

S E R V I C E N O T E

SUPERSEDES: E4411A-02B-02B

E4411A Spectrum Analyzer (Model Number ESA-L1500A)**Serial Numbers:** US36450101 /US36450399

Exceptions:

US36450149, US36450174, US36450189, US36450225, US36450235,
 US36450268, US36450273, US36450274, US36450275, US36450279,
 US36450282, US36450285, US36450298, US36450300, US36450304,
 US36450308, US36450311, US36450315, US36450316, US36450317,
 US36450321, US36450328, US36450329, US36450330, US36450331,
 US36450333, US36450337, US36450339, US36450340, US36450341,
 US36450342, US36450343, US36450344, US36450345, US36450346,
 US36450349, US36450352, US36450356, US36450357, US36450358,
 US36450387, US36450395, US36450396, US36450397, US36450398

Recommended IF Assembly Upgrade**To Be Performed By:** Agilent-Qualified Personnel**Parts Required:**

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

Continued

DATE: September 1998

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input type="checkbox"/> ON SPECIFIED FAILURE <input checked="" 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	USED PARTS: <input checked="" type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE		AGILENT RESPONSIBLE UNTIL: End of product support life
AUTHOR: RA	ENTITY: 5320	ADDITIONAL INFORMATION:	

Situation:

Heavy usage of the Marker Frequency Count function causes degradation of the log amplifier circuitry in the A3 IF Assembly. The degradation shows up as a raised noise floor which is approximately 10dB above normal. The condition is permanent in that it can damage the AD640 log amp chip, A3 U350. Conditions where the failure would be seen include heavy frequency counter usage. (i.e. leaving the marker frequency counter function turned on for long periods of time; using automated test routines which rely on the frequency count function; and/or long term degradation through occasional use.)

Solution / Action:

The IF Assembly has been redesigned to incorporate a fix for the marker frequency count problem. The redesign incorporates two PIN diodes which limit the voltage to the log amp chip to avoid overdriving the circuit. To ensure that units in service do not contain damaged AD640 log amp chips, A3 IF Assemblies will be replaced at no cost to the customer.

Units falling within the serial number range listed above should have the upgrade performed by the Service Centers whenever they are returned for repair, calibration, or upgrade. Prior to replacing the assembly, verify whether the upgrade has already been performed by looking at the serial number label on the rear of the instrument and checking for the note "SN E4411A-02A Installed". Also check the part number on the IF Assembly prior to replacement to ensure that it has not already been replaced; the part number which needs replacing is E4401-60001. If the instrument has an IF Assy with part number E4401-60072, then it has already been upgraded.

To perform the upgrade, replace the original A3 IF Assembly, p/n E4401-60001, with the new A3 IF Assembly, p/n E4401-60072. Refer to the "A3 IF Assembly" replacement instructions in Chapter 4 of the 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. After the replacement procedure has been completed, identify the repair performed by writing "SN E4411A-02C Installed" with indelible ink at the bottom of the serial number label on the rear of the unit.

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