

Multi-purpose Tone Generator & Amplifier Probe kit with Non-contact Voltage Detector

Four transmitter plug types

- RJ-11
- COAX
- RJ-45
- Alligator clips



INSTRUCTION MANUAL

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Amplifier Probe



Figure 1



Figure 2

Features

- The Amplifier Probe is designed to identify and trace wires or cables within a group without damaging the insulation.
- Works with any Tone Generator to identify wires.
- Volume control for increased sensitivity and adjustable to suit work environment.
- Recessed ON/OFF button prevents battery drain.
- Power supply is from any 9V battery with a life of approximately 100 hours.
- An audio jack is provided for headset.

Instructions

- Connecting the tone generator.

In terminated working cables:

Connect one test lead to a terminated wire and the other test lead to earth or equipment ground.(See figure 2)

In unterminated or non-working cables:

Connect one test lead to an unterminated wire and the other test lead to another unterminated wire.

- Depress the round on/off spring-loaded button on the amplifier probe. The volume control switch can be adjusted to suit the environment. Volume can be increased to overcome noise, or decreased to reduce interference.
- Touch the tip of the amplifier probe to the insulation of each suspect conductor.
- Reception of tone will be loudest on the subject wire.
- An audio jack is provided for headset.

Maintenance

The amplifier probe is maintenance free except for battery replacement. Remove the screw from the battery compartment, replace the 9V battery and reassemble.

Warranty limited solely to repair or replacement; no warranty of merchantability, fitness for a particular purpose or consequential damages.

Multi-purpose Tone Generator / Non-contact Voltage Detector

Instrument Layout



- ① Sensor of NCV detection
- ② Flashlight
- ③ NCV test button
- ④ Flashlight button
- ⑤ Function rotary switch
- ⑥ LINE2 LED
- ⑦ LINE1 LED



- ⑧ Red & Black alligator clips
- ⑨ RJ-45 transmitter plug
- ⑩ RJ-11 transmitter plug
- ⑪ COAX transmitter plug
- ⑫ Cover of the transmitter plug storage
- ⑬ Grip portion on the cover
- ⑭ Battery cover

Functions of Multi-purpose Tone Generator:

Features

- Four transmitter plug types
 - RJ-11
 - RJ-45
 - COAX
 - Alligator clips
- A function rotary switch controls the modes of operation.
- Two bi-colored LEDs for Line1 and Line2 indication of the polarities of the telephone lines.
- The tone and continuity (cont.) test functions only apply to Line 1.
- Easy to choose either a fast dual alternating tone (1) or a slow dual alternating tone (2) by turning the function rotary switch.
- Flashlight function

CAUTION: DO NOT CONNECT TO AN ACTIVE AC CIRCUIT EXCEEDING 24V IN THIS MODE.

Instructions

All of the following tests can be performed by using the red and black test leads or the modular plug.

NOTE:When using the modular test plug, the polarity test function applies to Lines 1 and 2. The continuity and tone functions ONLY apply to Line 1.

● **POLARITY TEST: IDENTIFYING TIP & RING**

- 1) Turn the function rotary switch to "POL".
- 2) Connect the RED test lead to the side of one line and the BLACK lead to the side of another line.
- 3) The LED will glow "GREEN" when you connect the RED test lead to the RING SIDE of the line.
- 4) The LED will glow "RED" when you connect the RED test lead to the TIP SIDE of the line.

● IDENTIFYING LINE CONDITION

- 1) Turn the function rotary switch to "POL".
- 2) Connect the RED test lead to the RING SIDE of the line and the BLACK to the TIP.
- 3) Watch the LED:
 - 3.1) A BRIGHT "GREEN" LED indicates a CLEAR line.
 - 3.2) A DIM "GREEN" LED indicates a BUSY line.
 - 3.3) A BRIGHTLY FLICKERING "GREEN and RED" LED indicates a RINGING line.

● VERIFYING LINES

- 1) Turn the function rotary switch to "POL".
- 1) Dial the line to be verified.
- 3) While the line is ringing, connect the RED lead to the RING SIDE of the line and the BLACK to the TIP.
- 4) In the "POL" position, the indicator lamp will flicker "RED and GREEN" when the test leads are connected to the subject pair.
- 5) If you turn the function rotary switch to "CONT", it will terminate the call on the subject line.

● SENDING TONE

CAUTION: DO NOT CONNECT TO ANY ACTIVE AC CIRCUIT EXCEEDING 24V IN THIS MODE.

- 1) Turn the function rotary switch to "M1" or "M2".
- 2) Connect the test leads to the pair, or attach one lead to ground and one lead to either side of the line. (See figure 3)
- 3) A fast dual alternating tone (M1) or a slow dual alternating tone (M2) can be selected from the function rotary switch.
- 4) Probe the suspected wires with the amplifier probe. Reception of tone will be strongest on the subject wire. In case of ready access to bare conductors, a handset or headphone may be used to receive the tone

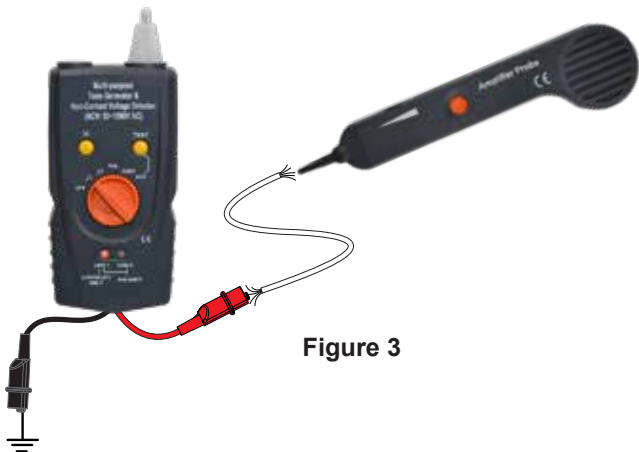


Figure 3

● TESTING CONTINUITY

CAUTION: DO NOT CONNECT TO ANY ACTIVE AC OR DC CIRCUIT IN THIS MODE.


- 1) Turn the function rotary switch to "CONT".
- 2) Connect the test leads to the subject pair.
- 3) A bright "GREEN" light indicates continuity.
The LED will not glow if the line resistance exceeds 12k Ω .

● TESTING CONTINUITY USING TONE

CAUTION: DO NOT CONNECT TO ANY ACTIVE AC OR DC CIRCUIT IN THIS MODE.

- 1) Turn the function rotary switch to "1" or "2".
- 2) Connect the test leads to the subject pair.
- 3) Use a handset or headset at the remote end and touch the wire end(s) with the clip lead(s).
- 4) Reception of tone is an indication of continuity.

● FLASHLIGHT

Flashlight function is available at any position of the function rotary switch by pressing the  button.

Functions of Non-contact Voltage Detector:

Safety precaution

Electricity can cause severe injuries with high voltages. Therefore it is very important to read the following info before using the function of Non-contact voltage detector.

This instrument must only be used and operated by a competent trained person and in strict accordance with the instructions. We will not accept liability for any damage or injury caused by misuse or non compliance with instructions and safety procedures.

Examine the instrument to make sure it is clean and dry. If in doubt, wipe with a clean, dry, lint-free cloth.

The Non-contact voltage detector test should always be used as an indication only. An absence of voltage detection given some testing situations may not always mean the circuit under test is dead.

Warning! TEST ON KNOWN LIVE CIRCUIT

Features

- Non-contact voltage detection : 50V ~ 1000V AC
- Frequency : 50 ~ 500 Hz
- Measurement category : CAT IV 1000V
- Indication : LED and Tone
- Operating Conditions :
 - Temperature : 0 ~ 40°C
 - Humidity : Less than 80% R.H.
 - Altitude : 2000 m (6500 feet) maximum
- For indoor use only.
- Pollution degree : 2
- Bright LED and audible alarm sound when voltage is present.
- Designed for Non-contact voltage detection. It's safer.
- Can be used to find a break in a wire.
- Flash light function.
- NCV Test button design.

Description

The Non-contact Voltage Detector is intended to check for the presence of AC voltage, signaling the user with an intermittent tone and a flashing LED.

Operation


The Non-contact Voltage Detector is an ideal tool for checking hot and neutral conductors, looking for a break in a wire, and detecting the presence of AC voltage at wall outlets, fuses switches, circuit breakers and cables.

- Turn the function rotary switch to the position of "NCV" and press the TEST button to do the Non-contact voltage detection



- Check the unit on a known live circuit before making tests. If the unit doesn't function as expected on a known live circuit, replace the battery.
- Place the testing tip on or near the circuit or unit to be tested. Tone and flashing LED indicate the presence of AC voltage.



- Turn the flashlight on by pressing the  " " button in dark space if necessary.
- Remember to turn the function rotary switch to the position of "OFF" after doing the NCV detection.



Maintenance

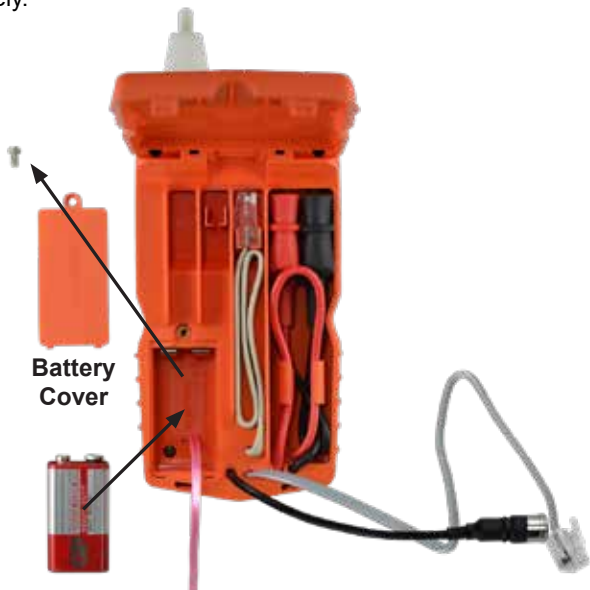
● Battery replacement

- 1) Disconnect the Non-contact Voltage Detector From the circuit under testing and turn the function rotary switch to the position of "OFF"
- 2) Use a screwdriver to unscrew the screw on the battery cover, then take the battery away and replace with a new battery (type 9V x 1).
- 3) Place the battery cover and screw it.

● Cleaning and storage

WARNING To avoid electrical shock or damage to the instrument, do not get water inside the case.

Periodically wipe the case with a damp cloth and detergent: do not use abrasives or solvents. If the instrument is not to be used for periods of longer than 60 days, remove the battery and store it separately.



Specifications

Multi-purpose Tone Generator / Non-contact Voltage Detector

Waveform	Square wave
Frequency	1kHz±15%
Over Voltage Protection	80V DC
Alternating Tone	Fast and Slow
Connection	RJ-11 connector RJ-45 connector COAX connector Alligator clip x 2
Power Source	9V battery
Dimensions	202(L) x 86(W) x 46(H)mm
Weight	Approx. 300g (battery included)

Amplifier Probe

Frequency	1Hz~12kHz
Receiver Distance	<50cm
Sensitivity Control	V
Flashlight	V
Probe tip	Fixed
Power Source	9V battery
Dimensions	230(L) x 57(W) x 27(H)mm
Weight	Approx. 125g (battery included)

General

Operating Temperature & Humidity	0°C~40°C, 80% Max
Storage Temperature & Humidity	-10°C~50°C, 80% Max
Safety Standard	EN 61010-1 EN 61326-1 EN 55011 EN 61000-4-2 EN 61000-4-3
Accessories	Instruction manual Batteries Carrying case