US-8015

NET TONER & PROBE KIT

Instruction Manual

US-8015 NET TONER & PROBE KIT
Description

The Net Toner & Probe Kit is a practical telecom and network installation, maintenance and troubleshooting tool. The kit helps you locate and identify wires, pairs and cables. The Net Toner has the unique features of enhancing talk battery power supply to allow communication over inactive pairs, using telephone test sets. It provides two selectable tones which allow you to trace cable and locate faults for troubleshooting both voice and data circuits. It also tests cable continuity and can determine line 1 and line 2 polarity and voltage in data and voice lines. It features a tone signal, two alligator clips, & 4-conductor (RJ12) modular cable to test telecom, cats cabling, coax cable and bare wires. In continuity mode, when a short circuit is detected an audible sound will be heard (US-8015A only). The short circuit test function are only applied to line 1 4/5 when using the   RJ12 plug cable. The tone generated by the Net Toner can be easily traced by the Net Probe or any other commercial probe.

The Net Probe comes with adjustable volume control and Ring/Tip polarity test indicators, an earphone jack for noisy environments, low battery indicator, easy tip replacement, and lanyards attachment point for hand-free operation. The Net Probe is also equipped with a visual signal indicator and a flashlight help to find the target in dark field (US-8015A only). When used in conjunction with the toner, the Net Probe allows you to trace and troubleshoot Telecom/Datacom, Security/Alarm, CATV and Audio cable systems. This Kit is a must-have tool for installation, service and repair.

Features:
Net Toner
1.   Provides 2 selectable tones for tracing wires and cables.
2.   Enhances talk battery power supply to allow communication over inactive pairs.
3.   Test cable/wire continuity, and determine line 1 and line 2 polarity.
4.   Built-in alligator clips and 4-conductor RJ12 cable for multiple connection options.
5.   Durable nylon carrying case with belt loop includes.
6.   An audible sound will be heard when a short circuit is detected (US-8015A only).

Net Probe
1.   Comes with adjustable table volume control.
2.   Includes Ring/Tip polarity indicators and RJ45 jack.
3.   An earphone jack for noisy environments.
4.   With low-battery indicator and easy tip replacement.
5.   Lanyards attachment point for hand-free operation.
6.   Includes visual signal indicator and flashlight (PR-608A only).

US-8015

Operating Instructions

WARNING – ELECTRIC SHOCK RISKS

★ Keep this unit away from water, moisture and rain to avoid electrical shock.

★ Never connect this Toner or Net Probe to a live wire from a non-compatible telephone Network system. Doing so may damage the units and or harm the operator.

★ This Kit is certified for indoor use only.

Warning – live circuit

Acceptable voltage – The tester is designed to bear voltage conditions commonly found on live telephone wires; it can softy be connected to wires carrying 48 VDC or less at less than 80 mA or 24 VAC.

Unacceptable voltage – Do not connect the tester to wires bearing over 48 VDC or at 80 mA or 24 VAC or higher.

Do not connect to live AC circuits.Doing so causes an extreme shock hazard and damage the tester.

When connecting the tester to a previously untested circuit, the tester should always be in OFF mode.

(A) To Send Tone for Cable Tracing

⚠ **Do not connect to circuit carrying AC voltage in "Tone" mode.**

1) With the left slide switch in the "Tone" position, the tone LED constantly flashing to indicate the "Tone" mode.
2) Connect the red lead to a wire of the cable to be traced, and connect the black lead to another wire of the cable, but not of the same pair or connect black lead to the ground, if no ground is available, leave the other (black or red) lead open.
3) Tracing pair or wires is terminated on a patch panel or a terminal block, connect both clip leads to the cable or pair.
4) Or connect red lead to Ring-negative, and connect black lead to Tip/positive conductor.

5) The RJ12 module cable can be used to connect to a wall jack directly but the tone will be on line 1 (pin 4/5 of RJ45) or (pin3/4 of RJ12).
6) Select the right slide switch for an alternating tones (parallel or cross tone).
   When select parallel tone, 3/6 and 4/5 LEDs will be flashing, select cross tone, 3/6 LED will be light on. The parallel tone may generate a stronger signal.
7) Use the Net Probe to find the cable you have connected to, when the tip of the Net Probe touches the right cable/wire the tone will be at it's loudest.
8) Move left slide switch to "Off/Line" mode, the tone LED turns off indicating that the tone is off.

(B) Supply Talk Battery Power

⚠ The talk battery mode should not be used with voltage present.
   Please use a new battery to enhance talk power supply.

1) With the left slide switch in the "Talk/Cont" position.
2) Using the test leads, connect the Net Toner and a telephone test set (buttset) to the inactive circuit, in series or parallel, as illustrated.

SUPPLY TALK POWER (PLACED IN SERIES)
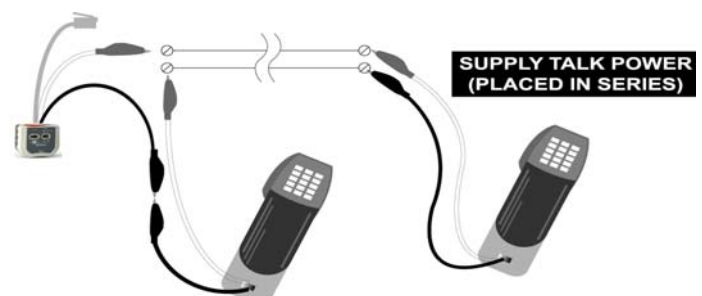
3) With the right slide switch in "Talk" position.
This provides additional battery power to enable voice communication over the inactive circuit.
4) Place both Test Sets "Off Hook" or "Talk" position to establish communications.
5) Move the left slide switch to "Off/Line" position to avoid draining battery.

(C)   Testing Wire/Cable Continuity

⚠   Do not connect to AC or DC voltage circuit in "Cont" mode.
Before connecting an unknown cable/wires to the Net toner in "Cont" mode, use the OFF/LINE mode to check and ensure that the cable/wires are not powered.
Connecting the live powered cables in "Cont" mode will damage the Net Toner.

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you wish to test or simply connect the two wires manually.
2) Attach the alligator clips to the 2 pins that you wish to test.
3) Read results on the "Cont" LED. A lit LED indicates that the cable is continuous. An unlit LED indicates that it has a break at some point.

Coax Cable Testing
a. Test terminated Coaxial Cables Connect the red test lead to the connector housing and the black test lead to the center pin or to the ground.
b. Test un-terminated Coaxial Cables Connect the red test lead to the outer shield and the black test lead to the ground or to the center conductor.

(D) Line Polarity Test:
To determine the polarity of a wire pair and identify Tip and Ring.

⚠   Do not connect to circuit carrying AC voltage in "Line" mode.
1)   With the left slide switch in "Off/Line" position.

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1) With the left slide switch in "Cont/Talk" position.
2) Connect the red and black alligator test leads to both ends of the cable/wire you want to test.
3) The "Cont" LED indicator will light **Green. Bright green** indicates a low resistance path. **Dim green** indicates a high resistance path. **Unlit** indicates an open circuit.
4) When a short circuit is detected, the 〝Cont〞LED indicator will light Green, an audible sound will be heard simultaneously (PR-608A only).
5) Move the left slide switch to "Off/Line" position to avoid draining battery of clip leads touch during storage.

Installed cables too long to test by alligator clips.

1)   Place a termination device on the far end of the cable, connecting the 2 pins that

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2)   Connect the red lead to the Ring(-) Connection, and the black test lead to the Tip(+) Connection.
3)   To check Line 2 (3/6 pins) polarity use the RJ12 modular plug connection.
4)   **Green** indicates normal polarity
Red   indicates reversed polarity
Flickering Red and Green indicates presence of AC power or ringing line.
A dim LED indicates a busy or faulted line.
If the 3/6 or and 4/5 LEDs is **off**, there is no DC voltage on the line.
5)   **Dial the line to be verified**. If the toner is connected to the correct line, the Line 1 LED will flickering red and green.
6)   **Monitor the line**, move the slide switch to "Cont" position.
This will terminate the call to confirm the identification.
When not in use, the Net Toner's cables can be kept bundled and organized by using the convenient Velcro cable strap attached to the cables near the Net Toners' housing.

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NET PROBE

(A) Tone tracing

1) Set the 〝Tel/Trace〞 selector to
   〝Trace〞 ↓ position.
2) Push 〝Trace〞 button and the probe end becomes active.
3) Hold 〝Trace〞 button to trace a line or plug the tracer's RJ45 jack into a wall outlet using a jumper cable or connect the clip leads to test pins.
4) The tone is loudest when the tip of the tracer is near and parallel to the cable carrying the tone signal.

(B) Flashlight

1) Set the right side light switch to 〝ON〞 ↑position to turn the flashlight on to help you to find the target in dark field (PR-608A).

2) Set the switch to 〝OFF〞↓position to turn off the light.

(C) Ear Jack:

In noisy environments, 2.5 mm headphone may be plugged into the ear jack on the
right side of the Net Probe, be sure to fully seat the plug into the jack, and set the 〝EAR/SPKR〞 selector to 〝EAR〞 position. The speaker is multed to avoid disturbing people nearly.

(D) Line Testing

⚠ **Do not connect to circuit carrying AC voltage in "Tel" mode.**

1) Set the 〝Tel/Trace〞 selector from 〝Trace〞 to 〝Tel〞 position.
2) Connect an RJ11 or RJ45 plug into the Jack on the probe or connect the probe to a wall Jack using a jumper cable.
● NRM LED lighted – indicates the phone line carries proper voltage and correct polarity.

● REV LED lighted - indicates to phone line's polarity is revised.
● Both NRM and REV LEDs lighted – The voltage is AC. Disconnect from the line and proceed with caution.
● Both NRM and REV LEDs flashing – The line is ringing from phone number verification.

NOTE: If one or both NRM and REV LEDs are on, voltage is present on the center pair of connectors on the RJ Jack (4/5 on RJ45, 3/4 on RJ11 and 12).

● No LEDs lighted – the cable is most likely not connected.

(E) Replacing Tip

1) Grasp the tip and gently turn it counterclockwise until it separates form the probe body.
2) Replace the old tip with a compatible new tip and reverse step1.
   Note: Do not overtighten the tip.

(F) Power / Battery Low

1) Both units require one standard or alkaline 9V battery.
   Slide back the battery cover to replace new battery.
2) When a low battery is indicated on either unit, change the battery immediately, as continuing to test with a low battery may produce inaccurate results.

SPECIFICATIONS

Net Toner

Test Performed	Generates Tones, Checks Wires Continuity, Provides Talk Power, Checks Lines Polarity.
Display	Slide Switch and LED Indicators – Tones, Line, Cont, Talk.
Tone Frequency	US-8015 Cross : 1KHZ ~ 600HZ Parallel: 1KHZ ~ 600HZ
Over Voltage Protection	60 VDC in Tone / Line Mode
Operating Temperature	0°C ~ 45°C (32°F ~ 113°F)

Size (approx)	61.5 x 63 x 36 mm 2.5" x 2.4" x 1.4"
Weight (approx)	75g (without battery)
Battery	One 9V DC Standard or Alkaline Battery
Certification and Compliance	CE APPROVED

Net Probe

Test Performed	Traces Tones, Line Polarity Test Battery Low Detect.
Test Mode	Trace/Tel, Speaker/Ear
Display	Audio sound / LEDs
Gain	30 dB
Battery	One 9V DC Standard or Alkaline Battery
Interface	Trace Button, LEDs, Volume Control Replaceable Tip, 2.5mm Earphone Jack

Size (approx)	212 x 40 x 27.5 mm 8.3" x 1.55" x 1.08"
Weight (approx)	80g without battery
Certification and Compliance	CE APPROVED

Package Contents
1) Net Toner with alligator clips and RJ12 plug cable
2) Net Probe
3) Carrying Pouch
4) User Manual

Order Information
US-8015 Net Toner & Probe kit.
US-8015A Net Toner & Probe kit, Flash light