

# E1405A/B-01

## S E R V I C E N O T E

SUPERSEDES

### E1405A C-Size VXI Command Module E1405B C-Size VXI Command Module

Serial Numbers: 3002A00101 through 3126A01556

### Modification to allow an E1405A/B to work with the HP 75000 Series 90 Modular SONET/SDH Analyzer VXI Systems.

#### Situation:

E1405A/B Command Modules within the listed serial number range, and having a motherboard with an ERC less than 3217, are incompatible with the HP Series 90 Systems without modification. Series 90 Systems may include the following:

Bundled Systems: E1650A, E1652A  
Modules: E1661/2/3A, E1671/2/3/4A, E1679A, E1681/2/3/4A.  
Software: E1651A

A modification of the E1405A/B Command Module will allow it to work with the Series 90 Systems. The modification described in this service note should only be performed on E1405A/B Command Modules that contain motherboards (part number E1405-66501) that are Revision C or greater and that have an Engineering Revision Code (ERC) of less than 3217. Motherboards with an ERC equal to 3217 or greater have been modified at the factory.

*Continued*

DATE:12 May 1992

### ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:		
<b>MODIFICATION AVAILABLE</b>		
ACTION CATEGORY:	AGREEABLE TIME	<input checked="" type="checkbox"/> PERFORMANCE ENHANCEMENT <input type="checkbox"/> SERVICE/RELIABILITY ENHANCEMENT
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> HP LOCATION	AVAILABLE UNTIL: End of Support Life
AUTHOR: KD	ENTITY: 0900	ADDITIONAL INFORMATION: Reference PCO 09-28748

© 1992 HEWLETT-PACKARD COMPANY  
PRINTED IN U.S.A.



1 of 4

Revision A or B motherboards may not be modifiable. Contact "VXI Product Support" at Hewlett-Packard Company, (303) 679-2423, for instructions on modifying revision A or B motherboards.

#### Note

An ERC is in the form YYWW and is usually found on a small white label on the motherboard.

Where:

YY = YEAR-1960 (Example: If YY=32, the year is 1992  
[1992-1960=32])

WW = WEEK (Example: If WW=17, it indicates the 17th  
week of YY)

This modification will not affect normal operations of the E1405A/B Command Module with any other HP VXI module. The E1405A/B will also continue to work with any other vendor's VXI products as long as they are compatible with the VXI Specification, Revision 1.3 or greater.

#### Action:

To disassemble the E1405A/B Command Module in preparation for modification, first read, and then perform, all of the following steps:

1. At a static-safe workstation, remove the top cover/shield from the E1405A/B (8 screws, TORX size 10) following the instructions on the cover. Front panel hardware must be loosened first before the cover can be removed. The battery is attached to the cover, so be careful to disconnect the battery cable from the motherboard before completely separating the top cover.
2. Remove the remaining two screws holding the piggy-back memory board to the motherboard. Remove the memory board and set it aside, since it will not be modified.
3. Orient the motherboard with the P1/P2 connectors to the right.
4. Inspect the motherboard to determine both the ERC and the revision letter of the PC board. The ERC is on a white label in the middle of the PC board near the front panel. The PC board revision letter is printed on the PC board near the board part number (E1405-66501), located near the middle of the bottom edge of the PC board.
5. If the PC board revision letter is A or B, contact the factory for further instructions as noted at the beginning of this service note. If the ERC is 3217 or greater, the PC board has already been modified for use with an HP Series 90 System.
6. If you are going to continue with the modification, unscrew the four memory board standoffs and remove the bottom shield from the motherboard.

To modify the E1405A/B Command Module to work with a Series 90 system, perform the following steps on the motherboard, checking them off as each step is completed (NOTE: Figures are only referenced where the action to be performed is not obvious to the viewer):

1. \_\_\_\_\_ Locate JM3 and TP3 between the two large, square ICs (U97 & U98). If there is a wire jumper in JM3, proceed to step 2. If there is a wire from the left end of JM3 to TP3, disconnect the end of the wire that is connected to TP3 and connect it to its normal JM3 location (right end).
2. \_\_\_\_\_ Cut the trace that runs from connector P1, pin B1 to U21, pin 11. A convenient place to cut this trace is on the component side of the PC board, top right corner, near the memory board mounting hole and U73 (See Figure 1)
3. \_\_\_\_\_ Cut the other end of this trace near U21 (top left corner of the PC board). (See Figure 2)
4. \_\_\_\_\_ Connect a jumper wire from TP3 to U21, pin 11.
5. \_\_\_\_\_ On the circuit side of the PC board, Cut the trace going to U20, pin 19 (top left corner, with P1/P1 connectors on the left).
6. \_\_\_\_\_ On the circuit side of the PC board, connect a jumper wire from U20, pin 19 to U20, pin 15 (ground).
7. \_\_\_\_\_ On the component side of the PC board (top right corner), cut the trace going to U20, pin 17. A convenient place to cut this trace is between U20 and U56. (See Figure 3)
8. \_\_\_\_\_ Connect a jumper wire from U20, pin 17 to U77, pin 6.
9. \_\_\_\_\_ Locate the white label on the PC board that contains the Engineering Revision Code (ERC). A typical ERC number might be 3106 for the 6th week in 1991 (1991-1960=31). Cover or replace the existing ERC label with another label containing the number 3217. This number will indicate that the board has been modified to work with a Series 90 SONET/SDH system.

Re-assemble the E1405A/B. Install it in slot 0 of a C-size VXI mainframe and apply power. Verify that the E1405A/B completes its turn-on sequence with no errors (indicated by only the "Ready" LED remaining on after 5 seconds).

Send the "\*\*TST?" command to the E1405A/B SYSTEM instrument and read back the self-test results. The results should be 0.

Here is a sample BASIC program that can be sent over HP-IB to the E1405A/B to perform the self-test:

```
OUTPUT 70900;"*TST?"  
ENTER 70900;A  
PRINT A  
END
```

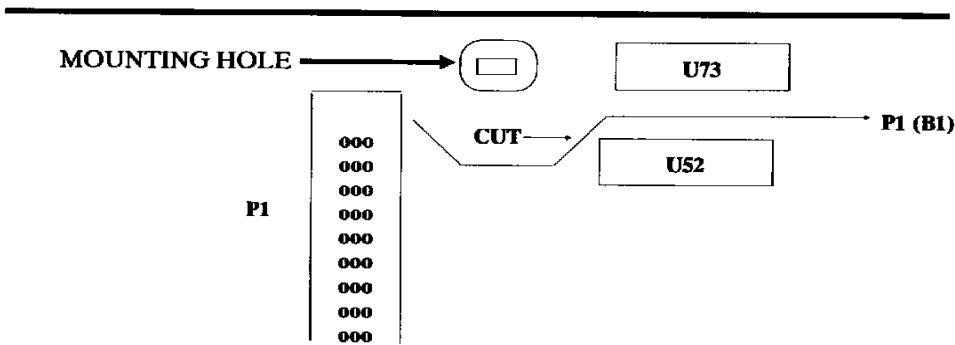


Figure 1

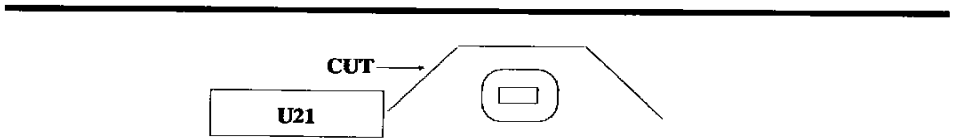


Figure 2

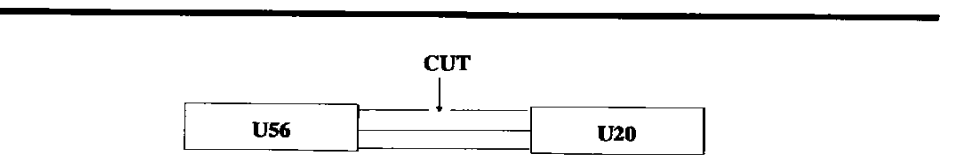


Figure 3