Keysight N9020B MXA Signal Analyzer

Frequency Range Upgrade From One Millimeter Frequency to a Higher Millimeter Frequency

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KEYSIGHT TECHNOLOGIES

Installation Note

Notices

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Frequency Range Upgrade from One Millimeter Frequency to a Higher Millimeter Frequency

Products Affected:	MXA N9020B
Serial Numbers:	All
To Be Performed By:	(X) Keysight Service Center
	( ) Personnel Qualified by Keysight
	( ) Customer
Estimated Installation Time:	1.0 Hours
Estimated Adjustment Time:	6.0 Hours
Estimated Verification Time:	Varies with installed options

Introduction

This installation note explains how to upgrade the frequency range on an existing 32 GHz N9020B MXA to either 44 GHz or 50 GHz, or how to upgrade an existing 44 GHz N9020B MXA to 50 GHz.

Option Ordered	Description
N9020BU-F15	MXA Upgrade from 32 GHz to 44 GHz (includes 44 GHz Preamp license)
N9020BU-F20	MXA Upgrade from 32 GHz to 50 GHz (includes 50 GHz Preamp license)
N9020BU-F21	MXA Upgrade from 44 GHz to 50 GHz (includes 50 GHz Preamp license)

Since all millimeter wave instruments contain the same hardware, updating the frequency range involves licensing the new maximum frequency range, updating the preamp option, adding frequency range labels to the instrument, and performing the necessary adjustments and performance verification tests.

IMPORTANT **In addition to upgrading the maximum frequency range of the instrument, this kit will also license the maximum frequency preamplifier to the new upper frequency range of the instrument.**

The option is licensed for one instrument model number/serial number combination. The license file that is downloaded from the web will only install on the designated instrument.

NOTE

A software upgrade to the latest revision, or a software reinstallation of the current software is required. The procedure that follows tells you when to install the software. This assures that after licensing to the new frequency range, any software related changes to the instrument files will be performed by the software installation.

To verify the current version, press **System**, **Show System** and look for the "Instrument S/W Revision".

The latest revision of the X-Series Signal Analyzers software may be downloaded from:

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

Contents

Quantity	Description	Part Number
1	Installation Note	This note
1	Option Upgrade Entitlement Certificate	5964-5178
1	Label, nameplate 10 Hz to 44 GHz (N9020B)	N9020-80197
1	Label, nameplate 10 Hz to 50 GHz (N9020B)	N9020-80198
1	Label, rear panel Frequency upgrade, 544 44 GHz	N9020-80148
1	Label, rear panel Frequency upgrade, 550 50 GHz	N9020-80149

Tools Required

- Personal computer with internet access and USB port
- LAN connection to instrument (allows factory to control unit)
- USB storage device with > 2 GB free memory
- Keysight Calibration and Adjustment Software, N7814A (revision E.21.00 or later)
- Test equipment and computer supported by the Keysight Calibration and Adjustment Software

Initial instrument Functionality Check

Power on the instrument and allow the instrument to boot up, run the alignments and display the measurement screen. The instrument will probably display a spectrum analyzer screen and you will see the instrument sweeping.

There should be no alignment failures. If there are failures, investigate and fix the problem before continuing.

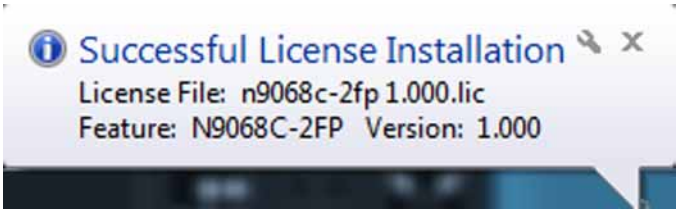
License Installation Procedure over USB

1. Locate the Option Upgrade Entitlement Certificate (5964-5178) 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. Cycle power on the signal analyzer and wait until the analyzer boots to the measurement application screen.
2. Press **System**, **Show System** to display a list of installed options.
3. Verify that the installed option list contains the newly installed N9020B-544 or N9020B-550.

Instrument Software Installation

Upgrade the software to the latest revision, or reinstall the current version (if available) when the customer does not want to upgrade. Software installation assures that after licensing to the new frequency range, any software related changes to the instrument files will be performed by the software installation.

To verify that the current version, press **System**, **Show System** and look for the "Instrument S/W Revision".

The latest revision of the X-Series Signal Analyzers software may be downloaded from

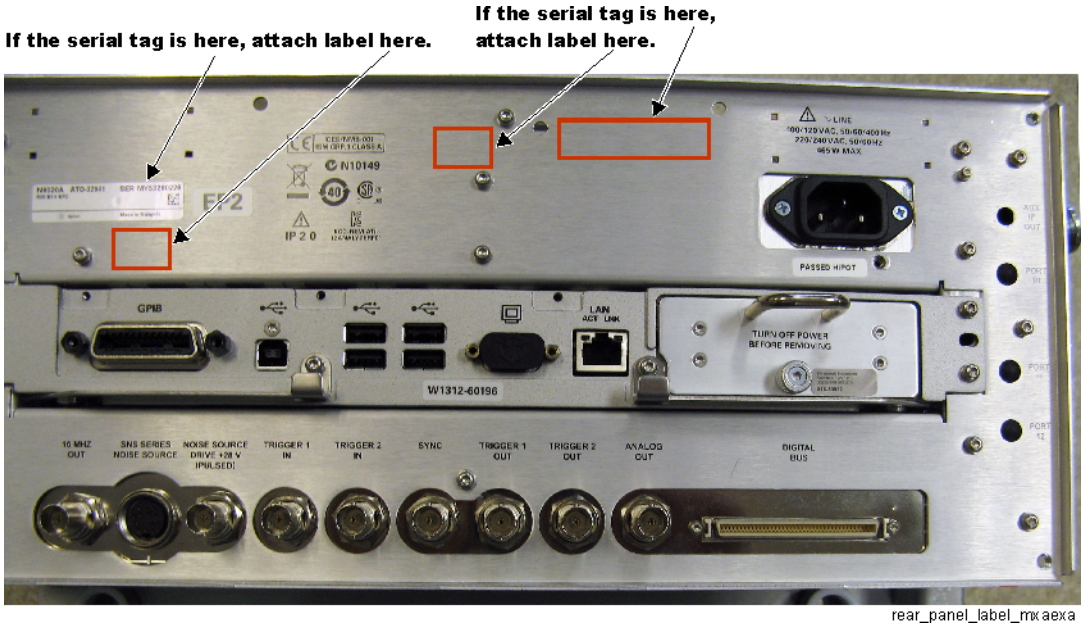
http://www.keysight.com/find/xseries_software.

Re-Label Instrument with New Frequency Range

1. Locate the correct rear panel label that indicates the new frequency range of the analyzer. The rear panel labels are printed with the option number and frequency range. Example: "544 44 GHz".

   Apply this label to the rear panel as shown in Figure 3.

   Figure 3 Rear Panel Label, MXA



2. Locate the correct nameplate label that indicates the new frequency range of the analyzer.
3. Peel off the existing nameplate.
4. Remove any residual adhesive from the front frame where the nameplate was removed.
5. Remove the backing from the new nameplate and carefully apply to the front frame. Press down evenly for good adhesion.

Utilities, Adjustments, and Performance Verification Tests

Utilities Required

None

Adjustments Required

Adjustment Name
Perform all possible adjustments

Performance Testing Required

Verification Test Name
Perform all Performance Verification Tests

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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