

# Installation Note

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## Replacing the 20 GHz to 40 GHz YIG Oscillator Using the 08722-60032 Installation Kit

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<b>CAUTION</b>	Damage to the YIG will occur if the modification to the A59 source interface board is not done as described in this note.
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### Affected Network Analyzers

Analyzer Model Numbers	Serial Numbers that Need to be Checked for Modification
8722D	All
8722ES	US39175301 and Below
8722ET	US39175026 and Below



**Agilent Technologies**

Part Number 08722-90080

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08722-90080

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## About the Installation Kit

Products Affected.....	8722D and all options 8722ET and all options 8722ES and all options
Installation to Be Performed By.....	Agilent Service Center Personnel Qualified by Agilent Customer with service guide
Estimated Installation Time.....	1 hour
Estimated Verification Time.....	1 hour

If you need assistance, contact Agilent Technologies. Refer to [“Contacting Agilent”](#) on page 8 for a list of offices.

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## Description of the 08722-60032 Installation Kit

The 08722-60032 kit contains parts to replace the 20 GHz to 40 GHz YIG oscillator in the 8722D/ES/ET network analyzers. Some models need a green wire modification to the A59 source interface board. If this is not done, damage to the YIG will occur. Refer to Table 1 for information on modification criteria.

**Table 1                      Modification Criteria**

<b>Analyzer Model Numbers</b>	<b>Serial Numbers</b>	<b>A59 Modification Procedure</b>
8722D	all	Perform the green wire modification or replace the A59 source interface board.
8722ES	US39175301 and Below	Check the for the green wire modification or perform the green wire modification
8722ET	US39175026 and Below	Check the for the green wire modification or perform the green wire modification

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## Contents of the 08722-60032 Installation Kit

Table 2 lists the parts included in this installation kit, Agilent part number 08722-60032. Check the contents of your kit against this list.

**Table 2      08722-60032 Kit Contents**

Description	Qty	Part Number
YTO (20 GHz to 40 GHz)	1	5087-7155
Suppressor - Mode	1	08415-40005
BD AY - YIG OSC	1	08720-60166
Installation Note (this document)	1	08722-90080
Green Wire (1 foot, 30 awg, 300V)	1	8150-3431

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**IMPORTANT**

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The network analyzer service guide will be needed to complete this installation.

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## Installation Procedure

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**WARNING**      **The servicing instructions are for use by qualified personnel only. To avoid electrical shock, do not perform any servicing unless you are qualified to do so.**

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### Electrostatic Discharge Protection

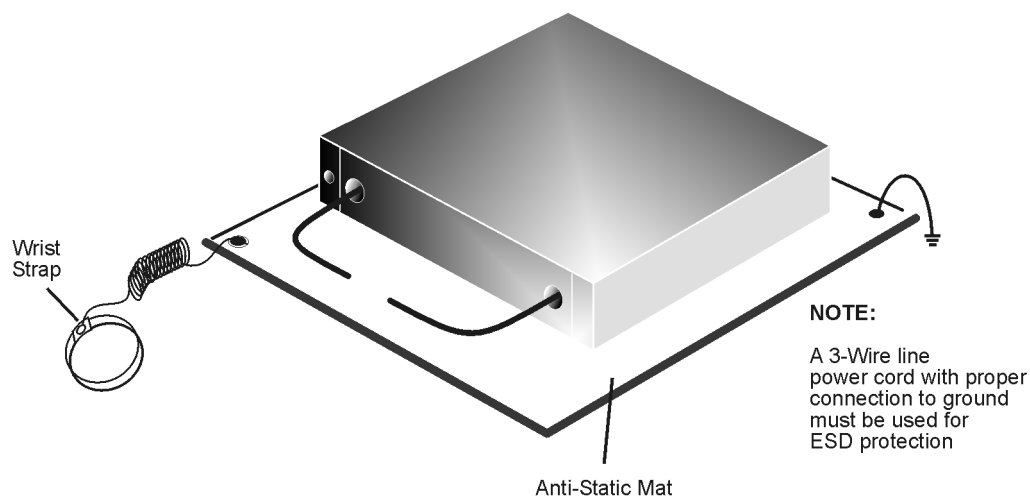
Protection against electrostatic discharge (ESD) is essential while removing or connecting cables or assemblies within the network analyzer.

Static electricity can build up on your body and can easily damage sensitive internal circuit elements when discharged. Static discharges too small to be felt can cause permanent damage. To prevent damage to the instrument:

- *always* wear a grounded wrist strap having a 1 M $\Omega$  resistor in series with it when handling components and assemblies.
- *always* use a grounded, conductive table mat while working on the instrument.
- *always* wear a heel strap when working in an area with a conductive floor. If you are uncertain about the conductivity of your floor, wear a heel strap.

Figure 3 shows a typical ESD protection setup using a grounded mat and wrist strap.

**Figure 3                  ESD Protection Setup**



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## Tools and Requirements for Installation

Refer to the network analyzer service guide for all tool requirements and for detailed procedures.

## Procedures for Installing the YIG Oscillator

- Step 1.** Check the serial number of the network analyzer. Refer to Table 1 on page 3 for modification criteria.
- Step 2.** Remove the top, bottom and side covers of the network analyzer. Refer to the “Removing the Covers” section in the service guide.
- Step 3.** Remove the front panel. Refer to the “Removing the Front Panel” section in the service guide.
- Step 4.** Remove the A54 YIG oscillator and A59 source interface board. Refer to the “Removing the Source Assemblies” section in the service guide.

### Modification of the A59 Board

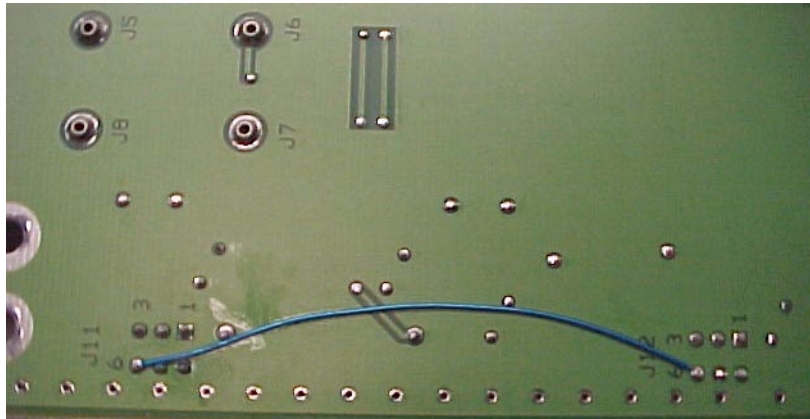
- Step 5.** Check the back (non-component side) of the A59 source interface board. If the green wire is *not* there and the serial numbers meet the criteria, you must solder the green wire on to the board. Solder the green wire from J11P6 to J12P6.

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**CAUTION**

If the green wire is not present or not attached, damage to the YIG will occur.

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## Reinstall the Assemblies

- Step 6.** Install the new A54 YIG Oscillator (5087-7155).
- Step 7.** After green wire has been soldered, reinstall the A59 source interface board. Refer to the “Removing the Source Assemblies” section in the service guide.
- Step 8.** Reinstall the front panel on to the network analyzer. Refer to the “Removing the Front Panel” section in the service guide.
- Step 9.** Before installing covers, perform a power check to ensure correct operation. If the analyzer does not power up correctly, check the cables, seating of the boards, and the solder connections. If there is still a problem, refer to the troubleshooting sections in the service guide.
- Step 10.** If the power check is good, replace the covers, refer to the “Removing the Covers” section of the service guide.
- Step 11.** After the covers are installed, go to the post repair procedures section.

## Post Repair Procedures

After the repairs are made and the analyzer is reassembled, perform the following adjustments and verification tests. Refer to the network analyzer service guide for procedure descriptions.

Adjustments and Correction Constants	Verification Tests
Source Pretune CC (Test 43)	Frequency Accuracy Performance Test
Output Power Adjustment	Level Accuracy Performance Test
Power Linearity Adjustments	Source Linearity Performance Test

## Contacting Agilent

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