

Installation Note

**HP ESG-D Series Option UND Signal Generators
Dual Arbitrary Waveform Generator Assembly
Replacement Kit
HP Kit Part Number E4400-69196**



HP Part Number E4400-90271

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HP E4400-69196

Product Affected:	HP E4430B, E4431B, E4432B, E4433B Signal Generators
Serial Numbers:	All
Options:	UND
To Be Performed By:	(X) HP Service Center (X) Personnel Qualified by HP (X) HP Personnel on Site (X) Technical Customer
Estimated Installation Time:	1.0 Hour
Estimated Verification Time:	None

Introduction

The Option UND Dual Arbitrary Waveform Generator Assembly Replacement Kit is intended to repair an ESG-D series signal generator which has a faulty dual arbitrary waveform generator assembly. For an ESG-D series signal generator that already has an Option UND installed, this kit can also be used to upgrade the signal generator to the latest shipping version of Option UND.

There are no performance or verification tests associated with this kit except what may be required for the installation of the firmware.

Installation Kit Parts List

Table 1 Option UND Replacement Kit Contents

Item	Quantity	Description	Part Number
1	1	A5 Dual Arbitrary Waveform Generator Assembly	E4400-60187
2	1	Firmware Upgrade Kit, Digital	E4400-60174
3	1	Installation Note	E4400-90271

Tools Required

- T-10 TORX screwdriver
- T-15 TORX screwdriver
- T-20 TORX screwdriver
- Long nose pliers

WARNING **Before you disassemble the instrument, turn the power switch off and unplug the instrument. Failure to unplug the instrument can result in personal injury.**

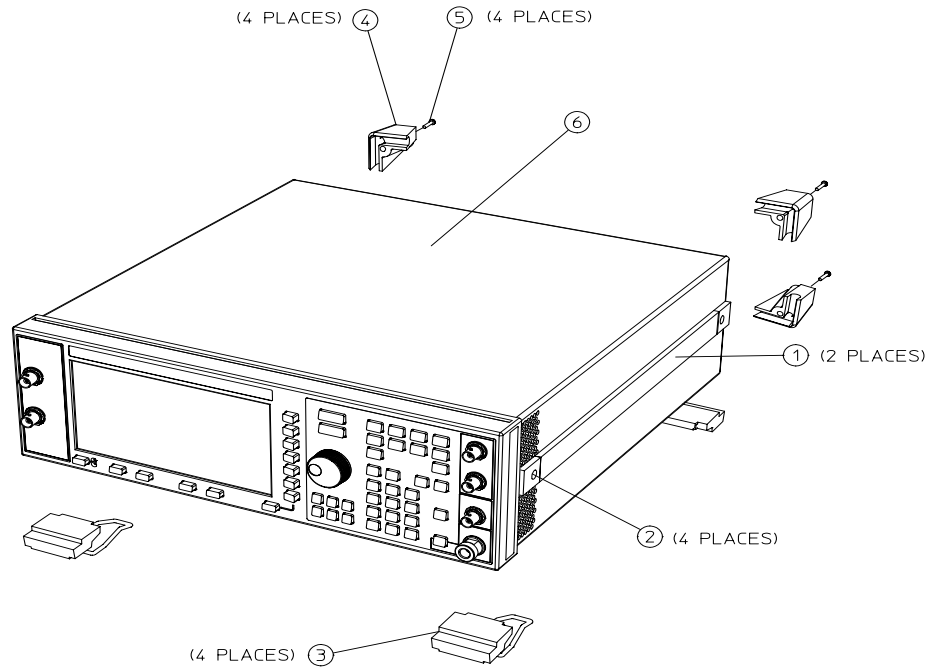
CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation.

Procedure

Removing Option Hardware

1. Remove the instrument cover. (Refer to [Figure 1](#).)
 - a. Remove the two strap handles (item 1) from each side of the signal generator by loosening the two screws (item 2) on each handle.
 - b. Remove the four bottom feet (item 3).
 - c. Remove the four rear feet (item 4) from the signal generator by removing the four screws (item 5) that secure them.
 - d. Slide the instrument cover (item 6) off the back of the signal generator.

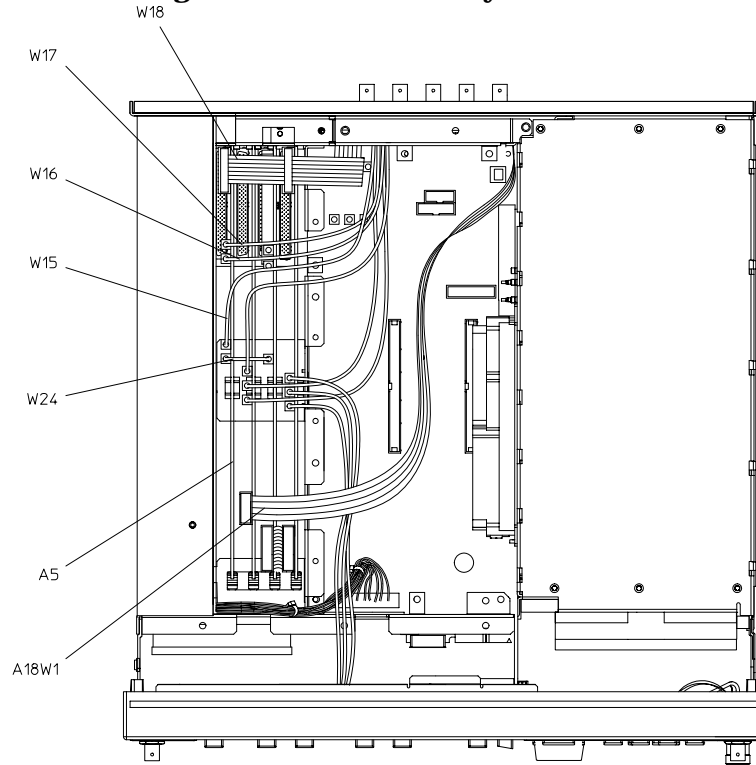
Figure 1 **Removing the Instrument Cover**



sk7104a

2. Perform the following steps to remove the A5 dual arbitrary waveform generator assembly. (Refer to [Figure 2.](#))
 - a. Remove the top cover by removing the screws that secure it.
 - b. Disconnect W15, W16, W17, and W18 from the dual arbitrary waveform generator assembly. If the instrument has Option UN3, UN4, UN8, or UN9, then W24 must also be disconnected from the dual arbitrary waveform generator assembly.
 - c. Pull up on the dual arbitrary waveform generator assembly to remove it from the motherboard connector.

Figure 2 **Removing the A5 Dual Arbitrary Waveform Generator Assembly**



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Installing the New A5 Dual Arbitrary Waveform Generator Assembly

1. Align the new dual arbitrary waveform generator into the slot and slide it into position. Firmly connect the A5 assembly to the motherboard connector.
2. Reconnect the cables to the A5 assembly.
3. Reinstall the instrument top cover.
4. Reinstall the instrument cover by reversing the removal procedure. Torque the screws as indicated:
 - Torque the four rear feet screws to 21 in-lbs.
 - Torque the strap handle screws to 21 in-lbs.

Installing and Verifying the New Firmware

1. Install the new firmware following the instructions in the firmware upgrade installation note.
2. Perform the verification procedure that is described in the firmware upgrade installation note.