

S E R V I C E N O T E

SUPERSEDES: E4411A-05A

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

Serial Numbers: US36450101-US36450259

Exceptions:

US36450149, US36450174, US36450189, US36450206, US36450217,
US36450225, US36450227, US36450232, US36450235, US36450238,
US36450247, US36450248, US36450255, US36450256, US36450257

Front Panel Interface Board Upgrade to Correct Intermittent On/Off Problem

To Be Performed By: Agilent-Qualified Personnel

Parts Required:

P/N	Description	Quantity
E4401-60017	A1A1 Front Panel Interface Board	1
or		
1902-0952	5.6V, 5%, 0.4W Diode	1

Continued

DATE: October 1997

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
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 checked="" 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 type="checkbox"/> RETURN <input checked="" type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AUTHOR: RA	ENTITY: 5320	AGILENT RESPONSIBLE UNTIL: End of support life	
		ADDITIONAL INFORMATION:	

Situation:

The static clamp on the Front Panel Interface Board of the E4411A is causing the power supply not to turn off. The "On" button is effectively always being pressed. This phenomena is most likely to occur when operating from a 12Vdc supply or battery pack.

Other symptoms of the problem include the supply turning off then back on immediately after the "Standby" button has been depressed or the supply turning itself off unexpectedly without any user intervention.

Solution / Action:

A modification to the E4401-60017 "A1A1 Front Panel Interface Board" corrects this On/Off problem. Units shipped after this modification was implemented (see serial numbers) no longer exhibit this problem. The modification consists of removing diode CR5 and adding diode CR11. If these symptoms are observed and the serial number falls within the range of serial numbers identified above, the service center should repair the unit by either of the two following methods.

The first option is to replace the E4401-60017 "A1A1 Front Panel Interface Board" with a new board (same part number); all new A1A1 boards incorporate the fix. To do this, refer to the "A1 Front Frame Assembly" and "A1A1 Front Panel Interface Board" replacement procedures in Chapter 4 of the ESA-L1500A Spectrum Analyzer Service Guide. Ensure that the appropriate safety and ESD procedures are followed as identified in Chapter 1 of the Service Guide. Also ensure that the "A1 Front Frame Assembly" post-repair procedures are performed in order to ensure that there is no degradation in EMI.

A second option is to perform the upgrade to the E4401-60017 pcb at the service center. Remove the "A1 Front Frame Assembly" and "A1A1 Front Panel Interface Board" by following the replacement procedures documented in Chapter 4 of the ESA-L1500A Spectrum Analyzer Service Guide. Ensure that the appropriate safety and ESD procedures are followed as identified in Chapter 1 of the Service Guide. After removing the interface board, follow the steps listed below:

1. Remove the 30V zener diode at CR5 (p/n 1902-1591). Clean excess solder from pads. Use care in removing this smt component.
2. Add the 5.6V zener diode, CR11 (p/n 1902-0952), by soldering the cathode (polarity end) lead into the pin 1 hole (square pad) of P2, and the anode lead into the pin 2 hole of P2. Note that the cathode end of the diode has a stripe on it. The body of CR11 should stand vertical to the board. The lead on the cathode side (polarity end) should extend straight from the body of the part into the pin 1 hole, and the lead on the anode side should be bent down 180 degrees so that it can be inserted into the pin 2 hole.
3. Ensure that the "A1 Front Frame Assembly" post-repair procedures are followed to confirm that there is no degradation in EMC compliance and/or electrical noise.
4. No part numbers or labels are changed.