

Installation Note

Extended Frequency Range Upgrade Kit

Upgrade Kit Number: E8363-60101

For E8363A and E8363B PNA Series Microwave Network Analyzers



Agilent Part Number: E8363-90001

Printed in USA January 2005

Supersedes all previous printings.

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E8363-90001

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The following safety notes are used throughout this document. Familiarize yourself with each of these notes and its meaning before performing any of the procedures in this document.

WARNING	Warning denotes a hazard. It calls attention to a procedure which, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a warning note until the indicated conditions are fully understood and met.
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This information supersedes all prior HP contact information.			
Online assistance: www.agilent.com/find/assist			
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Brazil (tel) (+55) 11 3351 7012 (fax) (+55) 11 3351 7024	Canada (tel) +1 877 894 4414 (fax) +1 303 662 3369	Mexico (tel) 1 800 254 2440 (fax) 1 800 254 4222	United States (tel) 800 829 4444 (alt) (+1) 303 662 3998 (fax) 800 829 4433
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Italy (tel) (+39) (0)2 9260 8484 (fax) (+39) (0)2 9544 1175	Luxemburg (tel) (+32) (0)2 404 9340 (alt) (+32) (0)2 404 9000 (fax) (+32) (0)2 404 9395	Netherlands (tel) (+31) (0)20 547 2111 (alt) (+31) (0)20 547 2000 (fax) (+31) (0)20 547 2190	Russia (tel) (+7) 095 797 3963 (alt) (+7) 095 797 3900 (fax) (+7) 095 797 3901
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(tel) = primary telephone number; (alt) = alternate telephone number; (fax) = FAX number; * = in country number 11/16/04			

About the Upgrade Kit

Products affected.	E8363A and E8363B; all options (See NOTE below.)
Installation to be performed by	Agilent service center, personnel qualified by Agilent, or customer
Estimated installation time	0.5 hour
Estimated adjustment time	1.0 hour
Estimated full instrument calibration time	4.5 hours

NOTE If the Time Domain option, Option 010, or the Frequency Converter Measurement Application, Option 083, are already installed on your analyzer, you will need a new license key for that option to function after installation of the extended frequency upgrade. Contact Agilent for this new license key.

If you need assistance, refer to [“Getting Assistance from Agilent” on page 3](#).

Description of the Extended Frequency Upgrade

This upgrade kit is used to extend the frequency range of the E8363A or E8363B PNA series microwave network analyzer from 40 GHz to 50 GHz.

Items Included in the Upgrade Kit

Check the contents of your kit against the following list. If any item is missing or damaged, contact Agilent Technologies. Refer to [“Getting Assistance from Agilent” on page 3](#).

Table 1 Upgrade Kit to Extend the E8363A and E8363B to 50 GHz (E8363-60101)

Description	Qty	Part Number
Installation note (this document)	1	E8363-90001
License key certificate	1	5964-5136
Model number nameplate for E8363A (E8364A)	1	E8364-80001
Model number nameplate for E8363B (E8364B)	1	E8364-80023

Installation Procedure for the Upgrade Kit

The network analyzer must be in proper working condition prior to installing this option. Any necessary repairs must be made before proceeding with this installation.

Overview of the Installation Procedure

- Step 1. [Verify the Model, Serial, and Option Numbers of the Analyzer.](#)
- Step 2. [Enter the New Model Number](#)
- Step 3. [Replace the Model Number Nameplate on the Front Panel](#)
- Step 4. [Perform Post-Upgrade Adjustments and Calibration](#)

Equipment Required for Post-Upgrade Adjustments

Equipment Type	Model or Part Number	Alternate Model or Part Number
Power meter	E4418B/E4419B	E4418A/E4419A
Power sensor, 2.4 mm	8487A	None
Adapter, 2.4 mm (f) to 2.4 mm (f)	11900B	85056-60007
RF cable, 2.4 mm (f) to 2.4 mm (f)	85133C	85133E

Step 1. Verify the Model, Serial, and Option Numbers of the Analyzer

Refer to the License Key Certificate supplied with the kit:

- Verify that the analyzer's model and serial numbers match those on the certificate.
- Verify that the option number on the certificate matches the option described in this installation note.

If the model number, serial number, or option number do not match the expected results, you will not be able to install the option. If this is the case, contact Agilent for assistance. Refer to [“Getting Assistance from Agilent”](#) on page 3.

Step 2. Enter the New Model Number

Procedure Requirements

- The analyzer must be powered up and operating to perform this procedure.
- The Network Analyzer program must be running.
- A keyboard and mouse are required for this procedure.

Enter the New Model Number

1. On the analyzer's **System** menu, point to **Service**, then click **Option Enable**.
2. Click **Repair**.
3. Check **Model shown is incorrect!**, then click **Begin Repair**.
4. In the **Model Change** box, select the appropriate new model number: **E8364A** or **E8364B**.
5. Using the keyboard, enter the keyword in the box provided. The keyword is printed on the License Key Certificate. Enter this keyword *exactly* as it is printed on the certificate.
6. Click **Enter Model**.
7. Verify that the new model number displayed is correct, then click **YES**. If it is not correct, click **NO** and repeat the repair.
8. When the installation is complete, click **Exit**.

Verify that the New Model Number is Shown Correctly

1. On the analyzer's **Help** menu, click **About Network Analyzer**.
2. Verify that the new model number is shown correctly in the display. Click **OK**.
3. On the analyzer front panel, press **Preset**. Verify that the full frequency range of the analyzer is correct.

Step 3. Replace the Model Number Nameplate on the Front Panel

Refer to [Figure 1](#) for this procedure.

Remove the Old Nameplate

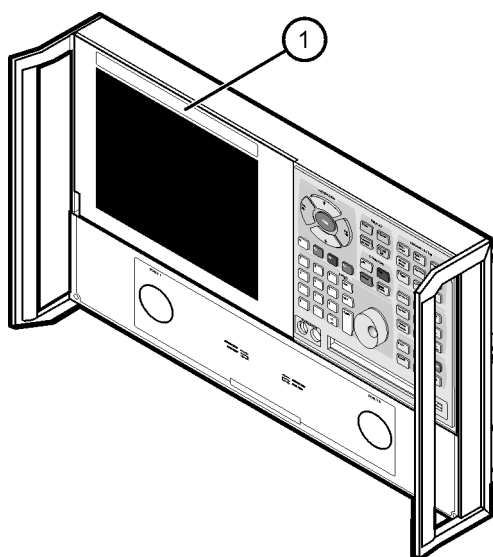
1. Using a sharp object such as a knife blade, lift one end of the old nameplate (item ①). Be careful not to scratch the painted surface.
2. Using your fingers, pull the nameplate completely off of the front panel and discard it.
3. If any adhesive remains on the front panel surface, it can be removed by rubbing it with your finger. Do not use a sharp object to remove this adhesive. If necessary, the surface can be cleaned with isopropyl alcohol.

Install the New Nameplate

NOTE There are two nameplates included in the upgrade kit—one for the “A” model and a different one for the “B” model. Be sure to select the proper nameplate for your analyzer model.

1. Remove the protective backing from the new nameplate to expose the adhesive. Avoid touching the adhesive with your fingers as this may affect its ability to adhere to the front panel surface.
2. *Loosely* align the new nameplate over the recess in the front panel and apply lightly.
3. Once the overlay is properly aligned, press it firmly onto the surface to secure it.

Figure 1 Model Number Nameplate Replacement



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Step 4. Perform Post-Upgrade Adjustments and Calibration

Adjustments

The following adjustments must be made due to the change in the full frequency range of the analyzer.

- LO power
- source calibration
- receiver calibration

These adjustments are described in the PNA service guide and in the PNA on-line HELP. A list of equipment required to perform these adjustments can be found at [“Equipment Required for Post-Upgrade Adjustments” on page 5](#).

Calibration

The analyzer should now operate and phase lock over its entire frequency range.

If you experience difficulty with the basic functioning of the analyzer, contact Agilent. Refer to [“Getting Assistance from Agilent” on page 3](#).

- Although the analyzer functions, its performance relative to its specifications has not been verified.
- It is recommended that a full instrument calibration be performed using the N2721A performance test software.
- Refer to the analyzer’s service guide for information on the performance test software.