FLUKE *networks®*

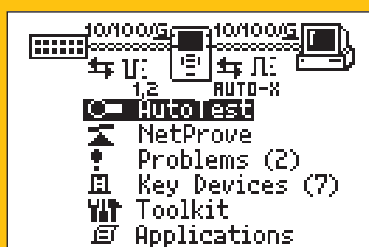# NetTool™ Series II
Inline Network Tester

Email not responding? Who's to blame? Where to start? NetTool Series II redefines how to track down and isolate the source of connectivity problems while providing the vision you need to troubleshoot network devices.

The new Series II NetTool features NetProve™ diagnostics – this easy, one-button test proves if the network is to blame for a connectivity problem. In seconds, you can test connectivity to key devices and service ports enterprise-wide.

NetTool's inline vision provides a unique view into 10, 100 and Gigabit links to troubleshoot device problems fast. Verify compatible configurations of switches and PCs. Monitor the conversations between VoIP phones and the network. Monitor ports for suspicious traffic from spyware, malware, and viruses. Discover key devices, problems, VLANs and switch ports. Measure PoE line voltage and current and verify PoE pairs.

And if the problem is cable related, NetTool verifies wiremap, displays the distance to cabling faults, and locates cables others can't with IntelliTone Digital Toning.

All this in a handheld, portable tool built to take what you can dish out.

NetTool Series II features

- **NetProve diagnostics** – isolate device and application connectivity issues in seconds.
- **Inline Gigabit** – troubleshoot Gigabit-to-the-desk deployments with dual 10, 100, and 1000 Mbps Ethernet interfaces.
- **PoE current measurement** – view PoE current, voltage and pair information either inline or single-ended.
- **Monitoring and authentication option** – identify spyware, malware, and viruses with port monitoring; troubleshoot authentication issues with 802.1X log.
- **VoIP Option** – monitor IP phone boot-up and VoIP conversations and measure key call quality metrics.
- **PC to network connectivity** – connect inline between two network devices and see common connectivity problems like speed and duplex mismatch, link problems, and errors.
- **PC's network configuration** – review servers the PC is configured to use, with services offered, name, IP address and subnet.
- **VLAN, CDP, EDP, LLDP visibility** – see native and appliance VLANs and discovery protocol information.
- **Spot available network resources** – see the IP address, MAC address, subnet, and services offered by active servers, routers and printers.
- **Identify protocols on the PC and network** – IP, NetWare, NetBIOS, Apple, and other protocols shown to identify mismatches and unwanted protocols.
- **Distinguish service at a network drop** – determine whether a drop is offering Ethernet, phone, Token Ring, or is inactive.
- **Monitor network health** – see frames sent, utilization, broadcasts, errors, and collisions – for both the desktop and network conversations.
- **Problems Log** – alerts you to excessive errors, duplicate IPs, unanswered DNS queries, unwanted protocols and TCP/IP connection failures.
- **Perform basic cable tests** – check patch cables or installed wiring for length, shorts, split pairs, or opens, including pin-to-pin connection.
- **IntelliTone™ Digital Signalling** – quickly and safely locate cables on active networks, even when terminated at a switch.
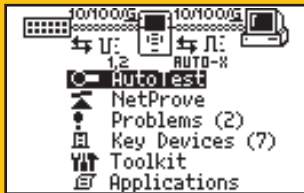
Inline vision between the PC or VoIP phone and network to solve application connectivity problems with the touch of a button

Technical Data

NetProve™ diagnostics

```
✓  Device Response      ⊠
⊔ Ping (32 bytes)
 Sent  Rcvd  Lost  Loss
   3     3     0    0%
 Min   Max    Avg   Limit
 <1ms  <1ms  <1ms  10ms
⊔ App Port DNS(53)
 Sent  Rcvd  Lost  Loss
   3     3     0    0%
```

Inline

```
  10/100/G      10/100/G
⇆ U:    ▤  ⇆ ⌿:
    1,2        AUTO-X
◯▭ AutoTest
  ⏶ NetProve
  ⏴ Problems (2)
  ⊞ Key Devices (7)
  ⊺⊺ Toolkit
  ⊟ Applications
```

Inline port monitor

```
  Inline Port Monitor  ⚲⊠
64.236.22.63:80,TCP
ads.cnn.com
http frames: 20, 8KB

66.151.244.166:80,TCP
cnn.122.2o7.net
http frames: 8, 5KB
```

PoE measurement

```
  ⊓ Link Config        ⊠
PoE Status
   Pairs:   -7,8 +4,5
   Volts:   51.52 v
   Current: 58 ma
Rx Pair: 3,6
Advrtsd Spd: 10/100
Actual Spd: 100Mb
Level: ⊓: Normal
```

Complete documentation

```
  ⊟ Reporter Menu      ⊠
✗✗ Delete All Reports
1. 7-8-06 1620
2. BLD4 FL2
3. <empty>
4. <empty>
5. <empty>
6. <empty>
```

Isolate device and application connectivity issues in seconds with NetProve™

Verify, isolate, and document device and connectivity problems faster than ever before with automated NetProve diagnostics. A user calls you, blaming the network, when he is unable to send an email message. Armed with a NetTool Series II, in seconds you can prove whether the network is truly at fault by seeing connectivity to key network devices and services. If the network is at fault, NetProve will isolate the source of the problem so you can fix it fast. If it is not the network, NetProve will identify which device or application port is slow to respond so you can dispatch the appropriate resource to correct the problem. This revolutionary new way to resolve connectivity issues is at least four times faster than conventional methods, resulting in improved productivity and happier users.

And NetProve improves IT staff efficiencies through improved workflow – simply create multiple catalogs representing various segments of your network. Within minutes, you can prove connectivity with up to 100 key enterprise devices and services. Do you manage remote sites? Equip less skilled personnel at remote sites with NetTools, pre-loaded with NetProve catalogs, to shift some frontline troubleshooting responsibilities to local staff.

```
⚞ NetProve        ⚲⊠
⊞ MyKeyHosts
⊞ MyWAN
⊞ SiteA_Device
⊞ SiteB_Device
⊞ SiteC_Device
⊞ SiteD_Device
⊞ WrkGrp_A
```

Use Netprove to build catalogs representing various segments of your network – organize catalogs by devices, applications, workgroups, and/or sites.

Inline functionality reduces troubleshooting time

NetTool Series II is the *only* handheld troubleshooting tool with inline vision into 10, 100 and Gigabit links to see the actual traffic between the network and end devices like PCs, VoIP phones, access points and security cameras. By analyzing network-device conversations, you can view detailed configuration information to troubleshoot compatibility and connectivity issues. Monitor link health and network problems, discover key devices, identify active protocols, and view segment information including VLANs and switch port.

PoE

IP

Maintain network security

Suspect malicious applications may be affecting a user's network connection? The monitoring and authentication option allows you to identify spyware, malware, and viruses fast. Select from a list of ports used on your network and test against the expected list during troubleshooting. Unexpected traffic and ports will be displayed and flagged during the autotest.

Whether you have already deployed 802.1X or plan to soon, the monitoring and authentication option can help. For troubleshooting, monitoring and authentication can be used inline between a PC and the network to observe the client authentication process and identify failures. For deployment, your NetTool can be used to emulate a device and verify connection by loading it with your enterprise 802.1X configuration settings.

Debug VoIP phone problems

Connect inline for visibility into real-time VoIP traffic to quickly diagnose IP phone boot-up and call control problems and to measure key call quality metrics. Qualify links as being ready for VoIP during pre-deployment assessments. Monitor VoIP calls and troubleshoot VoIP problems near the edge of your network with an immediate view into call processes, avoiding the need for complicated and time-consuming packet capture and post-capture decode. Measure key VoIP metrics, including jitter and dropped packets, to quantify the quality of an IP call.

Measure PoE power

Fully characterize your Power over Ethernet (PoE) links prior to the rollout of PoE services or the installation of powered devices. Verify the PoE pairs, line voltage and current to ensure a successful deployment. Place a NetTool Series II inline between a PD and PSE to troubleshoot PoE link configuration issues.

Locate cables on active networks

IntelliTone digital signaling gives you superior vision for locating cables hidden in floors, ceilings, walls and in bundles. When paired with an IntelliTone Probe (optional), this breakthrough digital technology facilitates safe and effective cable location on active networks, even when terminated at a switch. The IntelliTone Probe clearly identifies this digital signal with audio and LED visual indicators, allowing rapid isolation of the correct cable from a bundle or on a patch panel – eliminating hours of cable confusion.

Save, send, or print reports

Generate comprehensive test reports to document network resources and PC configurations – document the network, end device, protocols, key devices, VoIP log and NetProve pass/fail results. Create baseline reports for future reference. Deliver proof that the network is operating properly or, if not, document the source of the problem for trouble ticket escalation to other groups like the server or application support team.

Minimize training time, maximize productivity

NetTool is so easy to use, even inexperienced technicians can get up to speed quickly with minimal training. And it's priced so every technician can have one. By reducing the time and expense associated with troubleshooting PC, VoIP, device application connectivity problems, NetTool dramatically increases technician productivity.
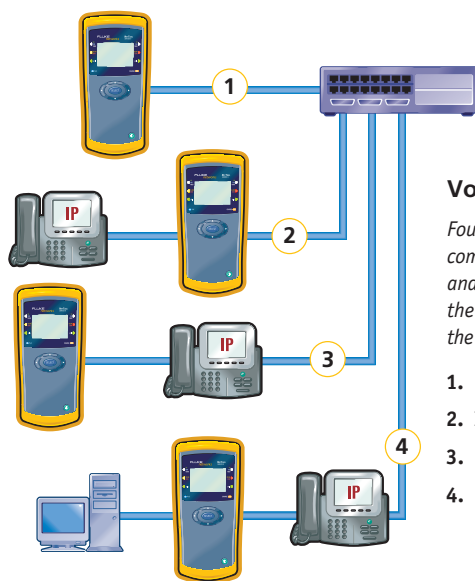
VoIP Option testing configurations

Four testing locations shown above support the complete VoIP lifecycle with testing, monitoring and troubleshooting capabilities at the edge of the VoIP network: before phone installation, with the phone installed and cascaded off the phone.

1. NetTool to switch
2. IP phone to NetTool to switch
3. NetTool to IP phone to switch
4. PC to NetTool to IP phone to switch

The right tool for the job

Since no two networks are identical, we offer several models to match your individual requirements and to maximize the value of your NetTool investment. From our top-of-the-line NetTool Series II Pro VoIP to the entry-level NetTool 10/100, you will find a NetTool that fits your network troubleshooting needs and your budget.

All NetTool models feature an Autotest to troubleshoot the cabling infrastructure and to test active Ethernet networks. Features common across all models include cable testing, a problem log, protocol discovery, device and service discovery, and visibility into link configuration and health. The table at right highlights the key differences between NetTool models.

Feature	Series II Kit	Series II Pro VoIP	Series II Pro	10/100 Pro VoIP	10/100 Pro	10/100 Standard
1000 Mbps Ethernet interface	•	•	•			
Inline device and traffic analysis	•	•	•	•	•	Option
NetProve device and application connectivity diagnostics	•	•	•			
Port monitoring and authentication	•	Option	Option			
VoIP testing, monitoring and troubleshooting	•	•	Option	•	Option	
Inline PoE voltage measurement and pair identification	•	•	•	•	•	Option
IntelliTone digital toning	•	•	•			
Device and network reporting	•	•	•	•	•	
PC interface for data transfer	USB	USB	USB	Serial	Serial	Serial
Internal NimH battery charging	•	Option	Option			
IntelliTone 200 Probe + Wireview cable IDs #2-6	•	Option	Option			

Ordering information

NetTool models include NetTool tester, interface cable, four AA batteries, wiremap adapter, multi language Getting Started Guide, and resource CD with Users Manual and companion utility software.

Models	Description
NTS2-NSKIT	**Series II Network Service Kit** with monitoring and authentication option, VoIP option, 10/100/1000 inline, NetProve, IntelliTone toning, NiMH batteries/charger, IntelliTone 200 Probe, Wireview cable IDs #2-6, deluxe carry case
NTS2-VOIP	**Series II Pro VoIP** with VoIP option, 10/100/1000 inline, NetProve, IntelliTone toning
NTS2-PRO	**Series II Pro** with 10/100/1000 inline, NetProve, IntelliTone toning
CIQ-VOIP	**CableIQ VoIP Enterprise Service Kit** includes: CableIQ Advanced IT Kit and NetTool Series II Pro VoIP
NT-VOIP	**10/100 Pro VoIP** with VoIP option, 10/100 inline
NT-PRO	**10/100 Pro** with 10/100 inline
NT	**10/100** single-ended

Options and Accessories

Models	Description
NTS2-VOIP-OPT	Upgrade from NTS2-PRO to NTS2-VOIP
NTS2-MONAUTH-OPT	Add monitoring and authentication capabilities to NTS2-PRO or NTS2-VOIP
NT-VOIP-OPT	Upgrade from NT-PRO to NT-VOIP
NT-PRO-OPT	Upgrade from NT to NT-PRO
MT-8200-63A	IntelliTone 200 probe for Series II
TPAK	ToolPak hanging kit for Series II
NTS2-POWERPAK	AC adapter and NiMH battery set for Series II
DTX-ACUN	AC universal adapter for Series II
BATT-AA-NIMH (4)	Rechargable NiMH battery set (4) for all models
NT-AC-ADAP	AC adapter for 10/100
NT-BATT-CHG	NiMH battery charger for 10/100
WIREVIEW 2-6	WireView WireMappers #2-6 for Series II
NT-HOLSTER	Holster for 10/100
GLD-NT	Gold priority support for all models
GLD-NT-REN	Gold priority support renewal for all models

Free Personalization Option with registration

Register your NetTool tester and receive a personalization option free. Load your custom image into your NetTool to uniquely identify your tester. Also receive notification of software upgrades and product enhancements.

N E T W O R K S U P E R V I S I O N