

# Installation Note

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## Agilent PSA Spectrum Analyzer Replacement Assembly Kits



**Agilent Technologies**

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## Replacement Assembly Kits

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| Products Affected: . . . . .           | PSA E4440A<br>PSA E4443A<br>PSA E4445A<br>PSA E4446A<br>PSA E4448A               |
| Serial Numbers: . . . . .              | US00000000/US99999999<br>MY00000000/MY99999999                                   |
| To Be Performed By: . . . . .          | (X) Agilent Service Center<br>(X) Personnel Qualified by Agilent<br>( ) Customer |
| Estimated Installation Time: . . . . . | 1 Hour   |
| Estimated Verification Time: . . . . . | Varies with assembly replaced  |

### Introduction

The replacement assembly in this kit can be used in several different PSA series instruments. However, the calibration constants stored on this replacement assembly may not be correct for your instrument model number. This is because the replacement assembly may have been tested and configured at the factory in one model number, but the instrument requiring the replacement assembly is a different model number.

This installation note serves as a reminder that you must use the “PSA Series Performance Tests and Adjustments Software,” A02.00 or later, to reset the calibration constants. This software is included in the option 0BW service documentation, and is also needed to adjust and verify the performance of the replacement assembly once it is installed.

## Installation Kit Parts List

### Kit Contents

| Item | Quantity | Description          | Agilent Part Number |
|------|----------|----------------------|---------------------|
| 1    | 1        | Replacement Assembly | ---                 |
| 2    | 1        | Installation Note    | this note           |

### Tools Required

- PSA Series Performance Verification and Adjustment Software, A02.00 or later. This software is available as part of Agilent E4440AW Option 0BW.
- Test equipment supported by the software mentioned above.

## Procedure

1. Refer to the replacement procedures section of the service guide for instructions on how to install the replacement assembly and power up the instrument.
2. Launch the “PSA Series Performance Tests and Adjustments Software” on your PC.
3. Configure the unit under test by selecting the appropriate PSA model number, and pressing the **Configure UUT** button.
4. Choose the **Utilities** test plan.
5. Select the **Manual Test Selection** tab.
6. Run **Calibration Constant Reset**.
7. Select the replacement assembly from the list and press OK to reset the calibration constants.
8. Refer to [Table 1](#) for adjustment and verification information for the assembly you replaced.

**Table 1 Post-Repair Testing Requirements**

| Assembly              | Adjustments, Tests, & Configuration   | Performance Verification  |
|-----------------------|---|---|
| A8 Analog IF Assembly | Analog IF Input Detector adjustment<br><br>Internal Align All Now<br><br>Check function of the front panel external trigger input.<br><br>Burst Trigger test, located in the Service Guide Post Repair Procedures Chapter | Absolute Amplitude Accuracy<br><br>Noise Sidebands <50 kHz Offset<br><br>Power Bandwidth Accuracy<br><br>Displayed Average Noise Level<br><br>IF Amplitude Ripple (Option B7J)<br><br>Display Scale Fidelity<br><br>IF Phase Ripple (Option B7J)<br><br>Resolution Bandwidth<br>Switching Uncertainty |

**Table 1 Post-Repair Testing Requirements (Continued)**

| Assembly   | Adjustments, Tests, & Configuration  | Performance Verification   |
|--|--|--|
| A10 Third Converter Assembly                                       | Requires FW revision A.03.01 or greater<br><br>50 MHz Calibrator Amplitude adjustment  | Third Order Intermodulation Distortion<br><br>Spurious Responses<br><br>Absolute Amplitude Accuracy<br><br>Displayed Average Noise Level<br><br>Power Bandwidth Accuracy |
| A12A1 LO/Synthesizer Board or A12 Assembly                         |  | Noise Sidebands (both tests)   |
| A13 Front End Driver Board (Agilent E4446A and E4448A models only) | Second LO Power adjustment<br><br>Lowband Mixer Bias adjustment<br><br>FELOMA adjustment<br><br>YTF Alignment<br><br>Frequency Response adjustments<br><br>Attenuator Slope adjustment<br><br>Overload Detector DAC adjustment | Absolute Amplitude Accuracy<br><br>Frequency Response  |

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