

Precautions

Precautions

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Safety

Safety Summary

The following general safety precautions must be observed during all phases of operation, service, and repair of this instrument. Failure to comply with these precautions or with specific WARNINGS elsewhere in this manual may impair the protection provided by the equipment. Such noncompliance would also violate safety standards of design, manufacture, and intended use of the instrument. Agilent Technologies assumes no liability for the customer's failure to comply with these precautions.

NOTE

The E5071C complies with INSTALLATION CATEGORY II as well as POLLUTION DEGREE 2 in IEC61010-1. The E5071C is an INDOOR USE product.

NOTE

The LEDs in the E5071C are Class 1 in accordance with IEC60825-1, CLASS 1 LED PRODUCT

- Ground the Instrument

To avoid electric shock, the instrument chassis and cabinet must be grounded with the supplied power cable's grounding prong.

- DO NOT Operate in an Explosive Atmosphere

Do not operate the instrument in the presence of inflammable gasses or fumes. Operation of any electrical instrument in such an environment clearly constitutes a safety hazard.

- Keep Away from Live Circuits

Operators must not remove instrument covers. Component replacement and internal adjustments must be made by qualified maintenance personnel. Do not replace components with the power cable connected. Under certain conditions, dangerous voltage levels may remain even after the power cable has been disconnected. To avoid injuries, always disconnect the power and discharge circuits before touching them.

- DO NOT Service or Adjust the Instrument Alone

Do not attempt internal service or adjustment unless another person, capable of rendering first aid and resuscitation, is present.

- DO NOT Substitute Parts or Modify the Instrument

To avoid the danger of introducing additional hazards, do not install substitute parts or perform unauthorized modifications to the instrument. Return the instrument to an Agilent Technologies Sales and Service Office for service and repair to ensure that safety features are maintained in operational condition.

- Dangerous Procedure Warnings

Warnings, such as the example below, precede potentially dangerous procedures throughout this manual. Instructions contained in the warnings must be followed.

- Dangerous voltage levels, capable of causing death, are present in this instrument. Use extreme caution when handling, testing, and adjusting this instrument.

Safety Symbols



Instruction Manual symbol: the product is marked with this symbol when it is necessary for the user to refer to the instrument manual.



Alternating current.



Direct current.



On (Supply).



Off (Supply).



In-position of push-button switch.



Out-position of push-button switch.



A chassis terminal; a connection to the instrument's chassis, which includes all exposed metal structure.



Stand-by.

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Installing Software

Updating Pre-Installed Software

Do not update pre-installed software besides Agilent recommends to do so. Before updating or installing software refer to Windows Support Information in http://www.agilent.com/find/ena_support for more information.

Installing User Application Software

Users can install commercial application software for Windows on the E5071C with their responsibilities. Some application software may affect the measurement performance, especially measurement speed.

Protecting ENA System

To protect your ENA, follow the instructions below:

1. Read the warning labels and specifications

Do not exceed the values provided in the specifications guide or as indicated by the yellow warning labels on the front panel of ENA. Refer to the specifications for the conditions required to meet the listed specifications. There will be information regarding ENA settings, and calibration requirements.

2. Do NOT Plug off Power Cable during Shutdown Process

Do Not Plug off Power cable until completely completing the shutdown process.

If you directly interrupt the power supply to the power cable receptacle when the power supply is on, or turn off the Line Switch (Always ON), the shutdown process will not work. This could damage the HDD of the E5071C.

3. Do NOT Modify or Reconfigure the Operating System

The Microsoft Windows operating system has been modified and optimized by Agilent to improve the performance of the ENA.

- Do NOT install a standard version of the Windows operating system on the ENA.
- Do NOT change advanced performance settings or group policies.
- Do NOT add or delete any hard disk drive partitions on the ENA.

- Do NOT delete the Agilent user account.
- Do NOT modify any of the Agilent software registry entries.
- DO NOT change the setting of BIOS
- Do NOT change the settings of Standards and Formats in Regional Options and Languages from default setting (English).

4. Install Antivirus Protection

The ENA does NOT have antivirus protection when shipped. Use of an antivirus program is strongly recommended if you connect the ENA to the LAN (Internet).

In addition, the use of a firewall could help to protect the ENA from viruses. However, some firewalls could limit DCOM connectivity of the ENA.

5. Install Windows Critical Updates

The ENA is always shipped with the latest service packs and critical updates that were available at the time when Firmware is updated. We recommend that you maintain the latest available protection for your ENA by automatically accepting and installing the latest critical security patches from the Microsoft Windows Update website:

<http://windowsupdate.microsoft.com>

6. Run Error Check and Disk Defragmenter

When the ENA is shutdown unexpectedly or power is removed without first shutting down, large amounts of Hard Disk Drive space is rendered unusable. If shutdown in this manner enough times, the ENA could become unstable and no longer work.

This HDD space can be recovered by first running Windows Error-checking to find and correct errors on the disk, and then the Disk Defragmenter to recover Hard Disk Drive space. See the Windows Help file for more information about Disk Defragmenter.

To run error check and defragmenter follow the procedure below:

1. On the desktop, double-click **My Computer**.
2. Select **System OS**.
3. Click **File**, then **Properties**.
4. Click the **Tools** tab.

Error-checking

1. Click **Check Now**.
2. Check **Automatically fix file system errors**.
3. Click **Start**.

4. Click **Yes** to run disk check on next restart.
5. Manually restart the ENA. The disk check will run before Windows restarts.

Periodically, check the second box in addition to the first box. The error-checking process takes much longer, but performs a complete check.

Defragmentation

1. Click **Defragment Now...**
2. Click **Defragment** to begin the defragment process.
3. Click **Close** when defragmentation is complete.

7. Precaution for Use of Hard Disk

Do NOT Modify or delete any Files and Folders in Drive other than D and E: Drive. (These two drives, D and E are available to use as Data backup). Doing so will result in malfunctioning of the device. It is required to execute the System recovery if there are any troubles with the above operations.

NOTE

For Option 017 users:

- Do not remove removable hard disk until completely completing the shutdown process.
- Do not unlock the removable hard disk key until completely completing the shutdown process.

8. Precaution for RF input connector and cable

- Do not apply DC voltage or current to the test port. Applying DC voltage or current may lead to device failure. In particular, the capacitor might remain charged. Connect the measurement sample (DUT) to the test port (or the test fixture, cables, etc. connected to the test port) after the analyzer has been completely discharged. The maximum DC limit of test port is 35V.
- Do NOT bend, bump or flex any device under test (DUT) connected to the input of ENA (such as filters, couplers etc). This will reduce the amount of strain placed on the input connector and the mounting hardware. Make sure externally connected items are properly supported (not freely suspended) from the input.
- Do NOT bend cables repeatedly, as this may damage the cable instantly. Limit the number of connections and disconnections to reduce wear. Inspect connectors prior to using; look for dirt, nicks, and other signs of damage or wear. A bad connector can ruin a good connector instantly. Clean dirty connectors to prevent poor electrical connections and damage to the connector. For more information on cable and connector care, refer to www.agilent.com/find/cable_care

9. Precautions for Electrostatic Discharge (ESD)

ESD can damage or destroy electronic components. Whenever possible, conduct testing at a static-safe workstation. Keep static-generating materials at least one meter away from all components. Before connecting any coaxial cable to an analyzer, momentarily short the center and outer conductors of the cable together.

10. Maintain working environment condition

Control your environment. Maintain temperature & humidity with a satisfactory range within the instruments specification and prevent large fluctuations.

11. Precautions for transportation

- Do NOT pick the instrument with your hand over the front panel. If the instrument slips, damage may occur to the keypad, knob, or input connectors. Lift the Instrument by the handles when transporting.
- Do NOT use styrene pellets as packaging materials as these may cause damage to ENA by generating static electricity.

12. Check for Proper Ventilation

Periodically check and clean the cooling vents of the ENA. Inadequate airflow can result in excessive operating temperatures which can lead to instrument failures. When installing the product in a cabinet, the convection into and out of the instrument must not be restricted.

See the installation guide in detail.

13. Precautions for Proper Grounding

- Proper grounding prevents building-up of static charge which may be harmful to ENA.
- Do NOT defeat the earth-grounding protection by using an extension cable, power cable, or autotransformer without a protective ground conductor.

Before Contacting us

If you encounter the following problems during startup or operation of the E5071C, in which initial registration of the Windows Operating System has been properly performed, execute system recovery and update the Firmware revision.

The system starts up, but the normal measurement screen does not appear

- The system automatically shuts down immediately after the startup, or the startup process stops.
- The measurement screen appears, but "Power on test fail" or "Calibration data lost" is displayed in the instrument message/warning area against a red background in the lower-left part of the screen. The system enters the service mode. (The instrument status bar in the lower-right displays SVC in red).

Unstable Operation

- The system hangs up while the instrument is controlled from VBA or external PCs.
- The blue screen appears and the system hangs up.
- The response is much slower than usual.

When execution of system recovery does not result in normal operation, a failure may have occurred. Contact Agilent customer contacts.

For other problems, refer to Troubleshooting.