

DIGITAL CLOCK DISTRIBUTOR

500 SERIES

OPERATIONS

RELEASE 5.05.02

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1. GENERAL

1.01 This section provides procedures for operating Symmetricom’s Digital Clock Distributor (DCD) 500 System when equipped with an MIS card with a part number of 090-45018-05 or 090-45018-25F. The language used for the commands in this section is Transaction Language 1 (TL1).

1.02 Whenever this section is reissued, the reason for reissue will be given in this paragraph.

1.03 All product names, service marks, trademarks, and registered trademarks used in this document are the property of their respective owners.

1.04 The following abbreviations are used in this section:

ACI	Analog Clock Input
CI	Clock Input
CI-EA	Clock Input - E1 Analog
DCIM	Dual Clock Input Messaging
ECI	E1 Clock Input
GPS	Global Positioning System
GTI	GPS Timing Interface

GTR	GPS Timing Antenna/Receiver
LNC	Local Node Clock
MCA-5	Matrix Controller Automatic-5
MIS	Maintenance Interface, System
MRC	Multi-Reference Controller
PRS	Primary Reference Source
PSM	Precision Synchronization Monitor
TNC	Transit Node Clock
TNC-E	Transit Node Clock Enhanced
TO	Timing output
ST2	Stratum-2 Clock
ST2E	Stratum-2 Clock Enhanced
ST3	Stratum-3 Clock
ST3E	Stratum-3 Clock Enhanced
TOAA	Timing Output Analog Automatic
TOCA	Timing Output Composite Clock Automatic
TO-EA	Timing Output E1 Analog
TO-EAN	Timing Output E1 Analog 1:N
TOEA	Timing Output E1 Automatic
TOGA	Timing Output G.703 Automatic
TOLA	Timing Output Logic Level Automatic
TOTA	Timing Output T1 Automatic
TOTA-5	Timing Output T1 Automatic
TOTL	Timing Output T1 with LBO Automatic

2. TASKS

2.01 Table A lists the tasks for operating the DCD-500 System and the charts that show how to perform the tasks.

Table A. Tasks

TASK	CHART NUMBER	CHART TITLE
<ul style="list-style-type: none"> • Logon • Logoff 	1	Logon & Logoff
<ul style="list-style-type: none"> • Silence alarms • Display all current alarms in a shelf • Display current alarms of specified equipment • Display current conditions of all equipment in a shelf • Display current conditions of specified equipment • Display current alarms of specified ports • Display current conditions of specified ports • Display message log • Clear message log 	2	Alarms & Status
<ul style="list-style-type: none"> • Display access level of a single user • Display access level of all users • Assign user • Change password • Change user name, password & access level • Delete user 	3	Security
<ul style="list-style-type: none"> • Display communication parameters • Change communication parameters • Display communication connections • Connect communication port • Disconnect communication port • Drop DTR signal for 5 seconds 	4	Communication Ports
<ul style="list-style-type: none"> • Display date and time • Change date and time • Display memory bank being used for MIS card program • Change to alternate MIS card program • Delete card database in MIS card • Reset MIS card • Completely reset MIS card to factory settings • Display system name • Change system name • Display equipment 	5	System Configuration
<ul style="list-style-type: none"> • Enter and restore clock card • Enter and restore DCIM card • Enter and restore GTI card • Enter and restore MRC card and ports • Enter and restore PSM card and ports • Enter and restore timing output card and ports • Enter and restore MCA card 	6	Enter into the Database and Put In Service a Version 5 Card
<ul style="list-style-type: none"> • Restore clock card • Restore DCIM card • Restore GTI card • Restore MRC card • Restore PSM card • Restore timing output card • Restore MCA card 	7	Put a Version 5 Card in Service

Table A. Tasks (Contd)

TASK	CHART NUMBER	CHART TITLE
<ul style="list-style-type: none"> • Remove clock card • Remove DCIM card • Remove GTI card • Remove MRC card • Remove PSM card • Remove timing output card • Remove MCA card 	8	Take a Version 5 Card Out of Service
<ul style="list-style-type: none"> • Delete clock card • Delete DCIM card • Delete GTI card • Delete MRC card • Delete PSM card • Delete timing output card • Delete MCA card 	9	Delete a Version 5 Card from Database
<ul style="list-style-type: none"> • Enter clock card • Enter input card • Enter output card • Enter protection card • Enter PRS card 	10	Enter a Non-Version 5 Card in Database
<ul style="list-style-type: none"> • Edit clock card • Edit input card • Edit output card • Edit protection card • Edit PRS card 	11	Edit Non-Version 5 Card Information
<ul style="list-style-type: none"> • Delete clock card • Delete input card • Delete output card • Delete protection card • Delete PRS card 	12	Delete a Non-Version 5 Card from Database
<ul style="list-style-type: none"> • Display parameters for all cards • Display clock quality level • Change clock quality level • Display DCIM card type • Display GTI card parameters • Change GTI card parameters • Display MRC card parameters • Change MRC card parameters • Display timing output card parameters • Change timing output card parameters • Display MCA card parameters • Change MCA card parameters 	13	Version 5 Card Configuration

Table A. Tasks (Contd)

TASK	CHART NUMBER	CHART TITLE
<ul style="list-style-type: none"> • Enter DCIM card input port • Enter MRC card input port • Restore input port • Display performance monitoring data • Clear performance monitoring data • Clear performance monitoring data for DCIM, MRC, & PSM cards • Display framing, priority, signal type, & reference condition of DCIM cards • Change framing, priority, signal type, & reference condition of DCIM cards • Display DCIM card protection mode • Change DCIM card protection mode • Display framing, priority, reference type, & signal type of MRC card • Change framing, priority, reference type, & signal type of MRC card • Display threshold • Change threshold • Display alarm severity • Change alarm severity • Display message type for autonomous port alarms • Set message type for autonomous port alarms • Remove port • Delete port 	14	Reference Input Ports
<ul style="list-style-type: none"> • Enter port • Restore port • Display performance monitoring data • Clear performance monitoring data • Clear performance monitoring data for DCIM, MRC, & PSM cards • Display framing & signal type • Change framing & signal type • Display threshold • Change threshold • Display alarm severity • Change alarm severity • Display message type for autonomous port alarms • Set message type for autonomous port alarms • Remove port • Delete port 	15	Monitor Input Ports
<ul style="list-style-type: none"> • Enter port • Restore port • Display signal type • Change signal type • Display message type for autonomous port alarms • Set message type for autonomous port alarms • Remove port • Delete port 	16	Timing Output Ports
<ul style="list-style-type: none"> • Display source mode for timing output cards • Change source mode for timing output cards • Select source for timing output cards • Release source for timing output cards 	17	Synchronization Source for Timing Output Cards

Table A. Tasks (Contd)

TASK	CHART NUMBER	CHART TITLE
<ul style="list-style-type: none"> • Display output protection type for timing output cards • Change output protection type for timing output cards • Switch to protection timing output card • Release protection timing output card 	18	Protection Control for Version 5 Timing Output Cards
<ul style="list-style-type: none"> • Display DCIM card protection mode • Change DCIM card protection mode • Force a specified DCIM input port to be used • Release a DCIM input port 	19	DCIM Protection Control
<ul style="list-style-type: none"> • Copy card database from MIS card to other cards • Copy card database from other cards to MIS card 	20	Copy Database of Version 5 Cards
<ul style="list-style-type: none"> • Copy program from external source to MIS card 	21	Copy Program from External Source to MIS Card
<ul style="list-style-type: none"> • Display GPS statistics 	22	GPS Information

3. COMMAND CONVENTIONS

3.01 For a more complete description of the TL1 language syntax and language structure, refer to the User's Guide section of this manual.

3.02 The following conventions are used in the input and response messages:

- < > enclose a parameter
- [] enclose an optional parameter
- { } enclose multiple parameters, one of which must be selected (or in a response, one of which will appear)
- | separate parameters enclosed by the { } symbols
- " " enclose a report of an alarm, event, AID or log
- /* */ enclose response text; may include spaces, carriage returns, line feeds and other characters and symbols which, as pertains to the TL1 language, are to be ignored

- :
 - ,
 - &
 - &&
 - . . .
 - ;
 - >
- separates parameter blocks
- separates parameters within a block
- indicates "and" (1&9 means 1 and 9)
- indicate a range (1&&9 means 1 through 9)
- indicates the line may repeat one or more times
- terminates a command and causes execution
- indicates a message continuation (message blocks are limited to 4096 bytes)

Note: When listing parameter values that can be used in a command, a range of numbers is shown as a–b, where any number a, b, or any number between a and b can be entered. (Example: 1–12 indicates any number from 1 through 12 inclusive.)

4. SHELF ADDRESSING

4.01 A particular shelf in a particular system is addressed through the tid. All commands are directed to the master shelf of the system unless an expansion or remote shelf identifier is added to the tid. In a response, the sid identifies the shelf that is reporting the condition.

Note: There are a few commands which have a <shelf> field which must be entered to direct a command at a particular shelf. This is in addition to the <aid> or <tid>.

4.02 The shelf types are defined as follows:

Master: The shelf that is the communications interface for the system and contains the highest-quality clocks in the system.

Expansion: A shelf that has no input cards, no clock cards, and is timed from the master shelf via a ribbon cable (generally collocated with the master shelf).

Remote: A shelf that contains timing input cards that use composite clock timing signals from the master or an expansion shelf (generally located distant from the master shelf).

4.03 When directing a command to a shelf in a system without remote shelves (which can have up to three expansion shelves), modify the aid or tid (if necessary) as follows.

On MIS cards with switch SW1-6 in the down position (Input Format 2) (factory setting for 090-45018-05 MIS cards):

<aid>	= Master shelf or LPR shelf
E1-<aid>	= Expansion shelf #1
E2-<aid>	= Expansion shelf #2
E3-<aid>	= Expansion shelf #3

On 090-45018-25F MIS cards with switch SW1-6 in the up position (Input Format 1) (does not apply to 090-45018-05 MIS cards):

<tid>	= Master shelf or LPR shelf
-------	-----------------------------

<tid>E1	= Expansion shelf #1
<tid>E2	= Expansion shelf #2
<tid>E3	= Expansion shelf #3

4.04 If the system includes a remote shelf, a maximum of two expansion shelves can be collocated with the master shelf, and no expansion shelves can be timed from the remote shelf. Therefore, modify the aid or tid (if necessary) as follows:

On MIS cards with switch SW1-6 in the down position (Input Format 2) (factory setting for 090-45018-05 MIS cards):

<aid>	= Master shelf or LPR shelf
E1-<aid>	= Expansion shelf #1
E2-<aid>	= Expansion shelf #2
E3-<aid>	= Remote shelf

On 090-45018-25F MIS cards with switch SW1-6 in the up position (Input Format 1) (does not apply to 090-45018-05 MIS cards):

<tid>	= Master shelf or LPR shelf
<tid>E1	= Expansion shelf #1
<tid>E2	= Expansion shelf #2
<tid>E3	= Remote shelf

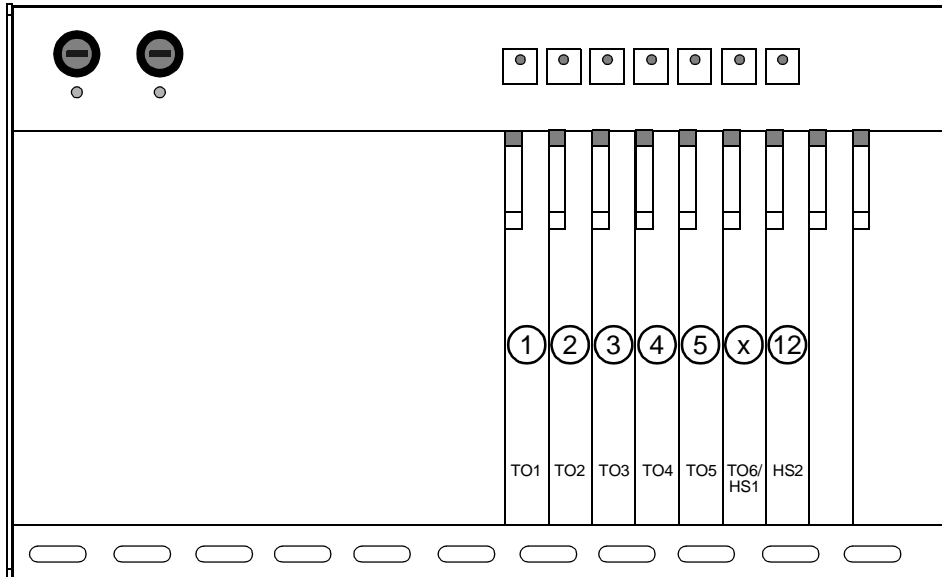
Note: In a system with a remote shelf, E3 is used to identify the remote shelf even if there are no expansion shelves.

Note: To allow the master and remote shelf to communicate (transfer commands and responses), the COM3 port on the master shelf must be connected to the COM3 port on the remote shelf.

4.05 The tid can be omitted if the system is being addressed locally or if there is only one system that can be accessed. Otherwise, the tid must be included to ensure that the correct shelf is addressed.

5. TO AND PSM CARD ADDRESSING

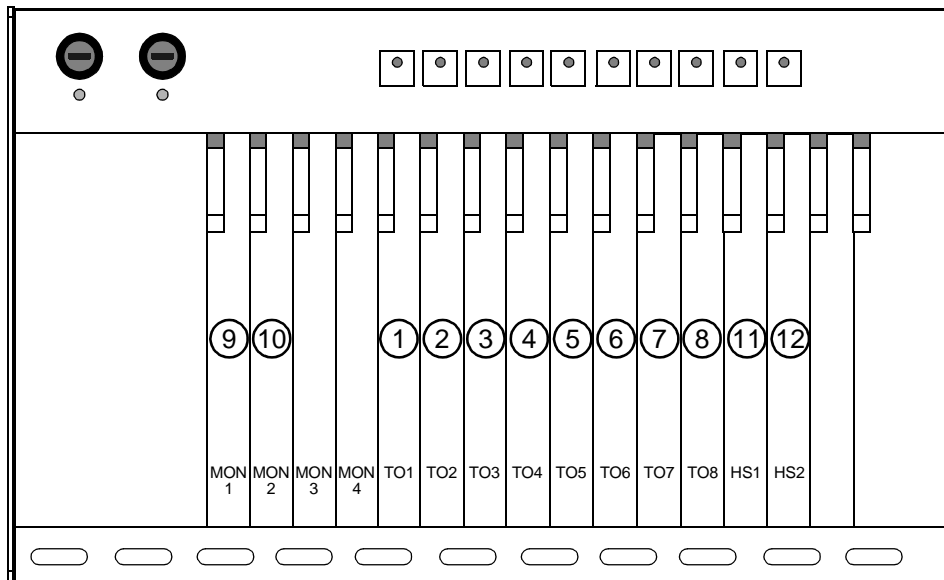
5.01 How TO and PSM cards are addressed is shown in Figures 1 through 3. The notes in the figures provide important addressing details.



Notes:

1. The circled numbers are the addresses of the TO cards.
2. TO slots 1 through 3 may not be accessible depending on the clock type installed.
3. TO cards in TO slots 1 through 5 are addressed as the TO slot where installed (TO1, TO2, etc).
4. The TO card in slot HS2 is addressed as TO12.
5. With no TO card protection, the TO card in the TO6/HS1 slot is addressed as TO6 (SW6 and SW7 on the shelf backplane set to 6:1) or as TO11 (SW6 and SW7 set to 5:2).
6. With 1:N TO card protection, the TO card in the TO6/HS1 slot is addressed as TO6 (one hot spare TO card and SW6 and SW7 on the shelf backplane are set to 6:1) or as TO11 (two hot spare TO cards and SW6 and SW7 are set to 5:2).
7. Notes 1 through 6 also apply to PSM cards with the following exceptions:
 - Use PSM1 instead of TO1, etc.
 - PSM cards are double-wide cards, and therefore cannot be installed in adjacent slots.
 - PSM cards are not allowed in the TO6/HS1 slot when 1:N protection is used.
 - PSM cards are not allowed in the TO3 or HS2 slot.

Figure 1. TO and PSM Card Addressing in a DCD-519 Master Shelf



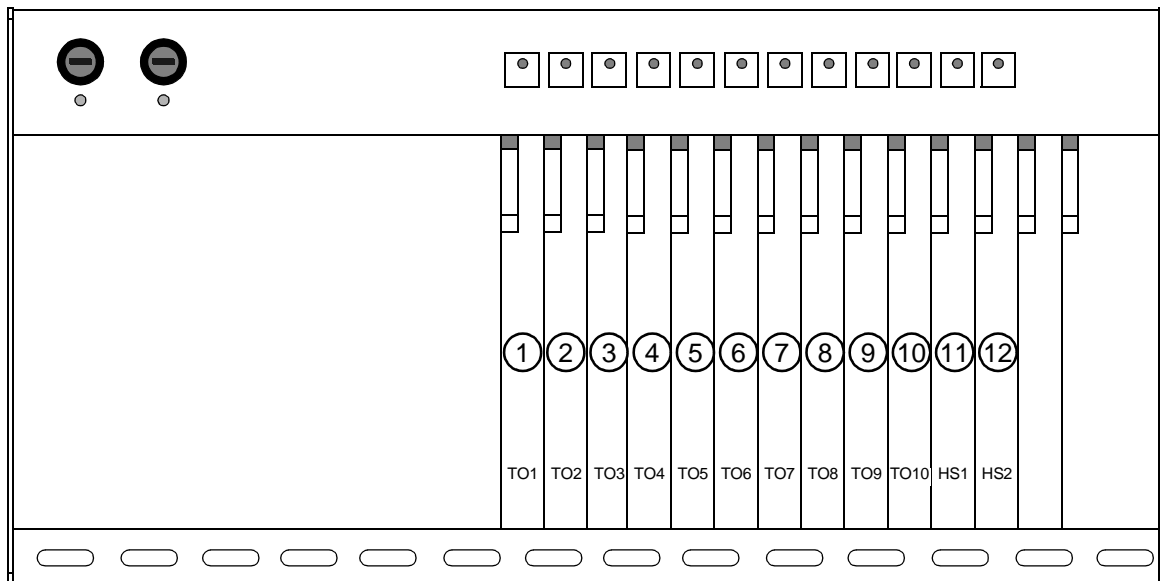
TO Card Notes:

1. The circled numbers are the addresses of TO cards (except 9 and 10).
2. TO cards in slots 1 through 8 are addressed by the TO slot where installed (TO1, TO2, etc).
3. A TO card in slot HS1 is addressed by TO11, and a TO card in slot HS2 is addressed by TO12.
4. TO cards are not allowed in slots MON1 and MON2.

PSM Card Notes:

1. The circled numbers are the addresses of PSM cards (except 12).
2. PSM cards are double-wide cards, and therefore cannot be installed in adjacent slots.
3. PSM cards in slots 1 through 8 are addressed by the TO slot where installed (a PSM card in slot TO1 is PSM1, a PSM card in slot TO2 is PSM2, etc).
4. A PSM card in slot MON1 is addressed by PSM9, and a PSM card in slot MON2 is addressed by PSM10.
5. PSM cards are not allowed in slot MON3, MON4, TO6, or HS2.
6. PSM cards are not allowed in slot HS1 with 1:N protection.
7. A PSM card in slot HS1 is addressed by PSM11.

Figure 2. TO and PSM Card Addressing in a DCD-519 Expansion Shelf



TO Card Notes:

1. The circled numbers are the addresses of TO cards.
2. TO cards in slots 1 through 10 are addressed by the TO slot where installed (TO1, TO2, etc.).
3. Only TO-EA cards can be addressed in the HS1 and HS2 slots. A TO-EA card in slot HS1 is addressed by TO11, and a TO-EA card in slot HS2 is addressed by TO12.

PSM Card Notes:

1. The circled numbers are the addresses of PSM cards (except 12).
2. PSM cards are double-wide cards, and therefore cannot be installed in adjacent slots.
3. PSM cards in slots 1 through 10 are addressed by the TO slot where installed (a PSM card in slot TO1 is PSM1, a PSM card in slot TO2 is PSM2, etc).
4. PSM cards are not allowed in slot HS1 with 1:N protection.
5. PSM cards are not allowed in the TO3 or HS2 slot.

Figure 3. TO and PSM Card Addressing in a DCD-523 Shelf

6. VERSION 5 VS. NON-VERSION 5 CARDS

6.01 Version 5 cards are those cards which can do the following:

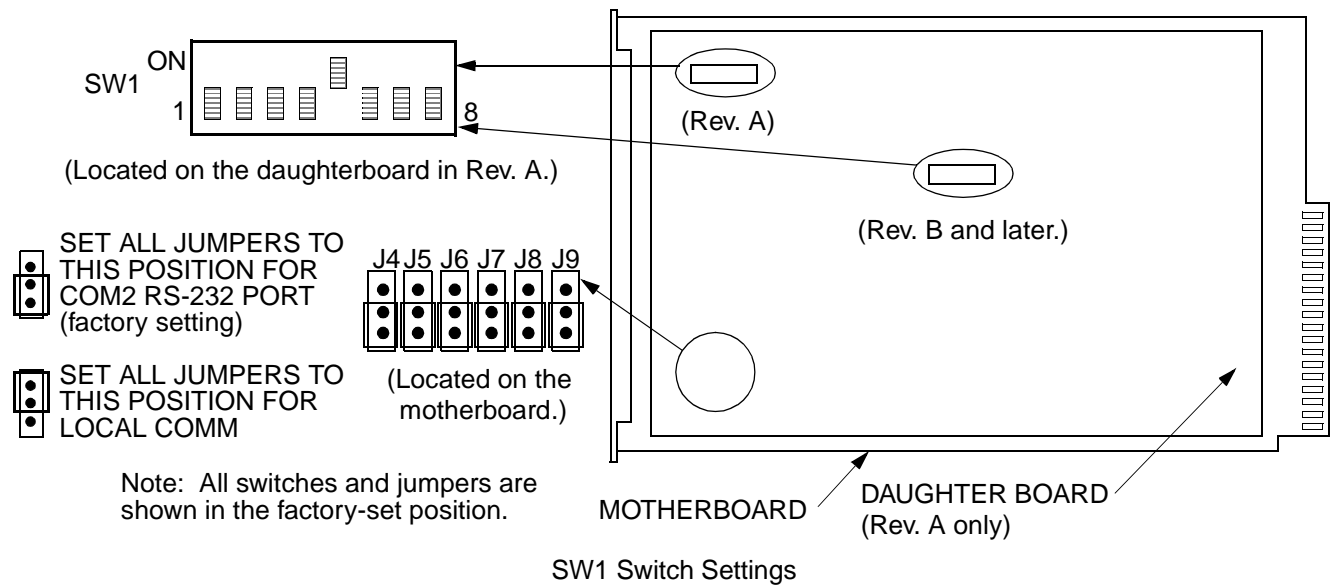
- Report configuration information and be configured via commands
- Report status information
- Report inventory information

6.02 Table B lists the Version 5 cards supported by MIS version 5.05.02; all other cards are non-Version 5 cards. Non-Version 5 cards do not contain inventory information and must be manually entered using the ENT-INVENTORY command.

6.03 Some non-Version 5 cards are incompatible with Version 5 cards. Refer to the manual that came with the equipment.

Table B. Version 5 Cards Supported by MIS Version 5.05.02

CARD	PART NUMBER
INPUT CARDS	
DCIM-EA	090-45010-59
MRC-EA	090-45010-56 090-45010-57
MRC-T	090-45010-53 090-45010-58
MONITOR CARDS	
PSM-EA	090-45025-54
PSM-T	090-45025-51
PSM-T5S	090-45025-53
TIMING OUTPUT CARDS	
TO-EAN	090-45029-56
TOTA-5	090-45012-52
PROTECTION CARDS	
MCA-5M	090-45015-55
LPR SHELF CARDS	
GTI	090-42140-13, software revision E or higher 090-42140-14, software revision E or higher

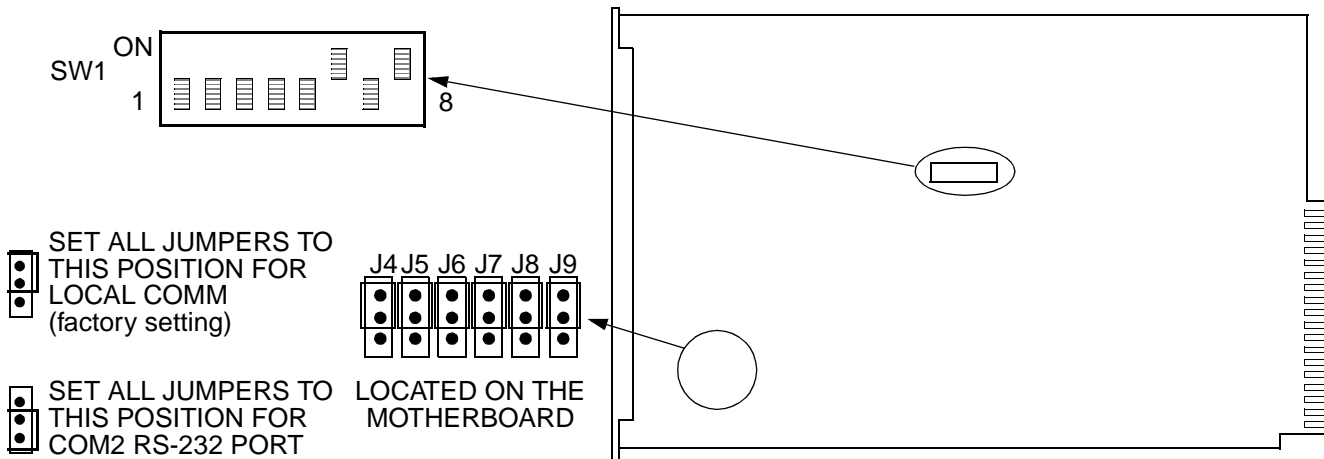


SW1 Section	Position	Description	Factory Setting
1 (Note 1)	On	1200 Baud	—
	Off	9600 Baud	X
2 and 3 (Note 1)	2=on, 3=any	Odd Parity	—
	2=off, 3=on	Even Parity	—
	2=off, 3=off	No Parity	X
4	On	Password protection enabled	—
	Off	Password protection disabled	X
5	On	When power is applied (or recycled), the MIS card downloads its configuration database to the Version 5 cards in the shelf. Only those Version 5 cards in the same slot and with the same serial number as the configuration database receive the download.	X
	Off	The MIS card does not download its configuration database (not recommended).	—
6	Off	Factory set. Do not change.	X
7 (Notes 2, 3)	On	Installed in a remote system or expansion shelf	—
	Off	Installed in a master shelf	X
8	Off	Factory set. Do not change.	X

Notes:

- Sections 1, 2, and 3 set the RS-232 baud rate and parity for COM2 and the LOCAL COMM port only.
- If installing an MIS in a remote system, be sure the master-to-remote cable is not connected, and the expansion shelves are not connected.
- To transfer information between an MIS card in a master system and an MIS card in a remote system, connect the COM 3 ports between the two master shelves.

Figure 4. 090-45018-05 MIS Card Switch and Jumpers



SW1 Switch Settings

SW1 Section	Position	Description	Factory Setting
1 (Note 1)	On	1200 Baud	—
	Off	9600 Baud	X
2 and 3 (Note 1)	2=on, 3=any	Odd Parity	—
	2=off, 3=on	Even Parity	—
	2=off, 3=off	No Parity	X
4	On	Password protection enabled	—
	Off	Password protection disabled	X
5	On	When power is applied (or recycled), the MIS card downloads its configuration database to the Version 5 cards in the shelf. Only those Version 5 cards in the same slot and with the same serial number as the configuration database receive the download.	—
	Off	The MIS card does not download its configuration database.	X
6	On	Factory set. Do not change.	X
7 (Notes 2, 3)	On	Installed in a remote system or expansion shelf	—
	Off	Installed in a master shelf	X
8	On	Factory set. Do not change.	X

Notes:

- Sections 1, 2, and 3 set the RS-232 baud rate and parity for COM2 and the LOCAL COMM port only.
- If installing an MIS in a remote system, be sure the master-to-remote cable is not connected, and the expansion shelves are not connected.
- To transfer information between an MIS card in a master system and an MIS card in a remote system, connect the COM 3 ports between the two master shelves.

Figure 5. 090-45018-25F MIS Card Switch and Jumpers

6.04 Certain Version 5 cards and ports can be entered in the database, using the complete TL1 command sequence, or an abbreviated method can be used. Refer to each command for the available command formats.

Complete Command Sequence

Card installed: when the card is first installed, all outputs are enabled, and the card and ports perform their prescribed function (if enabled by card switches). In this state, the card cannot communicate with the MIS card; therefore, card information and alarm reporting is not supported by the MIS card.

Card entered: after the card is entered with the ENT-EQPT command (including the card parameters), the card information and configuration is copied to the system database in the MIS card where it is stored in nonvolatile memory; outputs may be squelched (depending on the card configuration status) and alarms are not reported.

Port entered: (applies only to input cards, monitor cards, and timing output cards) after the port is entered with the ENT-PORT command, the entered port configuration is copied to the system database in the MIS card and stored in nonvolatile memory; outputs may be squelched (depending on the card configuration status) and alarms are not reported.

Card restored: after the card is restored with the RST-EQPT command, the card performs all its prescribed equipment-related functions. The timing input and output ports of the cards remain out of service. Port-related status and alarm reporting is inhibited.

Port restored: (applies only to input cards, monitor cards, and timing output cards) after the port is restored via the RST-PORT command, the card and all provisioned inputs and outputs are in service.

Port removed: (applies only to input cards, monitor cards, and timing output cards) after the port is removed via the RMV-PORT command, the card performs all its prescribed functions, except that the removed port is squelched, and port-related alarms are not reported.

Card removed: after the card is removed via the RMV-EQPT command, the card no longer performs its prescribed functions; outputs are squelched, and equipment and port alarms are not reported.

Port deleted: (applies only to input cards, monitor cards, and timing output cards) after the port is deleted via the DLT-PORT command, the card performs all its prescribed functions, except that the deleted port is removed from the system database; outputs are squelched and alarms are not reported.

Card deleted: after the card is deleted via the DLT-EQPT command, the card is erased from the system database; outputs are squelched and alarms are not reported.

Abbreviated Command Sequence

6.05 To use the abbreviated sequence, the ENT-EQPT command for the desired Version 5 card is entered without any parameters as follows:

```
ENT-EQPT:[<tid>]:<aid>:<ctag>;
```

6.06 The ENT-EQPT command without parameters is the same as using the following commands: ENT-EQPT, ENT-PORT, RST-EQPT, and RST-PORT. The card will be in-service, and ports will be in or out of service as determined by card switch settings.

A. Non-Version 5 Cards

6.07 Non-Version 5 cards are fully functional when plugged into the shelf. To enter information about a non-Version 5 card into the database, use the ENT-INVENTORY command.

7. SECURITY

7.01 Security is controlled by a combination of a switch on the MIS card, and by assigning users with passwords and particular access levels. To enable security, the switch must be set correctly and all users must have non-null passwords. Once security is enabled, access to commands is controlled by assigning levels to users.

A. Switch Setting

7.02 To enable security, section 4 of SW1 on the MIS card must be set to the ON position. From the factory, the switch is set for no security (section 4 is in the OFF position). While in this configuration, all commands can be accessed without logging onto the system.

7.03 For all the switch settings on the MIS card, refer to the manual that came with the shelf where the card is installed.

B. Command Levels

7.04 Security consists of restricting access to commands. Restriction is accomplished by requiring a particular access level for each command. The access level is listed with each command. The access levels are from 1 (lowest) to 5 (highest). Each user is assigned an access level allowing access to all commands at that level and below. A user with level 5 can access all commands.

7.05 As shipped from the factory, one user is assigned with a user name of “super”, a password of “sparky”, and an access level of 5. Up to 16 additional users can be assigned (for a total of 17 users) with any access levels.

8. DATABASE DOWNLOAD

8.01 Database downloading is the process of copying card configuration information from the nonvolatile memory in the MIS card to the Version 5 cards.

Database downloading is used to automatically configure Version 5 cards, which do not have nonvolatile memory, following a power cycle of the card or the shelf (if the cards were previously entered in the system).

8.02 Section 5 of switch SW1 on the MIS card controls whether the card database configuration is downloaded from the MIS card to the Version 5 cards. To enable downloading, section 5 must be set to ON. When enabled, the database download will occur when the MIS card is pulled out, then reinstalled in the shelf, or when the shelf is power cycled (does not require a craft terminal). If the MIS database does not match the card database, a database mismatch will occur and must be resolved. (The CPY-MEM command must be used to copy the card databases to the MIS card, or to copy the MIS card database to the cards.)

8.03 If section 5 of SW1 is set to OFF, the card operation will be based on card switch settings or previously provisioned options.

8.04 If a Version 5 card is replaced, the new card will automatically be entered in the system database.

9. PROVISIONING SEQUENCE

9.01 Use the steps in Table C to put a system in service. If equipment must be removed, use the steps in Table D. Table E lists the steps for adding and removing ports.

Caution: *Using an EDIT command on an in-service input or output card will cause a service interruption. The interruption will occur because the transmission operating parameters are redefined and reinitialized.*

10. FACTORY SETTINGS

10.01 For a list of factory settings, refer to Table F.

Table C. Steps to Put Equipment into Service and into Database

STEP	PROCEDURE	COMMAND
1	Insert cards into shelf	N/A
2	Log on	ACT-USER
3	Set communication parameters (Note 1)	ED-COM
4	Enter current date and time (Note 2)	ED-DAT
5	Enter system/shelf identification	SET-SID
6	Assign users	ENT-USER-SECU
7	Enter card into system database (Note: for some Version 5 cards, this command can enter and restore the card, and enter and restore all ports on the card – refer to the command for details)	ENT-EQPT
8	Enter port into system database	ENT-PORT
9	Put card in service	RST-EQPT
10	Put ports in service	RST-PORT
11	Change card parameters (if required)	ED-EQPT
12	Change port parameters (if required)	ED-PORT
13	Enter non-Version 5 cards into the database	ENT-INVENTORY
14	Set source mode (TO cards only)	SET-ATTR-CONT
15	Set output protection type (TO cards only)	SET-ATTR-CONT
16	Set notification codes for port events (DCIM, MRC, and PSM cards)	SET-ATTR-PORT
17	Set threshold level for monitored parameters (DCIM, MRC, and PSM cards)	SET-TH-PORT
18	Log off	CANC-USER
<p>Notes:</p> <ol style="list-style-type: none"> 1. If any communication parameters are changed which causes loss of communication, set the terminal parameters to match the set parameters, then restart the terminal and wait 30 seconds. 2. Failure to use the ED-DAT command to set the current date and time on initial power-up will result in erroneous time stamps on alarms and events reported by the MIS card. 		

Table D. Steps to Delete Equipment from Service and from Database

STEP	PROCEDURE	COMMAND
1	Log on	ACT-USER
2	Take ports out of service (MRC, PSM, and TO cards only)	RMV-PORT
3	Take cards out of service (Version 5 cards only)	RMV-EQPT
4	Delete ports from system database (Version 5 MRC, PSM, and TO cards only)	DLT-PORT
5	Delete cards from system database (Version 5 cards only)	DLT-EQPT
6	Pull card out of shelf	(None)
7	Log off	CANC-USER

Table E. Steps for Ports Only

STEP	PROCEDURE	COMMAND
1	Enter port into database	ENT-PORT
2	Put port in service	RST-PORT
3	Take port out of service	RMV-PORT
4	Delete port from database	DLT-PORT

Table F. Factory Settings

COMMAND	ITEM	PARAMETER	FACTORY SETTING
SECURITY			
ED-USER-SECU	User name	<uid>	super (has an access level of 5)
	Password	<pid>	sparky
SET-SID	Source identifier	<sid>	TELECOM
MONITORING THRESHOLDS			
SET-TH-PORT	BPV	<thlev>	13,340
	CRC		13,340
	OOF		1
	MTIE1		300 ns
	MTIE2		300 ns
	MTIE4		300 ns
	MTIE10		300 ns
	MTIE16		350 ns
	MTIE20		350 ns
	MTIE40		400 ns
	MTIE64		450 ns
	MTIE100		550 ns
	MTIE128		650 ns
	MTIE200		800 ns
	MTIE400		1000 ns
	MTIE512		1000 ns
	MTIE900		1000 ns
	MTIE1000		1000 ns
	MTIE2000		1000 ns
	MTIE4000		1000 ns
MTIE10000	1100 ns		
MTIE20000	1200 ns		
MTIE40000	1400 ns		
MTIE86400	1850 ns		

Table F. Factory Settings (Contd)

COMMAND	ITEM	PARAMETER	FACTORY SETTING
SET-TH-PORT (contd)	TDEV1	<thlev> (contd)	100 ns
	TDEV2		100 ns
	TDEV3		100 ns
	TDEV4		100 ns
	TDEV5		100 ns
	TDEV6		100 ns
	TDEV7		100 ns
	TDEV8		100 ns
	TDEV9		100 ns
	TDEV10		100 ns
	TDEV16		125 ns
	TDEV20		140 ns
	TDEV30		175 ns
	TDEV40		200 ns
	TDEV50		225 ns
	TDEV60		245 ns
	TDEV64		255 ns
	TDEV70		265 ns
	TDEV80		285 ns
	TDEV90		300 ns
	TDEV100		315 ns
	TDEV128		360 ns
	TDEV200		450 ns
	TDEV300		550 ns
	TDEV400		635 ns
	TDEV500		710 ns
TDEV600	775 ns		
TDEV700	840 ns		
TDEV800	895 ns		
TDEV900	950 ns		
TDEV1000	1000 ns		

Table F. Factory Settings (Contd)

COMMAND	ITEM	PARAMETER	FACTORY SETTING
SHELF FUNCTION			
SET-ATTR-CONT	Shelf function	<conttype>	RVRT
DCIM CARD FUNCTION			
SET-ATTR-CONT	Card function	<conttype>	Stand-alone
NOTIFICATION CODE FOR EVENT			
SET-ATTR-PORT	Notification code	<conttype>	NA (all cards, all <conttype>)
MESSAGE TYPE FOR PORT ALARMS			
SET-REPTMODE-PORT	Message type	<modetype>	Reported as REPT-ALM-PORT messages

Table F. Factory Settings (Contd)

COMMAND	ITEM	PARAMETER	FACTORY SETTING
COMMUNICATIONS – MIS CARD 090-45018-05			
ED-COM (Notes 1 & 2)	Baud rate	<baud>	Port 1: 9600 Port 2: 9600 Port 3: 9600
	Monitoring mode	<monmsg>	Port 1: inhibited from viewing messages associated with other ports Port 2: inhibited from viewing messages associated with other ports Port 3: inhibited from viewing messages associated with other ports
	Keep alive	<keepalive>	Port 1: inhibited from sending out a COMPLD message Port 2: inhibited from sending out a COMPLD message Port 3: inhibited from sending out a COMPLD message
	Communication type	<comtype>	Port 1: terminal 1 Port 2: terminal 2 Port 3: terminal 1
	End-of-text character	<endoftext>	Port 1: 00 (no end-of-text character) Port 2: 00 (no end-of-text character) Port 3: 00 (no end-of-text character)
	Echo	<echo>	Port 1: echo inhibited Port 2: echo inhibited Port 3: echo inhibited
	Report alarm	<reptalm>	Port 1: alarm/event messages are allowed to be sent Port 2: alarm/event messages are allowed to be sent Port 3: alarm/event messages are allowed to be sent
	Hardware flow	<hwcontrol>	External equipment is inhibited from starting and stopping output messages by manipulating the clear-to-send (CTS) lead
	Software flow	<swcontrol>	User is inhibited from starting and stopping output messages by using Control-s and Control-q key sequences
	Duration	<dur>	User is logged off if no activity occurs for 15 minutes

Table F. Factory Settings (Contd)

COMMAND	ITEM	PARAMETER	FACTORY SETTING
COMMUNICATIONS – MIS CARD 090-45018-25F			
ED-COM (Notes 1 & 2)	Baud rate	<baud>	Port 1: 9600 Port 2: 9600 Port 3: 9600
	Monitoring mode	<monmsg>	Port 1: Allows viewing messages associated with other ports Port 2: inhibited from viewing messages associated with other ports Port 3: inhibited from viewing messages associated with other ports
	Keep alive	<keepalive>	Port 1: Allows sending out a COMPLD message every 15 minutes to 20 minutes Port 2: inhibited from sending out a COMPLD message Port 3: inhibited from sending out a COMPLD message
	Communication type	<comtype>	Port 1: terminal Port 2: terminal Port 3: terminal
	End-of-text character	<endoftext>	Port 1: 19 (no end-of-text character) Port 2: 00 (no end-of-text character) Port 3: 00 (no end-of-text character)
	Echo	<echo>	Port 1: echo allowed Port 2: echo allowed Port 3: echo allowed
	Report alarm	<reptalm>	Port 1: alarm/event messages are allowed to be sent Port 2: alarm/event messages are allowed to be sent Port 3: alarm/event messages are allowed to be sent
	Hardware flow	<hwcontrol>	External equipment is inhibited from starting and stopping output messages by manipulating the clear-to-send (CTS) lead
	Software flow	<swcontrol>	User is inhibited from starting and stopping output messages by using Control-s and Control-q key sequences
Notes:			
1. The baud rate for port 2 can only be changed by strap settings on the MIS card.			
2. Communication parameters which cannot be changed are: character bits = 8 and start bits = 1.			

11. OPERATIONAL CONSIDERATIONS

11.01 Operational considerations are listed in Table G.

Table G. Operational Considerations

ITEM	CONSIDERATION
1	All systems are shipped from the factory with a <sid> of TELECOM. In multi-system installations, use the SET-SID command to set a unique sid for each system before entering other commands.
2	Upon initial installation of the MIS card, it is recommended that the date and time be set using the ED-DAT command to allow for proper event correlation. If the MIS card is being installed in a GPS system, the user need only supply the local time to the nearest hour (minutes and seconds will be set automatically).
3	On the shelf, clock input card slots and clock card slots are labeled A and B. In the commands and responses, these cards are designated 1 and 2. For example, input 4 of an MRC card in slot A is designated MRC-1-4 in the commands and responses.
4	PSM cards can be installed in TO slots 1 through 11. The addressing for the PSM cards is defined by the TO slot where the PSM card is located.
5	<p>If a GTI card is removed from the shelf without using appropriate commands or is removed from the shelf because it is not accepting commands from the MIS card, wait for the following message to appear before inserting the GTI card: UNEQUIPPED: IMPROPER CARD REMOVAL OR COMM FAILURE. This may take up to 6 minutes.</p> <p><i>Caution: If the card is inserted before the message appears, the card configuration set by TL1 commands will be invalidated, and the card will be configured according to its switch settings.</i></p>

Chart 1. Logon & Logoff

TASK	PROCEDURE
	<p>This chart provides the steps for logging on and logging off the System. The user name and password must have been assigned using the ENT-SECU-USER command unless the factory-supplied user name (super) and password (sparky) are being used. After a period of inactivity (set in the ED-COM command), the user is automatically logged off.</p> <p>Note: The user name and password are case (uppercase/lowercase) sensitive and must be entered exactly as assigned.</p>
Logon	<p>Access level 1 is required to use this command. Enter:</p> <pre>ACT-USER:[<tid>]:<uid>:<ctag>::<pid>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Logoff	<p>Access level 1 is required to use this command. Enter:</p> <pre>CANC-USER:[<tid>]:<uid>:<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 2. Alarms & Status

TASK	PROCEDURE
<p>This chart provides the steps for silencing audible alarms, and for displaying alarms, conditions, and messages.</p>	
<p>Silence Alarms</p>	<p>Access level 1 is required to use this command. Enter:</p> <pre>OPR-ACO-ALL:[<tid>]:[<shelf>]:<ctag>;</pre> <p>shelf = shelf to which the command is directed: (null) = master shelf E1 = expansion shelf 1 E2 = expansion shelf 2 E3 = expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Display All Current Alarms in a Shelf</p>	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-ALM-ALL:[<tid>]:<aid>:<ctag>;</pre> <p>aid = SHELF</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD <aid>:<ntfcncde>,<condtype>,<service effecting>,<date>,<time>,,<conddescr>," ...</pre> <p>aid = see Table I ntfncde = notification code: CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported</p> <p>condtype = see Table I service effecting = the effect on service: SA = service effecting NSA = not service effecting</p> <p>date = date of the alarm time = time of the alarm conddescr = see Table I</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
<p>Display Current Alarms of Specified Equipment</p>	<p>Access level 1 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>RTRV-ALM-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = equipment: CLK-a = clock card (a = 1-2) GTI-a = GTI card (a = 1-2) MCA = MCA card MRC-a = MRC card (a = 1-2) PSM-a = PSM card (a = 1-11) SHELF = shelf (master shelf includes GTI) TO-a = TO card (a = 1-10)</p> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>RTRV-ALM-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = equipment: CLK-a = clock card (a = 1-2) DCIM-a = DCIM card (a = 1-2) GTI-a = GTI card (a = 1-2) MCA = MCA card MRC-a = MRC card (a = 1-2) PSM-a = PSM card (a = 1-11) SHELF = shelf (master shelf includes GTI) TO-a = TO card (a = 1-12) (1-10 for Version 5 TO cards)</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
Display Current Alarms of Specified Equipment (Contd)	<p>Response:</p> <p>If there are no alarms in the specified card, the format is:</p> <pre> <sid> <date> <time> M <ctag> COMPLD </pre> <p>If there is at least one alarm to report in the specified card, the format is:</p> <pre> <sid> <date> <time> M <ctag> COMPLD <aid>:<ntfcncde>,<condtype>,<service effecting>,<date>,<time>,,:<conddescr>," ... </pre> <p>aid = see Table I</p> <p>ntfcncde = notification code:</p> <ul style="list-style-type: none"> CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported <p>condtype = see typerep in Table I</p> <p>service effecting = the effect on service:</p> <ul style="list-style-type: none"> SA = service effecting NSA = not service effecting <p>date = date of the alarm</p> <p>time = time of the alarm</p> <p>conddescr = see Table I</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
Display Current Conditions of All Equipment in a Shelf	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-COND-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = SHELF (master shelf includes GTI)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD <aid>:<ntfcncde>,<typerep>,<service effecting>,<conddescr>," ...</pre> <p>aid = see Table I</p> <p>ntfcncde = notification code:</p> <ul style="list-style-type: none"> CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported <p>typerep = see Table A in the Input/Output Reference Guide section of this manual, and also see condtype in Table I</p> <p>service effecting = the effect on service:</p> <ul style="list-style-type: none"> SA = service effecting NSA = not service effecting <p>conddescr = see Table I</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
<p>Display Current Conditions of Specified Equipment</p>	<p>Access level 1 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>RTRV-COND-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = card:</p> <ul style="list-style-type: none"> CLK-a = clock card (a = 1-2) GTI-a = GTI card (a = 1-2) MRC-a = MRC card (a = 1-2) PSM-a = PSM card (a = 1-11) TO-a = TO card (a = 1-10) <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>RTRV-COND-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = equipment:</p> <ul style="list-style-type: none"> CLK-a = clock card (a = 1-2) DCIM-a = DCIM card (a = 1-2) GTI-a = GTI card (a = 1-2) MCA = MCA card MRC-a = MRC card (a = 1-2) PSM-a = PSM card (a = 1-11) TO-a = TO card (a = 1-12) (1-10 for Version 5 TO cards)

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
<p>Display Current Conditions of Specified Equipment (Contd)</p>	<p>Response:</p> <pre> <sid> <date> <time> M <ctag> COMPLD <aid>:<ntfcncde>,<typerep>,<service effecting>,<conddescr>," ... aid = see Table I ntfcncde = notification code: CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported typerep = see Table A in the Input/Output Reference Guide section of this manual, and also see condtype in Table I service effecting = the effect on service: SA = service effecting NSA = not service effecting conddescr = see Table I </pre>
<p>Display Current Alarms of Specified Ports</p>	<p>Access level 1 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre> RTRV-ALM-PORT:[<tid>]:<aid>:<ctag>; aid = port: MRC-a-b[&&-c]: a = MRC card (1-2) b = port (1-4 or ALL) c = ending port (2-4 with c > b) PSM-a-b[&&-c]: a = PSM card (a = 1-11) b = port (b = 1-4 or ALL) c = ending port (2-4 with c > b) TO-a-b[&&-c]: a = TO card (a = 1-12) (1-10 for Version 5 TO cards) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b) </pre>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
<p>Display Current Alarms of Specified Ports (Contd)</p>	<p><u>Input Format 2:</u></p> <p>Enter:</p> <p style="padding-left: 40px;">RTRV-ALM-PORT:[<tid>]:<aid>:<ctag>;</p> <p style="padding-left: 80px;">aid = port:</p> <p style="padding-left: 120px;">DCIM-a-b:</p> <p style="padding-left: 160px;">a = DCIM card (a = 1-2)</p> <p style="padding-left: 160px;">b = port (b = 1-2 or ALL)</p> <p style="padding-left: 120px;">MRC-a-b[&&-c]:</p> <p style="padding-left: 160px;">a = MRC card (a = 1-2)</p> <p style="padding-left: 160px;">b = port (b = 1-4 or ALL)</p> <p style="padding-left: 160px;">c = ending port (2-4 with c > b)</p> <p style="padding-left: 120px;">PSM-a-b[&&-c]:</p> <p style="padding-left: 160px;">a = PSM card (a = 1-11)</p> <p style="padding-left: 160px;">b = port (b = 1-4 or ALL)</p> <p style="padding-left: 160px;">c = ending port (2-4 with c > b)</p> <p style="padding-left: 120px;">TO-a-b[&&-c]:</p> <p style="padding-left: 160px;">a = TO card (a = 1-12) (1-10 for Version 5 TO cards)</p> <p style="padding-left: 160px;">b = port (1-10 or ALL)</p> <p style="padding-left: 160px;">c = ending port in a range (2-10 with c > b)</p> <p>Response:</p> <p>If there are no port alarms on the specified card, the format is:</p> <p style="padding-left: 40px;"><sid> <date> <time></p> <p>M <ctag> COMPLD</p> <p>If there is at least one port alarm on the specified card, the format is:</p> <p style="padding-left: 40px;"><sid> <date> <time></p> <p>M <ctag> COMPLD</p> <p style="padding-left: 80px;">"<aid>:<ntfcncde>,<condtype>,<service effecting>,<date>,<time>,,/*<conddescr>*/" ...</p> <p style="padding-left: 80px;">aid = see Table I</p> <p style="padding-left: 80px;">ntfcncde = notification code:</p> <p style="padding-left: 120px;">CR = critical alarm</p> <p style="padding-left: 120px;">MJ = major alarm</p> <p style="padding-left: 120px;">MN = minor alarm</p> <p style="padding-left: 120px;">NA = not alarmed</p> <p style="padding-left: 120px;">NR = not reported</p> <p style="padding-left: 80px;">condtype = see typerep in Table I</p> <p style="padding-left: 80px;">service effecting = the effect on service:</p> <p style="padding-left: 120px;">SA = service effecting</p> <p style="padding-left: 120px;">NSA = not service effecting</p> <p style="padding-left: 80px;">date = date of the alarm</p> <p style="padding-left: 80px;">time = time of the alarm</p> <p style="padding-left: 80px;">conddescr = see Table I</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
<p>Display Current Conditions of Specified Ports</p>	<p>Access level 1 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter: RTRV-COND-PORT:[<tid>]:<aid>:<ctag>;</p> <p>aid = port: MRC-a-b[&&-c]: a = MRC card (a = 1-2) b = port (b = 1-4 or ALL) c = ending port (2-4 with c > b)</p> <p>PSM-a-b[&&-c]: a = PSM card (a = 1-11) b = port (b = 1-4 or ALL) c = ending port (2-4 with c > b)</p> <p>TO-a-b[&&-c]: a = TO card (1-12) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
Display Current Conditions of Specified Ports (Contd)	<p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>RTRV-COND-PORT: [<tid>] : <aid> : <ctag> ;</pre> <p>aid = port:</p> <p>DCIM-a-b:</p> <p>a = DCIM card (a = 1-2)</p> <p>b = port (b = 1-2 or ALL)</p> <p>MRC-a-b[&&-c]:</p> <p>a = MRC card (a = 1-2)</p> <p>b = port (b = 1-4 or ALL)</p> <p>c = ending port (2-4 with c > b)</p> <p>PSM-a-b[&&-c]:</p> <p>a = PSM card (a = 1-11)</p> <p>b = port (b = 1-4 or ALL)</p> <p>c = ending port (2-4 with c > b)</p> <p>TO-a-b[&&-c]:</p> <p>a = TO card (1-12) (1-10 for Version 5 TO cards)</p> <p>b = port (1-10 or ALL)</p> <p>c = ending port in a range (2-10 with c > b)</p> <p>Response:</p> <pre>M <sid> <date> <time> <ctag> COMPLD <aid> : <ntfcncde> , <typerep> , <service effecting> , <conddescr> , " ...</pre> <p>aid = see Table I</p> <p>ntfcncde = notification code:</p> <p>CR = critical alarm</p> <p>MJ = major alarm</p> <p>MN = minor alarm</p> <p>NA = not alarmed</p> <p>NR = not reported</p> <p>typerep = see Table A in the Input/Output Reference Guide section of this manual, and also see condtype in Table I</p> <p>service effecting = the effect on service:</p> <p>SA = service effecting</p> <p>NSA = not service effecting</p> <p>conddescr = see Table I</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
<p>Display Message Log</p>	<p>Access level 1 is required to use this command. This command retrieves up to 256 alarms and events, but does not clear the message log.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>RTRV-LOG:[<tid>]:<card>:<ctag>::LOG;</pre> <p><u>Response Format 1:</u></p> <pre><source identifier> <date> <time> M <ctag> COMPLD "SYSTEM" /* "<message>" ... */</pre> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>RTRV-LOG:[<tid>]:[<shelf>]:<ctag>::LOG;</pre> <p>shelf = shelf from which log will be displayed: (null) = master shelf E1 = expansion shelf 1 E2 = expansion shelf 2 E3 = expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)</p>

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
Display Message Log (Contd)	<p><u>Response Format 2:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "LOG" /* "<sid>:<ocrdat> <ocrtm> <aid>:<ntfcncde>,<cond- type>," <srveff>:/* <conddescr> */" ... "<sid>:<ocrdat> <ocrtm> <aid>:<condtype>,<condeff>:" /* <conddescr> */" ... */ </pre> <p>Notes:</p> <ol style="list-style-type: none"> 1. The line shown as "<date> <time> " in the response format will show an arbitrary date and time when the RTRV-LOG command is used without having ever used the INIT-LOG command. After the INIT-LOG command has been used, that line will appear as follows: <pre> "<date> <time> INIT-LOG:::<ctag>::LOG" </pre> where the date and time shown are the date and time when the INIT-LOG command was entered. 2. The next-to-the-last line in the response format (begins with "<sid>") is the format for an alarm in the log. 3. The last line in the response format (also begins with "<sid>") is the format for an event in the log.

Chart 2. Alarms & Status (Contd)

TASK	PROCEDURE
<p>Clear Message Log</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>INIT-LOG: [<tid>]:<card>:<ctag>::LOG;</pre> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>INIT-LOG: [<tid>]: [<shelf>]:<ctag>::LOG;</pre> <p>shelf = shelf where log will be initialized: (null) = master shelf E1 = expansion shelf 1 E2 = expansion shelf 2 E3 = expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 3. Security

TASK	PROCEDURE
	<p>This chart provides the steps for displaying and changing security parameters. As shipped from the factory, there is one user named “super” with a password of “sparky” and an access level of 5. For password protection to be enabled, section 4 of switch SW1 on the MIS card must be set to the ON position.</p> <p>Note: The user name and password are case (uppercase/lowercase) sensitive and must be entered exactly as assigned.</p>
Display Access Level of a Single User	<p>Access level 5 is required to use this command. This command is directed to the master shelf only. Enter:</p> <pre>RTRV-USER-SECU:[<tid>]:<uid>:<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMLPD <uid>:,<access level></pre>
Display Access Level of All Users	<p>Access level 5 is required to use this command. This command is directed to the master shelf only. Enter:</p> <pre>RTRV-USER-SECU:[<tid>]:ALL:<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMLPD <uid>:,<access level> ...</pre>
Assign User	<p>Access level 5 is required to use this command. This command is directed to the master shelf only. This command enters a new user into the system. A maximum of 16 users can be assigned. Enter:</p> <pre>ENT-USER-SECU:[<tid>]:<uid>:<ctag>::<password>,, <access level>;</pre> <p>uid = name of new user (up to 10 alpha-numeric characters) password = password for new user (see note below) access level = access level of new user (1–5 with 5 the highest)</p> <p>Note: The password can have a minimum of 1 character and a maximum of 10 characters. At least one alpha character must be used. Alpha characters can be uppercase, lowercase, or a mixture of both. Any printable character can be used except: comma (,), colon (:), semicolon (;), null (), space (), ampersand (&), and equal sign (=).</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 3. Security (Contd)

TASK	PROCEDURE
Change Password	<p>Access level 1 is required to use this command. This command is directed to the master shelf only. This command changes a user's password. Enter:</p> <pre>ED-PID:[<tid>]:<uid>:<ctag>::<pid>,<new pid>;</pre> <p>uid = name of user whose password is being changed pid = existing password new pid = new password (see note below)</p> <p>Note: The password can have a minimum of 1 character and a maximum of 10 characters. At least one alpha character must be used. Alpha characters can be uppercase, lowercase, or a mixture of both. Any printable character can be used except: comma (,), colon (:), semicolon (;), null (), space (), ampersand (&), and equal sign (=). Also, the following key words cannot be used: "E1", "E2", or "E3".</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Change User Name, Password, & Access Level	<p>Access level 5 is required to use this command. This command is directed to the master shelf only. Enter:</p> <pre>ED-USER-SECU:[<tid>]:<uid>:<ctag>::<new uid>,<new pid> , ,<uap>;</pre> <p>uid = name of user whose name, password, and/or access level is being changed new uid = new user name (up to 10 alpha-numeric characters) new pid = new password (see note below) uap = new access level (1-5 with 5 the highest)</p> <p>Note: The password can have a minimum of 1 character and a maximum of 10 characters. At least one alpha character must be used. Alpha characters can be uppercase, lowercase, or a mixture of both. Any printable character can be used except: comma (,), colon (:), semicolon (;), null (), space (), ampersand (&), and equal sign (=). Also, the following key words cannot be used: "E1", "E2", "E3", or "NO".</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 3. Security (Contd)

TASK	PROCEDURE
Delete User	<p>Access level 5 is required to use this command. This command is directed to the master shelf only. Enter:</p> <pre>DLT-USER-SECU:[<tid>]:<uid>:<ctag>;</pre> <p>uid = name of user being deleted</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 4. Communication Ports

TASK	PROCEDURE
<p>This chart provides the steps for displaying and changing the communication parameters.</p>	
<p>Display Communication Parameters</p>	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-COM: [<tid>] : <aid> : <ctag> ;</pre> <p>aid = communication port (COM-1, COM-2, COM-3, or COM-ALL)</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), Response Format 1 will be shown. If switch SW1-6 is in the down position, Response Format 2 will be shown.</p> <p>On 090-45018-05 MIS cards: Response Format 2 will be shown (SW1-6 is in the down position [factory setting]).</p> <p><u>Response Format 1:</u></p> <pre><source identifier> <date> <time> M <ctag> COMPLD "COM-a" ... /*BAUD=<value>,MONMSG=<value>,KEEPALIVE=<value>, COMTYPE=<value>,ENDOFTEXT=<value>, ECHO=<value>,REPTALM=<value>, HWCONTROL=<value>,SWCONTROL=<value> ...*/</pre> <p>baud = data rate (baud rate) for this communication port: 9600 = 9600 baud 1200 = 1200 baud</p> <p>monmsg = specifies whether this communication port is allowed to view communication messages associated with other ports: ALW = allowed INH = inhibited</p> <p>keepalive = specifies whether this communication port is allowed to autonomously output a COMPL messages every 15 to 20 minutes: ALW = allowed INH = inhibited</p> <p>comtype = communication type for this communication port: X25 = PAD MODEM = modem TERM = dumb terminal REMOTE = remote shelf</p> <p>endoftext = specifies an additional end-of-text character for this communication port: 0 = no additional end-of-text character x = the additional end-of-text character which is a hexadecimal number</p>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
Display Communication Parameters (Contd)	<p><u>Response Format 1 (Contd):</u></p> <p>echo = specifies whether this communication port allows local echo: ALW = allowed INH = inhibited</p> <p>reptalm = specifies whether alarm and event messages are allowed to be transmitted from this communication port: ALW = allowed INH = inhibited</p> <p>hwcontrol = specifies whether external equipment is allowed to stop the DCD system from sending messages by setting the clear to send (CTS) lead low, or continue messages by setting the CTS lead high on this communication port: ALW = allowed INH = inhibited</p> <p>swcontrol = specifies whether user is allowed to use a Control-s key combination to stop the DCD system from sending messages or use a Control-q key combination to cause the DCD system to continue sending messages via this communication port: ALW = allowed INH = inhibited</p> <p><u>Response Format 2:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>" ... /*BAUD= <value>, MONMSG= <value>, KEEPALIVE= <value>, COMTYPE= <value>, ENDOFTEXT= <value>, ECHO=<value> , COMPRI= <value>, HWCONTROL= <value> , SWCONTROL= <value>, DUR= <value> , DN= <value>...*/ baud = data rate (baud rate) for this communication port: 9600 = 9600 baud 1200 = 1200 baud monmsg = specifies whether this communication port is allowed to view communication messages associated with other ports: ALW = allowed INH = inhibited keepalive = specifies whether this communication port is allowed to autonomously output a COMPL messages every 15 to 20 minutes: ALW = allowed INH = inhibited </pre>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
Display Communication Parameters (Contd)	<p><u>Response Format 2 (Contd):</u></p> <p>comtype = communication type for this communication port: X25 = PAD MODEM = modem (Hayes compatible with autodial) TERM1 = dumb terminal (VT100 with no DSR/DTR support and message buffering disabled) TERM2 = dumb terminal (VT100 with DSR/DTR support and message buffering enabled) REMOTE = remote shelf</p> <p>endoftext = specifies an additional end-of-text character for this communication port: 00 = no additional end-of-text character x = the additional end-of-text character which is a hexadecimal number (x = 1-9F)</p> <p>echo = specifies whether this communication port allows local echo: ALW = allowed INH = inhibited</p> <p>compri = specifies whether alarm and event messages are allowed to be transmitted from this communication port: INH = communication through a port with this designation is inhibited (INH is not allowed on COM2) ALW0 = allows normal communication; autonomous messages are not sent out a port with this priority ALW1 = allows normal communication; autonomous messages are always sent out this port regardless of the priorities of the other ports (this is the highest port priority) ALW2 = allows normal communication; autonomous messages are sent out this port only if there are no ports with a priority level of ALW1 (this is the second-highest port priority) ALW3 = allows normal communication; autonomous messages are sent out this port only if there are no ports with a priority level of ALW1 or ALW2 (this is the lowest port priority)</p> <p>hwcontrol = specifies whether external equipment is allowed to stop the DCD system from sending messages by setting the clear to send (CTS) lead low, or continue messages by setting the CTS lead high on this communication port: ALW = allowed INH = inhibited</p> <p>swcontrol = specifies whether user is allowed to use a Control-s key combination to stop the DCD system from sending messages or use a Control-q key combination to cause the DCD system to continue sending messages via this communication port: ALW = allowed INH = inhibited</p> <p>dur = the amount of time (1-45 minutes) after which the user is logged off if there is no activity.</p> <p>dn = the remote PAD address (up to 32 numeric characters)</p>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
<p>Change Communication Parameters</p>	<p>Access level 3 is required to use this command. If a parameter is omitted, that parameter is not changed.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), Input Format 1 must be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter: ED-COM: [<tid>] : <aid> : <ctag> : : [<baud>] , [<monmsg>] , [<keepalive>] , [<comtype>] , [<endoftext>] , [<echo>] , [<reptalm>] , [<hwcontrol>] , [<swcontrol>] ;</p> <p>aid = communication port number (COM-1, COM-2, COM-3)</p> <p>baud = data rate (baud rate) for this communication port (baud rate for port 2 can only be changed by a switch on the MIS card): 9600 = 9600 baud 1200 = 1200 baud</p> <p>monmsg = specifies whether this communication port is allowed to view communication messages associated with other ports: ALW = allowed INH = inhibited</p> <p>keepalive = specifies whether this communication port is allowed to autonomously output a COMPL messages every 15 to 20 minutes: ALW = allowed INH = inhibited</p> <p>comtype = communication type for this communication port: X25 = for use with X.25 PAD (sets configuration for Black Box Corporation's X.25 PAD-8 only with the following settings: a. drops call if idle time is greater than 1 minute b. fixed destination id Note: If the <comtype> is set to X25 and TimeScan NMS or TMN is used, refer to the PAD manual and the X.3 Standard to set the following parameters in the PAD Profile: disable ECHO, enable MESSAGES, and disable SERVICE SIGNALS.</p> <p>MODEM = modem (Hayes compatible with autodial) TERM = dumb terminal (VT100 with no DSR/DTR support and message buffering disabled) (the autologoff feature will not function on a port with a comtype of TERM1)</p> <p>REMOTE = remote shelf</p>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
<p>Change Communication Parameters (Contd)</p>	<p><u>Input Format 1 (Contd):</u></p> <p> endoftext = specifies an additional end-of-text character for this communication port: 00 = no additional end-of-text character x = the additional end-of-text character which is a hexadecimal number (0-9F)</p> <p> echo = specifies whether this communication port allows local echo: ALW = allowed INH = inhibited</p> <p> reptalm = specifies whether alarm and event messages are allowed to be transmitted from this communication port: ALW = allowed INH = inhibited</p> <p> hwcontrol = specifies whether external equipment is allowed to stop the DCD system from sending messages by setting the clear to send (CTS) lead low, or continue messages by setting the CTS lead high: ALW = allowed INH = inhibited</p> <p> swcontrol = specifies whether user is allowed to use a Control-s key combination to stop the DCD system from sending messages, or use a Control-q key combination to cause the DCD system to continue sending messages via this communication port: ALW = allowed INH = inhibited</p> <p>Note: If the <comtype> is set to X25 and TimeScan NMS or TMN is used: set <swcontrol> to ALW, and also enable software flow control in the PAD.</p> <p>Note: hwcontrol and swcontrol cannot both be set to ALW.</p> <p>Response:</p> <p> <sid> <date> <time> M <ctag> COMPLD</p> <p><u>Input Format 2:</u></p> <p>Enter:</p> <p> ED-COM:[<tid>]:<aid>:<ctag>::[<baud>],[<monmsg>], [<keepalive>],[<comtype>],[<endoftext>],[<echo>], [<compri>],[<hwcontrol>],[<swcontrol>] [,<dur>],[<dn>]];</p> <p> aid = communication port number (COM-1, COM-2, COM-3)</p>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
Change Communication Parameters (Contd)	<p><u>Input Format 2 (Contd):</u></p> <p> baud = data rate (baud rate) for this communication port (baud rate for port 2 can only be changed by a switch on the MIS card): 9600 = 9600 baud 1200 = 1200 baud </p> <p> monmsg = specifies whether this communication port is allowed to view communication messages associated with other ports: ALW = allowed INH = inhibited </p> <p> keepalive = specifies whether this communication port is allowed to autonomously output a COMPL messages every 15 to 20 minutes: ALW = allowed INH = inhibited </p> <p> comtype = communication type for this communication port: X25 = for use with X.25 PAD (sets configuration for Black Box Corporation's X.25 PAD-8 only with the following settings: a. drops call if idle time is greater than 1 minute b. fixed destination id <i>Note:</i> If the <comtype> is set to X25 and TimeScan NMS or TMN is used, refer to the PAD manual and the X.3 Standard to set the following parameters in the PAD Profile: disable ECHO, enable MESSAGES, and disable SERVICE SIGNALS. </p> <p> MODEM = modem (Hayes compatible with autodial) TERM1 = dumb terminal (VT100 with no DSR/DTR support and message buffering disabled) (the autologoff feature will not function on a port with a comtype of TERM1) TERM2 = dumb terminal (VT100 with DSR/DTR support and message buffering enabled) REMOTE = remote shelf </p> <p> endoftext = specifies an additional end-of-text character for this communication port: 00 = no additional end-of-text character x = the additional end-of-text character which is a hexadecimal number (0-9F) </p> <p> echo = specifies whether this communication port allows local echo: ALW = allowed INH = inhibited </p>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
Change Communication Parameters (Contd)	<p><u>Input Format 2 (Contd):</u></p> <p>compri = specifies whether alarm and event messages are allowed to be transmitted from this communication port:</p> <p>INH = communication through a port with this designation is inhibited (INH is not allowed on COM2)</p> <p>ALW0 = allows normal communication; autonomous messages are not sent out a port with this priority level</p> <p>ALW1 = allows normal communication; autonomous messages are always sent out this port regardless of the priorities of the other ports (this is the highest port priority)</p> <p>ALW2 = allows normal communication; autonomous messages are sent out this port only if there are no ports with a priority level of ALW1 (this is the second-highest port priority)</p> <p>ALW3 = allows normal communication; autonomous messages are sent out this port only if there are no ports with a priority level of ALW1 or ALW2 (this is the lowest port priority)</p> <p>hwcontrol = specifies whether external equipment is allowed to stop the DCD system from sending messages by setting the clear to send (CTS) lead low, or continue messages by setting the CTS lead high:</p> <p>ALW = allowed</p> <p>INH = inhibited</p> <p>swcontrol = specifies whether user is allowed to use a Control-s key combination to stop the DCD system from sending messages, or use a Control-q key combination to cause the DCD system to continue sending messages via this communication port:</p> <p>ALW = allowed</p> <p>INH = inhibited</p> <p>Note: If the <comtype> is set to X25 and TimeScan NMS or TMN is used: set <swcontrol> to ALW, and also enable software flow control in the PAD.</p> <p>dur = the amount of time (1–45 minutes) after which the user is logged off if there is no activity (the autologoff feature will not function on a port with a comtype of TERM1)</p> <p>dn = the remote PAD address (up to 32 numeric characters)</p> <p>Note: hwcontrol and swcontrol cannot both be set to ALW.</p> <p>Response:</p> <p><sid> <date> <time></p> <p>M <ctag> COMPLD</p>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
Display Communication Connections	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-COM-CONN: [<tid>]:<aid>:<ctag>;</pre> <p style="padding-left: 40px;">aid = SHELF</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>" ... /* COM-1=<value>[,ACT-USER=<uid>], COM-2=<value>[,ACT-USER=<uid>], COM-3=<value>[,ACT-USER=<uid>] */</pre> <p style="padding-left: 40px;">value = status of communication port (ACTIVE or INACTIVE) uid = user id (as set by the ENT-USER-SECU command) of the user logged onto the port</p> <p>Notes:</p> <ol style="list-style-type: none"> The “,ACT-USER= <uid>” part of the response appears only if the communication port is active and security is enabled by section 4 of switch SW1 on the MIS card. A status of INACTIVE (even if the port is active) will be reported for any communication port that is using a 3-wire connection or has been set for a comtype of TERM1 with the ED-COM command.
Connect Communication Port	<p>Access level 4 is required to use this command. Enter:</p> <pre>CONN-COM: [<tid>]:<aid>:<ctag>:: [<comtype>];</pre> <p style="padding-left: 40px;">aid = communication port: COM-1 = communication port 1 COM-2 = communication port 2 COM-3 = communication port 3</p> <p style="padding-left: 40px;">comtype = communication device type: X25 = PAD MODEM = modem (Hayes compatible with autodial)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 4. Communication Ports (Contd)

TASK	PROCEDURE
<p>Disconnect Communication Port</p>	<p>Access level 4 is required to use this command. Enter:</p> <pre>DISC-COM: [<tid>]:<aid>:<ctag>;</pre> <p>aid = communication port: COM-1 = communication port 1 COM-2 = communication port 2 COM-3 = communication port 3</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Drop DTR Signal for 5 Seconds</p>	<p>Access level 3 is required to use this command. If a port is provision for TERM1 (no DSR/DTR support), the command will indicate completed but no action will occur. Enter:</p> <pre>INIT-COM: [<tid>]:<aid>:<ctag>;</pre> <p>aid = communication port number (COM-1, COM-2, COM-3, or COM-ALL)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 5. System Configuration

TASK	PROCEDURE
	<p>This chart provides the steps for displaying the date & time and changing the date & time. Steps are included for displaying and changing the system name, and how to reset the system database. Also included is a step for displaying the MIS card software revision. The system name is set at the factory to TELECOM. The system name is entered (optional) as the target identifier (tid) and is included with every response from the system as the source identifier (sid).</p> <p>Refer to Part 4, Shelf Addressing, for expansion or remote shelf addressing details.</p>
Display Date & Time	<p>Access level 1 is required to use this command. This command is directed to the master shelf only. Enter:</p> <pre>RTRV-HDR:[<tid>]::<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Change Date & Time	<p>Access level 4 is required to use this command. This command is directed to the master shelf only. If connected to a GTI card, the system will adjust the minutes and seconds to coincide with UTC time. The current hour (entered with <time>) will be used so that local time is displayed. Enter:</p> <pre>ED-DAT:[<tid>]::<ctag>::{<date>,<time>};</pre> <p>date = date in the format yyyy-mm-dd: yyyy = year (1997–2096) mm = month (01–12) dd = day (01–31)</p> <p>time = time in the format hh-mm-ss: hh = hour (00–23) mm = minute (00–59) ss = second (00–59)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 5. System Configuration (Contd)

TASK	PROCEDURE
Display Memory Bank Being Used for MIS Card Program	<p>Access level 2 is required to use this command. This command displays the MIS card inventory and the program memory bank (low bank or hi bank) in use. Enter:</p> <pre>RTRV-INVENTORY:[<tid>]:<aid>:<ctag>; aid = ADMIN</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>" /* CARD=<value>, TYPE=<value>, PART=<value>, CLEI=<value>, SERIAL=<value>, HARDREV=<value>, LOW_BANK_SW=<value>: SOFTREV=<value>, SOFTVER=<value>, HI_BANK_SW=<value>: SOFTREV=<value>, SOFTVER=<value> */</pre> <p>Note: The word (ACTIVE or INACTIVE) following the LOW_BANK_SW= and the HI_BANK_SW= fields indicate which memory bank is in use (ACTIVE = in use, INACTIVE = not in use).</p>

Chart 5. System Configuration (Contd)

TASK	PROCEDURE
Change to Alternate MIS Card Program	<p>Caution: <i>If section 5 of SW1 on the MIS card is set to ON, the following command will retain the card database in the MIS card and this card database will be downloaded from the MIS card to all other cards. If section 5 of SW1 on the MIS card is set to OFF, the following command will retain the card database in the MIS card, but this card database will <u>not</u> be downloaded from the MIS card to all other cards.</i></p> <p>Access level 5 is required to use this command. This command causes the MIS card to use the alternate MIS card program (if one is available) which may take up to 5 minutes. This command does not affect the SID, security, or communication port parameters. Enter:</p> <pre>INIT-SYS:[<tid>]:<aid>:<ctag>::5; aid = MIS</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete Card Database in MIS Card	<p>Caution: <i>The following command will delete the card database in the MIS card.</i></p> <p>Access level 5 is required to use this command. This command deletes the card database in the MIS card. This command does not affect the SID, security, or communication port parameters. Enter:</p> <pre>INIT-SYS:[<tid>]:<aid>:<ctag>::3; aid = MIS</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 5. System Configuration (Contd)

TASK	PROCEDURE
Reset MIS Card	<p>Caution: <i>If section 5 of SW1 on the MIS card is set to ON, the following command will retain the card database in the MIS card and this card database will be downloaded from the MIS card to all other cards. If section 5 of SW1 on the MIS card is set to OFF, the following command will retain the card database in the MIS card, but this card database will <u>not</u> be downloaded from the MIS card to all other cards.</i></p> <p>Access level 5 is required to use this command. This command causes the MIS card to perform a soft reset. This command does not affect the SID, security, or communication port parameters. Enter:</p> <pre>INIT-SYS:[<tid>]:<aid>:<ctag>::4;</pre> <p style="padding-left: 40px;">aid = MIS</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Completely Reset MIS Card to Factory Settings	<p>Caution: <i>The following command will delete the card database in the MIS card and reset all SID, security, and communication port parameters to the factory settings.</i></p> <p>Access level 5 is required to use this command. This command deletes all card information (no cards will be entered in the database); resets all security information and the source ID (SID) to the factory settings (there will be only one user named “super” with a password of “sparky”, and the DCD system SID will be TELECOM); and resets all communication parameters to factory settings. Enter:</p> <pre>INIT-SYS:[<tid>]:<aid>:<ctag>::9;</pre> <p style="padding-left: 40px;">aid = MIS</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 5. System Configuration (Contd)

TASK	PROCEDURE
Display System Name	<p>Access level 1 is required to use this command. This command is directed to the master shelf only. Enter:</p> <pre>RTRV-HDR:[<tid>]::<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Change System Name	<p>Access level 4 is required to use this command. This command is directed to the master shelf only. This command changes the source identifier for a system. Enter:</p> <pre>SET-SID:<tid>::<ctag>::<sid>;</pre> <p>tid = old source identifier of the system sid = new source identifier of the system (20 characters max using letters, numbers, and hyphens; the source identifier must begin with a letter; the target's CLLI code [if available] is recommended as the source identifier, or the office name can be used)</p> <p>Caution: The letter/number combinations "E1", "E2", and "E3" cannot be entered alone in any field in this command. These combinations can be used if additional characters are entered before or after these combinations.</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 5. System Configuration (Contd)

TASK	PROCEDURE
Display Equipment	<p>Access level 2 is required to use this command. This command displays equipped cards. Non-Version 5 cards must have been entered with the ENT-INVENTORY command (cards not entered will show blank fields). Version 5 cards are automatically entered in the database with the ENT-EQPT command. Enter:</p> <pre>RTRV-INVENTORY:<tid>:<aid>:<ctag>;</pre> <p>aid = specific equipment locations:</p> <ul style="list-style-type: none"> ADMIN = MIS card slot CLOCK-a = clock slot (a = 1-2) INPUT-a = input slot (a = 1-2) OUTPUT-a = output slot (used for timing output cards, monitoring cards, and clock insertion cards) (a = 1-12) PROT = protection controller slot PRS-a = LPR shelf (a = 1-2) SHELF = all equipment locations (PRS included with master shelf) <p>Response:</p> <p><u>For MIS card:</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>" /* CARD=<value>, TYPE=<value>, PART=<value>, CLEI=<value>, SERIAL=<value>, HARDREV=<value>, LOW_BANK_SW=<value>: SOFTREV=<value>, SOFTVER=<value>, HI_BANK_SW=<value>: SOFTREV=<value>, SOFTVER=<value> */... ;</pre> <p>Note: Information about the ADMIN slot shows information for the high-bank and low-bank program memory locations. One of these locations will be active and the other will be inactive.</p>

Chart 5. System Configuration (Contd)

TASK	PROCEDURE
Display Equipment (Contd)	<p>Response (Contd):</p> <p><u>For GTI card:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>" /* CARD=<value>, TYPE=<value>, PART=<value>, CLEI=<value>, SERIAL=<value>, HARDREV=<value>, SOFTREV=<value>, SOFTVER=<value> GTRSOFTVER=<value>, */ ; </pre> <p><u>For cards other than MIS:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>" /* CARD=<value>, TYPE=<value>, PART=<value>, CLEI=<value>, SERIAL=<value>, HARDREV=<value>, SOFTREV=<value>, SOFTVER=<value> */... ; </pre>

Chart 6. Enter into the Database and Put In Service a Version 5 Card

TASK	PROCEDURE
	<p>This chart provides the steps for entering Version 5 cards into the system database. The card will be put in service according to the switch settings on the card.</p> <p>Note: For TO-EAN and TOTA-5 cards, if section 8 of switch SW1 is ON:</p> <ul style="list-style-type: none"> • The outputs are disabled upon power-up. • The ENT-PORT, RST-EQPT, and RST-PORT commands must be used to enable the outputs. <p>Note: On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. (If Input Format 1 is used, the RST-EQPT command must be used to restore the card to service, and the ENT-PORT and RST-PORT commands must be used to put the outputs in service.) If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p>
<p>Enter and Restore Clock Card</p>	<p>Access level 4 is required to use this command.</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>:: , , , , ;</pre> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = clock card slot (CLK-1 or CLK-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Enter and Restore DCIM Card</p>	<p>Access level 4 is required to use this command. Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM card slot (DCIM-1 or DCIM-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 6. Enter into the Database and Put In Service a Version 5 Card (Contd)

TASK	PROCEDURE
Enter and Restore GTI Card	<p>Access level 4 is required to use this command.</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>::<framing>, <troublecode>,,<osc1>,<osc2>,<integration>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>framing = framing type:</p> <ul style="list-style-type: none"> CAS = channel assigned signaling CAS4 = channel assigned signaling with frame aligned sequence with cyclic redundancy check 4 CRC4 = frame alignment sequence framing with cyclic redundancy check 4 D4 = D4 framing format ESF = ESF framing format FAS = frame alignment sequence framing <p>troublecode = output signals when card has major alarm:</p> <ul style="list-style-type: none"> ALW = AIS is sent on all outputs INH = all outputs are squelched <p>osc1 = clock type on oscillator 1 (OSC A) input:</p> <ul style="list-style-type: none"> RB = rubidium QTZ = quartz <p>osc2 = clock type on oscillator 2 (OSC B) input:</p> <ul style="list-style-type: none"> RB = rubidium QTZ = quartz <p>integration = integration time until an alarm is declared:</p> <ul style="list-style-type: none"> 1 = see Table H 2 = see Table H 3 = see Table H 4 = see Table H <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 6. Enter into the Database and Put In Service a Version 5 Card (Contd)

TASK	PROCEDURE
<p>Enter and Restore MRC Card and Ports</p>	<p>Access level 4 is required to use this command.</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>::,,,,,;</pre> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card slot (MRC-1 or MRC-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Enter and Restore PSM Card and Ports</p>	<p>Access level 4 is required to use this command.</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>::,,,,,;</pre> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PSM card slot (PSM-x, where x = 1-11)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 6. Enter into the Database and Put In Service a Version 5 Card (Contd)

TASK	PROCEDURE
<p>Enter and Restore Timing Output Card and Ports</p>	<p>Access level 4 is required to use this command.</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>::<framing>, <troublecode>,<portseverity>,,,;</pre> <p>aid = TO card slot (TO-x, where x = 1-10)</p> <p>framing = framing type:</p> <ul style="list-style-type: none"> CAS = channel assigned signaling CAS4 = channel assigned signaling with frame aligned sequence with cyclic redundancy check 4 CRC4 = frame alignment sequence framing with cyclic redundancy check 4 D4 = D4 framing format ESF = ESF framing format FAS = frame alignment sequence framing <p>troublecode = output signals when card fails:</p> <ul style="list-style-type: none"> ALW = AIS is sent on all outputs INH = all outputs are squelched <p>portseverity = alarm type caused by port failure:</p> <ul style="list-style-type: none"> MJ = major MN = minor <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card slot (TO-x, where x = 1-12 [1-10 for Version 5 TO cards])</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 6. Enter into the Database and Put In Service a Version 5 Card (Contd)

TASK	PROCEDURE
Enter and Restore MCA Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>ENT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p style="padding-left: 40px;">aid = MCA card (MCA)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Table H. GTI Card Alarm Integration Times

INTEGRATION PARAMETER SETTING	ALARM INTEGRATION TIME (SIGNAL DEFECT ONLY)							
	MINOR ALARM	MAJOR ALARM						
1	4 hours	24 hours						
2	8 hours	48 hours						
3	Infinity	24 hours						
4	30 minutes	1 hour						
<p>Notes:</p> <p>1. The GTI types are as follows:</p> <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 40px;"><u>type</u></td> <td><u>part #</u></td> </tr> <tr> <td>GTI -13</td> <td>090-42140-13</td> </tr> <tr> <td>GTI -14</td> <td>090-42140-14</td> </tr> </table> <p>2. The times listed are from when a SIGNAL DEFECT occurs until a minor or major alarm is declared.</p>			<u>type</u>	<u>part #</u>	GTI -13	090-42140-13	GTI -14	090-42140-14
<u>type</u>	<u>part #</u>							
GTI -13	090-42140-13							
GTI -14	090-42140-14							

Chart 7. Put a Version 5 Card In Service

TASK	PROCEDURE
This chart provides the steps for putting Version 5 cards into service. Once in service, cards can report alarm and conditions.	
Restore Clock Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = clock card slot (CLK-1 or CLK-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Restore DCIM Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM card slot (DCIM-1 or DCIM-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Restore GTI Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Restore MRC Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card slot (MRC-1 or MRC-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 7. Put a Version 5 Card In Service (Contd)

TASK	PROCEDURE
Restore PSM Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PSM card slot (PSM-x, where x = 1-11)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Restore Timing Output Card	<p>Access level 4 is required to use this command. When a timing output card is restored (put in service), its outputs are enabled.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card slot (TO-x, where x = 1-10)</p> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card slot (TO-x, where x = 1-12 [1-10 for Version 5 TO cards])</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 7. Put a Version 5 Card In Service (Contd)

TASK	PROCEDURE
Restore MCA Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RST-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MCA card (MCA)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 8. Take a Version 5 Card Out of Service

TASK	PROCEDURE
	<p>This chart provides the steps for taking Version 5 cards out of service. When out of service, cards can no longer report alarms and conditions.</p> <p>Prerequisite: Before MRC, PSM, or timing output cards can be taken out of service, all the ports associated with the card must be taken out of service. Refer to Chart 14 (Reference Input Ports), Chart 15 (Monitor Input Ports), or Chart 16 (Timing Output Ports) for the procedure to take ports out of service.</p>
Remove Clock Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RMV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = clock card slot (CLK-1 or CLK-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Remove DCIM Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RMV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM card slot (DCIM-1 or DCIM-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Remove GTI Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RMV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Remove MRC Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RMV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card slot (MRC-1 or MRC-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 8. Take a Version 5 Card Out of Service (Contd)

TASK	PROCEDURE
<p>Remove PSM Card</p>	<p>Access level 4 is required to use this command. Enter:</p> <pre> RMV-EQPT:[<tid>]:<aid>:<ctag>; aid = PSM card slot (PSM-x, where x = 1-11) </pre> <p>Response:</p> <pre> <sid> <date> <time> M <ctag> COMPLD </pre>
<p>Remove Timing Output Card</p>	<p>Access level 4 is required to use this command. When a timing output card is removed (taken out of service), its outputs are disabled.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre> RMV-EQPT:[<tid>]:<aid>:<ctag>; aid = TO card slot (TO-x, where x = 1-10) </pre> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre> RMV-EQPT:[<tid>]:<aid>:<ctag>; aid = TO card slot (TO-x, where x = 1-12 [1-10 for Version 5 TO cards]) </pre> <p>Response:</p> <pre> <sid> <date> <time> M <ctag> COMPLD </pre>

Chart 8. Take a Version 5 Card Out of Service (Contd)

TASK	PROCEDURE
Remove MCA Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>RMV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MCA card (MCA)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 9. Delete a Version 5 Card from Database

TASK	PROCEDURE
	<p>This chart provides the steps for deleting Version 5 cards from the system database.</p> <p>Prerequisite: Before DCIM, MRC, PSM, or timing output cards can be deleted from the database, all the ports associated with the card must be deleted from the database. Refer to Chart 14 (Reference Input Ports), Chart 15 (Monitor Input Ports), or Chart 16 (Timing Output Ports) for the procedure to delete ports from the database.</p>
Delete Clock Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = clock card slot (CLK-1 or CLK-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete DCIM Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM card slot (DCIM-1 or DCIM-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete GTI Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete MRC Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card slot (MRC-1 or MRC-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 9. Delete a Version 5 Card from Database (Contd)

TASK	PROCEDURE
Delete PSM Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PSM card slot (PSM-x, where x = 1-11)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete Timing Output Card	<p>Access level 4 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card slot (TO-x, where x = 1-10)</p> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card slot (TO-x, where x = 1-12 [1-10 for Version 5 TO cards])</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 9. Delete a Version 5 Card from Database (Contd)

TASK	PROCEDURE
Delete MCA Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-EQPT:[<tid>]:<aid>:<ctag>; aid = MCA card (MCA)</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 10. Enter a Non-Version 5 Card in Database

TASK	PROCEDURE
	<p>This chart provides the steps for entering non-Version 5 cards and Version 5 cards without a database (ST2, ST2E, ST3, ST3E, TNC, TNC-E, and LNC) into the system database. Obtain information about the card from the front panel of the card. If information is not available, leave the associated field in the command empty.</p> <p>Caution: If the MCA-5M card is used, use the ENT-INVENTORY command to enter non-Version 5 TO cards, to protect the non-Version 5 TO cards.</p>
Enter Clock Card	<p>Access level 3 is required to use this command. Enter:</p> <pre>ENT-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = clock card slot (CLOCK-1 or CLOCK-2) card = card (LNC, TNC, TNC-E, ST2, ST2E, ST3, or ST3E)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Enter Input Card	<p>Access level 3 is required to use this command. Enter:</p> <pre>ENT-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = input card slot (INPUT-1 or INPUT-2) card = card (ACI, CI, CI-EA, or ECI)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 10. Enter a Non-Version 5 Card in Database (Contd)

TASK	PROCEDURE
<p>Enter Output Card</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>ENT-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = output card slot (OUTPUT-x, where x = 1-12) card = card (TOAA, TOCA, TOEA, TO-EA, TOGA, TOLA, TOTA, TOTL, SCIU, or ESCIU)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Enter Protection Card</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>ENT-INVENTORY:[<tid>]:<aid>:<ctag>::MCA-5,[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = protection card slot (PROT)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Enter PRS Card</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>ENT-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = PRS card slot (PRS-1 or PRS-2) card = LOU-1 or LOU-2</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 11. Edit Non-Version 5 Card Information

TASK	PROCEDURE
	<p>This chart provides the steps for editing the information for non-Version 5 cards and Version 5 cards without a database (ST2, ST2E, ST3, ST3E, TNC, TNC-E, and LNC). Omit those parameters not being changed.</p> <p>Caution: The letter/number combinations “NO”, “E1”, “E2”, and “E3” cannot be entered alone in any field in the ED-INVENTORY command. These combinations can be used if additional characters are entered before or after these combinations.</p>
<p>Edit Clock Card</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = clock card slot (CLOCK-1 or CLOCK-2) card = card (LNC, TNC, TNC-E, ST2, ST2E, ST3, or ST3E)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Edit Input Card</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = input card slot (INPUT-1 or INPUT-2) card = card (ACI, CI, CI-EA, or ECI)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 11. Edit Non-Version 5 Card Information (Contd)

TASK	PROCEDURE
Edit Output Card	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = output card slot (OUTPUT-x, where x = 1-12) card = card (TOAA, TOCA, TOEA, TO-EA, TOGA, TOLA, TOTA, TOTL, SCIU, or ESCIU)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Edit Protection Card	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-INVENTORY:[<tid>]:<aid>:<ctag>::MCA-5,[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = protection card slot (PROT)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Edit PRS Card	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-INVENTORY:[<tid>]:<aid>:<ctag>::[<card>],[<part>], [<clei>],[<serial>],[<hardware_revision>], [<software_revision>;</pre> <p>aid = PRS card slot (PRS-1 or PRS-2) card = LOU-1 or LOU-2</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 12. Delete a Non-Version 5 Card from Database

TASK	PROCEDURE
This chart provides the steps for deleting non-Version 5 cards from the system database.	
Delete Clock Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-INVENTORY:[<tid>]:<aid>:<ctag>;</pre> <p>aid = clock card slot (CLOCK-1 or CLOCK-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete Input Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-INVENTORY:[<tid>]:<aid>:<ctag>;</pre> <p>aid = input card slot (INPUT-1 or INPUT-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete Output Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-INVENTORY:[<tid>]:<aid>:<ctag>;</pre> <p>aid = output card slot (OUTPUT-x, where x = 1-12)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 12. Delete a Non-Version 5 Card from Database (Contd)

TASK	PROCEDURE
Delete Protection Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-INVENTORY:[<tid>]:<aid>:<ctag>;</pre> <p>aid = protection card slot (PROT)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete PRS Card	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-INVENTORY:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PRS card slot (PRS-1 or PRS-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 13. Version 5 Card Configuration

TASK	PROCEDURE
	<p>This chart provides the steps for displaying and changing parameters on the GTI, MRC, timing output, and MCA cards.</p> <p>Note: No information is returned for PSM cards; therefore, individual commands for these cards have not been included in this chart.</p>
<p>Display Parameters for All Cards</p>	<p>Access level 2 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = ALL (GTI card included with master shelf)</p> <p><u>Response Format 1:</u></p> <pre><source identifier> <date> <time> M <ctag> COMPLD "<aid>:[<framing>],[<troublecode>], [<portseverity>],[<osc1>],[<osc2>], [<integration>]" ...</pre> <p>framing = framing type: CAS = channel assigned signaling CAS4 = channel assigned signaling with frame aligned sequence with cyclic redundancy check 4 CRC4 = frame alignment sequence framing with cyclic redundancy check 4 D4 = D4 framing format ESF = ESF framing format FAS = frame alignment sequence framing</p> <p>troublecode = output signals when card has major alarm: ALW = AIS is sent on all outputs INH = all outputs are squelched</p> <p>osc1 = clock type on oscillator 1 (OSC A) input: RB = rubidium QTZ = quartz</p> <p>osc2 = clock type on oscillator 2 (OSC B) input: RB = rubidium QTZ = quartz</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
Display Parameters for All Cards (Contd)	<p><u>Response Format 1 (Contd):</u></p> <p>integration = integration time until an alarm is declared: 1 = see Table H 2 = see Table H 3 = see Table H 4 = see Table H</p> <p><u>Input Format 2:</u></p> <p>Enter:</p> <p>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</p> <p>aid = SHELF (GTI card included with master shelf)</p> <p><u>Response Format 2:</u></p> <p>M <sid> <date> <time> <ctag> COMPLD "<aid>:[<framing>],[<troublecode>],[<portseverity>] , [<osc1>],[<osc2>],[<integration>],[<clklevel>] , [<alarmlead>],[<signaltype>]" ...</p> <p>framing = framing type: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>troublecode = output signals when card has major alarm: ALW = AIS is sent on all outputs INH = all outputs are squelched</p> <p>portseverity = alarm type caused by port failure: MJ = major MN = minor</p> <p>osc1 = clock type on oscillator 1 (OSC A) input: RB = rubidium QTZ = quartz NONE = oscillator 1 is not equipped</p> <p>osc2 = clock type on oscillator 2 (OSC B) input: RB = rubidium QTZ = quartz NONE = oscillator 2 is not equipped</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Display Parameters for All Cards (Contd)</p>	<p><u>Response Format 2 (Contd):</u></p> <p>integration = integration time until an alarm is declared: 1 = see Table H 2 = see Table H 3 = see Table H 4 = see Table H</p> <p>clklevel = clock type in the shelf: ST2 = the clock is an ST2 ST2E = the clock is an ST2E ST3 = the clock is an ST3 ST3E = the clock is an ST3E TNC = the clock is a TNC TNCE = the clock is a TNCE</p> <p>alarmlead = shelf alarm lead activation during protection switch: ALW = a protection switch activates the shelf alarm lead INH = a protection switch does not activate the shelf alarm lead</p> <p>signaltype = type of output signal: ANALOG= analog DIGITAL= digital</p>
<p>Display Clock Quality Level</p>	<p>Access level 2 is required to use this command. Enter:</p> <p>RTRV-EQPT: [<tid>] : <aid> : <ctag> ;</p> <p>aid = clock card slot (CLK-1, CLK-2, or CLK-ALL)</p> <p>Response:</p> <p><sid> <date> <time> M <ctag> COMPLD "<aid>: , , , , , , <clklevel>"</p> <p>clklevel = clock type in the shelf: ST2 = the clock is an ST2 ST2E = the clock is an ST2E ST3 = the clock is an ST3 ST3E = the clock is an ST3E TNC = the clock is a TNC TNCE = the clock is a TNCE</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Change Clock Quality Level</p>	<p>Note: This command will be denied when attempting to set the <clklevel> with an aid of CLK unless the SET-ATTR-CONT command has been used to set the <conttype> for the MIS card to other than OFF.</p> <p>Access level 2 is required to use this command. Enter:</p> <pre>ED-EQPT:[<tid>]:<aid>:<ctag>::,,,,,<clklevel>,;,i</pre> <p>aid = clock card slot (CLK-1 or CLK-2) clklevel = clock type in the shelf: ST2 = the clock is an ST2 ST2E = the clock is an ST2E ST3 = the clock is an ST3 ST3E = the clock is an ST3E TNC = the clock is a TNC TNCE = the clock is a TNCE</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Display DCIM Card Type</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM card slot (DCIM-1, DCIM-2, or DCIM-ALL)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:,,,,,,"</pre>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Display GTI Card Parameters</p>	<p>Access level 2 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p><u>Response Format 1:</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<framing>,<troublecode>,<osc1>,<osc2> , <integration>" ...</pre> <p>framing = framing type: CAS = channel assigned signaling CAS4 = channel assigned signaling with frame aligned sequence with cyclic redundancy check 4 CRC4 = frame alignment sequence framing with cyclic redundancy check 4 D4 = D4 framing format ESF = ESF framing format FAS = frame alignment sequence framing</p> <p>troublecode = output signals when card has major alarm: ALW = AIS is sent on all outputs INH = all outputs are squelched</p> <p>osc1 = clock type on oscillator 1 (OSC A) input: RB = rubidium QTZ = quartz</p> <p>osc2 = clock type on oscillator 2 (OSC B) input: RB = rubidium QTZ = quartz</p> <p>integration = integration time until an alarm is declared: 1 = see Table H 2 = see Table H 3 = see Table H 4 = see Table H</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
Display GTI Card Parameters (Contd)	<p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = GTI card slot (GTI-1, GTI-2, or GTI-ALL)</p> <p><u>Response Format 2:</u></p> <pre>M <sid> <date> <time> <ctag> COMPLD "<aid>:<framing>,<troublecode>,,<osc1>,<osc2> ,<integration>,,,<signaltype>" ...</pre> <p>framing = framing type: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>troublecode = output signals when card has major alarm: ALW = AIS is sent on all outputs INH = all outputs are squelched</p> <p>osc1 = clock type on oscillator 1 (OSC A) input: RB = rubidium QTZ = quartz</p> <p>osc2 = clock type on oscillator 2 (OSC B) input: RB = rubidium QTZ = quartz</p> <p>integration = integration time until an alarm is declared: 1 = see Table H 2 = see Table H 3 = see Table H 4 = see Table H</p> <p>signaltype = type of output signal: ANALOG= analog DIGITAL= digital</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Change GTI Card Parameters</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>ED-EQPT:[<tid>]:<aid>:<ctag>::[<framing>], [<troublecode>],,[<osc1>],[<osc2>],[<integration>];</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>framing = framing type: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>troublecode = output signals when card has major alarm: ALW = AIS is sent on all outputs INH = all outputs are squelched</p> <p>osc1 = clock type on oscillator 1 (OSC A) input: RB = rubidium QTZ = quartz</p> <p>osc2 = clock type on oscillator 2 (OSC B) input: RB = rubidium QTZ = quartz</p> <p>integration = integration time until an alarm is declared: 1 = see Table H 2 = see Table H 3 = see Table H 4 = see Table H</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Change GTI Card Parameters (Contd)</p>	<p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>ED-EQPT:[<tid>]:<aid>:<ctag>::[<framing>], [<troublecode>],,[<osc1>],[<osc2>],[<integration>] [,,, [<signaltype>]]>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>framing = framing type:</p> <ul style="list-style-type: none"> CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling <p>troublecode = output signals when card has major alarm:</p> <ul style="list-style-type: none"> ALW = AIS is sent on all outputs INH = all outputs are squelched <p>osc1 = clock type on oscillator 1 (OSC A) input:</p> <ul style="list-style-type: none"> RB = rubidium QTZ = quartz <p>osc2 = clock type on oscillator 2 (OSC B) input:</p> <ul style="list-style-type: none"> RB = rubidium QTZ = quartz <p>integration = integration time until an alarm is declared:</p> <ul style="list-style-type: none"> 1 = see Table H 2 = see Table H 3 = see Table H 4 = see Table H <p>signaltype = type of output signal:</p> <ul style="list-style-type: none"> ANALOG= analog DIGITAL= digital <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Display MRC Card Parameters</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card slot (MRC-1, MRC-2, or MRC-ALL)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:,,,<osc1>,<osc2>,,,,," ...</pre> <p>osc1 = clock type on oscillator 1 (OSC A) input: RB = rubidium QTZ = quartz NONE = oscillator 1 is not equipped</p> <p>osc2 = clock type on oscillator 2 (OSC B) input: RB = rubidium QTZ = quartz NONE = oscillator 2 is not equipped</p>
<p>Change MRC Card Parameters</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-EQPT:[<tid>]:<aid>:<ctag>::,,,<osc1>,<osc2>,;</pre> <p>aid = MRC card slot (MRC-1 or MRC-2)</p> <p>osc1 = clock type on oscillator 1 (OSC A) input: RB = rubidium QTZ = quartz NONE = oscillator 1 is not equipped</p> <p>osc2 = clock type on oscillator 2 (OSC B) input: RB = rubidium QTZ = quartz NONE = oscillator 2 is not equipped</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
Display Timing Output Card Parameters	<p>Access level 2 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card slot (TO-x, where x = 1-10)</p> <p><u>Input Format 2:</u></p> <p>Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card slot (TO-x, where x = 1-12 [1-10 for Version 5 TO cards] or TO-ALL)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<framing>,<troublecode>,<portseverity> ,,,,,," . . .</pre> <p>framing = framing type: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>troublecode = output signals when card fails: ALW = AIS is sent on all outputs INH = all outputs are squelched Note: If any port on the TO card is set for ANALOG, the troublecode must be set to INH.</p> <p>portseverity = alarm type caused by port failure: MJ = major MN = minor</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Change Timing Output Card Parameters</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1:</u></p> <p>Enter:</p> <pre>ED-EQPT:[<tid>]:<aid>:<ctag>::[<framing>], [<troublecode>],[<portseverity>],,,;</pre> <p>aid = TO card slot (TO-x, where x = 1–10)</p> <p>framing = framing type: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>troublecode = output signals when card fails: ALW = AIS is sent on all outputs INH = all outputs are squelched <i>Note:</i> If any port on the TO card is set for ANALOG, the troublecode must be set to INH.</p> <p>portseverity = alarm type caused by port failure: MJ = major MN = minor</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Change Timing Output Card Parameters (Contd)</p>	<p><u>Input Format 2:</u></p> <p>Enter:</p> <p style="padding-left: 40px;">ED-EQPT: [<tid>]:<aid>:<ctag>:: [<framing>], [<troublecode>], [<portseverity>], , , ;</p> <p style="padding-left: 40px;">aid = TO card slot (TO-x, where x = 1-12 [1-10 for Version 5 TO cards])</p> <p style="padding-left: 40px;">framing = framing type:</p> <p style="padding-left: 80px;">CAS = channel associated signaling</p> <p style="padding-left: 80px;">CAS4 = channel associated signaling with cyclic redundancy check 4</p> <p style="padding-left: 80px;">CRC4 = common channel signaling with cyclic redundancy check 4</p> <p style="padding-left: 80px;">D4 = D4 framing</p> <p style="padding-left: 80px;">ESF = ESF framing</p> <p style="padding-left: 80px;">FAS = common channel signaling</p> <p style="padding-left: 40px;">troublecode = output signals when card fails:</p> <p style="padding-left: 80px;">ALW = AIS is sent on all outputs</p> <p style="padding-left: 80px;">INH = all outputs are squelched</p> <p style="padding-left: 120px;">Note: If any port on the TO card is set for ANALOG, the troublecode must be set to INH.</p> <p style="padding-left: 40px;">portseverity = alarm type caused by port failure:</p> <p style="padding-left: 80px;">MJ = major</p> <p style="padding-left: 80px;">MN = minor</p> <p>Response:</p> <p style="padding-left: 40px;"><sid> <date> <time></p> <p style="padding-left: 20px;">M <ctag> COMPLD</p>

Chart 13. Version 5 Card Configuration (Contd)

TASK	PROCEDURE
<p>Display MCA Card Parameters</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-EQPT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MCA card slot</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:,,<portseverity>,,,,,<alarmlead>,, " ...</pre> <p>portseverity = alarm type caused by port failure: MJ = major MN = minor</p> <p>alarmlead = shelf alarm lead activation during protection switch: ALW = a protection switch activates the shelf alarm lead INH = a protection switch does not activate the shelf alarm lead</p>
<p>Change MCA Card Parameters</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>ED-EQPT:[<tid>]:<aid>:<ctag>:,,<portseverity>,,,,,<alarmlead>,,;</pre> <p>aid = MCA card slot</p> <p>portseverity = alarm type caused by port failure: MJ = major MN = minor</p> <p>alarmlead = shelf alarm lead activation during protection switch: ALW = a protection switch activates the shelf alarm lead INH = a protection switch does not activate the shelf alarm lead</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 14. Reference Input Ports

TASK	PROCEDURE
	<p>This chart provides the steps for controlling reference input ports including: entering ports into the system database, putting ports into service, displaying port parameters, changing port parameters, taking ports out of service, and deleting ports from the system database.</p>
<p>Enter DCIM Card Input Port</p>	<p>Access level 4 is required to use this command. If a parameter is left blank, the switch settings for that parameter will be used. Enter:</p> <pre> ENT-PORT: [<tid>]:<aid>:<ctag>:: [<framing>], [<priority>],, [<signal type>] [, [<reference condition>]]; </pre> <p>aid = DCIM card port (DCIM-a-b): a = DCIM card slot (1-2) b = port (1-2 or ALL)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>priority = priority of the reference on this port (1-4 for 1+1 mode, 1-2 for 1:1 mode [1 is highest priority])</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p>reference condition = reference can be used: ALW = this input reference can be used INH = this input reference cannot be used (but can be IS-NR)</p> <p>Response:</p> <pre> <sid> <date> <time> M <ctag> COMPLD </pre>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Enter MRC Card Input Port	<p>Access level 4 is required to use this command. If a parameter is left blank, the switch settings for that parameter will be used.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>ENT-PORT:[<tid>]:<aid>:<ctag>::[<framing>], [<priority>],[<reference type>],[<signal type>];</pre> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>ENT-PORT:[<tid>]:<aid>:<ctag>::[<framing>], [<priority>],[<reference type>],[<signal type>],;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>priority = priority of the reference on this port (1-4 with 1 the highest)</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Enter MRC Card Input Port (Contd)</p>	<p><u>Input Format 2 (Contd)</u></p> <p>reference type = type of reference: CESIUM = cesium GPS = global positioning system LORAN = LORAN NETWORK = network</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p>Note: If all the reference ports of an MRC card are configured for the same priority, the references will be selected based on the numerical order of the ports. The same numerical order will be listed if the settings are retrieved.</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Restore Input Port</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>RST-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Restore Input Port (Contd)</p>	<p><u>Input Format 2</u></p> <p>Enter:</p> <pre>RST-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = port: DCIM card port (DCIM-a-b): a = DCIM card slot (1-2) b = port (1-2 or ALL) MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Display Performance Monitoring Data</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-PM-PORT:[<tid>]:<aid>:<ctag>::<montype>,,,,,i</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>montype = the monitored parameter: ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<montype>,<monval>,<vldty>,,,,, <mondatt>,<montm>" ...</pre> <p>monval = value retrieved for the monitor type mondatt = current date montm = current time</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Clear Performance Monitoring Data</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>INIT-REG: [<tid>]:<aid>:<ctag>::<monitor type>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL)</p> <p>monitor type = the monitored parameter: ALL = all monitor registers BPV = bipolar violations register CRC = cyclic redundancy check register</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>INIT-REG: [<tid>]:<aid>:<ctag>::<monitor type>;</pre> <p>aid = port: DCIM card port (DCIM-a-b): a = DCIM card slot (1-2) b = port (1-2 or ALL) MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>monitor type = the monitored parameter: ALL = all monitor registers BPV = bipolar violations register CRC = cyclic redundancy check register</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Clear Performance Monitoring Data for DCIM, MRC, & PSM Cards</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>INIT-REG:[<tid>]:<aid>:<ctag>::<monitor type>;</pre> <p>aid = all spans of all DCIM, MRC, & PSM cards (ALL) montype = the monitored parameter: ALL = all register types BPV = bipolar violations register CRC = cyclic redundancy check register MTIE = MTIE register (PSM only) PHASE1M = phase 1 minute register (PSM only) SLIPS = slips register (PSM only) TDEV = TDEV register (PSM only)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Display Framing, Priority, Signal Type, & Reference Condition of DCIM Cards	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM card port (DCIM-a-b): a = DCIM card slot (1-2) b = port (1-2 or ALL)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<ctag>::<framing>,<priority>,, <signal type>,<reference condition>" ...</pre> <p>framing = type of framing: AUTO = (see note below) CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>priority = priority of the reference on this port (1-4 with 1 the highest)</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p>reference condition = reference use: ALW = use reference INH = do not use reference</p> <p>Note: If the framing type has never been set for a port on an MRC card, the retrieved framing type for that port will indicate AUTO. If this occurs, use the ENT-PORT command (if the port has not been entered) or the ED-PORT command (if the port has been entered) to set the framing type for the specified port.</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Change Framing, Priority, Signal Type, & Reference Condition of DCIM Cards</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-PORT: [<tid>]:<aid>:<ctag>:: [<framing>], [<priority>] , [<signal type>][, [<reference condition>]];</pre> <p>aid = DCIM card port (DCIM-a-b): a = DCIM card slot (1-2) b = port (1-2 or ALL)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>priority = priority of the reference on this port (1-4 with 1 the highest)</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p>reference condition = reference use: ALW = use reference INH = do not use reference</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Display DCIM Card Protection Mode	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-ATTR-CONT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM cards (DCIM-ALL)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<protection mode>" ...</pre> <p>protection mode = protection mode for DCIM cards:</p> <ul style="list-style-type: none"> NO = no 1-plus-1 protection: each DCIM card is stand-alone with 2 inputs 1+1 = 1-plus-1 protection: the 2 DCIM cards operate as 1 card with 4 inputs
Change DCIM Card Protection Mode	<p>Access level 3 is required to use this command. Enter:</p> <pre>SET-ATTR-CONT:[<tid>]:<aid>:<ctag>::<protection mode>;</pre> <p>aid = DCIM-ALL</p> <p>protection mode = protection mode for DCIM cards:</p> <ul style="list-style-type: none"> NO = no 1-plus-1 protection: each DCIM card is stand-alone with 2 inputs 1+1 = 1-plus-1 protection: the 2 DCIM cards operate as 1 card with 4 inputs <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Display Framing, Priority, Reference Type, & Signal Type of MRC Card	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), Response Format 1 will be shown. If switch SW1-6 is in the down position, Response Format 2 will be shown. On 090-45018-05 MIS cards: Response Format 2 will be shown (SW1-6 is in the down position [factory setting]).</p> <p><u>Response Format 1:</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<ctag>::<framing>,<priority>,<reference type>,<signal type>" ...</pre> <p>framing = type of framing: CAS = channel assigned signaling CAS4 = channel assigned signaling with frame aligned sequence with cyclic redundancy check 4 CRC4 = frame alignment sequence framing with cyclic redundancy check 4 D4 = D4 framing format ESF = ESF framing format FAS = frame alignment sequence framing</p> <p>priority = priority of the reference on this port (1-4 with 1 the highest)</p> <p>reference type = type of reference: GPS = global positioning system LORAN = LORAN CESIUM = cesium NETWORK = network</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Display Framing, Priority, Reference Type, & Signal Type of MRC Card (Contd)	<p><u>Response Format 2:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:<ctag>::<framing>,<priority>, <reference type>,<signal type>," ... framing = type of framing: AUTO = (see note below) CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling priority = priority of the reference on this port (1-4 with 1 the highest) reference type = type of reference: CESIUM = cesium GPS = global positioning system LORAN = LORAN NETWORK = network signal type = type of signal: ANALOG = analog DIGITAL = digital </pre> <p>Note: If the framing type has never been set for a port on an MRC card, the retrieved framing type for that port will indicate AUTO. If this occurs, use the ENT-PORT command (if the port has not been entered) or the ED-PORT command (if the port has been entered) to set the framing type for the specified port.</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Change Framing, Priority, Reference Type, & Signal Type of MRC Card	<p>Access level 3 is required to use this command. Enter:</p> <pre>ED-PORT:[<tid>]:<aid>:<ctag>:: [<framing>] , [<priority>], [<reference type>], [<signal type>];</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>priority = priority of the reference on this port (1-4 with 1 the highest)</p> <p>reference type = type of reference: CESIUM = cesium GPS = global positioning system LORAN = LORAN NETWORK = network</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Display Threshold	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-TH-PORT: [<tid>]:<aid>:<ctag>::<montype>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>montype = the monitored parameter: ALL = bipolar violations and cyclic redundancy check BPV = bipolar violations CRC = cyclic redundancy check</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), Response Format 1 will be shown. If switch SW1-6 is in the down position, Response Format 2 will be shown. On 090-45018-05 MIS cards: Response Format 2 will be shown (SW1-6 is in the down position [factory setting]).</p> <p><u>Response Format 1:</u></p> <pre><source identifier> <date> <time> M <ctag> COMPLD "MRC-a-b:<montype>,,,<thlv>" ...</pre> <p>thlv = threshold level in decimal numerals</p> <p><u>Response Format 2:</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<montype>,,,<thlv>" ...</pre> <p>thlv = threshold level in decimal numerals</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Change Threshold</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>SET-TH-PORT:[<tid>]:<aid>:<ctag>::<monitor type> ,<threshold>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL)</p> <p>monitor type = the monitored parameter: BPV = bipolar violations CRC = cyclic redundancy check</p> <p>threshold = 1-32767</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>SET-TH-PORT:[<tid>]:<aid>:<ctag>::<monitor type> ,<threshold>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>monitor type = the monitored parameter: BPV = bipolar violations CRC = cyclic redundancy check</p> <p>threshold = 1-32767</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Display Alarm Severity	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-ATTR-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]):</p> <ul style="list-style-type: none"> a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b) <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<severity>,<condition>" ...</pre> <p>severity = severity set for the condition:</p> <ul style="list-style-type: none"> CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported CL = cleared <p>condition = port condition:</p> <ul style="list-style-type: none"> AIS = alarm indication signal ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check FFREQ = fractional frequency (MRC only) LOS = loss of signal OOF = out-of-frame errors

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Change Alarm Severity</p>	<p>Access level 4 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>SET-ATTR-PORT: [<tid>]:<aid>:<ctag>::<severity> ,<condition>;</pre> <p>aid = MRC card port (MRC-a-b): a = MRC card slot (1-2) b = port (1-4 or ALL)</p> <p>severity = severity set for the condition: CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported</p> <p>condition = port condition: AIS = alarm indication signal ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check FFREQ = fractional frequency (MRC only) LOS = loss of signal OOF = out-of-frame errors</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
<p>Change Alarm Severity (Contd)</p>	<p><u>Input Format 2</u></p> <p>Enter:</p> <pre>SET-ATTR-PORT:[<tid>]:<aid>:<ctag>::<severity> ,<condition>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>severity = severity set for the condition: CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported</p> <p>condition = port condition: AIS = alarm indication signal ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check FFREQ = fractional frequency (MRC only) LOS = loss of signal OOF = out-of-frame errors</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Display Message Type for Autonomous Port Alarms</p>	<p>Access level 4 is required to use this command. Enter:</p> <pre>RTRV-REPTMODE-PORT:[<tid>]::<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "REPTMODE: <modetype>"</pre> <p>modetype = type of message used for autonomous port alarms: ALW = REPT-ALM-PORT message INH = REPT-ALM-EQPT message</p>

Chart 14. Reference Input Ports (Contd)

TASK	PROCEDURE
Set Message Type for Autonomous Port Alarms	<p>Access level 4 is required to use this command. Enter:</p> <pre>SET-REPTMODE-PORT:[<tid>]::<ctag>::<modetype>;</pre> <p>modetype = type of message used for autonomous port alarms: ALW = REPT-ALM-PORT message INH = REPT-ALM-EQPT message</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Remove Port	<p>Access level 3 is required to use this command. Enter:</p> <pre>RMV-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete Port	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = MRC card port (MRC-a-b[&&-c]): a = MRC card slot (1-2) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 15. Monitor Input Ports

TASK	PROCEDURE
	<p>This chart provides the steps for controlling monitor input ports including: entering ports into the system database, putting ports into service, displaying port parameters, changing port parameters, taking ports out of service, and deleting ports from the system database.</p>
<p>Enter Port</p>	<p>Access level 4 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>ENT-PORT:[<tid>]:<aid>:<ctag>::<framing>,,, <signal type>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Enter Port (Contd)</p>	<p><u>Input Format 2</u></p> <p>Enter:</p> <pre>ENT-PORT:[<tid>]:<aid>:<ctag>::<framing>,,, <signal type>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>signal type = type of signal: ANALOG = analog signal DIGITAL = digital signal</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Restore Port</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>RST-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Display Performance Monitoring Data</p>	<p>Access level 2 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>RTRV-PM-PORT: [<tid>]:<aid>:<ctag>::<montype>,,,,, [<mondatt>], { , <montm1> , <montm2> } ;</pre> <p>aid = PSM card port (PSM-a-b): a = PSM card slot (1-11) b = port (1-4)</p> <p>montype = the monitored parameter: SLIPS = number of slips since the previous mid-night is displayed (used with monitor date). Data is available for the previous 7 days. BPV, CRC = BPV or CRC since the time and data entered, reported in 15 minute increments, is displayed (used with monitor time 2). Data is available for the previous 24 hours. MTIE, TDEV = if today's date is entered, the MTIE or TDEV accumulated between the last 15 minute reset period specified by monitor time 2 and the previous 24 hours is displayed; if any previous date is entered, monitor time 2 is not required and the MTIE or TDEV accumulated for the 24 hours between time 00:00:00 and 23:59:59 for that day is displayed. Data is not retrievable for the current time 15 minute bin. Data is valid only after a full 15 minute bin has been processed by the PSM-T. Data is available for the 7 previous days.</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
Display Performance Monitoring Data (Contd)	<p><u>Input Format 1 (Contd)</u></p> <p>PHASE1M = 1 minute raw phase accumulated between monitor time 2 and 1 hour after monitor time 2 is displayed. The units of measure for PHASE1M are nanoseconds. Data is available for the previous 7 days</p> <p>PHASE1S = 1 second raw phase accumulated between monitor time 2 and 1 hour after monitor time 2 is displayed. The units of measure for PHASE1S are nanoseconds. Data is available for the previous 24 hours.</p> <p>mondatt = date: mm-dd = mm = month, dd = day (null) = current day</p> <p>montm1 = current time (null) montm2 = start time of a 15 minute period: hh-00 = hour of the day (hh = 00-23) hh-15 = 15 minutes past hour hh hh-30 = 30 minutes past hour hh hh-45 = 45 minutes past hour hh</p> <p><u>Response Format 1</u></p> <p><u>For BPV (CRC, SLIPS, MTIE, TDEV, and PHASE1M will appear similarly):</u></p> <pre> <source identifier> <date> <time> M <ctag> COMPLD "PSM-a-b:<montype>,<monval>,<vldty> , , , <mondatt>,<montm>" . . . </pre> <p>monval = value retrieved for the monitor type vldty = complete (null) or not available (NA) mondatt = current date montm = current time</p> <p>Note: The <monval> units of measure for MTIE and TDEV are nanoseconds. The <monval> units of measure for PHASE1M are nanoseconds and 60 lines will be displayed.</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE																																						
Display Performance Monitoring Data (Contd)	<p data-bbox="396 310 589 342"><u>Input Format 2</u></p> <p data-bbox="396 373 477 405">Enter:</p> <pre data-bbox="477 443 1511 506">RTRV-PM-PORT:[<tid>]:<aid>:<ctag>::<montype>,,,,, [<mondatt>],[,<montm1> ,<montm2>];</pre> <p data-bbox="548 533 1511 1423"> <table border="0"> <tr> <td style="padding-right: 20px;">aid</td> <td>= PSM card port (PSM-a-b):</td> </tr> <tr> <td style="padding-left: 20px;">a</td> <td>= PSM card slot (1-11)</td> </tr> <tr> <td style="padding-left: 20px;">b</td> <td>= port (1-4)</td> </tr> <tr> <td>montype</td> <td>= the monitored parameter:</td> </tr> <tr> <td style="padding-left: 20px;">SLIPS</td> <td>= number of slips since the previous midnight (monitor date and monitor time = null)</td> </tr> <tr> <td style="padding-left: 20px;">BPV</td> <td>= 15 minute bipolar violation counts (used with monitor time 2)</td> </tr> <tr> <td style="padding-left: 20px;">CRC</td> <td>= 15 minute cyclic redundancy check error counts (used with monitor time 2)</td> </tr> <tr> <td style="padding-left: 20px;">MTIE</td> <td>= 900 second MTIE accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)</td> </tr> <tr> <td style="padding-left: 20px;">TDEV</td> <td>= 128 second TDEV accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)</td> </tr> <tr> <td style="padding-left: 20px;">PHASE1M</td> <td>= 1 minute average phase accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)</td> </tr> <tr> <td>mondatt</td> <td>= date:</td> </tr> <tr> <td style="padding-left: 20px;">mm-dd</td> <td>= mm = month, dd = day</td> </tr> <tr> <td style="padding-left: 20px;">(null)</td> <td>= current day</td> </tr> <tr> <td>montm1</td> <td>= current time (null)</td> </tr> <tr> <td>montm2</td> <td>= start time of a 15 minute period:</td> </tr> <tr> <td style="padding-left: 20px;">hh-00</td> <td>= hour of the day (hh = 00-23)</td> </tr> <tr> <td style="padding-left: 20px;">hh-15</td> <td>= 15 minutes past hour hh</td> </tr> <tr> <td style="padding-left: 20px;">hh-30</td> <td>= 30 minutes past hour hh</td> </tr> <tr> <td style="padding-left: 20px;">hh-45</td> <td>= 45 minutes past hour hh</td> </tr> </table> </p> <p data-bbox="396 1457 480 1488">Notes:</p> <ol data-bbox="396 1488 1511 1675" style="list-style-type: none"> 1. BPVs and CRCs are reported in 15 minute bins and can be retrieved for the past 24 hours. Each 15 minute bin is reinitialized to zero counts at the start of each 15 minute bin. 2. The time specified in montm2 is the start of a 15 minute period. 3. If the start time to the present time is less than 1 hour, only full 15 minute periods will be displayed. 	aid	= PSM card port (PSM-a-b):	a	= PSM card slot (1-11)	b	= port (1-4)	montype	= the monitored parameter:	SLIPS	= number of slips since the previous midnight (monitor date and monitor time = null)	BPV	= 15 minute bipolar violation counts (used with monitor time 2)	CRC	= 15 minute cyclic redundancy check error counts (used with monitor time 2)	MTIE	= 900 second MTIE accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)	TDEV	= 128 second TDEV accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)	PHASE1M	= 1 minute average phase accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)	mondatt	= date:	mm-dd	= mm = month, dd = day	(null)	= current day	montm1	= current time (null)	montm2	= start time of a 15 minute period:	hh-00	= hour of the day (hh = 00-23)	hh-15	= 15 minutes past hour hh	hh-30	= 30 minutes past hour hh	hh-45	= 45 minutes past hour hh
aid	= PSM card port (PSM-a-b):																																						
a	= PSM card slot (1-11)																																						
b	= port (1-4)																																						
montype	= the monitored parameter:																																						
SLIPS	= number of slips since the previous midnight (monitor date and monitor time = null)																																						
BPV	= 15 minute bipolar violation counts (used with monitor time 2)																																						
CRC	= 15 minute cyclic redundancy check error counts (used with monitor time 2)																																						
MTIE	= 900 second MTIE accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)																																						
TDEV	= 128 second TDEV accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)																																						
PHASE1M	= 1 minute average phase accumulated between monitor time 2 and 1 hour after monitor time 2 (in nanoseconds)																																						
mondatt	= date:																																						
mm-dd	= mm = month, dd = day																																						
(null)	= current day																																						
montm1	= current time (null)																																						
montm2	= start time of a 15 minute period:																																						
hh-00	= hour of the day (hh = 00-23)																																						
hh-15	= 15 minutes past hour hh																																						
hh-30	= 30 minutes past hour hh																																						
hh-45	= 45 minutes past hour hh																																						

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
Display Performance Monitoring Data (Contd)	<p><u>Response Format 2:</u></p> <p><u>For SLIPS and PHASE1M:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:<montype>,<monval>,,,,,<mondat>,<montm>"...</pre> <p> monval = value retrieved for the monitor type mondat = current date montm = current time </p> <p><u>For BPV and CRC:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:<montype>,<monval>,<vldty>,,,,,<mondat>,<montm>"...</pre> <p> vldty = indicates whether the information collected represents a complete monitoring interval: (null) = complete NA = not available P = partial </p> <p><u>For MTIE and TDEV:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:<montype>,<monval-1>,<vldty-1>,<monval-2>,<vldty-2>,<monval-3>,<vldty-3>,<monval-4>,<vldty-4>,,,,,<mondat>,<montm>"...</pre> <p>Note: Each line displays one hour of data. The four monvals and corresponding four vldtys are for the four 15 minute periods following the montm shown at the end of each line. The -1, -2, -3, and -4 indicate the first, second, third, and fourth 15 minute period after the montm shown at the end of the line.</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Clear Performance Monitoring Data</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>INIT-REG: [<tid>]:<aid>:<ctag>::<montype>;</pre> <p>aid = PSM card port (PSM-a-b): a = PSM card slot (1-11) b = port (1-4 or ALL)</p> <p>montype = the monitored parameter: ALL = all register types BPV = bipolar violations register CRC = cyclic redundancy check register MTIE = MTIE register PHASE1M = phase 1 minute register PHASE1S = phase 1 second register SLIPS = slips register TDEV = TDEV register</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Clear Performance Monitoring Data (Contd)</p>	<p><u>Input Format 2</u></p> <p>Enter:</p> <pre>INIT-REG:[<tid>]:<aid>:<ctag>::<montype>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>montype = the monitored parameter: ALL = all register types BPV = bipolar violations register CRC = cyclic redundancy check register MTIE = MTIE register PHASE1M = phase 1 minute register SLIPS = slips register TDEV = TDEV register</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Clear Performance Monitoring Data for DCIM, MRC, & PSM Cards</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>INIT-REG:[<tid>]:<aid>:<ctag>::<monitor type>;</pre> <p>aid = all spans of all DCIM, MRC, & PSM cards (ALL)</p> <p>montype = the monitored parameter: ALL = all register types BPV = bipolar violations register CRC = cyclic redundancy check register MTIE = MTIE register (PSM only) PHASE1M = phase 1 minute register (PSM only) SLIPS = slips register (PSM only) TDEV = TDEV register (PSM only)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
Display Framing & Signal Type	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]):</p> <ul style="list-style-type: none"> a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b) <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), Response Format 1 will be shown. If switch SW1-6 is in the down position, Response Format 2 will be shown.</p> <p>On 090-45018-05 MIS cards: Response Format 2 will be shown (SW1-6 is in the down position [factory setting]).</p> <p><u>Response Format 1</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<ctag>::<framing>,,,<signal type>" ...</pre> <p>framing = type of framing:</p> <ul style="list-style-type: none"> CAS = channel assigned signaling CAS4 = channel assigned signaling with frame aligned sequence with cyclic redundancy check 4 CRC4 = frame alignment sequence framing with cyclic redundancy check 4 D4 = D4 framing format ESF = ESF framing format FAS = frame alignment sequence framing

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
Display Framing & Signal Type (Contd)	<p><u>Response Format 2</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:<ctag>::<framing>,,,<signal type>," ... framing = type of framing: AUTO = (see note below) CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling signal type = type of signal: ANALOG = analog signal DIGITAL = digital signal </pre> <p>Note: If the framing type has never been set for a port on a PSM card, the retrieved framing type for that port will indicate AUTO. If this occurs, use the ENT-PORT command (if the port has not been entered) or the ED-PORT command (if the port has been entered) to set the framing type for the specified port.</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Change Framing & Signal Type</p>	<p>Access level 1 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>ED-PORT: [<tid>]:<aid>:<ctag>:: [<framing>] , , , ;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Change Framing & Signal Type (Contd)</p>	<p><u>Input Format 2</u></p> <p>Enter:</p> <pre>ED-PORT: [<tid>]:<aid>:<ctag>:: [<framing>] , , , [<signal type>] , ;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>framing = type of framing: CAS = channel associated signaling CAS4 = channel associated signaling with cyclic redundancy check 4 CRC4 = common channel signaling with cyclic redundancy check 4 D4 = D4 framing ESF = ESF framing FAS = common channel signaling</p> <p>signal type = type of signal: ANALOG = analog signal DIGITAL = digital signal</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Display Threshold</p>	<p>Access level 1 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>RTRV-TH-PORT:[<tid>]:<aid>:<ctag>::<monitor type>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>monitor type = the monitored parameter: ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check MTIE_x = MTIE x second threshold (x = 1, 2, 4, 10, 16, 20, 40, 64, 100, 128, 200, 400, 512, 900, 1000, 2000, 4000, 10000, 20000, 40000, or 86400) TDEV_x = TDEV x second threshold (x = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 20, 30, 40, 50, 60, 64, 70, 80, 90, 100, 128, 200, 300, 400, 500, 600, 700, 800, 900, or 1000)</p> <p><u>Response Format 1</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<monitor type>,,,<threshold>" ...</pre> <p>threshold = threshold level in decimal numerals</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE																																																							
Display Threshold (Contd)	<p data-bbox="298 317 639 348"><u>Response Format 1 (Contd)</u></p> <p data-bbox="298 380 1419 600">Note for monitor type of BPV: Only in-service (restored) ports are sampled; therefore, the BPV counts displayed correspond to a particular error rate depending on the number of in-service ports. Find the BPV count in the table below that is closest to the displayed BPV count and in the column which represents the number of ports in service, then follow across to the corresponding error rate. Because the ports are sampled in turn, there is some amount of settling time for the framing circuit. This settling time causes an error of $\pm 4\%$ in the specified error rate. The observation interval is 15 minutes.</p> <table border="1" data-bbox="383 653 1338 1052"> <thead> <tr> <th colspan="4" data-bbox="383 653 1127 709">BPV count</th> <th data-bbox="1127 653 1338 709"></th> </tr> <tr> <th data-bbox="383 709 570 793">1 port in service</th> <th data-bbox="570 709 756 793">2 ports in service</th> <th data-bbox="756 709 943 793">3 ports in service</th> <th data-bbox="943 709 1127 793">4 ports in service</th> <th data-bbox="1127 709 1338 793">Error Rate</th> </tr> </thead> <tbody> <tr> <td data-bbox="383 793 570 846">14</td> <td data-bbox="570 793 756 846">4</td> <td data-bbox="756 793 943 846">4</td> <td data-bbox="943 793 1127 846">4</td> <td data-bbox="1127 793 1338 846">1×10^{-8}</td> </tr> <tr> <td data-bbox="383 846 570 898">139</td> <td data-bbox="570 846 756 898">35</td> <td data-bbox="756 846 943 898">35</td> <td data-bbox="943 846 1127 898">35</td> <td data-bbox="1127 846 1338 898">1×10^{-7}</td> </tr> <tr> <td data-bbox="383 898 570 951">1390</td> <td data-bbox="570 898 756 951">348</td> <td data-bbox="756 898 943 951">348</td> <td data-bbox="943 898 1127 951">348</td> <td data-bbox="1127 898 1338 951">1×10^{-6}</td> </tr> <tr> <td data-bbox="383 951 570 1003">13896</td> <td data-bbox="570 951 756 1003">3474</td> <td data-bbox="756 951 943 1003">3474</td> <td data-bbox="943 951 1127 1003">3474</td> <td data-bbox="1127 951 1338 1003">1×10^{-5}</td> </tr> <tr> <td data-bbox="383 1003 570 1052">32767</td> <td data-bbox="570 1003 756 1052">8192</td> <td data-bbox="756 1003 943 1052">8192</td> <td data-bbox="943 1003 1127 1052">8192</td> <td data-bbox="1127 1003 1338 1052">2.35×10^{-5}</td> </tr> </tbody> </table> <p data-bbox="298 1100 493 1131"><u>Input Format 2</u></p> <p data-bbox="298 1163 380 1194">Enter:</p> <pre data-bbox="380 1230 1333 1262">RTRV-TH-PORT:[<tid>]:<aid>:<ctag>::<monitor type>;</pre> <p data-bbox="451 1293 1398 1671"> <table border="0"> <tr> <td style="padding-right: 20px;">aid</td> <td>= PSM card port (PSM-a-b[&&-c]):</td> </tr> <tr> <td style="padding-left: 20px;">a</td> <td>= PSM card slot (1-11)</td> </tr> <tr> <td style="padding-left: 20px;">b</td> <td>= port (1-4 or ALL)</td> </tr> <tr> <td style="padding-left: 20px;">c</td> <td>= ending port in a range (2-4 with c > b)</td> </tr> <tr> <td style="padding-right: 20px;">monitor type</td> <td>= the monitored parameter:</td> </tr> <tr> <td style="padding-left: 20px;">ALL</td> <td>= all monitor types</td> </tr> <tr> <td style="padding-left: 20px;">BPV</td> <td>= bipolar violations</td> </tr> <tr> <td style="padding-left: 20px;">CRC</td> <td>= cyclic redundancy check</td> </tr> <tr> <td style="padding-left: 20px;">MTIE_x</td> <td>= MTIE x second threshold (x = 1, 4, 16, 64, 128, 512, 900)</td> </tr> <tr> <td style="padding-left: 20px;">TDEV_x</td> <td>= TDEV x second threshold (x = 1, 4, 16, 64, 128)</td> </tr> </table> </p>	BPV count					1 port in service	2 ports in service	3 ports in service	4 ports in service	Error Rate	14	4	4	4	1×10^{-8}	139	35	35	35	1×10^{-7}	1390	348	348	348	1×10^{-6}	13896	3474	3474	3474	1×10^{-5}	32767	8192	8192	8192	2.35×10^{-5}	aid	= PSM card port (PSM-a-b[&&-c]):	a	= PSM card slot (1-11)	b	= port (1-4 or ALL)	c	= ending port in a range (2-4 with c > b)	monitor type	= the monitored parameter:	ALL	= all monitor types	BPV	= bipolar violations	CRC	= cyclic redundancy check	MTIE _x	= MTIE x second threshold (x = 1, 4, 16, 64, 128, 512, 900)	TDEV _x	= TDEV x second threshold (x = 1, 4, 16, 64, 128)
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Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE																																																																				
Display Threshold (Contd)	<p><u>Response Format 2</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:<monitor type>,,,<threshold>" ... threshold = threshold level in decimal numerals </pre> <p>Note for BPV and CRC: Only in-service (restored) ports are sampled; therefore, the BPV or CRC counts displayed correspond to a particular error rate depending on the number of in-service ports. Find the BPV count in one of the tables below that is closest to the displayed BPV or CRC count and in the column which represents the number of ports in service, then follow across to the corresponding error rate. Because the ports are sampled in turn, there is some amount of settling time for the framing circuit. This settling time causes an error of $\pm 4\%$ in the specified error rate. The observation interval is 15 minutes. If a PSM card has only one port active, no sampling occurs.</p> <table border="1" data-bbox="479 926 1435 1325"> <thead> <tr> <th rowspan="2">Error Rate</th> <th colspan="4">BPV or CRC counts for a T1 signal</th> </tr> <tr> <th>1 port in service</th> <th>2 ports in service</th> <th>3 ports in service</th> <th>4 ports in service</th> </tr> </thead> <tbody> <tr> <td>1×10^{-8}</td> <td>14</td> <td>4</td> <td>4</td> <td>4</td> </tr> <tr> <td>1×10^{-7}</td> <td>139</td> <td>35</td> <td>35</td> <td>35</td> </tr> <tr> <td>1×10^{-6}</td> <td>1390</td> <td>348</td> <td>348</td> <td>348</td> </tr> <tr> <td>1×10^{-5}</td> <td>13896</td> <td>3474</td> <td>3474</td> <td>3474</td> </tr> <tr> <td>2.35×10^{-5}</td> <td>32767</td> <td>8192</td> <td>8192</td> <td>8192</td> </tr> </tbody> </table> <table border="1" data-bbox="479 1388 1435 1787"> <thead> <tr> <th rowspan="2">Error Rate</th> <th colspan="4">BPV or CRC counts for an E1 signal</th> </tr> <tr> <th>1 port in service</th> <th>2 ports in service</th> <th>3 ports in service</th> <th>4 ports in service</th> </tr> </thead> <tbody> <tr> <td>1×10^{-8}</td> <td>18</td> <td>4</td> <td>4</td> <td>4</td> </tr> <tr> <td>1×10^{-7}</td> <td>184</td> <td>46</td> <td>46</td> <td>46</td> </tr> <tr> <td>1×10^{-6}</td> <td>1843</td> <td>461</td> <td>461</td> <td>461</td> </tr> <tr> <td>1×10^{-5}</td> <td>18432</td> <td>4608</td> <td>4608</td> <td>4608</td> </tr> <tr> <td>2.35×10^{-5}</td> <td>32767</td> <td>8192</td> <td>8192</td> <td>8192</td> </tr> </tbody> </table>	Error Rate	BPV or CRC counts for a T1 signal				1 port in service	2 ports in service	3 ports in service	4 ports in service	1×10^{-8}	14	4	4	4	1×10^{-7}	139	35	35	35	1×10^{-6}	1390	348	348	348	1×10^{-5}	13896	3474	3474	3474	2.35×10^{-5}	32767	8192	8192	8192	Error Rate	BPV or CRC counts for an E1 signal				1 port in service	2 ports in service	3 ports in service	4 ports in service	1×10^{-8}	18	4	4	4	1×10^{-7}	184	46	46	46	1×10^{-6}	1843	461	461	461	1×10^{-5}	18432	4608	4608	4608	2.35×10^{-5}	32767	8192	8192	8192
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Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Change Threshold</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>SET-TH-PORT:[<tid>]:<aid>:<ctag>::<monitor type> , <threshold>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL)</p> <p>monitor type = the monitored parameter: BPV = bipolar violations CRC = cyclic redundancy check MTIE_x = MTIE x second threshold (x = 1, 2, 4, 10, 16, 20, 40, 64, 100, 128, 200, 400, 512, 900, 1000, 2000, 4000, 10000, 20000, 40000, or 86400) TDEV_x = TDEV x second threshold (x = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 20, 30, 40, 50, 60, 64, 70, 80, 90, 100, 128, 200, 300, 400, 500, 600, 700, 800, 900, or 1000)</p> <p>threshold = 1-32767</p> <p>Note for BPVs: Only in-service (restored) ports are sampled; therefore, the BPV counts entered to obtain a desired error rate depends on the number of in-service ports. Enter a BPV count from the table below based on the desired error rate and the number of ports in service as the <thlev> parameter in the command.</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE																																																						
Change Threshold (Contd)	<p data-bbox="394 310 686 342"><u>Input Format 1 (Contd)</u></p> <table border="1" data-bbox="479 394 1435 793"> <thead> <tr> <th rowspan="2">Error Rate</th> <th colspan="4">BPV count</th> </tr> <tr> <th>1 port in service</th> <th>2 ports in service</th> <th>3 ports in service</th> <th>4 ports in service</th> </tr> </thead> <tbody> <tr> <td>1×10^{-8}</td> <td>14</td> <td>4</td> <td>4</td> <td>4</td> </tr> <tr> <td>1×10^{-7}</td> <td>139</td> <td>35</td> <td>35</td> <td>35</td> </tr> <tr> <td>1×10^{-6}</td> <td>1390</td> <td>348</td> <td>348</td> <td>348</td> </tr> <tr> <td>1×10^{-5}</td> <td>13896</td> <td>3474</td> <td>3474</td> <td>3474</td> </tr> <tr> <td>2.35×10^{-5}</td> <td>32767</td> <td>8192</td> <td>8192</td> <td>8192</td> </tr> </tbody> </table> <p data-bbox="427 842 1511 968">Because the ports are sampled in turn, there is some amount of settling time for the framing circuit. This settling time causes an error of $\pm 4\%$ in the specified error rate. The observation interval is 15 minutes. If a PSM card has only one port active, no sampling occurs, and events are accumulated in real time.</p> <p data-bbox="394 1003 589 1035"><u>Input Format 2</u></p> <p data-bbox="394 1066 475 1098">Enter:</p> <pre data-bbox="475 1136 1511 1192">SET-TH-PORT: [<tid>] : <aid> : <ctag> :: <monitor type> , <threshold> ;</pre> <p data-bbox="548 1224 1495 1602"> <table border="0"> <tr> <td style="padding-right: 20px;">aid</td> <td>= PSM card port (PSM-a-b[&&-c]):</td> </tr> <tr> <td style="padding-left: 40px;">a</td> <td>= PSM card slot (1–11)</td> </tr> <tr> <td style="padding-left: 40px;">b</td> <td>= port (1–4 or ALL)</td> </tr> <tr> <td style="padding-left: 40px;">c</td> <td>= ending port in a range (2–4 with c > b)</td> </tr> <tr> <td style="padding-right: 20px;">monitor type</td> <td>= the monitored parameter:</td> </tr> <tr> <td style="padding-left: 40px;">BPV</td> <td>= bipolar violations</td> </tr> <tr> <td style="padding-left: 40px;">CRC</td> <td>= cyclic redundancy check</td> </tr> <tr> <td style="padding-left: 40px;">MTIE_x</td> <td>= MTIE x second threshold (x = 1, 4, 16, 64, 128, 512, 900)</td> </tr> <tr> <td style="padding-left: 40px;">TDEV_x</td> <td>= TDEV x second threshold (x = 1, 4, 16, 64, 128)</td> </tr> <tr> <td style="padding-right: 20px;">threshold</td> <td>= 1–32767</td> </tr> </table> </p>	Error Rate	BPV count				1 port in service	2 ports in service	3 ports in service	4 ports in service	1×10^{-8}	14	4	4	4	1×10^{-7}	139	35	35	35	1×10^{-6}	1390	348	348	348	1×10^{-5}	13896	3474	3474	3474	2.35×10^{-5}	32767	8192	8192	8192	aid	= PSM card port (PSM-a-b[&&-c]):	a	= PSM card slot (1–11)	b	= port (1–4 or ALL)	c	= ending port in a range (2–4 with c > b)	monitor type	= the monitored parameter:	BPV	= bipolar violations	CRC	= cyclic redundancy check	MTIE _x	= MTIE x second threshold (x = 1, 4, 16, 64, 128, 512, 900)	TDEV _x	= TDEV x second threshold (x = 1, 4, 16, 64, 128)	threshold	= 1–32767
Error Rate	BPV count																																																						
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Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE																																																																				
Change Threshold (Contd)	<p data-bbox="302 317 591 348"><u>Input Format 2 (Contd)</u></p> <p data-bbox="370 382 1417 506">Note: Only in-service (restored) ports are sampled; therefore, the BPV or CRC counts entered to obtain a desired error rate depends on the number of in-service ports. Enter a BPV or CRC count from one of the tables below based on the desired error rate and the number of ports in service as the <thlev> parameter in the command.</p> <table border="1" data-bbox="383 548 1338 947"> <thead> <tr> <th rowspan="2">Error Rate</th> <th colspan="4">BPV or CRC counts for a T1 signal</th> </tr> <tr> <th>1 port in service</th> <th>2 ports in service</th> <th>3 ports in service</th> <th>4 ports in service</th> </tr> </thead> <tbody> <tr> <td>1×10^{-8}</td> <td>14</td> <td>4</td> <td>4</td> <td>4</td> </tr> <tr> <td>1×10^{-7}</td> <td>139</td> <td>35</td> <td>35</td> <td>35</td> </tr> <tr> <td>1×10^{-6}</td> <td>1390</td> <td>348</td> <td>348</td> <td>348</td> </tr> <tr> <td>1×10^{-5}</td> <td>13896</td> <td>3474</td> <td>3474</td> <td>3474</td> </tr> <tr> <td>2.35×10^{-5}</td> <td>32767</td> <td>8192</td> <td>8192</td> <td>8192</td> </tr> </tbody> </table> <table border="1" data-bbox="383 976 1338 1375"> <thead> <tr> <th rowspan="2">Error Rate</th> <th colspan="4">BPV or CRC counts for an E1 signal</th> </tr> <tr> <th>1 port in service</th> <th>2 ports in service</th> <th>3 ports in service</th> <th>4 ports in service</th> </tr> </thead> <tbody> <tr> <td>1×10^{-8}</td> <td>18</td> <td>4</td> <td>4</td> <td>4</td> </tr> <tr> <td>1×10^{-7}</td> <td>184</td> <td>46</td> <td>46</td> <td>46</td> </tr> <tr> <td>1×10^{-6}</td> <td>1843</td> <td>461</td> <td>461</td> <td>461</td> </tr> <tr> <td>1×10^{-5}</td> <td>18432</td> <td>4608</td> <td>4608</td> <td>4608</td> </tr> <tr> <td>2.35×10^{-5}</td> <td>32767</td> <td>8192</td> <td>8192</td> <td>8192</td> </tr> </tbody> </table> <p data-bbox="370 1428 1417 1554">Because the ports are sampled in turn, there is some amount of settling time for the framing circuit. This settling time causes an error of $\pm 4\%$ in the specified error rate. The observation interval is 15 minutes. If a PSM card has only one port active, no sampling occurs.</p> <p data-bbox="302 1587 423 1619">Response:</p> <pre data-bbox="378 1654 800 1717"> <sid> <date> <time> M <ctag> COMPLD </pre>	Error Rate	BPV or CRC counts for a T1 signal				1 port in service	2 ports in service	3 ports in service	4 ports in service	1×10^{-8}	14	4	4	4	1×10^{-7}	139	35	35	35	1×10^{-6}	1390	348	348	348	1×10^{-5}	13896	3474	3474	3474	2.35×10^{-5}	32767	8192	8192	8192	Error Rate	BPV or CRC counts for an E1 signal				1 port in service	2 ports in service	3 ports in service	4 ports in service	1×10^{-8}	18	4	4	4	1×10^{-7}	184	46	46	46	1×10^{-6}	1843	461	461	461	1×10^{-5}	18432	4608	4608	4608	2.35×10^{-5}	32767	8192	8192	8192
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Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Display Alarm Severity</p>	<p>Access level 1 is required to use this command. Enter:</p> <pre>RTRV-ATTR-PORT::<aid>:<ctag>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]):</p> <ul style="list-style-type: none"> a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b) <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), Response Format 1 will be shown. If switch SW1-6 is in the down position, Response Format 2 will be shown.</p> <p>On 090-45018-05 MIS cards: Response Format 2 will be shown (SW1-6 is in the down position [factory setting]).</p> <p><u>Response Format 1</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<severity>,<condition>" ...</pre> <p>severity = severity set for the condition:</p> <ul style="list-style-type: none"> CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported <p>condition = port condition:</p> <ul style="list-style-type: none"> ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check OOF = out-of-frame errors MTIE_x = MTIE x second threshold (x = 1, 2, 4, 10, 16, 20, 40, 64, 100, 128, 200, 400, 512, 900, 1000, 2000, 4000, 10000, 20000, 40000, or 86400) TDEV_x = TDEV x second threshold (x = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 20, 30, 40, 50, 60, 64, 70, 80, 90, 100, 128, 200, 300, 400, 500, 600, 700, 800, 900, or 1000)

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
Display Alarm Severity (Contd)	<p><u>Response Format 2</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:<severity>,<condition>" ... severity = severity set for the condition: CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported condition = port condition (refer to Table I) ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check MTIE_x = MTIE x second threshold (x = 1, 4, 16, 64, 128, 512, 900) TDEV_x = TDEV x second threshold (x = 1, 4, 16, 64, 128) </pre>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Change Alarm Severity</p>	<p>Access level 4 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>SET-ATTR-PORT: [<tid>]:<aid>:<ctag>::<severity>, <condition>;</pre> <p>aid = PSM card port (PSM-a-b): a = PSM card slot (1–11) b = port (1–4 or ALL)</p> <p>severity = severity set for the condition: CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported</p> <p>condition = port condition: ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check OOF = out-of-frame errors MTIE_x = MTIE x second threshold (x = 1, 2, 4, 10, 16, 20, 40, 64, 100, 128, 200, 400, 512, 900, 1000, 2000, 4000, 10000, 20000, 40000, or 86400) TDEV_x = TDEV x second threshold (x = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 20, 30, 40, 50, 60, 64, 70, 80, 90, 100, 128, 200, 300, 400, 500, 600, 700, 800, 900, or 1000)</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
<p>Change Alarm Severity (Contd)</p>	<p><u>Input Format 2</u></p> <p>Enter:</p> <pre>SET-ATTR-PORT:[<tid>]:<aid>:<ctag>::<severity>,<condition>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>severity = severity set for the condition: CR = critical alarm MJ = major alarm MN = minor alarm NA = not alarmed NR = not reported</p> <p>condition = port condition: AIS = alarm indication signal ALL = all monitor types BPV = bipolar violations CRC = cyclic redundancy check LOS = loss of signal MTIE_x = MTIE x second threshold (x = 1, 4, 16, 64, 128, 512, 900) TDEV_x = TDEV x second threshold (x = 1, 4, 16, 64, 128)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
<p>Display Message Type for Autonomous Port Alarms</p>	<p>Access level 4 is required to use this command. Enter:</p> <pre>RTRV-REPTMODE-PORT:[<tid>]::<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "REPTMODE: <modetype>"</pre> <p>modetype = type of message used for autonomous port alarms: ALW = REPT-ALM-PORT message INH = REPT-ALM-EQPT message</p>

Chart 15. Monitor Input Ports (Contd)

TASK	PROCEDURE
Set Message Type for Autonomous Port Alarms	<p>Access level 4 is required to use this command. Enter:</p> <pre>SET-REPTMODE-PORT:[<tid>]::<ctag>::<modetype>;</pre> <p>modetype = type of message used for autonomous port alarms: ALW = REPT-ALM-PORT message INH = REPT-ALM-EQPT message</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Remove Port	<p>Access level 3 is required to use this command. Enter:</p> <pre>RMV-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Delete Port	<p>Access level 4 is required to use this command. Enter:</p> <pre>DLT-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = PSM card port (PSM-a-b[&&-c]): a = PSM card slot (1-11) b = port (1-4 or ALL) c = ending port in a range (2-4 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 16. Timing Output Ports

TASK	PROCEDURE
	<p>This chart provides the steps for controlling timing output ports including: entering ports into the system database, putting ports into service, displaying port parameters, changing port parameters, taking ports out of service, and deleting ports from the system database.</p>
<p>Enter Port</p>	<p>Access level 4 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>ENT-PORT:[<tid>]:<aid>:<ctag>::,,,<signal type>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-10) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>ENT-PORT:[<tid>]:<aid>:<ctag>::,,,<signal type>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-12) (1-10 for Version 5 TO cards) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 16. Timing Output Ports (Contd)

TASK	PROCEDURE
Restore Port	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>RST-PORT: [<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-10) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>RST-PORT: [<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-12) (1-10 for Version 5 TO cards) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 16. Timing Output Ports (Contd)

TASK	PROCEDURE
<p>Display Signal Type</p>	<p>Access level 1 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>RTRV-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-10) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p><u>Response Format 1:</u></p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:,,,<signal type>" ...</pre> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>RTRV-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-12) (1-10 for Version 5 cards) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p>

Chart 16. Timing Output Ports (Contd)

TASK	PROCEDURE
Display Signal Type (Contd)	<p><u>Response Format 2:</u></p> <pre> <sid> <date> <time> M <ctag> COMPLD "<aid>:,,,,<signal type>," ... signal type = type of signal: ANALOG = analog DIGITAL = digital </pre>

Chart 16. Timing Output Ports (Contd)

TASK	PROCEDURE
<p>Change Signal Type</p>	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>ED-PORT:[<tid>]:<aid>:<ctag>::,,,<signal type>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-10) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>ED-PORT:[<tid>]:<aid>:<ctag>::,,,<signal type>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-12) (1-10 for Version 5 cards) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p>signal type = type of signal: ANALOG = analog DIGITAL = digital</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 16. Timing Output Ports (Contd)

TASK	PROCEDURE
Display Message Type for Autonomous Port Alarms	<p>Access level 4 is required to use this command. Enter:</p> <pre>RTRV-REPTMODE-PORT:[<tid>]::<ctag>;</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "REPTMODE: <modetype>"</pre> <p>modetype = type of message used for autonomous port alarms: ALW = REPT-ALM-PORT message INH = REPT-ALM-EQPT message</p>
Set Message Type for Autonomous Port Alarms	<p>Access level 4 is required to use this command. Enter:</p> <pre>SET-REPTMODE-PORT:[<tid>]::<ctag>::<modetype>;</pre> <p>modetype = type of message used for autonomous port alarms: ALW = REPT-ALM-PORT message INH = REPT-ALM-EQPT message</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 16. Timing Output Ports (Contd)

TASK	PROCEDURE
Remove Port	<p>Access level 3 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), either Input Format 1 or 2 can be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>RMV-PORT: [<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-10) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>RMV-PORT: [<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-12) (1-10 for Version 5 cards) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 16. Timing Output Ports (Contd)

TASK	PROCEDURE
Delete Port	<p>Access level 4 is required to use this command.</p> <p>On 090-45018-25F MIS cards: If switch SW1-6 is in the up position (factory setting), Input Format 1 must be used. If switch SW1-6 is in the down position, Input Format 2 must be used.</p> <p>On 090-45018-05 MIS cards: Input Format 2 must be used (SW1-6 is in the down position [factory setting]).</p> <p><u>Input Format 1</u></p> <p>Enter:</p> <pre>DLT-PORT: [<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-10) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p><u>Input Format 2</u></p> <p>Enter:</p> <pre>DLT-PORT: [<tid>]:<aid>:<ctag>;</pre> <p>aid = TO card port (TO-a-b[&&-c]): a = TO card slot (1-12) (1-10 for Version 5 cards) b = port (1-10 or ALL) c = ending port in a range (2-10 with c > b)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 17. Synchronization Source for Timing Output Cards

TASK	PROCEDURE
<p>This chart provides the steps for displaying and changing the synchronization source mode for the timing output cards, and for selecting and releasing a specific synchronization source for the timing output cards.</p>	
<p>Display Source Mode for Timing Output Cards</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-ATTR-CONT:[<tid>]:<aid>:<ctag>; aid = SHELF</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<source mode>" ... source mode = source mode for timing output cards: RVRT = revertive NRVRT = nonrevertive</pre>
<p>Change Source Mode for Timing Output Cards</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>SET-ATTR-CONT:[<tid>]:<aid>:<ctag>::<source mode>; aid = SHELF source mode = source mode for timing output cards: RVRT = revertive NRVRT = nonrevertive</pre> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 17. Synchronization Source for Timing Output Cards (Contd)

TASK	PROCEDURE
Select Source for Timing Output Cards	<p>Caution: This command should be used for maintenance purposes only. Leaving timing output cards in this mode (a forced synchronization source) will result in timing hits if the selected source fails.</p> <p>Access level 4 is required to use this command. Enter:</p> <pre>OPR-SYNCNSW:[<tid>]:<aid>:<ctag>::<source>;</pre> <p>aid = TO-ALL source = internal source for timing output cards: CLK1 = clock card 1 CLK2 = clock card 2 IN1 = system input card 1 IN2 = system input card 2</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Release Source for Timing Output Cards	<p>Access level 4 is required to use this command. This command cancels the OPR-SYNCNSW command. Enter:</p> <pre>RLS-SYNCNSW:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO-ALL</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 18. Protection Control for Version 5 Timing Output Cards

TASK	PROCEDURE
	<p>This chart provides the steps for displaying and setting the output protection type for timing output cards, and for switching to and releasing from a protection timing output card.</p>
<p>Display Output Protection Type for Timing Output Cards</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-ATTR-CONT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = TO-ALL (TO-EAN cards using 1-N or no protection) MCA (for timing output cards other than TO-EAN using 1:N protection)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>:<conttype>[,<protmode> ,<p1> ,<p2> ,<p3> ,<p4> , <p5> ,<p6> ,<p7> ,<p8> ,<p9> ,<p10>]" ...</pre> <p>conttype = type of protection: 1-N = 1-for-N protection (TO-EAN card only) (aid = TO-ALL only) NO = no protection (aid = TO-x only) NRVRT = nonrevertive switching when fault clears (aid = MCA only) RVRT = revertive switching when fault clears (aid = MCA only)</p> <p>protmode = protection mode (aid = MCA only): AUTO = automatic protection switching to same card type in HS slot (OPR-PROTNSW command will not function) MAN = manual protection switching to same card type in HS slot (via OPR-PROTNSW command)</p> <p>p1-p10 = priority of timing output slots 1 through 10 when using 1:N protection (aid = MCA only): 1-10 = timing output slots are designated by positions in the command: 1 to 10 appears for each timing output slot (p1-p10) protected by the same timing output card type to indicate the priority of the slot</p>

Chart 18. Protection Control for Version 5 Timing Output Cards (Contd)

TASK	PROCEDURE
Change Output Protection Type for Timing Output Cards	<p>Access level 3 is required to use this command. (For a more complete definition of the command, refer to the Input/Output Reference Guide section of this manual.) Enter:</p> <pre>SET-ATTR-CONT: [<tid>]:<aid>:<ctag>::<conttype> [,<protmode> ,<p1> ,<p2> ,<p3> ,<p4> ,<p5> ,<p6> ,<p7> ,<p8> , <p9> ,<p10>] ;</pre> <p>aid = TO-x (x = 1–12) (for no protection or TO-EAN 1-N protection only) = MCA (for 1:N protection only)</p> <p>conttype = type of protection: 1-N = 1-for-N protection (TO-EAN card only) (aid = TO-x only) NO = no protection (aid = TO-x only) NRVRT = nonrevertive switching when fault clears (aid = MCA only) RVRT = revertive switching when fault clears (aid = MCA only)</p> <p>protmode = protection mode (aid = MCA only): AUTO = automatic protection switching to same card type in HS slot (OPR-PROTNSW command will not function) MAN = manual protection switching to same card type in HS slot (via OPR-PROTNSW command)</p> <p>p1–p10 = priority of timing output slots 1 through 10 when using 1:N protection (aid = MCA only): 1–10 = timing output slots are designated by positions in the command: enter from 1 to 10 for each timing output slot (p1–p10) protected by the same timing output card type to indicate the priority of the slot</p> <p>Note: An aid of TO-x (for no protection) can be used for TO-EA cards only. An aid of MCA (for 1:N protection) can be used for all timing output cards. An aid of TO-x (for 1:N protection) can be used for TO-EAN cards only. An aid of MCA (for 1:N protection) can be used for all timing output cards except TO-EA.</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 18. Protection Control for Version 5 Timing Output Cards (Contd)

TASK	PROCEDURE
Switch to Protection Timing Output Card	<p>Access level 2 is required to use this command. This command forces a protection switch between a normally working timing output card and a protection timing output card. This command will be denied if the protection type has not been entered (SET-ATTR-CONT), or if the protection card is out of service. (For a more complete definition of the command, refer to the Input/Output Reference Guide section of this manual.) Enter:</p> <pre>OPR-PROTNSW:[<tid>]:<aid>:<ctag>::<switchfrom>;</pre> <p>aid = working TO card (TO-x, where x = 1-10) switchfrom = MCA (used with 1:N protection, causes a switch from the working timing output card in slot TO-a to the protection timing output card in the HS slot)</p> <p>Note: If automatic switching was set with the SET-ATTR-CONT command and revertive switching was not set with the SET-ATTR-CONT command, and a fault occurred in the working card, then the working card with the fault was replaced, the two commands (OPR-PROTNSW and RLS-PROTNSW) reverse function. That is, the OPR-PROTNSW must be used to return to the working card, and the RLS-PROTNSW must be used to transfer to the protection card.</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Release Protection Timing Output Card	<p>Access level 2 is required to use this command. This command switches from a protection to a working timing output card. Enter:</p> <pre>RLS-PROTNSW:[<tid>]:<aid>:<ctag>::<switchfrom>;</pre> <p>aid = working TO card (TO-x, where x = 1-10) switchfrom = MCA (used with 1:N protection, causes a switch from the working timing output card in slot TO-a to the protection timing output card in the HS slot)</p> <p>Note: If automatic switching was set with the SET-ATTR-CONT command and revertive switching was not set with the SET-ATTR-CONT command, and a fault occurred in the working card, then the working card with the fault was replaced, the two commands (OPR-PROTNSW and RLS-PROTNSW) reverse function. That is, the OPR-PROTNSW must be used to return to the working card, and the RLS-PROTNSW must be used to transfer to the protection card.</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 19. DCIM Protection Control

TASK	PROCEDURE
<p>This chart provides the steps for displaying and setting the output protection mode for DCIM cards, and for forcing a particular input port to be used and releasing the forced use of a particular port.</p>	
<p>Display DCIM Card Protection Mode</p>	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-ATTR-CONT: [<tid>] : <aid> : <ctag> ;</pre> <p>aid = DCIM cards (DCIM-ALL)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid> : <protection mode>" ...</pre> <p>protection mode = protection mode for DCIM cards: NO = no 1-plus-1 protection: each DCIM card is stand-alone with 2 inputs 1+1 = 1-plus-1 protection: the 2 DCIM cards operate as 1 card with 4 inputs</p>
<p>Change DCIM Card Protection Mode</p>	<p>Access level 3 is required to use this command. Enter:</p> <pre>SET-ATTR-CONT: [<tid>] : <aid> : <ctag> : : <protection mode> ;</pre> <p>aid = DCIM-ALL protection mode = protection mode for DCIM cards: NO = no 1-plus-1 protection: each DCIM card is stand-alone with 2 inputs 1+1 = 1-plus-1 protection: the 2 DCIM cards operate as 1 card with 4 inputs</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 19. DCIM Protection Control (Contd)

TASK	PROCEDURE
Force a Specified DCIM Input Port to be Used	<p>Access level 3 is required to use this command. This command forces a specified input port on a DCIM card to be used. Enter:</p> <pre>OPR-SWDX-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM port (DCIM-a-b, where a = 1 or 2, b = 1 or 2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
Release DCIM Input Port	<p>Access level 3 is required to use this command. This command releases the forced use of a DCIM card input as set by the OPR-SWDX-PORT command. Enter:</p> <pre>RLS-SWDX-PORT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = DCIM port (DCIM-a-b, where a = 1 or 2, b = 1 or 2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>

Chart 20. Copy Database of Version 5 Cards

TASK	PROCEDURE
<p>This chart provides the steps for copying Version 5 card databases to and from the MIS card.</p>	
<p>Copy Card Database from MIS Card to Other Cards</p>	<p>Access level 4 is required to use this command. Enter:</p> <pre> CPY-MEM: [<tid>]: [<shelf>]: <ctag>:: , FROM-MIS , , TO-a :DATA; </pre> <p>shelf = shelf where copying will occur: (null) = master shelf E1 = expansion shelf 1 E2 = expansion shelf 2 E3 = expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)</p> <p>a = card: DCIM-b = DCIM card (b = 1-2 or ALL) GTI-b = GTI card (b = 1-2 or ALL) MCA = MCA card MRC-b = MRC card (b = 1-2 or ALL) PSM-c = PSM card (c = 1-11 or ALL) TO-d = TO card (c = 1-12 or ALL) (1-10 or ALL for Version 5 TO cards) ALL = all DCIM, GTI, MRC, PSM, and TO cards</p> <p>Notes:</p> <ol style="list-style-type: none"> When copying to the GTI card, the master shelf must be addressed. After copying to the GTI card (or ALL), use the RTRV-COND-EQPT command to ensure that the GTI is in service. If the GTI is not in service, repeat the COPY command. <p>Response:</p> <pre> <sid> <date> <time> M <ctag> COMPLD </pre>

Chart 20. Copy Database of Version 5 Cards (Contd)

TASK	PROCEDURE
<p>Copy Card Database from Other Cards to MIS Card</p>	<p>Access level 4 is required to use this command. Enter:</p> <pre> CPY-MEM: [<tid>]: [<shelf>]: <ctag>::, FROM-a, , TO-MIS :DATA; </pre> <p>shelf = shelf where copying will occur: (null) = master shelf E1 = expansion shelf 1 E2 = expansion shelf 2 E3 = expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)</p> <p>a = card: DCIM-b = DCIM card (b = 1-2 or ALL) GTI-b = GTI card (b = 1-2 or ALL) MCA = MCA card MRC-b = MRC card (b = 1-2 or ALL) PSM-c = PSM card (c = 1-11 or ALL) TO-d = TO card (c = 1-12 or ALL) (1-10 or ALL for TOTA-5 cards) ALL = all DCIM, GTI, MRC, PSM, and TO cards</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. When copying from the GTI card, the master shelf must be addressed. 2. When copying from the GTI card (or ALL) to the MIS card, the COPY command may be denied with an error code of SROF. If this occurs, repeat the COPY command. <p>Response:</p> <pre> <sid> <date> <time> M <ctag> COMPLD </pre>

Chart 21. Copy Program from External Source to MIS Card

STEP	PROCEDURE																		
This chart provides the steps for copying an MIS card program from an external source to the MIS card.																			
1	Create a directory on the hard drive of the PC, and copy the files from both disks (092-45118-52 and 092-45218-52) to the newly created directory.																		
2	To determine the setting for echo on the communication port to be used, use the RTRV-COM command (for details, refer to the task Display Communication Parameters in Chart 4, Communication Ports).																		
3	If the echo parameter is set to INH (inhibited), skip to the next step. If the echo parameter is set to ALW (allowed), use the ED-COM command to change echo to INH (for details, refer to the task Change Communication Parameters in Chart 4, Communication Ports).																		
4	Use the RTRV-INVENTORY command to determine which program location (HI BANK or LOW BANK) is active in the MIS card (for details, refer to the task Display Memory Bank Being Used for MIS Card Program in Chart 5, System Configuration).																		
5	Ensure that a commercial software communication package (such as PROCOMM PLUS®) that supports the KERMIT protocol is running on the PC from which the program file will be downloaded, and that the PC is running in a VT100 terminal mode.																		
6	<p>Ensure that the following KERMIT protocol parameters are set:</p> <table data-bbox="427 930 930 1171"> <tr><td>Control quote:</td><td>35</td></tr> <tr><td>Pad:</td><td>0</td></tr> <tr><td>End of line:</td><td>13</td></tr> <tr><td>8th bit quote:</td><td>38</td></tr> <tr><td>Block start:</td><td>1</td></tr> <tr><td>Maximum packet size:</td><td>512</td></tr> <tr><td>Number of pad characters:</td><td>0</td></tr> <tr><td>File type:</td><td>Binary</td></tr> <tr><td>Block check type:</td><td>3-byte CRC</td></tr> </table>	Control quote:	35	Pad:	0	End of line:	13	8th bit quote:	38	Block start:	1	Maximum packet size:	512	Number of pad characters:	0	File type:	Binary	Block check type:	3-byte CRC
Control quote:	35																		
Pad:	0																		
End of line:	13																		
8th bit quote:	38																		
Block start:	1																		
Maximum packet size:	512																		
Number of pad characters:	0																		
File type:	Binary																		
Block check type:	3-byte CRC																		
7	<p>Access level 4 is required to use this command. Enter:</p> <pre data-bbox="402 1262 1471 1293">CPY-MEM:[<tid>]:[<shelf>]:<ctag>:: ,FROM-EXT , ,TO-MIS:PGM;</pre> <p>shelf = shelf where MIS card resides:</p> <table data-bbox="735 1356 1466 1539"> <tr><td>(null)</td><td>= master shelf</td></tr> <tr><td>E1</td><td>= expansion shelf 1</td></tr> <tr><td>E2</td><td>= expansion shelf 2</td></tr> <tr><td>E3</td><td>= expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)</td></tr> </table> <p>Response:</p> <pre data-bbox="402 1644 824 1705">M <sid> <date> <time> <ctag> COMPLD</pre>	(null)	= master shelf	E1	= expansion shelf 1	E2	= expansion shelf 2	E3	= expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)										
(null)	= master shelf																		
E1	= expansion shelf 1																		
E2	= expansion shelf 2																		
E3	= expansion shelf 3 (or remote shelf if equipped with a remote shelf instead of an expansion shelf 3)																		

Chart 21. Copy Program from External Source to MIS Card (Contd)

STEP	PROCEDURE
8	<p>Caution: If the program download is interrupted before completion, the inactive bank will be empty. Any program residing in this bank will be lost. Do not interrupt the download.</p> <p>Transmit one of the following files to the inactive memory bank in the MIS card:</p> <p>If the LOW BANK is active (as determined in Step 4), transmit the xxxxx.hi file. If the HI BANK is active (as determined in Step 4), transmit the xxxxx.low file.</p> <p>where xxxxx represents the particular release of software being installed. Example: 50303 would be for release 5.03.03.</p>
9	<p>Wait until the communication software indicates that the copying has been completed (may take up to 8 minutes).</p>
10	<p>Access level 5 is required to use this command. To switch to the program just copied to the MIS card, enter:</p> <pre>INIT-SYS:[<tid>]:<aid>:<ctag>::5;</pre> <p>aid = MIS</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD</pre>
11	<p>This procedure is completed.</p>

Chart 22. GPS Information

TASK	PROCEDURE
	This chart provides the steps for displaying the GPS operating statistics.
Display GPS Statistics	<p>Access level 2 is required to use this command. Enter:</p> <pre>RTRV-GPS-STAT:[<tid>]:<aid>:<ctag>;</pre> <p>aid = GTI card slot (GTI-1 or GTI-2)</p> <p>Response:</p> <pre><sid> <date> <time> M <ctag> COMPLD "<aid>" /* UTC-TIME=b, LOCATION=c, SAT-IN-VIEW=d, [SAT-e=f], ... GTIMDEV=g, OSC1FFREQ=h, OSC2FFREQ=i */</pre> <p>b = universal coordinated time (hours:minutes:seconds)</p> <p>c = format is ddmm.mmm-x-dddmm.mmm-y-aa ddmm.mmm-x = latitude: dd = degrees mm.mmm = minutes x = north (N) or south (S) dddmm.mmm-y = longitude: ddd = degrees mm.mmm = minutes x = east (E) or west (W) aa = altitude in meters (can be negative, error is ±20 meters)</p> <p>d = number of satellites in view</p> <p>e = satellite number</p> <p>f = format is d1-d2-sn: d1 = satellite azimuth (degrees relative to true north) d2 = satellite elevation (degrees relative from horizontal) sn = signal-to-noise ratio (dB)</p> <p>g = modified Allen deviation of the GTI card</p> <p>h = oscillator 1 fractional frequency</p> <p>i = oscillator 2 fractional frequency</p> <p>Note: The system occasionally returns an SARB error message in response to the RTRV-GPS-STAT command. If this occurs, repeat the command.</p>

Table I. Alarm/Event Summary

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
<p>Notes:</p> <ol style="list-style-type: none"> The severities in this table are defined as follows: <ul style="list-style-type: none"> MN = minor alarm MJ = major alarm NA = not alarmed SC = standing condition TC = transient condition The service-affecting states are: service affecting (SA) and nonservice affecting (NSA). Up to 6 minutes may be required to detect and report an unequipped condition (UNEQUIPPED: IMPROPER CARD REMOVAL OR COMM FAILURE) from a GTI card. This condition may be caused by card removal, cable removal, or loss of power to the LPR shelf. An asterisk (*) next to a severity indicates the following: <ul style="list-style-type: none"> The severity can be changed using the SET-ATTR-PORT command The severity shown is the factory setting A word enclosed in brackets [] may or may not appear as part of the <conddescr>. The IS-NR-STBY condtype for TO cards applies to TO-EA cards only. 				
CLK-x (x = 1-2)	ACTIVE	CLOCK IS SUPPLYING SIGNAL	SC	NSA
	DRIFT	INPUT IS DRIFTING	MN	NSA
	FREERUN	CLOCK FREERUNNING	SC	NSA
	HOLDOVER	CLOCK IN HOLDOVER	MN	NSA
	INACTIVE	CLOCK IS NOT SUPPLYING SIGNAL	SC	NSA
	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	LOCKED	CLOCK CONVERGED ON REFERENCE INPUT	SC	NSA
	NOT-LOCKED	CLOCK NOT CONVERGED ON REFERENCE INPUT	SC	NSA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
	TOLERANCE	SYSTEM INPUT TO CLOCK OUT OF TOLERANCE	MN	NSA
	UNEQUIPPED	IMPROPER CARD REMOVAL	MN	NSA
DCIM-x (x = 1-2)	ACTIVE	CARD IS SUPPLYING A SIGNAL TO THE CLOCK(S)	SC	NSA
	ALL-REF	LOSS OF ALL EXTERNAL INPUT REFERENCES	MJ	SA
	CLOCK-x (x = 1-2)	LOSS OF CLOCK SIGNAL	MN	NSA
	FAIL	CARD FAIL:CLOCK SYNTHESIZER FAILURE	MJ	SA
	FAIL	CARD FAIL: FRAMER FAILURE	MJ	SA
	INACTIVE	CARD IS NOT SUPPLYING A SIGNAL TO THE CLOCK(S)	SC	NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
DCIM-x (x = 1-2) (contd)	IS-NR	IN-SERVICE NORMAL	NA	NSA
	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	MISMATCH	CARD INFORMATION DOES NOT MATCH DATABASE	SC	SA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
	UNEQUIPPED	IMPROPER CARD REMOVAL	MN/ SC	SA/ NSA
DCIM-x-y (x = 1-2, y = 1-2)	AIS	ALARM INDICATION SIGNAL RECEIVED	MN*	NSA
	BPV	BPV THRESHOLD EXCEEDED	MN*	NSA
	CRC	CRC THRESHOLD EXCEEDED	MN*	NSA
	IS-NR	IN-SERVICE NORMAL	NA	NSA
	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	IS-NR-ACT-LOCK	IN-SERVICE NORMAL-ACTIVE LOCKED	SC	NSA
	LOS	LOSS OF EXTERNAL REFERENCE	MN*	NSA
	OOF	OOF DETECTED	MN*	NSA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
	OOS-MT-FLT-LOCK	OUT-OF-SERVICE MAINTENANCE-FAILED LOCKED	MN/ MJ	SA
	SWITCH	CARD NOW USING SPECIFIED INPUT SIGNAL	TC	NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
GTI-x (x = 1-2)	ACQUIRED	ACQUIRED AT LEAST ONE SATELLITE	SC	NSA
	COMM-LOSS	COMMUNICATION LOSS	MN	NSA
	CONVERGING	TIMING SIGNAL NOT YET STABLE	SC	NSA
	FAIL	CARD FAULT: REFERENCE PLL OUT OF LOCK	MJ	SA
	FAIL	CARD FAIL: PRIMARY REFERENCE PLL OUT OF LOCK	MJ	SA
	FAIL	CARD FAIL: OSCILLATOR PLL OUT OF LOCK	MJ	SA
	FREQ-TOL	GPS FREQUENCY OUT OF TOLERANCE	MN	NSA
	FUSE-x (x = 1-2)	LPR SHELF FUSE BLOWN OR POWER FAIL	MN	NSA
	GPS-INVALID	GPS INVALID	MJ/ MN/ SC	NSA
	GTI-OUT-FAIL	LOSS OF TIMING OUTPUT SIGNAL	MN	SA
	GTR-COMM-LOS	GTR COMMUNICATIONS FAIL	MN	NSA
	GTR-FAIL	GTR FAIL: ANTENNA CURRENT OUT OF TOLERANCE	MJ	NSA
	GTR-FAIL	GTR FAIL:GTR PLL OUT OF LOCK	MJ	NSA
	GTR-FAIL	GTR FAULT: NOT LOCKED TO UTC TIME - GTR OR SKY PROBLEM	MJ	NSA
	GTR-FAIL	GTR FAIL: FLASH MEMORY FAIL	MJ	NSA
	GTR-FAIL	GTR FAIL: RAM MEMORY FAIL	MJ	NSA
	GTR-GPS-LOS	LOSS OF GPS SIGNAL FROM GTR	MN	NSA
	GTR-LOCKED	GTR IS LOCKED	SC	NSA
	GTR-NOT-LOCKED	GTR IS NOT LOCKED TO GPS SIGNAL	SC	NSA
	GTR-PWR-FLT	GTR POWER FAULT	MN	NSA
	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	LOCKED	GTI IS LOCKED	SC	NSA
	MISMATCH	CARD INFORMATION DOES NOT MATCH DATABASE	SC	NSA
NO-INPUTS	LOSS OF OSCILLATORS AND INPUT FROM ANTENNA	MJ	SA	
OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA	

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
GTI-x (x = 1-2) (contd)	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
	OSC-x-LOS (x = 1-2)	LOSS OF EXTERNAL OSCILLATOR	MN	NSA
	OSC-x-TOL (x = 1-2)	EXTERNAL OSCILLATOR OUT OF TOLERANCE	MN	NSA
	SATELLITE	INSUFFICIENT SATELLITES IN VIEW < 3	SC	NSA
	SEARCH	SEARCHING FOR FIRST SATELLITE	SC	NSA
	TOD-INVALID	TOD INVALID	SC/ MN/ MJ	NSA/ SA
	TOD-FAIL	TOD FAIL	MJ	SA
	TRACK	GTI TRACKING	SC	NSA
	UNEQUIPPED	IMPROPER CARD REMOVAL OR COMM FAILURE	MN/ SC	SA/ NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
MCA	COMM	LOSS OF COMMUNICATIONS WITH ALL OUTPUT CARDS	SC	SA
	FAIL	CARD FAILED: WRITE RELAY REGISTER FAULT	MJ	SA
	FAIL	CARD FAILED: COMMON RELAY REGISTER FAULT	MJ	SA
	FAIL	CARD FAILED: OUTPUT RELAY DRIVER FAULT	MJ	SA
	FAIL	CARD FAILED: INTERNAL PROCESSOR FAILURE	MJ	SA
	IS-NR	IN-SERVICE NORMAL	SC	NSA
	IS-NR-FRCD	IN-SERVICE NORMAL COMMAND SWITCHED FORCED	SC	—
	IS-NR-LOCK	IN-SERVICE NORMAL MANUAL SWITCHED LOCKED	SC	—
	IS-NR-STBY	IN-SERVICE NORMAL-STANDBY	SC	NSA
	MISMATCH	CARD INFORMATION DOES NOT MATCH DATABASE	MN	NSA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	SC	SA
	PORT	EXTERNAL TIMING OUTPUT SHORT DETECTED	MJ	SA
	PROTN	HOT PROTECTION SWITCH PERFORMED TO _x WITH HS _y (x = 1–10, y = 1–2)	SC	SA
	UNEQUIPPED	IMPROPER CARD REMOVAL	MN/ SC	SA/ NSA
MIS	RESET	MIS HAS RESET	TC	NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
MRC-x (x = 1-2)	ACTIVE	CARD IS SUPPLYING A SIGNAL TO THE CLOCK(S)	SC	NSA
	ALL-REF	LOSS OF ALL EXTERNAL INPUT REFERENCES	MJ	SA
	CLOCK-x (x = 1-2)	LOSS OF CLOCK SIGNAL	MN	NSA
	FAIL	CARD FAIL:CLOCK SYNTHESIZER FAILURE	MJ	SA
	FAIL	CARD FAIL: FRAMER FAILURE	MJ	SA
	FFREQ-x (x = 1-2)	CLOCK DISQUALIFIED:FFREQ THRESHOLD EXCEEDED	MN	NSA
	INACTIVE	CARD IS NOT SUPPLYING A SIGNAL TO THE CLOCK(S)	SC	NSA
	IS-NR	IN-SERVICE NORMAL	NA	NSA
	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	MISMATCH	CARD INFORMATION DOES NOT MATCH DATABASE	SC	SA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
	UNEQUIPPED	IMPROPER CARD REMOVAL	MN/ SC	SA/ NSA
	MRC-x-y (x = 1-2, y = 1-4)	AIS	ALARM INDICATION SIGNAL RECEIVED	MN*
BPV		BPV THRESHOLD EXCEEDED	MN*	NSA
CRC		CRC THRESHOLD EXCEEDED	MN*	NSA
FFREQ		REF INPUT FRACTIONAL FREQ THRESHOLD EXCEEDED	MN*	NSA
IS-NR		IN-SERVICE NORMAL	NA	NSA
IS-NR-ACT		IN-SERVICE NORMAL-ACTIVE	SC	NSA
LOS		LOSS OF EXTERNAL REFERENCE	MN*	NSA
OOF		OOF DETECTED	MN*	NSA
OOS-MT		OUT-OF-SERVICE MAINTENANCE	SC	NSA
OOS-MT-FLT		OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
SWITCH		CARD NOW USING SPECIFIED INPUT SIGNAL	TC	NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
PSM-x (x = 1-11)	ALL-REF	LOSS OF ALL EXTERNAL INPUT REFERENCES	MJ	SA
	CLOCK-x (x = 1-2)	LOSS OF CLOCK SIGNAL	MN	NSA
	FAIL	CARD FAIL:CLOCK SYNTHESIZER FAILURE	MJ	SA
	FAIL	CARD FAIL: FRAMER FAILURE	MJ	SA
	FFREQ-x (x = 1-2)	CLOCK DISQUALIFIED:FFREQ THRESHOLD EXCEEDED	MN	NSA
	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	MISMATCH	CARD INFORMATION DOES NOT MATCH DATABASE	SC	SA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
	UNEQUIPPED	IMPROPER CARD REMOVAL	MN/ SC	SA/ NSA
PSM-x-y (x = 1-11, y = 1-4)	AIS	ALARM INDICATION SIGNAL RECEIVED	MN*	NSA
	BPV	BPV THRESHOLD EXCEEDED	MN*	NSA
	CRC	CRC THRESHOLD EXCEEDED	MN*	NSA
	FFREQ	REF INPUT FRACTIONAL FREQ THRESHOLD EXCEEDED	MN*	NSA
	LOS	LOSS OF EXTERNAL REFERENCE	MN*	NSA
	MTIEx (x = 1, 4, 16, 64, 128, 512, 900)	x SECOND THRESHOLD EXCEEDED (x = 1, 4, 16, 64, 128, 512, 900)	MN*	NSA
	OOF	OOF DETECTED	MN*	NSA
	TDEVx (x = 1, 4, 16, 64, 128)	x SECOND THRESHOLD EXCEEDED (x = 1, 4, 16, 64, 128)	MN*	NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
SHELF	ACTIVE	Ex EXPANSION SHELF PRESENT (x = 1-3)	SC	NSA
	DLCMP	DOWNLOAD COMPLETED	TC	NSA
	DLIP	DOWNLOAD IN PROGRESS	TC	NSA
	FUSE-x (x = 1-2)	FUSE BLOWN OR POWER FAIL	MN	NSA
	GP	SHELF INPUT ALARM	MN	NSA
	GPMJ	MAJOR GENERAL PURPOSE ALARM ON SHELF	MJ	SA
	GPMN	MINOR GENERAL PURPOSE ALARM ON SHELF	MN	SA
	INACTIVE	Ex EXPANSION SHELF NOT PRESENT (x = 1-3)	SC	NSA
	LOS	LOSS OF ALL INPUT AND CLOCK SIGNALS	CR	SA
	OVERRIDE	TIMING OUTPUT SOURCE SELECTED BY COMMAND	SC	NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
TO-x (x = 1-12)	CLOCK-x (x = 1-2)	TIMING SIGNAL FROM CLOCK CARD DISQUALIFIED	SC	NSA
	FAIL	CARD FAIL:A/D FAILURE	MJ	SA
	FAIL	CARD FAIL:INTERNAL FAILURE	MJ	SA
	FAIL	CARD FAIL:REFERENCE VOLTAGE FAILURE	MJ	SA
	FAIL	CARD FAIL:PLL OUT OF LOCK	MJ	SA
	INPUT-x (x = 1-2)	TIMING SIGNAL FROM INPUT CARD DISQUALIFIED	SC	NSA
	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	IS-NR-STBY	IN-SERVICE NORMAL-STANDBY	SC	NSA
	MISMATCH	CARD INFORMATION DOES NOT MATCH DATABASE	SC	SA
	MISMATCH	PROTECTION CARD CONFIGURATION MISMATCH OR PAIRED CARD MISSING	SC	NSA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	OOS-MT-FLT	OUT-OF-SERVICE MAINTENANCE-FAILED	MJ/ MN	SA
	SOURCE-CLK-x (x = 1-2)	OUTPUT CARD IS USING SPECIFIED CLOCK CARD	SC	NSA
	SOURCE-INPUT-x (x = 1-2)	OUTPUT CARD IS USING SPECIFIED INPUT CARD	SC	NSA
	SWITCH	INPUT SWITCHED	TC	NSA
	SWITCH-CLK-x (x = 1-2)	FAILURE TO SWITCH TO CLOCK CARD	SC	NSA
	SWITCH-INPUT-x (x = 1-2)	FAILURE TO SWITCH TO INPUT CARD	SC	NSA
	SWITCH	OUTPUT CARD PROTECTION SWITCH	TC	NSA
	UNEQUIPPED	IMPROPER CARD REMOVAL	MN/ SC	SA/ NSA

Table I. Alarm/Event Summary (Contd)

<aid>	<condtype>	<conddescr>	Severity	Service Affecting
TO-x-y (x = 1-12, y = 1-10)	IS-NR-ACT	IN-SERVICE NORMAL-ACTIVE	SC	NSA
	IS-NR-STBY	IN-SERVICE NORMAL-STANDBY	SC	NSA
	OOS-MT	OUT-OF-SERVICE MAINTENANCE	SC	NSA
	PORT	OUTPUT PORT HAS FAILED	MJ or MN (set by user)	SA