Issued: 04 01 94
Status: Standard
X11 Release: 19

Template audit

Templates are used to store data which is common to many telephones. This includes items such as key functions and class of service. The Template Audit program saves protected memory by eliminating unused or duplicate telephone templates.

LD01 also performs the following consistency checks.

User Count Scan

All telephones in the system are scanned to find the total number of users for a template.

If a template is found to have no users, the entire template is removed with the warning message 'NO USERS FOUND'. If a template is found to have an incorrect user count, the correct user count is written to the template, and the warning message 'USER COUNT LOW' or 'USER COUNT HIGH' is output. If the user count is accurate, the message 'USER COUNT OK' is output.

LD01

Duplicate Template Scan

Each template is checked against every other template for possible duplication. A template is considered a duplicate of another if all of the following conditions are met:

- the checksums are the same
- the template lengths and the hunt offsets are the same
- all template entries are the same

If a match is found, the warning message 'DUPLICATE OF xxxx' is output. A scan is then initiated to locate all users of the current template and move them to the matched template.

For each of these users found, the template number in the telephone data block and the user count is updated. After all of the users of the current template are moved to the matched template, the current template is removed.

Template Checksum Audit

A checksum is a binary sum of the template length, hunt offset, and template entries. The checksum is calculated for each template and compared with the existing template checksum. If the existing checksum is correct, the message 'CHECKSUM OK' is output. Otherwise, the checksum is corrected with the warning message 'CHECKSUM WRONG'

Key Lamp Strip Audit

Two checks are made to correct Key Lamp Strip (KLS) corruption. First, the template length is compared to the number of KLS indicated in the protected line block. The second check verifies that the last word of the template reflects a 'NULL' key.

If these checks detect any discrepancies, they are corrected with the warning message 'CORRUPTED KLS'.

These corrections alter the checksum of the template. This is identified and corrected by the checksum audit.

Operating parameters

Due to the Real Time impact of this program and the large amount of data being scanned, the template audit should be run during low traffic hours.

The template audit should not be aborted unless it is critically necessary. If it does become necessary to interrupt execution of the audit, be aware that the templates may be corrupted.

If a system initialization occurs during the template audit, the program is automatically aborted. It should be restarted as soon as possible after this occurs.

The audit printout only appears on the TTY that requested the template audit program run.

Template Audit cannot be run as a background task.

To confirm that extraneous templates have been removed and that all counts have been corrected to their proper value, re-run the audit program.

A data dump (LD43) should be run after a template audit is executed.

Example operation

The audit begins when the program (LD01) is loaded. All templates are scanned in the following sequence, beginning with template one:

1 Single line telephones
2 Multi-line telephones

Following is an example of the system information which is generated during a Template Audit:

```
TEMPLATE AUDIT
STARTING PBX TEMPLATE SCAN
TEMPLATE 0001 USER COUNT LOW     CHECKSUM OK
TEMPLATE 0002 USER COUNT HIGH    CHECKSUM OK
TEMPLATE 0003 NO USERS FOUND
                  •
                  •
                  •
STARTING SLI TEMPLATE SCAN
TEMPLATE 0001 USER COUNT OK      CHECKSUM OK
                  •
                  •
                  •
TEMPLATE 0067 USER COUNT OK      CHECKSUM WRONG
TEMPLATE 0068 USER COUNT OK      CHECKSUM OK DUPLICATE
OF 0014
                  •
TEMPLATE 0082 USER COUNT OK      CHECKSUM OK
                  •
TEMPLATE 0120 USER COUNT OK
TEMPLATE AUDIT COMPLETE
```

Note: The report does not print out that template inconsistencies have been corrected.

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Traffic control program

How to use traffic commands

The Traffic control program is used to set traffic options, system ID, date and time. The conventions used to describe the traffic commands are:

- data entered by the user is shown in upper case
- data output by the system is shown in lower case
- a period (.) prompt indicates that the system is ready to receive a new command
- a double dash (- -) indicates that the system is ready to receive data
- a <cr> indicates that the return key should be pressed

Note: The message TFC000 output on your switch indicates that the traffic program is running.

LD02

Set traffic report schedules

To print current customer report schedule:
TSCH C sd sm ed em
sh eh so
d d ...

To print current system report schedule:
TSHS sd sm ed em
sh eh so
d d ...

To set customer report schedule:
SSHC C sd sm ed em -- SD SM ED EM
sh eh so -- SH EH SO
d d ...—D D ...<cr>

To set system report schedule:
SSHS sd sm ed em -- SD SM ED EM
sh eh so -- SH EH SO
d d ...—D D ...<cr>

Legend
C = customer number
D = day of the week:
- 1 = Sunday
- 2 = Monday
- 3 = Tuesday
- 4 = Wednesday
- 5 = Thursday
- 6 = Friday
- 7 = Saturday

ED = end day (1-31)
EH = end hour (0-23)
EM = end month (1-12)
SD = start day (1-31)
SH = start hour (0-23)
SM = start month (1-12)
SO = schedule options:
- 0 = no traffic scheduled
- 1 = hourly on the hour
- 2 = hourly on the half-hour
- 3 = every half-hour

Example
To change the system reports schedule:
SSHS 25 4 16 7 -- 1 10 1 12
12 21 2 -- 0 23 1
2 3 4 5 6 -- 1 7<cr>

Old schedule
start time: April 4 at 12 noon

end time: July 16 at 9 P.M.
frequency: hourly on the half-hour (SO = 2)
days of the week: Monday to Friday

New schedule
start time: October 1 at 12 midnight

end time: July 16 at 11 P.M.
frequency: every half-hour (SO = 3)
days of the week: Saturday and Sunday

Note 1: In order to obtain traffic reports at the scheduled intervals, the output device must have prompt USER = TRF in LD17. If TRF is not defined for any device, reports are still generated to allow the printing of the last reports.

Note 2: Half hour start and end times are not supported.

LD02

System reports

To print the current report types:
TOPS r r ...

To set one or more report types:
SOPS r r ... -- R R ...<cr>

To clear one or more report types:
COPS r r ... -- R R ...<cr>

Legend
R is traffic report type:
1 = networks
2 = service loops
3 = dial tone delay
4 = processor load
5 = selected terminals
7 = junctor group traffic
8 = CSL and AML links
9 = D-channel
15 = Meridian Packet Handler (ISDN BRI)

Note 1: To use the print command enter a space (not a carriage return) after the customer number.

Note 2: If no reports are currently set, NIL is output by the system.

Customer reports

To print the current report types:
TOPC C r r ...

To set one or more report types:
SOPC C r r ... -- R R ...<cr>

To clear one or more report types:
COPC C r r ... -- R R ...<cr>

Legend
C = customer number
R is traffic report type:
1 = networks
2 = trunks
3 = customer console measurements
4 = individual console measurement
5 = feature key usage
6 = Radio Paging
7 = Call Park
8 = messaging and auxiliary processor links
9 = Network Attendant Service

Note 1: To use the print command enter a space (not a carriage return) after the customer number.

Note 2: If no reports are currently set, NIL is output by the system. For report 5, see "Set customer for feature key usage measurement."

LD02

Network reports

To print the current report types:
TOPN C r r ...

To set one or more report types:
SOPN C r r ... -- R R ...<cr>

To clear one or more report types:
COPN C r r ... -- R R ...<cr>

Legend
C = customer number
R is traffic report type:
1 = route list measurements
2 = network class of service measurements
3 = incoming trunk group measurements

Note 1: To use the print command enter a space (not a carriage return) after the customer number.

Note 2: If no reports are currently set, NIL is output by the system.

Set customer for feature key usage measurement

To print current customer being measured:
TCFT c

To set the customer to be measured:
SCFT c -- C

Note: Where C is the customer number. Only one customer can have feature measurement set at a time.

Stop printing of title, date and time

It is possible to suppress the printing of the title (TFS000), date and time in cases where traffic measurement is scheduled but no other data is printed. The command format is:

IDLT 0,1
0 = no title is printed unless further data is also printed
1 = the title is always printed

Set traffic measurement on selected terminals

These commands are used to print and change the Individual Traffic Measurement (ITM) class of service for given terminal numbers for traffic report TFS005. Telephone sets, trunk and DTI channels can have this class of service. Terminals with ITM set are included in the groups for which Line Traffic Measurements are recorded.

Note: Do not use these commands on superloops or octal density cards (NT8D02, NT8D03, NT8D09, NT8D14, or NT8D16).

To print the current TNs with ITM set :
TITM

Example
TITM
shelf 4 0 (all units on loop 4 shelf 0 have ITM set)
loop 5 (all units on loop 5 have ITM set)
tn 11 3 4 1 (unit on TN 11 3 4 1 has ITM set)
card 13 2 1 (all units on card 13 2 1 has ITM set)
chnl 15 21 (only loop 15 channel 21 has ITM set)

To set ITM on terminals:
SITM

Example
SITM
shelf 4 1 (current settings)
loop 05
tn 11 3 4 1
card 19 1 1
chnl 34 18
-- 7 (set ITM on all units on this loop)
-- 6 1 (set ITM on all units this shelf, or on channel 1)
-- 8 1 1 (set ITM on all units on this card)
-- 8 1 1 1 (set ITM on all units on this unit)
-- <cr> (stop "--" prompt)

To clear line traffic TNs:
CITM (the ITM class of service is removed from all units)

Set blocking probability for Line Load Control (LLC)

To print current LLC level and blocking probability:
TLLC

To set blocking probability:
SCTL x aaa

To activate Line Load Control at level x :
SLLC x

Legend
x = 1, 2 or 3 LLC level
aaa = blocking probability in %

Set time and date

To print the current time and date:
TTAD day-of-week day month year hour minute second

Example
TTAD WED 24 11 1976 15 41 49

To set the time and date:
STAD DAY MONTH YEAR HOUR MINUTE SECOND

Example
STAD 24 11 1976 15 41 49

Note: Except for the year, the other entries in the time of day output are 2-digit numbers. The year may be any year from 1901 to 2099 inclusive. It may be input as a full 4-digit field or as a 2-digit short form. The 2-digit short form is assumed to be in the range 1976 to 2075 and the appropriate addition is made when calculating the day-of-week and leap years.

Set daily time adjustment

The time of day can be adjusted during the mid-night routines to compensate for a fast or slow system clock.

To print the current adjustment :
TDTA x y

To set the adjustment:
SDTA x y -- X Y

Legend
x = 0 for negative increment
= 1 for positive increment
y = 0-60 second adjustment in increments of 100 ms

1-27-2011 Ø 25 = 2.5 SEC Loss
2-17-2011 "
4-7-2011 "
4-15-2011 "
11-02-2011 Ø 35 = 3.5 SEC Loss
4-29-2013 Ø 75 = 7.5 sec Loss (Clock controller Ø)

LD02

Set and print Daylight Savings Time

With X11 release 19 and later, the daylight savings time adjustment can be programmed to take place automatically. You can set the date to change to daylight savings, and to return to standard time. This information can be queried at any time.

The following commands are accepted by this program for this capability. The system clock MUST ALREADY be set for the daylight savings time to be updated. This information survives sysload.

FWTM = Set the date and time for the clock to move forward.
BWTM = Set the date and time for the clock to move backward.
SDST = Enable or disable the automatic change.
TDST = Query the change information.

To implement these commands, use the following.

- FWTM <month> <week> <day> <hour>
  month = 1-(4)-12 [Jan-DECM]
  week = (1)-5, L [1st-5th, L is the last week of the month]
  day = (1)-7 [Sunday-Saturday]
  hour = 1-(2)-22 [Midnight-11:00 pm]

- BWTM <month> <week> <day> <hour>
  month = 1-(10)-12 [Jan-DECM]
  week = (1)-5, L [1st-5th, L is the last week of the month]
  day = (1)-7 [Sunday-Saturday]
  hour = 1-(2)-22 [Midnight-11:00 pm]

- SDST ON, (OFF)
  ON enables the automatic change capability
  OFF disables the automatic change capability

- TDST <CR>
  The output reflects the input format to indicate the change information.

Set system ID

Each Meridian 1 system has a unique system ID number (SID) selected from 000 to 999. The 3-digit ID number can be printed or set by the following commands.

To print the current SID:
TSID sid

To change the SID:
SSID sid -- SID

Set thresholds

To print the current system thresholds:
TTHS TH tv

To set the system thresholds:
STHS TH tv -- TV

The system thresholds (TH) and range of values (TV) are:
1 = dial tone speed (range 0.00% to 99.9%)
2 = loop traffic (range 000 to 999 CCS)
3 = junctor group traffic (range 0000 to 9999 CCS)
4 = superloop traffic (range 0000 to 9999 CCS)

To print the current customer thresholds:
TTHC C TH tv

To set the customer thresholds:
STHC C TH tv -- TV

Legend
The thresholds (TC) and range of values (TV) for customer C are:
1= incoming matching loss (TV range 00.0% to 99.9%)
2 = outgoing matching loss (TV range 00.0% to 99.9%)
3 = average Speed of Answer (TV range 00.0 to 99.9 seconds)
4 = percent All Trunks Busy (TV range 00.0% to 99.9%)
5 = percent OHQ Overflow (TV range 00.0% to 99.9%)

Perform threshold tests on last reports

To perform threshold tests on customer reports:

ITHC C TH

Legend
C = customer number
TH is the threshold type:
1 = incoming matching loss
2 = outgoing matching loss
3 = average speed of answer
4 = percent all trunks busy
5 = percent OHQ overflow

To perform threshold tests on system reports:
ITHS TH

Legend
TH is the threshold type:
1 = dial tone speed
2 = loop traffic
3 = junctor group traffic

Note: When a threshold test passes, OK is output.

Print last reports

The last traffic reports can be printed or tested against threshold values. Data accumulating for the next reports is not accessible.

To print one or more of the last customer reports:
INVC C R R ...

Legend
C = customer number
R is traffic report type:
1 = networks
2 = trunks
3 = customer console measurements
4 = individual console measurement
5 = feature key usage
6 = Radio Paging
7 = Call Park
8 = messaging and auxiliary processor links
9 = Network Attendant Service

To print one or more of the last network reports:
INVN C R R ...

Legend
C = customer number
R is traffic report type:
1 = route list measurements
2 = network class of service measurements
3 = incoming trunk group measurements

To print one or more of last system reports:
INVS R R ...

Legend
R is traffic report type:
1 = networks (per loop)
2 = services
3 = dial tone delay
4 = processor load
5 = selected terminals
7 = junctor group traffic
8 = CSL and AML links
9 = D-channel

LD02

Print alarm and exception filter summary

X11 release 19 and later provide alarms status summaries in this overlay. The alarms printed by this overlay are discussed in X11 software management (553-3001-300) and in the introduction to this document.

To print the alarm status, enter ASUM at the dot (.) prompt.

```
>LD 02

TFC000

. ASUM
```

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Single-line Telephone Administration

LD10 is used to add or change data blocks for 500/2500 type telephones.

X11 release 19 and later support integrated telephone administration. Within this overlay, REQ and TYPE commands related to LD10, LD11, LD20, or LD32 can be executed. The overlays must be located in Cache memory for the command routing to operate.

When the overlay is loaded the available system memory and disk records are output in a header. Refer to the introduction of this document for details.

Incremental Software Management (ISM) also provides a header to indicate system configuration limits. For LD10, the header appears as follows:

TNS AVAIL: xxxxx USED: xxxxx TOT: xxxxx
ACD AGENTS AVAIL: xxx USED: xxx TOT: xxx
AST SET AVAIL: xxxxx USED: xxxxx TOT: xxxxx

LD10

Add a telephone (X11 release 18 and earlier)

When adding many new telephones (NEW xxx), enter the first TN at the TN prompt. The next higher unused TNs are assigned. Note that TNs will be created on unassigned loops. To avoid this situation, only add a number of new telephones equivalent to the print unused units in LD20.

REQ	NEW, NEW 1-255	Add a new telephone, or add 1-255 new telephones
TN	l s c u	Terminal Number
CDEN	SD, DD, 4D	Single, double or quadruple density
DES	a...x	ODAS telephone designator
CUST	0-99	Customer number
DIG	xx yy	Dial Intercom Group number and member number
DN	xxx...x	Directory Number
_MARP	Yes, (No)	Use TN as the MADN Redirection Prime
AST	Yes, (No)	Associate telephone assignment for Meridian Link applications
IAPG	(0)-15	Meridian Link Unsolicited Status Message (USM) group
HUNT	xxx...x	Hunt DN for internal calls
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network Class of Service group number
RNPG	(0)-4095	Ringing Number Pick-up Group
XLST	(0)-254	Pretranslation group associated with this telephone
SCPW	xxx...x	Station Control password
CLS	aaaa	Class of Service options
LNRS	4-(16)-32	Last Number Redial Size
OHID	(0)-9	Off-Hook Alarm Security DN index
TEN	1-511	Multi-Tenant number
SCI	(0)-7	Station Category number
FCAR	Yes, (No)	Forced Charge Account restriction
LANG	(0)-5, X	Language choice for Automatic Wake Up service
SPID	xxxx	Supervisor position ID
PRI	(1)-48	Priority level for ACD Agent
AACD	Yes, (No)	500/2500 telephone configured as AST ACD telephone
FTR	aaaa	Enter the feature name and related data

Add a telephone (X11 release 19)

With X11 release 19 and later, CPND information is configured in this overlay. The CPND information is configured per DN.

REQ	NEW, NEW 1-255	Add a new telephone, or add 1-255 new telephones
TN	l s c u	Terminal Number
CDEN	SD, DD, 4D	Single, double or quadruple density
DES	a...x	ODAS telephone designator
CUST	0-99	Customer number
DIG	xx yy	Dial Intercom Group number and member number
DN	xxx...x	Directory Number
_MARP	Yes, (No)	Use TN as the MADN Redirection Prime
_CPND	NEW/CHG/OUT	Calling Party Name Display gateway
_CPND_LANG	(ROM), KAT	CPND language
__NAME	aaaa, bbbb	CPND name
__XPLN	xx	Expected name length
__DISPLAY_FMT	LAST, FIRST/ (FIRST, LAST)	Display format for CPND name
_VMB	NEW, CHG, OUT	Voice Mailbox gateway
__VMB_COS	0-127	Voice Mailbox class of service
__SECOND_DN	xxx...x, X	Second DN sharing the voice mailbox
__THIRD_DN	xxx...x, X	Third DN sharing the voice mailbox
__KEEP_MSGS	Yes, (No)	Preserve Meridian Mail messages and current password
AST	Yes, (No)	Associate telephone assignment for Meridian Link applications
IAPG	(0)-15	Meridian Link Unsolicited Status Message (USM) group
HUNT	xxx...x	Hunt DN for internal calls
RCO	(0)-2	Ringing cycle option for Call Forward No Answer
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network Class of Service group number
RNPG	(0)-4095	Ringing Number Pick-up Group
XLST	(0)-254	Pretranslation group associated with this telephone
SCPW	xxx...x	Station Control password
CLS	aaaa	Class of Service options
MAUT	Yes, (No)	Modify assigned authorization codes for this telephone

_SPWD	xxxx	Secure data password
_AUTH	n xxxx	Authorization code
LNRS	4-(16)-32	Last Number Redial Size
OHID	(0)-9	Off-Hook Alarm Security DN index
TEN	1-511	Multi-Tenant number
SCI	(0)-7	Station Category number
FCAR	Yes, (No)	Forced Charge Account restriction
LANG	(0)-5, X	Language choice for Automatic Wake Up service
SPID	xxxx	Supervisor position ID
PRI	(1)-48	Priority level for ACD Agent
AACD	Yes, (No)	500/2500 telephone configured as AST ACD telephone
FTR	aaaa	Enter the feature name and related data

Easy change

REQ	CHG	Change
TN	l s c u	Terminal Number
ECHG	Yes	Easy Change
ITEM	aaaa bbbb	Enter the prompt (aaaa) and its new value (bbbb).

For example, to add a Class of Service option:

```
REQ  CHG
TYPE  500
TN  l s c u
ECHG  Yes
ITEM  CLS  FNA
ITEM  <cr>
REQ
```

Copy command

Use the copy command to create up to 32 new telephones with the same feature assignments.

Note: Associate set (AST) assignments are not copied to the new telephones.

REQ	CPY xx	Copy 1-32 sets
CFTN	l s c u	Copy from TN. Use this TN as the template for new sets.
SFMT	aaaa	Select format for the copy command
	AUTO	The new TNs, DNs and position IDs (for ACD telephones) are provided by the system. You are prompted for the starting TN, DN, and position ID. The system automatically selects consecutive unused TNs, DNs and ACD position IDs.
	TNDN	Manual selection of TNs, DNs and ACD position IDs. You are prompted for the TN, DN and ACD position ID of each new telephone.
	TN	The new DNs and ACD position IDs are provided by the system. You are prompted for the starting DN, ACD position ID and each TN.
	DN	The new TNs are provided by the system. You are prompted for the starting TN, each DN and ACD position ID.

LD10

Remove a telephone

When removing more than one telephone at a time, you are prompted for the starting TN. The next consecutive assigned TNs are removed.

REQ	OUT, OUT 2-255	Remove one telephone, or remove 2-255 consecutive telephones
TN	l s c u	Terminal Number

Move a telephone

Telephones with mixed directory numbers can only be moved to a TN on the same loop unless LD17 prompt MLDN = Yes.

REQ	MOV	Move a telephone
TN	l s c u	Terminal Number
TOTN	l s c u	Destination TN

Alphabetical list of prompts

AACD **Yes, (No)** — 500/2500 telephone configured as AST ACD telephone. ism-17

AST **Yes, (No)** — Associate telephone assignment for Meridian Link applications. iap3p-12

AUTH **n xxxx** — Authorization code. ssau-19

Prompted when CLS = AUTR.
n = the number of the assigned authorization code (1-6)
xxxx = the assigned authorization code
(can be any customer authorization code assigned in LD88)

CDEN **SD, DD, 4D** — Single, double or quadruple density. basic-7

CDEN defaults to the density of the network loop. The default for superloops is 4D due to the density of the cards.

CFTN **l s c u** — Copy from TN. basic-12

Enter the source TN to be copied. Data from that source is copied to configure more telephones. Prompted only if REQ = CPY.

CLS **aaaa** — Class of Service options. basic-1

The following CLS assignments determine the calling options and features available to the telephone. Defaults are shown in parentheses. Enter each non-default option required, separated by a space.

CLS **AGTA, (AGTD)** — ACD for 500/2500-type telephones allowed (denied). bacd-16

CLS **ARHA, (ARHD)** — Audible Reminder of Held Call allowed (denied). basic-14

CLS **ASCA, (ASCD)** — Alarm Security allowed (denied). ohas-18

CLS **AUTR, (AUTU), AUTD** — Authorization code class of service. ssau-19

AUTR = Restricted authcode
AUTU = Unrestricted authcode
AUTD = Denied authcode

This class of service is valid only when Station Specific Authorization Codes (package 229) is equipped.

When the CLS is changed from AUTR to AUTU or AUTD, all previous telephone authorization code information is removed.

CLS **C6A, (C6D)** — Six Party Conference allowed (denied). basic-10

C6A requires transfer allowed (XFA) class of service.

CLS	**CCSA, (CCSD)** — Controlled Class Of Service allowed (denied). CCSA is also required for the Electronic Lock feature. See Flexible Feature Codes in X11 features and services (553-3001-305).	ccos-7
CLS	**CFTA, (CFTD)** — Call Forward by Call Type allowed (denied). Call Forward by Call Type enhances Hunt and Call Forward No Answer. CFTA requires Hunting allowed (HFA) and/or Call Forward allowed (FNA) allowed class of service.	opft-10
CLS	**(CFXD), CFXA** — Call Forward All Calls to external DN (denied) allowed. When denied, a call can only be forwarded to the following internal DNs: — single or multi-line telephone — attendant DN or CAS local attendant DN — listed DN as defined in LD15 — message center DN (MWC = yes) With X11 release 18 and earlier, the default is CFXA.	opft-19
CLS	**CLTA, (CLTD)** — Network Call Trace from this telephone allowed (denied).	pra-17
CLS	**CNIA, (CNID)** — Call Number Information allowed (denied). This applies only to Background Terminal (BGD) applications in the Hotel/Motel environment.	bgd-10
CLS	**CWA, (CWD)** — Call Waiting allowed (denied). The telephone should also have Hunting denied (CLS = HTD) since hunting takes precedence.	basic-1
CLS	**(CWND), CWNA** — Call Waiting notification (denied) or allowed. This class of service is allowed only if the Call Waiting Notification package (225) is equipped.	m911-19
CLS	**DPUA, (DPUD)** — DN Pickup allowed (denied). DN Pickup is not allowed on telephones in group zero (RNPG = 0). See "Call Pickup, Directed" in X11 features and services (553-3001-305).	dcp-12
CLS	**(DTN), DIP, MNL** — Digitone, Dial pulse or manual service. DTN is used for 2500, UNITY and digitone telephones DIP is used for 500, rotary and dial pulse telephone MNL is used for manual service to the attendant and Flexible Hot Line With X11 release 18 and earlier, the default is DIP.	basic-19

CLS **EHTA, (EHTD)** — Enhanced Hot Line allowed (denied). hot-10

Cannot appear with LNA or LLCx.

CLS **FBA, (FBD)** — Call Forward Busy allowed (denied). basic-1

This feature sends DID calls encountering a busy condition to the attendant. Call Forward Busy should have Hunting and Call Waiting denied (CLS = HTD and CWD) since Hunting and Call Waiting takes precedence or FBA.

CLS **FNA, (FND)** — Call Forward No Answer allowed (denied). basic-1

CLS **GPUA, (GPUD)** — Group Pickup allowed (denied). dcp-12

Group Pickup is not allowed on telephones in group zero (RNPG = 0). See "Call Pickup, Directed" in X11 features and services (553-3001-305).

CLS **HPR, (LPR)** — High (Low) priority telephone. basic-1

This is an engineering parameter which assigns the telephone to the CPU work scheduler's high or low priority input buffers.

CLS **HTA, (HTD)** — Hunting allowed (denied). basic-1

CLS **ICDA, (ICDD)** — Internal Call Detail recording allowed (denied). icdr-10

CLS **LDN, (PDN)** — Listed DN (prime DN) used for Calling Line ID (CLID). pra-12

This option determines the information displayed on telephones with displays.

CLS **LDTA, (LDTD)** — Line Disconnect Tone allowed (denied). basic-17

CLS **LLC1, LLC2, LLC3, (LLCN)** — Line Load Control. llc-13

LLC1 = Line Load Control Class 1
LLC2 = Line Load Control Class 2
LLC3 = Line Load Control Class 3
LLCN = Line Load Control off

Refer to Line Load Control in X11 features and services (553-3001-305).

CLS **LNA, (LND)** — Last Number Redial allowed (denied). lnr-8

Last Number Redial must first be enabled in the Customer Data block (LD15 prompt OPT = LNA).

CLS **LPA, (LPD)** — Message Waiting lamp allowed (denied). mwc-1

Note: If a modem is connected to a port on the message waiting line card, that port should be defined as LPD. With LPA the modem may be damaged by the message waiting lamp voltage (150 V).

CLS	**MCTA, (MCTD)** — Malicious Call Trace allowed (denied).	mct-10
	MCT is applied on a TN basis.	
CLS	**MRA, (MRD)** — Message Registration allowed (denied).	mr-10
CLS	**MWA, (MWD)** — Message Waiting allowed (denied).	mwc-1
CLS	**OPX, (ONP)** — Off (On) Premise extension.	basic-1
	Not supported by Double or Quadruple density cards. These responses are allowed with X11 release 19 and earlier only.	
CLS	**OVDA, (OVDD)** — Override allowed (denied).	ffc-15
CLS	**PUD, (PUA)** — Call Pickup denied (allowed).	grp-1
	Call Pickup is not allowed on telephones in group zero (RNPG = 0).	
CLS	**SFA, (SFD)** — Second Level CFNA allowed (denied).	basic-10
	Prior to X11 release 15, SFA must have both FNA and MWD class of service. In X11 release 15 and later, SFA only requires FNA class of service.	
CLS	**SWA, (SWD)** — Station-to-station Call Waiting allowed (denied).	basic-8
	Enhances Call Waiting Allowed. Must have CLS = CWA.	
CLS	**TEND, (TENA)** — Multi-Tenant service denied (allowed).	tens-7
	Multi-Tenant must be configured in LD93 before the default is TENA.	
CLS	**THFA, (THFD)** — Centrex Switchhook Flash allowed (denied).	thf-14
CLS	**TVA, (TVD)** — Trunk Verification from station allowed (denied).	tvs-10
CLS	**UNR** — Access restrictions.	basic-1
	(UNR) = Unrestricted TLD = Toll Denied SRE = Semirestricted FRE = Fully Restricted FR1 = Fully Restricted class 1 FR2 = Fully Restricted class 2 CUN = Conditionally Unrestricted CTD = Conditionally Toll Denied	
CLS	**(USMD), USMA** — Meridian 911 position (denied) or allowed.	m911-19
	This class of service is allowed only if the Meridian 911 package (224) is equipped.	
CLS	**USRA, (USRD)** — User Selectable Call Redirection allowed (denied).	uscr-19

CLS **WTD, (WTA)** — Warning Tone denied (allowed). basic-1

CLS **XFA, (XFD)** — Call Transfer allowed (denied). basic-1

CLS **XHA, (XHD)** — Exclusive Hold allowed (denied). dhld-4

CLS **XRA, (XRD)** — Ring Again allowed (denied). opft-1

Must also have Call Transfer allowed (XFA) class of service.

CPND **NEW/CHG/OUT** — Calling Party Name Display gateway. cpnd-19

This prompt allows the required CPND prompts to appear, and assigns the data to the DN. When CPND = NEW, FTR CPND is automatically assigned to the telephone.

CPND_LANG

(ROM), KAT — CPND language. cpnd-19

This prompt applies when FTR = CPND. It only appears when package 211 is equipped.
ROM = Roman
KAT = Katakana

CUST **0-99** — Customer number. cust-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DELETE_VMB

(Yes), No — Remove the voice mailbox on the Meridian 1 and Meridian Mail. vmba-19

This is allowed only when the DN is a single appearance (or Multiple Appearance DN on a single TN) and there is an associated Voice Mailbox. Responding No to this prompt deletes the mailbox on the Meridian 1, and preserves it on the Meridian Mail system.

DES **a...x** — ODAS telephone designator. odas-1

Enter one to six-character alphanumeric ODAS designator.

LD10

DIG **xx yy** — Dial Intercom Group number and member number. di-1

Ranges:
xx = 0-253 yy = 0-99 (before X11 release 14)
xx = 0-2045 yy = 0-99 (X11 release 14 and later)

The value entered for the member number (yy) cannot be equal to the SPRE code. In the case of double-digit values, the first digit cannot be the same as the SPRE code. For example, if SPRE = 7, yy cannot be 70, 71...79.

Note 1: Single-line telephones can be either telephones or Dial Intercom sets, not both.

Note 2: If any member in the group has a two digit member number, all members have a two digit number. The system enters leading zeros.

DISPLAY_FMT

LAST, FIRST/(FIRST, LAST) — Display format for CPND name. cpnd-19

LAST, FIRST = Last name, First name (Walker, Alice)
FIRST, LAST = First name, Last name (Alice, Walker)

DN **xxx...x** — Directory Number. basic-1

Enter 4 digits, unless the DN Expansion (DNXP) package is equipped, when you can enter up to 7 digits; while ISDN applications can accept up to 13 digits.

Also prompted when using the copy command. DN is not prompted if Dial Intercom group (DIG) is defined.

If the DN entered already exists, you may receive one or more of the following outputs:
HNT = DN is defined as a Hunt DN in LD11 and Hunting is allowed
MIX = DN entered already appears on another telephone
PRL = DN is a Private Line number (PVR/PVN key defined in LD11)

ECHG **Yes, (No)** — Easy Change. basic-12

When ECHG = yes, ITEM is prompted. Respond to ITEM with the desired prompt and its new value. This allows you change any prompt in this overlay without toggling through all the prompts.

FCAR **Yes, (No)** — Forced Charge Account restriction. fca-1

Yes = restrict from using Forced Charge Account
No = must use Forced Charge Account

Prompted only if LD15 prompt FCAF = Yes, and CLS = TLD, CUN or CTD. TLD is recommended.

FTR **aaaa** — Enter the feature name and related data. basic-1

Special Features for 2500 telephones (SS25) must be equipped for FTR to be prompted. SS25 is required for Flexible Hot Line. Precede a feature mnemonic with "X" to remove it from the allowed features for the telephone (Xaaaa).

FTR **ACD xxxx yyyy** — ACD, the ACD-DN and the ACD Position (POS ID). ism-16

If the DN Expansion package is equipped up to 7 digits are allow for the DN and position ID; otherwise; a maximum of 4 digits are allowed.

FTR **CFW xx** — Call Forward All Calls. ss25-1

Where, xx is the DN length. Valid entries are: 4, 8, 12, (16), 20, 23. Numbers between 5 and 22 are rounded up to the next valid number.

FTR **CPND** — Call Party Name Display, name assignment allowed. cpnd-10

Response required only if Background Terminal or PMSI is used to configure names. Response is not required if CPND is programmed in LD95.

FTR **EFD xxxx** — External Flexible Call Forward DN. basic-10

This is the DN to which external no answer calls are routed when class of service is Call Forward by Call Type allowed (CFTA). Accepted only if CLS = CFTA. EFD is only used if one of the following customer options are defined in LD15:

FNAD = FDN
FNAT = FDN
FNAL = FDN

Listed DNs, Departmental Listed DNs and prime DNs are accepted as valid input. With X11 release 16 and later, EFD can be up to 13 digits.

FTR **EHT xxxx** — External Hunt DN. basic-10

This is the DN to which external no answer calls Hunt when class of service is Call Forward by Call Type allowed (CFTA). Accepted only if CLS = CFTA.

Listed DNs, Departmental Listed DNs and prime DNs are accepted as valid input. Starting with X11 release 16, EHT can be up to 13 digits.

FTR **FAXS xxxx** — Facsimile server and command sequence. faxs-18

The command sequence includes the following:
Wx = waiting time of 0 to 9 seconds
Cxxx = control command digits
Oxxxx = originating or designated fax DN
D = the called fax DN

For HiMail server, if the designated fax DN is 1234:
FTR FAXS W6 O1234 C#10* D C## W4, or
FTR FAXS W6 O1234 C#20* D C## W4

For Phi-Net server, if the designated fax DN is 1234:
FTR FAXS W4 C30 O1234 C*0 D C#

The facsimile server TNs must have digitone (DTN) class of service and cannot have FNA, CWA, or FBA class of service, or FTR CFW feature.

Use the HUNT feature to define the DN of the next port on the facsimile server.

FTR **FDN xxxx** — Flexible Call Forward No Answer DN. basic-1

FDN is used for internal calls, if CLS is CFTA and FNA. FDN is used for all calls if CLS is CFTD and FNA.

FDN requires CLS = MWA or FNA. FDN is only used if one or more of the following customer options are defined in LD15:
FNAD = FDN
FNAT = FDN
FNAL = FDN

With X11 release 14 and later, FDN can be up to 13 digits.

FTR **HOT dd x...x** — Maximum number of Flexible Hot Line digits and target DN (X11 release 4 to 9). hot-4

dd = maximum number of digits in target DN
x...x = target DN (31 digits maximum)

Flexible Hot Line requires CLS = MNL.

FTR **HOT D dd x...x** — Direct entry for Flexible and Enhanced Hot Line DN (X11 release 10 and later). hot-10

dd = number of digits in Target DN
x...x = Terminating DN (31 digits maximum)

Enhanced Hot Line requires CLS = EHTA and DIP or DTN. Flexible Hot Line requires CLS = EHTD and MNL.

FTR	**HOT L bbb** — List entry (bbb) for Enhanced Hot Line. Enhanced Hot Line requires CLS = EHTA, LLCN, PHTD and DIP or DTN. To remove Hot Line DN, change CLS EHTA to EHTD. Hot Line DNs can be programmed with "*" operands only if OPAO is enabled. Refer to the Outpulsing feature description in 553-2001-100 for an explanation of asterisk restrictions when OPAO is enabled.	hot-10
FTR	**ICF 4-(16)-23** — Internal Call Forward and Forward DN length. XICF removes the capability. Allowed if Call Forward is packaged.	icf-19
FTR	**PHD** — Permanent Hold. Allowed only if CLS = XFA.	basic-1
FTR	**RDL xx** — Stored Number Redial. Where, xx is the DN length. Valid entries are: 4, 8, 12, (16), 20, 24, 28, 31. Numbers between 5 and 30 are rounded up to the next valid number. CLS must be XFA.	snr-3
FTR	**SCC 0-8190** — Speed Call Controller list number. The range of list numbers is 0-253 in X11 release 12 and earlier. Speed call list must be defined first.	optf-1
FTR	**SCU 0-8190** — Speed Call User list number. The range of list numbers is 0-253 in X11 release 12 and earlier. Speed call list must be defined first.	optf-1
FTR	**SSU 0-4095** — System Speed Call User list number. The range of list numbers is 0-253 in X11 release 12 and earlier. Speed call list must be defined first.	ssc-2
HUNT	**xxx...x** — Hunt DN for internal calls. With X11 release 14 and later, the Internal Hunt DN can be up to 13 digits. With Call Forward and Hunt by Call Type, this is the Hunt DN for internal calls if CLS = CFTA, or for all busy calls if CLS = CFTD.	basic-10
IAPG	**(0)-15** — Meridian Link Unsolicited Status Message (USM) group. Assign Associate (AST) telephones to a USM group defined in LD15. These groups determine which status messages are sent to the host computer for an AST telephone. The default Group 0 sends no messages, while Group 1 sends all messages. *Note:* The range in X11 release 16 and earlier is 0-9.	aml-16

ITEM **aaaa yyy** — Change any prompt. basic-12

Enter any prompt and its new value. ITEM is reprompted until only a return (cr) is entered.

KEEP_MSGS

Yes, (No) — Preserve Meridian Mail messages and current password. vmba-19

This is prompted only when VMB = New. When this is YES, the current password and messages are kept on Meridian Mail if a voice mailbox with the same DN already exists.

LANG **(0)-5, X** — Language choice for Automatic Wake Up service. mlwu-16

This entry defines the language presented for the Automatic Wake Up recorded announcement (RAN).

0 = Language 0 (see prompts RAN1/RAN2 in LD15)
1 = Language 1 (see prompts LA11/LA12 in LD15)
2 = Language 2 (see prompts LA21/LA22 in LD15)
3 = Language 3 (see prompts LA31/LA32 in LD15)
4 = Language 4 (see prompts LA41/LA42 in LD15)
5 = Language 5 (see prompts LA51/LA52 in LD15)
X = To remove an entry

Prompted only if the Multi-Language Wake Up (MLWU) package (206) is equipped.

LDN **0-5, (no)** — Departmental Listed DN. nldn-20

With X11 release 19 and earlier, the allowed range is 0-3. LDN = No indicates no LDN is used.

LNRS **4-(16)-32** — Last Number Redial Size. lnr-8

Enter the maximum number of digits that can be stored. Valid entries are: 4, 8, 12, (16), 20, 24, 28, 32. Numbers between 5 and 31 are rounded up to the next valid number. Only prompted if CLS = LNA.

MARP **Yes, (No)** — Use TN as the MADN Redirection Prime. basic-18

The MARP prompt, or MARP message, is given only when assigning a DN.

MAUT **Yes, (No)** — Modify assigned authorization codes for this telephone. ssau-19

This is prompted only when the Station Specific Authorization Codes package (229) is equipped, and CLS = AUTR.

NAME **aaaa, bbbb** — CPND name. cpnd-19

The order the name is entered is First name, Last name (Alice, Walker).

Up to 27 character can be entered, including commas. The last occurence in a group of commas is used as a delimiter.

A name entry followed by a comma (bbbb,) stores the last name only (comma is optional). A comma followed by a name (,aaa) stores the first name only.

NCOS **(0)-99** — Network Class of Service group number. ncos-2

The ranges for Network Class Of Service group are:
(0)-3 for standalone CDP
(0)-7 for BARS/CDP and NFCR
(0)-15 for NARS and NFCR
(0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later

OHID **(0)-9** — Off-Hook Alarm Security DN index. basic-18

When a dial tone or interdigit timeout occurs on a set with Alarm Security Allowed (ASA) class of service, the set is intercepted to a predefined DN.

Enter the index number (0-9) of the DN defined by LD15 prompts ODNx.

POS xxxx — ACD position ID. bacd-12

Prompted only when copying ACD telephones.

PRI **(1)-48** — Priority level for ACD Agent. acdb-16

Enter the priority level for ACD agent. The ranges are:
(1)-48 for system options NT, RT, XT, 51, 61, and 71
(1)-32 for all other system options

Prompted only if CLS = AGTA, and the Priority Agents package (116) is equipped.

RCO **(0)-2** — Ringing cycle option for Call Forward No Answer. uscr-19

Prompted when CLS = FNA or MWA (or both).

REQ **aaa** — Action request. basic-1

Enter the action to be performed, where aaa can be any of the following:
CHG = modify existing data
CPY xx = copy a telephone to add 1-32 telephones (X11 release 12)
END = exit the overlay.
MOV = move from one TN to another
NEW = add new telephones
OUT = remove data block

RNPG **(0)-4095** — Ringing Number Pick-up Group. grp-1

The ranges for Ringing Number Pick-up Group are:
(0)-255 in X11 release 12 and earlier
(0)-4095 in X11 release 13 and later (with Capacity Expansion)

To remove a telephone from a group, set RNPG to 0. If RPNG is not defined, CUA or PUD takes precedence, and neither appear as the default CLS.

SCI **(0)-7** — Station Category number. sci-7

The station category number 1 to 7 must be defined as attendant console Incoming Call Indicator (LD15 prompt ICI = CA1-CA7).

SCPW **xxx...x** — Station Control password. ffc-15

Enter "X" to remove the password. Must equal Station Control Password Length (SCPL) as defined in LD15. Not prompted if SCPL = 0.

The Station Control password is used for the Electronic Lock and Remote Call Forward features. See "Flexible Feature Codes" in X11 features and services (553-3001-305).

SECOND_DN

xxx...x, X — Second DN sharing the voice mailbox. vmba-19

Enter up to 7 digits with DN Expansion package equipped, or up to 4 digits without DNXP. Entering X at this prompt deletes the second DN.

SFMT **aaaa** — Format of the copy command. basic-12

DNs, TNs and ACD position IDs can be assigned automatically depending on the value of aaaa as follows:
TN = user enters the TN for each new telephone
DN = user enters the DN for each new telephone
TNDN = user enters the DN & TN for each new telephone
AUTO = DNs & TNs are assigned automatically

Based on the above response, you are prompted for starting TN and/or DN.

For ACD telephones, the system also prompts "POS" for the ACD position ID. If the DN is assigned automatically, so is the position ID and you are prompted for the staring position ID. If the DNs are assigned manually, so are the position IDs.

SPID xxxx — Supervisor position ID. acdb-16

Enter the Supervisor position ID. Enter 4 digits, unless the DNXP package (150) is equipped, when you can enter 7 digits; ISDN applications can accept up to 13 digits.

This used to assign an agent to a supervisor when agent lamps are not assigned on the supervisor telephone.

Prompted for ACD Packages B, C and D when CLS = AGTA.

SPWD xxxx — Secure data password. ssau-19

Prompted only if the password is defined in LD15. If the password is not entered, the security codes will not print when PRT is requested.

TEN 1-511 — Multi-Tenant number. tens-7

Enter the Multi-Tenant number for this telephone. Prompted only if Multi-Tenant is configured for the customer.

TGAR (0)-31 — Trunk Group Access Restriction. basic-1

The ranges for TGAR are
(0)-15
(0)-31 (in X11 release 13)

THIRD_DN

xxx...x, X — Third DN sharing the voice mailbox. vmba-19

Enter up to 7 digits with DN Expansion package equipped, or up to 4 digits without DNXP. Entering X at this prompt deletes the second DN.

TN l s c u — Terminal Number. basic-1

The TN defines the location of the telephone. The ranges are:
loop = 0-159
shelf = 0-3 (0-1 with superloops)
card = 1-10 (0-15 with superloops)
unit = 0-15 (0-31 with superloops)

Note: See prompt SFMT when using the copy command.

TOTN l s c u — Destination TN. basic-1

New loop, shelf, card and unit when telephone data is to be moved to a new TN.

TYPE **500, CARD, CARDSLT** – Type of telephone or unit. basic-1

Enter the type of telephone:
500 = for 500 or 2500 type telephones
CARDSLT = single line telephone line card (X11 release 19 and later)
CARD = unused line card (ASR, X11 release 18 and earlier)

VMB **NEW, CHG, OUT** – Voice Mailbox gateway. vmba-19

This prompt is provided when the Voice Mailbox administration package (246) is equipped. The DN type must be SCR, SCN, MCR, or MCN.

VMB_COS

0-127 – Voice Mailbox class of service. vmba-19

This prompt corresponds to Meridian Mail options that must already be defined in Meridian Mail. If not, there will be transaction errors with Meridian Mail. Refer to the Meridian Mail documentation for the available options.

XLST **(0)-254** – Pretranslation group associated with this telephone. prxl-8

The default is zero if pretranslation is enabled for the customer. The ranges are:
(0)-7
(0)-254 (X11 release 14 and later)

XPLN **xx** – Expected name length. cpnd-19

This value should be set to a sufficient length for current and future names for that DN.

When REQ=NEW, the XPLN prompt defines the maximum name length for that particular DN or DIG. The XPLN for a DN cannot be changed without deleting that name entry.

XPLN must range from the actual length of the name string to MXLN, or defaults to DFLN.

Issued: 04 01 94
Status: Standard
X11 Release: 19

Multi-line Telephone Administration

LD11 is used to add or change data for SL-1, Digital, and Meridian Modular telephones.

X11 release 19 and later support integrated telephone administration. Within this overlay, REQ and TYPE commands related to LD10, LD11, LD20, or LD32 can be executed. The overlays must be located in Cache memory for the command routing to operate.

When this overlay is loaded the available system memory and disk records are output in a header. Refer to the introduction of this document for details.

Incremental Software Management (ISM) also provides a header to indicate system configuration limits. For LD11, the header appears as follows:

TNS AVAIL: xxxxx USED: xxxxx TOT: xxxxx
ACD AGENTS AVAIL: xxx USED: xxx TOT: xxx
AST SET AVAIL: xxxxx USED: xxxxx TOT: xxxxx

Add a voice telephone (X11 release 18 and earlier)

Respond to the prompts below when adding a new voice telephone.

REQ	NEW	Add a new telephone
TYPE	aaaa	Type of telephone or data port
TN	l s c u	Terminal Number
CDEN	SD, DD, 4D	Single, double or quad density (not prompted for superloops)
DES	a...x	ODAS telephone designator
CUST	0-99	Customer number
KLS	1-7	Number of key/lamp strips
AOM	(0)-2	Number of key expansion modules
FDN	xxx...x	Flexible CFNA DN
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network Class Of Service group number
RNPG	(0)-4095	Ringing Number Pickup Group
SSU	0-4095	System Speed call list number
XLST	(0)-254	Pretranslation group associated with this telephone
SCPW	xxx...x	Station Control password
CLS	aaaa	Class of Service options
EFD	xxx...x	Flexible CFNA DN for external calls
HUNT	xxx.. x	Hunt DN for internal calls
EHT	xxx...x	External Hunt DN
LHK	(0)-69	Last Hunt Key
LNRS	4-(16)-32	Last Number Redial size
OHID	(0)-9	Off-Hook Alarm Security DN index for off-hook or interdigit timeout
FSVC	(0)-9	Off-Hook Alarm Security DN index for forced out of service
TEN	1-511	Multi-Tenant number
SCI	(0)-7	Station Category number
LPK	(0)-69	Last key for Automatic Line Preference
FCAR	Yes, (No)	Forced Charge Account restriction
LTN	xxx yy	Logical TN and AUX link number
SPID	xxxx	Supervisor position ID

AST	xx yy	Associate telephone assignment for Meridian Link applications
IAPG	(0)-15	Meridian Link Unsolicited Status Message (USM) group
PRI	(1)-48	Priority level for ACD agent
LANG	(0)-5, X	Language choice for Automatic Wake Up service
KEY	xx aaa yyyy	Telephone function key assignments

LD11

Add a voice telephone (X11 release 19)

With X11 release 19 and later, CPND information is configured in this overlay. The CPND information is configured per DN.

REQ	NEW	Add a new telephone
TYPE	aaaa	Type of telephone or data port
TN	l s c u	Terminal Number
CDEN	SD, DD, 4D	Single, double or quad density (not prompted for superloops)
DES	a...x	ODAS telephone designator
CUST	0-99	Customer number
MPHI	Yes, (No)	Meridian Communications Unit used as MPH interface
KLS	1-7	Number of key/lamp strips
AOM	(0)-2	Number of key expansion modules
FDN	xxx...x	Flexible CFNA DN
RCO	(0)-2	Ringing cycle option for Call Forward No Answer
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network Class Of Service group number
RNPG	(0)-4095	Ringing Number Pickup Group
SSU	0-4095	System Speed call list number
XLST	(0)-254	Pretranslation group associated with this telephone
SCPW	xxx...x	Station Control password
CLS	aaaa	Class of Service options
MAUT	Yes, (No)	Modify authorization codes for this telephone
_SPWD	xxxx	Secure data password
_AUTH	n xxxx	Authorization code
EFD	xxx...x	Flexible CFNA DN for external calls
HUNT	xxx.. x	Hunt DN for internal calls
EHT	xxx...x	External Hunt DN
LHK	(0)-69	Last Hunt Key
LNRS	4-(16)-32	Last Number Redial size
OHID	(0)-9	Off-Hook Alarm Security DN index for off-hook or interdigit timeout
FSVC	(0)-9	Off-Hook Alarm Security DN index for forced out of service
TEN	1-511	Multi-Tenant number

SCI	(0)-7	Station Category number
LPK	(0)-69	Last key for Automatic Line Preference
FCAR	Yes, (No)	Forced Charge Account restriction
LTN	xxx yy	Logical TN and AUX link number
SPID	xxxx	Supervisor position ID
AST	xx yy	Associate telephone assignment for Meridian Link applications
IAPG	(0)-15	Meridian Link Unsolicited Status Message (USM) group
PRI	(1)-48	Priority level for ACD agent
LANG	(0)-5, X	Language choice for Automatic Wake Up service
KEY	xx aaa yyyy	Telephone function key assignments
_MARP	Yes, (No)	Use TN as the Multiple Appearance DN Redirection Prime
_CPND	NEW/OUT/CHG	Calling Party Name Display gateway
__CPND_LANG	(ROM), KAT	CPND language
__NAME	aaaa, bbbb	CPND name
__XPLN	xx	Expected name length
__DISPLAY_FMT	LAST, FIRST/ (FIRST, LAST)	Display format for CPND name
_VMB	NEW, CHG, OUT	Voice Mailbox gateway
__VMB_COS	0-127	Voice Mailbox class of service
__SECOND_DN	xxx...x, X	Second DN sharing the voice mailbox
__THIRD_DN	xxx...x, X	Third DN sharing the voice mailbox
__KEEP_MSGS	Yes, (No)	Preserve Meridian Mail messages, and current password

Add a data telephone

Respond to the prompts below when adding a new data telephone.

REQ	NEW	Add a new data port
TYPE	nnnn	Allowed ports,2006,2008,2016,2216,2616,MCA,R232,R422
TN	l s c u	Terminal Number
CDEN	SD, DD, 4D	Single, double or quad density (not prompted for superloops)
DES	a...x	ODAS telephone designator
CUST	0-99	Customer number
KLS	1-7	Number of key/lamp strips
AOM	(0)-2	Number of key expansion modules
FDN	xxx...x	Flexible CFNA DN
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network Class Of Service group number
RNPG	(0)-4095	Ringing Number Pickup Group
SSU	0-4095	System Speed call list number
XLST	(0)-254	Pretranslation group associated with this telephone
SCPW	xxx...x	Station Control password
CLS	DTA	Data telephone
DTYP	ODS, IDS, IOS	Data station type
TOV	(0)-3	Data port time out value
DTAO	(MPDA), MCA	Data option
PSEL	TLNK, (DMDM)	T-link or DM-DM protocol selection
OPE	Yes, (No)	Change data port parameters
_PSDS	Yes, (No)	Public Switched Data Service option
_TRAN	SYN, (ASYN)	Port transmission type
_PAR	EVEN, MARK, ODD, (SPAC)	Parity type used
_DTR	ON, (OFF)	Forced DTR
_DUP	HALF, (FULL)	Full duplex/half duplex
_HOT	ON, (OFF)	Hot Line services enabled (disabled)
_AUT	OFF, (ON)	Auto Answer
_AUTB	OFF, (ON)	Auto Baud rate disabled (enabled)
_BAUD	0-12	Baud rate
_DCD	OFF, (ON)	Dynamic Carrier Detect (CD)

_PRM	OFF, (ON)	Host mode, (terminal mode)
_VLL	ON, (OFF)	Virtual Leased Line
_MOD	Yes, (No)	Modem, (Network)
_INT	ON, (OFF)	Meridian 1/SL-100 interworking
_CLK	ON, (OFF)	Clock
_DEM	DTE, (DCE)	Data equipment mode
_DLNG	FRN, (ENG)	French or English data port language
_KBD	OFF, (ON)	Hayes/Keyboard dialing mode
_V25	Yes, (No)	V.25 bis option (synchronous mode only)
_HDLC	Yes, (No)	High Level Data Link Control
_RTS	OFF, (ON)	Request to send
EFD	xxx...x	Flexible CFNA DN for external calls
HUNT	xxx.. x	Hunt DN for internal calls
EHT	xxx...x	External Hunt DN
LHK	(0)-69	Last Hunt Key
LNRS	4-(16)-32	Last Number Redial size
OHID	(0)-9	Off-Hook Alarm Security DN index for off-hook or interdigit timeout
FSVC	(0)-9	Off-Hook Alarm Security DN index for forced out of service
TEN	1-511	Multi-Tenant number
SCI	(0)-7	Station Category number
WIRE	ON, (OFF)	Wire test mode
PBDO	ON, (OFF)	Port Busy when DTR Off
ADCP	Yes, (No)	All-digital connection prefix
MPR	0-511	Modem Pool Route number
LPK	(0)-69	Last key for Automatic Line Preference
FCAR	Yes, (No)	Forced Charge Account restriction
LTN	xxx yy	Logical TN and AUX link number
SPID	xxxx	Supervisor position ID
AST	xx yy	Associate telephone assignment for Meridian Link applications
IAPG	(0)-15	Meridian Link Unsolicited Status Message (USM) group
PRI	(1)-48	Priority level for ACD agent
LANG	(0)-5, X	Language choice for Automatic Wake Up service
KEY	xx aaa yyyy	Telephone function key assignments

Easy change

Use this procedure to change an existing telephone.

REQ	CHG	Change a telephone
TYPE	aaaa	Type of telephone or data port
TN	l s c u	Terminal Number
ECHG	Yes	Easy Change
ITEM	aaaa bbbb	Enter the prompt (aaaa) and its new value (bbbb). For example, to add an autodial key to a telephone:

REQ CHG
TYPE SL1
TN l s c u
ECHG YES
ITEM KEY 07 ADL
KEY <cr> (KEY is prompted until <cr> is entered)
ITEM <cr>
REQ

Copy command

Note 1: ACD supervisory telephones cannot be copied.

Note 2: Associate set (AST) assignments are not copied to the new telephones.

REQ	CPY xx	Copy 1-32 telephones
TYPE	aaa	Type of telephone
CFTN	l s c u	Copy from TN. Use this TN as the template for new telephones.
SFMT	aaaa	Select format for the copy command
	AUTO	The new DNs or position IDs (for ACD telephones) and TNs are provided by the system. You are prompted for the starting DN or position ID and TN, The system automatically selects consecutive unused DNs or ACD position IDs and TNs.
	TNDN	Manual selection of DNs or ACD position IDs and TNs. You are prompted for the DN or ACD position ID and TN of each new telephone.
	TN	The new DNs or ACD position IDs are provided by the system. You are prompted for the starting DN or ACD position ID and each TN.
	DN	The new TNs are provided by the system. You are prompted for the starting TN and each DN or ACD position ID.

Remove a telephone

Before removing an ACD agent telephone, first remove the associated AGT key on the supervisor's telephone.

REQ	OUT	Remove
TYPE	aaaa	Type of telephone or data port
TN	l s c u	Terminal Number

Move a telephone

If moving a voice unit with an associated data unit, the data unit must also be moved. On NT8D02 Digital Line Cards, both voice and data TNs can be moved by entering "MOV PAIR" in response to prompt "REQ."

REQ	MOV	Move a single TN
TYPE	aaaa	Type of telephone or data port
TN	l s c u	Existing Terminal Number
TOTN	l s c u	Destination TN

REQ	MOV PAIR	Move voice and data TNs on NT8D02 Digital Line card
TYPE	aaaa	Type of telephone or data port
TN	l s c u	Existing voice TN
TOTN	l s c u	Destination voice TN

Alphabetical list of prompts

ADCP **Yes, (No)** — All-digital connection prefix. adm-5

Enter yes to enable All-digital connection prefix.
Prompted only if DTYP = ODS or IOS.

AOM **(0)-2** — Number of key expansion modules. arie-14

Valid for M2016, M2216 and M2616 telephones.

AST **xx yy** — Associate telephone assignment for Meridian Link applications. iap3p-12

Enter the DN Key numbers for the Associate Set (AST) assignment. A maximum of two DN keys (xx and yy) can be assigned for host computer control. Precede with "X" to delete.

AUT **OFF, (ON)** — Auto Answer. arie-14

Enter On to enable Auto Answer for the data port on M2006, M2008, M2016, M2216 and M2616 telephones. See Note with TOV prompt.

AUTB **OFF, (ON)** — Auto Baud rate disabled (enabled). dac-16

Required for TYPE = R232 or R422, and only if HOT = OFF.

AUTH **n xxxx** — Authorization code. ssau-19

Prompted when CLS = AUTR.
n = the number of the assigned authorization code (1-6)
xxxx = the assigned authorization code
(can be any authorization code assigned in LD88)

BAUD **0-12** — Baud rate. mcu/arie-19

Enter the Data Rate in bps for the data port on M2006, M2008, M2016, M2216, M2616 telephones, and Data Access Cards.

The following values apply to:
MPDA-1
MCA with DTAO = MPDA and TRAN = ASYN
MCA with DTAO = MCA, or TYPE = MCU and TRAN = ASYN.
0 = 110
1 = 150
2 = 300
3 = 600
4 = 1200
5 = 2400
6 = 4800
7 = (9600)
8 = 19,200

The following values apply to:
MCA with DTAO = MPDA (with MCA hardware) and TRAN = SYN, MCA with TRAN = SYN, and MCA with DTAO = MCA, and TYPE MCU.
0 = 1200
1 = 2400
2 = 3600
3 = 4800
4 = 7200
5 = 9600
6 = 14,400
7 = 19,200
8 = 38,400
9 = 40,800
10 = 48,000
11 = (56000)
12 = 64,000

See Note with TOV prompt.

Note: With DAC in X11 release 16 and later, BAUD is prompted only if AUTB = OFF.

CDEN **SD, DD, 4D** — Single, double or quad density (not prompted for superloops). basic-7

CDEN defaults to the density of the network loop.

CFTN **l s c u** — Copy from TN. basic-12

Enter the source TN to be copied. Data from that source is copied to configure more telephones. Prompted only if REQ = CPY.

CLK **ON, (OFF)** — Clock. arie-14

Applies only to M2008, M2016, M2216, M2616 telephones. See Note with TOV prompt.

CLS **aaaa** — Class of Service options. basic-1

The following CLS assignments determine the calling options and features available to the telephone. Defaults are shown in parentheses. Enter each non-default option required, separated by a space.

CLS **AAA, (AAD)** — Automatic Answerback allowed (denied). aab-10

Automatic Answerback can be used on telephones with handsfree capability (M2112, M2317, M2616, M3000 and SL1). A special hardware kit is required for SL-1 sets and Companion 4 speakerphones. Automatic Answerback must have CLS = HFA for M2616 telephones.

CLS **ADD, DDS, TDD, NDD** — Digit display options. ddsp-1

The digit display class of service options are:
ADD = Automatic digit display (default for M2008, M2216, M2317, M2616, M2016S, M3000)
DDS = Delay display (display activates after the call is answered)
TDD = M3000 digit display
NDD = No digit display (default for SL-1, M2006, M2009, M2112, M2018)

Note: The default for M3000 is ADD, the recommended value is TDD.

CLS **ADV, (DDV)** — Data port verification allowed (denied). amp-5

CLS **ALDR, (NLDR)** — No Lock Directory softkey on M3000 touch profile screen allowed (denied). amp-5

CLS **AOS, (DOS)** — Observation of Supervisor allowed (denied). acdb-1

Must also have CLS = SPV.

CLS **ARHA, (ARHD)** — Audible Reminder of Held Call allowed (denied). basic-14

CLS **ASCA, (ASCD)** — Alarm Security allowed (denied). ohas-18

CLS **CCSA, (CCSD)** — Controlled Class Of Service allowed (denied). ccos-7

CCSA is also required for the Electronic Lock feature. See Flexible Feature Codes in X11 features and services (553-3001-305).

CCSA is not allowed on ACD agent telephones.

CLS	**AUTR, (AUTU), AUTD** — Authorization code class of service. AUTR = Restricted authcode AUTU = Unrestricted authcode AUTD = Denied authcode This class of service is valid only when Station Specific Authorization Codes (package 229) is equipped. When the CLS is changed from AUTR to AUTU or AUTD, all previous telephone authorization code informationm is removed.	ssau-19
CLS	**CFTA, (CFTD)** — Call Forward by Call Type allowed (denied). If response is CFTA, you must also designate HTA, FNA, or both. Call Forward by Call Type enhances Hunt and Call Forward No Answer.	optf-10
CLS	**(CFXD), CFXA** — Call Forward All Calls to External DN (denied) allowed. When denied, a call can only be forwarded to the following internal DNs: — single or multi-line telephone — attendant DN or CAS local attendant DN — listed DN as defined in LD15 — message center DN (MWC = yes) With X11 release 18 and earlier, the default is CFXA.	optf-19
CLS	**CLTA, (CLTD)** — Network Call Trace from this telephone allowed (denied).	pra-17
CLS	**CMSA, (CMSD)** — Command and Status link allowed (denied). CMSA is supported by SL-1 telephones only.	csl-8
CLS	**CNDA, (CNDD)** — Call Party Name Display allowed (denied). CNDA allows user names to be displayed on the telephone's digit display.	cpnd-10
CLS	**CNIA, (CNID)** — Call Number Information allowed (denied). This applies only to Background Terminal (BGD) applications in the Hotel/Motel environment.	bgd-10
CLS	**CNTA, (CNTD)** — Network ACD countdown allowed (denied). Only allowed on ACD agent telephones.	nacd-15

CLS **DNDA, (DNDD)** – Dialed Name Display allowed (denied). cpnd-13

DNDA allows the display of the originally dialed DN's names on redirected calls. Name display applies to M2317, M3000 or Meridian Modular telephones with displays. Allowed only if:
– CPND package is equipped
– CLS is CNDA
– CLS is not DTA

CLS **DPUA, (DPUD)** – DN Pickup allowed (denied). dcp-12

DN Pickup is not allowed on telephones in group zero (RNPG = 0). See "Call Pickup, Directed" in X11 features and services (553-3001-305).

CLS **DRGx** – Digital telephone distinctive ringing. drng-7

There are four types of distinctive ringing. The default is DRG1.

(DRG1) = high fast tone, frequency 667/500 Hz, warble rate 10.0 Hz
DRG2 = high slow tone, frequency 667/500 Hz, warble rate 2.5 Hz
DRG3 = low fast tone, frequency 250/333 Hz, warble rate 10.0 Hz
DRG4 = low slow tone, frequency 250/333 Hz, warble rate 2.5 Hz

The DRG3/4 distinctive ringing for M2006 and M2008 telephones are different:

DRG3 = low fast tone, frequency 1600/2000 Hz, warble rate 10.0 Hz
DRG4 = low slow tone, frequency 1600/2000 Hz, warble rate 2.5 Hz

CLS **DSI, (DSX)** – Data Service access allowed (denied). csl-8

CLS is automatically set to DTA. TYPE must be SL1.

CLS **DTA, (VCE)** – Data (DTA) or voice terminal (VCE). basic-5

VCE is used for voice TNs, DTA is used for data TNs. For digital line cards the TN range is VCE = 0-7, DTA = 8-15. For NT8D02 Digital Line cards, the range is VCE 0-15, DTA = 16-31.

CLS **FBA, (FBD)** – Call Forward Busy allowed (denied). basic-1

This feature sends DID calls encountering a busy condition to the attendant. Call Forward Busy should have Hunting and Call Waiting denied (CLS = HTD and CWD) since Hunting and Call Waiting takes precedence or FBA.

CLS **FITA, (FITD)** – Flexible Incoming Tones allowed (denied). basic-14

For SL-1 sets, FITA requires LD15 prompt OPT = SBA. For digital telephones, FITA requires LD15 prompt OPT = DBA.

CLS **FNA, (FND)** – Call Forward No Answer allowed (denied). basic-1

CLS	**FRN, (ENG)** — French, (English) language display for M2317 telephones.	dlt2-12
CLS	**GPUA, (GPUD)** — Group Pick-up allowed (denied). Group Pickup is not allowed on telephones in group zero (RNPG = 0). See "Call Pickup, Directed" in X11 features and services (553-3001-305).	dcp-12
CLS	**HFA, (HFD)** — Digital Telephone Handsfree allowed (denied). Only available for M2616 telephones. Handsfree capability on all other telephones is a function of the hardware and does not require HFA class of service in order to operate.	arie-14
CLS	**HPR, (LPR)** — High (low) priority telephone. This is an engineering parameter which assigns the telephone to the CPU work scheduler's high or low priority input buffers.	basic-1
CLS	**HTA, (HTD)** — Hunting allowed (denied).	basic-1
CLS	**ICDA, (ICDD)** — Internal Call Detail recording allowed (denied).	icdr-10
CLS	**IMA, (IMD)** — IMS attendant allowed (denied).	ims-2
CLS	**IRA, (IRD)** — Incoming ringing line preference allowed (denied).	lsel-4
CLS	**LDN, (PDN)** — Listed DN (prime DN) is used for Calling Line Identification (CLID). This option determines the information displayed on telephones with displays.	pra-12
CLS	**LLC1, LLC2, LLC3, (LLCN)** — Line Load Control. LLCN = Line Load Control off LLC1 = Class 1 LLC1 = Class 2 LLC1 = Class 3	llc-10
CLS	**LNA, (LND)** — Last Number Redial allowed (denied). Last Number Redial must first be enabled in the Customer Data block (LD15 prompt OPT = LNA).	lnr-8
CLS	**MCTA, (MCTD)** — Malicious Call Trace allowed (denied). The MCT key must be removed before changing MCTA to MCTD. MCT only traces internal DNs.	mct-10
CLS	**MRA, (MRD)** — Message Registration allowed (denied).	mr-10
CLS	**MTA, (MTD)** — Maintenance telephone allowed (denied).	basic-1

CLS	**MWA, (MWD)** — Message Waiting allowed (denied).	mwc-1
	If CLS = MWA and there is no Message Waiting key (MWK) defined, then the broken dial tone is used for message waiting notification.	
CLS	**NIA, (NID)** — Non-ringing Incoming line preference allowed (denied).	lsel-4
CLS	**OLA, (OLD)** — Outgoing Line preference allowed (denied).	lsel-4
CLS	**POA, (POD)** — Privacy Override allowed (denied).	basic-5
	This feature is used with multiple appearance DNs.	
CLS	**PUD, (PUA)** — Call Pickup denied (allowed).	optf-1
	Call Pickup is not allowed on telephones in group zero (RNPG = 0).	
CLS	**SFA, (SFD)** — Second Level CFNA allowed (denied).	optf-10
	Prior to X11 release 15, SFA must have both FNA and MWD class of service. In X11 release 15 and later, SFA only requires FNA class of service.	
CLS	**SPV, (AGN)** — ACD supervisor (agent).	acda-1
CLS	**SWA, (SWD)** — Station-to-station Call Waiting allowed (denied).	basic-8
	A Call Waiting key (CWT) must be defined. Must have CLS = HTD since hunting takes precedence.	
CLS	**TEND, (TENA)** — Tenant service denied (allowed).	tens-7
	Multi-Tenant must be configured in LD93 before the default is TENA.	
CLS	**UNR** — Access restrictions.	basic-1
	(UNR) = Unrestricted TLD = Toll Denied SRE = Semirestricted FRE = Fully Restricted FR1 = Fully Restricted class 1 FR2 = Fully Restricted class 2 CUN = Conditionally Unrestricted CTD = Conditionally Toll Denied	
CLS	**USMA, (USMD)** — Meridian 911 position.	m911-19
	This class of service is allowed only if the Meridian 911 package (224) is equipped.	
CLS	**USRA, (USRD)** — User Selectable Call Redirection allowed (denied).	uscr-19
CLS	**VMA, (VMD)** — Server Voice Messaging allowed (denied).	csl-8
CLS	**WTD, (WTA)** — Warning Tone denied (allowed).	basic-1

CLS **XHA, (XHD)** – Exclusive Hold allowed (denied). dhld-4

CPND **NEW/OUT/CHG** – Calling Party Name Display gateway. cpnd-19

This prompt allows the required CPND prompts to appear, and assigns the data to the DN. When CPND = NEW, FTR CPND is automatically assigned to the telephone.

CPND_LANG

(ROM), KAT – CPND language. cpnd-19

This prompt appears when FTR = CPND, and DN_DATA = Yes.
ROM = Roman
KAT = Katakana

CUST **0-99** – Customer number. basic-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DCD **OFF, (ON)** – Dynamic Carrier Detect (CD). arie-14

Enter "ON" to enable Dynamic CD. If DCD = OFF, carrier detect starts as inactive and follows the state of the call. Applies only to M2006, M2008, M2016, M2216, M2616 telephones, and the Data Access Card (DAC). See Note with TOV prompt.

Note: With a Data Access Card in X11 release 16 and later, DCD is prompted only if TYPE = R232.

DELETE_VMB

(Yes), No – Remove the voice mailbox on the Meridian 1 and Meridian Mail. vmba-19

This is allowed only when the DN is a single appearance (or Multiple Appearance DN on a single TN) and there is an associated Voice Mailbox. Responding No to this prompt deletes the mailbox on the Meridian 1, and preserves it on the Meridian Mail system.

DEM **DTE, (DCE)** — Data equipment mode. dac-16

Prompted only if TYPE = R232.
DTE = Data Terminal Equipment mode
DCE = Data Communications Equipment mode

DES **a...x** — ODAS telephone designator. odas-1

Enter one to six-character alphanumeric ODAS telephone designator.

DISPLAY_FMT

LAST, FIRST/(FIRST, LAST) — Display format for CPND name. cpnd-19

LAST, FIRST = Last name, First name (Walker, Alice)
FIRST, LAST = First name, Last name (Alice, Walker)

DLNG **FRN, (ENG)** — French or English data port language. dac-16

Choose the language preference for your Data Access Card (DAC) display modes. Prompted only if TYPE = R232 or R422.

DN **xxx...x** — Directory Number. basic-12

Prompted when using the copy command. If the DNXP package (150) is equipped, up to 7 digits are allowed otherwise, only 4 digits can be entered; and, ISDN applications can accept up to 13 digits.

DTAO **(MPDA), MCA** — Data option. arie-18

This prompt determines the downloaded data, system, and operating parameters.
MPDA = software for Meridian Programmable Data Adapter
MCA = software for Meridian Communications Adaptor
DTAO is not prompted if TYPE = MCU.

DTR **ON, (OFF)** — Forced DTR. arie-14

Enter "ON" to force the data port on M2006, M2008, M2016, M2216, M2616 telephones to be always ready for transmission. See the note with the TOV prompt.

Note: With the Data Access Card (DAC), DTR is prompted only if TYPE = R232.

DTYP **ODS, IDS, IOS** — Data station type. amp-5

Allowed values are:
ODS = outbound data station
IDS = inbound data station
IOS = inbound/outbound data Station

DUP **HALF, (FULL)** — Full duplex/half duplex. arie-14

Define the duplex mode for the data port on M2006, M2008, M2016, M2216, M2616 telephones. See Note with TOV prompt.

ECHG **Yes, (No)** — Easy Change. basic-12

When ECHG = Yes, ITEM is prompted. Respond to ITEM with the desired prompt and its new value. This allows you to change any prompt in this overlay without toggling through all the prompts.

EFD **xxx...x** — Flexible CFNA DN for external calls. optf-10

This is the DN to which external calls are routed when there is no answer. Call Forward by Call Type allowed class of service (CFTA) must be defined. LDNs, DLDNs, and Prime DNs are accepted as valid input. EFD is only used if one of the following customer options are defined in LD15:

FNAD = FDN
FNAT = FDN
FNAL = FDN

With X11 release 16 and later, EFD can be up to 13 digits.

EHT **xxx...x** — External Hunt DN. basic-10

This is the DN to which external no answer calls hunt when class of service is Call Forward by Call Type allowed (CFTA). Accepted only if CLS = CFTA.

Listed DNs, Departmental Listed DNs and prime DNs are accepted as valid input. With X11 release 16 and later, EHT can be up to 13 digits.

To remove EFD or EHT DNs, change CFTA class of service to CFTD. Enter "000" to enable Short Hunt for External calls.

FCAR **Yes, (No)** — Forced Charge Account restriction. chg-1

Yes = restrict from using Forced Charge Account
No = must use Forced Charge Account

Prompted only if LD15 prompt FCAF = Yes, and CLS = TLD, CUN or CTD. TLD is recommended.

FDN **xxx...x** — Flexible CFNA DN. optf-1

FDN is used for internal calls, if CLS is CFTA and FNA. FDN is used for all calls if CLS is CFTD and FNA.

FDN requires CLS = MWA or FNA. FDN is only used if one or more of the following customer options are defined in LD15:
FNAD = FDN
FNAT = FDN
FNAL = FDN

Starting with X11 release 14, FDN can be up to 13 digits.

FSVC **(0)-9** — Off-Hook Alarm Security DN index for forced out of service. basic-18

When forced out of service condition occurs on a digital telephone with Alarm Security Allowed (ASCA) class of service, the telephone is intercepted to a predefined DN.

Enter the index number (0-9) of the DN defined by LD15 prompts ODN0-9.

HDLC **Yes, (No)** — High Level Data Link Control. arie-18

Prompted only if V25 = Yes.

HOT **ON, (OFF)** — Hot Line services enabled (disabled). arie-14

Enter ON to enable Hot Line for the data port on M2006, M2008, M2016, M2216, M2616 telephones. See Note with TOV prompt.

Note: For the Data Access Card (DAC) in X11 release 16, if HOT = ON, Autobaud (AUTB) is set to OFF.

HUNT **xxx.. x** — Hunt DN for internal calls. basic-10

Enter the DN of the next station in the Hunt chain.

With Call Forward and Hunt by Call Type, this is the Hunt DN for internal calls if CLS = CFTA, or for all busy calls if CLS = CFTD.

Starting with X11 release 14, the Hunt DN can be up to 13 digits. Precede with an "X" to remove the Hunt number (Xxxxx).

Enter "000" to enable Short Hunting.

IAPG **(0)-15** — Meridian Link Unsolicited Status Message (USM) group. aml-16

Assign Associate (AST) telephones to a USM group defined in LD15. These groups determine which status messages are sent to the host computer for an AST telephone. The default Group 0 sends no messages, while Group 1 sends all messages.

Note: The range in X11 release 16 and earlier is 0-9.

LD11

INT **ON, (OFF)** — Meridian 1/SL-100 interworking. arie-14

ON enables Meridian 1 and SL-100 interworking for M2006, M2008, M2016, M2216 and M2616 telephones. See also notes for the TOV prompt.

ITEM **aaaa yyy** — Change any prompt. basic-12

Enter any prompt and its new value. For example, to set Call Forward No Answer Allowed class of service, enter: CLS FNA

ITEM is reprompted until only a carriage return <cr> is entered.

KBD **OFF, (ON)** — Hayes/Keyboard dialing mode. dac-16

ON = enables keyboard dialing for the data port on M2006, M2008, M2016, M2216, M2616 telephones. OFF = puts port in Hayes mode.

Prompted also if TYPE = R232 or R422. See note with TOV prompt.

KEEP_MSGS

Yes, (No) — Preserve Meridian Mail messages, and current password. oam-19

This is prompted only when VMB = New. When this is YES, the current password and messages are kept on Meridian Mail if a voice mailbox with the same DN already exists.

KEY **xx aaa yyyy** — Telephone function key assignments. basic-1

The following key assignments determine calling options and features available to a telephone. KEY is reprompted until just a carriage return <cr> is entered.

xx = key number
aaa = key name or function
yyy = additional information required for the key

Some data ports require specific key assignments as defined in the following notes.

Note 1: Only key number 0-7 can be assigned for M2008 telephones. For the M2006, only keys 0-5 can be assigned. For the M2016S, M2216 and M2616, definable keys vary with the number of key expansion modules equipped. A maximum of 59 keys, 2 modules, is allowed.

Note 2: If Meridian Programmable Data Adapter (MPDA) is equipped, key 7 on the M2008, M2016S, M2216, and M2616; and key 5 on the M2006 are Program keys and cannot be used as function keys. Any print of the TN block will not show key 7 because it is a local function key. SL-1 telephones with three QMT2 key/lamp strips have a maximum of 70 keys (0-69).

Note 3: On the M2616, if HFA class of service is defined, key 15 on the voice TN defaults to Handsfree key. No other feature assignment is accepted.

Note 4: Primary and secondary data TNs must be unique DNs. Feature key assignments must be in the positions shown above.

KEY **xx AAG** — ACD answer agent key. acdb-1

Applicable when CLS = SPV.

KEY **xx AAK** — Automatic Answer Back key. aab-1

AAA CLS and AAK key cannot be assigned to the same telephone. Only one type of automatic answer back is allowed. M2616S telephones must have CLS = HFA.

KEY **xx ACD xxxx yyyyyyy** — ACD agent key. bacd-1

Automatic Call Distribution (ACD) agent key or Message Center virtual TN. Where,
xx = key number (must be key 0)
xxxx = ACD DN or Message Center DN
yyyy = agent's position ID

If the DNXP package is equipped, up to 7 digits are allowed for the ACD DN and agent position ID; otherwise, only 4 digits can be entered.

An ACD key may not be assigned to a telephone with CCSA class of service, or a non-zero SCI.

KEY **xx ACNT** — Activity Code entry key. acdd-13

This key must have an associated lamp. This key applies to ACD-D and ACD-MAX only. ADS data block must be configured in LD23.

KEY **xx ADL yy zzzz...** — Autodial key. optf-1

yy = maximum length of the DN: 4, 8, 12, (16), 20, 23 (other values are rounded up)
zzzz = actual Autodial DN (optional)

KEY **xx AGT yyyy** — ACD agent key (xx) and agent ID (yyyy). bacd-1

Must have CLS = SPV. If the DNXP package is equipped, up to 7 digits are allowed for the agent position ID; otherwise, a maximum of 4 digits can be entered.

KEY **xx AMG** — ACD Answer Emergency call key. acdb-1

Must have CLS = SPV.

KEY **xx AO3** — 3-party Conference key. basic-1

KEY **xx AO6** — 6-party Conference key. basic-1

KEY **xx ARC** — Attendant Recall key. basic-1

KEY **xx ASP** — ACD supervisor call key. acdb-1

KEY **xx AWC** — ACD calls waiting key. bacd-1

Applicable when CLS = AGN. Supervisor Position ID (SPID) must be configured.

KEY **xx CA yy zzzz** — Combined No Hold Conference and Autodial key. basic-14

yy = maximum length of the DN. Valid entires are: 4, 8, 12, (16), 20, 23. Numbers between 4 and 23 are rounded up to the next valid number.
zzz = the actual Autodial DN (optional)

KEY **xx CAS** – Centralized attendant service key. casm-1

KEY **xx CFW yy xxxx** – Call Forward key. optf-1

yy = maximum length of the DN. Valid entires are: 4, 8, 12, (16), 20, 23. Numbers between 4 and 23 are rounded up to the next valid number.
xxxx = Call Forward DN

If CLS = CFXD, the Call Forward number is allowed only if it is an internal DN.

KEY **xx CH D yy xxxx** – Combined No Hold Conference and Direct Hot Line key. basic-14

yy = maximum number of dialed digits (1-31)
xxxx = actual dialed digits

KEY **xx CH L yyyy** – Combined No Hold Conference and Hot Line List key. basic-14

yyyy = Hot Line list entry defined in LD18.

KEY **xx CHG** – Charge Account key. chg-1

KEY **xx COS** – Controlled Class of Service key. ccos-7

KEY **xx CPN** – Calling Party Number key. chg-1

KEY **xx CS yyyy** – Combined No Hold Conference and Speed Call key. basic-14

yyyy = Speed Call list number. Not available on M3000 telephones.

KEY **xx CWT** – Call Waiting key. basic-1

Only one CWT key is allowed. Should have CLS = HTD since hunting takes precedence.

KEY **xx DAG** – Display ACD agents key. bacd-1

This key displays the status of ACD agents appearing on the supervisors telephone. Must have CLS = SPV.

KEY **xx DIG xxxx yy R/V** – Dial intercom group key. di-1

xxxx = group number (0-253) (0-2045 in X11 release 13 and later)
yy = member number (0-99)
R/V = ring or voice option

The value entered for the member number (yy) cannot be equal to the SPRE code. In the case of double-digit values, the first digit cannot be the same as the SPRE code either. For example, if SPRE = 7, yy cannot be 70, 71...79.

Note: If any member in a group has a 2-digit member number, then all members have a 2-digit number. The system adds leading zeros to other entries.

KEY xx **DPU** — Directed Call Pickup key. dcp-12

Prompted only if Directed Call Pickup (DCP) is equipped. Key is optional, dial access code can be used if CLS = DPUA. Not available on M3000 telephones.

See "Call Pickup, Directed" in X11 features and services (553-3001-305).

KEY xx **DRC yyy** — DID Route Control key. basic-15

yyy = route number 0-511.

KEY xx **DSP** — Digit display key. ddsp-1

This key must have an associated key/lamp pair.

KEY xx **DWC yyyy** — ACD display waiting calls key. bacd-19

yyyy = ACD DN. Must have CLS = SPV and ADD.

With X11 release 19 and later, ACD agent telephones can support the display waiting calls key. The telephone must have CLS = ADD.

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

Note 1: A maximum of 8 DWC keys can be assigned per supervisor. There is no limit to the number of keys that can be assigned to an agent.

Note 2: With X11 release 18 and earlier, this key applies to supervisor telephones only. X11 release 19 and later allows the key to be used with supervisors and agents.

KEY xx **EMR** — ACD emergency key. acdb-1

Applicable when CLS = AGN or SPV.

KEY xx **ENI yyyy** — ACD enable interflow key. acdb-1

yyyy = ACD DN. Applicable when CLS = SPV. Only one per ACD DN is supported.

KEY xx **GPU** — Group Number Pickup key. dcp-12

Prompted only if DCP is equipped. The key is optional; because, a dial access code can be used if CLS = GPUA. Not available on M3000 telephones.

KEY xx **GRC yy** — Group Call key. grp-1

yy = group number (0-63).

KEY **xx HOT D dd yyy...y** — One-way Hot Line key. hot-10

dd = number of digits dialed
yyy...y = Hot Line terminating DN (up to 31 digits)

KEY **xx HOT D dd yyy...y zzzz** — Two-way Hot Line DN key. hot-10

dd = number of digits dialed
yyy...y = Hot Line terminating DN (up to 31 digits)
zzzz = Two-way Hot Line DN.

If the DNXP package is equipped, up to 7 digits are allowed for two-way Hot Line DN; otherwise, a maximum of 4 digits can be entered.

KEY **xx HOT L bbb** — One-way Hot Line list key. hot-10

bbb = Hot Line list entry (0-999)

KEY **xx HOT L bbb yyyy** — Two-way Hot Line list key. hot-10

bbb = Hot Line list entry (0-999)
yyyy = Two-way Hot Line DN

If the DNXP package is equipped, up to 7 digits are allowed for two-way Hot Line DN; otherwise, a maximum of 4 digits can be entered.

KEY **xx ICF 4-(16)-23 xxxx** — Internal Call Forward key. icf-19

Allowed if Call Forward is enabled. 4-(16)-23 = the forward DN length. xxx = the forward DN (optional).

KEY **xx LNG** — M2317 Language toggle key. dlt2-9

This feature allows a user to set and reset the language display, toggling between French and English versions on the alphanumeric display.

Note: Key xx must = 29.

KEY **xx LNK** — Last number redial key. lnr-8

Must have CLS = LNA. The key definition is optional, because the user can press the DN key to activate Last Number redial.

KEY **xx MCK** — Message cancellation key. mwc-1

KEY **xx MCN yyyy** — Multiple call non-ringing DN key. basic-1

yyyy = the DN. Cannot appear simultaneously on a 500/2500 DN or as a Single Call Ringing (SCR) DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

KEY	**xx MCR yyyy** – Multiple call ringing DN key. yyyy = the DN. Cannot appear simultaneously on a 500/2500 DN or as a Single Call Ringing (SCR) DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.	basic-1
KEY	**xx MIK** – Message indication key.	mwc-1
KEY	**xx MMM** – Voice/Data Display key. Only key number 0-7 can be assigned for M2008. M2x16 varies with additional add-on modules. Maximum key number is 59. Data Port requires specific key assignments. The M2006, M2008, M2016, M2216, and M2616 telephones do not work with the A or B vintage of ISDLC; vintage C or higher is required.	amp-5
KEY	**xx MRK** – Message Registration key.	mr-10
KEY	**xx MSB** – Make Set Busy key.	msb-1
KEY	**xx MWK yyy...y** – Message Waiting key. yyy...y = message center DN. If the DNXP package is equipped, up to 7 digits are allowed, and ISDN applications can accept up to 13 digits; otherwise, only 4 digits can be entered. With the Network Message Service feature equipped, the NMS-DN can be up to 13 digits.	mwc-1
KEY	**xx NHC** – No Hold Conference key.	basic-14
KEY	**xx NRD** – Not Ready key. Applicable when CLS = AGN or SPV.	bacd-1
KEY	**xx NSVC yyyy** – Night Service key. yyyy = ACD DN with that service. Applicable when CLS = SPV. Only one per ACD DN is supported.	bacd-12
KEY	**xx NUL** – Null key. Use the NUL key to remove function of a key.	basic-1
KEY	**xx OBV** – ACD observe. Applicable when CLS = SPV.	bacd-12
KEY	**xx OVB** – Overflow Position Busy key.	aop-1
KEY	**xx OVR** – Override key.	optf-1

KEY	xx **PRK** – Call Park key. The Transfer (TRN), or 6-party Conference (A06) key plus a dial access code can be used instead of the Park key.	cprk-2
KEY	xx **PRS** – Privacy Release key.	basic-1
KEY	xx **PVN** yyyy – Private line non-ringing DN key. yyyy = DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Must have PRDN defined in LD14.	basic-1
KEY	xx **PVR** yyyy – Private line ringing DN key. yyyy = DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Must have PRDN defined in LD14.	basic-1
KEY	xx **RAG** – ACD call agent key. Applicable when CLS = SPV.	acdb-1
KEY	xx **RDL** yy – Stored Number Redial key. yy = maximum length of the DN: 4, 8, 12, (16), 20, 23 (other values are rounded up). The M2317 telephones are factory configured with this key.	snr-3
KEY	xx **RGA** – Ring Again key.	optf-1
KEY	xx **RLS** – Release key for SL-1 sets. Key lamp is not required.	basic-1
KEY	xx **RMK** – Room Status key.	rms-10
KEY	xx **RNP** – Ringing Number Pick-up key. Key lamp is not required. Key is optional. A dial access code can be used instead.	basic-1
KEY	xx **SCC** yyyy – Speed Call controller key. yyyy = Speed Call list number: 0-253 (0-8190 in X11 release 13 and later).	optf-1
KEY	xx **SCN** yyyy – Single call non-ringing DN key. yyyy = DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.	basic-1

KEY	**xx SCR yyyy** — Single call ringing DN key. yyyy = DN. Use a single appearance DN to terminate Voice Call (VCC) or Signaling (SIG). If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.	basic-1
KEY	**xx SCU yyyy** — Speed Call user key. yyyy = Speed Call list number: 0-253 (0-8190 in X11 release 13 and later).	optf-1
KEY	**xx SIG yyyy** — Signaling key. yyyy = a single appearance DN. Key lamp is not required. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.	basic-1
KEY	**xx SSC yyyy** — System Speed Call controller key. yyyy = Speed Call list number: 0-253 (0-4095 in X11 release 13 and later).	optf-1
KEY	**xx SSU yy** — System Speed Call user key. yy = Speed Call list number: 0-253 (0-4095 in X11 release 13 and later).	optf-1
KEY	**xx TAD** — Time and date key. SL-1 telephones only. Cannot be key 0. The key must have a lamp.	ddsp-1
KEY	**xx THF** — Centrex Switchhook Flash key.	thf-14
KEY	**xx TRC** — Malicious Call Trace key. Key lamp is not required. Must have CLS = MCTA. MCT is applied on a TN basis. With X11 release 19 and later, this key can be configured on ACD telephones.	mct-19
KEY	**xx TRN** — Call Transfer key.	basic-1
KEY	**xx USR** — User Selectable Call Redirection key.	uscr-19
KEY	**xx UST** — User Status key.	ims-2
KEY	**xx VCC yyyy** — Voice Call key. yyyy = a single appearance DN. Not available on M3000 telephones.	basic-1
KEY	**xx WUK** — Guest Entry of Automatic Wake Up call. Key number for a guest entered AWU call. A key/lamp pair is required.	gewu-16

KLS **1-7** — Number of key/lamp strips. basic-1

Enter the number of key/lamp strips, including add-on key/lamp modules. Only required if TYPE = SL1, although KLS appears in LD20 outputs for M2009, M2018, M2112, M2317 and M3000 telephones.

Digital telephones use Add-on Modules (AOM).

LANG **(0)-5, X** — Language choice for Automatic Wake Up service. mlwu-16

This entry defines the language presented for the Automatic Wake Up recorded announcement (RAN).

0 = Language 0 (see prompts RAN1/RAN2 in LD15)
1 = Language 1 (see prompts LA11/LA12 in LD15)
2 = Language 2 (see prompts LA21/LA22 in LD15)
3 = Language 3 (see prompts LA31/LA32 in LD15)
4 = Language 4 (see prompts LA41/LA42 in LD15)
5 = Language 5 (see prompts LA51/LA52 in LD15)
X = To remove an entry

Prompted only if the Multi-Language Wake Up (MLWU) package (206) is equipped.

LDN **0-5, (no)** — Departmental Listed DN. nldn-20

With X11 release 19 and earlier, the allowed range is 0-3. LDN = No indicates no LDN is used.

LHK **(0)-69** — Last Hunt Key. basic-10

Used for Internal/External Short Hunt. Enter 0 to remove.

LNRS **4-(16)-32** — Last Number Redial size. lnr-8

Enter the maximum number of digits that can be stored. Valid entries are: 4, 8, 12, (16), 24, 28, or 32 digits. Numbers between 4 and 32 are rounded up to the next valid number.

LPK **(0)-69** — Last key for Automatic Line Preference. lsel-4

Enter the last key number scanned for Automatic Line Preference. Prompted only if CLS = IRA, NIA, or OLA.

LTN **xxx yy** — Logical TN and AUX link number. amp-5

Enter the logical TN (xx) and AUX link number. The ranges are:

xxx = 1-253
yy = 0-15

LTN is prompted only if CLS = IMA and a valid APL link is listed for the IMA in LD15.

MARP **Yes, (No)** – Use TN as the Multiple Appearance DN Redirection Prime. basic-18

The MARP prompt, or MARP message, appears following the DN KEY designation, and is associated with those DN assignments.

MAUT **Yes, (No)** – Modify authorization codes for this telephone. ssau-19

This is prompted only when the Station Specific Authorization Codes package (229) is equipped, and CLS = AUTR.

MOD **Yes, (No)** – Modem, (Network). arie-14

No = Network (required for Meridian Programmable Data Adapter
Yes = Modem (synchronizes to clock in external device, such as QMT21)

Applies only to M2006, M2008, M2016, M2216 and M2616 telephones. See Note with TOV prompt.

MPHI **Yes, (No)** – Meridian Communications Unit used as MPH interface. mph-19

MPR **0-511** – Modem Pool Route number. amp-5

Enter the Modem Pool Route number.

NAME **aaaa, bbbb** – CPND name. cpnd-19

The order the name is entered is First name, Last name (Alice, Walker).

Up to 27 character can be entered, including commas. The last occurence in a group of commas is used as a delimiter.

A name entry followed by a comma (bbbb,) stores the last name only (comma is optional). A comma followed by a name (,aaa) stores the first name only.

NCOS **(0)-99** – Network Class Of Service group number. ncos-1

The ranges for Network Class Of Service group are:
(0)-3 for standalone CDP
(0)-7 for BARS/CDP and NFCR
(0)-15 for NARS and NFCR
(0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later

OHID **(0)-9** – Off-Hook Alarm Security DN index for off-hook or interdigit timeout. basic-18

When a dial tone or interdigit timeout occurs on a set with Alarm Security Allowed (ASCA) class of service, the set is intercepted to a predefined DN.

Enter the index number (0-9) of the DN defined by LD15 prompts ODNx.

OPE **Yes, (No)** — Change data port parameters. mcu/arie-19

Enter yes to change the data port parameters on M2006, M2008, M2016, M2216, M2616 telephones. With X11 release 19 and later, the parameters on the Meridian Communications Unit (MCU) can also be changed. See Note with TOV prompt.

PAR **EVEN, MARK, ODD, (SPAC)** — Parity type used. arie-14

Define the type of parity used for the data port on M2006, M2008, M2016, M2216, M2616 telephones. Allowed values are:
EVEN = even parity
MARK = mark parity
ODD = odd parity
(SPAC) = space parity

See Note with TOV prompt.

PBDO **ON, (OFF)** — Port Busy when DTR Off. dac-16

Prompted only for TYPE = R232 in operating modes 8 or 12. Switching to any other mode will force PBDO to OFF.
ON = enabled, Key 7 is automatically assigned as Make Set Busy key
(OFF) = disabled

POS **xxxx** — ACD position ID. bacd-12

Prompted when copying ACD telephones. If the DNXP package is equipped, the position ID can be up to 7 digits; otherwise, a maximum of 4 digits can be entered.

PRI **(1)-48** — Priority level for ACD agent. pagt-12

Enter the priority level for ACD agent. The ranges are:
(1)-48 for system options NT, RT, XT, 51, 61, and 71
(1)-32 for all other system options

PRI is prompted only if the Priority Agent Package (PAGT) is equipped and CLS = SPV or AGN.

PRM **OFF, (ON)** — Host mode, (terminal mode). arie-14

OFF = Prompt (KBD Mode)
ON = No Prompt (Host Mode)

Applies only to M2006, M2008, M2016, M2216 and M2616 telephones. See Note with TOV prompt.

PSDS **Yes, (No)** — Public Switched Data Service option. arie-18

With PSDS = Yes, transmission will be synch and the baud will be 56K or 64K. 56K is the default.

PSEL **TLNK, (DMDM)** — T-link or DM-DM protocol selection. arie-18

TLNK protocol is used by SL-100 and DMS data devices, DMDM is used by Meridian 1 data devices such as ASIM, AIM, ADM, SADM, Asynch Data Option (ADO), and MPDA. MCA can use both protocols.

Prompted if DTAO = MCA, or TYPE = MCU.

RCO **(0)-2** — Ringing cycle option for Call Forward No Answer. uscr-19

Prompted when CLS = FNA or MWA (or both).

REQ **aaa** — Action request. basic-1

Enter the action to be performed:
CHG = modify existing data
CPY 1-32 = copy a telephone template to add 1-32 new telephones
END = exit the overlay.
MOV = move from one TN to another
MOV PAIR = move voice and data TNs
NEW = add new data to the system
OUT = remove data block

RNPG **(0)-4095** — Ringing Number Pickup Group. grp-1

The ranges for Ringing Number Pickup Group are:
(0)-255 in X11 release 12 and earlier
(0)-4095 in X11 release 13 and later (with Capacity Expansion)

To remove a telephone from a group, set RNPG to 0.
If RPNG is not defined, CUA or PUD takes precedence, and neither appear as the default CLS.

RTS **OFF, (ON)** — Request to send. mca-18

Applies to asynchronous mode only.

SCI **(0)-7** — Station Category number. sci-7

The station category number 1 to 7 must be defined as attendant console Incoming Call Indicator (LD15 prompt ICI = CA1-CA7).

SCPW **xxx...x** — Station Control password. ffc-15

Enter "X" to remove the password. Must equal Station Control Password Length (SCPL) as defined in LD15. Not prompted if SCPL = 0.

The Station Control password is used for the Electronic Lock and Remote Call Forward features. See "Flexible Feature Codes" in X11 features and services (553-3001-305).

SECOND_DN

xxx...x, X – Second DN sharing the voice mailbox. vmba-19

Enter up to 7 digits with DN Expansion package equipped, or up to 4 digits without DNXP. Entering X at this prompt deletes the second DN.

SFMT **aaaa** – Format of the copy command. basic-12

DNs and/or TNs can be assigned automatically. The next available TN and DN is used from the specified starting TN and DN. The value of aaaa can be:

TN = user enters the TN for each new telephone
DN = user enters the DN for each new telephone
TNDN = user enters both the DN & TN for each new telephone
AUTO = DNs & TNs are assigned automatically for each new telephone
POS = ACD position ID

Based on the above response, you are prompted for the starting TN and/or DN. For ACD telephones, the system prompts POS for each ACD position ID, instead of the DN.

SPID **xxxx** – Supervisor position ID. bacd-1

Enter the supervisor position ID. SPID is prompted only for ACD packages B, C, and D when CLS = AGN. If the supervisor has a key assigned for this agent, you do not need to enter the SPID. The system enters it automatically.

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

SPWD **xxxx** – Secure data password. ssau-19

Prompted only if the password is defined in LD15. If the password is not entered, the security codes will not print when PRT is requested.

SSU **0-4095** – System Speed call list number. ssc-2

The ranges for System Speed call list number are:
0-253
0-4095 (X11 release 13 and later)

Prefix with "X" to delete a system speed call list number.

TEN **1-511** – Multi-Tenant number. tens-7

Enter the Tenant number for this telephone. Prompted only if Multi-Tenant is configured for the customer.

TGAR **(0)-31** — Trunk Group Access Restriction. basic-1

The ranges for TGAR are:
(0)-15
(0)-31 (in X11 release 13 and later)

THIRD_DN

xxx...x, X — Third DN sharing the voice mailbox. vmba-19

Enter up to 7 digits with DN Expansion package equipped, or up to 4 digits without DNXP. Entering X at this prompt deletes the second DN.

TN **l s c u** — Terminal Number. basic-1

The TN defines the location of the telephone. These are the ranges allowed:
loop = 0-159
shelf = 0-3 (0-1 with superloops)
card = 1-10 (0-15 with superloops)
unit = 0-15 (0-31 with superloops)

Note 1: See prompt SFMT when using the copy command.

Note 2: Data Access cards must have superloop TNs (X11 release 16).

TOTN **l s c u** — Destination TN. basic-1

New loop, shelf, card and unit when telephone data is to be moved to a new TN.

TOV **(0)-3** — Data port time out value. mcu/arie-19

Time Out Value:
0 = no time out
1 = 15 minutes
2 = 30 minutes
3 = 60 minutes

Applies to M2006, M2008, M2016, M2216, M2616 telephones for the Meridian Programmable Data Adapter (MPDA) through X11 release 19. With X11 release 19 and later, this applies to the Meridian Communications Adaptor (MCA) and the Meridian Communications Unit (MCU).

Note: Operating parameter information is stored in the MPDA. If the hardware is not present, the parameter information is lost. The hardware must be connected before configuring the operating parameters in this overlay. In the event that the parameters are lost, it is possible to enter the data through the Data Adapter. It is not necessary to re-enter it in this overlay.

TRAN **SYN, (ASYN)** — Port transmission type. mcu/arie-19

Define the port as Synchronous (SYN) or Asynchronous (ASYN) transmission for the data port on M2006, M2008, M2016, M2216, M2616 telephones. See Note with TOV prompt. Asynchronous data modules cannot be set as synchronous.

Note: SYN is the default for the Meridian Communications Adaptor (MCA) and the Meridian Communications Unit (MCU).

TYPE **aaaa** — Type of telephone or data port. basic-1

Enter the type of telephone, where aaa can be any of the following:
2006 = M2006 Digital telephone (X11 release 15 and later)
2008 = M2008/M2006 Digital telephone (X11 release 14 and later)
2009 = M2009 Digital telephone (X11 release 7)
2016 = M2016 Digital telephone (Secure) (X11 release 14 and later)
2018 = M2018 Digital telephone (X11 release 7)
2112 = M2112 Digital telephone (X11 release 7)
2216 = M2216 Digital telephones (ACD) (X11 release 14 and later)
2317 = M2317 Digital telephones (X11 release 9)
2616 = M2616 Digital telephones (X11 release 14 and later)
3000 = M3000 Touchphone (X11 release 7)
CARD = unused line card (ASR, X11 release 18 and earlier)
CARDMLT = Multi-Line Telephone line card (X11 release 19 and later)
MCU = Meridian Communications Unit (X11 release 19 and later)
R232 = RS-232-C units (X11 release 16, LD15 OPT = DSI)
R422 = RS-422 units (X11 release 16, LD15 OPT = DSI)
SL1 = SL-1 set or M1109 telephones

V25 **Yes, (No)** — V.25 bis option (synchronous mode only). arie-18

VLL **ON, (OFF)** — Virtual Leased Line. arie-14

Enter ON to set the data port on M2006, M2008, M2016, M2216 or M2616 telephones as a Virtual Leased Line. See Note with TOV prompt.

VMB **NEW, CHG, OUT** — Voice Mailbox gateway. vmba-19

This prompt is provided when the Voice Mailbox administration package (246) is equipped. The DN type must be SCR, SCN, MCR, or MCN.

VMB_COS

0-127 — Voice Mailbox class of service. vmba-19

This prompt corresponds to Meridian Mail options that must already be defined in Meridian Mail. If not, there will be transaction errors with Meridian Mail. Refer to the Meridian Mail documentation for the available options.

WIRE **ON, (OFF)** — Wire test mode. dac-16

Prompted only for TYPE = R232 or R422. When WIRE = ON, the system automatically tests wiring/cabling on installation of the Data Access Card (DAC). The test is not performed if there are any active calls.

XLST **(0)-254** — Pretranslation group associated with this telephone. pre-8

The default is zero if pretranslation is enabled for the customer. The ranges are:
(0)-7
(0)-254 (X11 release 14 and later)

XPLN **xx** — Expected name length. cpnd-19

Issued: 04 01 94
Status: Standard
X11 Release: 19

Attendant Console Administration

LD12 is used to add, change or remove attendant consoles.

Note: When using the M1250 Attendant Consoles, keys 10-19 are used by pressing the Shift key, then key 0-9 (respectively).

When this overlay is loaded the available system memory and disk records are output in a header. Refer to the introduction of this document for details.

Incremental Software Management (ISM) also provides a header to indicate system configuration limits. For LD12, the header appears as follows:

TNS AVAIL: xxxxx USED: xxxxx TOT: xxxxx

LD12

Add or change a console

The primary TN of consoles equipped with an Attendant Supervisory Module (ASM) must be configured on the TN unit 0, 4, 8, and so on. The secondary TN (SETN) must be configured on the next unit (1, 5, 9, ...) and the ASM TN must be configured as a power TN (TYPE = PWR) on the next unit (2, 6, 10,...).

REQ	NEW,CHG	New or change
TYPE	aaa	Type of console
TN	l s c u	Terminal Number
CDEN	SD, DD	Single, double card density
SETN	l s c u	Second loop, shelf, card and unit
CDEN	SD, DD	Single, double card density
CUST	0-99	Customer number
ANUM	1-63	Attendant number
DLEN	(8), 16	8 or 16 Digit Display on QCW type consoles
SSU	0-4095	System Speed Call list number
ICDR	ICDA, (ICDD)	Internal Call Detail Recording allowed (denied)
CPND	CNDA, (CNDD)	Call Party Name Display allowed (denied)
LANG	0-15	M2250 language selection
DNDI	DNDA, (DNDD)	Dialed name display allowed (denied)
EBLF	BLFA, (BLFD)	Enhanced Busy Lamp Field allowed (denied)
AADN	xxxx	Attendant Alternate Answering DN
KEY	xx aaa yyyy	Console key function

Move a console

Consoles cannot be moved between loops. The first and second TNs must be on the same loop.

REQ	MOV	Move
TYPE	aaa	Type of console
TN	l s c u	Terminal Number
TOTN	l s c u	New loop, shelf, card, and unit
SETN	L S C U	Current second TN of console is output
TOTN	l s c u	New loop, shelf, card and unit for second TN

Add or remove power TNs (third and fourth TN)

Consoles require power TNs unless local power is provided at the console.

REQ	NEW, OUT	Add power TN
TYPE	PWR	Power TN for a console
TN	l s c u	Terminal Number
REQ	NEW, OUT	Repeat for each power TN

Remove a console

When removing a console the secondary TN is removed automatically by the system. Power TNs must be removed individually.

REQ	OUT	Remove
TYPE	aaa	Type of console
TN	l s c u	Primary TN of console
SETN	L S C U	Current secondary TN is output and removed automatically
REQ	OUT	Remove
TYPE	PWR	Power TN for console
TN	l s c u	Terminal Number for power

Alphabetical list of prompts

AADN **xxxx** — Attendant Alternate Answering DN. aaa-15

Must be a valid telephone DN or ACD-DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

ANUM **1-63** — Attendant number. basic-1

Range is 1-15 before X11 release 8.

CDEN **SD, DD** — Single, double card density. basic-7

If the loop is a single density loop, the default is single density. If the loop is a double density, the default is double density. If the loop is a quad density, there is no default.

Only prompted when TYPE = ATT or 1250 and the loop is a single or double density.

CPND **CNDA, (CNDD)** — Call Party Name Display allowed (denied). cpnd-12

Prompted only if TYPE = 1250 or 2250.

CUST **0-99** — Customer number. basic-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DLEN **(8), 16** — 8 or 16 Digit Display on QCW type consoles. basic-1

DNDI **DNDA, (DNDD)** — Dialed name display allowed (denied). cpnd-13

Prompted only if TYPE is 1250/2250 and CPND = CNDA.

EBLF **BLFA, (BLFD)** — Enhanced Busy Lamp Field allowed (denied). basic-15

Prompted only if TYPE is 1250 or 2250. LD15 prompt OPT must be IBL (Include Enhanced Busy Lamp Field) before EBLF is prompted.

ICDR **ICDA, (ICDD)** — Internal Call Detail Recording allowed (denied). icdr-10

ICDA generates an L-Record in CDR reports. Refer to Call Detail Reporting output and formats (553-2631-100).

KEY	xx **aaa yyyy** — Console key function. xx = key number (0-9), 0-19 for M2250 consoles aaa = key name or function yyyy = additional information required for the key.	basic-1
KEY	xx **ADL xxx...x** — Autodial key. The programmed Autodial number can be entered here.	basic-1
KEY	xx **AWU** — Automatic Wake Up key. Cannot be key 0 or 1.	awu-10
KEY	xx **BIN** — Barge In. Barge In (BIN) must be key 1.	basic-1
KEY	xx **BVR** — Busy Verify. Busy Verify (BVR) must be key 0.	basic-1
KEY	xx **CHG** — Charge Account.	fca-1
KEY	xx **COS** — Controlled Class of Service.	eccs-15
KEY	xx **CPN** — Calling Party Number.	cab-1
KEY	xx **DCW** — Display Call Waiting.	basic-1
KEY	xx **DDL** — Do Not Disturb individual.	dndi-1
KEY	xx **DDT** — Display date.	basic-1
KEY	xx **DPD** — Display destination.	basic-1
KEY	xx **DPS** — Display source.	basic-1
KEY	xx **DRC** — DID route conversion.	basic-1
KEY	xx **DTM** — Display time.	basic-1
KEY	xx **EES** — End-to-End Signaling key number. EES cannot be key 00 or 01.	ees-16
KEY	xx **GND 0-99** — Group do not disturb.	dndg-1
KEY	xx **MCK** — Message cancellation (turns off indication at a telephone).	mwc-1
KEY	xx **MDT** — Display/change system date.	tad-1
KEY	xx **MIK** — Message indication (turns on indication at a telephone).	mwc-1
KEY	xx **MTM** — Display/change system time.	tad-1
KEY	xx **NUL** — Remove function from key.	basic-1

LD12

KEY	**xx PAG yyyy** — Paging key. yyyy = route access code. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.	basic-1
KEY	**xx PRG** — Attendant Administration program key.	aa-1
KEY	**xx PRK** — Call Park key.	cprk-2
KEY	**xx RDL** — Stored Number Redial.	basic-1
KEY	**xx RTC** — Routing controls key. This key will activate the NCOS map in the system.	bars-1
KEY	**xx SCC yyyy** — Speed Call Controller. yyyy = list number 0-253 (0-8190 in X11 release 13 and later).	optf-1
KEY	**xx SSC yyyy** — System speed call controller. yyyy = list number, 0-253 (0-4095 in X11 release 13 and later).	ssc-2
KEY	**xx TRC** — Malicious Call Trace.	mct-10
LANG	**0-15** — M2250 language selection. 0 = English 1 = French 2 = Spanish 3 = German 4 = Italian 5 = Norwegian 6 = Irish 7 = Turkish 8 = Katakana available on the MJ2250 only) *Note:* 9-15 are undefined.	-14
REQ	**aaa** — Action request. CHG = Modify existing console END = Exit the overlay MOV = Move from one TN to another NEW = Add new console OUT = Remove console	basic-1
SETN	**l s c u** — Second loop, shelf, card and unit. SETN must have same loop, shelf and card as the primary TN if TYPE = 2250.	basic-1
SSU	**0-4095** — System Speed Call list number. Range is 0-253 before X11 release 13.	ssc-2

TN **l s c u** — Terminal Number. basic-1

The TN defines the location of the telephone set. The ranges are:
loop = 0-159
shelf = 0-3 (0-1 with superloops)
card = 1-10 (0-15 with superloops)
unit = 0-15 (0-31 with superloops)

TOTN **l s c u** — New loop, shelf, card, and unit. basic-1

Prompted only if REQ = MOV

TYPE **aaa** — Type of console. basic-1

1250 = M1250 console (X11 release 12 and later)
2250 = M2250 console (X11 release 15 and later)
ATT = QCW type console
PWR = third and fourth TNs used only for power, or third TN for Attendant Supervisory Module (ASM) and forth and fifth TNs used for power.

LD12

84 Attendant Console Administration

Issued: 04 01 94
Status: Standard
X11 Release: 19

Digitone/Multi-Frequency Receiver and Tone Detector Administration

LD13 is used to configure Digitone and Multi-Frequency Receiver, and Tone Detector cards. These cards are used by 2500-type telephones and trunks that send DTMF tones to the system. Additionally, they are used by MF trunks to send MF tones to the system.

All 2500-type telephones and some trunks must have Class of Service (CLS) defined as Digitone (DTN). MF reception is available to QPC916 cards only.

When this overlay is loaded the available system memory and disk records are output in a header. Refer to the introduction of this document for details.

Incremental Software Management (ISM) also provides a header to indicate system configuration limits. For LD13, the header appears as follows:

TNS AVAIL: xxxxx USED: xxxxx TOT: xxxxx

LD13

Add, change or remove

REQ	NEW, CHG, OUT, MOV, END	Action request
TYPE	DTR, TDET, MFR	Digitone Receiver, Tone Detector, Multifrequency (MF) Receiver
TN	l s c u	Terminal Number
CDEN	DD, SD, 4D	Single, double or quad density

Add NT8D18 Digitone Receivers (system option 21)

The NT8D18 Network/Digitone Receiver card must first be assigned to loop 28 in LD97.

REQ	NEW	Add unit 0
TYPE	DTR	Digitone Receiver
TN	28 0 15 0	Terminal Number: loop 28, shelf 0, card 15, unit 0
REQ	NEW	Repeat for each unit 0-7

Alphabetical list of prompts

CDEN **DD, SD, 4D** — Single, double or quad density. basic-7

Only prompted when TYPE = DTR. Enter SD if this unit is on a single density card, Card density cannot be changed from DD to SD if more than one unit is assigned.

Enter DD if this unit is on a double density card. Not allowed if the network loop is configured for single density.

Cards defined as quad density must have network loops and shelves defined as 4D in LD17. Cards can be SD, DD or 4D.

If REQ = NEW, CDEN is set to the default density as specified in LD17, otherwise CDEN is left unchanged.

REQ **NEW, CHG, OUT, MOV, END** — Action request. basic-1

NEW = Add new data to the system
CHG = Modify existing data
OUT = Remove information from data block
END = Terminate overlay activity and exit
MOV= Move from one TN to another

Note: There is a possibility of data corruption when Digitone Receivers/Tone Detectors are moved using the MOV command.

TN **l s c u** — Terminal Number. basic-1

Defines the location of the Digitone Receive or Tone Detector unit.
loop = 0-159
shelf = 0-3 (0-1 with superloops)
card = 1-10 (0-15 with superloops)
unit = 0-75 (0-1 for TDET)

TOTN **l s c u** — New loop, shelf, card, and unit. basic-1

TYPE **DTR, TDET, MFR** — Digitone Receiver, Tone Detector, Multifrequency (MF) Receiver. basic-1

Up to 255 MF Receivers can be defined. Only units 0 and 1 can be used.

MFR is for Feature Group D use.

LD13

88 Digitone/Multi-Frequency Receiver and Tone Detector Administration

Issued: 04 01 94
Status: Standard
X11 Release: 19

Trunk Administration

LD14 is used to administer trunk cards.

Note: After making any changes to the route data block, IPE TRUNK CARDS MUST BE DOWNLOADED IN LD32.

When this overlay is loaded the available system memory and disk records are output in a header. Refer to the introduction of this document for details.

Incremental Software Management (ISM) also provides a header to indicate system configuration limits. For LD14, the header appears as follows:

TNS AVAIL: ttt USED: ttt TOT: ttt

LD14

Add, change or remove a trunk

REQ	aaa	Action request
TYPE	aaa	Trunk Type
TN	l s c u, l ch	Terminal Number, or loop and channel
XTRK	XUT, XEM, EXUT	Universal trunk card, Enhanced E&M trunk card, Enhanced Universal trunk card
SXS	Yes, (No)	Step-by-step CO trunk
SICA	(1)-16	Signaling Category table number
PDCA	(1)-16	PAD table number
PCML	MU, A	Mu-law or A-law companding law
SFEX	Yes, (No)	Special digital FEX trunk
CUST	0-99	Customer Number
NCOS	xx	Network Class of Service group number
RTMB	rrr mmm	Route number and Member number
CHID	xx	Channel ID for this trunk
MNDN	xxxx	Manual Directory Number
MTN	l s c u	Loop, shelf, card, and unit of modem
PRDN	xxxx	Private line directory number
CMF	Yes, No	Call modification for private lines
RLDN	xxxx	Release Link trunk Directory Number
NITE	xxxx	Night Service Directory Number
ATDN	xxxx	Auto-terminate DN
TGAR	(0)-31	Trunk Group Access Restriction
SIGL	aaa	Trunk signaling
CDEN	SD, DD	Single or double card density
XDIC	NOR, (MUTE)	Normal or mute outpulsing for DIC trunks
EMTY	TY1, (TY2)	4-wire E&M type 1 or 2
CPAD	CIN, (COUT)	Carrier interface pad in (out) for 4-wire E &M Tie trunks
LDOP	bop, (loop)	Loop Dial Outpulsing
TIMP	(600), 900, 1200	Termination impedance
BIMP	600, (3com), 900, 3CM2	Balance impedence
CDEN	SD, DD	Single or double card density
STRI	aaa	Incoming start arrangement
STRO	aaa	Outgoing start arrangement
SUPN	Yes, No	Answer and disconnect supervision required

FCAR	Yes, (No)	Forced Charge account
ADID	xxxx	AIOD four-digit trunk identifier
CFLP	0-159	Music conference loop
CLS	aaa	Class of service options

Add, change or remove a tandem trunk (X11 release 19)

REQ	aaa	Action request
TYPE	TCON	Tandem connection for PSPDN access
T_TN	loop channel	Tandem PRI connection
IPRI	loop channel	Incoming PRI channel
OPRI	loop channel	Outgoing PRI channel

Alphabetical list of prompts

ADID **xxxx** — AIOD four-digit trunk identifier. aiod-1

Represents the last 4-digits of the unique telephone number of a trunk that has AIOD service. Associates the calling number received over an AID trunk with the outgoing trunk used to make the call.

ATDN **xxxx** — Auto-terminate DN. disa-1

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered. ATDN can be any DN type unless on a DNIS route. If a DNIS route is defined, then the response can only be an ACD-DN.

Prompted only if the route (LD16) has AUTO = Yes.

BIMP **600, (3com), 900, 3CM2** — Balance impedence. tip/xpe-19

Not prompted for RAN which uses 600 only. Not prompted for XEM trunks.

For XUT trunks the termination impedance (TIMP) must be compatible with the balance impedance (BIMP). See prompt TIMP for allowed combinations of BIMP/TIMP.

Note: When using the Enhanced Universal Trunk card with X11 release 19, only 600 or 900 Ω terminating impedance is allowed. More terminating and balance impedance (BIMP) combinations are available, however. The terminating and balance impedance options are listed below.

TIMP	BIMP
600	600
600	3COM
900	3COM
900	900
900	3CM2
600	3CM2

CDEN **SD, DD** — Single or double card density. basic-7

There is no default. Not prompted for superloops.

CFLP **0-159** — Music conference loop. mus-1

CHID	**xx** — Channel ID for this trunk. Only prompted for ISL trunks. Number of ISL trunks allowed for D-channel. Prompted only if the Route specified has ISL enabled in LD16. The number of ISL trunks allowed for the D-channel is specified in LD17.	isl-12
CLS	**aaa** — Class of service options. The following CLS assignments determine the calling options and features available to the set. Defaults are show in parentheses. Enter each non-default option required, separated by a space.	basic-1
CLS	**APY, (APN)** — ACD priority required (not required). Applies only to COT, WAT, DID and FEX trunks.	bacd-1
CLS	**DTN, (DIP), MFR** — Digitone, (dial pulse), multifrequency signaling.	basic-1
CLS	**ECA, (ECD)** — Echo suppression allowed (denied).	basic-1
CLS	**HPR, (LPR)** — High (low) priority trunk. DID and TIE trunks should use HPR and terminate in card slot 1. Superloops do not require any trunks assigned as high priority.	basic-1
CLS	**JDID, JCO** — Japan DID, Japan CO capabilities allowed.	xutj-16
CLS	**LST, (LNT)** — Loop start supervisory (non-supervisory). LST = Loop start supervisory (not allowed for XUT/XEM) LNT = Loop start non-supervisory	basic-8
CLS	**MIA, (MID)** — Manual incoming allowed (denied).	basic-1
CLS	**P20, P12, (P10)** — Make-break ratio for dial pulse dialing. This is the make-break ratio for outpulsing digits. In X11 release 14 and earlier the options are P10 and P20 for 10 or 20 pulses per second (pps). In X11 release 15 the P12 option was added, where P10 = primary 10 pps make-break ratio (50%) P12 = secondary 10 pps make-break ratio (50%) In X11 release 16 all three make-break ratios can be set for XUT, XUTJ and XEM trunks. See prompts P10R, P12R and P20R in LD97. *Note:* P12 applies only to XUT, XUTJ and XEM trunks.	basic-1

CLS **PSP, (PIP)** – Polarity sensitive (insensitive) pack. basic-10

For loop start trunks with Answer Supervision in U.S. Use PSP for QPC218, QPC219 and QPC295 packs; PIP for QPC330 and QPC331 packs.

Note 1: When using PSP, the trunk route should have message registration set to reverse battery (LD16 prompt MR set to RVB).

Note 2: The NT8D14 Universal Trunk does not provide Message Registration, PPM, or PIP operation.

Note 3: In X11 release 18 this can be used for Answer Supervision on Ground Start trunks.

CLS **THFA, (THFD)** – Centrex Switchhook Flash allowed (denied). basic-14

CLS **TRC, NTC, VNL** – Transmission compensation options. tip-19

TRC = transmission compensated
NTC = non-transmission compensated
VNL = via net loss

With X11 release 19 and later VNL class of service is allowed with Universal Trunk Tie trunks.

The default depends on the signaling type (SIGL):
DX2 = VNL
DX4 = VNL
EAM = VNL
EM4 = VNL
GRD = NTC (default changed to TRC in X11 release 17)
LDR = NTC (default changed to TRC in X11 release 17)
LOP = NTC (default changed to TRC in X11 release 17)
OAD = NTC

CLS **UNR** – Access Restrictions. basic-1

(UNR) = unrestricted
CUN = conditionally unrestricted
CTD = conditionally toll denied
FR1 = fully restricted 1
FR2 = fully restricted 2
FRE = fully restricted
SRE = semirestricted
TLD = toll denied

Note: Only UNR is allowed for CO, FX and WATS trunks.

CLS	**WTD, (WTA)** — Warning tone denied (allowed).	basic-1
CMF	**Yes, No** — Call modification for private lines. No = can use call modification Yes = restricted from call modification	basic-1
CPAD	**CIN, (COUT)** — Carrier interface pad in (out) for 4-wire E &M Tie trunks. With CPAD = CIN a 7 dB pad attenuates the trunk input and a 16 dB pad attenuates the trunk output.	xpe-15
CUST	**0-99** — Customer Number. Prompted only if REQ = NEW. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines. In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.	basic-1
EMTY	**TY1, (TY2)** — 4-wire E&M type 1 or 2.	xpe-15
FCAR	**Yes, (No)** — Forced Charge account. Prompted only if CLS is TLD, CUN or CTD, and trunk type is CSA or TIE. TLD is recommended.	chg-1
IPRI	**loop channel** — Incoming PRI channel. This is the PRI channel through which the Meridian 1 gains access to the PSPDN. Loop = PRI loop number. Channel = PRI channel that holds the incoming nailed up connection (between 1-23).	mph-19
LDOP	**bop, (loop)** — Loop Dial Outpulsing. LDR signaling for battery (bop) outpulsing or loop outpulsing.	xpe-15
MNDN	**xxxx** — Manual Directory Number. CLS should be MIA. Default is ATDN = 0. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.	basic-1
MTN	**l s c u** — Loop, shelf, card, and unit of modem.	amp-5

NCOS **xx** — Network Class of Service group number. ncos-1

The ranges for Network Class Of Service group are:
(0)-3 for standalone CDP
(0)-7 for BARS/CDP and NFCR
(0)-15 for NARS and NFCR
(0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later

NITE **xxxx** — Night Service Directory Number. basic-1

Night Service applies to trunks terminating at the attendant. This prompt takes precedence over the NITE and NIT1-NIT4 prompts in LD15. If a DN is defined here, the call goes to this DN. If there is no DN here, the call goes to the defined LD15 NITE prompts.

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

Precede with "X" to remove night service DN.

OPRI **loop channel** — Outgoing PRI channel. mph-19

This is the PRI channel through which the Meridian 1 gains access to the PSPDN. Loop = PRI loop number. Channel = PRI channel that holds the outgoing nailed up connection (between 1-23).

PCML **MU, A** — Mu-law or A-law companding law. dti2-15

PDCA **(1)-16** — PAD table number. dti2-15

The PAD table must be defined in LD73 first.

PRDN **xxxx** — Private line directory number. basic-1

PRDN must be have been previously defined in LD11. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

REQ **aaa** — Action request. basic-1

CHG = modify existing data
END= terminate overlay activity
MOV = move from one TN to another
NEW = Add new data to the system
OUT = remove data block

RLDN **xxxx** — Release Link trunk Directory Number. cas-1

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

RTMB **rrr mmm** — Route number and Member number. basic-1

Route and Member numbers before X11 release14.
r = 0-127
m = 1-254

X11 release 14 and later Route and Member Number for system options NT, RT, XN, XT, 51, 61 and 71.
r = 0-511
m = 1-254

For all other machine types
r = 0-127
m = 1-254

With ISA trunks "B-CHANNEL SIGNALING" is output if B-channel signaling is used (CHTY = BCH in LD16).

SFEX **Yes, (No)** — Special digital FEX trunk. dti-5

This is used on Digital Trunk Interfaces (DTI).

SICA **(1)-16** — Signaling Category table number. dti2-15

The Digital Signaling Category table must be defined first.

SIGL **aaa** — Trunk signaling. tip-19

DX2 = 2-wire duplex
DX4 = 4-wire duplex
EAM = E&M 2-wire
EM4 = E&M 4-wire
GRD = ground start
LDR = loop dial repeating
LOP = loop start
OAD = outgoing automatic, incoming dial

Note: The Enhanced Universal Trunk card with X11 release 19 and later uses DX4 signaling.

STRI **aaa** — Incoming start arrangement. basic-5

DDL = delayed dial
IMM = immediate dial
OWK = off hook Fast Flash (RLR trunks with signaling converter)
WNK = wink

STRO **aaa** — Outgoing start arrangement. basic-5

DDL = delayed dial
IMM = immediate dial
OWK = off hook wink (RLR trunks with signaling converter)
WNK = wink

LD14

SUPN **Yes, No** — Answer and disconnect supervision required. basic-1

Note: The operation of answer supervision is affected if FC68 (package 223) is equipped. Refer to "FCC Compliance for DID Answer Supervision" in X11 features and services (553-3001-305).

SXS **Yes, (No)** — Step-by-step CO trunk. xpe-15

The central office reverses polarity on outgoing calls. Only prompted for Universal Trunks (XTRK = XUT) when TYPE = CO.

T_TN **loop channel** — Tandem PRI connection. mph-19

If the connection exists, both channels are displayed.
Loop = PRI loop number. Channel = PRI channel that holds the outgoing nailed up connection (between 1-23).

TGAR **(0)-31** — Trunk Group Access Restriction. basic-1

Range is (0)-15 before R13. Enter "0" to remove existing restriction

TIMP **(600), 900, 1200** — Termination impedance. tip/xpe-19

Use 1200 ohms for RAN trunks. Use 600 Ω or 900 Ω for all others. Prompted only if XTRK = XEM or XUT.

Note: When using the Enhanced Universal Trunk card with X11 release 19, only 600 or 900 Ω terminatiung impedance is allowed. More terminating and balance impedance (BIMP) combinations are available, however. The terminating and balance impedance options are:

TIMP	BIMP
600	600
600	3COM
900	3COM
900	900
900	3CM2
600	3CM2

For XUT trunks the Balance Impedance (BIMP) must be compatible with the Termination Impedence (TIMP). The following combinations of BIMP/TIMP are allowed:

BIMP impedance	TIMP impedance
3-component (3com)	-- 600 Ω
3-component (3com)	-- 900 Ω
600 Ω	-- 600 Ω
600 Ω	-- 1200 Ω (for RAN trunk only)

Note 1: For XEM trunks, TIMP must be set to 600.

Note 2: When CLS = JDID, TIMP must be set to 600.

TN **l s c u, l ch** — Terminal Number, or loop and channel. basic-1

TOTN **l s c u** — New loop, shelf, card and unit. basic-1

Prompted only if REQ = MOV.

TYPE **aaa** — Trunk Type. basic-1

ADM = data port interfacing with a data line card (R5)
AID = AIOD trunk data block
ATVN = AUTOVON trunk data block
AWR = AWU RAN/Music trunk block (R10)
CAA = CCSA ANI data block
CAM = CAMA trunk data block
COT = Central Office trunk data block
CSA = Common Control Switching Arrangement access
DIC = Dictation trunk data block
DID = Direct Inward Dialing trunk data block
FEX = Foreign Exchange trunk data block
FGDT = Feature Group D trunk
ISA = Integrated Services Access trunk (ISDN) Also called Call-By-Call service trunk type. Only Tie and ISA trunks apply to Meridian 1 to Meridian 1 connectivity.
MDM = Modem trunk data block (data port interfacing with QPC60 500/2500 card)
MCU = Meridian Communications Unit
MUS = Music trunk data block
PAG = Paging trunk data block
R232 = DAC (NT7D16) RS-232 port (X11 release 18)
R422 = DAC (NT7D16) RS-422 port (X11 release 18)
RAN = Recorded Announcement trunk data block
RCD = Emergency Recorder trunk data block
RLM = Release Link Main trunk data block
RLR = Release Link Remote trunk data block
TCON = Tandem connection for MPH and PRI connections (X11 release 19)
TIE = Tie trunk data block
WAT = WATS trunk data block

Note: Per FCC regulations, DID trunks must be properly designated for answer supervision. Refer to "FCC Compliance for DID Answer Supervision" in X11 features and services (553-3001-305).

XDIC **NOR, (MUTE)** — Normal or mute outpulsing for DIC trunks. xpe-15

XTRK **XUT, XEM, EXUT** — Universal trunk card, Enhanced E&M trunk card, Enhanced Universal trunk card. tip/xpe-19

Prompted only for superloops and the first unit defined on the card. With X11 release 19 and later allows the Enhanced Universal trunk card (EXUT) for this prompt.

LD14

100 Trunk Administration

Issued: 04 01 94
Status: Standard
X11 Release: 19

Customer data block

Add, change a customer data block (X11 release 18 and earlier)

REQ	NEW, CHG, OUT, END	Action request
TYPE	CDB	Customer data block
CUST	0-99	Customer number
TOCU	0-99	New customer number
DLDN	Yes, (No)	Departmental Listed DNs
_LDN0	xxx...x	Listed Directory Number 0
_LDA0	xx xx ..., ALL	Attendant consoles associated with LDN0
_LDN1	xxx...x	Listed Directory Number 1
_LDA1	xx xx ..., ALL	Attendant consoles associated with LDN1
_LDN2	xxx...x	Listed Directory Number 2
_LDA2	xx xx ..., ALL	Attendant consoles associated with LDN2
_LDN3	xxx...x	Listed Directory Number 3
_LDA3	xx xx ..., ALL	Attendant consoles associated with LDN3
DGRP	(0)-2046	Maximum number of Dial Intercom Groups (DIG)
IRNG	Yes, (No)	Distinctive Ringing for Dial Intercom
PKND	(1)-4	Number of digits dialed for Group Pickup
NITE	xxx...x	Night Service Directory Number
NIT1	xxx...x	First Night Service DN by time of day
TIM1	hh mm	Time for first Night Service DN to start
NIT2	xxx...x	Second Night Service DN by time of day
TIM2	hh mm	Time for second Night Service DN to start
NIT3	xxx...x	Third Night Service DN by time of day
TIM3	hh mm	Time for third Night Service DN to start
NIT4	xxx...x	Fourth Night Service DN by time of day

TIM4	hh mm	Time for fourth Night Service DN to start
TSTL	Yes, (No)	Change Test Lines
_T100	xxx...x	DN for Type-100 line
_REF0	xxxx	DN for reference trunk 0
_TST0	xxxx	DN for test trunk 0
_REF1	xxxx	DN for reference trunk 1
_TST1	xxxx	DN for test trunk 1
_REF2	xxxx	DN for reference trunk 2
_TST2	xxxx	DN for test trunk 2
_REF3	xxxx	DN for reference trunk 3
_TST3	xxxx	DN for test trunk 3
SPRE	xxxx	Special Prefix number
ATDN	(0)-xxx...x	Attendant DN
NCOS	(0)-99	Attendant Network Class Of Service for all consoles
CAS	Yes, (No)	Change Centralized Attendant Service options
_MAIN	Yes, (No)	Centralized Attendant Service main
_DFLT	Yes, (No)	System to recover in the CAS-active mode after sysload
_LDNT	Yes, (No)	Special tone to CAS main attendant on presentation of LDN calls
_LADN	xxx...x	Local attendant DN
_RLA	0-511	Release Link route number
_CHDN	xxx...x	Silent Hold DN
_HRCL	0-512	Hold Recall timer in units of 2 seconds
OPT	aaa	Customer options
LINK	Yes, (No)	ACD DNIS Link option
APL	0-15	Auxiliary Processor Link number
INTR	Yes, (No)	Change intercept treatments
_ACCD	(OVF OVF OVF ATN)	Access denied intercept treatment
_RANR	0-511	Intercept Recorded announcement route number
_CTVN	(OVF OVF OVF ATN)	Call to vacant number intercept treatment
_MBNR	(OVF OVF OVF ATN)	Calls to maintenance busy numbers Intercept treatment
_CTRC	(OVF NAP OVF NAP)	Restricted Call intercept treatment
_CLDN	(NAP OVF NAP NAP)	Calls to Listed DN intercept treatment
_NINV	(OVF OVF OVF ATN)	Invalid BARS/NARS call Intercept treatment
_NITR	(OVF OVF OVF ATN)	BARS/NARS invalid translation Intercept treatment

_NRES	(OVF OVF OVF ATN)	BARS/NARS restricted calls Intercept treatment
_NBLK	(OVF OVF OVF ATN)	BARS/NARS blocked calls Intercept treatment
ANAT	xxx...x	ANI billing number for attendants making ANI calls
ANLD	xxxxx	ANI listed DN
LFTN	l s c u	Lamp field array TN
LFFD	xxxx	First DN of Busy Lamp Field Array
APRF	xx	Automatic Identification of Outward Dial prefix
AATT	xxxx	Automatic Identification of Outward Dial attendant identifier
RTIM	xxx yyy zzz	Slow answer, Camp-on and Call Waiting recall timers
ATIM	(0)-126	Attendant Alternative Answering timer
CDR	Yes, (No)	Change Call Detail Recording options
_AXID	Yes, No	Auxiliary Identification output in CDR records
_TRCR	Yes, No	Carriage return sent after each CDR message
_CDPR	Yes, (No)	Access code (steering code) before dialed digits in CDR records
_MCR	Yes, No	Mini-CDR equipped
_PORT	0-15	CDR port
IMS	Yes, (No)	Change Integrated Messaging System (IMS) options
_IMA	Yes, (No)	Integrated Messaging System enabled
_APL	0-15	Auxiliary Processor Link number
_UST	Yes, (No)	User Status Update (UST) enabled
_APL	0-15	Auxiliary Processor Link number
_UMG	Yes, (No)	User to user messaging enabled
_APL	0-15	Auxiliary Processor Link number
FLSH	20-(45)-768	Switchhook flash timing
CHLN	(0)-23	Charge Account number length
PREO	(0), 1	Digit pretranslation (disabled), enabled
FCAF	Yes, (No)	Forced Charge Account (FCA) active
_CHMN	(1)-CHLN	Minimum number of digits for FCA code
_FCNC	0-99	Forced Charge Account Network class of service
SPWD	xxxx	Secure data password
_PWD2	xxxx	Second level administration password
FNAD	(HNT), ATT, NO, FDN	Call Forward No Answer treatment for DID calls
FNAT	(HNT), ATT, NO, FDN	Treatment for External CFNA calls (non-DID)
FNAL	(HNT), ATT, NO, FDN	CFNA treatment for calls when CFCT is enabled
CFTA	Yes, (No)	Call Forward to trunk access code

CFNA	1-(4)-15	Number of normal ringing cycles for CFNA
DFNA	1-(4)-15	Number of distinctive ring cycles before call forward
PHDT	1-(30)-63	Number of 2 s intervals between Permanent Hold reminders
AQTT	1-(30)-255	Attendant queue timing threshold in seconds
AODN	xxxx	Attendant overflow DN
SRCD	xxxx	Set Relocation security code
ATAC	xxxx	Attendant Administration access code
CWUP	Yes, (No)	Call Waiting queue update
CWCL	(0)-255 (0)-255	Lower and upper thresholds for number of Calls Waiting
CWTM	(0)-511 (0)-511	Lower and upper thresholds for Call Waiting time in seconds
CWBZ	Yes, (No) Yes, (No)	Call Waiting buzz
DNDL	Yes, (No)	Do Not Disturb lamp on 500/2500 sets
DNDT	(BST), ATT, RAN	Do Not Disturb intercept treatment
RRT	0-511	Recorded announcement route
DNDH	Yes, (No)	Do Not Disturb Hunting
CCRS	aaa	Controlled Class Of Service
ECC1	aaa	Enhanced Controlled Class of Service level one
ECC2	aaa	Enhanced Controlled Class of Service second level
MDID	Yes, (No)	No Answer DID calls routed to Message Center
NDID	Yes, (No)	No Answer non-DID calls routed to Message Center
MWFB	Yes, (No)	DID calls to busy sets routed to Message Center
MATT	Yes, (No)	Consoles used as Message Center
SPVC	0-63	Attendant number for Supervisor Console
SBLF	Yes, (No)	Standard Busy Lamp Field
ITH1	1-255	Visual Indication Threshold 1 for supervisory console
ITH2	1-255	Visual Indication Threshold 2 for supervisory console
ITH3	1-255	Visual Indication Threshold 3 for supervisory console
FRRT	0-511	First RAN route
FRT	0-(20)-2044	Time delay in seconds for first RAN route
SRRT	0-511	Second RAN route number for ROA
SRT	0-(40)-2044	Time delay for second RAN route in seconds
WAIT	(RGB), MUS, SIL	Treatment during waiting time for ROA
MURT	0-511	Music Route number

RICI	xx xx ...	ICI key numbers (0-19) requiring overflow announcement (ROA)
MUS	Yes, (No)	Music for sets
_MUSR	0-511	Music Route for Sets
CONG	BUSY, (OVFL)	Busy or overflow tone for all trunks busy condition
LLT	(OVF), ATN, OFA	Flexible Line Lockout treatment
OHAS	Yes, (No)	Change Off-Hook Alarm Security options
_ODN0	xxxx	OHAS DN 0
_ODN1	xxxx	OHAS DN 1
_ODN2	xxxx	OHAS DN 2
_ODN3	xxxx	OHAS DN 3
_ODN4	xxxx	OHAS DN 4
_ODN5	xxxx	OHAS DN 5
_ODN6	xxxx	OHAS DN 6
_ODN7	xxxx	OHAS DN 7
_ODN8	xxxx	OHAS DN 8
_ODN9	xxxx	OHAS DN 9
_ASTM	1-(30)-63	OHAS off-hook or interdigit timeout timer in seconds
DLT	(OVF), ATN, OFA	Direct Inward System Access (DISA) lockout treatment
DIND	2-(30)-60	Dial tone and interdigit timeout for non-DTR telephones
DIDT	2-(15)-60	Dial tone and interdigit timeout for 2500 telephones
LDTT	2-(6)-30	Line disconnect tone timer for 500/2500 telephones in seconds
BOTO	2-(15)-60	Busy tone/overflow tone timeout
DBRC	2-(60)-120	Duration between Audible Reminder of Held Call in seconds
NFCR	Yes, (No)	Enable New Flexible Code Restriction
_MAXT	1-255	Maximum number of NFCR translation tables
IDCA	Yes, (No)	Incoming DID digit conversion allowed (denied)
_DCMX	1-255	Maximum number of IDC conversion tables
ADCP	xxxx	All-digital connection prefix
EEST	Yes, (No)	End-to-end signaling tone to originating party
TTBL	(0)-31	Tone Table number
SCPL	0-8	Station Control Password Length
FFCS	Yes, (No)	Change end of dialing indicator in FFC
STRL	1-3	Number of digits to indicate FFC end of a feature activation

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STRG	(#), xxx	1 to 3 digits to indicate FFC end of a feature activation
VSID	0-15	Value Added Server Identifier
GPxx	(0), 1, 2, 3, 4, 5	Unsolicited status events 1, 2, 3, 4, 5, or 6 to Group xx
GP02	n n n n n	Group 2 status events 1, 2, 3, 4, 5, or 6 assigned
GP03	n n n n n	Group 3 status events 1, 2, 3, 4, 5, 6 assigned
GP04	n n n n n	Group 4 status events 1, 2, 3, 4, 5, or 6 assigned
GP05	n n n n n	Group 5 status events 1, 2, 3, 4, 5, or 6 assigned
GP06	n n n n n	Group 6 status events 1, 2, 3, 4, 5, or 6 assigned
GP07	n n n n n	Group 7 status events 1, 2, 3, 4, 5, or 6 assigned
GP08	n n n n n	Group 8 status events 1, 2, 3, 4, 5, or 6 assigned
GP09	n n n n n	Group 9 status events 1, 2, 3, 4, 5, or 6 assigned
GP10	n n n n n	Group 10 status events 1, 2, 3, 4, 5, or 6 assigned
GP11	n n n n n	Group 11 status events 1, 2, 3, 4, 5, or 6 assigned
GP12	n n n n n	Group 12 status events 1, 2, 3, 4, 5, or 6 assigned
GP13	n n n n n	Group 13 status events 1, 2, 3, 4, 5, or 6 assigned
GP14	n n n n n	Group 14 status events 1, 2, 3, 4, 5, or 6 assigned
GP15	n n n n n	Group 15 status events 1, 2, 3, 4, 5, or 6 assigned
AWU	Yes, (No), X	Enable Automatic Wake Up feature
_ATRC	Yes, (No)	Attendant Recall after failed AWU attempts
_CONF	loop	Conference loop number for Automatic Wake Up
_RANF	0-511	Music RAN route number
_RAN1	0-511	Primary RAN route number
_RAN2	0-511	Secondary RAN route number
_LA11	0-511	Primary RAN route for Language 1 in AWU
_LA12	0-511	Secondary RAN route for Language 1 in AWU
_LA21	0-511	Primary RAN route for Language 2 in AWU
_LA22	0-511	Secondary RAN route for Language 2 in AWU
_LA31	0-511	Primary RAN route for Language 3 in AWU
_LA32	0-511	Secondary RAN route for Language 3 in AWU
_LA41	0-511	Primary RAN route for Language 4 in AWU
_LA42	0-511	Secondary RAN route for Language 4 in AWU
_LA51	0-511	Primary RAN route for Language 5 in AWU
_LA52	0-511	Secondary RAN route for Language 5 in AWU
_R2BN	hhmm	Hour and minute to switch to Secondary RAN
_R2ED	hhmm	Hour and minute to switch to Primary RAN

_NRWU	2-(5)	Number of rings for Automatic Wake Up calls
_TAWU	1-(3)	Number of Tries for an unanswered AWU call
AC2	aaa	Access code 2
ISDN	Yes, (No)	Change ISDN options
_PNI	1-32700	Private Network Identifier
_PFX1	xxxx	Prefix (area) code for International PRA
_HNPA	200-999	Home Number Plan Area Code
_PFX2	xxxx	Central Office Prefix for IPRA
_HNPA	1200-1999	Home Number Plan Area code
_HNXX	100-9999	Prefix for Central Office
_HLOC	100-9999	Home Location Code (ESN)
_LSC	xxxx	Local steering code
_CNTP	LDN, (PDN)	Default for Calling Line ID (CLID)
_RCNT	0-(5)	Maximum inter-node hops in a network redirection call

LD15

Add, change a customer data block (X11 release 19)

REQ	NEW, CHG, OUT, END	Action request
TYPE	CDB	Customer data block
CUST	0-99	Customer number
TOCU	0-99	New customer number
DLDN	Yes, (No)	Departmental Listed DNs
_LDN0	xxx...x	Listed Directory Number 0
_LDA0	xx xx ..., ALL	Attendant consoles associated with LDN0
_LDN1	xxx...x	Listed Directory Number 1
_LDA1	xx xx ..., ALL	Attendant consoles associated with LDN1
_LDN2	xxx...x	Listed Directory Number 2
_LDA2	xx xx ..., ALL	Attendant consoles associated with LDN2
_LDN3	xxx...x	Listed Directory Number 3
_LDA3	xx xx ..., ALL	Attendant consoles associated with LDN3
DGRP	(0)-2046	Maximum number of Dial Intercom Groups (DIG)
IRNG	Yes, (No)	Distinctive Ringing for Dial Intercom
PKND	(1)-4	Number of digits dialed for Group Pickup
NITE	xxx...x	Night Service Directory Number
NIT1	xxx...x	First Night Service DN by time of day
TIM1	hh mm	Time for first Night Service DN to start
NIT2	xxx...x	Second Night Service DN by time of day
TIM2	hh mm	Time for second Night Service DN to start
NIT3	xxx...x	Third Night Service DN by time of day
TIM3	hh mm	Time for third Night Service DN to start
NIT4	xxx...x	Fourth Night Service DN by time of day
TIM4	hh mm	Time for fourth Night Service DN to start
TSTL	Yes, (No)	Change Test Lines
_T100	xxx...x	DN for Type-100 line
_REF0	xxxx	DN for reference trunk 0
_TST0	xxxx	DN for test trunk 0
_REF1	xxxx	DN for reference trunk 1
_TST1	xxxx	DN for test trunk 1
_REF2	xxxx	DN for reference trunk 2
_TST2	xxxx	DN for test trunk 2
_REF3	xxxx	DN for reference trunk 3

_TST3	xxxx	DN for test trunk 3
SPRE	xxxx	Special Prefix number
ATDN	(0)-xxx...x	Attendant DN
NCOS	(0)-99	Attendant Network Class Of Service for all consoles
CAS	Yes, (No)	Change Centralized Attendant Service options
_MAIN	Yes, (No)	Centralized Attendant Service main
_DFLT	Yes, (No)	System to recover in the CAS-active mode after sysload
_LDNT	Yes, (No)	Special tone to CAS main attendant on presentation of LDN calls
_LADN	xxx...x	Local attendant DN
_RLA	0-511	Release Link route number
_CHDN	xxx...x	Silent Hold DN
_HRCL	0-512	Hold Recall timer in units of 2 seconds
OPT	aaa	Customer options
LINK	Yes, (No)	ACD DNIS Link option
APL	0-15	Auxiliary Processor Link number
INTR	Yes, (No)	Change intercept treatments
_ACCD	(OVF OVF OVF ATN)	Access denied intercept treatment
_RANR	0-511	Intercept Recorded announcement route number
_CTVN	(OVF OVF OVF ATN)	Call to vacant number intercept treatment
_MBNR	(OVF OVF OVF ATN)	Calls to maintenance busy numbers Intercept treatment
_CTRC	(OVF NAP OVF NAP)	Restricted Call intercept treatment
_CLDN	(NAP OVF NAP NAP)	Calls to Listed DN intercept treatment
_NINV	(OVF OVF OVF ATN)	Invalid BARS/NARS call Intercept treatment
_NITR	(OVF OVF OVF ATN)	BARS/NARS invalid translation Intercept treatment
_NRES	(OVF OVF OVF ATN)	BARS/NARS restricted calls Intercept treatment
_NBLK	(OVF OVF OVF ATN)	BARS/NARS blocked calls Intercept treatment
ANAT	xxx...x	ANI billing number for attendants making ANI calls
ANLD	xxxxx	ANI listed DN
LFTN	l s c u	Lamp field array TN
LFFD	xxxx	First DN of Busy Lamp Field Array
APRF	xx	Automatic Identification of Outward Dial prefix
AATT	xxxx	Automatic Identification of Outward Dial attendant identifier
RTIM	xxx yyy zzz	Slow answer, Camp-on and Call Waiting recall timers
ATIM	(0)-126	Attendant Alternative Answering timer
CDR	Yes, (No)	Change Call Detail Recording options

_IMPH	Yes, (No)	CDR for incoming packet data call
_OMPH	Yes, (No)	CDR for outgoing packet data call
_AXID	Yes, No	Auxiliary Identification output in CDR records
_TRCR	Yes, No	Carriage return sent after each CDR message
_CDPR	Yes, (No)	Access code (steering code) before dialed digits in CDR records
_ECDR	Yes, (No)	Print End to End Signaling digits in CDR record
_MCR	Yes, No	Mini-CDR equipped
_PORT	0-15	CDR port
IMS	Yes, (No)	Change Integrated Messaging System (IMS) options
_IMA	Yes, (No)	Integrated Messaging System enabled
_APL	0-15	Auxiliary Processor Link number
_UST	Yes, (No)	User Status Update (UST) enabled
_APL	0-15	Auxiliary Processor Link number
_UMG	Yes, (No)	User to user messaging enabled
_APL	0-15	Auxiliary Processor Link number
FLSH	20-(45)-768	Switchhook flash timing
CHLN	(0)-23	Charge Account number length
PREO	(0), 1	Digit pretranslation (disabled), enabled
FCAF	Yes, (No)	Forced Charge Account (FCA) active
_CHMN	(1)-CHLN	Minimum number of digits for FCA code
_FCNC	0-99	Forced Charge Account Network class of service
SPWD	xxxx	Secure data password
_PWD2	xxxx	Second level administration password
FNAD	(HNT), ATT, NO, FDN	Call Forward No Answer treatment for DID calls
FNAT	(HNT), ATT, NO, FDN	Treatment for External CFNA calls (non-DID)
FNAL	(HNT), ATT, NO, FDN	CFNA treatment for calls when CFCT is enabled
CFTA	Yes, (No)	Call Forward to trunk access code
CFN0	1-(4)-15	Number of normal ringing cycles for CFNA, option 0
CFN1	1-(4)-15	Number of normal ringing cycles for CFNA, option 1
CFN2	1-(4)-15	Number of normal ringing cycles for CFNA, option 2
DFN0	1-(4)-15	Number of distinctive ringing cycles for CFNA, option 0
DFN1	1-(4)-15	Number of distinctive ringing cycles for CFNA, option 1
DFN2	1-(4)-15	Number of distinctive ringing cycles for CFNA, option 2
PHDT	1-(30)-63	Number of 2 s intervals between Permanent Hold reminders

AQTT	1-(30)-255	Attendant queue timing threshold in seconds
AODN	xxxx	Attendant overflow DN
SRCD	xxxx	Set Relocation security code
ATAC	xxxx	Attendant Administration access code
CWUP	Yes, (No)	Call Waiting queue update
CWCL	(0)-255 (0)-255	Lower and upper thresholds for number of Calls Waiting
CWTM	(0)-511 (0)-511	Lower and upper thresholds for Call Waiting time in seconds
CWBZ	Yes, (No) Yes, (No)	Call Waiting buzz
DNDL	Yes, (No)	Do Not Disturb lamp on 500/2500 sets
DNDT	(BST), ATT, RAN	Do Not Disturb intercept treatment
RRT	0-511	Recorded announcement route
DNDH	Yes, (No)	Do Not Disturb Hunting
CCRS	aaa	Controlled Class Of Service
ECC1	aaa	Enhanced Controlled Class of Service level one
ECC2	aaa	Enhanced Controlled Class of Service second level
MDID	Yes, (No)	No Answer DID calls routed to Message Center
NDID	Yes, (No)	No Answer non-DID calls routed to Message Center
MWFB	Yes, (No)	DID calls to busy sets routed to Message Center
MATT	Yes, (No)	Consoles used as Message Center
SPVC	0-63	Attendant number for Supervisor Console
SBLF	Yes, (No)	Standard Busy Lamp Field
ITH1	1-255	Visual Indication Threshold 1 for supervisory console
ITH2	1-255	Visual Indication Threshold 2 for supervisory console
ITH3	1-255	Visual Indication Threshold 3 for supervisory console
FRRT	0-511	First RAN route
FRT	0-(20)-2044	Time delay in seconds for first RAN route
SRRT	0-511	Second RAN route number for ROA
SRT	0-(40)-2044	Time delay for second RAN route in seconds
WAIT	(RGB), MUS, SIL	Treatment during waiting time for ROA
MURT	0-511	Music Route number
RICI	xx xx ...	ICI key numbers (0-19) requiring overflow announcement (ROA)
MUS	Yes, (No)	Music for sets
_MUSR	0-511	Music Route for Sets
CONG	BUSY, (OVFL)	Busy or overflow tone for all trunks busy condition
LLT	(OVF), ATN, OFA	Flexible Line Lockout treatment

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OHAS	Yes, (No)	Change Off-Hook Alarm Security options
_ODN0	xxxx	OHAS DN 0
_ODN1	xxxx	OHAS DN 1
_ODN2	xxxx	OHAS DN 2
_ODN3	xxxx	OHAS DN 3
_ODN4	xxxx	OHAS DN 4
_ODN5	xxxx	OHAS DN 5
_ODN6	xxxx	OHAS DN 6
_ODN7	xxxx	OHAS DN 7
_ODN8	xxxx	OHAS DN 8
_ODN9	xxxx	OHAS DN 9
_ASTM	1-(30)-63	OHAS off-hook or interdigit timeout timer in seconds
DLT	(OVF), ATN, OFA	Direct Inward System Access (DISA) lockout treatment
DIND	2-(30)-60	Dial tone and interdigit timeout for non-DTR telephones
DIDT	2-(15)-60	Dial tone and interdigit timeout for 2500 telephones
LDTT	2-(6)-30	Line disconnect tone timer for 500/2500 telephones in seconds
BOTO	2-(15)-60	Busy tone/overflow tone timeout
DBRC	2-(60)-120	Duration between Audible Reminder of Held Call in seconds
NFCR	Yes, (No)	Enable New Flexible Code Restriction
_MAXT	1-255	Maximum number of NFCR translation tables
IDCA	Yes, (No)	Incoming DID digit conversion allowed (denied)
_DCMX	1-255	Maximum number of IDC conversion tables
ADCP	xxxx	All-digital connection prefix
EEST	Yes, (No)	End-to-end signaling tone to originating party
_DTMF	(Yes), No	End to End Signaling feedback tone
TTBL	(0)-31	Tone Table number
SCPL	0-8	Station Control Password Length
FFCS	Yes, (No)	Change end of dialing indicator in FFC
STRL	1-3	Number of digits to indicate FFC end of a feature activation
STRG	(#), xxx	1 to 3 digits to indicate FFC end of a feature activation
VSID	0-15	Value Added Server Identifier
GPxx	(0), 1, 2, 3, 4, 5	Unsolicited status events 1, 2, 3, 4, 5, or 6 to Group xx
GP02	n n n n n	Group 2 status events 1, 2, 3, 4, 5, or 6 assigned

GP03	n n n n n	Group 3 status events 1, 2, 3, 4, 5, 6 assigned
GP04	n n n n n	Group 4 status events 1, 2, 3, 4, 5, or 6 assigned
GP05	n n n n n	Group 5 status events 1, 2, 3, 4, 5, or 6 assigned
GP06	n n n n n	Group 6 status events 1, 2, 3, 4, 5, or 6 assigned
GP07	n n n n n	Group 7 status events 1, 2, 3, 4, 5, or 6 assigned
GP08	n n n n n	Group 8 status events 1, 2, 3, 4, 5, or 6 assigned
GP09	n n n n n	Group 9 status events 1, 2, 3, 4, 5, or 6 assigned
GP10	n n n n n	Group 10 status events 1, 2, 3, 4, 5, or 6 assigned
GP11	n n n n n	Group 11 status events 1, 2, 3, 4, 5, or 6 assigned
GP12	n n n n n	Group 12 status events 1, 2, 3, 4, 5, or 6 assigned
GP13	n n n n n	Group 13 status events 1, 2, 3, 4, 5, or 6 assigned
GP14	n n n n n	Group 14 status events 1, 2, 3, 4, 5, or 6 assigned
GP15	n n n n n	Group 15 status events 1, 2, 3, 4, 5, or 6 assigned
AWU	Yes, (No), X	Enable Automatic Wake Up feature
_ATRC	Yes, (No)	Attendant Recall after failed AWU attempts
_CONF	loop	Conference loop number for Automatic Wake Up
_RANF	0-511	Music RAN route number
_RAN1	0-511	Primary RAN route number
_RAN2	0-511	Secondary RAN route number
_LA11	0-511	Primary RAN route for Language 1 in AWU
_LA12	0-511	Secondary RAN route for Language 1 in AWU
_LA21	0-511	Primary RAN route for Language 2 in AWU
_LA22	0-511	Secondary RAN route for Language 2 in AWU
_LA31	0-511	Primary RAN route for Language 3 in AWU
_LA32	0-511	Secondary RAN route for Language 3 in AWU
_LA41	0-511	Primary RAN route for Language 4 in AWU
_LA42	0-511	Secondary RAN route for Language 4 in AWU
_LA51	0-511	Primary RAN route for Language 5 in AWU
_LA52	0-511	Secondary RAN route for Language 5 in AWU
_R2BN	hhmm	Hour and minute to switch to Secondary RAN
_R2ED	hhmm	Hour and minute to switch to Primary RAN
_NRWU	2-(5)	Number of rings for Automatic Wake Up calls
_TAWU	1-(3)	Number of Tries for an unanswered AWU call
AC2	aaa	Access code 2
ISDN	Yes, (No)	Change ISDN options
_PNI	1-32700	Private Network Identifier

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_PFX1	xxxx	Prefix (area) code for International PRA
_PFX2	xxxx	Central Office Prefix for IPRA
_HNPA	1200-1999	Home Number Plan Area code
_HNXX	100-9999	Prefix for Central Office
_HLOC	100-9999	Home Location Code (ESN)
_LSC	xxxx	Local steering code
_CNTP	LDN, (PDN)	Default for Calling Line ID (CLID)
_RCNT	0-(5)	Maximum inter-node hops in a network redirection call

Alphabetical list of prompts

AATT xxxx — Automatic Identification of Outward Dial attendant identifier. aiod-1

Precede with "X" to remove.

AC2 **aaa** — Access code 2. pri-15

Enter call types that use access code 2. Multiple responses are permitted. If a numbering plan is not entered here, it automatically defaults to Access Code 1. Refer to the INAC prompt in LD16.

Before X11 release 16, this prompt only appears when ISDN = Yes and the switch is equipped with NARS. The allowed values are
NPA = E.164 National
NXX = E.164 Subscriber
INTL = International
SPN = Special number
LOC = Location code

With X11 release 16 and NMS, this prompt applies to both ISDN and non-ISDN calls.

ACCD **(OVF OVF OVF ATN)** — Access denied intercept treatment. basic-1

See prompt INTR for details.

ADCP xxxx — All-digital connection prefix. basic-5

Enter 1-4 digits. Prompted only if DTI and AMP are equipped.

ANAT xxx...x — ANI billing number for attendants making ANI calls. ani-1

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. In either case, together with ANLD (ANI listed DN), the total number of digits must be 7.

ANLD xxxxx — ANI listed DN. ani-1

May be 0-5 digits depending on the length of ANAT. The combined number of digits for ANAT and ANLD must be 7.

AODN xxxx — Attendant overflow DN. aop-1

The DN can be a single or multiple call ringing DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Enter "X" to remove.

APL **0-15** — Auxiliary Processor Link number. apl-10

Prompted only if OPT = DNI

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APRF	**xx** — Automatic Identification of Outward Dial prefix. Enter one or two digits.	aiod-1
AQTT	**1-(30)-255** — Attendant queue timing threshold in seconds.	basic-1
ASTM	**1-(30)-63** — OHAS off-hook or interdigit timeout timer in seconds. This timer is applied to telephones with Alarm Security Allowed (ASA) class of service. When the timer expires, the telephone is intercepted to the OHAS DN. ASTM applies to all OHAS DNs. If the telephone has Alarm Security Denied (ASD) class of service, the normal dial tone and interdigit timers are used (see LD15 prompts DIND and DIDT).	basic-18
ATAC	**xxxx** — Attendant Administration access code.	aa-1
ATDN	**(0)-xxx...x** — Attendant DN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.	basic-1
ATIM	**(0)-126** — Attendant Alternative Answering timer. Timer is in increments of 2 seconds. Use ATIM = "0" to disable AAA. Odd numbers are rounded down.	aaa-15
ATRC	**Yes, (No)** — Attendant Recall after failed AWU attempts. A YES response enables Attendant Recall for unanswered Automatic Wake Up (AWU) call attempts. The number of AWU attempts is defined at the REWU prompt. The number of rings for an AWU call is defined at the NRWU prompt.	awu-10
AWU	**Yes, (No), X** — Enable Automatic Wake Up feature. The AWU prompts appear only if AWU is equipped. If AWU = X, all AWU related data is removed for the customer.	awu-10
AXID	**Yes, No** — Auxiliary Identification output in CDR records. Auxiliary Identification provides the TN when the call involves a multiple appearance DN.	cdr-1
BOTO	**2-(15)-60** — Busy tone/overflow tone timeout.	basic-10
CAS	**Yes, (No)** — Change Centralized Attendant Service options.	casm-1

CCRS **aaa** — Controlled Class Of Service. ccos-7

Input restriction levels apply when CCRS is active. If CCRS is inactive, then the set defaults to the TN class of service restriction. Allowed values are

(UNR) = Unrestricted
CUN = Conditional Unrestricted
CTD = Conditionally toll-denied
TLD = Toll Denied
SRE = Semirestricted
FRE = Fully Restricted
FR1 = Restricted class 1
FR2 = Restricted class 2

CDPR **Yes, (No)** — Access code (steering code) before dialed digits in CDR records. cdp-1

Yes = ACOD is inserted before the dialed digits
No = Distant or Trunk Steering Code is replaced by the Trunk Access Code (ACOD)

CDR **Yes, (No)** — Change Call Detail Recording options. cdr-1

CFN0 **1-(4)-15** — Number of normal ringing cycles for CFNA, option 0. uscr-19

With X11 release 19 and later, CFNA has three ringing cycle options. This assigns the normal ringing cycles for option 0. refer to X11 features and services (553-3001-305) for details concerning this feature.

CFN1 **1-(4)-15** — Number of normal ringing cycles for CFNA, option 1. uscr-19

With X11 release 19 and later, CFNA has three ringing cycle options. This assigns the normal ringing cycles for option 1. refer to X11 features and services (553-3001-305) for details concerning this feature.

CFN2 **1-(4)-15** — Number of normal ringing cycles for CFNA, option 2. uscr-19

With X11 release 19 and later, CFNA has three ringing cycle options. This assigns the normal ringing cycles for option 2. refer to X11 features and services (553-3001-305) for details concerning this feature.

CFNA **1-(4)-15** — Number of normal ringing cycles for CFNA. basic-1

This prompt applies to X11 release 18 and earlier only.

If the Flexible Tones and Cadences (FTC) package is equipped, this interval is tied to the number of cycles of NCAD ringing. Refer to Flexible Tone and Digit Switches (553-2711-180).

CFTA **Yes, (No)** — Call Forward to trunk access code. optf-12

LD15

CHDN xxx...x – Silent Hold DN. casm-1

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

CHLN (0)-23 – Charge Account number length. fca-1

CHMN (1)-CHLN – Minimum number of digits for FCA code. fca-1

The range is from 1 to CHLN+1, where CHLN = Charge account Number Length.

CLDN (NAP OVF NAP NAP) – Calls to Listed DN intercept treatment. basic-1

See prompt INTR for details.

CNTP LDN, (PDN) – Default for Calling Line ID (CLID). pri-12

This determines the default Calling Line ID (CLID) class of service (COS) for all sets except those configured differently in LD10 and LD11. Attendant consoles have only a Listed Directory Number (LDN).

PDN = display the set's Prime DN
LDN = display the customer's Listed Directory Number

CONF loop – Conference loop number for Automatic Wake Up. awu-10

Prompted in X11 release 15 and earlier.

CONG BUSY, (OVFL) – Busy or overflow tone for all trunks busy condition. basic-1

CTRC (OVF NAP OVF NAP) – Restricted Call intercept treatment. basic-1

See prompt INTR for details.

CTVN (OVF OVF OVF ATN) – Call to vacant number intercept treatment. basic-1

See prompt INTR for details.

CUST 0-99 – Customer number. basic-1

With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71, and 81. It remains 0-31 for all other supported machines and system options.

CWBZ Yes, (No) Yes, (No) – Call Waiting buzz. basic-1

The two options are
1. Provide 2 second buzz on exceeding upper threshold.
2. Provide buzz on first call entering queue.

CWCL **(0)-255 (0)-255** — Lower and upper thresholds for number of Calls Waiting. basic-1

The Call Waiting lamp starts flashing when number of calls in the queue meet or exceed the upper threshold. The lamp continues to flash until the number of calls in queue is less than the lower threshold.

Enter "0 0" to disable this feature.

CWTM **(0)-511 (0)-511** — Lower and upper thresholds for Call Waiting time in seconds. basic-1

The Call Waiting lamp starts flashing when the time the call waits in the queue meet or exceed the upper threshold. The lamp continues to flash until the wait time is less than the lower threshold.

Enter "0 0" to disable this feature.

CWUP **Yes, (No)** — Call Waiting queue update. dcon-15

The M2250 type consoles can be notified every time there is a change to the Call Waiting queue (or not).

DBRC **2-(60)-120** — Duration between Audible Reminder of Held Call in seconds. basic-14

DCMX **1-255** — Maximum number of IDC conversion tables. idc-12

The sum of the values for MAXT and DCMX cannot exceed 255 (MAXT + DCMX ≤ 255) per customer.

DFLT **Yes, (No)** — System to recover in the CAS-active mode after sysload. casr-1

DFN0 **1-(4)-15** — Number of distinctive ringing cycles for CFNA, option 0. uscr-19

With X11 release 19 and later, CFNA has three ringing cycle options. This assigns the distinctive ringing cycles for option 0. refer to X11 features and services (553-3001-305) for details concerning this feature.

DFN1 **1-(4)-15** — Number of distinctive ringing cycles for CFNA, option 1. uscr-19

With X11 release 19 and later, CFNA has three ringing cycle options. This assigns the distinctive ringing cycles for option 1. refer to X11 features and services (553-3001-305) for details concerning this feature.

DFN2 **1-(4)-15** — Number of distinctive ringing cycles for CFNA, option 2. uscr-19

With X11 release 19 and later, CFNA has three ringing cycle options. This assigns the distinctive ringing cycles for option 2. refer to X11 features and services (553-3001-305) for details concerning this feature.

DFNA **1-(4)-15** — Number of distinctive ring cycles before call forward. drng-4

This prompt applies to X11 release 18 and earlier only.

LD15

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DGRP	**(0)-2046** — Maximum number of Dial Intercom Groups (DIG). Range is (0)-254 in X11 release 14 and earlier.	di-1
DIDT	**2-(15)-60** — Dial tone and interdigit timeout for 2500 telephones.	basic-10
DIND	**2-(30)-60** — Dial tone and interdigit timeout for non-DTR telephones.	basic-10
DLDN	**Yes, (No)** — Departmental Listed DNs. Enter Yes to enable Departmental Listed Directory Numbers.	dldn-5
DLT	**(OVF), ATN, OFA** — Direct Inward System Access (DISA) lockout treatment. OVF = overflow tone ATN = attendant OFA = overflow then attendant	disa-1
DNDH	**Yes, (No)** — Do Not Disturb Hunting.	hvs-16
DNDL	**Yes, (No)** — Do Not Disturb lamp on 500/2500 sets.	dndi-10
DNDT	**(BST), ATT, RAN** — Do Not Disturb intercept treatment. BST = busy tone ATT = Attendant RAN = RAN trunk	dndi-1
DTMF	**(Yes), No** — End to End Signaling feedback tone. Prompted when EEST = Yes Yes = use the current EES for DTMF feedback tone No = use the improved (X11 release 19) EES for single tone feedback	ees-19
ECC1	**aaa** — Enhanced Controlled Class of Service level one. The following restriction levels apply when CCRS is active. When CCRS is inactive, the telephone reverts to the Access Restriction level defined in LD10/11. (UNR) = Unrestricted TLD = Toll Denied SRE = Semirestricted FRE = Fully Restricted FR1 = Fully Restricted class 1 FR2 = Fully Restricted class 2 CUN = Conditionally Unrestricted CTD = Conditionally Toll Denied	ccos-15
ECC2	**aaa** — Enhanced Controlled Class of Service second level. See EEC1 for allowed values.	ccos-15

ECDR **Yes, (No)** — Print End to End Signaling digits in CDR record. ees-19

EEST **Yes, (No)** — End-to-end signaling tone to originating party. ees-19

No = do not send feedback tone to the originator
Yes = send feedback tone to originator

Note: With X11 release 19 and later, enhanced EES signaling is provided when EEST = Yes and DTMF = Yes.

FCAF **Yes, (No)** — Forced Charge Account (FCA) active. fca-1

FCNC **0-99** — Forced Charge Account Network class of service. fca-1

Range before X11 release 13:
0-15 (NARS/NSIG)
0-3 (CDP)
0-7 (NFCR/BARS)

FFCS **Yes, (No)** — Change end of dialing indicator in FFC. ffc-15

FLSH **20-(45)-768** — Switchhook flash timing. basic-1

FNAD **(HNT), ATT, NO, FDN** — Call Forward No Answer treatment for DID calls. basic-2

HNT = Hunt
ATT = CFNA to attendant
NO = CFNA not allowed
FDN = flexible CFNA DN in telephone data block

FNAL **(HNT), ATT, NO, FDN** — CFNA treatment for calls when CFCT is enabled. basic-10

An internal call is defined as a station-to-station call, or trunk call in which LD16 prompt RCLS = INT. If FNAL = HNT no answer calls are forwarded to the Hunt DN.
HNT = Hunting
ATT = CFNA to attendant
NO = CFNA not allowed
FDN = flexible CFNA DN in telephone data block

FNAN **(HNT), ATT, NO, FDN** — Call Forward No Answer treatment for DID calls. basic-2

HNT = Hunt
ATT = CFNA to attendant
NO = CFNA not allowed
FDN = flexible CFNA DN in telephone data block

Prompted only in X11 release 9 and earlier.

FNAT **(HNT), ATT, NO, FDN** — Treatment for External CFNA calls (non-DID). basic-10

An external call is as a trunk call in which LD16 prompt RCLS = EXT. If FDN or HNT is specified, then CFCT handles the call. FNAT is used only when CFCT is enabled.
HNT = Hunting
ATT = CFNA to attendant
NO = CFNA not allowed
FDN = flexible CFNA DN in telephone data block

FRRT **0-511** — First RAN route. ran-1

Enter "X" to remove.

FRT **0-(20)-2044** — Time delay in seconds for first RAN route. ran-1

Enter "X" to remove.

GP02 **n n n n n** — Group 2 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP03 **n n n n n** — Group 3 status events 1, 2, 3, 4, 5, 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP04 **n n n n n** — Group 4 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP05 **n n n n n** — Group 5 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP06 **n n n n n** — Group 6 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP07 **n n n n n** — Group 7 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP08 **n n n n n** — Group 8 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP09 **n n n n n** — Group 9 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP10 **n n n n n** — Group 10 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP11 **n n n n n** — Group 11 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP12 **n n n n n** — Group 12 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP13 **n n n n n** — Group 13 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP14 **n n n n n** — Group 14 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GP15 **n n n n n** — Group 15 status events 1, 2, 3, 4, 5, or 6 assigned. mlm-19

Refer to the description at the GPxx prompt.
Note that with X11 rel: ease 18 and earlier, only status events 1-5 are supported.

GPxx **(0), 1, 2, 3, 4, 5** — Unsolicited status events 1, 2, 3, 4, 5, or 6 to Group xx. mlm-19

Unsolicited status events are used with Meridian Link applications. Enter the message to be sent to the host computer for telephones in the group, where

0 = no status messages monitored
1 = On hook
2 = Off hook
3 = Ringing
4 = Active
5 = Disconnect
6 = Unringing (X11 release 19 and later only)

To remove a status from the group, precede the value with an X.

The prompts GP02 thru GP15 appear when Meridian Link package (153) equipped.

Default values are in Group 0 and Group 1:
Group 0 = sends no messages
Group 1 = sends all messages

Groups 0 and 1 cannot be changed, but can be entered in response to prompt IAPG in LD10 and LD11.

HLOC **100-9999** — Home Location Code (ESN). pri-12

HNPA **1200-1999** — Home Number Plan Area code. nanp-19

Prior to X11 release 19, the allowed parameter is 100-999. 1200-1999 is used fo 1+ dialing.

Prompted only with HNXX. Not prompted if the output gives PFX1 and PFX2 instead.

HNXX **100-9999** — Prefix for Central Office. pri-12

Prompted only with HNPA. Not prompted if the output gives PFX1 and PFX2 instead.

X11 release 16 and later support the range of 100-9999 to allow for digit insertion between HNXX and the DN. Prior to X11 release 16, the range allowed is 100-999. If HNXX is 4 digits long, only the last 3 digits of the DN are displayed in the Calling Line ID (CLID).

HRCL **0-512** — Hold Recall timer in units of 2 seconds. casm-1

ICI **0-19 aaa** — Attendant Incoming Call Indicators. basic-1

Enter the ICI number (0-19) and the desired function.
CAx = Station Category Indication priority level (x=1-7)
CFB = Call Forward Busy
CFN = Call Forward No Answer
DF0 = dial 0 fully restricted
DL0 = dial 0
IAT = inter-attendant call
INT = Intercept
LCT = lockout intercept
LD0 = Listed DN 0
LD1 = Listed DN 1
LD2 = Listed DN 2
LD3 = Listed DN 3
LD4 = Listed DN 4
LD5 = Listed DN 5
MWC = Message Waiting calls
NUL = remove ICI appearance
Rxxx Rxxx .... = one or more route numbers
RLL = attendant recall

Note: Multiple responses can be entered for the same key.

IDCA **Yes, (No)** — Incoming DID digit conversion allowed (denied). idc-12

NFCR must be Yes before IDCA can be Yes.

IMA **Yes, (No)** — Integrated Messaging System enabled. ims-1

IMPH **Yes, (No)** — CDR for incoming packet data call. mph-19

This is the Call Detail Records for an incoming packet data call from the Public Switched Packet Data Network to the Meridian Packet Handler.

IMS **Yes, (No)** — Change Integrated Messaging System (IMS) options. ims-1

INTR	**Yes, (No)** — Change intercept treatments. Intercept treatments determine the action performed when a user makes an invalid call. Each intercept prompt requires four entries representing the type of call: 1. Station call 2. Attendant extended call 3. Tie call 4. DID call The options are: ATN = route to attendant BSY = provide busy tone NAP = not applicable OVF = provide overflow tone RAN = route to recorded announcement The defaults are shown for each Intercept prompt. If RAN is specified, you are prompted for the RAN route number.	basic-1
IRNG	**Yes, (No)** — Distinctive Ringing for Dial Intercom.	drng-4
ISDN	**Yes, (No)** — Change ISDN options. Prompted if ISDN signaling package is equipped.	pri-12
ITH1	**1-255** — Visual Indication Threshold 1 for supervisory console. Range: ITH1 ≤ calls in queue ≤ ITH2	bacd-8
ITH2	**1-255** — Visual Indication Threshold 2 for supervisory console. Range: ITH2 ≤ calls in queue ≤ ITH3	bacd-8
ITH3	**1-255** — Visual Indication Threshold 3 for supervisory console. Range: calls in queue > ITH3	bacd-8
LA11	**0-511** — Primary RAN route for Language 1 in AWU. Prompted only if Multi-Language Wake Up (MLWU) package (206) is equipped.	mlwu-16
LA12	**0-511** — Secondary RAN route for Language 1 in AWU. Prompted only if MLWU package (206) is equipped.	mlwu-16
LA21	**0-511** — Primary RAN route for Language 2 in AWU. Prompted only if MLWU package (206) is equipped.	mlwu-16
LA22	**0-511** — Secondary RAN route for Language 2 in AWU. Prompted only if MLWU package (206) is equipped.	mlwu-16

LA31 **0-511** — Primary RAN route for Language 3 in AWU. mlwu-16

Prompted only if MLWU package (206) is equipped.

LA32 **0-511** — Secondary RAN route for Language 3 in AWU. mlwu-16

Prompted only if MLWU package (206) is equipped.

LA41 **0-511** — Primary RAN route for Language 4 in AWU. mlwu-16

Prompted only if MLWU package (206) is equipped.

LA42 **0-511** — Secondary RAN route for Language 4 in AWU. mlwu-16

Prompted only if MLWU package (206) is equipped.

LA51 **0-511** — Primary RAN route for Language 5 in AWU. mlwu-16

Prompted only if MLWU package (206) is equipped.

LA52 **0-511** — Secondary RAN route for Language 5 in AWU. mlwu-16

Prompted only if MLWU package (206) is equipped.

LADN **xxx...x** — Local attendant DN. casr-1

This must be different from the DN entered for ATDN. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

LDA0 **xx xx ..., ALL** — Attendant consoles associated with LDN0. basic-5

Enter one or more attendant numbers (1-63). Enter ALL to enable this Listed DN on all attendants. Precede with "X" to remove.

LDA1 **xx xx ..., ALL** — Attendant consoles associated with LDN1. basic-5

Enter one or more attendant numbers (1-63). Enter ALL to enable this Listed DN on all attendants. Precede with "X" to remove.

LDA2 **xx xx ..., ALL** — Attendant consoles associated with LDN2. basic-5

Enter one or more attendant numbers (1-63). Enter ALL to enable this Listed DN on all attendants. Precede with "X" to remove.

LDA3 **xx xx ..., ALL** — Attendant consoles associated with LDN3. basic-5

Enter one or more attendant numbers (1-63). Enter ALL to enable this Listed DN on all attendants. Precede with "X" to remove.

LDN0 **xxx...x** — Listed Directory Number 0. basic-1

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.

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LDN1	**xxx...x** — Listed Directory Number 1. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.	basic-1
LDN2	**xxx...x** — Listed Directory Number 2. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.	basic-1
LDN3	**xxx...x** — Listed Directory Number 3. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.	basic-1
LDNT	**Yes, (No)** — Special tone to CAS main attendant on presentation of LDN calls.	casr-12
LDTT	**2-(6)-30** — Line disconnect tone timer for 500/2500 telephones in seconds.	basic-17
LFFD	**xxxx** — First DN of Busy Lamp Field Array. The system shows the status of the next 150 consecutive DNs. Prompted only if OPT = ILF. Enter "X" to remove. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.	basic-1
LFTN	**l s c u** — Lamp field array TN. Loop, shelf, card, and unit for lamp field array for telephones or consoles. Prompted only if OPT = ILF. For Supervisory Console, when assigning lamp field array to show Attendant status, enter the secondary TN of the console (R8). LFTN is prompted again for a second lamp field array. To remove the second LFTN, enter "0". To remove both LFTNs enter XLF in response to prompt OPT.	basic-1
LINK	**Yes, (No)** — ACD DNIS Link option. Prompted only if OPT = DNI.	dnis-10
LLT	**(OVF), ATN, OFA** — Flexible Line Lockout treatment. OVF = overflow tone ATN = attendant OFA = overflow then attendant.	basic-4

LSC	**xxxx** – Local steering code. The 1-4 digit Local Steering Code (LSC) is established in the Coordinated Dialing Plan (CDP). The LSC prompt appears only if the user has a 5 or 6 digit dialing plan. If you want the CDP DN to be transmitted, leave LSC blank. To clear the code, precede the entry with an "X".	cdp-12
MAIN	**Yes, (No)** – Centralized Attendant Service main.	casm-1
MATT	**Yes, (No)** – Consoles used as Message Center.	basic-1
MAXT	**1-255** – Maximum number of NFCR translation tables. Once defined a lower value can not be entered for MAXT. The sum of the values for MAXT and DCMX cannot exceed 255 (MAXT + DCMX ≤ 255) per customer.	nfcr-2
MBNR	**(OVF OVF OVF ATN)** – Calls to maintenance busy numbers Intercept treatment. See prompt INTR for details.	basic-1
MCR	**Yes, No** – Mini-CDR equipped.	mcdr-1
MDID	**Yes, (No)** – No Answer DID calls routed to Message Center.	mwc-1
MURT	**0-511** – Music Route number. Enter "X" to remove.	mus-1
MUS	**Yes, (No)** – Music for sets.	emus-12
MUSR	**0-511** – Music Route for Sets. The default is route "0" which is not normally a music route. Enter "X" to remove.	emus-12
MWFB	**Yes, (No)** – DID calls to busy sets routed to Message Center.	mwc-1
NBLK	**(OVF OVF OVF ATN)** – BARS/NARS blocked calls Intercept treatment. See prompt INTR for details.	esn-1
NCOS	**(0)-99** – Attendant Network Class Of Service for all consoles. The ranges for Network Class Of Service group are: (0)-3 for standalone CDP (0)-7 for BARS/CDP and NFCR (0)-15 for NARS and NFCR (0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later	esn-1
NDID	**Yes, (No)** – No Answer non-DID calls routed to Message Center. Not needed if LD15 FNAD, FNAT, FNAL prompts are set to FDN.	mwc-1

NFCR **Yes, (No)** — Enable New Flexible Code Restriction. nfcr-1

To build an IDC table in LD49, NFCR and IDCA must be Yes. If NFCR is not used by the customer, the option must be turned off after the tables are built.

NINV **(OVF OVF OVF ATN)** — Invalid BARS/NARS call Intercept treatment. esn-1

See prompt INTR for details.

NIT1 **xxx...x** — First Night Service DN by time of day. basic-12

Up to 4 night service DNs can be defined. The time of day is specified by the prompts TIM1 to TIM4. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

NIT2 **xxx...x** — Second Night Service DN by time of day. basic-12

See prompt NIT1.

NIT3 **xxx...x** — Third Night Service DN by time of day. basic-12

See prompt NIT1.

NIT4 **xxx...x** — Fourth Night Service DN by time of day. basic-12

See prompt NIT1.

NITE **xxx...x** — Night Service Directory Number. basic-1

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. To remove the DN, precede entry with an "X".

Note 1: The NITE prompt is used up to X11 release 10. The prompts NITx and TIMx are used in X11 release 12 and later.

Note 2: See also prompt NITE in LD14 which takes precedence.

NITR **(OVF OVF OVF ATN)** — BARS/NARS invalid translation Intercept treatment. esn-1

See prompt INTR for details.

NRES **(OVF OVF OVF ATN)** — BARS/NARS restricted calls Intercept treatment. esn-1

See prompt INTR for details.

NRWU **2-(5)** — Number of rings for Automatic Wake Up calls. awu-10

Number of rings on each Automatic Wake Up (AWU) call attempt.

ODN0	**xxxx** – OHAS DN 0. Enter "X" to remove the DN.	basic-18
ODN1	**xxxx** – OHAS DN 1. Enter "X" to remove the DN.	basic-18
ODN2	**xxxx** – OHAS DN 2. Enter "X" to remove the DN.	basic-18
ODN3	**xxxx** – OHAS DN 3. Enter "X" to remove the DN.	basic-18
ODN4	**xxxx** – OHAS DN 4. Enter "X" to remove the DN.	basic-18
ODN5	**xxxx** – OHAS DN 5. Enter "X" to remove the DN.	basic-18
ODN6	**xxxx** – OHAS DN 6. Enter "X" to remove the DN.	basic-18
ODN7	**xxxx** – OHAS DN 7. Enter "X" to remove the DN.	basic-18
ODN8	**xxxx** – OHAS DN 8. Enter "X" to remove the DN.	basic-18
ODN9	**xxxx** – OHAS DN 9. Enter "X" to remove the DN.	basic-18
OHAS	**Yes, (No)** – Change Off-Hook Alarm Security options.	basic-18
OMPH	**Yes, (No)** – CDR for outgoing packet data call. This is the Call Detail Records for an outgoing packet data call from the Meridian Packet Handler to the Public Switched Packet Data Network.	mph-19
OPT	**aaa** – Customer options. Enter one or more customer options.	basic-1
OPT	**CFRA, (CFRD)** – Call Forward Reminder tone for 500/2500 telephones.	cfrt-19
OPT	**CFF, (CFO)** – Call Forward forwarding (originating) party COS.	basic-1
OPT	**COP, (COX)** – Central Office call priority (no priority). Central Office call priority is used for Ringing Number Pickup (RNPG) and Group Call Pickup. Includes COT, FEX, WAT and DID trunks.	dcp-12

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OPT	**CPA, (CPD)** — Call Park allowed (denied).	cpk-2
OPT	**CTA, (CTD)** — Camp-on Tone allowed (denied).	basic-1
OPT	**DBA, (DBD)** — Flexible Incoming Tones allowed (denied) on digital sets.	basic-14
OPT	**DNI, (DNX)** — Dialed Number Identification Service included (excluded).	dnis-10
OPT	**DSI, (DSX)** — Include (exclude) data services.	csl-8
OPT	**HVA, (HVD)** — Handsfree voice call allowed (denied).	hva-19
OPT	**HTR, (HTU)** — Hot Line access restricted (unrestricted).	hot-10
	When OPT = HTR, only Hot Line calls can terminate on Hot Line DNs.	
OPT	**IBL, (XBL)** — Include (exclude) Enhanced Busy Lamp Field.	basic-15
	Note: IBL and ILF cannot be used together.	
OPT	**IC2, (IC1)** — 20 (10) Incoming Call Indicators.	basic-1
OPT	**IDP, (XDP)** — Include (exclude) digit display.	ddsp-1
OPT	**IHA, (IHD)** — Individual Hold allowed (denied).	basic-1
OPT	**ILF, (XLF)** — Include (exclude) Busy Lamp Field Array.	basic-1
	Busy Lamp Field Array is only used on QCW-type consoles.	
OPT	**ITG, (XTG)** — Include (exclude) key lamp expansion module.	basic-1
	Used as Trunk Group Busy field or supervisory lamp field in X11 release 8 and later.	
OPT	**LOA, (LOD)** — Lockout allowed (denied).	basic-1
	LOA locks an attendant out of re-entering an established call on the console Hold key. The attendant can override with the Barge-In feature.	
OPT	**LRA, (LRD)** — Last Number Redial allowed (denied).	lnr-8
OPT	**MCI, (MCX)** — Message Center included (excluded).	mwc-1
OPT	**ROI, (ROX)** — Recorded overflow announcement included (excluded).	roa-2
	This treatment for congested consoles only.	
OPT	**ROR, (RTR)** — Originating (terminating) side determines ring cadence.	basic-14
	Originating (terminating) side of the call determines ringing or buzzing cadence used.	
OPT	**RTA, (RTD)** — CDP Routing feature Allowed (Denied).	cdp-15
	RTA allows DID routing with Distant Steering Codes over CO and WATS trunks.	

OPT	**SBA, (SBD)** — Flexible Incoming Tones allowed (denied) for SL-1 telephones.	basic-14
OPT	**SYA, (SYD)** — Secrecy allowed (denied) on attendant console.	basic-1
PFX1	**xxxx** — Prefix (area) code for International PRA. Prompted only with PFX2. Not prompted if the output gives HNPA and HNXX instead. For AXE-10 applications only, the PFX1 + PFX2 + DN length must be 8 digits or less.	pri2-15
PFX2	**xxxx** — Central Office Prefix for IPRA. Prompted only with PFX1. Not prompted if the output gives HNPA and HNXX instead. For AXE-10 applications only, the PFX1 + PFX2 + DN length must be 8 digits or less.	pri2-15
PHDT	**1-(30)-63** — Number of 2 s intervals between Permanent Hold reminders. Range is in 2 second intervals. For example 30 = 1 minute.	dhld-4
PKND	**(1)-4** — Number of digits dialed for Group Pickup. To determine the number of digits, count the number of digits of the highest number RNPG group. Before X11 release 14 the range is (1)-3.	dcp-12
PNI	**1-32700** — Private Network Identifier. Within one network, use the same value for PNI in both LD15 and LD16. When interworking with different networks, the LD15 PNI is for the local system and the LD16 PNI is for the target (remote) switch.	-12
PORT	**0-15** — CDR port. To remove a CDR port, change CDR = No. Exit and re-enter LD15, select CDR = Yes, then add only the desired CDR port numbers. Enter return <cr> to stop PORT prompt.	cdr-1
PREO	**(0), 1** — Digit pretranslation (disabled), enabled. To enable the Pretranslation feature, the Pretranslation data block (Calling Group to Speed Call correlation) must be configured in LD18.	pre-8
PWD2	**xxxx** — Second level administration password. This password is defined in LD17. The SPWD password is not updated unless the PWD2 password is entered correctly.	basic-1
R2BN	**hhmm** — Hour and minute to switch to Secondary RAN.	awu-10
R2ED	**hhmm** — Hour and minute to switch to Primary RAN.	awu-10
RAN1	**0-511** — Primary RAN route number. Use RAN1 as the Primary route for Language 0 in a Multi-language AWU application. The route must be unique.	awu-10

RAN2	**0-511** — Secondary RAN route number. Use RAN2 as the Secondary route for Language 0 in a Multi-language AWU application. The route must be unique.	awu-10
RANF	**0-511** — Music RAN route number. The route must be unique.	awu-10
RANR	**0-511** — Intercept Recorded announcement route number. RAN is prompted when recorded announcement is specified as an intercept treatment. See prompt INTR for details.	ran-1
RCNT	**0-(5)** — Maximum inter-node hops in a network redirection call. This value must be set to greater than 0 for a network redirection to take place. The RCNT prompt is only checked for redirected calls when prompt ISDN = Yes.	esn-14
REF0	**xxxx** — DN for reference trunk 0. See prompt TSTL.	basic-1
REF1	**xxxx** — DN for reference trunk 1. See prompt TSTL.	basic-1
REF2	**xxxx** — DN for reference trunk 2. See prompt TSTL.	basic-1
REF3	**xxxx** — DN for reference trunk 3. See prompt TSTL.	basic-1
REQ	**NEW, CHG, OUT, END** — Action request. CHG = change an existing customer END = exit the overlay NEW = add a new customer OUT = delete a customer	basic-1
RICI	**xx xx ...** — ICI key numbers (0-19) requiring overflow announcement (ROA). Precede with "X" to remove an ICI number.	roa-2
RLA	**0-511** — Release Link route number.	casr-1
RRT	**0-511** — Recorded announcement route. RRT is prompted when recorded announcement is specified as an intercept treatment for Do Not Disturb. See prompt DNDT for details.	ran-1

RTIM **xxx yyy zzz** — Slow answer, Camp-on and Call Waiting recall timers. basic-1

These timers indicate in seconds the elapsed time before attendant recall. Slow answer must be a multiple of 6 seconds, camp-on and call waiting must be a multiple of 2 seconds (all values must be an even number).
xx = 0-(30)-378 for slow answer
yy = 0-(30)-510 for Camp-on
zz = 0-(30)-510 for Call Waiting

To change one timer all three fields must be input.

SBLF **Yes, (No)** — Standard Busy Lamp Field. bacd-8

Prompted only if response to SPVC is in the range 1-63.

SCPL **0-8** — Station Control Password Length. ffc-15

Enter "0" to disable the Electronic Lock (ELK) and Remote Call Forward (RCFW) features. A data dump and sysload is required to implement a change in the password length.

SPRE **xxxx** — Special Prefix number. basic-1

The prefix must not conflict with the numbering plan. Typically SPRE is set to "1". Enter "X" to remove.

SPVC **0-63** — Attendant number for Supervisor Console. bacd-8

Enter "0" if there is no supervisor console.

SPWD **xxxx** — Secure data password. disa-1

This password is entered when using LD88 for authorization codes and LD24 for Direct Inward System Access (DISA) blocks. Enter X to remove the password.

SRCD **xxxx** — Set Relocation security code. sr-1

Enter X to remove.
With X11 release 19 and later, a security code is required. If one is not entered, the system defaults to 0000 (four zeroes).

SRRT **0-511** — Second RAN route number for ROA. roa-2

Enter X to remove.

SRT **0-(40)-2044** — Time delay for second RAN route in seconds. ran-1

Enter X to remove.

STRG	**(#), xxx** — 1 to 3 digits to indicate FFC end of a feature activation. Up to three characters are allowed as defined by prompt STRL. This is used with Flexible Feature Codes to indicate the end of a feature activation or deactivation, for example to indicate the end of entering a call forward DN. The default (#) cannot be used with the OPAO feature (package 104)	ffc-15
STRL	**1-3** — Number of digits to indicate FFC end of a feature activation. See prompt STRG to define the actual digits.	ffc-15
T100	**xxx...x** — DN for Type-100 line. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.	basic-1
TAWU	**1-(3)** — Number of Tries for an unanswered AWU call. This prompt defines the number of times an unanswered AWU call is presented before recall to the attendant for manual wake up calls. Prior to X11 release 16, the system always tried three times. Prompted only if ATRC = Yes.	gewu-16
TIM1	**hh mm** — Time for first Night Service DN to start. Enter the hour and minute for First Night Service DN. hh = 0-23 mm = 0-59 TIM1 should be set earlier than TIM2, 3 and 4. If no time is entered here, the system assumes a 24-hour clock. Enter "X" to remove the time.	basic-12
TIM2	**hh mm** — Time for second Night Service DN to start. See prompt TIM1.	basic-12
TIM3	**hh mm** — Time for third Night Service DN to start. See prompt TIM1.	basic-12
TIM4	**hh mm** — Time for fourth Night Service DN to start. See prompt TIM1.	basic-12
TOCU	**0-99** — New customer number. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines. X11 release 15 and later supports customer number 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71, and 81. It remains 0-31 for all other supported machines and system options.	basic-1

TRCR **Yes, No** — Carriage return sent after each CDR message. cdr-1

TST0 **xxxx** — DN for test trunk 0. basic-1

See prompt TSTL.

TST1 **xxxx** — DN for test trunk 1. basic-1

See prompt TSTL.

TST2 **xxxx** — DN for test trunk 2. basic-1

See prompt TSTL.

TST3 **xxxx** — DN for test trunk 3. basic-1

See prompt TSTL.

TSTL **Yes, (No)** — Change Test Lines. basic-1

Enter Yes to change the TSTx and REFx prompts. These prompts are used for transmission testing. Refer to Transmission Testing Capabilities (553-2001-325).

TTBL **(0)-31** — Tone Table number. ftc-13

Table 0 (North American default values) is created when the first customer is created. Refer to Flexible Tone and Digit Switches (553-2711-180) for other tables.

TYPE **CDB** — Customer data block. basic-1

UMG **Yes, (No)** — User to user messaging enabled. ims-4

UST **Yes, (No)** — User Status Update (UST) enabled. ims-4

VSID **0-15** — Value Added Server Identifier. usm-7

Enter the VAS identifier of the Value Added Server providing the services such as Voice Messaging and Meridian Link applications. Enter "X" to remove the VSID.

WAIT **(RGB), MUS, SIL** — Treatment during waiting time for ROA. roa-2

The Recorded Overflow Announcement can be
RGB = ringback
MUS = music
SIL = silence

LD15

138 Customer data block

Issued: 04 01 94
Status: Standard
X11 Release: 19

Trunk Route Administration

LD16 allows data for trunk routes, ATM schedule hours or ATM routes to be created or modified.

The range for route numbers is release dependent.

- 0-511 in X11 release 14 and later for NT, RT, XN, and XT systems.
- 0-511 in X11 release 15 and later for SL-1 NT, RT, XT, 51, 61, 61C, 71, and 81.
- 0-127 for all other systems.

Note 1: With X11 release 14 and later, trunk route 31 is no longer reserved for Private routes. Private routes can be configured individually by the customer on any available CO trunk route.

Note 2: After making any changes to the route data block, remember IPE TRUNK CARDS MUST BE DOWNLOADED IN LD32.

LD16

Trunk Route Data Block (RDB, X11 release 19 and earlier)

REQ	aaa	Action Request
TYPE	RDB, ATM, SCH, NPID	Type of data
CUST	0-99	Customer number
ROUT	0-511	Route number
TKTP	aaa	Trunk route type
PRIV	Yes, (No)	Route is (is not) a Private line route
ESN	Yes, (No)	ESN signaling
CNVT	Yes, (No)	Route to conventional switch
DDMI	xxx	Digit manipulation index
ATDN	(0)-xxxxxxx	Attendant DN of conventional main, ESN main, ESN node or ETN node
SAT	Yes, (No)	Trunk route via earth orbiting satellite transmission
RCLS	INT, (EXT)	Route classmarked as internal, (external)
DTRK	Yes, (No)	Digital trunk route
BRIP	Yes, (No)	ISDN BRI packet handler route
DGTP	aaa	Digital trunk type
ISDN	Yes, (No)	ISDN PRI option
_MODE	PRA, ISLD	Mode of D-Channel that controls the route
_DCHI	1-15	DCHI port number
_PNI	0-32700	Customer Private ID (unique to a customer)
_IFC	xxxx	Interface machine type for this PRI route
_SRVC	aaa	Service provisioned for AT&T ESS connections
_SRPM	0-(15)-255	Service parameter
_NCNA	(Yes), No	Network call name allowed
_NCRD	(No), Yes	Network Call Redirection
_TRO	Yes, (No)	Trunk optimization allowed (denied) on the route
_NSF	Yes, (No)	Network Service Facility
_COTR	0-511	Incoming DID/CO route number
_TIER	0-511	Incoming Tie route number
_WATR	xxx	WATS route number
_CHTY	ABCH, (BCH)	Signaling type for B-channel digital routes
_CTYP	aaa	Call type for outgoing direct dialed Tie route

_INAC	Yes, (No)	Insert ESN access code to incoming private network call
ISAR	Yes, (No)	ISA service route
_RTN	0-511	Route number for any configured ISA route
_FACY	Yes, (No)	Private/tie facility indicator
_SID	0-511	Service route ID
_MIN	0-254	Minimum number of channels allowed on the ISA route
_MAX	1-254	Maximum number of channels allowed on the ISA route
_PRIM	(Yes), No	ISA route class of use
NCOS	(0)-99	Network Class of Service
CLS	aaa	Class of service restriction for tie route
TGAR	0-31	Trunk Group Access Restriction
IEC	000-999	Interexchange carrier ID
DSEL	DTA, VCE, TDN, (VOD)	Data only, voice only, transparent data network only, voice and data route
PTYP	aaa	Port type at far end
AUTO	Yes, (No)	Auto terminate trunks
DNIS	Yes, (No)	ACD-DNIS route
IANI	Yes, (No)	Route is (not) an In-Band ANI route
NDGT	3, 4	Number of DNIS digits expected
DCDR	Yes, (No)	Include DNIS number in CDR records
RTYP	aaa	Recording device for RAN trunks
REP	1-15	Number of RAN repetitions
POST	ATT, DIS	Disconnect or route to attendant after maximum repetitions
STRT	IMM, DDL	Connect call immediately or delay until start of recording
ASUP	Yes, (No), CO	RAN to return answer supervision to originator
SIGL	BEL, NT4, NT5	Signaling interface CAMA trunks
FORM	M1A, M2B, M3C	Signaling format CAMA trunks
ICOG	IAO, ICT, OGT	Incoming and/or outgoing trunk
SRCH	RRB, (LIN)	Round robin or linear outgoing trunk search
STEP	0-511	Alternate trunk route for outgoing trunks
ACOD	xxxx . . . x	Trunk route access code
TARG	1-31	Trunk access restriction group number
OABS	0 1 2 9	Actual outgoing digit(s) to be ignored for code restriction

IABS	(0)-3	Number of incoming digits to be absorbed
ID	(0)-9	Identification digit for CAMA trunk routes
CAT	00-99	CAMA trunk route category digits
INST	(0)-99999999	Digits to be inserted in front of leading digit
JDGT	1-(4)	Japanese Central Office Digits
AUDN	xxxx	Auto termination DN for ISA service routes
IDC	Yes, (No)	Incoming DID digit conversion on this route allowed, (denied)
DCNO	(0)-254	IDC translation table for this route in the day mode
NDNO	0-254	IDC Conversion Table for the night mode
DNAM	Yes, (No)	Display IDC name
STRK	Yes, (No)	Super trunk group feature
SPTO	Yes, (No)	3 (7-10) digit outpulsing on ANI calls
ANKP	Yes, (No)	KP signal suppressed
DEXT	Yes, (No)	Digit display option
AIOD	Yes, (No)	Identification of outgoing calls
ACNO	0-99	Customer number
ARNO	0-511	AIOD route number
ATTK	xxxx	AIOD identifier number
ANTK	xxxx	ANI identifier number
SIGO	aaa	Signaling arrangement
STYP	(SDAT), STDN	Standard signaling type
CNTL	Yes, (No)	Change controls or timers
TIMR	aaa xxx	Trunk timers
SST	xx y	Seizure supervision timer for TIE trunks with delay dial and wink start, ground start
NEDC	ORG, ETH	Near end disconnect control
FEDC	ETH, FEC, JNT, (ORG)	Far end disconnect control
CPDC	Yes, (No)	Meridian 1 is the only controlling party on incoming calls
SPCT	DLY, (IMM)	Delayed or immediate cut-through speech path control
DLTN	Yes, (No)	Provide dial tone to the far-end
ANDT	Yes, (No)	ANI dial tone
HOLD	ic dc ht	Failure to hold, increment count, decrement count, min hold time

SEIZ	ic dc	Failure to seize increment count, decrement count percent threshold
RGFL	ic dc	Failure to ring increment count, decrement count percent threshold
RVSD	ic dc	Reversed wired CO trunk increment count, decrement count percent threshold
ILLR	ic dc	Illegal ring increment count, decrement count
SVFL	ic dc	Supervision failure increment count, decrement count
ASTP	1-(2)-15	ADM trunk ring cycles for call step forward
TOV	(0)-3	Data port timeout value
PSEL	TLNK, (DMDM)	T-link or DM-DM protocol selection
OPE	Yes, (No)	Change data port parameters
_PSDS	Yes, (No)	Public Switched Data Service option
_TRAN	SYN, (ASYN)	Synchronous (asynchronous) transmission
_PAR	EVEN, ODD, MARK, (SPAC)	Data port parity
_DTR	ON, (OFF)	Forced DTR (dynamic DTR)
_DUP	HALF, (FULL)	Half duplex (full duplex)
_DCD	OFF, (ON)	Forced CD (dynamic CD)
_MOD	Yes, (No)	Modem (network) for synchronous operation
_INT	ON, (OFF)	SL-1/100 interworking
_CLK	ON, (OFF)	Internal (external) clock for synchronous operation
_V25	Yes, (No)	V.25 bis option for synchronous operation
_HDLC	Yes, (No)	High Level Data Link Control
_DEM	DTE, (DCE)	Data Equipment Mode
_PBDO	ON, (OFF)	Port busy upon DTR off
BTUA	Yes, (No)	Block transfer of unanswered call
DRNG	Yes, (No)	North American distinctive ringing for incoming calls
ATGT	(0)-60	ADM Trunk guard timer
CDR	Yes, (No)	CDR to output for calls on trunks in this route
INC	Yes, (No)	CDR records generated on incoming calls
QREC	Yes, (No)	CDR ACD Q initial connection records to be generated
OAL	Yes, (No)	CDR on all outgoing calls
OTL	Yes, (No)	CDR on outgoing toll calls
AIA	Yes, (No)	Identify answered calls in CDR
OAN	(Yes), No	CDR on answered outgoing calls
NATL	Yes, No	North American Toll scheme

TDG	x...xx	List of toll digits
OPD	Yes, (No)	Outpulsed Digits recorded in CDR
MUS	Yes, (No)	Music on hold
MRT	0-511	Music route number
MR	Yes, RVB, (No)	Message Registration provided on all trunks
RACD	Yes, (No)	Route traffic information in ACD Reports
MANO	Yes, (No)	Manual outgoing trunk route
SIGO	aaa	Signaling arrangement
EQAR	Yes, (No)	Enable Equal Access on this route
_GCR	(Yes), No	Use General Carrier Restriction to restrict Equal Access calls
_NTOL	ALOW, (DENY)	Allow or deny North American toll calls (1+ calls)
_ITOL	ALOW, (DENY)	Allow or deny international toll calls (011+ calls)
_SCR	Yes, (No)	Use Selective Carrier Restriction to restrict Equal Access calls
FRL	0-7 0-254	FRL and NFCR tree number for this route
OHQ	Yes, (No)	Off-hook queuing
OHQT	(0)-63	Off-hook queue threshold
CBQ	Yes, (No)	Call-back queueing on this route
NDIG	(2)-10	Number of digits in numbering plan at conventional main switch
AUTH	Yes, (No)	Authcode to be prompted for incoming tie callers
FGNO	(0)-127	Feature Group D block number
TDET	Yes, (No)	Tone detector required
TTBL	(0)-31	Tone table number
OHTD	Yes, (No)	Off-hook timer delay
MDMP	Yes, (No)	ADM/modem or ADM only route
MRAT	5-30	Modem ring-again timer in minutes
DTYP	IDP, ODP, (IOP)	Inbound and/or outbound data port
ADCP	Yes, (No)	Use all-digital connection prefix assigned to customer
OAMP	0-127	Outbound modem pool route number
IAMP	0-127	Inbound modem pool route number
OPR	Yes, (No)	Outpulsing route
OPDL	0-8064	Outpulsing delay in ms

Automatic Trunk Maintenance (ATM) Data Block

REQ	NEW,CHG, OUT	Action Request
TYPE	ATM	Type of data
CUST	0-99	Customer number
ROUT	0-511	Route number
T100	xxxx	2-10 digits for T100 test line DN
PADT	0-63	Pad factor for T100 test line in dB
STND	(Yes), No	Test line is a standard T100
NMNL	27-90	Noise maintenance limit in dBrn
NOUT	27-90	Noise out of service limit in dBrn
NTOF	(Yes), No	Perform near to far measurement
REF	xxx...x	2-10 digits for reference loop around DN
TST	xxx...x	2-10 digits for test loop around DN
PADL	0-63	Pad factor for loop around in dB
EML	0-15	Expected measured loss in dB
LMNL	0-15	Loss deviation maintenance limit in dB
LOUT	0-15	Loss out of service deviation limit in dB
DSBL	(0)-100	Percent of trunks disabled if loss/noise reaches out of service limit
MXTI	0-(5)-15	Maximum seconds to wait for far end to connect to test line

ATM Schedules (SCH)

REQ	NEW,CHG, OUT	Action request
TYPE	SCH	Type of data
CUST	0-99	Customer number
HOUR	0-23	ATM test start time
ROUT	0-511	Route number

Numbering Plan Digit or Information Digit table

REQ	NEW,CHG	Action request
TYPE	NPID	NPID table creation
IDTB	0-7	ID table index
NPID	0-9	Numbering Plan Digit or Information Digit
TRMT	(None), Fail, Test, NPA	Numbering Plan Digit or Information Digit treatment
_NPA	nnn	Numbering Plan Area

Meridian 911 Route Data Block (X11 release 19 and later)

REQ	NEW,CHG	Action request
TYPE	RDB	Route Data Block
CUST	0-99	Customer number
ROUT	0-511	Route number
TKTP	DID	DID trunk types must be used for M911 routes
M911_ANI	Yes	Receive ANI digits for the M911 route
M911_TRK_TYPE	(911T), 911E	Meridian 911 ANI trunk types
NPID_TBL_NUM	0-7	Meridian 911 route table index

Alphabetical list of prompts

ACNO **0-99** — Customer number. aiod-1

Prompted if AIOD = Yes.

The range of customer numbers depends on system type and X11 release. Refer to prompt CUST in LD15 for details.

ACOD **xxxx . . . x** — Trunk route access code. basic-1

The ACOD must not conflict with the numbering plan. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum 4 digits can be entered.

ADCP **Yes, (No)** — Use all-digital connection prefix assigned to customer. basic-5

AIA **Yes, (No)** — Identify answered calls in CDR. cdr-13

Enter Yes to output an "A" in the CDR TerID field to indicate answered calls. Prompted if OAL = Yes or OTL = Yes.

AIOD **Yes, (No)** — Identification of outgoing calls. aiod-1

ANDT **Yes, (No)** — ANI dial tone. ani-1

ANKP **Yes, (No)** — KP signal suppressed. cam-1

ANTK **xxxx** — ANI identifier number. ani-1

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered. In either case, together with ANLD (ANI listed DN in LD15), the total number of digits must be no less than 7.

ARNO **0-511** — AIOD route number. aiod-1

Prompted if AIOD = Yes.

ASTP **1-(2)-15** — ADM trunk ring cycles for call step forward. adm-12

ASUP **Yes, (No), CO** — RAN to return answer supervision to originator. ran-1

Yes = return answer supervision to originator
No = do not return answer supervision to originator
CO = return answer supervision only if the originator is a CO trunk

Note: The operation of answer supervision is affected if FC68 (package 223) is equipped. Refer to "FCC Compliance for DID Answer Supervision" in X11 features and services (553-3001-305).

ATDN **(0)-xxxxxxx** — Attendant DN of conventional main, ESN main, ESN node or ETN node. casm-5

Prompted if CNVT = Yes. If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

ATGT	**(0)-60** — ADM Trunk guard timer. Two-second increments up to a minute.	adm-12
ATTK	**xxxx** — AIOD identifier number.	aiod-1
AUDN	**xxxx** — Auto termination DN for ISA service routes. Prompted when ISAR = Yes and AUTO = Yes. This must be an existing DN, and cannot be deleted. When DNIS = YES, it must be an ACD DN.	isa-17
AUTH	**Yes, (No)** — Authcode to be prompted for incoming tie callers.	baut-1
AUTO	**Yes, (No)** — Auto terminate trunks. AUTO = Yes, the route terminates as defined in LD14 AUTO = No, the route terminates on the console. Only ACD DNs or DISA DNs support Auto terminate trunks. In order to set AUTO = Yes for Tie, DID, and CCSA trunks, all members of the route must have STRI = IMM in LD14.	basic-1
BRIP	**Yes, (No)** — ISDN BRI packet handler route. Prompted only if DTRK = Yes.	bri-18
BTUA	**Yes, (No)** — Block transfer of unanswered call.	pra-14
CAT	**00-99** — CAMA trunk route category digits. Prompted if SIGL = NT4 or NT5.	cama-1
CBQ	**Yes, (No)** — Call-back queueing on this route. Use only for incoming tie callers.	bque-1
CDR	**Yes, (No)** — CDR to output for calls on trunks in this route.	cdr-1
CHTY	**ABCH, (BCH)** — Signaling type for B-channel digital routes. Prompted if DTRK - Yes. If you intend to respond Yes to prompt ISAR, then use the default (cr) for this prompt. If ISAR is Yes, then CTYP prints UNWN and does not permit you to enter a response. BCH = B-channel ABCH = or A/B bit signaling	pra-12
CLK	**ON, (OFF)** — Internal (external) clock for synchronous operation. Prompted only if TKTP = MCU and TRAN = SYN.	basic-18

CLS **aaa** — Class of service restriction for tie route. isa-12

Prompted if TKTP = TIE, ISAR = YES, and ISDN = Yes. The options are
(UNR) = Unrestricted
SRE = Semirestricted
TLD = Toll denied
FRE = Fully restricted
CUN = Conditionally unrestricted
CTD = Conditionally toll denied
FR1= Fully restricted 1
FR2 = Fully restricted 2

CNTL **Yes, (No)** — Change controls or timers. basic-1

CNVT **Yes, (No)** — Route to conventional switch. nars-5

Applies only to Tie trunks.

COTR **0-511** — Incoming DID/CO route number. pra-12

Enter a DID or CO route number. Prompted if TKTP = ISA, IFC = D100 or SL1, and NSF = No or Yes. Precede entry with "X" to delete the route number.

CPDC **Yes, (No)** — Meridian 1 is the only controlling party on incoming calls. basic-1

If CPDC = Yes, the connection stays up until disconnected by the Meridian1. This is used for 911 emergency services.

CTYP **aaa** — Call type for outgoing direct dialed Tie route. pra-15

The call type is used by the receiving switch so it can associate a call with a call type and perform ESN access code insertion. This option only applies to direct dialing using trunk access codes. NARS and BARS dialing do not apply here.

CTYP can be:
(UKWN) = The call type is unknown
INTL = International number
NPA = National number
NXX = Subscriber number
LOC = Location code
CDP = Coordinated Dialing Plan
SPN = Special Number (other than international number format)

LD16

CUST **0-99** – Customer number. basic-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71, and 81. It remains 0-31 for all other supported machines and system options.

DCD **OFF, (ON)** – Forced CD (dynamic CD). basic-18

Prompted only if TKTP = R232 or MCU.

DCDR **Yes, (No)** – Include DNIS number in CDR records. dnis-19

With X11 release 19 and later this prompt appears for ISDN routes to support Network ACD.

DCHI **1-15** – DCHI port number. pra-12

DCHI Port number must be defined in LD17. Prompted if MODE = ISLD.

DCNO **(0)-254** – IDC translation table for this route in the day mode. idc-12

DDMI **xxx** – Digit manipulation index. nars-5

Prompted if CNTV = Yes. Range:
(0)-255 for NARS
(0)-127 for BARS

DEM **DTE, (DCE)** – Data Equipment Mode. basic-18

Prompted only if TKTP = R232.

DEXT **Yes, (No)** – Digit display option. icd-12

DGTP **aaa** – Digital trunk type. pra-14

Allowed values are: DTI, DTI2, PRI, PRI2, JDMI.

DLTN **Yes, (No)** – Provide dial tone to the far-end. basic-1

Provide dial tone to the far-end when the trunk has been accessed from the far-end.

DNAM **Yes, (No)** – Display IDC name. dnis-17

Prompted only when IDC = YES and CPND is packaged.

DNIS **Yes, (No)** — ACD-DNIS route. dnis-10

Prompted if ACD-DNIS is enabled, and the Route type is TIE or DID, when AUTO = Yes.

DRNG **Yes, (No)** — North American distinctive ringing for incoming calls. drng-8

Distinctive ringing only applies to CAM, COT, DID, FEX, Tie, and WAT trunks. These trunks cannot be outgoing only (prompt ICOG).

DRNG **Yes, No** — Japan distinctive ringing. drng-8

Yes = for CO trunks to provide distinctive ringing (i.e., make/break, 1 second/2 seconds) to incoming calls terminating on stations.

No = for tie trunks to provide normal ringing (i.e, make/break/ make/break, 0.25 sec/0.25 sec/2.25 sec) to incoming calls terminating on stations.

DSBL **(0)-100** — Percent of trunks disabled if loss/noise reaches out of service limit. atm-7

DSEL **DTA, VCE, TDN, (VOD)** — Data only, voice only, transparent data network only, voice and data route. tdn-19

Prompted if DGTP = DTI, PRI, DTI2 or JDMI.

DTR **ON, (OFF)** — Forced DTR (dynamic DTR). basic-18

Prompted only if TKTP = R232 or MCU.

DTRK **Yes, (No)** — Digital trunk route. dti,-5

DTYP **IDP, ODP, (IOP)** — Inbound and/or outbound data port. amp-5

IDP = inbound data port
ODP = outbound data port
IOP = inbound/outbound data port

DUP **HALF, (FULL)** — Half duplex (full duplex). basic-18

Prompted only if TKTP = MCU.

EML **0-15** — Expected measured loss in dB. atm-7

EQAR **Yes, (No)** — Enable Equal Access on this route. eqa-17

Prompted when TKTP = CO, FEX, WAT, or ISA, and ICOG = OGT, or IAO.

ESN **Yes, (No)** — ESN signaling. xpe-15

This only applies to trunk routes whose members may use 4-wire E&M or DX signaling on an Electronic Switched Network (ESN).

FACY **Yes, (No)** — Private/tie facility indicator. isa-17

Prompted when TKTP = TIE, ISAR = YES, and IFC = D100, D250 or S100.

Yes = Private connection in the NSF IE
No = Tie connection in the NSF IE

Prior to X11 release 17, all tie trunks to a DMS250 sent a "Private" facility value, all others sent "tie". In X11 release 17, trunk routes to a DMS250 automatically have FACY set to Yes. All others default to No.

FEDC **ETH, FEC, JNT, (ORG)** — Far end disconnect control. basic-1

ETH = either end
FEC = far end
JNT = joint
ORG = originating end

Loop start trunks may be either ETH or ORG.

FGNO **(0)-127** — Feature Group D block number. fgd-17

FORM **M1A, M2B, M3C** — Signaling format CAMA trunks. cama-1

M1A = format 1
M2B = format 2
M3C = format 3

FRL **0-7 0-254** — FRL and NFCR tree number for this route. basic-1

GCR **(Yes), No** — Use General Carrier Restriction to restrict Equal Access calls. eqa-19

Prompted when EQAR = Yes.
This prompt only appears with X11 release 18 and earlier.

HDLC **Yes, (No)** — High Level Data Link Control. basic-18

Prompted only if TKTP = MCU and V25 = Yes.

HOLD **ic dc ht** — Failure to hold, increment count, decrement count, min hold time. basic-1

ic = increment count = 1-(2)-31
dc = decrement count = 1-(2)-31
ht = minimum hold time = 1-(40)-127 seconds

The failure to hold applies to trunks which are properly seized but disconnected sooner than the minimum hold (ht). See prompt ILLR for a description of increment count (ic) and decrement count (dc) values.

The default for AID trunks is 2 1 40.

HOUR **0-23** — ATM test start time. atm-7

The system outputs xx:15 indicating the test start times are performed 15 minutes after the hour to avoid interactions with traffic reports.

IABS **(0)-3** — Number of incoming digits to be absorbed. ccsa-1

CCSA trunks only.

IAMP **0-127** — Inbound modem pool route number. amp-5

Prompted if TKTP = ADM and DTYP = IOP or IDP.

IANI **Yes, (No)** — Route is (not) an In-Band ANI route. ani-15

Prompted if AUTO = Yes. ISDN must be No for this feature to be enabled.

ICOG **IAO, ICT, OGT** — Incoming and/or outgoing trunk. basic-1

IAO = incoming and outgoing trunk (2-way trunk)
ICT = incoming only trunk
OGT = outgoing only trunk

ID **(0)-9** — Identification digit for CAMA trunk routes. cama-1

IDC **Yes, (No)** — Incoming DID digit conversion on this route allowed, (denied). idc-12

IDTB **0-7** — ID table index. m911-19

This is the ID table index to be used by this Meridian 911 route.
This prompt appears when the Meridian 911 package (224) is equipped.

IEC **000-999** — Interexchange carrier ID. pra-12

Prompted if ISDN = Yes and TKTP = COT, FEX, or WAT. Precede with "X" to remove entry. If no value is entered, "???" is printed in the route data block.

IFC **xxxx** — Interface machine type for this PRI route. pra-12

D100 = Meridian DMS-100 (default)
D250 = Meridian DMS-250
ESS4 = AT&T* ESS #4
ESS5 = AT&T* ESS #5
SL1 = Meridian SL-1
SS12 = Norwegian SYS-12
AXEA = Ericsson* AXE-10 (Australia)
D70 = Japan D70

The IFC of an ISA route and its service route must match.

ILLR **ic dc** — Illegal ring increment count, decrement count. basic-1

ic = increment count = 0-(2)-15
dc = decrement count = 0-(2)-15

ILLR specifies illegal ringing on a seized trunk.
This is only prompted for COT, FEX and WAT trunks.

The increment count (ic) and decrement count (dc) control the rate at which detected failures exceed the trunk error threshold. A counter (initially set to zero) records trunk successes and failures. The counter is incremented by the IC value each time a failure is detected, and by the DC value when a valid trunk condition is detected. When the counter value exceeds the trunk threshold value (30), the overflow indicator is set, and a TRKxxx message displays. A high IC value increases the counter more rapidly than a low IC value, causing the counter to exceed the threshold with fewer detected failures.

The threshold counter only preserves positive values. If the counter contains a negative value, it automatically resets to zero. The next detected failure then immediately increases the counter toward the threshold value, allowing trunk failures to be detected more quickly.

Note: The RSET command in LD36 and LD41 resets the threshold counters to zero.

INAC **Yes, (No)** — Insert ESN access code to incoming private network call. pra-15

Permit an ESN access code to be automatically added to an incoming ESN call from a private network. If INAC is Yes, the digit insertion (INST) for NARS or BARS calls is bypassed. If Yes, BARS/NARS Access Code 1 (AC1) is used for all call types unless calls are specifically defined to use AC2 in LD15 (prompt AC2). This prompt only appears if the route type is a Tie trunk.

INC **Yes, (No)** — CDR records generated on incoming calls. cdr-1

INST **(0)-99999999** — Digits to be inserted in front of leading digit. basic-1

Range before Release 13 is (0)-999999. Not prompted when DNIS = Yes. Enter "X" to remove entry.

INT **ON, (OFF)** — SL-1/100 interworking. basic-18

Prompted only if TKTP = MCU.

ISAR **Yes, (No)** — ISA service route. pra-12

In X11 release 15 and earlier, ISAR indicated stepping to ISA allowed (denied).

ISDN **Yes, (No)** — ISDN PRI option. pra-12

Prompted if ISDN = Yes in LD15.

ITOL **ALOW, (DENY)** — Allow or deny international toll calls (011+ calls). eqa-17

Prompted when GCR = Yes.

JDGT **1-(4)** — Japanese Central Office Digits. xutj-16

This indicates the number of address digits sent from the CO to the Meridian 1. If the number of digits is not known, set the parameter to 4.

LMNL **0-15** — Loss deviation maintenance limit in dB. atm-7

LOUT **0-15** — Loss out of service deviation limit in dB. atm-7

M911_ANI

(No), Yes — Receive ANI for Meridian 911 routes. m911-19

This prompt appears when the Meridian 911 package (224) is equipped, and TKTP = DID. This prompt acts as a gate opener for Meridian 911 prompts, and should always be Yes..

M911_TRK_TYPE

(911T), 911E — Meridian 911 ANI trunk types. m911-19

This prompt appears when the Meridian 911 package (224) is equipped.
911T = E911 tandem connections
911E = End office connection

MANO **Yes, (No)** — Manual outgoing trunk route. basic-1

Define the manual DN in LD14 (prompt MNDN).

MAX **1-254** — Maximum number of channels allowed on the ISA route. isa-12

For example, if MAX = 8 for Tie routes, no more than 8 channels can used simultaneously for Tie calls.

Prompted if ISAR = Yes and IFC = ESS4, or NSF = Yes, and IFC = SL1 or D100 for the selected ISA route in RTN.

MDMP **Yes, (No)** — ADM/modem or ADM only route. adm-5

Yes = ADM/modem pair route
No = ADM-only route

MIN **0-254** — Minimum number of channels allowed on the ISA route. isa-12

For example, if MIN = 2 for Tie routes, at least two channels will be available for Tie calls.

Prompted if ISAR = Yes and IFC = ESS4, or NSF = Yes and IFC = SL1 or D100 for the selected ISA route in RTN.

MOD **Yes, (No)** — Modem (network) for synchronous operation. basic-18

Prompted only if TKTP = MCU and TRAN = SYN.

MODE **PRA, ISLD** — Mode of D-Channel that controls the route. pra-12

PRA = an ISDN/PRI ISA route (RTRK must be Yes)
ISLD = ISA route for ISDN Signaling Link (ISL)

If you intend to enter Yes to prompt ISAR, then use the default (cr) for this prompt. IF ISAR is Yes, then MODE prints NULL and does not allow a response.

MR **Yes, RVB, (No)** — Message Registration provided on all trunks. mr-10

RVB = reverse battery

Note: If MR is set to No, the trunk should have a polarity insensitive class of service (LD14 prompt CLS set to PIP).

MRAT **5-30** — Modem ring-again timer in minutes. amp-5

Prompted if MDMP = Yes.

MRT **0-511** — Music route number. mus-1

Prompted if MUS = Yes.

MUS **Yes, (No)** — Music on hold. mus-1

MXTI **0-(5)-15** — Maximum seconds to wait for far end to connect to test line. atm-7

NATL **Yes, No** — North American Toll scheme. cdr-13

A toll call has 0 or 1 as first or second digit. Prompted if OTL = Yes.

NCNA **(Yes), No** — Network call name allowed. pra-13

Prompted if ISDN = Yes.

NCOS **(0)-99** — Network Class of Service. pra-13

Prompted if ISDN = Yes, ISAR = Yes and TKTP = TIE.

NCRD **(No), Yes** — Network Call Redirection. pra-14

Allows Network Call Redirection messages to be sent (or blocks messages if NCRD = No).

Network Call Redirection can occur without answering Yes to the NCRD prompt. This prompt only controls the sending of Network Call Redirection messages, not the actual redirection of the call.

When NCRD = Yes, the message supplied provides information for the CLID display. When NCRD = No, the call is redirected without the CLID redirection information (if CLID is enabled).

It is appropriate to set NCRD = No when your network interfaces with a network that is equipped with a version of ISDN that is earlier than X11 release 14.

Default is Yes in X11 release 14. Default is No in X11 release 15 and later.

NDGT **3, 4** — Number of DNIS digits expected. dnis-10

NDIG **(2)-10** — Number of digits in numbering plan at conventional main switch. casm-1

Prompted if SIGO = STD and CBQ = Yes. Range is (2)-7 before X11 release 13.

NDNO **0-254** — IDC Conversion Table for the night mode. idc-14

When REQ = NEW, default is the DCNO defined. Otherwise, there is no default value.

NEDC **ORG, ETH** — Near end disconnect control. basic-1

ETH = either end control
ORG = originating end control

ORG is the default for Tie, ATVN, DID, and CCSA trunks, ETH is the default for all others.

NMNL **27-90** — Noise maintenance limit in dBrn. atm-7

NOUT **27-90** — Noise out of service limit in dBrn. atm-7

NPA **nnn** — Numbering Plan Area. m911-19

This prompt appears when the Meridian 911 package (224) is equipped, and TRMT = NPA.

NPID **0-9** — Numbering Plan Digit or Information Digit. m911-19

If <CR> is entered, the NPID table is created.
This prompt appears when the Meridian 911 package (224) is equipped.

NPID_TBL_NUM

0-7 — Meridian 911 route table index. m911-19

This prompt appears when the Meridian 911 package (224) is equipped. The ID table must be created before this prompt can be answered.

NSF **Yes, (No)** — Network Service Facility. pra-12

Prompted if TKTP = ISA and IFC = D100 or SL1. When NSF = Yes, the ATB traffic counter is incremented when the MAX value is reached in the service route.

NTOF **(Yes), No** — Perform near to far measurement. atm-7

See prompts REF, TST, and PADL.

NTOL **ALOW, (DENY)** — Allow or deny North American toll calls (1+ calls). eqa-17

Prompted when GCR= Yes.

OABS **0 1 2 .... 9** — Actual outgoing digit(s) to be ignored for code restriction. basic-1

Frequently used with 1+ calls. Precede with "X" to remove digits.

OAL **Yes, (No)** — CDR on all outgoing calls. cdr-1

If Answer Supervision is defined for the trunk, CDR records are only generated on call completion.

OAMP **0-127** — Outbound modem pool route number. amp-5

Prompted if TKTP = ADM and DTYP = IOP or ODP.

OAN **(Yes), No** — CDR on answered outgoing calls. cdr-1

Prompted only if OAL or OTL = YES. This prompt only applies to trunks with answer supervision (CLS = PSP, or SUPN = YES). With X11 International supplementary features (package 131 SUPP), the default is no.

OHQ **Yes, (No)** — Off-hook queuing. ohq-1

Used in NARS for incoming Tie callers.

OHQT **(0)-63** — Off-hook queue threshold. ohq-1

BARS/NARS availability test. Compare with current P3 calls.

OHTD **Yes, (No)** — Off-hook timer delay. basic-1

OHTD = NO masks the far end off-hook for up to 384 ms measured from the end of the interdigital pause of the digit sent out. OHTD = Yes masks the far end off-hook for up to 2 seconds.

OPD **Yes, (No)** — Outpulsed Digits recorded in CDR. cdr-12

No = Dialed digits in CDR
Yes = Outpulsed digits in CDR

Prompted only when OTL or OAL or OAN = Yes. The system must Initialize before this change takes effect.

OPDL **0-8064** — Outpulsing delay in ms. pra-14

OPE **Yes, (No)** — Change data port parameters. basic-18

Prompted only if TKTP = R232, R422 or MCU.

OPR **Yes, (No)** — Outpulsing route. opao-10

Prompted if trunk type is COT, DID, FEX, Tie, WATS. All trunk members for an OPR must have DTN CLS, unless they are on Private Line Routes.

OTL **Yes, (No)** — CDR on outgoing toll calls. cdr-1

Prompted if OAL = NO and Route = CAMA, CO, DID, FX, WATS. If Answer Supervision is defined for the trunk, CDR records are only generated on call completion.

PADL **0-63** — Pad factor for loop around in dB. atm-7

This is the near-end tone level, plus the total pad loss at both ends on two trunks.

PADT **0-63** — Pad factor for T100 test line in dB. atm-7

This is the far end tone level, plus the total pad loss at both ends.

PAR **EVEN, ODD, MARK, (SPAC)** — Data port parity. basic-18

Prompted only if TKTP = R232, R422, or MCU.

PBDO **ON, (OFF)** — Port busy upon DTR off. basic-18

Prompted only if TKTP = R232, DEM = DCE, and DTR = OFF.

PNI **0-32700** — Customer Private ID (unique to a customer). pra-12

Within one network, use the same value for PNI in both the LD15 and LD16. When interworking with different networks, the LD15 PNI is the PNI of this switch and the LD16 PNI is the PNI of the target (remote) switch.

POST **ATT, DIS** — Disconnect or route to attendant after maximum repetitions. ran-1

ATT = go to console queue
DIS = Disconnect from RAN

PRIM **(Yes), No** — ISA route class of use. isa-12

Not prompted after X11 release 15.

PRIV **Yes, (No)** — Route is (is not) a Private line route. basic-14

Prompted if TKTP = COT and REQ = NEW. Up to X11 release 13, used only on route 31. In X11 release 14 and later, any COT route can be a private route.

PSDS **Yes, (No)** — Public Switched Data Service option. basic-18

Prompted only if TKTP = MCU.

PSEL **TLNK, (DMDM)** — T-link or DM-DM protocol selection. basic-18

TLNK protocol is used by SL-100 and DMS data devices, DMDM is used by Meridian 1 data devices such as ASIM, AIM, ADM, SADM, Asynch Data Option (ADO), and MPDA. MCU can use both protocols.

Prompted only if TKTP = R232, R422, or MCU.

PTYP **aaa** — Port type at far end. basic-5

For analog Tie trunk routes:
AST = satellite (earth orbiting) or ESN trunks (SAT = Yes)
(ATT) = analog tie trunks
AOT = Analog tie trunk, used instead of ATT whenever the PBX has one or more digital satellite trunk routes (DST) to any digital satellite PBX which includes OPX telephones

For digital tie trunk routes:
DCT = combination satellite PBX tie trunk
DST = digital satellite PBX Tie trunk (allowed only if SAT = YES)
(DTT) = digital or combination Tie trunk

For analog CO trunk routes:
(ACO) = analog CO trunk
ATO = analog toll office trunk

For digital CO trunk routes and ANI applications:
(DCO) = digital or combination CO port
DTO = digital or combination toll office trunk

QREC **Yes, (No)** — CDR ACD Q initial connection records to be generated. cdr-1

RACD **Yes, (No)** — Route traffic information in ACD Reports. acd-12

Enter Yes only if the route is used as the Interflow DN of at least one ACD DN and the Interflow Trunk traffic is desired. Prompted for COT, Tie, DID, WAT, and FEX trunk types only prior to X11 release 17. Allowed for RAN trunks for X11 release 17 and later.

RCLS **INT, (EXT)** — Route classmarked as internal, (external). basic-10

Applies only to: CAA, COT, CSA, DID, FEX, FGD, TIE, WATS trunks.

REF **xxx...x** — 2-10 digits for reference loop around DN. basic-1

REP **1-15** — Number of RAN repetitions. ran-1

REQ **aaa** — Action Request. basic-1

NEW = add new data to the system
CHG = modify existing data
OUT = remove data block
END = terminate overlay activity

RGFL **ic dc** — Failure to ring increment count, decrement count percent threshold. basic-1

ic = increment count = 1-(2)-31
dc = decrement count = 1-(2)-31

RGFL specifies the percentage threshold for trunks which fail to produce the expected ringing and ground changes. See prompt ILLR for a description of ic and dc values.

RGFL is not prompted for AID, CAM, CSA, RLM, RLR and TIE trunks. The default for RAN and MUS trunks is 12 6.

ROUT **0-511** — Route number. basic-1

The range for route numbers is release dependent:
0-511 in X11 release 14 for NT, RT, XN, and XT
0-511 in X11 release 15 and later for NT, RT, XT, 51, 61, 61C, 71, and 81
0-127 for all other releases, and systems

Note: In X11 release 14 and later route 31 is no longer reserved as a Private route, but can be configured as one.

RTN **0-511** — Route number for any configured ISA route. pra-12

Prompted if ISAR = Yes and TKTP = TIE.

RTYP **aaa** — Recording device for RAN trunks. ran-1

AUD = Audichron or Cook 212 (required for XUT trunks)
CAP = code-a-phone
CK2 = Cook 201 or QAY1
CON = NT7M Digital Recorders (X11 release 15)
DGT = 213300, 213400 Digital Recorders (X11 release 15)
LVL = Level start/stop (X11 release 19 Enhanced Universal Trunk cards)
PUL = Pulse start/stop (X11 release 19 Enhanced Universal Trunk cards)

Note: The Enhanced Universal Trunk cards word with CAP, CK2, or AUD RAN interfaces. The Pulse and Level start/stop options are used in conjunction with the RAN interface selected.

The maximum length of the message allowed by software depends on the X11 release as follows:
AUD = 64 s in all X11 releases
CAP = 320 s in X11 release 14; 608 s in X11 release15
CK2 = 64 s in all X11 releases
CON = 608 s in X11 release15
DGT = 256 s in X11 release 15

RVSD **ic dc** — Reversed wired CO trunk increment count, decrement count percent threshold. basic-16

ic = increment count = 1-(8)-31
dc = decrement count = 1-(31)

RVSD specifies the percentage threshold for CO trunks which have tip and ring or other trunk wiring problems. See prompt ILLR for a description of ic and dc values.

Prompted only for COT, FEX and WATS trunks.

SAT **Yes, (No)** — Trunk route via earth orbiting satellite transmission. esn-1

This prompt has no relation to the trunk route function connecting a main PBX to a satellite PBX.

SCR **Yes, (No)** — Use Selective Carrier Restriction to restrict Equal Access calls. eqa-19

Prompted when EQAR = Yes, and New Flexible Code Restriction is enabled. NTOL and ITOL must both be ALOW.
This prompt only appears with X11 release 18 and earlier.

SEIZ **ic dc** — Failure to seize increment count, decrement count percent threshold. basic-1

ic = increment count = 1-(2)-31
dc = decrement count = 1-(2)-31

SEIZ specifies the percentage threshold for trunks which request seizure but are not seized (either no response from the far end or response is too late). See prompt ILLR for a description of ic and dc values.

The default for AID trunks is 2 1. The default for RAN and MUS trunks is 12 6.

SID **0-511** — Service route ID. pra-12

Used to poll switches for traffic, ACD or CDR reports. Allows NSF to be turned on or off. Must be the same as the far end.

In X11 release 17 and later there is no default. In X11 release 16 the range is 0-127 and the default is the route number.

Prompted if NSF = Yes and TKTP = TIE/WAT/FX. The service route ID must match the far end.

SIGL **BEL, NT4, NT5** — Signaling interface CAMA trunks. cama-1

BEL = bell method
NT4 = NT400 method
NT5 = NT500 method

SIGO **aaa** — Signaling arrangement. tdn/esn-19

The allowed values (aaa) are

(STD) = standard signaling arrangement

ESN2 = supports NCOS, TCOS and CCBQ call types

ESN3 = supports network call transfer, Satellite Link Control and all ESN2 call types It does not support DTI data calls. ENS2 or ESN3 is recommended for ISA.

ESN5 = supports DTI data calls plus all other call types

ETN = provides Electronic Tie network signaling arrangement

EN19 = ESN Transparent Data Networking data call Allowed when TKTP = TIE for PRI and DTI trunks.

SPCT **DLY, (IMM)** — Delayed or immediate cut-through speech path control. basic-1

SPTO **Yes, (No)** — 3 (7-10) digit outpulsing on ANI calls. cam-1

No = 7-10 digit outpulsing on ANI calls
Yes = 3-digit outpulsing on ANI calls

SRCH **RRB, (LIN)** — Round robin or linear outgoing trunk search. basic-1

RRB = start with next lower trunk than the last one seized (outgoing trunks)
LIN = start with highest member trunk (used for 2-way trunks)

SRPM **0-(15)-255** — Service parameter. pra-16

Prompted if SRVC = WATB.

SRVC **aaa** — Service provisioned for AT&T ESS connections. pra-12

Prompted if ISDN = Yes and IFC = ESS4 or ESS5.
(NNSF) = No Network Specific Facility ISF IE sent (Note)
ACC = Accunet Data service
I800 = International 800 service
LDS = Long Distance Service
M800 = MEGACOM 800 service
MEG = MEGACOM 800 service
SDN = select Software Defined Network
IWAT = In-WATS service for AT&T interface
WATM = WATS maximal subscribed for AT&T ESS#5
WATB = WATS parameter band for AT&T ESS#5

Note: NSF refers to the services provided on a Call-by-Call basis.

SST **xx y** — Seizure supervision timer for TIE trunks with delay dial and wink start, ground start. basic-18

xx = minimum value
= 1-(3)-15 seconds for GRD start
= 5 seconds for DDL or WNK start
y = increment (0-7 seconds)

STEP **0-511** — Alternate trunk route for outgoing trunks. basic-1

Precede with X to delete STEP entry

Note: You cannot define a STEP for an ISA route.

STND **(Yes), No** — Test line is a standard T100. atm-7

5.5 seconds followed by silent termination at the far end.

STRK **Yes, (No)** — Super trunk group feature. cam-1

STRT **IMM, DDL** — Connect call immediately or delay until start of recording. ran-1

DDL delays call connection to RAN until start of recording.

STYP **(SDAT), STDN** — Standard signaling type. tdn-19

This prompt appears when SIGO = STD.
SDAT = Standard data signaling for voice and data (DM-DM, non-tandem PSDS)
STDN = Standard Transparent Data Networking for voice and data and TDN calls.

This prompt applies to DTI trunks only.

SVFL **ic dc** — Supervision failure increment count, decrement count. basic-1

ic = increment count = 1-(2)-31
dc = decrement count = 1-(2)-31

SVFL specifies the percentage threshold for trunks which fail to obtain supervision. See prompt ILLR for a description of ic and dc values.

Only prompted for AID, CAM, CSA, RLM, RLR and TIE trunks. The default for AID trunks is 2 1.

T100 **xxxx** — 2-10 digits for T100 test line DN. basic-1

TARG **1-31** — Trunk access restriction group number. basic-1

Enter the list of all TGARs in LD10, LD11 and LD14 which are restricted access to this route. Range is 1-15 before X11 release 14.

To delete entries, enter Xnn. List all the entries to be deleted (Xnn, Xnn, ...).

TDET **Yes, (No)** — Tone detector required. basic-1

TDG **x...xx** — List of toll digits. cdr-13

Prompted if NATL = No. Precede with X to remove a digit.

TFD **(0)-3600** — Timed forced disconnect for paging trunks (30 second increments). basic-15

Must be defined individually for each Route.

TGAR **0-31** — Trunk Group Access Restriction. basic-12

Range is 0-15 for all packages before X11 release 13. Prompted if TKTP = TIE, ISAR = YES, and ISDN = YES

TIER **0-511** — Incoming Tie route number. pra-12

Prompted if TKTP = ISA, IFC = D100 or SL1, and NSF = Yes. Precede entry with X to delete the route number.

LD16

TIMR	**aaa xxx** — Trunk timers. Enter the name "aaa" and timer value "xxx." Timers are in milliseconds unless otherwise stated.	basic-1
TIMR	**AAD (384)-2048** — Address acknowledge delay timer. The minimum time for the system to delay before sending the address acknowledge signal to the central office. Incremented in steps of 128 ms. Allowed only if Japan trunks and Meridian 1 packages are enabled.	xutj-16
TIMR	**ATO 128-(4992)-6528** — ANI time out timer.	ani-1
TIMR	**DDL 0-(70)-511** — Dial delay timer.	basic-1
TIMR	**DSI 128-(34944)-499200** — Disconnect supervision timer.	basic-1
TIMR	**EOD 128-(13952)-32640** — End of dial timer, non-Digitone trunks. *Note:* For DID incoming calls, to comply with FCC regulations, the EOD timer expires at approximately 20 seconds (19968 ms), even if configured otherwise. All other call types utilize the configured timer parameters. Refer to X11 features and services (553-3001-305) for complete details about FCC Compliance.	basic-1
TIMR	**FLH 0-(512)-32640** — Flash timer in msec. The range for Centrex Switchhook flash timer is 256-(512)-1536. For CAS, it is recommended that the timer be set at 768 or greater. This timer must be at least 256 ms shorter than the remote OGF timer.	basic-1
TIMR	**GRD 0-(896)-32640** — Guard timer.	basic-1
TIMR	**ICF 0-(512)-32640** — Incoming Flash timer.	basic-1
TIMR	**MAD 0-(500)-1000** — Minimum Answer Delay timer. The minimum amount of time the Meridian 1 will remain on hook after the called party is first alerted. Incremented in steps of 100 ms. Allowed only if Japan trunks and Meridian 1 packages are equipped.	xutj-16
TIMR	**LEXT 50-(100)-350** — Loop Extender timer. The minimum amount of time the Meridian 1 waits to determine whether the tip is ground. When the time is expired, the loop is closed to outpulsing. The time is in milliseconds.	tip-19
TIMR	**NBL 128-(4096)-32640** — Long end of block dialing. Long time-out period set to check if all digits have been entered.	basic-12
TIMR	**NBS 128-(2048)-32640** — Short end of block dialing. Short time-out period set to check if all digits have been entered.	basic-12

TIMR	**NRAG (30)-240** — Network Ring Again duration timer in minutes. These are the T6 & T7 timers. Currently, only 30 minutes is supported.	pra-13
TIMR	**NRD 128-(10112)-32640** — No ringing detector change timer.	basic-1
TIMR	**ODT 256-(4096)-16128** — End of dial timer, DIGITONE trunks.	basic-1
TIMR	**OGF 0-(512)-32640** — Outgoing flash timer.	basic-1
TIMR	**RGV 128-(640)-1920** — Ring validation timer.	basic-1
TIMR	**TFD (0)-3600** — Timed Forced disconnect timer in 30 second increments. TFD applies to CO, DIC, FEX, PAG, Tie and WATS routes.	basic-15
TKTP	**aaa** — Trunk route type.	basic-1
TKTP	**ADM** — Add-on data module. Add-on data module associated with a data interface card (DLC, 4PDLC, AILC).	basic-5
TKTP	**AID** — AIOD trunk.	aiod-5
TKTP	**AWR** — Automatic Wake-up RAN/Music trunk.	awu-10
TKTP	**CAA** — CCSA ANI trunk.	basic-1
TKTP	**CAM** — CAMA trunk.	basic-1
TKTP	**COT** — Central Office route.	basic-1
TKTP	**CSA** — Common Control Switching Arrangement access line.	basic-1
TKTP	**DIC** — Dictation trunk.	basic-1
TKTP	**DID** — Direct Inward Dial trunk. Per FCC regulations, DID trunks must be properly designated for answer supervision. Refer to "FCC Compliance for DID Answer Supervision" in X11 features and services (553-3001-305).	basic-1
TKTP	**FEX** — Foreign exchange trunk.	basic-1
TKTP	**FGDT** — Feature Group D trunk.	fgd-17
TKTP	**ISA** — Integrated Service Access route. Also called Call-By-Call route type. Only Tie or ISA trunks are allowed for SL-1 to SL-1 connectivity.	isl-12
TKTP	**ISL** — Trunk route type. ISL is only allowed on ISA and Tie trunks only.	isl-12
TKTP	**MDM** — Modem trunk. This is the data port interfacing with QPC60 500/2500 type card.	amp-5

TKTP	**MCU** – Meridian Communications Unit port.	basic-18
TKTP	**MUS** – Music trunk.	mus-1
TKTP	**PAG** – Paging trunk.	basic-1
TKTP	**RAN** – Recorded announcement trunk.	ran-1
TKTP	**RCD** – Emergency Recorder trunk.	bacd-1
TKTP	**RLM** – Release Link Main trunk.	acdb-1
TKTP	**RLR** – Release Link Remote trunk.	cas-1
TKTP	**R232** – DAC (NT7D16) RS-232 port.	basic-18
TKTP	**R422** – DAC (NT7D16) RS-422 port.	basic-18
TKTP	**TIE** – Tie trunk.	basic-1
TKTP	**WAT** – WATS trunk.	basic-1
TOV	**(0)-3** – Data port timeout value. (0) = no timeout 1 = 15 minutes 2 = 30 minutes 3 = 60 minutes Prompted only if TKTP = R232, R422 or MCU.	basic-18
TRAN	**SYN, (ASYN)** – Synchronous (asynchronous) transmission. Prompted only if TKTP = MCU. If PSDS = Yes, then TRAN must be SYN.	basic-18
TRMT	**(None), Fail, Test, NPA** – Numbering Plan Digit or Information Digit treatment. This prompt appears when the Meridian 911 package (224) is equipped. Fail = interprets the NPD/ID as an ANI failure Test = interprets the call as a 911 test call (for 911T calls only)	m911-19
TRO	**Yes, (No)** – Trunk optimization allowed (denied) on the route. Prompted if NCRD = Yes, and IFC = SL1	tro-16
TST	**xxx...x** – 2-10 digits for test loop around DN.	basic-1
TTBL	**(0)-31** – Tone table number. Table 0 (North American default values) is created when the first customer is created. Refer to LD 56 for other tables.	ftc-13

TYPE	**RDB, ATM, SCH, NPID** — Type of data. RDB = Route Data Block ATM = Automatic Trunk Maintenance SCH = ATM schedules NPID = Numbering Plan or Information Digit table	basic-19
V25	**Yes, (No)** — V.25 bis option for synchronous operation. Prompted only if TKTP = MCU and TRAN = SYN.	basic-18
WATR	**xxx** — WATS route number. Prompted if TKTP = ISA, IFC = D250 or SL1, and NSF = Yes. Precede entry with X to delete the route number.	pra-14

LD16

170 Trunk Route Administration

Issued: 04 01 94
Status: Standard
X11 Release: 19

Configuration Record

LD17 defines the system configuration parameters for the following system hardware and software parameters.

- passwords
- buffer sizes (Note)
- number of CPUs (Note)
- voice or data loops (Note)
- tone and digit loops (Note)
- conference loops (Note)
- memories (Note)
- automatic maintenance routines
- teletypewriters and modems
- server configurations

Note: When modifying these parameters, the system must be initialized to effect the change. After initialization, use LD17 and check the amount of unprotected memory before data dumping. When adding memory a sysload is required. See *Software conversion procedures* (553-2001-320) for the parallel reload procedure.

LD17

X11 release 18 changes

In X11 release 18 and later the following changes have been made to LD17:

- The new 4-port Multi-purpose Serial Data Link (MSDL) card can accommodate Application Module Links (AML) and/or D-channels.
- Application Module Link (AML) is a new term used in X11 release 18. AML is a general name for links using an ESDI port such as CSL and Meridian Link. These links can now use a port on an MSDL card.
- D-channels and AML ports are now addressed by logical port number instead of the physical address.
- The logical number is defined at the ADAN prompt (ADAN NEW DCH 0-63 or ADAN NEW AML 0-15). The association to the device number (physical address) is defined at the DNUM prompt.
- The MSDL card takes only one of the 16 I/O addresses. The MSDL device number (0-15) cannot conflict with an existing SDI, ESDI or DCHI address.
- With the MSDL, the system now supports up to 64 D-channels, 16 AML ports, or 16 SDI ports.
- The IOTB and ISDN prompt sequences have been replaced by a new ADAN prompt sequence. This is used to configure all I/O devices (including D-channels).
- Incremental Software Management (ISM) now controls the number of D-channels and AMLs. The system also outputs the available D-channels and AMLs as follows.

```
>LD 17
DCH AVAIL: 07 USED: 08 TOT: 15
AML AVAIL: 05 USED: 03 TOT: 8
REQ CHG
TYPE CFN
ADAN
```

– After adding or changing an I/O device via the ADAN prompt sequence, the data is saved before ADAN is reprompted. This allows you to exit LD17 with **** after I/O changes without having to carriage return through the remaining prompts. One of the following is output.

ADAN DATA SAVED
ADAN DATA CHGED
ADAN DATA REMOVED
ADAN DATA MOVED

Note 1: The ADAN DCH MOV command allows primary D-channels to move to a new card type (CTYP), device number (DNUM), and port designation (PORT) when adding MSDL cards. You do not need to remove any D-channels or B-channels when using this command with MSDL cards.

Note 2: The MOV capability does not apply to Application Module Links (AMLs). Move AMLs from ESDI cards to MSDL cards by adding a new AML with the VAS ID prompt (VSID), then remove the old AML.

– When adding a D-channel, the parameters defined for the primary D-channel are automatically copied to the back-up D-channel. Changes to the D-channel pair should be made to the primary D-channel.

– When changing a D-channel, the existing physical parameters are printed before prompting you for the changes.

– DROL is updated to include option 81 maintenance LDs135 and 137 in the midnight routines.

LD17

X11 release 19 changes

X11 release 19 and later includes following changes in LD17. For complete discussions concerning system management, refer to X11 system management applications (553-3001-301).

- System option 61C availability. X11 release 19 introduces the option 61C. It utilizes the same technology as the option 81 (available with X11 release 18).
- Integrated Voice Mailbox Administration provides for mailbox administration from the Meridian 1. With Meridian Mail 9 and X11 release 19, voice mailboxes can be administered from the Meridian 1 as well as the Meridian Mail interface. Complete details can be found in X11 features and Services (553-3001-305).
- Meridian 1 Fault Management enhances system message reporting.

  Alarm filtering provides the ability to specify the type of Meridian 1 and auxiliary processor messages output to system terminals. Message output includes the following categories: Critical, Major, Minor, and None. The following mnemonics can be entered at the TRIGGER prompt to specify the messages to be output.

  ACD, ADD, AMH, AMLM, ATM, AUD, AUTH, BERR, BIC, BSD, BUG, CCED, CCR, CDM, CED, CIOD, CMON, CNF, CNI, CSA, CSC, DBMT, DCH, DLO, DSET, DTA, DTC, DTI, DTRK, EDD, ERR, ESDA, ESDI, HWI, IOD, ISR, LNK, MFR, MFS, MISP, MSDL, MWL, NPR, NWS, OSM, OVD, OVL, PCH, PMS, PRI, PWR, RPD, RPL, RPT, SCSI, SDL, TDS, TEMU, TFN, TRK, TSM, TTY, VAS, XCT, XMI
- System parameter gateways provide a more direct way to interface with selected system parameters. The following list shows the gateway responses that are accepted at the TYPE prompt with Release 19 and later.

  ADAN, ALARM, ATRN, CEQU, CFN, OVLY, PARM, PWD, VAS

- Option 61C/81 System Message Lookup Utility provides an on-line look up method for any system message appearance. The system will be able to retrieve explanation and definition text for any Meridian 1 system message.
- Prompts are no longer limited to 4 characters. Some prompts appearing in X11 release 19 and later will have more than 4 characters, and can better define their use. Underscores connect multiple words. For example, the prompt for the login name is LOGIN_NAME.
- Multi-User Login feature. Release 19 introduces the ability to have several active users logged in simultaneously. The feature is enabled and disabled through this LD. Refer to *X11 system management applications* (553-3001-301) for complete detail
- Single Terminal Access. Single Terminal Access (STA) is an application available on the MSDL card with X11 release 19 and later. The STA application reduces the number of physical devices used to administer and maintain the Meridian 1 and its auxiliary processors. Refer to *X11 system management applications* (553-3001-301) for complete details.
- ACD maximum agents. With Release 19 and later the maximum number of agents is no longer limited to 999. The number of agents allowed by the system is determined by the IDLB and IDUB prompts in LD23.

Conversion notes

When converting to X11 release 18 from an earlier release the existing I/O ports are affected as shown below.

- Existing AML (CSL) and DCH ports keep their device number and are given an equivalent logical number and a card type (CTYP) of ESDI or DCHI. For example: CSL 9 becomes AML 9 with device number of 9 and CTYP of ESDI; and DCH 13 becomes DCH 13 with device number of 13 and CTYP of DCHI.
- Asynchronous QPC513 ESDI ports are removed from the database. See SYS4464.
- ESDI ports on DCHI cards are converted to TTY ports with CTYP of DCHI.
- Normal SDI ports are assumed to be on an SDI2 card type. The card type will have to be updated manually for other SDI card types. This can only be done by removing and re-adding the port.
- D-channels on the NT6D11AB with even port numbers are converted with a card type of DCHI.

System parameters (X11 release 18 and earlier)

The following prompts are used to configure system parameters. These values should be set at the factory, but should be reviewed during initial system installation.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record information
	•	
	•	
	•	
PARM	Yes, (No)	Change system parameters
_LPIB	96-5000	Low-priority input buffers (range depends on system type)
_HPIB	16-5000	High-priority input buffer (range depends on system type)
_500B	16-5000	Output buffers for single line and Digital telephones, and trunks (range depends on system type)
_SL1B	16-255	Multi-line telephone output buffers
_NCR	26-2047, 5000, 20000	Number of call registers (range depends on system type)
_NDIS	(20)-255	Number of display messages for background terminal
_NCPU	1, (2)	Number of CPUs
_PCML	(mu), A	A or Mu companding law
_ALRM	Yes, (No)	Minor alarm displayed on attendant consoles
_ERRM	ERR, BUG, AUD	System messages to be output
_DTRB	50, 60, 70, 100	Digitone burst time (ms)
_TMRK	96, (128)	Length of cadence increments (ms)
_PCDR	Yes, (No)	Priority to CDR
_MLDN	Yes, (No)	Multiple loop DN allowed
_DUR5	Yes, (No)	CDR call duration with 0.5 second accuracy
_NDRG	Yes, (No)	New Distinctive Ringing
_MARP	Yes, No	Enable MADN Redirection Prime
MSCL	(0)-8191	Maximum number of Speed Call lists

LD17

System parameters (X11 release 19)

The following prompts are used to configure system parameters with X11 release 19. PARM can be entered at the TYPE prompt, and the associated prompts will appear. These values should be set at the factory, but should be reviewed during initial system installation.

REQ	CHG, END	Change data or terminate overlay
TYPE	PARM	System parameters
PWD2	xxx...x	Current Level 2 master password (4-16 characters)
ADAN	NEW,CHG,MOV,OUT aaa x	Add, change, move, or remove an I/O device, type aaa, port x
PARM	YES	Change system parameters
_LPIB	96-5000	Low-priority input buffers (range depends on system type)
_HPIB	16-5000	High-priority input buffer (range depends on system type)
_500B	16-5000	Output buffers for single line and Digital telephones, and trunks (range depends on system type)
_SL1B	16-255	Multi-line telephone output buffers
_NCR	26-2047, 5000, 20000	Number of call registers (range depends on system type)
_MGCR	0-NCR	Maximum number of call registers used by AUX messaging
_CSQI	(20)-255	Maximum call registers for CSL input queues
_CSQO	(20)-255	Maximum number of call registers used for CSL/AML output queues
_AXQI	(20)-255	Size of auxiliary input queue
_AXQO	(20)-255	Size of auxiliary output queue
_NCPU	1, (2)	Number of CPUs
_PCML	(mu), A	A or Mu companding law
_ALRM	Yes, (No)	Minor alarm displayed on attendant consoles
_ERRM	ERR, BUG, AUD	System messages to be output
_DTRB	50, 60, 70, 100	Digitone burst time (ms)
_TMRK	96, (128)	Length of cadence increments (ms)
_PCDR	Yes, (No)	Priority to CDR
_DUR5	Yes, (No)	CDR call duration with 0.5 second accuracy
_MLDN	Yes, (No)	Multiple loop DN allowed
_NDRG	Yes, (No)	New Distinctive Ringing
_MARP	Yes, No	Enable MADN Redirection Prime

_FRPT	OLFR, (NEFR)	Access to incoming calls by FRE station allowed (not allowed)
_DCUS	0-5	Maximum number of ACD-ADS customers
_MAGT	0-1200	Maximum number of ACD agent IDs per customer
_MSCL	(0)-8191	Maximum number of Speed Call lists
_NDIS	(20)-255	Number of display messages for background terminal

Common Equipment (X11 release 18 and earlier)

The following prompts are used to configure Common Equipment in the system.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record information
	•	
	•	
	•	
CEQU	Yes	Change Common Equipment parameters
_MPED	(SD), DD, 4D, 8D	Maximum PE density of any network loop
_TERM	0-159 0-159 ...	Single density local terminal loops
_REMO	0-159 0-159 ...	Single density remote terminal loops
_TERD	0-159 0-159 ...	Double density local terminal loops
_REMD	0-159 0-159 ...	Double density remote terminal loops
_TERQ	0-159 0-159 ...	Quad density local terminal loops
_REMQ	0-159 0-159 ...	Quad density remote terminal loops
_XCT	0, 2, 4,...159	Loop number for NT8D17 Conference/TDS card
_TDS	0, 2, 4,...158	TDS or Fast TDS service loop (even loop)
_CONF	0, 2, 4,...158	Conference loop (even number)
_MFSD	0, 2, 4,...158	Multifrequency Sender (MFS) loop (even number)
_DLOP	loop dd ff	Digital trunk loop options
_MODE	TRK, LINK, PRI	Digital trunk loop mode
_LCMT	AMI, B8S	Line coding method
_YALM	DG2, FDL	Yellow alarm method
_TRSH	0-99	Digital Trunk threshold set defined in LD73
_DTIC	0, 4, 8,...156	Starting network loop slot for DTI/PRI
_EXT0	0-4 SBE 3PE	CPU0 extenders to network (option 81)
_EXT1	0-4 SBE 3PE	CPU1 extenders to network (option 81)
_SBE	Yes, (No)	Segmented bus extender equipped
_MTYP	x x x	Memory type
_SMEM	Yes, (No)	Short Memory Test option
_BATT	Yes, (No)	Memory battery backup software test (21E and STE only)

Common Equipment (X11 release 19 and later)

The CEQU gateway allows only the prompts applying to common equipment parameters to appear.

REQ	CHG, END	Change data or terminate overlay
TYPE	CEQU	Common equipment information
TERM	0-159 0-159 ...	Single density local terminal loops
REMO	0-159 0-159 ...	Single density remote terminal loops
TERD	0-159 0-159 ...	Double density local terminal loops
REMD	0-159 0-159 ...	Double density remote terminal loops
TERQ	0-159 0-159 ...	Quad density local terminal loops
REMQ	0-159 0-159 ...	Quad density remote terminal loops
XCT	0, 2, 4,...159	Loop number for NT8D17 Conference/TDS card
TDS	0, 2, 4,...158	TDS or Fast TDS service loop (even loop)
CONF	0, 2, 4,...158	Conference loop (even number)
MFSD	0, 2, 4,...158	Multifrequency Sender (MFS) loop (even number)
DLOP	loop dd ff	Digital trunk loop options
MODE	TRK, LINK, PRI	Digital trunk loop mode
LCMT	AMI, B8S	Line coding method
YALM	DG2, FDL	Yellow alarm method
TRSH	0-99	Digital Trunk threshold set defined in LD73
DTIC	0, 4, 8,...156	Starting network loop slot for DTI/PRI
EXT0	0-4 SBE 3PE	CPU0 extenders to network (option 81)
EXT1	0-4 SBE 3PE	CPU1 extenders to network (option 81)
SBE	Yes, (No)	Segmented bus extender equipped
MTYP	x x x	Memory type
SMEM	Yes, (No)	Short Memory Test option
BATT	Yes, (No)	Memory battery backup software test (21E and STE only)

LD17

Option 81 memory and CNI cards (X11 release 18 only)

The following prompts are used to configure memory and CNI cards for option and 81 systems. Note that the prompt MCFN replaces the standard MTYP and MEM prompts. Note, also, that EXT0 and EXT 1 must be 3PE.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record information
	•	
	•	
	•	
CEQU	Yes	Change Common Equipment parameters
_MPED	(SD), DD, 4D, 8D	Maximum PE density of any network loop
_TERM	0-159 0-159 ...	Single density local terminal loops
_REMO	0-159 0-159 ...	Single density remote terminal loops
_TERD	0-159 0-159 ...	Double density local terminal loops
_REMD	0-159 0-159 ...	Double density remote terminal loops
_TERQ	0-159 0-159 ...	Quad density local terminal loops
_REMQ	0-159 0-159 ...	Quad density remote terminal loops
_XCT	0, 2, 4,...159	Loop number for NT8D17 Conference/TDS card
_TDS	0, 2, 4,...158	TDS or Fast TDS service loop (even loop)
_CONF	0, 2, 4,...158	Conference loop (even number)
_MFSD	0, 2, 4,...158	Multifrequency Sender (MFS) loop (even number)
_DLOP	loop dd ff	Digital trunk loop options
_MODE	TRK, LINK, PRI	Digital trunk loop mode
_LCMT	AMI, B8S	Line coding method
_YALM	DG2, FDL	Yellow alarm method
_TRSH	0-15	Digital trunk threshold defined in LD73
_DTIC	0, 4, 8,...156	Starting network loop slot for DTI/PRI
_EXT0	3PE	Core side 0 extenders must be 3PE
_CNI	s p g	Core to Network Interface card location (option 81)
_EXT1	3PE	Core side 1 extenders must be 3PE
_CNI	s p g	Core to Network Interface card location (option 81)
MCFN	x x x x x x	Number and size of SIMMs in option 61C/81

Option 61C/81 memory and CNI cards

The CEQU gateway allows only the prompts applying to common equipment parameters to appear. Note that this sequence is for option 61C and 81 systems only.

Note: The option 81 supports X11 release 18 and later software. The option 61C supports X11 release 19 and later software.

REQ	CHG, END	Change data or terminate overlay
TYPE	CEQU	Common equipment information
MPED	(SD), DD, 4D, 8D	Maximum PE density of any network loop
TERM	0-159 0-159 ...	Single density local terminal loops
REMO	0-159 0-159 ...	Single density remote terminal loops
TERD	0-159 0-159 ...	Double density local terminal loops
REMD	0-159 0-159 ...	Double density remote terminal loops
TERQ	0-159 0-159 ...	Quad density local terminal loops
REMQ	0-159 0-159 ...	Quad density remote terminal loops
XCT	0, 2, 4,...159	Loop number for NT8D17 Conference/TDS card
TDS	0, 2, 4,...158	TDS or Fast TDS service loop (even loop)
CONF	0, 2, 4,...158	Conference loop (even number)
MFSD	0, 2, 4,...158	Multifrequency Sender (MFS) loop (even number)
DLOP	loop dd ff	Digital trunk loop options
MODE	TRK, LINK, PRI	Digital trunk loop mode
LCMT	AMI, B8S	Line coding method
YALM	DG2, FDL	Yellow alarm method
TRSH	0-99	Digital Trunk threshold set defined in LD73
DTIC	0, 4, 8,...156	Starting network loop slot for DTI/PRI
EXT0	3PE	Core side 0 extenders must be 3PE (option 81 only)
CNI	s p g	Core to Network Interface card location (option 81)
EXT1	3PE	Core side 1 extenders must be 3PE (option 81 only)
CNI	s p g	Core to Network Interface card location (option 81)
MCFN	x x x x x x	Number and size of SIMMs in option 61C/81

Option 81 I/O ports (X11 release 18 only)

The following prompt sequences are used to configure the various I/O ports for 81 systems.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record information
ADAN	NEW, CHG	Add, change an I/O device
CTYP	aaaa	Card type aaaa = MSDL, SDI, SDI2, SDI4, XSDI, DCHI
GRP	0, 0-4	Network group number
DNUM	0-15	Device number for I/O ports
PORT	0-3	Ports on specified card. Prompted when CTYP = MSDL
DES	aaa...a	Port/link designation
FLOW	(No), Yes	Flow control capability
_BCST	(No), Yes	Broadcast ports affected by Flow control

REQ	CHG, END	Change data or terminate overlay
TYPE	ADAN	All input/output devices
ADAN	NEW, CHG	Add, or change an I/O device
CTYP	CPSI	Call Processor (CP) card serial interface
PORT	0-1	Port number on Call Processor (CP) card
DES	aaa...a	Port/link designation
BPS	xxxx	Baud rate
PARY	ODD, EVEN, (NONE)	Parity type
STOP	(1), 2	Number of stop bits
BITL	5, 6, 7, (8)	Data bit length
FLOW	(No), Yes	Flow control capability
_BCST	(No), Yes	Broadcast ports affected by Flow control
USER	aaa	Output message types

REQ	CHG, END	Change data or terminate overlay
TYPE	ADAN	All input/output devices
ADAN	NEW,CHG	Add, or change an I/O device
CTYP	PTY	Pseudo TTY
PORT	0-7	Pseudo port number for the Pseudo TTY
DES	aaa...a	Port/link designation
FLOW	(No), Yes	Flow control capability
_BCST	(No), Yes	Broadcast ports affected by Flow control
USER	aaa	Output message types

Option 61C/81 I/O ports (X11 release 19 and later)

The ADAN gateway applies to all input/output devices, including those for option 61C and 81 systems.

Note: The option 81 supports X11 release 18 and later software. The option 61C supports X11 release 19 and later software.

REQ	CHG, END	Change data or terminate overlay
TYPE	ADAN	System input/output devices
CTYP	aaaa	Card type aaaa = MSDL, SDI, SDI2, SDI4, XSDI, DCHI
GRP	0, 0-4	Network group number (prompted for option 81 only)
DNUM	0-15	Device number for I/O ports
PORT	0-3	Ports on specified card. Prompted when CTYP = MSDL
DES	aaa...a	Port/link designation
FLOW	(No), Yes	Flow control capability
_BCST	(No), Yes	Broadcast ports affected by Flow control

REQ	CHG, END	Change data or terminate overlay
TYPE	ADAN	System input/output devices
CTYP	CPSI	Call Processor (CP) card serial interface
PORT	0-1	Port number on Call Processor (CP) card
DES	aaa...a	Port/link designation
BPS	xxxx	Baud rate
PARY	ODD, EVEN, (NONE)	Parity type
STOP	(1), 2	Number of stop bits
BITL	5, 6, 7, (8)	Data bit length
FLOW	(No), Yes	Flow control capability
_BCST	(No), Yes	Broadcast ports affected by Flow control
USER	aaa	Output message types
XSM	Yes, (No)	SDI port for the System Monitor
TTYLOG	0-65534	Log buffer size

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REQ	CHG, END	Change data or terminate overlay
TYPE	ADAN	System input/output devices
CTYP	PTY	Pseudo TTY
PORT	0-7	Pseudo port number for the Pseudo TTY
DES	aaa...a	Port/link designation
FLOW	(No), Yes	Flow control capability
_BCST	(No), Yes	Broadcast ports affected by Flow control
USER	aaa	Output message types
XSM	Yes, (No)	SDI port for the System Monitor
TTYLOG	0-65534	Log buffer size

Overlay area options (X11 release 18 and earlier)

The following prompts are used to configure overlay parameters. Use these prompts to determine overlay activity in the system.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record information
	•	
	•	
	•	
OVLY	Yes	Change overlay area options
_SID	xxxx	System ID number
_BKGD	xx xx ...	Background overlay task
_PBXH	0-23, X	Hour to perform message waiting lamp maintenance
_TODR	00-23	Time of daily (midnight) routines
_DROL	xx xx	Daily (midnight) routine programs
_CACH	(0),2-32	Number of overlays in cache buffers (does not apply to option 81)
__PRTY	xx xx xx...	Priority of overlays stored in cache buffers

Overlay area options (X11 release 19 and later)

The OVLY gateway allows only the prompts applying to overlay area parameters to appear.

REQ	CHG, END	Change data or terminate overlay
TYPE	OVLY	Overlay area information
SID	xxxx	System ID number
BKGD	xx xx ...	Background overlay task
PBXH	0-23, X	Hour to perform message waiting lamp maintenance
TODR	00-23	Time of daily (midnight) routines
DROL	xx xx	Daily (midnight) routine programs
CACH	(0), 2-32	Number of overlays in cache buffers (does not apply to option 81)
_PRTY	xx xx xx...	Priority of overlays stored in cache buffers
MULTI_USER	On, (Off)	Multi-User Login

System and limited access passwords (X11 release 18 and earlier)

The following prompts are used to change the system and Limited Access to Overlays (LAPW) passwords. LAPW must be equipped for LAPW prompts to appear. LAPW users can change their passwords by entering the current password at prompt LPWD and entering the new password at prompt NLPW.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
	•	
	•	
	•	
PWD2	xxx...x	Current Level 2 master password (4-16 characters)
_NPW1	xxx...x	New level 1 log-in password (4-16 characters)
_NPW2	xxx...x	New level 2 master password (4-16 characters)
_LAPW	0-99	Limited Access Password number
__PWnn	xx . . . x	4-16 character LAPW password
__OVLA	xx . . . xx, ALL, (XALL)	Overlays (02-99) accessible with password PWnn
__CUST	0-99, ALL, (XALL)	Customers which can access overlays with password PWnn
__TEN	xx xx . . . xx, ALL, (XALL)	Tenant list for password access
__HOST	Yes, (No)	Enable HOST mode log in for password PWnn
__OPT	aaaa	Options accessible with password PWnn
_FLTH	0-(3)-7	Failed log-on attempt threshold
_LOCK	0-(60)-270	Lock-out time in minutes
_AUDT	Yes, (No)	Audit trail allowed (denied)
__SIZE	(50)-1500	Word size of audit trail buffer
_INIT	(Yes), No	Reset locked out ports during manual INIT (allowed) denied

REQ	CHG	Follow this sequence to change the LAPW password. No other LAPW prompts appear.
TYPE	ADAN	All input/output devices
	•	
	•	
	•	
PWD2	xxx...x	Current Level 2 master password (4-16 characters)
_NPW1	xxx...x	New level 1 log-in password (4-16 characters)
_NPW2	xxx...x	New level 2 master password (4-16 characters)
_LAPW	0-99	Limited Access Password number
__LPWD	aaaa	Enter current LAPW password to change user password
__NLPW	xx . . . x	New 16 character password for LAPW users

System and limited access passwords (X11 release 19 and later)

The PWD gateway allows only the prompts applying to system passwords parameters to appear. The PWD2 prompt is given immediatly following the PWD gateway, unless LAPW and Multi-User Login are enabled. LAPW (package 164) must be equipped for LAPW prompts to appear. LAPW users can change their passwords by entering the current password at prompt LPWD and entering the new password at prompt NLPW.

REQ	CHG, END	Change data or terminate overlay
TYPE	PWD	System password information
PWD2	xxx...x	Current Level 2 master password (4-16 characters)
_LNAME_OPTION	Yes, (No)	Require login name for password access
_NPW1	xxx...x	New level 1 log-in password (4-16 characters)
__LOGIN_NAME	aaa . . . . aaaa	Login name for password access
_NPW2	xxx...x	New level 2 master password (4-16 characters)
__LOGIN_NAME	aaa . . . . aaaa	Login name for password access
_LAPW	0-99	Limited Access Password number
__PWnn	xx . . . x	4-16 character LAPW password
__LOGIN_NAME	aaa . . . . aaaa	Login name for password access
__OVLA	xx . . . xx, ALL, (XALL)	Overlays (02-99) accessible with password PWnn
__CUST	0-99, ALL, (XALL)	Customers which can access overlays with password PWnn
__TEN	xx xx . . . xx, ALL, (XALL)	Tenant list for password access
__HOST	Yes, (No)	Enable HOST mode log in for password PWnn
__OPT	aaaa	Options accessible with password PWnn
_FLTH	0-(3)-7	Failed log-on attempt threshold
_LOCK	0-(60)-270	Lock-out time in minutes
_AUDT	Yes, (No)	Audit trail allowed (denied)
__SIZE	(50)-1500	Word size of audit trail buffer
_INIT	(Yes), No	Reset locked out ports during manual INIT (allowed) denied

REQ	CHG	Follow this sequence to change the LAPW password. No other LAPW prompts appear.
TYPE	PWD	System password information
PWD2	xxx...x	Current Level 2 master password (4-16 characters)
_NPW1	xxx...x	New level 1 log-in password (4-16 characters)
_NPW2	xxx...x	New level 2 master password (4-16 characters)
_LAPW	0-99	Limited Access Password number
__LPWD	aaaa	Enter current LAPW password to change user password
__NLPW	xx . . . x	New 16 character password for LAPW users

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DTI configuration (X11 release 18 and earlier)

The following prompts are used to change Digital Trunk Interface configuration. Refer to *DTI description* (553-2811-100).

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
CEQU	Yes, (No)	Change Common Equipment parameters
DLOP	loop dd ff	Digital trunk loop options
MODE	TRK, LINK, PRI	Digital trunk loop mode
TRSH	0-99	Digital Trunk threshold set defined in LD73

DTI configuration (X11 release 19 and later)

The following prompts are used with X11 release 19 and later to change Digital Trunk Interface configuration. Refer to *DTI description* (553-2811-100).

REQ	CHG, END	Change data or terminate overlay
TYPE	CEQU	Commom Equipment parameters
CEQU	Yes, (No)	Change Common Equipment parameters
DLOP	loop dd ff	Digital trunk loop options
MODE	TRK, LINK, PRI	Digital trunk loop mode
LCMT	AMI, B8S	Line coding method
YALM	DG2, FDL	Yellow alarm method
TRSH	0-99	Digital Trunk threshold set defined in LD73

ISDN configuration (X11 release 17 and earlier)

The following prompts are used to change Integrated Services Digital Network (ISDN) configuration. Refer to *ISDN PRI description and administration* (553-2901-100).

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
PWD2	xxx...x	Current Level 2 master password (4-16 characters)
ISDN	Yes	Change ISDN configuration
DCHI	1-15	D-channel port number
BCHI	1-15	Back-up D-channel port number
USR	PRI, ISLD, SHA	D-channel mode
RCVP	Yes, (No)	Auto-recovery to primary D-channel option
DCHL	0, 2, 4,...158	PRI loop number for D-Channel
BCHL	0,2,4 ... 158	PRI loop number for back-up D-channel
OTBF	1-(32)-127	Number of output request buffers
DRAT	(56K), 64KC, 64KI	D-channel transmission
PRI	0-159 2-15	Additional PRI loops using the same D-channel, and interface ID
ISLM	1-382	Number of ISL trunks controlled by the D-Channel
IFC	aaa	Interface type
SIDE	NET, (USR)	Meridian 1 node type
CNEG	(1), 2	Channel negotiation option
RLS	xx	Release ID of the switch at the far end of the D-Channel
RCAP	BRI, MSL, MWI, NCT, ND1, ND2, RVQ	Remote D-channel capabilities
CLOK	INT, EXT	Internal or external clock
LAPD	Yes, (No)	D-channel LAPD parameters
__T23	1-(20)-31	Interface guard timer (DCHI only)
__T200	2-(3)-40	Retransmission timer
__N200	1-(3)-8	Maximum number of retransmissions
__N201	4-(260)	Maximum number of octets in information field
__T203	2-(10)-40	Maximum time (in seconds) without frames being exchanged
__K	1-(7)	Maximum number of outstanding frames

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ISDN configuration (X11 release 18)

The following prompts are used to change Integrated Services Digital Network (ISDN) configuration. This is accomplished by adding the primary D-channel followed by the optional backup D-channel.

Refer to *ISDN PRI description and administration* (553-2901-100) for complete details. Be sure to observe the following.

- the primary and backup D-channels must be on the same card type (DCHI or MSDL)
- the parameters defined for the primary D-channel are automatically copied to the back-up D-channel (except for BCHL and RCVP)
- the D-channels must be disabled before making any changes
- changes to the D-channel pair should be made to the primary D-channel first (except for BCHL and RCVP)
- the backup D-channel must be removed prior to removing the primary D-channel
- when a backup D-channel is configured for a primary D-channel, the USR of the primary can be changed from SHA to ISLD or PRI, but not from ISLD to PRI or SHA
- the ADAN DCH MOVE command allows primary D-channels to move to a new logical number (NDCH), card type (CTYP), device number (DNUM), and port designation (PORT) when adding MSDL cards. You do not need to remove any D-channels or B-channels when using this command with MSDL cards.

REQ	CHG	Change
TYPE	CFN	Configuration record
ADAN	NEW DCH 0-63	Add a primary D-channel on logical port 0-63
	CHG DCH 0-63	Change a primary D-channel
	MOV DCH 0-63	Move a primary D-channel
	OUT DCH 0-63	Remove a primary D-channel
NDCH	0-63	Move the primary D-channel to this logical number
CTYP	DCHI, MSDL	Card type

DNUM	0-15	Device number: physical port (odd) for D-channel on DCHI, physical card address for MSDL
_PORT	0-15	Port number for MSDL cards, option 61C/81 I/O devices, or PMSI ports
DES	aaa...a	Port/link designation
USR	PRI, ISLD, SHA	D-channel mode
_ISLM	1-382	Number of ISL trunks controlled by the D-Channel
DCHL	0, 2, 4,...158	PRI loop number for D-Channel
GRP	0, 0-4	Network group number
OTBF	1-(32)-127	Number of output request buffers
_BPS	xxxx	Baud rate for ISL D-channel on MSDL port (default 64000)
_PARM	R232,(R422) DCE, (DTE)	ISL D-channel interface and transmission mode (MSDL port only)
PRI	0-159 2-15	Additional PRI loops using the same D-channel, and interface ID
DRAT	(56K), 64KC, 64KI	D-channel transmission
IFC	aaa	Interface type
SIDE	NET, (USR)	Meridian 1 node type
RLS	xx	Release ID of the switch at the far end of the D-Channel
RCAP	BRI, MSL, MWI, NCT, ND1, ND2, RVQ	Remote D-channel capabilities
_CLOK	INT, (EXT)	Internal or external clock on ISL D-channels
LAPD	Yes, (No)	D-channel LAPD parameters
__T23	1-(20)-31	Interface guard timer (DCHI only)
__T200	2-(3)-40	Retransmission timer
__N200	1-(3)-8	Maximum number of retransmissions
__N201	4-(260)	Maximum number of octets in information field
__T203	2-(10)-40	Maximum time (in seconds) without frames being exchanged
__K	1-(7)	Maximum number of outstanding frames
ADAN	NEW BDCH 0-63	Add a backup D-channel on logical port 0-63
	CHG BDCH 0-63	Change a backup D-channel
	OUT BDCH 0-63	Remove a backup D-channel
PDCH	0-63	Primary D-channel
CTYP	DCHI, MSDL	Card type (automatically printed because it must be the same as primary D-channel)

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DNUM	0-15	Physical port (odd) for D-channel, card number for MSDL
_PORT	0-15	Port number for MSDL cards, option 61C/81 I/O devices, or PMSI ports
DES	aaa...a	Port/link designation
BCHL	0,2,4 ... 158	PRI loop number for back-up D-channel
GRP	0, 0-4	Network group number
RCVP	Yes, (No)	Auto-recovery to primary D-channel option
ADAN	<cr>,****	Go on to next prompt or exit overlay

ISDN configuration (X11 release 19 and later)

The following prompts are used to change Integrated Services Digital Network (ISDN) configuration. This is accomplished by adding the primary D-channel followed by the optional backup D-channel.

Refer to ISDN PRI description and administration (553-2901-100) for complete details. Be sure to observe the following.

- the primary and backup D-channels must be on the same card type (DCHI or MSDL)
- the parameters defined for the primary D-channel are automatically copied to the back-up D-channel (except for BCHL and RCVP)
- the D-channels must be disabled before making any changes
- changes to the D-channel pair should be made to the primary D-channel first (except for BCHL and RCVP)
- the backup D-channel must be removed prior to removing the primary D-channel
- when a backup D-channel is configured for a primary D-channel, the USR of the primary can be changed from SHA to ISLD or PRI, but not from ISLD to PRI or SHA
- The ADAN DCH MOVE command allows primary D-channels to move to a new logical number (NDCH), card type (CTYP), device number (DNUM), and port designation (PORT) when adding MSDL cards. You do not need to remove any D-channels or B-channels when using this command with MSDL cards.

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REQ	CHG	Change
TYPE	ADAN	Input/output information
NDCH	0-63	Move the primary D-channel to this logical number
CTYP	DCHI, MSDL	Card type
DNUM	0-15	Device number: physical port (odd) for D-channel on DCHI, physical card address for MSDL
_PORT	0-15	Port number for MSDL cards, option 61C/81 I/O devices, or PMSI ports
DES	aaa...a	Port/link designation
USR	PRI, ISLD, SHA	D-channel mode
_ISLM	1-382	Number of ISL trunks controlled by the D-Channel
DCHL	0, 2, 4,...158	PRI loop number for D-Channel
GRP	0, 0-4	Network group number
OTBF	1-(32)-127	Number of output request buffers
_BPS	xxxx	Baud rate for ISL D-channel on MSDL port (default 64000)
_PARM	R232,(R422) DCE, (DTE)	ISL D-channel interface and transmission mode (MSDL port only)
PRI	0-159 2-15	Additional PRI loops using the same D-channel, and interface ID
DRAT	(56K), 64KC, 64KI	D-channel transmission
IFC	aaa	Interface type
SIDE	NET, (USR)	Meridian 1 node type
RLS	xx	Release ID of the switch at the far end of the D-Channel
RCAP	BRI, MSL, MWI, NCT, ND1, ND2, RVQ	Remote D-channel capabilities
_CLOK	INT, (EXT)	Internal or external clock on ISL D-channels
LAPD	Yes, (No)	D-channel LAPD parameters
__T23	1-(20)-31	Interface guard timer (DCHI only)
__T200	2-(3)-40	Retransmission timer
__N200	1-(3)-8	Maximum number of retransmissions
__N201	4-(260)	Maximum number of octets in information field
__T203	2-(10)-40	Maximum time (in seconds) without frames being exchanged
__K	1-(7)	Maximum number of outstanding frames

ADAN	NEW BDCH 0-63	Add a backup D-channel on logical port 0-63
	CHG BDCH 0-63	Change a backup D-channel
	OUT BDCH 0-63	Remove a backup D-channel
PDCH	0-63	Primary D-channel
CTYP	DCHI, MSDL	Card type (automatically printed because it must be the same as primary D-channel)
DNUM	0-15	Physical port (odd) for D-channel, card number for MSDL
_PORT	0-15	Port number for MSDL cards, option 61C/81 I/O devices, or PMSI ports
DES	aaa...a	Port/link designation
BCHL	0,2,4 ... 158	PRI loop number for back-up D-channel
GRP	0, 0-4	Network group number
RCVP	Yes, (No)	Auto-recovery to primary D-channel option
ADAN	<cr>,****	Go on to next prompt or exit overlay

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History File (X11 release 17 and earlier)

The history file stores system messages in Protected Data and uses an SDI port address. When full, new incoming messages overwrite the oldest messages. The History File survives initialization, but is lost during sysload or when the file length is changed.

The History File cannot be created if all 16 I/O ports are defined.

REQ	CHG	Change
TYPE	CFN	Configuration record
	•	
	•	
	•	
IOTB	Yes	Change input/output terminals or devices
HIST	(0)-65534	History file buffer length
ADAN	NEW/CHG/OUT HST	Add, change or remove the history file
USER	aaa	Enter one or more of the message types to be stored in the history file
	BUG	BUG messages
	MTC	Maintenance messages (includes ERR, BUG and AUD if defined by prompt ERRM in PARM)
	SCH	Service Change messages
	TRF	Traffic reports

History File (X11 release 18)

The history file stores system messages in Protected Data and uses an SDI port address. When full, new incoming message overwrite the oldest messages, the History File survives initialization, but is lost during sysload or when the file length is changed. The history File cannot be created if all 16 I/O port are defined.

REQ	CHG	Change
TYPE	CFN	Configuration record
ADAN	NEW/CHG/OUT HST	Add, change or remove the history file
SIZE	(0)-65534	History file buffer length
USER	aaa	Enter one or more of the message types to be stored in the history file
	BUG	BUG messages
	MTC	Maintenance messages (includes ERR, BUG and AUD if defined by prompt ERRM in PARM)
	SCH	Service Change messages
	TRF	Traffic reports
ADAN	<cr>, ****	Go to next prompt or exit overlay

History Log Files (X11 release 19 and later)

The history log files are configured at the CFN gateway. The history file is also enhanced to provide easier viewing in LD22. Refer to that program for more information.

REQ	CHG	Change
TYPE	CFN	Configuration record
ADAN	NEW/CHG/OUT HST	Add, change or remove the history file
SIZE	(0)-65534	File buffer length
USER	aaa	Enter one or more of the message types to be stored in the history file
	BUG	BUG messages
	MTC	Maintenance messages (includes ERR, BUG and AUD if defined by prompt ERRM in PARM)
	SCH	Service Change messages
	TRF	Traffic reports
ADAN	<cr>, ****	Go to next prompt or exit overlay

Traffic Log Files (X11 release 19 and later)

The traffic log files are configured at the CFN gateway. They allows easier access to the traffic information provided by the system.

REQ	CHG	Change
TYPE	CFN	Configuration record
ADAN	NEW/CHG/OUT TRF	Add, change or remove the traffic log file
SIZE	(0)-65534	File buffer length
ADAN	<cr>, ****	Go to next prompt or exit overlay

Mass Storage devices (X11 release 17 and earlier)

REQ	CHG	Change
TYPE	CFN	Configuration record
	•	
	•	
	•	
IOTB	Yes	Change input/output terminals or devices
HIST	<cr>	History file buffer length
ADAN	NEW/OUT HDK 0-1	Add, change or remove a Hard Disk unit
ADAN	NEW/CHG/OUT FDK 0-1	Add, change or remove a Floppy Disk unit
NUMD	1-(2)	Number of floppy disk drives
FTYP	(3), 3S, 5	3.5 inch high density floppy, 3.5 inch super density floppy, 5.25 inch floppy
ADAN	NEW,CHG,MOV,OUT aaa x	Add, change, move, or remove an I/O device, type aaa, port x

Mass Storage devices (X11 release 18)

This sequence defines the mass storage devices for X11 release 18. This applies to all systems supported by X11 release 18, EXCEPT option 81.

REQ	CHG	Change
TYPE	CFN	Configuration record information
ADAN	CHG HDK 0	Change a Hard Disk unit
ADAN	CHG FDK 0	Change or remove a Floppy Disk unit
NUMD	1-(2)	Number of floppy disk drives
FTYP	(3), 3S, 5	3.5 inch high density floppy, 3.5 inch super density floppy, 5.25 inch floppy
ADAN	<cr>, ****	Go to next prompt or exit overlay

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Mass Storage devices (X11 release 19 and later)

The ADAN prompt applies to all input/output devices. Option 61C and 81 devices are discussed earlier in this chapter. This sequence applies to all non-option 61C/81 systems.

REQ	CHG	Change
TYPE	ADAN	Input/output information
ADAN	CHG HDK 0	Change a Hard Disk unit
ADAN	CHG FDK 0	Change or remove a Floppy Disk unit
NUMD	1-(2)	Number of floppy disk drives
FTYP	(3), 3S, 5	3.5 inch high density floppy, 3.5 inch super density floppy, 5.25 inch floppy
ADAN	<cr>, ****	Go to next prompt or exit overlay

System terminals (TTY, PRT) (X11 release 17 and earlier)

System terminals are used to access overlays and output system error messages, CDR records and traffic reports. These terminals are attached to a port on an SDI card. Up to 16 ports can be defined.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
	•	
	•	
	•	
IOTB	Yes	Change input/output terminals or devices
HIST	<cr>	History file buffer length
ADAN	NEW/CHG/OUT TTY/PRT 0-15	Add, change, move, or remove an I/O device, type aaa, port x
ESDI	<cr>	Not an ESDI port
CDNO	0-15	SDI card number
DENS	SDEN, DDEN, 4DEN	Single, double or quad ports on SDI card
USER	aaa aaa ...	Enter one or more of the following terminal functions
	CDL	CDR data link
	BUG	BUG error messages on this port (prompt ERRM must include BUG)
	CSC	Automatic Set Relocation and Attendant Administration messages
	CTY	CDR TTY port
	MTC	Allow maintenance overlays (includes ERR and AUD if enabled by prompt ERRM, includes BUG messages if enabled by prompt ERRM and USER = MTC BUG)
	NOO	No overlay allowed
	SCH	Allow service change overlays
	TRF	Traffic reports
	FIL	Alarm filtering (X11 release 19 and later)
XSM	Yes, (No)	SDI port for the System Monitor
CLID	Yes, (No)	Calling Line ID in CDR records
ADAN	<cr>	Go to next prompt

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System terminals (TTY, PRT) (X11 release 18)

System terminals are used to access overlays and output system error messages, CDR records and traffic reports. These terminals are attached to a port on an SDI card. Up to 16 ports can be defined.

REQ	CHG	Change
TYPE	CFN	Configuration record
ADAN	NEW/CHG/OUT TTY/PRT 0-15	Add, change, move, or remove an I/O device, type aaa, port x
CTYP	aaaa	Card type
	DCHI	Asynch port (even) on DCHI card
	MSPS	Misc/SDI/Peripheral Signaling card
	SDI	Single port SDI card
	SDI2	Dual port SDI card
	SDI4	Four port SDI card
	XSDI	SDI paddle board
GRP	0, 0-4	Network group number
DNUM	0-15	Device number printed automatically (same as ADAN number)
USER	aaa aaa ...	Enter one or more of the following terminal functions
	CDL	CDR data link
	BUG	BUG error messages on this port (prompt ERRM must include BUG)
	CSC	Automatic Set Relocation and Attendant Administration messages
	CTY	CDR TTY port
	MTC	Allow maintenance overlays (includes ERR and AUD if enabled by prompt ERRM, includes BUG messages if enabled by prompt ERRM and USER = MTC BUG)
	NOO	No overlay allowed
	SCH	Allow service change overlays
	TRF	Traffic reports
XSM	Yes, (No)	SDI port for the System Monitor
ADAN	<cr>, ****	Go to next prompt or exit overlay

System terminals (TTY, PRT) (X11 release 19 and later)

System terminals are used to access overlays and output system error messages, CDR records and traffic reports. These terminals are attached to a port on an SDI card. Up to 16 ports can be defined.

REQ	CHG	Change
TYPE	ADAN	Input/output device information
ADAN	NEW/CHG/OUT TTY/PRT 0-15	Add, change, move, or remove an I/O device, type aaa, port x
CTYP	aaaa	Card type
	DCHI	Asynch port (even) on DCHI card
	MSPS	Misc/SDI/Peripheral Signaling card
	SDI	Single port SDI card
	SDI2	Dual port SDI card
	SDI4	Four port SDI card
	XSDI	SDI paddle board
GRP	0, 0-4	Network group number
DNUM	0-15	Device number printed automatically (same as ADAN number)
USER	aaa aaa ...	Enter one or more of the following terminal functions
	CDL	CDR data link
	BUG	BUG error messages on this port (prompt ERRM must include BUG)
	CSC	Automatic Set Relocation and Attendant Administration messages
	CTY	CDR TTY port
	FIL	Alarm filtering
	MTC	Allow maintenance overlays (includes ERR and AUD if enabled by prompt ERRM, includes BUG messages if enabled by prompt ERRM and USER = MTC BUG)
	NOO	No overlay allowed
	SCH	Allow service change overlays
	TRF	Traffic reports
XSM	Yes, (No)	SDI port for the System Monitor
ADAN	<cr>, ****	Go to next prompt or exit overlay

ESDI port (synchronous) (X11 release 17 and earlier)

The ESDI card contains a synchronous and an asynchronous port. The synch port is used for applications such as Meridian Link. Shown below are the prompts for asynch ESDI ports. In X11 release 18 and later, see Application Module Link (AML).

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
	•	
	•	
	•	
IOTB	Yes	Change input/output terminals or devices
HIST	<cr>	History file buffer length
ADAN	NEW/CHG/OUT TTY 0-15	Add, change, move, or remove an I/O device, type aaa, port x
ESDI	Yes	Define ESDI port
SYNC	Yes	ESDI port is synchronous
DUPX	HALF, (FULL)	Half or full duplex mode
BPS	xxxx	Baud rate
CLOK	INT, EXT	Internal or external clock
IADR	0-(3)-255	Individual Address for the data-link level HDLC protocol
RADR	0-(1)-255	Remote Address for the data-link level HDLC protocol
LCTL	Yes, (No)	Modify link control system parameters
_T1	2-(4)-20	Timer of retransmission range in units of 0.5 seconds
_T2	0-(10)-255	Maximum time allowed without a frame being exchanged
_T3	2-(5)-255	Timer for initial link set-up in units of 0.5 seconds (ESDI only)
_N1	32, 64, (128)	Maximum octets per I frame
_N2	4-(8)-16	Maximum number of retransmissions in steps of 1
_K	1-(7)	Maximum number of outstanding frames
LTHR	Yes, (No)	Modify link performance thresholds (ESDI only)
_RXMT	1-(5)-20	Percentage of retransmissions before out of service threshold
_CRC	1-(10)-20	Percentage of CRC errors before out of service threshold

_ORUR	1-(5)-255	Number of overrun/underruns before out of service thresholds
_ABOR	1-(5)-255	Number of aborts before an out of service threshold
CONF	DIR	Direct CSL configuration
CMS	0-15	ESDI port number used for the CSL
VAS	NEW, CHG, OUT	Add, change, or remove a value added server
CSQI	(20)-255	Maximum call registers for CSL input queues
CSQO	(20)-255	Maximum number of call registers used for CSL/AML output queues
USER	aaa	Output message types
ADAN	NEW,CHG,MOV,OUT aaa x	Add, change, move, or remove an I/O device, type aaa, port x

LD17

Application Module Link (X11 release 18 and later)

An Application Module Link provides an interface for features such as Meridian Link. The AML requires the synchronous port on an Enhanced Serial Data Interface card or a port on a Multi-purpose Serial Data Link (MSDL) card. The following prompt sequence shows how to configure an AML.

REQ	CHG	Change
TYPE	CFN	Configuration record
ADAN	NEW AML 0-15	Add AML port
	CHG AML 0-15	Change AML port
	OUT AML 0-15	Remove AML port
CTYP	MSDL,ESDI	MSDL or ESDI card type
GRP	0, 0-4	Network group number
DNUM	0-15	Device number: physical port (odd) for AML on ESDI, physical card address for MSDL
_PORT	0-15	Port number for MSDL cards, option 61C/81 I/O devices, or PMSI ports
DES	aaa...a	Port/link designation
BPS	xxxx	Baud rate (default 4800)
_PARM	(R232),R422 (DCE), DTE	Interface and transmission mode (MSDL port only)
_CLOK	(INT), EXT	Internal or external clock (ESDI only)
IADR	0-(3)-255	Individual Address for the data-link level HDLC protocol
RADR	0-(1)-255	Remote Address for the data-link level HDLC protocol
LCTL	Yes, (No)	Modify link control system parameters
_T1	2-(4)-20	Timer of retransmission range in units of 0.5 seconds
_T2	0-(10)-255	Maximum time allowed without a frame being exchanged
_T3	2-(5)-255	Timer for initial link set-up in units of 0.5 seconds (ESDI only)
_N1	32, 64, (128)	Maximum octets per I frame
_N2	4-(8)-16	Maximum number of retransmissions in steps of 1
_K	1-(7)	Maximum number of outstanding frames
LTHR	Yes, (No)	Modify link performance thresholds (ESDI only)
_RXMT	1-(5)-20	Percentage of retransmissions before out of service threshold

_CRC	1-(10)-20	Percentage of CRC errors before out of service threshold
_ORUR	1-(5)-255	Number of overrun/underruns before out of service thresholds
_ABOR	1-(5)-255	Number of aborts before an out of service threshold
ADAN	<cr>, ****	Go to next prompt or exit overlay
VAS	NEW, CHG, OUT	Add, change, or remove a value added server
_VSID	0-15	VAS identifier
_AML	0-15	Application Module Link
_SECU	Yes, (No)	Turn on (off) security for Meridian Link
_INTL	1-12	Time interval for checking Meridian Link for overload, in 5-second increments
_MCNT	5-100000	Message count threshold for number of Meridian Link messages per time interval
_CONF	DIR	Direct CSL configuration
_AML	0-15	Application Module Link
_APPL	NEW/CHG/OUT	Add, change or remove an application associated with the VAS (when 246 is equipped)
_VSID	<cr>	VAS identifier
_CSQI	(20)-255	Maximum call registers for CSL input queues
_CSQO	(20)-255	Maximum number of call registers used for CSL/AMI output queues

LD17

MSDL-SDI application (X11 release 19 and later)

With X11 release 19 and later, the Multi-purpose Serial Data Link (MSDL) card supports Serial Data Interface (SDI) applications. This prompt sequence show how to configure this application.

Detailed information and sample configurations are given in *X11 system management applications* (553-3001-301).

REQ	CHG	Change
TYPE	CFN	Configuration record
ADAN	NEW TTY/PRT 0-15	Add MSDL TTY or printer port
CTYP	MSDL	MSDL card type
GRP	0, 0-4	Network group number
DNUM	0-15	Device number for I/O ports
PORT	0	Port number 0 is automatically assigned when CTYP = MSDL
DES	aaa...a	Port/link designation
BPS	xxxx	Baud rate
PARY	ODD, EVEN, (NONE)	Parity type
STOP	(1), 1x5, 2	Number of stop bits
BITL	7, (8)	Data bit length must be 7 or 8
PARM	R232, R422 and DCE, DTE	Interface and transmission mode
FUNC	aaa	MSDL card function for the SDI application
USER	aaa	Output message types
XSM	Yes, (No)	SDI port for the System Monitor
TTYLOG	0-65534	Log buffer size

Single Terminal Access (STA, X11 release 19 and later)

With X11 release 19 and later, the Multi-purpose Serial Data Link (MSDL) card supports the Single Terminal Access (STA) application. This sequence shows how to add STA to an existing terminal. For complete details, refer to *X11 system management applications* (553-3001-301).

REQ	CHG	Change the system terminal configuration
TYPE	CFN	Configuration record
ADAN	NEW/CHG STA 0-15	Configure the STA port
TTY	0-15	Pre-defined MSDL-SDI terminal number
CTYP	MSDL	MSDL card type
GRP	0, 0-4	Network group number
DNUM	0-15	Device number for I/O ports
ADMIN_PORT	0	Administration terminal port number
LANGUAGE	ENGLISH	Language supported on STA
ADDITIONAL_PORT	P1, P2, P3	Additional port number for STA terminal

ACD ports (X11 release 17 and earlier)

A variety of ACD ports are used to connect the system to external processors for applications such as enhanced reporting and voice mail. The following prompts show the options available for ACD ports. Refer to the product documentation for exact port configurations.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
IOTB	Yes	Change input/output terminals or devices
HIST	<cr>	History file buffer length
ADAN	NEW/CHG/OUT TTY/PRT 0-15	Add, change, move, or remove an I/O device, type aaa, port x
ESDI	<cr>	Not an ESDI port
CDNO	0-15	SDI card number
DENS	SDEN, DDEN, 4DEN	Single, double or quad ports on SDI card
USER	aaa aaa ...	Enter one or more of the following terminal functions
	ACD	Automatic Call Distribution printer for reports
	APL	Auxiliary Processor Link (for IVMS)
	HSL	ACDD high speed auxiliary link
	LSL	ACDD low speed auxiliary link
CUST	0-99	Customer number
SSUP	Yes, (No)	Device assigned used by senior supervisor/load manager
APRT	Yes, (No)	ACD printer
AXQI	(20)-255	Size of auxiliary input queue
AXQO	(20)-255	Size of auxiliary output queue
MGCR	0-NCR	Maximum number of call registers used by AUX messaging
DCUS	0-5	Maximum number of ACD-ADS customers
MAGT	0-1200	Maximum number of ACD agent IDs per customer
ADAN	<cr>	Add, change, move, or remove an I/O device, type aaa, port x

ACD ports (X11 release 18)

A variety of ACD ports are used to connect the system to external processors for applications such as enhanced reporting and voice mail. The following prompts show the options available for ACD ports. Refer to the product documentation for exact port configurations.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
ADAN	NEW/CHG/OUT TTY/PRT 0-15	Add, change, move, or remove an I/O device, type aaa, port x
CTYP	aaaa	Card type
	DCHI	Asynch port (even) on DCHI card
	MSPS	Misc/SDI/Peripheral Signaling card
	SDI	Single port SDI card
	SDI2	Dual port SDI card
	SDI4	Four port SDI card
	XSDI	SDI paddle board
GRP	0, 0-4	Network group number
DNUM	0-15	Device number printed automatically (same as ADAN number)
USER	aaa aaa ...	Enter one or more of the following terminal functions
	ACD	Automatic Call Distribution printer for reports
	APL	Auxiliary Processor Link (for IVMS)
	HSL	ACDD high speed auxiliary link
	LSL	ACDD low speed auxiliary link
CUST	0-99	Customer number
SSUP	Yes, (No)	Device assigned used by senior supervisor/load manager
APRT	Yes, (No)	ACD printer
AXQI	(20)-255	Size of auxiliary input queue
AXQO	(20)-255	Size of auxiliary output queue
MGCR	0-NCR	Maximum number of call registers used by AUX messaging
DCUS	0-5	Maximum number of ACD-ADS customers
MAGT	0-1200	Maximum number of ACD agent IDs per customer
ADAN	<cr>, ****	Go to next prompt or exit overlay

LD17

ACD ports (X11 release 19 and later)

A variety of ACD ports are used to connect the system to external processors for applications such as enhanced reporting and voice mail. The following prompts show the options available for ACD ports. Refer to the product documentation for exact port configurations.

REQ	CHG, END	Change data or terminate overlay
TYPE	ADAN	Input/output device information
CTYP	aaaa	Card type
	DCHI	Asynch port (even) on DCHI card
	MSDL	Multi-purpose Serial Data Link card
	MSPS	Misc/SDI/Peripheral Signaling card
	SDI	Single port SDI card
	SDI2	Dual port SDI card
	SDI4	Four port SDI card
	XSDI	SDI paddle board
GRP	0, 0-4	Network group number
DNUM	0-15	Device number printed automatically (same as ADAN number)
USER	aaa aaa ...	Enter one or more of the following terminal functions
	ACD	Automatic Call Distribution printer for reports
	APL	Auxiliary Processor Link (for IVMS)
	HSL	ACDD high speed auxiliary link
	LSL	ACDD low speed auxiliary link
CUST	0-99	Customer number
SSUP	Yes, (No)	Device assigned used by senior supervisor/load manager
APRT	Yes, (No)	ACD printer
AXQI	(20)-255	Size of auxiliary input queue
AXQO	(20)-255	Size of auxiliary output queue
ADAN	<cr>, ****	Go to next prompt or exit overlay

BGD and PMSI ports (X11 release 17 and earlier)

The Background Terminal (BGD) and Property Management Interface (PMSI) ports are used in Hospitality applications. Refer to *Background Terminal* (553-2311-316) and *Property Management Interface* (553-2801-101).

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
	•	
	•	
	•	
IOTB	Yes	Change input/output terminals or devices
HIST	<cr>	History file buffer length
ADAN	NEW/CHG/OUT TTY 0-15	Add, change, move, or remove an I/O device, type aaa, port x
ESDI	<cr>	Not an ESDI port
CDNO	0-15	SDI card number
DENS	SDEN, DDEN, 4DEN	Single, double or quad ports on SDI card
USER	aaa aaa ...	Enter one or more of the following terminal functions
	BGD	Background Terminal
	PMS	Property Management Interface
CUST	0-99	Customer number
MANU	(PMS1), PMS2, PMS3	PMS interface type
ADAN	<cr>	Add, change, move, or remove an I/O device, type aaa, port x

LD17

BGD and PMSI ports (X11 release 18)

The Background Terminal (BGD) and Property Management Interface (PMSI) ports are used in Hospitality applications. Refer to *Background Terminal description* (553-2311-316) and *Property Management System description* (553-2801-101).

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
ADAN	NEW/CHG/MOV/OUT TTY/PRT 0-15	Add, change, move, or remove an I/O device, type aaa, port x
CTYP	aaaa	Card type
	DCHI	Asynch port (even) on DCHI card
	MSPS	Misc/SDI/Peripheral Signaling card
	SDI	Single port SDI card
	SDI2	Dual port SDI card
	SDI4	Four port SDI card
	XSDI	SDI paddle board
GRP	0, 0-4	Network group number
DNUM	0-15	Device number printed automatically (same as ADAN number)
USER	aaa aaa ...	Enter one or more of the following terminal functions
	BGD	Background Terminal
	PMS	Property Management Interface
CUST	0-99	Customer number
MANU	(PMS1), PMS2, PMS3	PMS interface type
ADAN	<cr>, ****	Go to next prompt or exit overlay

PMSI ports (X11 release 19 and later)

This is the configuration sequence for PMSI with X11 release 19 and later. Refer to *Property Management System description* (553-2801-101).

REQ	CHG, END	Change data or terminate overlay
TYPE	ADAN	Input/output device information
CTYP	aaaa	Card type
	DCHI	Asynch port (even) on DCHI card
	MSDL	Multi-purpose Serial Data Link card
	MSPS	Misc/SDI/Peripheral Signaling card
	SDI	Single port SDI card
	SDI2	Dual port SDI card
	SDI4	Four port SDI card
	XSDI	SDI paddle board
GRP	0, 0-4	Network group number
DNUM	0-15	Device number printed automatically
USER	PMS	Property Management Interface
CUST	0-99	Customer number
PMSI	Yes, (No)	Modify PMS parameters
_MANU	(PMS1), PMS2, PMS3	PMS interface type
_PMCR	5, (x), y	Number of call registers used for PMSI
_PORT	0-15	Primary port number
__XTMR	(0) - 6	PMS acknowledgment time
__XNUM	(1)-4	Number of retransmissions per message for PMSI
__PMIN	Yes, (No)	Minor alarm when the PMSI link is not responding
_PTMR	(0)-31	Polling timer for PMSI

LD17

220 Configuration Record

DCHI port (asynchronous) (X11 release 17 and earlier)

The QPC757 DCHI card contains a synchronous port and an asynchronous port. The asynch port can be used as a standard SDI port (except that its enabled and disabled with LD48 "ESDI" commands rather than LD37 commands). Shown below are the prompts for the asynch port. See *ISDN PRI description and administration* (553-2901-100) to configure D-channels. See also System terminals (TTY, PRT) (X11 release 18).

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
IOTB	Yes	Change input/output terminals or devices
HIST	<cr>	History file buffer length
ADAN	NEW/CHG/OUT TTY/PRT 0-15	Async ESDI port
ESDI	Yes	ESDI port
SYNC	No	ESDI port is asynchronous
DUPX	HALF, (FULL)	Half or full duplex mode
BPS	xxxx	Baud rate
BITL	(5), 6, 7, 8	Data bit length
STOP	(1), 1x5, 2	Number of stop bits
PRTY	(ODD), EVEN, NONE	Parity
FLOW	(No), Yes	Flow control capability
USER	aaa	Output message types
ADAN	<cr>	Add, change, move, or remove an I/O device, type aaa, port x

Meridian Modular telephone transmission (X11 release 18 and earlier)

These transmission parameters are downloaded to Meridian Modular telephones after sysload (except when performing parallel reload); when enabling the loop, shelf or card; and when the telephone is plugged in. These values determine the loudness of the receiver and transmitter. See *Summary of transmission parameters* (553-2201-182) before changing these values.

REQ	CHG, END	Change data or terminate overlay
TYPE	CFN	Configuration record
ATRN	Yes	Change transmission parameters for Meridian Modular telephones
_CODE	(0), 1, 2	CODEC coding law
_SOLR	0-(1)-4	Sidetone objective loudness rating
_ROLR	(0)-63	Receive objective loudness rating
_TOLR	(0)-63	Transmit objective loudness rating
_AGCD	Yes, (No)	Automatic Gain Control disabled

Meridian Modular telephone transmission (X11 release 19 and later)

The ATRN gateway allows only the prompts applying to Meridian Modular transmission to appear.

REQ	CHG, END	Change data or terminate overlay
TYPE	ATRN	Meridian Modular telephone transmission
CODE	(0), 1, 2	CODEC coding law
SOLR	0-(1)-4	Sidetone objective loudness rating
ROLR	(0)-63	Receive objective loudness rating
TOLR	(0)-63	Transmit objective loudness rating
AGCD	Yes, (No)	Automatic Gain Control disabled

LD17

Alarm filtering parameters (X11 release 19)

Alarm Filtering allows you to specify the type of system messages to be output to a port. Up to 50 alarm filters, and 50 exception filters can be configured.

Note: The A_FILTER and E_FILTER prompts are repeated until <CR> is entered.

REQ	NEW/CHG	Alarm and exception filters
TYPE	ALARM	Alarm and Exception filter information
FMT_OUTPUT	ON, (OFF)	Alarm filters formatted printing
AF_STATUS	ON, (OFF)	Alarm and Exception filtering
A_FILTER	NEW, CHG, OUT	Add, change, or remove an alarm filter entry
TRIGGER	xxx xxx	Trigger string for alarm and exception tables
SEVERITY	aaaa	Alarm severity
SUPPRESS	0-(5)-127	Alarm occurence threshold (prior to suppressing)
ESCALATE	0-(2)-127	Alarm occurrence threshold (prior to escalating)
A_FILTER	<CR>	To move on to exception filters
E_FILTER	NEW, CHG, OUT	Add, change, or remove an exception filter entry
TRIGGER	xxx xxx	Trigger string for alarm and exception tables
E_FILTER	<CR>	To move on
REQ	CHG, END	Change data or terminate overlay

Voice Mailbox administration (X11 release 19)

REQ	NEW/CHG	Alarm and exception filters
TYPE	CFN,VAS	Configuration record or VAS gateway
VAS	NEW, CHG, OUT	Add, change, or remove a value added server
VSID	0-15	VAS identifier
AML	0-15	Application Module Link
APPL	NEW, CHG, OUT VMBA	Configure or remove a voice mailbox application
_CUST	0-99	Customer number
_DATA_CORRECT	ON, (OFF)	Enable voice mailbox database correction
_AUTO_AUDIT	(ON), OFF	Enable the automatic voice mailbox database audit
VSID	0-15	VAS identifier

Alphabetical list of prompts

500B **16-5000** — Output buffers for single line and Digital telephones, and trunks (range depends on system type). basic-19

The range is 16-5000 for option 61C/81 only. All other machines support 16-1000.

A_FILTER

NEW, CHG, OUT — Add, change, or remove an alarm filter entry. alarm-19

This is reprompted for subsequent alarm filters . Up to 50 Alarm Filters may be configured. Entering <CR> moves on to the E_FILTER prompt.

Entering an X performs the same function as OUT. To remove an alarm filter, enter X at this prompt, then indicated the removal at the TRIGGER prompt.

ABOR **1-(5)-255** — Number of aborts before an out of service threshold. csl-7

Enter in units of 1, the number of aborts in 15 minutes before an out of service is enforced.

ADAN **NEW,CHG,MOV,OUT aaa x** – Add, change, move, or remove an I/O device, type aaa, port x. basic-19

Where, aaa and xx can be any of the following:
AML 0-15 = Application Module Link (X11 release 18 and later)
BDCH 0-63 = backup primary D-channel (X11 release 18 and later)
DCH 0-63 = primary D-channel (X11 release 18 and later)
FDK 0 = Floppy Disk unit (does not apply to option 61C/81, only ADAN CHG FDK allowed)
HDK 0 = Hard Disk unit (does not apply to option 61C/81, only ADAN CHG HDK allowed)
HST = History file
PRT 0-15 = Printer port number
STA 0-15 = Single Terminal Access port number (X11 release 19 and later)
TAP 0-3 = Tape unit (X11 release 17 and earlier)
TRF = Traffic Log file (X11 release 19 and later)
TTY 0-15 = Teletype port number

Note 1: See the prompt sequences to configure specific devices.

Note 2: The MOV command is not supported for AML, BDCH, HST, PRT, or TTY.

Note 3: OUT is not allowed on device 0.

Note 4: MOV is supported for MSDL D-channels only. When using the MOV command, the D-channel must be disabled, as well as all associated PRI and DCH loops. This command is not allowed for a D-channel with a backup D-channel configured, and a backup D-channel cannot be moved to another physical address. MOV supports D-channels in PRI user mode only. It cannot be used if in shared or ISL mode.

Note 5: In X11 release 18 and later, the prompt sequence has been changed. IOTB is not longer prompted and ADAN has been moved to the first prompt after TYPE. In addition, changes to I/O devices are saved before ADAN is reprompted. To indicate the data have been saved, one of the following is output.

ADAN DATA SAVED
ADAN DATA CHGED
ADAN DATA REMOVED
ADAN DATA MOVED

Note 6: With X11 release 18 and later, entering four asterisks (****) after the ADAN prompt saves the changes you made and exits out of the overlay.

ADDITIONAL_PORT

P1, P2, P3 – Additional port number for STA terminal. sta-19

This is the port for the Single Terminal Access regular terminal, or the STA system monitor connection. This prompt repeats until <CR> is entered. There can be up to 3 ports for each STA application.

Preceding the entry with X deleted the port.

ADMIN_PORT

0 – Administration terminal port number. sta-19

This is the port used to connect the Single Terminal Access administration port. This must be 0 (zero).

AF_STATUS

ON, (OFF) – Alarm and Exception filtering. alarm-19

This prompt enables (disables) the alarm and exception filtering. <CR> retains the current filtering status.

AGCD **Yes, (No)** – Automatic Gain Control disabled. arie-17

Enter Yes to disable the Automatic Gain Control capability on Meridian Modular telephones.

ALARM **Yes, No** – Alarm configuration (gateway). alarm-19

Entering Yes opens the gate for subsequent alarm and exception filter prompts. Entering No or <CR> bypasses all the filtering prompts.

ALRM **Yes, (No)** – Minor alarm displayed on attendant consoles. basic-1

No disables the minor alarm on consoles.

AML **0-15** – Application Module Link. msdl-18

APPL **ISAP** – User application type: Meridian Link ISDN/AP. iap3p-13

APPL **NEW, CHG, OUT appl** – Add, change or remove an application associated with the VAS ID. vmba-19

This prompt appears when VAS = NEW or CHG, and package the VMBA (246) package is equipped.

Appl = VMBA, so that the input is:
NEW VMBA, or
CHG VMBA, or
OUT VMBA

APRT **Yes, (No)** – ACD printer. acdc-1

APRT cannot be Yes if prompt SSUP is yes.

ATRN **Yes, (No)** — Change transmission parameters for Meridian Modular telephones. arie-14

These transmission parameters for the M2008, M2016, and M2616 sets must be set here before sets can be configured. Refer to Summary of transmission parameters (553-2201-182) before changing these values.

AUDT **Yes, (No)** — Audit trail allowed (denied). lapw-16

Prompted only for PWD1 and PWD2.

AUTO_AUDIT

(ON), OFF — Enable the automatic voice mailbox database audit. vmba-19

When enabled, the voice mailbox data is audited every 5 days to ensure consistency between the Meridian Mail and Meridian 1 databases. The audit takes place during the daily routines every 5 days.

AXQI **(20)-255** — Size of auxiliary input queue. basic-1

Maximum of 255 or 25% of call registers (whichever is less).

AXQO **(20)-255** — Size of auxiliary output queue. basic-1

Maximum of 255 or 25% of call registers (whichever is less).

BATT **Yes, (No)** — Memory battery backup software test (21E and STE only). 21e-18

Yes indicates that the software tests the battery backup circuitry. No means that the software does not test the backup circuitry. The software will not detect whether or not the battery backup circuitry functions.

BCHI **1-15** — Back-up D-channel port number. pri-12

Precede with "X" to remove.

BCHL **0,2,4 ... 158** — PRI loop number for back-up D-channel. pri-12

Prompted when a value (1-15) is entered for BCHI. Precede the loop number with X to remove.

BCST **(No), Yes** — Broadcast ports affected by Flow control. op61C/81-18

This prompt determines if all or none of the broadcast ports (ports with the same user type) are affected by Flow control. If BCST = No, flow control affects this port only. Prompted only if FLOW = Yes.

Use this prompt with caution. For example, if BCST = YES, and a maintenance port receives an X-off command, system output to all maintenance ports will eventually be blocked.

BITL **(5), 6, 7, 8** — Data bit length. csl-7

Prompted for asynchronous ESDI ports.

BKGD **xx xx ...** — Background overlay task. basic-1

Enter the overlay number to run in background (30, 33, 34, 35, 36, 37, 38, 40, 41, 44, 45, 46) when the overlay area is idle.

With X11 release 12 and later, you may configure more than one overlay to run in background. These overlays will run sequentially, one after the other.

BPS **xxxx** — Baud rate. csl-7

Asynchronous baud rates: 1200, 2400, 4800, 9600, 19200, 48000, 56000, or 64000.

Default for AML ports is 4800. Default for ISL D-channels is 64000. Default for the option 61C/81 CP card is 9600. If the baud rate is set differently (4800 for example) the system will return to the default TEMPORARILY if it is manually Initialized. The entered baud rate will return when the initialization is complete.

CACH **(0), 2-32** — Number of overlay programs in cache buffers. basic-18

This prompt does not apply to option 61C/81 systems.
Up to 32 overlays can reside in system memory. This reduces the overlay loading time to about 1 second.

The first time an overlay is requested by the LD xx command it is loaded from disk and placed in the cache memory. If cache area is full, the oldest used non-priority overlay in cache memory is replaced by the new overlay.

In the event of data corruption to the overlay or cache memory, the problem can be corrected by a forced reload of the overlay from disk by the command "LD xx D." The DIST/ENLT commands cannot be used to force a reload of the current overlay.
Background or daily routine overlays are not stored in cache.

If a sysload of a new issue of software reduces the available memory, the number of cache buffers is reduced. When this occurs an OVL407 message is output. If this results in too many priority overlays, the highest number priority overlays are removed.

If CACH = 0, all overlays are loaded from disk.

CDNO **0-15** — SDI card number. xpe-15

Use this prompt to keep track of all SDI ports. Enter the SDI card to which the port is assigned.

Number the SDI cards logically within the system and keep a paper listing. On the paper listing record the physical location of each SDI card. This will help to configure and maintain SDI ports. Enter 0 if you are not using CDNO to keep track of SDI port and cards.

CEQU **Yes, (No)** — Change Common Equipment parameters. basic-1

CLID **Yes, (No)** — Calling Line ID in CDR records. pri-12

Prompted only when configuring CDR ports and ISDN is equipped.

CLOK **INT, EXT** — Internal or external clock. pri-12

Source of primary clock is either internal or external. Prompted for ISL D-channels and ESDI synchronous ports. Other D-channels are automatically set to EXT.

INT is used only during D-channel loopback tests, where one side is set to INT, the other is set to EXT. When USR = ISLD, CLOK should be set to External.

Default for ISL D-channels is EXT. Default for ESDI AML ports is INT.

CMS **0-15** — ESDI port number used for the CSL. csl-7

Synchronous ESDI port number used for the CSL. Precede with "X" to remove from VAS configuration.

This must be the same value as the port number defined at the ADAN prompt.

CNEG **(1), 2** — Channel negotiation option. ipra-15

Applies to AXE10, D70, and SYS12 interfaces only.
1 = In setup message, channel is indicated and no acceptable alternative
2 = In setup message, channel is indicated and any alternative is acceptable

CNI **s p g** — Core to Network Interface card location (option 81 only). opt81-18

s = slot (8-12)
p = port (0, 1)
g = network group (0-4)

Enter s p X to delete the specified CNI. To out a CNI card, it must NOT be in service (see LD135).

If only one CNI card is equipped, only one network group is supported. This is because the CNI card must be installed in slot 8 in the Core Module, and Port 0 must be configured as "group 5." Only Port 1 can support a network switching group. Therefore, to support two network groups, two CNI cards are required. To support three network groups, still only two CNI cards are required, because one port is available in slot 8 and two ports are available on the second CNI card.

CODE **(0), 1, 2** – CODEC coding law. basic-14

0 = Mu Law (North America)
1 = A Law, inverted (Sweden only)
2 = A Law, even bit interleaved

CONF **0, 2, 4,...158** – Conference loop (even number). basic-1

Use even numbered loops for Conference. Precede loop number with X to remove.

Note: You may configure more than 16 conference loops, however enabling more than 16 conference loops may cause the system to lock-up.

CONF **DIR, IND** – Direct or indirect link CSL configuration. csl-7

CRC **1-(10)-20** – Percentage of CRC errors before out of service threshold. csl-7

Enter in units of 5%, the % of Cyclic Redundancy Checks (CRC) errors detected in 15 minutes before an out of service is enforced = (# of packets retransmitted) ÷ (total # packets sent).

CSQI **(20)-255** – Maximum call registers for CSL input queues. csl-7

These call registers are used for Command and Status Link applications such as Meridian Link.

Set CSQI and CSQO equal to the number of ACD agents or AST sets to be controlled by the host computer, or 50 whichever is larger, but not more than 25 % of the total number of call registers.

CSQO **(20)-255** – Maximum number of call registers used for CSL/AML output queues. csl-7

These call registers are used for AML applications such as Meridian Link.

Set CSQI and CSQO equal to the number of ACD agents or AST sets to be controlled by the host computer, or 50 whichever is larger, but not more than 25 % of the total number of call registers.

CTYP **aaaa** — Input/output port card type. msdl-18

The following card types are available:
CPSI = Call Processor card (option 61C/81 systems only)
DCHI = D-channel Interface card
ESDI = Enhanced Serial Data Interface
MSDL = Multi-purpose Serial Data Link
MSPS = Misc/SDI/Peripheral Signaling card
PTY = Pseudo TTY (option 61C/81 systems only)
SDI = Single port SDI card
SDI2 = Dual port SDI card
SDI4 = Four port SDI card
XSDI = SDI paddle board

CUST **0-99** — Customer number. bgd-10

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

CUST **0-99, ALL, (XALL)** — Customers which can access overlays with password PWnn. lapw-16

Enter the customer (0-99) and the associated Tenant numbers (entered at the TEN prompt) to have access with password PWnn to the overlays specified at OVLA.

If CUST = ALL, then all customers and associated tenants have access with this password.

If CUST = XALL, then no customers or tenants have access with this password.

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DATA_CORRECT

ON, (OFF) — Enable voice mailbox database correction. vmba-19

When enabled, the Meridian Mail database is updated to match the Meridian 1 database, when a discrepancy is discovered by the database audit.

DCHI **1-15** — D-channel port number. pri-12

Precede with X to remove.

Note: When adding a D-channel the MEM AVAIL data is output after this prompt indicating the channel has been added. You can therefore abort the program and save the changes without going to the REQ prompt.

DCHL **0, 2, 4,...158** — PRI loop number for D-Channel. pri-12

One DCHI card can support up to 16 PRIs. Precede the loop number with X to remove.

DCUS **0-5** — Maximum number of ACD-ADS customers. acdd-1

DENS **SDEN, DDEN, 4DEN** — Single, double or quad ports on SDI card. basic-15

DES **aaa...a** — Port/link designation. msdl-18

DES is used to identify the port/link and can be up to 16 alphanumeric characters: 0-9, and A-Z (upper case only). Characters * and # are not allowed.

Spaces are removed by the system. For example "MERIDIAN MAIL" becomes "MERIDIANMAIL". Use the underscore character instead (MERIDIAN_MAIL).

DES can be left blank or changed as required. If DES is already defined for a port/link, the system outputs the current name and reprompts DES.

Precede the existing DES with "X" to remove. Example: "XMERIDIAN_MAIL".

DLOP **loop dd ff** — Digital trunk loop options. dti-5

loop = loop number 0-159
dd = maximum number of data calls 0-(24)
ff = frame format D2, D3, D4, or ESF

The default for frame format (ff) is ESF if prompt MODE is set to PRI; D3 if MODE is set to DTI or LINK.

Loop must be removed before a change can be made.

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DLOP **L1 L2 Ln** — DTI loop number(s) of this VAS. dti-5

Loops must have previously been defined as MODE = LINK. Precede a loop number with "X" to remove.

DNUM **0-15** — Device number for I/O ports. msdl-18

All ports on the MSDL card share the same DNUM. The MSDL card address settings should match the DNUM value. For all other ports (SDI, DCHI, etc.) the device number must match the port address switch settings.

DRAT **(56K), 64KC, 64KI** — D-channel transmission. pri-12

56K = D-channel transmission rate is 56K (56 kbps when LCMT is AMI)
64KC = 64 kbps clear. Allowed if LCMT = B8S (SL-1 to SL-1 only).
64KI = 64 kbps inverted HDLC (64 Kbps restricted)

Note 1: DRAT must match the far end.

Note 2: In X11 release 15 and later DRAT is not prompted when configuring ISL D-channels because the speed is controlled by the modem baud rate.

DROL **xx xx ....** — Daily (midnight) routine programs. basic-1

Daily (midnight) routine programs are once a day at the time specified by prompt TODR. The allowed programs are: 30, 32, 33, 34, 35, 36, 37, 38, 40, 41, 43, 44, 45, 46, 60, 61, 135, 137.

Note: For SL-1 MS, N and ST and system option 21A, LD35 is always run in the midnight routines even if it is not specified with this prompt.

LD135 and LD137 apply to option 61C/81 systems only.

DTI2 **0-158** — 2 Mb/s Digital Trunk Interface loop number. ipra-14

DTIC **0, 4, 8,...156** — Starting network loop slot for DTI/PRI. dti-5

Number must be even and in multiples of 4 for all systems.

In system option 21, each network slot has one superloop (four loops). Since the DTI/PRI card takes two slots, eight loops are used per DTI/PRI.

On non-Network loops, enter return (cr) and ignore the SCH2035 message.

Note: Do not input loop numbers that take the system out of its bounds.

DTRB **50, 60, 70, 100** — Digitone burst time (ms). basic-1

This determines the DTMF burst and interdigit pause for the Tone and Digit Switch (TDS). Burst time of 50 ms is used for the Fast TDS; 100 ms is used for the standard TDS. All TDS cards in the system should be set the same. Burst time of 60 and 70 is used for international requirements.

DUPX **HALF, (FULL)** — Half or full duplex mode. csl-7

Enter FULL if each end can simultaneously send and receive.

DUR5 **Yes, (No)** — CDR call duration with 0.5 second accuracy. cdr-8

This option is used in Japan only. It does not apply to CDR data link.

E_FILTER

NEW, CHG, OUT — Add, change, or remove an exception filter entry. alarm-19

Entering X before an entry also removes it. This is reprompted for subsequent exception filters . Up to 50 Exception Filters can be configured. Entering <CR> completes exception filter entries..

ERRM **ERR, BUG, AUD** — System messages to be output. basic-1

These messages, if enabled here are output on the maintenance port (prompt USER = MTC). Precede with X to remove.

ESCALATE

0-(2)-127 — Alarm occurrence threshold (prior to escalating). alarm-19

This determines the number of times a Major alarm may occur before it becomes Critical. Entering 0 disables the alarm excalation. This applies to Major alarms only.

ESDI **Yes, No** — Port is connected to ESDI card. csl-7

Default is as previous if ADAN = CHG. Default is No if ADAN = NEW and no ports on the card are configured, or the other port is configured and is not ESDI. Default is Yes if the other port is configured and is ESDI.

EXT0 **0-4 SBE 3PE** — CPU0 extenders to network (option 81). basic-19

0-4 is network group number. Must be 3PE for option 61C/81 systems. <CR> = no changes

EXT1 **0-4 SBE 3PE** — CPU1 extenders to network (option 81). basic-19

0-4 is network group number. Must be 3PE for option 61C/81 systems. <CR> = no changes

FLOW **(No), Yes** — Flow control capability. 61C/81-19

Prompted for option 61C/81 systems with X11 release 18 and later

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FLOW **XON, CTS, (NONE)** — Flow control. csl-7

Prompted for Async ESDI ports. This prompt appears with X11 release 17 and earlier only.

FLTH **0-(3)-7** — Failed log-on attempt threshold. lapw-16

Prompted only for PWD1 and PWD2 users.

FMT_OUTPUT

ON, (OFF) — Alarm filters formatted printing. alarm-19

This prompt enables (disables) formatting for the alarm/exception output. <CR> retains the current formatting status.

FRPT **OLFR, (NEFR)** — Access to incoming calls by FRE station allowed (not allowed). basic-1

If FRPT = OLFR, then a FRE station can do Ringing Number Pickup, Night Answer and receive modified calls.

FTYP **(3), 3S, 5** — 3.5 inch high density floppy, 3.5 inch super density floppy, 5.25 inch floppy. basic-15

Prompted if ADAN = FDK or HDK.

FUNC **aaa** — MSDL card function for the SDI application. msdl-19

This prompt is used when applying the MSDL card to the SDI application. aaa can be any of the following.
ABD = Autobaud
FCL = Flow control (XON/XOFF handling)
MOD = Modem support
LME = Line mode editing
SCN = Character screening

The items can be removed by preceding the acronym with X (XLME).

GRP **0, 0-4** — Network group number. 61C/81-19

Group numbers cannot be changed until the I/O devices associated with that group are disabled.

The option 61C supports 1 network group (0). The option 81 supports up to 5 network groups (0-4).

For the option 81:
Port 0 of the CNI card in slot 8 in the NT6D60 Core Module must be configured as "group 5." This configuration is not equivalent to a network switching group (groups 0-4). "Group 5" extends the inter-processor section to the interface bus, within the Core Module, through the CNI card in slot 8 and the 3PE card in slot 7.

Port 0 of the CNI card in slot 8 in the NT6D60 Core Module must be configured as "group 5." This configuration is not equivalent to a network switching group (groups 0-4). "Group 5" extends the inter-processor bus to the interface bus, within the Core Module, through the CNI card in slot 8 and the 3PE card in slot 7.

HIST **(0)-65534** — History file buffer length. basic-1

The history file stores system messages in Protected Data (Pdata) and uses an SDI port address. The history file survives initialization, but is lost when Sysload occurs or the length of the file is changed.

Note: HIST is not prompted in X11 release 18 and later. See prompt SIZE.

HOST **Yes, (No)** — Enable HOST mode log in for password PWnn. lapw-17

When a HOST user logs in, the outputs defined for the port are only output to that port. For example, two ports are defined by prompt USER to output BUG and SCH messages. When a HOST user logs in to one of these ports, the other port does not receive BUG and SCH messages until the HOST user logs out.

This removes the restriction that ports with the same output must operate at the speed of the slowest port. This feature is primarily used by applications such as Meridian Manager.

HPIB **16-5000** — High-priority input buffer (range depends on system type). basic-19

Recommended for attendant consoles and DID/TIE trunks. High priority line or trunk cards are placed in slot 1 and assigned CLS = HPR in LD10, 11, 12 or 14. Superloops do not require any line or trunk cards assigned as high priority.

The range is 16-5000 for System option 61C/81 only. All other machines support 16-1000.

IADR **0-(3)-255** — Individual Address for the data-link level HDLC protocol. csl-7

The IADR and RADR prompts must be coordinated with the far-end. If IADR is defined as 3, then RADR must be 1.

Note: Default is "1" prior to X11 release 18.

IDLP **0-158** — DTI loop number used for IND CSL loop. csl-7

See prompt DLOP.

IFC **aaa** — Interface type. pri-17

Allowed responses are listed below. Note that when USR = ISLD or SHA, the interface is automatically entered as SL1.
(D100) = Meridian DMS-100
D250 = Meridian DMS-250
ESS4 = AT&T ESS4
ESS5 = AT&T ESS5
SL1 = Meridian SL-1
S100 = Meridian SL-100
SS12 = Norwegian SYS-12
AXEA = Ericsson* AXE-10 (Australia)
D70 = Japan D70

INIT **(Yes), No** — Reset locked out ports during manual INIT (allowed) denied. lapw-16

This option (allows) denies a manual initialization to reset ports which were locked out due to failed log-on attempts.

Caution: Initialization interrupts call processing for 2 to 5 seconds.

INTL **1-12** — Time interval for checking Meridian Link for overload, in 5-second increments. iap3p-12

This is the interval for count the number of messages on a Meridian Link. See prompt MCNT.

IOTB **Yes, (No)** — Change input/output terminals or devices. basic-1

ISDN **Yes, (No)** — Change Integrated Services Digital Network configuration. pri-12

ISLM **1-382** — Number of ISL trunks controlled by the D-Channel. isl-12

There is no default value.

JDMI **0-158** — Japan Digital Multiplexer Interface loop number. jdtm-14

K **1-(7)** — Maximum number of outstanding frames. csl-7

This value should be the same for the Meridian 1 (near-end) and the host processor (far-end). 7 is the recommended value AUX applications. 2 is the CCITT recommended value.

Note: Default is 2 in X11 release 17 and earlier.

LANGUAGE

ENGLISH — Language supported on STA. sta-19

LAPD **Yes, (No)** — D-channel LAPD parameters. pri-12

LAPW **0-99** — Limited Access Password number. lapw-16

To remove the password, prefix an existing number with an X. If a password does not exist, <cr> is not a valid input.

LCMT **AMI, B8S** — Line coding method. pri-19

B8S = B8ZS coding format.
AMI = Alternate Mark Inversion, B7 coding format.

With X11 release 19 and later, the default is B8ZS when the frame format is ESF. When the frame format is D2, D3, or D4, the default is AMI.

LCTL **Yes, (No)** — Modify link control system parameters. csl-7

Prompts T1 to K are prompted if LCTL = Yes.

LD17

LNAME_OPTION

Yes, (No) — Require login name for password access. lapw-19

If the option is changed to Yes, each password entry is given a default name until it is changed. The names that apply are:

ADMIN1 = PWD1 access
ADMIN2 = PWD2 access
USER0 = Password 00 access
USER1 = Password 01 access
and so on to USER 99.

The following message is output before reprompting REQ: DEFAULT LOGIN NAMES SAVED.

If the option is changed to No, random passwords are assigned by the system to ensure no password duplication. The default passwords are output to the terminal when this option is disabled. The following message is output: WARNING: PASSWORDS WILL BE CHANGED TO DEFAULT VALUES.
OK? (Y/N)
If data is saved, the following appears: DEFAULT PASSWORDS SAVED
PWD2 = <pwd2 password>

With Multi-User Login enabled, it is possible for more than one user to be logged in with the same name and password. Each login name must be unique. Two people can be logged in as PWD00, but they cannot have the same login name.

LOCK **0-(60)-270** — Lock-out time in minutes. lapw-16

This is the time that an entry terminal is locked out of processing after using exceeding the failed log on attempt threshold (prompt FLTH). The terminal operator must wait this time (in minutes) before regaining control of the terminal keyboard. Messages of the lock-out are displayed on maintenance terminals and supervisory stations.

Prompted only for PWD1 and PWD2 users.

LOGIN_NAME

aaa . . . . aaaa — Login name for password access. lapw-19

When LNAME_OPTION is Yes, the names must be associated with each login passwords.
This can be up to 11 alphanumeric characters (0-9, A-Z, a-z).

LPIB **96-5000** — Low-priority input buffers (range depends on system type). basic-19

Most stations and trunks are defined as low priority. See prompt HPIB.

The range is 96-5000 for System option 61C/81 only. All other machines support 96-1000.

LPWD **aaaa** — Enter current LAPW password to change user password. lapw-16

Prompted only for LAPW users if PWD2 is not entered. This is used by LAPW users to change their password.

LTHR **Yes, (No)** — Modify link performance thresholds (ESDI only). cls-7

RXMT to ABOR are prompted if LTHR = Yes.

MAGT **0-1200** — Maximum number of ACD agent IDs per customer. acdc-18

This prompt applies to X11 release 18 and earlier only.

MANU **(PMS1), PMS2, PMS3** — PMS interface type. pmsi-19

PMS1 = standard interface
PMS2 = requires <CR> (H.OD) to recognize input message.
PMS3 = updated RMS message is followed by the old RMS when a room DN checks IN or OUT.

MARP **Yes, No** — Enable MADN Redirection Prime. marp-18

MCFN **x x x x x x** — Number and size of SIMMs in option 61C/81. 61C/81-19

x = SIMM size in megabytes

If size is not specified, the system assumes they are unequipped (size = 0). This does not affect system operation.

MCNT **5-100000** — Message count threshold for number of Meridian Link messages per time interval. iap3p-12

The recommended setting is 400. With INTL = 4 and MCNT = 400 the maximum flow is 20 messages/second.

MEM **768** — Memory modules. basic-1

Enter the 64K memory modules. Prompted if MTYP=0. Duplicate module for CPU1 (e.g., 10 for 0) is assumed for each module added. Precede with X to delete a memory module

MFSD **0, 2, 4,...158** — Multifrequency Sender (MFS) loop (even number). basic-1

Precede loop number with X to remove.

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MGCR **0-NCR** — Maximum number of call registers used by AUX messaging. basic-1

MGCR is associated with the NCR prompt. It is the maximum number of call registers that can be queued for use by AUX messaging before extra processing time is allocated to handle them.

MLDN **Yes, (No)** — Multiple loop DN allowed. basic-1

This allows multiple appearance DNs to be on different loops.

MODE **TRK, LINK, PRI** — Digital trunk loop mode. dti-8

TRK = Digital Trunk mode
LINK = Digital Link mode
PRI = Primary Rate mode

MPED **(SD), DD, 4D, 8D** — Maximum PE density of any network loop. basic-7

Density can be single, double, quad or octal. Set to "8D" for superloops. See LD97 to define superloops.

MSCL **(0)-8191** — Maximum number of Speed Call lists. optf-13

The system will default to 255 if converted from a prior release, and the Speed Call package is equipped. Otherwise, the default is 0.

MTYP **x x x** — Memory type. basic-19

0 = QPC51 (64K) modules (see prompt MEM)
128 = module 0 128K card
128 128 = modules 0 and 1 (two 128K or one 256K)
192 = module 0 is 192K card, module 1 not equipped
192 128 = module 0 is 192K card, module 1 is 128K
192 192 = modules 0 and 1 are 192K
192 192 192 = modules 0, 1 and 2 are 192K
192 192 192 192 = modules 0, 1, 2 and 3 are 192K
512 = module 0 is 512K card
768 = module 0 is 768K card, used for ST systems
768 768 = modules 0 and 1 are 768K cards
768 768 768 = modules 0, 1 and 2 are 768K cards
2M = 2Mword memory card (required for X11 release 18)

Note 1: This prompt does not apply to option 61C/81.

Note 2: Multiple responses are allowed for XT and 71 systems (2M 2M 2M 2M) as long as the total does not exceed 4 Mwords (12 Mbytes) per CPU. The memory types must be the same (all 2M, or all 768K).

Note 3: A sysload is required to change the memory type from 786K to 2M, or vice versa.

MULTI_USER

On, (Off) — Multi-User Login. muli-19

N1 **32, 64, (128)** — Maximum octets per I frame. csl-7

N2 **4-(8)-16** — Maximum number of retransmissions in steps of 1. pri-12

N200 **1-(3)-8** — Maximum number of retransmissions. pri-12

Prompted if LAPD = Yes.

N201 **4-(260)** — Maximum number of octets in information field. pri-12

Prompted if LAPD = Yes.

NCPU **1, (2)** — Number of CPUs. basic-18

This value is programmed at the factory. For system option 51 enter the value to 1, but you must define the extenders as EXT0 0 NIL 3PE and EXT1 0 NIL 3PE.

With X11 release 18 and later, this is prompted for NT, RT, 51, and 61 systems only. XT and 71 systems automatically have 2 assigned. STE and 21E systems have 1 assigned.

NCR **26-2047, 5000, 20000** — Number of call registers (range depends on system type). basic-19

26-2047 — System option 21E, 51 and STE, NT, RT
26-5000 — System option 71 and XT
26-20000 — System option 61C/81

The maximum number of call registers may be limited by the amount of system memory. In this case the number of call registers is the amount of protected memory available divided by the number of words per call register.

NDCH **0-63** — Move the primary D-channel to this logical number. pri-18

This command is used when moving D-channels. With X11 release 18 and later, the ADAN MOV command is supported for D-channels.

The NDCH number is the port number that the D-channel is moving TO.

NDIS **(20)-255** — Number of display messages for background terminal. bgd-10

This prompt appears when the Background Terminal (BGD) is equipped. It is used to determine the queue length for display messages for the BGD application.

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NDRG	**Yes, (No)** — New Distinctive Ringing. Prompted only if DRNG equipped, and ATVN/JTDS packages are not equipped.	drng-10
NLPW	**xx . . . x** — New 16 character password for LAPW users. Characters include 0-9 and all upper and lower case letters (A-Z). Prompted only for LAPW users after LPWD is entered.	lapw-16
NPW1	**xxx...x** — New level 1 log-in password (4-16 characters). Characters include 0-9 and all upper and lower case letters (A-Z).	basic-1
NPW2	**xxx...x** — New level 2 master password (4-16 characters). Characters include 0-9 and all upper and lower case letters (A-Z).	basic-1
NPWC	**xxxx** — New mini-CDR password. Acceptable values range between 0-9 and A-Z.	mcdr-1
NUMD	**1-(2)** — Number of floppy disk drives. Prompted if ADAN = FDK or HDK.	basic-15
OPT	**FORCA, (FORCD)** — Allow (deny) the Force command.	muli-19
OPT	**MONA, (MOND)** — Allow (deny) the Monitor command.	muli-19
OPT	**aaaa** — Options accessible with password PWnn.	lapw-16
OPT	**CFPD, (CFPA)** — Changes to all LD17 prompts denied (allowed). CFPD only allows access to prompts LPWD and NLPW to change one's own passwords.	lapw-16
OPT	**LLCA, (LLCD)** — Line Load Control commands in LD02 allowed (denied). The Line Load Control (LLC) feature is available in X11 release 12 and later.	lapw-16
OPT	**PROA, (PROD)** — Print Only class of service allowed (denied). Restricts LD access to printing functions only.	lapw-16
OPT	**PSCD, (PSCA)** — Printing Speed Call lists (allowed) denied. Printing Speed Call lists can be allowed even though the LD is restricted for all other functions.	lapw-16
ORUR	**1-(5)-255** — Number of overrun/underruns before out of service thresholds. Enter in units of 1, the number of overrun/underrun in 15 minutes before an out of service is enforced.	basic-1

OTBF	**1-(32)-127** — Number of output request buffers.	pri-12
OVLA	**xx . . . xx, ALL, (XALL)** — Overlays (02-99) accessible with password PWnn. Enter one or more overlays separated by a space. OVLA is reprompted until a <cr> is entered. Enter "ALL" to allow access to all overlays through password PWnn. Enter "XALL" to deny access to all overlays through password PWnn.	lapw-16
OVLY	**Yes, (No)** — Change overlay area options.	basic-1
PARM	**Yes, (No)** — Change system parameters.	basic-1
PARM	**R232, R422 DCE, DTE** — Interface and transmission mode (MSDL port only). The RS-422 parameters are established with switch settings on the MSDL card. This prompt is used to verify those settings prior to enabling the card. There are several ways to enter this information. R232 and RS232, and R422 and RS422 are accepted by the system as valid input. The responses can be entered two ways: double entries, or single entries. Double entries include both the interface and transmission mode. For example, you enter R232 DCE. Single entries have either the interface or the transmission node entered, and the other item uses a default. For example, you enter R422 <CR>, and DCE is automatically entered as the transmission mode. If you enter DTE <CR>, R232 is automatically entered as the interface. The system defaults to R232 and DCE unless otherwise indicated.	msdl-18
PARY	**ODD, EVEN, (NONE)** — Parity type. Prompted for asynchronous ESDI ports. Used with X11 release 18 and later.	61C/81-18
PBXH	**0-23, X** — Hour to perform message waiting lamp maintenance. Enter the hour to perform message waiting lamp maintenance. Enter "X" if no tests are to be performed.	mwc-15
PCDR	**Yes, (No)** — Priority to CDR. Yes gives CDR priority over call processing.	cdr-1
PCML	**(mu), A** — A or Mu companding law. Use mu-Law for North America.	basic-1

PDCH **0-63** — Primary D-channel. msdl-18

Enter the primary D-channel associated with a backup D-channel.

Note: Both D-channels must be on the same card type (DCHI or MSDL).

PMCR **5, (x), y** — Number of call registers used for PMSI. pms-19

The minimum number of call registers to be configured is 5.
x = 60, or 25 % of the total system call registers (whichever is less)
y = 250, or 25% of the total system call registers (whichever is less)

For example, if you enter 65, but 25% of the system total is 45, the number entered by the system will be 45.

PMIN **Yes, (No)** — Minor alarm when the PMSI link is not responding. pms-19

This is not prompted if XTMR = 0. When this prompt is Yes, the attendants minor alarm is activated when the PMSI link does not respond. Note that when the link responds again, the alarm is not cleared.

PMSI **Yes, (No)** — Modify PMS parameters. pms-19

This is prompted is Property Management Systems Interface (PMSI) is enabled.

PORT **0-15** — Port number for MSDL cards, option 61C/81 I/O devices, or PMSI ports. -19

Prompted only when CTYP = MSDL(Multi-purpose Serial Data Link), CPSI (option 61C/81 CP card), or PTY (option 61C/81 Pseudo TTY).

With X11 release 19 and later, this prompt appears for Property Management Systems Interface (PMSI) port configuration. This appears when PMSI = YES.

0-3 for the MSDL card
0-1 for the CP card
0-7 for Pseudo TTYs
0-15 for PMSI ports

PRI **0-159 2-15** — Additional PRI loops using the same D-channel, and interface ID. pri-12

This prompt is used to assign the PRI loops controlled by the D-channel. Each loop is given an Interface ID. The PRI loop carrying primary D-channel (DCHI) and backup D-channel (BCHI) loops are assigned an Interface ID 0 and 1, respectively.

The 13 remaining PRI loops that can be assigned to the D-channel are defined here and given an Interface ID of 2-15.

This prompt is repeated until <cr> is entered. Precede loop number with X to remove.

PRI2 **0-158** — 2 Mb/s Primary Rate Interface loop number. ipra-14

PRIM **0-15** — Primary PMS port. pms-19

This defines the primary PMS port. To remove the port, enter X.

PRTY **xx xx xx ...** — Priority overlays to be stored in cache buffers. basic-19

Priority overlays remain in cache memory when a new overlay is loaded (see CACH prompt). Enter one or more of the most commonly used overlay numbers. Precede the overlay number with X to remove.

This prompt does not apply to option 61C/81.

PTMR **(0)-31** — Polling timer for PMSI. pms-19

This is the polling timer, in minutes. When PTMR = 0 polling does not occur.

PWD2 **xxx...x** — Current Level 2 master password (4-16 characters). basic-1

This password is required to change NPW1, NPW2 and SPWD passwords. Characters include 0-9 and all upper and lower case letters (A-Z).

PWnn **xx . . . x** — 4-16 character LAPW password. lapw-16

Characters include 0-9 and all upper and lower case letters (A-Z). The value nn is the Limited Access password number (0-99).

RADR **0-(1)-255** — Remote Address for the data-link level HDLC protocol. csl-7

The IADR and RADR prompts must be coordinated with the far-end. If IADR is defined as 3, then RADR must be 1.

Note: Default is 3 prior to X11 release 18.

RCAP **BRI, MSL, MWI, NCT, ND1, ND2, RVQ** — Remote D-channel capabilities. pri-19

Enter one or more values to define the capabilities of the far end, where
BRI = Basic Rate Interface (when IFC = Sl1, D70, ESS4, or ESS5)
MSL = Remote D-channel is on an MSDL card
MWI = Message Waiting interworking with DMS-100 (X11 release 19)
NCT = Network Call Trace
ND1 = Network Name Delivery method 1
ND2 = Network Name Delivery method 2
RVQ = Remote Virtual Queuing

Precede a value with X to remove. RCAP is reprompted until no values are entered.

Note: ND1 and ND2 are used with Network Call Party Name Display (NCPND). Both ends must have NCPND. ND1 requires X11 release 13 and later. ND2 requires X11 release 17 and later; or SL-100, DMS with BCS32 and later. Enter either ND1 or ND2.

RCVP **Yes, (No)** — Auto-recovery to primary D-channel option. pri-13

RCVP is supported on Meridian 1 to Meridian 1 connections only.

When RCVP = Yes, the primary D-channel is automatically forced to be the active channel after it is brought up from a released state.

This option must be coordinated with the far end. Both sides must be either Yes or No. If the two sides do not match, both sides default to No. When IFC ≠ SL1, RCVP changes to No.

REMD **0-159 0-159 ...** — Double density remote terminal loops. rpe-1

Precede loop number with X to remove.

REMO **0-159 0-159 ...** — Single density remote terminal loops. basic-1

Precede loop number with X to remove.

REMQ **0-159 0-159 ...** — Quad density remote terminal loops. rpe-7

Precede loop number with X to remove.

REQ **CHG, END** — Change data or terminate overlay. basic-1

RLS **xx** — Release ID of the switch at the far end of the D-Channel. pri-19

This is the current software release of the far end. If the far end has an incompatible release of software, it prevents the sending of application messages.

Shown below is the relationship between, the ISDN application, equipment and the Release ID (X11 or BCS) at the far end.

Network Ring Again
far end = SL-1; minimum RLS = 12
far end = SL-100, DMS-100/250; minimum RLS = 26
Network ACD
far end = SL-1; minimum RLS = 15
far end = SL-100, DMS-100/250; minimum RLS = 29
Network Message Service - Message Center
far end = SL-1; minimum RLS = 15
Network Message Service - Meridian Mail
far end = SL-1; minimum RLS = 16
Message Waiting Indication Interworking with DMS-100
far end = DMS-100; minimum RLS = 36
far end = SL-1;minimum RLS = 19

Note: The Release ID information is required and supported for connection to Northern Telecom equipment only. For connections to AT&T ESS4/5 set RLS = 1.

ROLR **(0)-63** — Receive objective loudness rating. arie-14

The ROLR value is downloaded to Meridian Modular telephones after sysload (except when performing parallel reload). See Summary of transmission parameters (553-2201-182) before changing this value.

RXMT **1-(5)-20** — Percentage of retransmissions before out of service threshold. basic-1

Enter in units of 5%, the % of retransmissions in 15 minutes before out of service is enforced = (# of packets retransmitted) ÷ (total # packets sent).

SATN **l s c u** — TN of SADM/Data Line Card associated with IND CSL. csl-7

SBE **Yes, (No)** — Segmented bus extender equipped. basic-1

SL-1MS, SL-1S only.

SECU **Yes, (No)** — Turn on (off) security for Meridian Link. iap3p-12

When set to No, the host computer must specify both the TN and DN of the associate set in connect, answer, and release messages. Must be set to Yes for Meridian Link, and No for Customer Controlled Routing.

LD17

SEVERITY

aaaa — Alarm severity. alarm-19

This establishes the severity of a particular alarm entry. AAA may be any of the following entries. <CR> retains current value.

Critical = System operation is in jeopardy
Major = Serious condition, the system is operational
Minor = Error condition detected, system operation not affected
(None) = No rating (default status)

SID **xxxx** — System ID number. basic-1

The SID is used for polling an SL-1 for ACD, CDR and Traffic reports. It can also be printed and changed using LD02.

SIDE **NET, (USR)** — Meridian 1 node type. pri-12

NET = network, the controlling switch
USR = slave to the controller

Prompted only if IFC = SL1. Opposite sides of the PBX-to-PBX interface must be set as MAS or SLAV. The call processing software uses these labels to handle call collision.

Note: In X11 release 17 and earlier, enter MAS for NET and SLAV for USR.

SIZE **(0)-65534** — History file buffer length. hist-18

The history file stores system messages in Protected Data (Pdata) and uses an SDI port address. The history file survives initialization, but is lost when Sysload occurs or the length of the file is changed.

SIZE **(50)-1500** — Word size of the Audit Trail buffer. lapw-16

The Size entered here must be a multiple of 50 for correct memory storage. Prompted only if AUDT = Yes.

With X11 release 18 and earlier, the parameters are (50)-1000.

SL1B **16-255** — Multi-line telephone output buffers. basic-1

SMEM **Yes, (No)** — Short Memory Test option. smem-19

This prompt does not apply to option 61C/81.

SOLR **0-(1)-4** — Sidetone objective loudness rating. arie-14

The SOLR value is downloaded to Meridian Modular telephones after sysload (except when performing parallel reload). See Summary of transmission parameters (553-2201-182) before changing this value.

Note: The default value in X11 release 14 and 15 is 0 (7 dB). The default value in X11 release 16 and later is 1 (12 dB). The recommended value for all releases is 1 (12 dB).

SSUP **Yes, (No)** — Device assigned used by senior supervisor/load manager. acdc-1

Cannot be Yes if prompt APRT is Yes.

STOP **(1), 1x5, 2** — Number of stop bits. csl-19

Prompted for asynchronous ESDI ports. For 1.5 stop bits, you must enter 1x5. Option 61C/81 systems support 1 or 2 stop bits only (not 1.5).

SUPPRESS

0-(5)-127 — Alarm occurence threshold (prior to suppressing). alarm-19

This determines the number of times an alarm may occur before it is no longer output. Entering 0 indicates that all alarm occurences are output (no suppression).

SYNC **Yes, (No)** — Synchronous (asynchronous) ESDI port. csl-7

T1 **2-(4)-20** — Timer of retransmission range in units of 0.5 seconds. csl-7

The default is 4 (2 seconds).

T2 **0-(10)-255** — Maximum time allowed without a frame being exchanged. csl-7

Note: Default is "0" prior to X11 release 18.

T200 **2-(3)-40** — Retransmission timer. pri-12

Entry is in unit of 0.5 seconds. Default is 3 (1.5 seconds). Prompted if LAPD = Yes.

T203 **2-(10)-40** — Maximum time (in seconds) without frames being exchanged. pri-15

T23 **1-(20)-31** — Interface guard timer (DCHI only). pri-12

This timer to check how long the interface takes to respond. Entry is in unit of 0.5 seconds. Default is 20 (10 seconds). Prompted if LAPD = Yes.

T3 **2-(5)-255** — Timer for initial link set-up in units of 0.5 seconds (ESDI only). csl-7

The default is 10 (5 seconds).

LD17

250 Configuration Record

TDS **0, 2, 4,...158** — TDS or Fast TDS service loop (even loop). basic-1

Use even numbered loops for Tone and Digit Switch (TDS). Precede loop number with X to remove.

TEN **xx xx . . . xx, ALL, (XALL)** — Tenant list for password access. lapw-16

Enter the one or more tenant numbers to have access with this password. The TEN prompt is repeated until <cr> is entered. Precede with "X" to remove a tenant number.

If TEN = ALL, then all tenants have access with this password.

If TEN = XALL, then no tenants have access with this password.

TERD **0-159 0-159 ...** — Double density local terminal loops. basic-1

Precede loop number with "X" to remove.

TERM **0-159 0-159 ...** — Single density local terminal loops. basic-1

Precede loop number with "X" to remove.

TERQ **0-159 0-159 ...** — Quad density local terminal loops. basic-7

Precede loop number with "X" to remove.

TMRK **96, (128)** — Length of cadence increments (ms). basic-13

Refer to Flexible Tone and Digit Switch cards (5523-2711-180).

TODR **00-23** — Time of daily (midnight) routines. basic-1

TOLR **(0)-63** — Transmit objective loudness rating. arie-14

The TOLR value is downloaded to Meridian Modular telephones after sysload (except when performing parallel reload). See Summary of transmission parameters (553-2201-182) before changing this value.

TRIGGER

xxx . . . . xxx — Trigger string for alarm and exception tables. alarm-19

The trigger string can be up to 10 alphanumeric characters. At least one character must be alphabetic (a-z). Plus sign (+) can be used to indicate the "wild card" entry. For example, BUG++++ includes all BUG system messages. The mnemonics supported for this prompt are lists at the beginning of this overlay. A value must be entered, <CR> is not accepted.

If X or OUT was entered at the A_FILTER prompt, the entered alarem filter will be removed.

TRSH **0-99** — Digital Trunk threshold set defined in LD73. pri-19

With X11 release 18 and earlier, the threshold limit is 0-15.

TTY **0-15** — Pre-defined MSDL-SDI terminal number. sta-19

TTYLOG

0-65534 — Log buffer size. muli-19

When 0 is entered, there is no log file.

TYPE **ADAN** — All input/output devices. basic-19

This response is accepted with X11 release 19 and later. The I/O devices include D-channels.

TYPE **ALARM** — Alarm filter configuration data. alarm-19

When this type is entered the system automatically prints out the current alarm and exception filters.

TYPE **ATRN** — Meridian Modular Telephone transmission parameters. basic-19

This response is accepted with X11 release 19 and later.

TYPE **CEQU** — Common Equipment parameters. basic-19

This response is accepted with X11 release 19 and later.

TYPE **CFN** — Configuration Record. basic-1

TYPE **OVLY** — Overlay area options. basic-19

This response is accepted with X11 release 19 and later.

TYPE **PARM** — System parameters. basic-19

This response is accepted with X11 release 19 and later.

TYPE **PWD** — System password and Limited Access to Overlay password. basic-19

This response is accepted with X11 release 19 and later.
This gateway prompt replaces the PWD2 password prompt. When entering yes, the PWD2 is prompted unless LAPW is used and Multi-User Login is enabled

TYPE **VAS** — Value Added Server. basic-19

This response is accepted with X11 release 19 and later.

LD17

USER **aaa** — Output message types. basic-1

Prompted when ADAN is PRT or TTY. Where, aaa can be:

ACD = Automatic Call Distribution printer for reports
APL = Auxiliary Processor Link (for IVMS)
BGD = Background Terminal (Mutually exclusive with ACD, APL, CDL, CMC, CMS, HSL, and LSL)
BUG = software error messages
CDL = CDR Data Link to CDR processor
CMC = Communications Management Center
CMS = Command and Status Link (synchronous ESDI)
CSC = Customer Service Changes: Automatic Set Relocation and Attendant Administration
CTY = CDR TTY port to output CDR records
FIL = Filtered alarm messages (allows critical alarm messages from auxiliary processors to be displayed on this port.
HSL = ACD/D high-speed AUX Link
LSL = ACD/D low-speed AUX Link
MTC = Maintenance (includes ERR and or AUD messages if enabled by prompt ERRM, includes BUG if enabled by ERRM and prompt USER = MTC BUG). Use MTC for the system monitor (XSM).
NOO = No overlay allowed
PMS = Property Management System interface
SCH = Service Change (any data base change)
TRF = Traffic

Prompted when ADAN is HST. Where, aaa can be:

BUG = software error
MTC = Maintenance (includes ERR, BUG and AUD if defined by prompt ERRM). Use MTC for the system monitor (XSM).
SCH = Service Change (any data base change)
TRF = Traffic

USER **FIL** – Alarm filtering message output. alarm-19

This response is supported by X11 release 19 and later. When a port is assigned this User type, only Alarm Filtered messages will be output. The messages listed at the TRIGGER prompt are the messages that appear for this user type. When AF_STATUS = OFF, no system messages are output to the port with FIL type.

The output appears as shown below. The field definitions follow.
<severity> <report id> <date> <time> <sequence number> <event>
<component ID> <label>
<tab> OPRDAT: <data>
<tab> Expert data: <data>

severity: **** = Critical
*** = Major
** = Minor
blank = None

report id: The system message character string (BUG1234, ERR5683, etc.)

time: hh:mm:ss

date: dd/mm/yy

sequence number: The sequence the message appears. The range is 0-65535, and the numbers are right justified. Meridian 1 and auxiliary processor messages have separate sequence numbers.

event: This indicates the type of event that is being output: MSG (message), SET (set alarm), CLR (clear alarm).

component ID: This is the system (Meridian Mail, or CCR, or example) that is generating the alarm.

label: THis is a 30 character text string that gives information about the event.

TAB: 6 character indent

OPRDAT: This contains additional information to help clear the fault. This field contains the additional message information (TN, loop number, etc.) that the message contains. Up to 30 characters will appear.

Expert data: This field may not always appear. It contains system expert information.

USR **PRI, ISLD, SHA** — D-channel mode. pri-12

PRI = D-channel for ISDN PRA only (enter PRA in X11 release 17 and earlier)

ISLD = D-channel for ISL only, in dedicated mode, without using the PRI channel

SHA = Shared mode. D-channel used for both ISDN PRA and ISL.

Note 1: One of the above responses is required. There is no default.

VAS **NEW, CHG, OUT** — Add, change, or remove a value added server. csl-7

VSID **0-15** — VAS identifier. csl-7

Enter the VAS identifier of the VAS providing the services (this includes IS, Data Services, Voice Messaging).

XCT **0, 2, 4,...159** — Loop number for NT8D17 Conference/TDS card. xct-15

Enter an even network loop number for TDS/MFS functions. The conference function is automatically assigned the next higher (odd) loop number.

System prints: TDS n MFS n CNF n+1

This indicates that TDS and MFS functions are configured on the even loop "n" and conference function is configured on the next higher odd loop.

Precede with "X" to remove. Both loops must be disabled first. Since TN 0 0 0 0 cannot be used in system option 21, 51, 61 and 71, it is recommended that Conference/TDS/MFS card be placed in loop 0.

Note 1: You may configure more than 16 conference loops, however enabling more than 16 conference loops may cause the system to lock-up.

Note 2: In multigroup systems (SL-1 XT and system option 71), the NT8D17 should not be configured in loop 0/1.

XNUM **(1)-4** — Number of retransmissions per message for PMSI. pms-19

If XTMR = 0, this prompt does not appear.

XSM **Yes, (No)** — SDI port for the System Monitor. xpe-15

Prompt USER must be set to MTC (maintenance messages) for the system monitor port. Only one port can be XMS = Yes.

XTMR **(0) - 6** — PMS acknowledgment time. pms-19

This is the time (in seconds) to wait for the acknowledgement message from the PMS. 0 = no retransmission.

YALM **DG2, FDL** — Yellow alarm method. pri-19

Prompted only if the frame format is ESF. If YALM is not prompted, DG2 was set automatically. If YALM is prompted, the response varies between countries.

With X11 release 19 and later, the default is FDL when the frame format is ESF. When the frame format is D2, D3, or D4, the default is DG2.

LD17

256 Configuration Record

Issued: 04 01 94
Status: Standard
X11 Release: 19

Speed Call, Group Call and Pretranslation

LD18 is used to add or change Speed Call lists, System Speed Call lists, Group Call lists, Enhanced Hot Line lists and Pretranslation lists. These lists are printed using LD20.

X11 release 19 and later provides the ability to add and copy multiple Speed Call lists and System Speed Call lists. The memory requirements for Speed Call do not change. The number of lists allowed by each system is subject to the system type and memory available. Refer to *X11 features and services* (553-3001-305) for details concerning speed call requirements.

LD18

Estimate Speed Call list memory size and disk records

Use this prompt sequence to determine if there are enough memory and disk records for new Speed Call and Hot Line lists. Compare the output with the "MEM AVAIL" and "DISK RECS AVAIL" values output before the REQ prompt. See also "System memory and disk space" at the beginning of this document.

REQ	COMP	Compute disk and memory required for new lists
TYPE	SCL	Speed Call, System Speed Call or Hot Line estimation
NOLS	1-8191	Number of lists to be added
DNSZ	4-(16)-31	Maximum length of DNs allowed for new lists
SIZE	1-1000	Maximum number of of DNs allowed in new lists

Add or change Speed Call lists

REQ	NEW, CHG, OUT	Add, change or remove a speed call list
TYPE	SCL, SSC	Speed Call or System Speed Call list
LSNO	0-8190	List number for Speed Call (SCL)
	0-4095	List number for System Speed call (SSC)
NCOS	(0)-99	Network class of service for SSC
DNSZ	4-(16)-31	Maximum length of DNs allowed for Speed Call lists
SIZE	1-1000	Maximum number of DNs in Speed Call list
WRT	No, (Yes)	Data is correct and can be updated in data store
STOR	xxx yyy...	Entry number (0-999) and digits stored with it
WRT	No, (Yes)	Data is correct and can be updated in data store

Add or change Group Call lists

REQ	NEW, CHG, OUT	Add, change or remove a group call list
TYPE	GRP	Group Call list
CUST	0-99	Customer number
GRNO	0-63	Group number for group call
STOR	xxx yyy...	Entry number (0-19) and digits stored with it

Add or change a Pretranslation group to Speed Call list assignments

REQ	NEW, CHG, OUT	Add, change or remove pretranslation table assignments
TYPE	PRE	Pretranslation calling group assignments
CUST	0-99	Customer number
XLAT	0-254 0-8190	Pretranslation list (calling group to Speed Call list correlation)
	0-254 8191	If list number 8191 is assigned to a group, Pretranslation is removed for that group

Add or change Enhanced Hot Line lists

REQ	NEW, CHG, OUT	Add, change or remove a Hot Line list
TYPE	HTL	Hot Line List
CUST	0-99	Customer number
LSNO	0-8190	Hot Line list number (one list per customer)
NCOS	0-4095	Network class of service for HTL
DNSZ	4-(16)-31	Maximum length of DNs allowed for Hot Line list
SIZE	1-1000	Maximum number of DNs in Hot Line list
WRT	No, (Yes)	Data is correct and can be updated in data store
STOR	xxx yyy...	Entry number (0-999) and digits stored with it
WRT	No, (Yes)	Data is correct and can be updated in data store

Alphabetical list of prompts

CUST **0-99** — Customer number. basic-1

The range of customer numbers depends on system type and X11 release. Refer to prompt CUST in LD15 for details.

Prompted only if TYPE = GRP, HTL or PRE.

DNSZ **4-(16)-31** — Maximum length of DNs allowed for Speed Call lists. optf-1

Valid entires are: 4, 8, 12, (16), 20, 24, 28, 31. Numbers between 1 and 30 are rounded up to the next valid number.

Once defined DNSZ should not be changed. Instead, print out the list, remove it (REQ = OUT) and rebuild the list with the new DNSZ.

GRNO **0-63** — Group number for group call. grp-1

LSNO **0-8190** — List number for speed call (SCL, SSC) or Hot Line (HTL). optf-1

Range before X11 release 13: 0-254
Range X11 release 13 and later:
- 0-4095 for System Speed call and Hot Line lists
- 0-8190 for for Speed Call lists

List numbers exceeding 4 digits will have the left most digits truncated, and only the right most digits will be accepted.

A Hot Line list uses a System Speed Call list entry, only one Hot Line list is allowed per customer.

NCOS **(0)-99** — Network Class of Service group number. ncos-2

Prompted only when TYPE = SSC or HTL. The ranges for Network Class Of Service group are:
- (0)-3 for standalone CDP
- (0)-7 for BARS/CDP and NFCR
- (0)-15 for NARS and NFCR
- (0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later

NOLS **1-8191** — Number of lists to be added. basic-17

Prompted if REQ = COMP.

Issued: 04 01 94
Status: Standard
X11 Release: 19

Code Restriction

Code Restriction is used to control the digits that can be dialed on a COT or FEX trunk route by a Toll Denied (TLD), Conditionally Toll Denied (CTD) or Conditionally Unrestricted (CUN) class of service telephone. See also New Flexible Code Restriction in LD49.

Add Code Restriction data

REQ	NEW	Add new data
TYPE	CRB	Code Restriction data block
CUST	0-99	Customer number
ROUT	0-511	Route number
CLR	DENY, ALOW	Allow or deny all codes
ALOW	200-999 200-999 ...	NXX and/or NPA codes allowed
DENY	200-999 200-999 ...	NXX and/or NPA codes denied

Remove Code Restriction

REQ	OUT	Remove data
TYPE	CRB	Restriction data block
CUST	0-99	Customer number
ROUT	0-511	Route number

LD19

Move Code Restriction data

REQ	MOV	Move data
TYPE	CRB	Restriction data block
CUST	0-99	Customer number
ROUT	0-511	Route number
TORT	0-511	New route number

Change Code Restriction data to another route

REQ	CHG	Change data
TYPE	CRB	Code Restriction data block
CUST	0-99	Customer number
ROUT	0-511	Route number
CLR	<cr>	Must be <cr> or all data is erased
ALOW	200-999 200-999 ...	NXX and/or NPA codes allowed
DENY	200-999 200-999 ...	NXX and/or NPA codes denied

Add Feature Group D data block

REQ	NEW	Add data block
TYPE	FGDB	Feature Group D data block
FGNO	0-127	Feature Group D block number
CIC	0000-9999	Carrier ID
CCLS	IC, INC, CONS	Carrier Class
PRES	(Yes), No	Presubscription
OVLP	(Yes), No	Overlapped outpulsing by LEC
CCAN	aaa (Yes), No	Call Categories on calls to Carrier, and ANI screening provided
SAC	xxx xxx xxx . . .	Service Access Codes
ANII	0-31	ANI Data Block Index
CDAN	Yes, (No)	ANI Digits in CDR Records
SHAN	Yes, (No)	Show ANI Digits on Terminal Displays
PRTD	(No), ALL, REJ	Printout Control for Invalid II or ANI Digits
LDAC	AC1, AC2	Long Distance Access Code
LAAC	AC1, AC2	Local Area Access Code
OPER	DN nnn. . . nnn, RAN nnn	Treatment for 0+, 0- calls
INTR	Yes, (No)	Intercept Treatment
ADFT	(OVF), RAN nnn, DN nnn . . . nnn	Intercept Treatment for Invalid Address format
IIT	(OVF), RAN nnn, DN nnn . . . nnn	Intercept Treatment for Invalid IIs
IITP	xx yyyy zz	Valid II, II Type, and NCOS for ANI screening bypass
CPAR	Yes, (No)	Call Processing parameters
INIT	0-(7)-9	Length of Initial String of dialed digits on outgoing calls
ENBL	1-(12)-30	Long Enbloc dialing timeout
ENBS	1-(5)-30	Short Enbloc dialing timeout
IFTO	2-(120)-254	Inter-field FGD timeout in increments of 2 seconds
DGTO	128-(640)-5000	Interdigits timeout
MONT	0-(256)-2048	Minimum Onhook Time

Print Feature Group D data

REQ	PRT	Print data block
TYPE	FGDB	Feature Group D data block
FGNO	0-127	Feature Group D block number

Add ANI Screening data

REQ	NEW	Add ANI screening data block
TYPE	ANI	Feature Group D ANI data block
ANII	0-31	ANI Data Block Index
ANIT	(OVF), RAN xxx, DN xxxx, NCOS xx	Invalid ANI treatment
3ANI	(DENY), NCOS xx	3 Digit ANI (denied), allowed
SLV3	NXX, NCOS xx	Number of digits for screening
NXX	xxx yyy	Range of end office numbers
SLV6	SUB, NCOS xx	Number of digits for screening
SUB	xxxx yyyy	Range of subscriber numbers
NCOS	0-99	NCOS value for subscribers

Print ANI Screening data

REQ	PRT	Print ANI screening data block
TYPE	ANI	Feature Group D ANI data block
ANII	0-31	ANI Data Block Index
ANIT	(OVF), RAN xxx, DN xxxx, NCOS xx	Automatically outputs to show data block established treatment
NXX	xxx	Range of end office numbers

FGNO **0-127** — Feature Group D block number. fgd-17

The system automatically assigns FGNO numbers in sequential order when REQ = NEW.

IFTO **2-(120)-254** — Inter-field FGD timeout in increments of 2 seconds. fgd-17

The maximum time between two fields on incoming calls in seconds.

IIT **(OVF), RAN nnn, DN nnn . . . nnn** — Intercept Treatment for Invalid IIs. fgd-17

OVF = Overflow tone
RAN nnn = RAN route
DN nnn . . . nnn = Network or local DN

IITP **xx yyyy zz** — Valid II, II Type, and NCOS for ANI screening bypass. fgd-17

xx = II in range 00-99
yyyy = one of the following II types
- REGU = Regular
- 4A8P = 4 or 8 party
- HOTL = Hotel/Motel
- CLES = Coinless
- TST3 = Test 3
- AIOD = Automatic Identification of Outward Dialing
- COIN = Coin
- TST7 = Test 7

zz = optional NCOS number defining ANI screening bypass (00-99)

When IITP = <CR> and REQ = NEW, the following shows the default arrangement.

xx	yyyy	zz
00	REGU	no
01	4A8P	no
06	HOTL	no
07	CLES	no
10	TST3	no
20	AIOD	no
27	COIN	no
95	TST7	no

International codes (12-19) are left undefined.

INIT **0-(7)-9** — Length of Initial String of dialed digits on outgoing calls. fgd-17

INTR **Yes, (No)** — Intercept Treatment. fgd-17

LAAC **AC1, AC2** — Local Area Access Code. fgd-17

Prompted only if NARS package is equipped.

LD19

270 Code Restriction

LDAC	**AC1, AC2** — Long Distance Access Code. Prompted only if NARS package is equipped.	fgd-17
MONT	**0-(256)-2048** — Minimum Onhook Time. The minimum amount of time between acknowledgement wink and answer offhook signal, in multiples of 128 milliseconds.	fgd-17
NCOS	**0-99** — NCOS value for subscribers. Reprompts current level NPA, NXX, or SUB.	fgd-17
NXX	**xxx yyy** — Range of end office numbers. Prompted only if SLV3 = NXX xxx = starting or only NXX, yyy = ending NXX (optional) <cr> reprompts NPA.	fgd-17
OPER	**DN nnn. . . nnn, RAN nnn** — Treatment for 0+, 0- calls. DN nnn . . . nnn = 1-16 digit network or local DN RAN nnn = RAN route (0-511)	fgd-17
OVLP	**(Yes), No** — Overlapped outpulsing by LEC.	fgd-17
PRES	**(Yes), No** — Presubscription.	fgd-17
PRTD	**(No), ALL, REJ** — Printout Control for Invalid II or ANI Digits. No = No printout at all ALL = Printout for all invalid ANI and II digits REJ = Printout all invalid II digits. Printout invalid ANI when not mapped to NCOS.	fgd-17
REQ	**aaa** — Action Request. CHG = modify the existing data END = terminate and exit the overlay activity MOV = move data to a new route NEW = add new data to the system OUT = remove the data block PRT = Print FGD or ANI data block	basic-1
ROUT	**0-511** — Route number.	basic-1
SAC	**xxx xxx xxx . . .** — Service Access Codes. Default codes: 700, 800, 900, 601.	fgd-17
SHAN	**Yes, (No)** — Show ANI Digits on Terminal Displays.	fgd-17

SLV3	**NXX, NCOS xx** — Number of digits for screening. NXX = 6 or 10 digit screening. NXX prompt follows. NCOS xx = 3 digit screening (0-99), all NXX+XXXX numbers under the NPA map to NCOS value, NPA is reprompted.	fgd-17
SLV6	**SUB, NCOS xx** — Number of digits for screening. SUB = 10 digit screening level, SUB prompt appears next. Not allowed if an ending NXX level (yyy) was entered at NXX prompt. NCOS = 6 digit screening level, reprompts NXX. All XXXX numbers under the NPA map to NCOS value (0-99).	fgd-17
SUB	**xxxx yyyy** — Range of subscriber numbers. Prompted if SLV6 = SUB xxxx = starting or only subscriber number yyyy = ending subscriber number (optional)	fgd-17
TORT	**0-511** — New route number.	basic-1
TYPE	**aaa** — Restriction data block. Enter the type of datablock to be addressed. aaa can be one of the following: CRB = Code Restriction data block FGDB = Feature Group D data block ANI = ANI screening data block (for Feature Group D)	basic-1

LD19

272 Code Restriction

Issued: 04 01 94
Status: Standard
X11 Release: 19

Print Programs

LD20, LD21 and LD22 are used to print the various types of data. See also the following overlays.

- LD81 Features and Stations Print
- LD82 Print Hunt Chain and Multiple Appearance groups

X11 release 19 and later support integrated telephone administration. Within this overlay, REQ and TYPE commands related to LD10, LD11, LD20, or LD32 can be executed. The overlays must be located in Cache memory for the command routing to operate.

X11 release 19 and later also support the View history file commands. When in VHST mode, several commands are available for searching and moving within the history file. Refer to the History file View commands sequence, or the specific commands listed later in this section.

Note 1: With X11 release 18 and later, when printing the TN block, "MARP" is output next to a DN appearance if it is the MARP TN for that DN. Refer to X11 features and services (553-3001-305) for an explanation of the MARP feature.

Note 2: With X11 release 18 and later, when printing the DN block, "MARP" is output prior to the DES if it is the MARP TN. Refer to X11 features and services (553-3001-305) for an explanation of the MARP feature.

Note 3: With X11 release 19 and later, the security password may be required to print telephone and TN information. The password (SPWD) is required if the Station Security Authcode package (229) is equipped and the password is defined.

Alarm and exception filter summary (X11 release 19 and later)

Alarm filtering (AFTR), package 243 must be equipped to print this information.

	LD22	
REQ	PRT	Print
TYPE	ALARM	Print Filter and expection tables

Audit trail for Limited Access to Overlays (LAPW)

You must be logged in with the PWD1 or PWD2 password in order to print the Audit Trail.

	LD22	
REQ	PRT	Print
TYPE	AUDT	Audit trail

Automatic Trunk Maintenance (ATM) routes

	LD 21	
REQ	PRT	Print
TYPE	ATM	ATM routes
CUST	0-99	Customer number
ROUT	0-511	Route number to be printed

Automatic Trunk Maintenance (ATM) schedules

	LD 21	
REQ	PRT	Print
TYPE	SCH	ATM schedules
CUST	0-99	Customer number
HOUR	0-23	Print all routes tested by ATM for this hour
	<cr>	Print routes tested for all hours

Centralized Attendant Service (CAS) key

	LD 21	
REQ	PRT	Print
TYPE	CASK	Centralized Attendant Service (CAS) key
CUST	0-99	Customer number

Code Restriction data

	LD 21	
REQ	PRT	Print
TYPE	CRB	Code Restriction data
CUST	0-99	Customer number
ROUT	0-511	Route number to be printed

Common Equipment

	LD 20	
REQ	PRT	Print
TYPE	CEQU	Common equipment data

Configuration Record (CFN)

	LD 22	
REQ	PRT	Print
TYPE	CFN	Configuration

Core Inventory (option 61C/81)

	LD 22	
REQ	PRT	Print
TYPE	CINV	Core inventory list

Customer data block (CDB)

	LD 21	
REQ	PRT	Print
TYPE	CDB	Customer data block
CUST	0-99	Customer number

LD20-22

Data Access Card (NT7D16)

By responding R232, R422, or DAC to the TYPE prompt in LD20, you can print out the configured parameters for each port, or the entire DAC.

If a specific TN is entered, the current settings are uploaded from the unit and printed with the database settings. This is useful if parameters have been altered during keyboard or Hayes dialing modify procedures.

	LD 20	
REQ	PRT, LTN, LUU	Print data, TN, or unit for the TN specified
TYPE	R232, R422, DAC	Print data for the RS-232-C, RS-422 ports, or the whole DAC
TN	l s c u	Terminal number
CUST	0-99	Customer number
DATE	dd mmm yyyy, ACT	Print data from date specified, or last activity
PAGE	Yes, (No)	Data printed on a per-page basis
DES	aaaaaa	Print all units with DES "aaaaaa"
	a+	Print all units starting with DES "a"
	<cr>	Disregard DES

Dial Intercom Group (DIG)

	LD 20	
REQ	PRT	Print
TYPE	DIG	Dial Intercom Group
CUST	0-99	Customer number
DGRP	0-2045	Dial Intercom Group
DMEM	0-99	Dial Intercom Group member number

Directory Numbers

	LD 20	
REQ	PRT	Print
TYPE	DNB	Directory Number Block
CUST	0-99	Customer number
DN	xxxx	Print for directory number
DATE	dd mmm yyyy, ACT	Print data from date specified, or last activity
PAGE	Yes, (No)	Data printed on a per-page basis
DES	aaaaaa	Print all units with DES "aaaaaa"
	a+	Print all units starting with DES "a"
	+	Print units with no DES assignment
	<cr>	Disregard DES
Adjust paper		
	<cr>	Adjust paper so that printing starts at top of sheet

Directory Number ranges (X11 release 19)

	LD 20 or LD 22	
REQ	PRT	Print
TYPE	DNB	Directory Number Block
CUST	0-99	Customer number
DN	xxxx . . . yyyy	Up to 8 DNs can be entered
DATE	dd mmm yyyy, ACT	Print data from date specified, or last activity
PAGE	Yes, (No)	Data printed on a per-page basis
DES	aaaaaa	Print all units with DES "aaaaaa"
	a+	Print all units starting with DES "a"
	+	Print units with no DES assignment
	<cr>	Disregard DES
Adjust paper		
	<cr>	Adjust paper so that printing starts at top of sheet

LD20-22

Feature Group D

	LD 20	
REQ	PRT	Action request
TYPE	FGDT	Print Feature Group D trunks
TN	l s c u, l ch	Terminal Number loop, shelf, card and unit; or DTI/PRI loop and channel

History File (X11 release 18 and earlier)

	LD 22	
REQ	PRT	Print
TYPE	AHST	Print all of the history file
	PHST	Print the previous history file

History File (X11 release 19 and later)

	LD 22	
REQ	PRT	Print
TYPE	AHST	Print all of the history file
	PHST	Print the previous history file
	VHST	View the history file

History file View commands (X11 release 19 and later)

	LD 22	
REQ	PRT	Print
TYPE	VHST	View the history file
FIND	aaaa	Search forward in the history file
BFIND	aaaa	Search backward in the history file
UP	x	Move backward x lines in the history file
DOWN	x	Move forward x lines in the history file
PREV	x	Move backward x lines in the history file, display all lines in between
NEXT	x	Move forward x lines in the history file, display all lines in between
HELP		List view commands
% (ON)/OFF		Turn (on) or off display features

Hot Line list

	LD 20	
REQ	PRT	Print
TYPE	HTL	Hot Line list
CUST	0-99	Customer number
RNGE	xxxx yyyy	Range of Hot Line list entries (0-1000) to be printed for this customer
	<cr>	Print all entries in the Hot Line list

Hunting Pattern

	LD 20	
REQ	PRT	Print
TYPE	HNT, EHT	Hunting, External Hunting
CUST	0-99	Customer number
HTNO	xxxx	Hunt Directory Number
EHNO	xxxx	External Hunt DN

Input/output devices (X11 release 19 and later)

	LD 22	
REQ	PRT	Print
TYPE	ADAN DCH	D-channel and backup D-channels
	ADAN HST	History files
	ADAN FDK	Floppy disk units
	ADAN TTY	System terminals
	ADAN PRT	System ports
	ADAN AML	Application modules
	ADAN	All I/O devices

Integrated Message Service (IMS) message attendant

	LD 22	
REQ	PRT	Print
TYPE	IMA	IMS message attendant
CUST	0-99	Customer number

LD20-22

ISDN Signaling Link

	LD 21	
REQ	PRT	Print
TYPE	ISLL	ISDN Signaling Link trunk TN

Issue and release of X11

If the system has a "patch", then a "+" is printed next to the issue number.

	LD 22	
REQ	ISS	Print

Meridian Modular Telephones (X11 release 19 and later)

	LD 22	
REQ	PRT	Action request
TYPE	ATRN	Print Meridian Modular Telephone transmission parameters

Multifrequency receivers

	LD 20	
REQ	PRT	Action request
TYPE	MFR	Print MFR units
TN	l s c u, l ch	Terminal Number loop, shelf, card and unit; or DTI/PRI loop and channel
CDEN	SD, DD, 4D, 8D	Single, double, quad or octal density
DATE	dd mmm yyyy, ACT	Print data from date specified, or last activity
PAGE	Yes, (No)	Data printed on a per-page basis

Multifrequency versatile units

	LD 20	
REQ	PRT	Action request
TYPE	MFVE	Print MFVE units
TN	l s c u, l ch	Terminal Number loop, shelf, card and unit; or DTI/PRI loop and channel
CDEN	SD, DD, 4D, 8D	Single, double, quad or octal density
DATE	dd mmm yyyy, ACT	Print data from date specified, or last activity
PAGE	Yes, (No)	Data printed on a per-page basis

Overlay area (X11 release 19 and later)

	LD 22	
REQ	PRT	Action request
TYPE	OVLY	Print overlay area informantion

Packages equipped

This prompt sequence prints the equipped X11 software packages. In X11 release 18 and later the packages are printed in numerical order by package number, accompanied by the 4-letter mnemonic. In addition, you can get the status of an individual package.

	LD 22	
REQ	PRT	Print
TYPE	PKG	Software packages
	PKG xxx	Check equipped/restricted status of package number xxx

Passwords (X11 release 18 and earlier)

	LD 22	
REQ	PWD	Action request
PWD2	xxxx	Level 2 password
	<CR>	Limited Access to Overlays

LD20-22

Passwords (X11 release 19 and later)

PWD can be entered at the type prompts with X11 release 19 and later. The pre-Release 19 manner is still supported: passwords will be printed if PWD is entered at the REQ prompts.

	LD22	
REQ	PRT	Print
TYPE	PWD	Print system passwords

Peripheral Software versions

	LD 22	
REQ	PRT	Print
TYPE	PSWV	Peripheral software version(s) downloaded to: – NT8D01 Controller cards – NT8D04 Network cards – NT8D018 Network/Digitone Receiver cards

Pretranslation data

	LD 20	
REQ	PRT	Print
TYPE	PRE	Pretranslation
CUST	0-99	Customer number

Read Only Memory (ROM)

This print option only applies to SL-1 ST and system option 21. UNKNOWN is output for all other systems.

	LD 22	
REQ	ROM	Print the QPC code of the ROM card

Route data

	LD 21	
REQ	PRT	Print
TYPE	RDB	Route data block
CUST	0-99	Customer number
ROUT	0-511	Route number to be printed
	<cr>	Print data for all routes
ACOD	xxxx	Route access code

Set Relocation data

This prints the sets which have "relocated out", but have not "relocated back in". With Meridian Telephone Relocation the set's serial number, NT code, color code, and release are also printed.

	LD 21	
REQ	PRT	Print
TYPE	SRDT	Recent Set Relocation activity

Speed Call lists

	LD 20	
REQ	PRT	Print
TYPE	SCL	Regular and System Speed Call Lists
LSNO	0-8190	List number for Speed Call or System Speed Call
	<cr>	Print all lists
RNGE	xxxx yyyy	Range of Speed Call entries (0-1000) to be printed
	<cr>	Print all entries

System limits for Incremental Software Management (ISM)

This prints the ISM limits for TNs, ACD Positions, ACD DNs, AST sets, Application Module Links (AML), D-channels (DCH), ISDN BRI Digital Subscriber Loops (DSL), Meridian Packet Handler (MPH) DSLs, and LTID.

	LD22	
REQ	SLT	Print system limits Output example: ACDN xxxx LEFT xxxx USED xxxx AGNT xxxx LEFT xxxx USED xxxx AML xxxx LEFT xxxx USED xxxx AST xxxx LEFT xxxx USED xxxx DCH xxxx LEFT xxxx USED xxxx BRI DSL xxxx LEFT xxxx USED xxxx LTID xxxx LEFT xxxx USED xxxx TNS xxxx LEFT xxxx USED xxxx MPH DSL xxxx LEFT xxxx USED xxxx

System Loop Limit

	LD 22	
REQ	SLL	Print system loop limits

System parameters (X11 release 19 and later)

	LD 22	
REQ	PRT	Action request
TYPE	PARM	System parameters

System patches (X11 release 19 and later)

	LD 22	
REQ	ISSP	Print system and patch information

Tape ID

	LD 22	
REQ	TID	Print Tape ID

Templates

Templates store telephone information in system memory. Telephones with the same configuration of keys and class of service share the same template. This makes efficient use of Protected Data Store. Template Audit (LD01) is used to removed unused templates.

	LD 20	
REQ	PRT	Print
TYPE	TEM	Templates
FOR	500, SL1, 2xxx	Print template information for telephone type
INFO	aaa	Template information to be printed, where aaa is:
	FRM	Print key/feature assignment template
	USE	Print number of users of the template
	USS	Print TN using the template
	DEF	Print number of templates defined, and the number of templates allowed
TEMP	xxxx	Telephone template number
	<cr>	Print all templates

Terminal Number Blocks for telephones and trunks

	LD 20	
REQ	PRT, LTN	Print or list TN
TYPE	ADM	Add-on module data port
	AID	AIOD trunk block
	ARIE	M2006, M2008, M2016S, M2216, M2616 telephones, and MCU
	ATT	Attendant data block
	ATVN	AUTOVON trunk data block
	AWR	Automatic Wake Up/Recorded Announcement trunk
	CAA	CCSA ANI data block
	CAM	CAMA trunk data block
	CHID	Channel ID for ISL (ISDN signaling link)
	COT	Central Office trunk data block
	CSA	CCSA access line data block
	DIC	Dictation trunk data block
	DID	Direct Inward Dialing trunk data block
	DIG	Dial Intercom Group data block (REQ = PRT only)
	DTR	Digitone Receiver data block
	FEX	Foreign Exchange trunk data block
	MDM	Modem trunk data block
	MCU	Meridian Communications Unit (X11 release 19 and later)
	MUS	Music trunk data block
	PRI	ACD priority agents
	PWR	Power card data block
	RAN	Recorded Announcement trunk data block
	R232	DAC (NT7D16) RS-232 port (X11 release 18 and later)
	R422	DAC (NT7D16) RS-422 port (X11 release 18 and later)
	RCD	Emergency recorder trunk data block
	RLM	Release Link (main) trunk data block
	RLR	Release Link (remote) trunk data block
	TEM	Template data block (REQ = PRT only)
	TDET	Tone Detector data block
	TIE	Tie trunk data block

	TNB	Terminal Number blocks for all TNs
	TRK	Trunk data block
	WAT	Wide Area Telephone System trunk data block
	TCON	Tandem connection data block
	Telephone data:	
	500	500/2500 set data block
	2xxx	M2006, M2008, M2009, M2016, M2016, M2018 M2112, M2216, M2317, or M2616 telephone
	3000	M3000 Touchphone data block
	MCU	Meridian Communications Unit (X11 release 18)
	SL1	SL-1 set data block
TN	l s c u, l ch	Terminal Number loop, shelf, card and unit; or DTI/PRI loop and channel
CDEN	SD, DD, 4D, 8D	Single, double, quad or octal density
CUST	0-99	Customer number
MPHI	Yes, No	Meridian Packet Handler Interface
SPWD	nnnn	Security password (if required)
TEN	0-511	Tenant number
DATE	dd mmm yyyy, ACT	Print data from date specified, or last activity
PAGE	Yes, (No)	Data printed on a per-page basis
DES	aaaaaa, a+, +, <cr>	Print units with ODAS designator
NACT	Yes, (No)	Activity date updated

LD20-22

Terminal Number ranges

	LD 20	
REQ	PRT	Print TN
TYPE	aaa	TN type
TN	l s c u - l s c u	TN range
CDEN	SD, DD, 4D, 8D	Single, double, quad or octal density
CUST	0-99	Customer number
MPHI	Yes, No	Meridian Packet Handler Interface
SPWD	nnnn	Security password (if required)
TEN	0-511	Tenant number
DATE	dd mmm yyyy, ACT	Print data from date specified, or last activity
PAGE	Yes, (No)	Data printed on a per-page basis
DES	aaaaaa, a+, +, <cr>	Print units with ODAS designator
NACT	Yes, (No)	Activity date updated

Trunk Members

	LD 21	
REQ	LTM	List Trunk Members
CUST	0-99	Customer number
ROUT	0-511	Route number to be printed
ACOD	xxxx	Route access code

Unused cards

	LD 20	
REQ	LUC	List unused card slots
TN	l s c, l ch	Terminal Number loop, shelf and card; or DTI/PRI loop and channel

Unused Directory Numbers (X11 release 19 and later)

	LD 20	
REQ	PRT	Action request
TYPE	LUDN	List Unused Directory Numbers
CUST	0-99	Customer number
DN	xxxx-yyyy	DN range:XXX = starting DN and YYYY = ending DN

Unused units

	LD 20	
REQ	LUU	List Unused Units
TYPE	aaa	Peripheral Equipment requiring TNs:
	500	Single line telephones
	SL1	SL-1 telephones, QCW and M1250 consoles
	2000	Digital telephones and M2250 consoles
	DTR	Digitone Receiver
	DSL	Digital Subscriber Loop (S/T or U I/F for ISDN BRI)
	TRK	All trunks
	MCU	Meridian Communications Unit
	aaa	Specific trunk type (COT, DID, FEX, etc)
TN	l s c u, l ch	Terminal Number loop, shelf, card and unit; or DTI/PRI loop and channel

Unused voice or data units (X11 release 19 and later)

	LD 20	
REQ	LUVU	List Unused Voice Units
	LUDU	List Unused Data Units
TYPE	aaa	Peripheral Equipment requiring TNs:
	500	Single line telephones
	SL1	SL-1 telephones, QCW and M1250 consoles
	2000	Digital telephones and M2250 consoles
	DTR	Digitone Receiver
	DSL	Digital Subscriber Loop (S/T or U I/F for ISDN BRI)
	TRK	All trunks
	MCU	Meridian Communications Unit
	aaa	Specific trunk type (COT, DID, FEX, etc)
TN	l s c u, l ch	Terminal Number loop, shelf, card and unit; or DTI/PRI loop and channel

Value Added Server (X11 release 19 and later)

	LD 22	
REQ	PRT	Action request
TYPE	VAS	Print Value Added Server data

Voice Mailbox data (X11 release 19 and later)

When printing voice mailbox information, a specific DN or DN range may be entered. Refer to the DN range printing sequence for details concerning accepted entried.

	LD 20	
REQ	PRT	Action request
TYPE	VMB	Voice Mailbox information
CUST	<CR>	Customer number automatically appears. No entry is needed
DN	xxxx	Print for directory number
VMB_STATE	nnnn	Print based on voice mailbox state

Alphabetical list of prompts

% (ON)/OFF

— Turn (on) or off display features. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command is used to enable or disable the following three display features:
— brackets to surround the current index ([])
— percent symbol (%) preceding each history file line
— relative locatoin within the history file (shown in percentage)

ACOD **xxxx** — Route access code. basic-1

Use <cr> to print data for all route ACODs.

Adjust Paper

<cr> — Adjust paper so that printing starts at top of sheet. basic-1

<cr> starts the printing.

BFIND **aaaa** — Search backward in the history file. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command can be used to search backward, starting at the current index location, for the string "aaaa." If necessary, the file will wrap until it returns to the same location.

Entering only BFIND (without a text string) repeats the previous backward search. You can also enter B aaaa, or just B to search.

The text string can be up to 12 characters. Special characters like space, slash (/), and colon (:) are accepted. Leading or trailing spaces are ignored unless enclosed in double quotes. For example, the spaces denoted here are ignored: <SP><SP>INI<SP>. The spaces in this string, however, are included in the search: "<SP><SP>INI<SP>".

When the string is found, the system displays the current index location. Three text line are shown, with the middle line containing the sought string. The VHST prompt is re-displayed to allow more command use. If the string is not found, VHST is reprompted to allow more command use.

CDEN **SD, DD, 4D, 8D** — Single, double, quad or octal density. basic-7

Use <cr> to print TNs of all densities.

CUST **0-99** — Customer number. basic-1

Not prompted if a complete TN is entered or REQ = LUU, LUC, or TYPE = SCL, TEM. Use <cr> to print data for all customers.

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DATE **dd mmm yyyy, ACT** — Print data from date specified, or last activity. basic-1

dd = 1-31
mmm = JAN - DEC
yyyy = Year
<cr> = print data and show last activity date
ACT = print data from last activity date

DES **aaaaaa, a+, +, <cr>** — Print units with ODAS designator. odas-1

aaaaaa = print all units with DES "aaaaaa"
a+ = print all units starting with DES "a"
+ = print units with no DES assignment
<cr> = disregard DES

DGRP **0-2045** — Dial Intercom Group. basic-1

Use <cr> to print all DIG numbers per customer.

DMEM **0-99** — Dial Intercom Group member number. basic-1

Use <cr> to print all DIG members.

DN xxxx — Print for directory number. basic-19

Use <cr> to print data for all DNs. When DN Expansion is enabled, the DNs can be up to 7 digits.

With X11 release 19 and later, a range of Directory Numbers can be printed. They can be printed in the following ways.
X <CR> = All DNs starting with first digit X (X000-X999).
XX <CR> = All DNs starting with first 2 digits XX (XX00-XX99).
XXX <CR> = All DNs starting with first 3 digits XXX (XXX0-XXX9).
X - <CR> = = All DNs between the DN X000 through 9999.
X - Y <CR> = All DNs between the DN X000 through Y999.
XX - YYY <CR> = All Dns between the DN XX00 through YYY9.
XXXX, YYYY = Two specific DNs. You can list up to 8 specific DNs this way.
XXXX - YYYY = All DNs between DN XXXX and YYYY.

With X11 release 18 and earlier, if a space is entered after the directory number, the system will reprompt DN. A maximum of six DNs may be stacked and printed at one time, separated by a comma.

DOWN x — Move forward x lines in the history file. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command can be used to move forward in the history file, toward the end. If x exceeds the end of the file, the end will be shown.

If you enter only DOWN, the default of 20 lines is used for the move. When the move is complete, VHST is reprompted to allow more command use.

The DOWN BOT command automatically moves to the top of the file.

EHNO xxxx — External Hunt DN. eht-10

FIND **aaaa** — Search forward in the history file. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command can be used to search forward, starting at the current index location, for the string "aaaa." If necessary, the file will wrap until it returns to the same location.

Entering only FIND (without a text string) repeats the previous forward search. You can also enter F aaaa, or just F to search.

The text string can be up to 12 characters. Special characters like space, slash (/), and colon (:) are accepted. Leading or trailing spaces are ignored unless enclosed in double quotes. For example, the spaces denoted here are ignored: <SP><SP>INI<SP>. The spaces in this string, however, are included in the search: "<SP><SP>INI<SP>".

When the string is found, the system displays the current index location. Three text line are shown, with the middle line containing the sought string. The VHST prompt is re-displayed to allow more command use. If the string is not found, VHST is reprompted to allow more command use.

FOR **500, SL1, 2xxx** — Print template information for telephone type. basic-1

2xxx includes M2006, M2008, M2016, M2216, M2317, and M2616.

GRNO **0-63** — Group Call Number. grp-1

Use <cr> to print all Group Call groups.

HELP — List view commands. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command is used to list the available view commands.

HOUR **0-23** — Print all routes tested by ATM for this hour. atm-7

HTNO **xxxx** — Hunt Directory Number. basic-1

INFO **aaa** — Template information to be printed. basic-1

FRM = print key/feature assignment template
USE = print number of users of the template
USS = print TN using the template
DEF = print number of templates defined, and the number of templates allowed

LSNO **0-8190** — List number for Speed Call or System Speed Call. basic-1

When inputting customer number for printout, non-DN input exceeding 4 digits may be truncated. Only the four right most digits will be accepted, and printed.

MPHI **Yes, No** — Meridian Packet Handler Interface. mph-19

This prompt appears when TYPE = MCU. Respond Yes if using the MCU for MPH interfaces.

NACT **Yes, (No)** — Activity date updated. odas-1

Yes = Print current system data and end overlay
No = Return to REQ prompt
END = End overlay activity

NEXT **x** — Move forward x lines in the history file, display all lines in between. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command can be used to view lines forward, toward the end of the file. The lines between the current index location, and the new one (x lines down) are displayed.

If you enter only NEXT, the default of 20 lines is used for the move. When the move is complete, VHST is reprompted to allow more command use.

The NEXT BOT command automatically moves to the end of the file. NEXT TOP is not supported.

OPR **Yes, (No)** — Print outpulsing route. opao-10

PAGE **Yes, (No)** — Data printed on a per-page basis. basic-1

PREV **x** — Move backward x lines in the history file, display all lines in between. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command can be used to view lines backward, toward the top of the file. The lines between the current index location, and the new one (x lines up) are displayed.

If you enter only PREV, the default of 20 lines is used for the move. When the move is complete, VHST is reprompted to allow more command use.

The PREV TOP command automatically moves to the top of the file. PREV BOT is not supported.

PWD2 **xxxx** — Level 2 password. basic-1

LD20-22

REQ **aaa** — Action request. basic-1

END = end overlay activity (LD20, 21, 22)
ISS = print generic version and issue (LD22)
ISSP = print system patch information (LD22)
LTM = printtrunk route by TN and member number (LD21)
LTN = print TN of TYPE specified (LD20)
LUC = print unused cards for the TYPE specified (LD20)
LUU = print unused units for the TYPE specified (LD20)
PRT = print data for the TYPE specified (LD20, 21, 22)
PWD = print the system Password (LD22)
ROM = print the ROM board QPC number (LD22)
SLL = print system loop limit (LD22)
SLT = print system TN limits (LD22)

RNGE **xxxx yyyy** — Range of Speed Call or Hot Line list entries (0-1000) to be printed. optf-1

For example, to print entries 1 to 50 enter: 1 50

Use <cr> to print all entries.

ROUT **0-511** — Route number to be printed. basic-1

Use <cr> to print all routes of the specified type.

SCNO **0-8190** — Speed Call list number. optf-1

Use <cr> to print all lists.

SPWD **xxxx** — Security password. ssau-19

This prompt appears when the Station Specific Authcode package (229) is equipped, and the security password is defined (in LDs10 or11).

TEM **xxxx** — Template number. basic-1

Use <cr> to print all templates.

TEMP **xxxx** — Telephone template number. -1

Enter <cr> to print all templates.

TEN **0-511** — Tenant number. tens-7

Enter "0" for shared customer resources. Use <cr> for all tenants.

TN **l s c u, l ch** — Terminal Number loop, shelf, card and unit; or DTI/PRI loop and channel. basic-1

With X11 release 19 and later, a maximum of six TNs may be entered, each separated by commas.

With X11 release 18 and earlier, a maximum of six TNs may be entered, each separated by a space.

Enter any of the following:
<cr> = all TNs
l = all TNs on loop L
l s = all TNs on loop L and shelf s
l s c = all TNs on loop L, shelf s and card c
l s c u = all TNs on loop L, shelf s, card c and unit u

For Digital Trunk Interface (DTI) or Primary Rate Interface (PRI)
l = all channels on loop L
l ch = channel ch on loop L

With X11 release 19 and later, the following can be entered in addition to the above commands.
l s c u , l s c u = list of TNs (up to 6)
l s c u, l ch = a TN and a trunk loop/channel can be entered on the same line
l s c - l s c = all units within the specified starting and ending cards
l s - l s c u = all units, including the specified starting shelf and ending TN
l s c u - = all TNs, starting with the specified TN and ending with the last TN

TYPE **aaa** — Type of data to be printed. basic-1

Refer to specific print sequences for allowed responses.

UP **x** — Move backward x lines in the history file. hist-19

This command applies to the VHST command (X11 release 19 and later). When TYPE = VHST, this command can be used to move backward in the history file, toward the top. If x exceeds the top of the file, the top will be shown.

If you enter only UP, the default of 20 lines is used for the move. When the move is complete, VHST is reprompted to allow more command use.

The UP TOP command automatically moves to the top of the file.

VMB_STATE

nnnn — Print based on voice mailbox state. vmba-19

This prints information for Voice Mailboxes (VMB) in the specified state; nnnn can be any of the following.

Note: The Voice Mailbox state can be printed with the DN block, TN block, or VMB data.

ALL (default) = all VMBs regardless of state

CONFIGURED = all VMBs in the configured state
MISMATCH = all VMBs in the mismatched state
UPDFAIL = all VMBs in the update failed state
UPDPEND = all VMBs in the update pending state
UPDINPROG = all VMBs in the update in progress state
INVALID = all VMBs in the invalid state

Issued:	04 01 94
Status:	Standard
X11 Release:	19

Automatic Call Distribution (ACD)

LD23 allows ACD data and schedules for management reports to be created, modified or printed. ACD groups are also used for Meridian Mail and various server applications.

When this overlay is loaded the available system memory and disk records are output in a header. Refer to the introduction of this document for details.

Incremental Software Management (ISM) also provides a header to indicate system configuration limits. For LD23, the header appears as follows:

ACD DNS AVAIL: xxxxx USED: xxxxx TOT: xxxxx

Note 1: To prevent virtual agent information from appearing on ACD-D reports do not make changes to virtual agents. If a change to a virtual agent is required, out the agent and rebuild it with REQ = new.

Note 2: With X11 release 14 and later, Route 31 is no longer exclusively a private line route, unless configured as one in LD16.

LD23

Prompts for ACD Directory Number (TYPE = ACD)

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	ACD	ACD data block
CUST	0-99	Customer number
ACDN	xxx...x	ACD directory number
MWC	No	ACD DN message center DN
AST	No	Associated set (X11 release 16 and earlier)
DSAC	No	Data service access code
MAXP	xxxx	Maximum number of agent positions
SDNB	Yes, (No)	Block calls to the Secondary DN while busy on ACD call
BSCW	Yes, (No)	Block calls to secondary DN on walkaway
ISAP	Yes, (No)	ACD messages sent (not sent) in Meridian Link applications
VSID	0-15	Value Added Server (VAS) ID as defined in LD17
RGAI	Yes, (No)	Ring again for internal calls
ACAA	Yes, (No)	Allow (deny) ACD calls to an agent on an Individual DN (IDN) call on hold
FRRT	0-511	First RAN route number
_FRT	1-2044	Seconds before unanswered calls are connected to first RAN
SRRT	0-511	Second RAN route number
_SRT	1-2044	Second RAN time threshold
NRRT	0-511	RAN route for night announcement
FROA	Yes, (No)	First RAN to be given to incoming calls immediately, ignoring FRT time
NCFW	xxx...x	Night call forward DN
FORC	Yes, (No)	Call forcing option
_FCFT	0-(2)-30	Flexible Call Force Timer
SPCP	Yes, (No)	Separate DCP from PCP indication
OBTN	AGT, ALL, (No)	Agent Observe Tone options
CWTH	0-(1)-2047	Number of calls waiting in queue before calls waiting lamp lights
NCWL	Yes, (No)	New Call Waiting lamp settings
_CWLF	(0)-2047	Call Waiting lamp flash threshold
_CWLW	(0)-2047	Call Waiting lamp fast flash threshold

BYTH	(0)-2047	Number of calls waiting in queue before calls waiting lamp flashes
OVTH	0-(2047)	Number of calls waiting in queue before calls are overflowed to the OVDN
TOFT	2-1800	Timed Overflow timer in seconds
HPQ	Yes, (No)	Preference given to high priority trunk calls
OCN	Yes, (No)	Accept oldest call in network
OVDN	xxxx xxxx xxxx	Overflow ACD DNs (maximum three target ACD DNs)
IFDN	xxx...x	DN to which calls interflow (up to 23 digits)
_BUSY	aaa bbb ccc ddd	Interflow treatments for different originators
AENI	Yes, (No)	Automatically enable interflow
OVBU	aaa bbb ccc ddd	Overflow treatment for specific call originator types
EMRT	0-511	Emergency recorder trunk route
MURT	0-511	Music route number
STIO	0 1 2 ...15	Enter all input/output devices assigned for status displays
TSFT	0-(20)-510	Telephone service factor threshold time in seconds
HOML	No, (Yes)	Make Set Busy key (MSB key or handset removal) initiates log out
RDNA	Yes, (No)	Restrict DN Access
ACNT	xxxx	Default activity code
DAL	Yes, (No)	Allow data agent login with the MSB key
RPRT	(Yes), No	Activate (deactivate) the report control option
RAGT	2-(4)-30	Number of seconds an agent in a remote target is reserved for an overflow call
DURT	15-(30)-45	Maximum number of minutes a call request may remain queued in a target queue
RSND	(4)-16	Message resend timer in seconds
FCTH	10-(20)-100	Flow control threshold to allow additional calls into the call request queue
CRQS	0-(100)-255	Call request queue size
DNRT	Yes, (No)	Delay Night RAN Treatment
IVR	Yes, (No)	Interactive Voice Response queue
_TRDN	xxxxxxx	Treatment DN for IVR queue
CWNT	l s c u	Call Waiting Notification TN
CWNC	No, Yes	Call Waiting Notification TN control

LD23

Prompts for ACD-D (TYPE = ADS, Release 18 and earlier)

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	ADS	Auxiliary Data System data block
CUST	0-99	Customer number
AID	Yes, (No)	Operate in agent ID mode (position ID mode)
IDLB	(0001)-9999	Agent ID lower bound
IDUB	IDLB-(9999)	Agent ID upper bound
LOG	1-10000	Maximum number of agents that can be logged in at any one time

Prompts for ACD-D (TYPE = ADS, Release 19 and later)

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	ADS	Auxiliary Data System data block
CUST	0-99	Customer number
AID	Yes, (No)	Operate in agent ID mode (position ID mode)
IDLB	(0001)-9999	Agent ID lower bound
IDUB	IDLB-(9999)	Agent ID upper bound

Prompts for report option (TYPE=SCB, Release 18 and earlier)

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	SCB	ACD report scheduling data block
CUST	0-99	Customer number
CPRD	mm dd mm dd	Month and day data collection for reports is to start and end
SHR	0-23	Hour of day that data reporting starts
EHR	0-23	Hour of day that data reporting ends
DOW	1 2 3...7	Days of week data collection will take place
RFRQ	0-7	Frequency that reports are to be generated
SFRQ	1, 2	Frequency of status display updates
ROPT	1 2 3 4	Report options
PRIO	0 1 2...15	Device number(s) used for output of reports
PAGE	Yes, (No)	Start at the top of a new page for each report
AID	Yes, (No)	Operate in agent ID mode (position ID mode)
IDLB	(0001)-9999	Agent ID lower bound
IDUB	IDLB-(9999)	Agent ID upper bound
LOG	1-10000	Maximum number of agents that can be logged in at any one time
SRPT	Yes, (No)	Short report option for report 4
TOT4	Yes, (No)	Totals on report 4, (averages on report 4)

Prompts for report option (TYPE=SCB, Release 19 and later)

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	SCB	ACD report scheduling data block
CUST	0-99	Customer number
CPRD	mm dd mm dd	Month and day data collection for reports is to start and end
SHR	0-23	Hour of day that data reporting starts
EHR	0-23	Hour of day that data reporting ends
DOW	1 2 3...7	Days of week data collection will take place
RFRQ	0-7	Frequency that reports are to be generated
SFRQ	1, 2	Frequency of status display updates
ROPT	1 2 3 4	Report options
PRIO	0 1 2...15	Device number(s) used for output of reports
PAGE	Yes, (No)	Start at the top of a new page for each report
AID	Yes, (No)	Operate in agent ID mode (position ID mode)
IDLB	(0001)-9999	Agent ID lower bound
IDUB	IDLB-(9999)	Agent ID upper bound
SRPT	Yes, (No)	Short report option for report 4
TOT4	Yes, (No)	Totals on report 4, (averages on report 4)

Prompts for Meridian Mail ACD Group (TYPE = ACD)

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	ACD	ACD data block
CUST	0-99	Customer number
ACDN	xxx...x	ACD directory number
MWC	Yes	ACD DN message center DN
IMS	Yes	Integrated Messaging
CMS	Yes	Command and status link
IMA	Yes	ACD DN assigned to IMS
IVMS	Yes	Voice messaging system
EES	Yes, (No)	IVMS uses End-to-End signaling to send tone
VSID	0-15	Value Added Server (VAS) ID as defined in LD17
MAXP	xxxx	Maximum number of Meridian Mail ports
SDNB	Yes, (No)	Block calls to the Secondary DN while busy on ACD call
BSCW	Yes, (No)	Block calls to secondary DN on walkaway
ISAP	<cr>	ACD messages sent (not sent) in Meridian Link applications
ALOG	Yes	Provide automatic login for agents on this DN
RGAI	Yes, (No)	Ring again for internal calls
FRRT	0-511	First RAN route number
SRRT	0-511	Second RAN route number
NRRT	0-511	RAN route for night announcement
FROA	Yes, (No)	First RAN to be given to incoming calls immediately, ignoring FRT time
NCFW	xxx...x	Operator Revert DN
FORC	Yes, (No)	Call forcing option
SPCP	Yes, (No)	Separate DCP from PCP indication
OBTN	AGT, ALL, (No)	Agent Observe Tone options
CWTH	0-(1)-2047	Number of calls waiting in queue before calls waiting lamp lights
NCWL	Yes, (No)	New Call Waiting lamp settings
BYTH	(0)-2047	Number of calls waiting in queue before calls waiting lamp flashes
OVTH	0-(2047)	Number of calls waiting in queue before calls are overflowed to the OVDN
TOFT	2-1800	Timed Overflow timer in seconds

HPQ	Yes, (No)	Preference given to high priority trunk calls
OCN	Yes, (No)	Accept oldest call in network
OVDN	xxxx xxxx xxxx	Overflow ACD DNs (maximum three target ACD DNs)
IFDN	xxx...x	DN to which calls interflow (up to 23 digits)
_BUSY	aaa bbb ccc ddd	Interflow treatments for different originators
_AENI	Yes, (No)	Automatically enable interflow
OVBU	aaa bbb ccc ddd	Overflow treatment for specific call originator types
EMRT	0-511	Emergency recorder trunk route
MURT	0-511	Music route number
STIO	0 1 2 ...15	Enter all input/output devices assigned for status displays
TSFT	0-(20)-510	Telephone service factor threshold time in seconds
HOML	No, (Yes)	Make Set Busy key (MSB key or handset removal) initiates log out
RDNA	Yes, (No)	Restrict DN Access
DAL	Yes, (No)	Allow data agent login with the MSB key
RPRT	(Yes), No	Activate (deactivate) the report control option
RAGT	2-(4)-30	Number of seconds an agent in a remote target is reserved for an overflow call
DURT	15-(30)-45	Maximum number of minutes a call request may remain queued in a target queue
RSND	(4)-16	Message resend timer in seconds
FCTH	10-(20)-100	Flow control threshold to allow additional calls into the call request queue
CRQS	0-(100)-255	Call request queue size
DNRT	Yes, (No)	Delay Night RAN Treatment
IVR	Yes, (No)	Interactive Voice Response queue
_TRDN	xxxxxxx	Treatment DN for IVR queue

Prompts for ACD Groups for other Server applications

Shown below are the prompts when adding ACD groups for various applications. Refer to the documentation for your application to select the correct options.

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	ACD	ACD data block
CUST	0-99	Customer number
ACDN	xxx...x	ACD directory number
MWC	Yes, (No)	ACD DN message center DN
AST	Yes, (No)	Associated set (X11 release 16 and earlier)
DSAC	Yes, (No)	Data service access code
VSID	0-15	Value Added Server (VAS) ID as defined in LD17
PRIM	Yes, (No)	Primary DSAC
IMS	Yes, (No)	Integrated Messaging
CMS	Yes, (No)	Command and status link
IMA	Yes, (No)	ACD DN assigned to IMS
IVMS	Yes, (No)	Voice messaging system
DNIS	Yes, (No)	Dialed Number Identification Service
EES	Yes, (No)	IVMS uses End-to-End signaling to send tone
VSID	0-15	Value Added Server (VAS) ID as defined in LD17
APL	0-15	Auxiliary Processor Link number
UST	Yes, (No)	User status update
APL	0-15	Auxiliary Processor Link number
UMG	Yes, (No)	User to user messaging
RAN	0-511	Recorded Announcement trunk route
UMT	2-(6)-15	Silence interval in seconds after message queue alert tone
MAXP	xxxx	Maximum number of agent positions
SDNB	Yes, (No)	Block calls to the Secondary DN while busy on ACD call
BSCW	Yes, (No)	Block calls to secondary DN on walkaway
ALOG	Yes, (No)	Provide automatic login for agents on this DN
RGAI	Yes, (No)	Ring again for internal calls
FRRT	0-511	First RAN route number
SRRT	0-511	Second RAN route number
NRRT	0-511	RAN route for night announcement

LD23

FROA	Yes, (No)	First RAN to be given to incoming calls immediately, ignoring FRT time
NCFW	xxx...x	Night call forward DN (ACD) or Operator Revert DN (IMS)
FORC	Yes, (No)	Call forcing option
SPCP	Yes, (No)	Separate DCP from PCP indication
OBTN	AGT, ALL, (No)	Agent Observe Tone options
CWTH	0-(1)-2047	Number of calls waiting in queue before calls waiting lamp lights
NCWL	Yes, (No)	New Call Waiting lamp settings
BYTH	(0)-2047	Number of calls waiting in queue before calls waiting lamp flashes
OVTH	0-(2047)	Number of calls waiting in queue before calls are overflowed to the OVDN
TOFT	2-1800	Timed Overflow timer in seconds
HPQ	Yes, (No)	Preference given to high priority trunk calls
OVDN	xxxx xxxx xxxx	Overflow ACD DNs (maximum three target ACD DNs)
IFDN	xxx...x	DN to which calls interflow (up to 23 digits)
EMRT	0-511	Emergency recorder trunk route
MURT	0-511	Music route number

Prompts for Network ACD (TYPE = NACD)

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	NACD	Network ACD
CUST	0-99	Customer number
ACDN	xxx...x	ACD directory number
TABL	D, N	Day or Night Table
OUTS	xxxx xxxx ...	Routing Table entries to be removed
TRGT	xxxx tttt	Target ACD DN (xxxx) and the timer (0-1800) in seconds

Prompts for Control DN

REQ	aaa	Action request: NEW, CHG, OUT, PRT, LST, END
TYPE	CDN	Control DN data block
CUST	0-99	Customer number
CDN	xxx...x	Control DN number
FRRT	0-511	First RAN route number
FRT	1-2044	Seconds before unanswered calls are connected to first RAN
SRRT	0-511	Second RAN route number
SRT	1-2044	Second RAN time threshold
FROA	Yes, (No)	First RAN to be given to incoming calls immediately, ignoring FRT time
MURT	0-511	Music route number
DFDN	xxx...x	Local default ACD DN
CEIL	0-(2047)	CDN ceiling value
RPRT	(Yes), No	Activate (deactivate) the report control option
CNTL	Yes, (No)	Control DN placed in controlled mode

Prompts for Customer Controlled Routing

REQ	NEW, CHG	New or change
TYPE	CDN	Control DN datablock
CUST	0-99	Customer number
CDN	xxx...x	Control DN number
FRRT	0-511	First RAN route number
_FRT	1-2044	Seconds before unanswered calls are connected to first RAN
SRRT	0-511	Second RAN route number
_SRT	1-2044	Second RAN time threshold
FROA	Yes, (No)	First RAN to be given to incoming calls immediately, ignoring FRT time
MURT	0-511	Music route number
DFDN	xxx...x	Local default ACD DN
CEIL	0-(2047)	CDN ceiling value
RPRT	(Yes), No	Activate (deactivate) the report control option
CNTL	Yes, (No)	Control DN placed in controlled mode
VSID	0-15	Value Added Server (VAS) ID as defined in LD17
HSID	0-15	VAS ID for the Application Module Link for the Host
CWTH	0-(1)-2047	Number of calls waiting in queue before calls waiting lamp lights
BYTH	(0)-2047	Number of calls waiting in queue before calls waiting lamp flashes
OVTH	0-(2047)	Number of calls waiting in queue before calls are overflowed to the OVDN
STIO	0 1 2 ...15	Enter all input/output devices assigned for status displays
TSFT	0-(20)-510	Telephone service factor threshold time in seconds
ACNT	xxxx	Default activity code. Prompted if CNTL = Yes.

Alphabetical list of prompts

ACAA **Yes, (No)** — Allow (deny) ACD calls to an agent on an Individual DN (IDN) call on hold. bacd-18

When ACAA = Yes, the agent can put an active IDN call on hold and press the In calls key to return to the idle agent queue. When ACAA = No, the agent cannot place an IDN call on hold, and return to the idle queue.

ACDN **xxx...x** — ACD directory number. acda-1

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

ACNT **xxxx** — Default activity code. acdc-13

Maximum 4 digits (0 through 9). The # and * are not allowed. Prompted only if the ADS data block is built, and CNTL = YES.

AENI **Yes, (No)** — Automatically enable interflow. acdb-12

Prompted only if IFDN is defined.

AID **Yes, (No)** — Operate in agent ID mode (position ID mode). acdc-2

Prompted only if TYPE = ADS or SCB.
No = this customer will operate in position ID mode
Yes = this customer will operate in agent ID mode

ALOG **Yes, (No)** — Provide automatic login for agents on this DN. csl-8

Prompted only if IMS or ISAP = Yes. ALOG applies to Command and Status link (CMS) and Data Service Access Codes (DSAC) only.

APL **0-15** — Auxiliary Processor Link number. lnk-2

Prompted only if IMA = Yes. The APL is defined in LD17.

AST **Yes, (No)** — Associated set (X11 release 16 and earlier). iap3p-13

In X11 release 17 and later, the Associate Set assignment is performed in LD10 and LD11 for each ACD telephone. In X11 release 16 and earlier, the AST is assigned automatically to each telephone for an ACD DN with AST = Yes.

BSCW **Yes, (No)** — Block calls to secondary DN on walkaway. bacd-13

The caller to the source DN hears busy tone.

BUSY **aaa bbb ccc ddd** — Interflow treatments for different originators. acdb-12

Prompted only if IFDN is defined. The possible options are:
BSY = caller hears busy tone
SRC = caller is re-linked to source queue

Enter BSY or SRC for each of the four different originators:
aaa = stations
bbb = attendants
ccc = CO, FEX, and WATS trunks.
ddd = all other trunk types

Default if the IFDN is an ACD DN, internal or external DN:
BSY BSY SRC BSY (third entry cannot be changed)
Default if the IFDN is an attendant console:
BSY SRC SRC BSY (only the fourth entry can be changed)

BYTH **(0)-2047** — Number of calls waiting in queue before calls waiting lamp flashes. acdb-1

When BYTH = 0, overflow calls are not accepted by this target queue unless an agent is available.

CDN **xxx...x** — Control DN number. ear-17

xxx...x = any directory number up to 7 digits if DNXP is equipped. If not, it can be up to 4 digits.

CEIL **0-(2047)** — CDN ceiling value. ear-17

CEIL limits the number of unanswered calls a CDN can have at its default ACD DN at a time. New calls receive a busy signal once the ceiling is reached (CO trunks do not receive busy).

CMS **Yes, (No)** — Command and status link. csl-8

Prompted only if MWC = Yes. If this ACD DN is to use the CSL, enter "Yes."

CNTL **Yes, (No)** — Control DN placed in controlled mode. ear-17

"No" sends CDN calls to the Default ACD DN.

CPRD **mm dd mm dd** — Month and day data collection for reports is to start and end. acdc-2

CRQS **0-(100)-255** — Call request queue size. nacd-15

CRQS must be greater than FCTH. 0 = closes the queue.

CUST **0-99** — Customer number. bacd-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

CWLF **(0)-2047** — Call Waiting lamp flash threshold. acdb-15

Prompted only if NCWL = Yes. CWLF must be greater than or equal to CWTH.

CWLW **(0)-2047** — Call Waiting lamp fast flash threshold. acdb-15

Prompted only if NCWL = Yes. CWLW must be greater than or equal to CWLF.

CWNC **No, Yes** — Call Waiting Notification TN control. m911-19

Yes = alert rings for priority calls only
No = alert rings for all calls

This prompt appears when a TN has been entered for CWNT. There is no default.

CWNT **l s c u** — Call Waiting Notification TN. m911-19

CWTH **0-(1)-2047** — Number of calls waiting in queue before calls waiting lamp lights. acdb-1

Enter "0" to disable.

DAL **Yes, (No)** — Allow data agent login with the MSB key. acdc-14

The data agent must be defined with a DTA class of service in LD11. DAL is not prompted when IVMS or DSAC is "Yes."

DFDN **xxx...x** — Local default ACD DN. ear-17

xxx...x = any local ACD DN, can be up to 7 digits if the DNXP package is equipped, otherwise, a maximum of 4 digits can be entered.

Calls to the CDN are directed to this ACD DN. RAN and music, if provided, are as defined for the CDN. Any other ACD treatment, such as night, is applied as if the caller directly dialed the ACD DN.

DNIS **Yes, (No)** — Dialed Number Identification Service. dnis-12

Send (do not send) ACD/DNIS information across the link.

DNRT **Yes, (No)** — Delay Night RAN Treatment. nacd-15

When DNRT = Yes for an ACD DN there is a delay routing calls to the night RAN, until the call has reached the end of the Night table and there are no outstanding call requests for that call.

Prompted only if a NACD night table and a RAN route have been defined.

DOW **1 2 3...7** — Days of week data collection will take place. acdc-2

1 = Sunday, 7 = Saturday. When a new day is entered, it replaces the old entry.

DSAC **Yes, (No)** — Data service access code. csl-8

Prompted if MWC is No.

DURT **15-(30)-45** — Maximum number of minutes a call request may remain queued in a target queue. nacd-15

EES **Yes, (No)** — IVMS uses End-to-End signaling to send tone. ims-2

Prompted only when IMA = Yes.

EHR **0-23** — Hour of day that data reporting ends. acdc-2

EMRT **0-511** — Emergency recorder trunk route. acdb-1

The route and least one trunk must exist before defining EMRT. Enter "X" to remove.

FCFT **0-(2)-30** — Flexible Call Force Timer. acdb-16

Timeout in seconds before invoking Flexible Call Force.
Prompted only if FORC = YES.

FCTH **10-(20)-100** — Flow control threshold to allow additional calls into the call request queue. nacd-15

FORC **Yes, (No)** — Call forcing option. acdb-1

When FORC = "Yes," the call arrives on Key 0 (incalls key) in an answered state. Headsets are recommended for this option.

FROA **Yes, (No)** — First RAN to be given to incoming calls immediately, ignoring FRT time. acda-1

If FROA = No, the call is forced to wait FRT time. (Recorded Announcement is only given if an idle agent is not found.)

FRRT **0-511** — First RAN route number. acda-1

The route and at least one trunk must exist before defining FRRT. Enter "X" to remove.

FRT **1-2044** — Seconds before unanswered calls are connected to first RAN. acda-1

Prompted only if FRRT is defined. If a value is not entered, FRT defaults to blank and there is no connection to the RAN.
Note: When FROA = Yes, the caller receives RAN immediately according to that prompt.

HOML **No, (Yes)** — Make Set Busy key (MSB key or handset removal) initiates log out. bacd-1

Enter "Yes" if either handset removal or Make Set Busy key activation is used to indicate agent log out. Enter "No" if only the Make Set Busy key initiates log out.

Prompted only if an Auxiliary Data System (ADS) or Schedule Block (SCB) exists.

HPQ **Yes, (No)** — Preference given to high priority trunk calls. tof-10

When HPQ = Yes, calls from the source queue's high priority trunks are presented before another queue's Timed Overflow queue (TOFQ) calls.

When HPQ = No, calls from the source queue's high priority trunks are presented after another queue's Timed Overflow queue (TOFQ) calls.

In an NACD environment, HPQ must be denied to receive the OCN prompt. (HPQ = No)

HSID **0-15** — VAS ID for the Application Module Link for the Host. ccr-17

IDLB **(0001)-9999** — Agent ID lower bound. acdc-19

Prompted only if TYPE = ADS or SCB and AID = Yes.
With X11 release 19 and later, this prompt is used with the IDUB prompt to determine the maximum number of agents allowed by the system. The number must be within the parameters set by the IDLB and IDUB prompts.

IDUB **IDLB-(9999)** — Agent ID upper bound. acdc-19

Prompted only if TYPE = ADS or SCB and AID = Yes.
With X11 release 19 and later, this prompt is used with the IDLB prompt to determine the maximum number of agents allowed by the system. The number must be within the parameters set by the IDLB and IDUB prompts.

IFDN **xxx...x** — DN to which calls interflow (up to 23 digits). acdb-1

If the OPAO package is equipped, then "#" can be used in this DN. Enter "X" to delete this DN.

LD23

IMA	**Yes, (No)** — ACD DN assigned to IMS. Prompted if MWC = Yes and IMS = Yes (IMA = Yes in LD15).	ims-2
IMS	**Yes, (No)** — Integrated Messaging. Prompted if MWC = Yes (IMA = Yes in LD15).	ims-2
ISAP	**Yes, (No)** — ACD messages sent (not sent) in Meridian Link applications.	ani-15
IVMS	**Yes, (No)** — Voice messaging system. Prompted if MWC = Yes and IMS = Yes.	ivms-2
IVR	**Yes, (No)** — Interactive Voice Response queue. AN ACD queue must be defined as an IVR queue before the Treatment Request for IVR command can be used in Customer Controlled Routing (CCR) applications.	ivr-18
LOG	**1-10000** — Maximum number of agents that can be logged in at any one time. Prompted only if TYPE = ADS or SCB and AID = Yes. LOG cannot exceed MAGT value defined in LD17.	acdc-18
MAXP	**xxxx** — Maximum number of agent positions. Ranges: 1-1000 for system option XT and 71 1-500 for system option NT, 51 and 61 1-240 for system option XN, RT, VLE, XL and 21 1-120 for system option LE, N or ST 1-70 for system option M, S or MS The value for MAXP can be increased to the allowed maximum or decreased to the current number of agents.	acda-1
MURT	**0-511** — Music route number. The route and at least one trunk must exist before defining MURT. Enter "X" to remove.	acda-1
MWC	**Yes, (No)** — ACD DN message center DN. For Meridian Mail, the response must be Yes.	mwc-1
NCFW	**xxx...x** — Night call forward DN (ACD) or Operator Revert DN (IMS). NCFW can be up to 23 digits. NCFW is tracked on reports as interflow.	acda-1
NCWL	**Yes, (No)** — New Call Waiting lamp settings.	acdb-15

NRRT **0-511** — RAN route for night announcement. acda-1

If NRRT and NCFW are both defined then NRRT occurs first. The route and at least one trunk must exist before defining NRRT. Enter "X" to remove.

OBTN **AGT, ALL, (No)** — Agent Observe Tone options. acdb-1

AGT = Audible Observe Tone to agent only
ALL = Audible Observe Tone to all call parties
No = No tone given

Before X11 release 14, OBTN options are "Yes" or "No". Yes is equivalent to AGT.

OCN **Yes, (No)** — Accept oldest call in network. nacd-15

OUTS **xxxx xxxx ...** — Routing Table entries to be removed. nacd-15

Up to 20 entries at a time can be removed from the Enhanced Overflow (EOVF) or Network ACD (NACD) routing tables. Only 5 entries can be entered at OUTS at a time. OUTS is reprompted until just <cr> is entered.

Only prompted if REQ = CHG. Remove routing tables by list entry number, not by ACD DN. Print the NACD data to see the ACD DN associated with each entry number.

OVBU **aaa bbb ccc ddd** — Overflow treatment for specific call originator types. acdb-16

Only prompted if there is no entry for IFDN. Enter the required treatment for overflow calls:

LNK = Link to source queue (the default value)
BSY = Busy tone

Enter LNK or BSY for each of the four fields.

aaa = Internal calls
bbb = Attendant calls
ccc = CO, FX, and WATS calls
ddd = DID and Tie calls

Note: If busy tone is configured for CO trunk calls, the calling or called party will be billed for the duration of the call, which is from the time the PBX returns answer supervision until the time the calling party disconnects. In X11 release 17 and later, BSY is not allowed for CO trunks.

LD23

OVDN **xxxx xxxx xxxx** — Overflow ACD DNs (maximum three target ACD DNs). acdb-1

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered. Any new entry replaces the old data. X removes ALL OVDNs for the ACD DN. The Overflow DN cannot be a CDN.

OVTH **0-(2047)** — Number of calls waiting in queue before calls are overflowed to the OVDN. acdb-1

When OVTH = "0" overflow is attempted when all agents are busy.

PAGE **Yes, (No)** — Start at the top of a new page for each report. acdc-2

PRIM **Yes, (No)** — Primary DSAC. csl-8

Prompted only if DSAC = Yes.

PRIO **0 1 2...15** — Device number(s) used for output of reports. acdc-2

These output devices must have been defined in LD17 as ACD printers. "X" removes ALL TTYs assigned to the PRIO. Any new entry replaces the old data.

RAGT **2-(4)-30** — Number of seconds an agent in a remote target is reserved for an overflow call. nacd-15

RAN **0-511** — Recorded Announcement trunk route. acda-1

RDNA **Yes, (No)** — Restrict DN Access. acdc-1

Prompted only if an Auxiliary Data System (ADS) or Schedule Block (SCB) exists. Enter "No" if use of DN keys is to be allowed without logging in. Entering "Yes" restricts agents from making outgoing calls when not logged in.

REQ **aaa** — Action request: NEW, CHG, OUT, PRT, LST, END. bacd-18

NEW = add new data to the system
CHG = modify existing data
PRT = print the specified data
OUT = remove data block
LST = List ACD DNs (includes ACD DNs, CDNs, NACD DNs)
END = end and exit the overlay

RFRQ **0-7** — Frequency that reports are to be generated. acdc-2

0 = no reports
1 = all reports hourly on the hour
2 = all reports hourly on the half-hour
3 = all reports half-hourly
4 = report 3 every quarter-hour, no other reports
5 = report 3 every quarter-hour, other reports hourly on the hour
6 = report 3 every quarter-hour, other reports hourly on the half-hour
7 = report 3 every quarter-hour, other reports every half-hour

See also the ROPT prompt for Report Options.

RGAI **Yes, (No)** — Ring again for internal calls. acda-8

When an internal caller dials a queue with no available agents, fast ringback is provided. If RGAI = Yes, the caller can activate Ring Again to be presented to the next available agent.

Enter "Yes" for data service access codes (DSAC).

ROPT **1 2 3 4** — Report options. acdc-2

Enter one or more of the report option numbers.
1 = agent group
2 = queue
3 = trunk routes
4 = agent position

Precede with "X" to disable a report. Any new entry replaces the old data.

RPRT **(Yes), No** — Activate (deactivate) the report control option. acdc-17

If RPRT = Yes, information concerning this ACD DN or CDN will be included in management reports and displays. If RPRT = No, the information is excluded. Prompted only if TYPE = ACD or CDN, and ADS or SCB has been defined.

RSND **(4)-16** — Message resend timer in seconds. nacd-15

SDNB **Yes, (No)** — Block calls to the Secondary DN while busy on ACD call. acdb-12

SFRQ **1, 2** — Frequency of status display updates. acdc-2

1 = 30 seconds, 2 = 60 seconds.

SHR **0-23** — Hour of day that data reporting starts. acdc-2

SPCP **Yes, (No)** — Separate DCP from PCP indication. acdb-1

When SPCP = Yes, agents in Post Call Processing (PCP) are separated from agents in Direct Call Processing (DCP).

Changing the SPCP option for an ACD DN, changes all ACD DNs in the same customer group.

Agent (AGT) key lamp states and display (DAG) field on supervisor telephones are affected by SPCP as follows:

AGT Key lamp steady
SPCP = Yes: agent is on ACD call
SPCP = No: agent is on ACD call or not ready (NRD)
AGT Key lamp fast flash
SPCP = Yes: agent is on non-ACD call or NRD
SPCP = No: agent is on non-ACD call

DAG Display ACD DN
SPCP = Yes: displays number of agents on ACD calls
SPCP = No: displays number of agents on ACD calls or NRD
DAG Display non-ACD DN
SPCP = Yes: displays number of agents on non-ACD calls or NRD
SPCP = No: displays number of agents on non-ACD calls

SRPT **Yes, (No)** — Short report option for report 4. acdc-2

Use the short report when more than one agent, each with a unique agent ID, logs in to the same position ID during a report period.

SRRT **0-511** — Second RAN route number. acda-1

The route and at least one trunk must exist before defining SRRT. Enter "X" to remove.

SRT **1-2044** — Second RAN time threshold. acda-1

Prompted only if SRRT is defined. There is no default for SRT. This is the time between the first RAN playing and the second RAN beginning.

STIO **0 1 2 ...15** — Enter all input/output devices assigned for status displays. acdc-2

The device must first be defined in LD17. Prompted only if a Schedule Block (SCB) exists. Enter "X" to remove.

TABL **D, N** — Day or Night Table. nacd-15

The Day Table is mutually exclusive with TOFT. The Night Table is mutually exclusive with NCFW.

TOFT **2-1800** — Timed Overflow timer in seconds. tof-10

Before defining the TOFT value, first delete that OVDN from its Source ACD DN. Then, enter the time in seconds that you want a call to wait in queue before it overflows to an OVDN.

Note: In X11 release 14 and earlier, the TOFT range is 10-1800.

When REQ = CHG, and the OVDNs are answering TOF calls, an error message is output indicating the affected Target ACD DNs.

If no value is entered, NONE is printed. Enter "X" to disable this feature.

TOT4 **Yes, (No)** — Totals on report 4, (averages on report 4). acdc-10

Prompted only if ROPT = 4. If TOT4 = Yes, HDCP column is output on report 1 and 4.

TRDN **xxxxxxx** — Treatment DN for IVR queue. ivr-18

A treatment DN does not have to be a valid DN in the switch. If Meridian Mail is to be used for both Voice Messaging and IVR, a Treatment DN should not be the same as any Meridian Mail voice box.

Enter "X" to remove.

TRGT **xxxx tttt** — Target ACD DN (xxxx) and the timer (0-1800) in seconds. nacd-15

Up to 20 target ACD DNs can be defined. For each target, tttt is the total time from the call entering the ACD queue until a call request is sent to the target.

TRGT rounds up to an even number.

TSFT **0-(20)-510** — Telephone service factor threshold time in seconds. acdc-1

Prompted only if a Schedule Block (SCB) exists.

TYPE **ACD** — ACD data block. bacd-1

TYPE **ADS** — Auxiliary Data System data block. acdd-2

TYPE **CDN** — Control DN. ear-17

This is a special DN created to specify a destination ACD DN to which incoming calls are directed. Multiple CDNs can direct calls to the same ACD DN providing different treatments based on the CDN parameters.

TYPE **NACD** — Network ACD data. nacd-15

TYPE **SCB** — Scheduling ACD Management Reports. acdc-2

UMG **Yes, (No)** — User to user messaging. ims-2

UMT **2-(6)-15** — Silence interval in seconds after message queue alert tone. ims-2

LD23

UST **Yes, (No)** — User status update. ims-2

VSID **0-15** — Value Added Server (VAS) ID as defined in LD17. csl-8

VASs are external server equipment facilities such as Meridian Mail.
Prompted only if IMS or ISAP = Yes.

Issued:	04 01 94
Status:	Standard
X11 Release:	19

Direct Inward System Access (DISA)

LD24 allows data for the Direct Inward System Access (DISA) to be created, modified and printed.

Add or Change DISA block

REQ	NEW, CHG	Add or Change DISA block
TYPE	DIS	DISA data
CUST	0-99	Customer number
SPWD	xxxx	Secure data password
DN	xxxx	DISA directory number
SCOD	x...x	DISA security access code number (1 to 8 digits)
AUTR	Yes, (No)	Authorization code required
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network class of service group number
COS	aaa	Access restrictions

Print or remove DISA block

REQ	PRT, OUT	Print or Out DISA block
TYPE	DIS	DISA data
CUST	0-99	Customer number
SPWD	xxxx	Secure data password
DN	xxxx	DISA directory number

LD24

Alphabetical list of prompts

AUTR **Yes, (No)** — Authorization code required. disa-7

If "Yes", the user enters the authorization code but not the special prefix access code.

COS **aaa** — Access restrictions. disa-1

(UNR) = unrestricted
TLD = toll denied
SRE = semi-restricted
FRE = fully restricted
CUN = conditionally unrestricted
CTD = conditionally toll denied
FR1 = fully restricted 1
FR2 = fully restricted 2

CUST **0-99** — Customer number. disa-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DN **xxxx** — DISA directory number. disa-1

All trunk routes terminating in DISA must auto-terminate (LD16 prompt AUTO = Yes) and trunks must have ground start signaling (LD14 prompt SIGL = GRD). The DN must be the same as prompt ATDN in LD14.

If DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

NCOS **(0)-99** — Network class of service group number. ncos-1

The ranges for Network Class Of Service group are:
(0)-3 for standalone CDP
(0)-7 for BARS/CDP and NFCR
(0)-15 for NARS and NFCR
(0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later

REQ **aaa** — Action request. disa-1

NEW = create a new DISA data block
CHG = change existing data
PRT = print DISA data blocks
OUT = remove a DISA data block
END = end and exit the overlay

SCOD **x...x** — DISA security access code number (1 to 8 digits). disa-1

Enter "X" to remove.

SPWD **xxxx** — Secure data password. disa-1

Prompted only if the password is defined in LD15. If the password is not entered, the security codes will not print when PRT is requested.

TGAR **(0)-31** — Trunk Group Access Restriction. disa-1

The range is 0-15 before X11 release 13.

TYPE **DIS** — DISA data. disa-1

LD24

Issued: 04 01 94
Status: Standard
X11 Release: 19

Move Data Blocks

LD25 allows data associated with Loops, Shelves, or Cards to be moved to or interchanged with different Loops, Shelves or Cards.

This overlay also allows the data associated with different customers to be moved at the same time as long as all source and destination loops, shelves and cards are identical for all customers specified.

Note: The move/swap superloop data on a customer basis is not supported.

Move and swap rules

Legend:
- SD = single density loop
- DD = double density loop
- 4D = quad density loop

Move or swap shelf or card
- SD to SD, DD or 4D — all cards must be SD
- DD to SD — all cards must be SD
- DD to DD — cards must be SD or DD
- DD to 4D — cards must be SD or DD
- 4D to SD — all cards must be SD
- 4D to DD — cards must be SD or DD
- 4D to 4D — cards must be SD, DD or 4D

Move or swap entire loop
- SD to SD – destination has shelf 0-3
- SD to DD – destination has shelf 0 and/or 1
- SD to 4D – destination has shelf 0 configured
- DD to SD – all cards on shelf must be SD
- DD to DD – destination has shelf 0 and 1
- DD to DD – destination has shelf 0 configured
- 4D to SD – all cards on shelf must be SD
- 4D to DD – cards be SD or DD
- 4D to 4D – destination has shelf 0 configured

Before using MOV or SWP the following hardware should be removed from the database and reconstructed after the MOV is completed.
- Consoles
- Digitone Receivers
- Dial Tone Detectors
- Multifrequency Compelled Signaling (MFC/MFE)
- PRA loops
- ACD telephones
- All lines

Loops must be configured in LD17.

NT8D17 Conference/TDS loop cannot be moved or swapped with LD25.

An individual unit must be moved to a card of the same type.

Move or swap card loops (except superloops)

REQ	MOV, SWP	Move or swap
CUST	xx xx ...	Customers affected
SRCL	0-159	Loop number from which data is to be moved
DSTL	0-159	Loop number to which data is to be moved
SHCD	ss TO ds, ss c TO ds c	Source shelf and card TNs TO destination shelf and card TNs

Move card TNs from non-superloop to superloop

REQ	MOV	Move
CUST	<cr>	Can not move superloop data between customers
SRCL	0-159	Loop number from which data is to be moved
DSTL	0-159	Loop number to which data is to be moved
MVSG	Yes, (No)	Move or swap superloop segments
SHCD	ss TO ds, ss c TO ds c	Source shelf and card TNs TO destination shelf and card TNs
STUN	xx	Starting destination unit number

Move or swap superloop shelf

This can only be used for DLC, ALC and DTR cards.

REQ	MOV, SWP	Move or swap
CUST	<cr>	Can not move/swap superloop data between customers
SRCL	0-159	Loop number from which data is to be moved
DSTL	0-159	Loop number to which data is to be moved
MVSG	<cr>	Move or swap superloop segments
SHCD	ss TO ds	Source shelf To destination shelf
STSG	0-3	Starting destination segment

Move or swap superloop segments

REQ	MOV, SWP	Move or swap
CUST	<cr>	Can not move/swap superloop data between customers
SRCL	0-159	Loop number from which data is to be moved
DSTL	0-159	Loop number to which data is to be moved
MVSG	Yes	Move or swap superloop segments
SHSG	ss sseg TO sd dseg	Move/swap source shelf/segment TO destination self/segment

Move or swap superloops

REQ	MOV, SWP	Move or swap
CUST	<cr>	Can not move/swap superloop data between customers
SRCL	0-159	Loop number from which data is to be moved
DSTL	0-159	Loop number to which data is to be moved
MVSG	<cr>	Move or swap superloop segments
SHCD	<cr>	Source shelf and card TNs TO destination shelf and card TNs
STSG	0-3	Starting destination segment

Move or swap superloop cards

REQ	MOV,SWP	Move or swap
CUST	<cr>	Can not move/swap superloop data between customers
SRCL	0-159	Loop number from which data is to be moved
DSTL	0-159	Loop number to which data is to be moved
MVSG	<cr>	Move or swap superloop segments
SHCD	ss c TO ds c	Source shelf and card TNs TO destination shelf and card TNs
STSG	0-3	Starting destination segment

Alphabetical list of prompts

CUST **xx xx ...** — Customers affected. basic-1

Enter the customers affected by the move or swap operation. Customer 0 must be specified to move digitone receivers on the source loop. Use <cr> if all customers affected.

Note: The move/swap superloop data on a customer basis is not supported. Enter a return, (<cr>) when moving or swapping superloop data.

The range of customer numbers depends on system type and X11 release.

With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DSTL **0-159** — Loop number to which data is to be moved. basic-1

If the loop has a D-channel as a backup, the MOVE command is not supported.

MVSG **Yes, (No)** — Move or swap superloop segments. basic-15

REQ **MOV, SWP, END** — Move or swap. basic-1

MOV = move data associated with an existing loop to a vacant loop
SWP = interchange data associated with existing loops
END = terminate overlay activity

SHCD **ss TO ds, ss c TO ds c** — Source shelf and card TNs TO destination shelf and card TNs. basic-1

c = card number (1-15)
ss = source shelf
ds = destination shelf

Shelf range
SD = 0-3
DD = 0-1
4D = 0
8D = 0-1 (superloops only)

SHSG **ss sseg TO sd dseg** — Move/swap source shelf/segment TO destination self/segment. basic-15

This command is used to move or swap superloop segments.
ss = source shelf
sd = destination shelf
sseg = source segment
dseg = destination segment

SRCL **0-159** — Loop number from which data is to be moved. basic-1

If the loop has a D-channel as a backup, the move command is not supported.

STSG **0-3** — Starting destination segment. basic-15

If REQ = MOV, enter the starting destination segment to which the shelf is to be moved. Superloops only.

STUN **xx** — Starting destination unit number. basic-15

Enter the starting destination unit number to which the first source unit is to be moved. The source card must not be on a superloop; the destination card must be on a superloop.

The value for xx depends on source loop density. For 500/2500 and digital line cards:

SD, xx = 0, 4, 8 12
DD, xx = 0, 8
QD, xx = 0, 8 (8 for digital line cards only)

For a Digitone Receiver Card the destination density is 8D and the source density is:

SD, xx = 0, 1, 2, 3, 4, 5, 6, 7
DD, xx = 0, 2, 4, 6
QD, xx = 0, 4

Note 1: SD, DD trunk cards cannot be moved to Universal or E&M/Dictation Trunk cards.

Note 2: Different source card types cannot be mixed into Superloop cards with one destination.

Note 3: Only ALC, DLC and DTR can be moved to superloops.

Issued: 04 01 94
Status: Standard
X11 Release: 19

Group Do Not Disturb

LD26 allows Do Not Disturb groups to be created, modified and printed.

Add or change data

REQ	NEW,CHG	Add or change data
TYPE	DND	DND Group data block
CUST	0-99	Customer number
GPNO	0-99	Group number
STOR	xxxx, G0-G99	DN or Group number to be stored

Move groups

REQ	MOV	Move
TYPE	DND	DND Group data block
CUST	0-99	Customer number
GPNO	0-99	Group number
TOGP	0-99	Move to group number

LD26

Merge Groups

REQ	MRG	Merge
TYPE	DND	DND Group data block
CUST	0-99	Customer number
GPNO	0-99	Group number
GRPx	0-99	Number of next group to be merged (x = 1, 2, 3, ...) (maximum of 127 distinct items)
	SIZE x	System responds with the size of each group to be merged

Print Groups

REQ	PRT	Print
TYPE	DND	DND Group data block
CUST	0-99	Customer number
GPNO	0-99	Group number. Use <cr> to print all groups.

Remove Groups

REQ	REM	Remove
TYPE	DND	DND Group data block
CUST	0-99	Customer number
GPNO	0-99	Group number
RMOV	xxxx, G0-G99	Remove DN or Group number

Alphabetical list of prompts

CUST **0-99** — Customer number. dndg-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

GPNO **0-99** — Group number. dndg-1

<CR> = print all group numbers when REQ is PRT

When REQ = MRG, enter the new group number to be created.

GRPx **0-99** — Number of next group to be merged (n =1, 2, 3, ...). dndg-1

<cr> = proceed to next prompt

REQ **aaa** — Action request. dndg-1

END = end overlay activity
CHG = modify existing data
MOV = move a group from one DND Group to another
MRG = merge existing groups into a new group
(the old groups will still exist)
NEW = create a new data block
REM = remove an entry from a group
OUT = remove data block
PRT = print DND Group contents

RMOV **xxxx, G0-G99** — Remove DN or Group number. dnbg-1

xxxx = the DN. If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

STOR **xxxx, G0-G99** — DN or Group number to be stored. dndg-1

xxxx = the DN. If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

G0-G99 = group number to be stored. Numbers may be added when REQ is CHG.

TOGP **0-99** — Move to group number. dndg-1

TYPE **DND** — DND Group data block. dndg-1

LD26

336 Group Do Not Disturb

Issued: 04 01 94
Status: Standard
X11 Release: 19

ISDN Basic Rate Interface (BRI)

LD27 is used to configure ISDN Basic Rate Interface hardware.

If you are installing ISDN BRI for the first time, you must configure these components in the order listed below.

1. LAPD protocol group
2. Multi-purpose ISDN Signaling Processor
3. Basic Rate Signaling Concentrator (optional, X11 release 19 and later)
4. S/T Interface Line Card or U Interface Line Card (optional)
5. Digital Subscriber Loop
6. Terminal Service Profile on DSL

Once you have configured the ISDN BRI line application, you can add the Meridian Packet Handler (MPH, available with X11 release 19 and later). To do this, follow these steps.

1. Configure LAPB protocol
2. Configure X.25 protocol
3. Configure the DNA table associated with the MPH network interface
4. Configure PRI or MCU for packet data
   Refer to *ISDN PRI description* (553-2901-100) or *MCU/MCA description* (553-2731-109) for details.
5. Configure the MISP to support MPH
6. Disable and modify the MISP cards, or BRSC cards to support packet data
7. Modify the TSP for D-channel packet data
8. Modify the DSL for B-channel packet data, and define a new TSP
9. Configure the Permanent Virtual Circuits (PVCs, optional)

Rather than an MPH, you can configure for an external packet handler with X11 release 19 and later. To do this, follow these steps.

1. Configure LAPD protocol
2. Configure packet data transmission
   Refer to *ISDN BRI administration* (553-3901-300) for details.
3. Configure the MISP
4. Configure the BRSC (optional)
5. Configure SILC/UILC (optional)
6. Configure the DSL
7. Configure the TSP

If you are changing existing ISDN BRI service, you do not have to follow this order. But, you must be aware of the relationship of one component to another and whether the component you are changing necessitates changing other components.

Refer to *ISDN BRI administration* (553-3901-300) for complete details.

Protocol groups (PROT, X11 release 18)

The protocol configuration procedures define the protocols used by ISDN BRI DSLs to communicate over ISDN. These protocol groups support various ISDN communication standards used in North America, Europe, and other continents and countries.

REQ	NEW, CHG	Add or change a protocol group
TYPE	PROT	Protocol group
PGPN	0-15	Protocol group number
LAPD	Yes, (No)	Change LAPD parameters
_T200	(2)-40	Retransmission timer in increments of 0.5 seconds
_T203	4-(20)-80	Maximum time between transmission frames in increments of 0.5 seconds
_N200	1-(3)-8	Maximum number of retransmissions
_N201	4-(260)	Maximum number of contiguous octets or bytes of information
_K	(1)-32	Maximum number of outstanding unacknowledged frames

LAPD protocol group (LAPD, X11 release 19 and later)

The protocol configuration procedures define the protocols used by ISDN BRI DSLs to communicate over ISDN. These protocol groups support various ISDN communication standards used in North America, Europe, and other continents and countries.

LAPD is a transmission protocol that specifies the transmission timers, the maximum number of retransmissions, the size of the data frame, and the number of negative acknowledgements allowed before issuing an alarm.

REQ	NEW, CHG	Add or change an LAPD protocol group
TYPE	LAPD	Protocol group
PGPN	0-15	Protocol group number
LAPD	Yes, (No)	Change LAPD parameters
_USER	Yes, (No)	Print groups selected at PGPN prompt
_T200	(2)-40	Retransmission timer in increments of 0.5 seconds
_T203	4-(20)-80	Maximum time between transmission frames in increments of 0.5 seconds
_N200	1-(3)-8	Maximum number of retransmissions
_N201	4-(260)	Maximum number of contiguous octets or bytes of information
_K	(1)-32	Maximum number of outstanding unacknowledged frames
PGPN	<CR>	This prompt is repeated until <CR> is entered

MISP configuration for BRIL (X11 release 18)

The MISP configuration procedure identifies each MISP in the system. After the MISP is configured, it is enabled in LD32. An MISP card can support any combination of SILCs and UILCs, totaling four cards.

REQ	NEW, CHG	Add or change an MISP BRIL configuration
TYPE	MISP	Multi-purpose ISDN Signaling Processor
LOOP	0, 2, 4, . . . 158	MISP loop number
APPL	BRI	Application running on the MISP
PH	<CR>	Packet handler communication (does not apply here) Enter <CR> to skip packet handling prompts

MISP configuration for BRIL (X11 release 19 and later)

The MISP configuration procedure identifies each MISP in the system. After the MISP is configured, it is enabled in LD32.

With X11 release 19 and later, the application may be downloaded to the MISP hardware. When functioning as a stand-alone MISP, BRIL only, the MISP card supports up to 4 ISDN BRI line cards. When using the BRSC card, up to 120 line cards can be supported with the maximum of 8 BRSC cards.

REQ	NEW, CHG	Add or change an MISP BRIL configuration
TYPE	MISP	Multi-purpose ISDN Signaling Processor
LOOP	0, 2, 4, . . . 158	MISP loop number
APPL	BRIL	Application running on the MISP BRIL and MPH may NOT be configured on the same MISP
DPSD	Yes, (No)	D-channel Packet Switched Data

LD27

BRSC configuration (X11 release 19 and later)

The ISDN BRI Basic Rate Signaling Concentrator card is available with X11 release 19 and later only. THis card enhances the ISDN BRI line capacity by off-loading some signaling processing from the MISP card to the BRSC card. Each BRSC card can support up to 120 DSLs, and 2 more line cards, thus increasing the line capacity to 9996.

Additionally, the BRSC card separates the D-channel packet data from signaling data, and routes it accordingly.

Once a BRSC card is configured, it is enabled in LD32.

REQ	NEW, CHG	Add or change an MISP BRIL configuration
TYPE	BRSC	ISDN BRI BRSC card
BRSC	l s c u	Basic Rate Signaling Concentrator
MISP	0, 2, 4, . . . 158	MISP loop number
DPSD	<CR>	No D-channel Packet Switched Data Entering <CR> skips the subsequent packet handling prompts

SILC/UILC configuration

The SILC or UILC configuration procedures identify the location, the card type, and the MISP network loop for each SILC or UILC installed in the Meridian 1 Intelligent Peripheral Equipment (IPE) and Common Equipment (CE) Modules.

After the card configuration block is created, the dedicated D-channels are automatically assigned if the MISP is enabled.

When REQ = PRT, entering <CR> at the TN prompt prints out information for all the cards in the system.

REQ	NEW, CHG	Add or change SILC/UILC data
TYPE	CARD	SILC/UILC configuration
TN	l s c	Terminal Number
MISP	0, 2, 4, . . . 158	MISP loop number
CTYP	SILC, UILC	Card type

Digital Subscriber Loop (DSL, X11 release 18)

The DSL configuration determines the characteristics for each DSL connected to an SILC or UILC. Up to eight DSLs can be assigned to each SILC or UILC.

When REQ = PRT, entering <CR> at the DSL prompt prints out all DSLs in the system.

REQ	NEW, CHG	Add or change DSL configuration
TYPE	DSL	Digital Subscriber Loop
DSL	l s c dsl	DSL address
DES	aaaaaa	DSL designator (1 to 6 alphanumeric characters)
CUST	0-99	Customer number
CTYP	SILC, UILC	Card type
APPL	BRI	Application running on an MISP
MISP	0, 2, 4, . . . 158	MISP loop number
MODE	NTAS, NTFS	Network terminal line sampling mode (SILC only)
B1CT	(VCE DTA), PMD, IPD	B-channel 1 call type
_TN	lll ch	PRI loop number and B-channel number (when B1CT = PMD)
B2CT	(VCE DTA), PMD, IPD	B-channel 2 call type
_TN	lll ch	PRI loop number and B-channel number (when B2CT = PMD)
XLST	(0)-254	Pretranslation group
MTEI	1-(8)-20	Maximum number of Terminal Endpoint Identifiers
LTEI	n1 n2, Xmm	LTID and TEI pair for D-channel packet data transmission
MCAL	2-(16)-32	Maximum number of calls on a DSL at one time
MTSP	1-(8)-16	Maximum number of TSPs allowed for a DSL
PGPN	0-15	Protocol group number
PRID	1-4	Protocol ID
FDN	xxx...x	Flexible CFNA directory number
EFD	xxx...x	Flexible external CFNA directory number
HUNT	xxx...x	Hunt directory number
EHT	xxx...x	Hunt external call directory number
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network class of service group number
CLS	aaa	Class of service access restrictions

LD27

Digital Subscriber Loop (DSL, X11 release 19)

The DSL configuration determines the characteristics for each DSL connected to an SILC or UILC. Up to eight DSLs can be assigned to each SILC or UILC.

REQ	NEW, CHG	Add or change DSL data
TYPE	DSL	Digital Subscriber Loop
DSL	l s c dsl	DSL address
DES	aaaaaa	DSL designator (1 to 6 alphanumeric characters)
CUST	0-99	Customer number
CTYP	SILC, UILC	Card type
OPT	BRIL	BRI line application
MISP	0, 2, 4, . . . 158	MISP loop number
MODE	NTAS, NTFS	Network terminal line sampling mode (SILC only)
B1CT	(VCE DTA), PMD, IPD	B-channel 1 call type
_TN	lll ch	PRI loop number and B-channel number (when B1CT = PMD)
_MPH	loop	Meridian Packet Handler loop number (when B1CT = IPD)
B2CT	(VCE DTA), PMD, IPD	B-channel 2 call type
_TN	lll ch	PRI loop number and B-channel number (when B2CT = PMD)
_MPH	loop	Meridian Packet Handler loop number (when B2CT = IPD)
XLST	(0)-254	Pretranslation group
MTEI	1-(8)-20	Maximum number of Terminal Endpoint Identifiers
MCAL	2-(16)-32	Maximum number of calls on a DSL at one time
MTSP	1-(8)-16	Maximum number of TSPs allowed for a DSL
LAPD	0-15	LAPD protocol group number with this DSL
PRID	1-4, 6	Protocol ID
FDN	xxx...x	Flexible CFNA directory number
EFD	xxx...x	Flexible external CFNA directory number
HUNT	xxx...x	Hunt directory number
EHT	xxx...x	Hunt external call directory number
TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network class of service group number
CLS	aaa	Class of service access restrictions

Terminal Service Profiles (TSP, X11 release 18)

The TSP configuration procedures define the service profiles for ISDN BRI terminals connected to a DSL. A service profile specifies the type of transmission, the call restrictions, and the features the terminal can use.

REQ	NEW, CHG	Add or change TSP configuration
TYPE	TSP	Terminal Service Profiles
DSL	l s c dsl	DSL address
OPT	aaaa	TSP Print option
USID	0-15	User service identifier
_SPID	xxx...x	Service profile ID
DN	xxx...x	Directory number to be associated with TSP
_CT	VCE, DTA	Directory number call type
_MCAL	1-(4)-8	Maximum number of calls allowed per DN
_CLIP	(Yes), No	Calling line identification presentation service
_PRES	(Yes), No	Display of calling line identification to far end on outgoing calls
FEAT	aaa aaa	Class of service features
DN	xxx...x	Directory number to be associated with TSP
DFDN	xxx...x	Default directory number

LD27

Terminal Service Profiles (TSP, X11 release 19 and later)

The TSP configuration procedures define the service profiles for ISDN BRI terminals connected to a DSL. A service profile specifies the type of transmission, the call restrictions, and the features the terminal can use.

REQ	NEW, CHG	Add or change TSP configuration
TYPE	TSP	Terminal Service Profiles
DSL	l s c dsl	DSL address
USID	0-15	User service identifier
MPHC	No	No packet data
_SPID	xxx...x	Service profile ID
FEATID	aaa mmm nnn	Feature ID association
DN	xxx...x	Directory number to be associated with TSP
_CT	VCE, DTA	Directory number call type
MCAL	2-(16)-32	Maximum number of calls on a DSL at one time
CLIP	(Yes), No	Calling line identification presentation service
PRES	(Yes), No	Display of calling line identification to far end on outgoing calls
FEAT	aaa aaa	Class of service features
DFDN	xxx...x	Default directory number

LAPB configuration (X11 release 19 and later)

LAPB protocol is used to support B-channel packet data. Up to 16 protocol groups can be defined to support the network and terminal interface for the Meridian Packet Handler (MPH).

REQ	NEW, CHG	Add or change LAPB protocol configuration
TYPE	LAPB	LAPB protocol group configuration
PGPN	0-15	Protocol group number
LAPB	Yes, (No)	Change LAPB parameters
_T1	2 - (6) - 130	Response timer
_T2	1 - (4) - 129	Maximum frame delay
_T3	0, 3 - (12) - 131	Idle timer
_N1	23 - (135) - 263	Maximum I-frame size (in octets)
_N2	1 - (10) - 15	Maximum number of retries
_K	(1)-7	Window size

X.25 configuration (X11 release 19 and later)

The X.25 protocol allows for the grouping of sets of timers and protocol values for X.25 packet protocols. Up to 16 protocol groups may be defined in the system.

REQ	NEW, CHG	Add or change X.25 protocol configuration
TYPE	X25P	X.25 protocol group configuration
PGPN	0-15	Protocol group number
X25P	(Yes), No	Change X.25 parameters
_T10/T20	15-(180)-930	Request restart timer
_T11/T21	15-(180)-930	Call request timer
_T12/T22	15-(180)-930	Reset request timer
_T13/T23	0, 15-(180)-930	Clear request timer
_PSIZ	16, 32, 64, (128), 256	Default packet transmission size
_WSIZ	1-(2)-7	Default transmit window size

LD27

Data Network Access (DNA) table (X11 release 19 and later)

The DNA tables contain the DNA numbers that access the PSDN. A DNA table number is assigned to each DNA table accosiated with an MPH network interface in the MISP configuration. The DNA table number informat the network of the available DNAs on that network interface. Up to 32 DNA numbers can be included in a DNA table, and upt o 32 tabdle can be configured in the system.

REQ	NEW, CHG	Add or change DNA table configuration
TYPE	DNAT	DNA table administration
DNAT	1-32	DNA table to print
DNIC	xxxx	Data Network Identification code
NTN	xx . . . xx	Network Terminal Number

MISP configuration for external packet handler (X11 release 18)

This procedure shows how to configure MISP cards to support external packet data. X11 release 18 does not support the MPH.

REQ	NEW, CHG	Add or change an MISP BRIL configuration
TYPE	MISP	Multi-purpose ISDN Signaling Processor
LOOP	0, 2, 4, . . . 158	MISP loop number
APPL	BRI	Application running on the MISP
PH	DCH, BCH, BDCH, (X)	Packet handler
PRI	0, 2, 4, . . . 158	PRI loop number
CH	1-23	PRI channel number

MISP configuration for external packet handler (X11 release 19 and later)

This procedure shows how to configure MISP cards to support external packet data only. Refer to the procedure for configuring the MPH, if required.

REQ	NEW, CHG	Add or change an MISP BRIL configuration
TYPE	MISP	Multi-purpose ISDN Signaling Processor
LOOP	0, 2, 4, . . . 158	MISP loop number
APPL	BRIL	Application running on the MISP
DPSD	Yes, (No)	D-channel Packet Switched Data
MPHC	No	DPSD are routed to an external packet handler or PSDN
TN	l ch	PRI loop and channel connecting the MISP to external Packet Handler

MISP configuration for Meridian Packet Handler (X11 release 19 and later)

This procedure shows how to configure MISP cards to support the Meridian Packet Handler (MPH). The MPH can be downloaded to the MISP hardware. The MISP serves as a dedicated MPH when running only that application.

REQ	NEW, CHG	Add or change an MISP BRIL configuration
TYPE	MISP	Multi-purpose ISDN Signaling Processor
LOOP	0, 2, 4, . . . 158	MISP loop number
APPL	MPH	Application running on the MISP
PRFX	0-9	DNA table prefix
NTNO	(Yes), No	Public Switched Packet Data Network presentation
DNIC	xxxx	Data Network Identification code
NWIF	1-3	MPH network interface identifier
_TN	l s c u	Terminal Number
_RATE	56, (64)	PSDN communication rate
_LAPB	Yes, (No)	Change LAPB parameters
_X25P	(Yes), No	Change X.25 parameters
_PVC	n1 n2	Permanent Virtual Circuit logical channel number range
_IC	n1 n2	Incoming Logical Channel Number range
_TC	n1 n2	Two-way logical channel number range
_OC	n1 n2	Outgoing logical channel number range
_DNAT	1-32	DNA table to print

LD27

DSL configuration for the Meridian Packet Handler (X11 release 19)

The DSL configuration determines the characteristics for each DSL connected to an SILC or UILC. Up to eight DSLs can be assigned to each SILC or UILC.

REQ	NEW, CHG	Add or change DSL data
TYPE	DSL	Digital Subscriber Loop
DSL	l s c dsl	DSL address
DES	aaaaaa	DSL designator (1 to 6 alphanumeric characters)
CUST	0-99	Customer number
CTYP	SILC, UILC	Card type
OPT	BRIL	BRI line application
MISP	0, 2, 4, . . . 158	MISP loop number
MODE	NTAS, NTFS	Network terminal line sampling mode (SILC only)
B1CT	(VCE DTA), PMD, IPD	B-channel 1 call type
_TN	l s c u	Terminal Number
MPH	loop	Meridian Packet Handler loop
_PRI	0, 2, 4, . . . 158	PRI loop number
_CH	1-23	PRI channel number
B2CT	(VCE DTA), PMD, IPD	B-channel 2 call type
TN	l s c u	Terminal Number
_PRI	0, 2, 4, . . . 158	PRI loop number
_CH	1-23	PRI channel number
XLST	(0)-254	Pretranslation group
MTEI	1-(8)-20	Maximum number of Terminal Endpoint Identifiers
LTEI	n1 n2, Xmm	LTID and TEI pair for D-channel packet data transmission
MCAL	2-(16)-32	Maximum number of calls on a DSL at one time
MTSP	1-(8)-16	Maximum number of TSPs allowed for a DSL
LAPD	Yes, (No)	Change LAPD parameters
PRID	1-4, 6	Protocol ID
FDN	xxx...x	Flexible CFNA directory number
EFD	xxx...x	Flexible external CFNA directory number
HUNT	xxx...x	Hunt directory number
EHT	xxx...x	Hunt external call directory number

TGAR	(0)-31	Trunk Group Access Restriction
NCOS	(0)-99	Network class of service group number
CLS	aaa	Class of service access restrictions

TSP configuration for Meridian Packet Handler (X11 release 19 and later)

The TSP configuration procedures define the service profiles for ISDN BRI terminals connected to a DSL. A service profile specifies the type of transmission, the call restrictions, and the features the terminal can use.

REQ	NEW, CHG	Add or change TSP configuration
TYPE	TSP	Terminal Service Profiles
DSL	l s c dsl	DSL address
USID	0-15	User service identifier
MPHC	Yes	Use this TSP with an MPH
TRMT	D, B	Terminating type
TEI	0-63	Stativ TEI for addressing terminal
BCH	1-2	TSP association
_LAPB	Yes, (No)	Change LAPB parameters
_X25P	(Yes), No	Change X.25 parameters
_NTN	xx . . . xx	Network Terminal Number
_PVC	n1 n2	Permanent Virtual Circuit logical channel number range
_IC	n1 n2	Incoming Logical Channel Number range
_TC	n1 n2	Two-way logical channel number range
_OC	n1 n2	Outgoing logical channel number range
CDR	Yes, (No)	Internal CDR
FEAT	aaa aaa	Class of service features
DFDN	xxx...x	Default directory number

Permanent Virtual Circuit (PVC, X11 release 19 and later)

An external PVC connection can be established with the DNA entries, its associated Logical Channel Number, the MPH network interface, and the MPH Logical Channle Number.

REQ	NEW, CHG	Add or change PVC configuration
TYPE	PVC	PVC connection administration
MPH	loop	Meridian Packet Handler loop
PVCN	1-4	Permanent Virtual Circuit number
XPVC	(Yes), No	External or internal PVC connection
_NWIF	1-3	MPH network interface identifier
NTN1	xx . . . xx	First Permanent Virtual Circuit connection to the NTN
LCN1	1-4095	Permanent Virtual Circuit logical channel number for NT1
NTN2	xx . . . xx	Second Permanent Virtual Circuit connection to the NTN
LCN2	1-4095	Permanent Virtual Circuit logical channel number for NT2

BRSC configuration for Meridian Packet Handler (X11 release 19 and later)

The ISDN BRI Basic Rate Signaling Concentrator card is available with X11 release 19 and later only. This card enhances the ISDN BRI line capacity by off-loading some signaling processing from the MISP card to the BRSC card. Each BRSC card can support up to 120 DSLs, and 2 more line cards, thus increasing the line capacity to 9996.

Additionally, the BRSC card separates the D-channel packet data from signaling data, and routes it accordingly.

Once a BRSC card is configured, it is enabled in LD32.

REQ	NEW, CHG	Add or change an MISP BRIL configuration
TYPE	BRSC	ISDN BRI BRSC card
BRSC	l s c u	Basic Rate Signaling Concentrator
MISP	0, 2, 4, . . . 158	MISP loop number
DPSD	Yes, (No)	D-channel Packet Switched Data
MPHC	(Yes), No	Route D-channel packet switched data to the Meridian Packet Handler
MPH	loop	Meridian Packet Handler loop
PRI CH	loop channel	PRI for packet handler and BRSC connections

Alphabetical list of prompts

APPL **BRI, BRIL, MPH** — Application running on an MISP. bri-19

BRI and BRIL = BRI application
MPH = Meridian Packet Handler
BRI is entered with X11 release 18 only. BRIL and MPH are entered with X11 release 19 and later.

BRIL and MPH cannot operate on the same MISP.

Precede the application with an X to delete it. MPH can only be deleted if there are:
— no D-channel packet data separators, and
— no B-channel or D-channel terminals, and
— no network interface, and
— no PVC connections.

B1CT **(VCE DTA), PMD, IPD** — B-channel 1 call type. bri-19

VCE = Circuit switched voice
DTA = Circuit switched data
PMD = B-channel packet data with dedicated connection from DSL to a PRI
B-channel
IPD = B-channel packet data with MPH

For PMD the B-channel packet data must have been specified at the PH prompt in the MISP configuration procedure.

You cannot select PMD or IPD simultaneously with VCE and/or DTA.

Precede with "X" to remove (For example, XDTA).

B2CT **(VCE DTA), PMD, IPD** — B-channel 2 call type. bri-19

VCE = Circuit switched voice
DTA = Circuit switched data
PMD = B-channel packet data with dedicated connection from DSL to a PRI
B-channel
IPD = B-channel packet data with MPH

For PMD the B-channel packet data must have been specified at the PH prompt in the MISP configuration procedure.

You cannot select PMD or IPD simultaneously with VCE and/or DTA.

Precede with "X" to remove (For example, XDTA).

LD27

BCH **1-2** — TSP association. bri-19

1 = TSP associated with the B1 DSL channel.
2 = TSP associated with the B2 DSL channel.

BRSC **l s c u** — Basic Rate Signaling Concentrator. bri-19

Only 1 BRSC card can be enabled on a single IPE shelf.

CDR **Yes, (No)** — Internal CDR. bri-19

Yes = turn on internal CDR
No = turn internal CDR off

CH **1-23** — PRI channel number. bri-18

This channel carries D-channel packet data between the MISP and the packet handler. The PRI route and channel must have already been defined in LD16 and LD14.

Prompted only if PH = DCH or BDCH.

CLIP **(Yes), No** — Calling line identification presentation service. bri-18

YES = allows display of calling party DN on incoming calls
NO = does not allow display of calling party DN on incoming calls

CLS **aaa** — Class of service access restrictions. bri-18

(UNR) = Unrestricted
TLD = Toll denied
SRE = Semi-restricted
FRE = Fully restricted
CUN = Conditionally unrestricted
CTD = Conditionally toll denied
FR1 = Fully restricted class 1
FR2 = Fully restricted class 2
ICDA = Internal call detail recording allowed
(ICDD) = Internal call detail recording denied

You can enter more than one class of service by separating each entry with a space.

CT **VCE, DTA** — Directory number call type. bri-18

VCE = Circuit switched voice
DTA = Circuit switched data

XVCE or XDTA deletes that call type.

One or more call types can be entered by separating each entry with a space.

The call types entered must have been specified for the B1CT and B2CT prompts in the DSL configuration procedures.

CTYP **SILC, UILC** — Card type. bri-18

This prompt is displayed only if the SILC or UILC has not been previously configured or when configuring another DSL on the same SILC/UILC.

CUST **0-99** — Customer number. bri-18

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DES **aaaaaa** — DSL designator (1 to 6 alphanumeric characters). bri-18

DFDN **xxx...x** — Default directory number. bri-18

Enter a 1 to 7-digit directory number.

This directory number must have been previously defined at the DN prompt.

A directory number can be associated with multiple TSPs. Only one default DN can be defined for a TSP. This DN is sent in the outgoing setup if the terminal does not send a calling line identification number with the outgoing call.

DMPH **(Yes), No** — Dedicated Meridian Packet Handler. bri-19

Yes = the MPH supports 8 SAPI 16 separators, and 19 B-channels
No = the MPH supports 3 SAPI 16 separators, and 1 B-channel

DN **xxx...x** — Directory number to be associated with TSP. bri-18

xxx...x =1 to 7-digit directory number

The directory number cannot be shared by a non-BRI terminal.

At least one and a maximum of 8 DNs can be assigned to a DSL.

The directory number can be associated with multiple TSPs on a DSL but it cannot be associated with any other DSL.

DNAT **1-32** — DNA table to print. mph-19

<CR> prints all Data Network Address (DNA) tables

DNIC **xxxx** — Data Network Identification code. bri-19

Enter a 4-digit DNIC for this item.

DPSD **Yes, (No)** — D-channel Packet Switched Data. mph-19

No = route D-channel packet data calls to an external packet handler, or Public Switched packet Data Network (PSPDN).

DSL **l s c dsl** — DSL address. bri-18

superloop = 0-156 (must be zero or divisible by 4)
shelf = 1 to the maximum number of IPE modules shelf can be 0 or 1
card = 0-15
DSL = 0-7

You can assign 31 DSLs for each MISP if you specified DCH or BDCH at the PH prompt in MISP configuration procedures.

When REQ = PRT, entering <CR> at this prompt prints out all DSLs in the system.

EFD **xxx...x** — Flexible external CFNA directory number. bri-18

Enter a 1-13 digit directory number.

EHT **xxx...x** — Hunt external call directory number. bri-18

Enter a 1-13 digit directory number.

FDN **xxx...x** — Flexible CFNA directory number. bri-18

Enter a 1-13 digit directory number.

FEAT **aaa aaa** — Class of service features. bri-18

HTA, (HTD) = Hunt allowed (denied)
FNA, (FND) = Call forward no answer allowed (denied)
SFA, (SFD) = Second level call forward no answer allowed (denied)
CFTA, (CFTD) = Call forward by call type allowed (denied)
MWA, (MWD) = Message waiting allowed (denied)
FBA, (FBD) = Call forward busy allowed (denied)

You can enter more than one class of service by separating each entry with a space.

Note: Always assign HTA if the terminal does have CWT capability.

FEATID **aaa mmm nnn** — Feature ID association. bri-19

This is prompted when PRID = 6, to implement the ISDN BRI Conferencing capability.
aaa = Feature: AO3 = 3-party conference, AO6 = 6 party conference
mmm = Feature activation ID (1-127)
nnn = Feature indication ID (1-127)
This is optional. If nothing is entered, the same value as mmm is used.

Feature activation and Feature indication ID are the feature key assignments on the terminal. The key numbers must also be configured at the terminal level.

Recommended assignments are:
M5317TDX: AO6 15
M5209TDcp: AO6 9

HUNT **xxx...x** — Hunt directory number. bri-18

Enter a 1-13 digit directory number.

IC **n1 n2** — Incoming Logical Channel Number range. bri-19

n1 = the lowest incoming LCN (1-4095)
n2 = the highest incoming LCN (1-4095)
<cr> = no incoming LCNs

K **(1)-7** — Window size. bri-19

This definition applies when TYPE = LAPB with X11 release 19 and later.

K **(1)-32** — Maximum number of outstanding unacknowledged (NAK) frames. bri-19

This definition applies to TYPE = LAPD with X11 release 19 and later. With X11 release 18 this applies when TYPE = PROT.

LAPB **Yes, (No)** — Change LAPB parameters. mph-19

LAPD **Yes, (No)** — Change LAPD parameters. bri-18

LAPD **0-15** — LAPD protocol group number for DSL assignment. bri-19

LCN1 **1-4095** — Permanent Virtual Circuit logical channel number for NT1. bri-19

LCN2 **1-4095** — Permanent Virtual Circuit logical channel number for NT2. bri-19

LDN **0-5, (No)** — Departmental listed directory number. bri-20

With X11 release 19 and earlier, the allowed range is 0-3. LDN = No indicates no LDN is used.

LOOP **0, 2, 4, . . . 158** — MISP loop number. bri-18

This must be an even number and the next odd loop number must be unequipped.

When REQ = PRT, enter <CR> to print all MISPs in the system.

LTEI **n1 n2, Xmm** — LTID and TEI pair for D-channel packet data transmission. bri-18

The maximum number of Logical Terminal Identifier (LTID) and static Terminal Endpoint Identifier (TEI) pairs is as stated by MTEI.

The value for this prompt is:
n1 = LTG in the range of 1-15
n2 = LTN in the range of 1-1023
LTG =15 and LTN=1023 is invalid.
Xmm = deletes LTID and TEI as a pair for the specified TEI.
<cr> = go to next prompt

Prompted only if D-channel packet data was specified for the associated MISP.

MCAL **2-(16)-32** — Maximum number of calls on a DSL at one time. bri-18

If TYPE = DSL, MCAL = 2-(16)-32. This is the maximum number of calls on a DSL at one time. This includes calls waiting and on hold. Warning is received if less than 8 is specified.

MISP **0, 2, 4, . . . 158** — MISP loop number. bri-19

ISDN BRI applications on the MISP must be disabled when changing the MISP loop. The SILC or UILC must be disabled before changing the MISP loop number.

Prompted only if the MISP has not been assigned to the specified SILC or UILC.
With X11 release 19 and later, 8 BRSC cards can be configured per MISP.

MODE **NTAS, NTFS** — Network terminal line sampling mode (SILC only). bri-18

NTAS = Adaptive sampling (extended passive bus, Branched passive bus, Point-to-point bus, U interface DSL)
NTFS = Fixed sampling (sort passive bus)
Prompted only if CTYP = SILC.

MPH **loop** — Meridian Packet Handler loop. mph-19

This is the loop with the dedicated connection from the MISP card.

MPHC	**(Yes), No** — Route D-channel packet switched data to the Meridian Packet Handler. No = route D-channel packet data calls to an external packet handler, or Public Switched packet Data Network (PSPDN).	mph-19
MTEI	**1-(8)-20** — Maximum number of Terminal Endpoint Identifiers. Both static and dynamic combined assigned to the logical terminals on a DSL.	bri-18
MTSP	**1-(8)-16** — Maximum number of TSPs allowed for a DSL.	bri-18
N1	**23 - (135) - 263** — Maximum I-frame size (in octets). This is given in units of 0.5 seconds (the default is, therefor, 3 seconds).	mph-19
N2	**1 - (10) - 15** — Maximum number of retries.	mph-19
N200	**1-(3)-8** — Maximum number of retransmissions.	bri-18
N201	**4-(260)** — Maximum number of contiguous octets or bytes of information.	bri-18
NCOS	**(0)-99** — Network class of service group number.	bri-18
NTN	**xx . . . xx** — Network Terminal Number. Add the NTN to the DNA table. The NTN can be up to 10 digits; up to 32 NTN entries are supported for each table. Delete the entry by preceding the number with X. Enter a range of NTNs by separating the numbers with a space.	bri-19
NTN1	**xx . . . xx** — First Permanent Virtual Circuit connection to the NTN. Up to 10 digits can be entered.	bri-19
NTN2	**xx . . . xx** — Second Permanent Virtual Circuit connection to the NTN. Up to 10 digits can be entered.	bri-19
NTNO	**(Yes), No** — Public Switched Packet Data Network presentation. Yes = PSPDN presents only the NTN in the incoming call packet's called address field. No = PSPDN presents NTN and DNIC in the incoming call packet's called address field.	bri-19
NWIF	**1-3** — MPH network interface identifier. <CR> indicates there is no identifier. Delete an identifier by preceding the entry with an X.	bri-19

LD27

OC **n1 n2** — Outgoing logical channel number range. bri-19

n1 = the lowest incoming LCN (1-4095)
n2 = the highest incoming LCN (1-4095)
<cr> = no incoming LCNs

OPT **aaaa** — TSP Print option. bri-18

The possible responses for this prompt follow:
SPID = Print the TSPs with the specified Profile ID
USID = Print the TSPs with the specified User ID
SUID = Print the Service Profile ID, and the User Service Identifier map
DN = Print the TSPs with the specified Directory Number
DNS = Print the Directory Numbers defined for the DSL
<CR> = Print all the TSPs defined for the DSL

THIS APPLIES TO X11 RELEASE 18 ONLY.

OPT **line** — BRI line application. bri-19

This information is NOT downloaded to the DSL.

PGPN **0-15** — Protocol group number. mph/bri-19

Enter "ALL" to remove all protocol groups. You cannot remove a protocol group if it is assigned to a DSL.

With X11 release 19 and later, this is the LAPB protocol group number.

Enter <cr> to print all protocol groups and the number of DSLs in each group.

PH **DCH, BCH, BDCH, (X)** — Packet handler. bri-18

The values for this prompt are:

DCH = BRI terminal communicates with the packet handler using multiplexed D-channels over a dedicated BD-channel

BCH = BRI terminal communicates with the packet handler using a dedicated B-channel

BDCH = Both D-channel and B-channel communicate with packet handler

(X) = No packet data transmission. Subsequent prompts will be skipped.

If you select DCH or BDCH, the MISP can support only 31 DSLs because one serial port is dedicated to the packet handler.

PRES **(Yes), No** — Display of calling line identification to far end on outgoing calls. bri-18

YES = allow this DN to be presented to the called party on outgoing calls
NO = do not present this DN to the called party on outgoing calls

PRFX **0-9** — DNA table prefix. bri-19

PRI **0, 2, 4, . . . 158** — PRI loop number. bri-18

This loop is connected to the packet handler. The loop must have already been added in LD17.

THIS APPLIES TO X11 RELEASE 18 ONLY.

PRI CH **loop channel** — PRI for packet handler and BRSC connections. bri-19

loop (1-159) = the PRI loop number that is connected to the external packet handler

channel (1-23) = the PRI channel number where the dedicated BRSC connection terminates

This PRI loop must be previously assigned in LD17, and must be dedicated to packet handler connection. The PRI channel must be configured for BRI packet data in LD14 and LD16.

PRID **1-4, 6** — Protocol ID. bri-19

Selection of the protocol ID is terminal dependent. The values are:
1 = ANSI
2 = ETSI
3 = DMS
4 = NET64
6 = NI-1 (X11 release 19 and later)

PRID = 6 allows the ISDN BRI conference feature to be configured in the TSPs of the DSL.

PSIZ **16, 32, 64, (128), 256** — Default packet transmission size. bri-19

This is in octets, and applies when TYPE = X25 with X11 releease 19 and later.

PVC **n1 n2** — Permanent Virtual Circuit logical channel number range. bri-19

n1 = the lowest PVC LCN
n2 = the highest PVC LCN

PVCN **1-4** — Permanent Virtual Circuit number. bri-19

LD27

RATE	**56, (64)** — PSDN communication rate. This establishes the rate at which the PSDN communicates across the PRI channel network interface	bri-19
REQ	**NEW, CHG, OUT, PRT, END** — Action request.	bri-18
SPID	**xxx...x** — Service profile ID. xxx...x = up to 9 character alphanumeric service profile ID matching the service profile ID defined on an ISDN BRI terminal. A maximum of 8 valid SPIDs per TSP are allowed. Prompted only if the user service identifier is 1-15. It will be repeated until <cr> is entered but only up to 8 SPIDs should be entered. This SPID must be entered in the initializing terminal to associate the terminal with a USID.	bri-18
T1	**2 - (6) - 130** — Response timer. This is given in units of 0.5 seconds. The default, therefor, is 3 seconds.	mph-19
T10/T20	**15-(180)-930** — Request restart timer. This is given in units of 1 second.	mph-19
T11/T21	**15-(180)-930** — Call request timer. This is given in units of 1 second.	mph-19
T12/T22	**15-(180)-930** — Reset request timer. This is given in units of 1 second.	mph-19
T13/T23	**0, 15-(180)-930** — Clear request timer. This is given in units of 1 second.	mph-19
T2	**1 - (4) - 129** — Maximum frame delay. This is given in units of 0.5 seconds. The default, therefor, is 2 seconds). This must be less than T1.	mph-19
T200	**(2)-40** — Retransmission timer in increments of 0.5 seconds. This specifies the time delay before the system retransmits the information.	bri-18
T203	**4-(20)-80** — Maximum time between transmission frames in increments of 0.5 seconds.	bri-18

T3 **0, 3 - (12) - 131** — Idle timer. mph-19

This is given in units of 0.5 seconds. The default is 6 seconds. Setting it a 0 (zero) turns off the timer. If this is not 0, it must be greater than T1.

TC **n1 n2** — Two-way logical channel number range. mph-19

n1 = the lowest twp-way LCN
n2 = the highest two-way LCN
<CR> = no two-way LCNs

TEI **0-63** — Stativ TEI for addressing terminal. mph-19

This is given in units of 1 second.

TGAR **(0)-31** — Trunk Group Access Restriction. bri-18

TN **l s c u** — Terminal Number. bri-18

loop = 0-156 (must be an even number divisible by 4)
shelf = 0-1
card = 0-15

You can also enter lll ch for the PRI loop and B-channel channel number.

Entering l prints out information for all the cards on this loop.
Entering l s prints out information for all the cards on that loop and shelf.
Entering <CR> prints out information for all the cards in the system.

Note: This entry can be l ch (loop and channel) when applying to PRI loops.

TRMT **D, B** — Terminating type. mph-19

This is the terminal type used.
D = D-channel configuration
B = B-channel configuration

TYPE **aaa** — Type of data. bri-19

The allowed values are:
BRSC = BRI Signaling Concentrator (X11 release 19 and later)
CARD = SILC/UILC cards
DNAT = Data Network Address tables (X11 release 19 and later)
DSL = Digital Subscriber Loop
LAPB = Link Access Procedure - Balanced (X11 release 19 and later)
LAPD = Link Access Procedure on D-channel (X11 release 19 and later)
MISP = Multi-purpose ISDN Signaling Processor
PROT = Protocol group
PVC = Permanent Virtual Circuit connections (X11 release 19 and later)
TSP = Terminal Service Profile
X25P = X.25 packet protocol parameters (X11 release 19 and later)

USER **Yes, (No)** — Print groups selected at PGPN prompt. mph-19

Yes = prints the LAPB groups selected at the PGPN prompt, and the TSPs or MPH network interfaces that are using them
No = does not print LAPB group user information

USID **0-15** — User service identifier. bri-18

The total number of TSPs defined for a DSL cannot exceed the maximum number of TSPs allowed for a DSL as specified by the MTSP prompt in the DSL configuration procedures.

ALL removes all TSPs defined for the DSL. Use only when REQ = OUT.

A default TSP should be configured for non-initializing terminals. This is done by assigning USID = 0 to the TSP.

WSIZ **1-(2)-7** — Default transmit window size. bri-19

This is in octets and applies when TYPE = X25 with X11 release 19 and later.

X25P **(Yes), No** — Change X.25 parameters. bri-19

If these parameters are changed, all active calls associated with the TSPs and network interfaces for the group wil be dropped.

XLST **(0)-254** — Pretranslation group. bri-18

Prompted only if LD15 prompt PREO = 1.

XPVC **(Yes), No** — External or internal PVC connection. bri-19

Yes = external
No = internal

Issued: 04 01 94
Status: Standard
X11 Release: 19

Route Selection for Automatic Number Identification

LD28 allows data for Route Selection for Automatic Number Identification (RS-ANI) to be created, modified and printed.

Add or change ANI-RS data

REQ	aaa	Action request
TYPE	RSA	Route selection ANI data block
CUST	0-99	Customer number
RASC	xxxx	RS-ANI access code digits
0-RT	xxxx	Route access code for 0- calls
0+RT	xxxx	Route access code for 0+ calls
1RT	xxxx	Route access code for 1+ or IDDD calls
CORT	xxxx	Route access code for local calls

LD28

Alphabetical list of prompts

0+RT **xxxx** — Route access code for 0+ calls. ani-1

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

0-RT **xxxx** — Route access code for 0- calls. ani-1

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

1RT **xxxx** — Route access code for 1+ or IDDD calls. ani-1

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

CORT **xxxx** — Route access code for local calls. ani-1

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

CUST **0-99** — Customer number. ani-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

RASC **xxxx** — RS-ANI access code digits. ani-1

REQ **aaa** — Action request. ani-1

NEW = create a new data block
CHG = modify an existing data block
OUT = remove data block
PRT = print RSA data
END = terminate overlay activity

TYPE **RSA** — Route selection ANI data block. ani-1

Issued: 04 01 94
Status: Standard
X11 Release: 19

Memory Management

LD29 is used to

- determine the amount of unused memory
- determine if sufficient memory is available to accommodate substantial amounts of new data to be added
- respond to messages SCH601 and SCH603 on SL-1 XL & XN

Add new data

REQ	ADD	Add new data
TYNM	aaa xx	Type and amount of data
Display new map?	Yes, (No)	Display new map?
Save new map?	Yes, (No)	Save new map?
Change map?	Yes, (No)	Change map?

Print memory

REQ	PRT	Print
OPT	FULL, FREE	Print full map or free space
MAP	ACT, DUMP	Print active or dump map

LD29

Response to SCH601 or SCH603

REQ	SCH	Response to SCH message
MSG	601, 603 xx	SCH message
New data planned?	Yes,No	New data to be added in this overlay?
TYNM	aaa xx	Type and amount of data

Change memory map

REQ	CHG	Change (SL-1 XN & XL systems only)
PWD2	xxxx	Second level password defined in LD17
Change map?	yes	Change map?
CMD	ASGN	Assign logical page and memory number
PGMM	xx xx	Logical page number, memory number
PGBY	0-254,256-510 1-65535	Logical page, size
CMD	CHK	Check memory map
Display new map?	Yes, (No)	Display new map?
Save new map?	Yes, (No)	Save new map?

Alphabetical list of prompts

Change map?

Yes, (No) — Change map?. basic-1

Prompted if "save new map" is "No" or automatic map generator fails (message MEM150).

CMD **ASGN** — Assign logical page and memory number. basic-1

CMD **CHK** — Check memory map. basic-1

Display new map?

Yes, (No) — Display new map?. basic-1

MAP **ACT, DUMP** — Print active or dump map. basic-1

MSG **601, 603 xx** — SCH message. basic-1

Prompted when REQ is SCH. Enter 601 when SCH message is 601. Enter 603 followed by the parameters printed with the SCH603 message during an attempt to add data

New data planned?

Yes, (No) — New data to be added in this overlay?. basic-1

OPT **FULL, FREE** — Print full map or free space. basic-1

PGBY **0-254,256-510 1-65535** — Logical page, size. basic-1

Prompted only if CMD = ASGN.

PGMM **xx xx** — Logical page number, memory number. basic-1

Prompted only if CMD = ASGN.

PWD2 **xxxx** — Second level password defined in LD17. basic-1

REQ **aaa** — Action request. basic-1

ADD = create a new data block
CHG = Change existing map
CLR = clear map
END = end activity
GEN = generate a new map. Use only with ROMs with memory extensions in place.
PRT = print the specified map
SCH = change data in response to SCH601/603

Save new map?

Yes, (No) — Save new map?. basic-1

Prompted when a new map has been created.

LD29

TYNM	**aaa xx** — Type and amount of data. Prompted when "REQ" is "ADD" or "NEW DATA PLANNED?" is "Yes" The following values entered represent additions to the existing data and do not include existing data. <cr> stops TYNM prompt.	basic-1
TYNM	**500 1-12800** — Number of new 500/2500 sets.	basic-1
TYNM	**ACD 0-99 1-240 1-240** — Customer number, number of ACD DN, maximum agents per ACD DN.	bacd-1
TYNM	**AGNT 1-12800** — Number of agent positions.	bacd-1
TYNM	**ANI xxx yyyy zzzzz** — Feature Group D ANI datablocks. xxx = number of NPAs (1-160) yyyy = number of ranges of NXXs (0-9999) zzzzz = number of ranges of XXXXs (0-30,000)	fgd-17
TYNM	**APRT 1-16** — Number of ACD printers.	bacd-1
TYNM	**ATM 1-4096** — Number of ATM data routes for the system.	atm-7
TYNM	**ATT 1-480** — Number of consoles.	basic-1
TYNM	**AUB xx xx xx** — Customer number, number of authcodes, authcode digit length.	baut-1
TYNM	**BGD 1-15 1-99** — Number of Background Terminals and number of customers.	bgd-10
TYNM	**CDB 1-99** — Number of new customers.	basic-1
TYNM	**CDL 1-16** — Number of CDR links.	clnk-1
TYNM	**CONF xxx** — Number of conference loops.	basic-1
TYNM	**CPG 1-100 1-63** — CPG Level Services customers and average CPG per customer.	cpg-15
TYNM	**CPND 1-99 1-100 5-27** — Number of customers, names and average size. Calling Party Name Display data. xx = number of customers with CPND, 1-32. yy = number of CPND names per customer, 1-1000. zz = average size of name string, 5-27 characters.	cpnd-10
TYNM	**CRB 1-1024** — Number of code restriction blocks.	basic-1
TYNM	**DGT 1-99 xx xx** — Number of customers, digit manipulation tables, max avg # of insert digits.	basic-1

TYNM	**DIS 0-99 1-240** — Customer number, number of DISA DN.	disa-1
TYNM	**DND 1-99 1-100 1-127** — Number of customers, DND groups, avg number per group.	dndg-1
TYNM	**DTR 1-126** — Number of digitone receivers.	basic-1
TYNM	**EBLF 1-99 yy zz** — Enhanced Busy Lamp Field. xx = the number of customers to receive the feature yy = the average number of hundreds groups per customer zz = the average DN length (4, 5, 6, or 7 digits)	basic-14
TYNM	**ESN 1-99** — Number of customers with ESN.	basic-1
TYNM	**FCAS 1-99 xx xx xx** — Force Charge Account. Number of customers, number of free calling area tables, maximum average number of FCAS blocks, maximum average number of different first digit of NXX codes.	fca-1
TYNM	**FGD xxx yyy** — FGD datablocks. xxx = number of FGD blocks (1-128) yyy = average number of II entries	fgd-17
TYNM	**MFR 1-99 0-126 0-126** — Automatic Call Distribution routes. Number of customers, average number of ACD routes per customer, average largest member number per ACD route.	bacd-1
TYNM	**MFRR 1-255** — Number of Multifrequency receivers.	fgd-17
TYNM	**MFSD xx** — Number of MF sender loops.	basic-1
TYNM	**NACD xx yy zz** — Network Automatic Call Distribution. xx = number of NACD customers yy = average number of source DNs zz = average number of target ACD-DNs	nacd-15
TYNM	**NCTL 1-99** — Number of customers with NTCL.	basic-1
TYNM	**NET 1-99 xx xx** — Number of customers, network translation codes, LOC codes.	esn-1
TYNM	**RDB 1-4064 1-126** — Number of routes, average largest member number.	basic-1
TYNM	**REMO xx** — Number of RPE loops.	rpe-1
TYNM	**RLB 1-99 xx xx** — Number of customers, route lists, max average number of entries.	basic-1
TYNM	**RSA 1-99** — Number of RS-ANI customers.	ani-1

LD29

TYNM	**SCL 4-31 1-1000 1-8191** — Speed call DN size, list size, number of new lists.	optf-1
TYNM	**SDR 1-99 xx xx** — Customers, supplemental digit restriction blocks, max avg number of entries.	basic-1
TYNM	**SL1 1-12800** — Number of new SL-1 sets.	basic-1
TYNM	**SUP 1-16** — Number of ACD supervisor TTY.	bacd-1
TYNM	**TAP 1-3** — Number of new tape units.	basic-1
TYNM	**TDS 1-80** — Number of new TDS loops.	basic-1
TYNM	**TENC 1-99** — Number of customers with Tenant Service.	ten-7
TYNM	**TENR 0-127** — Number of routes to be shared by Tenants.	ten-7
TYNM	**TENT 0-512** — Number of Tenants to have access to each other.	ten-7
TYNM	**TERM 1-159** — Number of new terminal loops.	basic-1
TYNM	**TRK 1-6400** — Number of new trunks.	basic-1
TYNM	**TTY 1-16** — Number of new TTY.	basic-1

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Status: Standard
X11 Release: 19

Network and Signaling Diagnostic (NWS)

LD30 is used to maintain Network loops. It may be run in background, loaded during the daily routines or loaded manually to enter commands.

Program operation

When invoked automatically by the system, the overlay performs the following tests:

- network memory of each enabled network card
- continuity of the speech path to each PE shelf (for enabled loops only)
- signaling channel to each line or trunk card (on enabled loops only)
- signaling channel through each ISDLC card to each Digital telephone or data TN
- clocks are switched

For the Integrated Voice Messaging System (IVMS), the overlay does not test Automatic Call Distribution (ACD) positions when the positions belong to IVMS-DN groups.

Digital telephones that pass the signaling test have their date and time updated to match the system clock.

Any SL-1 telephone or card that fails the signaling test may be disabled by this program. Use LD32 to reenable them.

If two or more PE cards are disabled on a loop, an NWS101 message is printed without the associated NWS301 messages to indicate card failures. However, the shelves that failed are known from the NWS201 messages. Therefore, the state of the individual cards can be determined by manually retesting using the SHLF command.

If NWS301 indicates a failure of the Peripheral Buffer or Controller card, the message may not be correct. Therefore the card should be retested using the SHLF command.

This overlay does not test attendant consoles or Automatically Identified Outward Dialing (AIOD) trunks. Equipment which has been disabled due either to overload or manual request is not tested.

How to use LD30

When invoked manually, the overlay may be used to:

- conduct a complete test, as when the overlay is invoked automatically, except for switching the clocks
- conduct a test on a specific PE shelf
- get the enable/disable status of network loops
- enable or disable network loops
- clear alarm indications and the maintenance display
- download peripheral software on superloops
- clear contents of the Controller maintenance display
- read contents of the Controller maintenance display

LD30 basic commands

CDSP	Clear the maintenance display on the active CPU
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm
CMIN c	Clear minor alarm indication on attendant consoles for customer c
CMIN ALL	Clear minor alarm indication on all attendant consoles
DISL loop	Disable loop
END	Abort current test
ENLL loop	Enable network loop
LDIS	List disabled loops
LENL	List enabled loops
STAT	Get status of all network loops
STAT loop	Get status of a network loop
TTSM r s j ts	Test Time Switch Memory (TSM) of a loop
TTWI r s j ts	Test TSM when the timeslot junctor is idle

Superloop commands

The following commands are used with Controllers (NT8D01) and Network Cards (NT8D04 or NT8D18).

CPED l s	Clear contents of Controller maintenance display on loop l shelf s
DISL loop	Disable loop
END	Abort current test
ENLL loop (v)	Enable superloop, download peripheral software version v
LDIS	List disabled loops
LENL	List enabled loops
RPED l s	Read contents of the Controller maintenance display
STAT	Get status of all network loops
STAT loop	Get status of a network loop

Alphabetical list of commands

CDSP	Clear the maintenance display on the active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
CPED l s	Clear contents of Controller maintenance display on loop l shelf s.	xpe-15
	This also clears the buffer printed with the command RPED.	
DISL loop	Disable loop.	basic-1
	All calls in progress on this loop are disconnected. Peripheral cards remain software enabled and no LEDs are lit.	
END	Abort current test.	basic-1
	If no test is in progress, message NWS002 is output.	
ENLL loop	Enable network loop.	basic-1
	Enables the network, performs a network memory test and tests continuity and signaling to all shelves on the loop. If it passes the test, OK is output. This does not reenable any disabled cards on the loop. Use LD32 ENLS or ENXP commands or enable each card individually.	
	When enabling a network loop serving ISDLC cards, the ISDLC cards must be individually disabled, then reenabled to ensure that service is restored to digital telephones. Service may also be restored to digital telephones by disconnecting and then reconnecting the telephone's line cord.	
ENLL loop (v)	Enable superloop, download peripheral software version v.	xpe-15
	If version v is not specified, the software downloaded is current (c) or latest (l) version as defined in LD97.	
LDIS	List disabled loops.	basic-1
	Response is: L1, L2, Ln — L is a disabled loop, or NONE — if no cards are disabled.	
LENL	List enabled loops.	basic-1
	Response is: L1, L2, Ln — L is a enabled loop	

LD30

RPED l s — Read contents of the Controller maintenance display. (xpe-15)

This command lists the current and last 15 clock tracking states of the NT8D01 Controller. The tracking is indicated on the Controller maintenance display. The possible tracking modes are:

C0 = Controller is tracking to the network connected to port 0.
C1 = Controller is tracking to the network connected to port 1.
C2 = Controller is tracking to the network connected to port 2.
C3 = Controller is tracking to the network connected to port 3.
CF = Controller is not tracking any network.

See HEX messages for the interpretation of Controller maintenance display codes.

SLFT l s c type

Selftest ISDN BRI line card. (brsc/ bri-19)

The card must be disabled. Response is
NWS637 selftest passed, or
NWS632 selftest failed

l = loop
s = shelf
c = card
type = self-test type (Long or Short)

SLFT loop type

Selftest MISP card. (bri-18)

The comprehensive test is run automatically when the MISP is enabled.
The card must be disabled. Response is
NWS632 selftest failed, or
NWS637 selftest passed
Type = 1(comprehensive) or 2 (power-on-reset)

STAT — Get status of all network loops. (basic-1)

Gives status of network loops indicating how many are enabled and how many are disabled. Response is: x ENBL, y DSBL.

STAT loop Get status of a network loop. basic-1

Response is one of the following:

UNEQ = loop is unequipped.

DSBL: NOT RESPONDING = loop is disabled and the Network card is not responding. The card is missing, disabled by the faceplate switch or is faulty.

DSBL: RESPONDING = loop is disabled and the Network card is responding. The loop may have been disabled because of:
a) DISL command
b) associated Peripheral Signaling (PS) card is disabled
c) overload condition on associated loop. In this case an OVD message is output. An attempt to enable the loop may result in a recurrence of the overload.

x BUSY, y DSBL = loop is enabled with x channels busy, y channels disabled.

CTYF L1 L2 ... = Loop specified in the STAT command cannot receive speech from one or more loops (L1, L2). This usually indicates the LD30 continuity test failed. Probable fault is the network card.

STEI l s c d Query the Terminal Endpint Identifiers, and their corresponding USIDs. brsc-19

This command queries the TEIs, and their corresponding USIDs on the specified DSL with an established D-channel data link layer with the MISP. Output looks like:

```
MISP 111
   TEI   USID
   ---   ----
   nnn   nnnn
```

TEIT l s c d Perform TEI check on Digital Subscriber Loop d (0-7). bri-18

This test is carried out on a single specified DSL interface. It checks the existence of the defined TEIs and any possible duplication of TEIs. Duplicate TEIs are removed by the layer 2 task on the MISP.

LD30

TTSM r s j ts Test Time Switch Memory (TSM) of a loop. basic-1

Tests the Time Switch Memory (TSM) of the network card, where:

r = the network loop that may have a faulty TSM.

s = the network loop of the transmitting party.

j = the junctor used on the transmitting side of the call. Its value has a range of 0 to 7, unless the two loops are in the same group, in which case the the junctor value to be entered is 15.

ts = the timeslot used on the transmitting side of the call. Its value has a range of 2 to 31.

Note: The values normally used in this command are the same values that appeared in the ERR3036 or ERR3037 message during call processing.

TTWI r s j ts Test TSM when the timeslot junctor is idle. basic-1

The command is usually used if error message NWS800 is output in response to TTSM.

r = the network loop that may have a faulty TSM.

s = the loop ID (range 0 to 159) of the transmitting party.

j = the junctor used on the transmitting side of the call. Its value has a range of 0 to 7, unless the two loops are in the same group, in which case the the junctor value to be entered is 15.

ts = the timeslot (2-31) used on the transmitting side of the call.

Note: This command waits for the timeslot z and junctor y to become available and will then execute the command.

Issued: 04 01 94
Status: Standard
X11 Release: 19

Telephone and Attendant Console diagnostic program

This program tests the keys and lamps of telephones and attendant consoles. The tests consist of pressing keys on a telephone and checking for the correct response. This diagnostic cannot be used for testing the DISPLAYPHONE* 1200 or Meridian M3000 TOUCHPHONE*.

LD31 topics

- Using this program
- SL-1 and M1109 test
- M3000 Touchphone test
- M2009, M2018 and M2112 test
- M2006 and M2008 test
- M2216 test
- M2016S and M2616 test
- M2317 telephone test
- QCW-type Attendant Console test
- M1250 Console test
- M2250 Console test

LD31

Using this program

After loading the program, any telephone in the system may invoke the test by dialing SPRE 92, (SPRE is the Special Service Prefix Code for the customer). No further inputs from the TTY are needed. If commands are input, the system responds with TRM001 indicating an invalid command.

To start the test:

1 Load program 31.

2 With the handset on-hook dial SPRE 92 from the telephone to be tested.

3 Perform the steps given in the appropriate Table. The expected responses for LCD lamps, displays and tones are given. Each key need only be operated momentarily.

The volume keys (VOL UP and VOL DOWN) have eight levels. The level is adjusted by operating a key once for a change in one level. These keys control the audible level for ring volume, buzz volume and speech/tone volume.

SL-1 and M1109 Telephone test

The SL-1 and M1109 key and lamp layout is shown in Figure 1. The test is provided in Table 1.

Figure 1
SL-1 and M1109 Telephone Key and Lamp Layout

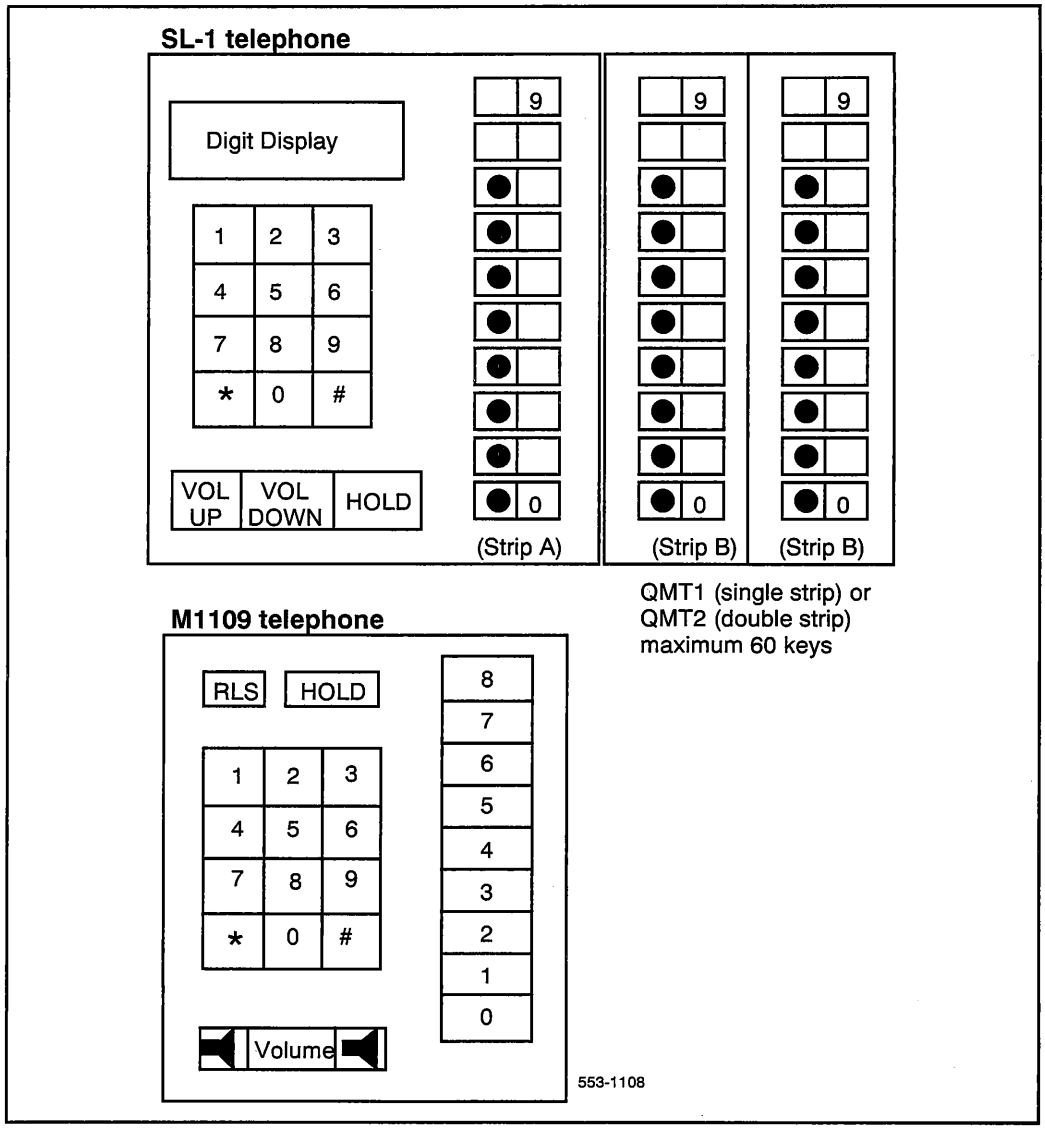


Table 1
SL-1 and M1109 test

After dialing the SPRE code 92 the SL-1 telephone shows LEDs 0-7 lit on all key strips and the display shows all 8's.

Note 1: If a lamp field array module exists on an SL-1 telephone, the following responses are included : * Key – All lamps on, # Key – All lamps off, Strip A Key 0 – Diagonal test pattern (see Figure 6).

Note 2: Response shown is for a 16-digit display. For an 8-digit display, only the last eight characters of each response are shown.

Step	Key operated	LCD location and response	Display and Tones
1	Handset off-hook	LEDs A0 to A7 flash	blank display
2	Handset on-hook	LEDs A0 to A7 fast flash	blank display
3	Handset off-hook	LEDs A0 to A7 lit	8888888888888888
4	Handset on-hook	All LEDs off	blank display
5	Dial Pad key 1	LED A0 lit	1
6	Dial Pad key 2	LED A1 lit	12
7	Dial Pad key 3	LED A2 lit	123
8	Dial Pad key 4	LED A3 lit	1234
9	Dial Pad key 5	LED A4 lit	12345
10	Dial Pad key 6	LED A5 lit	123456
11	Dial Pad key 7	LED A6 lit	1234567
12	Dial Pad key 8	LED A7 lit	12345678
13	Dial Pad key 9	LEDs A0 & A7 lit	123456789
14	Dial Pad key 0	LEDs A1 & A7 lit	1234567890
15	Dial Pad key *	LEDs A0 to A7 lit	8888888888888888
16	Dial Pad key #	All LEDs off	blank display
17	Strip A key 0	LED A0 lit	
18	Strip A key 1	LED A1 lit	
19	Strip A key 2	LED A2 lit	

— continued —

Table 1
SL-1 and M1109 test (continued)

Step	Key operated	LCD location and response	Display and Tones
20	Strip A key 3	LED A3 lit	
21	Strip A key 4	LED A4 lit	
22	Strip A key 5	LED A5 lit	
23	Strip A key 6	LED A6 lit	
24	Strip A key 7	LED A7 lit	
25	Strip A key 8 (SL-1)	LEDs A0 & A7 lit	
26	Strip A key 9 (SL-1)	LEDs A1 & A7 lit	
27	Strip A key 8 (M1109)	LED A0 to A7 flashing LED 8 lit	
28	RLS key (M1109)	LEDs A1 & A7 lit	
29	Strip B key 0	LED B0 lit	
30	Strip B key 1	LED B1 lit	
31	Strip B key 2	LED B2 lit	
32	Strip B key 3	LED B3 lit	
33	Strip B key 4	LED B4 lit	
34	Strip B key 5	LED B5 lit	
35	Strip B key 6	LED B6 lit	
36	Strip B key 7	LED B7 lit	
37	Strip B key 8 (SL-1)	LEDs B0 & B7 lit	
38	Strip B key 9 (SL-1)	LEDs B1 & B7 lit	
39	If 10-key or 20-key add-on modules are equipped, repeat steps 29 to 38 for each key/lamp strip on each module before proceeding.		
40	HLD key	LEDs, A0 to A4 lit	Dial tone
41	Handset off-hook	All LEDs flash (SL-1) LED A0 to A7 lit (M1109)	Dial tone from handset only
42	Handset on-hook	All LEDs fast flash (SL-1) All LEDs off (M1109)	Dial tone from speaker
43	Vol Up key	LEDs A5 to A7 lit	Volume up
44	Vol Down key	LEDs A5 to A7 off	Volume down
45	HLD key	LEDs A0 to A4 lit	Buzzer
46	HLD key	End of test	

M3000 Touchphone test

Terminal diagnostics are provided by the M3000 Touchphone itself. Refer to *Meridian 1 telephones description and specifications* (553-3001-108).

M2009, M2018 and M2112 test

The M2000 key and lamp layout is shown in Figure 2. The test is provided in Table 2.

Figure 2
Meridian M2000 Series Digital Telephone Key and LCD Layout

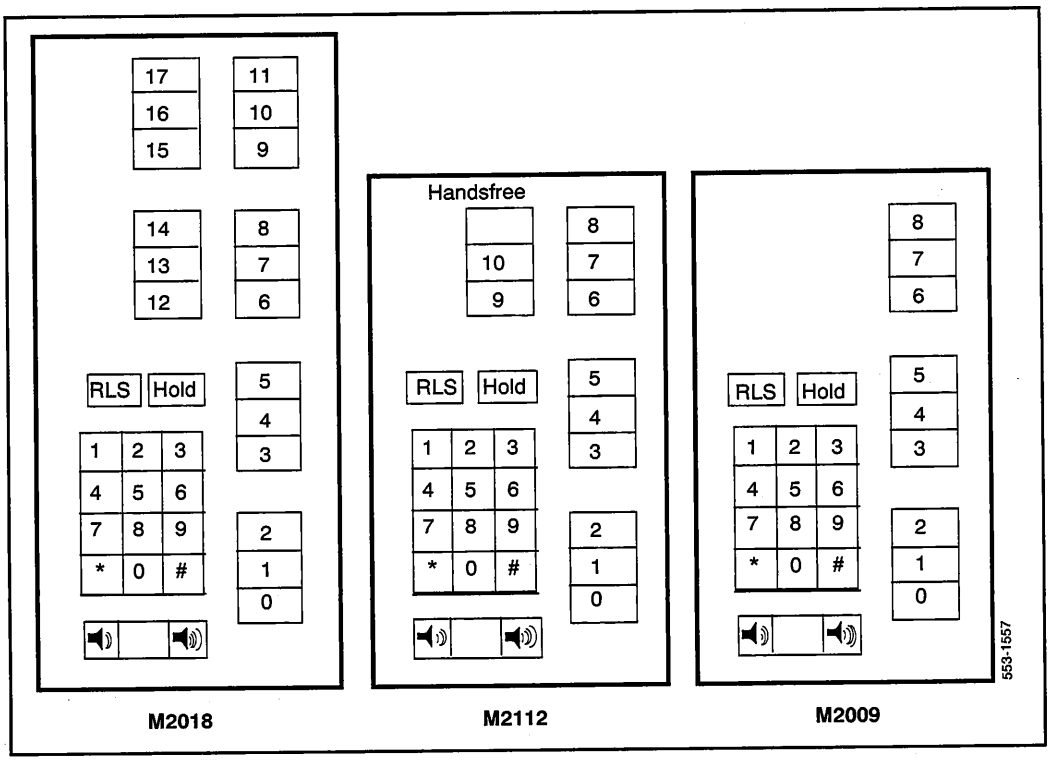


Table 2
M2009, M2018 and M2112 test

After dialing the SPRE code 92 the M2018 and M2112 telephones shows all LEDs lit and the display shows all 8's. For the M2009 press the "*" key first.

Step	Key operated	LCD location and response	Display and Tones
1	Handset off-hook	All LCDs flash Handsfree lit (M2112)	blank display
2	Handset on-hook	All LCDs fast flash Handsfree lit (M2112)	blank display
3	Handset off-hook	All LCDs lit	blank display
4	Handset on-hook	All LCDs off Handsfree lit (M2112)	blank display
5	Dial Pad key 1	LCD 0 lit	1
6	Dial Pad key 2	LCD 1 lit	12
7	Dial Pad key 3	LCD 2 lit	123
8	Dial Pad key 4	LCD 3 lit	1234
9	Dial Pad key 5	LCD 4 lit	12345
10	Dial Pad key 6	LCD 5 lit	123456
11	Dial Pad key 7	LCD 6 lit	1234567
12	Dial Pad key 8	LCD 7 lit	12345678
13	Dial Pad key 9	LCDs 0 & 7 lit	123456789
14	Dial Pad key 0	LCDs 1 & 7 lit	1234567890
15	Dial Pad key *	All LCDs lit	8888888888888888
16	Dial Pad key #	All LCDs off	blank display
17	Fixed key 0	LCD 0 lit	
18	Fixed key 1	LCD 1 lit	
19	Fixed key 2	LCD 2 lit	
20	Fixed key 3	LCD 3 lit	
21	Fixed key 4	LCD 4 lit	
22	Fixed key 5	LCD 5 lit	

— continued —

Table 2
M2009, M2018 and M2112 test (continued)

Step	Key operated	LCD location and response	Display and Tones
23	Fixed key 6	LCD 6 lit	
24	Fixed key 7	LCD 7 lit	
25	Fixed key 8	LCD 8 lit	
26	Fixed key 9	LCD 9 lit	
27	Fixed key 10	LCD 10 lit	
	Note: Steps 28 to 34 are for testing the M2018 only.		
28	Fixed key 11	LCD 11 lit	
29	Fixed key 12	LCD 12 lit	
30	Fixed key 13	LCD 13 lit	
31	Fixed key 14	LCD 14 lit	
32	Fixed key 15	LCD 15 lit	
33	Fixed key 16	LCD 16 lit	
34	Fixed key 17	LCD 17 lit	
35	HLD key	LCDs 0 to 4 lit	Dial tone
36	Handset off-hook	all LCDs flash Handsfree lit (M2112)	Dial tone from handset only
37	Handset on-hook	all LCDs fast flash Handsfree lit (M2112)	Dial tone from speaker
38	Volume up and down		Tone increases/decreases in handset receiver or speaker
39	Release key	All LCDs off	
40	HLD key	LCDs 0 to 4 lit	Buzzer
41	HLD key	End of test	

— **continued** —

Table 2
M2009, M2018 and M2112 test (continued)

Step	Key operated	LCD location and response	Display and Tones
	To test M2112 Handsfree key, dial SPRE 92 with the handset off-hook.		
42	Dial SPRE 92 with the handset off-hook.	All LEDs are lit	
43	Handsfree key	LCD 0 to 2 lit	
44	HOLD key	LCD 0 to 4 lit	Dial tone
45	HOLD key	LCD 0 to 4 lit	Buzzer
46	HOLD key	end of test	

Meridian M2006 and M2008 tests

The M2006 and M2008 faceplate is shown in Figure 3. The M2006 test is provided in Table 3. The M2008 test is provided in Table 4.

Figure 3
Meridian M2006 and M2008 telephone

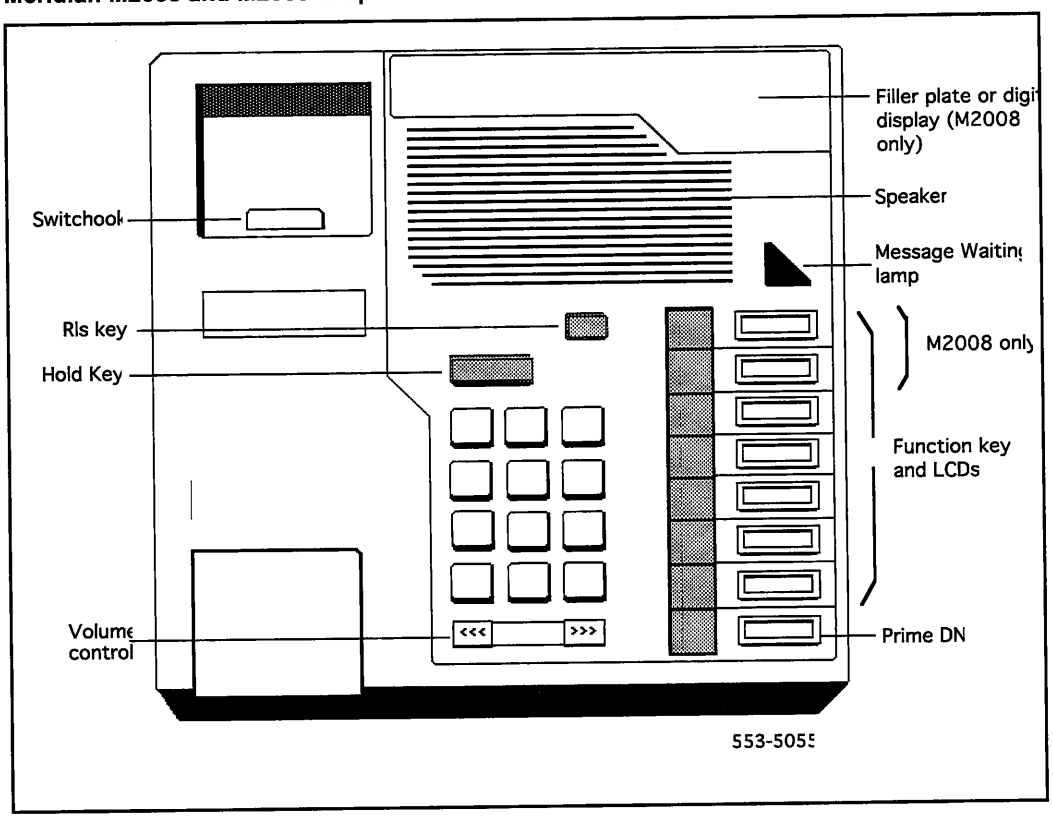


Table 3
Meridian M2006 test

Step	Key operated	Response
1	Test feature keys.	
	Key 0	LCD 0 lit
	Key 1	LCD 1 lit
	Key 2	LCD 2 lit
	Key 3	LCD 3 lit, turn on message waiting LED
	Key 4	LCD 4 lit, turn off message waiting LED
	Key 5	LCD 5 lit (if key 5 is not a Program key for data option)
2	Test keypad keys.	
	Key 1	LCD 0 lit
	Key 2	LCD 1 lit
	Key 2	LCD 2 lit
	Key 4	LCD 3 lit
	Key 5	LCD 4 lit
	Key 6	LCD 0 and 4 lit
	Key 7	LCD 1 and 4 lit
	Key 8	LCD 2 and 4 lit
	Key 9	LCD 3 and 4 lit
	Key 0	LCD 1 and 4 lit
	Key *	all LCDs lit
	Key #	all LCDs off
3	Test fixed keys.	
	HLD	LCDs 0 to 4 lit, dial tone from speaker
	Release	all LCDs off
	Off Hook	all LCDs flash, dial tone from handset only
	On Hook	all LCDs fast flash, dial tone from speaker
	Off Hook	all LCDs lit
	On Hook	all LCDs off
	HLD	LCDs 0 to 4 lit, buzzer
	HLD	end of test

Table 4
Meridian M2008 test

Step	Key operated	Response
1	Test feature keys.	
	Key 0	LCD 0 lit, display upper case letters
	Key 1	LCD 1 lit, display lower case letters
	Key 2	LCD 2 lit, display clears
	Key 3	LCD 3 lit, display darkens
	Key 4	LCD 4 lit, top line of display darkens
	Key 5	LCD 5 lit, turn on message waiting LED
	Key 6	LCD 6 lit, turn off message waiting LED
	Key 7	LCD 7 lit, display Program screen
2	Test keypad keys.	
	Key 1	LCD 0 lit, 1 on display
	Key 2	LCD 1 lit, 2 on display
	Key 2	LCD 2 lit, 3 on display
	Key 4	LCD 3 lit, 4 on display
	Key 5	LCD 4 lit, 5 on display
	Key 6	LCD 5 lit, 6 on display
	Key 7	LCD 6 lit, 7 on display
	Key 8	LCD 0 and 6 lit, 8 on display
	Key 9	LCD 1 and 6 lit, 9 on display
	Key 0	LCD 2 and 6 lit, 0 on display
	Key *	all LCDs lit, top line of display darkens
	Key #	all LCDs off, display clears
3	Test fixed keys.	
	HLD	LCDs 0 to 4 lit, dial tone from speaker
	Release	all LCDs deactivated, display clears
	Off Hook	all LCDs flash, dial tone from handset only
	On Hook	all LCDs fast flash, dial tone from speaker
	Off Hook	all LCDs lit, display darkens
	On Hook	all LCDs off, display clears
	HLD	LCDs 0 to 4 lit, buzzer
	HLD	end of test

Meridian M2216, M2016S and M2616 test

The faceplate is shown in Figure 4. The M2216 test is provided in Table 5. The M2016S and M2616 test is provided in Table 6.

Figure 4
Meridian M2216, M2016S and M2616 telephone

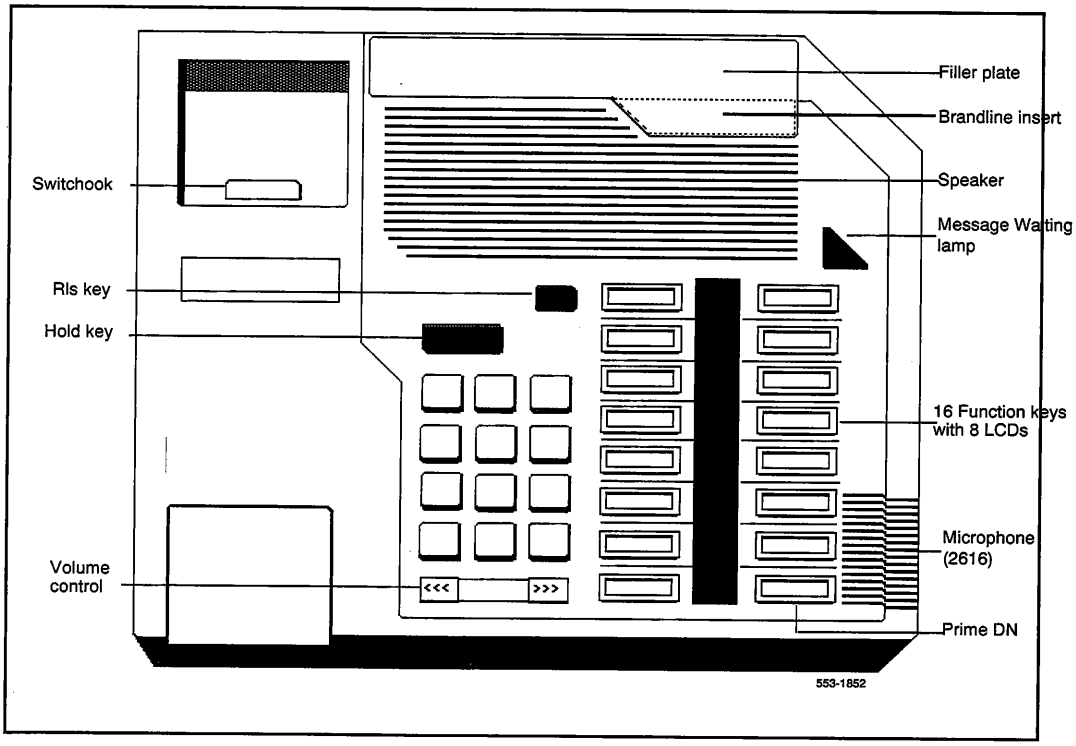


Table 5
Meridian M2216 test

Note: Do not test key 7

Step	Key operated	Response
1	Test feature keys.	
	Key 0	LCD 0 lit,display in upper case
	Key 1	LCD 1 lit, display lower case letters
	Key 2	LCD 2 lit, display clears
	Key 3	LCD 3 lit, display darkens
	Key 4	LCD 4 lit, top line of display darkens
	Key 5	LCD 5 lit, turn on message waiting LED
	Key 6	LCD 6 lit, turn off message waiting LED
	Key n>8	LCD n lit
2	Test keypad keys.	
	Key 1	LCD 0 lit, 1 on display
	Key 2	LCD 1 lit, 2 on display
	Key 2	LCD 2 lit, 3 on display
	Key 4	LCD 3 lit, 4 on display
	Key 5	LCD 4 lit, 5 on display
	Key 6	LCD 5 lit, 6 on display
	Key 7	LCD 6 lit, 7 on display
	Key 8	LCD 0 and 6 lit, 8 on display
	Key 9	LCD 1 and 6 lit, 9 on display
	Key 0	LCD 2 and 6 lit, 0 on display
	Key *	all LCDs lit, bottom line of display darkens
	Key #	all LCDs off, display clears
3	Test fixed keys.	
	HLD	LCDs 0 to 4 lit, dial tone
	HLD	LCDs 0 to 4 lit, buzzer
	HLD	end of test, all indicators off

Table 6
Meridian M2016S and M2616 test

Note: Do not test key 7.

Step	Key operated	Response
1	Test feature keys.	
	Key 0	LCD 0 lit,display in upper case
	Key 1	LCD 1 lit, display lower case letters
	Key 2	LCD 2 lit, display clears
	Key 3	LCD 3 lit, display darkens
	Key 4	LCD 4 lit, top line of display darkens
	Key 5	LCD 5 lit, turn on message waiting LED
	Key 6	LCD 6 lit, turn off message waiting LED
	Key n>8	LCD n lit
2	Test keypad keys.	
	Key 1	LCD 0 lit, 1 on display
	Key 2	LCD 1 lit, 2 on display
	Key 2	LCD 2 lit, 3 on display
	Key 4	LCD 3 lit, 4 on display
	Key 5	LCD 4 lit, 5 on display
	Key 6	LCD 5 lit, 6 on display
	Key 7	LCD 6 lit, 7 on display
	Key 8	LCD 0 and 6 lit, 8 on display
	Key 9	LCD 1 and 6 lit, 9 on display
	Key 0	LCD 2 and 6 lit, 0 on display
	Key *	all LCDs lit, top line of display darkens
	Key #	all LCDs off, display clears
3	Test fixed keys.	
	Handsfree	LCD 15 lit
	Release	all LCDs deactivated
	HLD	LCDs 0 to 4 lit, dial tone from speaker
	Off Hook	all LCDs flash, dial tone from handset, darken line 2 of display
	On Hook	all LCDs flash, dial tone from speaker
	Off Hook	all LCDs lit
	On Hook	all LCDs off
	HLD	LCDs 0 to 4 lit, buzzer
	HLD	End of test

M2317 telephone test

The key and LCD layout is shown in Figure 5. The test is provided in Table 7.

Figure 5
M2317 telephone key and LCD layout

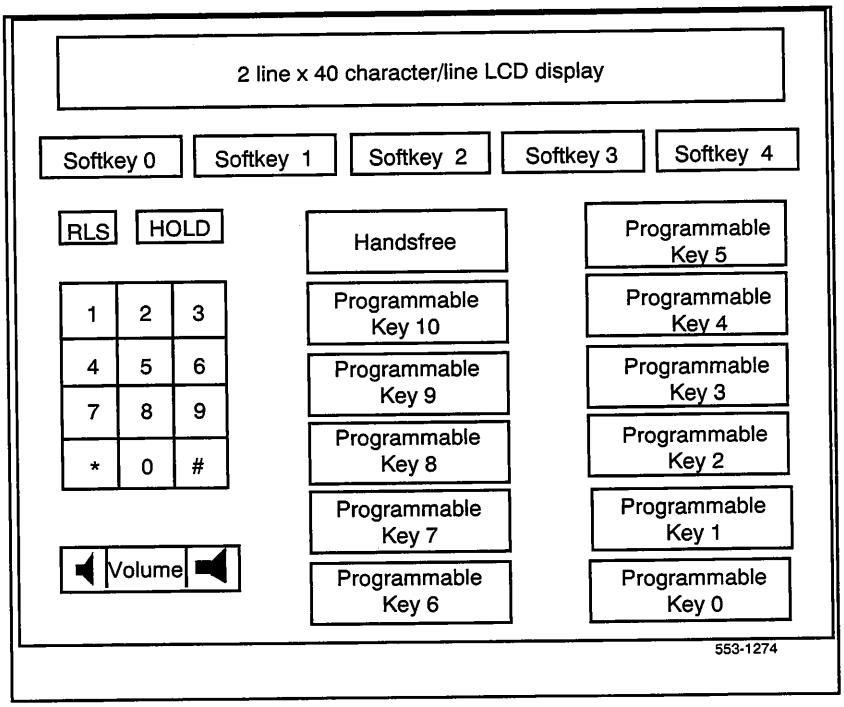


Table 7
Meridian M2317 test

Step	Key operated	LCD location and response	Display and Tones
1	Off-hook	All LCDs flash, except Handsfree	192
2	On-hook	All LCDs fast flash, except Handsfree	192
3	Off-hook	All LCDs lit	All 80 character elements (40 characters x 2 lines) are fully lit. Each character element is made up of 35 dots in a 5 x 7 dot array.
4	On-hook	All LCDs off	All 80 character elements are off
	Dial Pad Keys:		
5	Key 1	LCD 0 lit	1
6	Key 2	LCD 1 lit	12
7	Key 3	LCD 2 lit	123
8	Key 4	LCD 3 lit	1234
9	Key 5	LCD 4 lit	12345
10	Key 6	LCD 5 lit	123456
11	Key 7	LCD 6 lit	1234567
12	Key 8	LCD 7 lit	12345678
13	Key 9	LCDs 0 & 7 lit	123456789
14	Key 0	LCDs 1 & 7 lit	1234567890
15	Key 1	LCD 0 lit	12345678901
16	Key 2	LCD 1 lit	123456789012
17	Key 3	LCD 2 lit	1234567890123
18	Key 4	LCD 3 lit	12345678901234
19	Key 5	LCD 4 lit	123456789012345
20	Key 6	LCD 5 lit	1234567890123456

— continued —

Table 7
Meridian M2317 test (continued)

Step	Key operated	LCD location and response	Display and Tones
21	Key 7	LCD 6 lit	12345678901234567
22	Key 8	LCD 7 lit	123456789012345678
23	Key 9	LCDs 0 & 7 lit	1234567890123456789
24	Key 0	LCDs 1 & 7 lit	12345678901234567890
25	Key 1	LCD 0 lit	123456789012345678901
26	Key 2	LCD 1 lit	1234567890123456789012
27	Key 3	LCD 2 lit	12345678901234567890123
28	Key 4	LCD 3 lit	123456789012345678901234
29	Key 5	LCD 4 lit	1234567890123456789012345
30	Key 6	LCD 5 lit	12345678901234567890123456
31	Key 7	LCD 6 lit	123456789012345678901234567
32	Key 8	LCD 7 lit	1234567890123456789012345678
33	Key 9	LCDs 0 & 7 lit	12345678901234567890123456789
34	Key 0	LCDs 1 & 7 lit	123456789012345678901234567890
35	Key 1	LCD 0 lit	1234567890123456789012345678901
36	Key 2	LCD 1 lit	12345678901234567890123456789012
37	Key 3	LCD 2 lit	123456789012345678901234567890123
38	Key 4	LCD 3 lit	1234567890123456789012345678901234

— continued —

Table 7
Meridian M2317 test (continued)

Step	Key operated	LCD location and response	Display and Tones
39	Key 5	LCD 4 lit	1234567890123456789012345678901234 5
40	Key 6	LCD 5 lit	12345678901234567890123456789012345 6
41	Key 7	LCD 6 lit	123456789012345678901234567890123456 7
42	Key 8	LCD 7 lit	1234567890123456789012345678901234567 8
43	Key 9	LCDs 0 & 7 lit	12345678901234567890123456789012345678 9
44	Key 0	LCDs 1 & 7 lit	123456789012345678901234567890123456789 0
45	Repeat steps 5 through 44.		
46	Key *	All LCD lit, except Handsfree key	8888888888888888888 8888888888888888888
47	Key #	All LCD go off	Display clears
	Programmable Keys:		
48	Key 0	LCD 0 lit	Blank
49	Key 1	LCD 1 lit	Blank
50	Key 2	LCD 2 lit	Blank
51	Key 3	LCD 3 lit	Blank
52	Key 4	LCD 4 lit	Blank
53	Key 5	LCD 5 lit	Blank
54	Key 6	LCD 6 lit	Blank
55	Key 7	LCD 7 lit	Blank
56	Key 8	LCD 8 lit	Blank
57	Key 9	LCD 9 lit	Blank
58	Key 10	LCD 10 lit	Blank

— continued —

Table 7
Meridian M2317 test (continued)

Step	Key operated	LCD location and response	Display and Tones
	Soft Keys:		
59	Key 0	LCD 0 flashes 60 ipm	ABCDEFGHIJKLMNOPQRST.....N OPQRSTUVWXYZABCDEFG.....ZAB
60	Key 1	LCD 1 flashes 60 ipm	All 80 character elements are lit
61	Key 2	LCD 2 flashes 60 ipm	abcdefghijklmnopqrst.....n opqrstuvwxyzabcdefgh.....ab
62	Key 3	LCD 3 flashes 60 ipm	Display clears
63	Key 4	LCD 4 flashes 60 ipm	Display clears
64	Press HOLD key	LCD 0 to 4 light steadily (Handsfree key lit)	Dial tone heard through speaker
65	Handset off-hook	All LCD flash at 60 ipm (Handsfree key off)	Dial tone heard through handset
66	Handset on-hook	All LCD fast flash at 120 ipm (Handsfree key on)	Dial tone heard through speaker
67	Press HANDSFREE key	LCD 0 to 2 light steadily	
68	Press RELEASE key	All LCD go off	
69	Press HOLD key	LCD 0 to 4 lit steadily, Handsfree key on	Buzz heard through speaker
70	Press HOLD key	End of test	

QCW-type Attendant Console test

This is the procedure for testing the basic Attendant Console used with most Meridian systems. Start these tests with the headset/handset plugged in. Tones, except for Buzz, are heard from the headset/handset.

Figure 7 shows the layout of the keys and LEDs on a console. Figure 6 show the optional lamp field array. Table 8 provides the test.

Figure 6
Lamp Field Array response

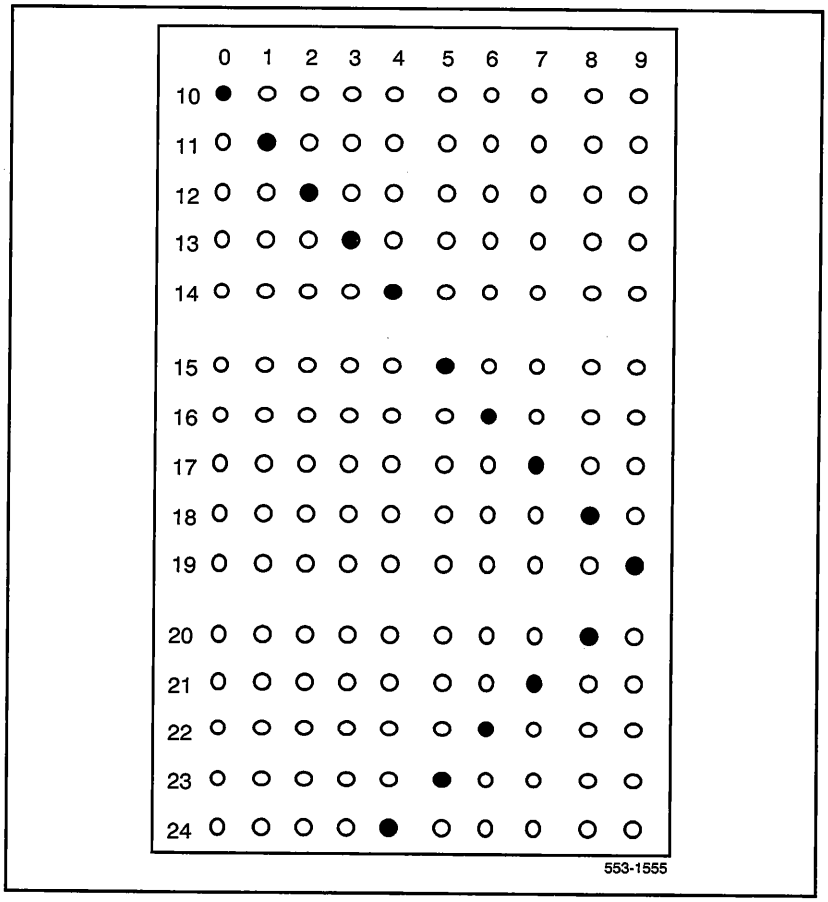


Figure 7
Meridian SL-1 console key and LED layout

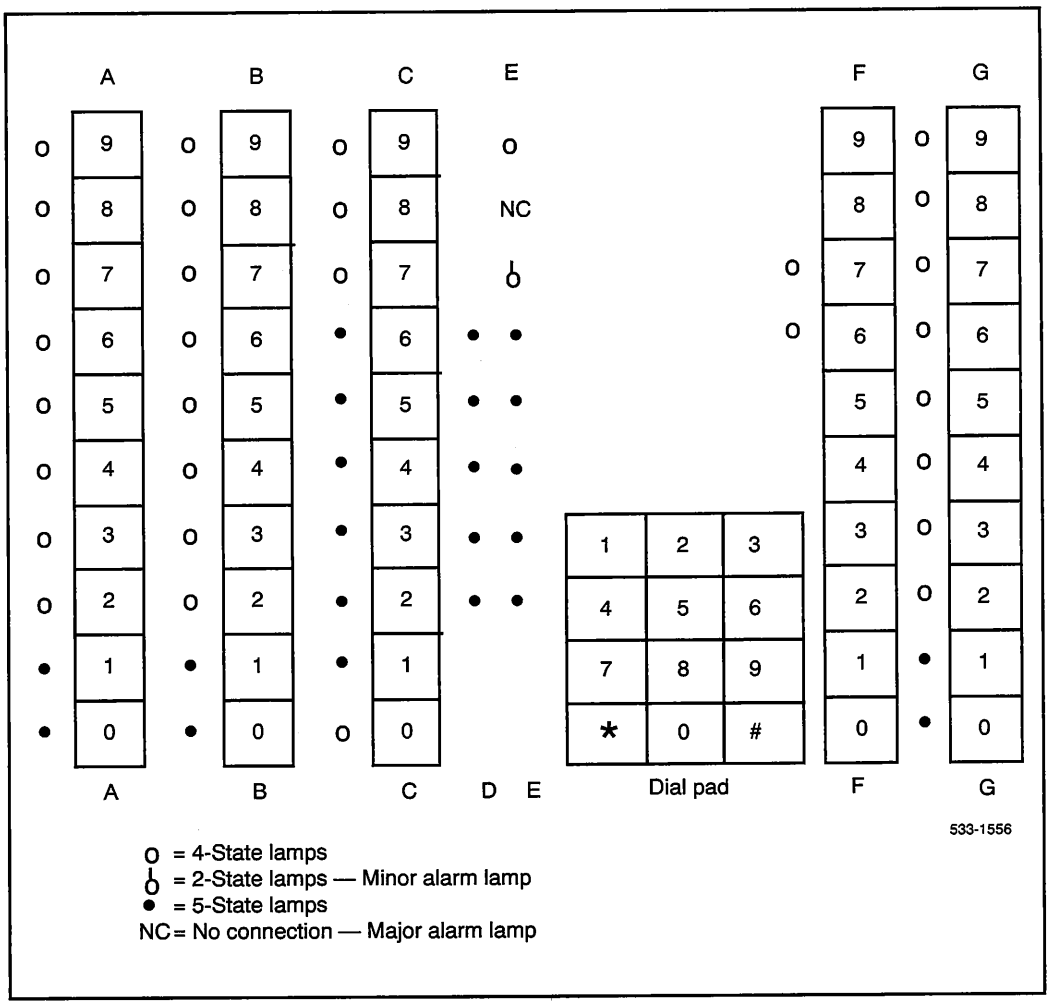


Table 8
QCW-type Attendant Console test

Note 1: If the console has a 16-digit display, test all digits by repeating the dial pad sequence. On 8-digit display consoles, only the last 8 digits are shown.

Note 2: This is the test of the conference circuit. EXCL DEST controls the DESTINATION port, EXCL SRC controls the SOURCE ports and RLS the ATTENDANT port. Each key activation reverses the enable/disable status of the port.

Step	Key operated	LCD location and response	Display and Tones
1	Select an idle loop key on the Console to be tested.		
2	Enter SPRE 92	All lit (except E8, F0-5, 8-9, D0, 7-9 and E0)	All field array LEDs are lit, display shows all 8's
3	Dial Pad Key #	All unlit	Display is blank, all lamp field array LEDs are off
4	Dial Pad Key 1	D1 lit	1
5	Dial Pad Key 2	E1 lit	12
6	Dial Pad Key 3	D2 lit	123
7	Dial Pad Key 4	E2 lit	1234
8	Dial Pad Key 5	D3 lit	12345
9	Dial Pad Key 6	E3 lit	123456
10	Dial Pad Key 7	D4 lit	1234567
11	Dial Pad Key 8	E4 lit	12345678
12	Dial Pad Key 9	D5 lit	123456789
13	Dial Pad Key 0	E5 lit	1234567890 (Note 1)
14	Dial Pad Key *	All lit (except E8, F0-5, 8-9, D0, 7-9 and E0)	8888888888888888 All field array LEDs are lit

— continued —

Table 8
QCW-type Attendant Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
15	Dial Pad Key #	all unlit	Blank, all lamp field array LEDs are off
16	Strip A key 0	A0 lit	
17	Strip A key 1	A1 lit	
18	Strip A key 2	A2 lit	
19	Strip A key 3	A3 lit	
20	Strip A key 4	A4 lit	
21	Strip A key 5	A5 lit	
22	Strip A key 6	A6 lit	
23	Strip A key 7	A7 lit	
24	Strip A key 8	A8 lit	
25	Strip A key 9	A9 lit	
26	Strip B key 0	B0 lit	
27	Strip B key 1	B1 lit	
28	Strip B key 2	B2 lit	
29	Strip B key 3	B3 lit	
30	Strip B key 4	B4 lit	
31	Strip B key 5	B5 lit	
32	Strip B key 6	B6 lit	
33	Strip B key 7	B7 lit	
34	Strip B key 8	B8 lit	
35	Strip B key 9	B9 lit	
36	Strip C key 0	C0 lit	
37	Strip C key 1	C1 lit	

— continued —

Table 8
QCW-type Attendant Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
38	Strip C key 2	C2 lit	
39	Strip C key 3	C3 lit	
40	Strip C key 4	C4 lit	
41	Strip C key 5	C5 lit	
42	Strip C key 6	C6 lit	
43	Strip C key 7	C7 lit	
44	Strip C key 8	C8 lit	
45	Strip C key 9	C9 lit	
46	Strip G key 0	G0 lit	Lamp field array displays a diagonal pattern as shown in Figure 6
47	Strip G key 1	G1 lit	All field array LEDs are off
48	Strip G key 2	G2 lit	
49	Strip G key 3	G3 lit	
50	Strip G key 4	G4 lit	
51	Strip G key 5	G5 lit	
52	Strip G key 6	G6 lit	
53	Strip G key 7	G7 lit	
54	Strip G key 8	G8 lit	
55	Strip G key 9	G9 lit	

Note: If console is equipped with 10- or 20-button modules, proceed to Step 56. If not, go to Step 66.

56	Strip H key 0	H0 lit	

— continued —

Table 8
QCW-type Attendant Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
57	Strip H key 1	H1 lit	
58	Strip H key 2	H2 lit	
59	Strip H key 3	H3 lit	
60	Strip H key 4	H4 lit	
61	Strip H key 5	H5 lit	
62	Strip H key 6	H6 lit	
63	Strip H key 7	H7 lit	
64	Strip H key 8	H0 and H7 lit	
65	Strip H key 9	H1 and H7 lit	

Note: Test all remaining key strips in a similar manner to H before testing strip F. H7 remains lit for strip I test.

66	Strip F key 0	B0 to B4 lit. H7 and I7 lit.	Busy tone
67	Strip F key 1	All lit (except D0, 7-9, E8, F0-5, F8-9)	8888888888888888
68	Strip F key 1	All Fast Flash at 120 ipm (except D0, 7-9, E8, F0-5, F8-9)	Blank
69	Strip F key 1	All Flash at 60 ipm (except D0, 7-9, E8, F0-5, F8-9)	Blank
70	Strip F key 1	C1-6, D1-6, E1-6, and G0-1 Slow Flash at 30 ipm.	
71	Strip F key 2	All strip A lit	Blank
72	Strip F key 3	All strip B lit	
73	Strip F key 4	All off	
74	Strip F key 5 (Note 2)	B0 to B4 lit	Dial tone

— continued —

Table 8
QCW-type Attendant Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
75	Strip F key 6 (Note 2)	B0 to B4 off	Dial tone only
76	Strip F key 5 (Note 2)	B0 to B4 lit	No tone
77	Strip F key 6 (Note 2)	B0 to B4 off	Busy tone only
78	Strip F key 7 (Note 2)	B0 to B4 lit	No tone
79	Strip F key 7 (Note 2)	B0 to B4 off	Busy tone
80	Handset out	B0 to B4 off	Busy tone in speaker (all keys disabled on QCW4E only)
81	Handset in	B0 to B4 lit	Speaker off, busy tone in handset receiver
82	Strip F key 0	B0 to B4 lit	Buzz in speaker
83	Strip F key 9	F7 lit	Volume up
84	Strip F key 8	F6 lit	Volume down
85	Strip F key 0	End of test	
86	Repeat test for all remaining consoles		

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M1250 Console test

The M1250 and M2250 faceplate is shown in The tests are provided in the following tables:

Table 9 — M1250 console test
Table 10 — M1250 console test in QMT2 mode
Table 11 — M2250 console test

QMT2 mode for M1250 Console

When console is configured for the QMT2 mode, the two leftmost keystrips imitate add-on keystrips QMT2 of QCW-type consoles when in shift mode. For the M1250 console to operate in the QMT2 mode, Option IC2 must be assigned in the Customer Data Block (LD15).

To place the M1250 into QMT2 mode:

1 Unplug the console from the wall jack.

2 Open the console faceplate and the set dip-switch on the top circuit board to ON. Refer to *Installation Procedures for Telephone Sets and Attendant Consoles* (553-3001-215).

3 Replace the console faceplate.

4 Plug the console into the wall jack.

5 Put the M1250 console in an idle state, with handset or headset plugged in.

6 Press SHIFT to put the console into shift mode.

7 Enter diagnostics mode by pressing F6 function key.

8 From the diagnostics menu on the Liquid Crystal Display (LCD) screen, select the QMT2 option by keying in an asterisk (*) and the number (3) from the dial pad, then check for ON confirmation on line 2 of the LCD screen.

9 Exit the diagnostics menu by pressing the octothorpe (#) key.

10 Return to the operating mode by pressing the # key again.

Figure 8
Meridian M1250 and M2250 Console

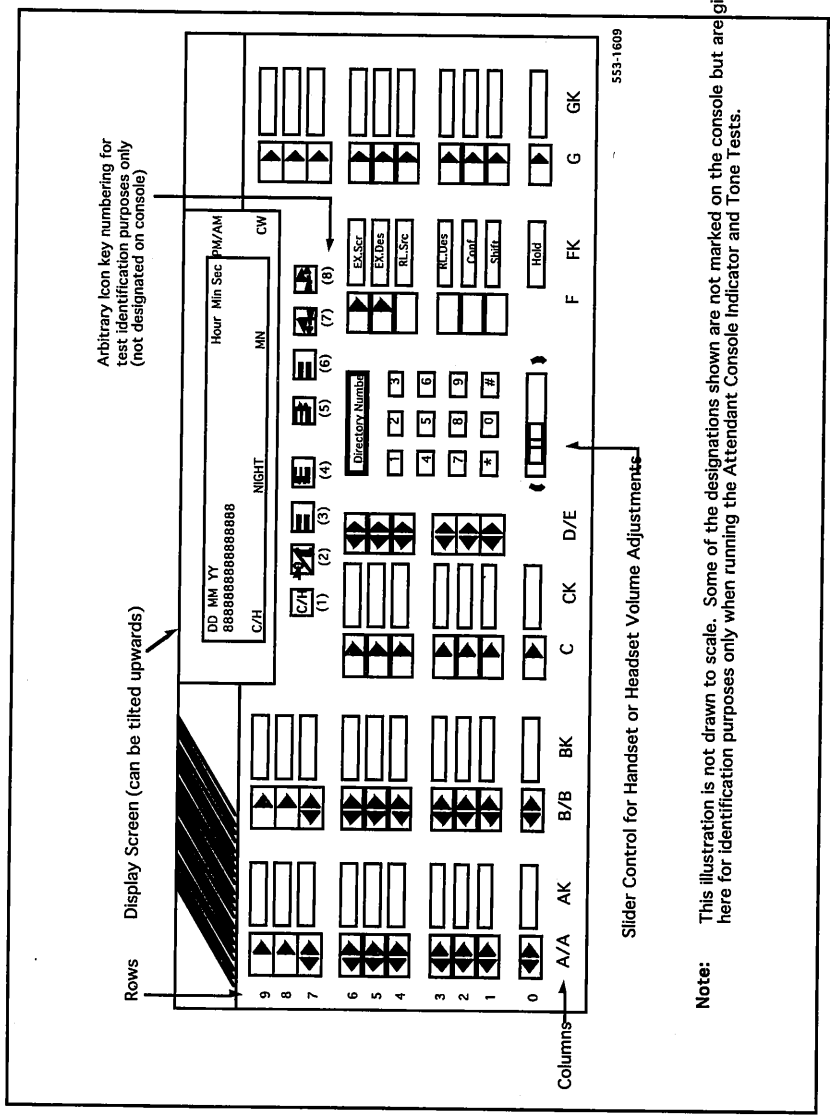


Table 9
M1250 Console test

Note 1: Refer to Table 10 for M1250 test in the QMT2 mode.

Note 2: An "Active" LCD display shows the date and time on line 1, digits on line 2, and the word ACTIVE on line 4.

Note 3: Where "headset" is written, the word "handset" may be substituted.

Note 4: The volume keys for adjusting the speaker volume (alerting tones) have eight levels. Volume levels are adjusted by pressing the Volume Up key (Icon key 2 in Shift mode) or the Volume Down key (Icon key 3 in Shift mode) once for each change in level.

Step	Key operated	LCD location and response	Display and Tones
1	Select an idle loop key on the M1250 Attendant Console to be tested.		
2	Enter SPRE 92	All LCD indicators are lit as illustrated in Figure 8.	Display screen appears as shown in Figure 8.
3	Press Key #	All LCD key indicators are blank	Active
4	Press Key 1	D1 lit	1
5	Press Key 2	E1 lit	12
6	Press Key 3	D2 lit	123
7	Press Key 4	E2 lit	1234
8	Press Key 5	D3 lit	12345
9	Press Key 6	E3 lit	123456
10	Press Key 7	D4 lit	1234567
11	Press Key 8	E4 lit	12345678
12	Press Key 9	D5 lit	123456789
13	Press Key 0	E5 lit	1234567890

Note: Only 16 integers are displayed. If steps 4 to 13 are repeated line 2 displays the numbers 1 to 0 as shown here. The display appears where the field is filled with eights (8's) in Figure 8. After key 7 is pressed, one number is truncated off the right of the display for each number added on the left. Avoid this scrolling condition as it may disrupt the rest of the test.

— continued —

Table 9
M1250 Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
14	Press Key *	All LCD indicators are lit as shown in Figure 8, except FK0-4.	Display screen appears as shown in Figure 8.
15	Press Key #	All LCD key indicators are blank	Active
16	Press AK key 0	A0 blank	Active
17	Press AK key 1	A1 blank	Active
18	Press AK key 2	A2 blank	Active
19	Press AK key 3	A3 blank	Active
20	Press AK key 4	A4 blank	Active
21	Press AK key 5	A5 blank	Active
22	Press AK key 6	A6 blank	Active
23	Press AK key 7	A7 blank	Active
24	Press AK key 8	A8 blank	Active
25	Press AK key 9	A9 blank	Active
26	Press BK key 0	B0 lit	Active
27	Press BK key 1	B1 lit	Active
28	Press BK key 2	B2 lit	Active
29	Press BK key 3	B3 lit	Active
30	Press BK key 4	B4 lit	Active
31	Press BK key 5	B5 lit	Active
32	Press BK key 6	B6 lit	Active
33	Press BK key 7	B7 lit	Active
34	Press BK key 8	B8 lit	Active
35	Press BK key 9	B9 lit	Active
36	Press CK key 0	C0 lit	Idle
37	Press CK key 1	C1 lit	Active
38	Press CK key 2	C2 lit	Active

— continued —

Table 9
M1250 Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
39	Press CK key 3	C3 lit	Active
40	Press CK key 4	C4 lit	Active
41	Press CK key 5	C5 lit	Active
42	Press CK key 6	C6 lit	Active
43	Press Icon key (1)		C/H and Active
44	Press Icon key (2)		BUSY/NIGHT

Note: BUSY or NIGHT display is dependent on how many consoles are configured in the system, and the state of those consoles at the time of the test.

1) BUSY = Standard consoles are POS BUSY — M1250 is IDLE
2) NIGHT = all consoles are POS BUSY

45	Press FK key 1	F1 lit	BUSY/NIGHT
46	Press Icon key (2)	F1 lit	BUSY/NIGHT
47	Press FK key 1	F1 off	BUSY/NIGHT
48	Press GK key 0	G0 lit	Active
49	Press GK key 1	G1 lit	Active
50	Press GK key 2	G2 lit	Active
51	Press GK key 3	G3 lit	Active
52	Press GK key 4	G4 lit	Active
53	Press GK key 5	G5 lit	Active
54	Press GK key 6	G6 lit	Active
55	Press GK key 7	G7 lit	Active
56	Press GK key 8	G8 lit	Active
57	Press GK key 9	G9 lit	Active
58	Press FK key 1	F1 lit	Active
59	Press AK key 0	A0 and F1 lit	Active

— continued —

Table 9
M1250 Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
60	Press AK key 1	A1 and F1 lit	Active
61	Press AK key 2	A2 and F1 lit	Active
62	Press AK key 3	A3 and F1 lit	Active
63	Press AK key 4	A4 and F1 lit	Active
64	Press AK key 5	A5 and F1 lit	Active
65	Press AK key 6	A6 and F1 lit	Active
66	Press AK key 7	A7 and F1 lit	Active
67	Press AK key 8	A8 and F1 lit	Active
68	Press AK key 9	A9 and F1 lit	Active
69	Press BK key 0	B0 and F1 lit	Active
70	Press BK key 1	B1 and F1 lit	Active
71	Press BK key 2	B2 and F1 lit	Active
72	Press BK key 3	B3 and F1 lit	Active
73	Press BK key 4	B4 and F1 lit	Active
74	Press BK key 5	B5 and F1 lit	Active
75	Press BK key 6	B6 and F1 lit	Active
76	Press BK key 7	B7 and F1 lit	Active
77	Press BK key 8	B8 and F1 lit	Active
78	Press BK key 9	B9 and F1 lit	Active
79	Press FK key 0	B0-4, and F1 lit	Active
80	Press FK key 0		Active tone
81	Press FK key 0	C0 and F1 lit	BUSY/NIGHT
82	Press CK key 1	C1 and F1 lit	BUSY/NIGHT
83	Dial SPRE 92	As shown in Figure 8, F1 lit	As shown in Figure 8.
84	Press key #	F1 lit, all other LCDs are blank.	Active

— continued —

Table 9
M1250 Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
85	Press FK key 0	B0-4 and F1 lit	Active
86	Press FK key 1	F1 goes blank (B0-4 still lit)	Active
87	Press FK key 2	All LCDs are lit as in Figure 8	Night
88	Press FK key 2	All LCDs Fast Flash at 120 ipm.	Fast Flash Active/Night
89	Press FK key 2	All LCDs Flash at 60 ipm.	Flash Active/Night
90	Press FK key 2	These LCDs are lit: C1-6, D/E1-6, G0-1 Slow Flash at 30 ipm.	
91	Press FK key 3	All of Key Strip A is lit	Active
92	Press FK key 4	All LCDs in strip B lit	Active
93	Press Icon key (8)	All LCDs are blank	Active
94	Press FK key 5	B0-4 lit	Active
95	Press Icon key (7)	All LCDs are blank	Active
96	Press FK key 6	B0-4 lit	Active
97	Press FK key 6	B0-4 are blank	Active
98	Remove the headset jack (unplug the headset)	All LCDs are blank	Active
99	Replace the headset jack (plug-in the headset)	B0-4 lit	Active
100	Press FK key 0	B0-4 lit	Buzz tone to the Attendant display is active
101	Press FK key 0	C0 lit	BUSY/NIGHT
102	Press FK key 0	End of test	NIGHT

Table 10
M1250 Console test in QMT2 mode

Note 1: An "Active" LCD display shows the date and time on line 1, digits on line 2, and the word ACTIVE on line 4.

Note 2: Where "headset" is written, the word "handset" may be substituted.

Note 3: The volume keys for adjusting the speaker volume (alerting tones) have eight levels. Volume levels are adjusted by pressing the Volume Up key (Icon key 2 in Shift mode) or the Volume Down key (Icon key 3 in Shift mode) once for each change in level.

Note 4: Ensure console is not in shift mode when beginning test.

Step	Key operated	LCD location and response	Display and Tones
1	Select an idle loop key on the M1250 console to be tested.		
2	Enter SPRE 92	All LCD indicators are lit as illustrated in Figure 8. AA and BB lit on both sides.	The display screen is activated and shows all alphanumerics as indicated in Figure 8.
3	Dial Pad Key #	All LCD indicators are blank.	Active
4	Dial Pad Key 1	D1 lit	1
5	Dial Pad Key 2	E1 lit	12
6	Dial Pad Key 3	D2 lit	123
7	Dial Pad Key 4	E2 lit	1234
8	Dial Pad Key 5	D3 lit	12345
9	Dial Pad Key 6	E3 lit	123456
10	Dial Pad Key 7	D4 lit	1234567
11	Dial Pad Key 8	E4 lit	12345678

— continued —

Table 10
M1250 Console test in QMT2 mode (continued)

Step	Key operated	LCD location and response	Display and Tones
12	Dial Pad Key 9	D5 lit	123456789
13	Dial Pad Key 0	E5 lit	1234567890

Note: Only 16 integers (maximum) are displayed, even though the display line has a total capacity of 40 characters. If steps 4 to 13 are repeated line 2 displays the numbers 1 to 0 as shown here. The display appears where the field is filled with eights in Figure 8. After key 7 is pressed, one number is truncated off the right of the display for each number added on the left. Avoid this scrolling condition as it may disrupt the rest of the test.

14	Dial Pad Key *	All LCD indicators are lit as illustrated in Figure 8.	Display screen is activated and displays alphanumerics as indicated in Figure 8.
15	Dial Pad Key #	All LCD indicators are blank	Active
16	Strip AK key 0	A0 lit	Active
17	Strip AK key 1	A1 lit	Active
18	Strip AK key 2	A2 lit	Active
19	Strip AK key 3	A3 lit	Active
20	Strip AK key 4	A4 lit	Active
21	Strip AK key 5	A5 lit	Active
22	Strip AK key 6	A6 lit	Active
23	Strip AK key 7	A7 lit	Active
24	Strip AK key 8	A8 lit	Active
25	Strip AK key 9	A9 lit	Active
26	Strip BK key 0	B0 lit	Active
27	Strip BK key 1	B1 lit	Active
28	Strip BK key 2	B2 lit	Active

— continued —

Table 10
M1250 Console test in QMT2 mode (continued)

Step	Key operated	LCD location and response	Display and Tones
29	Strip BK key 3	B3 lit	Active
30	Strip BK key 4	B4 lit	Active
31	Strip BK key 5	B5 lit	Active
32	Strip BK key 6	B6 lit	Active
33	Strip BK key 7	B7 lit	Active
34	Strip BK key 8	B8 lit	Active
35	Strip BK key 9	B9 lit	Active
36	Strip CK key 0	C0 lit	Active
37	Strip CK key 1	C1 lit	Active
38	Strip CK key 2	C2 lit	Active
39	Strip CK key 3	C3 lit	Active
40	Strip CK key 4	C4 lit	Active
41	Strip CK key 5	C5 lit	Active
42	Strip CK key 6	C6 lit	Active
43	Icon key (1)	–	C/H and Active
44	Icon key (2)	–	BUSY
45	Strip FK key 1	F1 lit	BUSY
46	Icon key (2)	F1 lit	NIGHT
47	Strip FK key 1	–	NIGHT
48	Strip GK key 0	G0 lit	Active
49	Strip GK key 1	G1 lit	Active
50	Strip GK key 2	G2 lit	Active
51	Strip GK key 3	G3 lit	Active
52	Strip GK key 4	G4 lit	Active

— continued —

Table 10
M1250 Console test in QMT2 mode (continued)

Step	Key operated	LCD location and response	Display and Tones
53	Strip GK key 5	G5 lit	Active
54	Strip GK key 6	G6 lit	Active
55	Strip GK key 7	G7 lit	Active
56	Strip GK key 8	G8 lit	Active
57	Strip GK key 9	G9 lit	Active
58	Strip FK key 1	G9 and F1 lit	Active
59	Strip AK key 0	A0 and F1 lit	Active
60	Strip AK key 1	A1 and F1 lit	Active
61	Strip AK key 2	A2 and F1 lit	Active
62	Strip AK key 3	A3 and F1 lit	Active
63	Strip AK key 4	A4 and F1 lit	Active
64	Strip AK key 5	A5 and F1 lit	Active
65	Strip AK key 6	A6 and F1 lit	Active
66	Strip AK key 7	A7 and F1 lit	Active
67	Strip AK key 8	A7, A0 and F1 lit	Active
68	Strip AK key 9	A7, A1 and F1 lit	Active
69	Strip BK key 0	A7, B0 and F1 lit	Active
70	Strip BK key 1	A7, B1 and F1 lit	Active
71	Strip BK key 2	A7, B2 and F1 lit	Active
72	Strip BK key 3	A7, B3 and F1 lit	Active
73	Strip BK key 4	A7, B4 and F1 lit	Active
74	Strip BK key 5	A7, B5 and F1 lit	Active
75	Strip BK key 6	A7, B6 and F1 lit	Active
76	Strip BK key 7	A7, B7 and F1 lit	Active

— continued —

Table 10
M1250 Console test in QMT2 mode (continued)

Step	Key operated	LCD location and response	Display and Tones
77	Strip BK key 8	A7, B7, B0 and F1 lit	Active
78	Strip BK key 9	A7, B0, B1 and F1 lit	Active
79	Strip FK key 0	A7, B7, B0 to B4 and F1 lit	Active and busy tone
80	Strip FK key 0	A7, B7, B0 to B4 and F1 lit	Active and tone from speaker
81	Strip FK key 0	C0 and F1 lit	NIGHT
82	Strip FK key 1	C0 lit	NIGHT
83	Strip CK key 1	All LCD key indicators are blank	Display screen is activated and shows all alphanumerics as indicated in Figure 8.
84	Dial Pad Key #	All LCD key indicators remain blank	Active
85	Strip FK key 0	B0 to B4 lit	Active and busy tone
86	Strip FK key 2	All LCD indicators are lit as illustrated in Figure 8.	Display is activated and displays all alphanumerics as indicated in Figure 8.
87	Strip FK key 2	As in Step 86, but LCD indicators Fast Flash at 120 ipm	As in Step 86, but LCD display Fast Flashes at 120 ipm.
88	Strip FK key 2	As in Step 86, but LCD indicators Flash at 60 ipm	As in Step 86, but LCD display Flashes at 60 ipm.
89	Strip FK key 2	All 5-state LCD indicators (strips C and D/E) Slow Flash at 30 ipm	Active

— continued —

Table 10
M1250 Console test in QMT2 mode (continued)

Step	Key operated	LCD location and response	Display and Tones
90	Strip FK key 3	All LCD indicators in strip A/A are lit	Active
91	Strip FK key 4	All LCD indicators in strip B/B lit	Active
92	Icon key (8)	All LCD indicators go off	Active
93	Icon key (7)	LCD indicators B0 to B4 lit	Active and dial tone, then busy tone
94	Strip FK key 5	LCD indicators B0 to B4 go off	Active and dial tone
95	Icon key (7)	LCD indicators B0 to B4 lit	Active
96	Strip FK key 5	LCD indicators B0 to B4 go off	Active and busy tone
97	Strip FK key 6	LCD indicators B0 to B4 lit	Active
98	Strip FK key 6	LCD indicators B0 to B4 go off	Active and busy tone
99	Handset unjacked	All LCD indicators go off	Active
100	Handset jacked in	B0 to B4 lit	Active and busy tone
101	Handset unjacked	All LCD indicators go off	Active
102	Handset jacked in at other side of console	B0 to B4 lit	Active and busy tone
103	Strip FK key 0	B0 to B4 lit	Active and tone from speaker
104	Strip FK key 0	C0 lit	NIGHT
	End of test. Repeat for all additional consoles in QMT2 mode.		

M2250 Console test

The M2250 key and LCD layout is shown in Figure 8. The test is in Table 11.

Table 11
M2250 Console test

Step	Key operated	LCD location and response	Display and Tones
1	Select idle loop key		
2	Enter SPRE code 92	All lit as shown in Figure 8, and F2 to F4 lit	8888888888888888888... 8888888888888888888...
3	Press dial pad #	All off	Active
4	Press dial pad keys:	LCD lit:	Digit display shows:
	1	D1	1
	2	E1	12
	3	D2	123
	4	E2	1234
	5	D3	12345
	6	E3	123456
	7	D4	1234567
	8	E4	12345678
	9	D5	123456789
	0	E5	1234567890
5	Repeat step 4 until both lines of the display are full		12345678901234567... 12345678901234567...
6	Press dial pad *	Lit as shown in Figure 8, and F2 to F4 lit	8888888888888888888... 8888888888888888888...
7	Press dial pad #	All LCD blank	Line 2 and 3 blank
8	Press AK key 0	A0 lit	ABCDEFGHIJKLMN...MN NOPQRSTUVWXYZ...AB
9	Press AK key 1	A1 lit	abcdefghijklmnopqrstu...mn nopqrstuvwxyzabcdefg...ab
10	Press AK key 2	A2 lit	Display shows dark squares

— continued —

Table 11
M2250 Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
11	Press AK key 3	A3 lit	Active (lines 2 and 3 are blank)
	Press AK key 4	A4 lit	
	Press AK key 5	A5 lit	
	Press AK key 6	A6 lit	
	Press AK key 7	A7 lit	
	Press AK key 8	A8 lit	
	Press AK key 9	A9 lit	
12	Press BK key 0	B0 lit	Active (lines 2 and 3 are blank)
	Press BK key 1	B1 lit	
	Press BK key 2	B2 lit	
	Press BK key 3	B3 lit	
	Press BK key 4	B4 lit	
	Press BK key 5	B5 lit	
	Press BK key 6	B6 lit	
	Press BK key 7	B7 lit	
	Press BK key 8	B8 lit	
	Press BK key 9	B9 lit	
13	Press CK key 0	C0 lit	Active (lines 2 and 3 are blank)
	Press CK key 1	C1 lit	
	Press CK key 2	C2 lit	
	Press CK key 3	C3 lit	
	Press CK key 4	C4 lit	
	Press CK key 5	C5 lit	
	Press CK key 6	C6 lit	
14	Press Icon key 1		C/H
15	Press Icon key 2		BUSY
16	Press CK key 0	C0	IDLE

— continued —

Table 11
M2250 Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
17	Press GK key 0	G0 lit	Active (lines 2 and 3 are blank)
	Press GK key 1	G1 lit	
	Press GK key 2	G2 lit	
	Press GK key 3	G3 lit	
	Press GK key 4	G4 lit	
	Press GK key 5	G5 lit	
	Press GK key 6	G6 lit	
	Press GK key 7	G7 lit	
	Press GK key 8	G8 lit	
	Press GK key 9	G9 lit	
18	Press FK key 1	F1 and G9 lit	[S] and Active line 4 (lines 2 and 3 blank)
19	Press AK key 0	F1 and A0 lit	[S] and Active (lines 2 and 3 are blank)
	Press AK key 1	F1 and A1 lit	
	Press AK key 2	F1 and A2 lit	
	Press AK key 3	F1 and A3 lit	
	Press AK key 4	F1 and A4 lit	
	Press AK key 5	F1 and A5 lit	
	Press AK key 6	F1 and A6 lit	
	Press AK key 7	F1 and A7 lit	
	Press AK key 8	F1 and A8 lit	
	Press AK key 9	F1 and A9 lit	
20	Press GK key 0	F1 and G0 lit	[S] and Active (lines 2 and 3 are blank)
	Press GK key 1	F1 and G1 lit	
	Press GK key 2	F1 and G2 lit	
	Press GK key 3	F1 and G3 lit	
	Press GK key 4	F1 and G4 lit	
	Press GK key 5	F1 and G5 lit	
	Press GK key 6	F1 and G6 lit	
	Press GK key 7	F1 and G7 lit	
	Press GK key 8	F1 and G8 lit	
	Press GK key 9	F1 and G9 lit	

— continued —

Table 11
M2250 Console test (continued)

Step	Key operated	LCD location and response	Display and Tones
21	Press Hold key	F1 and B0-4 lit	Busy tone in handset
	Press Hold key	F1 and B0-4 lit	Buzz in speaker
	Press Hold key	C0 and F1 lit	Display in BUSY/NIGHT mode
	Press CK key 1	C1 and F1 lit	Display in BUSY/NIGHT mode
22	Dial SPRE 92	F1 lit and all LCDs lit	
23	Press FK2 key	LCD flash once	Flash ACTIVE/NIGHT
	Press FK2 key	LCDs Fast Flash at 120 ipm	88888888.... 88888888....
	Press FK2 key	LCDs Flash at 60 ipm	Flash ACTIVE/NIGHT
	Press FK2 key	LCDs Flicker at 30 ipm	Flash ACTIVE/NIGHT
	Press FK2 key	LCDs stop flashing	ACTIVE
24	Press Icon key 8	All LCDs off	ACTIVE
	Press Icon key 7	B0-4 lit	
	Press Icon key 7	All LCDs off	
	Press Icon key 7	B0-4 lit	
	Press Icon key 7	All LCDs off	
	Press Icon key 7	B0-4 lit	
	Press Icon key 7	All LCDs off	
25	Handset out		ACTIVE
	Handset in (left side)	D0-4 lit	
	Handset out	All LCDs off	
	Handset in (right side)	B0-4 lit	
26	Press Hold key	B0-4 lit	Busy tone in handset
	Press Hold key	B0-4 lit	Buzz tone in speaker
	Press Hold key	C0 lit	Display in NIGHT mode
	End of test.		

Issued: 04 01 94
Status: Standard
X11 Release: 19

Network and Peripheral Equipment Diagnostic (NPR)

LD32 performs checks and maintenance functions on network and Peripheral Signaling equipment.

This overlay is used to perform the following tasks.

- get the status of Peripheral Signaling (PS), Controller and network cards
- get the status of PE shelves cards or units
- disable and enable PS, Controller and network cards
- disable and enable PE shelves, cards or units
- test message waiting lamps on 500/2500 sets
- list TNs of 500/2500 telephones with faulty message waiting lamps on specified shelf (not applicable from X11 Release 5.24 on)
- test Message Waiting Lamps (MWL) on 2500 telephones during midnight routines (Release 8+)
- print set and card IDs on superloops
- convert packed TNs in hex to the loop, shelf, card, unit format

Note 1: Disabled DID trunks are placed in the answer state while disabled.

Note 2: If Recorded Telephone Dictation (RTDT) cards are to be software enabled or disabled, the Out-of-Service (OS) lead should be connected to ground. On completion of the task, ground can be removed.

Note 3: After making any changes to the route data block, IPE TRUNK CARDS MUST BE DOWNLOADED by issuing the ENLC l s c command.

Note 4: When getting the status of a card relating to a trunk error (STAT), the term RVSD may appear with the trunk information. RVSD indicates that the software detected a reversed wired trunk for that unit.

Using Enable/Disable commands

All units on a loop go into maintenance busy mode when disabled using the DISL command. The shelves on a loop must be individually reenabled via the ENLS command. Any telephones that were in lockout mode show as idle, then go into lockout mode again 30 seconds after any unit on the shelf requests dial tone.

When enabling a network loop serving ISDLC cards, the ISDLC cards must be individually disabled then reenabled to ensure that service is restored to digital telephones. Service may also be restored to digital telephones by disconnecting, and then reconnecting the telephone's line cord.

Note: When the Trunk Failure Monitor (TFM) package is enabled, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit (it stays in the BUSY state).

LD32 basic commands

CDSP	Clear the maintenance display on the active CPU
CMIN c	Clear minor alarm indication on attendant consoles for customer c
CMIN ALL	Clear minor alarm indication on all attendant consoles
CPWD l s c u	Clear directory password for M3000 set
DISC l s c	Disable the specified card
DISI l s c	Disable specified card when it is idle
DISL loop	Disable network loop
DISN loop	Disable network card containing specified loop
DISS l s	Disable specified shelf
DISU l s c u	Disable specified unit
DSPS x	Disable Peripheral Signaling card x
END	Abort current test
ENLC l s c	Enable the specified card
ENLG x	Enable group x
ENLL loop	Enable network loop
ENLN loop	Enable network card with specified loop
ENLS l s	Enable specified shelf
ENLU l s c u	Enable specified unit
ENPS x	Enable PS card x and associated loops
LBSY l s	List TNs of all busy units on specified shelf
LDIS l s	List TNs of all disabled units on specified shelf
LIDL l s	List TNs of all idle units on specified shelf
LLBD l s	List TNs of 500/2500 sets with defective MWLs
LMNT l s	List TNs of all maintenance busy units on specified shelf
PBXH	Message waiting lamp maintenance
PBXT l (s c u), ALL	Test message waiting lamps
SDLC l s c	Get status of specified ISDLC card
STAT (loop)	Give status of one or all loops
STAT l s	Get idle, busy or disabled status of units on specified shelf

LD32

STAT l s c	Get status of specified card
STAT l s c u	Get status of specified unit
STAT NWK loop	Check status of non-superloop network card for specified loop
STAT PER x	Get status of PS card x
TRK l s c u	Seize specified trunk for outpulsing

Superloop commands

The following commands are available for superloops.

CONV tn, l s c u	Convert packed TN (in hex) to l s c u, or vice versa
DISL loop	Disable network loop
DSCT loop	Disable automatic background continuity tests for a superloop
DISS l s	Disable specified shelf
DSXP x	Disable Controller x and all connected cards
ENCT loop	Enable automatic background continuity tests for a loop
ENLL loop (v)	Enable superloop, download peripheral software version v
ENLS l s	Enable specified shelf
ENXP x (v)	Enable Controller x and associated PE cards, download software version v
ENXP XPC x (v)	Enable Controller x, do not enable the associated PE cards, download software version v
IDC loop, l s c	Print card ID for superloop or PE card
IDCS x	Print ID of all line cards on Controller x
IDU l s c u	Print telephone ID
LBSY l s	List TNs of all busy units on specified shelf
LDIS l s	List TNs of all disabled units on specified shelf
LIDL l s	List TNs of all idle units on specified shelf
SUPL (loop)	Print data for one or all superloops
STAT (loop)	Give status of one or all loops
XNTT loop	Do self test of Network card for specified superloop
XPCT x	Do self test on Controller x
XPEC (x)	Print data for Controller x

ISDN BRI SILC/UILC command summary

The following commands are available for ISDN Basic Rate Interface hardware.

DISC l s c	Disable the specified card
DISI l s c	Disable specified card when it is idle
DISU l s c d	Disable specified Digital Subscriber Loop 0-7
ENLC l s c	Enable the specified card
ENLU l s c d	Enable specified unit Digital Subscriber Loop 0-7
IDC l s c	Print BRSC card and loadware version
STAT l s c d	Get status of specified Digital Subscriber Loop 0-7

ISDN BRI BRSC command summary

The following commands are available for ISDN BRI Basic Rate Signaling Concentrator (BRSC) card, available with X11 release 19 and later.

DISC (BASE) l s c	Disable specified card
DISU BRI l s c	Disable ISDN BRI BRSC card
ENLC (BASE) l s c (FDL/NST)	Enable specified card
ENLC BRI l s c (FDL)	Enable the BRSC ISDN BRI application
IDC l s c	Print BRSC card and loadware version
STAT l s c	Get status of specified card

Alphabetical list of commands

CDSP	Clear the maintenance display on the active CPU.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
CONV tn, l s c u		
	Convert packed TN (in hex) to l s c u, or vice versa.	xpe-15
	The command format is: CONV tn — convert packed TN CONV l s c u — convert unpacked TN	
CPWD l s c u	Clear directory password for M3000 set.	basic-1
	Allows the M3000 Directory password of the specified M3000 set to be cleared. This allows a user to access the M3000 Directory if the password has been forgotten or if the user wants to change the current password.	
DISC (BASE) l s c		
	Disable specified card.	brsc/basic-19
	With X11 release 19 and later, this command is also used to disable the ISDN Basic Rate Interface Signaling Concentrator (BRSC) card. The command format is shown here. ENLC (BASE) l s c u (FDL/NST) BASE = enable only the BRSC basecode. Both the basecode and application are disabled. The application is disabled first unless BASE is entered. l = loop s = shelf c = card	
	The card faceplate LED is turned on to indicate the card is disabled, and the IPC channel is eliminated. The "." prompt is given when the process is complete.	

LD32

DISC BRI l s c	Disable the BRSC ISDN BRI application. This command is available with X11 release 19 and later. BRI = the BRSC ISDN BRI application l = loop s = shelf c = card All active and transient ISDN BRI calls are dropped, and all signaling and packet channels are torn down. The DSL software state remains the same, but the ISDN BRI line cards receive a disable message.	brsc-19
DISC l s c	Disable the specified card.	basic-1
DISI l s c	Disable specified card when it is idle.	basic-1
DISL (appl) loop (FDL)	Disable MISP application, and loop. appl = optional application name (BRIL) loop = loop number FDL = force download the application Note: with X11 release 18, entering 1 rather than FDL force downloads the application.	brsc/bri-19
DISL loop	Disable network loop. See "Using the Enable/Disable commands" in the introduction. This command is also used for superloops.	basic-1
DISN loop	Disable network card containing specified loop. Disables a network card, where "loop" is the number of the even or odd loop. Not applicable to superloops.	basic-1
DISS l s	Disable specified shelf. Disables specified shelf. See "Using the Enable/Disable commands" in the introduction.	basic-1
DISU BRI l s c	Disable ISDN BRI BRSC card.	brsc-19
DISU l s c d	Disable specified Digital Subscriber Loop 0-7.	bri-18
DISU l s c u	Disable specified unit. Disables specified unit. See "Using the Enable/Disable commands" in the introduction.	basic-1
DSCT loop	Disable automatic background continuity tests for a superloop.	xpe-15

DSPS x Disable Peripheral Signaling card x. basic-1

Disables Peripheral Signaling (PS) card x and loops serviced by the card. Disabling PS card 0 interrupts service on loops 0 to 15. To reenable the card, use the ENPS x command. If this fails, a system initialization may be required. Use the disable command with discretion. Disabling a PS card disables up to 16 loops.

The following lists the group/PS/loop relationship:

Group	PS	Loops
0	0	0 to 15
0	1	16 to 31
1	2	32 to 47
1	3	48 to 63
2	4	64 to 79
2	5	80 to 95
3	6	96 to 111
3	7	112 to 127
4	8	128 to 143
4	9	144 to 159

DSXP x Disable Controller x and all connected cards. xpe-15

ENCT loop Enable automatic background continuity tests for a loop. xpe-15

END Abort current test. basic-1

Stops outputing. Stops current test.

ENLC (BASE) l s c (FDL/NST)

Enable specified card. brsc/basic-19

If the card resides on a disabled shelf, the status is output and enable is not performed. If card has been disabled by overload, the overload status entry is cleared.

With X11 release 19 and later, this command is also used to enable the ISDN Basic Rate Interface Signaling Concentrator (BRSC) card. The command format is shown here.
ENLC (BASE) l s c u (FDL/NST)
BASE = enable on.ly the BRSC basecode. If not specified, both the basecode and the application will be enabled.
l = loop
s = shelf
c = card
FDL = force download the basecode
NST = No self-test

The card faceplate is turned off ti indicate the card is enabled, and the IPC channel is built.

ENLC BRI l s c (FDL)

Enable the BRSC ISDN BRI application. brsc-19

This command is available with X11 release 19 and later.

BRI = the BRSC ISDN BRI application
l = loop
s = shelf
c = card
FDL = force download the application

The application is force downloaded if:
– FDL is entered, or
– No application currently exists on the BRSC card, or
– There is a version number mismatch between the applications in the software and on the card.

ENLC l s c Enable the specified card. basic-1

ENLG x Enable group x. basic-1

Equivalent to two ENPS commands. Refer to DSPS command for the relationships of groups, PS cards and loops.

ENLL (appl) loop (FDL)

Enable MISP application, and loop. brsc/bri-19

appl = optional application name (BRIL)
loop = loop number
FDL = force download the application
Note: with X11 release 18, entering 1 rather than FDL force downloads the application.

ENLL loop Enable network loop. basic-1

See "Using the Enable/Disable commands" in the introduction.

ENLL loop (v) Enable superloop, download peripheral software version v. xpe-15

If version v is not specified, the software downloaded is current (c) or latest (l) version as defined in LD97.

ENLN loop Enable network card with specified loop. basic-1

Enables network card, where loop is the even or odd numbered loop on the network card. Not applicable to superloops.

ENLS l s	Enable specified shelf. If the shelf is disabled by overload, the overload status entry is cleared.	basic-1
ENLU l s c d	Enable specified unit Digital Subscriber Loop 0-7.	bri-18
ENLU l s c u	Enable specified unit. If the unit resides on a disabled shelf or card, the status is output and enable is not performed. If the unit to be enabled is a 500/2500 message waiting telephone, test the unit prior to enabling.	basic-1
ENPS x	Enable PS card x and associated loops. Enables PS card x and all loops that were enabled at time of last DSPS command. Refer to DSPS command to find the relationships of groups, PS cards and loops.	basic-1
ENXP x (v)	Enable Controller x and associated PE cards, download software version v. Enable all PE cards connected to Controller x and the Controller itself. If version v is not specified, the software downloaded to the Controller is current (c) or latest (l) version as defined in LD97.	xpe-15
ENXP XPC x (v)	Enable Controller x, do not enable the associated PE cards, download software version v. The cards connected to the Controller are not enabled by this command. If version v is not specified, the software downloaded to the Controller is current (c) or latest (l) version as defined in LD97.	xpe-15
IDC l s c	Print BRSC card and loadware version. This command, with X11 release 19 and later, queries the BRSC card ID, the basecode, and the application version number. l = loop s = shelf c = card Output example: BOOTCODE VERSION xx . . . x BASECODE VERSION xx . . . x BRI APPL VERSION xx . . . x	brsc-19
IDC l s c d	Print ID of Digital Subscriber Loop 0-7.	bri-18

IDC loop Print MISP card ID. bri-18

The format is:
CARDID: xxx...x
BASECODE VERSION: xxx...x
BRI LINE/TRUNK VERSION: xxx...x
BOOTCODE VERSION: xxx...x

IDC loop, l s c Print card ID for superloop or PE card. xpe-15

The format is:
IDC loop – print ID of Network and Controller for a superloop
IDC l s c – print ID of specified line card

The format of the card ID is CCCCCCCC-RRSSSS, where
CCCCCCCC = order code
RR = release number
SSSS = serial number

For example, a Network Card (NT8D04AA) with a release of 01 and serial number of 00001 will have a card ID with:
NT8D04AA-010001

For BRI MISP cards, the output is:
CARDID: xxx...x
BASECODE VERSION: xxx...x
BRI LINE/TRUNK VERSION: xxx...x
BOOTCODE VERSION: xxx...x

IDCS x Print ID of all line cards on Controller x. xpe-15

The format of the card ID is CCCCCCCC-RRSSSS, where
CCCCCCCC = order code
RR = release number
SSSS = serial number

For example, Digital Line Card (NT8D02AA) with a release of 01 and serial number of 00001 will have a card ID with:
NT8D02AA-010001

IDU l s c u	Print telephone ID. Print ID applies to the following set types: M2006, M2008, M2016, M2216 and M2616. The output format of the set ID (M2008 for example) is: ARIES TN: l s c u TN ID CODE: M2008 NT CODE: NT2K08WC COLOR CODE: xx RLS CODE: xx SER NUM xxxxxx (X11 release 18 and later) The color codes are: 03 is black 35 is chameleon ash 93 is dolphin grey	xpe-15
LBSY l s	List TNs of all busy units on specified shelf.	basic-1
LDIS l s	List TNs of all disabled units on specified shelf.	basic-1
LIDL l s	List TNs of all idle units on specified shelf.	basic-1
LLBD l s	List TNs of 500/2500 sets with defective MWLs. Lists TNs of all 500/2500-type units for specified loop and shelf with message waiting lamps seen by the system as defective (not available after Release 5.24).	basic-1
LMNT l s	List TNs of all maintenance busy units on specified shelf.	basic-1
PBXH	Message waiting lamp maintenance.	basic-1
PBXT l (s c u), ALL	Test message waiting lamps. Tests 500/2500 message waiting lamp on specified loop, shelf, card, unit or all 500/2500 unit in the system. This is required after failed lamp is fixed.	basic-5
SDLC l s c	Get status of specified ISDLC card.	basic-7

STAT (appl) loop

Get status of MISP loop (and application). bri-18

If "BRIL" is entered for appl, the status of the BRI Line application is output. Typical response is:

loop : MISP LOOP
mm DSBL nn BUSY
MISP lll : ENBL ACTIVATED timestamp
BRIL : ENBL

If the card has been manually disabled, the response is:
loop : MISP LOOP
DISABLED RESPONDING
MAN DSBL

If the card has been disabled by the system, the response is:
loop : MISP LOOP
DISABLED RESPONDING
SYS DSBL - aaa...a

Where aaa...a is the reason as follows:
BOOTLOADING = basecode is being downloaded to the MISP
FATAL ERROR = MISP has a serious problem
OVERLOAD = MISP overload (card inoperable)
RESET THRESHOLD = too many resets (card inoperable)
SELF TESTING = card is performing self test
SELFTEST FAILED = self test failed
SELFTEST PASSED = successfully completed self test
SHARED RAM TEST FAILED = MISP memory problem (card inoperable)
STUCK INTERRUPT = MISP hardware failure (replace card)

With the STAT BRIL option, the response includes one of the following:
APPLICATION ENBL
APPLICATION NOT CONFIGURED
APPLICATION NOT RESPONDING
APPLICATION MAN DSBL (manually disabled)
APPLICATION SYS DSBL - aaa.aaa (system disabled)

Where aaa...a is the reason as follows:
CLOSED = application is closed by basecode on the card
CLOSED ERR = error in closing the application
CORRUPTED = application is corrupted on the card
DOWNLOADING = application is being downloaded
ENABLED = application is in active state
INACTIVE = application is in inactive state
MNT BUSY = application is in maintenance busy state
WAIT DSBL = application is in process of being disabled
WAIT ENABLE = application is in process of being enabled
WAIT ERASE = application is being erased from the card
WAIT REMOVE = application is being removed from the card

STAT (loop) Give status of one or all loops. basic-1

Response is one of the following:

x BUSY, y DSBL = loop enabled with x channels busy and y channels disabled.

UNEQ = loop unequipped.

CTYF: L1 L2 = loop specified in STAT command is unable to receive data from loops L1, L2, etc. (i.e., continuity test failed in most recent LD45 loop test). Probable fault in network card.

DSBL: NOT RESPONDING = loop disabled. Network card not responding. Card missing, disabled by switch or faulty.

DSBL: RESPONDING = loop disabled but the network card responds. The loop may have been disabled due to:
– manual request (DISL)
– associated Peripheral Signaling card being disabled
– overload condition on associated loop

Note 1: For overload conditions are indicated by OVD messages. An attempt to enable a loop which was disabled due to overload may result in a recurrence of the overload condition: the system's service may be impaired for about 2 minutes.

Note 2: For MISP loops see STAT (BRIL) loop command.

STAT l s Get idle, busy or disabled status of units on specified shelf. basic-1

Displays number of units idle, busy, disabled and maintenance busy for the specified shelf.

STAT l s c Get status of specified card. brsc/ basic-19

With ISDN BRI cards, the output format is:
loop = UNIT sw_state DSL misp_state LC_state

With ISDN BRI BRSC cards, the basecode and application status are output.

```
APPLICATION   MAIN STATE    SUB STATE/ACTIVATION TIME
+-------------+-------------+-------------------------+
BASECODE      ENABLED       xx/xx/xx x:xx
BRI           ENABLED       xx/xx/xx x:xx
+-------------+-------------+-------------------------+
   IDLE 0        BUSY 0        DISABLED 8      MSBY 0
   TOTAL DSLS CONFIGURED 8
```

See "STAT l s c d" command for a list of possible states.

Note: When getting the status of a card relating to a trunk error (STAT), the term RVSD may appear with the trunk information. RVSD indicates that the software detected a reversed wired trunk for that unit.

STAT l s c d Get status of specified Digital Subscriber Loop 0-7. bri-18

The output format is:

DSL sw_state misp_tate lc_state
B1 status B2 status

Where,
sw_state = state of DSL software
ms_state = state of the DSL on the MISP card
lc_state = state of the DSL on the BRI line card

Alphabetical list of sw_state, misp_tate, lc_state and B1/B2 status:
APDB = MISP call application is disabled
BUSY = Call is active
DOWN = Link layer is not established
DSBL = DSL is disabled
ESTA = Link layer is established
IDLE = No active calls
LCNR = Line card is not responding
MBSY = DSL is in maintenance busy mode
MPDB = MISP is disabled
MPNR = MISP not responding or message is lost
NTAN = DSL is not assigned to an MISP
RLS = Link layer is not established
UNDN = DSL is in an undefined state
UNEQ = Unequipped
UP = Link layer is established
UTSM = CPU unable to send message to MISP or line card
XTDB = Superloop is disabled
XPDB = Controller is disabled

STAT l s c u Get status of specified unit. basic-1

Response is one of the following:
IDLE = idle
MBSY = maintenance busy
DSBL = disabled
DSBL = virtual terminal on SL-1 disabled by Server
BUSY = In use by call processing
UNEQ = terminal not defined in software
L500 = line is 500/2500 type
MBCS = maintenance set
BCS = normal SL-1 telephone
TRK = trunk
ATTN = attendant console
DTR = digitone receiver
PWR = console power unit

Abnormal responses:
CARD x DSBL (OVD) = Card x disabled due to overload
DND xxx xxx = Do not disturb feature is active
SHELF DSBL (OVD) = Shelf disabled due to overload
SIG FAULT = Outgoing signal circuitry fault detected on PS card under examination
WARNING: CRPTR NOT IN RANGE = TN's data is corrupted. Check BUG messages relating to the TN

Responses caused by invalid equipment choice:
EXT DSBL = extender disabled
LOOP NOT TERM = loop is not on a terminal loop
LOOP UNEQ = loop is unequipped
SHELF UNEQ = shelf is unequipped
SHELF UNEQ W/PBX CARDS — no 500 cards on shelf
CARD UNEQ = card is unequipped
CARD NOT PBX = card is not a PBX card
UNIT UNEQ FOR MW = unequipped for message waiting
PER UNEQ = PS card is unequipped
UNIT UNEQ = unit is unequipped

STAT NWK loop

Check status of non-superloop network card for specified loop. basic-1

Check the status of network card, where loop is the even or odd numbered loop on the network card.

STAT PER x	Get status of PS card x. If the PS card is disabled, the response is changed from DSBL to either: DSBL: NOT RESPONDING = PS card N is either missing, either faulty or disabled via the faceplate switch. DSBL: RESPONDING = loop is disabled but the network circuit for that loop is present and responding to CPU. The loop may have been disabled by a manual request (DISL) or the associated PS card may have been manually disabled. *Note:* If neither of these conditions apply, the card may have been disabled due to an overload condition on the associated loop. Check for OVD messages. An attempt to enable a loop which was disabled due to overload may result in a recurrence of the overload condition: the system's service may be impaired for about 2 minutes.	basic-1
SUPL (loop)	Print data for one or all superloops.	xpe-15
TRK l s c u	Seize specified trunk for outpulsing. This command is valid at a SL-1 maintenance telephone only. The specified trunk is connected to the SL-1 telephone and a test call may be performed on the trunk. When the test call is completed, access sequence SPRE 91 must be redialed to use the SL-1 telephone to input more commands.	basic-1
XNTT loop	Do self test of Network card for specified superloop. The Network card must be disabled before the self test.	xpe-15
XPCT x	Do self test on Controller x. The NT8D01 Controller must be disabled before the self test.	xpe-15
XPEC (x)	Print data for Controller x.	xpe-15

LD32

444 Network and Peripheral Equipment Diagnostic (NPR)

Issued: 04 01 94
Status: Standard
X11 Release: 19

1.5Mb/s RPE Diagnostic (RPED)

The 1.5MB/S Remote Peripheral Equipment Diagnostic (RPD) is loaded manually or as one of the daily routines.

Note: LD33 should be included in the daily routines for any system having Remote Peripheral Equipment (RPE).

Overlay operation during daily routines

When loaded as part of the daily routines, the overlay will, for each RPE loop in the system:

- reset internal counts of carrier failures which are used to determine whether carriers should be automatically reenabled if a temporary carrier fault occurs
- test the connection memory on the local network card
- test the signaling channel to the Local Carrier Buffer (LCB) card
- test the connection memory of the Remote Peripheral Switch (RPS) card
- test the continuity of the speech path to the remote site using all idle channels
- switch the primary carrier function from the current primary carrier to the other one, then repeat the above tests

If faults are detected during the above tests, the primary carrier is selected to give the greatest number of working speech timeslots, provided that the signaling channel works on this carrier.

LD33

446 1.5Mb/s RPE Diagnostic (RPED)

Purpose of LD33

When loaded manually, the overlay may be used to:

- conduct a test of a specific RPE loop, similar to the automatic tests
- enable or disable an RPE loop, or either carrier associated with an RPE loop
- enable or disable the automatic carrier status monitoring function on an RPE loop
- give timeslot numbers of speech channels which could not be successfully transmitted by a specified carrier
- switch the primary carrier function from one carrier to the other
- obtain the status of RPE loops and/or carriers
- obtain a list of equipped RPE loops
- clear minor alarms and the maintenance display on the active CPU

Speech timeslots used by each carrier

If primary carrier = 0

- Speech channels carried by primary carrier = 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31
- Speech channels carried by secondary carrier = 2, 3, 8, 9, 16-19, 24, 25

If primary carrier = 1

- Speech channels carried by primary carrier = 2, 3, 4, 5, 8, 9, 10, 11, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29
- Speech channels carried by secondary carrier = 6, 7, 12, 13, 14, 15, 22, 23, 30, 31

LD33 commands

CDSP	Clears the maintenance display on the active CPU
CMIN ALL	Resets minor alarm indication on attendant consoles for all customers
CMIN c	Resets minor alarm indication on attendant consoles for customer c
DISC loop c	Disable carrier c on RPE loop
DISI loop c	Disable carrier c on RPE loop when idle
DISL loop	Disable specified RPE loop
DISM loop	Disable carrier status monitoring on RPE loop
END	Abort current command
ENLC loop c	Enable carrier c on RPE loop
ENLL loop	Enable RPE loop
ENLM loop	Enable carrier status monitoring on RPE loop
LDIS loop c	List all speech channels that failed continuity test on carrier c
LOOP loop	Perform various tests on RPE loop
LRPE	List all equipped RPE loops
NCAR loop	Get number of "carrier status change" messages for RPE loop
SCAR loop	Switch primary carrier on RPE loop
STAT	Get number of busy channels on specified carrier in the active DISI request
STAT loop	Get status of RPE loop
STAT loop ALL	Get status of the loop, carriers and RPS card
STAT loop c	Get status of carrier c on RPE loop
STAT loop RPS x	Get status of RPS card x on specified loop

LD33

Alphabetical list of commands

CDSP	Clears the maintenance display on the active CPU.	rpe-1
CMIN ALL	Resets minor alarm indication on attendant consoles for all customers.	rpe-1
CMIN c	Resets minor alarm indication on attendant consoles for customer c.	rpe-1
DISC loop c	Disable carrier c on RPE loop. Any active calls using this carrier will be disconnected.	rpe-1
DISI loop c	Disable carrier c on RPE loop when idle. Disables the carrier as soon as it has become idle. The number of channels still busy on the carrier may be checked using the STAT command. The message RPD018 indicates that the disable operation is complete.	rpe-1
DISL loop	Disable specified RPE loop. Any active calls on the loop are disconnected and line transfer occurs at the remote end.	rpe-1
DISM loop	Disable carrier status monitoring on RPE loop. Carrier failures will not be detected while this command is in effect. The command is canceled by the ENLM or ENLL commands.	rpe-1
END	Abort current command. If no command is in progress, the active DISI command (if any) is cancelled.	rpe-1
ENLC loop c	Enable carrier c on RPE loop. OK is output if the operation is successful.	rpe-1
ENLL loop	Enable RPE loop. Implies ENLM also. OK is output if the operation is successful. If the loop is already enabled, RPD007 is output.	rpe-1
ENLM loop	Enable carrier status monitoring on RPE loop.	rpe-1
LDIS loop c	List all speech channels that failed continuity test on carrier c. If no channels failed, response is NONE. The response is based on the results of the most recent tests (via the LOOP command) of the carrier.	rpe-1

LOOP loop Perform various tests on RPE loop. rpe-1

Performs the following tests:
- tests idle timeslots of network connection memory
- tests signaling channel to the LCB card
- tests idle timeslots of the RPS connection memory
- tests speech continuity to remote site, using idle channels

Note 1: Any memory connection or channel faults detected results in the affected channel being disabled.

Note 2: To completely check the loop, this command may be run twice, once with each carrier being primary, by using the SCAR command between tests.

Note 3: If all tests pass, system response is OK.

Note 4: This command does not test signaling to PE cards on the loop. To test signaling, use LD30 or 45.

LRPE List all equipped RPE loops. rpe-1

If none exists, response is NONE.

NCAR loop Get number of "carrier status change" messages for RPE loop. rpe-1

This outputs the number of messages received from the RPE loop since the most recent running of the midnight routines, initialize or loop enable. Response is:
LCB: XX
CAR 0: YY, CAR 1: ZZ

The Local Carrier Buffer (LCB) card gives the total number of messages received. CAR 0 and CAR 1 indicate the number of those messages which indicated a change of state of the corresponding carrier. The count for each carrier is reset when the carrier is manually enabled or at midnight.

A large number of messages received (particularly on one carrier only), may indicate a transient fault on the affected carrier.

SCAR loop Switch primary carrier on RPE loop. rpe-1

This command is allowed only if the current non-primary carrier is enabled, and no faults exist on the current non-primary carrier (which would reduce the number of working speech channels if it becomes the primary carrier).

STAT Get number of busy channels on specified carrier in the active DISI request. rpe-1

If no DISI request is active, error code RPD022 is output.

LD33

450 1.5Mb/s RPE Diagnostic (RPED)

STAT loop Get status of RPE loop. rpe-1

Response will be one or more of the following:

x BUSY, x DSBL = number of busy/disabled speech channels on the loop.

x NWK MEM FLTS = number of speech channels disabled due to fault in connection memory of network.

LCB DSBL = carrier monitoring function of LCB card disabled

CTYF: L1 L2 = cannot receive speech from loops L1, L2, etc., based on most recent test run by the background diagnostic (LD45).

DSBL: RESPONDING = loop is disabled but can still communicate with the CPU. The loop may have been disabled manually, as the result of the disabling of some other card (e.g., associated Peripheral Signaling card) or by an overload condition. If the loop was disabled because of overload, the overload condition may recur if the loop is reenabled.

DSBL: NOT RESPONDING = loop is disabled and cannot communicate with the CPU. The Network card may be missing or faulty, or not responding because of the removal or failure of other cards, e.g., CE extenders.

STAT loop ALL

Get status of the loop, carriers and RPS card. rpe-1

Response is:
x BUSY, y DSBL
CAR 0: x BUSY, y DSBL PRIME
CAR 1: x BUSY, y DSBL
RPS: x MEM FLTS
where,
x BUSY, y DSBL = number of busy and disabled channels for the RPE loop and each carrier (CAR0 and CAR1).

PRIME = indicates which carrier is currently the primary one.

RPS: x MEM FLTS = number of faults in the memory connection of the RPS card.

STAT loop c Get status of carrier c on RPE loop. rpe-1

Response is one or more of:

x BUSY, y DSBL = number of busy channels and number of channels having continuity failure on this carrier

PRIME = indicated carrier is currently the primary one.

DSBL = carrier is disabled.

LOOP DSBL = loop is disabled.

STAT loop RPS x

Get status of RPS card x on specified loop. rpe-1

Results are based on the most recent tests. Response is one of:

x MEM FLTS = number of faults in the connection memory of the RPS card

NOT RESPONDING = card failed to respond (this message does not necessarily indicate a RPS fault)

LOOP DSBL = loop is disabled.

LD33

452 1.5Mb/s RPE Diagnostic (RPED)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Tone and Digit Switch and Digitone Receiver (TDS)

LD34 tests cards used to generate and detect tones in the system. If loaded automatically in background or the daily routines, it tests the hardware and performs fault detection and isolation. If invoked manually, commands are used to conduct tests and to change card status.

The overlay tests the following cards:

- Tone and Digit Switch (TDS)
- Flexible Tone and Digit Switch
- Digitone Receiver
- Tone Detector
- Dial Tone Detector

TDS outpulsers and channels are checked for timing errors, memory faults and Digitone frequency accuracy. Digitone receivers are checked for response to all Digitone frequencies. Tones and outpulses can be tested from a maintenance telephone.

Maintenance telephone commands

A maintenance telephone, which has LD11 CLS = MTA, is used to test and hear tones. Refer to the introduction of this document for details on the use of a maintenance telephone.

BSY#L## – 279#L##	Provide busy tone from tone and digit loop L
C## – 2##	Remove any active tone
DIA#L## – 342#L##	Provide dial tone from tone and digit loop L
DRNG#L## – 3764#L##	Provide distinctive ringing from loop L
JDRG#L## – 5374#L##	Provide distinctive ringing from loop L
JIDT#L## – 5438#L##	Provide interrupted dial tone from loop L
OPS#L#xx## – 677#L#xx##	Test outpulsing from Meridian 1 to idle trunk
OVF#L## – 683#L##	Provide overflow tone from loop L
RBK#L## – 725#L##	Provide ringback tone from loop L
RNG#L## – 764#L##	Provide ring tone from loop L
XCTT#L#T#C## – 9288#L#T#C##	Test tone and cadence number on Conference/TDS/MFS card

LD34 commands

CDSP	Clear the maintenance display on the active CPU
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm
CMIN ALL	Clear minor alarm indication on all attendant consoles
CMIN c	Clear minor alarm indication on attendant consoles for customer c
DISD l s c	Disable the specified Tone Detector card
DISD l s c u	Disable specified Dial Tone Detector
DISL loop	Disable tone and digit loop
DISR l s c (u)	Disable specified Digitone receiver
DISX loop	Disable NT8D17 Conference/TDS card on loop L and L + 1
DTR l s c (u)	Test specified unit on Digitone receiver card or unit
END	Stop execution of current command
ENLD l s c (u)	Enable Tone Detector on specified card or unit
ENLL loop	Enable tone and digit loop
ENLR l s c (u)	Enable the Digitone receiver on specified unit
ENLX loop	Enable Conf/TDS card on loop L and L + 1
MFR	Test all Multifrequency receiver units
MFR l s c (u)	Test Multifrequency receiver card or unit
MFR loop	Test all Multifrequency receivers on this loop
STAD	List all disabled Tone Detector units
STAD l s c (u)	Get status of Tone Detector card or unit
STAT	List TNs of all disabled Digitone Receivers
STAT loop	Get status TDS loop
TDET l s c (u)	Perform self-test and tone detection on specified card or unit
TDS loop	Test outpulsers and channels on specified loop

LD34

Alphabetical list of commands

BSY#L## – 279#L##

Provide busy tone from tone and digit loop L. basic-1

C## – 2## Remove any active tone. basic-1

DIA#L## – 342#L##

Provide dial tone from tone and digit loop L. basic-1

DRNG#L## – 3764#L##

Provide distinctive ringing from loop L. drng-13

JDRG#L## – 5374#L##

Provide distinctive ringing from loop L. jtds-8

JIDT#L## – 5438#L##

Provide interrupted dial tone from loop L. jtds-8

OPS#L#xx## – 677#L#xx##

Test outpulsing from Meridian 1 to idle trunk. basic-1

Outpulses from tone and digit loop L using the 10 or 20 pps outpulser to any idle trunk. This command connects the maintenance telephone to the trunk and a test call on the trunk may be made using the outpulsers selected. Where xx = 10 or 20 representing the trunk class of service (LD14 CLS = P10 or P20).

When the test call is completed, LD34 must be reloaded by dialing SPRE + 91 before entering another command.

OVF#L## – 683#L##

Provide overflow tone from loop L. basic-1

RBK#L## – 725#L##

Provide ringback tone from loop L. basic-1

RNG#L## – 764#L##

Provide ring tone from loop L. basic-1

XCTT#L#t#c## – 9288#L#t#c##		
	Test tone and cadence number on Conference/TDS/MFS card. L = loop number of Conference/TDS/MFS (NT8D17) card t = tone number c = cadence number Refer to Flexible Tone and Digit Switch cards (553-2711-180) for the Conference/TDS tone and cadence numbers.	xct-15
CDSP	Clear the maintenance display on the active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
DISD l s c	Disable the specified Tone Detector card. Both units are disabled and the LED lights.	basic-1
DISD l s c u	Disable specified Dial Tone Detector. If both units on the card are disabled, the LED lights.	basic-1
DISL loop	Disable tone and digit loop. For Conference/TDS cards see note with ENLL command.	basic-1
DISR l s c (u)	Disable specified Digitone receiver.	basic-1
DISX loop	Disable NT8D17 Conference/TDS card on loop L and L + 1. Disables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are disabled. Loop = 0, 2, 4 ...158 *Note 1:* The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. *Note 2:* This command can be used in LD34, LD38 and LD46.	xct-15
DTR l s c (u)	Test specified unit on Digitone receiver card or unit. This test may be performed while the card is enabled or disabled. If a disabled card passes the test, it is enabled automatically.	basic-1
END	Stop execution of current command.	basic-1

LD34

ENLD l s c (u)	Enable Tone Detector on specified card or unit.	basic-1
ENLL loop	Enable tone and digit loop.	basic-1
	Note: For Conference/TDS cards the DISX and ENLX commands must be used whenever the faceplate switch of the card has been toggled. ENLL will software enable the card but the card will not reset properly.	
ENLR l s c (u)	Enable the Digitone receiver on specified unit.	basic-1
ENLX loop	Enable Conf/TDS card on loop L and L + 1.	xct-15
	Enables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are enabled. Loop = 0, 2, 4 ...158.	
	If one of the loops is already enabled, it is disabled and then both loops are enabled.	
	This command initiates card tests and downloads software.	
	Note 1: The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions, provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card.	
	Note 2: This command can be used in LD34, LD38 and LD46.	
	Note 3: The Conf/TDS card is not enabled automatically when it is inserted.	
	Note 4: Enabling more than 16 conference loops may cause the system to lock-up.	
MFR	Test all Multifrequency receiver units.	fgd-17
MFR l s c (u)	Test Multifrequency receiver card or unit.	fgd-17
MFR loop	Test all Multifrequency receivers on this loop.	fgd-17
STAD	List all disabled Tone Detector units.	basic-1
STAD l s c (u)	Get status of Tone Detector card or unit.	basic-1
	The status is either idle, busy, maintenance busy or not equipped.	
STAT	List TNs of all disabled Digitone Receivers.	basic-1
	NONE is output if there are no disabled Digitone Receivers.	

STAT loop Get status TDS loop. basic-1

The response may include OPS DSBL, indicating that the outpulsing function of the TDS card has been disabled.

TDET l s c (u) Perform self-test and tone detection on specified card or unit. basic-1

Performs the self-test and basic tone detection functions of the Tone Detector card or unit. This test may be performed while the card is enabled or disabled. If a disabled card passes the test, it is enabled automatically.

TDS loop Test outpulsers and channels on specified loop. basic-1

Tests the outpulsers and channels of the tone and digit switch at loop L. Outpulsers and tones may also be tested with a maintenance telephone (see maintenance telephone commands).

When the Fast Tone and Digit Switch (FTDS) package is equipped, it:

- tests the outpulsers and channels of the tone and digit switch
- outpulses 32 Digitone encoded digits to a DTR, and receives the 32 digits back in system code
- checks if the time to outpulse 32 digits is within acceptable range
- compares outpulsed and received digits, displays OK if they match

LD34

460 Tone and Digit Switch and Digitone Receiver (TDS)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Common Equipment Diagnostic (CED)

LD35 is used to maintain the Central Processing Unit (CPU) and related cards. It can be run in background, during the daily routines, or loaded manually to enter commands. Problems are reported by CED messages.

The CED overlay is used to do the following.

- clear the maintenance display
- switching CPUs in dual-CPU systems
- test the idle CPU in dual-CPU systems
- display the status of CPU and buses
- enable, disable, test and display status of memory and CMA cards
- enable, disable and display the status of CE extenders

When loaded during daily routines, memory modules are tested. If there are two CPUs, a CPU switchover is made.

This overlay applies to all systems EXCEPT options 61C and 81. Refer to LD135 for Core Common Equipment Diagnostics.

LD35

Extender designations

Extender Codes for LD35 (CED)

0M0 – from CPU 0 to Memory Shelf 0
0M1 – from CPU 0 to Memory Shelf 1
1M0 – from CPU 1 to Memory Shelf 0
1M1 – from CPU 1 to Memory Shelf 1

0G0 – from CPU 0 Network Group 0
0G1 – from CPU 0 Network Group 1
0G2 – from CPU 0 Network Group 2
0G3 – from CPU 0 Network Group 3
0G4 – from CPU 0 Network Group 4

1G0 – from CPU 1 Network Group 0
1G1 – from CPU 1 Network Group 1
1G2 – from CPU 1 Network Group 2
1G3 – from CPU 1 Network Group 3
1G4 – from CPU 1 Network Group 4

LD35 commands

CDSP	Clear the maintenance display on active CPU
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm
CMIN ALL	Clear minor alarm indication on all attendant consoles
CMIN c	Clear minor alarm indication on attendant consoles for customer c
DIS CMA x	Disable Changeover and Memory card x
DIS EXT x	Disable the specified extender pair
DIS SBE	Disable the Segmented Bus Extender
DIS xx	Disable memory module xx
DSPL	Get contents of maintenance display on the active CPU
END	Terminate test in progress
ENL CMA x	Enable Changeover and Memory card x
ENL EXT x	Enable specified extender pair
ENL SBE	Enable Segmented Bus Extender (SL-1 MS only)
ENL xx	Perform memory test on module xx
FCNT	Get soft failure counts of all memory modules
LDIS	List disabled memories
LENL	List enabled memories
MEM xx	Test memory module xx
MIDN	Run midnight (daily) routines once CED is aborted and the user logs off
REPL xx	Enable new memory card xx
SCPU	Switch CPUs
SHLF x	Perform memory decode fault test on CPU x
STAT CMA x	Get status of CMA x
STAT CPU	Get status of both CPUs
STAT EXT	Get status of extender pair designation
STAT EXT x	Get status of specified extender
STAT MEM	Get status of all memory modules
STAT MEM xx	Get status of memory module xx
STAT SBE	Get status of Segmented Bus Extender
TCPU	Test inactive CPU in a dual CPU system

LD35

Alphabetical list of commands

BATT	Check status of memory battery backup. The response is OK or CED503. Only available on 21E and STE systems with X11 release 18 and later.	21e-18
CDSP	Clear the maintenance display on active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
DIS CMA x	Disable Changeover and Memory card x. This command disables the specified Changeover and Memory (CMA) card. It must be the CMA on the idle CPU and all the memories served by the CMA must be disabled before the CMA can be disabled.	basic-1
DIS EXT x	Disable the specified extender pair. Disables the extender pair specified by x. Only extenders on the nonactive CPU may be disabled. The extender is marked as unusable by the system and it will not attempt to use it, i.e., a CPU changeover will not be permitted. LEDs on the card faceplates do not reflect this command. See introduction for extender designations.	basic-1
DIS SBE	Disable the Segmented Bus Extender.	basic-1
DIS xx	Disable memory module xx. Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second specifies the memory module number.	basic-1
DSPL	Get contents of maintenance display on the active CPU. If the maintenance display is blank, 000 is output.	basic-1
END	Terminate test in progress.	basic-1
ENL CMA x	Enable Changeover and Memory card x. The CMA must be on the idle CPU.	basic-1

ENL EXT x Enable specified extender pair. basic-1

Only extenders on the nonactive CPU may be enabled. See introduction for extender designations.

The state of the LED on the circuit card faceplate does not reflect this command.

ENL SBE Enable Segmented Bus Extender (SL-1 MS only). basic-1

ENL xx Perform memory test on module xx. basic-1

Performs a memory test on memory module xx. Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second specifies the memory module number.

The module must not be in use by the system. Dual CPU systems only. System response of OK is output and the module is enabled if the test is passed.

FCNT Get soft failure counts of all memory modules. basic-1

Response is (sample):

For system options NT, RT, XT, 51, 61 and 71:

CD	MTR	FCNT
0	0	0
0	1	0
0	2	0

where:
CD = memory module number
MTR = Memory Trouble Register number on the 768K memory
FCNT = fault counts on that MTR

For all other system options:

CD	PAGE	LFC	HFC
0	0	3	1
0	1	0	2
0	2	3	2
1	5	2	0
1	6	0	1

where:
CD = memory card number
PAGE = page number
LFC = fault count of low card module
HFC = fault count of high card module

Not applicable to SL-1 MS, S, ST or system option 21.

IDC ICM, MSPS

Print card ID for ICM or MSPS card. 21e-18

The Integrated CPU with 4Meg Memory (ICM) or Misc/SDI and PS (MSPS) card ID is output in the following format.

PPPPPPPPAA RRSSSS cccccccc@DDDDD

pppppppp = PEC code
aa = Attribute code
rr = Release number
ssss = Serial number
cccccccc = Comments (optional)
@ = HEX 01 ASCII SOH character (non printing)
DDDDD = Design code

LDIS List disabled memories. basic-1

Not applicable to SL-1 MS, S, ST or system option 21.

LENL List enabled memories. basic-1

Not applicable to SL-1 MS, S, ST or system option 21.

MEM xx Test memory module xx. basic-1

Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second specifies the memory module number.

The module must be disabled first with the DIS x command.

The module does not have to be defined in the Configuration Record (LD17) to pass the test. System outputs OK if test is passed.

MIDN Run midnight (daily) routines once CED is aborted and the user logs off. basic-1

REPL xx Enable new memory card xx. basic-1

Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second specifies the memory module number.

This command is used to enable a new memory module after inserting it into the shelf. It sets the soft memory failure count zero and tests the module. If the tests are successful the module is enabled.

SCPU	Switch CPUs. In a dual CPU system, this command causes the inactive CPU to become the active CPU. If the changeover is successful, OK is output. This command cannot be used when the active CPU is in maintenance mode. Caution: Indiscriminate use of this command should be avoided as system reload may occur.	basic-1
SHLF x	Perform memory decode fault test on CPU x. Performs a memory decode fault test on the disabled memories corresponding to the specified CPU (0 or 1). To use this test, disable the memory modules that are to be included in the test and issue the command to the appropriate shelf. If individual tests of memory modules using the MEM command pass but the SHLF test fails on the same modules, then the CMA or controller is probably faulty.	basic-1
STAT CMA x	Get status of CMA x. Response is: CMA x ACTIVE y MEM = CMA is being used CMA x DSBL = CMA is disabled CMA x ENBL = CMA is enabled but in a standby state In some systems a value of "y MEM" is output. Ignore this value. Use STAT MEM to check memory status.	basic-1
STAT CPU	Get status of both CPUs. Responses are: ENBL = CPU is running IDLE = CPU is in standby DSBL = CPU is disabled Not applicable to Meridian SL-1 MS or S.	basic-1
STAT EXT	Get status of extender pair designation. This command outputs the extender pair designation and if disabled indicates the number of devices on the network shelf connected to the extender that would become inaccessible if a CPU changeover occurs. *Note:* If the extender has been disabled by using the DIS EXT command, then the number output will be equal to the number of devices on the shelf. See the introduction for extender designations.	basic-1

LD35

STAT EXT x	Get status of specified extender. For extenders to network shelves, the response is: x <status> <y NET>, where x <status> = status of extender x, can be one of: ENBL = the extender is enabled. DSBL = the extender is disabled. LEFT DSBL = only shelf 0 of the group served by the extender is disabled RIGHT DSBL = only shelf 1 the group served by the extender is disabled y NET = the number of network and PS cards that do not respond when accessed using the specified extender.	basic-1
STAT MEM	Get status of all memory modules. This command outputs the number of enabled and disabled memory modules. Use STAT MEM x for status of a specific module.	basic-1
STAT MEM xx	Get status of memory module xx. Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second specifies the memory module number. Responses are: ENBL = module is enabled ENBL BUT FAULTY = module is enabled but faulty REPL = module is replaced DSBL module is disabled UNEQ = module is missing or not configured	basic-1
STAT SBE	Get status of Segmented Bus Extender.	basic-1
TCPU	Test inactive CPU in a dual CPU system. This command tests the inactive CPU. If the CPU passes, OK is output. This command cannot be used when the active CPU is in maintenance mode. Caution: Indiscriminate use of this command should be avoided as system reload may occur.	basic-1

Issued: 04 01 94
Status: Standard
X11 Release: 19

Trunk Diagnostic (TRKD)

Insufficient space in the overlay area requires the trunk diagnostic to be split into two overlays. LD41 is merely an extension of LD36.

The overlays allow trunks to be tested from either the Meridian 1 site or a remote test center.

When testing from a Meridian 1 site, individual trunks can be seized for test calls on the trunk in the normal manner.

When testing from a remote test center, a speech path must be set up to monitor the testing. This is accomplished by having the Meridian 1 call a DN at the test center. This allows dial tone, outpulsing and test tones to be monitored as tests are performed on other trunks by inputting commands in LD36 or LD41.

When a trunk is seized, the system prompts DN? for a DN. When the DN is input, the system calls that number automatically. When the call is answered a pure tone indicates the validity of the speech path. New trunks can be tested in the same way with the maintenance telephone.

LD36, 41

When to use LD36 and 41

Use either LD36 or 41 to:

- clear minor alarms and the maintenance display
- query threshold overflows for specific customers and routes
- reset thresholds for specific trunks

Use LD36 to:

- query number of days since an incoming call was received for a specific customer and route or trunk
- query the trunk with the most number of idle days for a specific customer and route
- query trunks for which no disconnect supervision was received
- test Automatic Number Identification (ANI) trunks.

  Note: When defined as a midnight routine, LD36 searches for trunks not used during the day and updates the total number of days the trunks have been idle.

Use LD41 to:

- test Automatically Identified Outward Dialing (AIOD) trunks in the system
- enable, disable and request the status of Trunk circuit card. Disabled DID trunks are placed in the answer state)

Issued: 04 01 94
Status: Standard
X11 Release: 19

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LD36, 41

When to use LD36 and 41

Use either LD36 or 41 to:

- clear minor alarms and the maintenance display
- query threshold overflows for specific customers and routes
- reset thresholds for specific trunks

Use LD36 to:

- query number of days since an incoming call was received for a specific customer and route or trunk
- query the trunk with the most number of idle days for a specific customer and route
- query trunks for which no disconnect supervision was received
- test Automatic Number Identification (ANI) trunks.

Note: When defined as a midnight routine, LD36 searches for trunks not used during the day and updates the total number of days the trunks have been idle.

Use LD41 to:

- test Automatically Identified Outward Dialing (AIOD) trunks in the system
- enable, disable and request the status of Trunk circuit card. Disabled DID trunks are placed in the answer state)

Trunk error thresholds

Resident programs monitor all calls and notes apparent errors. The errors are accumulated and, if they exceed a threshold on any trunk, a TRK message is output. The identified trunk should be suspected of trouble and a manual test should be performed on the trunk.

A record is kept of each threshold violation. Use the LOVF command to list error threshold violations for a trunk route. Once an TRK error threshold violation message is printed, it is not repeated for that trunk until the RSET command is entered for that trunk or an initialization has occurs.

Potentially, a trunk may fail by not detecting incoming calls. The error threshold mechanism cannot be used to detect such failures so the system maintains a count of the number of days since an incoming call was received on each trunk.

Thus, customer reports that indicate incoming calls are not being processed can initiate a check for the trunk which has been without an incoming call for the longest interval via the LMAX command. This trunk should be tested first.

Use the LDIC command to determine the number of days since an incoming call was processed on a trunk. Subsequent trunk tests should be performed on those trunks showing the highest counts until the trouble is located.

LD36, 41

LD36 commands

CALL	Set up monitor link with test center
CALL l s c u	Set monitor link with test center on this trunk
CDSP	Clear the maintenance display on active CPU to 00 or blank
CMIN ALL	Clear minor alarm indication on attendant consoles for customer c
CMIN c	Clear minor alarm indication on attendant consoles for customer c
DISC l s c	Disable specified card for replacement
DISU l s c u	Disable single unit
END	Terminate test in progress
ENLC l s c	Enable specified card
ENLU l s c u	Enable single unit
LDIC c r	List number of days since last incoming call for specified customer and route
LDIC l s c u	List number of days since last incoming call on specified trunk
LMAX c r	List trunk with maximum idle days for specified customer and route
LNDS c r	List trunks with no disconnect supervision for specified customer and route
LOVF c r	List threshold overflows for specified customer and route
MUS c r	Test music device for specified customer and route
RAN c r	Test recorded announcement device for specified customer and route
RSET l s c u	Reset thresholds for specified trunk
STAT l s c	Check card's software status
TRK l s c u	Seizes the specified trunk for outpulsing and testing
TPPM l s c u	Test the specified PPM trunk

LD41 commands

AIOD l s c	Test AIOD card
AIOD MSG l s c	Output codes transmitted to Public Telephone Rated Service (PTRS)
CDSP	Clear the maintenance display on active CPU to 00 or blank
CMIN ALL	Clear minor alarm indication on attendant consoles for customer c
CMIN c	Clear minor alarm indication on attendant consoles for customer c
DISC l s c	Disable specified card for replacement
END	Terminate test in progress
ENLC l s c	Enable specified card
LOVF c r	List threshold overflows for specified customer and route
RSET l s c u	Reset thresholds for specified trunk
STAT l s c	Check card's software status

Alphabetical list of commands

AIOD l s c	Test AIOD card. Not available in X11 release 9 and later.	basic-1
AIOD MSG l s c	Output codes transmitted to Public Telephone Rated Service (PTRS). Output on TTY all 8-digit codes bring transmitted to PTRS by AIOD card. Response is OK if monitor is set. Not available in X11 release 9 and later.	basic-1
CALL	Set up monitor link with test center. Same as the CALL l s c command except any PTRS trunk in the system can be selected. The CALL command must be terminated using the * command.	basic-1
CALL l s c u	Set monitor link with test center on this trunk. Sets up a monitor link (call) between the Meridian 1 and the test center on the trunk specified. The system prompts "DN?" for the directory number. When the PTRS directory number is entered, the system calls up that number automatically. When the call is answered, a pure tone indicates the validity of the link. This sequence can take up to 14 seconds on a trunk without answer supervision. The END command disconnects the call. The CALL l s c u command is not allowed when the diagnostic overlay is being run from a maintenance telephone. During the CALL command, on-hook and off-hook signals from the maintenance telephone may initiate BUG105. *Note:* When the monitor is enabled, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit (it stays in the BUSY state).	basic-1
CDSP	Clear the maintenance display on active CPU to 00 or blank.	basic-1
CMIN ALL	Clear minor alarm indication on attendant consoles for customer c.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
DISC l s c	Disable specified card for replacement.	basic-1
DISU l s c u	Disable single unit.	basic-1
END	Terminate test in progress.	basic-1
ENLC l s c	Enable specified card.	basic-1

ENLU l s c u	Enable single unit.	basic-1
LDIC c r	List number of days since last incoming call for specified customer and route.	basic-1
LDIC l s c u	List number of days since last incoming call on specified trunk.	basic-1
LMAX c r	List trunk with maximum idle days for specified customer and route.	basic-1
LNDS c r	List trunks with no disconnect supervision for specified customer and route. Lists the trunks for which no disconnect supervision was received, i.e., terminating party not going on-hook after a call.	basic-1
LOVF c r	List threshold overflows for specified customer and route. The overflows are set when the resident trunk monitor outputs a diagnostic	basic-1
MUS c r	Test music device for specified customer and route.	basic-1
RAN c r	Test recorded announcement device for specified customer and route.	basic-1
RSET l s c u	Reset thresholds for specified trunk.	basic-1
STAT l s c	Check card's software status.	basic-1
TPPM l s c u	Test the specified PPM trunk. This command is not applicable when the trunk is connected to 1 TR 6 (international ISDN PRA).	basic-1
TRK l s c u	Seizes the specified trunk for outpulsing and testing. If the command is issued from a maintenance telephone, dial tone is heard followed by outpulsing when the directory number is entered. If a trunk is to be seized for outpulsing and testing from a remote test center (not a maintenance telephone), a monitor link must first be set up using the CALL l s c u command. This must not be over the trunk to be tested. With the monitor link set up, the TRK l s c u command is input to select the trunk to be tested. The system then prompts with "DN?" and the directory number is input via the TTY. Normal speech path connections are made between the monitor link and the trunk being tested. Disconnect by entering END, by going on-hook if an SL-1 telephone is used or by entering *. END also disconnects the monitor link. *Note:* This command cannot be used to seize an ISL trunk.	basic-1

LD36, 41

476 Trunk Diagnostic (TRKD)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Input/Output Diagnostic (IOD)

LD37 is used to diagnose faults with disk units, tape units, teletypewriter (TTY) or Serial Data Interface (SDI) cards. It provides enable, disable, status and test functions on these devices. Problems are indicated in IOD messages.

When LD37 is defined as a daily routine, the overlay runs only once every 5 days and the primary storage device (disk or tape) is thoroughly tested (equivalent to command MSI 0 or TAPE 0).

Only some of the commands in this overlay are supported by options 61C and 81. Refer to LD137 for MSI commands for those systems.

Refer to Link Diagnostic (LD48) for I/O ports used with the following applications:

- Command and Status Links (CSL)
- Meridian Link
- Automatic Call Distribution (ACD)
- Integrated System Messaging Link
- Enhanced Serial Data Interface (ESDI) ports

Intelligent links (APL, HSL, LSL, and CMAC)

A warning message is generated each time an intelligent link is accessed (enable, disable, test). The message is generated for the following types of links:

APL
ACD-D (HSL/LSL)
CMAC (Communication Management Center)

The message allows the access to be aborted prior to performing the enable, test, etc. The warning appears in the following format:

DIS TTY N (link type) LINK (status) (y/n)

A response of y disables the hardware of the TTY regardless of the software status of the link. The status field provides the software status of the link. Valid status entries are:

BAD = software status is invalid
DOWN = link is down
MAINT = link is up and in maintenance mode
FULL = link is full
EMPTY = link is empty
NOT EMPTY= link still contains data

Disk commands verses tape commands

The various MSI (Mass Storage Interface) commands are not supported on Generic X37 and Generic X08 (prior to Release 12) and if equipped with disk drives, the corresponding TAPE command should be used when testing the MSI as follows:

Disk command — Tape command

DIS MSI x — DIS TAPE x
ENL MSI x — ENL TAPE x
MSI DATA — TAPE DATA
MSI x — TAPE x
MSI RW x — TAPE RW x
MSI SELF x — TAPE CTRL x
STAT MSI — STAT TAPE
STAT MSI x — STAT TAPE x

Use of the TAPE x or TAPE MOTN x commands on a system equipped with disk drives will result in an IOD075 message. This message should be disregarded.

If LD37 is run as part of the daily routines, an IOD075 message will be output on systems equipped with disk drives. This message should be disregarded.

Multi-purpose Serial Data Link (MSDL) commands

The MSDL provides 4 ports for ISDN Primary Rate D-channel (DCH) and Application Module Link (AML).

The MSDL commands are listed below, where x is the MSDL device number (defined by prompt DNUM in LD17).

DIS MSDL x (ALL) – Disable MSDL card
ENL MSDL x (FDL, ALL) – Enable MSDL card
RST MSDL x – Reset MSDL card
STAT MSDL (x (FULL)) – Get MSDL status
SLFT MSDL x – Execute a selftest on MSDL card x

These commands are provided in Link Diagnostic (LD48) and D-channel Maintenance (LD96), and I/O Diagnostic (LD37). See "Alphbetical list of commands" in LD48 for a complete description of these commands.

Alphabetical list of commands

CDSP	Clear the maintenance display on the active CPU.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
DIS MSG	Disable incoming message monitoring for the primary PMSI port.	pms-19
DIS MSGO	Disable outgoing message monitoring for the primary PMSI port.	pms-19
DIS MSI x	Disable Mass Storage Interface card x.	basic-1
DIS PRT x	Disable printer x.	basic-1
DIS TAPE x	Disable tape unit x.	basic-1
DIS TTY x	Disable TTY x.	basic-1
END	Clear all test activity.	basic-1
ENL MSGI	Enable incoming message monitoring for the primary PMSI port.	pms-19
ENL MSGO	Enable outgoing message monitoring for the primary PMSI port.	pms-19
ENL MSI x	Enable Mass Storage Interface card x.	basic-1
ENL PRT x	Enable printer x.	basic-1
ENL TAPE x	Enable tape unit x.	basic-1
ENL TTY x	Enable TTY x.	basic-1
MSI DATA	Test data validity in primary and backup device.	basic-1
MSI RW x	Test READ/WRITE ability of Mass Storage unit x.	basic-1
MSI SELF x	Perform self-test on MSI card and report result.	basic-1
MSI x	Test Mass Storage unit x. This command runs the MSI DATA, RW and SELF tests.	basic-1
PRT x	Test printer x. Same as TTY test except that no keyboard input is expected and END command is not required. * denotes that the printer is not yet available.	basic-1
SET MON 0	Set the monitoring display to be in alphanumeric format. This applies to the primary PMSI port.	pms-19
SET MON 1	Set the monitoring display to be in hexadecimal format. This applies to the primary PMSI port.	pms-19
STAT	Provide status of all input/output devices in system.	basic-1

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STAT LINK	Provide status of all CDR links.	basic-1
STAT LINK x	Provide status of CDR data link x.	basic-1
STAT MON	Get the monitoring status for the primary PMSI port.	pms-19
	This command displays the status of the message monitoring for the primary port. For example, if MSGI, MSGO, and SET MON 0 are enabled, the display would be as follows. MSGI:ON MSGO: ON ALPH	
STAT MSI	Provide status of all MSI cards.	basic-1
STAT MSI x	Provide status of MSI card associated with the active CPU.	basic-1
STAT PRT	Provide status of all printers in system.	basic-1
STAT PRT x	Provide status of printer x.	basic-1
STAT TAPE	Provide status of all magnetic tape devices.	basic-1
STAT TTY	Provide status of all TTY devices in system.	pms-19
	With X11 release 19 and later, this comand enables you to get the status of the primary PMSI I/O port, and the Single Terminal Access (STA) administration terminal.	
STAT TTY x	Provide status of TTY x.	basic-19
	With X11 release 19 and later, this command also provides the status of the primary PMSI port.	
STAT XSM	Provide status of the system monitor.	xpe-15
	If there are no error conditions, PWR000 is output. Otherwise, the appropriate PWR messages are output.	
TAPE CTRL x		
	Test control electronics on tape device x.	basic-1
TAPE DATA	Test data on all 4 tracks.	basic-1
TAPE MOTN x		
	Test motion and timing on tape device x.	basic-1
TAPE RW x	Test READ/WRITE ability of tape device x.	basic-1
TAPE x	Test magnetic tape device x.	basic-1
	This command combines the TAPE CTRL N, TAPE MOTN N, TAPE RW N and TAPE DATA tests.	

TTY x Test TTY x. basic-1

Response is:

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789"#$%*!&()<>−.:,.? READY FOR INPUT

Anything entered on the keyboard will be echoed until END is input.

LD37

484 Input/Output Diagnostic (IOD)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Conference Circuit Diagnostic (CNF)

LD38 is used to detect and isolate circuit faults on the system conferencing equipment.

LD 38 can detect problems on the conference circuit such as:

- channel faults on the network card which interfaces a conference card to the system
- channel faults on the conference card
- conference faults associated with conferee group numbers
- switching faults controlling the attenuation feature.

The overlay is used to

- enable a specific conference card
- disable a specific conference card
- check status of channels and conferee groups
- clear alarms and displays

The overlay allows complete manual control in establishing a test conference, thus allowing the user to listen for noise and distortion. This includes:

- selection of a specific conference card
- selection of a specific conferee group
- stepping through all free channels and groups with special test conference.

LD38

LD38 commands

CDSP	Clears the maintenance display on the active CPU
CMIN ALL	Clear minor alarm indication on all attendant consoles
CMIN c	Clear minor alarm indication on attendant consoles for customer c
CNFC loop	Test conference loop
CNFC MAN loop g	Set up for manual conference on conference group g
CNFC STEP	Ready system terminal for testing conferee groups
DISL loop	Disable conference loop
DISX loop	Disable NT8D17 Conference/TDS card on loop L and L - 1
END	Abort all current test activity
ENLL loop	Enable conference loop
ENLX loop	Enable NT8D17 Conference/TDS card on loop L and L - 1
LCNF loop	List busy and disabled conferee groups on specified loop
STAT l s c u	List conference card and group used by specified TN
STAT loop	Provide status of conference card loop

Alphabetical list of commands

CDSP	Clears the maintenance display on the active CPU.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
CNFC loop	Test conference loop.	basic-1
	Tests conference loop for channel, group and switching faults.	
CNFC MAN loop g		
	Set up for manual conference on conference group g.	basic-1
	The conference group range is 1-15. Only one manual conference is allowed at a time.	
	After this command, any telephone dialing SPRE 93 enters the conference, where SPRE is the special service prefix for the system.	
	Going on-hook from that telephone takes it out of the conference. The END command removes all telephones in the manual conference.	
	If CNFC MAN command is entered from an maintenance telephone, the telephone automatically becomes part of the manual conference.	
CNFC STEP	Ready system terminal for testing conferee groups.	basic-1
	Readies the system terminal into a special command mode for testing various channels and conferee groups audibly, using two telephones: one to monitor and one to act as a signal source. The CNFC MAN command should have been used previously to set up the 2-party conference.	
	By entering "C" on the system terminal, the conference will step on to the next available channel.	
	Entering "G" will step to the next available conferee group. Entering an asterisk (*) will revert back to the normal command mode.	
	Entering "END" or aborting LD38 releases the manual conference.	
DISL loop	Disable conference loop.	basic-1
	For NT8D17 Conference/TDS cards see note with ENLL command.	

LD38

DISX loop Disable NT8D17 Conference/TDS card on loop L and L - 1. xct-15

Disables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are disabled. Loop = 1, 3, 5 ... 159

Note 1: The DISL and ENLL commands can be used on the odd number loop for the conference functions provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card.

Note 2: This command can be used in LD34, LD38 and LD46.

END Abort all current test activity. basic-1

ENLL loop Enable conference loop. basic-1

Note 1: For Conference/TDS cards the DISX and ENLX commands must be used whenever the faceplate switch of the card has been toggled. ENLL will software enable the card but the card will not reset properly.

Note 2: Enabling more than 16 conference loops may cause system to lock-up.

ENLX loop Enable NT8D17 Conference/TDS card on loop L and L - 1. xct-15

Enables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are enabled. Loop = 1, 3, 5 ... 159

If one of the loops is already enabled, it is disabled and then both loops are enabled.

This command initiates card tests and downloads software.

Note 1: The DISL and ENLL commands can be used on the odd number loop for the conference functions, provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card.

Note 2: This command can be used in LD34, LD38 and LD46.

Note 3: The Conf/TDS card is not enabled automatically when it is inserted.

Note 4: Enabling more than 16 conference loops may cause the system to lock-up.

LCNF loop	List busy and disabled conferee groups on specified loop.	basic-1
STAT l s c u	List conference card and group used by specified TN.	basic-1
	Lists which conference card and conferee group is being used by the specified terminal number.	
STAT loop	Provide status of conference card loop.	basic-1
	Output format is:	
	CNFC N DSBL N BUSY = number of conferee groups disabled and busy	
	CHAN N DSBL N BUSY = number of channels disabled and busy	
	UNEQ = card is not equipped in the system	
	DSBL = card is disabled in software	

LD38

490 Conference Circuit Diagnostic (CNF)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Intergroup Switch (IGS) and System Clock

The Intergroup Switch (IGS) and System Clock Generator (SCG) or Clock Controller (CC) diagnostic applies to multi-group systems. It is used to:

- determine the status of any Peripheral Signaling, Intergroup Switch (IGS), System Clock Generator (SCG) or Clock Controller (CC) card
- disable and enable any PS, IGS, SCG or CC card
- switch the system clock from one SCG or CC to another
- clear minor alarm indications and the maintenance display on the active CPU
- All SCG commands can be used for Clock Controllers, although LD60 is normally used when DTI, CPI or PRI features are installed

LD39

Group, loop and Peripheral Signaling card relationship

Group	Shelf	PS	Loops
0	0	0	0-15
0	1	1	16-31
1	0	2	32-47
1	1	3	48-63
2	0	4	64-79
2	1	5	80-95
3	0	6	96-111
3	1	7	112-127
4	0	8	128-143
4	1	9	144-159

LD39 commands

CDSP	Clear the maintenance display on the active CPU
CMIN ALL	Clear minor alarm indication on all attendant consoles
CMIN c	Clear minor alarm indication on attendant consoles for customer c
DIS IGS x	Disables IGS card x (0 to 19)
DIS SCG x	Disable SCG card x (0 or 1)
DISI IGS x	Disables IGS card x (0 to 19) when all timeslots are idle
DSPS x	Disable PS card x (0 to 9)
END	Stop current operation or test
ENL IGS x	Enables IGS card x (0 to 19)
ENL SCG x	Enable SCG x (0 or 1)
ENPS x	Enable PS card x (0 or 1)
SCLK	Switch clock to other SCG
STAT IGS x	Get status of IGS card x (0 to 19)
STAT PER x	Get status of PS card x (0 to 9)
STAT SCG x	Get status of SCG x (0 or 1)

Alphabetical list of commands

CDSP	Clear the maintenance display on the active CPU.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
DIS IGS x	Disables IGS card x (0 to 19).	basic-1
DIS SCG x	Disable SCG card x (0 or 1).	basic-1
DISI IGS x	Disables IGS card x (0 to 19) when all timeslots are idle.	basic-1
	Use of this command is recommended instead of DIS IGS, which interrupts calls in progress. The command's progress completion is indicated by an output of ISR043 on the maintenance terminal.	
DSPS x	Disable PS card x (0 to 9).	basic-1
END	Stop current operation or test.	basic-1
ENL IGS x	Enables IGS card x (0 to 19).	basic-1
ENL SCG x	Enable SCG x (0 or 1).	basic-1
ENPS x	Enable PS card x (0 or 1).	basic-1
SCLK	Switch clock to other SCG.	basic-1
STAT IGS x	Get status of IGS card x (0 to 19).	basic-1
	The response "x DSBL x BUSY" indicates the number of junctor timeslots disabled or busy associated with the specified IGS card.	
STAT PER x	Get status of PS card x (0 to 9).	basic-1
	Possible responses:	
	DSBL: NOT RESPONDING = Peripheral Signaling card is disabled and not responding. The PS is either missing, disabled via its faceplate switch or faulty.	
	Note: If there is a fault in the extender pair for the network shelf, the status of the PS card will also be DSBL: NOT RESPONDING.	
	DSBL: RESPONDING = The PS card is disabled and responding to the CPU. The PS may have been disabled by manual request (DSPS) or the associated extender pair may have been manually disabled. If neither of these conditions exist, the card may have been disabled because of an overload condition on the associated loop.	
	Check for OVD messages appearing in previous TTY output. An attempt to enable a PS card which was disabled because of an overload may result in a recurrence of the overload condition: the system's service may be impaired for approximately 2 minutes.	
STAT SCG x	Get status of SCG x (0 or 1).	basic-1

LD39

494 Intergroup Switch (IGS) and System Clock

Issued: 04 01 94
Status: Standard
X11 Release: 19

Call Detail Recording Diagnostic (CDRD)

The Call Detail Recording (CDR) feature outputs call records to a Single or Multi-port tape drive storage system. The tapes are processed to produce billing reports.

The option 61C/81 Psuedo TTY (PTY) and Call Processor (CP) cards do not support the CDR link maintenance commands (CDL, CTY) used in this overlay. When using the STAT command in this LD, the output includes all the ports: CP and PTY.

Automatic diagnostic routines

LD40 is run in background, during the daily routines, or automatically in response to CDR faults. It performs the following.

- CDR Link test
- CDR Controller status report
- CDR data transmission/loss summary

Fault indications reported by LD40 are cleared after their corresponding CDM message is output. Faults in a multi-port CDR Tape Controller are reported to all Meridian 1 systems connected to the controller. The fault records kept for each Meridian 1 are maintained and cleared independently of each other by the controller.

Loading LD40 manually runs the automatic fault-clearing routines. Also, similarly to LD42, the "CDMA loaded today" flag which prevents LD40 from being automatically loaded more than once a day are cleared. Thus, manually loading LD40 or 42 allows faults detected in the afternoon to be reported, even though previous faults may have been detected and cleared in the morning.

To run CDMA in background, you must reload LD40 after a trouble has been cleared using LD42. CDM117 X 3 is printed after LD40 has been reloaded, where X is the Meridian 1 link or port number. This reload is required so that the Meridian 1 can react again as soon as another error is detected.

CDR maintenance mode and commands

Use LD42 to:

- enable/disable/give status of CDR links and TTY
- perform diagnostic tests on CDR machines
- perform manual tape functions on CDR machines
- clear alarms alarms and the maintenance display
- clear the maintenance display of CDR machines
- clear "CDMA loaded today" flags

The CDR storage system is put into maintenance mode to test the tape drive. While in maintenance mode, call records are saved in tape buffers. When all the buffer space is used up, incoming call records are lost. An 8K CDR machine can buffer about 600 call records; a 32K CDR can retain about 2500. Use the BUFF command to write the buffer contents to tape or output it to the I/O device.

Enter maintenance mode

1. Load CDM (LD42).
2. Issue the PORT command to specify the CDR port.
3. Issue the GET command to put the CDR into maintenance mode.

GET sends the "Request Maintmode" message to CDR and waits for CDR to grant MAINTMODE, which CDR will not do until it is finished its current activity on the drive.

When CDR grants Maintenance Mode, it also makes available a tape buffer for the use of the read/write and RBC functions. This buffer may be loaded with data by using the LOAD command and the contents can be output onto the TTY by using the BUFF command without indicating which buffer to output (it defaults to the active maintenance buffer).

Exit maintenance mode

To ensure that CDR does not stay in maintenance mode forever, CDR starts a 30 second timer whenever it receives a request for maintenance mode. If this timer expires, CDR resets maintenance mode. To prevent this, CDM sends a message every 5 seconds to keep the CDR in maintenance mode. If CDM does not send the message in time, CDR will reset maintenance mode and a CDM017 message will appear to indicate that maintenance mode has been lost. Pressing the UNLOAD button on CDR will also cancel maintenance mode.

The CDR may also be released from maintenance mode using the FREE command. When CDR leaves maintenance mode it returns to the state it was in before it entered maintenance mode. That is, if it was in a state in which it would not attempt to write on the drive, it will still not try to use the drive. However, if it was using the drive before it entered the maintenance mode, it will use one of two methods to return to using the drive:

- If it left maintenance mode because of a timeout, it will rewind to LP and search for the first tape mark to locate the place where it should begin writing.
- If the FREE command was used to release it from maintenance mode, it will begin writing on the tape wherever the tape is. Thus, the tape should be left at the same point it was before maintenance mode was entered.

Ensure tape integrity

The following procedure is recommended to ensure tape integrity if manual tasks are to be performed on the drive using CDM:

1. UNLOAD the call recording tape from the drive.
2. Mount a scratch tape and put the drive on line but do not use any of the CDR pushbuttons. Call records are now being stored in tape buffers so this should only be done at low traffic periods.
3. Use CDM to issue the PORT and GET commands.
4. Perform tests using manual functions.
5. Issue the FREE command.
6. UNLOAD the scratch tape.
7. Remount the call-recording tape and press RESTORE to get the tape to the proper position for writing. If the tape is nearly full, a new call recording tape might be loaded instead to save time.

Verify proper recording

To verify that call records are being properly recorded on tape, the following procedure may be used:

1. Issue the PORT and GET commands to go into maintenance mode.
2. Issue the FUNC BKSP 1 command to position the tape just before the most recently written block.
3. Issue the FUNC READ command to read the most recently written block.
4. Issue the BUFF command to output the contents of the maintenance buffer on your I/O device.
5. Issue FREE to release the drive from maintenance mode.

This procedure may be modified easily to allow the checking of tape blocks older than the most recent. Extreme caution is advised, however, as it is easy to lose track of where the tape is positioned.

If it is suspected that the tape may not be positioned just after the last data block on tape when the FREE command is about to be issued, simply abort the overlay (****). This will cause the CDR machine to time out from maintenance mode after 30s, after which CDR will automatically restore tape position so that data recording can continue normally.

Alphabetical list of commands

BLOC	Output hexadecimal contents of CDR tape block.	clnk-1
BUFF	Output contents of CDR maintenance mode buffer.	clnk-1
BUFF x	Output contents of tape buffer x.	clnk-1
	For a single port CDR machine, 0<N<6. For a 32K machine, 0<N<29. The contents of the buffer may change while it is being output.	
CCDS x	Clear maintenance display of CDR on link x.	clnk-1
CDSP	Clear the maintenance display on active CPU to 00 or blank.	clnk-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	clnk-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	clnk-1
DIS LINK x	Disable device on link x.	clnk-1
DIS SL1 x	Disable CDR device x.	clnk-1
	This command should be issued before disconnecting another Meridian SL-1 machine from a multi-port CDR machine. DIS SL1 M is the inverse of ENL SL1 M.	
	The commands may NOT be used to disable the SDI port currently being used by the CDM overlay; i.e., "you can't disable yourself."	
	The commands may NOT be used to disable the SDI port currently being used by the CDM overlay; i.e., "you can't disable yourself." The enabled/disabled status of a Meridian SL-1 port in a multi-port CDR machine is maintained by the CDR machine only.	
	If the CDR machine initializes for any reason, such as a power failure, then the enabled/disabled status of each SDI port is set according to whether the physical SDI device responds. For this reason, the enabled/disabled status of an SDI port in a multi-port CDR machine should not be considered trustworthy over extended periods of time.	
	Also note that disabling a Meridian SDI port in the CDR using the DIS SL1 M command causes the report "SL1 M DSBL <type> SOFT" to be given by STAT SL1 M. This status indication remains even after the SDI pack has been physically pulled out, until the next CDR initialization.	
DIS TTY x	Disable device x.	clnk-1
	You may not disable the TTY you are logged into.	

LD40, 42

DISP pg ad cnt

Display CDR storage. clnk-1

pg = memory page 0, 2 or 3.

cnt = the number of words to output. If cnt is not entered, one word will be output. No checking is performed on the validity of the address. If an invalid address is provided, the CDR machine will trap with a response timeout. This command can be used to continue printing buffer contents, if timeout or transmission error occurs using the BUFF N command, rather than reissuing BUFF N and starting from the beginning again. In this case, the command is:

DISP O addr 100

ad = given by the last 4-digit hexadecimal code preceding the colon in the last printed line.

ECHO x y Perform echo test on link x, y times. clnk-1

A test pattern is sent to the CDR machine and the machine echoes it back. OK is output if a successful response indicates a fault-free link. If y is not provided, the test is performed once only.

END Terminate command in progress. clnk-1

This command may be output at any time.

ENL LINK x Enable link x. clnk-1

The specified link is checked for response and stuck interrupt. OK is output and the link enabled if the tests are passed.

ENL SL1 x Enable SL-1 machine connected to CDR link x. clnk-1

This command is only valid for multi-port CDR machines. It enables new Meridian SL-1 machines connected to the CDR machine to communicate with the CDR, without interruption of service to existing Meridian SL-1 machines.

ENL TTY x Enable TTY x. clnk-1

The specified TTY is checked for response and stuck interrupt. OK is output and the TTY is enabled once the tests are passed.

FREE Release CDR from maintenance mode. clnk-1

If the CDR tape drive is enabled, then the next tape block that CDR has to write will be written wherever the tape was left. Thus, if the FUNC command was used on a tape which is to contain valid CDR data, it is imperative that the user reposition the tape to the same position that CDR had it before the FUNC command was used.

FUNC function

Initiate specified tape drive function. clnk-1

Initiates the specified function on the tape drive.

"function" may be one of:

STAT = status function
WID = write ID burst function
WTM = write tape mark
WFB = write contents of the maintenance tape buffer
READ = read block into maintenance buffer
RBC = perform read back check into maintenance buffer
SKIP x = skip x blocks in hexadecimal number
ERG = erase gap
ERAS = erase to end of tape
BKSP x = backspace x blocks in hexadecimal number
REW = rewind
UNL = unload
TERM = terminate

These commands correspond to the primitive tape functions supported by the CDR tape handler firmware. The FUNC STAT command causes the tape status to be printed at the TTY.

The tape status is the first word printed in response to the BLOC command and is the "status" field of a CDM122 error message. If the "unexpected interrupt" bit in the tape status in ON, a word corresponding to the "unexpected" field in a CDM122 message is printed.

GET Put CDR tape unit into maintenance mode. clnk-1

When CDR is in this mode, it will not initiate any tape functions of its own. A tape buffer will be allocated for CDM to use for tape functions. Only one Meridian SL-1 system may put the CDR into maintenance mode at one time. See the description of maintenance mode.

LD40, 42

LOAD xxxx Set buffer for a WRITE. clnk-1

The hexadecimal digits xxxx are propagated through the tape buffer allocated for maintenance mode. The command is used to set the buffer for a WRITE.

PORT Resets the port so that no port is active. clnk-1

Enter the following commands only after a PORT command, and only from a TTY:

DISP
STOR
BLOC
TEST x
BUFF
BUFF x
GET
LOAD xxxx
FUNC
FREE
ENL SL1 x
DIS SL1 x
STAT SL1 x

PORT x Set up links for commands to follow. clnk-1

Sets the links to which the following commands will apply. This command may only be entered from a TTY. Take care when using the following commands with PORT or PORT N, as the CDR may trap data or write erroneous data to tape:

DISP
STOR
BLOC
TEST x
BUFF
BUFF x
GET
LOAD xxx
FUNC
FREE
ENL SL1 x
DIS SL1 x
STAT SL1 x

STAT List SDI packs and give their status. clnk-1

Lists all SDI packs and specifies whether they are dedicated to data links or TTY; enabled or disabled. Output is:

SDI N <tty/link> <enbl/dsbl><messages> <naks> <timeouts> <lost>

If the device is an enabled link, then the number of messages sent, the number of transmission errors and the number of lost call records are also output. See error code CDM121 for a description of the <> fields.

STAT SL1 ALL, x

Get status of one or all CDR ports. clnk-1

This command is used to output the status of ports in multiport CDR machines. The format of the output for is:

status type mode

where:

status = UNEQ (unequipped), DSBL (Disabled) or ENBL (enabled)

type = SNGL (single-port SDI) or DUAL (dual-port SDI)

mode = may be IDLE (normal idle), BUSY (normal busy), SOF software-disabled), NOIS (disabled for too many interrupts), STUC (disabled for stuck interrupt condition) or EIA (disabled for having EIA device not ready).

STAT x Get status of SDI x. clnk-1

Output is: <tty/link> <enbl/dsbl/uneq> <messages> <naks> <timeouts> <lost>

See error code CDM121 for a description of the <> fields.

STOR pg addr

Alter CDR storage information. clnk-1

The old contents of the location is output and the user is prompted for the new contents. After entering the new contents, enter a space or carriage return. If a carriage return is entered, the command ends. If a space is entered, the contents of the next location are output and the user is prompted for input. If only the carriage return or space is entered (i.e., the new contents are not input), then the current word is not modified. If an invalid address is provided, CDR will response timeout.

LD40, 42

TEST x	Write x sets of test records to tape. Before using this command, refer to the description of the maintenance mode. If x is not given, the default is 1. As this command writes to tape, a scratch tape should be mounted before the command is executed. PORT and GET commands must be issued before this command can be used. Twenty blocks of data are written to the tape, then the tape is rewound and read to check the data. The number of errors found is output using a CDM035 message.	clnk-1

Issued:	04 01 94
Status:	Standard
X11 Release:	19

Equipment Data Dump (EDD)

LD43 is used to keep data on the system storage device up to date. When data dump is invoked, data in the read/write memory (including any that has been changed or added) is written to the storage device at the location reserved for it.

The overlay can be invoked daily as part of the daily routines or loaded manually. An incremental data dump occurs during the daily routines if database changes have been made.

X11 release 18 introduces the option 81 system. X11 release 19 introduces the option 61C. The same commands apply to the option 61C/81 and all other machines. Because the option 6CE/81 utilize two CMDUs and disk redundancy, the LD43 commands apply to both sides of the system. Refer to the specific commands for the differences between the option 61E/81 and other systems. Refer to System installation (553-3001-210) for general information.

Following a successful EDD on the option 61C/81, the string "HI" (Hardware Infrastructure).

LD43

When the data dump fails

In the event of an unsuccessful initial dump, the office data on the tape or disk is suspect. Another data dump should be attempted on the same tape or disk; if successful, a transient error is indicated and normal procedures can be resumed. If this second attempt also fails, DO NOT attempt another data dump until the fault is isolated and corrected.

If the storage medium is not proved faulty and the storage device appears serviceable, data dumping to an OLD tape or disk may help to pinpoint the problem.

Except during the troubleshooting phase, any storage medium which has failed to data dump successfully must not be left in the storage device. Should a SYSLOAD occur with such a storage medium, the load may terminate abnormally with unpredictable results.

Low memory warning

Unprotected data store equal in size to the length of the records being written (i.e., 512 words) must be available to the data dump overlay.

A low memory warning message (SCH603) is issued when spare unprotected data store falls below a given threshold. Once this warning message has been issued, it is not possible to perform a data dump as the Meridian SL-1 requires spare unprotected data store equivalent to the size of a record on the storage medium (i.e., 512K words).

Users should ensure that these amounts of spare unprotected data store are available before attempting to perform a data dump.

Alphabetical list of commands

BKO	Copy data from the primary to the backup device. Copy data base from the primary device (Winchester disk) to the back-up device (floppy disk). Applicable to systems with hard disk storage only. For the option 61C/81, this command creates backups to floppy disks for the active CMDU.	basic-19
DAT	Print the creation date of the main, secondary, or backup database.	op81-18
EDD	Begin data dump. For the option 61C/81, this command creates backups to floppy disks for both CMDUs when redundancy is in effect and both CMDUs have floppy disks inserted.	basic-19
EDD CLR	Clear data dump inhibit flag. This flag is set because SYSLOAD or the conversion programs detect incomplete or inconsistent equipment data. Exercise caution since the use of this option may result in incorrect data being written to tape.	basic-1
EDD CN	Save CND names (use prior to data dump). Saves the names associated with DNs for Caller's Name Display. *Note:* Use EDD CN prior to data dump.	basic-1
EDD HM	Save AWU, RMS and MR data with the data dump. Saves Automatic Wakeup (AWU), Room Status (RMS) and Message Registration (MR) data. *Note:* This should be performed prior to a sysload or software conversion.	basic-1
EDD IWC	Inhibits write check. Caution: For Emergency Use Only. Inhibits write check. This command is useful when the standard commands for data dump fail and end-of-file cannot be found. It writes an end-of-file on tape and allows other commands to be invoked.	basic-1
EDD NBK	Inhibit database backup. Indicates that a database backup should not be performed after a datadump. Applicable to hard disk storage with floppy disk backup.	basic-1

LD43

EDD NS	Inhibit tape far-end spool. Tape will not spool to the far end and will not perform write test. Default option is SP. Overlay cannot be aborted until writing has either been completed or has failed. This command applies to systems equipped with tape units.	basic-1
EDD NX	Write tape data records. Writes tape data records consistent in size with predefined system values. Default option is NX.	basic-1
EDD SP	Spool tape to far end. Spools tape to the far end in order to even the tension on the tape. Also writes a test record after the end of existing data to check for any write problems. If errors occur during test, data should remain intact. This command applies to systems equipped with tape units.	basic-1
PBX CF6 (ALLOWED)		
	Bit dumped with PBX data block.	basic-1
RES	Copy entire contents of back-up to primary device. Copy entire contents of back-up device (floppy diskettes) to primary device (Winchester disk). Applicable to systems with hard disk storage. For option 61C/81, this command copies the contents of the floppy disks on the active CMDU to both hard disks providing redundancy is in effect. If redundancy is not in effect, this command copies the floppy disk contents to the active CMDU.	basic-19
SWP	Exchange (swap) main and secondary database files.	61C/81-18

Issued: 04 01 94
Status: Standard
X11 Release: 19

Software Audit (AUD)

LD44 monitors system operation and provides an indication of the general state of system operation. The overlay is concerned mostly with the system software. When a software problem is encountered, the overlay outputs an AUD message and attempts to clear the problem automatically.

Running software audit

LD43 is enabled as a Background or Daily Routine in the configuration record. See prompts BKGD and DROL in LD17. To load the Audit overlay manually, enter the following.

```
LD 44
R x
```

where, x is the number of audit passes desired. Enter 0 for continuous auditing. R and x must be separated by a space or the system responds with the following.

```
AUD REQ ERR
AUDIT
```

The Meridian Mail MP data base audit (co-administration) is run during Audit if a data base mismatch is known by the system, or if it is being run manually.

LD44

510 Software Audit (AUD)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Background Signaling and Switching (BSD)

LD45 performs network continuity tests and outputs detected problems via BSD messages.

The Manual Continuity Test (MCT) allows you to isolate intermittent faulty points reported by the Background Continuity Test (BCT). For example, BCT reports faults between A, B, and C. Run the MCT between A and B, then between B and C to determine how often it fails.

When run in background, LD45 performs the following tests on all enabled network loops

- the continuity of the speech path between each network card and its associated PE shelves is tested
- the continuity of the speech path between all network cards is tested
- nonfunctioning paths between network cards are identified.

Note: When running in background, only new faults detected are output.

For systems running X11 release 15 and later, memory and signaling tests are only performed in LD30. If LD45 is included in background or midnight routines it is recommended that LD30 also be included. By including LD30, bad memory areas will be flagged before the continuity tests of LD45 which will improve fault isolation.

Using the manual continuity (XCON) command

The XCON command is used to test various communication paths on a NT8D04 Network and NT8D01 Controller cards. There are 8 variations of the XCON command as shown in Figure 1. Only 1 XCON test at a time can be run on a superloop.

To begin a manual continuity test, enter one of the following:

XCON 0 = perform test once and output results

XCON H hhh = repeat test for hhh hours (hhh = 1-255)

XCON M mm = repeat test for mm minutes (mm = 1-255)

XCON S ss = repeat test for ss seconds (ss = 1-255)

After you enter the XCON command, you are prompted for a combination of the values listed below. The responses to these prompts determine the test performed.

Prompt – Response – Comment

DSLT – xx – Timeslot (2-31, 34-63, 66-95, 98-127) for Network Card associated with detector Controller.

GSLT – xx – Timeslot (2-31, 34-63, 66-95, 98-127) for Network Card associated with generator Controller.

JUNC – x – Junctor number (0-7).

LBTN – l s c u – Terminal Number (loop, shelf, card, unit) to be loopback point.

LBTY – N/P – Loopback address: N = Network Card, P = Controller or terminal.

Note: When using XCON Test 9 for ISDN BRI, the possible responses for LBTY are 3 or 4. 3 indicated the test will take place with the DSL enabled; 4 performs the test with the DSL disabled.

PATT — x — Test pattern number (0-7). Signal sent by the generator to the detector. You should run a test several times with varying patterns.

SLOT — xx — Timeslot (2-31, 34-63, 66-95, 98-127). Enter return (<cr>) to select a random timeslot.

SUPL — l — Superloop number (0-156, in multiples of 4).

TAG — x — Tag number (1-15) returned by the system. Tag number 0 is used for one-shot tests (XCON 0).

TEST — x — Test case number (1-8).

TN — l s c u — Controller or terminal (loop, shelf, card, unit) to be the detector. For Controller, enter any valid TN on Controller's shelf. For special loopback channel enter: l s 99 0.

TYPD — N/P — Pattern detector: N = Network Card, P = Controller.

TYPG — N/P — Pattern generator: N = Network Card, P = Controller.

Alphabetical list of commands

NSIG — Perform the network memory and continuity tests (Release 14 and earlier). basic-1

No signaling test is done. All faults detected are reported.

TEST (loop) — Perform a complete continuity test for one or all loops. basic-1

Performs a complete test and reports all faults detected (even if they have been previously reported).

XCON test 1 — Network Card to Controller. xpe-15

This test uses the Network Card (NT8D04) as a pattern generator and the Controller (NT8D01) as the detector.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 1 — XCON test number
PATT — x — pattern (0-7)
TYPG — N — Network Card is generator
SUPL — loop — 0-156 in multiples of 4
SLOT — xx — timeslot 2-31, 34-63, 66-95, 98-127
TYPD — P — Controller is detector
TN — l s c u — valid TN on the Controller
TAG x — — tag number (1-15) assigned by the system

XCON test 2 — Controller to Network Card. xpe-15

This test uses the Controller (NT8D01) as a pattern generator and the Network Card (NT8D04) as the detector.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 2 — XCON test number
PATT — x — pattern (0-7)
TYPG — P — Controller is generator
TN — l s c u — valid TN on the Controller
TYPD — N — Network Card is detector
SUPL — loop — 0-156 in multiples of 4
SLOT — xx — timeslot 2-31, 34-63, 66-95, 98-127
TAG x — — tag number (0-15) assigned by the system

XCON test 3 Network Card to different Network Card. xpe-15

This test uses the Network Card (NT8D04) as a pattern generator and another Network Card as the detector.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 3 — XCON test number
PATT — x — pattern (0-7)
TYPG — N — Network Card is generator
SUPL — loop — 0-156 in multiples of 4
SLOT — xx — timeslot 2-31, 34-63, 66-95
TYPD — N — Network Card is detector
SUPL — loop — 0-156 in multiples of 4
SLOT — xx — timeslot 2-31, 34-63, 66-95
JUNC — x — junctor if Network cards in different groups
TAG x — — tag number (0-15) assigned by the system

XCON test 4 Controller to different Controller. xpe-15

This test uses a Controller (NT8D01) as a pattern generator and another Controller as a detector. The pattern is sent through one or two Network Cards (NT8D04).

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 4 — XCON test number
PATT — x — pattern (0-7)
TYPG — P — Controller is generator
TN — l s c u — valid TN on the Controller
TYPD — P — Controller is detector
TN — l s c u — valid TN on the Controller
GSLT — xx — timeslot 2-31, 34-63, 66-95 on
— — generator Network Card
DSLT — xx — timeslot 2-31, 34-63, 66-95 on detector Network card
JUNC — x — junctor if Network cards in different groups
TAG x — — tag number (0-15) assigned by the system

LD45

XCON test 5 Network Card to Network Card (loopback at backplane). xpe-15

This test uses the Network Card (NT8D04) as a pattern generator and detector. The pattern is sent to the network backplane and back.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt – Response – Comment
TEST – 5 – XCON test number
PATT – x – pattern (0-7)
TYPG – N – Network Card is generator
SUPL – loop – 0-156 in multiples of 4
SLOT – xx – timeslot 2-31, 34-63, 66-95, 98-127
TYPD – N – Network Card is detector
SUPL – loop – 0-156 in multiples of 4
SLOT – xx – timeslot 2-31, 34-63, 65-95, 98-127
LBTY – N – loopback address through network backplane
TAG x – – tag number (0-15) assigned by the system

XCON test 6 Network Card to Network Card (loopback through Controller). xpe-15

This test uses the Network Card (NT8D04) as a pattern generator and detector. The pattern is looped back through a Controller (NT8D01).

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt – Response – Comment
TEST – 6 – XCON test number
PATT – x – pattern (0-7)
TYPG – N – Network Card is generator
SUPL – loop – 0-156 in multiples of 4
SLOT – xx – timeslot 2-31, 34-63, 66-95, 98-127
TYPD – N – Network Card is detector
SUPL – loop – 0-156 in multiples of 4
LBTY – P – loopback through Controller
LBTN – l s 99 0 – special Controller loopback channel
TAG x – – tag number (0-15) assigned by the system

XCON test 7 Controller to Controller (special loopback channel). xpe-15

This test uses the Controller (NT8D01) as a pattern generator and detector. The pattern is looped back through a special loopback channel.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 7 — XCON test number
PATT — x — pattern (0-7)
TYPG — P — Controller is generator
TN — l s 99 0 — special Controller loopback channel
TAG x — — tag number (0-15) assigned by the system

XCON test 8 Network Card to Network Card (special loopback channel). xpe-15

This test uses the Network Card (NT8D04) as a pattern generator and detector. The pattern is looped back through a special channel which is specified by timeslot 128.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 8 — XCON test number
PATT — x — pattern (0-7)
TYPG — N — Network Card is generator
SUPL — loop — 0-156 in multiples of 4
SLOT — 128 — special Network loopback channel
TAG x — — tag number (0-15) assigned by the system

XCON test 9 Loopback test on Digital Subscriber loop. bri-18

This test uses the MISP as a pattern generator and detector. The pattern goes through the Network and Controller Card and is looped back at a single DSL. Both B- and D-channels are looped back.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 9 — XCON test number
PATT — x — pattern (0-7)
TYPG — N — Network Card is generator
LOOP — loop — 0-156 in multiples of 4
SLOT — 128 — special Network loopback channel
LBTY — 3 — The test is generated with the DSL enabled
or 4 — The test is generated with the DSL disabled
LBTN — l s c d — address of DSL
TAG x — — tag number (0-15) assigned by the system

XCON test 10 Loopback test on BRI line card. bri-18

This test uses the MISP as a pattern generator and detector. The pattern goes through the Network and Controller Card and is looped back at the line card level (i.e., bus loopback). Both B- and D-channels are looped back.

Enter one of: XCON 0, XCON H 1-255, XCON M 1-255, or XCON S 1-255 (one test or for duration of hours, minutes, or seconds). Then respond to prompts as follows:

Prompt — Response — Comment
TEST — 10 — XCON test number
PATT — x — pattern (0-7)
TYPG — 5 — MISP is generator
LOOP — loop — 0-156 in multiples of 4
SLOT — 128 — special Network loopback channel
LBTY — 4 — loopback at line card
LBTN — l s c d — address of DSL
TAG x — — tag number (0-15) assigned by the system

XINF	Display the tag numbers of all running and completed tests. The output format is: RUN T# T# T# T#.... DONE T# T# T# T#.... FREE: xx (number of free tags available)	xpe-15
XSTA x	Get the status of manual continuity test with TAG = x. Individual tests are identified by the tag number the system generates when you complete a sequence of test prompts. See also the XINF and XSTP commands. The test status provides the following format information: PATT: x = pattern number TYPG: N/P = Network or Controller as pattern generator SUPL: x = Superloop number or TN on Controller TS: x = timeslot TYPD: N/P = Network or Controller as pattern detector SUPL: x= Network Card or Controller as pattern generator TS: x = timeslot RESULTS TESTS PASSED: x TESTS FAILED: x	xpe-15
XSTP x	Stop manual continuity test with TAG = x. Individual tests are identified by the tag numbers. The XSTP command outputs the test status. See also XINF and XSTA commands.	xpe-15

LD45

520 Background Signaling and Switching (BSD)

Issued: 04 01 94
Status: Standard
X11 Release: 19

MF Sender Diagnostic for ANI (MFS)

LD46 is used to maintain the Multifrequency Sender card. The Multifrequency Sender pack provides multifrequency signals of Automatic Number Identification (ANI) digits over Centralized Automatic Message Accounting (CAMA) trunks to a toll switching CAMA, Traffic Operator Position System (TOPS) or Traffic Service Position System (TSPS).

The MFS diagnostic overlay can be run in background, during the daily routines, or manually to enter commands. It performs the following tests:

- checks that the MF Sender pack responds to system I/O functions
- tests the 30-channel memory locations, the 480 (30 x 16) digit buffer memory locations and the 64 First-in, First-out locations
- exercises all 15-digit codes with digit strings from 2 to 16 digits long and verifies both the 68 ms pulse width and whether each string outpulses to completion

LD46

Alphabetical list of commands

CDSP	Clear the maintenance display on the active CPU.	basic-1
CMAJ	Clear major alarm and resets power fail transfer.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
DISL loop	Disable MSF loop. For NT8D17 Conference/TDS cards see note with ENLL command.	basic-1
DISX loop	Disable NT8D17 Conference/TDS card on loop L and L + 1. Disables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are disabled. Loop = 0, 2, 4 ...158 *Note 1:* The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. *Note 2:* This command can be used in LD34, LD38 and LD46.	xct-15
END	Stop all current testing.	basic-1
ENLL loop	Enable loop. *Note:* For Conference/TDS cards the DISX and ENLX commands must be used whenever the faceplate switch of the card has been toggled. ENLL will software enable the card but the card will not reset properly.	basic-1

ENLX loop Enable NT8D17 Conference/TDS card on loop L and L + 1. xct-15

Enables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are enabled. Loop = 0, 2, 4 ...158

If one of the loops is already enabled, it is disabled and then both loops are enabled.

This command initiates card tests and downloads software.

Note 1: The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions, provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card.

Note 2: This command can be used in LD34, LD38 and LD46.

Note 3: The Conf/TDS card is not enabled automatically when it is inserted.

Note 4: Enabling more than 16 conference loops may cause system to lock-up.

MFS loop Test and enable MFS loop. basic-1

STAT loop Get status of MFS loop. basic-1

Response is:
UNEQ — loop is unequipped
DSBL — loop is disabled
CHAN xx — number of channels busy
xx DSBL xx BUSY — number of channels disabled and busy
NOT MFS — loop is not an MFS loop

TONE loop Enter input mode to provide MF tone bursts. basic-1

TONE loop ALL

Provide MF tone bursts for all digits on specified loop. basic-1

Provides MF tone bursts for all digits 1 to 9, 0, 11 to 15, in that order.

LD46

524 MF Sender Diagnostic for ANI (MFS)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Link Diagnostic

LD48 is used to maintain data links used with various special features and auxiliary data links.

Note: A maintenance telephone cannot use LD48.

ACD (Automatic Call Distribution) Links

When equipped with the Automatic Call Distribution (ACD) feature, the Meridian 1 can be supplemented with an Auxiliary Data System (ADS) minicomputer. The ADS is an auxiliary data processor located external to the Meridian 1 and is connected by a high-speed link only; or a high speed and a low-speed link.

The high-speed link is used for transmission of ACD-related messages between the Meridian 1 and the auxiliary processor. The low-speed link is used for transmitting maintenance codes and error messages between the maintenance TTY (connected to the Meridian 1) and the auxiliary processor.

Each auxiliary processor link consists of a single Serial Data Interface (SDI) port connected by interface cable to an interface port on the auxiliary processor.

LD48

ACD High speed and low speed link commands

The following commands are used to enable, disable, test and check the status of an APL link.

DIS HSL	Disable the high-speed link
DIS SDI HIGH	Disable the SDI port for high-speed link
DIS SDI LOW	Disable the SDI port for low-speed link
ENL HSL	Enable the high-speed link
ENL SDI HIGH	Enable SDI port for high-speed link
ENL SDI LOW	Enable SDI port for low-speed link
STAT HSL	Get high-speed link status
STAT LSL	Get low-speed link status
STAT SDI HIGH	Get status of high-speed link port
STAT SDI LOW	Get status of low-speed link port

ACD High speed and low speed link monitor commands

The monitor is a tool used to diagnose the messages flowing across the link. This is only useful for someone experienced with the message formats and protocols.

DIS MON	Disable the monitor-bit of high-speed link data
DIS PRNT	Disable the print-bit of high-speed link data
ENL MON	Print software information at maintenance TTY
ENL PRNT	Connect high-speed link to TTY
STAT MON (x)	Get status of one or all message monitors

AML (Application Module Link)

An Application Module Link (AML) provides a connection to applications such as Meridian Link. The AML is configured on an Enhanced Serial Data Interface (ESDI) or Multipurpose Serial Data Link (MSDL) card.

In X11 release 18 the CMS and ESDI commands are replaced by the following AML commands:

Old commands	New commands
ENL ESDI x	use: ENL AML x LYR2
DIS ESDI x	use: DIS AML x LYR2
ENL CMS x	use: ENL AML x LYR7
DIS CMS x	use: DIS AML x LYR7
CON ESDI x	use: EST AML x
DSC ESDI x	use: RLS AML x
ACMS x	use: ENL AML x ACMS
SLFT ESDI x	use: SLFT AML x
STAT CMS (x)	use: STAT AML x
STAT ESDI (x)	use: STAT AML x
SWCH CMS x x	use: SWCH AML x x

AML commands

The AML commands are listed below, where x is the AML logical device number (defined by prompt ADAN in LD17). Some of these commands only apply to AMLs on an MSDL card.

DIS AML x	Disable AML x
DIS AML x AUTO	Disable AUTO recovery on AML x (MSDL only)
DIS AML x LYR2	Disable layer two on AML x
DIS AML x MDL	Disable MDL error reporting on AML x (MSDL only)
DIS AML x MON	Disable monitor on AML x (MSDL only)
DIS AML x LYR7	Disable layer seven on AML x
ENL AML x	Enable AML x
ENL AML x ACMS	Enable automatic set-up on AML x (ESDI only)
ENL AML x AUTO	Enable AUTO recovery on AML x (MSDL only)
ENL AML x FDL	Force download loadware to the MSDL card and enable AML x
ENL AML x LYR2	Enable layer two on AML x
ENL AML x LYR7	Enable layer seven on AML x
ENL AML x MDL	Enable MDL error reporting on AML x (MSDL only)
ENL AML x MON	Enable monitor on AML x (MSDL only)
EST AML x	Establish layer two on AML x
RLS AML x	Release layer two on AML x
MAP AML (x)	Get physical address and card name of one or all AMLs
STAT AML (x)	Get AML status
SLFT AML x	Selftest on AML x
SWCH AML x y	Switch active (x) and standby (y) AML

AML/CSL monitor commands

The AML monitor is a tool used to diagnose the messages flowing across the link. This is only useful for someone experienced with the message formats and protocols. These commands apply to CSLs or AMLs on ESDI cards and AMLs on MSDL cards.

ENL MSGI x	Enable output of incoming layer seven messages on AML x
DIS MSGI x	Disable output of incoming layer seven messages on AML x
ENL MSGO x	Enable output of outgoing layer seven messages on AML x
DIS MSGO x	Disable output of outgoing layer seven messages on AML x
ENL PACI x	Enable output of incoming layer two messages on AML x
DIS PACI x	Disable output of incoming layer two messages on AML x
ENL PACO x	Enable output of incoming layer two messages on AML x
DIS PACO x	Disable output of outgoing layer two messages on AML x
STAT MON (x)	Get status of one or all message monitors

APL (Auxiliary Processor Link) commands

The following commands are used to enable, disable, test and check the status of an APL link.

DIS APL x	Put software AUX link x in maintenance mode
DIS ISDI x	Disable hardware AUX link SDI x
ENL APL x	Put software AUX link x in non-maintenance mode
ENL ISDI x	Enable AUX link SDI x
STAT APL x	Display status of AUX link x
STAT DSP LNK x	Get status of all Displays on link x
STAT ISDI x	Get status of hardware AUX link SDI x

LD48

APL monitor commands

The APL monitor is a tool used to diagnose the messages flowing across the link. This is only useful for someone experienced with the message formats and protocols.

DIS PPRT x	Disable packet message print option on link x
DIS UPRT x	Disable unpacket message print on AUX link x
ENL PPRT x	Enable packet message print option on link x
ENL UPRT x	Enable unpacked message print on link x
ENLX MSGI x p	Output incoming priority p messages from link x
ENLX MSGO x p	Output outgoing priority p messages from link x
STAT CNFG	Get status of link monitor/simulator configuration
STAT CSDI x	Get status of SDI port x
STAT DSP LNK x	Get status of all Displays on link x

CSL (Command and Status Links)

The Command and Status Link application protocol is used to communicate between the Meridian 1 CPU and an external Value Added Server (VAS) like Meridian Mail or a message center. The CSL requires an Enhanced Serial Data Interface (ESDI) card.

In addition to the tests in LD48, resident firmware diagnostics for the CSLs and ESDIs can output CSA, ESDA, ESDI error messages.

CSL commands (X11 release 17 and earlier)

The following commands are used to enable, disable, test and check the status of Command and Status links. Note: Use AML commands in X11 release 18 and later.

ACMS x	Automatic set-up for Command and Status Link x
CON ESDI x	Set up link layer of HDLC protocol
DIS CMS x	Disable Command and Status Link x
DIS ESDI x	Disable ESDI x
DSC ESDI x	Disconnect the link
ENL CMS x	Enable CSL x
ENL ESDI x	Enable ESDI x
SLFT ESDI x	Invoke ESDI and run self-test
STAT CMS x	Get status of Command and Status link
STAT ESDI x	Get status of ESDI x
SWCH CMS x y	Switch active (x) and standby (y) CSL

ISDN BRI monitor commands

These commands are used to monitor input/output messages to the MISP and SILC/UILC. This is only useful for someone experienced with the message formats and protocols. A password is required for DGB and MON options. The SETM TNx, RSET TNx and RSET ALL commands are also available for digital telephones.

Caution: Use of the SETM MISP loop MON commands may use all system printing registers and cause an initialization.

SETM MISP loop DBG	Set debug option on MISP card
SETM MISP loop MON	Set printing of input/output messages on MISP card
SETM MISP loop MNT	Set printing of status messages on MISP card
SETM MISP loop AMO	Set printing of audit messages on MISP card
SETM BRIM xxxx	Set printing of messages on SILC/UILC, MISP or digital line card
SETM TNx l s c u,dsl	Set printing messages on a unit
SETM TNx l s c u,31	Set printing messages on a digital line card unit (u) or ISDN BRI line card (31)
RSET MISP loop DGB	Exit MISP debug
RSET MISP loop MON	Stop printing of input/output messages on MISP card
RSET MISP loop MNT	Stop MISP printing of status messages on MISP card
RSET MISP loop AMO	Stop printing MISP card audit messages
RSET BRIM	Stop printing of messages on SILC/UILC, MISP or digital line card
RSET TNx	Stop printing messages on an ISDN BRI line card
RSET ALL	Stop printing all messages on a line card

Integrated Messaging System Links

The link maintenance capabilities provided for Integrated Messaging System (IMS) and Integrated Voice Messaging System (IVMS) links allow the link to be enabled or disabled, or put into a maintenance mode.

The link hardware or software status can be displayed on the maintenance terminal. The program allows technicians to request printouts of all packed and/or unpacked messages be sent over a specific APL link.

Using print options (packet/unpacked messages) and observing the patterns of messages sent over the link, system faults can be diagnosed and isolated on the AUX, the Meridian 1, the SDI cable, or ESDI card.

Multipurpose Serial Data Link (MSDL)

MSDL provides 4 ports for applications such as ISDN Primary Rate D-channels (DCH) and Application Module Links (AML). With X11 release 19 and later, the MSDL card supports SDI functions.

The MSDL commands are listed below, where x is the MSDL device number (defined by prompt DNUM in LD17). These are provided in Link Diagnostic (LD48) and D-channel Maintenance (LD96), and I/O Diagnostic (LD37).

DIS MSDL x (ALL) – Disable MSDL card
ENL MSDL x (FDL, ALL) – Enable MSDL card
RST MSDL x – Reset MSDL card
STAT MSDL (x (FULL)) – Get MSDL status
SLFT MSDL x – Execute a selftest on MSDL card x

These are provided in Link Diagnostic (LD48) and D-channel Maintenance (LD96), and I/O Diagnostic (LD37) overlays. See "Alphabetical List of commands" in LD48 for a complete description of these commands.

LD48

Multipurpose Serial Data Link (MSDL) commands

The MSDL commands are listed below, where x is the MSDL device number (defined by prompt DNUM in LD17). These are provided in Link Diagnostic (LD48) and D-channel Maintenance (LD96), and I/O Diagnostic (LD37).

DIS MSDL x (ALL)	Disable MSDL card
ENL MSDL x (FDL, ALL)	Enable MSDL card
RST MSDL x	Reset MSDL card
STAT MSDL (x (FULL))	Get MSDL status
SLFT MSDL x	Execute a selftest on MSDL card x

Single Terminal Access (STA) commands

Single Terminal Access (STA) is an application available on the MSDL card with X11 release 19 and later. The STA application reduces the number of physical devices used to administer and maintain the Meridian 1 and its auxiliary processors. Refer to *X11 system management applications* (553-3001-301) for complete details.

DIS STA x	Disable the STA application
ENL STA x (FDL)	Enable STA application
MAP STA x	Get information relating to the STA application
STAT STA x	Get status of STA application

Voice Mailbox Administration (VMBA) commands

Voice Mailbox Administration (VMBA) is available with X11 release 19 and Meridian Mail 9. It allows for integrated voice mailbox administration. Refer to *X11 features and services* (553-3001-305) for complete details.

DIS VMBA <vsid>	Disable the Voice Mailbox Administration application
DIS VMBA <vsid> AUDT	Disable the mailbox database audit
DIS VMBA <vsid> UPLD	Disable the mailbox database upload
ENL VMBA <vsid>	Enable the Voice Mailbox Administration application
ENL VMBA <vsid> AUDT	Enable the mailbox database audit
ENL VMBA <vsid> UPLD	Enable the mailbox database upload
STAT VMBA <vsid>	Get the status for the Voice Mailbox Administration application
STAT VMBA <vsid> AUDT	Get the status for the voice mailbox database audit
STAT VMBA <vsid> UPLD	Get the status for the voice mailbox database upload

LD48

Alphabetical list of commands

ACMS x Automatic set-up for Command and Status Link x. csl-8

The given CSL must have been previously disabled. This command is equivalent to using the ENL ESDI x, CON ESDI x and ENL CMS x sequence of commands to set up a Command and Status Link or Meridian Link.

If the first attempt to bring up the CSL fails, ACMS will automatically try again to set up the link. If set-up failure continues, an appropriate error code is generated periodically. ACMS is a background process.

Note: Use ENL AML x ACMS command in X11 release 18 and later.

CMIN ALL Clear minor alarm indication on all attendant consoles. basic-1

CMIN c Clear minor alarm indication on attendant consoles for customer c. basic-1

CON ESDI x Set up link layer of HDLC protocol. csl-8

This command is valid only if the ESDI is enabled. If successful, the corresponding ESDI port will be in the CONNECTED state. If the port is used for a CSL application, the command ENL CMS x must be entered before the CSL is operational. This command is only applicable for a synchronous port.

Note: Use EST AML x command in X11 release 18 and later.

DIS AML x Disable AML x. esdi/ msdl-18

Whenever the third parameter (LYR2, LYR7, etc.) is not typed, the overlay defaults the third parameter of the DIS command to LYR2. Therefore, this command is equivalent to DIS AML x LYR2. Refer to DIS AML x LYR2 command definition, for more information.

DIS AML x AUTO

Disable AUTO recovery on AML x (MSDL only). msdl-18

This command is not available for an ESDI AML.

DIS AML x LYR2

Disable layer two on AML x. esdi/msdl-18

MSDL Requirement: The MSDL card must be enabled. The AML link state can be any state other than the disabled state, and should not be in the process of self test. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time.

MSDL Action: The AML link state is changed to the disable state. The MSDL port on which the AML is configured is disabled.

ESDI: The ESDI port is disabled. The port must be idle.

DIS AML x LYR7

Disable layer seven on AML x. esdi/msdl-18

The MSDL or ESDI card must be enabled. The AML layer two must be enabled and established, and AML layer seven must also be enabled. (Example: ENL MSDL x followed by ENL AML x LYR2 followed by EST AML x followed by ENL AML x LYR7 must have been executed at an earlier time).

Action: A request to disable the AML layer seven is issued. SL-1 will stop sending polling messages to the far end.

DIS AML x MDL

Disable MDL error reporting on AML x (MSDL only). msdl-18

This command disables the Management Data link Layer (MDL) error reporting for the MSDL application. This command is not available for ESDI AML.

The MSDL card must be enabled. The AML layer two must be enabled. For example, the ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time.

DIS AML x MON

Disable monitor on AML x (MSDL only). msdl-18

Using this command is used, the periodic printing of the link state and configuration, traffic data, error logs, and protocol logs stops. This command is not available for ESDI AML links.

The MSDL card must be enabled. The AML layer two must be enabled. For example, the ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time).

LD48

DIS APL x	Put software AUX link x in maintenance mode.	apl-1
DIS CMS x	Disable Command and Status Link x. This command does not disable the physical or link layer (HDLC protocol) of the CSL. i.e., the corresponding ESDI is not disabled or disconnected. Warning messages will appear if an attempt is made to disable the active CSL but the link can be disabled if desired. *Note:* Use DIS AML x LYR7 command in X11 release 18 and later.	csl-8
DIS ESDI x	Disable ESDI x. If the port is used for CSL purposes, the link layer is disconnected and the ESDI will NOT respond to far-end SABM (HDLC protocol). Also, ESDI can no longer interrupt the Meridian 1. A warning message will appear if an attempt is made to disable the active CSL, though it can be disabled, if desired. *Note:* Use DIS AML x LYR2 command in X11 release 18 and later.	csl-8
DIS HSL	Disable the high-speed link.	lnk-2
DIS ISDI x	Disable hardware AUX link SDI x.	apl-1
DIS MON	Disable the monitor-bit of high-speed link data.	apl-1

DIS MSDL x (ALL)

Disable MSDL card. msdl-18

When entered without the optional parameter, the disable MSDL command attempts to disable the MSDL card. Disabling the card via this command is permitted from either the Enabled (ENBL) state or the System Disabled (SYS DSBL) state.

When attempted on an MSDL that does not have any ports enabled, this command should unconditionally succeed. The only exception to this is when the disable card message needs to be sent to the card, and there is no buffer currently available for building the message (MSDL015 is output to the TTY). In this unusual situation, attempting the command again will most likely result in success.

Application programs are not erased when the MSDL is disabled.

If there are any ports that are still running in the MSDL card, the 'ALL' option must be used to force disable the active ports followed by the card. As an alternative to this command, the craftsperson can use the commands provided by the applications to disable the ports (D-channels or AML) individually, and then use the 'DIS MSDL x' command.

The command 'DIS MSDL x ALL' is not allowed if the active TTY (the terminal from which the command was entered) is supported on the MSDL card in question.

Note: Software disable the logical channel prior to disabling the physical DNUM port.

DIS MSGI x Disable output of incoming layer seven messages on AML x. csl-8

DIS MSGO x Disable output of outgoing layer seven messages on AML x. csl-8

DIS PACI x Disable output of incoming layer two messages on AML x. csl-8

DIS PACO x Disable output of outgoing layer two messages on AML x. csl-8

DIS PPRT x Disable packet message print option on link x. apl-1

DIS PRNT Disable the print-bit of high-speed link data. apl-1

DIS SDI HIGH

Disable the SDI port for high-speed link. lnk-2

DIS SDI LOW

Disable the SDI port for low-speed link. lnk-2

LD48

DIS STA x Disable the STA application. sta-19

This command disables the application, the administration port, and any other additional ports. The associated ports must be disabled before using this command.
x = the logical ID number identifying the STA application.

DIS UPRT x Disable unpacket message print on AUX link x. apl-1

DIS VMBA <vsid>

Disable the Voice Mailbox Administration application. vmba-19

This command is used to disable the Voice Mailbox Application.

Enter the command in the following format.
DIS VMBA <vsid> <NNNN>

vsid = The VAS ID number associated with VMBA.
NNNN = AUDT or UPLD for the database audit or upload.

Note: AUDT and UPLD are optional entries. The VAS ID must be entered.

The voice mailbox audit and upload functions are aborted when the application is disabled. Be sure to get the status of those functions before disabling the application.

DIS VMBA <vsid> AUDT

Disable the mailbox database audit. vmba-19

This command aborts the audit function whether it was invoked manually or automatically.

DIS VMBA <vsid> UPLD

Disable the mailbox database upload. vmba-19

This command aborts the audit function whether it was invoked manually or automatically.

DSC ESDI x Disconnect the link. csl-8

This command is only applicable when the ESDI port is in CONNECTED state. If the command is entered successfully, ESDI x is in enabled state.

If this command is entered while the CSL is active, a warning message is generated. Disabling while in this state disables the CMS and ESDI.

Note: Use RLS AML x command in X11 release 18 and later.

ENL AML x Enable AML x. esdi/msdl-18

For MSDL: If AUTO recovery is off, then this command is the same as the ENL AML x LYR2 command. If AUTO recovery is on, an attempt is made to establish the link (layer two) and the application (layer seven).

For ESDI: This is the same as the ENL AML x LYR2 command.

ENL AML x ACMS

Enable automatic set-up on AML x (ESDI only). esdi-18

This command is valid only for ESDI AML and is not available on the MSDL AML. It is equivalent to ACMS x command.

ENL AML x AUTO

Enable AUTO recovery on AML x (MSDL only). msdl-18

This command is not available for ESDI AML links.

ENL AML x FDL

Force download loadware to the MSDL card and enable AML x. msdl-18

MSDL Requirement: The MSDL card must be enabled. The AML link state must be in the disable state. All other MSDL AML links configured on the same MSDL card must be in the disable state. Example: ENL MSDL x must have been executed at an earlier time.

MSDL Action: The MSDL AML loadware is downloaded to the MSDL card. While download is in progress a series of dots are output. Once the command is executed successfully the ENL AML x LYR2 command is executed automatically.

ENL AML x LYR2

Enable layer two on AML x. esdi/msdl-18

MSDL Requirement: The MSDL card must be enabled. The AML link state must be in the disable state. Example: ENL MSDL x must have been executed at an earlier time.

MSDL Action: The AML link state is changed to the release state. The MSDL port on which the AML is configured is enabled. If the ENL AML x command is executed successfully, and MSDL AML auto recovery is in the enable state, then the EST AML x is issued automatically.

ESDI: The ESDI port is enabled. The ESDI card must first be disabled.

ENL AML x LYR7

Enable layer seven on AML x. esdi/msdl-18

MSDL Requirement: The MSDL card must be enabled. The AML link should not be in the simulation mode. The AML layer two must be enabled and established, and AML layer seven must be disabled. Example: ENL MSDL x followed by ENL AML x LYR2 followed by EST AML x must have been executed at an earlier time.

MSDL Action: A request to enable the AML layer seven is issued. Polling messages are sent to the far end.

ESDI: Layer seven is enabled for the ESDI AML. The ENL AML x (LYR2) command must be completed successfully first.

ENL AML x MDL

Enable MDL error reporting on AML x (MSDL only). msdl-18

This command disables the Management Data link Layer (MDL) error reporting for the MSDL application. This command is not available for ESDI AML.

The MSDL card must be enabled. The AML layer two must be enabled. For example, the ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time.

ENL AML x MON

Enable monitor on AML x (MSDL only). msdl-18

When this command is activated, the AML application periodically prints the link state and configuration, traffic data, error logs, and protocol logs. The information is output to the MSDL monitor port. This command is not available for ESDI AML links.

The MSDL card must be enabled. The AML layer two must be enabled. For example, the ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time.

ENL APL x Put software AUX link x in non-maintenance mode. apl-1

ENL CMS x Enable CSL x. csl-8

This does not automatically enable the physical layer (HDLC protocol) of the CSL, i.e., the corresponding components (ESDI, Digital Link Interface, ASIM/Data Line Card) have to be enabled before this command can be entered. The command is valid only when the corresponding ESDI is in the CONNECTED state (i.e., the HDLC link layer is up).

This command will trigger a polling message to be sent and if the correct response is returned, a confirmation message will be printed and a polling message sent automatically every 5 seconds. If there is no response within 5 seconds, an error message will be printed and no more polling messages will be sent. (48 messages are sent at initial set-up.)

Note: Use ENL AML x LYR7 command in X11 release 18 and later.

ENL ESDI x Enable ESDI x. csl-8

ESDI hardware tests will be performed and parameters will be downloaded to the ESDI port. If the command is successful, the ESDI port will be in the ENABLED state.

If the ESDI is used for a CSL application, the commands CON ESDI x and ENL CMS x have to be entered before CSL is operational.

Note: Use ENL AML x LYR2 command in X11 release 18 and later.

ENL HSL Enable the high-speed link. lnk-2

ENL ISDI x Enable AUX link SDI x. apl-1

ENL MON Print software information at maintenance TTY. apl-1

This command causes software information being sent to the auxiliary processor to be printed at the TTY. This information would include counts of Cumulative Negative Acknowledgements (NAKs), timeouts and many other control characteristics of the link.

Use this command only when the ACD is handling light traffic otherwise the TTY will be overloaded from of the high volume of messages.

ENL MSDL x (FDL, ALL)

Enable MSDL card. msdl-18

When entered without any of the optional parameters, the enable MSDL command attempts to enable the MSDL card. Enabling the card via this command is only permitted if the card is currently in the Manually Disabled (MAN DSBL) state.

The enable card succeeds if the card is resident in the shelf, it has passed all the self tests, and the MSDL base software has been downloaded and is responding.

If the MSDL base software and any configured application software has not been downloaded, or if the version of the software on the card is different from the version on the system disk, software download occurs. While download is in progress, a series of dots (".") are output.

If the FDL (forced download) option is entered, the MSDL base software and all the configured applications will be downloaded regardless if the application already exists on the card. Following the download, the card will be enabled.

If the ALL option is entered, the card will be enabled (provided the three conditions mentioned above are met), all the applications will be downloaded if necessary and then an attempt will be made to enable all the links/ports configured on the card. Additionally, the enable command with the ALL option can be entered when the card is already in the enabled state. This allows you to enable any disabled links/ports through one command.

It is not possible to use both the ALL and the FDL options in the same command.

ENL MSGI x Enable output of incoming layer seven messages on AML x. csl-8

This command allows printing of all incoming message received over link x on the maintenance output device. The SSD signaling messages and the program input are not printed. This is typically used to check the validity of incoming messages for the different queues.

ENL MSGO x Enable output of outgoing layer seven messages on AML x. csl-8

This command allows printing for all outgoing messages over link x on the maintenance output device. This is typically used to check the validity of outgoing messages sent from the application layer to the output queue.

ENL PACI x Enable output of incoming layer two messages on AML x. csl-8

When enabled, all incoming messages received on link x to the ESDI are printed on the maintenance TTY, including SSD signaling messages. Typically this is used to check the correctness of the incoming messages as received from the ESDI in the data block format.

ENL PACO x Enable output of incoming layer two messages on AML x. csl-8

When enabled, all outgoing messages are sent through link x to the ESDI are printed on the maintenance TTY. The message will be printed in the data block format required by the ESDI.

ENL PPRT x Enable packet message print option on link x. apl-1

Printouts can be up to 7 lines in length and are of the form:
APLOxxx y xxx . . . x
APLIxxx y xxx . . . x

where:

APLO = the message is output from the SL-1

APLI = the message is input to the SL-1 from the AUX

xxx = number of the APL link

y = number from 0 to 6 indicating the printout line number of the message. This field is not used for ACK and NAK messages.

ENL PRNT Connect high-speed link to TTY. apl-1

Disconnects the high-speed link from the AUX and connects it instead to an RS-232-C compatible TTY device. This disrupts communication between the Meridian SL-1 and the auxiliary processor. It enables ACD-related messages (which would normally be sent to the auxiliary processor) to be printed at the TTY connected to the high-speed link.

Normal communications between the Meridian SL-1 and the auxiliary processor will not continue if the ENL PRINT command is inputted while the Meridian SL-1 and auxiliary processor are still connected. A different message format is used between the Meridian SL-1 and the auxiliary processor. This condition will cause the HSL to go down because the auxiliary processor cannot interpret this other message format.

ENL SDI HIGH

Enable SDI port for high-speed link. lnk-2

ENL SDI LOW

Enable SDI port for low-speed link. lnk-2

ENL STA x (FDL)

Enable STA application. sta-19

The MSDL card must be enabled to implement this command.
x = the logical ID number identifying the STA application
FDL = force download the application
If not invoked, the application is downloaded only when needed

ENL UPRT x Enable unpacked message print on link x. apl-1

Printouts are of the form:

APLMxxx aa b c zzzz . . . z

where:
APLMxxx = indicates unpacketed message over link xxx
aa = indicates the message length
b = indicates the application type
c = indicates the message type
zzz = these fields are the message body, depending on the application and message type

ENL VMBA <vsid>

Enable the Voice Mailbox Administration application. vmba-19

Enter the command in the following format.
ENL VMBA <vsid> <NNNN> ALL/xxxx

vsid = The VAS ID number associated with VMBA.
NNNN = AUDT or UPLD for the mailbox database audit or upload functions.
ALL/xxxx = Enable NNNN for ALLDNs with voice mailboxes, or a specific DN (xxxx).

Note: NNNN and ALL/xxxx are optional entries. The VAS ID must be entered to initiate this command.

ENL VMBA <vsid> AUDT

Enable the mailbox database audit. vmba-19

Enter the command in the following format.
ENL VMBA <vsid> AUDT ALL/xxxx

The audit can be implemented for a specific Directory Number by entering the DN following the audit command:
ENL VMBA <vsid> AUDT xxxx

The upload can also be enabled for all DNs eligible for a voice mailboxe by entering ALL following the audit command:
ENL VMBA <vsid> AUDT ALL

ENL VMBA <vsid> UPLD

Enable the mailbox database upload. vmba-19

Enter the command in the following format.
ENL VMBA <vsid> UPLD ALL/xxxx

The upload can be implemented for a specific Directory Number by entering the DN following the upload command:
ENL VMBA <vsid> UPLD xxxx

The audit can also be enabled for all DNs configured with voice mailboxes by entering ALL following the upload command:
ENL VMBA <vsid> UPLD ALL

LD48

ENLX MSGI x p

Output incoming priority p messages from link x. apl-1

When enabled by the user, all incoming messages received on link n are output, excluding the messages with specified priorities, where "p" is the message priority:
1 = the system priority
2 = signaling priority
3 = call processing priority
4 = administration priority

ENLX MSGO x p

Output outgoing priority p messages from link x. apl-1

When enabled by the user, all outgoing messages sent through link n are output, excluding the messages with specified priorities, where "p" is the message priority:
1 = the system priority
2 = signaling priority
3 = call processing priority
4 = administration priority.

EST AML x Establish layer two on AML x. esdi/msdl-18

The layer two is established for the AML configured on the given MSDL port. The layer two is connected for the AML configured on the ESDI card.

MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled and released. (Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time).

MSDL Action: The MSDL AML link state is changed into the establish state. If EST AML x executes successfully, and provided that the MSDL AML AUTO recovery is enabled, next the ENL AML x LYR7 is executed automatically.

ESDI: Layer two is connected for the ESDI AML. The port must be enabled first.

MAP AML (x)

Get physical address and card name of one or all AMLs. esdi/msdl-18

This command outputs the card name and physical card address and ports for one or all AMLs. This information is also output with the STAT AML command. For example:

```
MAP AML
  AML: 05   ESDI: 04
  AML: 12   MSDL:07   PORT:1
```

MAP STA x Get information relating to the STA application. sta-19

This command displays the logical, physical, and port allocation information related to the STA application. If the ID number (x) is not specified, the information for all existing STAs is given.

RLS AML x Release layer two on AML x. esdi/msdl-18

The layer two is released for the AML Link configured on the given MSDL port. The layer two is disconnected for the AML configured on the ESDI card.

MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled and established. (Example: ENL MSDL x followed by ENL AML x LYR2 followed by EST AML x must have been executed at an earlier time).

MSDL Action: Prior to the execution of the RLS AML x, if the MSDL AML layer seven is enabled, the DIS AML x LYR7 is automatically executed. The MSDL AML state is changed to the release state.

ESDI: The layer two is disconnected for the ESDI AML port. The port must be in the connected and idle state first.

RSET ALL Stop printing all messages on a line card. arie/bri-14

RSET BRIM Stop printing of messages on SILC/UILC, MISP or digital line card. bri/arie-18

RSET IFx 1 PDL2 1

Stop printing SAPI 16 interface messages. mph-19

RSET IFx 1 PDNI n

Stop printing network interface messages. mph-19

RSET IFx l s c u BCH x		
	Stop printing B-channel terminal interface messages.	mph-19
RSET IFx l s c u DCHx		
	Stop printing D-channel terminal interface messages.	mph-19
RSET MISP loop AMO		
	Stop printing MISP card audit messages.	bri-18
RSET MISP loop DGB		
	Exit MISP debug.	bri-18
RSET MISP loop MNT		
	Stop MISP printing of status messages on MISP card.	bri-18
RSET MISP loop MON		
	Stop printing of input/output messages on MISP card.	bri-18
RSET MPHM	Stop all Meridian Packet Handler message monitoring.	mph-19
RSET TNx	Stop printing messages on an ISDN BRI line card.	bri-18
RST MSDL x	Reset MSDL card.	msdl-18
	This command causes a power-on reset on the MSDL, followed by a series of short self tests. Resetting the card via this command is only permitted if the card is in the Manually Disabled (MAN DSBL) state.	

SETM BRIM xxxx

Set printing of messages on SILC/UILC, MISP or digital line card. bri-18

This command is used to select various message types for printing on a given TN (defined by SETM TNx commands). The value of xxxx is a HEX word which determines the message types.

The bits in xxxx which specify a message type are:
0000a00000bcdefg

Where,
a = Call processing error messages
b = Output ring messages to BRIL on MISP
c = Input ring messages from BRIL on MISP
d = Output expedited messages to BRIL on MISP
e = Input expedited messages from BRIL on MISP
f = Output SSD messages to SILC/UILC
g = Input SSD messages from SILC/UILC

Examples:

To print input SSD and expedited messages:
SETM BRIM 0005 (i.e., 0000000000000101)

To print input and output expedited messages:
SETM BRIM 000C (i.e., 0000000000001100)

SETM IFx 1 PDL2 1

Set printing of SAPI 16 interface messages. mph-19

SETM IFx 1 PDNI n

Set printing of network interface messages. mph-19

SETM IFx l s c u BCHx

Set printing of B-channel terminal interface messages. mph-19

SETM IFx l s c u DCHx

Set printing of D-channel terminal interface messages. mph-19

SETM MISP loop AMO

Set printing of audit messages on MISP card. bri-18

These messages are sent from the MISP handler to the MISP basecode. This command is used to turn these message back on once they have been turned off because:
– debug or monitor (MON) mode is enabled
– RSET loop AMO command has been issued

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SETM MISP loop DBG

Set debug option on MISP card. bri-18

The card must be disabled first. The debug option has the following effect when the MISP card is enabled:
- turns off the sanity timer
- stops interface handler audit messages
- no timestamp messages are sent to the MISP card

This command requires a password. The "dot" prompt indicates debug mode is turned on.

SETM MISP loop MNT

Set printing of status messages on MISP card. bri-18

These messages indicate:
- error indication messages from the MISP
- state of L1 on SILC/UILC and L2/L3 on MISP

This option setting is lost during an initialization.

SETM MISP loop MON

Set printing of input/output messages on MISP card. bri-18

Both the expedited and ring input/output messages are printed. This command also sets the debug option and requires a password.

Note 1: This command turns on all input/output messages. This may use up all system print registers and may cause system initialization. Therefore use this command with caution.

Note 2: The debug option is turned off by a system initialization. Restarting debug will also restart the input/output monitoring.

SETM MPHM xxxx

Set printing of Meridian Packet Handler messages. mph-19

xxxx = the MPHs to be monitored

SETM TNx l s c u,31

Set printing messages on a digital line card unit (u) or ISDN BRI line card (31). arie/bri-14

This command is used in conjunction with the SETM BRIM command.

The value x is a tag number (0-6).

For ISDN BRI line cards, you must enter "l s c 31" for the address.

SETM TNx l s c u,dsl

Set printing messages on a unit. arie/bri-14

This command is used in conjunction with the SETM BRIM command.

The value x is a tag number (0-6).

SLFT AML x Selftest on AML x. esdi/msdl-18

This command runs the local loop back test for MSDL AML, and the ESDI self test for the ESDI AML.

MSDL Requirement: The MSDL card must be enabled. The AML layer two must be disabled. (Example: ENL MSDL x must have been executed at an earlier time).

MSDL Action: The MSDL AML local loop back test is executed and upon completion of the test the MSDL AML port is set to the disable state.

SLFT ESDI x Invoke ESDI and run self-test. csl-8

The command is only valid for the port which is enabled and when the other port on the ESDI card is disabled. If the self-test passes, OK is output; otherwise, an error message is output.

Note: Use SLFT AML x command in X11 release 18 and later.

SLFT MSDL x

Execute a selftest on MSDL card x. msdl-18

This command causes a power-on reset on the MSDL, which will be followed by a complete set of self tests. This command only executes self tests if the card is in the Manually Disabled (MAN DSBL) state.

If the self tests pass, a message indicating this and card id is output.

If the self tests fail, a message is output describing which self test failed. It is useful to note that the first test that fails will abort the self test sequence, so this command only indicates one test failure, even if multiple tests might fail.

STAT AML (x)

Get AML status. esdi/msdl-18

This command outputs the status of layer two and layer seven of one or all configured AMLs. The designation (DES) of the AML is output if it has been defined for the port in LD17.

Examples:

AML: 01 MSDL: 08 PORT: 00
LYR2: DSBL AUTO: OFF LYR7: DOWN
DES: MERIDIAN_MAIL

AML: 04 ESDI: 10
LYR2: EST AUTO: ON LYR7: ACTIVE

STAT APL x Display status of AUX link x. apl-1

STAT CMS x Get status of Command and Status link. csl-8

Status may be:

DOWN = CSL is not available. Link layer may not be up (Enhanced Serial Data Interface state is not CONNECTED) or there may be no polling message response after two tries.

DOWN AUTOSETUP = SL-1 software is attempting Auto Set-Up of a CSL, but the CSL is not available. Link layer (HDLC protocol) may not be up (ESDI state is not connected) or there may be no polling message response after two tries.

ACTIVE EMPTY = CSL is in ACTIVE state and there are no messages waiting to be sent.

ACTIVE NOT EMPTY = CSL is in ACTIVE state and there are some messages in the queue waiting to be sent.

ACTIVE FULL = CSL is in ACTIVE state and the call register queue is full of messages to be sent. It may be an indication of a problem.

STANDBY = CSL is in standby mode. The Enhanced Serial Data Interface (ESDI) has established the link layer and can become ACTIVE (switchover).

ACTIVE EMPTY CCR DISABLE = Customer Controlled Routing feature is not implemented or not enabled.

Note: Use STAT AML x command in X11 release 18 and later.

STAT CNFG	Get status of link monitor/simulator configuration. Display link monitor/simulator configuration status. The system will respond according to the current configuration as follows: *NOT CONFG - if system is not configured. *CNFG INT/SIM CSLAPL N CSLSIM N if the system is in internal maintenance mode; shows link numbers of CSLSIM and CSL application program. *CNFG FLD CSL N if the system is in field maintenance mode; shows CSL link number.	csl-8
STAT CSDI x	Get status of SDI port x.	basic-1
STAT DSP LNK x	Get status of all Displays on link x.	apl-1
STAT ESDI x	Get status of ESDI x. Status may be as follows: DISABLED = ESDI port has been disabled. ENABLED = ESDI port had been enabled, but the link layer has not been set up by the CON ESDI command. The ESDI port must be in the enabled state to perform the self-test. CONNECTED = ESDI has already brought up the link layer and is ready to send and receive messages (result of entering CON ESDI n command). AUTO SETUP = ESDI is trying to automatically bring up the application layer. This state occurs during automatic recovery of the link, or after the ACMS command has been issued. *Note:* Use STAT AML x command in X11 release 18 and later.	csl-8
STAT HSL	Get high-speed link status. Response can be either UP, DOWN or NOT READY.	lnk-2
STAT ISDI x	Get status of hardware AUX link SDI x.	apl-1
STAT LSL	Get low-speed link status. Response can be either UP, DOWN or NOT READY.	lnk-2

STAT MON (x)

Get status of one or all message monitors. csl-8

The system will respond with the status. If all monitors are disabled, the response is:

MSGO DIS
MSGI DIS
PACO DIS
PACI DIS
X25I DIS
X25O DIS

If the monitor function is enabled, for outgoing messages on two links the response is:

MSGO ENL CSL n

STAT MSDL (x (FULL))

Get MSDL status. msdl-18

This command outputs the status of MSDL cards. Without any optional parameters (no card number, etc.), the status of all MSDL cards in the system is output.

When a card number alone is provided with the command, the status of the card is output along with additional information regarding the applications configured on the card. Specifically, for each D-channel or AML configured on the card, the application name, logical number and port status is output. For example:

MSDL x: ENL

AML	11	DIS	PORT 1
DCH	25	OPER	PORT 2
AML	03	OPER	PORT 3

If the FULL option is entered along with the MSDL number, the Meridian 1 outputs all the information output for the 'STAT MSDL x' command along with the following additional information:

- card ID
- bootload firmware version
- basecode version
- basecode state
- when the basecode was activated (if it is active)
- each application version
- each application state
- when each the application was activated (if it is active)

The card status is output on the first line and can be any one of the following:

MSDL x: ENBL - card is enabled

MSDL x: MAN DSBL - card disabled by the DIS MSDL command

MSDL x: SYS DSBL reason - card has been disable by the system

The system disabled state may be due to any of the following.

SYS DSBL - NOT RESPONDING

If the MSDL is in this state, the implication is that the Meridian 1 has attempted to communicate with the MSDL and was not successful. It is possible that the card is not present in the shelf. If it is present, then it is possible that the software on the card is unable to respond to messages from the Meridian 1

Action: Check if the card is properly inserted in its slot. If it is (and has been for more than a few minutes), then check the console output for MSDL or ERR messages and take the appropriate action for the error message. It may be that the rotary switch setting on the MSDL card is not set properly. To keep the Meridian 1 from continuously attempting recovery of the MSDL, use the 'DIS MSDL x' command to put the card in the Manually Disabled (MAN DSBL) state.

SYS DSBL - SELF TESTING

If the MSDL is in this state, self tests are in progress.

Action: Wait for self tests to complete and for the Meridian 1 to examine the results. Under normal circumstances, self tests take less than one minute to complete. There is a possibility, however, when an erasable EPROM on the card has been cleared that self tests can take between five and six minutes to complete. Therefore, it is prudent not to take any action at this time.

SYS DSBL - SELFTESTS PASSED

This is a transient state. It implies that the card has successfully completed self tests and the Meridian 1 either is about to begin downloading the MSDL base software, or has just completed downloading the MSDL base software and is about to attempt to enable the card.

– continued –

Action: Wait for the Meridian 1 to begin the next step of recovery. If a more immediate recovery is desired, use the 'DIS MSDL x' command followed by the 'ENL MSDL x' command. This cause essentially the same recovery action to be taken, however it may be faster (since it is being done as a result of input from the craftsperson).

SYS DSBL – SELF TESTS FAILED
If the MSDL is in this state, self tests have executed and failed on this card.

Action: Use the 'STAT MSDL x' command to determine reason for self test failure. Disable the MSDL card using the 'DIS MSDL x' command, then use the 'SLFT MSDL x' command to execute the selftests again. If the selftests pass, attempt to enable the card using the 'ENL MSDL x' command. If the card fails the self tests again, record the results and replace the card.

SYS DSBL - SRAM TESTS FAILED
If the MSDL is in this state, self tests have executed and passed, however when the Meridian 1 attempted to perform read/write tests to the Shared RAM on the MSDL, it detected a failure.

Action: Same as for self test failure. If the attempt to enable the card fails, record the results and replace the card.

SYS DSBL - OVERLOAD
The Meridian 1 has received too many messages from the MSDL. This is considered to be unacceptable, in that this much of a demand may interfere with other system functions.

Action: If the MSDL is left in this state, the Meridian 1 will attempt to bring the card back into service within a few minutes. If this is not desired, disable the card using the 'DIS MSDL x' command. It is also advisable to identify a specific port or application that may be responsible for the overload. This can be done by disabling individual links/ports on the MSDL and letting the remaining links/ports operate normally.

– continued –

SYS DSBL - RESET THRESHOLD
If the MSDL is in this state, the Meridian 1 has detected more than four resets within ten minutes. This is considered to be unacceptable, as a normally operating card should not reset so often. It is possible that the card may be in this state due to a Fatal Error or Self Test failure from which no recovery was successful. (As the recovery from Fatal Errors and Self Test failures begins with resetting the card, repeated attempts at recovery may cause the reset threshold to be reached.)

Action: Disable the card using the 'DIS MSDL x' command and execute the 'SLFT MSDL x' command. If self tests pass, attempt to enable the card using the 'ENL MSDL x' command. If the problem recurs, try force downloading the software to the MSDL using the 'ENL MSDL x FDL' command. If the problem still recurs, and the reason for the resets is a repeated fatal error, attempt to isolate the problem by disabling all links/ports controlled by one application (e.g., all D-channels or all AMLs). If no manual intervention is taken by the craftsperson, the Meridian 1 will attempt to bring the card back into service beginning at midnight.

SYS DSBL - FATAL ERROR
If the MSDL is in this state, the card encountered a fatal condition from which it could not recover. In response to the 'STAT' command, the cause of the fatal error will be displayed. If the 'STAT' command is not entered while the card is in this state, the MSDL302 message printed at the time of the state transition will indicate the cause of the fatal error.

Action: The Meridian 1 will attempt to bring the card back into service automatically. While the card is in this state it is recommended that the craftsperson do nothing. If the Meridian 1 is unable to recover the card, the system disabled substate will be changed to indicate the reason recovery was not possible. The craftsperson should then take the recommended action for that new substate.

– continued –

SYS DSBL - NO RECOVERY ATTEMPTED UNTIL MIDNIGHT
When this is output after the SYS DSBL message, the Meridian 1 has attempted to recover the card but has repeatedly failed. One example of this condition is when the background recovery mechanism has failed to download the MSDL Base Code five times in a row.

Action: Disable the card using the 'DIS MSDL x' command, test the card using the 'SLFT MSDL x' command, and if self tests pass, enable the card using the 'ENL MSDL x' command. If downloading of the MSDL Base Code is necessary, it will be attempted in response to the enable command. If no manual intervention is taken, the Meridian 1 will again attempt recovery beginning at midnight.

STAT SDI HIGH

Get status of high-speed link port. lnk-2

Response can be either ENL (enabled), DIS (disabled), or ENL NRDY (enabled not ready).

STAT SDI LOW

Get status of low-speed link port. lnk-2

Response can be either ENL (enabled) or DIS (disabled).

STAT STA x Get status of STA application. sta-19

When x (STA ID number) is specified, the STA state, port number, port type, port state, and system description are displayed.

If x is not specified, and the application is enabled, the state and port information is given.

If x is not specified, and the application is in any state other than enabled, only the STA status is given. No port or system information is displayed. Possible output follows.

Application state and Target state: ENABLED, MANUAL DISABLE, SYSTEM DISABLE, AWAIT DISABLE, AWAIT APPL ENABLE, AWT CONF DOWNLOAD

Port type: ADM, SYS, TTY

Port state: NO SDI/STA, DISABLED, ENABLED, TESTING, KEYBOARD TST, AWAIT VT-200, DTR DOWN, AUTOBAUDING, AWT AUTOBAUD, ABD SCANNING, DEFAULT ABD, NO MODEM, IN SESSION, AWAIT ENABLE

System description is entered as part of the port configuration. For the additional port used to shadow the STA application, the system description is SHADOW TTY.

STAT VMBA <vsid>

Get the status for the Voice Mailbox Administration application. vmba-19

Enter the command in the following format.

STAT VMBA <vsid> <NNNN>

vsid = the VAS ID where the VMBA is configured
The VAS ID must be entered.

NNNN = VMBA audit or upload function
AUDT = mailbox database audit
UPLD = mailbox database upload

Note: AUDT and UPLD are optional entries. The VAS ID must be entered.

The status output is shown below.

STAT VMBA <vsid>
VMBA <ACTIVE or INACTIVE>
AUDIT <ACTIVE or INACTIVE>
UPLOAD <ACTIVE or INACTIVE>

STAT VMBA <vsid> AUDT
AUDIT INACTIVE
or
AUDIT ACTIVE
n AUDITED
n MISMATCHES FOUND/CORRECTED
n ERRORS

STAT VMBA <vsid> UPLD
UPLOAD INACTIVE
or
UPLOAD ACTIVE
n UPLOADED
n DELETED
n ERRORS

STAT VMBA <vsid> AUDT

Get the status for the voice mailbox database audit. vmba-19

Enter the command in the following format.

STAT VMBA <vsid> AUDT

The status output is shown below.

STAT VMBA <vsid> AUDT
AUDIT INACTIVE
or
AUDIT ACTIVE
n AUDITED
n MISMATCHES FOUND/CORRECTED
n ERRORS

STAT VMBA <vsid> UPLD

Get the status for the voice mailbox database upload. vmba-19

Enter the command in the following format.

STAT VMBA <vsid> UPLD

The status output is shown below.

STAT VMBA <vsid> UPLD
UPLOAD INACTIVE
or
UPLOAD ACTIVE
n UPLOADED
n DELETED
n ERRORS

SWCH AML x y

Switch active (x) and standby (y) AML. msdl-18

This command makes the standly AML the active and vice versa.
x is the active AML becoming standby
y is the standby AML to becoming active.

Note: This command applies to X11 release 18 and later.

SWCH CMS x y

Switch active (x) and standby (y) CSL. csl-8

CSL switchover, where x is the active CSL switching to standby and y is the standby CSL to become active.

Note: This command applies to X11 release 17 and earlier only.Use SWCH AML x y in X11 release 18 and later.

LD48

564 Link Diagnostic

Issued: 04 01 94
Status: Standard
X11 Release: 19

New Flexible Code Restriction (NFCR)

LD49 allows the building, changing, deleting and printing of code restriction trees for the following.

- New Flexible Code Restriction (NFCR) data
- Incoming DID Digit Conversion (IDC) data

Add a new tree

REQ	NEW	Action request
TYPE	FCR, IDC	NFCR or IDC data block
CUST	0-99	Customer number
DCNO	0-254	IDC tree number
IDGT	0-9999 0-9999	DN or range of DNs to be converted
CRNO	(0)-254	NFCR tree number
INIT	ALOW, DENY	Allow or deny all codes
ALOW	xxxx	Digit sequence allowed unconditionally
UPDT	No, (Yes)	Data is correct and can update the NFCR tree
ALOW	xxxx yyy	Digit sequence allowed, maximum digits to follow
DENY	xxxx	Digit sequence to be denied
UPDT	No, (Yes)	Data is correct and can update the NFCR tree
BYPS	xxxx	Digit sequence to be bypassed
UPDT	No, (Yes)	Data is correct and can update the NFCR tree

LD49

Change existing tree

REQ	CHG	Action request
TYPE	FCR, IDC	NFCR or IDC data block
CUST	0-99	Customer number
DCNO	0-254	IDC tree number
IDGT	0-9999 0-9999	DN or range of DNs to be converted
CRNO	(0)-254	NFCR tree number
ALOW	xxxx	Digit sequence allowed unconditionally (NFCR)
UPDT	No, (Yes)	Data is correct and can update the NFCR tree
DENY	xxxx	Digit sequence to be denied
UPDT	No, (Yes)	Data is correct and can update the NFCR tree
BYPS	xxxx	Digit sequence to be bypassed
UPDT	No, (Yes)	Data is correct and can update the NFCR tree

Move a tree

REQ	MOV	Action request
TYPE	FCR, IDC	NFCR or IDC data block
FROM	0-99 0-256	Source customer and tree number
TO	0-99 0-256	Destination customer and tree number

Remove a tree

REQ	OUT	Action request
TYPE	FCR, IDC	NFCR or IDC data block
CUST	0-99	Customer number
CRNO	(0)-254	NFCR tree number

Release all data for a customer

REQ	RLS	Action request
TYPE	FCR, IDC	NFCR or IDC data block
CUST	0-99	Customer number
FRCE	Yes, (No)	Force the storage or release of data

Print data

REQ	PRT	Action request
TYPE	FCR, IDC	NFCR or IDC data block
CUST	0-99	Customer number
DCNO	0-254	IDC tree number
CRNO	(0)-254	NFCR tree number

LD49

Alphabetical list of prompts

ALOW xxxx — Digit sequence allowed unconditionally. nfcr-2

Prompted when INIT is DENY. Enter <cr> to end ALOW prompting.

ALOW xxxx yyy — Digit sequence allowed, maximum digits to follow. nfcr-2

Enter the digit sequence to be conditionally allowed and maximum number of digits that can follow.

BYPS xxxx — Digit sequence to be bypassed. nfcr-2

Enter <cr> to end BYPS prompt.

CRNO (0)-254 — NFCR tree number. nfcr-2

The maximum number of trees allowed for a customer is defined by prompt MAXT in LD15

CUST 0-99 — Customer number. nfcr-2

If REQ was PRT, <cr> prints data for all customers.

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DCNO 0-254 — IDC tree number. idc-12

DENY xxxx — Digit sequence to be denied. nfcr-2

Prompted when INIT is ALOW.

FRCE Yes, (No) — Force the storage or release of data. nfcr-2

If an entry for ALOW, DENY or BYPS is more general than existing data, FRCE is prompted. For example, ALOW = 7 and the existing ALOW = 7000. In this case enter "No" to ignore the data, or "Yes" to accept the change. A modification of this type may result in the loss of portions of the tree.

If REQ is RLS and "Yes" is entered to FRCE, then all the customer's NFCR data is deleted. Prompt NFCR in LD15 must be set to "No" first.

FROM 0-99 0-256 — Source customer and tree number. nfcr-2

IDGT **0-9999 0-9999** — DN or range of DNs to be converted. idc-12

The external DNs to be converted is output and the user enters the internal DN. For example, to convert the external DN 3440 to 510, enter:

Prompt—Response:
IDGT—3440
3440—510

To convert the external DNs in the range 3440 to 3445, enter:

Prompt—Response:
IDGT—3440 3445
3440—444
3441—445
.
.
3445—469

INIT **ALOW, DENY** — Allow or deny all codes. nfcr-2

ALOW = to specify digit strings to be denied
DENY = to specify digit strings to be allowed

Note: Entering DNs may be affected by the Outpulsing feature for Japan.

REQ **aaa** — Action request. nfcr-2

NEW = create a new data block
CHG = modify an existing data block
MOV = move data to a new customer or NFCR tree
PRT = print NFCR tree data
RLS = release all NFCR data for a customer
RPL = replace data in an NFCR tree with new data
OUT = remove an NFCR tree
END = terminate overlay activity

TO **0-99 0-256** — Destination customer and tree number. nfcr-2

TYPE **FCR, IDC** — NFCR or IDC data block. nfcr-2

UPDT **No, (Yes)** — Data is correct and can update the NFCR tree. nfcr-2

LD49

570 New Flexible Code Restriction (NFCR)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Call Park and Modular Telephone Relocation

LD50 allows the implementation, administration and printing of the Call Park feature.

Add or change Call Park data

REQ	NEW, CHG	Add or change
TYPE	CPK	Call Park data block
CUST	0-99	Customer number
CPTM	30-(45)-240	Call park recall time in seconds
SPDN	(0)-50 xxxx	Number of contiguous system park DNs, and first DN
MURT	0-511	Music route number for parked calls

Remove Call Park data

REQ	OUT	Remove
TYPE	CPK	Call Park data block
CUST	0-99	Customer number

Print Call Park data

REQ	PRT	Print
TYPE	CPK	Call Park data block
CUST	0-99	Customer number

LD50

Change Meridian Modular Telephone ID during relocation

This prompt sequence is used to change the serial number, NT code, color code or release information stored in a Meridian Modular Telephone. This can only be done after the set has "relocated out" and before it is "relocated in" to the new location. An application of this occurs when the terminal is being replaced with one of the same type and requires the same key configuration.

See also "Set Relocation Data" in LD21, and "IDU: Print set ID" command in LD32.

REQ	CHG,OUT	Change or remove Relocation Table entry
TYPE	MTRT	Modular Telephone Relocation Table
TN	l s c u	Old Terminal Number of set in relocation table
SER	xxxxxx	New serial number of Meridian Modular Telephone
NTCD	xxxxxxxx	New NT code of Meridian Modular Telephone
COLR	xx	New color of Meridian Modular Telephone
RLS	xx	New release of Meridian Modular Telephone

Alphabetical list of prompts

COLR **xx** — New color of Meridian Modular Telephone. asr/arie-18

The color codes are:
03 is black
35 is chameleon ash
93 is dolphin

CPTM **30-(45)-240** — Call park recall time in seconds. cprk-2

This is the amount of time a call is held in the parked state before being returned to the caller.

CUST **0-99** — Customer number. cprk-2

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

MURT **0-511** — Music route number for parked calls. mus-1

The route and at least one trunk must exist before defining the music route. Enter "X" to remove.

NTCD **xxxxxxxx** — New NT code of Meridian Modular Telephone. asr/arie-18

REQ **aaa** — Action request. cprk-2

NEW = create a new data block
CHG = modify existing data block
PRT = print call park data block
OUT = remove call park data block
END = terminate overlay activity

RLS **xx** — New release of Meridian Modular Telephone. asr-18

SER **xxxxxx** — New serial number of Meridian Modular Telephone. asr/arie-18

SPDN **(0)-50 xxxx** — Number of contiguous system park DNs, and first DN. cprk-2

If DNXP package is equipped, up to 7 digits are allowed for first DN; otherwise, only 4 digits can be entered.

TN **l s c u** — Old Terminal Number of set in relocation table. asr/arie-18

LD50

TYPE	**CPK** — Call Park data block.	cprk-2
TYPE	**MTRT** — Meridian Modular Telephone Relocation Table.	asr/arie-18

Issued: 04 01 94
Status: Standard
X11 Release: 19

Multifrequency Signaling Diagnostic

Multifrequency Compelled Signaling (MFC) or Multifrequency Signaling (MFE) provides a handshaking facility between the Meridian 1 and the Central Office or Public Exchange (CO/PE) or between other PBXs over network/Tie trunks.

The MFD overlay program is used to diagnose, display or change the status of the MFC or MFE send/receive (S/R) cards.

LD54 resets all available MFC or MFE cards (both channels idle) and performs loop-back tests during the midnight routines. After every SYSLOAD or power-up, all available MFC or MFE cards are initialized.

The overlay can be loaded by the system after every power-up (or SYSLOAD), as part of the daily routines, or loaded manually to enter commands.

LD54

Hardware Initialization after SYSLOAD

After system power-up, every idle MFC or MFE card is initialized (self-tested). During this test the card is disabled (LED on faceplate ON) and the S/R card microprocessor executes sequential loop-back tests on both channels.

These tests entail looping the sender output of each card to the Receiver input. The sender transmits all thirty tone pairs (1 to 15 digits for both DOD/DID modes) with a default signal level of zero. Each time the receiver detects a tone pair, the microprocessor verifies the digit received. At the end of the test a command to enable the card is issued and the microprocessor sends the test results to the CPU.

Loop-around test during daily routines

This loop-around test is conducted by the system during the daily routines. The loop-around test is identical to the one conducted after power-up except for the following points:

- the test is conducted on one channel at a time for all available MFC or MFE cards
- the MFC or MFE S/R card remains enabled (LED on faceplate OFF)
- the self-test can also be loaded manually by issuing a command on the specified channel

Loop-around test by command

The loop-around tests are performed by maintenance personnel on a specified channel of the MFC or MFE S/R card. There are two types of tests:

- one is identical to the daily routine test which is conducted on the specific channel
- the second is conducted on a specific channel for a specified digit and signal level

LD54 also performs the following functions:

- resets all idle MFC or MFE cards once a day during the midnight routines
- enables and disables MFC or MFE card or channel
- determines the status of MFC card or channel
- lists all disabled MFC or MFE channels
- handles other common overlay operations (such as clearing alarms)

Note 1: Use the DISL command to force-disable the MFC or MFE channel or card.

Note 2: Use the DISI command in LD 32 to disable the card when idle.

Note 3: No more than 50% of MFC channels can be disabled at one time as a result of system or manually initiated tests. However, this constraint does not apply using disable commands.

MFC/MFE error handler and counter

The MFC/MFE error handlers are resident programs that monitor the number of MFC or MFE signaling errors. A one-word error field in the MFC or MFE block is initialized to zero. The Error Handler program allows a maximum of 10 errors. After every successful use of the MFC or MFE channel, the error field is decremented by one, if it is not already at zero. After every failure of the MFC or MFE channel the error field is incremented by one.

With X11 software, the Error Handler program generates only the ERR700 L S C U message. When an Error Handler code is output, the MFD overlay must be loaded manually and the MFC or MFE channels tested.

Alphabetical list of commands

ATST l s c u	Test automatic loop-around for specified unit. Performs automatic loop-around test on specified unit with default signal level of zero. All 30 tone pairs are tested and verified by the card microprocessor. Digits 1 to 15 signify Forward Signals 1 to 15 (DOD mode) and digits 16 to 30 signify Backward Signals 1 to 15 (DID mode). The response is OK when the unit passes the test and is enabled. If the receiver sends no message within a predefined time period, an error message indicating timeout is printed. If the receiver indicates it has received a different signal than that sent, the failed signal, an error message and the TN are printed.	basic-1
CDSP	Clear maintenance display on the active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
DISC l s c	Disable specified MFC or MFE card. LED on card is ON when disabled.	basic-1
DISU l s c u	Disable specified MFC or MFE channel. When the other unit on the card is also in a disabled state in the software, a message is sent to disable the MFC or MFE card. LED on card is ON when disabled.	basic-1
END	Stop further testing or cancel active command.	basic-1
ENLC l s c	Enable specified MFC or MFE card. Response is OK. A message is sent to the MFC or MFE card to turn off the LED.	basic-1
ENLU l s c u	Enable specified MFC or MFE channel. Response is OK. A message is sent to the MFC or MFE card to turn off the LED.	basic-1
MIDN 0	Reset all idle MFC or MFE cards. Resets all idle MFC or MFE cards and performs loop-around tests on all idle channels.	basic-1
MIDN 1	Initialize all idle MFC or MFE cards (recommended after installation).	basic-1

MTST l s c u dl

Manual loop-around test on unit with specified digit level. basic-1

MFC-30 tone pairs are tested and verified by the CPU. Digits 1 to 15 indicate forward signals 1 to 15 (DOD mode) and digits 16 to 30 indicate backward signals 1 to 15 (DID mode).

MFE-15 tone pairs are tested and verified. Digits 1-15 represent Forward Signals 1-15 (DID mode). Digit 0 represents the control frequency.

The MFC signal levels require a +3 dBm gain at the trunk end. The following list shows the level codes, their value at the S/R card output, and their value at the trunk.

Digit level	Level Values (at S/R card)	Level Values (at trunk)
0	8 dBm	5 dBm
1	11 dBm	8 dBm
2	12 dBm	9 dBm
3	13 dBm	10 dBm
4	14 dBm	11 dBm
5	15 dBm	12 dBm
6	16 dBm	13 dBm
7	35 dBm	32 dBm

The MFE signal level 0=-10.5 dBm level with skew -7.0 dBm control frequency level. Signal levels 1-7 are used for internal test purposes.

The response is OK when the unit passes the test and is enabled. If the unit fails the test, the appropriate error message and the TN are printed.

STAT List all disabled MFC channels in the system. basic-1

STAT l s c (u) Get status of specified MFC or MFE card or unit. basic-1

Status is one of IDLE, BUSY, MBSY, DSBL or UNEQ for both channels.

Issued: 04 01 94
Status: Standard
X11 Release: 19

Flexible Tones and Cadences

Flexible Tones and Cadences (FTC) is an optional feature which is used to customize the tones provided to telephone users. FTC is primarily intended for international markets where tones which are different from the North American defaults are required.

LD56 is used to modify the tones and cadences. If the FTC feature (package 125) is not equipped, North American tones and cadences are used.

Refer to Flexible Tones and Cadences description (553-2711-180) for complete details regarding this feature.

What are tones and cadences?

Tones are used to provide call status to telephone users. A tone is defined by the both the frequency and volume of the sound.

Tones are provided in on and off phases. One or more cycles of on/off cycles make up a tone's cadence. For example, the default cadence for normal ringing is 2 seconds on, 4 seconds off, 2 seconds on, 4 seconds off, and so on.

CAUTION: To maintain your UL/CSA safety rating, ringing cadences must be established to support the following:

There must be at least a 1 second quiet interval, separated from the next quiet interval by no more than 5 seconds of ringing.

LD56

Flexible Tone and Cadence (FTC) Tables

FTC tables define the tones and cadences used for various calling features. Up to 31 FTC tables can be created. Each table can be associated with with one or more trunk routes by entering the table number in response to prompt TTBL in LD16.

Master Cadence Table (MCAD)

The Master Cadence Table (MCAD) defines cadences that are controlled by software.

The MCAD can have 256 entries. Each entry can have up to 10 on/off phases each. Entry 0 is reserved for continuous tone and cannot be changed. Entries 1-15 are reserved for ringing cadences.

Most of the software cadences are continuously repetitive unless it is specified that the tone should end after the last phase. There are four exceptions to this rule: prompts ACBT,AOBT, INTU and OVRD cadences repeat the last 8 phases. This allows a special initial tone burst to be defined. To have the first cycle repeat, it must be defined as both the first and last cycle.

A cadence is defined at the CDNC prompt by entering the time for each on and off phase. The time depends on the settings for the TMRK prompt in LD17 which defines the software cadence increments as 96 or 128 ms. For each phase, enter the closest multiple of 5 ms equal to the multiple of 96 or 128 ms which gives the a time ≥ the time required.

For example, given LD17 TMRK is set to 128 ms, and a repeating 2 seconds on, 4 seconds off cadence is required.

1. Determine the ON phase (2 seconds = 2000 ms)
   2000/128 = 15.625 = 16 (always round up)
   128 x 16 = 2048 ms
   multiple of 5 closet to 2048 ms = 2050
   Entry for prompt CDNC = 2050/5 = 0410
2. Determine the OFF phase (4 seconds = 4000 ms). By using the same calculation, the entry for prompt CDNC = 0820.
3. To define the cadence, respond to the prompts as follows:
   REQ NEW, CHG
   TYPE MCAD
   WCAD 1-255
   CDNC 0410 0820
   - To define the cadence: 2 s on, 4 s off, 4 s on, 2 s off, repeat cycle 1 and 2, enter the following.
     CDNC 0410 0820 0820 0410
   - To define the cadence: 2 s on, then steady off, enter the following.
     CDNC 0410, or
     CDNC 0410 0000

If an odd number of non-zero phases are entered, software ends the tone after the last ON phase. A carriage return at any phase results in zero for the remaining phases.

Once the cadence is defined, it can be entered in response to the CDNC prompt for a given feature. For example, CDNC is output after the Call Waiting Tone prompt.

Firmware Cadence Table (FCAD)

The Firmware Cadence Table (FCAD) defines cadences that are controlled by an NT8D17 Conference/TDS/MFS card.

The FCAD can have 256 entries (0-255). Each entry can have up to 10 on/off phases. Entry 0 is reserved for continuous tone and cannot be changed. Entries 1-15 are reserved for ringing cadences. Each phase is in multiples of 5 ms.

FCAD cadences have the following capabilities.

- Each cadence may be defined to end at the "on" phase, the "off" phase, or repeat after a single pass through the defined on/off cycles. Any or all of the five cycles can be repeated.
- Unique tones can be defined for each "on" phase. These tones are permanently held in the Conference/TDS/MFS firmware.

In order to have the same cadences on 500/2500/digital telephones and SL-1 telephones, the MCAD and FCAD entries 0-15 are identical. Changes to MCAD entries 1-15 automatically change FCAD entries 1-15. The FCAD entries 1-15 can only be changed by changing the MCAD entries 1-15.

The Conference/TDS/MFS card must be disabled and then re-enabled to download changed firmware cadences.

Examples of creating firmware cadences:

1. For a cadence of 2 s on, 4 s off, repeat
   REQ NEW, CHG, PRT
   TYPE FCAD
   WCAD 1-255
   CDNC 0410 0820

   END REPT
   CYCS 1 (on/off cycles to be repeated)
   WTON NO (use default tone for this cadence)

2. For a cadence of 2 s on, 4 s off, 3 s on, 5 s off, repeat
   REQ NEW, CHG, PRT
   TYPE FCAD
   WCAD 1-255
   CDNC 0410 0820 0614 0998

   END REPT
   CYCS 1 2 (on/off cycles to be repeated)
   WTON NO (use default tone for this cadence)

3. For a cadence of:
   0.1 s on at 950 Hz, 19 dB below overload A-law, 0.1 off
   0.1 s on at 1400 Hz, 20 dB below overload A-law, 0.1 off
   0.1 s on at 1800 Hz, 20 dB below overload A-law, steady off
   REQ NEW, CHG, PRT
   TYPE FCAD
   WCAD 1-255
   CDNC 0020 0020 0020 0020 0020

   END OFF
   WTON YES (define tones for this cadence)
   TONES 134 135 136 (See NT8D17 Conference/TDS tone table)

TDS and NT8D17 Conference/TDS/MFS cards

There are two types of cards providing tones and cadences:

- Tone and Digit Switch (TDS) cards
- NT8D17 Conference, TDS and Multi-Frequency (MF) Sender card

There are a variety of TDS cards. Each card provides a different set of tones and cadences. When a TDS card is used for SL-1 sets, each tone and cadence is identified by a hexadecimal code. The decimal equivalents for these hex codes are entered at the TDSH prompt for each calling feature.

Refer to the Flexible Tones and Cadences (553-2711-180) for the appropriate codes.

When the NT8D17 Conference/TDS/MFS cards are used, the tones and cadences are defined by the following prompts.

XCAD = 0-255 — entry in the Firmware Cadence Table (FCAD)

XTON = 0-255 — tone stored in the card firmware

CDNC = 0-255 — entry in Master Cadence Table (MCAD)

Note: The ringing cadences for all telephones use the Master Cadence Table (MCAD). MCAD entries 1-15 are downloaded to the Peripheral Controller to provide ringing.

Time interval for Call Forward

In Call Forward No Answer (CFNA), the time interval before a call is forwarded is measured by the time interval for one ring cycle (defined at NCAD prompt) times the number of ring cycles (defined at CFNA prompt in LD15).

All other types of ringing forward a call after this same time interval regardless of cadence. For example, those with a faster cadence will forward after more rings, those with a slower cadence after fewer rings.

Installing FTC

These steps outline the process to install the FTC feature and change the default tones and cadences for one or more calling features.

Note: To assist in fault clearing, it is recommended that you keep a record of all changes.

1. Load overlay 56.
2. Define new MCAD cadences.
3. Define new FCAD tones and cadences.
4. Create one or more FTC tables (one for each trunk route requiring different tones and cadences).
5. Define the non-default tones and cadences for each FTC table.
6. Enter the FTC table number for each trunk route (LD16 prompt TTBL).
7. If a Conference/TDS/MFS card is equipped, then follow these steps:
   a) set options in LD97
   b) initialize the system (INIT)
   c) disable and enable each Conf/TDS/MFS card (LD34)
   d) disable and enable each Controller (LD32)

Create, change or print FTC Table

An FTC table number can be entered for each trunk route at prompt TTBL in LD16. Table 0 is the default for all trunk routes and contains the defaults for North America.

REQ	NEW,CHG, PRT	Create, change or print
TYPE	FTC	Flexible Tones and Cadences
TABL	0-31	FTC table number
USER	Yes, (No)	Print customer and route users of the table(s)
DFLT	0-31	Default FTC table

LD56

Ring Table Entries

For systems with NT8D17 Conference/TDS cards, all telephones share the same ringing cadence. SL-1 telephones require an NT8D17 tone (XTON).

REQ	NEW,CHG	Create or change
TYPE	FTC	Flexible Tones and Cadences
TABL	0-31	FTC table number
DFLT	0-31	Default FTC table
RING	Yes	Modify the Ringing feature definitions
NCAD	(1)-255	500/2500/Digital set normal ringing MCAD index number
NBCS		Normal cadence for SL-1 set ringing
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
DCAD	0-(2)-15	500/2500/Digital set distinctive ringing MCAD table index
DBCS		Distinctive cadence for SL-1 set ringing
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
ICAD	0-(5)-15	500/2500/Digital Dial Intercom distinctive ringing MCAD table index
IBCS		SL-1 set distinctive Dial Intercom ringing TDS code
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
ACAD	0-(2)-15	500/2500/Digital Autovon precedence ringing MCAD table index
ABCS		Autovon precedence ringing cadence for SL-1 sets
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
RCAD	0-(1)-255	500/2500/Digital Call Park Recall ringing MCAD table index
RBCS		SL-1 Call Park Recall Ring Cadence
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
GCAD	0-(1)-255	500/2500/Digital set Group Call ringing MCAD table index
GBCS		SL-1 Group Call Ring Cadence

TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
HCAD	0-(3)-255	500/2500/Digital set Held Call reminder MCAD table index
HBCS		SL-1 Held Call Reminder ring cadence
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code

LD56

Hardware Controlled Cadences

For systems with NT8D17 Conference/TDS cards, each feature requires a firmware cadence (XCAD) and tone (XTON). For other TDS cards, the tone and cadence is defined by prompt TDSH. See the alphabetical list of prompts for the default values.

REQ	NEW,CHG	Create or change
TYPE	FTC	Flexible Tones and Cadences
TABL	0-31	FTC table number
DFLT	0-31	Default FTC table
RING	<cr>	.
HCCT	Yes	Change the TDS card controlled cadence tones
DIAL		Dial Tone
EEST		End to End signaling feedback tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
SPCL		Special Dial Tone
TDSH	0 0 0 tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDT		Control dial tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CFDT		Call Forward dial tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
MWDT		Message Waiting Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CFMW		Call Forward Message Waiting tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD

TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
BUSY		Busy tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
RGBK		Ringback Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
PREM		Preemption Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
PRBK		Precedence Ringback Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
ARBK		ACD Ring Again ringback tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
FFCT		FFC Confirmation tone cadence
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
LIMT		ACD Log In Mode Tone for 500/2500 telephone sets
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
NRMT		ACD Not Ready (NRDY) Mode Tones
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
AWUT	i bb cc tt	Automatic Wake-Up special error tone

TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
OVFL		Overflow Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
TEST		Test Tone
TDSH	0 0 0 tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
ERWT		Expensive Route Warning Tone
TDSH	0 0 0 tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
PCWT		Precedence Call Waiting Tone
TDSH	0 0 0 tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
ACFT	0 0 0 xx	ACD call force tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD

Software Controlled Cadences

REQ	NEW,CHG	Create or change
TYPE	FTC	Flexible Tones and Cadences
TABL	0-31	FTC table number
DFLT	0-31	Default FTC table
RING	<cr>	.
HCCT	<cr>	.
CAST	<cr>	.
SCCT	Yes.	Change software controlled cadence tone definitions
CAMP		Camp-on tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
ACBT		AUTOVON completion busy tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
AOBT		Agent observe tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
INTU		Intrusion Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
CWT		Call Waiting tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
OBKT		Observe Blocking Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone

XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
OVRD		Override Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
OHQ		Off Hook Queuing Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
SRT		Automatic Set Relocation Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
TMAT		Telephone Messaging Alert Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
TMOT		Telephone Messaging OK Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
TSUT		Tel Status Update Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence

Centralized Attendant Service Cadences

For systems with NT8D17 Conference/TDS cards, each feature requires a firmware cadence (XCAD), a software cadence (CNDN) and tone (XTON). Due to the finer resolution of the firmware cadence (5 ms) compared to the software (96/128 ms), you should allow the software cadence to be long enough to cover the full duration of the XCAD.

For example, to define a cadence of 0.1 s on, 0.1 s off, 0.1 s on, steady off

CDNC 0020 0020 0020 0000

END OFF

SPCL

The software cadence is then 0.3 s (600 ms). If the software precision is 128 ms, the software cadence is calculated as follows:

600 ms/128 = 4.6 = 5 (rounded up)

128 x 5 = 640

Entry to on phase = 640/5 = 0128, and to define the cadence enter 0128 to prompt CDNC.

REQ	NEW,CHG	Create or change
TYPE	FTC	Flexible Tones and Cadences
TABL	0-31	FTC table number
DFLT	0-31	Default FTC table
RING	<cr>	.
HCCT	<cr>	.
CAST	Yes	Change Centralized Attendant Service tones
LDN		Listed Directory Number Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
DI0		Dial "0" Recall Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence
HLDC		Hold Confirmation Tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD

LD56

CDNC	0-255	MCAD table entry for this cadence
CPNC		Camp-on confirmation tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
CDNC	0-255	MCAD table entry for this cadence

Intercept Treatment Cadences (International)

Eight intercept source tones can be defined. These tones are entered in LD15 in response to the various intercept treatment prompts.

REQ	NEW,CHG, PRT	Create, change or print
TYPE	FTC	Flexible Tones and Cadences
TABL	0-31	FTC table number
DFLT	0-31	Default FTC table
RING	<cr>	.
HCCT	<cr>	.
CAST	<cr>	.
SCCT	<cr>	.
SRC	Yes	Change Source Tones (SRC1-SRC8)
SRC1		Source Tone 1
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
SRC2		Source Tone 2
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
SRC3		Source Tone 3
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
SRC4		Source Tone 4
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
SRC5		Source Tone 5
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
SRC6		Source Tone 6
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD

SRC7		Source Tone 7
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
SRC8		Source Tone 8
TDSH	i bb cc tt	TDS external, burst, cadence and tone
XTON	0-255	NT8D17 TDS Tone code
XCAD	0-255	NT8D17 cadence code for FCAD
TDSH	i bb cc tt	TDS external, burst, cadence and tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone
TDSH	i bb cc tt	TDS external, burst, cadence and tone

Flexible Pulse Timers

REQ	NEW,CHG, PRT	Create, change or print
TYPE	FTC	Flexible Tones and Cadences
TABL	0-31	FTC table number
DFLT	0-31	Default FTC table
RING	<cr>	.
HCCT	<cr>	.
CAST	<cr>	.
SCCT	<cr>	.
SRC	<cr>	.
PULS	<cr>	.
P10	Yes	Codes for make/break ratio for 10 pps
ID1	256-1024, (768)	P10 interdigital pause in ms
ID2	256-1024, (512)	P20 interdigital pause in ms
IDD	256-(384/512)1024	DTMF interdigital pause in ms

Default MCAD table

REQ	PRT		Print
TYPE	MCAD		Master Cadence Table
WCAD	000	CDNC =	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	001	CDNC =	0410 0800 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	002	CDNC =	0308 0076 0308 0076 0000 0000 0000 0000 0000 0000
WCAD	003	CDNC =	0205 0000 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	004	CDNC =	0102 0102 0205 0819 0000 0000 0000 0000 0000 0000
WCAD	005	CDNC =	0100 0100 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	016	CDNC =	0128 0000 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	017	CDNC =	0051 0000 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	018	CDNC =	0205 3072 0051 3072 0000 0000 0000 0000 0000 0000
WCAD	019	CDNC =	0205 1229 0051 1229 0000 0000 0000 0000 0000 0000
WCAD	020	CDNC =	0051 0026 0051 2048 0000 0000 0000 0000 0000 0000
WCAD	021	CDNC =	0410 0000 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	022	CDNC =	0102 0000 0000 0000 0000 0000 0000 0000 0000 0000
WCAD	023	CDNC =	0512 0000 0000 0000 0000 0000 0000 0000 0000 0000
	For Japan TDS		(all other entries are null)
WCAD	001	CDNC =	0050 0050 0050 0450 0000 0000 0000 0000 0000 0000
WCAD	002	CDNC =	0200 0400 0000 0000 0000 0000 0000 0000 0000 0000

Default FCAD table

REQ	PRT	Print
TYPE	FCAD	Firmware Cadence Table
WCAD	000	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	001	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0410 0800 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no
WCAD	002	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0308 0076 0308 0076 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1 2
	SPCL =	no
WCAD	003	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0205 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	004	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0102 0102 0205 0819 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1 2
	SPCL =	no
WCAD	005	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0100 0100 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no

WCAD	016	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0100 0100 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no
WCAD	017	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0050 0050 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no
WCAD	018	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0010 0010 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no
WCAD	019	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0040 0060 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no
WCAD	020	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0015 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	021	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0020 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	022	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0020 0020 0020 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	023	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0060 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no

WCAD	024	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0020 0000 0020 0000 0020 0000 0000 0000 0000 0000
	END =	off
	SPCL =	yes
WCAD	025	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0200 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	026	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0050 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	027	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0400 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	028	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0125 0000 0000 0000 0000 0000 0000 0000 0000 0000
	END =	off
	SPCL =	no
WCAD	029	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0330 0070 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no
	For Japan TDS	(all other entries are null)
WCAD	001	Cadence number in the Master Cadence table (MCAD)
	DNC =	0050 0050 0050 0450 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1 2
	SPCL =	no

WCAD	002	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0200 0400 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1
	SPCL =	no
WCAD	017	Cadence number in the Master Cadence table (MCAD)
	CDNC =	0100 0050 0000 0000 0000 0000 0000 0000 0000 0000
	END =	rept
	CYCS =	1

Alphabetical list of prompts

ABCS — Autovon precedence ringing cadence for SL-1 sets. ftc-13

Defaults:
TDSH = 0082
XTON = 002

ACAD **0-(2)-15** — 500/2500/Digital Autovon precedence ringing MCAD table index. ftc-13

Enter the MCAD table index number for 500/2500 and digital sets. It is also used for SL-1 sets in systems with NT8D17 Conference/TDS cards.

ACBT — AUTOVON completion busy tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 019

This cadence repeats the last 8 on/off phases to allow for a special tone burst on the first cycle. For example, a cadence is defined as 3 s on, 3 s off, 1 s on, 3 s off. After the initial burst, the tone repeats in a 1 s on, 3 s off pattern. In order to repeat the initial 3 s burst, it must entered as the first and last cycle because the first cycle is not repeated. In this case the cadence is defined as: 3 s on, 3 s off, 1 s on, 3 s off, 3 s on 3 s off.

ACFT **0 0 0 xx** — ACD call force tone. ftc-13

When defining the hex codes for this tone, only the code for the frequency/level is required as the cadence is provided by software. Enter zero for the other values (e.g., TDSH = 0 0 0 xx, XTON = xxx, XCAD = 000).
Defaults:
TDSH = 0003
XTON = 003
XCAD = 000

AOBT — Agent observe tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 018

This cadence repeats the last 8 on/off phases to allow for a special tone burst on the first cycle. For example, a cadence is defined as 3 s on, 3 s off, 1 s on, 3 s off. After the initial burst, the tone repeats in a 1 s on, 3 s off pattern. In order to repeat the initial 3 s burst, it must entered as the first and last cycle because the first cycle is not repeated. In this case the cadence is defined as: 3 s on, 3 s off, 1 s on, 3 s off, 3 s on 3 s off.

ARBK — ACD Ring Again ringback tone. ftc-13

Defaults:
TDSH = 008D
XTON = 011
XCAD = 002

AWUT **i bb cc tt** — Automatic Wake-Up special error tone. mlwu-16

Defaults:
TDSH = 0027
XTON = 007
XCAD = 017

BUSY — Busy tone. ftc-13

Defaults:
TDSH = 0017
XTON = 007
XCAD = 016

CAMP — Camp-on tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 017

CAST **Yes, (No)** — Change Centralized Attendant Service tones. ftc-13

CDNC **0-255** — MCAD table entry for this cadence. ftc-14

This prompt occurs when defining a cadence in the Master Cadence Table (MCAD) and when defining specific cadences.

To define a cadence in MCAD see the description of the Master Cadence Table (MCAD) in this section.

CDT — Control dial tone. ftc-13

Defaults:
TDSH = 0004
XTON = 004
XCAD = 000

CFDT — Call Forward dial tone. ftc-13

Defaults:
TDSH = 0004
XTON = 004
XCAD = 000

CFMW — Call Forward Message Waiting tone. ftc-13

Defaults:
TDSH = 0024
XTON = 004
XCAD = 017

CPNC — Camp-on confirmation tone. ftc-13

Defaults:
TDSH = 0243
XTON = 003
XCAD = 021
CDNC = 017

CWT — Call Waiting tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 020

CYCS **x x x x x** — On-off cycles (1 to 5) to be repeated. ftc-14

Only prompted is END = REPT. Default is no repeats.

DBCS — Distinctive cadence for SL-1 set ringing. ftc-13

Defaults:
TDSH = 0082
XTON = 002

DCAD **0-(2)-15** — 500/2500/Digital set distinctive ringing MCAD table index. ftc-13

Enter the MCAD table index number for 500/2500 and digital sets. It is also used for SL-1 sets in systems with NT8D17 Conference/TDS cards.

DFLT **0-31** — Default FTC table. ftc-13

Use a copy of this table to create and modify a new one.
Prompted for REQ = NEW only. Enter the FTC table number from which the new FTC table will be copied.

DI0 — Dial "0" Recall Tone. ftc-13

Defaults:
TDSH = 0283
XTON = 003
XCAD = 022
CDNC = 016

DIAL — Dial Tone. ftc-13

Defaults:
TDSH = 0004
XTON = 004
XCAD = 000

EEST — End to End signaling feedback tone. ees-19

This pompt appears with X11 release 19 and later, to indicate that the improved EES tone is used. There is actually no cadence. When using the Enhanced Conference/TDS card, the XCAD prompt is not printed, and the cadence is set to 0 no matter what is entered.

END **REPT, ON, OFF** — End treatment for cadence (repeat, on or off). ftc-14

REPT = repeating cycles (defined by CYCS prompt)
ON = end cadence on the "on" phase
OFF = end cadence on the "off" phase

LD56

ERWT — Expensive Route Warning Tone. ftc-13

When defining the hex codes for this tone, only the code for the frequency/level is required as the cadence is provided by software. Enter zero for the other values (e.g., TDSH = 0 0 0 xx, XTON = xxx, XCAD = 000).

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000

FFCT — FFC Confirmation tone cadence. ffc-15

Defaults:
TDSH = 0004
XTON = 0004
XCAD = 0

GBCS — SL-1 Group Call Ring Cadence. grp-13

Defaults:
TDSH = 0082
XTON = 002

GCAD **0-(1)-255** — 500/2500/Digital set Group Call ringing MCAD table index. grp-14

Enter the MCAD table index number for 500/2500 and digital sets. It is also used for SL-1 sets in systems with NT8D17 Conference/TDS cards.

HBCS — SL-1 Held Call Reminder ring cadence. ftc-13

Defaults:
TDSH = 0002
XTON = 002

HCAD **0-(3)-255** — 500/2500/Digital set Held Call reminder MCAD table index. ftc-13

Enter the MCAD table index number for 500/2500 and digital sets. It is also used for SL-1 sets in systems with NT8D17 Conference/TDS cards.

HCCT **Yes, (No)** — Change the TDS card controlled cadence tones. ftc-13

HLDC — Hold Confirmation Tone. ftc-13

Defaults:
TDSH = 0346
XTON = 000
XCAD = 024
CDNC = 016

IBCS — SL-1 set distinctive Dial Intercom ringing TDS code. ftc-13

Defaults:
TDSH = 0012
XTON = 002

ICAD **0-(5)-15** — 500/2500/Digital Dial Intercom distinctive ringing MCAD table index. ftc-13

Enter the MCAD table index number for 500/2500 and Digital sets. It is also used for SL-1 sets in systems with NT8D17 Conference/TDS cards.

ID1 **256-1024, (768)** — P10 interdigital pause in ms. ftc-13

ID2 **256-1024, (512)** — P20 interdigital pause in ms. ftc-13

IDD **256-(384/512)1024** — DTMF interdigital pause in ms. ftc-13

Default is 512 if 100 is the response to prompt DTRB in LD17. Otherwise, the default is 384.

INTU — Intrusion Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 019

This cadence repeats the last 8 on/off phases to allow for a special tone burst on the first cycle. For example, a cadence is defined as 3 s on, 3 s off, 1 s on, 3 s off. After the initial burst, the tone repeats in a 1 s on, 3 s off pattern. In order to repeat the initial 3 s burst, it must entered as the first and last cycle because the first cycle is not repeated. In this case the cadence is defined as: 3 s on, 3 s off, 1 s on, 3 s off, 3 s on 3 s off.

LDN — Listed Directory Number Tone. ftc-13

Defaults:
TDSH = 0346
XTON = 000
XCAD = 024
CDNC = 016

LIMT — ACD Log In Mode Tone for 500/2500 telephone sets. bacd-16

This is the tone setting for ACD services to 500/2500 agent sets. You must have Flexible Tones and Cadences (FTC) supported for this feature to function properly.

MWDT — Message Waiting Tone. ftc-13

Defaults:
TDSH = 0024
XTON = 004
XCAD = 017

NBCS — Normal cadence for SL-1 set ringing. ftc-13

Defaults:
TDSH = 0032
XTON = 002

NCAD **(1)-255** — 500/2500/Digital set normal ringing MCAD index number. ftc-13

Enter the MCAD table index number for 500/2500 and digital sets. It is also used for SL-1 sets in systems with NT8D17 Conference/TDS cards.

NRMT — ACD Not Ready (NRDY) Mode Tones. bacd-16

This is the tone setting for the NRDY function within ACD services to 500/2500 agent sets. You must have Flexible Tones and Cadences supported for this feature to function properly.

OBKT — Observe Blocking Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 017

OHQ — Off Hook Queuing Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 003

OVFL — Overflow Tone. ftc-13

Defaults:
TDSH = 0027
XTON = 007
XCAD = 017

OVRD — Override Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 018

This cadence repeats the last 8 on/off phases to allow for a special tone burst on the first cycle. For example, a cadence is defined as 3 s on, 3 s off, 1 s on, 3 s off. After the initial burst, the tone repeats in a 1 s on, 3 s off pattern. In order to repeat the initial 3 s burst, it must entered as the first and last cycle because the first cycle is not repeated. In this case the cadence is defined as: 3 s on, 3 s off, 1 s on, 3 s off, 3 s on 3 s off.

P10 **4, (8)** — Codes for make/break ratio for 10 pps. ftc-13

8 = North American make/break ratio (prompt S10P in LD97)
4 = other make/break ratio (prompt S10P in LD97)
See also CLS P10 in LD14)

PCWT — Precedence Call Waiting Tone. ftc-13

When defining the TDS hex codes for this tone, only the code for the frequency/level is required as the cadence is provided by software. Enter zero for the other values (e.g., 0 0 0 xx).

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000

PRBK — Precedence Ringback Tone. ftc-13

Defaults:
TDSH = 008D
XTON = 011
XCAD = 002

PREM — Preemption Tone. ftc-13

Defaults:
TDSH = 0006
XTON = 006
XCAD = 000

PULS **Yes, (No)** — Change Pulse Timers. ftc-13

RBCS — SL-1 Call Park Recall Ring Cadence. ftc-14

Defaults:
TDSH = 0032
XTON = 002

RCAD **0-(1)-255** — 500/2500/Digital Call Park Recall ringing MCAD table index. ftc-14

Enter the MCAD table index number for 500/2500 and digital sets. It is also used for SL-1 sets in systems with NT8D17 Conference/TDS cards.

REQ **aaa** — Action request. ftc-13

NEW = add new data to the system
CHG = modify existing data
PRT = print data
OUT = remove data block
END = terminate overlay activity

RGBK — Ringback Tone. ftc-13

Defaults:
TDSH = 0035
XTON = 005
XCAD = 001

RING **Yes, (No)** — Modify the Ringing feature definitions. ftc-13

SCCT **Yes, (No)** — Change software controlled cadence tone definitions. ftc-13

SPCL — Special Dial Tone. ftc-13

When defining the hex codes for this tone, only the code for the frequency/level is required as the cadence is provided by software. Enter zero for the other values (e.g., TDSH = 0 0 0 xx, XTON = xxx, XCAD = 000).

Defaults:
TDSH = 0004
XTON = 004
XCAD = 000

SRC **Yes, (No)** — Change Source Tones (SRC1-SRC8). ftc-13

SRC1 — Source Tone 1. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRC2 — Source Tone 2. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRC3 — Source Tone 3. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRC4 — Source Tone 4. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRC5 — Source Tone 5. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRC6 — Source Tone 6. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRC7 — Source Tone 7. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRC8 — Source Tone 8. ftc-13

Defaults:
TDSH = 0000
XTON = 000
XCAD = 000

SRT — Automatic Set Relocation Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 022

TABL **0-31** — FTC table number. ftc-13

FTC tables define the tones and cadences used on a specific trunk route. To associate a FTC table with a trunk route, enter the table number in response to prompt TTBL in LD16.

TDSH **i bb cc tt** — TDS external, burst, cadence and tone. ftc-14

Only prompted for systems equipped with Tone and Digit cards.

i = internal (0) or external (1) source
bb = burst
cc = cadence
tt = frequency/level

Prompts with the response x xx xx xx define the burst, cadence and frequency/level respectively. Enter the decimal equivalent of the TDS Hex code defined in the Flexible Tone and Digit Switch (553-2711-180).

The first field is usually 0. If an external source is used, the entry is 1 and the fourth field is 0-7 for the specified channel.

TEST — Test Tone. ftc-13

When defining the TDS hex codes for this tone, only the code for the frequency/level is required as the cadence is provided by software. Enter zero for the other values (e.g., 0 0 0 xx).

Defaults:
TDSH = 0008
XTON = 008
XCAD = 000

TMAT — Telephone Messaging Alert Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 022

TMOT — Telephone Messaging OK Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 023

TONES **ttt ttt ....** — NT8D17 tones (0-255) to be used with each phase of the cadence. ftc-14

The default is no tones (0 0 0 0 0).

TSUT — Tel Status Update Tone. ftc-13

Defaults:
TDSH = 0003
XTON = 003
XCAD = 000
CDNC = 023

TYPE **aaa** — Type of data. ftc-13

TYPE **FCAD** — Firmware cadence table. ftc-15

TYPE **FTC** — Flexible tone and cadences. ftc-13

TYPE **MCAD** — Master cadence table. ftc-14

USER **Yes, (No)** — Print customer and route users of the table(s). ftc-13

WCAD **0-255** — Cadence number in the Master Cadence table (MCAD). ftc-14

Cadence table 0 can be printed, but it can not be changed, here. Please consult with your Northern Telecom representative.

With X11 release 19 and later, the default for this cadence is 160. X11 release 18 and earlier default to 128.

WTON **Yes, (No)** — Define tones associated with the cadence. ftc-14

Only prompted for systems equipped with Conference/TDS/MF Sender cards.

XCAD **0-255** — NT8D17 cadence code for FCAD. ees/ftc-19

Enter the FCAD table entry number.
For EEST, with X11 release 19 and later, this prompt does not appear.

XTON **0-255** — NT8D17 TDS Tone code. ees/ftc-19

Enter the tone table index number. These tones are defined in firmware.
For EEST, with X11 release 19 and later, this value is set to 0 no matter what is entered.

LD56

616 Flexible Tones and Cadences

Issued: 04 01 94
Status: Standard
X11 Release: 19

Flexible Feature Codes

LD57 is used to create or modify data blocks for the Flexible Feature Codes (FFC). The FFC package is used to define user access codes for various calling features.

Up to 100 user access codes may be entered at a time for one or more different codes. After entering 100 user access codes, SCH8891 is output.

FFC requires X11 release 15 and later.

Note: If the DNXP package (150) is equipped, up to 7 digits are allowed for Flexible Feature Codes, otherwise, a maximum of 4 digits can be entered.

LD57

Set up new FFC table for a customer

REQ	NEW	Add new table
TYPE	FFC	Flexible Feature Codes
CUST	0-99	Customer number
FFCT	Yes, (No)	FFC Confirmation Tone
CEPT	Yes, (No)	Set up CEPT defaults
REP*	x	Single-digit replacement for "*" in CEPT
CODE	ALL	Prompt all access codes in order
ASRC	xxxx	Automatic Set Relocation code
AUTH	xxxx	Authorization code
AWUA	xxxx	Automatic Wake Up activate code
AWUD	xxxx	AWU deactivate code
AWUV	xxxx	AWU verify code
CDRC	xxxx	Call Detail Recording Charge Account code
CFWA	xxxx	Call Forward All Calls activate code
CFWD	xxxx	Call Forward All Calls deactivate code
CFWV	xxxx	Call Forward All Calls verify code
COND	xxxx	Conference diagnostics code
CPAC	xxxx	Access Call Park code
CPRK	xxxx	Call Park code
CSHF	xxxx	Centrex Switchhook Flash code
C6DS	xxxx	6 Party Conference call code
DEAF	xxxx	Deactivate RGA and FWA codes
DPVS	xxxx	Data port verifications code
ELKA	xxxx	Electronic Lock Activate code
ELKD	xxxx	Electronic Lock Deactivate code
HOLD	xxxx	Permanent Hold code
ICFA	xxxx	Internal Call Forward activate code
ICFD	xxxx	Internal Call Forward deactivate code
ICFV	xxxx	Internal Call Forward verify code
IMS	xxxx	Integrated Message System (IMS)Access Code
LILO	xxxx	Log In--Log Out for 500/2500 ACD sets
MNTC	xxxx	Maintenance Access code
MTRC	xxxx	Malicious Call Trace code

NRDY	xxxx	Not Ready activation/deactivation for 500/2500 ACD telephones
OVRD	xxxx	Override code
PUDN	xxxx	Pick-Up DN code
PUGR	xxxx	Pick Up Group code
PURN	xxxx	Pick Up Ringing Number code
RCFA	xxxx	Remote Call Forward activate code
RCFD	xxxx	Remote Call Forward deactivate code
RCFV	xxxx	Remote Call Forward verify code
RDLN	xxxx	Last Number Redial code
RDNE	xxxx	Erase Stored Number code
RDSN	xxxx	Stored Number Redial code
RDST	xxxx	Store Last Number code
RGAA	xxxx	Ring Again Activate code
RGAD	xxxx	Ring Again Deactivate code
RGAV	xxxx	Ring Again Verify code
RMST	xxxx	Room Status code
SCPC	xxxx	Station Control Password change code
SPCC	xxxx	Speed Call Controller code
SPCU	xxxx	Speed Call User code
SSPU	xxxx	System Speed Call User code
TFAS	xxxx	Trunk Answer From Any Station code
TRMD	xxxx	Terminal Diagnostics code
TRVS	xxxx	Trunk Verification code
USCR	xxxx	User Selectable Call Redirection
USTA	xxxx	User Status Code

LD57

Change one or more access codes

REQ	CHG	Change FFC
TYPE	FFC	Flexible Feature Codes
CUST	0-99	Customer number
FFCT	Yes, (No)	FFC Confirmation Tone
CODE	AAAA	Enter access code prompt AAAA
AAAA	xxxx	Enter the new access code to prompt AAAA
AAAA	<cr>	Return to the CODE prompt
CODE	<cr>	Return to REQ
REQ	END	End program activity

Remove one or all access codes

REQ	OUT	Action Request
TYPE	FFC	Flexible Feature Codes
CUST	0-99	Customer number
FFCT	Yes, (No)	FFC Confirmation Tone
ALL	Yes	Remove all access code for the customer
ALL	No	Remove specific access code
CODE	AAAA	Enter access code prompt AAAA
AAAA	xxxx	Enter existing code for prompt AAAA
AAAA	<cr>	Return to CODE
CODE	<cr>	Return to REQ
REQ	END	End program activity

Print FFC data

REQ	PRT	Print
TYPE	FFC	Flexible Feature Codes
CUST	0-99	Customer number
CODE	ALL	Print all FFCs
CODE	aaaa	Print code for prompt AAAA
CODE	<cr>	Return to REQ

Alphabetical list of prompts

AAAA	**xxxx** – Flexible Feature Code prompt entered for prompt CODE. This can be any of the FFC prompts.	ffc-15
ALL	**Yes, (No)** – Remove (or not) all FFCs.	ffc-15
ASRC	**xxxx** – Automatic Set Relocation code.	sr-15
AUTH	**xxxx** – Authorization code.	baut-15
AWUA	**xxxx** – Automatic Wake Up activate code.	awu-15
AWUD	**xxxx** – AWU deactivate code.	awu-15
AWUV	**xxxx** – AWU verify code.	awu-15
C6DS	**xxxx** – 6 Party Conference call code.	basic-15
CDRC	**xxxx** – Call Detail Recording Charge Account code.	chg-15
CEPT	**Yes, (No)** – Set up CEPT defaults. Enter "Yes" to set up default access codes for Conference European Des Postes Tel (CEPT).	basic-15
CFWA	**xxxx** – Call Forward All Calls activate code.	optf-15
CFWD	**xxxx** – Call Forward All Calls deactivate code.	optf-15
CFWV	**xxxx** – Call Forward All Calls verify code.	optf-15
CODE	**aaaa, ALL** – Specific FFC type. To change a specific FFC code, enter the associated prompt. For example, to change the access code for Call Park to 88, respond to CODE as follows: CODE CPRK CPRK 88	ffc-15
COND	**xxxx** – Conference diagnostics code.	basic-15
CPAC	**xxxx** – Access Call Park code.	cpk-15
CPRK	**xxxx** – Call Park code.	cpk-15
CSHF	**xxxx** – Centrex Switchhook Flash code.	thf-15
CUST	**0-99** – Customer number. The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines. In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.	cust-15

LD57

DEAF	xxxx — Deactivate RGA and FWA codes.	optf-15
DPVS	xxxx — Data port verifications code.	basic-15
ELKA	xxxx — Electronic Lock Activate code.	basic-15
ELKD	xxxx — Electronic Lock Deactivate code.	basic-15
FFCT	Yes, (No) — FFC Confirmation Tone.	ffc-15
	This tone allows users of 500/2500 or multi-line telephone sets to receive a confirmation tone after activating/deactivating the following features: — Call Forward activate/deactivate — Ring Again deactivate — Store/erase Stored Number Redial — all Automatic Wake Up codes — Speed Call store — any verification code	
HOLD	xxxx — Permanent Hold code.	basic-15
ICFA	xxxx — Internal Call Forward activate code.	icf-19
ICFD	xxxx — Internal Call Forward deactivate code.	icf-19
ICFV	xxxx — Internal Call Forward verify code.	icf-19
IMS	xxxx — Integrated Message System (IMS)Access Code.	ims-15
LILO	xxxx — Log In--Log Out for 500/2500 ACD sets.	bacd-16
	Dialing the number programed here allows an ACD Agent on a 500/2500 telephone set to toggle between Log In and Log Out. There is no confirmation tone.	
MNTC	xxxx — Maintenance Access code.	basic-15
MTRC	xxxx — Malicious Call Trace code.	mct-15
NRDY	xxxx — Not Ready activation/deactivation for 500/2500 ACD telephones.	bacd-16
	Dialing the number programed here allows an ACD Agent on a 500/2500 telephone to toggle in and out of the Not Ready state like other ACD Agents. There is no confirmation tone returned.	
OVRD	xxxx — Override code.	optf-15
PUDN	xxxx — Pick-Up DN code.	grp-15
PUGR	xxxx — Pick Up Group code.	grp-15
PURN	xxxx — Pick Up Ringing Number code.	grp-15
RCFA	xxxx — Remote Call Forward activate code.	optf-15

RCFD	**xxxx** – Remote Call Forward deactivate code.	optf-15
RCFV	**xxxx** – Remote Call Forward verify code.	optf-15
RDLN	**xxxx** – Last Number Redial code.	lnr-15
RDNE	**xxxx** – Erase Stored Number code.	snr-15
RDSN	**xxxx** – Stored Number Redial code.	snr-15
RDST	**xxxx** – Store Last Number code.	snr-15
REP*	**x** – Single-digit replacement for "*" in CEPT. The CEPT defaults will be defined again with this digit used in place of "*." In addition, the trailing "#" will be omitted. Prompted only when REQ = NEW and CEPT = YES. Use <CR> to create CEPT defaults only.	ffc-15
REQ	**aaa** – Action Request. CHG = change existing data blocks PRT = print existing data blocks OUT = delete data END = terminate overlay activity	ffc-15
RGAA	**xxxx** – Ring Again Activate code.	optf-15
RGAD	**xxxx** – Ring Again Deactivate code.	optf-15
RGAV	**xxxx** – Ring Again Verify code.	optf-15
RMST	**xxxx** – Room Status code.	rms-15
SCPC	**xxxx** – Station Control Password change code.	basic-15
SPCC	**xxxx** – Speed Call Controller code.	optf-15
SPCU	**xxxx** – Speed Call User code.	optf-15
SSPU	**xxxx** – System Speed Call User code.	optf-15
TFAS	**xxxx** – Trunk Answer From Any Station code.	basic-15
TRMD	**xxxx** – Terminal Diagnostics code.	basic-15
TRVS	**xxxx** – Trunk Verification code.	tvs-15
TYPE	**FFC** – Flexible Feature Codes.	ffc-15
USCR	**xxxx** – User Selectable Call Redirection.	uscr-19
USTA	**xxxx** – User Status Code.	basic-15

LD57

624 Flexible Feature Codes

Issued: 04 01 94
Status: Standard
X11 Release: 19

Digital Trunk/Primary Rate Interface Diagnostic (DTI/PRID)

LD60 is used to maintain the following

- QPC471/775 Clock Controller
- QPC472 1.5 Mb/s Digital Trunk Interface (DTI)
- QPC536 2.0 Mb/s Digital Trunk Interface (DTI2)
- QPC720 Primary Rate Interface (PRI)

The LD60 diagnostic overlay can be can be run in midnight routines or loaded manually to enter commands.

LD60

DTI and PRI commands

ATLP (0), 1	Disable (0) or enable (1) daily routine auto loop test
CDSP	Clear maintenance display on the active CPU
CMIN ALL	Clear minor alarm indication on all attendant consoles
CMIN c	Clear minor alarm indication on attendant consoles for customer c
DISI loop	Disable DTI/PRI loop when all channels are idle
DISL loop	Disable network loop (LD17 DLOP) and associated DTI/PRI cards
DLBK loop	Disable remote loopback test previously set by RLBK loop command
DLBK loop ch	Disable remote loopback test previously set by RLBK loop ch command
DSCH loop ch	Disable channel ch of DTI/PRI loop
ENCH loop ch	Enable channel ch of DTI/PRI loop
ENCH loop	Enable all channels on loop (DTI2 only)
ENLL loop	Enable network loop (LD17 DLOP) and associated DTI/PRI cards
LCNT (loop)	List contents of alarm counters on one or all DTI/PRI loops
LOVF c r	List threshold overflows for customer c (0-99) and route r (0-511)
RCNT	Reset alarm counters of all DTI/PRI loops
RCNT loop	Reset alarm counter of DTI/PRI loop
RMST loop	Perform self-test on specified loop
RMST loop ch	Perform self-test on specified channel (DTI2 only)
RLBK loop	Close loop at carrier interface point for testing
RLBK loop ch	Close channel at carrier interface point
RSET loop ch	Reset thresholds for channel ch
SLFT loop	Invoke DTI/PRI hardware self-test on loop
SLFT loop ch	Invoke partial hardware self-test on channel ch
STAT	Get status of loops
STAT loop	Get status of DTI/PRI loop
STAT loop ch	Get status of channel ch

Clock Controller commands

DIS CC 0, 1	Disable system clock controller 0 or 1
DSYL loop	Disable yellow alarm processing for specified loop
ENL CC 0, 1	Enable system clock controller 0 or 1
ENYL loop	Enable yellow alarm processing for specified loop
EREF	Enable automatic switchover of system clocks
MREF	Disable switchover of system clocks
SSCK 0, 1	Get status of system clock 0 or 1
SWCK	Switch system clock from active to standby
TRCK aaa	Set clock controller tracking to primary, secondary or free run

LD60

Alphabetical list of commands

ATLP (0), 1	Disable (0) or enable (1) daily routine auto loop test. 1 = loop test enable; causes far-end to raise and clear yellow alarm 0 = run the partial loop test; there is no interaction for far-end loop (default value) LD60 is included in the daily (midnight) routines if defined by LD17 prompt DROL. ATLP is only run if LD60 is included in the daily routines. If ATLP = 1, and all 24 channels on the loop are idle, then the DTI/PRI card is disabled and a selftest is performed on each channel. All DTI/PRI cards are tested, one at a time. If a D-channel is on the loop, it is temporarily released and reestablished. If one or more channels are busy, the test is not performed on the loop. If ATLP = 0, then an "AUTO TEST DSBL" message is output and only one channel is tested. The channel is randomly selected by software, it cannot be specified.	dti/pra-5
CDSP	Clear maintenance display on the active CPU.	dti/pra-5
CMIN ALL	Clear minor alarm indication on all attendant consoles.	dti/pra-5
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	dti/pra-5
DIS CC 0, 1	Disable system clock controller 0 or 1. CPU 0 must be idle to disable CC0. CPU 1 must be idle to disable CC1. To switch CPUs, use the SCPU command in LD35.	dti/pra-5
DISI loop	Disable DTI/PRI loop when all channels are idle. The network and DTI/PRI cards are then disabled and the DTI/PRI card DIS and RED LEDs are lit. Channel status is set to maintenance busy (MBSY) as it becomes idle. When the PRI is physically connected to a DCHI card, the D-channel must be disabled first using LD96. Enter END to abort.	dti/pra-5
DISL loop	Disable network loop (LD17 DLOP) and associated DTI/PRI cards. Active calls are force disconnected by on-hook simulation. All channels are disabled and status LEDs are lit. When the PRI is physically connected to a DCHI card, the D-channel must be disabled first using LD96.	dti/pra-5

DLBK loop	Disable remote loopback test previously set by RLBK loop command. The loop remains disabled.	dti/pra-5
DLBK loop ch	Disable remote loopback test previously set by RLBK loop ch command. The channel remains disabled.	dti/pra-5
DSCH loop ch	Disable channel ch of DTI/PRI loop.	dti/pra-5
DSYL loop	Disable yellow alarm processing for specified loop.	dti/pra-5
ENCH loop	Enable all channels on loop (DTI2 only).	dti2-5
ENCH loop ch	Enable channel ch of DTI/PRI loop. For tie trunks with A+B signaling, the channel is set to the same state as the far end. The far end refers to the status of the channels as presented by the T1 port. With B-channel signaling, channels are placed into the idle state and made available for calls.	dti/pra-5
ENL CC 0, 1	Enable system clock controller 0 or 1.	dti/pra-5
ENLL loop	Enable network loop (LD17 DLOP) and associated DTI/PRI cards. For tie trunks with A+B signaling, the channels are set to the same status as the far end; otherwise, the channels are set to idle status. The far end refers to the status of the channels as presented by DTI T1 port. Status LEDs are deactivated. With B-channel signaling, channels are placed into the idle state and made available for calls.	dti/pra-5
ENYL loop	Enable yellow alarm processing for specified loop.	dti/pra-5
EREF	Enable automatic switchover of system clocks. Enables automatic switchover of primary and secondary reference clocks. Also enables recovery to primary or secondary clocks when loops associated with these clocks are automatically enabled.	dti/pra-5

LCNT (loop) List contents of alarm counters on one or all DTI/PRI loops. dti/pra-5

The counters are:
- BPV = bipolar violation counter
- SLIPD = frame slip deletion counter
- SLIPR = frame slip repetition counter
- CRC = Cyclic Redundancy Check bit error rate counter (displayed only if framing format is ESF)
- CMV = coded Mark Inversion Violations (JDMI loop only)
- LOSFA = loss of frame alignment counter
- OS_BPV = 24-hr bipolar violation counter
  1) For PRI with D2, D3, or D4 framing format, 24-hr bipolar violation counter
  2) For PRI mode with Extended Superframe Format, 24-hr Cyclic Redundancy Check (CRC) counter
- OS_LOSFA = 24-hr loss of frame alignment counter
- OS_YEL = 24-hr yellow alarm counter

LOVF c r List threshold overflows for customer c (0-99) and route r (0-511). dti/pra-5

The overflows are set when the resident trunk monitor outputs a diagnostic message. Defined thresholds are HOLD, ILLR, REPT, SEIZ and SVFL (see LD16).

MREF Disable switchover of system clocks. dti/pra-5

Disables switchover to primary and secondary reference clocks. Also disables recovery to primary or secondary reference clocks when loops associated with these clocks are automatically enabled.

RCNT Reset alarm counters of all DTI/PRI loops. dti/pra-5

RCNT loop Reset alarm counter of DTI/PRI loop. dti/pra-5

If the loop was disabled due to an error threshold overflow and the DTI/PRI may be enabled automatically when the counter is cleared, then before performing any command, such as a selftest, that requires the DTI/PRI to be disabled you should:

1 disable the DTI/PRI
2 list the counters with the LCNT command
3 reset the counters with the RCNT command
4 do the test commands

RLBK loop	Close loop at carrier interface point for testing. Allows the far end to perform an external loopback test on the carrier span using the RMST command. This command closes the loop at the carrier interface point of the DTI/PRI. The DTI/PRI loop must be disabled first using the DISI or DISL loop commands.	dti/pra-5
RLBK loop ch	Close channel at carrier interface point. Allows the far end to perform an external loopback test on the carrier span. The loop remains enabled, but closes the specified channel at the carrier interface point of the DTI/PRI. The DTI/PRI channel must be disabled first using the DSCH loop ch command.	dti/pra-5
RMST loop	Perform self-test on specified loop. The far end must be in the remote loopback mode (RLBK command has been issued at the far end).	dti/pra-5
RMST loop ch	Perform self-test on specified channel (DTI2 only). The far end must be in the remote loopback mode (RLBK loop ch command has been issued at the far end).	dti2-14
RSET loop ch	Reset thresholds for channel ch.	dti/pra-5
SLFT loop	Invoke DTI/PRI hardware self-test on loop. This command tests speech path continuity, zero code suppression, remote alarm detection, and A&B bit signaling. The loop must be disabled first using the DISI or DISL loop command.	dti/pra-5
SLFT loop ch	Invoke partial hardware self-test on channel ch. The DTI/PRI channel must be disabled first using the DSCH command.	dti/pra-5
SSCK 0, 1	Get status of system clock 0 or 1. Response may be: AUTO SWREF CLK - ENBL or DSBL = automatic switchover of system clocks enabled or disabled CLOCK ACTIVE = the active controller DSBL = clock disabled ENBL = clock enabled REF CLK ERR = possible faulty cable from CC to DTI/PRI, or faulty Clock Controller SYSTEM CLOCK - FREE RUN, PREF or SREF = clock is in free run mode or tracking to the primary (PREF) or secondary (SREF) reference loop VCXO AGING ERROR = the timing crystal is faulty. Replace the Clock	dti/pra-5

LD60

STAT Get status of loops. dti/pra-5

The types of loops are:
PRI = Primary Rate Interface
DTI = Digital Trunk Interface
DLI = Digital Link Interface
JDMI = Japan Digital Multiplex Interface

STAT loop Get status of DTI/PRI loop. dti/pra-5

Response may be:
DTI TRK LOOP x = DTI trunk loop
PRI TRK LOOP x = PRI trunk
DTI LINK LOOP x = DTI link loop (DLI)

DSBL = DTI/PRI hardware is disabled
ENBL = DTI/PRI hardware is enabled
RLBK = DTI/PRI hardware is in remote loop back mode
DISI PENDING = DISI command is in progress

SERVER RCVY = server has not recovered status of this DTI LINK loop. Channels will not be allocated for call processing until this status is removed by the server.

SERVICE RESTORE:
YES = restore service automatically if alarm is removed
NO = loop can only be manually enabled

TRACKING = system clock is tracked to this loop

YEL ALARM PROCESS:
YES = yellow alarm processing is enabled
NO = yellow alarm processing is disabled

ALARM STATUS:
NO ALARM = no alarm active

RED = red (local) alarm active.
Action:
1 list alarm counters (LCNT command)
2 check for DTA messages
3 go to the fault clearing section

YELLOW = yellow (remote) alarm active

WAITING = DTI/PRI card is not responding. The card either did not respond to a status check or did not respond when a red alarm was cleared.
Action:
1 check DTI/PRI status again
2 disable, then enable the DTI/PRI (DISI or DISL and ENLL loop)

STAT loop ch	Get status of channel ch. Status may be: This gives the status for the loop and channels. For PRI loops, the response identifies the D-channel and it's logical number. IDLE = channel is enabled and is idled BUSY = channel is enabled and is call processing busy or channel is in a lock-out state (far end is disabled) MBSY = channel is being used for maintenance busy, the D channel is down, or far end channel is disabled DSBL = channel is disabled DSBL (SERVER) = channel is being used for server maintenance and is disabled for the duration FE MBSY= near end is idle, far end is maintenance busy FE DSBL = near end is idle, far end is disabled FE MBSY = far end B-channel is in maintenance mode UNEQ = channel is not equipped	dti/pra-5
SWCK	Switch system clock from active to standby. The reference clock source remains unchanged.	dti/pra-5
TRCK aaa	Set clock controller tracking to primary, secondary or free run. Where aaa is: PCK = track primary clock SCLK = track secondary clock FRUN = free run mode Track primary clock (PCK) or secondary clock (SCLK) as the reference clock or go to free run (FRUN) mode.	dti/pra-5

LD60

634 Digital Trunk/Primary Rate Interface Diagnostic (DTI/PRID)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Message Waiting Lamps Reset (MWL)

LD61 can be invoked automatically by the system as part of the daily routines or manually from an input device. It is used to deactivate all active message waiting lamps on user stations and reset the associated status in the system.

This overlay applies only to single line telephones equipped with Message Waiting lamps.

When LD 61 is loaded manually, 'G' must be entered to initiate the task.

G command

Starts resetting the trouble status on all message waiting lamps. The program does not reset lamp status unless all message center sets are out of service (i.e., message center is closed and attendants are in night service).

Before running this overlay, all Message Center (MC) telephones must be taken out of service by "make telephone busy" and if attendants are set up to handle message calls, they must be in night mode.

LD61

636 Message Waiting Lamps Reset (MWL)

Issued:	04 01 94
Status:	Standard
X11 Release:	19

1.5MB/S Remote Peripheral Equipment

LD62 is loaded manually to test the local equipment associated with a particular carrier going to a remote site.

When to use LD62

It is assumed that either:

- a manually requested or automatic test using LD33 has indicated a fault which may be due to a failure of either local or remote equipment by one of the following messages: RPD202, RPD230, RPD232, RPD240, RPD250.
- a carrier has been disabled automatically and RPD211, RPD214 or RPD215 was printed.

This overlay is used to determine whether the fault is at the local Meridian 1 site. It is necessary to disable the carrier to be tested before performing the local loop-around test.

If a local end fault is detected and cleared, a complete test using LD33 should then be done.

The LD62. If a command is issued when no loop number has been specified, the response LOOP ? will be output.

LD62

LD62 commands

DFLP loop	Define RPE loop
DISC c loop	Disable carrier c on specified loop
DISI c	Disable carrier c once it is idle
END	Terminate active command
ENLC c	Enable carrier c
LFLT	List speech timeslots that failed LOCL test
LOCL c	Perform loop-around test on carrier c
LOCL c ALL	Loop-around test for all speech timeslots on carrier c
LPBK c	Close loop-back relay on carrier c
SCAR	Switch primary carriers
STAT	Get status of carrier specified by DISI
STAT CAR loop	Get status of all carriers on specified loop
UNLP c	Open loop-back relay on carrier c

Alphabetical list of commands

DFLP loop Define RPE loop. basic-1

Defines the loop for the following commands. The specified loop must be an enabled RPE loop.

DISC c loop Disable carrier c on specified loop. basic-1

Must be the current secondary carrier. Any calls using this carrier will be disconnected.

DISI c Disable carrier c once it is idle. basic-1

The number of channels still busy on the carrier may be checked using the STAT command.

END Terminate active command. basic-1

If no command is in progress, the active DISI command is cancelled.

ENLC c Enable carrier c. basic-1

If the operation is successful, OK is output.

LFLT List speech timeslots that failed LOCL test. basic-1

If no channels failed or if no test has been performed, the response is NONE.

LOCL c Perform loop-around test on carrier c. basic-1

Carrier c must be disabled when the command is given. The command tests the local equipment associated with the carrier, plus the continuity of the 10 speech timeslots which are always carried by this carrier (see below). If all tests pass, response is OK. The carrier is left in the "manually disabled" state.

Speech timeslots carried by each carrier:

Carrier	Timeslots
primary	4, 5, 10, 11, 20, 21, 26, 27, 28, 29
0	6, 7, 12, 13, 14, 15, 22, 23, 30, 31
1	2, 3, 8, 9, 16, 17, 18, 19, 24, 25

LD62

LOCL c ALL Loop-around test for all speech timeslots on carrier c. basic-1

Similar to LOCL command, except that all 20 speech timeslots plus the signaling channel will be tested, provided the channels are not being used by active calls.

Note: Execution of this command will cause temporary disruption of all active calls on the loop. The command should be used only when LOCL command tests OK without the ALL option and a fault is still indicated by a complete test using LD33. Response will include:

x SLOTS TESTED, giving the number of speech channels actually tested (maximum 20).

LPBK c Close loop-back relay on carrier c. basic-1

Carrier c must be disabled. The relay remains closed until an ENLC or UNLP command is given.

SCAR Switch primary carriers. basic-1

This command is allowed only if both the current secondary carrier is enabled, and no faults exist on the current secondary carrier which would reduce the number of working speech channels if it were to become the primary carrier.

STAT Get status of carrier specified by DISI. basic-1

If no DISI request is active, error message RPL022 is output.

STAT CAR loop

Get status of all carriers on specified loop. basic-1

Response will be one or more of:
PRIME = carrier is currently the primary one.
DSBL = carrier is disabled.
LPBK = loop-back relay is closed.
x BUSY
y DSBL

The value x and y indicate the number of busy channels and number of channels having continuity failure from the most recent tests in LD33. The LOCL command does not change the number of disabled channels.

UNLP c Open loop-back relay on carrier c. basic-1

Issued: 04 01 94
Status: Standard
X11 Release: 19

Conversion Program (CNV)

Conversion programs are used to convert to a new release of software. Refer to *Software Conversion* (553-2001-320) and Controlled Release Bulletins (provided with the new software) for details.

LD66

642 Conversion Program (CNV)

Issued: 04 01 94
Status: Standard
X11 Release: 19

Digital Trunk Error Thresholds

DTI and PRI thresholds

REQ	NEW,CHG, PRT	New,change or print
TYPE	DDB	Digital data block
CEQP	Yes, No	Clock Controller equipped
PREF	0-159	Primary reference source for clock sync controller
SREF	0-159	Secondary reference source for clock sync controller
TRSH	0-99	Add, change or remove thresholds set
RALM	1-(3)-128	Yellow (remote) alarm/clear threshold
BIPC	0-(2)-128	24-hour bit rate violation threshold
LFAC	0-(3)-128	24-hour loss of frame alignment threshold
BIPV	1-(3)-4, 1-(2)-4	Bit rate violation maintenance and out-of-service thresholds
SRTK	1-(5)-24 1-(30)-3600	Slip rate maintenance (in hours) and out-of-service threshold (per hour)
SRNT	1-(15)-1024 1-(3)-1024	Non-tracking slip rate maintenance and out-of-service thresholds
LFAL	xx yy	Loss of frame alignment limits: maintenance and out of service
AUTO	Yes, (No)	Automatic Recovery for Frame Slippage (X11 release 14 and lower only)
SRGT	1-(15)-127	Slip Rate Guard Time in minutes (X11 release 14 and lower only)
SRIM	(1)-127	Slip Rate Improvement time in Minutes
SRMM	1-(2)-127	Slip Rate exceeded maintenance limit

LD73

Alphabetical list of prompts

AUTO **Yes, (No)** — Automatic recovery for frame slippage. dti/pra-5

This prompt appears in X11 release 14 and lower releases only.

BIPC **0-(2)-128** — 24-hour bit rate violation threshold. dti/pra-5

This is the maximum number of times a DTI/PRI loop can be taken out of service in 24 hours. If this threshold is reached the DTI/PRI must be restored to service manually. Refer to DTI maintenance (553-2881-500), or PRI maintenance (553-2901-500) for details.

If "0" is entered, there is no limit on number of times trunks can be taken out and automatically restored to service.

The method of bit rate monitoring depends on the loop configuration:
- for DTI mode, bipolar violation threshold
- for PRI mode with D2, D3, or D4 framing format, bipolar violation threshold
- for PRI mode with Extended Superframe Format (ESF), Cyclic Redundancy Check (CRC) threshold

BIPV **1-(3)-4, 1-(2)-4** — Bit rate violation maintenance and out-of-service thresholds. dti/pra-5

The BIPV values determine the sensitivity of the loop to errors, where BIPV = 1 is the least tolerant to errors, and BIPV = 4 is the most tolerant.

The maintenance threshold must be greater than the out-of-service threshold.

The method of bit rate monitoring depends on the loop configuration:
- for DTI mode, bipolar violation thresholds
- for PRI mode with D2, D3, or D4 framing format, bipolar violation thresholds
- for PRI mode with Extended Superframe Format (ESF), Cyclic Redundancy Check (CRC) thresholds

CEQP **Yes, No** — Clock Controller equipped. dti/pra-5

Prompted with SL-1M, MS, S only.

LFAC **0-(3)-128** — 24-hour loss of frame alignment threshold. dti/pra-5

If "0" is entered, there is no limit on number of times trunks can be taken out and automatically restored to service.

LFAL xx yy — Loss of frame alignment limits: maintenance and out of service. dti/pra-5

Ranges:
xx = 1-(17)-10240 — maintenance limit
yy = 1-(511)-10240 — out of service limit

The maintenance threshold must be greater than the out-of-service threshold.

PREF **0-159** — Primary reference source for clock sync controller. dti/pra-5

The loop must already be defined in LD17 (prompt DLOP). Use <cr> for free-running mode. If <cr> is used, you are not prompted for the secondary reference (SREF).

Precede the loop number with "X" to remove.

RALM **1-(3)-128** — Yellow (remote) alarm/clear threshold. dti/pra-5

This is the number of "remote alarm clear" signals received in 24 hours. If the threshold is reached the DTI/PRI must be restored to service manually.

REQ **aaa** — Action Request. dti/pra-5

NEW = create a new data block
CHG = modify existing data
PRT = print the specified data
OUT = remove data block
END = terminate LD73 is used to define error thresholds for Digital Trunk Interface (DTI) and Primary Rate Interface (PRI) hardware. activity

Note: To remove a threshold set (TRSH 0-15), all loops using the set must be first removed or assigned to another threshold set.

SRAR **Yes, (No)** — Automatic Recovery from frame slips in the Free Run Mode. dti/pra-5

This prompt appears only in Release 14 and lower releases only.

SREF **0-159** — Secondary reference source for clock sync controller. dti/pra-5

The loop must already be defined in LD17 (prompt DLOP). Prompted only if PREF is not free-run.

Precede the loop number with "X" to remove the existing secondary reference.

SRGT **1-(15)-127** — Slip Rate Guard Time in minutes. dti/pra-5

Before monitoring begins for a noticeable improvement in the slip rate, the SRGT prompt measures the number of minutes that trunks stay out of service.

This prompt appears in X11 release 14 and lower releases only.

LD73

SRIM **(1)-127** — Slip Rate Improvement time in Minutes. dti/pra-15

This is the amount of time before returning trunks to service or to the SRGT prompt.

After the tracking or non-tracking mode frame slippage out-of-service threshold is exceeded, the slip rate is monitored for improvement. If the non-tracking maintenance threshold exceeds SRMM or fewer times in the duration of this timer, then the trunks are returned to service. Otherwise, this timer is reset and monitoring continues.

SRMM **1-(2)-127** — Slip Rate exceeded maintenance limit. dti/pra-14

Number of times the Slip Rate exceeds the maintenance limit while waiting for Slip Rate improvement during the time window specified at the SRIM prompt.

SRNT **1-(15)-1024 1-(3)-1024** — Non-tracking slip rate maintenance and out-of-service thresholds. dti/pra-5

These are frame slip rate thresholds for the non-tracking mode. The first value is the maintenance threshold in seconds. The second value is the out-of-service threshold in seconds, the amount of time in which 10 slips occur.

SRTK **1-(5)-24 1-(30)-3600** — Slip rate maintenance (in hours) and out-of-service threshold (per hour). dti/pra-5

These are frame slip rate thresholds for the tracking mode. The first value is the maintenance threshold; or, the elapsed time (in hours) between frame slips. The default is 1 slip in 5 hours.

The second value is the out-of-service threshold; or, the number of slips per hour. The default is 30 slips in 1 hour.

TRSH **0-99** — Add, change or remove thresholds set. dti/pra-19

Enter this number in LD17 when defining a DTI/PRI loop. Precede with X to remove TRSH (LD17 DLOP/TRSH associated with this TRSH must be removed first).

With X11 release 18 and earlier, the threshold limit is 0-15.

TYPE **DDB** — Digital data block. dti/pra-5

TYPE **JDMI** — Japan Digital Multiplexer Interface. jdmi-12

Issued: 04 01 94
Status: Standard
X11 Release: 19

Manual Print

LD77 is used to print the signals that come from the peripheral packs to the common equipment. This overlay is intended for people experienced with the message formats and protocols.

When to use LD77

LD77 can be useful in determining which peripheral card (line or trunk) is causing a system overload in situations in which the CPU cannot narrow the problem to a specific terminal number (TN). Once the overlay is loaded, the user may request the system to print all the input messages from a specific area of peripheral equipment.

Manual Print can also be used to continuously send frequency combinations by defining the loop and terminal number of the MFE card, busying the channel, setting the read/write bit to write, defining the message and repeatedly sending it. This channel will not be available for regular signaling until the message sending is stopped and the channel is idled.

When the switch is carrying traffic, there will be a large number of valid messages generated from the peripheral equipment. Thus, the overlay will be most effective for trouble shooting when:

- there is little system traffic
- message address range is restricted (i.e., looks only at one shelf or loop)

This overlay has capabilities which are used by the software designers during development activities. The user is protected from accidental access to these commands (and resulting potential service degradation) as a password is required. This password is not available to customers.

LD77

LD77 Output Format

All numerical input/output is in hexadecimal format. The output is in the following format.

<loop> <shelf> <card> <terminal> <message> <time-stamp>

The loop, shelf and card fields identify the circuit pack generating the message.

Abbreviations for LD77

The fields are defined as follows.

b = bypass bit value
cb = continuity Bit
ch = chip on a given SSD Peripheral Signaling pack
g = group
l s c u = TN: loop, shelf, card, unit
ln = link
loop = network loop
m = module
p = page
ps = Peripheral Signaling pack
sh = Multigroup shelf
ts = time slot
v = desired lamp state; 0 = lit, 1 = dark
x = Multigroup bit

Some four-letter commands can be abbreviated to a one-letter command when entered from a TTY (but not a maintenance telephone). The one-letter command is shown in parentheses after the four-letter mnemonic (e.g., ARPS (F) l s 32 can be entered as F l s 32).

All input is in decimal form, except message data which is in hexadecimal form. Space and carriage return are automatically done by the overlay when number of expected digits are input. Therefore the number of input digits must be strictly entered for each input parameter. The number of letters specified in each parameter field dictate the number of hex or decimal digits that must be entered.

For example:
for TN 1 0 2 0, enter: 001 0 02 00
for TN 156 1 15 30, enter: 156 1 15 30

Basic LD77 commands

All the commands, except the "P" commands, cannot be used on superloops.

ANWK (B) loop ts	Read/write network card memory
ANWS (C) loop ts	Read/write network card memory (short)
ARPM loop 20	Print contents of timeslots in RPC
ARPM loop ts b s c u	Get contents of timeslot TS, loop L
ARPS (F) loop ts	Read Remote Peripheral Switch memory
DENL loop	Get the density of the loop
DFTM (T) s c u	Define unit to receive signaling messages
DRTM (N) l s c u	Stop printing messages
N	Stop print
P	Print all messages
P lll	Print all messages from specified loop
P lll s	Print all messages from specified shelf
P lll s cc	Print all messages from specified card
PRTM (P) lll s cc uu	Print messages, as specified
WCTS loop	Print the current unit scan of specified loop
WMBY l s c u	Write the maintenance bit for the given unit to BUSY
WMUB l s c u	Write the maintenance bit for the given unit to NOT BUSY
XRCL loop	Read contents of RPC control register
XRSH loop	Read and print contents of SHEN register
XRST loop	Read and print contents of STATUS register
XTRP loop	Test remote RPC processor for the loop
XTLP loop	Test local RPC processor for the loop
XWCS loop xxxx	Writes RPC control/SHEN register from loop L

LD77

LD77 commands with X11 release 15 and later

DLMP 0/1	Turn on/off lamp audit
KALL	Call set up without specifying timeslots
KALS	Call set up with specifying timeslots
DISC	Call disconnect
IMSG	Send input SSD messages from PE to SL-1 CPU
XMSG	Send output SSD messages from SL-1 CPU to PE
XMII, XMIO	Send input/output XMI messages between the CPU and superloops
DMTN	Monitor input and output SSD messages for 1 to 6 TNs
KILLx	Reset one or all TN being monitored

Alphabetical list of commands

ANWK (B) loop ts

Read/write network card memory. basic-1

Access the specified network card memory to read and print one word. The word format is <cb s c u x ln -->, where:
cb = continuity bit
s = shelf
c = card
u = unit
x = multigroup bit
ln = link

You can write in new data. To change the values, rekey the word after the dashes, substituting new values where appropriate.

ANWS (C) loop ts

Read/write network card memory (short). basic-1

Access the specified network card memory (short form) to read and print one word. The multigroup bit and continuity field are not used. The word format is <s c u ln -->, where:
s = shelf
c = card
u = unit
ln = link

You can write in new data. To change the values, rekey the word after the dashes, substituting new values where appropriate.

ARPM loop 20

Print contents of timeslots in RPC. basic-1

Prints contents of 32 timeslots in RPC associated with loop L (20 hexadecimal = 32 decimal).

ARPM loop ts b s c u

Get contents of timeslot TS, loop L. basic-1

The system prints data in the form "bscu", where b is the current value of the bypass bit in the Remote Peripheral Equipment Controller (RPC) memory (0 or 1) for that shelf, card and unit.

The user can enter a new bypass bit for the RPC memory after the dash.

LD77

ARPS (F) loop ts

Read Remote Peripheral Switch memory. basic-1

Access the specified Remote Peripheral Switch (RPS) memory to read and print one word. The word format is <cb s c u -->, where:
cb = continuity bit
s = shelf
c = card
u = unit

You can write in new data. To change the values, rekey the word after the dashes, substituting new values where appropriate.

DENL loop Get the density of the loop. basic-1

DFTM (T) s c u

Define unit to receive signaling messages. basic-1

DISC Call disconnect. xpe-15

Format:
DISC
TN1 lll s cc uu
TN2 lll s cc uu

This command disconnects the call specified by the TNs. A scan of the connection memory is done prior to disconnecting the call, if no timeslot can be found for the specified TN, nothing is done. TN1 and TN2 are prompted by the overlay.

DLMP 0/1 Turn on/off lamp audit. xpe-15

Format :
DLMP 0 = turn on lamp audit
DLMP 1 = turn off lamp audit

DMTN Monitor input and output SSD messages for 1 to 6 TNs. xpe-15

This command is used to monitor all SSD messages for the specified TN. TN is automatically prompted by the overlay. Up to 6 TNs can be monitored at the same time.

Enter the DLPM and DMTN commands as follows:
DLMP 2
DMTN
TN x lll s cc uu

where,
x = (1-6), TN index

The output format is :
OSSD111 TN MSG TIME
OSSD111 = header
TN = packed TN
MSG = SSD message content
TIME = real time clock before output when work scheduler gets the input message

DRTM (N) l s c u

Stop printing messages. basic-1

Stop printing messages from the loop, shelf, card and unit. Only loop and shelf numbers are required.

IMSG Send input SSD messages from PE to SL-1 CPU. xpe-15

This command is used to simulate incoming SSD message from the peripheral equipment. The specified TN must be equipped.

Format:
IMSG
TN lll s cc uu
NUMBER MESSAGES mm
TIMES TO SEND hhh
MSG DATA xxxx xxxx xxxx xxxx xxxx ...

where,
mm = number of SSD messages (1-10) to be sent
hhh = number of times (1-999) to simulate the SSD input message
xxxx = SSD message content. Number of message contents depends on input of MM

TN, NUMBER MESSAGES, # TIMES TO SEND, and MSG DATA are prompted by the overlay.

KALL Call set up without specifying timeslots. xpe-15

This command is used to set up a simple call (intra or inter-group). The system finds an available timeslot for the specified TNs. The specified TN must be equipped, enabled and idle.

Format:
KALL
TN1 lll s cc uu
TN2 lll s cc uu

TN1 and TN2 are automatically prompted by the overlay.

Note 1: If AUDIT is running, call(s) are disconnected, and AUD17, AUD18, AUD19, and/or AUD31, AUD32 is printed.

Note 2: Call setup command simply finds the available timeslots and sets up the connection memory and/or junctor memory.

Note 3: BUG105, BUG330 may be printed if illegal sequences are carried out.

Note 4: These commands are designed for lab use only, and should be used cautiously in the live-switch.

KALS Call set up with specifying timeslots. xpe-15

This command will set up a call specified by the input TNs and the timeslots if both TNs are equipped, enable and idle. The specified timeslots will be used if they are idle, if the specified timeslot are occupied, then the call will not be set up. See Notes with the KALL command.

Format:
KALS
TN1 lll s cc uu
TN2 lll s cc uu
TIMESLOTS ts1 ts2

where,
ts1 = specified timeslot of the TN1
ts2 = specified timeslot of the TN2

TN1, TN2, and TIMESLOTS are prompted by the overlay.

KILLx Reset one or all TN being monitored. xpe-15

Where, x = the TN index number (1-6) entered with the DMTN command. Enter 7 to reset all the output monitored TNs.

N Stop print. basic-1

P	Print all messages.	basic-1
P lll	Print all messages from specified loop. *Note:* Enter the exact number of digits. For example for loop 4, enter 004.	basic-1
P lll s	Print all messages from specified shelf. *Note:* Enter the exact number of digits. Example: for loop 4, enter 004.	basic-1
P lll s cc	Print all messages from specified card. *Note:* Enter the exact number of digits. Example: for loop 4, enter 004.	basic-1
PRTM (P) lll s cc uu	Print messages, as specified. Only loop and shelf numbers are required. *Note:* Enter the exact number of digits. Example: for loop 4, enter 004.	basic-1
WCTS loop	Print the current unit scan of specified loop. Outputs shelf, card and unit.	basic-1
WMBY l s c u	Write the maintenance bit for the given unit to BUSY.	basic-1
WMUB l s c u	Write the maintenance bit for the given unit to NOT BUSY.	basic-1

LD77

XMII, XMIO Send input/output XMI messages between the CPU and superloops. xpe-15

Send input/output XMI messages to the Peripheral Controller (NT8D01) or Network card (NT8D04). Use XMII for input messages from the Network card (NT8D04) to the CPU. Use XMIO for messages from the CPU to the Network.

This command is used to simulate input/output XMI message. It may not be useful in LD77, a similar command is available in resident debugger.

Format:

```
XMII or XMIO
LOOP lll
NUMBER MESSAGES m
# TIMES TO SEND hhh
 MSG DATA
cccc xxxx xxxxxxxx
cccc xxxx xxxxxxxx
cccc xxxx xxxxxxxx
      .
      .
      .
```

where,

lll = loop number
m = Number of multiple XMI messages (1-6)
hhh = Number of times to send XMI messages (1-999)
cccc = control word and defined as follow:

```
r  ss  applic   type
-|--|------ |-------|
```

r = one bit msg ready flag, always sets to
ss = two bit sequence status field
- B.00 : short message
- B.01 : starting a long message (message has 6 or more words of data)
- B.10 : continue a long msg
- B.11 : end of a long msg

applic = six bit value for msg's intended application
- B.000001 : for LD 30
- B.000010 : for LD 32
- B.000011 : for LD 45
- B.000100 : for LD 77
- B.000101 : for XPE parameter download
- B.000110 : for XNET action request

type = seven bit value of message type
xxxx = message data

XMSG Send output SSD messages from SL-1 CPU to PE. xpe-15

This command is used to send output SSD message to the peripheral equipment TN. The specified loop of the TN must be enabled and responding.

Format
XMSG
TN l s c u
NUMBER MESSAGES mm
TIMES TO SEND hhh
MSG DATA xxxx xxxx xxxx ....

where,
mm = number of SSD messages to be sent (1-10)
hhh = number of times to output SSD message (1-999)
xxxx = SSD message content. Number of message contents depends on the value of MM

TN, NUMBER MESSAGES, # TIMES TO SEND, and MSG DATA are prompted by the overlay.

XRCL loop Read contents of RPC control register. basic-1

XRSH loop Read and print contents of SHEN register. basic-1

XRST loop Read and print contents of STATUS register. basic-1

XTLP loop Test local RPC processor for the loop. basic-1

XTRP loop Test remote RPC processor for the loop. basic-1

XWCS loop xxxx

Writes RPC control/SHEN register from loop L. basic-1

Writes RPC control/SHEN register for loop L with data xxxx in hexadecimal format.

LD77

658 Manual Print

Issued:	04 01 94
Status:	Standard
X11 Release:	19

Call Trace Program (TRA)

LD80 provides a means of tracing a call by looking at a snap shot of the transient data (such as call register contents) associated with the call. The trace commands operate only when this overlay is active. If LD80 is aborted (****), the trace functions stop. Note that when using the enhanced trace commands, the overlay will not automatically abort (according to the defined time-out period) if calls are being traced.

When a system initialization occurs, all trace commands are removed, and the trace operation is stopped.

For Network Call Trace see NCT messages.

X11 release 19 and later include Enhanced Trace Commands. The enhanced trace function requires Multi-User Login functionality (package 242) to be enabled in LD17. The enhanced commands are: DALL, DIST, ENTC, ENTD, GOTR, FITR, and STPT. These commands interact with each other only. They do not affect pre-Release 19 commands.

The enhanced trace commands can be disabled through a maintenance telephone by dialing the following: nn + 9913 + x + yy

nn = customer SPRE access code

9913 = feature code to display for message display control

x = action code (0 to deacticvate)

yy = message monitor code (02 for enhanced trace messages)

A second dial tone indicate that the command was successful. Overflow tone is heard if the the command is entered incorrectly. Once this command has been entered, a user entering FITR from the TTY wil receive the period (.) prompt.

Using call trace commands

There are three basic commands:

- TRAT for tracing attendant consoles
- TRAC for tracing sets and trunks
- TRAD for tracing calls through Computer PBX Interface (CPI), Digital Trunk Interface (DTI), ISDN PRI, or Digital Link Interface (DLI) loops.

The TRAC command can be used to print the tone detector TN if a tone detector is used at the time of the call trace.

Additional information on the NARS/BARS/CDP and Ring Again (RGA) features can be retrieved by adding DEV to any of the TRAC commands. Example: TRAC L S C U DEV

Note: For TRAC L S C U, enter U = DSL0 to DSL7 for Digital Subscriber Loops.

Originating and terminating information

The Call Trace originating and terminating party information depends on the types of telephone, console or trunk as shown below.

Single line telephones:

ORIG l s c u cust dn 500
TERM l s c u cust dn 500

Multi-line telephones:

ORIG l s c u key# keytype cust dn settype
TERM l s c u key# keytype cust dn settype

Attendant consoles

ORIG l s c u cust att# lpk# ATTN consoletype
TERM l s c u cust att# lpk# ATTN consoletype

Trunks:

ORIG l s c u rtyp RMBR rrr mmm
TERM l s c u rtyp RMBR rrr mmm

Where,

l s c u = TN
consoletype = console type (ATT, 1250, 2250)
cust = customer number
dn = directory number
key# = multi-line telephone key number
keytype = multi-line telephone key type (SCR, MCR, HOT, etc.)
lpk# = console loop key number
rrr mm = trunk route and member number
rtyp = trunk route type (TIE, CO, FX, etc.)
settype = multi-line telephone type (SL1, 2008, 2317, etc.)

Example 1: Trace a call placed to a 500-type set

Configuration: active call from key 0 on an M2008, to 500-type telephone
Customer number: 06

Originator:
telephone type: M2008
TN: 004 0 05 00
DN: 5100 on SCR key 0

Terminator:
telephone type: 500
TN: 008 0 03 06
DN: 2121

Trace command:
TRAC 4 0 5 0 (l s c u), or
TRAC 6 5100 (customer and DN)

Output:

```
ACTIVE TN  004 0 05 00

ORIG  04 0 0 05 00   6  SCR 0   5100   2008

TERM 008 0 03  06   6  2121  500

DIAL DN 2121

MAIN PM  ESTD

TALKSLOT  ORIG 22   TERM 22

QUEUE  NONE
```

Example 2: Trace an outgoing ISDN call

Configuration: outgoing call call from key 0 on an M2317, to 500-type telephone
Customer number: 05

Originator:
telephone type: M2317
TN: 016 0 02 00
DN: 6050 on SCR key 0

Terminator:
Dialed DN: 7873107
Outgoing PRI TIE trunk: loop 018 channel 16; route 24 member 12

Trace command:
TRAC 5 6050 (customer, DN), or
TRAC 16 0 2 0 (l s c u)

Output:

```
ACTIVE TN 016 0 02 00

ORIG   016 0 02 00   5 SCR 0  6050  2317

TERM   018 16   TIE RMBR 24 12

DIAL DN 7873107

MAIN PM  ESTD

TALKSLOT ORIG 13  TERM 13

QUEUE NONE

---- ISDN PRA CALL (TERM) ----
CAL REF # = 16
BEARER CAP = VOICE
CALL STATE = 10  ACTIVE
CALLING NO = 4376050
CALLED NO = 7873107
```

Example 3: Enhanced Trace command output

The enhanced call trace output includes a time stamp that appears on the first line of the output.

The TN or digital trunk prints out only when thaere has been a change to the call register. The TN or trunk is printed only once.

Sample output:

.14:00:02 12/25/1992

KEY 0 MCR MARP ACTIVE TN 001 0 02 01

ORIG 001 02 01 0 SCR MARP 1 5011 SL1

TERM 001 0 02 00 0 MCR MARP 1 5006 SL1

DIAL DN 5006

MAIN_PM ESTD

TALKSLOT ORIG 19 TERM 21

QUEU NONE

KEY 1 TRN IDLE

KEY 2 AO3 IDLE

.

.

.

KEY 8 RND

KEY 9 RLS

.14:00:04 12/25/1992

IDLE TN 015 04

Alphabetical list of Call Trace outputs

This section provides definitions of the data output by the various call trace commands.

With X11 release 19 and later, a time stamp is added to Enhanced Call Trace commands output. The following information is added below the time stamp as necessary.

- A digital telephone shows
  TN l s c u
- A locked out telephone or digital trunk shows
  LOCKOUT TN l s c u (or l ch)
- A disabled telephone or digital trunk shows
  DSBL TN l s c u (or l ch)
- A telephone or digital trunk that is in maintenance busy state shows
  MSBY TN l s c u (or l ch)
  MSBY TN l s c u (or l ch) MARP shows if the TN is a MARP TN

ACTIVE – the call is active

AUX_NARS — Network Automatic Route Selection (NARS) data to follow

AUX_PM — auxiliary progress mark may be any of the following depending on the MAIN_PM:
ABSORBING = performing digit manipulation on the call
AWAIT ANI = waiting for Automatic Number Identification information
AWAITREPLY = CPU is waiting for a response during a dial sequence
BSYG = busy tone to originator
CDR-CALLRECORD = CPU is outputting a CDR record
CDR-TIMING = CPU is computing a CDR record
COMPLETE = dialing is complete
DNTRANS = DN translation to TN in progress
FAREND-OFF = ?
NARS = call is a network call
NOOUTPULS = outpulsing complete, originator receiving ringback
OUTPULSING = outpulsing digits related to the call
OVLF = resources not available, returning overflow to originator
PAUSING = timed pause in a trunk call dialing sequence
SPEEDCALL = performing speed call
TEMPPATH = software timing, occurs when outpulsing digits on trunks
TOLLCHECK = checking access restrictions for the call
USCR = User Selectable Call Redirection programing, receiving dial tone
USCR_DIAL = USCR programming

AUX_RGAT_PM — Ring Again over trunk information

BEARER CAP — bearer capability, such as voice, 64K clear, 64K restricted and 56K

BUSY — unit or DN is busy

CALL REF # — PRI call reference number assigned by the system

CALL STATE — specifies the PRI call as active or inactive

CALLED NO — PRI dialed number

CALLING N0 — PRI home location code and DN of originating party

CONF — conference call

COS_ORIG, COS_TERM — class of service restrictions for originating and terminating party. Possible values are:
UNR = Unrestricted
TLD = Toll Denied
SRE = Semirestricted
FRE = Fully Restricted
FR1 = Fully Restricted class 1
FR2 = Fully Restricted class 2
CUN = Conditionally Unrestricted
CTD = Conditionally Toll Denied

DARK_CONSOLE — the call is being temporarily released by a console. Also outputs three types of recall:
RLSED = console released the call is getting recall
FLASH = flash recall
CAMP = camp-on recall

DIAL DN— the dialed number

DIAL xxx yy TTR zz — TDS on loop xxx and timeslot yy connected to Digitone Receiver timeslot zz

DG_MAN xxx FCA_INDEX xxx TOD x — Digit Manipulation Index, Free Area Screening and Time Of Day value

DIRECT MW_CALL — message waiting indication is being given

DSBL — the unit has been disabled

DST — console destination information to follow

EMR100 — ACD emergency conference

EXP_ROUTE — identifies if an expensive route is being used for an ESN call

IDLE — TN or key is idle

HLD — number of calls on Hold at the console

HOLD — call is on hold

LOCKOUT — the unit is in lockout state

LOOP — attendant console LPK key

MAIN_PM — this is the main progress mark which identifies the state of the call, possible values are listed below. See also AUX_PM.
BUSY = originator is receiving busy tone
CDR = CPU is processing Call Detail Recording records
DELAY DIAL = CPU is in a timing sequence while establishing a delay dial start trunk call
DIAL = one or more digits have been dialed, system requires more digits
ESTD = call is established between the originating and terminating party
HALFDISC = Trunk with answer supervision has not received a disconnect signal from the far end during trunk idling
READY = CPU is ready to process a function for the originating TN
REOR = originator is receiving intercept treatment
RING = originator is receiving ringback tone
WAIT = dial tone waiting queue
WINKON = CPU is in a timing sequence while establishing a wink start trunk call

MARP — indicates the TN is Multiple Appearance Redirection Prime

MBSY — unit is in maintenance busy state

NARS_PM — NARS call progress mark

NEW_RLIST_INDEX NWQ_RLIST_ENTRY — network queue route list index and route list entry

NCOS_ORIG, NCOS_TERM — Network Class of Service for originating and terminating party

OHQ/CBQ — call is in the off-hook queue or callback queue

PRIOITY NWQ_EXT_ROUTE — the priority in the queue and extended route queueing

PTY SLOT — TDS priority timeslot; reserved by the CPU while a user is receiving tones (this timeslot may be required by the CPU to further process the call). Normally PTY SLOT is the same timeslot as SLOT.

QUEU — a call may be in one of the following CPU timing queues:
128 = 128 ms timing queue
2S = 2 second timing queue
CAD = cadence
CDR = Call Detail Recording processing queue
DIAL = dialing queue
IDLE = idle queue
NONE = call is not in a timing queue
RING = ringing queue

RCVR xx SET yy — timeslot to the Digitone Receiver (xx) and the telephone (yy)

RGAT_PM — Ring Again progress mark

RL_IND xx RL_ENT xx — NARS/BARS route list index and entry number

SRC — console source information to follow

SBSY — unit is software busy

SLOT — the timeslot used by the originator and terminator

TALKSLOT — identifies the timeslot and junctor (if applicable) used by the originator and terminator

TDTN — Tone Digit Switch loop and timeslot

TERM — originating party information, identifies the TN or DN where the call terminates, output depends on type of telephone or console

TGAR_ORIG, TGAR_TERM — Trunk Group Access Restriction for originating and terminating party

TTR = Digitone Receiver TN

Alphabetical list of commands

DALL Disable all enhanced trace commands. basic-19

This command disables all trace commands enabled with ENTC or ENTD command. You must stop the trace with the STPT command before disabling all the commands with DALL.

DIST n Disable the enhanced trace operation. basic-19

This command disables the trace command enabled with ENTC or ENTD command. This command is used once a trace command is started then stopped.
n = the entry number (as seen with the FITR command)

ENTC l s c u t Enable the enhanced trace command for a TN. basic-19

This command enables the trace capability for the TN specified. Note that this command does not start the trace immediately. Use the GOTR command to begin the trace operation.
l = loop
s = shelf
c = card
u = unit
t = the length of time the trace command operates
The format for the trace command duration is HHMM.
HH = hours (0-23), MM = minutes (0-59)
For example, a duration of 5 minutes: t = 0005
1 hour: t = 0100

Note: The time duration must be at least 1 minute, and no more than 23 hours.

ENTD l ch t Enable the enhanced trace command for a digital trunk. basic-19

This command enables the trace capability for the digital trunk specified. Note that this command does not start the trace immediately. Use the GOTR command to begin the trace operation.
l = loop
ch = channel
t = the length of time the trace command operates
The format for the trace command duration is HHMM.
HH = hours (0-23), MM = minutes (0-59)
For example, a duration of 5 minutes: t = 0005
1 hour: t = 0100

Note: The time duration must be at least 1 minute, and no more than 23 hours.

FITR	Get information about the enhanced trace function. This command queries the TNs or Digital trunks being traced with the ENTC and ENTD commands. The output is shown as follows. ENTRY TN or TRUNK TIME STATUS For example, 1 001 0 01 01 0030 OFF 2 015 04 1200 OFF	basic-19
GOTR	Begin enhanced trace commands. This command starts the trace operation specified with the ENTC and ENTD commands.	basic-19
STPT	Stop the enhanced trace command. This command stops the enhanced trace operation specified with the ENTC and ENTD commands. This can be used at any time during the trace operation. This does not disable the commands; they can be restarted with the GOTR command. When they are restarted, the duration timer is reset. For example: the timer is set at 30 minutes, but the trace is stopped after 2 minutes. When the trace is restarted (GOTR) the timer is set to 30 minutes.	basic-19
TRAC c acod	List route number, type and status of each trunk for customer c.	basic-1
TRAC c dn	Trace calls, this dn of customer c.	basic-1
TRAC c dn	Trace calls with Local Steering Code dn for customer c.	basic-1
TRAC c r m	Trace calls, customer c, route r, member m.	basic-1
TRAC l s c DSLx	Trace calls on Digital Subscriber Loop x (0-7).	bri-18
TRAC l s c u	Trace calls associated with this unit. If a trace is performed on a DTR, an error message is output.	basic-1
TRAC l s c u k	Trace call associated with key k on specified unit.	basic-1

TRAC xx...xx DEV

Print auxiliary data. basic-1

Print the auxiliary data related to the call for Network Alternate Route Selection (NARS), Basic Alternate Route Selection (BARS), Coordinated Dialing Plan (CDP) or Ring Again (RGA), where equipped, as well as the normal data for command xx...xx. Command xx...xx can be any of the TRAC commands.
Note: When TYP E is output, E = extended route (not expensive).

TRAD loop ch	Trace DTI or DLI calls, channel ch of specified loop.	basic-1
TRAT c a	Trace calls, attendant a of customer c.	basic-1
TRAT c a k	Trace calls associated with a loop key k of attendant console a for customer c.	basic-1
TRAT l s c u	Trace attendant calls, this unit.	basic-1
TRAT l s c u k	Trace attendant calls on key k.	basic-1

TRAT xx...xx DEV

Print auxiliary data. basic-1

Print the auxiliary data related to the call for Network Alternate Route Selection (NARS), Basic Alternate Route Selection (BARS), Coordinated Dialing Plan (CDP) or Ring Again (RGA), where equipped, as well as the normal data for command xx...xx. Command xx...xx can be any of the TRAT commands.

Issued: 04 01 94
Status: Standard
X11 Release: 19

Features and Station Print

LD81 is used to print a list or count of telephones with selected features. It also allows last service change date information to be printed.

Note: In X11 release 18, a TN which is the Multiple Appearance Redirection Prime (MARP) is indicated by an "M" following FEAT (when TYPE = MCN, SCN, MCR, or SCR).

All prompts

REQ	LST, CNT	Print list or count of telephone features
CUST	0-99, 0-99 1-99, <cr>	One customer, range of customer numbers, or all customers
DATE	dd mmm yyyy, ACT, <cr>	Print data from date specified, last activity, all activities
PAGE	Yes, (No)	Print data on a per page basis
DES	aaaaaa	Print all telephones with DES "aaaaaa"
	a+	Print all telephones starting with DES "a"
	+	Print telephones with no DES assignment
	<cr>	Disregard DES
FEAT	aaaa	Features to be printed
RNPG	xx yy	Ringing Number Pick-up Group number, or a range of groups
LSNO	xx yy	Speed Call List Number, or a range of list numbers
NCOS	xx yy	Network Class of Service group number
Adjust Paper	<cr>	Adjust paper so that printing starts at top of sheet
NACT	Yes, (No)	Activity date updated

Alphabetical list of prompts

Adjust Paper

<cr> — Adjust paper so that printing starts at top of sheet. basic-1

Prompted when PAGE =Yes. Enter <cr> to start printing.

CUST **0-99, 0-99 1-99, <cr>** — One customer, range of customer numbers, or all customers. basic-1

Use <cr> for all customers.

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DATE **dd mmm yyyy, ACT, <cr>** — Print data from date specified, last activity, all activities. basic-1

dd = day (0-31)
mmm = month (JAN-DEC)
yyyy = year
ACT = print data from last activity date
<cr> = disregard date restrictions

DES **aaaaaa, a+, +, <cr>** — Print telephones with ODAS designator. odas-1

The Office Data Administration System (ODAS) is used to assign alphanumeric designations (DES) to telephones. This can be used to keep track telephone configurations and locations.

Input any of the following:
aaaaaa = print all telephones with DES "aaaaaa"
a+ = print all telephones starting with DES "a"
+ = print telephones with no DES assignment
<cr> = disregard DES

FEAT **aaaa** — Features to be printed. basic-1

Enter a specific feature mnemonic or one the following for groups of features: ALL, COS, DNK, SETS, SCL, RNP or 500.

FEAT is repeated until <cr> is entered

FEAT **2000** — All M2000 telephones. dset-7

FEAT	**3000** – M3000 Touchphone.	tset-7
FEAT	**4020** – M4020 telephone (no longer supported).	basic-8
FEAT	**500** – 500/2500 type telephone.	basic-1
	Print both MNL and DIP telephones. 2500 type telephones are requested by DTN entry.	
FEAT	**AAA** – Automatic Answerback allowed.	aab-1
FEAT	**AAD** – Automatic Answerback denied.	aab-1
FEAT	**AAK** – Automatic Answer back key.	aab-1
FEAT	**ACD** – ACD in calls key.	bacd-1
FEAT	**ACNT** – Assignment of activity codes allowed.	bacd-13
FEAT	**ADD** – Digit display equipped.	ddsp-1
FEAT	**ADL** – Autodial key.	optf-1
FEAT	**ADV** – Data port verification allowed.	bacd-5
FEAT	**AGN** – ACD agent.	bacd-1
FEAT	**AGT** – ACD agent's key.	bacd-1
FEAT	**AGTA** – ACD services for 500/2500 telephone allowed.	bacd-16
FEAT	**AGTD** – ACD services for 500/2500 telephone denied.	bacd-16
FEAT	**ALL** – Print all features.	basic-1
	When REQ = LST only the features actually programmed on telephones are listed along with the associated TN. Features not listed are RNPK, DIP and MNL.	
	When REQ = CNT, features available in the system software are listed even if they are not programmed on any telephone. Not listed are RNPK, 500, 2500, SL1, 2000, and 3000.	
FEAT	**ASCA, (ASCD)** – Alarm Security allowed (denied).	ohas-18
FEAT	**AO3** – Three Party Conference key.	basic-1
FEAT	**AO6** – Six Party Conference key.	basic-1
FEAT	**ARC** – Attendant Recall key.	basic-1
FEAT	**ARHA** – Audible Reminder of Held Call allowed.	basic-14
FEAT	**ARHD** – Audible Reminder of Held Call denied.	basic-14
FEAT	**AUTU** – Authorization Code Unrestricted.	ssau-19
FEAT	**AUTR** – Authorization Code Restricted.	ssau-19

FEAT	**AUTD** – Authorization Code Denied.	ssau-19
FEAT	**ICF** – Internal Call Forward key.	icf-19
FEAT	**USRA** – User Selectable Call Redirection allowed.	uscr-19
FEAT	**USRD** – User Selectable Call Redirection denied.	uscr-19
FEAT	**USR** – User Selectable Call Redirection key.	uscr-19
FEAT	**C6A** – Six Party Conference allowed.	basic-10
FEAT	**C6D** – Six Party Conference denied.	basic-10
FEAT	**CA** – Combined No Hold Conference and Autodial.	basic-14
FEAT	**CAS** – Centralized Attendant Service.	casm-1
FEAT	**CCOS** – Controlled Class of Service key.	ccos-7
FEAT	**CFTA** – Call Forward by Call Type allowed.	basic-10
FEAT	**CFTD** – Call Forward by Call Type denied.	basic-10
FEAT	**CFW** – Call Forward key.	basic-1
FEAT	**CFXA** – Call Forward number to external DN allowed.	basic-10
FEAT	**CFXD** – Call Forward number to external DN denied.	basic-10
FEAT	**CHD** – Combined No Hold Conference and Direct Hot Line.	basic-14
FEAT	**CHG** – Charge Account key.	fca-1
FEAT	**CHL** – Combined No Hold Conference and Hot Line list.	basic-14
FEAT	**CLTA** – Network Call Trace allowed.	basic-17
FEAT	**CLTD** – Network Call Trace denied.	basic-17
FEAT	**CMSA** – Command and Status Link allowed.	csl-8
FEAT	**CNDA** – Call Party Name Display allowed.	cpnd-10
FEAT	**CNDD** – Call Party Name Display denied.	cpnd-10
FEAT	**CNIA** – Call Number Identification allowed.	pra-12
FEAT	**CNID** – Call Number Identification denied.	pra-12
FEAT	**CNTA** – Network ACD countdown allowed.	nacd-15
FEAT	**CNTD** – Network ACD countdown denied.	nacd-15
FEAT	**COS** – Print telephones with Class Of Service (COS) restrictions.	basic-1
	These are telephones equipped with CMSA, CTD, CUN, DSI, FRE, FR1, FR2, NCOS, SFA, SFD, SRE, TLD, UNR and VMA Classes of Service.	
FEAT	**CPN** – Display Calling Party Number key.	cpnd-10

FEAT	CS – Combined No Hold Conference and Speed Call.	basic-14
FEAT	CTD – Conditionally Toll Denied.	basic-1
FEAT	CUN – Conditionally Unrestricted.	basic-1
FEAT	CWA – Call Waiting allowed.	basic-1
FEAT	CWD – Call Waiting allowed.	basic-1
FEAT	CWT – Call Waiting key.	basic-1
FEAT	DAG – ACD display agents key.	bacd-1
FEAT	DDS – Digit display allowed.	ddsp-1
FEAT	DDV – Data port verification denied.	amp-5
FEAT	DIG – Dial Intercom group.	di-1
FEAT	DIP – Dial Pulse telephone (500 type).	basic-1
FEAT	DNDA – Dialed Name Display allowed.	cpnd-13
FEAT	DNDD – Dialed Name Display denied.	cpnd-13
FEAT	DNK – Telephones with MCN, MCR, SCN and SCR keys.	basic-1
FEAT	DPU – DN Pick-Up key.	grp-1
FEAT	DPUA – DN Pick-Up allowed.	dcp-12
FEAT	DPUD – DN Pick-Up denied.	dcp-12
FEAT	DRC – DID Route Control.	basic-14
FEAT	DRG1 – Digital telephone distinctive ringing (high/fast).	drng-7
FEAT	DRG2 – Digital telephone distinctive ringing (high/slow).	drng-7
FEAT	DRG3 – Digital telephone distinctive ringing (low/fast).	drng-7
FEAT	DRG4 – Digital telephone distinctive ringing (low/slow).	drng-7
FEAT	DSP – Digit Display key.	ddsp-1
FEAT	DTA – Data telephone.	basic-5
FEAT	DTN – Digitone dial telephone (2500 type).	basic-1
FEAT	DWC – ACD Display Waiting Calls key.	bacd-1
FEAT	ENG – English language display for M2317.	dlt2-12
FEAT	FAXS – Facsimile servers.	faxs-18
FEAT	FBA – Call Forward Busy allowed.	optf-1
FEAT	FBD – Call Forward Busy denied.	optf-1
FEAT	FITA – Flexible Incoming Tones allowed.	basic-14

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FEAT	**FITD** – Flexible Incoming Tones denied.	basic-14
FEAT	**FNA** – Call Forward No answer allowed.	basic-1
FEAT	**FND** – Call Forward No answer denied.	basic-1
FEAT	**FR1** – Fully Restricted 1.	basic-1
FEAT	**FR2** – Fully Restricted 2.	basic-1
FEAT	**FRE** – Fully Restricted.	basic-1
FEAT	**FRN** – French language display for M2317.	dlt2-12
FEAT	**GPU** – Group Call Pick-Up key.	grp-1
FEAT	**GPUA** – Group call Pick-Up allowed.	dcp-12
FEAT	**GPUD** – Group call Pick-Up denied.	dcp-12
FEAT	**GRC** – Group Recall key.	grp-1
FEAT	**HFA** – Handsfree allowed (M2616).	arie-14
FEAT	**HFD** – Handsfree denied (M2616).	arie-14
FEAT	**HOTD** – Enhanced Hot Line, Direct entry method.	hot-10
FEAT	**HOTL** – Enhanced Hot Line, List entry method.	hot-10
FEAT	**HPR** – High priority station.	basic-1
FEAT	**HTA** – Hunting allowed.	basic-1
FEAT	**HTD** – Hunting denied.	basic-1
FEAT	**HTL** – Hot Line.	hot-10
FEAT	**ICDA** – Internal CDR allowed.	icdr-10
FEAT	**ICDD** – Internal CDR denied.	icdr-10
FEAT	**ICF** – Internal Call Forward.	icf-19
FEAT	**IMA** – Integrated Message System allowed.	ims-2
FEAT	**IRA** – Incoming Ringing line preference allowed.	lsel-4
FEAT	**IRD** – Incoming Ringing line preference denied.	lsel-4
FEAT	**KLS** – Key/Lamp Strip.	basic-1
FEAT	**LDN** – Listed Directory Number (DN).	dldn-12
FEAT	**LDTA** – Line Disconnect Tone allowed.	basic-17
FEAT	**LDTD** – Line disconnect tone denied.	basic-17
FEAT	**LLC1** – Line Load Control level 1.	llc-10
FEAT	**LLC2** – Line Load Control level 2.	llc-10

FEAT	LLC3 – Line Load Control level 3.	llc-10
FEAT	LLCA – Line Load Control allowed.	llc-10
FEAT	LLCN – Line Load Control off.	llc-10
FEAT	LNA – Last Number Redial allowed.	lnr-8
FEAT	LND – Last Number Redial denied.	lnr-8
FEAT	LNK – Last Number Redial key.	lnr-8
FEAT	LPA – Message Waiting lamp allowed.	mwc-1
FEAT	LPD – Message Waiting lamp denied.	mwc-1
FEAT	LPR – Low priority telephone.	basic-1
FEAT	MCD – Message Center DN.	mwc-1
FEAT	MCK – Message cancellation key.	mwc-1
FEAT	MCN – Multiple call non-ringing DN.	basic-1
	In X11 release 18, a TN which is the Multiple Appearance Redirection Prime (MARP) for the DN is indicated by an "M" in the output (MCN M).	
FEAT	MCR – Multiple call ringing DN.	basic-1
	In X11 release 18, a TN which is the Multiple Appearance Redirection Prime (MARP) for the DN is indicated by an "M" in the output (MCR M).	
FEAT	MCTA – Malicious Call Trace allowed.	mct-10
FEAT	MCTD – Malicious Call Trace denied.	mct-19
FEAT	MIK – Message indication key.	mwc-1
FEAT	MNL – Manual Line Service.	basic-1
FEAT	MRA – Message Registration allowed.	rm-10
FEAT	MRD – Message Registration allowed.	mr-10
FEAT	MSB – Make Set Busy key.	msb-1
FEAT	MTA – Maintenance set allowed.	basic-1
FEAT	MWA – Message Waiting allowed.	mwc-1
FEAT	MWD – Message Waiting denied.	mwc-1
FEAT	MWK – Message Waiting key.	mwc-1
FEAT	NCOS – Network Class Of Service.	ncos-1
FEAT	NDD – No Digit Display.	ddsp-1
FEAT	NHC – No Hold Conference.	basic-14
FEAT	NIA – Incoming non-ringing line preference allowed.	lsel-4

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FEAT	**NID** – Incoming non-ringing line preference denied.	lsel-4
FEAT	**NKL** – Notification key lamps.	drng-7
FEAT	**NRD** – ACD Not Ready key.	bacd-1
FEAT	**NSVC** – ACD Night Service key for Supervisor control.	bacd-12
FEAT	**OLA** – Outgoing line preference allowed.	lsel-4
FEAT	**OLD** – Outgoing line preference denied.	lsel-4
FEAT	**ONP** – On premise extension.	basic-1
	This applies to X11 release 19 and earlier only.	
FEAT	**OPX** – Off premise extension.	basic-1
	This applies to X11 release 19 and earlier only.	
FEAT	**OVB** – Attendant Overflow Position.	aop-1
FEAT	**OVDA** – Override allowed (500/2500 telephone).	ffc-15
FEAT	**OVDD** – Override denied (500/2500 telephone).	ffc-15
FEAT	**OVR** – Override key.	basic-1
FEAT	**PDN** – Prime Directory Number.	pra-12
FEAT	**PHD** – Permanent Hold.	basic-4
FEAT	**POA** – Optional Privacy allowed.	basic-1
FEAT	**POD** – Optional Privacy denied.	basic-1
FEAT	**PRK** – Park key.	cprk-2
FEAT	**PRS** – Privacy release key.	basic-1
FEAT	**PUA** – Call Pick-Up allowed.	grp-1
FEAT	**PUD** – Call Pick-Up denied.	grp-1
FEAT	**PVN** – Private line non-ringing phantom DN.	basic-1
FEAT	**PVR** – Private line ringing phantom DN.	basic-1
FEAT	**RDL** – Stored Number Redial.	basic-14
FEAT	**RGA** – Ring Again key.	optf-1
FEAT	**RLS** – Release key.	basic-1
FEAT	**RNP** – Ringing Number Pick-up (includes PUA and RNPK).	grp-1
FEAT	**RNPK** – Ringing Number Pick-up key.	grp-1
FEAT	**SCC** – Speed Call Controller.	optf-1

FEAT	**SCI** – Station Category Indication Priority Level.	sci-7
FEAT	**SCL** – Speed Call (includes SCU and SCC).	optf-1
FEAT	**SCN** – Single Call non-ringing DN.	basic-1
	In X11 release 18, a TN which is the Multiple Appearance Redirection Prime (MARP) for the DN is indicated by an "M" in the output (SCR M).	
FEAT	**SCR** – Single Call ringing DN.	basic-1
	In X11 release 18, a TN which is the Multiple Appearance Redirection Prime (MARP) for the DN is indicated by an "M" in the output (SCR M).	
FEAT	**SCU** – Speed Call User.	optf-1
FEAT	**SETS** – All telephones.	basic-1
FEAT	**SFA** – Second Level Call Forwarding allowed.	optf-10
FEAT	**SFD** – Second Level Call Forwarding denied.	optf-10
FEAT	**SIG** – Buzz key to phantom DN.	basic-1
FEAT	**SL1** – SL-1 sets.	basic-1
FEAT	**SPV** – ACD supervisor.	acdb-1
FEAT	**SRE** – Semi-restricted class of service.	basic-1
FEAT	**SSC** – System Speed Call controller.	optf-1
FEAT	**SSU** – System Speed Call user.	optf-1
FEAT	**SWA** – Station-to-Station Call Waiting allowed.	basic-8
FEAT	**SWD** – Station-to-Station Call Waiting denied.	basic-8
FEAT	**TAD** – Time and date key.	ddsp-1
FEAT	**TDD** – M3000 display.	tset-7
FEAT	**THF** – Centrex Switchhook Flash.	thf-14
FEAT	**THFA** – Centrex Switchhook Flash allowed (500/2500 telephones).	thf-14
FEAT	**THFD** – Centrex Switchhook Flash allowed (500/2500 telephones).	thf-14
FEAT	**TLD** – Toll denied class of service.	basic-1
FEAT	**TRC** – Malicious Call Trace key.	mct-10
FEAT	**TRN** – Call Transfer key.	basic-1
FEAT	**TVA** – Trunk Verification allowed.	basic-1
FEAT	**TVD** – Trunk Verification denied.	basic-1
FEAT	**UNR** – Unrestricted class of service.	basic-1
FEAT	**USR** – User Selectable Call Redirection.	-19

FEAT	**USRA** — User Selectable Call Redirection allowed.	user-19
FEAT	**USRD** — User Selectable Call Redirection denied.	user-19
FEAT	**UST** — Telset status feature key.	iap3p-13
FEAT	**VCC** — Voice Call to phantom DN.	basic-1
FEAT	**VCE** — Voice telephone.	basic-5
FEAT	**VMA** — Server voice messaging allowed.	csl-8
FEAT	**WTA** — Warning Tone allowed.	basic-1
FEAT	**WTD** — Warning Tone denied.	basic-1
FEAT	**WUK** — Guest Entry of Automatic Wake Up key.	gewu-16
FEAT	**XFA** — Call Transfer allowed.	basic-1
FEAT	**XFD** — Call Transfer denied.	basic-1
FEAT	**XHA** — Exclusive Hold allowed.	dhld-4
FEAT	**XHD** — Exclusive Hold denied.	dhld-4
FEAT	**XRA** — Ring Again allowed.	optf-1
FEAT	**XRD** — Ring Again denied.	optf-1
LSNO	**xx yy** — Speed Call List Number, or a range of list numbers. Ranges: 0-253 before X11 release 13 0-8190 in X11 release 13 and later Prompted when FEAT is SCL, SCU, SCC, SSC, SSU or CS. Enter <cr> to print all lists.	basic-1
NACT	**Yes, (No)** — Activity date updated. Yes = Print current system data and end overlay No = Return to REQ prompt END = End overlay activity	odas-1
NCOS	**xx yy** — Network Class of Service group number. Prompted when FEAT = COS, NCOS. The ranges for Network Class Of Service group are: (0)-3 for standalone CDP (0)-7 for BARS/CDP and NFCR (0)-15 for NARS and NFCR (0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later	basic-1

PAGE **Yes, (No)** — Print data on a per page basis. basic-1

Yes = Print data on a per page basis
No = Print data continuously, ignoring page breaks

REQ **LST, CNT, END** — Print list or count of telephones with specified features. basic-1

LST = list telephones equipped with the features specified by the prompt FEAT
CNT = print a count of telephones equipped with the features specified by the prompt FEAT
END = end overlay activity

RNPG **xx yy** — Ringing Number Pick-up Group number, or a range of groups. basic-1

Ranges:
0-255 before X11 release 13
0-4095 in X11 release 13 and later

Prompted when FEAT = either RNP, RNPK, PUA, PUD, DPU, DPUA, DPUD, GPU, GPUA or GPUD.

Enter <cr> to print all groups

LD81

684 Features and Station Print

Issued: 04 01 94
Status: Standard
X11 Release: 19

Print Hunt Chain and Multiple Appearance Groups

LD82 allows the printing of Hunt patterns and Multiple Appearance groups for telephone sets.

Note: In X11 release 18, a TN which is the Multiple Appearance Redirection Prime (MARP) is indicated by an "M" preceding the TN in the output.

LD82

All prompts

REQ	aaa	Action request
	EHT	Print external hunting pattern (except regular and short Hunting)
	HNT	Print hunting pattern (except short hunting and EHT)
	MAG	Print Multiple Appearance groups including all single appearance DNs assigned on telephones having multiple appearance DNs
	MAP	Print Multiple Appearance DN and associated TNs
	END	End program activity
CUST	0-99, 0-99 1-99, <cr>	One customer, range of customer numbers, or all customers
DATE	dd mmm yyyy, ACT, <cr>	Print data from date specified, or last activity, all activities
PAGE	Yes, (No)	Data printed on a per-page basis
DES	aaaaaa	Print all telephones with DES "aaaaaa"
	a+	Print all telephones starting with DES "a"
	+	Print telephones with no DES assignment
	<cr>	Disregard DES
DN	xxxx	Print specific DN
	xxxx xxxx	Print range of DNs
	ALL	Print data when REQ = MAG or MAP
	<cr>	Print data for all DNs
Adjust Paper	<cr>	Adjust paper so that printing starts at top of sheet
NACT	Yes, (No), END	Update activity date

Alphabetical list of prompts

Adjust Paper

<cr> — Adjust paper so that printing starts at top of sheet. basic-1

Printing starts when <cr> is entered.

CUST **0-99, 0-99 1-99, <cr>** — One customer, range of customer numbers, or all customers. basic-1

Use <cr> for all customers.

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DATE **dd mmm yyyy, ACT, <cr>** — Print data from date specified, or last activity, all activities. basic-1

dd = day (0-31)
mmm = month (JAN-DEC)
yyyy = year
ACT = print data from last activity date
<cr> = disregard date restrictions

DES **aaaaaa, a+, +, <cr>** — ODAS telephone designator. odas-1

The Office Data Administration System (ODAS) is used to assign alphanumeric designations (DES) to telephones. This can be used to keep track telephone configurations and locations.

Input any of the following:
aaaaaa = print all telephones with DES "aaaaaa"
a+ = print all telephones starting with DES "a"
+ = print telephones with no DES assignment
<cr> = disregard DES

DN **xxxx, xxxx xxxx, ALL** — DN, range of DNs, or all DNs. basic-1

xxxx = print specific DN
xxxx xxxx = print range of DNs
ALL = print data when REQ = MAG or MAP
<cr> = print data for all DNs

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered.

LD82

NACT **Yes, (No), END** — Update activity date. odas-1

Yes = Print current system data and end overlay
No = Return to REQ prompt
END = End overlay activity

PAGE **Yes, (No)** — Data printed on a per-page basis. basic-1

Yes = Print data on a per page basis
No = Print data continuously, ignoring page breaks

REQ **aaa** — Action request. basic-1

EHT = Print external hunting pattern (except regular and short Hunting)
END = End program activity
HNT = Print hunting pattern (except short hunting and EHT)
MAG = Print Multiple Appearance groups including all single appearance DNs assigned on telephones having multiple appearance DNs
MAP = Print Multiple Appearance DN and associated TNs

The hunt pattern displayed shows only the first TN in a MADN hunt group.

Issued: 04 01 94
Status: Standard
X11 Release: 19

TN sort and print

LD83 allows the printing of a list of TNs and of TN Blocks in designation (DES) order.

Note: In X11 release 18, "MARP" is output after the DN when printing the TN block (NOT when using the LST command) if the TN is the Multiple Appearance Redirection Prime.

Print TNs

REQ	LST, TNB, END	Print list of TNs or TNs blocks in designation order
CUST	0-99, 0-99 1-99, <cr>	One customer, range of customer numbers, or all customers
DATE	dd mmm yyyy, ACT, <cr>	Print data from date specified, or last activity, all activities
PAGE	Yes, (No)	Data is to be printed on a per-page basis
Adjust Paper	<cr>	Adjust paper so that printing starts at top of sheet
NACT	Yes, (No), END	Update the activity date

LD83

690 TN sort and print

Alphabetical list of prompts

Adjust Paper

<cr> — Adjust paper so that printing starts at top of sheet. odas-1

Prompted when PAGE = Yes. Use <cr> to start printing.

CUST **0-99, 0-99 1-99, <cr>** — One customer, range of customer numbers, or all customers. odas-1

Use <cr> for all customers.

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DATE **dd mmm yyyy, ACT, <cr>** — Print data from date specified, or last activity, all activities. odas-1

dd = day (0-31)
mmm = month (JAN-DEC)
yyyy = year
ACT = print data from last activity date
<cr> = disregard date restrictions

NACT **Yes, (No), END** — Update the activity date. odas-1

Yes = Print current system data and end overlay
No = Return to REQ prompt
END = End overlay activity

PAGE **Yes, (No)** — Data is to be printed on a per-page basis. odas-1

REQ **LST, TNB, END** — Print list of TNs or TNs blocks in designation order. odas-1

LST = print list of TNs in designator order
TNB = print list of TN blocks in designator order
END = terminate the overlay activity

Issued: 04 01 94
Status: Standard
X11 Release: 19

Set Designation Entry (ODAS)

Office Data Administration System (ODAS) designations are used to keep track of set features and locations.

LD84 allows the changing of line designators to existing single line sets. Use LD85 for the changing of line designators to multiple line sets.

Note: If currently active on a call, the station will be disconnected after the <cr> following the DES prompt.

Single line set Set Designation Entry (ODAS)

	LD 84	Use LD84 for single line sets
TN	l s c u	Terminal number
DES	xxxxxx	1-6 alphanumeric designator
TN	END	Terminate activity

Multi-line set Set Designation Entry (ODAS)

	LD 85	Use LD85 for multi- line sets
TN	l s c u	Terminal number
DES	xxxxxx	1-6 alphanumeric designator
TN	END	Terminate activity

LD84-85

692 Set Designation Entry (ODAS)

Alphabetical list of prompts

DES	xxxxxx — 1-6 alphanumeric designator.	odas-1
TN	**l s c u** — Terminal number.	basic-1
	Enter END to terminate program activitiy.	

Issued: 04 01 94
Status: Standard
X11 Release: 19

Electronic Switched Network (ESN)

LDs 86, 87 and 90 allow data defining the NARS/BARS/CDP features to be created, modified and printed.

ESN data block

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	ESN	ESN data block
MXLC	0-999	Maximum number of LOC codes (NARS only)
MXSD	xxx	Maximum number of supplemental digit restriction blocks
MXIX	xxx	Maximum number of incoming trunk group exclusion tables
MXDM	0-256	Maximum number of digit manipulation tables
MXRL	xxx	Maximum number of route lists
MXFC	0-256	Maximum number of free calling area screening tables
CDP	No, (Yes)	CDP feature for this customer
MXSC	xxxxx	Maximum number of steering codes
NCDP	3-7	Number of digits in CDP DN (DSC + DN, or LSC + DN)
MSCC	0-7	Maximum number of Special Common Carrier (SCC) entries
AC1	xx	One or two digit NARS/BARS access code one
AC2	xx	One or two digit NARS access code two
DLTN	No, (Yes)	NARS/BARS dial tone after dialing AC1 or AC2
ERWT	No, (Yes)	Expensive route warning tone
ERDT	0-(6)-10	Expensive route warning tone delay in seconds
TODS	x hh mm hh mm	Start and end time of day schedules
RTCL	Yes, (DIS)	Routing controls
NMAP	xx yy	NCOS numbers to be applied for routing controls
ETOD	1 2 3 ... 7	Day or days of the week for extended TOD schedule
TGAR	Yes, (No)	Check for trunk group access restrictions

Digit Manipulation Index (DGT)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	DGT	Digit Manipulation Index
DMI	xxx, (0)	Digit manipulation table
DEL	(0)-15	Number of leading digits to be deleted
INST	x...x	Up to 24 leading digits to be inserted
SCCI	(0)-7	Special Common Carrier index
CTYP	aaa	Call type to the manipulated digits

Route List Index (RLB)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	RLB	Data type to be changed
RLI	xxx	Route list index
ENTR	xxx	Route list entry number
LTER	Yes, (No)	Local Termination Entry
ROUT	0-511	Route number
TDET	Yes, (No)	Tone detector used
TYPE	TIE, CC1, CC2	Tone detector application type
TONE	DIAL, SCC	Type of tone expected from SCC
TOD	0-7	Time of day schedule
CNV	Yes, (No)	Conversion to LDN required (NARS)
EXP	Yes, (No)	Expensive route
FRL	(0)-7	Minimum facility restriction level
DMI	xxx, (0)	Digit manipulation table
ISDM	(0)-255	DMI index used when ISL D-channel is down
FCI	xxx, (0)	Free calling area screening table index number
OHQ	Yes, (No)	Off-hook queuing allowed
CBQ	Yes, (No)	Call-back queuing allowed
ISET	(0)-64	Number of entries in initial set for route list block
MFRL	0-7, (MIN)	Set minimum FRL used to determine autocode prompting

Route List Index when Route Type is ADM

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	RLB	Data type to be changed
RLI	xxx	Route list index
ENTR	xxx	Route list entry number
LTER	Yes, (No)	Local Termination Entry
ROUT	0-511	Route number
TOD	0-7	Time of day schedule
FRL	(0)-7	Minimum facility restriction level
OHQ	Yes, (No)	Off-hook queuing allowed
CBQ	Yes, (No)	Call-back queuing allowed
ISET	(0)-64	Number of entries in initial set for route list block
MFRL	0-7, (MIN)	Set minimum FRL used to determine autocode prompting

Special Common Carrier (SCC)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	SCC	Special Common Carrier
SCCI	(0)-7	Special Common Carrier index
LDN2	(0)-10	Number of digits in SCC type 2 LDN
RBTD	(0)-30	Ringback tone delay (seconds) for SCC (even numbers only)

Incoming Trunk Group Exclusion Index (ITGE)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	ITGE	Incoming trunk group exclusion index
ITEI	1-127	Incoming trunk group exclusion index
RTNO	0-511	Route number associated with index
RTNO	0-511	Route number associated with index

Local Termination (FGD) route list blocks

REQ	NEW, CHG, PRT, OUT	Action request
FEAT	RLB	Data type to be changed
RLI	xxx	Route list index
ENTR	xxx	Route list entry number
LTER	YES	Local Termination Entry
TOD	0-7	Time of day schedule
FRL	(0)-7	Minimum facility restriction level
DMI	xxx, (0)	Digit manipulation table
FCI	xxx, (0)	Free calling area screening table index number
ISET	(0)-64	Number of entries in initial set for route list block
MFRL	0-7, (MIN)	Set minimum FRL used to determine autocode prompting

Alphabetical list of prompts

AC1 **xx** — One or two digit NARS/BARS access code one. b/nars-1

The access code cannot conflict with the numbering plan.

AC2 **xx** — One or two digit NARS access code two. nars-1

The access code cannot conflict with the numbering plan.

CBQ **Yes, (No)** — Call-back queuing allowed. fcbq-1

CDP **No, (Yes)** — CDP feature for this customer. cdp-1

CNV **Yes, (No)** — Conversion to LDN required (NARS). nars-1

This prompt does not appear if ROUT = ADM.

CTYP **aaa** — Call type to the manipulated digits. pra-15

This call type must be recognized by the far end switch. Where aaa can be:

(NCHG) = the call type will not be changed
INTL = special number in international format
NPA = NPA
NXX = NXX
LOC = Location Code
CDP = Coordinated Dialing Plan
SPN = Special number other than internal
UKWN = Unknown call type

Note: This prompt can be used with any ISDN interface. However, LOC, CDP, and SPN call types will be reset to UNKWN and PRIVATE for ann non-Meridian 1 D-channel interfaces.

CUST **0-99** — Customer number. basic-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DEL **(0)-15** — Number of leading digits to be deleted. b/nars-1

DLTN **No, (Yes)** — NARS/BARS dial tone after dialing AC1 or AC2. b/nars-1

DMI xxx, (0) — Digit manipulation table. b/nars-1

Range for NARS/BARS: (0)-255
Range for CDP: (0)-31

Use "0" if no digit manipulation is required when building Route List Blocks (FEAT = RLB).

When building Index Tables (FEAT = DGT) valid table numbers are:
Range for NARS/BARS: 1-255
Range for CDP: 1-31

This prompt does not appear if ROUT = ADM.
Note: The maximum number of Digit Manipulation tables is defined by prompt MXDM.

ENTR xxx — Route list entry number. esn-1

Range before Release 13:
NARS/BARS: 0-7
CDP: 0-2
Range in Release 13 and 14:
NARS/BARS: 0-31
CDP: 0-6
Range in Release 15:
NARS/BARS: 0-63
CDP: 0-6

Precede the entry with an "X" to remove.

ERDT 0-(6)-10 — Expensive route warning tone delay in seconds. b/nars-1

Range is in 2 second intervals.

ERWT No, (Yes) — Expensive route warning tone. b/nars-1

ERWT consists of three burst of tone to indicate that the call will be placed over an expensive route. The user has three choices:
— go on hook and abort the call
— remain on hook and accept the call
— activate Ring Again

ETOD 1 2 3 ... 7 — Day or days of the week for extended TOD schedule. b/nars-1

1 = Sunday, 7 = Saturday. Precede with "X" t o remove a day.

EXP Yes, (No) — Expensive route. b/nars-1

This prompt does not appear if ROUT = ADM.

LD86

FCI **xxx, (0)** — Free calling area screening table index number. b/nars-1

This prompt does not appear if ROUT = ADM.
Range for NARS: (0)-255
Range for BARS: (0)-127

Use "0" if no FCAS is required.

FEAT **aaa** — Data type to be changed. esn-1

ESN = ESN data block
DGT = digit manipulation data block
ITGE = incoming trunk group exclusion data (Release 5)
RLB = route list data block
SCC = Special Common Carrier data table

FRL **(0)-7** — Minimum facility restriction level. b/nars-1

INST **x...x** — Up to 24 leading digits to be inserted. b/nars-1

Enter x...x*y...y for special common carriers (SCC), up to 23 leading digits to be inserted, including access number, delimiter (*), and authorization code.

ISDM **(0)-255** — DMI index used when ISL D-channel is down. isl-17

When the ISL D-channel goes down, this digit manipulation index is used to perform the digit manipulation which includes the ESN access code insertion capability.

This prompt does not appear if ROUT = ADM. This is only used when the ISL reverts back to conventional signaling. When the D-channel is up the existing DMI is used to perform digit manipulation.

Note: The range is (0)-127 in X11 release 17.

ISET **(0)-64** — Number of entries in initial set for route list block. b/nars-1

Ranges:
(0)-8
(0)-64 (X11 release 13 and later)

ITEI **1-127** — Incoming trunk group exclusion index. b/nars-5

Range for NARS: 1-255
Range for BARS: 1-127

LDN2 **(0)-10** — Number of digits in SCC type 2 LDN. b/nars-1

LTER **Yes, (No)** — Local Termination Entry. fgd-17

MFRL **0-7, (MIN)** — Set minimum FRL used to determine autocode prompting. b/nars-1

Use default of MIN to set to the mininum FRL value.

MSCC **0-7** — Maximum number of Special Common Carrier (SCC) entries. nars-1

MXDM **0-256** — Maximum number of digit manipulation tables. esn-1

Range for NARS/BARS: 0-256
Range for CDP: 0-32

Note: You must count table 0 for the system.

MXFC **0-256** — Maximum number of free calling area screening tables. b/nars-1

Range for NARS: 0-255
Range for BARS: 0-127

Use "0" if not required.

MXIX **xxx** — Maximum number of incoming trunk group exclusion tables. b/nars-5

Range for NARS: 0-255
Range for BARS: 0-127

Use "0" if not required.

MXLC **0-999** — Maximum number of LOC codes (NARS only). nars-1

MXRL **xxx** — Maximum number of route lists. esn-1

Range for NARS: 0-256
Range for BARS: 0-128
Range for CDP: 0-128

If MXRL = 0, the system will not allow the creation of any route lists.

MXSC **xxxxx** — Maximum number of steering codes. cdp-1

Ranges:
0-5000
0-10000 (X11 release 13 later)

MXSD **xxx** — Maximum number of supplemental digit restriction blocks. b/nars-1

Ranges for NARS:
0-256
0-512 (X11 release 5)
Ranges for BARS
0-32
0-128 (X11 release 4)
0-256 (X11 release 5)

Use "0" if not required.

NCDP **3-7** — Number of digits in CDP DN (DSC + DN, or LSC + DN). cdp-1

This represents the actual number of digits dialed. Range is 3-10 if DNXP package is equipped.

NMAP **xx yy** — NCOS numbers to be applied for routing controls. ncos-1

xx = current NCOS number
yy = NCOS number to be applied for BARS/CDP or NARS when routing control is in effect (yy).

NCOS ranges:
0-15 with NARS
0-3 with CDP
0-7 with BARS/NFCR
0-99 with NARS/CDP/BARS (X11 release 13 and later)

OHQ **Yes, (No)** — Off-hook queuing allowed. bars-1

RBTD **(0)-30** — Ringback tone delay (seconds) for SCC (even numbers only). nars-1

REQ **aaa** — Action request. esn-1

NEW = create new data base
CHG = modify existing data base
OUT = remove data block
PRT = print data block
END = terminate overlay activity

RLI **xxx** — Route list index. esn-1

Range for NARS: 0-255
Range for BARS: 0-127
Range for CDP: 0-127

ROUT **0-511** — Route number. esn-1

RTCL **Yes, (DIS)** — Routing controls. esn-1

YES = enable or modify routing controls
DIS = disable routing controls

RTNO **0-511** — Route number associated with index. b/nars-5

Precede with "X" to delete an existing route.

SCCI **(0)-7** — Special Common Carrier index. nars-1

Use "0" if not required.

TDET **Yes, (No)** — Tone detector used. nars-1

This prompt does not appear if ROUT = ADM.

TGAR **Yes, (No)** — Check for trunk group access restrictions. esn-1

Yes = examine TGAR/TARG when call is placed through BARS

No = ignore TGAR/TARG when call is placed through BARS

TOD **0-7** — Time of day schedule. esn-1

Range for NARS/BARS: 0-7
Range for CDP: 0-1

Precede with "X" to turn off schedule.

TODS **x hh mm hh mm** — Start and end time of day schedules. esn-1

x = schedule number; 0-7 for NARS/BARS; 0-1 for CDP hh = hour
mm = minutes

TONE **DIAL, SCC** — Type of tone expected from SCC. nars-1

This prompt does not appear if ROUT = ADM.
DIAL = normal dial tone
SCC = SCC dial tone
There is no default.

TYPE **TIE, CC1, CC2** — Tone detector application type. nars-1

This prompt does not appear if ROUT = ADM.
TIE = on-network call
CC1 = SCC type 1
CC2 = SCC type 2

LD86

704 Electronic Switched Network (ESN)

Issued:	04 01 94
Status:	Standard
X11 Release:	19

Electronic Switched Network (ESN)

LDs 86, 87 and 90 allow data defining the NARS/BARS/CDP features to be created, modified and printed.

X11 release 19 and later update this overlay to allow DSC, LSC, and TSC prompts to reappear without returning to the REQ prompt each time an entry is complete. They will be reprompted until <CR> is entered, then the REQ prompt will appear.

LD87

Network control (NCTL)

REQ	NEW, CHG, PRT	Action request
CUST	0-99	Customer number
FEAT	NCTL	Network control
SOHQ	Yes, (No)	Off-hook queuing option
OHTL	2-(10)-60	Off-hook queue time limit in 2 second increments
SCBQ	Yes, (No)	Call-back queuing option
CBTL	10-(20)-30	Call-back queue time limit in 2 second increments
RANE	0-511	RAN route number for CBQ offer to ESN stations
RANC	0-511	RAN route number for CBQ offer to conventional main
NRNG	0-99 1-99	Starting and ending number for NCOS printing
NCOS	(0)-99	Network class of service group number
EQA	Yes, (No)	Associate Equal Access with this NCOS group
FRL	(0)-7	Facility restriction level
RWTA	Yes, (No)	Expensive route warning tone
NSC	Yes, (No)	Network Speed Call access allowed
LIST	xxx	System Speed Call (SSC) list numbers
OHQ	Yes, (No)	Off-hook queuing eligibility for NCOS
CBQ	Yes, (No)	Call-back queuing eligibility for NCOS
RETT	2-(10)-30	Remote Virtual Queuing retry timer in seconds
RETC	4-(5)-16	Remote Virtual Queuing retry counter
ROUT	A, (I)	Call-back queuing offer at ISET (I) or ESAT (A) routes
RADT	(0)-30	Route advance timer in 30 second increments
SPRI	(0)-3	Starting priority in CBQ
MPRI	(0)-3	Maximum priority attainable in CBQ
PROM	(0)-30	Priority promotion timer in 30 second increments
TOHQ	0 1 2 ... 7	Which TCOS (i.e., FRL) are OHQ eligible

Free Calling Area Screening (X11 release 18 and earlier)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	FCAS	Free Calling Area Screening
FCI	xxx	Free calling area screening table index number
NPA	xxx yyy	NPA code to be screened
NXX	DENY, ALOW	Allow or Deny NXX codes for NPA
DENY	xxx xxx	NXX code or range of codes to be denied
ALOW	xxx xxx	NXX code or range of codes to be allowed

Free Calling Area Screening (X11 release 19 and later)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	FCAS	Free Calling Area Screening
FCI	xxx	Free calling area screening table index number
NPA	xxx	First NPA code
NPA	xxx	Fifteenth NPA code
NXX	DENY, ALOW	Allow or Deny NXX codes for NPA
DENY	xxx xxx	NXX code or range of codes to be denied
ALOW	xxx xxx	NXX code or range of codes to be allowed

LD87

Coordinated Dialing Plan (X11 release 18 and earlier)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	CDP	Coordinated Dialing Plan
TYPE	LSC, DSC, TSC	Steering code type
LSC	xxx...x	Local steering code (CDP)
DEL	1-7	Number of digits to be deleted
DSC	xxxx	Distant steering code (CDP)
RLI	xxx	Route list to be accessed for trunk steering code
TSC	xxx...x	Trunk steering code
RLI	xxx	Route list to be accessed for trunk steering code

Coordinated Dialing Plan (X11 release 19 and later)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	CDP	Coordinated Dialing Plan
TYPE	LSC, DSC, TSC	Steering code type
LSC	xxx...x	LSC is reprompted until <CR> is entered. Then REQ reprompts.
DEL	1-7	Number of digits to be deleted
DSC	xxx...x	DSC is reprompted until <CR> is entered. Then REQ reprompts.
RLI	xxx	Route list to be accessed for trunk steering code
TSC	xxx...x	TSC is reprompted until <CR> is entered. Then REQ reprompts.
RLI	xxx	Route list to be accessed for trunk steering code

Alphabetical list of prompts

ALOW xxx xxx — NXX code or range of codes to be allowed. b/nars-1

Use <cr> to stop DENY prompt.

CBQ Yes, (No) — Call-back queuing eligibility for NCOS. bque-1

CBTL 10-(20)-30 — Call-back queue time limit in 2 second increments. b/nars-1

This is the time in which the user must respond to Ring Again feature to accept the CBQ call. Applies to multi-line sets only.

CUST 0-99 — Customer number. esn-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DEL 1-7 — Number of digits to be deleted. cdp-1

DENY xxx xxx — NXX code or range of codes to be denied. b/nars-1

Use <cr> to stop DENY prompt.

DSC xxxx — Distant steering code (CDP). cdp-19

If DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered.

With X11 release 19 and later this is reprompted until <CR> is entered.

EQA Yes, (No) — Associate Equal Access with this NCOS group. eqa-18

FCI xxx — Free calling area screening table index number. b/nars-1

Range for NARS: 1-255
Range for BARS: 1-127

Table 0 is network reserved to indicate that no FCAS is applied.

FEAT NTCL, FCAS, CDP — Data type. esn-1

NCTL= network control
FCAS = free calling area screening
CDP = coordinated dialing plan

FRL	**(0)-7** — Facility restriction level. FRL is assigned to each NCOS. It determines the entries in an route list (RLI) to which it has access. 0 is the most restrictive, 7 is the least restrictive and can access more entries.	b/nars-1
LIST	**xxx** — System Speed Call (SSC) list numbers. Ranges: 0-253 0-4095 (X11 release 13) Precede with "X" to remove SSC list; <cr> = allows access to all lists	ssc-2
LSC	**xxx...x** — Local steering code (CDP). If DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. With X11 release 19 and later this is reprompted until <CR> is entered.	cdp-19
MPRI	**(0)-3** — Maximum priority attainable in CBQ.	bque-1
NCOS	**(0)-99** — Network class of service group number. The ranges for Network Class Of Service group are: (0)-3 for standalone CDP (0)-7 for BARS/CDP and NFCR (0)-15 for NARS and NFCR (0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later	ncos-1
NPA	**xxx yyy** — NPA code to be screened. The first digit must be 2-9, second and third digits must be 0-9. Omit the "1" in 1 + NPA format. With NARS up to 15 NPA codes with up to 800 NXX codes; with BARS, seven NPA codes per table with up to 800 NXX codes. X11 release 19 and later allow up to 15 NPA codes with BARS. With X11 release 18 and earlier, the allowed response is 100-999. X11 release 19 and later the allowed responses are 200-999. Only 3 digits are allowed, even when using 1+ dialing.	nanp-19
NRNG	**0-99 1-99** — Starting and ending number for NCOS printing. Prompted only REQ = PRT. If <cr> is entered without defining the ending number, then only the NCOS with the starting number defined is printed.	ncos-14
NSC	**Yes, (No)** — Network Speed Call access allowed.	nsc-2

NXX **DENY, ALOW** — Allow or Deny NXX codes for NPA. b/nars-1

OHQ **Yes, (No)** — Off-hook queuing eligibility for NCOS. ohq-1

OHTL **2-(10)-60** — Off-hook queue time limit in 2 second increments. b/nars-1

This is the maximum amount of time a user will remain off-hook for OHQ before it times out. After timeout the system searches once before going to network blocking intercept treatment.

If an odd number is entered, it is rounded up to the next even number.

PROM **(0)-30** — Priority promotion timer in 30 second increments. pque-1

1 = 30 seconds; 30 = 15 minutes.

RADT **(0)-30** — Route advance timer in 30 second increments. bque-1

1 = 30 seconds; 30 = 15 minutes.

RANC **0-511** — RAN route number for CBQ offer to conventional main. nars-1

Ranges:
0-30, 32-127 before X11 release 14
0-511 for NT, RT, XN, and XT machines (X11 release 14)

Enter "X" to remove RAN route.

RANE **0-511** — RAN route number for CBQ offer to ESN stations. nars-1

Ranges:
0-30, 32-127 before X11 release 14
0-511 for NT, RT, XN, and XT machines (X11 release 14)

Enter "X" to remove RAN route.

REQ **aaa** — Action request. esn-1

NEW = create new data base
CHG = modify existing data base
OUT = remove data block
PRT = print data block
END = terminate overlay activity

RETC **4-(5)-16** — Remote Virtual Queuing retry counter. rvq-18

This is the number of times the initial set should be searched before the scanning includes the extended set. Once the retry counter threshold is met, each node in the network searches its extended set.

RETT **2-(10)-30** — Remote Virtual Queuing retry timer in seconds. rvq-18

This is the number of seconds between forward scanning attempts.

RLI	**xxx** — Route list to be accessed for trunk steering code. Range for NARS: 0-255 Range for BARS: 0-127 Range for CDP: 0-127	cdp-1
ROUT	**A, (I)** — Call-back queuing offer at ISET (I) or ESAT (A) routes. With ROUT = I, the system offers queueing after examining ISET entries only. With ROUT = A, the system examines all entries in the route list, both ISET and ESET before offering queueing	bque-2
RWTA	**Yes, (No)** — Expensive route warning tone.	b/nars-1
SCBQ	**Yes, (No)** — Call-back queuing option.	b/nars-1
SOHQ	**Yes, (No)** — Off-hook queuing option.	b/nars-1
SPRI	**(0)-3** — Starting priority in CBQ.	pque-2
TOHQ	**0 1 2 ... 7** — Which TCOS (i.e., FRL) are OHQ eligible. Use <cr> if TCOS are not OHQ eligible. Precede with "X" to remove OHQ eligibility from a TCOS	b/nars-1
TSC	**xxx...x** — Trunk steering code. If DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. With X11 release 19 and later this is reprompted until <CR> is entered.	cdp-19
TYPE	**LSC, DSC, TSC** — Steering code type. LSC = local steering code DSC = distant steering code TSC = trunk steering	cdp-1

Issued: 04 01 94
Status: Standard
X11 Release: 19

Basic and Network Authorization Codes (BAUT/NAUT)

LD88 allows data for Basic Authorization Code (BAUT) and Network Authorization Code (NAUT) to be created, modified and printed.

Authcode data block (AUB)

REQ	NEW,CHG, PRT	Action request
TYPE	AUB	Authcode data block
CUST	0-99	Customer number
SPWD	xxxx	Secure data password
ALEN	1-14	Number of digits in authcodes
ACDR	Yes, No	Activate CDR for authcodes
RANR	0-511	RAN route number for "Authcode Last" prompt (NAUT)
CLAS	(0)-115	Classcode value assigned to authcode (NAUT)
COS	aaa	Class of Service
TGAR	(0)-31	Trunk Group Access Restrictions
NCOS	(0)-99	Network Class of Service group number
AUTO	Yes, No	Automatically generate authcodes
_SECR	0-9999	Security password (NAUT)
_NMBR	1-9999	Number of authcodes to be generated automatically (NAUT)
_CLAS	(0)-115	Classcode value assigned to authcode (NAUT)

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Delete Authcode data block

REQ	OUT	Action request
TYPE	AUB	Authcode data block
CUST	0-99	Customer number
SPWD	xxxx	Secure data password
CODE	xxxx	Authcode (number of digits must equal ALEN)
CLAS	(0)-115	Classcode value assigned to authcode (NAUT)

Authcode table entries

REQ	NEW, CHG, PRT	Action request
TYPE	AUT	Authcode entries
CUST	0-99	Customer number
SPWD	xxxx	Secure data password
CODE	xxxx	Authcode (number of digits must equal ALEN)
CLAS	(0)-115	Classcode value assigned to authcode (NAUT)

Delete Authcode table entries

REQ	OUT	Delete
TYPE	AUT	Authcode entries
CUST	0-99	Customer number
SPWD	xxxx	Secure data password
CODE	xxxx	Authcode (number of digits must equal ALEN)
SECR	0-9999	Security password (NAUT)

Alphabetical list of prompts

ACDR **Yes, No** — Activate CDR for authcodes. cdr-1

There is no default.

ALEN **1-14** — Number of digits in authcodes. baut-1

Range for BAUT: 1-14
Range for NAUT: 1-7 (1-14 in X11 release 13 and earlier)

All authcodes are the same length.

AUTO **Yes, No** — Automatically generate authcodes. naut-1

Prompted when NAUT is equipped and REQ = "NEW". ALEN must be a minimum of four digits.

CLAS **(0)-115** — Classcode value assigned to authcode (NAUT). baut-1

When TYPE = "AUT", enter "X" to have the authcode be an exempt code. When this data is printed, the Month the authcode was deactivated is output. Default is "0" when adding authcode entries.

CODE **xxxx** — Authcode (number of digits must equal ALEN). baut-1

"ALL" may be used to delete Authcodes only when the NAUT package is equipped and the codes were automatically generated.

COS **aaa** — Class of Service. baut-1

(UNR) = unrestricted
CTD = conditionally toll denied
CUN = conditionally unrestricted
FRE = fully restricted
FR1 = fully restricted 1
FR2 = fully restricted 2
SRE = semi-restricted
TLD = toll denied

CUST **0-99** — Customer number. esn-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

NCOS **(0)-99** — Network Class of Service group number. baut-1

Enter the new NCOS that will be looked at and replace NCOS of the station. The ranges for Network Class Of Service group are:
(0)-3 for standalone CDP
(0)-7 for BARS/CDP and NFCR
(0)-15 for NARS and NFCR
(0)-99 for BARS/NARS/CDP/NFCR in X11 release 13 and later

NMBR **1-9999** — Number of authcodes to be generated automatically (NAUT). baut-1

Ranges:
1-20000 before X11 release 14
1-50000 in X11 release 14 and later

Note: To generate up to 50,000 Authcodes, the maximum entry at NMBR is 5000 each time it is prompted.

RANR **0-511** — RAN route number for "Authcode Last" prompt (NAUT). naut-1

Enter "X" to remove RAN route or if no RAN route is to be assigned.

REQ **aaa** — Action request. baut-1

NEW = create new data base
CHG = modify existing data base
OUT = delete existing data block
PRT = print data block
END = terminate overlay activity

SECR **0-9999** — Security password (NAUT). baut-1

SPWD xxxx — Secure data password. baut-1

This is the same password as defined for DISA on a per customer basis in LD15.

TGAR **(0)-31** — Trunk Group Access Restrictions. baut-1

Range is (0)-15 before X11 release 13.

TYPE **AUB, AUT** — Authcode data block (AUB) or table entries (AUT). baut-1

Issued: 04 01 94
Status: Standard
X11 Release: 19

ESN Translation Tables

LD90 allows data for network translation tables to be generated modified and printed.

Location Code (LOC)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2, SUM	Access code 1, 2 or summary tables
TYPE	LOC	Location Code (LOC)
LOC	x...x	Location code (3 digits) or extended LOC (3 to 7)
RLI	xxx	Route list index
ITEI	xxx	Incoming trunk group exclusion index
LDN	xx...xx	Up to ten-digit listed directory number including NPA
DID	Yes,(No)	This location arranged for DID
MNXX	Yes, (No)	Multiple NXX codes and ranges
SAVE	1-4	Number of trailing digits to be saved in dialed extension number
OFFC	xxx	NXX of the DID number
RNGE	0-9999 0-9999	Bottom and top of range of DID numbers

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Home Location Code (HLOC)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2, SUM	Access code 1, 2 or summary tables
TYPE	HLOC	Home Location Code (HLOC)
HLOC	xxx	Home location code (3-7 digits for extended HLOC)
DMI	1-255	Digit manipulation table index

Number plan area code (NPA)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2, SUM	Access code 1, 2 or summary tables
TYPE	NPA	Number plan area code translation
NPA	xxx, xxx yyy	Area code translation, extended NPA code translation
RLI	xxx	Route list index
SDRR	aaa	Type of supplemental restriction or recognition
DMI	1-255	Digit manipulation table index
DENY	x...x	Number to be denied within the NPA, NXX, SPN or SDRR
LDID	x...x	Local DID number recognized within the NPA, NXX or SPN
LDDD	x...x	Local DDD number recognized within the NPA, NXX or SPN
DID	x...x	Remote DID number recognized within the NPA, NXX or SPN
DDD	x...x	Remote DDD number recognized within the NPA, NXX or SPN
ITED	x...x	Incoming trunk group exclusion codes for NPA, NXX or SPN
ITEI	xxx	Incoming trunk group exclusion index

Home NPA Translation (HNPA)

REQ	NEW, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2, SUM	Access code 1, 2 or summary tables
TYPE	HNPA	Home NPA Translation
HNPA	200-999	Home NPA

Central Office Translation (NXX)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2, SUM	Access code 1, 2 or summary tables
TYPE	NXX	Central Office Translation
NXX	xxx, xxx yyy	Office code translation, extended NXX codes translation
RLI	xxx	Route list index
SDRR	aaa	Type of supplemental restriction or recognition
DMI	1-255	Digit manipulation table index
DENY	x...x	Number to be denied within the NPA, NXX, SPN or SDRR
LDID	x...x	Local DID number recognized within the NPA, NXX or SPN
LDDD	x...x	Local DDD number recognized within the NPA, NXX or SPN
DID	x...x	Remote DID number recognized within the NPA, NXX or SPN
DDD	x...x	Remote DDD number recognized within the NPA, NXX or SPN
ITED	x...x	Incoming trunk group exclusion codes for NPA, NXX or SPN
ITEI	xxx	Incoming trunk group exclusion index

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Special Number Translation (SPN)

REQ	NEW, CHG, PRT, OUT	Action request
CUST	0-99	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2, SUM	Access code 1, 2 or summary tables
TYPE	SPN	Special Number Translation
SPN	xxxx xxxx x...	Special number translation
RLI	xxx	Route list index
SDRR	aaa	Type of supplemental restriction or recognition
DENY	x...x	Number to be denied within the NPA, NXX, SPN or SDRR
DMI	1-255	Digit manipulation table index
LDID	x...x	Local DID number recognized within the NPA, NXX or SPN
LDDD	x...x	Local DDD number recognized within the NPA, NXX or SPN
DID	x...x	Remote DID number recognized within the NPA, NXX or SPN
DDD	x...x	Remote DDD number recognized within the NPA, NXX or SPN
ITED	x...x	Incoming trunk group exclusion codes for NPA, NXX or SPN
ITEI	xxx	Incoming trunk group exclusion index

Speed Call (NSCL)

REQ	NEW, CHG, PRT	Action request
CUST	0-99	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2, SUM	Access code 1, 2 or summary tables
TYPE	NSCL	Network Speed Call
NSCC	xxx	One to three-digit network speed call access code
SSCL	0-4095	System speed call list number

Alphabetical list of prompts

CUST **0-99** — Customer number. b/nars-1

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DDD **x...x** — Remote DDD number recognized within the NPA, NXX or SPN. b/nars-5

The maximum number of digits allowed is
7-m (8-m for 1+ dialing) for NXX
10-m (11-m for 1+ dialing) for NPA or SPN

where, m is the number of digits entered for the prompt NPA, NXX or SPN.

Precede entry with an "X" to remove.

DENY **x...x** — Number to be denied within the NPA, NXX, SPN or SDRR. b/nars-1

The maximum number of digits allowed is
7-m (8-m for 1+ dialing) for NXX
10-m (11-m for 1+ dialing) for NPA or SPN

where, m is the number of digits entered for the prompt NPA, NXX or SPN.

Precede entry with an "X" to remove.

DID **x...x** — Remote DID number recognized within the NPA, NXX or SPN. b/nars-5

The maximum number of digits allowed is
7-m (8-m for 1+ dialing) for NXX
10-m (11-m for 1+ dialing) for NPA or SPN

Where, m is the number of digits entered for prompt NPA, NXX or SPN. Precede entry with an "X" to remove.

DID **Yes, (No)** — This location arranged for DID. b/nars-1

DMI **1-255** — Digit manipulation table index. dnxp-13

When TYPE = NPA, NXX or SPN then DMI is only prompted when the DN Expansion (DNXP) package is equipped.

FEAT **NET** — Network translation tables. nars-1

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HLOC xxx — Home location code (3-7 digits for extended HLOC). nars-1

HNPA **200-999** — Home NPA. nanp-19

xxx = home NPA
1xxx = home NPA (1+ dialing)

With X11 release 18 and earlier, the allowed response is 100-999.
X11 release 19 and later the allowed responses are 200-999.

Note: A leading zero is not allowed.

ITED x...x — Incoming trunk group exclusion codes for NPA, NXX or SPN. b/nars-1

The maximum number of digits allowed is
4 - m for NXX
7 - m for NPA or SPN

Where, m is the number of digits entered for prompt NPA, NXX or SPN.
Precede entry with an "X" to remove.

ITEI xxx — Incoming trunk group exclusion index. b/nars-5

Ranges:
(0)-255 for NARS
(0)-127 for BARS

LDDD x...x — Local DDD number recognized within the NPA, NXX or SPN. b/nars-5

The maximum number of digits allowed is
7-m (8-m for 1+ dialing) for NXX
10-m (11-m for 1+ dialing) for NPA or SPN

Where, m is the number of digits entered for prompt NPA, NXX or SPN.
Precede entry with an "X" to remove.

LDID x...x — Local DID number recognized within the NPA, NXX or SPN. b/nars-5

The maximum number of digits allowed is
7-m (8-m for 1+ dialing) for NXX
10-m (11-m for 1+ dialing) for NPA or SPN

Where, m is the number of digits entered for prompt NPA, NXX or SPN.
Precede entry with an "X" to remove.

LDN xx...xx — Up to ten-digit listed directory number including NPA. b/nars-1

LOC x...x — Location code (3 digits) or extended LOC (3 to 7). nars-1

Enter the location code (xxx) and the extended code (xxxx) separated by a space. Extended LOC available in X11 release 8.

MNXX **Yes, (No)** — Multiple NXX codes and ranges. b/nars-5

NPA **xxx, xxx yyy** — Area code translation, extended NPA code translation. nanp-19

xxx = area code translation
1xxx = area code translation (1+ dialing)

With X11 release 18 and earlier, the allowed response is 100-999.
X11 release 19 and later the allowed responses are 200-999.

Extended NPA code translation has 3-10 digits or 4-11 digits with 1+ dialing (X11 release 8). Enter the NPA code (xxx) and the extended code (yyy) separated by a space.

Note 1: Enter the digits in groups of no more than 4 digits, separated by a space.

Note 2: A leading zero is not allowed.

NSCC **xxx** — One to three-digit network speed call access code. nars-1

NXX **xxx, xxx yyy** — Office code translation, extended NXX codes translation. b/nars-1

xxx = office code translation
1xxx = office code translation (1+ dialing)

Extended NXX code translation has 3-7 digits or 4-8 digits with 1+ dialing (X11 release 8). Enter the NXX code (xxx) and the extended code (yyy) separated by a space.

Note 1: Enter the digits in groups of no more than 4 digits, separated by a space.

Note 2: A leading zero is not allowed.

OFFC **xxx** — NXX of the DID number. b/nars-5

REQ **aaa** — Action request. esn-1

NEW = create new data base
CHG = modify existing data base
OUT = delete existing data block
PRT = print data block
END = terminate overlay activity

RLI **xxx** — Route list index. esn-1

This must be in the range specified by prompt MXRL in LD86.

Ranges:
0-127 for BARS/CDP
0-255 for NARS

RNGE **0-9999 0-9999** — Bottom and top of range of DID numbers. b/nars-1

This must equal the number of digits specified for prompt SAVE.

SAVE **1-4** — Number of trailing digits to be saved in dialed extension number. b/nars-1

Only applies to DID trunks. Must be 4 if MNXX = "Yes".

SDRR **aaa** — Type of supplemental restriction or recognition. b/nars-5

DENY = restricted codes
LDID = recognized local DID codes
LDDD = recognized local DDD codes
DID = recognized remote DID codes
DDD = recognized remote DDD codes
ITED = incoming trunk group exclusion digits

SPN **xxxx xxxx x...** — Special number translation. b/nars-1

xxxx = special number translation (1+ dialing)
x...x = extended SPN code

This entry defines a single number, not a range, not a list. Each entry is a specific station identifier.

Note: Enter the SPN digits in groups of no more than 4 digits, separated by a space. Do not enter more than a total of 11 digits. The most common example: xxxx xxx xxxx

SSCL **0-4095** — System speed call list number. nars-1

Range is 0-253 before X11 release 13.

TRAN **AC1, AC2, SUM** — Access code 1, 2 or summary tables. b/nars-1

AC1 = BARS/NARS Access Code 1
AC2 = NARS Access Code 2
SUM = Network translation table summary, when REQ = PRT

TYPE **aaa** — Type of data. esn-1

NPA = numbering plan area code translation data
HNPA = home NPA translation data
NXX = central office code translation data
SPN = special code
NSCL = network speed call list
LOC = ESN location code translation data (NARS only)
HLOC = ESN home location code translation data (NARS)
ALL = when REQ = PRT, this prints all entries for all the above types

Issued: 04 01 94
Status: Standard
X11 Release: 19

Automatic Trunk Maintenance (ATM)

LD92 tests TIE, CSA, WATS, FEX, DID and COT trunk groups automatically each day at times scheduled in the ATM Schedule block. The overlay also allows the manual testing of trunks.

Alphabetical list of commands

ATMC loop ch

Test DTI channel ch on specified loop. atm-7

ATMC loop ch loop ch

Test specified DTI channel, with reference trunk. atm-7

Test the specified DTI channel (loop and channel of the first field) with the reference trunk (loop and channel of the second field).

ATMR c r Test route r of customer c. atm-7

Accepts ADM Route numbers in R12+. When an ADM Route is entered, member numbers cannot be entered.

ATMR c r m Test route r of customer c with reference trunk member m. atm-7

ATMU l s c u Test specified unit. atm-7

If the unit specified is an ADM trunk unit, no reference information can be entered.

ATMU l s c u l s c u

Test specified unit, with reference trunk. atm-7

Test the specified unit (l s c u of the first field) using the reference trunk (l s c u of the second field). If the unit specified is an ADM trunk unit, no reference information (L S C U) can be entered.

LD92

CLRR c r	Clear "ring/no answer" count on route r for customer c. Clears the "ring/no answer" count for every trunk member in the ADM Route specified.	atm-7
CLRU l s c u	Clear "ring/no answer" count on specified trunk unit.	atm-7
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
END	Terminate test in progress. This command can be entered at any time.	atm-7
PRTR c r	Get "ring/no answer" count for all members on route r for customer c.	atm-7
PRTU l s c u	Get "ring/no answer" count on specified unit.	atm-7

Issued: 04 01 94
Status: Standard
X11 Release: 19

Multi-Tenant Service

LD93 is used to enable and administer the Multi-Tenant service feature. It is used to configure, change and print data for

- attendant console groups
- tenant to tenant groups
- tenant to route groups
- tenant to attendant console groups
- route to attendant console groups

Enable/Disable/Print Multi-tenant Service or CPG

CPG Level Services must be enabled before adding Console Presentation Groups.

REQ	NEW,CHG	Enable/Disable Multi-Tenant Service for a customer
TYPE	TENS	Multi-Tenant Service
CUST	0-99	Customer number
CPGS	Yes, (No)	Enable (disable) CPG level Services

REQ	PRT	Print customers with Multi-Tenant Service enabled
TYPE	TENS	Multi-Tenant Service
CUST	0-99	Customer number

LD93

Define Tenant to Tenant access

REQ	CHG,PRT	Change or print
TYPE	TACC	Tenant to Tenant access for a tenant
CUST	0-99	Customer number
TEN	1-511	Tenant number
ACC	ALOW, DENY	Set up allow or deny access
DENY	1-511 1-511, ALL	Access denied tenant numbers
ALOW	1-511 1-511, ALL	Access allowed tenant numbers

Define Tenant to Route Access

REQ	CHG,PRT	Change or print
TYPE	RACC	Tenant to Route Access
CUST	0-99	Customer number
ROUT	0-511	Route number
ACC	ALOW, DENY	Set up allow or deny access
DENY	1-511 1-511, ALL	Access denied tenant numbers
ALOW	1-511 1-511, ALL	Access allowed tenant numbers

Telephones with TEND class of service can access all routes.

Telephones with TENA can only access routes if tenant to route access is allowed for that telephone's tenant.

Attendant Console Presentation Group

Note: Prior to X11 release 15 TYPE = ACG.

REQ	NEW,CHG, OUT,PRT	Action request
TYPE	CPG	Attendant Console Presentation Group
CUST	0-99	Customer number
AGNO	1-63	Attendant console group number
ANUM	1-63 1-63	Add attendant console numbers

Tenant Attendant Console Presentation Group

Note: Prior to X11 release 15 TYPE = TACG.

REQ	CHG,PRT	Change or print
TYPE	TCPG	Tenant Console Presentation Group
CUST	0-99	Customer number
TEN	1-511	Tenant number
AGNO	0-63	Attendant console group number

Route Attendant Presentation Group Number

Note: Prior to X11 release 15 TYPE = RACG.

REQ	CHG,PRT	Change or print
TYPE	RCPG	Route Presentation Group Number
CUST	0-99	Customer number
ROUT	0-511	Route number
AGNO	0-63	Attendant console group number

Define Console Presentation Group (CPG, Release 19 and earlier)

If REQ = NEW and <cr> is entered for all prompts, then all parameters default to the customer data block (LD15) values except LDN0-3, ICI, RICI and AQTT.

REQ	NEW,CHG,PRT	Enable/Disable, or Print Multi-Tenant Service for a customer
TYPE	CPGP	Console Presentation Group parameters
CUST	0-99	Customer number
CPG	1-63	Console Presentation group number
LDN0	xxx...x	Listed DN 0
LDN1	xxx...x	Listed Directory Number 1
LDN2	xxx...x	Listed Directory Number 2
LDN3	xxx...x	Listed Directory Number 3
NIT1	xxx...x	First Night Service DN by Time of Day
TIM1	hh mm	Time for first Night Service DN
NIT2	xxx...x	Second Night Service DN by Time of Day
TIM2	hh mm	Time for second Night Service DN
NIT3	xxx...x	Third Night Service DN by Time of Day
TIM3	hh mm	Time for third Night Service DN
NIT4	xxx...x	Fourth Night Service DN by Time of Day
TIM4	hh mm	Time for fourth Night Service DN
AQTT	1-(30)-255	Attendant queuing threshold
AODN	xxxx	Attendant overflow DN
CWCL	(0)-255 (0)-255	Number of waiting calls, lower threshold and upper bound
CWTM	(0)-511 (0)-511	Time for waiting calls, lower threshold and upper bound
CWBZ	Yes, (No) Yes, (No)	Buzz Call Waiting calls over thresholds, and/or enters queue
FRRT	0-511	First RAN route number
FRT	0-(20)-2044	First RAN Time threshold
SRRT	0-511	Second RAN route number
SRT	0-(20)-2044	Second RAN Time threshold
WAIT	MUS, SIL, (RGB)	Treatment during waiting time
MURT	0-511	Music route number if WAIT = MUS
RICI	xx xx ..., (No)	ICI key numbers (0-19) requiring overflow announcement (ROA)

Alphabetical list of prompts

ACC **ALOW, DENY** — Set up allow or deny access. tens-7

DENY = access denied tenants
ALOW = access allowed tenants

AGNO **0-63** — Attendant console group number. tens-7

AGNO 0 always exists and contains all attendant consoles that are configured for the customer. AGNO is initially specified for all tenants. When TYPE = CPG, AGNO can not be zero.

ALOW **1-511 1-511, ALL** — Access allowed tenant numbers. tens-7

ALL = to give all tenants access allowed
<cr> = stop DENY prompt

ANUM **1-63 1-63** — Add attendant console numbers. tens-7

Range is 1-15 before Release 8. Precede attendant number with "X" to remove.

AODN **xxxx** — Attendant overflow DN. aop/cpg-15

Precede with "X" to remove.

AQTT **1-(30)-255** — Attendant queuing threshold. aop/cpg-15

CPG **1-63** — Console Presentation group number. cpg-15

Use <CR> to print all configured CPG data blocks for the customer.

CPGS **Yes, (No)** — Enable (disable) CPG level Services. cpg-15

Prompted only if the base package for Console Presentation Groups (CPG, Pkg.172) is equipped and enabled.

CUST **0-99** — Customer number. tens-7

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

CWBZ **Yes, (No) Yes, (No)** — Buzz Call Waiting calls over thresholds, and/or enters queue. cpg-15

This prompt has two options for providing a 2 second buzz to indicate the status of waiting calls.

The first option is buzz for calls over the Call Waiting number (CWCL) or time thresholds (CWTM). The second option is to buzz when a call enters the Calls Waiting queue.

CWCL **(0)-255 (0)-255** — Number of waiting calls, lower threshold and upper bound. cpg-15

Enter "0" to disable the threshold.

CWTM **(0)-511 (0)-511** — Time for waiting calls, lower threshold and upper bound. cpg-15

Enter "0" to disable the threshold.

DENY **1-511 1-511, ALL** — Access denied tenant numbers. tens-7

ALL = access denied all other tenants
<cr> = stop DENY prompt

FRRT **0-511** — First RAN route number. roa/cpg-15

Precede with "X" to remove.

FRT **0-(20)-2044** — First RAN Time threshold. roa/cpg-15

ICI **xx aaa** — Incoming Call Indicators (ICI). cpg-15

xx = key number (0-19)
aaa = Call type:
CFB = Call Forward Busy
CFN = Call Forward No Answer
DF0 = Dial 0 Fully restricted
DL0 = Dial 0 forward busy
IAT = Inter-Attendant call
INT = Intercept
LCT = Lockout Intercept
LD0 = Listed DN 0
LD1 = Listed DN 1
LD2 = Listed DN 2
LD3 = Listed DN 3
LD4 = Listed DN 4
LD5 = Listed DN 5
MWC = Message Waiting Calls
NUL = remove ICI appearances
PIN = AUTOVON Precedence Intercept
PRC = AUTOVON Precedence
RTN = AUTOVON Routine
RLL = Recall
Rxxx Rxxx = Routes (0-511). Enter one or more routes.
CAx = Station Category (x = 1-7)

LDN0 **xxx...x** — Listed DN 0. cpg-15

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.

LDN1 **xxx...x** — Listed Directory Number 1. cpg-15

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.

LDN2 **xxx...x** — Listed Directory Number 2. cpg-15

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.

LDN3 **xxx...x** — Listed Directory Number 3. cpg-15

If the DNXP package is equipped, up to 7 digits are allowed; otherwise, a maximum of 4 digits can be entered. Precede with "X" to remove.

MURT **0-511** — Music route number if WAIT = MUS. roa/cpg-15

Precede with "X" to remove.

NIT1	**xxx...x** — First Night Service DN by Time of Day. If the DNXP package is equipped, DNs can be up to seven digits. Precede with "X" to remove.	cpg-15
NIT2	**xxx...x** — Second Night Service DN by Time of Day. If the DNXP package is equipped, DNs can be up to seven digits. Precede with "X" to remove.	cpg-15
NIT3	**xxx...x** — Third Night Service DN by Time of Day. If the DNXP package is equipped, DNs can be up to seven digits. Precede with "X" to remove.	cpg-15
NIT4	**xxx...x** — Fourth Night Service DN by Time of Day. If the DNXP package is equipped, DNs can be up to seven digits. Precede with "X" to remove.	cpg-15
REQ	**aaa** — Action request. NEW = enable the Multi-Tenant or CPG Service CHG = define or change the data specified by TYPE PRT = print the data specified by the prompt TYPE OUT = disable the Multi-Tenant Service feature END = terminate overlay activity For CPG, if REQ = NEW and <cr> is entered for all prompts, then all parameters default to the customer data block (LD15) values except LDN0-3, ICI, RICI and AQTT.	tens-7
RICI	**xx xx ..., (No)** — ICI key numbers (0-19) requiring overflow announcement (ROA). Precede with "X" to remove.	roa/cpg-15
ROUT	**0-511** — Route number.	tens-7
SRRT	**0-511** — Second RAN route number. Precede with "X" to remove.	roa/cpg-15
SRT	**0-(20)-2044** — Second RAN Time threshold.	roa/cpg-15
TEN	**1-511** — Tenant number.	tens-7
TIM1	**hh mm** — Time for first Night Service DN. hh = 0-23 mm = 0-59	cpg-15
TIM2	**hh mm** — Time for second Night Service DN.	cpg-15

TIM3 **hh mm** – Time for third Night Service DN. cpg-15

TIM4 **hh mm** – Time for fourth Night Service DN. cpg-15

TYPE **aaa** – Type of data. tens-7

ACG = Attendant Console Group (X11 release 7 to 14)
CPG = Console Presentation Group (X11 release 15)
CPGP = CPG level Parameters (X11 release 15)
RACC = tenant-to-Route Access (X11 release 7)
RACG = Route-to-Attendant Console Group (X11 release 7 to 14)
RCPG = Route-to-Console Presentation Group (X11 release 15)
TACC = Tenant-to-tenant Access (X11 release 7)
TACG = Tenant-to-Attendant Console Groups (X11 release 7 to 14)
TCPG = Tenant-to-Console Presentation Group (X11 release 15)
TENS = Multi-Tenant Service data block (X11 release 7)

WAIT **MUS, SIL, (RGB)** – Treatment during waiting time. roa/cpg-15

RGB = Ringback
MUS = Music
SIL = Silence

LD93

736 Multi-Tenant Service

Issued:	04 01 94
Status:	Standard
X11 Release:	19

Call Party Name Display (CPND)

LD95 is used to define, change, remove or print information for the Call Party Name Display (CPND) data block and Name assignment, on a per customer basis.

X11 release 19 and later enhances CPND to provide more options in the name and its presentation. Refer to X11 features and services (553-3001-305) for a complete description of CPND.

Create CPND data block

REQ	NEW	Define CPND for a customer
TYPE	CPND	Call Party Name Display data block
CUST	0-99	Customer number
CNFG	(ALON)	Standalone CPND configuration
MXLN	5-(17)-27	Maximum allowable CPND character string
STAL	Yes, (No)	Static allocation of name storage
DFLN	5-(13)-27	Default character string length
DES	Yes, (No)	Allow designator for multiple appearance DNs
RESN	Yes, (No)	Allow display of reason for redirecting calls
_CFWD	aaaa, (F)	Mnemonic for Call Forward All Calls display
_CFNA	aaaa, (N)	Mnemonic for Call Forward No Answer display
_HUNT	aaaa, (B)	Mnemonic for Hunt/Call Forward Busy display
_PKUP	aaaa, (P)	Mnemonic for Call Pickup display
_XFER	xxxx, (T)	Mnemonic for Call Transfer display in Network Call Redirection
_AAA	aaaa, (A)	Mnemonic for Attendant Alternative Answering

LD95

Add names (X11 release 18 and earlier)

REQ	NEW	Action Request
TYPE	NAME	CPND name
CUST	0-99	Customer number
DIG	0-2045 0-99	Existing Dial Intercom Group and member number
_LANG	(ROM), KAT	Language in Roman or Katakana characters
_NAME	aaa...a	CPND name in ASCII characters
_XPLN	xx	Expected name Length range (between input name length and MXLN)
DN	xxxx	Existing DN of eligible type
_LANG	(ROM), KAT	Language in Roman or Katakana characters
_NAME	aaa...a	CPND name in ASCII characters
_XPLN	xx	Expected name Length range (between input name length and MXLN)
DCNO	0-254	IDC Conversion table number
_IDC	nnn	Existing complete or partial IDC number
_NAME	aaa...a	CPND name in ASCII characters

Add names (X11 release 19 and later)

REQ	NEW	Action Request
TYPE	NAME	CPND name
CUST	0-99	Customer number
CPND_LANG	(ROM), KAT	CPND language
DIG	0-2045 0-99	Existing Dial Intercom Group and member number
_NAME	bbbb	aaaa,CPND name (last name first)
_XPLN	xx	Expected name Length range (between input name length and MXLN)
__DISPLAY_FMT	LAST, (FIRS)	Display format for CPND name
DN	xxxx	Existing DN of eligible type
_NAME	bbbb	aaaa,CPND name (last name first)
_XPLN	xx	Expected name Length range (between input name length and MXLN)
__DISPLAY_FMT	LAST, (FIRS)	Display format for CPND name
DCNO	0-254	IDC Conversion table number
_IDC	nnn	Existing complete or partial IDC number
_NAME	bbbb	aaaa,CPND name (last name first)
_XPLN	xx	Expected name Length range (between input name length and MXLN)
__DISPLAY_FMT	LAST, (FIRS)	Display format for CPND name

LD95

Change names (X11 release 18 and earlier)

REQ	CHG	Change name
TYPE	NAME	CPND name
CUST	0-99	Customer number
LANG	(ROM), KAT	Language in Roman or Katakana characters
DIG	0-2045 0-99	Existing Dial Intercom Group and member number
_NAME	aaa...a	CPND name in ASCII characters
DN	xxxx	Existing DN of eligible type
_NAME	aaa...a	CPND name in ASCII characters
DCNO	0-254	IDC Conversion table number
_IDC	nnn	Existing complete or partial IDC number
_NAME	aaa...a	CPND name in ASCII characters

Change names (X11 release 19 and later)

REQ	CHG	Chane CPND name information
TYPE	NAME	CPND name
CUST	0-99	Customer number
CPND_LANG	(ROM), KAT	CPND language
DIG	0-2045 0-99	Existing Dial Intercom Group and member number
_NAME	bbbb	aaaa,CPND name (last name first)
_XPLN	xx	Expected name Length range (between input name length and MXLN)
__DISPLAY_FMT	LAST, (FIRS)	Display format for CPND name
DN	xxxx	Existing DN of eligible type
_NAME	bbbb	aaaa,CPND name (last name first)
_XPLN	xx	Expected name Length range (between input name length and MXLN)
__DISPLAY_FMT	LAST, (FIRS)	Display format for CPND name
DCNO	0-254	IDC Conversion table number
_IDC	nnn	Existing complete or partial IDC number
_NAME	bbbb	aaaa,CPND name (last name first)
_XPLN	xx	Expected name Length range (between input name length and MXLN)
__DISPLAY_FMT	LAST, (FIRS)	Display format for CPND name

Remove names

REQ	OUT	Remove
TYPE	NAME	CPND names
CUST	0-99	Customer number
LANG	ROM, KAT, ALL	Remove names in Roman, Katakana characters
DIG	ALL	Remove all DIG-defined names
	xxxx	Remove DIG group xxxx
	xxxx yy	Remove DIG group xxxx and member number yyyy
DN	ALL	Remove all DN-defined names
	xxxx	Remove DN xxxx
DCNO	0-254	Remove IDC conversion table
_IDC	nnn, ALL	Existing complete or partial number or all IDC numbers
ARE YOU SURE?	Yes, No	Enter Yes or No to remove all name associated with DIG, DN or IDC

LD95

742 Call Party Name Display (CPND)

Print CPND data and names (X11 release 18 and earlier)

REQ	PRT	Print
TYPE	CPND	CPND data block
CUST	0-99	Customer number
REQ	PRT	Print
TYPE	NAME	CPND names
CUST	0-99	Customer number
LANG	ROM, KAT	Language choice for name display
PAGE	Yes, (No)	Page headers and numbers printed for multiple DN/DIG/IDC
DIG	ALL	Print all DIG groups
	xx	Print DIG group (xx)
	xx yy	Print DIG group (xx) and member (yy)
_SHRT	Yes, (No)	Print short form, (long form)
DN	ALL	Print all DNs
	xx	Print all DNs starting with xx
	xxxx	Print single DN
	xxxx yyyy	Print range of DNs
_SHRT	Yes, (No)	Print short form, (long form)
DCNO	0-254	IDC Conversion table number
IDC	nnn	Existing complete or partial IDC number
_SHRT	Yes, (No)	Print short form, (long form)

Print CPND data and names (X11 release 19 and later)

REQ	PRT	Print
TYPE	CPND	CPND data block
CUST	0-99	Customer number
REQ	PRT	Print
TYPE	NAME	CPND names
CUST	0-99	Customer number
CPND_LANG	(ROM), KAT	CPND language
PAGE	Yes, (No)	Page headers and numbers printed for multiple DN/DIG/IDC
DIG	ALL	Print all DIG groups
	xx	Print DIG group (xx)
	xx yy	Print DIG group (xx) and member (yy)
_SHRT	Yes, (No)	Print short form, (long form)
DN	ALL	Print all DNs
	xx	Print all DNs starting with xx
	xxxx	Print single DN
	xxxx yyyy	Print range of DNs
_SHRT	Yes, (No)	Print short form, (long form)
DCNO	0-254	IDC Conversion table number
IDC	nnn	Existing complete or partial IDC number
_SHRT	Yes, (No)	Print short form, (long form)

LD95

744 Call Party Name Display (CPND)

Alphabetical list of prompts

AAA **aaaa, (A)** — Mnemonic for Attendant Alternative Answering. cpnd-10

ARE YOU SURE?

Yes, No — Enter Yes or No to remove all name associated with DIG, DN or IDC. cpnd-1

CFNA **aaaa, (N)** — Mnemonic for Call Forward No Answer display. cpnd-10

CFWD **aaaa, (F)** — Mnemonic for Call Forward All Calls display. cpnd-10

CNFG **(ALON)** — Standalone CPND configuration. cpnd-10

ALON = Stand-alone CPND configuration

CPND_LANG

(ROM), KAT — CPND language. cpnd-19

This prompt appears when FTR = CPND, and package 211 is equipped.
ROM = Roman
KAT = Katakana

CUST **0-99** — Customer number. cpnd-10

The range of customer numbers depends on system type and X11 release. With X11 release 14, the customer number is 0-99 for XN, NT, RT, ST, and XT machine types. It remains 0-31 for all other machines.

In X11 release 15 and later, the customer number is 0-99 for NT, RT, ST, STE and XT machines and system options 21, 21E, 51, 61, 61C (X11 release 19), 71 and 81. It remains 0-31 for all other supported machines and system options.

DCNO **0-254** — IDC Conversion table number. dnis-17

DES **Yes, (No)** — Allow designator for multiple appearance DNs. odas-10

Prompted only if Office Data Administration System is (ODAS) is equipped.

DFLN **5-(13)-27** — Default character string length. cpnd-10

Prompted only if STAL = "Yes". Default to 13 or MXLN, whichever is less.

DIG **0-2045 0-99** — Existing Dial Intercom Group and member number. di-10

Range before X11 release 14 is 0-253 0-99. If CPND Name already exists, an error message is returned.

DISPLAY_FMT

LAST, (FIRS) — Display format for CPND name. cpnd-19

LAST = Last name, First name (Doe, John)
FIRS = First name, Last name (John Doe)

DN xxxx — Existing DN of eligible type. cpnd-10

If DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered. If CPND name is already defined, error message is returned.

Valid DN types are Single or Multiple line prime DN, Trunk DN, attendant DN or ACD DN.

HUNT **aaaa, (B)** — Mnemonic for Hunt/Call Forward Busy display. cpnd-10

IDC **nnn** — Existing complete or partial IDC number. dnis-17

Prompted only if DCNO has a valid input.
Entering <CR> after this prompt returns you to DCNO.

LANG **ROM, KAT, ALL** — Language choice for name display. cpnd-16

Call Party Name Display (CPND) language types for screen and set display.
ROM = English display (Roman characters)
KAT = non-English display (Katakana characters)
ALL = removes All names from the CPND data block for the DN or DIG selected. Allowed only if REQ = OUT.
<cr> = Roman (English) display

MXLN **5-(17)-27** — Maximum allowable CPND character string. cpnd-10

Once an MXLN is entered, it cannot be changed to a lower value under the CHG prompt.

NAME **aaa...a** — CPND name in ASCII characters. cpnd-10

If STAL = Yes, then name size must be less than XPLN.
If STAL = No, then name size equals the number of characters entered.

NAME **aaaa, bbbb** — CPND name. cpnd-19

The input order is first name, last name (Sylvia, Plath).
Upt to 26 characters can be entered (including the comma).

PAGE **Yes, (No)** — Page headers and numbers printed for multiple DN/DIG/IDC. cpnd-10

Page headers (date and page number) are not printed if a single DN/DIG is specified.

PKUP **aaaa, (P)** — Mnemonic for Call Pickup display. cpnd-10

LD95

746 Call Party Name Display (CPND)

REQ	**aaa** – Action Request. CHG = change an existing name or data block END = terminate overlay activity NEW = create CPND data blocks and/or name strings OUT = remove or delete an existing name or data block PRT = print an existing Name or data block	cpnd-10
RESN	**Yes, (No)** – Allow display of reason for redirecting calls.	cpnd-10
SHRT	**Yes, (No)** – Print short form, (long form). The short form prints DNs and names only. The long form prints the DN, type of telephone, name and XPLN range.	cpnd-10
STAL	**Yes, (No)** – Static allocation of name storage. In a Hotel/Motel environment with Background Terminal facilities, STAL must be "Yes". Also, STAL = "Yes" is recommended whenever CPND Names change frequently, for efficient use of available memory (for example, when a guest checks-in).	cpnd-10
TYPE	**CPND, NAME** – CPND data block or name. NAME is allowed only if CPND data block is already defined.	cpnd-10
XFER	**xxxx, (T)** – Mnemonic for Call Transfer display in Network Call Redirection. This prompt allows the system administrator to define a mnemonic for transferring calls in NCRD. One to four characters are accepted, and the default value is "T." Prompted only if ISDN = Yes in LD15.	ncrd-16
XPLN	**xx** – Expected name Length range (between input name length and MXLN). Only prompted if STAL= Yes. Use <cr> to set the XPLN to the input length, or DFLN whichever is greater. This value should be set to a sufficient length for current and future names for that DN. When REQ=NEW, the XPLN prompt defines the maximum name length for that particular DN or DIG. The XPLN for a DN cannot be changed without deleting that name entry. XPLN must range from the actual length of the name string to MXLN, or defaults to DFLN.	cpnd-10

Issued: 04 01 94
Status: Standard
X11 Release: 19

D-channel diagnostic program

LD96 is used to test and maintain D-channel links and the QPC757 or NT6D11AB D-channel Interface (DCHI) card.

In X11 release 18, D-channels can also reside on Meridian Serial Data Link (MSDL) cards. A new set of LD96 commands are provided to support MSDL cards. The MSDL commands listed in LD48 can also be used in LD96.

Note: In X11 release 18, all commands accept "DCH" instead of "DCHI." For example, use ENL DCH x rather than ENL DCHI x.

LD96

748 D-channel diagnostic program

Monitoring

D-channel message monitoring is used to analyze the Layer 3 protocol messages traveling between the near and far end D-channels.

Up to and including X11 release 16, message monitoring can be performed only on a per D-channel basis using LD96. That is, once the message monitor is turned on, all messages are output for that D-channel. The messages output might be excessive.

X11 release 17 provides additional commands in LD96 that allows selective message monitoring based on

- the D-channel
- the B- or ISL channel
- the message types for a specific feature
- any specific message

The following sections describe the various command formats.

Note 1: During high traffic some of the monitored messages may be lost.

Note 2: In order to get the D-channel monitor messages to display, the system terminal must be have LD17 prompt USER defined as MTC (X11 release 17).

D-channels

All message types, features and channels associated with a particular D-channel can be monitored. Up to and including X11 release 16, only one D-channel can be monitored for outgoing messages and one for incoming messages. X11 release 17 allows the monitoring of multiple D-channels for both incoming and outgoing messages.

The LD96 commands to enable or disable monitoring of all incoming or outgoing messages on a D-channel are

ENL MSGI x — enable monitoring of incoming messages
ENL MSGO x — enable monitoring of outgoing messages
DIS MSGI x — disable monitoring of incoming messages
DIS MSGO x — disable monitoring of outgoing messages

Where x is the DCHI or MSDL port address (I/O address). For example, to enable monitoring of incoming messages on D-channel 5, enter

ENL MSGI 5

The output includes all messages, features and channels for D-channel 5.

B-channels and ISL channels

You can monitor up to 5 ISL or B-channels, for each direction. If there is no specific channel selected, all channels are monitored. The commands are listed below.

For B-channels:

ENL MSGI x CH loop channel
ENL MSGO x CH loop channel
DIS MSGI x CH loop channel
DIS MSGO x CH loop channel

For ISL channels:

ENL MSGI x CH l s c u
ENL MSGO x CH l s c u
DIS MSGI x CH l s c u
DIS MSGO x CH l s c u

Where,

ENL = enable monitoring
DIS = disable monitoring
MSGI = incoming messages
MSGO = outgoing messages

ISDN features

You can select specific ISDN applications, such as Network Ring Again, for message monitoring. Only one or all ISDN applications can be monitored per D-channel at one time. The LD96 commands are listed below, where x is the D-channel (DCHI or MSDL) port number.

ENL MSGI x FEAT feature
ENL MSGO x FEAT feature
DIS MSGI x FEAT feature
DIS MSGO x FEAT feature

Where "feature" can be
NCT = Network Call Trace
NRAG = Network Ring Again
NACD = Network Automatic Call Distribution
TRO = Trunk Optimization
NMS = Network Message Services

LD96

Message types

You can select specific types of messages to be monitored on a D-channel. The LD96 commands are listed below, where x is the D-channel (DCHI or MSDL) port number.

ENL MSGI x MSG msg1 msg2 msg3
ENL MSGO x MSG msg1 msg2 msg3
DIS MSGI x MSG msg1 msg2 msg3
DIS MSGO x MSG msg1 msg2 msg3

Up to three message types (msg1, msg2, msg3) can be entered per command. The default is "ALL", which is all message types except SVC and SVCA. The message types are:

ALER = alerting
ALL = all primitives and all messages except SVC and SVCA
CAPR = call proceeding
CON = connect
CONA = connect ack
DISC = disconnect
FAC = facility
FACA = facility ack
FACR = facility reject
INFO = information
NOTF = notify
PRIM = all primitives (such as release indication)
PROC = call proceeding
PROG = progress
RLS = release
RLSC = release complete
RST = restart
RSTA = restart ack
STAT = status
STEN = status enquiry
STP = setup
STPA = setup ack
SVC = service
SVCA = service ack
UI = user information

Setting output format levels

There are three levels (0-2) of message decoding. The level determines the format of the data output to the system terminal. To set the output level enter the following.

```
SET MSGI x MON (0)-2
SET MSGO x MON (0)-2
```

Level 0 outputs the message as shown below.

```
DCH x y MSG msgtype REF xxxxxxx CH zzzz TOD hh:mm:ss
<more data>
```

Where,

x = D-channel number
y = "I" for incoming messages, "O" for outgoing messages
xxxxxxxx = the call reference number
zzzz = the loop and channel number (or TN for ISL channels)
<more data> = additional lines of information, such as
- CALLED # = called number
- CALLING # = calling number of originator
- CAUSE = reason for action taken (e.g., unassigned number)
- CONNECT # = connected number
- FEAT = feature (such as Network Ring Again)
- NUM PLAN = Numbering plan used (such as private)
- PROGRESS = call progress description
- REDIR REASON = reason the call was re-directed
- REDN # = call redirection number
- STATE = call state
- STATUS = channel status
- TYPE = type of channel

Level 1 outputs the raw data (as was done in X11 release 16). The format is

```
DCH x y MSG msgtype REF xxxxxxxx TN zzzzzz CH# x CK x
<more data in hexadecimal>
```

Level 2 output identifies the individual Information Elements (IE) in the messages and their hexadecimal values. The possible IEs are

BCAP = bearer capability
CAST = call state
CHGA = charge advice
CHID = channel ID
CHST = change status
CLED = called number
CLES = called party subaddress
CLNG = calling number
CLNS = calling party subaddress
CNS5 = codeset 5 connected number subaddress
CON# = connect number
CON5 = codeset 5 connected number
CSE = cause
DES6 = codeset 6 Destination IE
DISP = display
FAC = facility IE for codeset 0
FAC6 = codeset 6 facility IE
FIND = feature Indication
HLYR = higher layer compatibility
INFO = information request
KYPD = keypad
LLYR = low layer compatibility
LS5 = locking Shift to codeset 5
LS6 = locking shift to codeset 6
LS7 = locking Shift to codeset 7
NLS5 = codeset 5 non locking shift
NLS6 = codeset 6 non locking shift
NLSO = non-locking shift to codeset 0
NOTI = notify indicator
NSF = network specific facility
ORG# = originating called number
ORG6 = codeset 6 Originating IE
PROG = progress indicator
RDG6 = codeset 6 redirecting number
REDG = redirecting number
REDN = redirection number
RETR = codeset 6 reason for return
RSTI = restart indicator
SHFT = shift
SIGN = signal
TACG = codeset 6 TTC advice charge
TNS = transit network selection
UNKN = unknown
UUI = user-user information

Deactivate monitor from a maintenance telephone

Once the system has been tied up or flooded with the monitored messages, it is very difficult, if not impossible, to use LD96 to disable the monitors. In this case, a maintenance telephone with MTA class of service can be used to deactivate the monitor.

To activate or deactivate the monitor from a maintenance telephone, simply dial: SPRE 9913 x 01.

Where,
SPRE = special function access code (defined in LD15)
9913 = feature code to activate or deactivate the monitor
x = 0 to deactivate, 1 to activate.
01 = DCH monitor ID

Note 1: Dial tone is provided if successful.

Note 2: Use "RST MON" to reactivate the monitor from LD96.

Note 3: Deactivating the monitor by the maintenance telephone does not disable the monitor, but simply halts the output. If the monitor is deactivated and not disabled using the DIS MSGI and DIS MSGO commands, then the monitor becomes re-activated after a data dump and sysload.

Get monitor status

To determine the current status of the D-channel monitor, enter the following command, where x is the D-channel (DCHI or MSDL) port number.

STAT MON x

Output format:

***DCH MSGI x LEVEL y ACTV (where, y = format level)
MSG - msg1 msg2 ...
FEAT - feat
CH - loop channel (or l s c u for ISL)

***DCH MSGO x LEVEL y ACTV
MSG - msg1 msg2 ...
FEAT - feat
CH - loop channel (or l s c u for ISL)

Note: If the monitor had been deactivated by the maintenance telephone, INACTV is output instead of ACTV.

D-channel command summary

The following commands are used to enable, disable, test and get the status of a D-channel. Refer to the LD96 introduction for details on the use of these commands.

Note: In X11 release 18 all commands now accept "DCH" instead of "DCHI." For example: use "ENL DCH x" instead of "ENL DCHI x." The STAT DCH and STAT DCHI commands have been combined to STAT DCH.

DIS AUTO x	Disable automatic recovery for DCH x
DIS DCH x	Disable DCH x
DIS MSGI x (options)	Disable the monitoring of incoming messages on D-channel x
DIS MSGO x (options)	Disable the monitoring of outgoing messages on D-channel x
DIS SERV x	Disable service messages on D-channel x
ENL AUTO x	Enable automatic recovery for DCH x
ENL DCH x (FDL)	Enable DCH x and attempt to establish the link, and force download to MSDL
ENL MSGI x (options)	Enable the monitoring of incoming messages on D-channel x
ENL MSGO x (options)	Enable the monitoring of outgoing messages on D-channel x
ENL SERV x	Enable service messages on D-channel x
EST DCH x	Establish multiple frame operation on D-channel x
PLOG DCH x	Print protocol error log on DCH x
RLS DCH x	Release D-channel x
RST DCH x	Reset D-channel x, inhibit signaling
RST MON	Reset or reactivate monitoring on D-channels with enabled monitors
SDCH DCH x	Switch to the standby D-channel x
STAT DCH (x)	Get status of one or all D-channels
STAT MON (x)	Display the incoming and outgoing monitoring status of one or all D-channel
STAT SERV (x)	Get the enable/disable status of services messages for one or all D-channels
TEST 100 x	Perform interrupt generation test on DCH x
TEST 101 x	Perform loopback mode test on DCH x
TEST 200 x	Perform interrupt handler test on DCH x
TEST 201 x	Test interrupt handler-to-link interface path

LD96

Multi-purpose Serial Data Link (MSDL) commands

The MSDL provides 4 ports for ISDN Primary Rate D-channel (DCH) and Application Module Link (AML).

The MSDL commands are listed below, where x is the MSDL device number (defined by prompt DNUM in LD17). These are provided in Link Diagnostic (LD48) and D-channel Maintenance (LD96), and I/O Diagnostic (LD37).

DIS MSDL x (ALL) – Disable MSDL card
ENL MSDL x (FDL, ALL) – Enable MSDL card
RST MSDL x – Reset MSDL card
STAT MSDL [x (FULL)] – Get MSDL status
SLFT MSDL x – Execute a selftest on MSDL card x

These commands are provided in Link Diagnostic (LD48) and D-channel Maintenance (LD96), and I/O Diagnostic (LD37). See "Alphabetical List of commands" in LD48 for a complete description of these commands.

MSDL D-channel command summary

The following commands are only available for D-channels on an MSDL port.

DIS LLB x	Disable local loop back mode on MSDL DCH x
DIS RLB x	Disable remote loop back mode on MSDL DCH x
DIS TEST x	Disable TEST mode on MSDL DCH x
ENL LLB x	Enable local loop back mode on MSDL DCH x
ENL RLB x	Enable remote loop back mode on MSDL DCH x
ENL TEST x	Enable TEST mode on MSDL DCH x
MAP DCH x	Get physical address and switch settings for D-channels
PCON DCH x	Print configuration parameters on MSDL DCH x
PMES DCH x	Print incoming layer 3 messages on MSDL DCH x
PTRF DCH x	Print traffic report on MSDL DCH x
TEST LLB x	Start local loop back test on MSDL DCH x
TEST RLB x	Start remote loop back test on MSDL DCH x

Alphabetical list of commands

DIS AUTO x Disable automatic recovery for DCH x. pra-13

DIS DCH x Disable DCH x. pra-13

This changes the status of the DCH to DSBL and the status of the D-channel to DCH RST (reset).

Note: In X11 release 17 and earlier, the command format is: DIS DCHI x.

DIS LLB x Disable local loop back mode on MSDL DCH x. msdl-18

See "ENL TEST" command for details.

DIS MSGI x (options)

Disable the monitoring of incoming messages on D-channel x. pra-13

The available options are:
CH l c — disable incoming messages on B-channel l c
CH l s c u — disable incoming messages on ISL-channel l s c u
FEAT feature — disable incoming messages for a PRI feature
MSG msg1 msg2 msg3 — disable incoming message types

Refer to the LD96 introduction for details.

DIS MSGO x (options)

Disable the monitoring of outgoing messages on D-channel x. pra-13

The available options are:
CH l c — disable outgoing messages on B-channel l c
CH l s c u — disable outgoing messages on ISL-channel l s c u
FEAT feature — disable outgoing messages for a PRI feature
MSG msg1 msg2 msg3 — disable outgoing message types

Refer to the LD96 introduction for details.

DIS RLB x Disable remote loop back mode on MSDL DCH x. msdl-18

See "ENL TEST" command for details.

DIS SERV x Disable service messages on D-channel x. pra-15

The D-channel must be disabled before disabling service messages. See ENL SERV for details.

DIS TEST x Disable TEST mode on MSDL DCH x. msdl-18

When the test mode state is disabled, the DCH link will go back to release state and the DCH background audit will then try to establish the link.

See "ENL TEST" command for details.

LD96

ENL AUTO x Enable automatic recovery for DCH x. pra-13

Automatic recovery is initially enabled.

ENL DCH x (FDL)

Enable DCH x and attempt to establish the link, and force download to MSDL. pra-13

A self-test on the DCH runs automatically. If this is successful, then:
DCHI status = OPER
DCH status: EST

If this is not successful, then:
DCHI status: OPER
DCH status: RLS

FDL forces D-channel loadware to the MSDL card. This is optional.
Note: In X11 release 17 and earlier, the command format is: ENL DCHI x.

ENL LLB x Enable local loop back mode on MSDL DCH x. msdl-18

See "ENL TEST" command for details.

ENL MSGI x (options)

Enable the monitoring of incoming messages on D-channel x. pra-13

The available options are:
CH l c — enable incoming messages on B-channel l c
CH l s c u — enable incoming messages on ISL-channel l s c u
FEAT feature — enable incoming messages for a PRI feature
MSG msg1 msg2 msg3 — enable incoming message types

Refer to the LD96 introduction for details.

ENL MSGO x (options)

Enable the monitoring of outgoing messages on D-channel x. pra-13

The available options are:
CH l c — enable outgoing messages on B-channel l c
CH l s c u — enable outgoing messages on ISL-channel l s c u
FEAT feature — enable outgoing messages for a PRI feature
MSG msg1 msg2 msg3 — enable outgoing message types

Refer to the LD96 introduction for details.

ENL RLB x Enable remote loop back mode on MSDL DCH x. msdl-18

See "ENL TEST" command for details.

ENL SERV x Enable service messages on D-channel x. pra-15

"Service" and "Service Acknowledge" messages are supported on individual PRA B channels, ISL channels and D-channels. They are used to coordinate channel status between the near and far end. A channel status can be in service, maintenance or out-of-service.

The primary and backup D-channel must be disabled before enabling service messages.

Make sure both ends support service messages before using this command.

For SL-1 to SL-1, both systems must have X11 release 15 or higher. By default, SERV is disabled when the interface type is SL-1 (LD17 IFC = SL1). When enabled service messages are supported on individual PRA B channels, ISL channels and D-channels. When disabled, service messages are provided automatically on D-channels with Backup D-channel configured.

For SL-1 to DMS, or SL-1 to AT&T only service messages on individual PRA B-channels and ISL channels are supported. By default, SERV is disabled when the interface type is DMS (LD17 IFC = D100/D250), and enabled when the interface type is AT&T (LD17 IFC = ESS4/ESS5).

LD96

ENL TEST x Enable TEST mode on MSDL DCH x. msdl-18

The DCH is put into TEST mode to perform the local loopback (LLB) or remote loopback (RLB) test. The DCH link can only be put in test mode if it is in the release or established state. If the link is in establish state, the DCH link is first released, and then put in test mode.

The local loopback test first tests the expediated interface, then the ring interface. The test consists of sending a data packet through each interface, which in turn is sent back by Layer 2. This data packet is then validated to ensure that the contents of the data packet are the same that were originally sent. Example:

ENL TEST x — enter TEST mode
ENL LLB x — enter local loopback mode
TEST LLB x — perform test (results are PASS or FAIL)
DIS LLB x — exit local loopback mode
DIS TEST x — exit TEST mode and restore link

The remote loopback test is used to verify the integrity of the physical link. This following test is only supported if both the D channels are on the MSDL card and both switches are running Release 18 or above. To run the test the far end must be in the remote loopback mode (ENL RLB x). The DCH running the test (near end) must be in TEST mode. Example:

Far end:
ENL TEST x — enter TEST mode
ENL RLB x — enter remote loopback mode
DIS RLB x — exit remote loopback mode (after test)
DIS TEST x — exit TEST mode and restore link

Near end:
ENL TEST x — enter TEST mode
TEST RLB x — perform test (results are PASS or FAIL)
DIS TEST x — exit TEST mode and restore link

If the far end is not an MSDL D-channel, use the RLBK command in LD60 to set up the remote loopback test.

EST DCH x Establish multiple frame operation on D-channel x. pra-13

With the absence of the backup D-channel, issuing the EST DCH x command clears all the B-channels on loop x. If backup D-channel is available, the system switches to the backup D-channel and the B-channels of loop x are not cleared.

MAP DCH x Get physical address and switch settings for D-channels. msdl-18

This command outputs the card name and switch settings for D-channels. For example:

```
MAP DCH
  DCH 15  DCHI 07
  DCH 23  MSDL 09 PORT 2
```

PCON DCH x Print configuration parameters on MSDL DCH x. msdl-18

This command outputs the parameters originally downloaded when the D channel was enabled. The output format is:

```
DCH : xx  LINK PARAM CONFIRM  TIME:  hh:mm:ss
MSDL x = 0-15
PORT x = (0-3)
INTERFACE   aaa =  SL1, D100, D250, ESS4, S100, etc.
OPER MODE aaa bbb ccc ddd eee
   aaa = RS422, RS232
   bbb = DTE, DCE
   ccc = USR, NET
   ddd = baud rate
   eee = clock (EXT or INT CLK)
T200 xx (LAPD parameter)
T203 xx (LAPD parameter)
T200 xx (LAPD parameter)
N201 xx (LAPD parameter)
K xx (LAPD parameter)
N2X4 xx (LAPD parameter if INTERFACE is ITR6)
```

PLOG DCH x Print protocol error log on DCH x. pra-13

Protocol errors can be the result of PRI transmission problems and re-start procedures, or a protocol mismatch with the far end. The PLOG counters are cleared after the PLOG is printed or the DCH card is enabled.

Note 1: In X11 release 17 and earlier, the command format is: PLOG DCHI x.

Note 2: When a protocol counter overflows, the PLOG is printed automatically and the counters are cleared. The counter is also cleared when the D-channel is disabled.

Response in X11 release 17 and earlier is:
DCH xx I xxxx
yy zz 01 02 03 ... 16

Response for MSDL DCH in X11 release 18 is:
DCH : xx MAINT CONFIRM TIME: hh:mm:ss
01 cc
11 cc
23 cc

Where,
x = DCH number
xxxx = system real time (in hexadecimal)
yy = maintenance indication primitive
zz = maintenance indication task ID
01 02 03....16 = protocol error counters as listed below
cc = protocol error counters

Note: In X11 release 18, only the non-zero counters are output.

– continued –

Protocol error counters:
01 = count of missing PRI handshakes
02 = count of peer initiated re-establishment link
03 = count of unsuccessful retransmit N200 of SABME
04 = count of unsuccessful retransmit N200 of DISC
05 = count of N(R) errors
06 = count of I fields with length greater than N201
07 = count of undefined frames
08 = count of I fields but not allowed
09 = count of FRMR frames
10 = count of CRC error frames
11 = count of REJ frames
12 = count of messages with less than 4 octets
13 = count of undefined protocol discrimators
14 = count of undefined message types
15 = count of messages missing mandatory information elements
16 = count of messages with undefined information elements
17 = Count of layer 1 reports of no external clock being received
18 = Count of aborted frames
19 = Count of SABME frames received with incorrect C/R bit
20 = Count of supervisory frames received with F=1
21 = Count of unsolicited DM responses with F=1
22 = Count of unsolicited UA responses with F=1
23 = Count of unsolicited UA responses with F=0
24 = Count of DM responses with F=0
25 = Number of times that no response was received from the far end after N200 retransmissions of RR or RNR
26 = Count of frames received with incorrect header length
27 = Number of times owner receiver busy condition was entered
28 = Number of times peer receiver busy condition was entered
29 = Count of messages with call reference length greater than 2
30 = Count of optional IE's received with invalid contents
31 = Count of mandatory IE's received with invalid contents
32 = Count of messages received with IE's not ordered correctly
33 = Count of IE's which were repeated in received messages, but are only allowed to appear once per message
34 = Count of IE's received with length exceeding the specified maximum length for the IE

LD96

PMES DCH x Print incoming layer 3 messages on MSDL DCH x. msdl-18

The following data is kept by the MSDL DCH loadware and output when requested by this command or when one of the counters overflows. Only non-zero counters are reported.

DCH : xx MSG LOG CONFIRM TIME: hh:mm:ss
SETUP: yy
CONNECT: yy
ALERT: yy
etc.

Where, yy is the number of times a message was received.

Note: When a counter overflows, the log is printed automatically and the counters are cleared. The counter is also cleared when the D-channel is disabled.

PTRF DCH x Print traffic report on MSDL DCH x. msdl-18

The following traffic information is output:

PEAK_I_US xx % = peak incoming usage on the DCH link
AVRG_I_US xx % = average incoming usage on the DCH link
PEAK_O_US xx % = peak outgoing usage on the DCH link
AVRG_O_US xx % = average outgoing usage on the DCH link
TIME xx = time in seconds
CONNECTED CALLS xx: = total number of connected calls

RLS DCH x Release D-channel x. pra-13

The link is in a waiting state, ready to come back up at any time.

Note 1: If you release the D-channel with active B-channels, then calls in progress are not affected. However, these calls are disconnected when you re-establish the D-channel.

Note 2: When the automatic recovery feature is active, the B-channels are automatically re-established.

RST DCH x Reset D-channel x, inhibit signaling. pra-13

Forces the link to a reset (RST) state, but does not disable the PRI or DCH.

RST MON Reset or reactivate monitoring on D-channels with enabled monitors. pra-13

SDCH DCH x Switch to the standby D-channel x. pra-13

Where x is the standby D-channel number. This command changes the status of the active D-channel to standby, and changes the status of standby D-channel to active.

Note 1: This is only valid in a back-up D-channel configuration.

Note 2: This command is not applicable if the recovery to primary D-channel option (prompt RCVP = YES in LD17) is used.

Note 3: This command is only applicable to Meridian 1 to Meridian 1 Back-up D-channel interface (IFC = SL1 in LD17).

SET MSGI x MON (0)-2

Set monitor output format level for incoming messages. pra-13

SET MSGO x MON (0)-2

Set monitor output format level for outgoing messages. pra-13

LD96

STAT DCH (x)

Get status of one or all D-channels. pra-13

If a DCH number is not entered, the status of all D-channels is output. The output format is:
DCH x : aaaa bbbb cccc dddd x

Where,
x = DCH number
aaaa = application status
bbbb = link status
cccc = AUTO if autorecovery is enable
dddd = BKUP x or PRIM x (associated primary or backup DCH)

Application status (aaaa):
APRI = Awaiting PRI response
CPRI = Checking PRI
DIAG = application has failed
DSBL = application is disabled
OPER = link is operational
RST = application is in reset state
SDCH = Setting D-channel

Link status (bbbb):
AEST = Awaiting establishment
ARLS = Awaiting release
EST ACTV = DCH link is established and active
EST STBY = DCH link is established and is the standby
FAIL = DCH link has failed
REST = request establishment
RLS = DCH link is released
RST = DCH link is in reset state
TST = Test mode

Note: In X11 release 17 and earlier, the STAT DCHI command is required to get the application status.

STAT MON (x)

Display the incoming and outgoing monitoring status of one or all D-channel. pra-13

STAT SERV (x)

Get the enable/disable status of services messages for one or all D-channels. pra-15

See ENL SERV for details.

TEST 100 x	Perform interrupt generation test on DCH x. This is an isolated hardware test. If this test fails, either a faulty DCHI card or a contention problem is indicated. *Note:* Tests 100, 101, 200, and 201 must be run in sequential order. Established calls will stay up, but new calls cannot be placed. The DCH link must be in the reset state when these tests are run. Reset can be established by entering the RST DCH x command when the status of the D-channel is established (EST) or released (RLS).	pra-13
TEST 101 x	Perform loopback mode test on DCH x. This is an isolated hardware test. If this test fails, either a faulty DCHI card or a contention problem is indicated.	pra-13
TEST 200 x	Perform interrupt handler test on DCH x. This is a software test which, when failed, indicates software problems.	pra-13
TEST 201 x	Test interrupt handler-to-link interface path. This is a software test which, when failed, indicates software problems.	pra-13
TEST LLB x	Start local loop back test on MSDL DCH x. See "ENL TEST" command for details.	msdl-18
TEST RLB x	Start remote loop back test on MSDL DCH x. See "ENL TEST" command for details.	msdl-18

LD96

770 D-channel diagnostic program

Issued: 04 01 94
Status: Standard
X11 Release: 19

Configuration Record 2

LD97 defines Extended Peripheral Equipment (XPE) configuration.

Change or print PE system parameters

Note: When modifying the PE system parameters, the system must initialize to effect the change.

REQ	CHG, PRT	Change or print
TYPE	SYSP	System Parameters
INTN	Yes, (No)	Companding law (Yes = A-law, No = Mu-law for North America)
CODE	(0)-3	Quiet code is used by the network card firmware
CONT	1-(4)-32767	Maintenance threshold for number of continuity faults per timeslot
CRCF	1-(4)-32767	Maintenance threshold for number of Cyclic Redundancy check (CRC) failures per cable
FLSH	(120)-768	Switchhook flash timing in ms for 500/2500 sets (NT8D PE only)
P10R	(50)-70	Make-break ratio for primary 10 pulses per second dial pulse dialing
P12R	(50)-70	Make-break ratio for secondary 10 pulses per second dial pulse dialing
P20R	(50)-70	Make-break ratio for 20 pulses per second dial pulse dialing
FDLC	p1 p2 p3 p4	Peripheral Software Download option

LD97

772 Configuration Record 2

Change or print Controller number and card location

REQ	CHG	Change
TYPE	XPE	Controller and superloop configuration
XPEC	0	Automatically assign the next available Controller number
	1-95	Manually assign the Controller number
	Xx	Precede Controller number with "X" to remove (remove all TNs on the Controller and associated superloop first)
LOC	xxxxxx	Location code for Controller (0-6 characters)
MED	<cr>	Connection media to Controller. Enter a carriage return
RGTP	(8), 16	8 or 16 concurrent ringers (16 requires NT6D42CA Ringing Generator)
REQ	PRT	Print
TYPE	XPE	Controller configuration
XPEC	<cr>	Controller number or <cr> for all. The output format is:

S0 S1 S2 S3 LOC DIS RGTP

xx yyy yyy yyy yyy zzz Yes/No rr

where,

xx = Controller number (1-95)

yyy = superloop number for each segment

zzz = location code entered with prompt LOC

DIS = Controller disabled (yes or no)

RGTP = Ringing Generator type (rr = 8 or 16)

Change or print superloops

To configure superloops, you must set the maximum PE density to octal. See prompt MPED in LD17. The Controller card must be defined before a superloop can be configured.

REQ	CHG	Change
TYPE	SUPL	Superloop data
SUPL	0-156	Superloop number in multiples of 4
	Xx	Precede with "X" to remove a superloop (remove all TNs on the loop first)
ST21	Yes, (No)	System option 21
SLOT	(L), R	Network card is in left or right slot
XPE0	x y z	Controller number, starting segment, ending segment for shelf 0
XPE1	x y z	Controller number, starting segment, ending segment for shelf 1
REQ	PRT	Print
TYPE	SUPL	Superloop data
SUPL	<cr>	Enter superloop number or <cr> for all. The output format is:

SUPL	SLOT	XPEC0	XPEC1
xxx	L/R	x y z	x y z

where,

xxx = superloop number

L/R = Network card is in Left or Right slot

x = Controller number

y = Starting segment

z = Ending segment

LD97

774 Configuration Record 2

Change NT8D18 Network/Digitone Receiver card

The NT8D18 card contains a superloop and 8 Digitone Receivers. It is located in network slot 10 of an option 21/21A and must be defined as superloop 28. The Digitone Receivers are defined in LD13. See "Change and print superloops" to print data on this loop.

REQ	CHG	Change
TYPE	XNPD	Network/Digitone Receiver parameters
XNPD	28	Network loop number for NT8D18 Network/Digitone Receiver
XPEC	1-95	Assign Controller number

Change or print Conference/TDS/MFS parameters

The loop number for the NT8D17 Conference/TDS/MFS card is defined by prompt XCT in LD17.

REQ	CHG	Change
TYPE	XCTP	Conference/TDS/MFS parameters
CPAD	(0),1	PAD values for conference (0 = software, 1 = switch settings)
DTMF	0-(14)-255	Tone table index of the first DTMF digit to be used
P10P	0-(30)-255	Tone table index for primary 10 pulses per second (pps) digit set
S10P	0-(31)-255	Tone table index for secondary 10 pulses per second digit set
20PP	0-(32)-255	Tone table index for 20 pulses per second (pps) digit set
REQ	PRT	Print
TYPE	XCTP	Conference/TDS/MFS parameters

Alphabetical list of prompts

20PP **0-(32)-255** — Tone table index for 20 pulses per second (pps) digit set. xct-15

Use "32" for North American tones. Tone tables are defined in LD56.

CODE **(0)-3** — Quiet code is used by the network card firmware. xpe-15

Use the default value of 0.

CONT **1-(4)-32767** — Maintenance threshold for number of continuity faults per timeslot. xpe-15

CPAD **(0),1** — PAD values for conference (0 = software, 1 = switch settings). xct-15

Select PAD values for conference circuits, where
0 = use software PAD values
1 = use PAD values defined by switch settings

The CNFC command in LD38 will not do the attenuation testing when CPAD is set to 1.

CRCF **1-(4)-32767** — Maintenance threshold for number of Cyclic Redundancy check (CRC) failures per cable. xpe-15

DTMF **0-(14)-255** — Tone table index of the first DTMF digit to be used. xct-15

Use "14" for North American tones. Tone tables are defined in LD56.

LD97

776 Configuration Record 2

FDLC **p1 p2 p3 p4** — Forced download control parameters. xpe/msdl-15

p1 =
XNET = Network cards
XPEC = Controller cards
XNPD = Network/Digitone Receiver cards
MSDL = Multi-purpose Serial Data Link cards (X11 release 18 and later)
MISP = Multi-purpose ISDN Signaling Link cards (X11 release 18 and later)
BRIL = Basic Rate Interface Line cards (X11 release 18 and later)
SDI = Serial Data Interface cards (X11 release 18 and later)
DCH = D-Channel cards (X11 release 18 and later)
(ALL) = all of the above cards

p2 =
F — force download after initialization, or
(C) — conditional download only if there is a major fault in the firmware or after a power failure. "C" is the recommended setting.

Note: Entering F (forced download) only applies to the first INIT following the entry. After the INIT, the system reverts to C (conditional).

p3 =
(C) — current version
L — latest version
S — specified version

p4 = xx (version number, if p3 = S). See LD20-22 to print peripheral software versions.

FLSH **(120)-768** — Switchhook flash timing in ms for 500/2500 sets (NT8D PE only). xpe-15

INTN **Yes, (No)** — Companding law (Yes = A-law, No = Mu-law for North America). xpe-15

LOC **xxxxxx** — Location code for Controller (0-6 characters). xpe-15

This should be equal to the column number assigned to the System Monitor and the Universal Equipment Module (UEM) that contains the Controller.

For example: CxxMy

where,
xx = column number
y = UEM number

MED **ddd** — Connection media to Controller. Enter a carriage return. xpe-17

This prompt is reserved for future use.

P10P **0-(30)-255** — Tone table index for primary 10 pulses per second (pps) digit set. xct-15

Use "30" for North American tones. Tone tables are defined in LD56.

P10R **(50)-70** — Make-break ratio for primary 10 pulses per second dial pulse dialing. xpe-16

Range is 50% to 70%, in steps of 1. For example, at 70% the signal is on for 30 ms and off for 70 ms producing the the 100 ms cycle for one pulse.

To use on individual XUT, XUTJ and XEM trunks, set CLS to P10 in LD14.

P12R **(50)-70** — Make-break ratio for secondary 10 pulses per second dial pulse dialing. xpe-16

Range is 50% to 70%, in steps of 1. For example, at 70% the signal is on for 30 ms and off for 70 ms producing the the 100 ms cycle for one pulse.

To use on individual XUT, XUTJ and XEM trunks, set CLS to P12 in LD14.

P20R **(50)-70** — Make-break ratio for 20 pulses per second dial pulse dialing. xpe-16

Range is 50% to 70%, in steps of 1. For example, at 70% the signal is on for 15 ms and off for 35 ms producing the the 50 ms cycle for one pulse.

To use on individual XUT, XUTJ and XEM trunks, set CLS to P20 in LD14.

REQ **aaa** — Action request. xpe-15

END = exit the overlay.
CHG = modify existing data
PRT = print data block

RGTP **(8), 16** — 8 or 16 concurrent ringers (16 requires NT6D42CA Ringing Generator). xpe-18

The prompt determines the maximum number of 500/2500 telephones which can be in the ringing state at the same time.

CAUTION: Do not set RGTP = 16 of you do not have the NT6D42 ringing generator. Exceeding the ringer capacity may cause intermittent overload alarms on the ringing generator.

The value is not passed to the Peripheral Controller card immediately after service change. That information is downloaded when the card is enabled.

LD97

778 Configuration Record 2

S10P **0-(31)-255** — Tone table index for secondary 10 pulses per second digit set. xct-15

Use "31" for North American tones. Tone tables are defined in LD56.

SLOT **(L), R** — Network card is in left or right slot. xpe-15

Enter L (left) if the Network Card is located in the lower numbered network pair. For example, in superloop 0, enter L if the Network Card sits in the slot for network loops 0/1, enter R (right) for 2/3.

ST21 **Yes, (No)** — System option 21. xpe-15

Enter "yes" for System Option 21. Enter "No" for all other System Options.

SUPL **0-156** — Superloop number in multiples of 4. xpe-15

Precede with "X" to remove superloop number. Remove Controller and TNs defined on the superloop first. Out the units, and the card before outting the loop.

TYPE **aaa** — Type of data to be changed or printed. xpe/msdl-15

SYSP = System parameters
SYSM = System parameters for MSDL/MISP cards
SUPL = Superloop configuration
XCTP = Conference/TDS/MF Sender card parameters
XPE = Extended Peripheral Equipment shelves
XNPD = Extended Network/Digitone Receiver

XNPD **28** — Network loop number for NT8D18 Network/Digitone Receiver. xpe-15

The card must be assigned to loop 28. The Digitone Receivers on this card are defined in LD13.

XPE0 **x y z** — Controller number, starting segment, ending segment for shelf 0. xpe-15

Define the superloop configuration, where
x = Controller number (1-95) for superloop's shelf 0
y = starting shelf segment number (0-3)
z = ending shelf segment number (0-3)

Enter "X" to remove XPE0.

<cr> Return to REQ prompt.

XPE1 **x y z** — Controller number, starting segment, ending segment for shelf 1. xpe-15

Define the superloop configuration, where
x = Controller number (1-95) for superloop's shelf 1
y = starting shelf segment number (0-3)
z = ending shelf segment number (0-3)

Enter "X" to remove XPE1.

<cr> Return to REQ prompt.

XPEC **(0)-95** — Assign Controller numbers (0 for automatic). xpe-15

0 = Automatically assign Controller numbers. The system assigns the next available Controller number.

0 cannot be assigned for XPND.

1-95 = Manually assign Controller numbers

Precede with "X" to remove. Remove all cards/TNs in the Controller shelf first.

LD97

780 Configuration Record 2

Issued: 04 01 94
Status: Standard
X11 Release: 19

Core Common Equipment Diagnostic

LD135 provides diagnostic and maintenance information for option 61C/81 machines. It provides a means of performing the following functions.

- clearing minor and major alarms
- clearing and printing maintenance display contents for the primary Core
- testing the idle Core
- displaying CP card status and ID
- enabling and disabling CNI cards
- displaying CNI card ID and status
- testing SIMMs, inactive CNIs, and standby Core during daily routines
- switch Cores when in redundant mode
- during midnight routines checks primary CNIs, checks for Core redundancy, and attempts to switch Cores

Note: The option 81 is available with X11 release 18 and later. Option 61C systems support X11 release 19 and later.

When a status appears disabled, one or more Out of Service (OOS) messages may appear. Listed below are the possible OOS messages. What actually appears are the numbers associated with the OOS text.

0 = CP local bus parity threshold exceeded
1 = CP card HPM timeout threshold exceeded
8 = Unconfigured CNI card.
9 = Port has been disabled by craftsperson.
10 = Device is not accessible.
16 = CNI to 3PE cable 1 on specified card and port lost.
17 = CNI to 3PE cable 2 on specified card and port lost.
18 = 3PE power lost.
19 = 3PE has been manually disabled.
20 = CNI card has been manually disabled.
21 = Card test failed.
22 = Port test failed.
23 = Extender disabled by Meridian 1 initialization.
24 = Port interrupt line 0 disabled.
25 = Port interrupt line 1 disabled.
26 = Port interrupt line 2 disabled.
27 = Port interrupt line 3 disabled.

Adding a group to an option 61C/81

It may be necessary to add a group, or groups, to your system after original installation. Refer to *System installation* (553-3001-210) for cabling and general installation information. Follow these steps to configure the new groups in the software.

1 Be sure to connect the cables from the network shelf to the active and standby IPB CNI card slots. Each CNI card has 2 ports and can support 2 groups.

2 Load overlay 135 and disable the standby port connect to the new group. Switch Cores, then disable the standby port again (was the active one).

```
LD 135
DIS CNI c s p   Disable the standby CNI port
SCPU            Switch Cores If asked for FORCE, enter Yes.
DIS CNI c s p   Disable the standby CNI port
```

3 Load overlay 17 and configure the active and standby EXT for each new group.

4 Load overlay 135 and enable the standby CNI port. Switch Cores and enable the standby again (was the active). Switch Cores again.

```
LD 135
ENL CNI c s p   Enable the standby CNI port
SCPU            Switch Cores If asked for FORCE, enter Yes.
ENL CNI c s p   Enable the standby CNI port
SCPU            Switch Cores  If asked for FORCE, enter Yes.
```

5 Load overlay 43 and datadump to save the new configuration.

6 Load overlay 135 and perform some system integrity checks. Switch the Cores, and test the CNI ports.

LD135

Removing a group from an option 61C/81

It may be necessary to remove a group, or groups, from your system after original installation. Refer to *System installation* (553-3001-210) for cabling and general installation information. Follow these steps to remove the groups from the software.

1 Disable any peripheral or network devices connected to the groups being removed.

2 Load overlay 135 and disable the standby port connect to the new group. Switch Cores, then disable the standby port again (was the active one).

```
LD 135
DIS CNI c s p    Disable the standby CNI port
SCPU             Switch Cores If asked for FORCE, enter Yes.
DIS CNI c s p    Disable the standby CNI port
```

3 Load overlay 17 and remove (OUT) the active and standby EXT for removed group.

4 Load overlay 43 and datadump to save the new configuration.

Alphabetical list of commands

CDSP	Clear maintenance displays. This command sets the maintenance display for the primary CP to blank.	61C/81-19
CMAJ	Clear major alarm, and reset power fail transfer.	61C/81-19
CMIN ALL	Clear minor alarm indication for all customers.	61C/81-19
CMIN n	Clear minor alarm indication for customer n.	61C/81-19
DIS CNI c s p	Disable the CNI port. c = Core number (0 or 1) This must be the standby side. Disable the active side if the CNI is not in service. s = Slot number (8-12) p = Port number (0 or 1) If the P is not entered, both ports, and the card itself are disabled.	61C/81-19
DSPL	Get contents of maintenance display for the active Core. If the maintenance display is blank, BLANK is output.	61C/81-19
DSPL ALL	Get contents of maintenance display for the active Core, and previous 63 displays.	61C/81-19
ENL CNI c s p	Enable CNI port. c = Core number (0 or 1) s = Slot number (8-12) p = Port number (0 or 1) If the P is not entered, both ports, and the card itself are enabled. A port cannot be enabled if the card is disabled.	61C/81-19

LD135

IDC CNI s	Print the card ID for the CNI on the active side. s = Slot number (8-12) The printout appears in the following format: x y pppppppaa rrssss ccccccc x = Core number (0 or 1) y = Slot number (8-12) pppppppp = PEC code aa = Attribute code rr = Release number ssss = Serial number cccccccc = Comments (optional)	61C/81-19
IDC CPU	Print card ID for the active Core. The printout appears in the following format: x y ppppppppp rrssss ccccccc x = Core number (0 or 1) y = Slot number (8-12) ppppppppp = PEC code rr = Release number ssss = Serial number cccccccc = Comments (optional)	61C/81-19
MIDN	Run midnight routines after LD135 is aborted and TTY is logged out.	61C/81-19
SCPU	Switch Cores. This command causes the inactive CP to become active. If the switchover is successful, OK in printed. If it is not successful, an error message is printed. If, when attempting to switch CPs, the system determines the currently active side is better than the standby side, a message appears on the TTY: "FORCE ? Enter <YES> to force SCPU to standby Core x. Press <Return> to abort SCPU." Entering Yes continues the switch. Entering a Carriage Return <CR> defaults to No and retains the currently active side.	61C/81-19

SHDW Restore redundancy to a system put in single mode by the SPLIT command. 61C/81-19

This command cannot be used unless the system is already SPLIT. This command MUST be entered by the CPIO port on the secondary CP.

This command puts the secondary CP to "sleep." Once the secondary CP is asleep, the primary CP begins the process of updating the secondary CP's memories so they match the primary CP's.

This command does NOT synchronize the contents of the CMDUs. Use LD137 to synchronize the CMDUs.

When implementing this command, the following is output: WARNING: CP x will be put to SLEEP. Enter <YES> to continue, or press <return> to abort.

SPLIT Put a redundant (shadowed) system into single (non-shadowed) mode. 61C/81-19

The active Core remains active. Use this command for parallel reload, and for diagnostics requiring split mode operation. Additionally, the standby (inactive) Core "wakes up" and does a system level INIT. When the command is successful, OK is printed. If it is not successful, an error message is printed.

This command has the same effect as putting both Cores into MAINT.

Note 1: If a terminal is connected to the secondary Core's CPIO port, OS level startup messages appear as well as INI messages. This is not an error, and is operating according to design.

Note 2: If the disks are not synchronized, the command aborts, and an error message appears.

STAT CNI c s p

Get the status of all configured CNIs. 61C/81-19

Also prints the Network Group number of both ports on each CNI. To get the status of a specific CNI port, enter the following information. Entering only STAT CNI gets the status for all CNI ports.

c = Core number (0 or 1)
s = Slot number (8-12)
p = Port number (0 or 1)
If the P is not entered, the status of both ports is printed.

If the status is DSBL (Disabled), one or more of the OOS reasons may appear. What actually appears are the numbers associated with the OOS text.

0 = CP local bus parity threshold exceeded
1 = CP card HPM timeout threshold exceeded
8 = Unconfigured CNI card.
9 = Port has been disabled by craftsperson.
10 = Device is not accessible.
16 = CNI to 3PE cable 1 on specified card and port lost.
17 = CNI to 3PE cable 2 on specified card and port lost.
18 = 3PE power lost.
19 = 3PE has been manually disabled.
20 = CNI card has been manually disabled.
21 = Card test failed.
22 = Port test failed.
23 = Extender disabled by Meridian 1 initialization.
24 = Port interrupt line 0 disabled.
25 = Port interrupt line 1 disabled.
26 = Port interrupt line 2 disabled.
27 = Port interrupt line 3 disabled.

STAT CPU Get the status and core numbers for both CPs. 61C/81-19

Possible responses are:
ENBL = CP is running
IDLE = CP is in standby
DSBL = CP is disabled

If the status is DSBL, one of the following OOS reasons is printed:
0 = CP card local bus parity threshold exceeded
1 = CP card sanity timeout threshold exceeded
10 = Secondary CP is not accesible
16 = Secondary CP has a major fault

This command also prints out the results of the latest self-test, and the position of the MAINT/NORM switch.

STAT MEM c m

Get status of SIMMs on both CPs. 61C/81-19

To get the status of a single SIMM, or a specific side enter the following information.
c = Core (0 or 1)
m = SIMM number (0-5) If m is not entered, status for all SIMMs is printed.
If the status is Disabled (DSBL), the device is not accessible.

TEST CNI c s p

Test the CNI port. 61C/81-19

c = Core number (0 or 1)
s = Slot number (8-12)
p = Port number (0 or 1) If the P is not entered, both ports are tested.

This command can test Standby CNIs as well as active CNIs that are out of service.

This may take a few minutes because of the time required to reestablish memory shadowing and contents. When the command is successful, OK is printed. If it is not successful, an error message is printed.

LD135

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TEST CPU Test the inactive (standby) Core. 61C/81-19

This command performs NO tests upon the active (primary) Core.

The CMB (on the CP card), CP to CP cable, and memory are tested to ensure that Split mode can be entered safely. Then the CP is tested. The system enters split mode, runs the test, and returns to redundancy (memory shadowing).

This may take a few minutes because of the time required to reestablish memory shadowing and contents. It is possible, during the test, that service may be interrupted if an error occurs on the single active Core.

Output from this test is "OK," or a CCED message. Refer to the specific message for more information.

Note: Testing the secondary (inactive) Core is done by performing a "reset" on the secondary Core. If a terminal is connected to the secondary Core's CPIO, cold start diagnostics are displayed on the terminal. This is not an error, and is operating according to design.

TEST IPB Test the backplane protocol on the secondary (inactive) Interprocessor Bus. 61C/81-19

This command does NOT test the primary (active) IPB.

The system enters split mode, runs the test, and returns to redundancy (memory shadowing). When the command is successful, OK is printed. If it is not successful, an error message is printed.

This may take a few minutes because of the time required to reestablish memory shadowing and contents. It is possible, during the test, that service may be interrupted if an error occurs on the single active Core.

TEST LCD Test the LCD display on the active CP card. 61C/81-19

The following test pattern is displayed on the active CP card's display:

8888888888888888
8888888888888888

ABCDEFGHIJKLMNOP
QRSTUVWXYZ123456

abcdefghijklmnop
qrstuvwxyz012345

Note: The first two tests go by very quickly, so you may actually see only the third one.

LD135

792 Core Common Equipment Diagnostic

Issued: 04 01 94
Status: Standard
X11 Release: 19

Core Input/Output Diagnostic

LD137 provides IOP and CMDU related diagnostic and maintenance information for option 61C/81 machines. Some commands in LD37 can also be used. Refer to that program.

Note: The option 81 is available with X11 release 18 and later. Option 61C systems support X11 release 19 and later.

LD137 provides a means of performing the following functions.

- enabling and disabling the CMDU and IOP cards
- displaying status and card ID for CMDU and IOP cards
- testing the IOP and CMDU (the hard and floppy disk drives are tested)
- testing individual disk drives
- enabling and disabling disk redundancy
- testing SCSI cable connections between IOPs and CMDUs
- testing disk synchronization on file or sector levels
- during midnight routines performs DATA CMDU, DATA RDUN commands

Note: The DATA CMDU AND DATA RDUN midnight routines are run every 5 days.

LD137

When a status appears disabled, one or more Out of Service (OOS) messages may appear. Listed below are the possible OOS messages.

IOP Out of Service
Unexpected interrupt fault monitor threshold exceeded
Fault interrupt fault monitor threshold exceeded
Processor exception fault monitor threshold exceeded
ASIC interrupt fault monitor threshold exceeded
Unrecognized error fault monitor threshold exceeded
General event interrupt fault monitor threshold exceeded
IOP not responding
IOP disabled by craftsperson
IOP responding but cannot be enabled
CMDU Out of Service
Hard disk read error
Hard disk write error
Hard disk drive error
CMDU does not respond, the disk drive may be missing
CMDU has been disabled by the craftsperson
CMDU is disabled because the IOP is out of service
Hard disk is inaccessible
CMDUs are not synchronized
CMDU status is mismatched because of a software error
CMDU is in split mode
CMDU is out of split mode
No access to hard disk (HDK)

Alphabetical list of commands

DATA CMDU n

Perform read tests on the specified CMDU. 61C/81-19

This data validity check is performed on both hard and floppy disks. While the test is in progress, the CMDU is inaccessible. Progress messages are output.
n = core number (0 or 1) If n is not entered, this command checks both CMDUs.

Note: This is more extensive than the TEST command, and may take longer.

DATA CMDU n HDK, FDK

Perform read test on either the Hard Disk or Floppy Disk. 61C/81-19

This is a data validity check. While the test is in progress, the Disk is inaccessible.
n = Core number (0 or 1) You must enter the Core number.

Note: This is more extensive than the TEST command, and may take longer.

DATA RDUN Perform sector level checking on both hard disks. 61C/81-19

This test ensures that disk synchronization (disk redundancy) exists. It can only be performed when disk redundancy is enabled. All data is checked, on both disks, sector by sector. If the test fails, a CIOD message appears, and disk redundancy is disabled.

Note: This is more extensive than the TEST command, and may take longer. While this test is in progress, the disks are inaccessible.

DIS CMDU n Disable CMDU. 61C/81-19

n = Core number (0 or 1) You must enter the Core number.

If disk redundancy is currently enabled (both CMDUs are enabled and enabled), disabling the CMDU also disables disk redundancy. The confirmation is displayed, "CURRENTLY CMDU N IS ACTIVE. DISK RDUN WILL BE DISABLED. ENTER Y(ES) TO CONFIRM, N(O) TO ABORT." If the specified CMDU is in standby, its state is changed to disabled. If it is the active CMDU, it is disabled, and the standby CMDU becomes active.

LD137

DIS IOP Disable the active IOP. 61C/81-19

The LED is lit on the IOP faceplate, and both CMDUs are inaccessible.

ENL CMDU n Enable the CMDU. 61C/81-19

n = Core number (0 or 1) You must enter the Core number.

When the first CMDU is enabled, that CMDU's state is ACTIVE. If a second ENL CMDU is attempted, a file level synchronization on both hard disks is performed first. If the synchronization (disk redundancy) does not exist, a CIOD error message is printed, and the second CMDU remains disabled. If the synchronization exists, the confirmation is displayed," DISK RDUN WILL BE ENABLED, ENTER Y(ES) to CONFIRM, N(O) TO ABORT." When disk redundancy is successful, both CMDU states are Enabled. The CMDU enabled first is active, and the second is standby.

ENL IOP Enable the IOP on the active Core. 61C/81-19

The LED is turned off on the IOP faceplate. The CMDUs are restored to the state they were in prior to the IOP being changed. However, if the cable between the IOPs is not connected, the CMDUs remain inaccessible until the cable is reattached.

Note: If both CMDUs were enabled, a file level synchronization check is performed prior to restoring states. If the synchronization (disk redundancy) does not exist, only the previously active CMDU is enabled.

IDC Print the IDs of both CMDUs and the active IOP. 61C/81-19

The printout appears in the following format: pppppppppp rrssss cccccccc
pppppppppp = PEC code
rr = Release number
ssss = Serial number
cccccccc = Comments (not always be present)

IDC CMDU n Print the ID for the CMDU. 61C/81-19

n = Core number (0 or 1) If n is not entered, card ID information is printed for both CMDUs.

IDC IOP Print out the ID of the active IOP. 61C/81-19

STAT Get status both IOPs and CMDUs. 61C/81-19

For the IOP, the Enabled or Disabled, and Active or Standby state is printed. Status is given for active and standby IOPs.
For the CMDU, Disk redundancy, enabled/disabled, and active/standby status are printed.

Note: The status given for the standby IOP is a software status as it was last seen when that IOP was active. No hardware status is given because the standby IOP cannot be accessed.

If the status of the IOP or CMDU is disabled, one of the following OOS messages may appear.

IOP Out of Service
Unexpected interrupt fault monitor threshold exceeded
Fault interrupt fault monitor threshold exceeded
Processor exception fault monitor threshold exceeded
ASIC interrupt fault monitor threshold exceeded
Unrecognized error fault monitor threshold exceeded
General event interrupt fault monitor threshold exceeded
IOP not responding
IOP disabled by craftsperson
IOP responding but cannot be enabled

CMDU Out of Service
Hard disk read error
Hard disk write error
Hard disk drive error
CMDU does not respond, the disk drive may be missing
CMDU has been disabled by the craftsperson
CMDU is disabled because the IOP is out of service
Hard disk is inaccessible
CMDUs are not synchronized
CMDU status is mismatched because of a software error
CMDU is in split mode
CMDU is out of split mode
No access to hard disk (HDK)

LD137

STAT CMDU n

Get status of the CMDU. 61C/81-19

n = Core number (0 or 1) If n is not entered, the status for both CMDUs is printed.

If the CMDU is disabled, one of the following CMDU OOS reason may appear.
Hard disk read error
Hard disk write error
Hard disk drive error
CMDU does not respond, the disk drive may be missing
CMDU has been disabled by the craftsperson
CMDU is disabled because the IOP is out of service
Hard disk is inaccessible
CMDUs are not synchronized
CMDU status is mismatched because of a software error
CMDU is in split mode
CMDU is out of split mode
No access to hard disk (HDK)

STAT IOP Provide status of the active IOP. 61C/81-19

This command prints out the status whether the IOP is enabled or disabled. If it is disabled, the OOS reasons are printed. The following IOP OOS mesasges may appear.

IOP Out of Service
Unexpected interrupt fault monitor threshold exceeded
Fault interrupt fault monitor threshold exceeded
Processor exception fault monitor threshold exceeded
ASIC interrupt fault monitor threshold exceeded
Unrecognized error fault monitor threshold exceeded
General event interrupt fault monitor threshold exceeded
IOP not responding
IOP disabled by craftsperson
IOP responding but cannot be enabled

SWAP Swap the CMDUs. 61C/81-19

After this command is issued, the active CMDU becomes standby, and the standby CMDU becomes active. This command is performed only when disk redundancy is enabled.

SYNC Synchronize the hard disks on both CMDUs. 61C/81-19

This is a sector level synchronization. It is performed by copying the data from the active CMDU to the disabled CMDU, sector by sector. This can only be done when one CMDU is active and one is disabled. The confirmation prompt appears when the system is ready to do the copying, "CMDU n ACTIVE HDK WILL BE COPIED AND DISK RDUN WILL BE ENABLED. ENTER Y TO CONFIRM."

Synchronization may take as long as 40 minutes. Progress reports appear on the TTY periodically.

TEST CMDU n

Perform test for the CMDU. 61C/81-19

This test includes a self-test, read/write capability test, and disk access test on both hard and floppy disks for this CMDU. While the test is in progress, the CMDU is inaccessible.
n = Core number (0 or 1) You must enter the Core number.

A disk must be in the floppy drive when this test is run. If the floppy disk is not present, the floppy disk test will fail. The hard disk test will not be affected.

TEST CMDU n HDK, FDK

Perform test on the Hard or Floppy Disk. 61C/81-19

This test includes a self-test, read/write capability test, and disk access test on either the hard or floppy disk drive for this CMDU. While the test is in progress, the CMDU is inaccessible.
n = Core number (0 or 1) You must enter the Core number.

A disk must be in the floppy drive to test it. If a floppy disk is not present, the floppy disk test will fail. The hard disk test will not be affected.

TEST IOP Perform the self test on the active IOP. 61C/81-19

The IOP must be disabled to perform this test.

TEST RDUN Perform file level checking on both hard disks. 61C/81-19

This test ensures that disk synchronization exists. It can only be performed when disk redundancy is enabled. If the test fails, a CIOD message appears, and disk redundancy is disabled.

While this test is in progress, the disk is inaccessible.

LD137

800 Core Input/Output Diagnostic

TEST SCSI	Test the SCSI cables. This test ensures the cable connections between the IOPs are present. Access to the CMDUs is tested as well. If the test is successful, OK is printed. If the test is unsuccessful, CIOD messages are printed to indicate the problem.	61C/81-19
TTY x	Test TTY x. Response is: ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789"#$%*!&()<>–.:,.? READY FOR INPUT Anything entered on the keyboard will be echoed until END is input.	61C/81-19