TAP-010

Resolve Alarms Using Visual Indicators

PURPOSE

Provides procedure for alarm resolution (visual).

GENERAL

It is recommended that alarm messages be analyzed to determine problems. Use this procedure only if a terminal or PC is not available or communication with craft port has failed. Also, craft port access may be required to download software to the replacement unit.
When replacing plug-in units, a few minutes may be required for the system to stabilize and alarms to clear. If alarms do not clear, replace the original unit before replacing another unit.

Procedure

1. **CAUTION: Possibility of service interruption. Replacing plug-in units without first analyzing alarm messages may cause unnecessary service interruptions.**

2. Review handling of static sensitive plug-in units (DLP-002).

3. Is a PC with means for logging on to the Network Element (NE) available?

   If yes, go to step 4.
   If no, go to step 5.

4. Can you communicate with NE (DLP-117)?

   If yes, go to TAP-001.
   If no, go to TAP-039.

5. If necessary, review shelf layout (Figure 1) and system block diagram (Figure 2).

6. If not already done, silence office alarms by pressing Alarm Cut-off (ACO) button on COAxxx plug-in (COA) unit (Figure 3).

7. Determine which plug-in LEDs are lighted. Refer to Table A for a description of the LEDs.

Figure 1. 1603 SM Shelf Layout
Figure 2. 1603 SM Functional Block Diagram - A-Side Equipment
Figure 3. COAxxx Plug-in Unit

Table A. 1603 SM Plug-in Alarm Indicators

UNIT/ ALARM LED	INDICATION WHEN ALARM LED IS LIGHTED	PROBABLE CAUSE/ CORRECTIVE ACTION
COAxxx Craft, Orderwire and Alarm Unit		
CRI	Critical alarm level	Provides system alarm severity level
MJ	Major alarm level	Provides system alarm severity level
MN	Minor alarm level	Provides system alarm severity level
REM ALM	Remote (Far-End) alarm is present	Push ID SEL button to cycle through list of FEADISPNUMs reporting alarms to this NE
NE ID 7-Segment LED Display	When ID SEL button is pushed, remote NE FEADISPNUMs are displayed along with active alarms indicated by CRI, MJ and MN LEDs	Determine what NE name (from office records) is associated with FEADISPNUM. Go to, or log on to, alarmed NE to resolve alarm(s)
ACO ACTIVE	Alarm cutoff has been activated	Silences office alarms, no action required
ALM	Unit failure	CAUTION: Possibility of service interruption. See TAD-001 for database information before replacing unit. Replace unit per DLP-101
NEPxxx Network Element Processor Unit		
ACT	Unit is active	Not an alarm; status indicator only
ABN	Abnormal condition exists in NE, or unit is running bootcode if flashing	An equipment or facility has been placed in an abnormal state or NEP is running bootcode. Refer to Table B
ALM	Unit failure	CAUTION: Possibility of service interruption. See TAD-001 for database information before replacing unit. Replace unit per DLP-101
HIFxxx High Speed Interface Unit		

ACT	Unit is active	Not an alarm, status indicator only
SF	Incoming signal failure	Check facility, far-end NE, near-end and far-end facility provisioning
ALM	Unit failure	Replace unit per DLP-101
CLK20x Clock Unit		
ALM	Unit failure	Replace unit per DLP-101
DMIxxx Drop Module Interface Unit		
ACT	Unit is active	Not an alarm, status indicator only
ALM	Unit failure	Replace unit per DLP-101
VTGxxx Virtual Tributary Group (Asynchronous DS1) Unit		
SF	Signal failure on any or all of four DS1s served by unit	Check DS1 facility, far-end multiplexer equipment
ALM	Unit failure	CAUTION: Possibility of service interruption. VTG with ALM lighted may be providing access to protection VTG for another unit and may interrupt service on that unit. Replace unit per DLP-101
PSA	Protection switch active (not available on VTG101)	Indication only. Look for other alarms
LIFxxx Low Speed Interface Unit		
ACT	Unit is active (does not apply to LIF901)	Not an alarm; status indicator only
ALM	Unit failure	Replace unit per DLP-101
SF (LIF901 and OC3 only)	Incoming signal failure	Check facility; near-end and far-end facility provisioning
LDRxxx Line Driver Unit		
ACT	Unit is active	Not an alarm, status indicator only
SF	Incoming signal failure	Check facility; near-end and far-end facility provisioning
ALM	Unit failure	Replace unit per DLP-101
PWRA01 Power Converter Unit (SP101 Shared Power Shelf only)		
ON	-48 Vdc power is provided to unit	Not an alarm; normal indication. If off, -48 Vdc input is not present
ALM	Unit failure	Replace unit per DLP-101
PWR801 Power Converter Unit (ADM150 Dual Power Shelf only)		
ON	Unit power switch is on	Not an alarm; normal indication. If ON LED and ALM LED are off, -48 Vdc input is not present
ALM	Unit power switch is off or unit	WARNING: Possibility of

	failure	equipment damage. Verify unit power switch is in the OFF position before removing or installing unit. Verify power switch is in the ON position. Replace unit if both ON LED and ALM LED are lighted
VSCCxxx Cross-Connect Unit		
ACT	Unit is active	Not an alarm, status indicator only
ALM	Unit failure	Replace unit per DLP-101

1. Are any LEDs lighted besides the CRI, MJ, and MN LEDS on the COA?

   If yes, go to step 10.
   If no, go to step 9.

2. Craft terminal or PC is required for further analysis. Go to TAP-001.

3. Is the ALM (red) LED lighted on any of the units?

   If yes, go to step 11.
   If no, go to step 15.

4. **CAUTION: Possibility of service interruption. Refer to Table A for any warnings or cautions pertaining to replacement plug-in unit before proceeding.**

5. ***NOTE:*** *If NEP, HIF, LIF, or DMI is replaced, unit may require software to be downloaded, which requires a Personal Computer. Refer to DLP-116.*

   Replace the unit with the lighted ALM (red) LED.

6. After several minutes, did the unit ALM (red) LED go off?

   If yes, STOP. This procedure is complete.
   If no, go to step 14.

7. Craft terminal or PC is required for further analysis. Go to TAP-001.

8. Select the LED that is lighted:

   If NEP ABN LED, go to step 16.
   If HIF or LIF (OC3) SF LED, go to step 17.
   If VTG or LDR SF LED, go to step 18.

9. ***NOTE:*** *An ABN LED indicates an abnormal state exists in the NE. A craft terminal is required for further analysis.*

Refer to Table B for the abnormal conditions that light the ABN LED. Go to TAP-001 to determine the procedure to use to clear the abnormal condition.

Table B. Conditions that Light the ABN LED on NEP

CONDITION	EXPLANATION
MTCE	An equipment or facility is in maintenance state (OOS-MT)
INHSWDX	Switch to duplex equipment is inhibited
INHAUTOMODESW	Inhibit auto switching back to primary timing reference when returning to normal
INHSWWKG	Switch to working equipment inhibited
INHSWPR	Switch to protection equipment inhibited
LOCKOUTOFPR	OC facility APS locked out of protection
FRCD/MAN	Forced or manual OC line, STS path or VT1 path switch
BOOT	NEP unit is running bootcode; LED is flashing
BOOT	Slave-processor unit is running bootcode
PROGVER	Slave-processor unit has different program version than NEP
CONFIG	Configuration error (usually encountered during upgrade)
LOCKOUT	STS, VT1, or VPL path switch is locked out
MAN	Ring manual switch request
CNFGRNERR	Ring line group configuration error
OPRACT	Sync. reference switch is in effect because of operator action

1. ***NOTE:*** *An SF LED on an HIF or LIF indicates a signal fail condition has been detected on an OC facility. A craft terminal is required for further analysis.*

   Go to TAP-001 to determine the procedure to use to clear the signal failure.

2. ***NOTE:*** *An SF LED on a VTG or LDR indicates a signal fail condition on a T1 (VTG) or EC1/T3 (LDR) facility. A craft terminal is required for further analysis.*

   Go to TAP-001 to determine the procedure to use to clear the signal failure.

3. STOP. This procedure is complete.