

Installation Note

Agilent PSA Series Spectrum Analyzers 512 MB User Memory, Option 115



Agilent Technologies

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E4440-90319

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512 MB User Memory Option 115

Products Affected:	PSA E4440A PSA E4443A PSA E4445A PSA E4446A PSA E4447A PSA E4448A
Serial Numbers:	US0000 / US4618 MY0000 / MY4618 SG0000 / SG4618
To Be Performed By:	(X) Agilent Service Center (X) Personnel Qualified by Agilent () Customer
Estimated Hardware Installation Time:	30 minutes
Estimated Firmware Download and Verification Time:	1 Hour

Introduction

This installation note explains how to install the 512 MB user memory assembly into the PSA Series instruments. Instruments with serial prefix US/MY/SG 4618 or greater were factory configured with Option 115. Please note that the 512 MB Memory assembly has a USB port, but this port is only active if Option 111, USB Device Side I/O, is installed.

The retrofit adds 512 MB of memory which is used by the instrument to store measurement personalities such as W-CDMA or Phase Noise, and user defined files such as trace and state files. This 512 MB memory is in addition to, and does not replace any existing memory on the CPU.

Once the hardware is installed, it is mandatory to update the PSA firmware so the PSA can recognize the new hardware.

Contents

Quantity	Description	Agilent Part Number
1	Installation Note	This note
1	Option Upgrade Entitlement Certificate	5964-5141
1	512 MB Memory Assembly	E4440-60252
1	Cover Plate, rear panel	E4440-00061
1	Label (used to cover USB port on cover plate)	E4440-80099
9	Screw, M3 X 0.5 8 mm LG TORX	0515-0372

Tools Required

- ☐ T-20 Torx driver
- ☐ T-10 Torx driver
- ☐ PSA Series Spectrum Analyzer Service Guide. This manual is available as part of the E444xAU Option OBW kits.
- ☐ Microsoft Windows based personnel computer with LAN card and CD-ROM drive.
- ☐ Windows NT 4.0, Windows 2000, or Windows XP
- ☐ Crossover cable if PC or analyzer is not connected to network. Use a CAT, RJ45 cable with cross pinning, Agilent p/n 8121-0545.
- ☐ Firmware A.0 9.00 or later. Download the latest revision from http://www.agilent.com/find/psa_firmware, or order the Firmware Update kit.

Depending on your model number, the firmware update kit is ordered as: Order E444xAU (Qty.1) Option UE2 (Qty. 1), where the “x” is the last digit of the model number. For example: E4440AU option UE2.

Installation Procedure

Preliminary Hardware Verification

1. Check for the presence of Option 111 or Option 117 by pressing **System, Show System**, and look at the option list.

NOTE	Option 111, Option 115, and Option 117 share the same PC assembly. Therefore, if the latest version of the PC assembly is currently installed, you can skip the hardware installation portion of this procedure.
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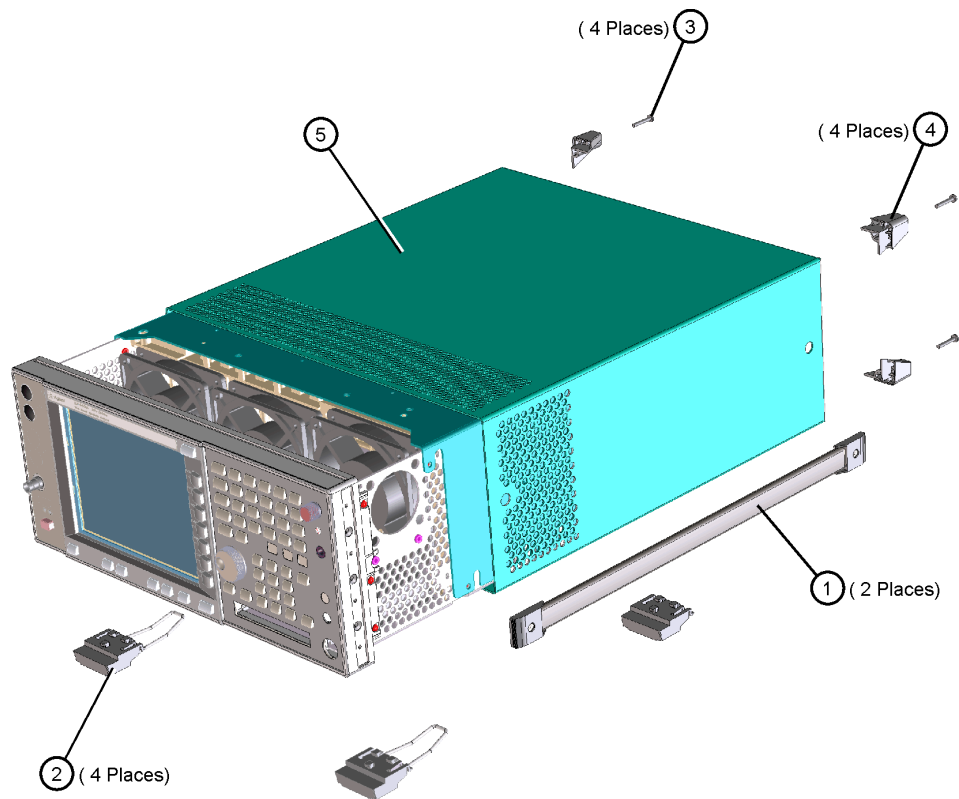
2. If Option 111 or Option 117 is present, press **System, Show Hardware**. Note the part number of the USB/Flash Driver.
3. Determine the part number of the PC assembly in the kit. The assembly in the kit should be the latest part number.
 - If the part numbers match, skip to the “Install the Option Designator and License Keyword” portion of this installation note.
 - If the part numbers do not match, follow the procedure below to install the latest PC assembly.

Remove the Outer Case

CAUTION	If the instrument is placed on its face during any of the following procedures, be sure to use a soft surface or soft cloth to avoid damage to the front panel, keys, or input connector.
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1. Disconnect the instrument from ac power.
2. Refer to Figure 1. Remove the two handles on the sides of the instrument as shown. Use the T-20 driver to loosen the screws that attach each handle (1). Remove the handles.
3. Remove the four bottom feet (2). Lift up on the tabs on the feet, and slide the feet in the direction indicated by the arrows.
4. Remove the four screws (3) that hold the rear feet (4) in place.
5. Pull the instrument cover (5) off toward the rear of the instrument.

Figure 1 Instrument Outer Case Removal

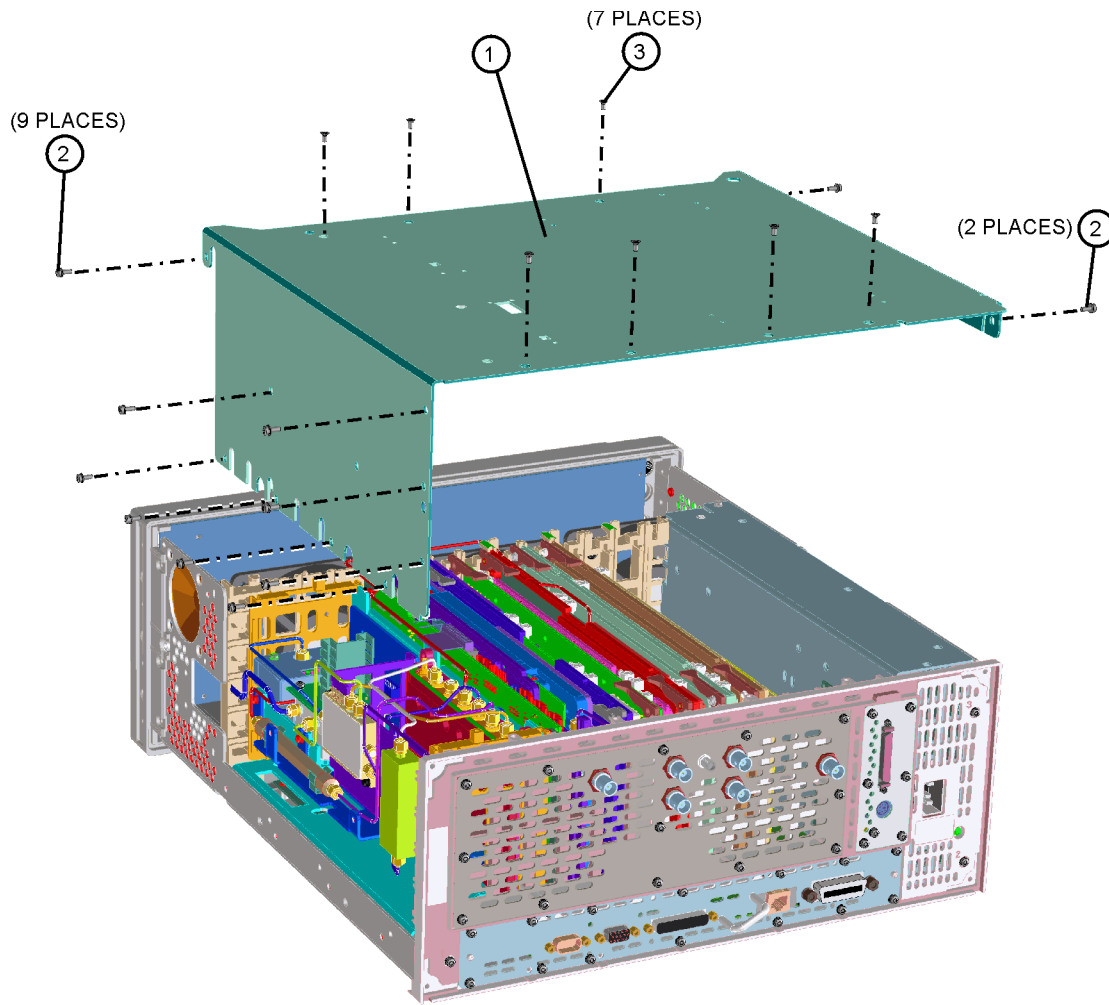


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Remove the Top Brace

1. Refer to Figure 2. Use the T-10 driver to remove the top screws (3) (one screw is under the security label), and the side screws (2) attaching the top brace (1) to the deck.
2. Remove the top brace from the deck.

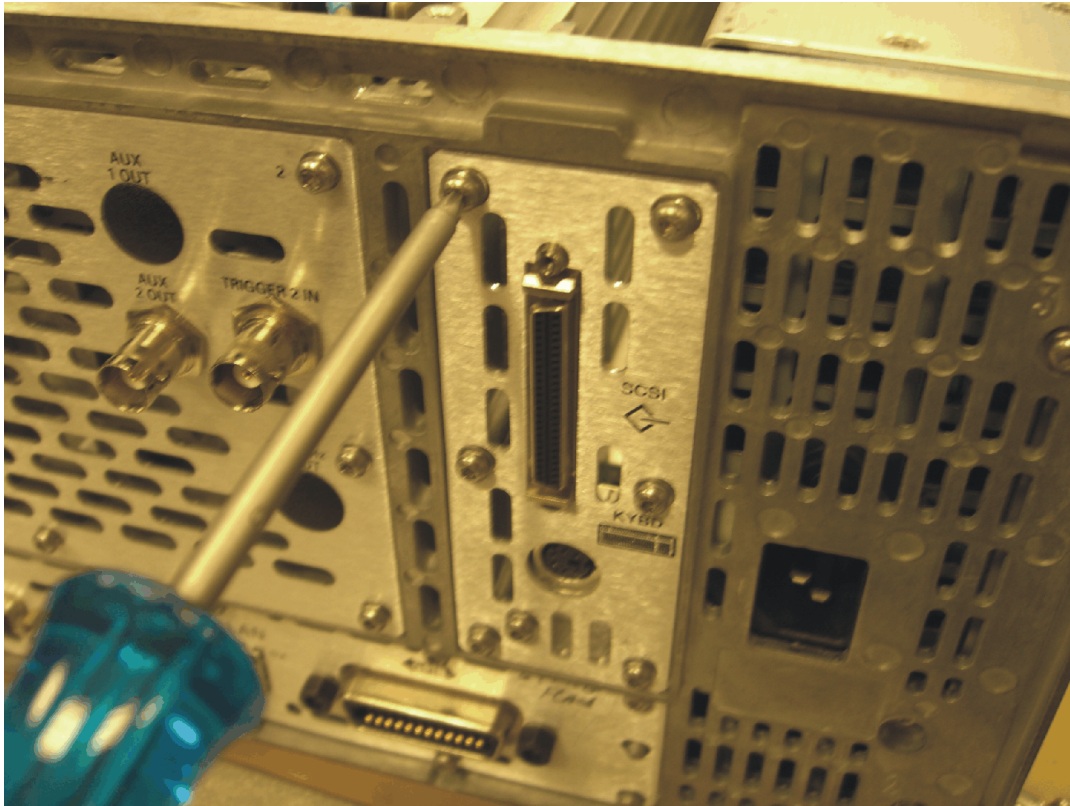
Figure 2 **Top Brace Removal**



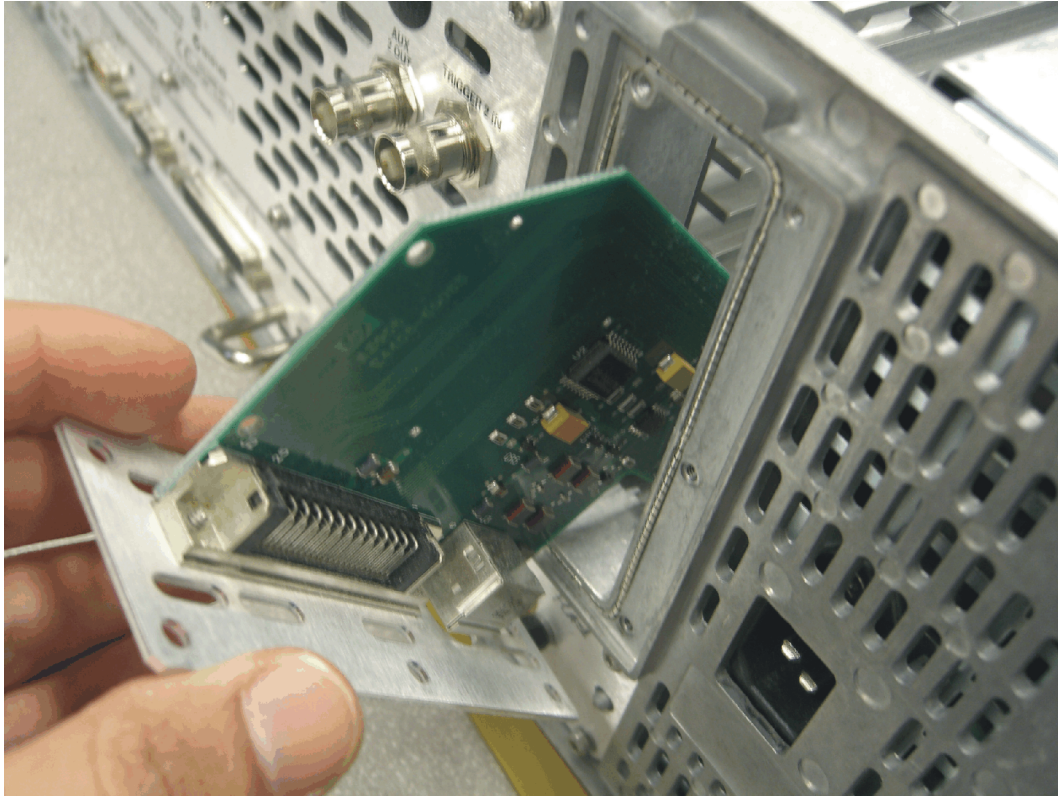
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Installing the Retrofit Kit

1. Locate the A6 (SCSI Interface board). When facing the rear panel of the instrument, the A6 board is in the right side of the instrument.
2. Remove the 6 screws from the rear plate of the A6 SCSI interface board. The plate will stay attached to the board. See the picture below.

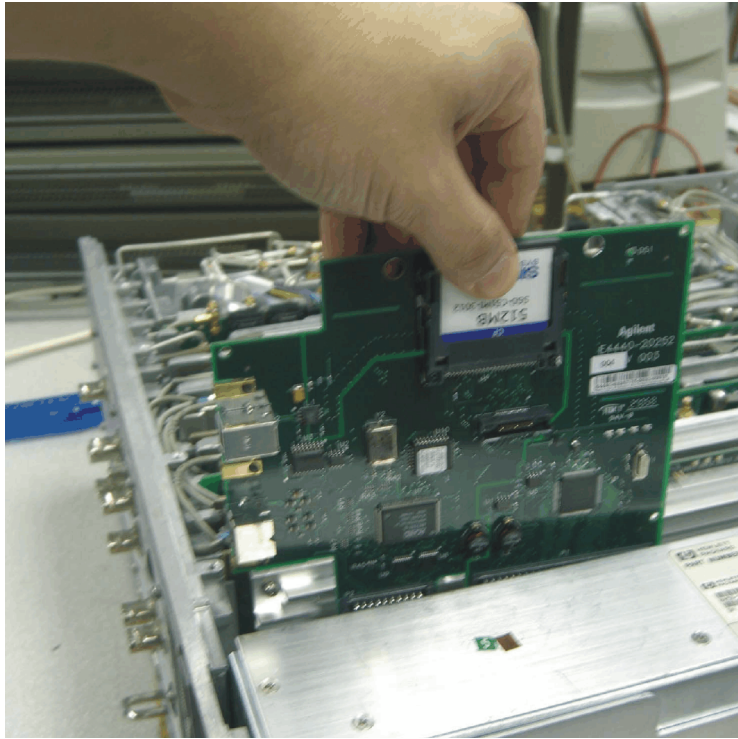


3. Remove the A6 SCSI interface board. To do this, gently lift the board vertically from its socket on the PSA motherboard. Once the A6 SCSI interface board is unseated from the motherboard, it can be removed through the rear panel.

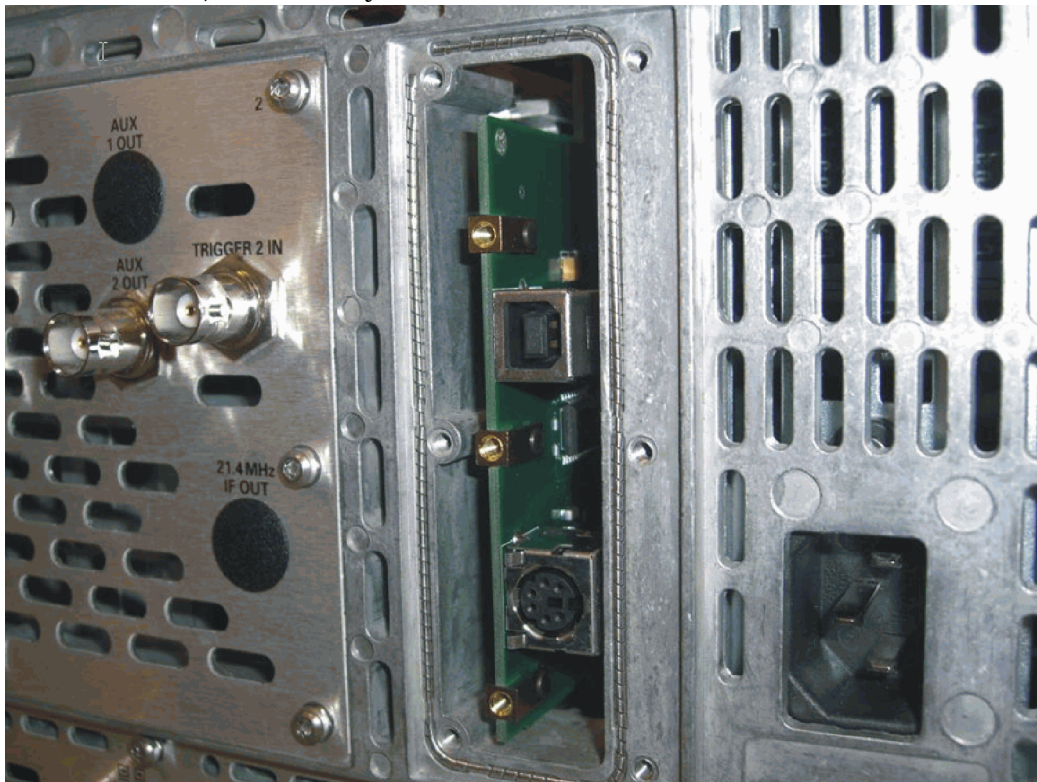


Installation Procedure

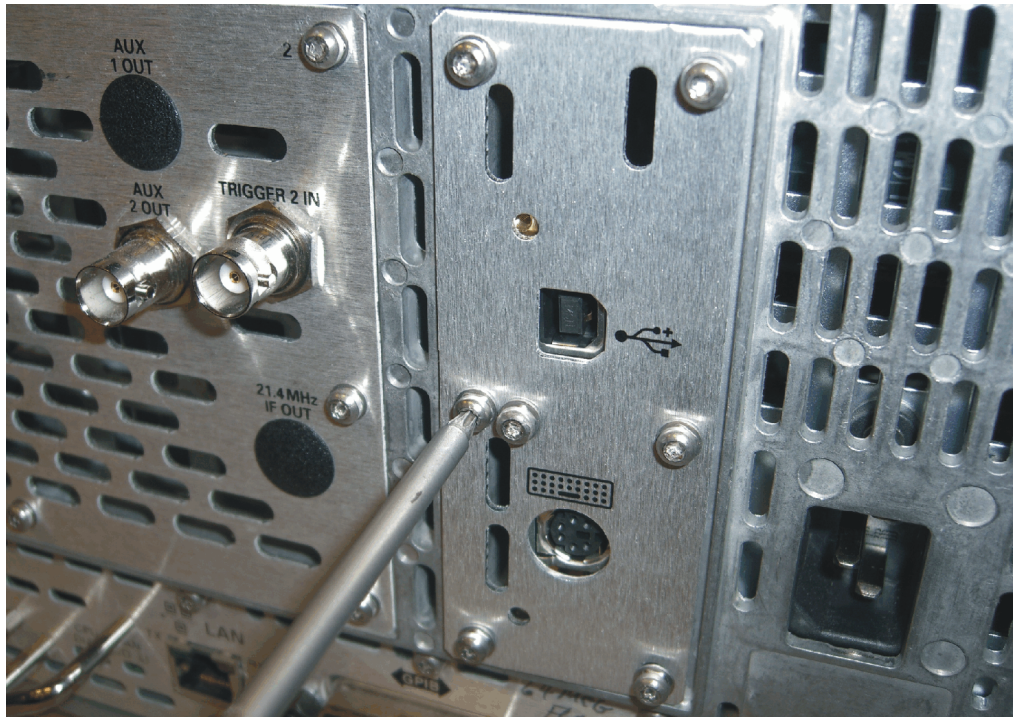
4. Insert the 512 MB user memory assembly as shown below. Make sure to firmly insert the connectors into the PSA motherboard sockets, but do not exert so much force as to break the connector.



After installation, the memory board should look like this:



- Put the rear plate in place on the PSA rear panel, and screw it into place as shown below. New screws are included in the kit.



- Apply the label, included in the kit, over the USB port.

Replace the Top Brace

- Refer to Figure 2.
- Carefully position the top brace on the deck. There is an alignment pin on the mid web/fan assembly that should match up with the alignment hole on the top brace. Make sure that no coaxial cables will get pinched underneath the brace.
- Using the T-10 driver, replace the top screws first, and then the side screws after the top screws are tightened. Torque to 9 inch pounds.

Replace the Outer Case

- Refer to Figure 1.
- Slide the instrument cover back onto the deck from the rear. The seam on the cover should be on the bottom. Be sure the cover seats into the gasket groove in the front frame.
- Replace the four rear feet onto the rear of the instrument. Torque to 236 Ncm (21 in-lb).
- Use the T-20 driver to replace the handles. Torque to 236 Ncm (21 in-lb).
- Replace the four bottom feet by pressing them into the holes in the case and sliding them in the opposite direction of the arrows until they click into place. Note that the feet at the front have the tilt stands.

Install the Option Designator and License Keyword

Option 115 and Option 117 cannot coexist. Check the instrument for Option 117 by pressing **System**, **Show System** and look for 117 in the Options section of the display. If Option 117 is present, remove it by pressing **System**, **More**, **More**, **Licensing**, **Option**, then enter 117. Press **Delete License**.

NOTE	The option designator 115 and the license keyword must be entered into instrument memory in addition to the correct firmware before the hardware will function.
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1. Locate the Option Upgrade Entitlement Certificate in the kit and follow the directions to redeem it. You will receive an email that has the license keyword required for step 4.
2. Plug in instrument and power up.
3. On the instrument front panel press: **System**, **More**, until the **Licensing** softkey is visible. Press **Licensing** and **Option**. This will activate the alpha editor menu. Use the front panel numerical keypad to enter the option designator 115. Press the **Enter** key. Note that 115 now appears on the **Option** key.
4. Press **License Key**. The license key number is a hexadecimal number that will require the entry of both letters and numbers. Use the alpha editor and the front panel numerical keypad to enter the license key number. Your entry will appear in the active function area of the display. If you make a typing error, use the backspace key to correct the error. Check the license key number you entered. Press **Enter**, **Activate License**.
5. Cycle instrument power and allow instrument to perform the auto align routine.

Install New Instrument Firmware

A complete firmware installation is required even if the instrument currently contains the latest firmware. If the instrument does contain the latest firmware, do the following:

- At the **Choose Components to load** screen, check the box for **Operating System Version X.XX for Firmware Version A.XX.XX**.

This will allow the instrument memory to be reconfigured.

Download the PSA Update Program and the PSA Firmware Procedure from

http://www.agilent.com/find/psa_firmware

Follow the directions to install the firmware.

Alternate method:

Install the Firmware Upgrade Kit E4440AU Option UE2.

Adjustments and Performance Tests Required

None. Installing this memory assembly does not affect instrument calibration.

Verify the Option

Once the license keyword is installed and the firmware updated, the instrument will automatically update the memory following a power cycle.

Press the **Mode** key and view the softkey labels. Assuming the instrument had optional personalities installed before the upgrade, the same measurement personalities will still be present.

You can also do the following:

Check for the presence of Option 115 by pressing **System, Show System** and looking for 115 in the Options section of the display.

You can press **System, Licensing, Show License** and see that Option 115 appears in the list.

Press **System, Show Hardware, Next Page** and this will show Compact Flash Type (vendor name/size) and Compact Flash Size (512 MB).

End of Installation

For assistance, contact your nearest Agilent Technologies Sales and Service Office. To find your local Agilent office access the following URL:

<http://www.agilent.com/find/assist>

