Keysight Technologies
X-Series Signal Analyzers, Multi-Touch, N9048B PXE EMI Receiver, N9038B MXE EMI Receiver, Multi-Touch

Option PFR
Precision Frequency Reference

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TECHNOLOGIES

Installation Note

Notices

Option PFR Precision Frequency Reference Installation Kit

Products Affected:	N9000B CXA Signal Analyzer N9010B EXA Signal Analyzer N9020B MXA Signal Analyzer N9021B MXA Signal Analyzer N9038B MXE EMI Receiver, Multi-Touch N9048B PXE EMI Receiver
Serial Numbers:	All
To Be Performed By:	(X) Keysight Service Center (X) Personnel Qualified by Keysight (X) Customer
Estimated Installation Time: Estimated Adjustment and Verification Time:	0.5 Hours 0.5 Hours (see Note 2)

Option PFR Precision Frequency Reference Installation Kit

Introduction

This kit contains all of the instructions required to install Option PFR on a N9000B CXA, N9010B EXA, or N9020B/N9021B MXA signal analyzer, or N9038B MXE EMI Receiver, Multi-Touch, or N9048B PXE EMI receiver. The CXA, EXA, and MXA signal analyzers are collectively referred to as X-Series Multi-Touch signal analyzers. No tools are required.

NOTE	1. At the time of manufacture the hardware related to this option was fully adjusted and the option performance was verified to be within its warranted specifications. Within one year of the initial calibration date of the instrument this option is fully calibrated with no further adjustment or verification testing.

To determine the initial calibration date, locate the original calibration certificate that was shipped with the instrument at the time of purchase. The Date of Calibration is printed on the original calibration certificate.

No factory test data is available for this option. If you require test data for this option then a full calibration is required after installation of this option. Arrangements regarding the level of calibration must be made with the calibration provider.

2. If this instrument has been adjusted as part of a repair or calibration during its first year, or if the instrument is more than one year old, additional adjustments and performance verification tests are required to ensure that this newly installed option is functioning properly. However, the completion of these tests does not guarantee that the instrument meets all warranted specifications.

3. The latest revision of the X-Series signal analyzer software may be downloaded from:

   http://www.keysight.com/find/Xseries_software

4. This option is licensed for one instrument model/serial number combination. The license key will only install on the designated instrument.

Contents

Quantity	Description	Keysight Part Number
1	Installation Note	This note
1	Option Upgrade Entitlement Certificate	-----

Tools Required

— CXA Signal Analyzer Service Guide, EXA Signal Analyzer Service Guide, OR MXA Signal Analyzer Service Guide as applicable. These service guides can be downloaded from the following websites:

  For CXA

  www.keysight.com/find/N9000B_service_guide

  For EXA

  www.keysight.com/find/N9010B_service_guide

  For MXA

  www.keysight.com/find/N9020B_service_guide

  www.keysight.com/find/N9021B_service_guide

— Personal computer with internet access and USB port

— USB storage device with > 2 GB free memory
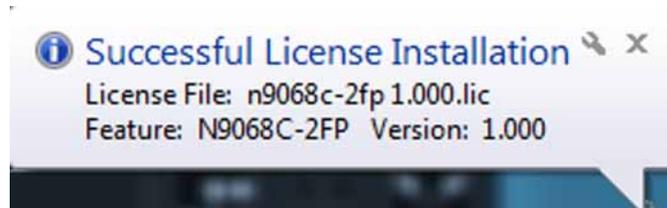
Installation Procedure over USB

1. Locate the Option Upgrade Entitlement Certificate from the kit.

2. Redeem the Option Upgrade Entitlement Certificate by following the instructions on the Certificate.

3. After redeeming your Option Upgrade Entitlement Certificate you will receive an email with an attached License File.

4. Locate a USB storage device. Perform a virus scan on this device before use.

5. Save the License File to the root directory of the USB storage device.

6. Connect the USB storage device to the signal analyzer USB port. Windows will detect the new hardware and may display the configuration menu shown in Figure 1. This menu may be configured according to your preferences.

Figure 1   USB Storage Device Configuration Menu

7. The signal analyzer will automatically consume the License File. (This may take a few minutes) When the License File is consumed the Keysight License Manager will display a "Successful License Installation" message similar to the one shown in Figure 2.

Figure 2   Successful License Installation

Alternate Installation Procedure

The License File can be manually installed over USB or LAN by placing the license file in the following folder on the signal analyzer

C:\Program Files\Agilent\licensing

Verify the Installation

1. Press **System**, **Show System** to display a list of installed options.

2. Verify that the newly installed option appears on the list.

Utilities, Adjustments, and Performance Verification Tests

Calibration Software and specified test equipment is required to perform the adjustments, and can be used to automate the performance verification testing. Information on how to obtain this software can be found at

http://www.keysight.com/find/calibrationsoftware

Utilities Required

None

Adjustments Required

If the instrument is more than one year old, or if this instrument has been adjusted as part of calibration or repair during its first year, the following adjustments are the minimum set required to ensure that this newly installed option is functioning properly.

Adjustments
10 MHz Reference Adjustment

Performance Testing Required

If the instrument is more than one year old, or if the instrument has been adjusted as part of a calibration or repair during its first year, the following performance verification tests are the minimum set required to ensure that this newly installed option is functioning properly. Performing only these tests does not guarantee the instrument meets all specifications.

Performance Verification Tests
Displayed Average Noise Level
10 MHz Frequency Reference Accuracy
Marker Count Accuracy

A full calibration is required to assure the instrument meets all specifications

The end user must ultimately determine whether they want a full calibration to be performed after the installation of this upgrade or not. If a full calibration is required, arrangements regarding the level of calibration must be made between the end user and the calibration provider.

For assistance, contact your nearest Keysight Technologies Sales and Service Office. To find your local Keysight office access the following URL, or if in the United States, call the following telephone number:

http://www.keysight.com/find/assist

1-800-829-4444 (8 am - 8 pm ET, Monday - Friday)

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