

E5100A/B-07

S E R V I C E N O T E

SUPERSEDES: NONE

**E5100A/B Network Analyzer**

**Serial Numbers:**

E5100A: JP1KC00101/JP1KC00282

E5100B: JP1KC00101/JP1KC00121

**Modification to fix the problem of Input Crosstalk Test failure**

**To Be Performed By:** HP-qualified personnel

**Parts Required:**

Need the following cable assemblies.

(Choose one from each table. The total number of the required cable assemblies depends on the options installed in the unit. See Note at the end of the list and carefully check the installed options in the unit.)

*Continued*

DATE: August 1996

**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 6.0 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> HP LOCATION	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
		USED PARTS:	<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	HP RESPONSIBLE UNTIL: August 1998	
AUTHOR: KI	ENTITY: 3355	ADDITIONAL INFORMATION:	

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**1. RF Cable for "RF OUT 1" (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
001	E5100-61610	1	RF Cable
002 and Not 010	E5100-61605	1	RF Cable
002 and 010	E5100-61619	1	RF Cable
003	E5100-61624	1	RF Cable
600	E5100-61605	1	RF Cable

**2. RF Cable for "RF OUT 2" (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
001	(not required)		
002 and Not 010	E5100-61606	1	RF Cable
002 and 010	E5100-61620	1	RF Cable
003	E5100-61625	1	RF Cable
600	E5100-61606	1	RF Cable

**3. RF Cable for "PORT R" (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
100	(not required)		
Not 100	E5100-61601	1	RF Cable

**4. RF Cable for "PORT A" (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
100 and			
101:No 102:No	E5100-61602	1	RF Cable
101:Yes 102:No	E5100-61626	1	RF Cable
101:No 102:Yes	E5100-61654	1	RF Cable
101:Yes 102:Yes	E5100-61650	1	RF Cable
200 and			
101:No 102:No	E5100-61602	1	RF Cable
101:Yes 102:No	E5100-61626	1	RF Cable
101:No 102:Yes	E5100-61654	1	RF Cable
101:Yes 102:Yes	E5100-61650	1	RF Cable
300 and			
301:No 302:No	E5100-61602	1	RF Cable
301:Yes 302:No	E5100-61626	1	RF Cable
301:No 302:Yes	E5100-61654	1	RF Cable
301:Yes 302:Yes	E5100-61650	1	RF Cable
510:Yes	(not required)		
400 and			
301:No 302:No	E5100-61602	1	RF Cable
301:Yes 302:No	E5100-61626	1	RF Cable
301:No 302:Yes	E5100-61654	1	RF Cable
301:Yes 302:Yes	E5100-61650	1	RF Cable
600	E5100-61602	1	RF Cable

**5. RF Cable for "PORT B" (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
100	(not required)		
200	(not required)		
300			
301:No 302:No	E5100-61603	1	RF Cable
301:Yes 302:No	E5100-61627	1	RF Cable
301:No 302:Yes	E5100-61655	1	RF Cable
301:Yes 302:Yes	E5100-61651	1	RF Cable
510:Yes	(not required)		
400			RF Cable
301:No 302:No	E5100-61603	1	RF Cable
301:Yes 302:No	E5100-61627	1	RF Cable
301:No 302:Yes	E5100-61655	1	RF Cable
301:Yes 302:Yes	E5100-61651	1	RF Cable
600	(not required)		

**6. RF Cable for "PORT C" (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
400	E5100-61604	1	RF Cable
Not 400	(not required)		

**7. RF Cable between A24 (p/n E5100-66524) and A25 (p/n E5100-66525) (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
010	E5100-61621	1	RF Cable
600	E5100-61621	1	RF Cable
Neither 010 Nor 600	(not required)		

**8. RF Cable between A24(A25 if Opt.010) and A28 (p/n E5100-66528) (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
003	E5100-61618	1	RF Cable
Not 003	(not required)		

**9. RF Cable between A26A (p/n E5100-66526) and A29 (p/n E5100-66529) (choose one from the following table)**

Installed Option	HP P/N	Qty	Description
101	E5100-61628	1	RF Cable
301	E5100-61628	1	RF Cable
Neither 101 Nor 301	(not required)		

**10. RF Cable between A26B (p/n E5100-66526) and A29 (choose one from the following table)**

Installed Option	HP P/N	Qty.	Description
301	E5100-61629	1	RF Cable
Not 301	(not required)		

**Notes:**

- Opt.001: One RF OUT Port
- Opt.002: Two RF OUT Port, Built-in Power Splitter
- Opt.003: Two RF OUT PORT, Switched Single Output  
(One of the above three options is always designated if Opt.600 is not specified.)
- Opt.100: One receiver, Port A
- Opt.200: Two receivers Ports R and A
- Opt.300: Three receivers Ports R,A,and B
- Opt.400: Four receivers Ports R,A,B,and C  
(One of the above four options is always designated f Opt.600 is not specified.)
- Opt.010: Extended Output Power Range
- Opt.101: 50/1M ohm Selectable Inputs on Port A (Not on Port B)
- Opt.301: 50/1M ohm Selectable Inputs on Port A and B
- Opt.102: Type-N Input Connector on Port A (Not on Port B)
- Opt.302: Type-N Input Connector on Port A and B

- Opt.600: Crystal Resonator Test w/PI-network.  
(If this option is designated, other options in this list can not exist.)

**Situation:**

The Input Crosstalk Test for the unit with the following serial number may fail because of the deterioration in the internal RF cable quality:

HP E5100A: JP1KC00101/JP1KC00282

HP E5100B: JP1KC00101/JP1KC00121

**Solution/Action:**

This problem can be fixed by replacing cable assemblies.

1. Replace cable assemblies with new ones listed in "Parts Required."

**Notes**

- Some of the cables have ferrite core at an end. It should be located at the far side from the front ports.
- RF Cable between A24 and A25 (p/n E5100-61621) has a ferrite core at an end. The ferrite core should be located at the A24 assembly side.

2. Perform the following adjustments:

- a. Source Correction
- b. IF Attenuator Correction
- c. Receiver Calibration

3. Perform the following performance tests: (All performance tests are required)

- a. Frequency Range and Accuracy Test
- b. Harmonics Test
- c. Non-Harmonic Spurious Test
- d. Phase Noise Test
- e. Source Level Accuracy/Flatness Test
- f. Source Power Linearity Test
- g. Receiver Noise Level Test
- h. Trace Noise Test
- i. Residual Response Test
- j. Input Crosstalk Test
- k. Absolute Amplitude Accuracy Test
- l. Dynamic Accuracy Test
- m. Magnitude Ratio Frequency Response Test
- n. Phase Frequency Response Test