Installation Note

Time Gated Spectrum Analyzer Capability Installation Kit, 5062-8218

Part Number 5967-8554 Supersedes: 5962-5078
Printed in USA September 2000

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Time Gated Spectrum Analyzer Capability Installation Kit

Product Affected:	8591E, 8593E, 8594E, 8595E and 8596E spectrum analyzers
Serial Numbers:	0000A00000/9999A99999 0000U00000/9999U99999
To Be Performed By:	Agilent Technologies Service Center Only
Estimated Installation Time:	1/2 Hour
Estimated Verification Time:	1 Hour

Introduction

This installation note describes how to install Option 105, the time-gated spectrum analyzer capability in an 8590 Series spectrum analyzer.

Installation Kit Parts List

Table 1 Parts Kit Option 105 Contents

Item	Quantity	Description	Part Number
1	2	Nut, hex 15/32-32	0590-1251
2	1	Cable, BNC (m) to (m)*	8120-2682
3	1	Option 105 product note	5960-2555
4	2	Adapters, BNC female to male, right angle*	1250-0076
5	1	Cable BNC (f) to SMB (f) (gate in)	08591-60076
6	1	Cable BNC (f) to SMB (f) (gate out)	08591-60077
7	1	Installation note	5962-5078

* The right-angle adapters can be used to connect the BNC cable to the rear-panel connectors when Option 105 is in use.

Tools Required

- ❑ 4-mm hex (Allen) wrench
- ❑ 9/16-inch nut driver
- ❑ Needle-nose pliers (2 pairs required)
- ❑ T-15 TORX screwdriver
- ❑ T-10 TORX screwdriver

NOTE If the spectrum analyzer firmware is dated prior to 27.10.92 (October 27, 1992), the spectrum analyzer firmware must be replaced with the firmware in the firmware installation kit. To determine the firmware date on the analyzer, turn the analyzer power off, then the analyzer power on. The firmware date is displayed on the analyzer screen. The firmware is displayed in a day.month.year format. See *Contacting Agilent Technologies* for details.

WARNING **Before disassembling the instrument, turn the power switch OFF and unplug the analyzer. Failure to unplug the analyzer can result in personal injury.**

CAUTION **Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe work station. Refer to the installation and verification manual for your spectrum analyzer for information about a static-safe work station and static-safe accessories.**

Procedure

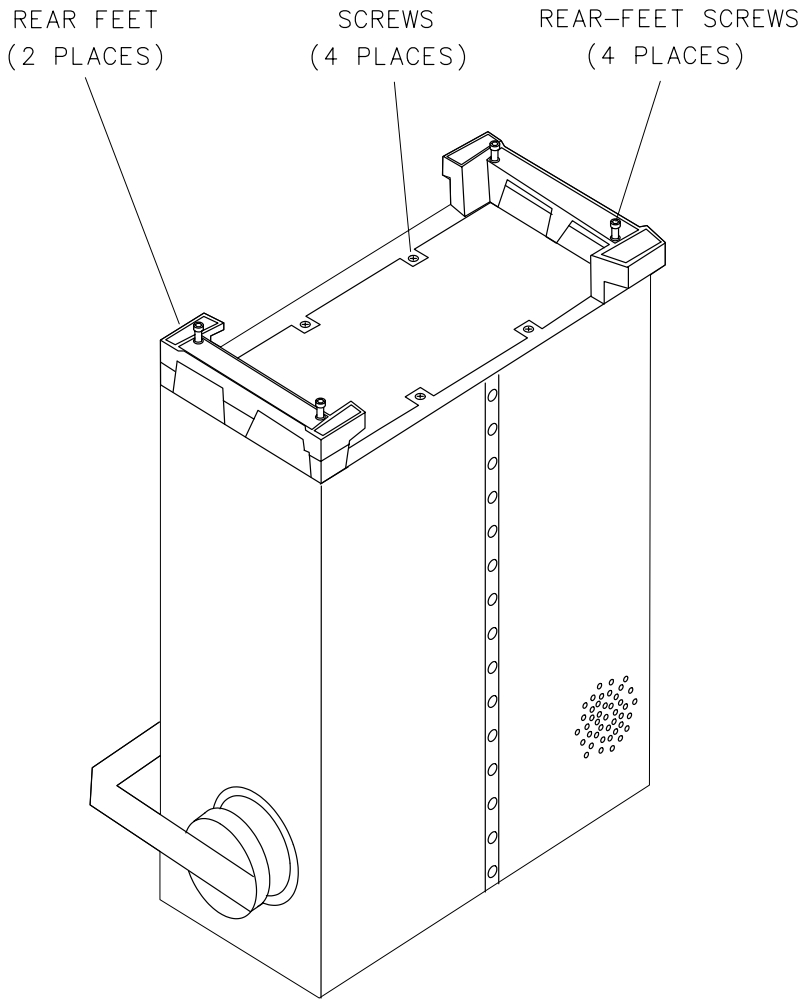
Removing the Instrument Cover

1. Disconnect the analyzer from ac power.

CAUTION To prevent damage to the front panel, place a soft cloth or towel between the work surface and the front panel.

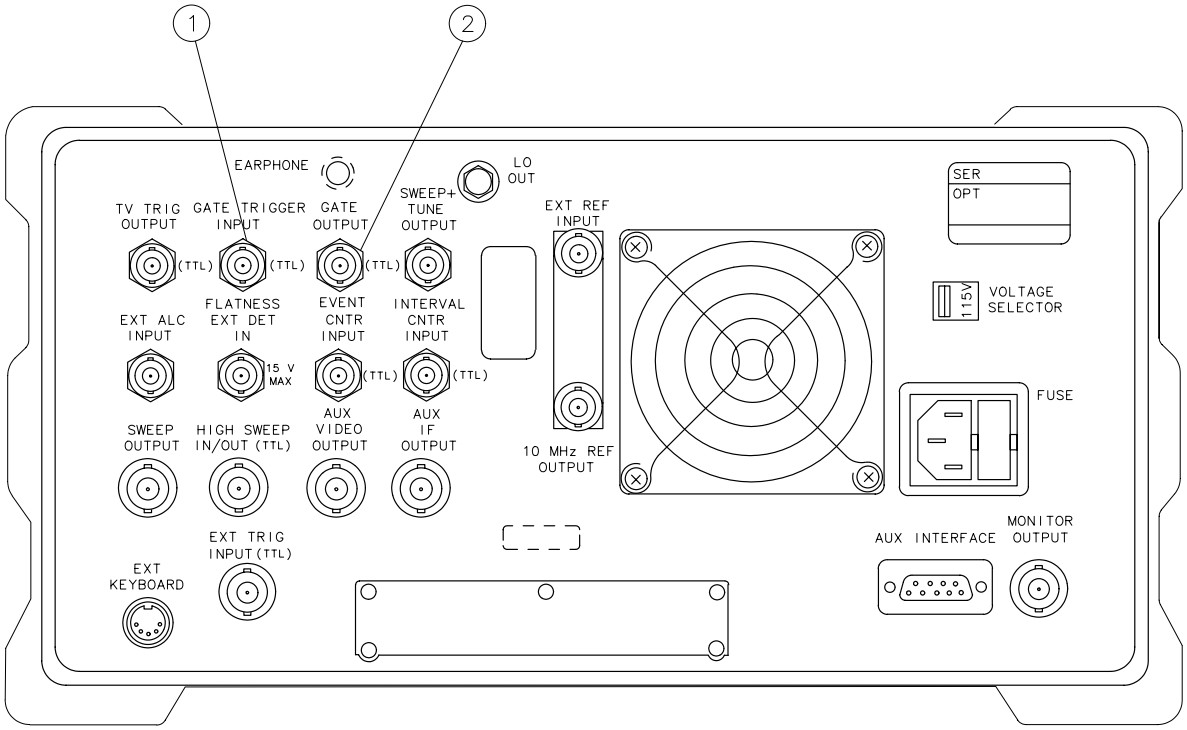
2. Carefully place the analyzer on the work surface with the front panel facing down.
3. Remove the four screws and washers attaching the instrument cover to the rear frame.
4. Unscrew, but do not remove, the four rear-feet screws, using a 4-mm hex wrench.

Figure 1 Removing The instrument Cover



5. Pull the instrument cover off toward the rear of the instrument.
6. If there is a dual I/O option on the back of the instrument it must be removed. If the instrument does not have the dual I/O option, then go to step 9.
7. Remove the five screws attaching the dual I/O to the rear panel.
8. Remove dual I/O connector board from the instrument by pulling up on the board.
9. Remove three screws on each side of the rear panel, and pull the rear panel gently away from the instrument a few centimeters.
10. Remove the plugs from the Gate Trigger In and Gate Out holes on the analyzer rear panel. Use one pair of long needle-nose pliers to compress the barrel of the plug, and use another pair of needle-nose pliers to pull the plug out of the rear panel. See Figure 2.

Figure 2 Gate Trigger Input and Gate Output

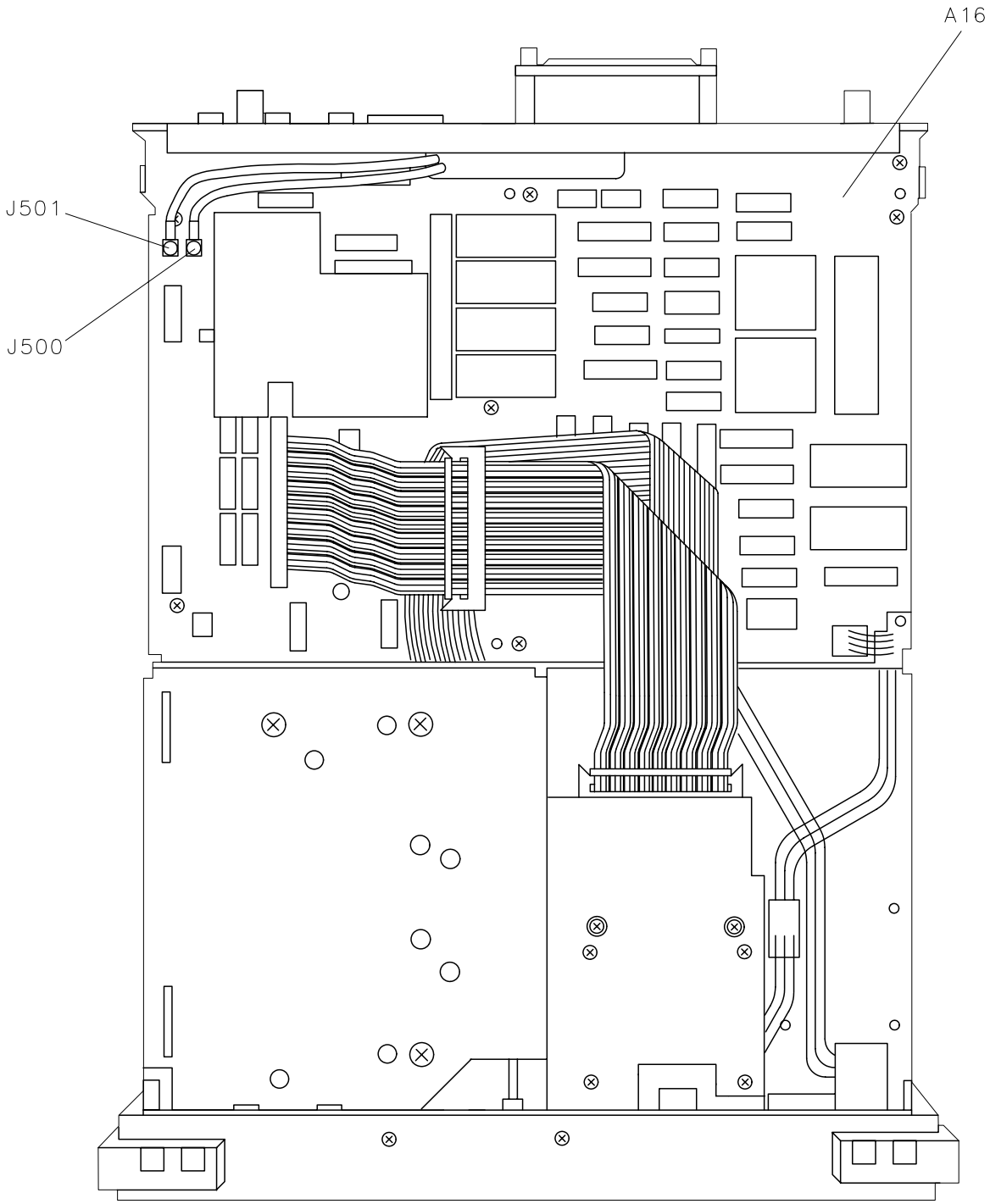


11. This installation kit comes with two long cables and two hex nuts. Install the cable with the #6 label through the rear-panel GATE TRIGGER INPUT (1) opening. Use a hex nut to attach the cable to the rear panel. Tighten the hex nut with the hex wrench.
12. Install the other cable with the #0 label through the rear-panel GATE OUTPUT (2) opening. Use a hex nut to attach the cable to the rear panel. Tighten the hex nut with the hex wrench.
13. Remove the 4 screws attaching the Dual I/O interconnect board A40 to the CPU and remove the I/O board.
14. Route the SMB cable ends to enable them to attach to A16J501 and A16J500.

NOTE If J501 and J500 do not exist on the CPU, you will need to order a CPU Board Kit. Refer to *Contacting Agilent Technologies* section of this document.

15. Being careful not to pinch or damage any of the cables, reattach the rear panel assembly to the chassis of the analyzer.

Figure 3 Attaching Cables to Board Assembly



16. Attach the cable from the rear-panel connector labeled GATE TRIGGER INPUT to A16J501. See Figure 3.
17. Attach the cable from the rear-panel connector labeled GATE TRIGGER OUTPUT to A16J500. See Figure 3.
18. Reattach I/O board to CPU. Be careful not to pinch the SMB cable.
19. If the instrument has the dual I/O option, then it should be reattached. Make sure that the connector is properly aligned, then firmly push into place. Replace the five screws attaching the dual I/O to the rear panel.

CAUTION Be careful not to bend or misalign the connector pins.

Replacing the Instrument Cover

CAUTION To prevent damage when replacing the instrument cover, place a soft cloth or towel between the work surface and the front panel.

Ensure cables do not bind between the instrument cover and the analyzer internal assemblies.

20. Carefully place the analyzer on the work surface with the front panel facing down.
21. Replace the instrument cover assembly. The seam of the cover should be on the bottom side of the analyzer.
22. Tighten the four rear-feet screws with a 4-mm hex wrench.
23. Replace the four screws and washers attaching the instrument cover assembly to the rear frame.

Contacting Agilent Technologies

1. If the CPU board does not have J501 and J500, order the 08590-60361 CPU kit for a compatible CPU board.
2. To complete the Option 105 upgrade process refer to the Web at http://mktwww.soco.agilent.com/field/service/signal/8590/105revb.htm to receive a complete set of instructions or call (707) 577-6801.
3. For detailed information about the 8590 Series firmware history, look on the Web at http://mktwww.soco.agilent.com/field/service/signal/8590/firmhist.htm. The two different firmware kits are noted on this web page.