8590D-01

S E R V I C E N O T E

SUPERSEDES: None

HP 8590D Spectrum Analyzer

Serial Numbers: 0000A00000 / 9999Z99999

Increasing flatness data values improves performance

A4 First Converter, HP part number 08590-60214

Duplicate Service Notes: 8591E-01

To be performed by: HP-Qualified Personnel

Situation 1:

The response has a small but abrupt resonance at about 60 MHz which cannot be completely removed by the flatness correction values at 41 MHz and 78 MHz. A 0.5 dB offset minimizes the positive and negative errors relative to the 300 MHz reference point.

Situation 2:

older firmware used in the 8590D does note properly compensate for flatness correction values which are more negative than -1.3 dB in linear mode. Some clipping of the top of the signal will occur in linear mode at frequencies below 41 MHz. Analyzers with a firmware datecode newer than 27.10.92 are not affected

Continued

DATE: December 1994

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

INFORMATION ONLY

AUTHOR:	ENTITY:	ADDITIONAL INFORMATION:
PGS	5300	

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Solution:

The Frequency Response (Flatness) correction value at 78 MHz should be increased by 0.5 dB. During the Frequency Response Adjustment Procedure found in the Service Manual, add 0.5 dB to the "Error Relative to 300 MHz" at 78 MHz only. (Column 2 of the Correction Table without Option 001. Column 5 of the Correction Table with Option 001.)

Example: Error at 78 MHz relative to 300 MHz = -1.2 dB
Add 0.5 dB offset +0.5 dB

Optimum correction value at 78 MHz = -0.7 dB

NOTE

If you request and reinstall the original factory calibration values, it is not necessary to add this additional 0.5 dB offset. The original factory calibration numbers always include this offset.