CTX690 Network Tone and Probe Kit

USER MANUAL

Introduction

Congratulations on your purchase the CTX690. This Network Toner and Probe Kit is designed specifically for locating and tracing cables on inactive or active networks, and live or dead phone lines, as well as coaxial video cabling systems. Today's media networks have a combination of twisted pair data, telephone voice, coax and security/alarm video wiring. It provides 2 selectable powerful Net and Tel tones allow cabling installers, Datacom/Telecom technicians directly plug into an active networks, patch panel, wall outlet or live phone line, makes it easy to quickly isolate the right cable in the equipment closet, and locating an unlabeled network cables during installation and troubleshooting.

Meter Description

1. Net Toner
2. F Male to Alligator Clip Adaptor (Optional)
3. Trace Button/Volume Adjust
4. Probe Tip
5. RJ45 Connector
6. RJ11 Connector
7. Alligator Clips
8. Mode Function Switches

Operating Instructions

Note: To extend battery life, remember to turn off the probe and transmitter after tracing the cables

Self Check

- Turn the probe on and set the transmitter to TONE.
- The RED LED on both units will light up. Replace the batteries if they do not.
- Touch the probe to the transmitter wires and check for the generated tone..

⚠ 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 safety 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.

Power: Both units require one standard or alkaline 9V battery.

Cable/Wire tracing

"Tone" mode transmits 2 selectable powerful net tones to allow the user to quickly and accurately trace wires or cables directly in connection with an active Network Hub, Switch, Router and Live Telephone Line Systems.

Set the left slide switch in the "Tone" position, the tone LED constantly flashing to indicate the "Tone" mode is on.

I. Locating & tracing RJ45 cables or wall outlets on inactive and active networks on switch, Hub, router, patch panels, termination blocks or hidden within bundles.

1. Use the RJ45 plug cable for tracing inactive & active network cabling systems.

2. The RJ45 plug cable can be used to connect an RJ45 network jack to be traced or use an optional RJ45 inline coupler to connect RJ45 plug and RJ45 plug of the cable to be traced.

3. Select the right slide switch for an alternating tone (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.

4. Use the Net Probe to find the cable you have connected to, when the tip of the Net Probe touches the right wire/cable, the tone will be at its loudest, with a bright red signal light.

5. Move left slide switch to "OFF/LINE" position, the tone LED turns off indicating that the tone is off.

II. Tracing Live or Dead Telephone Lines

1. Use the RJ11 plug cable for tracing dead & live phone lines.
2. The RJ11 plug cable can be used to connect to a RJ11/RJ11 phone jack to be traced or use an optional RJ11 inline coupler to connect RJ11/RJ11 plug and RJ11/RJ11 plug of the cable to be traced.

3. The far end of the cable being traced can be located by using the Net Probe.

III. Locating individual wire, pairs with alligator clips.

1. Connect the black alligator clip to the ground and then connect the red clip to the wire to be traced.
2. Connect alligator clips across the line or attach one clip to ground and the other clip to one wire of a cable or pair to be traced.

IV. Coax Cable Tracing

1. Tracing terminated coax cables
   - Using optional F-male to alligator clips adapter.
   - Connect the F-male adapter to the F-female connector of the Coax cable to be traced.
   - Connect red clip of the adapter to the red clip on the toner.
   - Connect black clip of the adapter to the black clip on the toner.
2. Tracing un-terminated coax cables
   - Connect the red clip to the outer shield and black clip to the ground or to the center conductor.

V. Isolating individual wire pairs for exact pair identification

1. In "TONE" mode when both clips (red & black) connected to the pair, and move right slide switch to the 4/5 Cont LED position can be used on a dead line to identify and verify having found both clips of a pair.
2. When touching the wire together, momentarily shorting the far end of a cable pair.
3. The audible tone will be disappearing when you short the correct pair on the far end. On the Net Toner the 4/5 Cont LED will turn off and the audible tone will change the cadence of the tone generated simultaneously, indicating the pair has been found.

Checking Status and Polarity of Phone Lines

Indicates proper line polarity and status by lighting its LED either Green or Red.

⚠ Do not connect to circuit carrying AC voltage in OFF/LINE mode.

1. Move the left slide switch in OFF/LINE position.
2. Attach either the RJ11 plug cable for checking Line 1 and Line 2. Or the alligator clips for checking Line 1 only to the connection to be tested.
3. Connect black clip to Tip (+) and the red clip to Ring (-) or one clip to each wire of the pair if designation is unknown.

- If the green light up indicates the polarity is correct/normal. It means that the black clip connects to Tip (+).If the red light up, it means the clips are reversed.

- A bright LED indicates the line is not in use.
- A dim LED indicates the circuit is in use.
- Flickering red & green indicates presence of AC power or ringing line.

4. Dial the line to be verified. If the Net Toner is connected to the correct line, the Line 1 LED will flickering red and green.
5. Monitor the line; move the slide switch to “Cont” position, this will terminate the call to confirm the identification.

Testing Continuity of a Cable/Wire Circuit

⚠ Use only on non-energized circuit.
Do not connect to AC or DC voltage circuit in “Cont” mode.

Before connecting to an unknown cable/wire to the Net Toner in “Cont” mode, use the OFF/LINE mode to check and ensure that cable/wire are not powered. Connecting the live powered cable in “Cont” mode may damage the Net Toner or cause erroneous results.

1. With the left slide switch in “Cont/Talk” position and right slide switch in “Cont” position.
2. Connect the red and black clips to both ends of the cable/wire that 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. No Light, indicates an open circuit.
4) When a short circuit is detected, the “Cont” LED indicator will light green.

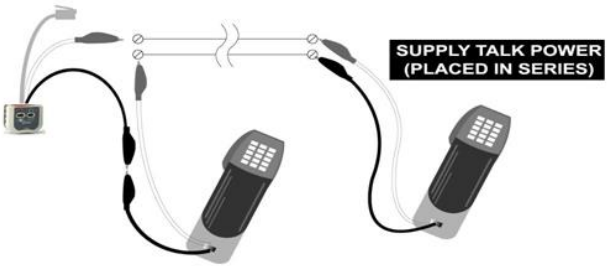
5) Move the left slide switch to “OFF/LINE” position when finished to avoid draining battery of clips touch during storage.

Supply Talk Battery Power

⚠ The talk battery mode should not be used with voltage present.

The Net Toner will supply power to operate handsets. This feature particularly useful when two installers are working at terminal panels, and must have at least one identified pair connected between them. This model allows the installers to commutation using their handsets.*Please use a new battery to enhance talk power supply.

1. With the left slide switch in the “Talk/Cont” position and the right slide switch in the “Talk” position.
2. Using the red & black clips connect the handsets in series as shown in the diagram.



3. Place both headsets “OFF HOOK” or “Talk” position to establish communication.

4. When finished, move the left slide switch to “Off/Line” position to avoid draining battery. No power drain in “Cont/Talk” mode with clip open but the clips touching during storage could drain the battery.

Probe Functions and Indications

(A) Tone tracing

1) Set the "Trace/Hub blink" 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 probe's RJ45 jack into a wall outlet or patch panel port using a jumper cable.
4) The tone is loudest when the tip of the tracer is near and parallel to the cable carrying the tone signal.

*Application Hint: To detect tracing tone signal at patch panel. For the best signal, using a patch cable, one end connect to Net Probe Pro RJ45 jack, then use the other end patch cable connect or touch the patch panel port.

(B) Signal strength LED

Touch the tip of the Probe to the insulation of each suspect wire/cable, when the tip touches the right cable, the tone will be at its loudest and the "Signal" LED will turn on. (You may turn the volume down as the tip gets nearer to the right cable to help distinguish between the cables and the tip touch.)

(C) Flashlight

1) Set the left side light switch to "ON" ↑position to turn the flashlight on to help you to find the target in dark field.
2) Set the switch to "OFF" ↓position to turn off the light.

(D) Ear Jack:
In noisy environments, 2.5 mm headphone may be plugged into the ear jack on the right side of the Net Probe Pro, be sure to fully seat the plug into the jack.
The speaker is muted to avoid disturbing people nearly.

(E) Hub Blink and Link Mode (Hub blink mode LED blink Yellow)
To locate an active Ethernet port drop on Hub/Switch or Router and identifies an unknown RJ45-outlet for active Ethernet.
The probe will blink the corresponding port LED of the Hub or Switch at the other end for fast identification.
The feature provides a simple and effective way to identify Switch, Hub port assignment on active networks; it's perfect for tracing active network cable location.

1. Hub Blink
The probe will send signal to make the connected PoE/Ethernet port blinking at a set frequency, this will enable help the installers to easily and quickly find the connected port for an active Ethernet cable.

1) Connect the probe's right side " Trace-Net" RJ45 jack to a cable or network outlet at a room or workstation for which the Ethernet port is to be located.
2) Set the right side switch to "Hub Blink mode" ↑ position, Blink Hub mode LED begin blinking Yellow

and start to send a link pulses to connect the port on a Ethernet/PoE Switch or Hub.

If an Ethernet link is active on the cable, the probe begins blinking the link indication port of the Hub or Switch at the far end and Active Link Green LED will be on simultaneously.

If no active connection was detected, the Active Link LED will be off.

2. Link Indicator

If an Ethernet link is active on the cable or network outlet, the Link Green LED will be blinking. Simultaneously the tester begins blinking with the link indicator on a port of Hub/Switch at the far end.

This will assist with troubleshooting for quickly determine whether an unknown outlet or cable is connected to an active Hub/Switch.

If an Ethernet line at far end, Hub is active on the cable the Link LED will be blinking.

If no active connection was detected, the Link LED will be off.

NOTE: In Hub blink mode, if a cable is connected to remote unit or connected to a STP cable, this will cause the Link LED blink.

(G) 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.

(H) 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 unit, change the battery immediately, as continuing to test with a low battery may produce inaccurate results.

LIMITED WARRANTY

The manufacturer warrants to the original consumer that this product is in good working order for a period of one year from the date of manufacture or the date of purchase. During this period, the product will be repaired or replaced without charge for either parts or labor. Repair or replacement as provided under this warranty is the exclusive remedy of the purchaser.

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.
Interface	RJ45 plug cable,/RJ11 plug cable and alligator clips.
Tone Frequency	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, FCC APPROVED

Net Probe Pro

Test Performed	Traces Tones, Hub blink/Link mode Battery Low Detect.
Test Mode	Trace/Hub Blink/Link mode/Flash light.
Display	Audio sound / LEDs
Gain	30 dB
Battery	One 9V DC Standard or Alkaline Battery
Interface	Trace Button, LEDs, Volume Control, RJ45 Jack 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, FCC APPROVED