

NOTES:

Testing Cables for Pin-out Wiring Configuration (Cable Mapping):

⚠ DO NOT USE ON LIVE CIRCUITS

- For testing local patch cables, connect the cable between the RJ45 sockets located on sides of the tone generator and tone probe.
 - For testing installed cables, use a patch cable to connect the tone generator into the jack at one end, and a patch cable to connect the tone probe into the jack at the opposite end of the cable.
 - Set "tlk, cont, line/tone" switch on side of tone generator to the "cont" position.
 - Set the tone generator "slow, fast, off" switch on the mapper transmitter to either the "slow" or "fast" position to scan through pins 1-8 and shield.
 - Read the lights for pins 1 through 8, and shield on the Tone Generator/Cable-Check Transmitter and the Tone Probe/Cable-Check Receiver units to determine connections through the cable. If one light on each end is shown, there is a good connection between the respective pins. If a light appears on the Cable-Check Transmitter and no lights appear on the Cable-Check Receiver, there is an open contact between the respective connectors. If multiple lights appear on the transmitter or receiver at any one time, a short exists between respective contacts.
- For the RJ11 6-wire systems, pins 1 and 8 are not shown. Pins 2 through 7 will light up only whereas, light 2 equals pin 1 of the RJ11 cable and light 7 equals pin 6 of the RJ11 Cable.**

Cable Mapping Good 1-to-1		Cable Mapping Cross 7-to-4		Cable Mapping Short 1-to-2, 2-to-1		Cable Mapping Open Pin 3		Cable Mapping Open Pin 5	
Transmitter	Receiver	Transmitter	Receiver	Transmitter	Receiver	Transmitter	Receiver	Transmitter	Receiver
8	8	8	8	8	8	8	8	8	8
7	7	7	7	7	7	7	7	7	7
6	6	6	6	6	6	6	6	6	6
5	5	5	5	5	5	5	5	5	5
4	4	4	4	4	4	4	4	4	4
3	3	3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1
Shield	Shield	Shield	Shield	Shield	Shield	Shield	Shield	Shield	Shield

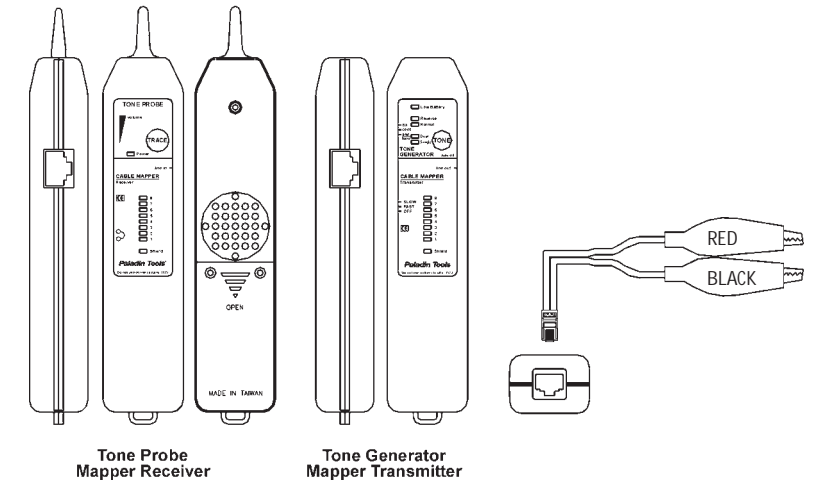
Sample Test Results:

Remote Light Sequence	Cable Fault
1 2 3 4 5 6 7 8 S	None, cable wired correctly
2 1 3 4 5 6 7 8 S	Conductors 1 & 2 reversed
1 2 & 3 2 & 3 4 5 6 7 8 S	Conductors 2 & 3 are shorted
1 2 3 - 5 6 7 8 S	Conductor 4 is open
1 2 4 3 6 5 7 8 S	Pair 3/6 is transposed with pair 4/5
1 2 3 7 5 6 4 8 S	Conductors 4 & 7 are switched
1 2 3 4 5 6 7 8 -	Shield is open
X 2 3 4 5 6 7 X	RJ11 6-pin is wired directly

Operating Instructions

Features and Benefits

- A complete test system for data and telephone installations
- Applies distinct, selectable tone patterns
- Applies tone to balanced and unbalanced circuits using dual (Tip & Ring) or single (Tip) modes
- Tests line and load continuity
- Tests polarity of standard phone systems
- Red and black alligator clip-to-RJ11 cable included
- Tone probe has adjustable volume control
- Cable mapper tests RJ45 and RJ11 local patch cables & installed cables for continuity including cross-over telephone connections. Tests data and telephone connection schemes
- Cable-check identifies opens, shorts, cross connections, and good connections
- Tests UTP, STP, and flat satin cable types with RJ45 connections.
- Two RJ45 shielded patch cords included
- Two 9-volt batteries included
- Auto-off battery save function
- Durable nylon carrying case with belt loop included
- Two RJ11 patch cords included



Tone Tracing Note: the tone signal only emits from the top RJ11 socket. Tone is NOT present on the side RJ45 socket

⚠ DO NOT USE ON LIVE CIRCUITS

- For testing directly into RJ11 wall jacks, use an RJ11 patch cord wired 1-to-1 connection (provided). Connect the RJ11 patch cord into the top of the tone generator in the RJ11 socket. (Proceed to step 4).
- For testing telephone boxes, discreet wire connections, or open contact connections install the alligator clip cable provided into the top of the tone generator in the RJ11 socket. (Proceed to step 4).
- To test RJ45 systems, use the RJ11-to-RJ11 patch cord provided to connect into the top of the tone generator in the RJ11 socket. *An RJ11 plug is compatible to insert into most RJ45 sockets.* The tone will be applied to the RJ45 two center pins #4 and #5 respectively. In the event the RJ11 plugs on the patch cord is not compatible with the RJ45 socket, use an RJ11-to-RJ45 adapter patch cable (*not provided*) ensuring the two center pins for the RJ11 plug are mated to the two center pins of the RJ45 plug, or use an 8-way RJ45 Modular Adapter (also known as a "banjo") such as the Paladin Tools model 1902. (*Modular Adapter is not provided*).
- Set the "tlk, cont, line/tone" slide switch located on the side of the tone generator to the "line/tone" position.
- Press the "TONE" button to turn on the tone generator. Press the "TONE" button to change operating modes. Indications are as follows:

Rev & Norm Lights	Tone operation "ON"
Dual light	Tone applied to red (Tip) and black (Ring) alligator clips or to pins 3 (Ring) and 4 (Tip) or RJ11 plug
Single light	Tone applied to red alligator clip only (RJ11 socket pin 4 - Tip) with black (RJ11 socket pin 3 - Ring) open for grounded connections

Example: Light Indications

Tone operation	Tone operation
Dual Mode	Single Mode
Reverse	Reverse
Normal	Normal
Dual	Dual
Single	Single

Technical

Weight 18 oz. (complete kit)

Tone Generator

Dimensions	6.75" L x 1.35" W x 1.08" D
Output Voltage	8Vdc (open), 5Vdc (600Ω load)
Battery	9Vdc NEDA 1604, JIS 006P, IEC 6LR61
Battery life	120 hrs (NEDA 1604)
Auto-Off	1 hr (tone mode)
Output Frequency	8 tones: 523, 587, 659, 698, 784, 880, 988, 1046 HZ
Tone Sequences	4 patterns: single oscillating, dual slow, dual fast & multi-tone
Connection	RJ11 6-pin modular plug

Tone Probe

Dimensions	5.92" L x 1.35" W x 1.08" D
Battery	9Vdc NEDA 1604, JIS 006P, IEC 6LR61
Battery life	120 hrs (NEDA 1604)
Tone Pick-up	Inductive type, non-conducting

Cable-Check

Cable Types	EIA/TIA-568A & B Cat-3 through Cat-6, flat satin telephone, 4-pair UTP/STP, 25-pair UTP/STP, 24/4 and 22/4 telephone line
Connection Types	RJ45 shielded (STP) or unshielded (UTP)
Output Signal	9Vdc nominal at 10mA max.
Voltage Protection	Connector pins protect up to 56Vdc with 400Ω series resistance applied for 2 minutes
Max. Cable Length	1650 feet (500 m)

NOTES:

- For best results, use "Dual" for balanced line toning, and "Single" for unbalanced line toning. Press and hold the "TONE" button to change tone patterns.
- Use the tone probe to detect tone signals along the cable length. Press and hold the "TRACE" button to activate the tone probe. The "Power" light will turn on when button is depressed. Use the "volume" adjustment located on the side of the tone probe to set volume to desired level.
- For quiet operation, insert standard 3.5 mm head phones into the headset socket located on the side of the probe.
- Set "tlk, cont, line/tone" switch on side of tone generator to the "cont" position when storing. Leaving the switch in the "line/tone" position will not cause any battery drainage unless the metal tips of the red and black alligator clips touch.

Testing phone circuit polarity:

⚠ WARNING! LIVE CIRCUIT TESTING - USE CAUTION
ENSURE THE TONE GENERATOR IS TURNED OFF

- For testing directly into RJ11 wall jacks, use the RJ11 patch cord wired 1-to-1 connection. Connect the RJ11 patch cord into the top of the tone generator in the RJ11 socket. (Proceed to Step 4).
- For testing telephone boxes, discrete wire connections or open contact connections, install the alligator clip cable provided into the top of the tone generator in the RJ11 socket. (Proceed to Step 4).
- To test RJ45 systems, use the RJ11-to-RJ11 patch cord provided to connect into the top of the tone generator in the RJ11 socket. *An RJ11 plug is compatible to insert into most RJ45 sockets.* The tone will be applied to the RJ45 two center pins #4 and #5 respectively. In the event the RJ11 plugs on the patch cord is not compatible with the RJ45 socket, use an RJ11-to-RJ45 adapter patch cable (*not provided*) ensuring the two center pins for the RJ11 plug are mated to the two center pins of the RJ45 plug, or use an 8-way RJ45 Modular Adapter (also known as a banjo) such as the Paladin Tools model 1902 (*Modular Adapter is not provided*).
- Set the "tlk, cont, line/tone" slide switch located on the side of the tone generator to the "line/tone" position.
- If the polarity for the TIP and RING is correct, the "Normal" light will turn on. If the polarity for the TIP and RING is reversed, the "Reverse" light will turn on.
- Perform steps 4 and 5 to check line status. If the line is not in use, the "Normal" or "Reverse" lights will be brightly lighted. If the line is in use, the "Normal" or "Reverse" lights will be dim. If the line is ringing, the "Normal" or "Reverse" lights will flash.

Examples: Test Results and Indications

Polarity Testing	Polarity Testing
Normal Polarity	Reverse Polarity
<input type="checkbox"/> Reverse	<input checked="" type="checkbox"/> Reverse
<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Normal
<input type="checkbox"/> Dual	<input type="checkbox"/> Dual
<input type="checkbox"/> Single	<input type="checkbox"/> Single

NOTES:

Testing Continuity of Lines and Loads:

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- Install the alligator clip cable into the top of the tone generator.
- Set the "tlk, cont, line/tone" slide switch located on the side of the tone generator to the "cont" position.
- Connect the alligator clip test leads to the ends of the cable or across the load to be tested.
- If the DC resistance (continuity) of the cable or load is 12000Ω (12KΩ) or less, the "Reverse" light will turn on indicating a path of continuity.
- Set the "tlk, cont, line/tone" switch on side of tone generator to the "cont" position when storing. Leaving the switch in the "line/tone" position will not cause any battery drainage unless the metal tips of the red and black alligator clips touch.

Examples: Test Results and Indications

Continuity Testing	Continuity Testing
Good Continuity	No Continuity/High Res.
<input checked="" type="checkbox"/> Reverse	<input type="checkbox"/> Reverse
<input type="checkbox"/> Normal	<input type="checkbox"/> Normal
<input type="checkbox"/> Dual	<input type="checkbox"/> Dual
<input type="checkbox"/> Single	<input type="checkbox"/> Single

Talk Power/Battery Power for Butt Set Communications

⚠ DO NOT USE ON LIVE CIRCUITS
ENSURE THE TONE GENERATOR IS TURNED OFF

- Install the alligator clip cable into the top of the tone generator.
- Connect the alligator clips so the tone generator is in series with the butt set at one end of the dead pair.
- Connect a second butt across the dead pair at the opposite end of the line.
- Set the "tlk, cont, line/tone" slide switch located on the side of the tone generator to the "tlk" position.
- Take both butt sets off "hook" open communications.
- Set "tlk, cont, line/tone" switch on side of tone generator to the "cont" position when storing. Leaving the switch in the "line/tone" position will not cause any battery drainage unless the metal tips of the red and black alligator clips touch.