

Installation Note

**Agilent Technologies ESG Family Signal Generators
Firmware Upgrade Kit: Part Number E4400-60230**



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ESG Family Signal Generators Firmware Upgrade Kit: Part Number E4400-60230

Product Affected:	ESG Family Signal Generators
Serial Numbers:	All
Options:	All
To be Performed By:	(X) Agilent Technologies Service Center (X) Personnel Qualified by Agilent Technologies (X) Customer
Estimated Installation Time:	1 hour (RS-232), 15 minutes (GPIB)
Estimated Verification Time:	1 minute

Introduction

To upgrade ESG family signal generator firmware, you must install the ESG Platform Installation Agent on a computer.

The instructions in this installation note enable you to:

- install the ESG Platform Installation Agent on your computer from either the CD-ROM supplied in this kit, or the Agilent Technologies website
- use the agent to upgrade the ESG family signal generator firmware
- verify that the firmware upgraded successfully

RS-232 Installation Kit Parts List

Quantity	Description	Part Number
1	Firmware CD-ROM upgrade	E4400-10014
1	RS-232 Cable Kit: <ul style="list-style-type: none"> • Serial RS-232 Cable (8120-6188) • RS-232 Null Modem (5181-6639) • Adapter, f-f (1252-7825) 	E4400-60049
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GPIB Interface Requirements

Interface Cards	Maker	Driver Software	Revision	Windows Version
HP 82341C	Hewlett Packard	I/O Libraries SICL & VISA	H.01.02.00	3.1/95/NT
HP 82341	“	“	“	95
HP82350A	“	“	“	95/NT
PCI-GPIB	National Instruments	NI-488.2M	1.60	95/98/2000/NT
PCI-GPIB+	“	“	“	2000/NT 4.0
PCMCIA-GPIB	“	“	“	3.1/95/98/NT/2000

Tools Required

- 5-mm nut driver, part number 8710-1219 (for RS-232 Interface)

Equipment Required

A PC with:

- Windows NT[®] 4.0 (service pack 3 or higher recommended), *or*
Windows 95[®] (service pack 2 recommended), *or*
Windows 98[®]
- 486 processor (or better)
- 64 MB RAM
- 20 MB free disk space, although this could increase significantly if a large library of firmware upgrade files is expected to be maintained on the PC. A single firmware release consists of approximately 5 MB of data.
- CD-ROM drive for systems without internet access
- 56k modem for systems with internet access

- A JavaScript-enabled web browser for systems with internet access. The installation agent has been tested with Netscape and Internet Explorer. Netscape version 3.0 or higher and Internet Explorer version 4.0 or higher are recommended.

NOTE For Windows service packs, contact Microsoft® directly, or go to:
<http://www.microsoft.com>

Functionality Check

Use the following procedure to verify that the signal generator powers up and that the internal instrument check identifies no errors. The internal check evaluates the correctness of operation and returns an error message if it detects a problem.

1. Turn on power to the signal generator. Let the instrument warm up for at least 5 minutes.

NOTE For instruments with Option 1E5, the error message ERROR 514, Reference Oven Cold occurs when you first connect the signal generator to AC line power. The OVEN COLD annunciator and the ERR annunciator both turn on. The OVEN COLD annunciator automatically clears after approximately 5 minutes. The error queue cannot be cleared, however, until the OVEN COLD annunciator turns off.

2. Cycle the power to the signal generator. The green LED should light, and the instrument performs a check.
3. When the display lights, check to see if the ERR annunciator is on.
4. If the ERR annunciator is *off*, go to the Installation section below.

If the ERR annunciator is *on*, review the error messages in the queue by pressing **Utility > Error Info > View Next Error Message**. The first error message in the queue appears in the display text area. Refer to the signal generator error messages document for information about the error message.

5. After you resolve all of the errors, press **Clear Error Queue(s)** to delete the messages.

Installation

To install from CDROM, go to [“Installation from CDROM”](#) on page 7

To install from Web, go to [“Installation from the Web”](#) on page 10

Installation from CDROM

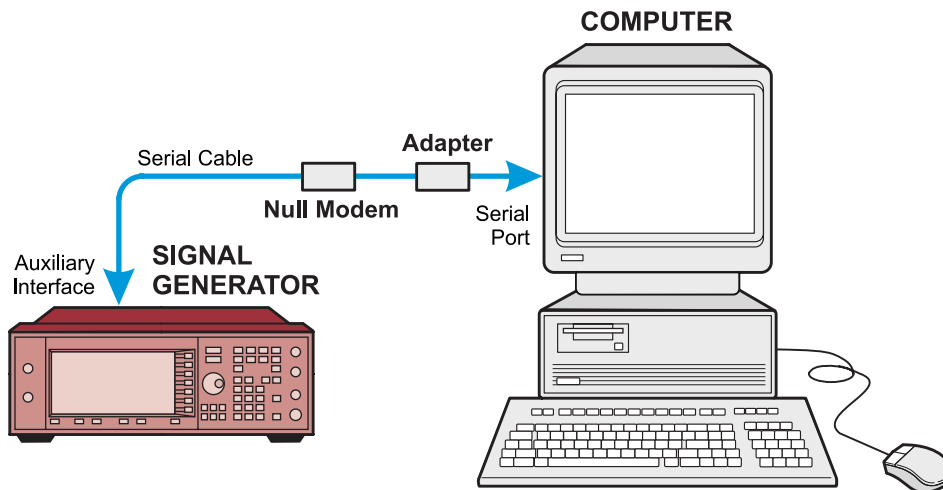
Use the following procedure to install the ESG Platform Installation Agent on your computer, and upgrade the ESG firmware.

1. Connect the computer to the signal generator:

For a RS-232 interface

Connect the computer to the signal generator as shown in the following diagram. Use the 5-mm nut driver to remove both standoffs from the female-to-female adapter.

NOTE Ensure that the selected COM port is not used by any other device.



Set the RS-232 parameters in the signal generator. Press **Utility > HP-IB/RS-232** and set as follows:

Baud rate = 19200

Echo = off

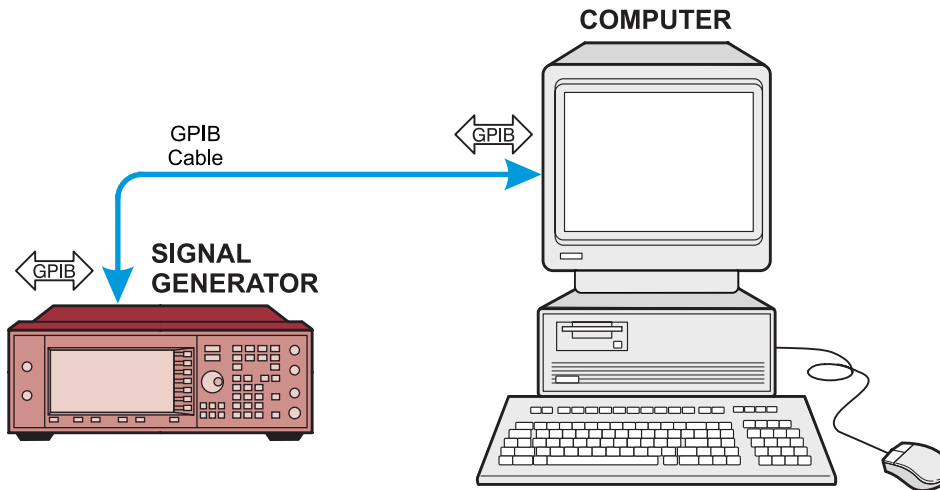
Transmit Pace = None

Receiver Pace = XOn

RTS/CTS = RTS On

For a GPIB interface

The interface requires a GPIB card installed in the PC and a GPIB cable connected between the PC and the signal generator.



2. Insert the firmware upgrade disk into the computer disk drive.
3. Run the self-extracting executable setup program: `EPIA_1_2.exe`.
Follow the program prompts.
4. Open the program from either the Windows Programs menu or the desktop icon (if you chose that option during setup). The program's Main dialog opens.

NOTE The software help provides additional information on program function.

5. In the Main dialog, choose **Select a directory path**. This opens the Select Index File dialog.
6. In the CD-ROM drive, double-click `Index.mdb`
7. Click the **Copy Release to PC** button. This opens the Retrieve Information dialog.
8. Highlight the firmware release that you want to upgrade, then click the **Copy Release Files to PC** button. Close the window.
The program copies the release index and description files to the PC.
9. In the Main dialog, choose **Use Index already on PC**, then click the **Upgrade ESG Firmware** button.
This opens the Upgrade Manager dialog.
10. In the Upgrade Manager dialog, select an upgrade and click the **Proceed with Upgrade** button.
This opens the Upgrade Status dialog.

By default, the Upgrade Status dialog opens with all upgrade components selected.

NOTE If you want to do a partial upgrade, and do not *already* know the requirements for each upgrade component, review the firmware release information:

1. Click the **Browse Release Info** button in the Main dialog.
2. Select the release notes for the desired firmware release.
3. Review the hardware compatibility information.

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11. Configure the interface, RS-232 or GPIB on the ESG Platform Installation Agent.
 12. To begin the firmware upgrade, click the **Upgrade Selected Firmware** button.
 13. The Upgrade Progress area appears at the bottom of the dialog, indicating the estimated and elapsed time of the upgrade process. The program performs a number of checks to confirm proper configuration for the PC and the signal generator.
 14. After the main firmware has been upgraded, you may need to configure the signal generator for any hardware or software options added to the ESG. On the signal generator:

Hardware Options

- a. Press **Utility > Instrument Adjustments > Hardware Options**
- b. Highlight the desired option.
- c. Press **Proceed with Reconfiguration > Confirm Change**

Software Options

- a. Press **Utility > Instrument Adjustments > Software Options > Modify License Key**
 - b. Enter the license key.
 - c. Press **Proceed with Reconfiguration**
15. Upgrade the remaining DSP files.
After the upgrade is complete, the program reboots the signal generator.

Instrument Verification

Perform the [“Functionality Check”](#) on page 6.

Installation from the Web

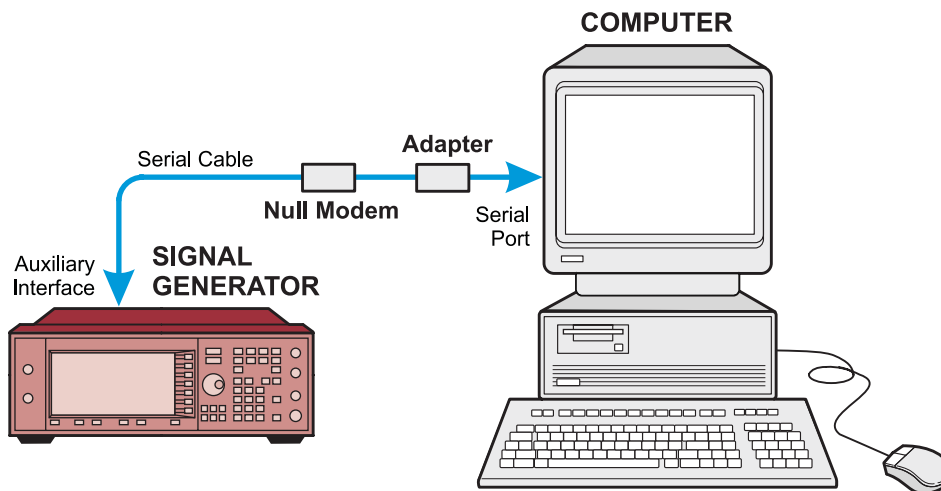
Use the following procedure to install the ESG Platform Installation Agent on your computer, download the firmware release files, and then transfer the firmware upgrade files to the signal generator.

1. Connect the computer to the signal generator:

For a RS-232 interface

Connect the computer to the signal generator as shown in the following diagram. Use the 5-mm nut driver to remove both standoffs from the female-to-female adapter.

NOTE Ensure that the selected COM port is not used by any other device.



Set the RS-232 parameters in the signal generator. Press **Utility > HP-IB/RS-232** and set as follows:

Baud rate = 19200

Echo = off

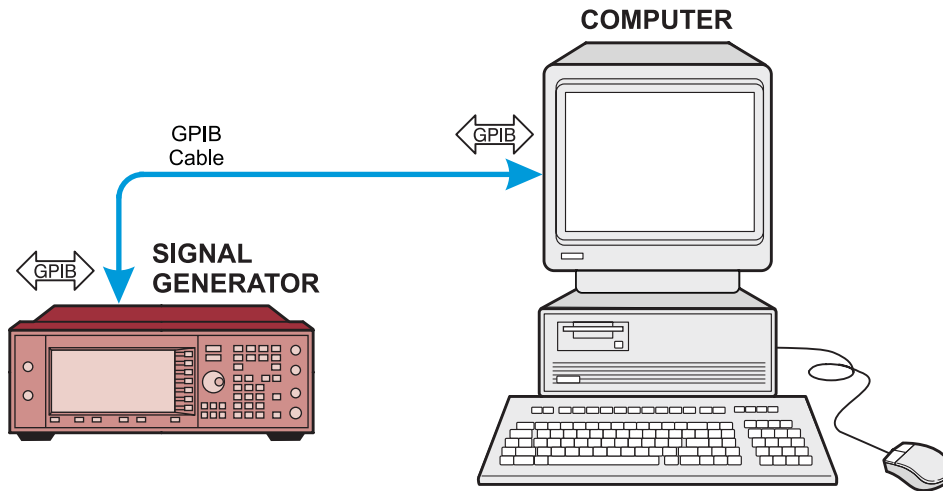
Transmit Pace = None

Receiver Pace = XOn

RTS/CTS = RTS On

For a GPIB interface

The interface requires a GPIB card installed in the PC and a GPIB cable connected between the PC and the signal generator.



2. Access the Agilent Technologies website:
http://www.tm.agilent.com/tmo/software/English/ESG_platform.html
3. Download the ESG Platform Installation Agent setup program.
4. Run the self-extracting executable setup program: `EPIA_1_2.exe`.
Follow the program prompts.
5. Open the program from either the Windows Programs menu or the desktop icon (if you chose that option during setup). The program's Main dialog opens.

NOTE The ESG Platform Installation Agent Help provides additional information on program function.

6. In the Main dialog, choose **Copy from default website**.
7. Click the **Copy Release to PC** button. This opens the Retrieve Release Information dialog.
8. Highlight the firmware release that you want to upgrade, then click the **Copy Release Files to PC** button. Close the dialog.
The program copies the release index and description files to the PC.
9. In the Main dialog, choose **Use Index already on PC**, then click the **Upgrade ESG Firmware** button.
This opens the Upgrade Manager dialog.

10. In the Upgrade Manager dialog, click the **Proceed with upgrade** button. This opens the upgrade Status dialog.

By default, the Upgrade Status dialog opens with all upgrade components selected.

NOTE If you want to do a partial upgrade, and do not *already* know the requirements for each upgrade component, review the firmware release information:

1. Click the **Browse Release Info** button in the Main dialog.
2. Select the release notes for the desired firmware release.
3. Review the hardware compatibility information.

11. Configure the interface, RS-232 or GPIB on the ESG Platform Installation Agent.

12. To begin the firmware upgrade, click the **Upgrade Selected Firmware** button.

13. The Upgrade Progress area appears at the bottom of the dialog, indicating the estimated and elapsed time of the upgrade process. The program performs a number of checks to confirm proper configuration for the PC and the signal generator.

14. After the main firmware upgrades, you may need to configure the signal generator for any hardware or software options added to the ESG. On the signal generator:

Hardware Options

- a. Press **Utility > Instrument Adjustments > Hardware Options**
- b. Highlight the desired option.
- c. Press **Proceed with Reconfiguration > Confirm Change**

Software Options

- a. Press **Utility > Instrument Adjustments > Software Options > Modify License Key**
- b. Enter the license key.
- c. Press **Proceed with Reconfiguration**

15. Upgrade the remaining DSP files.

After the firmware upgrade completes, the program reboots the signal generator.

Instrument Verification

Perform the [“Functionality Check”](#) on page 6.

Troubleshooting Hints

Browse the Release Information from the Main dialog.