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# Keysight UXA Signal Analyzer

Option CRP Arbitrary IF Out

or

Option ALV Log Video Out

# Notices

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## Option CRP or ALV Installation Kit

Products Affected:	UXA N9040B UXA N9041B UXA N9042B
Serial Numbers:	All
Options	
To Be Performed By:	<input checked="" type="checkbox"/> Keysight Service Center <input checked="" type="checkbox"/> Advanced User <input type="checkbox"/> User
Estimated Installation Time:	0.5 Hours
Estimated Adjustment and Verification Time:	0.5 Hours

## Option CRP or ALV Installation Kit

### Introduction

This kit contains all of the instructions required to install Option CRP or ALV on a UXA X-Series signal analyzer.

The rear panel AUX IF OUT port is present on all UXA signal analyzers, however each of the possible output signal choices require a license.

#### NOTE

1. To ensure that this newly installed option has been installed properly, the procedure that follows includes a functional check.

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

[https://www.keysight.com/find/Xseries\\_software](https://www.keysight.com/find/Xseries_software)

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

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### Contents

Quantity	Description
1	Installation Note
1	Option Upgrade Entitlement Certificate

### **Tools Required for Installation**

- Personal computer with internet access and USB port
- USB storage device

### **Tools Required for Manual Operation Verification**

For Option CRP

- Spectrum Analyzer capable of measuring a 322.5 MHz signal at -40 dBm
- Test cable, sma or 3.5 mm connectors
- Adapters as needed to connect the cable between the spectrum analyzer and sma AUX IF OUT port on the rear panel of the UXA analyzer

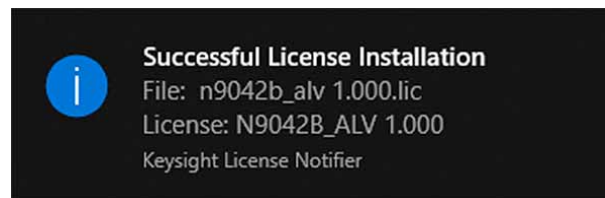
For Option ALV

- Signal source capable of providing pulse output above 200 MHz
- Oscilloscope
- Test cable, BNC
- BNC (f) to sma (m) adapter to connect the cable between the oscilloscope and sma AUX IF OUT port on the rear panel of the analyzer.

## 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.
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 as shown in **Figure 1**.

**Figure 1** 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 the power on the signal analyzer.
2. Press **System, Show System** to display a list of installed options.
3. Verify that the newly installed option appears on the list.

## Manually Verify Operation

### Option CRP, Arbitrary IF Output

1. Preset the UXA analyzer. Assure mode is Spectrum Analyzer.
2. Display the 50 MHz calibrator signal. Press **Input/Output, RF Calibrator, 50 MHz**. Press **FREQ, Center Frequency**. Key in 50 MHz. Press **Swept Span, Zero Span** to toggle to **Zero Span**. You should see a flat line across the display at -25 dBm.
3. Enable Option CRP. Press **Input/Output, Output, Aux IF Out**. Select **Arbitrary IF**. Press **Arbitrary IF Freq**. Set the Arbitrary IF Out frequency to 70 MHz using the key pad.
4. Connect a spectrum analyzer to the rear panel Aux IF Out port using test cable and appropriate adapters.

Spectrum analyzer settings:

Center frequency: 70 MHz

Span: 1 MHz

Bandwidth: 100 kHz

The spectrum analyzer should display a  $-33 \text{ dBm} \pm 5 \text{ dB}$  signal

### Option ALV, Fast Log Video

1. Preset the UXA analyzer. Assure mode is Spectrum Analyzer.
2. Enable Option ALV. Press **Input/Output, Output, Aux IF Out, Fast Log Video**.
3. Connect a signal source configured for a pulse output to the UXA analyzer RF input port with the following settings:
  - Frequency: 400 MHz
  - Amplitude: -20 dBm
  - Pulse period: 80  $\mu$ sec
  - Pulse width: 40  $\mu$ sec
4. UXA analyzer settings:
  - Center frequency: 400 MHz
  - Span: 0 Hz
  - Bandwidth: 3 MHz
5. Connect an oscilloscope to the UXA analyzer rear panel Aux IF Out port.
  - Oscilloscope settings:
    - Impedance 1 Mohm
    - 500 mV/div
    - 10  $\mu$ sec/div
  - Adjust oscilloscope to view the pulse on the oscilloscope.
6. The signal on the oscilloscope should measure as follows:
  - Frequency: 12.5 kHz
  - Period: 80 us
  - Duty Cycle: 50%
  - Amplitude: 1.3 Vp-p

## 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

<https://www.keysight.com/find/calibrationsoftware>

### Utilities Required

None

### Adjustments Required

None

### Performance Testing Required

None

### **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:

<https://www.keysight.com/find/assist>



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