



OptiView™

Series II

Integrated Network Analyzer

Getting Started Guide

PN 2131534

April 2004

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Fluke Networks, Inc.
P.O. Box 9090
Everett, WA 98206-9090
U.S.A.

Fluke Europe B.V.
P.O. Box 1186
5602 BD
Eindhoven
The Netherlands

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Note

This Cryptix General License only applies to the data encryption software used by the OptiView remote user interface.

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


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Before You Start

Safety Information

The following symbols are used on the product and in this document:

	NOT FOR CONNECTION TO PUBLIC TELEPHONE SYSTEMS
	PLEASE READ MANUAL FOR SAFETY
	COMPLIES WITH EUROPEAN UNION DIRECTIVE
	SHOCK HAZARD
	CLASS 1 LASER PRODUCT. DO NOT LOOK INTO LASER
	RECYCLE LITHIUM ION BATTERIES
	COMPLIES TO CSA C22.2 No. 950 CANADIAN STANDARDS, AND UL 1950 (US STANDARDS)
	UNDERWRITERS LABORATORY CERTIFICATION
	DO NOT DISPOSE OF LITHIUM ION BATTERIES IN GARBAGE, RECYCLE
	MEETS AUSTRALIA EMC REQUIREMENTS

The OptiView™ Series II Integrated Network Analyzer (hereafter referred to as the “analyzer”) complies with:

-  Class 1 Laser product 21 CFR 1040.10 & 1040.11, CFR(J)
-  CSA C22.2 No 950, and EN60950

Warnings

To avoid possible electric shock or personal injury, follow these guidelines:

- Do not use this product if it is damaged. Before using the product, inspect the case. Look for cracked or missing plastic. Pay particular attention to the insulation surrounding the connectors.**

- **Do not operate the product around explosive gas, vapor or dust.**
- **No serviceable parts.**
- **This product contains a Class I laser (OptiView™ Series II Integrated Network Analyzer Pro and Pro Gigabit models); looking into the laser port may cause eye damage.**
- **Do not connect a telephone line to this product.**
- **If this product is used in a manner not specified by the manufacturer, the protection provided by the product may be impaired.**

⚠ Cautions

To avoid possible damage to the analyzer and to the equipment under test, follow these guidelines.

- **Use the proper terminals and cable for all connections.**

Cleaning the Analyzer

To prevent moisture from entering the analyzer, clean the front panel touch display with a moist cloth only. Do not spray water directly on the front panel touch display. Wipe the case with a damp cloth. Do not use organic solvents, acid, or alkali solutions.

Has This Instrument Been Damaged in Shipping?

ATTENTION!

In case of damage, call the carrier at once for inspection, and request an inspection report. **ALWAYS NOTIFY THE CARRIER FIRST!** Please do not write the factory until you have notified the carrier, since this will delay the claim.

If this precaution is not taken, we cannot assist you in recovering the amount of claim against the carrier.

When the carrier's inspection report is obtained, you may return the instrument and copy of the inspection report to the factory immediately.

Contacting Fluke Networks Sales, Service, and Support Centers

Visit the Fluke Networks contact website at www.flukenetworks.com/contact. Send email to support@flukenetworks.com. For operator assistance in the USA, call 1-800-28-FLUKE (1-800-283-5853). To order accessories or get the location of the nearest Fluke Networks distributor or service center, call:

Anywhere in the world: +1-425-446-4519
Australia: 61 (2) 8850-3333 or 61 (3) 9329-0244
Beijing: 86 (10) 6512-3435
Brazil: 11 3044 1277
Canada: 1-800-36-FLUKE (1-800-363-5853)
Europe: +44 1923 281 300
Hong Kong: 852 2721-3228
Japan: +81-3-3434-0181
Korea: 82 2 539-6311
Singapore: +65-6738-5655
Taiwan: (886) 2-227-83199
USA: 1-800-28-FLUKE (1-800-283-5853)

OptiView™ Series II Integrated Network Analyzer Support

As a registered user, you are entitled to entry level product support, including three free telephone support incidents during the first 60 days of ownership, access to the entry level online Knowledge Base library of product operation and application information, and Web-based trouble ticketing. We will also be sending you Fluke Networks company and product information updates.

Please take the time to register your analyzer. A registration card is supplied in the shipping box. You can also register by going to www.flukenetworks.com, clicking on **support**, then clicking on **Registration**. A *Log in* screen is displayed. Click on **create** to setup an account password if you have not done so before. Then you will be able to log in using your email address and password. Once logged in, you can fill out the online registration form by clicking on **Register a product**.

Updating Your Analyzer

Note

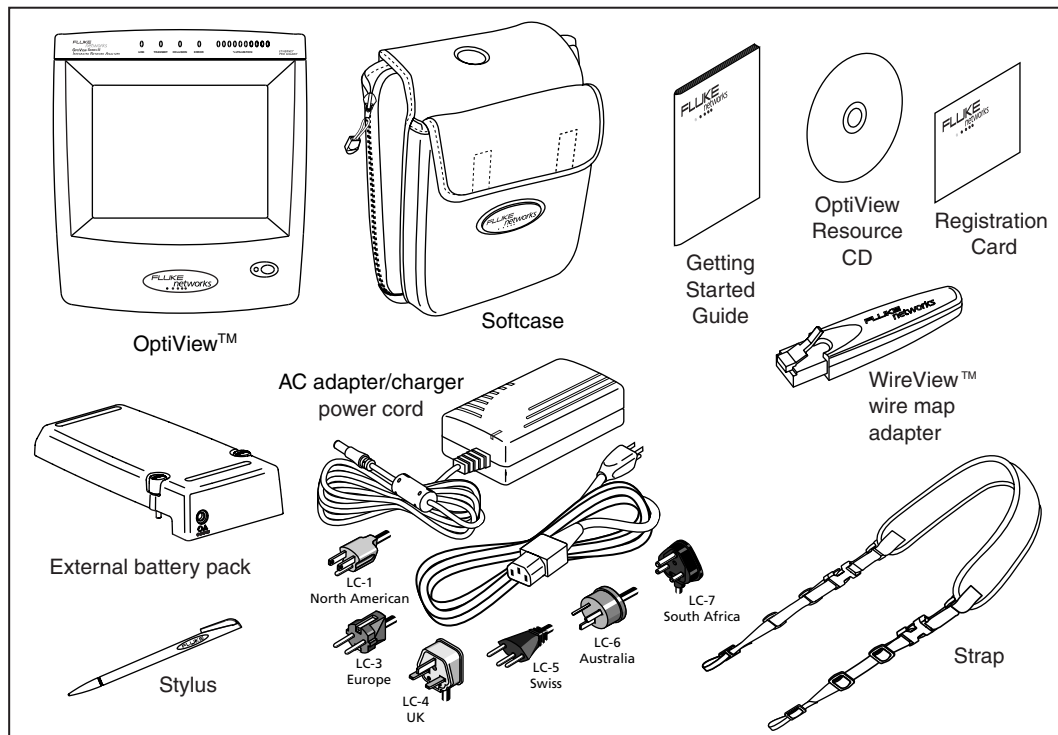
To be notified when new software becomes available for your analyzer, or to access technical support/knowledge base information via the web, please register your product at www.flukenetworks.com.

From time to time, software improvements are being made to the analyzer. These improvements can be applied to your analyzer either through the **Setup | Version | Latest OptiView Software** link, or by visiting www.flukenetworks.com.

The Analyzer and Accessories

The analyzer is designed for troubleshooting and monitoring Local Area Networks (LANs). The analyzer tests all seven OSI layers. It tests from the cable to the application layer and everything in between, so problems have nowhere to hide. The analyzer comes in two configurations:

- ❑ **OptiView™ Series II** (standard version) - supports 10/100 Ethernet (10BASE-T and 100BASE-TX) through an RJ-45 jack.
- ❑ **OptiView™ Series II Pro** – adds complete RMON and RMON2 support, a 100BASE-FX fiber optic interface, packet capture and decoding capability
- ❑ **OptiView™ Series II Pro Gigabit** - adds to the OptiView™ Pro fiber 1000BASE-SX using a standard GBIC (the 1000BASE-LX and 1000BASE-TX GBICs may be ordered as an option)



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Figure 1. The Standard OptiView™ Series II Integrated Network Analyzer and Supplied Accessories

Supplied Items

The following equipment is supplied with the OptiView™ Series II Integrated Network Analyzer.

Table 1. Supplied OptiView™ Series II Integrated Network Analyzer Items

Item	Description	Model/Part Number
WireView™ Wire Map Adapter	Cable termination device with office locator ID #1. Used to perform the Cable Test Wire Map operation, and used as an office locator.	2128396
External Battery Pack	The External analyzer battery, provides up to 2 1/4 hours additional use, Lithium-Ion, 11.1V, 6AH.	OPVS2-BP 2134834
Shoulder Strap	Shoulder strap clips to the analyzer for easy carrying.	1541888
Soft Case	Analyzer fits in the soft case. Analyzer can operate while in case.	1281908
External AC adapter/charger	Input: 120V -240V AC, 50/60Hz, 1.5A, output: 15V DC, 3.3A.	1565193
External AC power cord	Country specific AC power cord.	1552374 North America 1552342 UK 1552388 Cont. Europe 1552363 South Africa 1552339 Australia
Getting Started Guide	Provides basic operating information, accessory part numbers, and specifications.	2103831
Startup Sheet	Provides basic information about operating the analyzer.	2131552
CD-ROM	OptiView™ Resource CD. Includes user interface software, FTP Server software, OptiView Help, and Getting Started Guide (Multiple languages in PDF format).	1626397
Registration Card	Fluke Networks can serve you best by registering online at www.flukenetworks.com . If you cannot register online, please fill out and return the supplied registration card.	688861
Stylus	Stylus used on the OptiView™ analyzer touch panel display.	1671659

Table 2. Other Available Accessories

Item	Description	Model/Part Number
OptiView Reporter™	OptiView Reporter™ allows you to generate reports on the network you are connected to, based on criteria you setup in the OptiView Reporter™ application. After the OptiView Reporter™ is installed, the OptiView Reporter™ button is enabled in the OptiView Browser screen.	OPV-RPT 1578901
OptiView Protocol Expert™	The Fluke Networks OptiView Protocol Expert™ application is a Windows based protocol analyzer for network engineers, LAN administrators, and network technicians who maintain LANs. The application allows you to monitor and packet decode data on your local network. The OptiView Protocol Expert™ application supports OptiView™ analyzer packet capture files. This product is intended to be used with the OptiView remote user interface on a PC.	OPV-PE/PRO 1627440
OptiView™ Expert Analysis Option	Adds expert analysis to the Fluke OptiView Integrated Protocol Expert application on the analyzer, and to the OptiView Protocol Expert PC application described above. When you purchase this option, you are given a key code that will need to be entered in the OptiView Protocol Expert application's Tools Add New Plug-in "Adding a Plug-in" screen.	OPVS2-EXPT 2139187
OptiView Console™	The Fluke Networks OptiView Console™ application is a Windows software tool for network engineers, LAN administrators, and network technicians who maintain LANs. The application allows you to monitor, map, and troubleshoot LAN segments that could consist of servers, routers, switches, printers, managed hubs, and clients (hosts and other network devices).	OVC 2031945
DSP-FTK, Fiber Optic Test Kit	<p>The DSP-FTK Fiber Test Kit is used to measure the optical power loss of fiber optic cables. The kit includes an optical power meter (DSP-FOM) and an optical power source (FOS-850/1300). Together these instruments can verify the performance of multimode fiber optic cable.</p> <p>Simply connect the test kit's RJ-45 connector into the analyzer's 10/100 BASE-TX port, go to the analyzer's Cable Test screen and select the Fiber Test tab to perform fiber measurements. Refer to the analyzer's Help topic "Fiber Test" for setup procedures. The DSP-FTK Fiber Test Kit is supplied in a hard carrying case with the following:</p> <ul style="list-style-type: none"> • One (1) DSP-FOM power meter • One (1) FOS-850/1300 power source • One (1) ST-ST single mode-capable adapter • Two (2) ST-ST jumper cables • User documentation consisting of an instruction sheet and registration card 	DSP-FTK 615937

Table 2. Other Available Accessories (cont)

Item	Description	Model/Part Number
OptiView™ Fiber Inspector	Acts as a microscope to analyze fiber cable ends and display them on the OptiView™ Integrated Network Analyzer.	OPV-FT600/2114341
OptiView™ WAN Vision	<p>Adds additional WAN Layer 2 and Layer 3 MIB support for Frame Relay, Sonet, ISDN, etc. devices.</p> <p>A license key is provided which must be entered through the OptiView™ user interface (in the Setup Options screen).</p> <p>A 15 day evaluation period is initially given to discover the benefits of this option before purchase. The evaluation period is decremented when WAN information is displayed in the Tools Interfaces screen, with a maximum of one decrement per day.</p>	OPV-WV/2003738
OptiView™ VLAN Vision	<p>Adds off-net discovery of network devices and VLAN support for SNMP manageable switches. Search in the Help for “Supported Switches” topic to learn more about specific devices.</p> <p>A license key is provided which must be entered through the OptiView™ user interface (in the Setup Options screen).</p> <p>A 15 day evaluation period is initially given to discover the benefits of this option before purchase. The evaluation period is decremented when VLAN information is displayed, with a maximum of one decrement per day.</p>	OPV-VLAN/2112468
WireView™ Wire Map Adapters	Set of five wire map adapters with office locator IDs #2 through #6.	WIREVIEW 2-6 2128409
External Keyboard	USB mini keyboard.	OPVS2-KB/2134829
Hard Carrying Case	Hard shell carrying case.	OPV-HCASE/1599048
GBIC-SX	850nm, 1000BASE-SX GBIC module used in the OptiView™ Pro Gigabit analyzer. Used with multi-mode fiber.	OPV-SX/1586550
GBIC LX	1300nm, 1000BASE-LX GBIC module used in the OptiView™ Pro Gigabit analyzer. Used with single-mode fiber.	OPV-LX/1586605
GBIC T	Copper 1000BASE-T GBIC module used in the OptiView™ Pro Gigabit analyzer. This module is used with twisted pair copper.	OPV-T/1626866

Using the Analyzer

Peripheral Support

The analyzer provides the following external accessory connectors:

- ❑ PC Card (multi bus PCMCIA)
- ❑ Three USB ports
- ❑ VGA-out DB-15 (see *Using the VGA Out Port*, later in this manual, for specific information)

Registering the OptiView™ Analyzer

Please take the time to register your analyzer. A registration card is supplied in the shipping box. You can also register at www.flukenetworks.com. Click on **support**, then click on **Registration**. A *Log in* screen is displayed. Click on **create** to setup an account password if you have not done so before. Then you will be able to log in using your email address and password. Once logged in, you can fill out the online registration form by clicking on **Register a product**.

Powering the Analyzer On and Off

Note

To properly condition the battery(s), a new analyzer must be initially charged for 8 hours.

Powering the Analyzer On

Simply press the green **On/Off** button on the front of the analyzer. When the analyzer is first powered on, it goes through a complete power-up sequence which includes initializing the processor, memory, performing a self test, loading the operating system, loading the analyzer user interface, and displaying the analyzer Front Page screen as shown in Figure 2.

Powering the Analyzer Off

Standby - With the analyzer powered *on*, press the green **On/Off** button on the front of the analyzer for one second. This places the analyzer in a standby state (suspend to RAM), and the LED turns amber. This is used in normal day to day operation to power the analyzer *off*. The analyzer can remain in the standby state for two days without the battery needing to be recharged, and longer if the analyzer also has an external battery attached.

Touching the **On/Off** button again will take the analyzer out of the standby state. Allow about 15 seconds to resume normal operation (Statistics and other real-time measurement information will be reset).

⚠ Caution

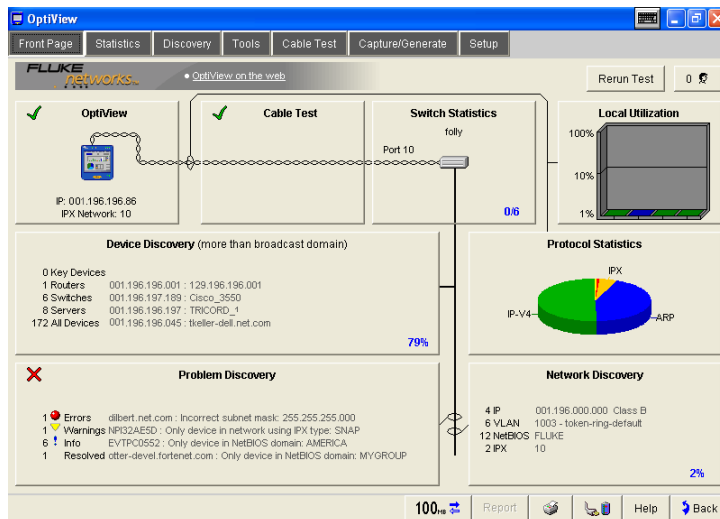
Make sure all user-installed applications are shut down before powering the analyzer off with the On/Off button. User installed applications may interfere with standby.

If the analyzer is left in standby for an extended period of time (days), and the analyzer does not come out of standby by pressing the **On/Off** button, both the internal and external batteries are probably fully discharged. Attach the supplied AC adapter/charger to allow the analyzer to power-up. A discharged battery will take approximately 5 hours to fully charge with the analyzer off, and longer if you are charging the analyzer while it is on.

To maximize analyzer battery shelf-life - If the analyzer will be left *off* for an extended period of time (weeks), power-down the analyzer from the Windows desktop. Select **Start | Shut Down | Shut Down**. This resets all tests, and removes power from the analyzer.

Verifying the Basic Analyzer Operation

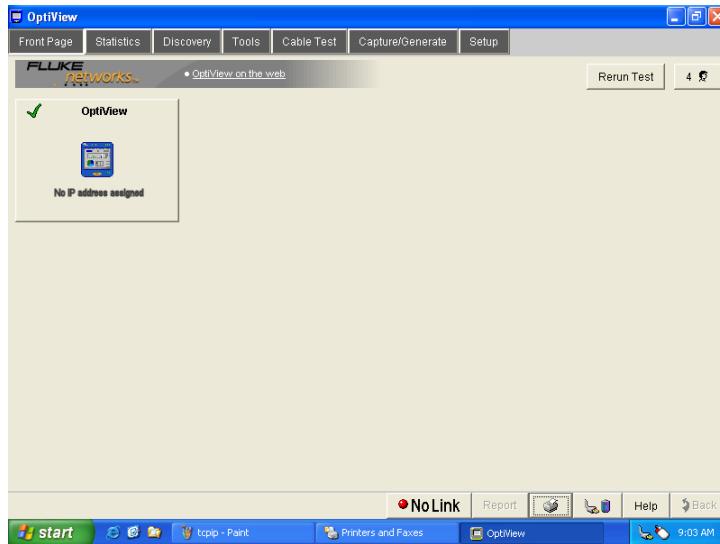
When the analyzer is turned *on*, a boot sequence occurs, the Utilization LEDs flash, a relay reset sequence is heard, and a self-test is run. After the analyzer boots, the analyzer user interface is loaded. If the analyzer is connected to a network, the Link LED (top of analyzer, left-most LED) will come *on* when link is detected, or flash if there is no link. When the OptiView™ analyzer user interface is completely loaded, the display should look similar to Figure 2.



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Figure 2. Front Page Screen (Connected to Network)

Figure 3 shows an example of the analyzer Front Page screen when it is not connected to a network (no network cable connected).



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Figure 3. Power-up Completion - Analyzer Front Page - No Cable Connected

Running the Analyzer on Internal and External Batteries

The analyzer comes with an internal Lithium-Ion battery which is capable of powering the analyzer for approximately 45 minutes.

An external Lithium-Ion battery is shipped with each analyzer. It attaches to the back of the analyzer (see “Connecting the External Battery” on page 11). This external battery will extend the operation time by approximately 2 1/4 hours.

Note

The analyzer always operate off the external battery until the external battery reaches a low charge state. At that point the analyzer automatically switches to the internal battery.

Connecting the External Battery

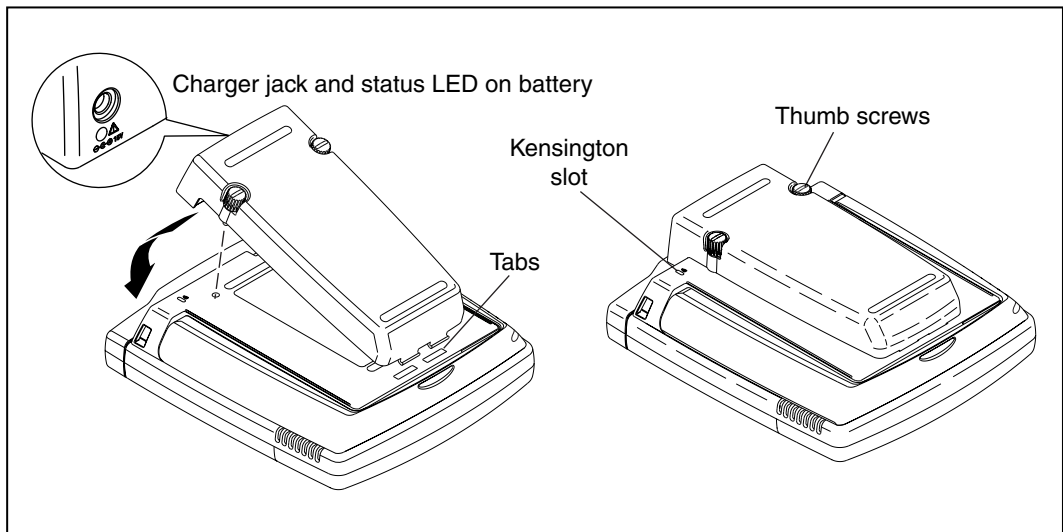
Note

The external battery can be connected or removed with the analyzer powered on.

The external battery is connected to the back of the analyzer as shown in Figure 4. First, slide the external battery tabs into the tab slots on the bottom of the back of the analyzer. Next, press the battery firmly against the analyzer, and turn the thumb screws clockwise until finger tight.

Note

Take care to align the battery tabs into the slots. Do not force the external battery connection. If the thumb screws do not engage, remove the external battery and try again.



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Figure 4. Installing the external battery and Charger Jack Location

Charging the Internal and External Batteries

The external battery and AC adapter/charger (hereafter referred to as the charger) are shipped with every OptiView™ analyzer. The charger will charge both the internal and external batteries while operating the analyzer.

The internal battery takes approximately 5 hours to fully charge (see note on page 8 about initially charging the batteries). It will take longer if the analyzer is *on* while the battery is charging. Figure 5 shows the internal battery charging jack and charging status LED.

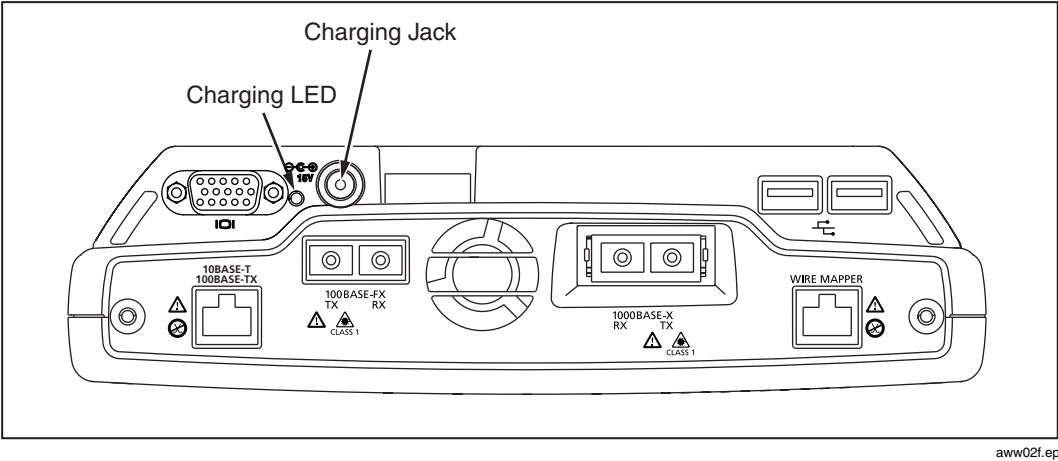


Figure 5. Charging Jack and LED Location for Internal Battery Only

The charging LED states are as follows:

Table 3. Red Charging LED States

Status	Description
Off	Charger not connected
Flashing	Charging
Continuous on, solid	Battery is fully charged, AC power applied

The external battery can take up to 5 hours to fully charge. When it is connected to the analyzer, and the analyzer is *on*, it will not begin charging until the internal battery is close to fully charged (approximately 80% charged). If the analyzer is *off*, both the internal and external batteries will charge at the same time.

Note

Battery charging is controlled by the circuitry residing in each battery. The protective circuitry prevents overcharging. You may "top off" the batteries at any time without worry of damaging the batteries. In the first 2 1/2 hours a fully discharged battery becomes approximately 90% charged. In the following 2 1/2 hours, the battery then becomes fully charged.

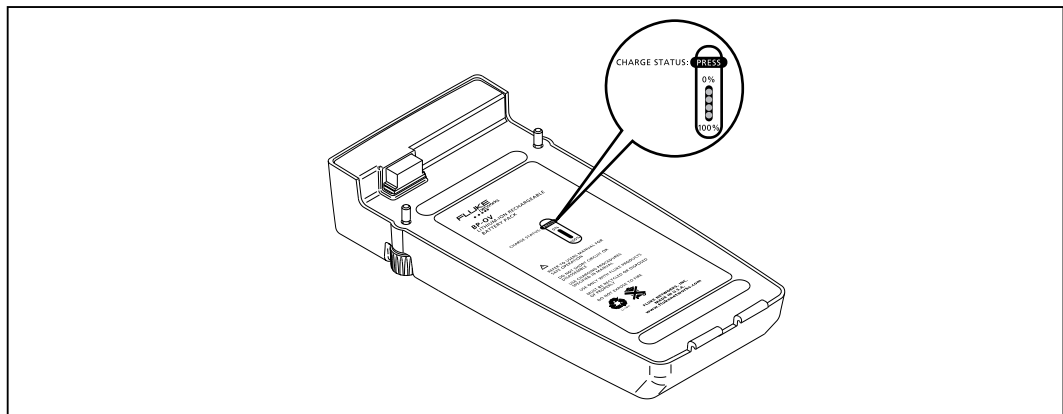
The external battery can also be charged when not connected to the analyzer. It has a charging jack and red status LED indicating charging state. See Table 3 for the LED charge states.

The external battery also has a **Charge Status** button shown in Figure 6. Its charge status is shown in Table 4 below.

Table 4. External Battery Charge Status Indicator

Status Indicator LEDs	Status
No LEDs on	fully discharged battery
1 LED	less than 25% charged
2 LEDs	less than 50% charged
3 LEDs	less than 75% charged
4 LEDs	near or fully charged

When the external battery is connected to the analyzer, use its charging jack to charge both batteries (the internal battery's charging jack will be covered by the external battery).



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Figure 6. External Battery Charge Status Button

By pressing the **Charge Status** button, the appropriate number of LEDs turn *on* and indicate the charge state as shown in Table 4.

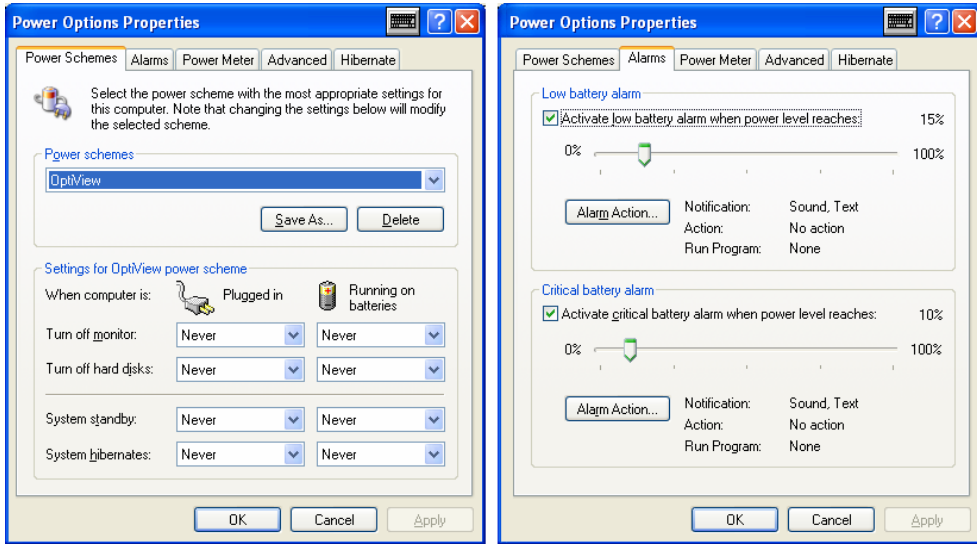
Power Management

⚠ Caution

The power management settings are optimized to reduce power consumption when the analyzer is battery operated. It is strongly recommended that you do not change the default values shown in Figure 7.




Selecting the battery/power icon opens the power management window as shown in Figure 7. The following screens show the factory default states. These settings can be customized to optimize battery life. The battery icon can be found in the bottom-right of the analyzer user interface display.



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Figure 7. Power Management Window

Pressing the analyzer battery/power icon  in the Windows taskbar opens the **Power Options Properties** screen. Press the **Power Meter** tab to see the current battery charge state.

Using the Front Panel Touch Display

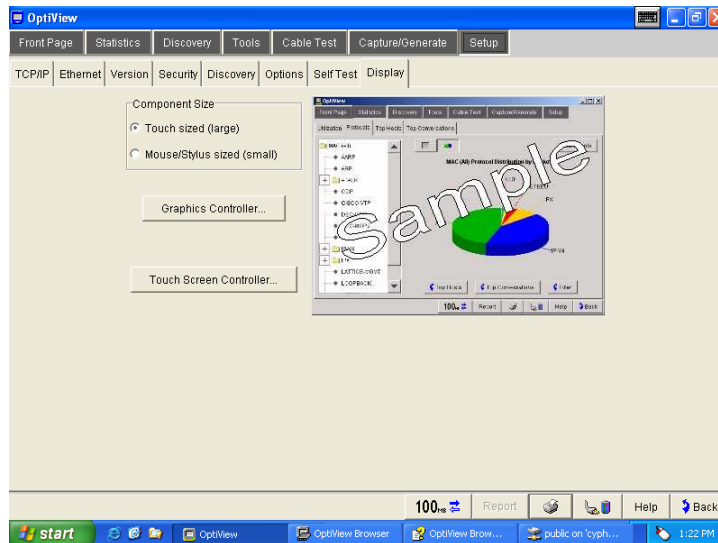
A stylus or your finger can be used on the touch panel display. The target size can be adjusted through the analyzer user interface by selecting **Setup | Display** and changing the Component Size to either large or small.

The **Graphics Controller...** button lets you customize the display setup. Brightness and contrast are adjusted under the **Color** tab in the **Graphics Controller** screen.

Touch target calibration can also be performed from the **Display** screen by pressing the **Touch Screen Controller...** button and then pressing **Calibrate**. The calibration screen provides a simple test that will ask you to touch several targets on the screen to perform the calibration.

⚠ Caution



To prevent moisture from entering the analyzer, clean the front panel touch display with a moist cloth only. Do not spray water directly on the front panel touch display. Wipe the case with a damp cloth. Do not use organic solvents, acid, or alkali solutions.



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Figure 8. Display Adjustment Screen

Using the Virtual Keyboard and IP Keypad

The analyzer is shipped with a virtual keyboard and an IP keypad. The virtual keyboard allows both text and numeric entry, while the IP keypad allows easy entry of IP addresses. Anywhere the user interface allows text or numeric entry, the virtual keyboard  or the IP keypad  button is displayed next to the field.

The virtual keyboard icon is also visible in the upper-right corner of the title bar.

The virtual keyboard can be minimized by pressing the minimize button .

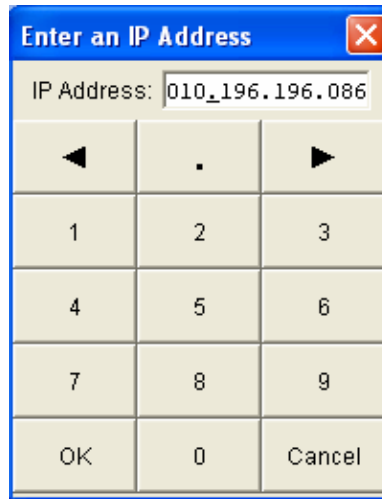
The virtual keyboard can be closed by pressing the close button . If you close the virtual keyboard, the  icon will no longer be visible in the upper-right corner of the screen. You can start the virtual keyboard through the Windows **Start | All Programs** menu, and selecting **Touch Keyboard | Touch Keyboard**.

You can move the virtual keyboard by pressing in an unused area of the keyboard, such as above the arrow keys, and dragging it to a new location.



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Figure 9. Virtual Keyboard



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Figure 10. IP Keypad

Right-clicking the Mouse

Note

The analyzer user interface does not require any right-clicking of the mouse. This is provided as a touch panel convenience for use with other applications.

To do an equivalent right-click of the mouse with the touch panel display:

1. On the desktop, in the system tray , select the mouse icon (Event Selector) . The mouse icon changes to the right-click mouse icon . It resets back to the left-click mouse (normal touch screen mode) after one event, e.g. one touch of the touch screen.

Note

On the touch panel display user interface, using the equivalent right-clicking of the mouse is particularly useful with Windows Explorer to copy, paste, install, and rename files.

Connecting an External Mouse and Keyboard

A USB keyboard, and/or USB mouse can be connected to the analyzer. The three USB connectors are “hot swappable”, i.e. they can be connected to and disconnected from while the analyzer is *on*. Figure 11 shows the USB connectors.

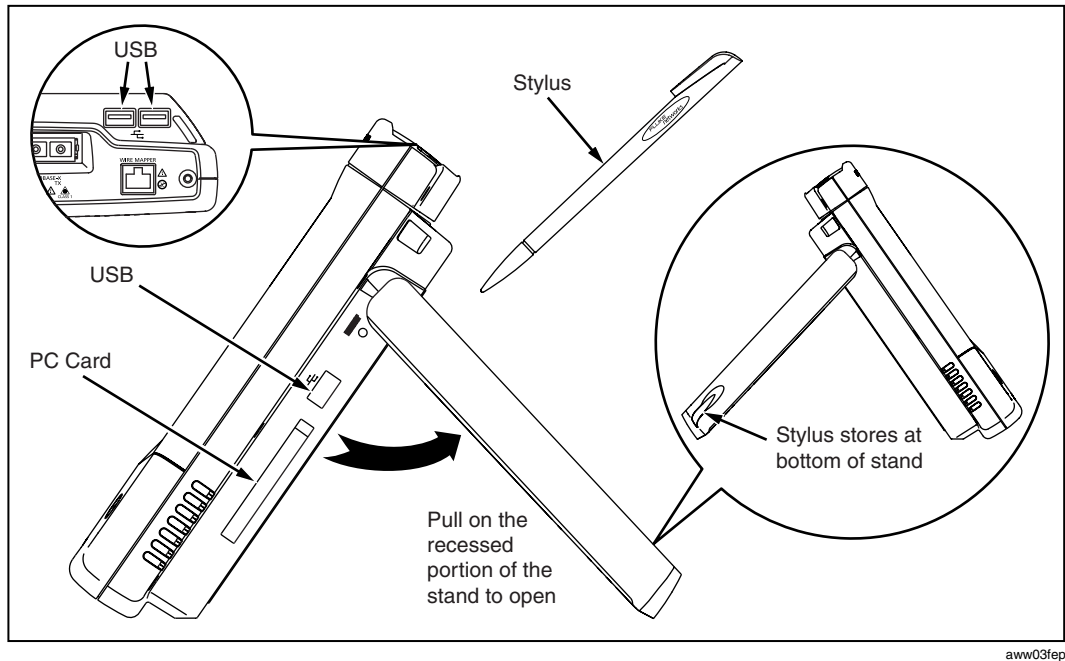


Figure 11. USB Connectors

Extending the Stand, Finding the Stylus

Figure 11 shows the stand extended. To open the stand, pull at the recessed portion located at the bottom of the stand.

The stylus is stored in the stand leg as shown in Figure 11. Simply slide the stylus out to use it.

Using the VGA Out Port

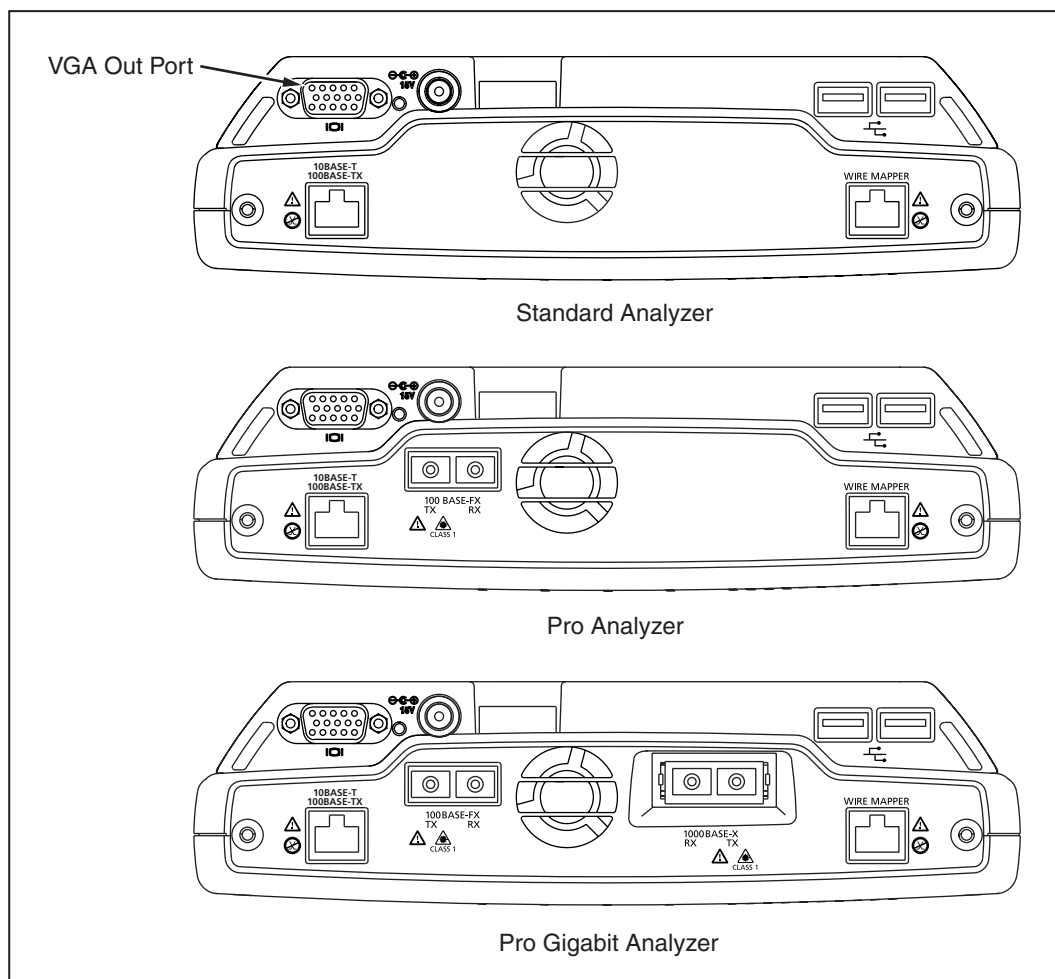
The VGA out port allows an external monitor to be connected to the analyzer. Simply connect a VGA monitor to the analyzer VGA out port and it works! This can be done before or after the analyzer has been turned *on*. See Figure 12 for VGA out port location. See the VGA Help topic for more information about configuring the VGA out port.

Analyzer Network Connections

Figure 12 shows the top view of the OptiView™ Standard, Pro, and Pro Gigabit Analyzers.

Note

*The internal wire map adapter, labeled Wire Mapper, tests patch cables. To test patch cables, connect a cable from the 10/100 BASE-TX connector to the Wire Mapper connector. The test is automatically run. Go to the **Cable Test** screen to view the results.*



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Figure 12. Top View of the OptiView™ Standard, Standard, Pro, and Pro Gigabit Analyzers

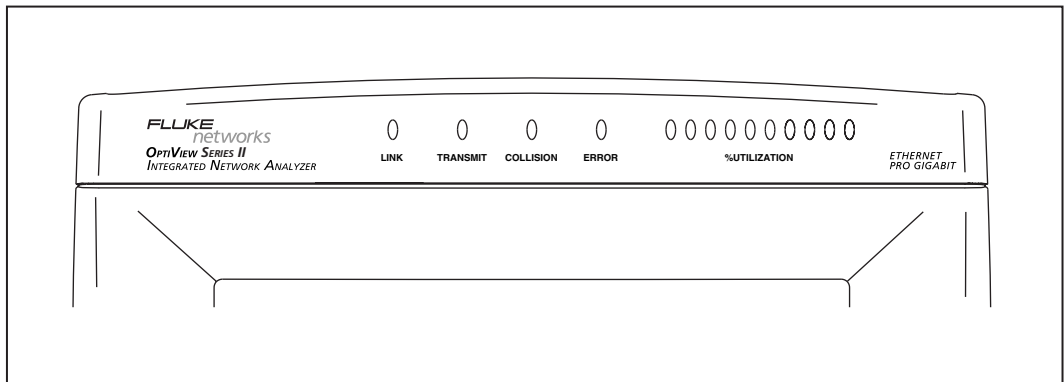
Setting Up the Analyzer to Test Your Network

Simply turn on the analyzer and connect a cable from the 10/100 BASE-T connector (or fiber connector if you have purchased the OptiView™ Pro or Pro Gigabit) to the network. The analyzer will check the cable, find the active network interface, and obtain a non-duplicate IP address. It will then start discovering the network. Its advanced auto-discovery process does the rest!

You can always manually assign an IP address in the **Setup | TCP/ IP** screen. You can also manually assign an IP address for an alternate network as long as it is in the same broadcast domain.

The **Front Page** screen is the first screen that appears after the analyzer power-up sequence is complete (connected to an active network), as shown in Figure 2.

LED Status



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Figure 13. Analyzer Status LEDs

The LEDs on the front of the analyzer represent the following conditions:

Link - Indicates one of five conditions given below.

- ❑ green solid = link present with fiber or twisted-pair MDI connection (analyzer receives on 3, 6 pair)
- ❑ amber flashing = cable or wire mapper present, but no link present
- ❑ amber solid = link present with MDI-X connection (crossover, analyzer receives on 1, 2 pair)
- ❑ red flashing = no cable or no link present on fiber
- ❑ red solid = an over voltage condition has been detected such as being connected to an ISDN line

Transmit - Indicates the analyzer is transmitting packets. Packets are transmitted while running Traffic Generator, and routinely transmitted by the analyzer discovery process. The analyzer communicates with devices to determine their device type and identity. The LED will flash faster as more transmit activity from the analyzer occurs.

Collision - Indicates that collisions have been detected by the analyzer on the local network. As more collisions occur, the LED flashes faster.

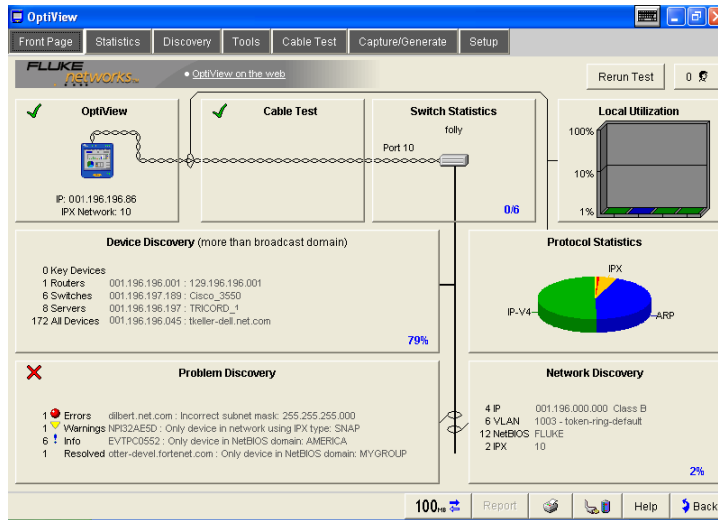
Errors - Indicates that errors have been detected on the local network. Errors include CRC alignment errors, undersized packets, oversized packets, and jabbers.

Utilization - Represents traffic at the point where the analyzer is connected (local traffic). Ten LEDs indicate utilization in 10 percent increments. The first five LEDs (from left-to-right) are green, followed by three amber LEDs (indicating more traffic), then two red LEDs (indicating very heavy traffic).

Note

The green Utilization LEDs also flash during cable testing. Do not disturb the cable while these LEDs are flashing or the measurement results may be invalid.

Front Page Screen



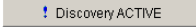
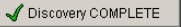
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Figure 14. Front Page Screen

The Front Page screen is an overview and launching point to monitor and test your network. This screen presents the closest switch (**Switch Statistics** button), any network problems (**Problem Discovery** button), all discovered devices (**Device Discovery** button), and statistics (**Protocol Statistics** and **Local Utilization** buttons). The health (e.g. state, condition, etc.) of your network is discovered and problems are displayed if they exist.

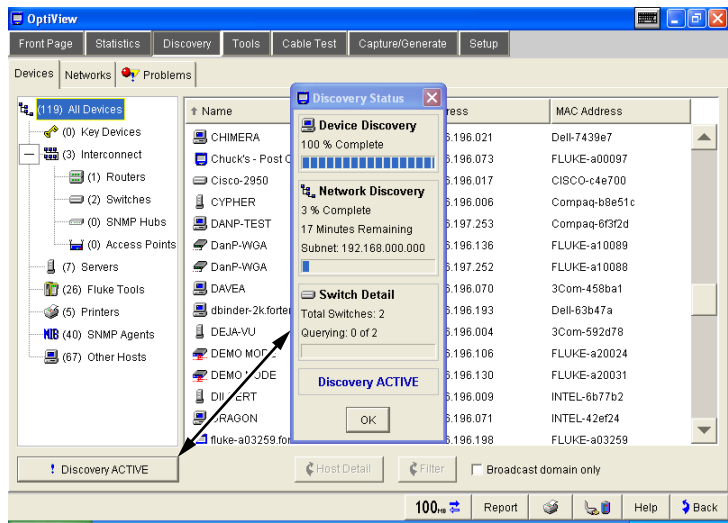
Rerun Test allows you to clear all statistics and discovery information, and restart all network device discovery. Cable Test is not rerun. Cable Test is rerun when a cable change is detected, or when link loss is detected.

At startup, a representation of the cable appears (cable presence is detected automatically). Initially, the **OptiView** and **Cable Test** buttons are the only elements shown. After the cable test has completed and link has been established, the remaining screen elements appear.

79% This discovery percent complete indicator appears in the Front Page screen's **Device Discovery** and **Network Discovery** buttons while active discovery is running. When active discovery is completed, the discovery percent complete indicator goes away and passive discovery resumes. Every 90 minutes active discovery will re-run. The **Device Discovery** and **Network Discovery** screens display the button  or . Press the button to display discovery progress/results information as shown below.

Note

*For smaller networks, the Network Discovery percent complete indicator may display "0%" and then go away. This is because IP subnets have not been added/configured in the **Setup | Discovery** screen. The time it takes to discover devices on your network is directly proportional to the number of IP addresses enabled in the **Setup | Discovery** screen.*



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Figure 15. Device Discovery Status

The **Status Bar** is located at the lower-left corner of the analyzer screen. Analyzer activity and errors are reported here.

The following buttons are located at the bottom-right of the analyzer screen:



This button indicates the link speed, and duplex mode. In this example, it shows a 100 Mbit full duplex connection (two solid arrows). One solid and one outlined arrow represents a half duplex connection. Press this button to go to the **Setup | Ethernet** screen.



This button indicates that **Receive only, do not transmit frames** (silent mode) is turned on in the **Setup | Ethernet** screen.



This button generates tabular HTML reports on select screens. The reports are stored by default in C:\Program Files\Fluke Networks\OptiView\Reports. When this button is pressed you are prompted to specify a filename or to use the default name provided.



This button brings up the Print dialog. The default printer is the OptiView PDF Printer which allows you to take a snapshot of the current screen and save it as a PDF file. You can also add or select a different printer in the Print dialog. See "Setting Up a Printer" on page 30.






This button displays the battery charge state. The battery icon displays the battery charge level, e.g. full, about half full, and near empty. If an external battery is connected, the battery icon represents the weighted average of both the internal and external batteries. The analyzer operates off the external battery until it is depleted, then switches to the internal battery. Pressing this button opens the **Power Options Properties** screen.





This button opens the help system and will display help information on the current screen.



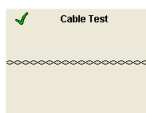
The Back button returns you to the previous screen. Also, when going to a screen using a forward arrow button , the **Back** button returns you to that particular screen.

The **Switch Statistics**, **Local Utilization**, **Device Discovery**, **Protocol Statistics**, **Problem Discovery**, and **Network Discovery** buttons provide information on their respective areas. The combined information provides a blueprint of the network, letting you know how things are going. This information will allow you to quickly dismiss some hypotheses during troubleshooting without "drilling-in." Some buttons show a  (good) or  (error) to draw your attention to potential problem areas.



The **OptiView** analyzer button represents the configuration status of the analyzer.  indicates that the analyzer passed self test and obtained a valid IP address for the local network.  indicates Self Test failed, or a valid IP address was not found.

If a valid IP address was not found, the analyzer will still be able to analyze traffic for statistics, discovering devices and station names. However, without a valid IP address, the analyzer will not be able to actively discover names. Pressing the **OptiView** analyzer button takes you to the **Setup | TCP/IP Network Configuration** screen.



The **Cable Test** button summarizes the status of the twisted-pair or fiber cable:



- indicates a valid cable. Length is given for twisted-pair copper wires on the 10/100BASE-TX interface.

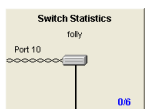


- indicates that there is a problem with the cable. Other tests depend upon a functional cable with a successful link. Select this button and view Cable Test details to diagnose a problem with a cable.

Note

Measurable twisted-pair lengths are from 1 meter to 305 meters (approximately 3 feet to 1000 feet).

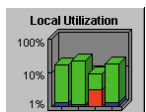
The correct cable type must be selected for Cable Test to report correct measurements. The cable type is selected on the **Cable Test | Twisted-Pair Detail** screen. The default cable type is UTP 100 Ohm Category 5. A misidentified cable type may cause the measured length to differ from the actual length by up to 15%.



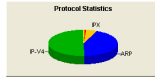
Switch Statistics displays the nearest switch (including slot, port, and VLAN ID if available) discovered by examining the bridge forwarding tables of all the local switches. The progress indicator (shown in the figure to the left) shows 0/6, which indicates the discovery process has queried 0 of the 6 known switches on the network.

When completed, the nearest switch is determined. Also, during this discovery process, the analyzer is looking for any VLAN memberships by searching through all the hosts.

Pressing this button takes you directly to the **Tools | Interface Statistics** screen for this switch.



The **Utilization Statistics** button shows network unicast, multicast, broadcast, collisions, and error percent detail for the connected network segment. Pressing this button takes you to the **Utilization** screen where information is provided in both tabular and graphical views.



The **Protocol Statistics** button shows protocol mix information. The OptiView Analyzer continuously updates the protocol list based on protocols used on the network segment the analyzer is connected to. Pressing this button takes you to the **Statistics | Protocols** screen for more detail.

Category	Count	IP Address	Hostname
Key Devices	1	001.196.198.001	128.196.198.001
Flakes	0	001.196.197.158	Cisco_3550
Switches	0	001.196.198.017	198.017.1
Servers	172	001.196.198.045	198.045.1

The **Device Discovery** button summarizes device discovery results for the entire broadcast domain, along with discovered critical network servers. If off-net (VLAN Vision option) discovery is setup (**Setup | Discovery**), this will include discovery results outside the broadcast domain if the **Broadcast domain only** checkbox is unchecked in the **Device Discovery** or **Network Discovery** screens.

Specific address and domain names are displayed. Network interconnect devices and servers are also displayed, along with the total number of hosts. Devices are shown by category and are updated every few seconds. The names and addresses of the devices are provided to aid you in troubleshooting. Pressing this button takes you to the **Discovery | Devices** screen.

Category	Count	IP Address	Hostname
Key	4	001.196.300.000	Cisco 0
VLAN	6	1000.198.017.000	198.017.000
NetBIOS	12	198.017.000	198.017.000
IPX	2	10	10

The **Network Discovery** button summarizes the network discovery results. IP Subnets, VLANs, NetBIOS Domains, and IPX Networks are shown. Pressing this button takes you to the **Discovery | Networks** screen.

Category	Count	IP Address	Hostname
Problems	1	001.196.198.001	128.196.198.001
Warning	1	001.196.198.001	128.196.198.001
Info	1	001.196.198.001	128.196.198.001
Resolved	1	001.196.198.001	128.196.198.001

The **Problem Discovery** button summarizes the problem discovery results. Problem Discovery status is conveyed using graphics and color (red ball for severe problem; yellow triangle for problem or warning; blue exclamation point for informational). This information is continuously updated every few seconds. Pressing this button takes you to the **Discovery | Problems** screen.

Generating Network Traffic

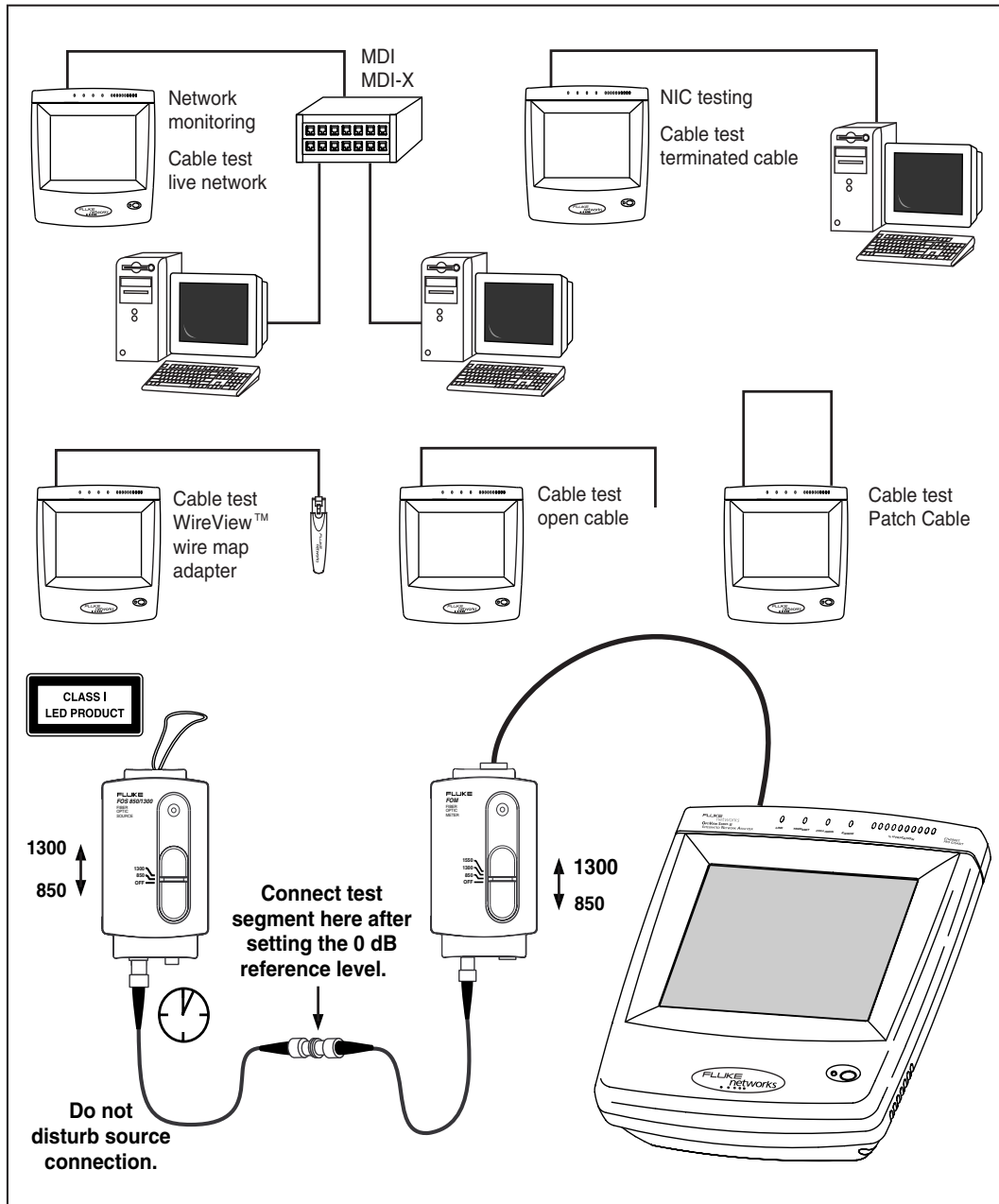
Traffic Generator enables you to create different traffic loads to stress test your network. The type of protocol, size of packet, number of packets per second, and percent utilization are configurable along with the type of traffic, e.g. Broadcast, Multicast, or to a specific Device. You may generate traffic to devices on your local network or to devices specified out of your local network. See the *Traffic Generator* topic in the analyzer Help for usage.

Testing Network Cables

Measurable cable lengths are from 1 meter to 305 meters (approximately 3 feet to 1000 feet). The correct cable type must be selected for Cable Test to report correct measurements. UTP 100 Ohm Category 5 is the default cable type selected.

It is not necessary to disconnect the far end of the cable for the length to be measured. Cable length can be measured while the cable is connected to a wire map adapter, connected to nothing, or connected to an active hub, switch, or NIC. A cable is automatically tested when it is connected to the analyzer and during the power-up sequence. If needed, the cable may be re-tested by pressing the **Rerun Cable Test** button on the **Cable Test** screen, or by simply disconnecting and reconnecting the cable to the analyzer.

Figure 16 illustrates the different cable test capabilities. All cable test detail results are reported in the **Cable Test** screen.



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Figure 16. Cable Test Capabilities

The supplied WireView™ wire map adapter is used to confirm end-to-end wire connections. Using the wire map adapter, you can see cabling shorts, opens, and mis-wired connections on the **Cable Test** screen. There is a built-in wire map adapter port on the top of the analyzer for convenient patch cable testing.

Note

*Due to the various manufacturing techniques used by equipment vendors in NICs, hubs and switches, the length shown may be the distance to a connector or cross-connect that is causing a larger signal reflection than the end-equipment. Examining the **Cable Test | Twisted-Pair Detail** screen shows the actual end-length and reflection values. This is not an issue with non-terminated (open) cables.*

*If you have purchased the optional OptiView Fiber Inspector product, it can be launched from the **Cable Test | Fiber Test** screen by pressing the  button.*

Setting Up a Printer

You can add printers through the desktop (**Start | Printers and Faxes | Add a Printer**).

Note

*By default, a PDF print driver, called “OptiView PDF Printer”, has been installed and configured to print to file. By default, the PDF file is saved in the **My Documents** folder.*

Changing the GBIC Module (Pro Gigabit version only)

To remove a GBIC module, press and hold the tabs on the sides of the GBIC module and pull gently out of the gigabit slot.

To install a GBIC module, make certain the GBIC’s “D” shaped connector is aligned with the connector in the gigabit slot.

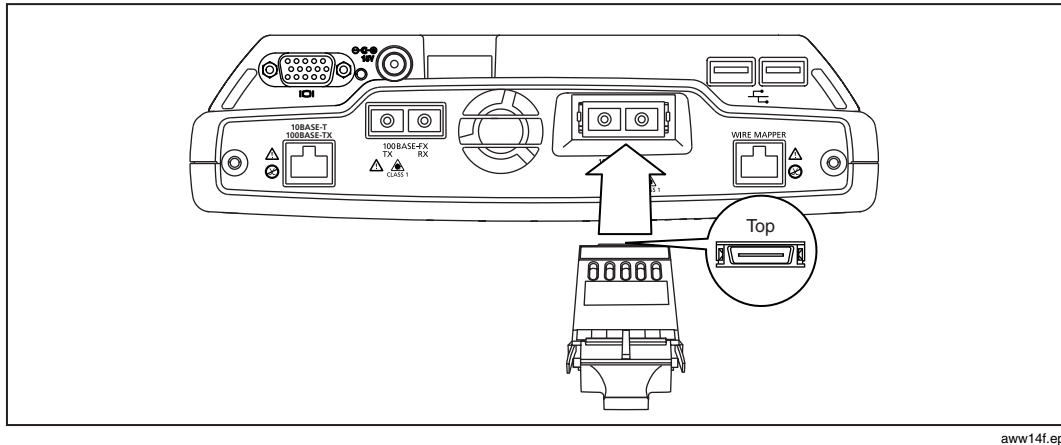


Figure 17. Installing a GBIC Module

Note

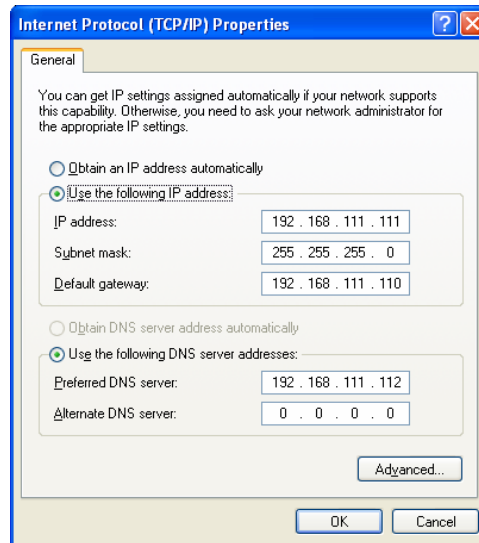
Though most GBICs are designed to be hot-swappable, i.e. changed with the analyzer power on, it is recommended that the analyzer be powered off or placed in suspend mode prior to changing the GBIC. This will reduce the possibility of damage to the GBIC.

⚠ Warning

GBIC modules are Class 1 laser light emitting products. Never look into the GBIC module while it is on, otherwise damage to the eyes, including blindness, can occur.

Windows Network Configuration

The Windows network configuration is preconfigured for communication with the OptiView™ analyzer data acquisition board. The Ethernet and fiber connectors are part of the data acquisition board. DO NOT modify the Windows IP address settings for the data acquisition board. You may add additional interfaces that have their own TCP/IP protocol settings. You may need to modify other network configurations such as WINS (the DNS servers should be 192.168.111.112).



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Figure 18. TCP/IP Properties for the Data Acquisition Board

⚠ Caution

In the Windows Network setup, TCP/IP -> Internet Protocol (TCP/IP) has a preconfigured IP address of 192.168.111.111, subnet mask of 255.255.255.0, and gateway of 192.168.111.110. These settings **MUST NOT be changed. They are used for communication between the data acquisition board and the Windows interface.**

Using the OptiView Browser™ and User Interface Software

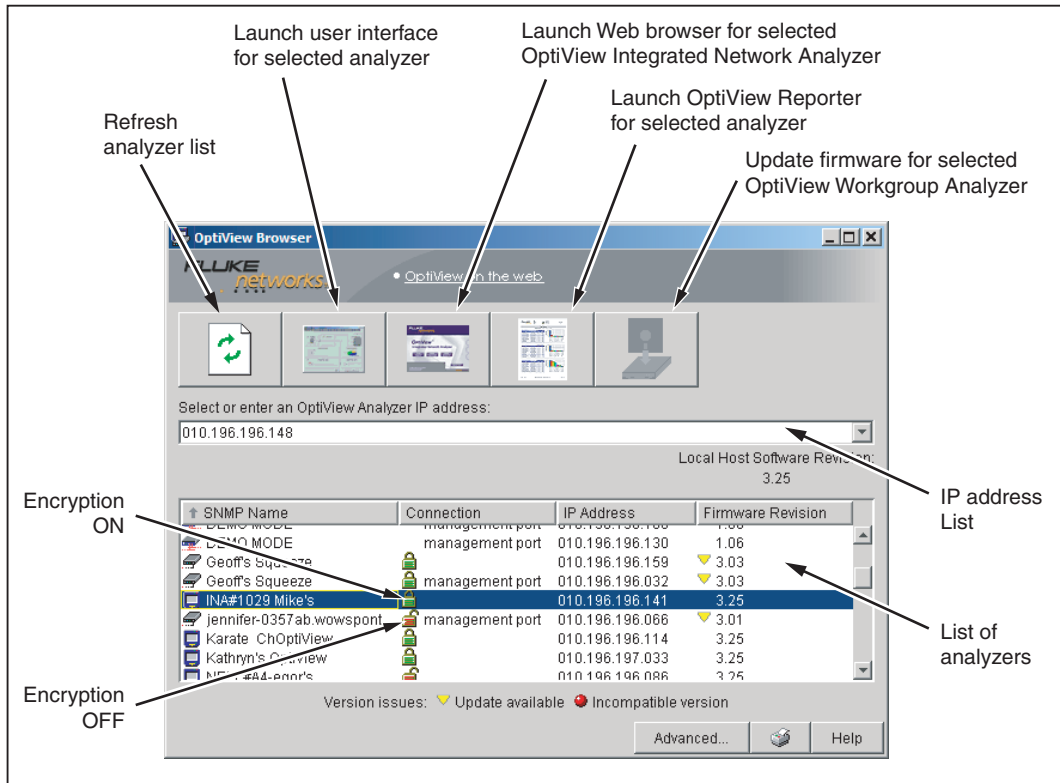
The OptiView Browser™ allows you access to OptiView™ Integrated Network and Workgroup Analyzers through a user interface installed on your analyzer or PC.

Note

*On your OptiView Series II Integrated Network Analyzer, the remote OptiView™ user interface session will display slightly smaller than the primary analyzer's user interface, and the IP address and name (if specified in the **Setup | Security** screen) are displayed in the user interface's title bar area.*

In the OptiView Browser™ window, double-click on an analyzer from this list and the user interface is launched. If an analyzer is password protected, you will be prompted to enter a password. You may also be prompted for an encryption key.

In order for analyzers that are not in the same broadcast domain to be displayed in the OptiView Browser™ list, you must first configure the Remote Control IP address setting on each analyzer. This is found in the **Setup | Security** screen. The **Remote Control PC IP** address should match the IP address of the PC (or analyzer) that you intend to run the user interface software on. Then, the remote analyzer will send its identification back to the controlling PC (or analyzer).



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Figure 19. OptiView Browser

Refresh analyzer list

Re-displays the analyzer list with current active analyzers.

Launch user interface for selected analyzer

Launches the user interface for the selected analyzer. The selected analyzer is the device that is highlighted in the OptiView Browser™ analyzer list or the IP address entered in the OptiView Browser™ IP address field.

Note

When running the OptiView Browser™ on the analyzer, new analyzer user interface sessions appear slightly smaller than the primary analyzer session.

Launch Web browser for selected OptiView Integrated Network Analyzer

Enabled only for OptiView™ Integrated Network Analyzers (Series II and older analyzers) and not for OptiView™ Workgroup analyzers. Launches the default web browser on your PC (or analyzer) and connects to the home page on the selected OptiView™ Integrated Network Analyzer. From the home page, you can access saved reports and packet capture files located on the hard drive of the OptiView™ Integrated Network Analyzer.

Launch OptiView Reporter for selected analyzer

This button launches the Fluke Networks OptiView Reporter software. The OptiView Reporter™ software is purchased separately. See Table 2 for the part number. This button does not appear on the OptiView Browser until the software is installed on the PC (or analyzer that is running the OptiView Browser). OptiView Reporter provides you with a simple way to generate a variety of reports based on data obtained from analyzers connected to your network. The easiest way to install it on an analyzer, is through an external USB CD drive. Otherwise, you will need to map a drive using Windows networking, or use the TFTP server to transfer the files from your PC.

Update firmware for selected OptiView™ Workgroup Analyzer

This button does not apply to OptiView™ Integrated Network Analyzers (Series II and older analyzers).

Updates the firmware on the OptiView™ Workgroup analyzer by downloading from the controlling PC. Enabled only when selecting an OptiView™ Workgroup analyzer through the Management port.

Installing the Remote User Interface Software

The remote user interface software can be installed on Win98 SE, WinNT 4.0, Win2000, and WinXP operating systems.

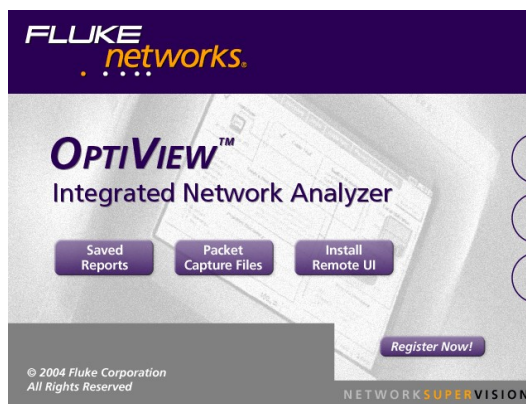
To install the remote user interface software from CD, insert the OptiView™ Resource CD into your PC's CD drive. Autorun will execute and load the OptiView™ Resource CD user interface.

If autorun is disabled on your PC, execute the file *Launch.exe* located in the root directory of the CD. Follow the on-screen instructions to complete the installation.



To install the user interface software from your PC through your browser, connect the analyzer to your network and power it *on*. Enter the analyzer IP address into your PC's browser URL field (omit leading zeros). The analyzer IP address is displayed on the Front Page screen in the **OptiView** button as shown to the left. The home page of the analyzer will display as shown in Figure 20. Select the **Install Remote UI** button and follow the on-screen instructions to complete the installation.

Once the installation is complete, you will be able to launch the OptiView Browser™ from your desktop, select an analyzer from the OptiView Browser™ list, or enter the IP address of the analyzer, and gain access to valuable network information through the user interface software. See figure 20.



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Figure 20. OptiView Personal Web Server Home Page

User Interface Events that will Terminate a Remote Session

The active TCP/IP session between the user interface software and the analyzer can be severed under the following conditions:

- If IP parameters are manually changed on the analyzer and **Apply** is selected in the **Setup | TCP/IP** screen
- If **Auto Reconfigure on Network Change** is checked in the TCP/IP setup screen and the analyzer patch cable is disconnected and reconnected to another jack
- If the Ethernet link goes down due to temporary network outage
- If **Rerun Auto Config** is selected in the TCP/IP setup screen
- If the encryption is changed in the **Setup | Security** screen
- If **Find Unused IP and Apply** is selected in the TCP/IP setup screen
- If **Rerun Cable Test** is selected
- If the Analyzer MAC address is changed in the **Setup | Ethernet** screen
- If **Receive only, do not transmit frames** is selected in the **Setup | Ethernet** screen

In the previous conditions, the popup message *There are <n> user interfaces that may lose connection to the remote OptiView Analyzer, proceed anyway?* With both the **Yes** and **No** buttons displayed.

Setting Up the Analyzer Security

The **Setup | Security** screen provides analyzer security settings for packet capture, remote access, and SNMP configuration.

Note

*The **Setup | Ethernet** screen allows you to select **Receive only, do not transmit frames**, which turns off the analyzer transmit capability, thus putting it on the network in silent mode. Turning off the analyzer transmit capability disables the device query for name resolving and other active tests such as Ping.*

*The analyzer's MAC address can also be changed in the **Setup | Ethernet** screen for testing switch forwarding tables or ARP caches.*

Setting the Analyzer Name

In the **Setup | Security** screen, the **OptiView Analyzer Name** field allows you to change the default analyzer name as seen in the **Discovery | Devices** screen and in the remote user interface **OptiView Browser** screen. This is the equivalent SNMP name. Naming the analyzer is especially useful when multiple analyzers are connected to your network.

The Windows XP computer name displays the NetBIOS name in the **Tools | Overview** screen and in other Windows applications (network browsing). You may want to change the NetBIOS name to match the **OptiView Analyzer Name** for easy identification.

To change the NetBIOS name:

1. From the Windows XP desktop, press **Start | Control Panel**.
2. Select **System** (Classic view).
3. Select the **Computer Name** tab.
4. Press **Change....**
5. Enter the name you have entered in the analyzer's **Setup | Security** screen **OptiView Analyzer Name** field.
6. Select **OK** to save the change and exit the **Computer Name Changes** screen.
7. Select **OK** again to save the changes and exit the **System Properties** screen.
8. You will have to restart the analyzer for the changes to update.

Setting Password Control, Feature Selection

The Security screen enables/disables packet capture and access for remote users. If packet capture is enabled with a password, you will be prompted to supply a password before any packet capture will occur. This also applies when a remote user password is enabled and you are trying to remotely access the analyzer.

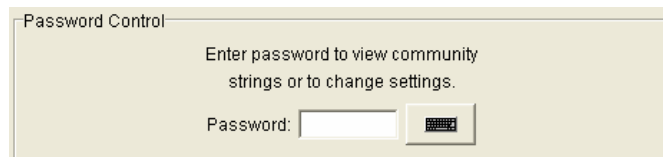
Setting a Password: Press the **Create Password** button. Enter a password in the Enter new password window as shown in Figure 21. The password is case sensitive, has maximum length of 40 characters, and any printable ASCII character can be used (including spaces). Once you have entered a password, you must re-enter it in the **Confirm new password** field. Select **OK** for the password to be accepted.



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Figure 21. Password Dialog

Once a password has been set, and you return to this screen, you will be asked to enter the password as shown in Figure 22.



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Figure 22. Password Control Dialog

Fields that are secure are displayed with "*" until the password is entered.

Clearing a Password: To clear a password, you must first know and enter the existing password. Press the **Change Password** button and select **OK** to clear the password.

Note

If you forget the password, you will need to contact your authorized service center or Fluke Networks product support for procedures. See page 3 for contact phone numbers.

Setting Data Encryption

Setting data encryption allows data being sent to and from a remote user interface to be encrypted. The analyzer data encryption uses the AES 128 bit encryption algorithm. You may enter the encryption key in Hex or ASCII. Both enter a 128-bit encryption key. Anything less than 128 bits will be padded with 0's. ASCII is provided to allow an easier method of remembering the encryption key.

To set the data encryption, in the **Setup | Security** screen, press the **Remote Control Encryption Settings...** button. The **Remote Control Encryption Settings** dialog is displayed as shown below.



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Figure 23. Remote Control Encryption Settings Dialog

Warning

The encryption can be set from a remote UI, but should only be done on the analyzer to prevent unauthorized detection of the encryption key while it is being set. What this means is, a remote UI could be capturing packets while another remote UI is setting the data encryption, and capture the encryption key. That is why we recommend setting the encryption on the analyzer.

Once the encryption key has been set on an analyzer, each user trying to open a remote UI session with that analyzer will be prompted to first enter the encryption key.

Note

Once a remote PC has successfully opened a remote UI by entering the encryption key, that PC will remember the encryption key and it will not have to be re-entered.

Setting the Remote Control PC Field

Set this field to specify an off-net PC running the OptiView Browser™ remote user interface software. When this field is set, the analyzer will send its identification back to the specified PC running the remote user interface software. Set this field to *<none>*, *<last connected>*, or manually enter the IP address of the remote PC that will be running the OptiView Browser™ remote user interface software. *<last connected>* is the last remote session to terminate from the analyzer, and that PC's IP address is saved into this field.

Setting the OptiView Console™ Field

The OptiView Console field enhances the interoperability of the analyzer and Fluke Networks' OptiView Console™ product. The address you enter should be the IP address of the PC running the OptiView Console™ agent. The analyzer will send packets to this address when it is connected to the network, and when the IP address of the analyzer is changed.

These packets assist the OptiView Console™ product in keeping its information current. OptiView Console™ maintains a special list of all Fluke Networks' products that are connected to the network and can even be used to launch a user interface session on any OptiView™ analyzer.

OptiView Console™ is purchased separately. A 30 day evaluation copy can be downloaded from www.flukenetworks.com.

Setting Up the SNMP Community Strings

The **MIB II Read community string**, **RMON2 Read community string**, and **RMON2 Read/Write community string** fields controls other clients from accessing the MIB II and RMON agent information on the OptiView™ Pro and Pro Gigabit analyzers.

The field labeled **Strings used to query other SNMP agents** is used by the analyzer to interrogate discovered SNMP agents within devices on the attached network.

Note

Strings used to query other SNMP agents can have multiple entries, each separated by a space. The order in which they are entered is the order in which they are sent to the device.

*If you have inadvertently changed the default values, select the **Default** button to restore the default community strings.*

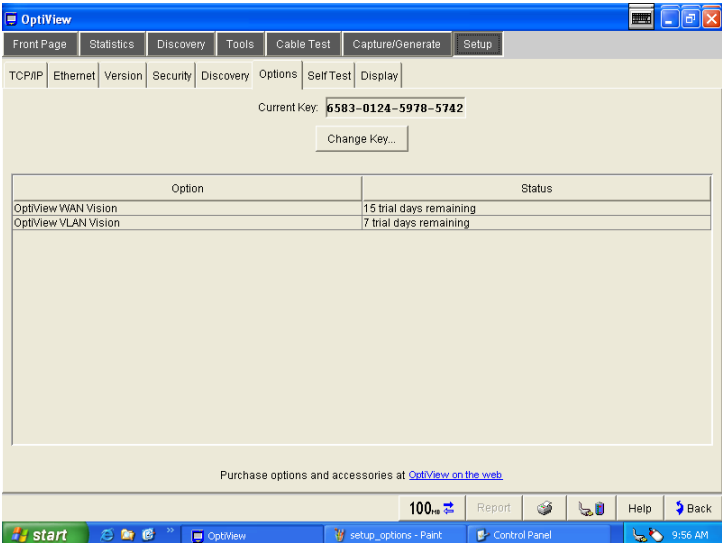
Deleting the SNMP community strings will prevent the analyzer from using SNMP in an active discovery.

Installing Options

Analyzer options that are purchased separately, such as the WAN Vision option, require you to enter a unique key code in the **Setup | Options** screen. This unique 16-digit key code is given to you when you purchase the option.

To activate a purchased option, go to the **Setup | Options** screen and press the **Change Key** button. Enter the key code in the Enter New Option Key popup, and press **OK**.

The **Setup | Options** screen displays current installed options that are enabled or have an evaluation period. The evaluation period is decremented each time you access that feature. Multiple accesses within a 24-hour period are counted as a single "trial day."



aww62s.bmp

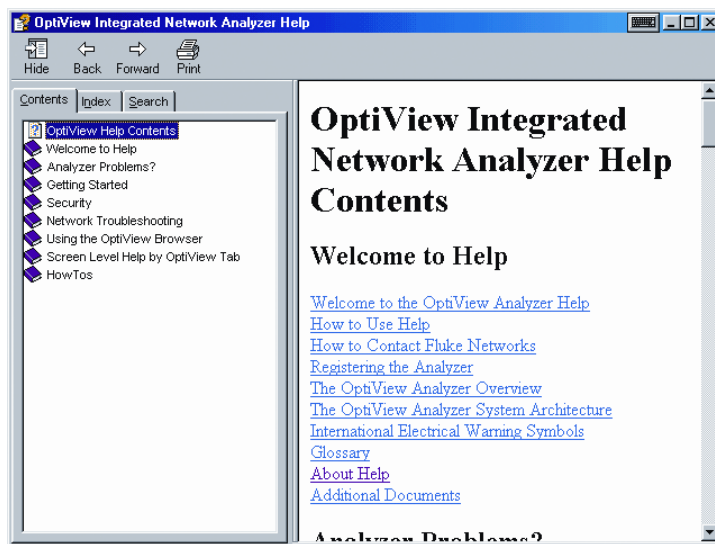
Figure 24. The Options Screen

Using the Built-in Help System

Accessing and Navigating the Help System



The help system is an integral part of the analyzer. While using the analyzer user interface, help can be accessed by selecting the **Help** button located on the bottom-right of the user interface screen.



ahq47s.tif

Figure 25. The Help Screen

When the Help is launched, the current screen topic is displayed. You can also select a topic from the Contents (left pane), choose an Index entry, or perform a full text Search on any analyzer help topic or term.



ahq48s.tif

Figure 26. Help Navigation Tabs



You can also press the **Back** and **Forward** buttons to move to and from previous viewed topics.



The **Hide** button collapses the left pane of the Help screen giving you more room to view Help topics. The **Hide** button is replaced by the **Show** button. The **Show** button expands the left pane of the Help screen.



The **Print** button allows you to either print the selected topic or print the selected heading and all subtopics.

Changing the Default Help Language

The Help is displayed by default in English. The Help language can be changed in the **Setup | Version** screen. Simply select the language from the Help Language drop-down list.



ahq49s.tif

Figure 27. Selecting the Help Language

Accessing the Online Documentation

This Getting Started Guide (in multiple languages) and the online Help system are also provided in PDF format on the OptiView™ Resource CD.

Troubleshooting Your Analyzer

Resetting and Powering the Analyzer Completely Off

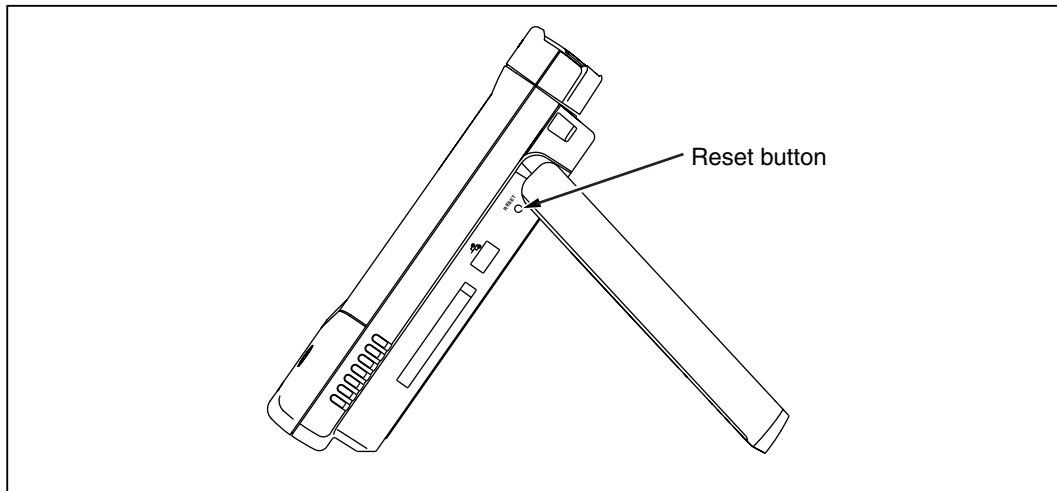
If you suspect the Windows environment has locked-up, you may have to reset the analyzer. This is done by pressing the **Reset** button. If you are not sure if the Windows environment or the analyzer (hardware) has locked-up, you may have to completely power-down the analyzer by forcing the power off as described below.

Resetting the Analyzer

The **Reset** button (see Figure 28) resets the Windows portion of the analyzer without shutting down the data acquisition board. Discovery and capture data are not affected. The **Reset** button should only be used if the Windows environment has stopped responding.

Forcing Power Off

Power can be forced off by pressing and holding the **On/Off** button for approximately 7 seconds. After being forced off in this manner, the analyzer may initiate a scan disk upon the next power-up.



aww09f.eps

Figure 28. Reset Button Location

Before Calling Technical Support

Before calling technical support, you can perform these basic analyzer troubleshooting steps to pinpoint many problems:

Do you suspect Windows has locked up?

If yes, press the **Reset** button (see Figure 28).

Do you suspect the analyzer has locked up?

If yes, completely power-down the analyzer. See “Forcing Power Off” on page 44.

Does the analyzer power-up?

Connect the AC adapter/charger to determine if the internal battery (or internal and external batteries) is the culprit. The analyzer will not power-up if the batteries are completely discharged.

If the analyzer only powers up with the AC adapter connected, the internal battery may be completely discharged.

The external battery has a charge indicator on the underside of the battery pack (side with tabs, see Figure 6). The external battery will need to be removed from the analyzer to view the charge indicator. Press the charge indicator button to determine if the external battery is charged.

Does the analyzer user interface appear?

The **Front Page** screen should be displayed after power-up. Check the Windows task bar (usually at bottom of desktop) to see if the OptiView™ user interface has been loaded. If not, go to the Windows **Start | All Programs** menu and select **OptiView**.

Does the analyzer pass self test?

Go to the **Setup | Self Test** screen and press Run Self Test. All tests need to pass.

Unexpected IP Discovery or Tools results?

Does the analyzer have a valid IP address? Look at the **Front Page** screen OptiView button and see if a valid IP has been configured. Also, see if the Auto Configure capability in the **Setup | TCP/IP** screen has been disabled. If an IP address has been manually entered, it may not be within the local subnet.

Do the touch targets seem to be off?

Try touching around the target to verify if the touch target calibration is off (this is rare). If you suspect the touch target is off, select **Setup | Display**, press **Touch Screen Controller...**, then **Calibrate**. You will be prompted to touch the display at certain points to perform the calibration.

Are you connected to the network?

- ❑ Link light should be on solid green or amber if Link exists.
- ❑ Some activity on Transmit LED and/or Utilization LEDs should be seen.
- ❑ Go to **Setup | Ethernet** screen. An active interface should be indicated.
- ❑ Confirm that Cable Test passed. Try a different cable if necessary.

Does Cable Test pass?

A network connection can not be made if cable test does not pass. Look at the **Front Page** screen **Cable Test** button and see if there is a red X or green check mark in the button. A red X could indicate a faulty cable. If there is a red X, press the **Cable Test** button and go to the **Cable Test | Overview** and **Twisted-Pair Detail** screens to test the cable.

Does the battery charge state appear erratic or inconsistent, or is the battery not consistently holding a normal charge?

Discharge the battery completely, then charge the battery for at least 5 hours.

Does the touch panel display (or Windows) not respond to input?

Press the **On/Off** button to place the analyzer in standby. Press the **On/Off** button again to resume from standby.

If this does not correct the problem, try using a keyboard and/or mouse to shutdown and restart Windows.

If this does not correct the problem, try pressing the **Reset** button (see Figure 28) to reset Windows.

Note

A Windows Reset will not erase information collected on the data acquisition card.

If none of the above corrects the problem, press and hold the **On/Off** button for 7 seconds to shutdown. Press the **On/Off** button again to power-up the analyzer.

Note

*A Windows Restart (either holding the on/off button for 7 seconds or pressing **Start | Shut Down | Shut down**) will erase information collected on the data acquisition card.*

Windows Configuration Precautions

If you are trying to share files, or use TCP/IP based applications (such as the web browser), you may need to configure WINS, DNS, and domain/ workgroup information on the Windows environment.

Restoring the OptiView™ Analyzer Default Configuration and Software

In the event your analyzer becomes unstable, or you feel your analyzer is no longer operating correctly, possibly caused by user installed applications, custom configurations, etc., you may restore the factory default configuration. A disk recovery utility is provided on the analyzer. The analyzer hard drive contains an image of the operating system, and all factory installed applications as originally configured by the factory.

⚠ Caution

Performing a Disk recovery will delete all report and capture files, user installed applications, and custom configurations that are stored on the C: drive. Your analyzer will be returned to its factory default settings.

Make sure you have the charger/AC adapter connected to the analyzer before performing a disk recovery.

It is VERY IMPORANT during the disk recovery process NOT TO INTERRUPT IT or hard drive damage could occur.

During the disk recovery, make sure a 2nd drive is not connected to the analyzer's USB port, or the 2nd disk's contents could potentially be deleted.





To perform a disk recovery, perform the following:

1. Attach an external keyboard.
2. Power-up or restart the analyzer. Keep pressing the **F9** key during the boot-up sequence. At the point when the black screen with the Fluke Networks logo is briefly displayed, the **F9** key needs to be pressed. The Fluke Networks OptiView Disk Recovery Utility screen is displayed.
3. You are then asked to *Press 'Y' to continue, any other key to cancel and reboot*. Press **Y** to continue with the recovery process. The recovery process will take about 30 minutes to complete.
4. When completed, you are prompted to press <ESC> to reboot the PC. Disk recovery is then completed.

You will now have to walk through the Windows license agreement and OptiView configuration instructions found on the **StartupII** sheet supplied with every new purchase.

Specifications

Table 5. General Specifications

Weight without external battery	2.1 kilograms (4.6 lbs)
Weight with external battery	2.8 kilograms (6.2 lbs)
Dimensions	26.0 x 23.4 x 6.4 centimeters (10.3 x 9.2 x 2.5 inches)
LCD touch screen display	800 x 600 pixels, active color panel, CCFT backlight and bezel, touch pad
LED indicators	16 (21 with external battery)
Internal battery	Lithium Ion 11.1V DC (nominal), 2Ah
External battery	Lithium Ion 11.1V DC (nominal), 6Ah
External AC adapter/battery charger	AC input: 120V - 240V, 50/60Hz, 1.5A DC output: 15V, 3.3A
Communication and accessory ports	3 USB, PC Card type II, 1 VGA out 15-pin connector
Network analysis ports	RJ-45 10/100BASE-T Ethernet, fiber 100BASE-FX (OptiView™ Series II Pro, Pro Gigabit), fiber 1000BASE-X GBIC and copper 1000BASE-T GBIC (OptiView™ Series II Pro Gigabit)
Shock and vibration	Meets requirements of MIL-PRF-28800F for Class 3 equipment
Laser	 Class 1 Laser Product, complies with 21 CFR 1040.10 & 1040.11, CFR(J)
Safety	 Complies to CSA C22.2 No. 950 Canadian standards, and UL 1950 (US standards)  Complies with European Union directive EN60950
EMC	 Complies with EN61326, Class A

Supported Network Standards

Table 6. Supported Network Standards

LAN Interfaces	Standard SNMP MIBs Used
IEEE 10BASE-T	RFCs: 1213, 1231, 1239, 1285, 1315, 1493, 1512, 1513, 1643, 1757, 2021, 2108, 2115, 2127, 2495, 2496, 2515, 2558
IEEE 100BASE-TX	
IEEE 100BASE-F	
IEEE 1000BASE-X	

Cable Types

Unshielded Twisted Pair LAN cables (100 and 120 Ohm UTP category 3, 4, 5, 5E, and 6 ISO/IEC Class C and D)

Foil-screened Twisted Pair cables (100 and 120 Ohm ScTP category 3, 4, 5, and 6 ISO/IEC Class C and D)

Cable Length

Table 7. Cable Length, Resolution 0.1m (1 ft.)

Open, shorted or with wire map adapter	1 to 305m (3 ft. to 1000 ft.)	+/- [2% of reading + 0.3 m (1 ft.)]
Terminated with greater than or equal to 15% reflection	1 to 153m (3 ft. to 500 ft.)	+/- [5% of reading + 0.3 m (1 ft.)]

Note

Length accuracy is dependent upon the cable type selected in the **Cable Test | Twisted-Pair Detail** screen with its ideal NVP (nominal velocity of propagation) matching the NVP of the cable under test.

Characteristic Impedance

50 to 150 Ohms, cables 3-5 m (10-16 ft.) +/- (5 Ohms +10%)

50 to 150 Ohms, cables >5 m (16 ft.) +/- (5 Ohms +5%)

Resolution: 1 Ohm

Receive Level

100 to 5000mVp-p, +/- 5%

Resolution: 10mV

Datalink Signal

500mVp-p to 4000mVp-p

Measuring Terminated Cables

Cable Test analyzes individual twisted-pairs of a cable that are terminated into most equipment vendors' Ethernet ports such as on a hub, switch or NIC.

All cable tests other than wiremap and office locator ID are operational in the presence of datalink signal.

Fault Tolerance

The RJ-45 10/100BASE-T Ethernet connection on the analyzer is designed to withstand a maximum of 100 volts.

GBIC Identification

Identifies and operates with the following GBIC module types per SFF Document Number SFF-8053, Gigabit Interface Converter, Rev. 5.4: LX (1300nm), SX (850nm).

WireView™ Compatibility

Detects combinations of shorts, opens, and connector miswires. Compatible with wire mapper/office locators (officially called WireView™, also called wire map adapter and office locator) labeled for Fluke Networks OptiView™ analyzer.

Environmental Requirements

Operating Temperature	10°C to 30°C (50°F to 86°F) with up to 95% Relative Humidity
	10°C to 40°C (50°F to 104°F) with up to 75% Relative Humidity

***Note:** Battery will not charge below 12°C (53.6°F)*

Non-Operating Temperature	-40°C to +71°C (-40°F to +159.8°F)
Altitude	Operates up to 4600 meters (15091 feet)
Approvals	The AC Adapter/charger for the instrument has UL, CSA, CE , SEMKO, CCIB, BCIQ, and GS valid

Electromagnetic Interference	Complies to EN61326, Class A requirements.
Connection to public telephone network	The analyzer network interfaces are NOT FOR CONNECTION TO PUBLIC TELEPHONE SYSTEMS. The analyzer should only be connected to the public phone network through regulatory agency compliant modem devices.