70841A-02

S E R V I C E N O T E

SUPERSEDES: None

HP 70841A 3Gbit/s Pattern Generator Module

Serial Numbers: 3017U00101 / 3207U00222

Module causing Mainframe/Display shutdown

Situation:

The HP 70001A Mainframe or HP 70004A Display may shutdown with the above module inserted.

If this happens (overcurrent led on the Mainframe front panel may be lit) then suspect a problem with the HP 70841A PSU assembly.

This assembly can feedback high-voltage spikes of sufficient amplitude to trigger the internal protection circuitry within Mainframe/Display.

The solution is to replace the module PSU assembly with the later revision which does not exhibit this problem.

Note

Recalibration of the module will be required after replacement of the PSU assembly. This can only be performed at a Hewlett-Packard Service Center equipped with the necessary test equipment, Calibration Programs and FTM Operating system.

Continued

DATE: 11 August 1992

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION: **MODIFICATION RECOMMENDED**					
ACTION CATEGORY:	☐ IMMEDIATELY ■ ON SPECIFIED FAILURE ☐ AGREEABLE TIME	STANDARDS: LABOR: 3.0 Hours			
LOCATION CATEGORY:	☐ CUSTOMER INSTALLABLE ☐ ON-SITE ■ HP LOCATION	SERVICE INVENTORY:	☐ RETURN ☐ SCRAP ■ SEE TEXT	USED PARTS:	☐ RETURN ■ SCRAP ☐ SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	RESPONSIBLE UNTIL : 11 August 1994			
AUTHOR: GCH	ENTITY: 1400	ADDITIONAL INFORMATION:			

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Action:

The HP 70841A Pattern Generator Module is part of the HP 71600 Series of Pattern Generator or Error Detector Systems.

If a fault is suspected in either of these systems, use the troubleshooting in the HP 71600 Series Installation and Verification Manual (Section 5) to establish the location of the fault.

If the fault is found to be shutdown of the Mainframe/Display caused by the HP 70841A Pattern Generator Module and the module serial number is within the range specified above, then suspect excessive voltage spike feedback from the A2 Power Supply Assembly.

Use the following procedure to confirm the diagnosis:

Accessing PSU Assembly

1. Remove the posidrive screws along the top of the module. There are 7 at the front and 8 at the rear.

2. Remove the posidrive screws which secure the top cover to the module front and rear frames. There are 2 each side at the front and 3 each side at the rear.

3. Loosen BUT DO NOT REMOVE the 9 posidrive screws fitted centrally along each side of the module.

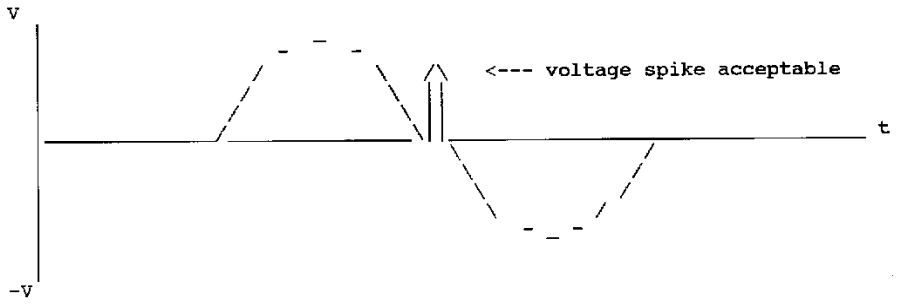
   The top cover can now be carefully lifted clear of the module along with the four plastic board spacers.

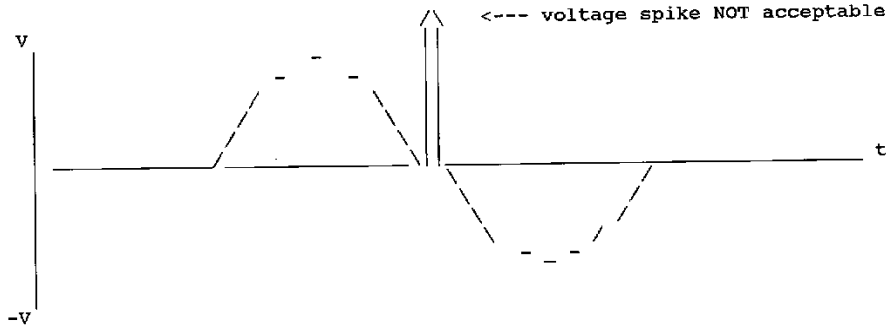
Testing PSU Assembly

4. Fit the module extender assembly HP p/n 70001-60013 into the Mainframe (or Display) and attach the cable from this extender assembly to the socket on the rear panel of the HP 70841A module.

5. Connect an oscilloscope to TP 40kHz on the module power supply assembly HP p/n 70841-60002.

6. Switch on the Mainframe (or Display) and adjust the oscilloscope timebase and amplitude to display a single pulse across the screen. Some ringing on this pulse is acceptable, but if the voltage spike appears excessive the PSU should be changed for new assembly HP p/n 70841-60102.





7. With the new PSU assembly fitted, check the typical supply voltages are as shown here (test points exist for these).

   +5V, +8V, +10V, +15V, +17V, +25V, -2V, -5.2V, -15V, -20V.

8. Module reassembly is a reversal of the dismantling procedure - DO NOT FORGET the plastic board spacers.

9. Fit the module in Mainframe/Display and carry out the semi-automatic calibration procedure using the FTM calibration programs supplied by QTD.

10. Perform module Operational Verification as described in Section 4 of the HP 71600 Series Installation and Verification Manual.

The module repair is now complete.