

# Installation Note

---

## Agilent Technologies N5161A/62A/81A/82A MXG Signal Generators A3 RF Assembly Upgrade for Expanded License Key Upgradeability Option 099 Upgrade Kit

### Kit Part Numbers:

**N5161AK-099**

**N5162AK-099**

**N5181AK-099**

**N5182AK-099**

---

### NOTE

For the latest revision of this installation note, go to the following website:

*<http://www.agilent.com/find/mxg>*

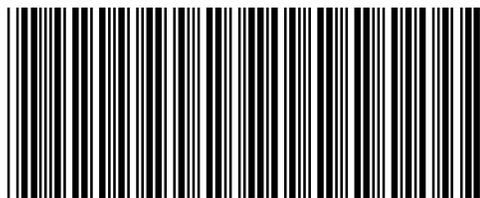
---



**Agilent Technologies**

Part Number N5180-90042

Printed in USA July 2008



N5180-90042

**Notice**

The information contained in this document is subject to change without notice.

Agilent Technologies makes no warranty of any kind with regard to this material, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Agilent Technologies shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

---

## A3 RF Assembly Upgrade for Expanded License Key Upgradeability Option 099 Upgrade Kit

Products Affected: .....	N5161A/62A/81A/82A
Serial Numbers: .....	All
Options: .....	All
To Be Performed By: .....	(X) Agilent Technologies Service Center (X) Personnel Qualified by Agilent Technologies (X) Customer
Estimated Installation Time: .....	1.0 hour
Estimated Verification Time: .....	0.75 hours

### Introduction

This upgrade kit adds standard specified performance down to 100 kHz, higher output power, and provides the capability to install the following license key enabled hardware options: Option UNZ, UNT, UNU, UNV<sup>1</sup>, UNW, 1EQ, and 1EA.

---

**NOTE** This upgrade requires LAN access and a PC with a CD drive.

---

Installation includes completing the following major steps, in the order given.

1. Run Self Test.
2. Install new firmware ( $\geq$  A.01.43).
3. Replace the A3 RF assembly.
4. Verify signal generator operation.
5. Activate Option 099.
6. Install new nameplate overlay. (For instruments with serial prefixes <US/MY/SG4818.)

---

1. Not available on N5161A and N5181A instruments.

## Installation Kit Parts List

Item	Quantity	Description	Part Number
1	1	Installation Note	N5180-90042
2	1	1 GHz Nameplate (N5181A)	N5180-80027
3	1	3 GHz Nameplate (N5181A)	N5180-80028
4	1	6 GHz Nameplate (N5181A)	N5180-80029
5	1	3 GHz Nameplate (N5182A)	N5180-80025
6	1	6 GHz Nameplate (N5182A)	N5180-80026
7	1	Media Binder	5958-5162
8	1	Documentation CD	N5180-90007
For Option UNM Instruments			
9	1	A3 RF assembly	N5180-60169
For Option UNM Instruments			
9	1	A3 RF assembly	N5180-60170

## Tools Required

- TORX T-10 driver
- TORX T-15 driver
- TORX T-20 driver
- 9/16" nut driver
- 5 mm nut driver
- Torque Wrench (9-21 in-lb.)
- Small Phillips screw driver
- Long-nose pliers

## Typical Safety Considerations

---

**WARNING** Before you disassemble the signal generator, turn the power switch off and unplug the power cord. Failure to unplug the signal generator can result in personal injury.

---

---

**CAUTION** Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation.

---

## Run Self Test

1. Turn on the signal generator and let it warm up for at least five minutes.

---

**NOTE** If the ERR annunciator is on take note of the error(s) numbers, but do not resolve the error(s) at this time.

---

1. Open the MXG service guide (N5180-90006) on the documentation CD (N5180-90007) provided with this kit.
2. Go to “Running Self Test” in chapter 1, “Troubleshooting”, and follow the procedure for your instrument model.
3. Self test failures between 100 and 699 do not need to be resolved at this time.  
Self test failures between 700 and 999 must be resolved before installing the new A3 RF assembly.

## Install New Firmware

---

**NOTE** Firmware version  $\geq$ A.01.43 must be downloaded before installing the new A3 RF assembly.

---

Use the firmware CD provided in the 5958-5162 binder or go to [www.agilent.com/find/mxg](http://www.agilent.com/find/mxg) to download the latest firmware.

## Replace the A3 RF Assembly

1. If not already open, open the MXG service guide (N5180-90006) on the documentation CD (N5180-90007) provided with this kit.
2. Use chapters 3 and 4 of the MXG service guide to remove and replace the A3 RF assembly in your instrument.

## Verify Signal Generator Operation

To ensure the signal generator is meeting all published specifications review chapter 4 of the MXG service guide, then run the recommended manual performance verification tests in the order listed.

1. I/Q Calibration (N5162A/82A only)
2. Self Test
3. Relative Frequency Range and Accuracy Verification
4. Leveled Output Power Verification

## Activate Option 099

1. Follow the instructions on the Entitlement Certificate.

## Install New Nameplate (For Instruments with Serial Prefixes <US/MY/SG4818)

---

**NOTE** The nameplate is provided for customer convenience only. The actual model and option capability is determined electronically, and viewed on the front panel LCD Display.

---

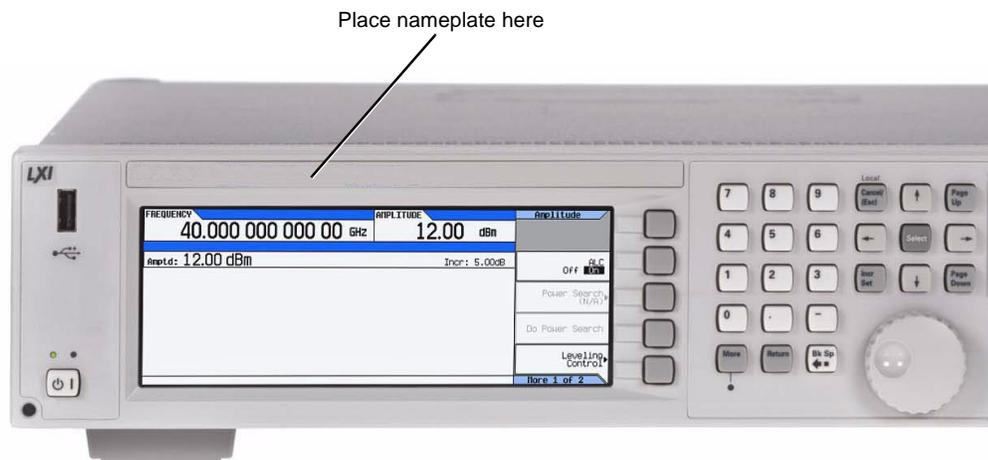
1. Use a sharp knife, (i.e. Exacto knife), to lift one end of the current nameplate.

**Figure 0-1**



2. Pull the lifted end to remove the nameplate.
3. Remove the backing from the new nameplate.
4. Place the nameplate in the nameplate area on the Front Panel Assembly, see [Figure 0-2](#).

**Figure 0-2**



5. Press firmly.