

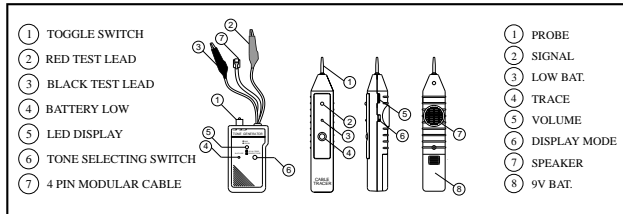
# Tone Generator & Probe

## User Manual

### Introduction

The Tone Generator is a highly practical network installation and troubleshooting tool which features a single or multi-tone signal, two test leads and a 4-conductor modular cable. The signal emitted by the Tone Generator can be easily traced by the Probe, even when cables are in a bundle or hidden in a mess of punchdown blocks or wall plates. The Tone Generator & Probe can be used to verify cable continuity, identify wiring faults, determine line polarity and voltage in network (Cat 5 and Coax) and modular telephone lines. The Probe is equipped with a tone amplifier and an LED indicator that detects audible frequency tones for accurate tracing and identification of wires.

### Product Profile



### Tone Generator

#### Features:

- \* 2-position switch for single tone or multi-tone signal
- \* Toggle switch to control 3 modes of operation
- \* 3-color LED indicator display for telephone line

- \* polarity, continuity and voltage testing
- \* Black and red testing leads and standard 4-pin modular cable for individual wire tests or modular jack tests
- \* Convenient compact size and simple application

#### Specifications:

- \* 1 ft. each of red and black test lead
- \* 1 ft. 4-pin modular cord and plug
- \* One 3-position toggle switch for operation mode control
- \* One 3-color LED display for line polarity, continuity and voltage test
- \* One 2-position slide switch for tone volume level selection
- \* Power: 9V DC battery

### Probe

#### Features:

- \* Special inductive plastic tip which prevents accidental shorts (possible with copper-tip tracers) when using near high voltage devices
- \* Traces and identifies wires or cable in a bundle or group without damaging cable insulation
- \* Adjustable volume level for various work environments
- \* Both amplifier and LED for loud or dark work environments
- \* Can work with any existing tone generator in the market
- \* Power switch to prevent battery drain

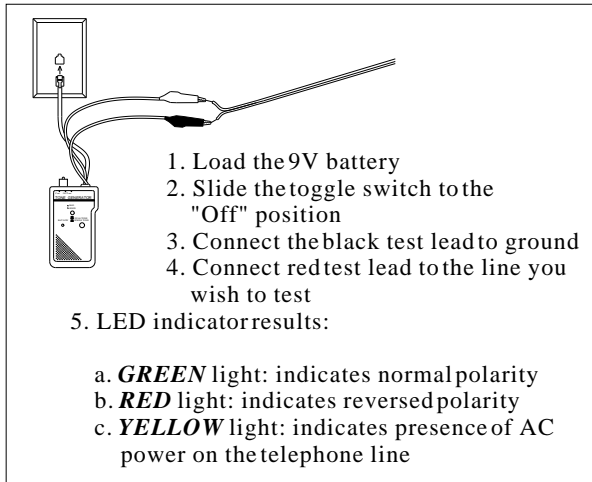
#### Specifications:

- \* Pen-style casing
- \* Special inductive plastic tip

- \* One push-button TRACE switch
- \* One battery low LED indicator
- \* One amplifier and one LED for signal detection
- \* One rotary volume level switch

## Operation

### A. Identifying the polarity of a telephone line



**Note:** If a ground is not available, you may try to switch the test leads around to different wires within the pair. The LED indicator will light GREEN when the red test lead is connected to the ring side of the line and the black lead is connected to the ground.

### B. Indicating telephone Line Condition

1. Load the 9V battery.
2. Slide the toggle switch to the "Off" position.
3. Plug the standard 4-pin modular cable into modular wall jack.
4. LED indicator results:
  - a. **BRIGHT GREEN** light: indicates a clear line.
  - b. **DIM GREEN** light: indicates a busy line.
  - c. **BRIGHT FLASHING RED and GREEN** light: indicates a ringing line.

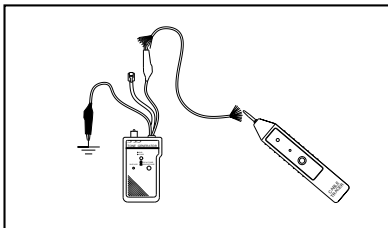
**Note:** A DIMLY FLASHING GREEN light will result under ringing line conditions if the line's polarity is reversed. If the test is begun prior to an incoming call, the call will be blocked.

### C. Verifying telephone Lines

1. Slide the toggle switch to the "Cont" position.
2. Dial the number of the line you wish to verify.
3. While the line is ringing, connect the red lead to the ring side of the line, and connect the black lead to ground.
4. Slide the toggle switch to the "Off" position. The LED indicator will flicker RED and GREEN when the test leads are connected to the subject pair.
5. To verify identification, monitor the line and switch the test set to "Cont." This will terminate the call on the subject line.

#### ***D. Sending a Tone***

1. Slide the toggle switch to the "Cont" position
2. Connect the test leads to a pair of wires or attach one lead to the ground and the other lead to either side of line, (See Fig. 3).
- 3.



4. Select either a dual alternating tone or a single solid tone by positioning the button on the face of the Tone Generator unit to "DUAL TONE" or "SINGLE TONE."
5. Select one of the display functions (LED only/speaker only/LED & speaker together) by positioning the switch on the side of the Probe to "L," "S," or "L & S" respectively.
6. Use the Probe to trace the subject wire.
7. Reception of tone will be loudest (amplifier) or brightest (LED) on the subject wire.

#### ***Caution:***

Do not connect to an active AC circuit exceeding 24 Volts in this mode.

#### ***E. Testing Continuity***

1. Slide the toggle switch to the "Cont" position.
2. Connect the test leads to the subject pair.
3. A BRIGHT GREEN light indicates continuity.

#### ***Caution:***

Do not connect to an active AC or DC circuit in this mode.

#### ***F. Testing Continuity Using Tone***

1. Slide the toggle switch to the "Tone" position.
2. Connect the test leads to the subject pair.
3. Using a handset or headset at the remote end, touch the wire end(s) with the clip lead(s).
4. Reception of tone is an indication of continuity.

#### ***Modular Testing***

- \* All above tests are applicable to modular plugs for line 1 only (red & green wires).

#### ***Coax Testing***

- \* To test un-terminated coaxial cables, connect the RED test lead to the outer shield and the BLACK test lead to the center conductor, or connect the RED test lead to the outer shield and the BLACK test lead to the ground.
- \* To test terminated coaxial cables, connect the RED test lead to the connector housing and the BLACK test lead to center pin, or connect the RED test lead to the connector housing and the BLACK test lead to ground.

### *Remarks*

1. Do not touch the tip of Probe to the Active Circuit contact or line.
2. Remember to adjust the volume rotary switch to reach an ideal volume level.
3. When the "Battery Low" LED is illuminated, you must replace the battery to ensure a correct test.

### *Ordering Information:*

256711A	Tone Generator
256712A	Probe
256713A	Tone Generator & Probe Kit

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