SUPERSEDES: 87510A-01, 87510A-02, 87510A-03

HP 87510A Gain-Phase Analyzer

Serial Number: 0000J00000/3152J00152
(Firmware Revision 1.00)

Firmware upgrade improves performance and corrects known problems described in Table 1.

To Be Performed By: HP-qualified personnel

Parts Required:

HP P/N	Qty.	Description
87510-86011	1	A1 ROM set Rev. 2
87510-86012	1	A2 ROM set Rev. 2
87510-90100	1	Manual Change Sheets *1

NOTE

For Japanese users, order PN 87510-97100

Continued

DATE: 30 November 1992

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:				
MODIFICATION RECOMMENDED				
ACTION CATEGORY:	☐ IMMEDIATELY ■ ON SPECIFIED FAILURE ☐ AGREEABLE TIME	STANDARDS: LABOR: 2.0 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 : 30 November 1994		
AUTHOR: MT	ENTITY: 3355	ADDITIONAL INFORMATION:		

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Situation:

Table 1. Known Problems Corrected by Firmware Rev. 2.00

Problem	Description
ADDRESS ERROR at boot up	If an auto-start I-BASIC program "AUTOST" is stored in the RAM disk and the INPUT command is used in the program, the ADDRESS ERROR may occur and the analyzer may not boot up. **NOTE:** This symptom will disappear if the analyzer is not powered on for long time, because the memory backup time for RAM Disk is approximately 70 hours. When the end-user reports the symptom but no trouble is found at service bench confirm if the end-user uses "AUTOST" program.
Incorrect Q value in bandwidth search	At bandwidth search function, WIDTHS under MKR SEARCH Menu under MKR FCTN key, the displayed Q value will not be correct if the value is more than 100000. Example, if the correct Q value is 198721, the displayed value is 19872. **NOTE:** This error doesn't happen on HP-IB. The "OUTPFILT?" returns correct Q value.
Different results between OUTPRESO? and EQUCPARS?	The measurement results of the resonant frequency (fr) and anti-resonant frequency (fa) may be different between the "OUTPRESO?" and the "EQUCPARS?". The "EQUICPARS?" outputs the frequency results fr and fa without interpolation. The closest point is chosen from the measurement points which are determined by the START/STOP frequency and the "number of points". On the other hand, the "OUTPRESO?" outputs the results which are interpolated from the measurement points. That is why these results are different.

Problem (Cont'd)	**Description (Cont'd)**
87510 hangs up when being controlled by a controller	The HP 87510A may hang up or reset when the HP 87510A repeats the same measurement under the computer-controlled circumstances. Check if this service note can be applied to your case, with reference to the following situation list (you must have ALL the situations listed below): 1. The HP 87510A is controlled by an external controller through the HP-IB interface. 2. The HP 87510A repeats the same measurement. 3. The HP 87510A hangs up and resets after several hours or several days. 4. This symptom happens regularly.

Solution/Action:

All of the problems listed in Table 1 are fixed with firmware revision 2.00 and above.

Replace six ROMs on the A1 board and two ROMs on the A2 board with new ROMs.

Pass the manual change sheet to the customer.

Procedure:

1. Remove the A1 and the A2 boards according to the Replacement Procedures in the Service Manual.

2. Replace the six ROMs on the A1U43 through A1U48 of the A1 board.

3. Replace the two ROMs on the A2U1 through A2U2 of the A2 board.

4. Reinstall the A1 and A2 boards.

5. Perform the Power Level Linearity Correction Constants. See the chapter 2 in the service manual.

6. Perform the Source Level Accuracy/Flatness Test and the Source Power Linearity Test. See the maintenance manual.

7. Attach the manual change sheet to the unit and return them to the customer.