

# Installation Note

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## Option 010 Time Domain Upgrade Kit

**For Agilent 8719D, 8720D, 8722D,  
8719ET, 8720ET, 8722ET,  
8719ES, 8720ES, and 8722ES Network Analyzers**

<b>Network Analyzer Model Number</b>	<b>Applicable Upgrade Kit Model Number</b>
8719D	8719DU Option 010
8720D	8720DU Option 010
8722D	8722DU Option 010
8719ET	8719ETU Option 010
8720ET	8720ETU Option 010
8722ET	8722ETU Option 010
8719ES	8719ESU Option 010
8720ES	8720ESU Option 010
8722ES	8722ESU Option 010



**Agilent Technologies**

Part Number 08720-90408 Supersedes 08720-90313

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## Time Domain Upgrade Kit

Products Affected: .....	8719D/8720D/8722D 8719ET/8720ET/8722ET 8719ES/8720ES/8722ES
To Be Performed By: .....	Agilent Service Center, Personnel Qualified by Agilent, or Customer
Estimated Installation Time: .....	30 minutes
Estimated Verification Time: .....	30 minutes

### Purpose

This Option 010 upgrade kit provides the network analyzer with time domain operation. The upgrade kit is keyed to the serial number of a specific network analyzer and cannot be used to upgrade other instruments.

### Items Included in the Kit

Table 1 describes the parts included in this upgrade kit. Check the contents of this kit against Table 1.

**Table 1**                      **Option 010 Upgrade Kit Contents**

Quantity	Description	Part Number
1	Installation note	08720-90408
1	Keyword label (affixed to <a href="#">page 5</a> )	9320-6215
1	Keyword label (to affix to instrument)	9320-5805
1	Envelope	9230-0023

### Equipment and Tools Required

**Table 2**                      **Required Equipment and Tools**

Quantity	Description
1	TORX T-10 screwdriver
1	TORX T-15 screwdriver
1	Electrostatic discharge (ESD) grounding strap and mat

## Safety Considerations

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WARNING	<b>Before you disassemble the instrument, turn the power switch OFF and unplug the instrument. Failure to unplug the instrument can result in personal injury.</b>
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CAUTION	Electrostatic discharge (ESD) can damage or destroy electronic components. Perform these procedures only at a static-safe workstation and wear a grounding strap. Refer to the documentation that pertains to your instrument for information about static-safe workstations and ordering static-safe accessories.
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## Conventions

This installation note uses the following conventions for front-panel keys and softkeys.

Front-Panel Key represents a key physically located on the instrument. **SOFTKEY** represents a “softkey,” a key whose label is determined by the instrument’s firmware.

## Installation Procedure for the Option 010 Upgrade Kit

The network analyzer must be in proper working condition prior to installing this option. Any necessary repairs must be made before proceeding with this installation.

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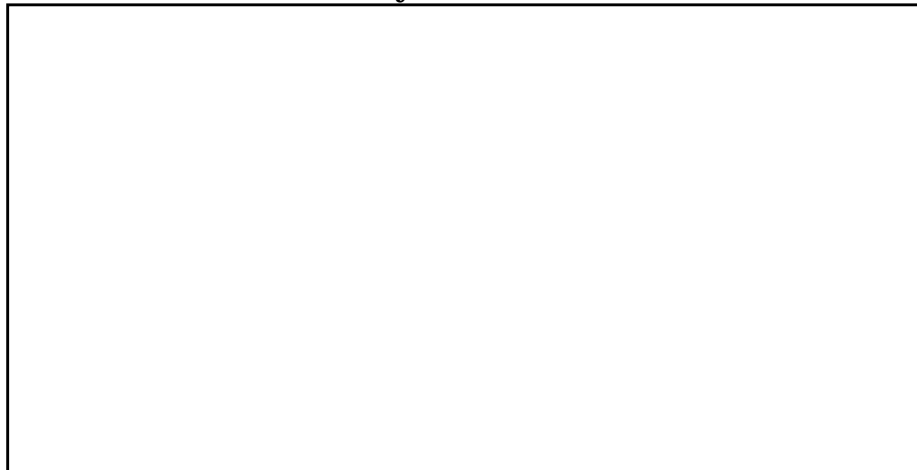
**NOTE**            The network analyzer is shown in the illustrations of this installation procedure is only a representative illustration of many network analyzers of this series. It may not accurately reflect your network analyzer model in every detail. However, these slight differences will not affect the procedures of this installation.

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### Verify the Serial Number

Refer to the keyword label in the box below. First, verify that the analyzer's serial number matches the serial number on the keyword label. Second, verify that the option number on the keyword label matches the option number for this installation note. If in either step, the serial number or the option number does not match the expected results, the keyword will not enable the option. If this is the case, refer to [Table 3, "Agilent Technologies Sales and Service Offices" on page 10](#) and contact the nearest sales or service office for assistance.

#### Keyword Label

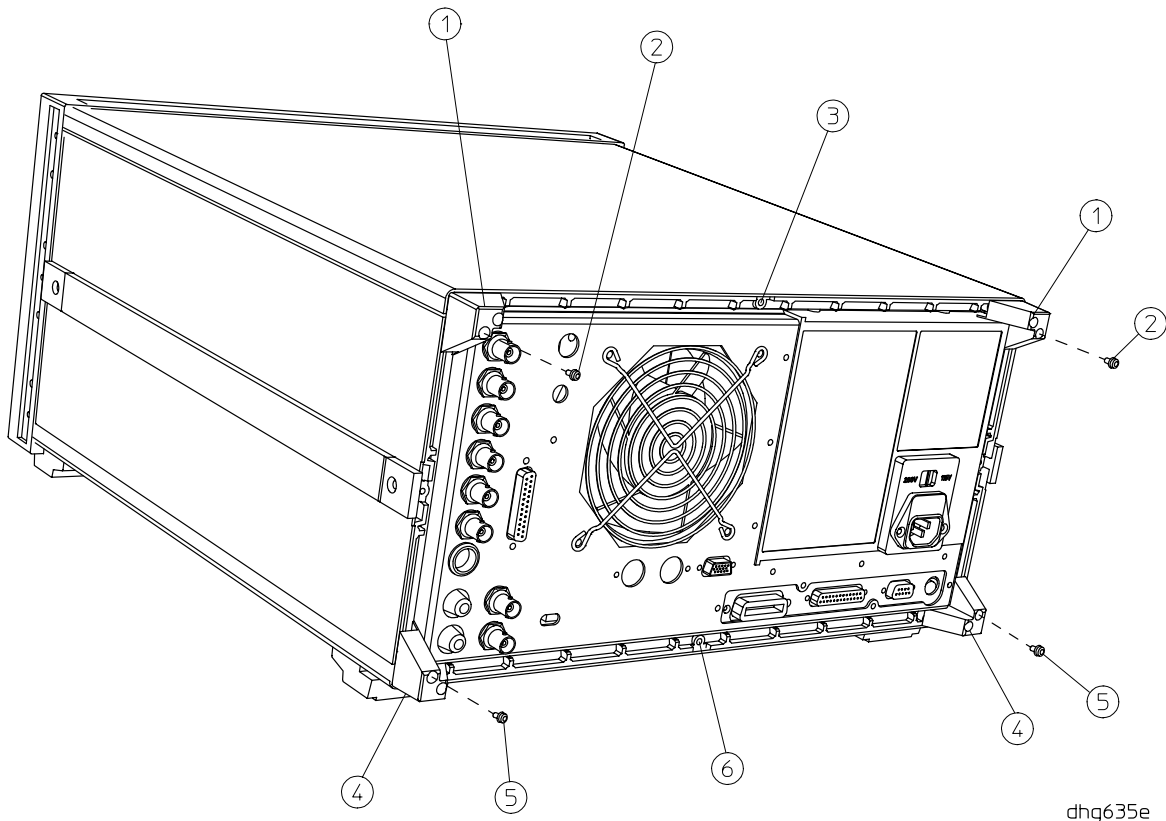


## Remove the Bottom Cover

Refer to [Figure 1](#).

1. Disconnect the power cord from the rear of the instrument and set the analyzer on its side.
2. Remove both of the lower feet (item 4) by loosening the TORX T-10 screws (item 5).
3. Loosen the captive TORX T-15 screw (item 6). This will cause the cover to pull away from the front frame.
4. Slide the cover towards the rear of the instrument, then pull it out and away. (The cover has a tight fit and may need to be worked loose.)

**Figure 1**      **Cover Removal**



## Configure the Analyzer for Time Domain Operation

5. Refer to [Figure 2](#) or [Figure 3](#):
  - Use [Figure 2](#) and step [5a](#) if your analyzer is an ET or ES model or if your D model has firmware revision 07.xx or later. (If necessary, refer to the following note to determine your analyzer firmware revision.)
  - Use [Figure 3](#) and step [5b](#) if your analyzer is a D model and has firmware revision 06.xx. (If necessary, refer to the following note to determine your analyzer firmware revision.)

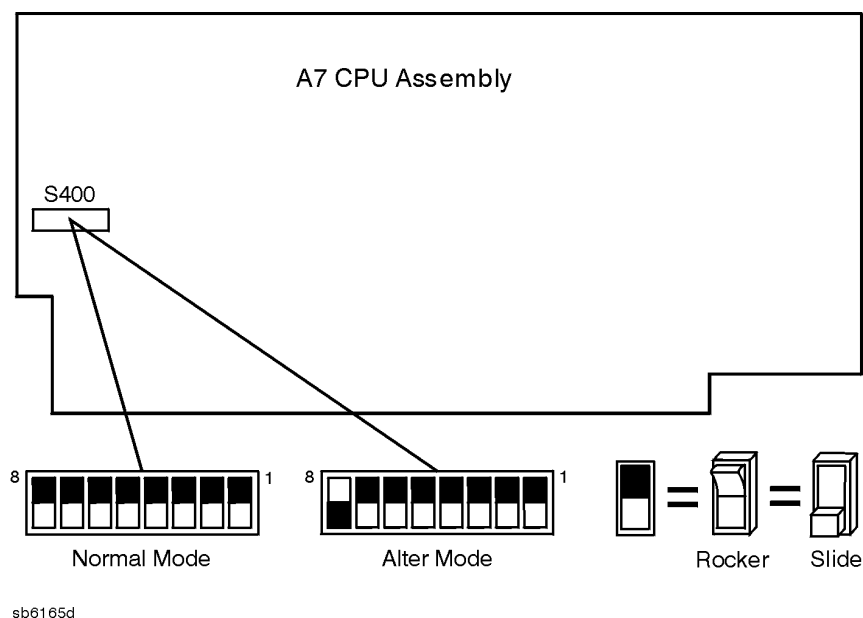
**NOTE**

To determine your analyzer firmware revision, press the following keys:

**System SERVICE MENU TESTS FIRMWARE REVISION**

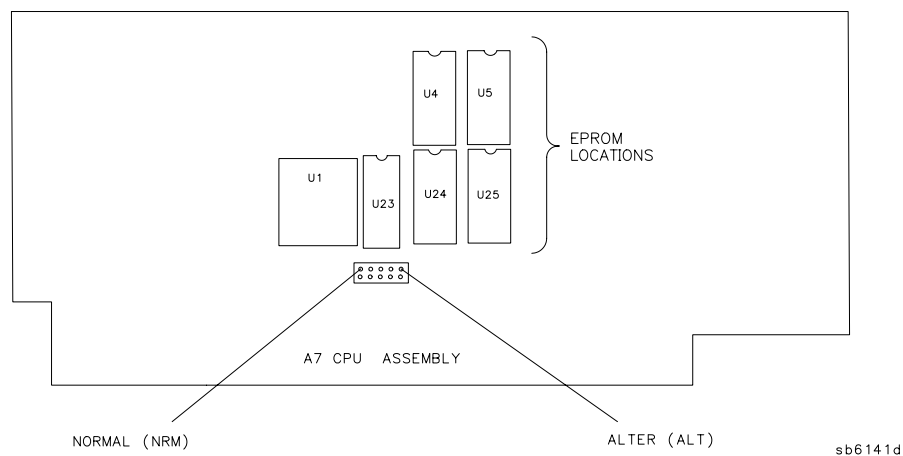
The firmware revision is the numbers that follow the model number. For example, firmware revision 07.64 would be an 07.xx revision.

**Figure 2 A7 CPU Board CC Switch Location (for ET/ES Models and D Models with Firmware Revision 07.xx and later)**



5a. Locate the CPU board and set the CC switch to the alternate (Alter Mode) position, using [Figure 2](#) as a guide.

**Figure 3 A7 CPU Board CC Jumper Location (for D Models with Firmware Revision 06.xx)**



5b. Locate the CPU board and move the Correction Constants (CC) jumper from the normal (NRM) position to the alternate (ALT) position, using [Figure 3](#) as a guide.

6. Reinstall the bottom cover and set the analyzer upright for normal operation.
7. Reconnect the analyzer power cord and switch on the power.
8. After the instrument has initialized, press **Preset** **Display** **MORE** **TITLE** **ERASE TITLE** to erase the title.
9. Enter the keyword from the label located on [page 5](#). There are two methods to do this: use a keyboard connected to the analyzer's mini-DIN connector on the rear panel, or rotate the front panel knob to position the arrow below each character of the keyword. Press **SELECT LETTER** to enter each character. When all characters are entered, press **DONE**.

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**NOTE** *Be sure to use upper-case letters when entering via a keyboard.*

10. Press **System** **SERVICE MENU** **TESTS** **50** **x1** **EXECUTE TEST** **YES**.

11. If the display shows:

- Test 50 Option Cor DONE, press **Preset**. Proceed to [“Verify Time Domain Operation.”](#)
- Test 50 Option Cor FAIL, perform the following steps to correct the failure:
  - ☐ Make sure that you entered the keyword correctly by repeating the previous steps.
  - ☐ Press **System** **SERVICE MENU** **FIRMWARE REVISION**. Compare the serial number shown on the analyzer's display to the one on the keyword label included with this installation note.
  - ☐ If the serial numbers do not match, or if Test 50 fails repeatedly, refer to [page 10](#) and contact the nearest Agilent sales or service office for assistance.

### Verify Time Domain Operation

12. Switch the instrument power on and press **Preset**, then **System**. Softkey 4 should be labeled **TRANSFORM MENU**.

### Return the CC Switch (or CC Jumper) on the A7 CPU Board to Normal

13. Switch off the power, disconnect the analyzer power cord, and remove the bottom cover.

14. Depending on the analyzer model and firmware revision that you determined in step 5, perform one of the following steps:

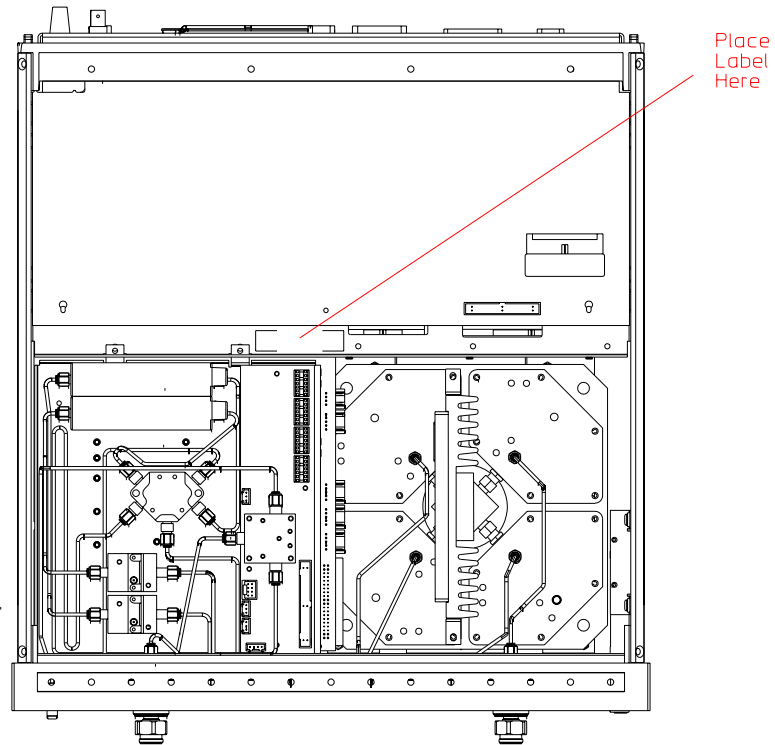
- Use step [5a](#) and [Figure 2](#) to set the CC switch to the Normal Mode position.
- Use step [5b](#) and [Figure 3](#) to move the Correction Constants (CC) jumper from the alternate (ALT) position to the normal (NRM) position.



### Affix the Keyword Label

15. Locate the keyword label in the small envelope and remove it from its backing. Affix the label onto the location shown in [Figure 4](#).
16. Replace the bottom cover.
17. Replace the feet on the rear corners of the instrument (*item 4 of [Figure 1](#)*).

**Figure 4**      **Location of Keyword Label, Top View of Analyzer**



db65d

**Table 3                      Agilent Technologies Sales and Service Offices**

<b>UNITED STATES</b>		
Instrument Support Center Agilent Technologies Company (800) 403-0801		
<b>EUROPEAN FIELD OPERATIONS</b>		
Headquarters Agilent Technologies S.A. 150, Route du Nant-d'Avril 1217 Meyrin 2/ Geneva Switzerland (41 22) 780.8111	France Agilent Technologies France 1 Avenue Du Canada Zone D'Activite De Courtaboeuf F-91947 Les Ulis Cedex France (33 1) 69 82 60 60	Germany Agilent Technologies GmbH Agilent Technologies Strasse 61352 Bad Homburg v.d.H Germany (49 6172) 16-0
Great Britain Agilent Technologies Ltd. Eskdale Road, Winnersh Triangle Wokingham, Berkshire RG41 5DZ England (44 118) 9696622		
<b>INTERCON FIELD OPERATIONS</b>		
Headquarters Agilent Technologies Company 3495 Deer Creek Rd. Palo Alto, CA 94304-1316 USA (415) 857-5027	Australia Agilent Technologies Australia Ltd. 31-41 Joseph Street Blackburn, Victoria 3130 (61 3) 895-2895	Canada Agilent Technologies (Canada) Ltd. 17500 South Service Road Trans- Canada Highway Kirkland, Quebec H9J 2X8 Canada (514) 697-4232
Japan Agilent Technologies Japan, Ltd. Measurement Assistance Center 9-1, Takakura-Cho, Hachioji-Shi, Tokyo 192-8510, Japan TEL (81) -426-56-7832 FAX (81) -426-56-7840	Singapore Agilent Technologies Singapore (Pte.) Ltd. 150 Beach Road #29-00 Gateway West Singapore 0718 (65) 291-9088	Taiwan Agilent Technologies Taiwan 8th Floor, H-P Building 337 Fu Hsing North Road Taipei, Taiwan (886 2) 712-0404
China China Agilent Technologies Co. 38 Bei San Huan X1 Road Shuang Yu Shu Hai Dian District Beijing, China (86 1) 256-6888		