

S E R V I C E N O T E

SUPERSEDES: NONE

**E4411A Spectrum Analyzer  
(Model Number ESA-L1500A)**

**Serial Numbers:**

US36450149	US36450174	US36450189	US36450212
US36450225	US36450235	US36450268	US36450273
US36450274	US36450275	US36450279	US36450282
US36450285	US36450300	US36450304	US36450308
US36450311	US36450315	US36450316	US36450317
US36450331	US36450341	US36450342	US36450343
US36450344	US36450345	US36450349	US36450352
US36450356	US36450357	US36450358	US36450387
US36450395	US36450396	US36450397	US36450398

US36450400-US36450455  
(Exceptions: US36450401, US36450402, US36450403, US36450405, US36450406, US36450408, US36450411, US36450413, US36450416, US36450420, US36450428, US36450443, US36450447, US36450450)

US37230456-US37230479  
(Exceptions: US37230456, US37230458, US37230461, US37230465, US37230466, US37230468, US37230473, US37230475, US37230476, US37230477, US37230478)

**IF Assembly Upgrade to Correct Amplitude Stability Error**

*Continued*

DATE: September 1997

**ADMINISTRATIVE INFORMATION**

SERVICE NOTE CLASSIFICATION:			
<b>MODIFICATION RECOMMENDED</b>			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR 1.25 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY:	<input checked="" type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input checked="" type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AUTHOR: RA	ENTITY: 5320	AGILENT RESPONSIBLE UNTIL:	September 2000
		ADDITIONAL INFORMATION:	



**To Be Performed By:** Agilent-Qualified Personnel

**Parts Required:**

P/N	Description	Quantity
E4401-60072	A3 IF Assembly	1

**Situation:**

An amplitude stability problem was identified on certain ESA-L1500A instruments. The instability was linked to oscillation on the A3 IF Assembly. The amplitude variations range from 0.1 - 1.0 dB within a fixed resolution bandwidth and upto 2.0 dB when switching between resolution bandwidths. According to specifications, up to 0.1 dB of variation is acceptable in a fixed resolution bandwidth; when switching between resolution bandwidths, up to 0.5 dB of variation is acceptable. (These numbers include the 0.1 dB variation for Auto Align being on.)

The symptoms may be seen as a jump in the noise floor or as amplitude instability of a signal. These amplitude variations do not occur on all instruments, and when they do occur they may be minutes or hours apart. Worst case exists when Marker Count is on.

**Solution / Action:**

The A3 IF Assembly's hardware has been modified to correct this design problem. Part number E4401-60072 Rev B corrects the amplitude instability.

Instruments within the serial number ranges listed above which have symptoms similar to those described herein should have the A3 IF Assembly upgraded from p/n E4401-60072 Rev A to p/n E4401-60072 Rev B. To perform the upgrade, replace the IF Assembly referring to the "A3 IF Assembly" replacement instructions in Chapter 4 of the Agilent ESA-L1500A Spectrum Analyzer Service Guide for the appropriate replacement procedure. Ensure that appropriate safety and ESD procedures are followed as identified in Chapter 1 of the Service Guide. Also ensure that the IF Assembly post-repair procedures are performed.

Code the CSO as Warranty Type Subtype 02G / Repair Class SN. Also, in the Details section of the CSO, write "per Service Note E4411A-04".