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Agilent J6800A Network Analyzer

Hardware Setup Guide



Agilent Technologies

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WARNING This product is a Safety Class I instrument with a protective earth terminal.

WARNING For protection from electric shock hazard, power cord ground must not be defeated.

Operating Restrictions

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 with specific warnings in this manual violate safety standards of design, manufacture, and intended use of this instrument.

Grounding

To minimize shock hazard, the instrument chassis and cabinet must be connected to an electrical ground. The instrument is equipped with a three-conductor AC power cable compatible with an approved three-contact electrical outlet. The power jack and mating plug of the power cord must meet International Electrotechnical Commission (IEC) safety standards.

Environment

Do not operate the instrument in the presence of flammable gases or fumes. Operation of any electrical instrument in such an environment constitutes a definite safety hazard.

Service and Adjustment

Dangerous voltages exist within this instrument. Service and adjustment of this instrument is to be performed only by trained service personnel.

Do not replace components with the power cable connected.[1] Dangerous voltages may be present even when the power cable is disconnected.

[1] Note this exception: You can exchange Line Interface Modules with the power cable connected and power applied.

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

Hazardous Material

Should the LCD be damaged, the liquid crystal material can leak. Avoid all contact with this material, especially swallowing. Use soap and water to thoroughly wash all skin and clothing contaminated with the liquid crystal material.

Unauthorized Service

The installation of substitute parts or the installation of any instrument modification not authorized by Agilent Technologies is specifically forbidden. The performance of such unauthorized service can negate the instrument warranty or any maintenance agreements.

Return the instrument to an Agilent Sales and Service Office for authorized service and repair.

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Electric Shock Hazard

Do not remove the system covers. To avoid electric shock, use only the supplied power cords and connect only to properly grounded (3-pin) wall outlets.

Explosion Hazard

Do not operate in the presence of flammable gases.

Fire Hazard

For continued protection against fire hazard replace only with fuse of same type and rating.

Cleaning

To clean the product, use a damp cloth moistened with a mild solution of soap and water. *Do not* use harsh chemicals. *Do not* let water get into the product.

Product Damage

Do not use this product when the product shows visible damage, fails to perform, has been stored in unfavorable conditions, or has been subject to severe transport stresses.

Whenever this product has become damaged or wet, make the product inoperative and secure it against any unintended operation. Contact your nearest Agilent Sales office for assistance.



Instruction book symbol - the product will be marked with this symbol when it is necessary for the user to refer to the instruction book in order to protect against damage.



A product marked with this symbol indicates it is a laser product. When necessary, this symbol will be included in the instruction book for the user to refer to in order to protect against personal injury and/or correct product handling.



Indicates potential for electrical shock.

This is an Installation Category II product.

This is a Pollution Degree 2 product.

This product is designed for indoor use only.

FCC Part 68 Disclaimer

This equipment must not be connected to the telephone network unless it is connected through protective circuitry that is registered pursuant to Part 68 of the Federal Communications Commission rules.

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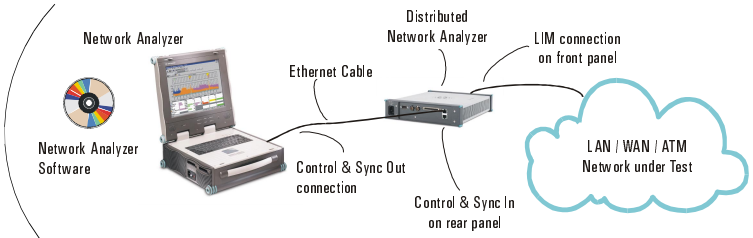
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Documentation Map

The books and Help shown here are available to assist you in setting up and using the Network Analyzer products.

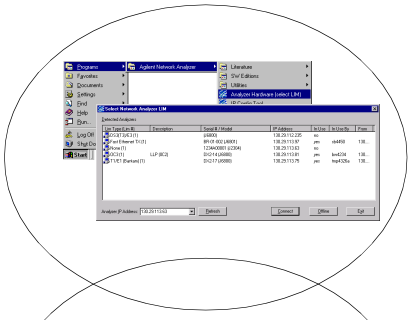
Install and Connect



The Network Analyzer Software runs on the Network Analyzer for LAN / WAN / ATM network testing. Data capture is done using the Line Interface Modules installed in the Analyzer.



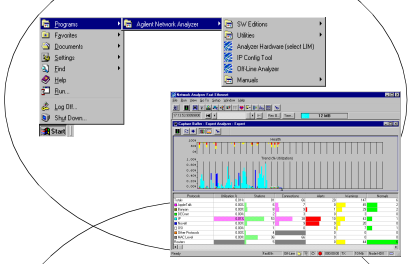
Configure



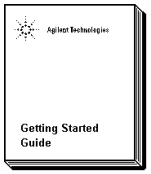
Select and configure a Line Interface Module for physical line testing.



Run



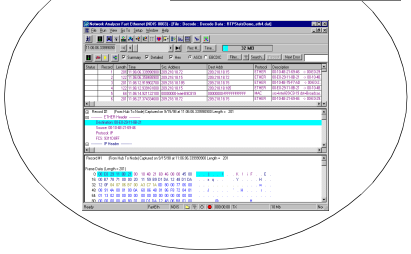
Start a Network Analyzer application. Configure and run measurements.



Use the Help to get details.



Analyze Data



Analyze data when the Network Analyzer is not connected to the network.

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Overview of the Network Analyzer Solution

The Agilent Network Analyzer product family contains new ultra-high performance acquisition hardware platforms. This product family includes these hardware and software items for testing in a variety of scenarios:

- J6800A Network Analyzer — this manual is dedicated to this product
- J6801A Distributed Network Analyzer
- Software Edition and Offline Analyzer

Combined with intelligent, patented analysis software, the Network Analyzer family of products can resolve the new complex problems that occur in:

- State-of-the-art communication networks that carry heavy application loads
- IP telephony
- Streaming media traffic

The Network Analyzer family of products provides an expert network test and troubleshooting system that supports real-time measurements in LAN, WAN, and ATM network environments. All of the products in the Network Analyzer family provide the same graphical user interface and utilize the same underlying technology, providing an unmatched level of user friendliness and integration.

The Network Analyzer family of products tests all network infrastructures (LAN, WAN, and ATM), including the latest technologies, such as IP telephony and 3G mobile networks. The Network Analyzer family of products is capable of fulfilling all network test and analysis needs of state-of-the-art networks. Today, these networks carry a variety of sophisticated data applications, including voice and streaming media. For this reason, the Network Analyzer is the tool of choice for network engineers and troubleshooters.

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Overview of the J6800A Network Analyzer



The J6800A Network Analyzer is a protocol analysis tool in the Network Analyzer product family. You can dispatch the Network Analyzer for analyzing LAN, WAN, and ATM protocols.

The Network Analyzer has the following features:

- A built-in PC for full control of the Network Analyzer and to access other Network Analyzers remotely
- Two data acquisition systems; each data acquisition system contains a slot for a supported Line Interface Module (LIM) used to physically connect to the network under test. Each data acquisition system can capture network data through a supported LIM for the technology type you are using.
- LEDs, which provide status and data acquisition indications for each data acquisition system
- Built-in power supply with AC power connection
- GPS interface hardware and connectors
- Supports the hot-swapping of LIMs
- 256 MB capture buffer for each data acquisition system
- Full-rate data capture from supported LIMs to a maximum of 1 Gbps
- Cell-based (ATM) and frame-based data processing
- 32 real-time hardware capture filters
- Display and search filters in both data acquisition systems
- Control & Sync port

Overview of the Network Analyzer's Built-in PC

The Network Analyzer's built-in PC contains:

- Microsoft Windows 2000 or XP
- 500 MHz processor
- 256 MB of expandable memory
- 30 GB hard disk drive
- Ultra VGA video display, 14.1 inches
- Full keyboard with integrated touchpad pointing device

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- CD-RW drive
- Standard connectors: external video display, external PS-2 mouse, USB (two), headphones, microphone
- Two double-height Network Interface Card (NIC) slots

Network Interface Cards You Can Use

You can use a NIC card in the Network Analyzer to:

- Connect to the IP network to update the Network Analyzer Software.
- Remotely control another Network Analyzer or Distributed Network Analyzer.
- Allow a PC to remotely connect to the Network Analyzer.

The supported Network Interface Cards (NICs) include:

- J6753A Modem/Ethernet 56K NIC
- J4616A Ethernet 10/100+Modem 56 NIC

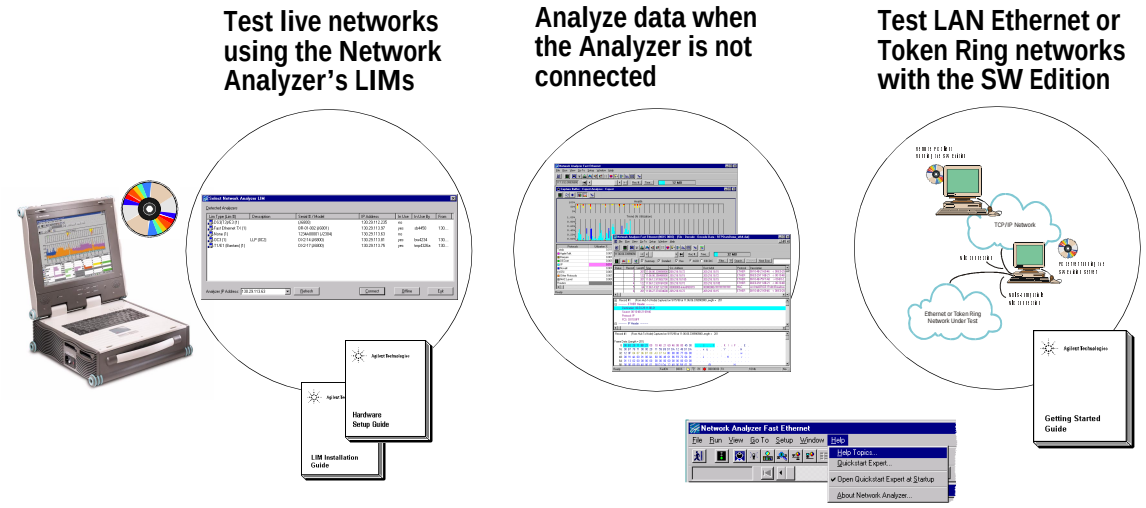
For details about how to install a NIC card in the PC client and verify its proper operation, refer to the NIC card manufacturer's instructions. How to configure the IP address of the NIC is described in Chapter 2.

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How to Use the Network Analyzer

The Network Analyzer Software is installed on the J6800A Network Analyzer at the factory for LAN, WAN, and ATM protocol analysis testing. The Network Analyzer Software controls the Network Analyzer data acquisition systems. These main capabilities are included:



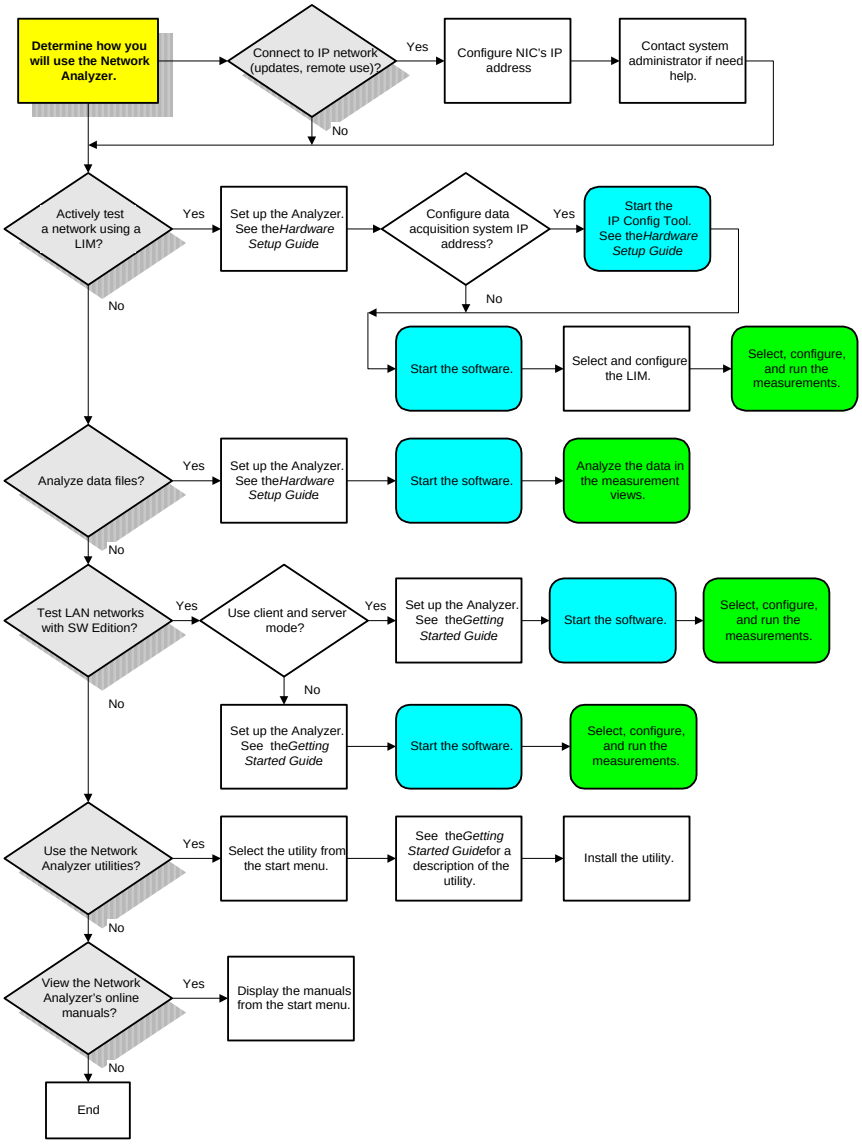
A CD and one software license key are supplied with the J6800A Network Analyzer to allow you to load and enable the Network Analyzer Software on one PC client. You may want to purchase additional copies of the software for other engineers to control one or more Network Analyzers from remote PC clients.

If you are planning to use the J6800A as a PC client to control a J6801A Distributed Network Analyzer, the control is provided by the Control & Sync Out port of the Network Analyzer and through the Network Analyzer Software running on the J6800A.

The next page shows a flowchart of what you need to do, depending on how you are going to use the Network Analyzer.

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Deciding How To Use the Network Analyzer



What's Next? See Chapter 2 for details about making connections and setting up the Network Analyzer to run measurements.

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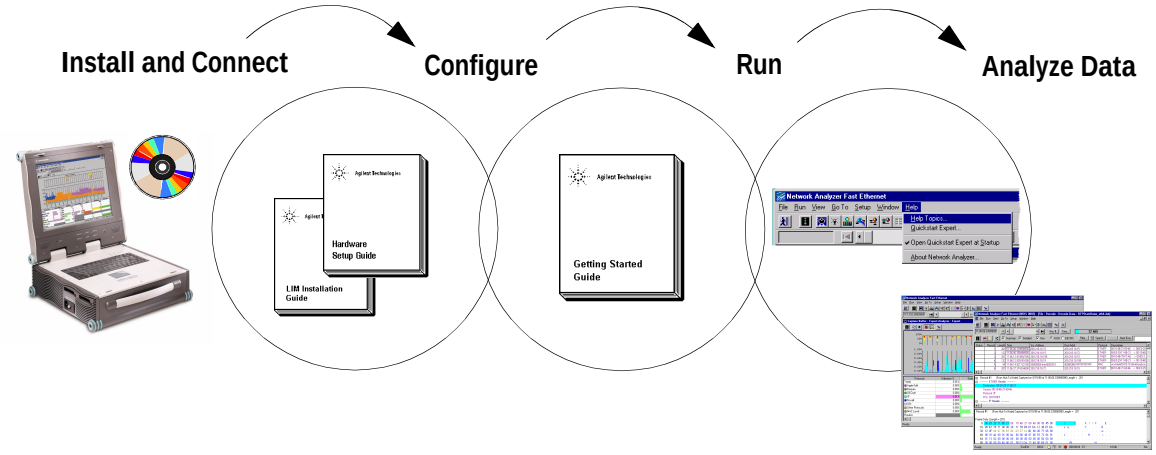
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Setting Up and Running the Network Analyzer

Use the general steps listed below to set up the Network Analyzer and begin running measurements. These steps are described in more detail next.



Overview of Steps for Network Analyzer Setup and Use			Setup Guide	Getting Started Guide	LIMs Guide	Online Help
Install and Connect	1	Understand the connections to the Network Analyzer.	✔			
	2	Install the Line Interface Modules or Cooling Control Modules.	✔		✔	
	3	Connect LIMs to network under test.	✔		✔	
	4	Power up the Network Analyzer.	✔			
	5	Install the software update (if nec).	✔	✔		
Configure	6	Configure IP addresses (if nec).	✔			
	7	Start the software.	✔	✔		
	8	Select the Line Interface Module(s).	✔	✔		
	9	Configure the LIM's physical interface.	✔	✔		
Run	10	Run measurements to begin testing. a. Select a measurement. b. Configure the measurement. c. Run the measurement.		✔		✔
Analyze Data	11	Analyze the data results.				✔

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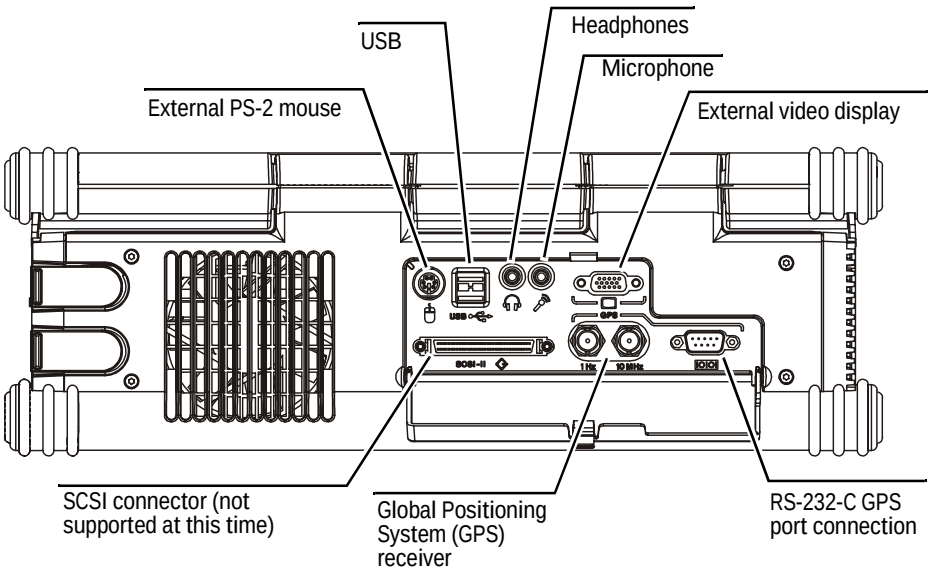
Step 1. Understand the Connections to the Network Analyzer

Depending on how you will be using the Network Analyzer, you will make one or more types of connections, as described in this section. You can connect the Network Analyzer to:

- Peripherals
- A network under test using dedicated LIMs
- Remote Distributed Network Analyzers
- Multiple Distributed Network Analyzers in a daisy chain
- A GPS Receiver
- An IP network for SW Edition client-and-server use and software updates (See the *Network Analyzer Getting Started Guide* for details.)

Connect to Peripherals

You can connect peripherals to the Network Analyzer. The rear panel of the J6800A Network Analyzer is shown here.



The USB can be used to connect an optical mouse, floppy drive, or printer.

Details about connecting to a GPS receiver are described in “Connect to a GPS Receiver” on page 24.

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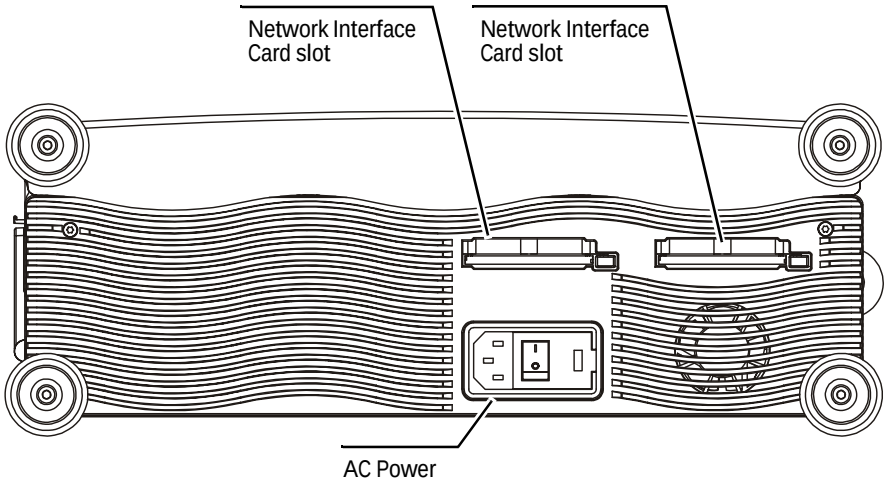
Connecting a Printer

You can connect a USB printer to the USB connector on the rear panel of the Network Analyzer. You can print files, help topics, and measurement results. The default printer selection is set to No Printer. If you are going to use a printer with your Network Analyzer, select the printer driver and output port.

NOTE The SCSI II port is not part of the built-in PC in the Network Analyzer. Therefore, you cannot use the SCSI II port to connect to a printer.

The left side of the J6800A Network Analyzer is shown here.

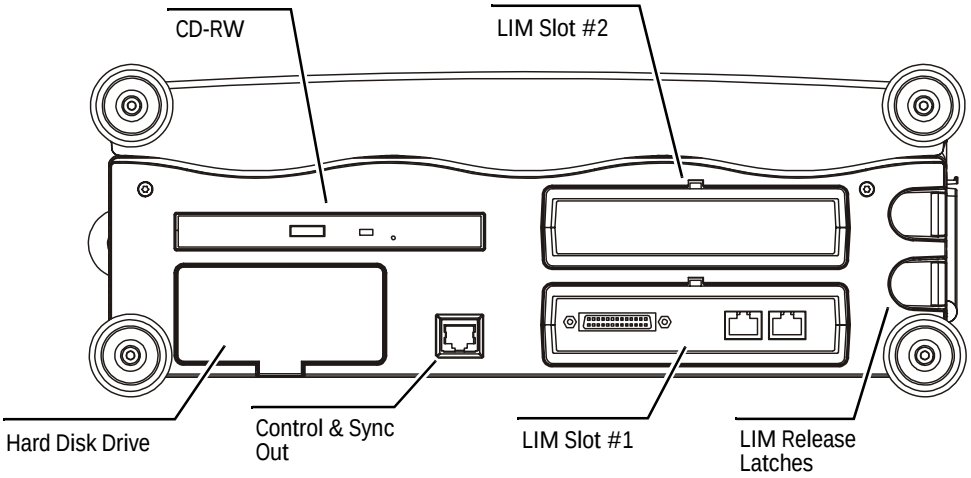
The Network Analyzer contains two network interface card (NIC) slots for connecting to a network.



The right side of the J6800A Network Analyzer is shown here.

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CAUTION Do not connect the Network Analyzer's Control & Sync Out port to the network.

WARNING **Before removing or installing the hard disk drive, turn off power to Network Analyzer and then ground yourself to avoid ESD (Electro Static Discharge), which can damage the Network Analyzer or LIMs.**

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Connect to the Network Under Test

The Agilent J6800A Network Analyzer contains two data acquisition systems (one for each line interface module) and two slots for the Line Interface Modules (LIMs). The Analyzer is capable of connecting to a wide range of LAN, WAN, and ATM networks, and can analyze the protocols used on those networks.

The supported Line Interface Modules (LIMs) for connecting the Analyzer to the network under test include:

Line Interface Module (LIM)	For LAN	For WAN	For ATM
J6811A — STM-1o/OC-3 — with Opt-SC connectors		WAN	ATM
J6812A — STM-1e/EC-3 — with BNC connectors		WAN	ATM
J6813A/B — E3/T3 (DS3) — with BNC connectors		WAN	ATM
J6815A/B — T1/E1 — with Bantam, RJ-45/RJ-48C connectors		WAN	ATM
J6816A/B — E1/T1 — with DB-9, RJ-45/RJ-48C connectors		WAN	ATM
J6817A/B — E1 — with BNC connectors		WAN	ATM
J6818A — ATM25 — with RJ-45 connectors			ATM
J6820A — High-Speed V-Series (37-pin connector)		WAN	
J6830A — 10Base-T, 10/100Base-TX Ethernet	LAN		
J6831A — 10/100Base-FX Ethernet (fiber interface)	LAN		
J6832A — 1000Base-X (Gigabit) Ethernet	LAN		

The LIMs support hot-swapping, which means that you can remove one LIM and insert another while power is applied to the Network Analyzer. Refer to the *Line Interface Modules Installation Guide* for details and sample connections.

Use the Cooling Control Modules

Two Cooling Control Modules (CCMs) are shipped with the Network Analyzer. The CCMs are used, when one or both of the LIM slots are empty, to keep the Network Analyzer cool during operation.

Both of the slots must be occupied with either LIMs or CCMs during operation. Failure to fill both LIM slots can result in faulty operation.

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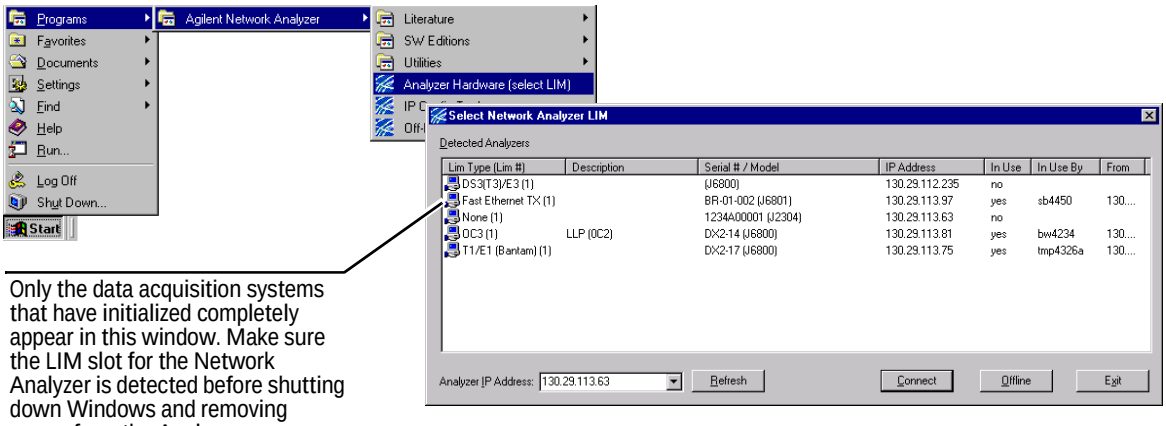
Do Not Remove Power When the Acquisition System is Rebooting

Do not remove power from the Network Analyzer while the data acquisition system is rebooting.

CAUTION

The data acquisition system reboots each time the Network Analyzer application is shut down (exited to Windows) and each time a LIM is installed. If you shut down the Network Analyzer application and remove power from the Analyzer before the data acquisition system has fully initialized, this action may put the Analyzer in a state where the data acquisition system will have to be reprogrammed.

Network Analyzers have a built-in mechanism to recover from the state described in the Caution above. Agilent recommends that before closing Windows and removing power from the Analyzer, you use the Analyzer Hardware (select LIM) option to ensure that the acquisition slot is detected, as shown here:



Only the data acquisition systems that have initialized completely appear in this window. Make sure the LIM slot for the Network Analyzer is detected before shutting down Windows and removing power from the Analyzer.

Use a Crossover Cable to Monitor Between Switches

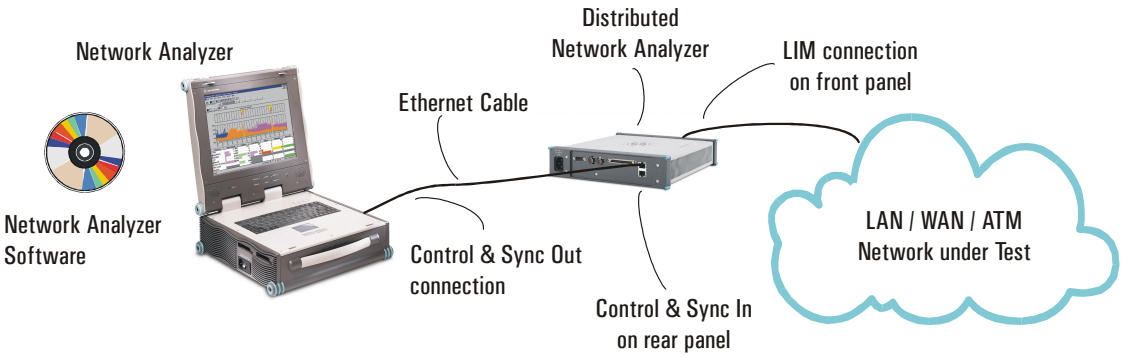
If you plan to monitor the network between two switches, use the same crossover cable you would normally use to connect the two switches together to make a single connection to the Network Analyzer. Then use a straight-through cable for the other connection. For proper operation, the combined cable length must not exceed 100 meters (328 feet).

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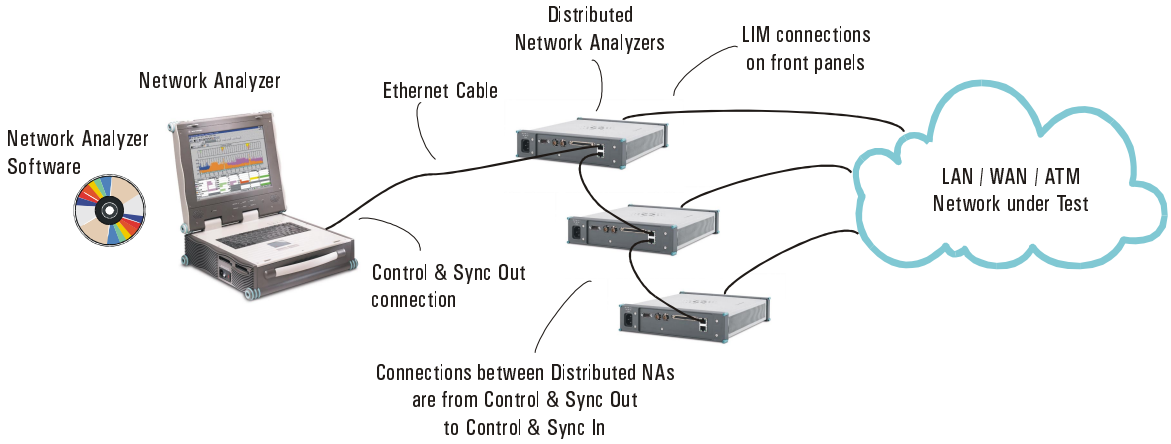
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Connecting to Distributed Network Analyzers

The most straightforward means of controlling other Analyzers, such as Distributed Network Analyzers, is by connecting from the Control & Sync Out on one Analyzer to the Control & Sync In on the next Analyzer, as shown in the following picture.



A variation of this scenario occurs when you use the Network Analyzer as the controlling PC client when you daisy-chain two or more Distributed Network Analyzers together, as shown in the following picture.



For details about time-synchronizing the Distributed Network Analyzers, see the *Distributed Network Analyzer Hardware Setup Guide*.

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About the Control & Sync RJ-45 Connections

The Control & Sync connection interfaces between the Analyzer and the PC client. The RJ-45 connector interface is compatible with standard UTP Ethernet systems. The pin assignments are:

Output Port		Input Port	
RJ-45 pin	Signal	RJ-45 pin	Signal
1	RXD+	1	TXD+
2	RXD-	2	TXD-
3	TXD+	3	RXD+
4	CLK_OUT+	4	CLK_IN+
5	CLK_OUT-	5	CLK_IN-
6	TXD-	6	RXD-
7	EVT_OUT+	7	EVT_IN+
8	EVT_OUT-	8	EVT_IN-

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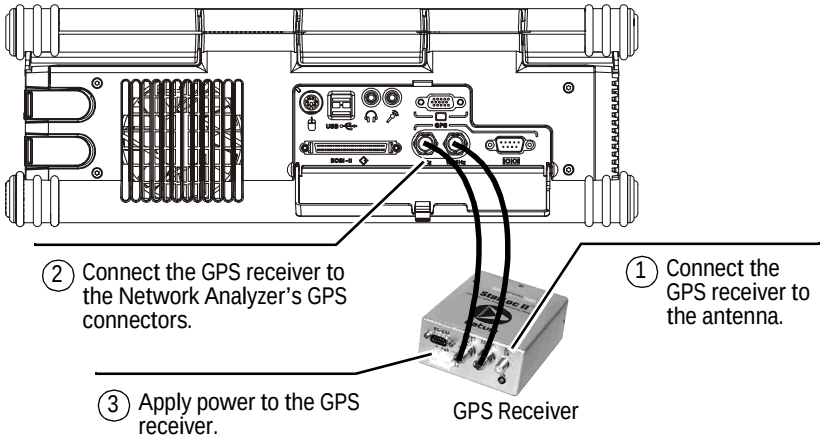
Connect to a GPS Receiver



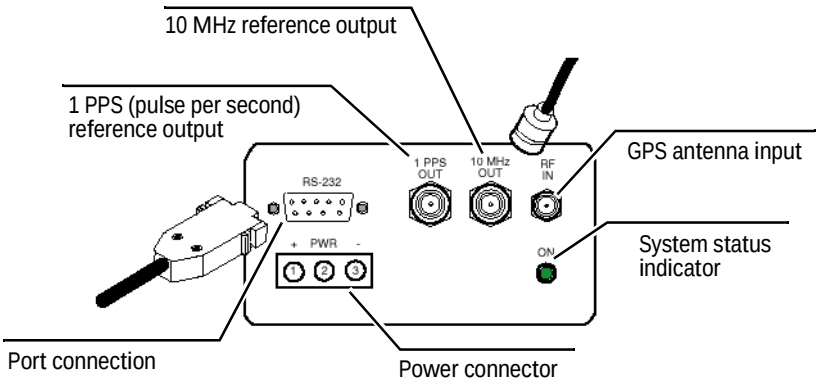
The Network Analyzer provides the clock source for the data timestamp and correlation. Time synchronization is performed using the internal, real-time clock of the first data acquisition system in the Network Analyzer as the reference clock source, or by using a Global Positioning System (GPS) clock for the reference clock source.

Multiple GPS receivers are supported. See Time Sync in the Network Analyzer Help for more information.

This picture shows the Datum STARLOC II connected to the Network Analyzer. If you are connecting one of the other supported GPS receivers, see the manufacturer's instructions.



Datum STARLOC II Connections



4 Refer to the manufacturer's instructions for the GPS Receiver.

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Configure the GPS Clock Source

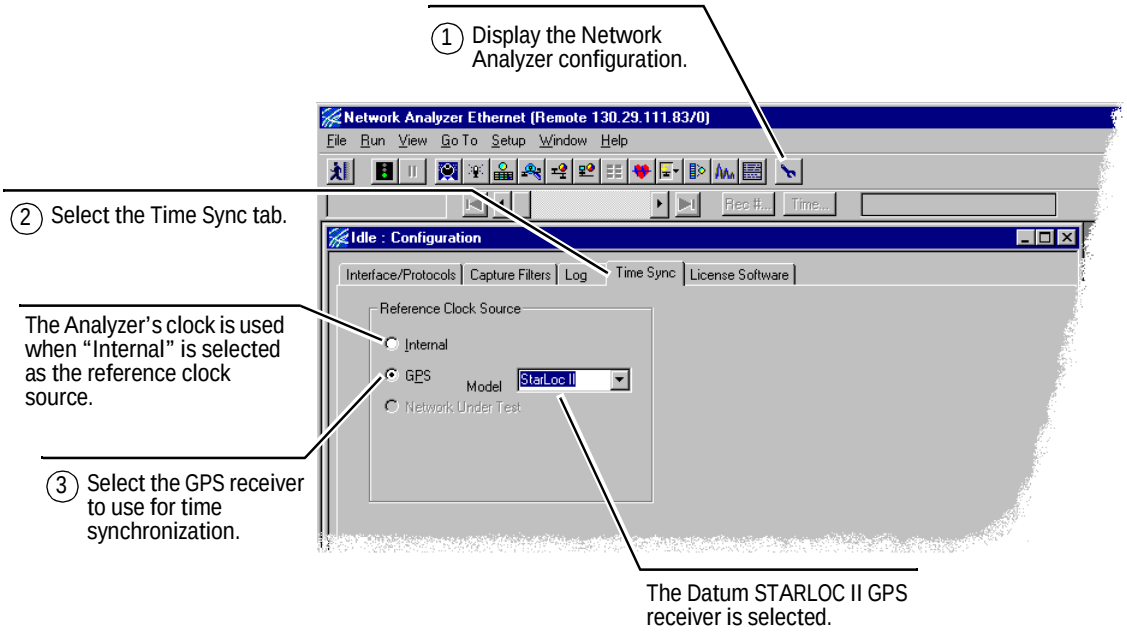
CAUTION

Allow the GPS to Synchronize Before Selecting It

Select the GPS clock only after you have performed these steps:
1. Connect the antenna to the GPS receiver.
2. Power up the GPS.
3. Allow sufficient time for the GPS receiver to synchronize.

See the manufacturer's GPS operating manual for details.

After you start the Network Analyzer application, configure the GPS clock source in the Time Sync tab in the Network Analyzer configuration dialog box.



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Step 2. Install the Line Interface Modules (LIMs)

1 Locate the dual LIM slots.

2 Locate the release latch for the LIM. If a LIM is installed, slide the latch to release the LIM.

3 Slide the LIM you are going to use completely into the slot. Press firmly to seat the LIM in the slot. The release latch will lock into place completely when the LIM is seated properly.

Make sure that both LIM slots in the Network Analyzer are filled with Line Interface Modules (LIMs) or Cooling Control Modules (CCMs) in one of these ways:

- LIMs only – Install two LIMs
- LIM and CCM – Install one LIM and one CCM
- CCMs only – Install two CCMs

During operation, both of the LIM slots must be occupied. if you do not fill both slots with LIMs and/or CCMs, the Analyzer operation can fail. If you are not using two LIMs to fill both slots, you must insert a Cooling Control Module (CCM) into the empty slot.

For details about the LIMs, see the *Line Interface Modules Installation Guide* hard copy or the online version, which is accessible from the Start menu when starting the Network Analyzer application.

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Step 3. Connect the LIM(s) to the Network Under Test

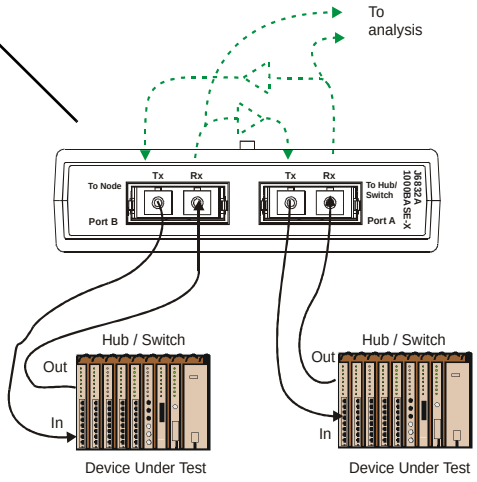
Depending on the LIM(s) you are using, you will connect the LIM to the network under test in multiple ways.

- LAN LIMs connect in monitor or node mode – half-duplex or full-duplex
- WAN and ATM LIMs connect in these Run and Receiver modes – Terminated, Bridged, Monitor Jack, Thru/Drop & Insert

One example is shown here.

J6832A Gigabit Ethernet LIM in Pass-Thru Connection

This example shows the Gigabit Ethernet LIM connected to a network under test.



The Network Analyzer online Help topic about connecting the Network Analyzer to a network shows how to connect the LIMs to the networks under test. For details about the LIMs, see the *Line Interface Modules Installation Guide*.

For Making Other Connections

If you are connecting to a Distributed Network Analyzer, see the *Distributed Network Analyzer Hardware Setup Guide*.

If you are connecting and setting up the Network Analyzer to be used in SW Edition client-and-server mode, see the *Network Analyzer Getting Started Guide*.

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Step 4. Power Up the Network Analyzer

When you power up the Network Analyzer for the first time, you need to enter information for the Microsoft Windows setup. If you are starting the Network Analyzer Software for the first time, you may be prompted to update the Network Analyzer Software, which is described in the next step.

1 Connect the AC power cable to the Network Analyzer. Turn the power switch on.

The Network Analyzer automatically determines whether the power connection is 100 to 120 volts, or 200 to 240 volts.

CAUTION Agilent Technologies ships the Network Analyzer with a three-conductor power cable that grounds it when it is connected to an appropriate power outlet. Do not operate the Network Analyzer without ground protection.

2 If the Network Analyzer will not power up, do the following:

- Ensure that the power cable connections are secure.
- Determine that AC power is available at the outlet.
- Verify that the fuse is operational.



Fuse

You can pry the power cover open to check the fuse.

3 When the Analyzer powers up, follow the instructions that appear on the screen, and accept the Microsoft Windows license agreement.

4 Enter the Microsoft Windows authenticity product ID# that is affixed to the Network Analyzer when you are prompted.

The Network Analyzer Software and Microsoft Windows are installed on the Network Analyzer before it is shipped from the factory. When the Network Analyzer powers up, the Windows interface appears.

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Set the Date and Time

1 When the Date/Time Properties dialog box appears, enter the date and time and select the time zone.

2 Set the Network Analyzer's local date and time before using it to run measurements.

The Network Analyzer uses the date and time when running applications, generating reports, and to update the system configuration files. The Network Analyzer maintains the date and time when it is powered off.

Shut Down and Cycle Power

1 After the Windows setup is complete, shut down the Network Analyzer using the Windows shutdown sequence. The shutdown sequence updates setup files and prepares the Network Analyzer for running measurements.

2 Wait several seconds, then power up the Network Analyzer.

NOTE

For some configurations, for example if you are using the Network Analyzer as a PC client to control a Distributed Network Analyzer, it may be necessary to follow the power-up sequence described in the *Distributed Network Analyzer Hardware Setup Guide*.

3 View the status LEDs.

The status LEDs on the LIM panel show the status of activity in the Distributed Network Analyzer. The status LEDs include Power, Health, and Signal In, and are described here.

Power	**Description**
Green	Power is applied to the Analyzer.
Health	**Description**
Green	Power is applied to the LIM.
Yellow	The LIM is not functioning properly.
Gray (off)	The Analyzer does not detect a LIM.
Signal In	**Description**
Green	The Analyzer has detected good data.
Yellow	Bad data or loss of data is occurring. The type of loss depends on the LIM type. See the *Line Interface Modules Installation Guide*.
Gray (off)	The Analyzer does not detect a LIM. A Network Analyzer Software application is not selected or running.

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Step 5. Install the Software Update (if necessary)

The Network Analyzer Software was loaded on the Network Analyzer at the factory before it was shipped to you. Agilent strongly encourages you to check periodically for updates, including the first time you use the software. The preferred method for updating the software between major releases is by downloading it from the Agilent Web site.

To update the Network Analyzer Software from the Web:

1. Connect the Network Analyzer to the IP network so that you can access the Internet.
2. Click the software update selection in the Agilent Network Analyzer Start menu.
3. Follow the on-screen directions to complete the update.

If you cannot update the software from the Web, or if the update you are looking for is not on the Web, contact Agilent Product Support listed in the front of this manual to obtain an update CD for the Network Analyzer Software.

For details about re-installing the software from the CD that was shipped with the Network Analyzer, see the *Network Analyzer Getting Started Guide*.

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If You Need to Recover the Operating System

If you need to recover the Windows 2000 operating system on the J6800A Network Analyzer, use the Recovery CDs supplied with the J6800A Network Analyzer. The Recovery CDs include all of the necessary drivers to support recovering the operating system on the J6800A Network Analyzer.

CAUTION The recovery CDs are intended only for use on the Agilent Network Analyzer to recover or re-install the Windows 2000 operating system.

1. Power down the J6800A Network Analyzer.
2. Locate the Recovery CDs supplied with your Network Analyzer.
3. Insert the first Recovery CD into the CD-ROM drive.
4. Power up the J6800A Network Analyzer and follow the instructions that appear on the screen.

After using the Recovery CDs to recover the operating system, you must reload the Network Analyzer Software. For more information, see the *Network Analyzer Getting Started Guide*.

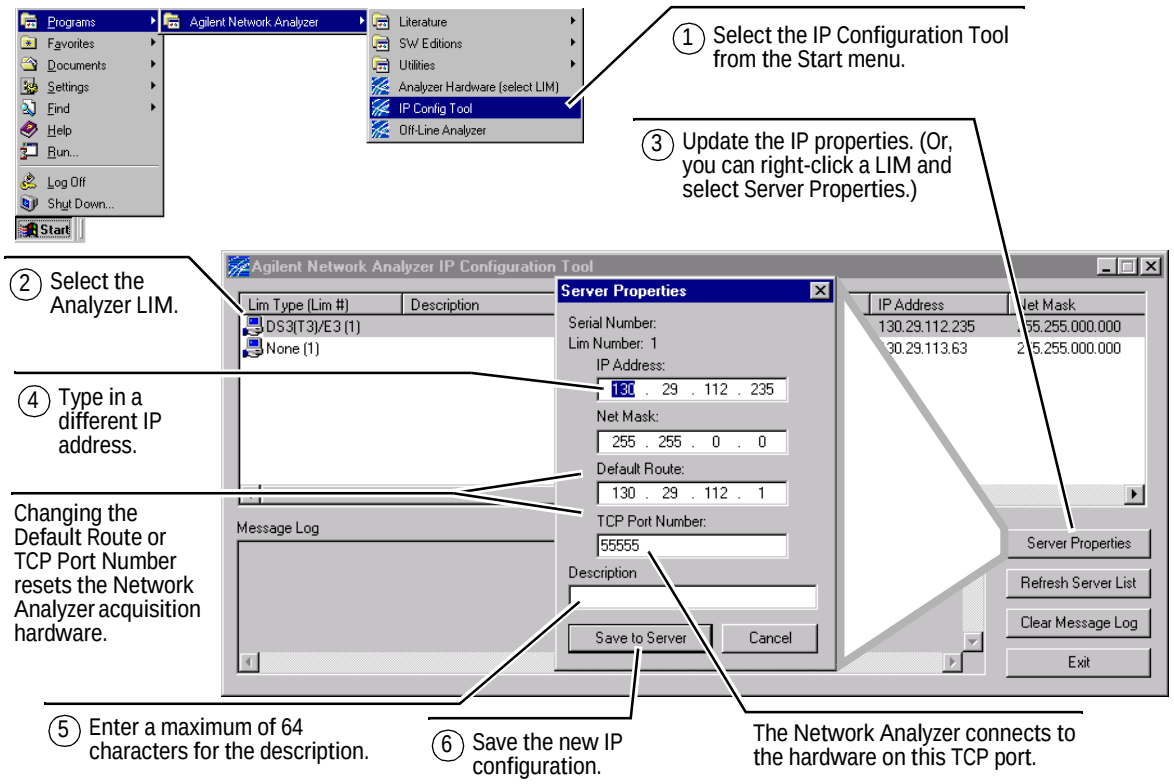
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Step 6. Configure IP Addresses (if necessary)

If you want to access remote data acquisition systems, one of the first things you will need to do is to update those IP addresses. This section describes how to start and use the IP Configuration Tool to update the IP addresses of remote data acquisition systems.

NOTE

If you are using the J6800A Network Analyzer as a PC client to control a Distributed Network Analyzer, for proper control the IP address for the Network Analyzer must be in the same subnet as the Distributed Network Analyzer's IP address. See the *Distributed Network Analyzer Hardware Setup Guide* for more information.



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Order of Configuring IP Addresses for Distributed Network Analyzers

Configure the IP addresses in this order:

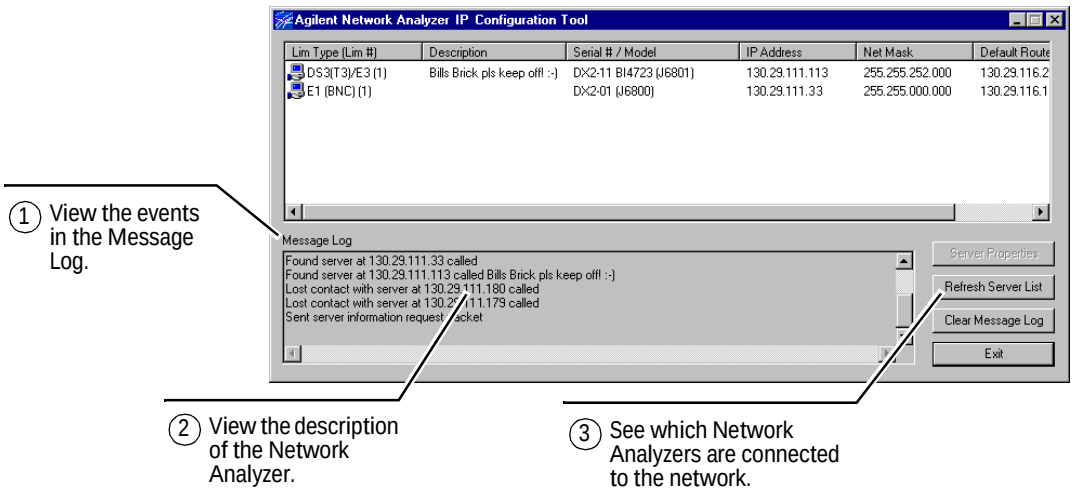
1 Configure the network interface card IP address. A Network Administrator can do this for you.

2 Configure the Distributed Network Analyzer data acquisition system IP address.

When saving changes to the properties, the Network Analyzer will apply the new settings and the IP Configuration Tool will continue to search for updated servers. If the Network Analyzer fails to update the configuration, the IP Configuration Tool will retry to save the changes. You can choose to save the changes again or cancel the operation.

Viewing the IP Configuration Tool Message Log

When using the IP Configuration Tool, the message log reports the Network Analyzers that are detected on the network, along with the status of those that have dropped off of the network.



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IP Addressing Scheme

The Agilent Network Analyzers use a "Private Internet" subnet scheme for the IP addresses assigned to it. Using the Private Internet IP addressing scheme minimizes the possibility of clashes between Network Analyzers and other devices on a network. This IP addressing scheme applies to the Control & Sync Out port also.

The Network Analyzers use 172.30.1.0 as the subnet by default. This means that IP addresses from 172.30.1.1 through 172.30.1.254 are valid. The Network Analyzers use a portion of the address range of 172.16.0.0 to 172.31.255.255 by default.

- The subnet mask is 255.255.255.0.
- The default router for the internal network interface card is 172.30.1.100.
- The default IP addresses are: 172.30.1.101 for the first data acquisition system (LIM 1), and 172.30.1.102 for the second data acquisition system (LIM 2).

Validating the TCP / IP Configuration

To validate the TCP/IP configuration, ping either one or both of the IP addresses for the data acquisition systems. To ping a data acquisition system:

1. Open a DOS window.
2. Enter: ping xx.xx.xx.xx (using the IP address of interest). The DOS command will report the connectivity status or errors.

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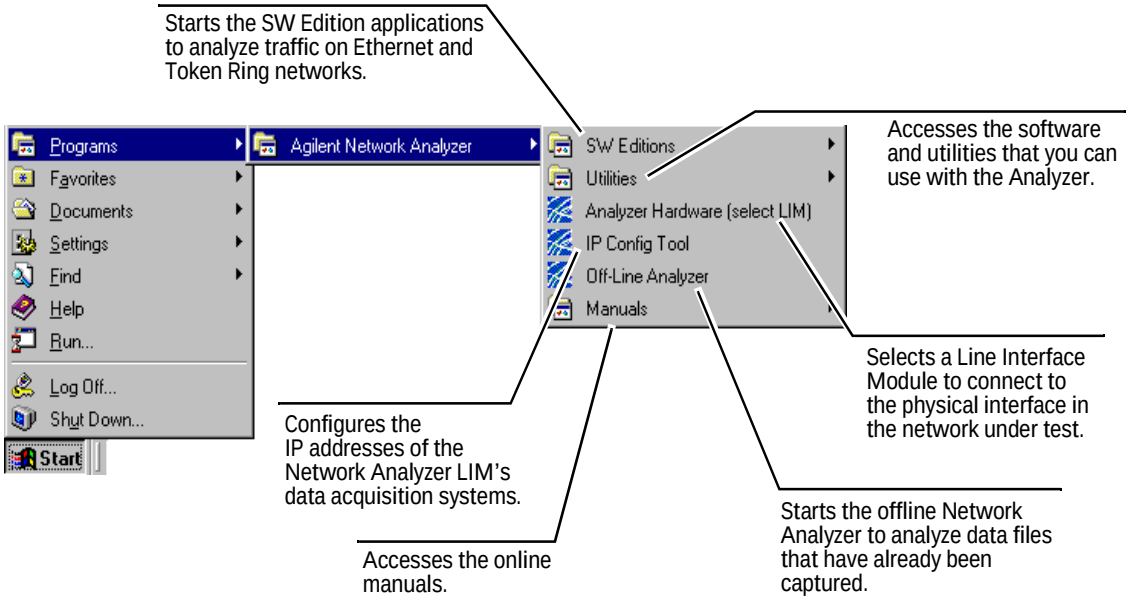
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Step 7. Start the Software

When starting the Network Analyzer Software, you can select multiple applications, depending on what you need to do. These Network Analyzer applications allow you to:

- Actively test a network using the Network Analyzer's dedicated hardware analysis with the Line Interface Modules (LIMs)
- Analyze pre-captured data files offline
- Analyze Ethernet and Token Ring networks using the SW Edition

The Network Analyzer applications are summarized here:



If you are selecting a LIM If you are selecting a LIM for dedicated hardware analysis, see the next step.

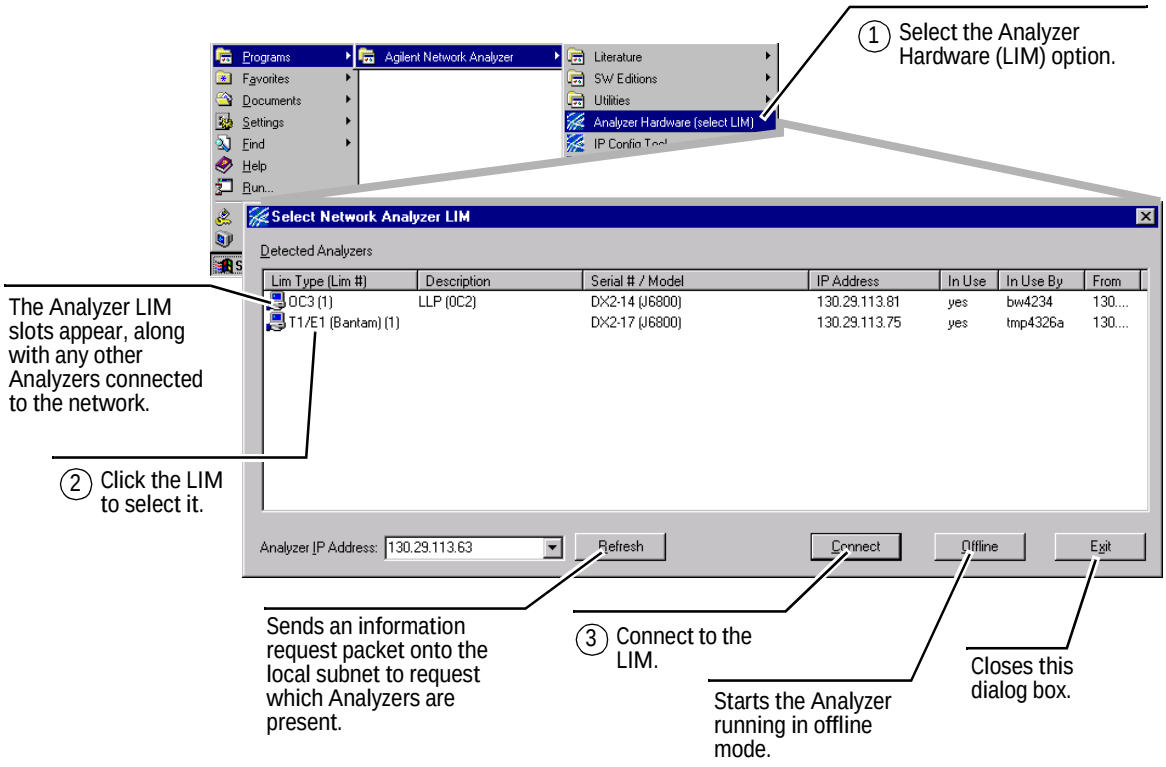
If you are selecting another application If you are selecting a SW Edition or the Offline Analyzer, see the *Network Analyzer Getting Started Guide* for details.

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Step 8. Select the Line Interface Module(s)

To select a Network Analyzer LIM, follow these steps.



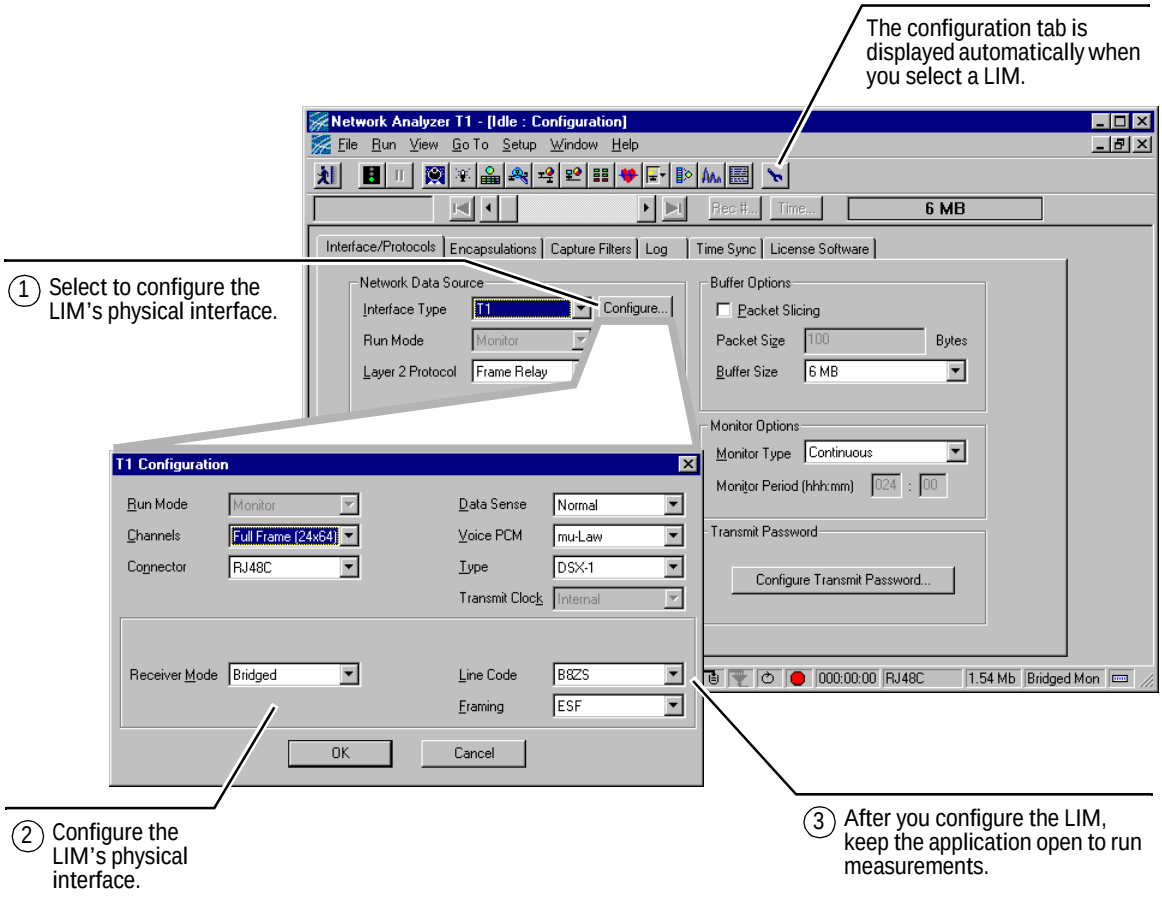
NOTE You can right-click any LIM to display the server properties and configure its IP address.

Step 9. Configure the LIM's Physical Interface

Configure the LIM's physical interface to match the LIM's connections to the network under test. When you are finished, keep the application open so that you can run measurements.

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Select and Configure the Second LIM

1. Start a second Network Analyzer session by clicking the Analyzer Hardware (select LIM) option in the Agilent Network Analyzer Start menu again, and select the second LIM.
2. Configure the second LIM's physical interface.
3. After you finish configuring the second LIM, keep the second application open to run measurements.

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Step 10. Run Measurements to Begin Testing

The Network Analyzers provide a complete toolset for gathering data during network monitoring, test, and troubleshooting.

If you monitor, test, or analyze...	Tasks You May Perform	Measurement to Use
Network health	**Examine the overall health of the network.**	Expert Analyzer
Decoded data	**Use the protocol decodes to interpret traffic on the network and display the captured data.**	Decode View
Events	**View network events.**	Commentators
Utilization	**View network utilization.**	Protocol Statistics
Nodes	**Display the nodes on the network.**	Node Discovery
Communication	**View the communication between nodes.**	Connection Statistics
Traffic patterns	**Display the traffic patterns between nodes.**	Node Statistics
Physical connections	**Show the status of the physical LIM connections.**	Line Status
Data and trends	**Display cumulative data and trends.**	Protocol Vitals
Ping, Traffic generation...	**Perform active tests on the network.**	Active Tests
Layer 2 activity	**Display LAN, ATM, and WAN layer 2 statistics.**	VLAN Statistics (LAN), VPI.VCI Statistics (ATM), DLCI Statistics (WAN)
Voice quality and MOS	**Assess voice quality on a call-by-call basis and calculate a predictive MOS.**	RTCP Monitor
RTP traffic, VoIP	**Troubleshoot and analyze RTP traffic, and analyze VoIP activity.**	RTP Statistics
Data collection	**Collect data from SNMP-managed devices on a network.**	Switch Advisor

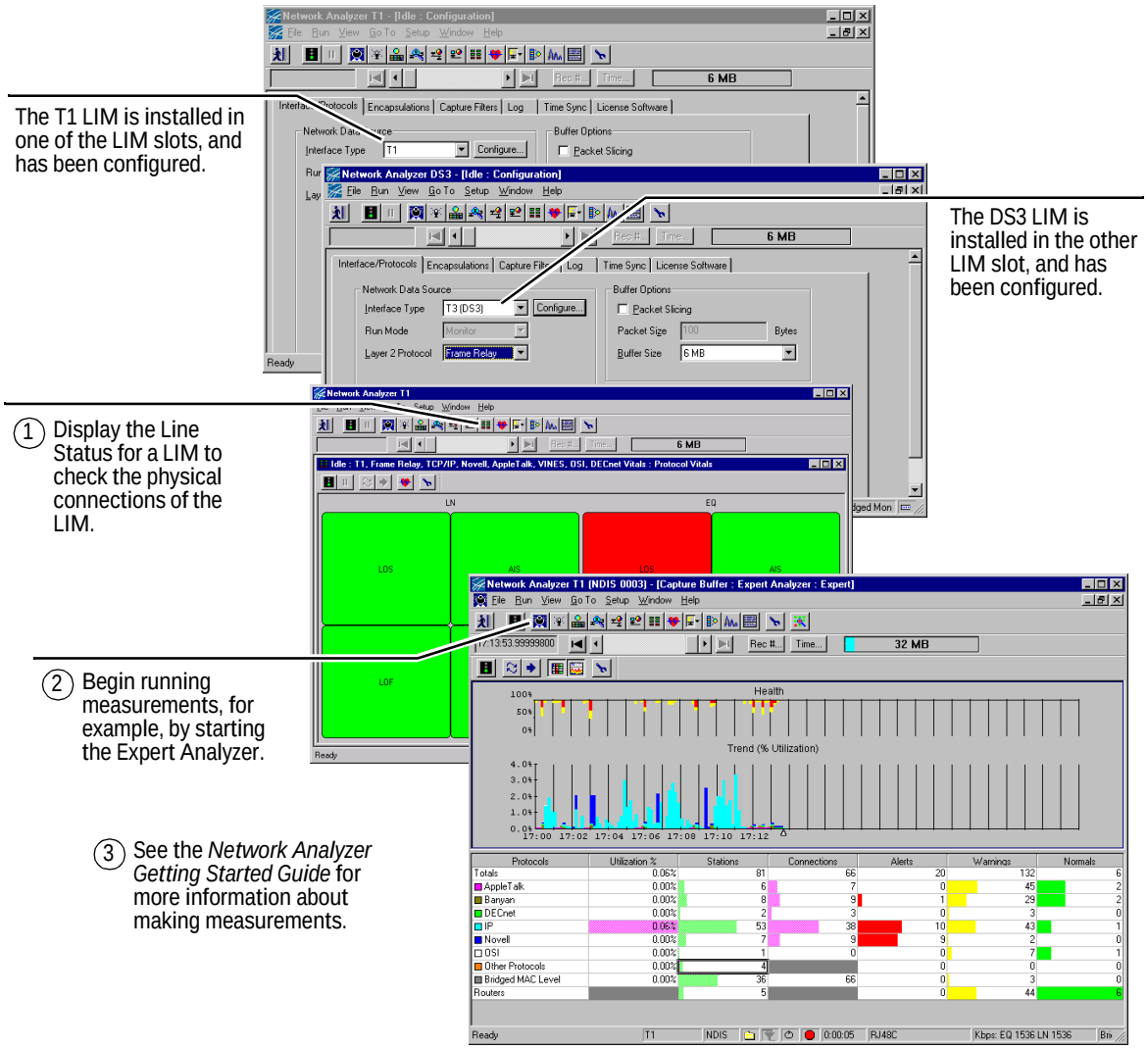
Starting Two Applications

With two LIMs installed, you can start running measurements using both of the LIMs to acquire data from the network under test by starting the Analyzer Hardware (select LIM) twice from the Agilent Network Analyzer Start menu.

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This picture shows a Network Analyzer with two LIMs – T1 and DS3. Two applications are running for both LIMs:



Typically you will select a measurement, configure the measurement, then run the measurement.

What's Next? See the *Network Analyzer Getting Started Guide* for details about running measurements and what you see in the software.

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Using the CD-RW (Read/Write) Drive

To take advantage of the write capability available with the CD-RW drive, start the Easy CD Creator software from the Windows Start menu. Then, follow the instructions in the Easy CD Creator software to write to a writable compact disk.

For more information, check these references:

- The *Network Analyzer Getting Started Guide* describes the Easy CD Creator.
- The Help in the Easy CD Creator drive software for details about using the CD-RW drive.
- The Help in the Network Analyzer application discusses the Easy CD Creator, and how to use a slower write speed to reduce the possibility of buffer underrun.

Working with the Hard Disk Drive



If you are using the Network Analyzer in secure facilities, you may need to remove and replace the hard disk drive.

Replace the Network Analyzer disk drive with the Agilent J6750A disk drive only. Other disk drives will not operate with the Network Analyzer.

WARNING **Before removing the hard disk drive, power down the Network Analyzer to eliminate the risk of shorting the hard disk drive to the chassis. Pay close attention to the Warning label on the Network Analyzer.**

1 Power down the Network Analyzer and then wait 10 seconds for the disk drive to stop.

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2 Locate the hard disk drive cover tab and pull the tab outward to remove the cover.



3 Rotate the screws to the left (the screws rotate one fourth of a turn only).

4 Slide the hard disk drive out of the Network Analyzer, leaving approximately 3 inches of slack in the ribbon cable.



5 Push the connector's locking tabs outward, then disconnect the hard disk drive from the ribbon cable.

6 Attach the new hard disk drive to the ribbon cable. Make sure the connector's locking tabs are in the closed position.

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7 Slide the new hard disk drive into the Network Analyzer.



8 Secure the hard disk drive in place by turning the screws one fourth of a turn to the right.

9 Re-attach the cover.

How to Find More Information

Hardware Setup Guide	Use this manual to install, connect, set up, and configure the Network Analyzer hardware.
Getting Started Guide	Use the *Network Analyzer Getting Started Guide* to learn how to use the Network Analyzer measurements to perform protocol analysis.
Help	Use the online Help in the Network Analyzer application for detailed information about making measurements with the Network Analyzers.
Steps to Use	See “Setting Up and Running the Network Analyzer” on page 16 to set up and begin using the Network Analyzer.
Product Support	For other assistance, see the Product Support number at the front of this manual.

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A
J6800A Specifications and Regulatory Compliance

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J6800A Physical Specifications

Size	402 x 356 x 142 mm (15.8 x 14 x 5.6 inches)
Weight	9 kg (20 lb)

J6800A Operating Conditions

Temperature	Operating Non-operating	+5°C to +40°C (+41°F to +104°F) -25°C to +60°C (-13°F to +140°F)
Humidity	Operating Storage	20% to 80% rh, non-condensing 10% to 90% rh, non-condensing
Altitude	Operating Storage	4,575 meters (15,000 feet) 12,200 meters (40,000 feet)
Power Requirements	External	100 to 240 V~, 50-60 Hz, 2.5A

Regulatory Compliances

Electromagnetic Compatibility	IEC 61326-1 European Low-Voltage and EMC Directives (marked) AS/NZS 2064.1 (marked) ICES/NMB-001 (marked)
Safety	IEC 61010-1 CSA C22.2 No. 1010.1 (marked) UL 3111 (marked)

The term “marked” indicates that the product bears the appropriate compliance markings.

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