

# BST-CT105

## Amplifier Probe & Tone Generator

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### INSTRUCTION MANUAL

**Test Equipment  
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## AMPLIFIER PROBE



Figure 1

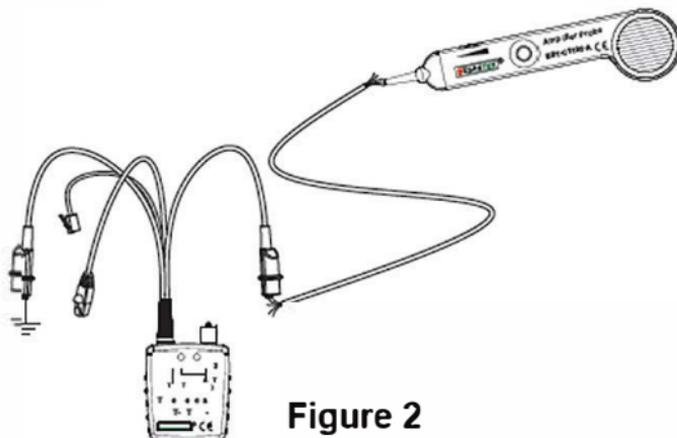


Figure 2

### 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 in any 9V battery with a life of approximately 100 hours.
- A plug receptacle is provided for head set or hand set.

## **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 of 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.
- The plug receptacle is provided for connecting to a head set or hand set.

## **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.

# TONE GENERATOR

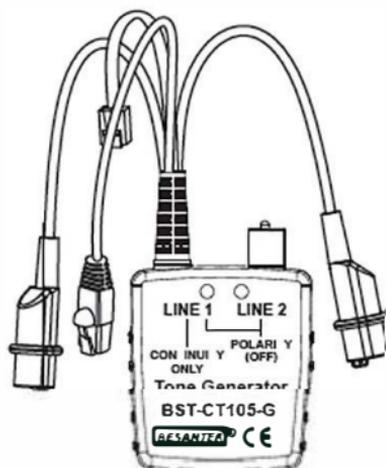


Figure 3

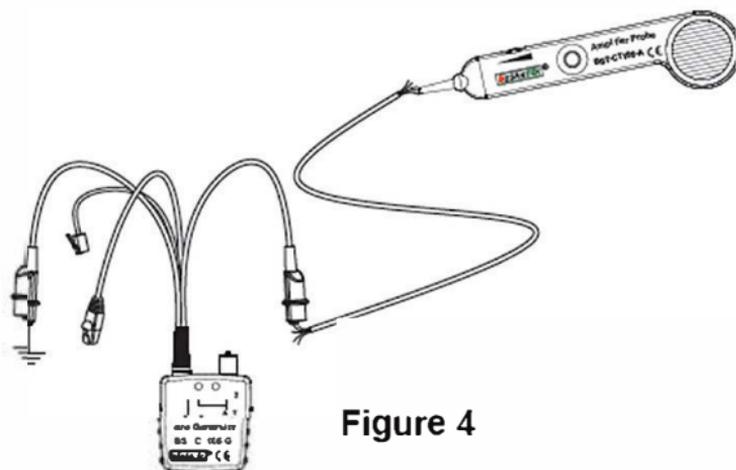
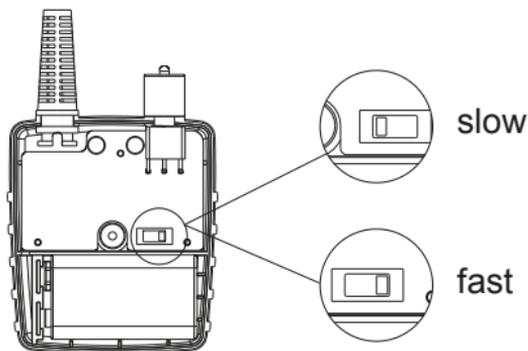


Figure 4

## FEATURES

- Red and black test leads with a standard 4 conductor modular cord and plug.
- A 3-position toggle switch controls the modes of operation and two bi-colored LEDs display line polarity for Lines 1 and 2.
- The tone and continuity (cont.) test functions are only applied to Line 1 using the modular plug.
- A tone selector switch located inside the test set is provided for choosing either a fast dual alternating tone or a slow dual alternating tone.
- RJ45 connector is available.

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



**Figure 5**

## 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 (switch to "off")**

1. Connect the RED test lead to the side of one line and the BLACK lead to the side of another line.
2. The LED will glow "GREEN" when you connect the RED test lead to the RING SIDE of the line.
3. The LED will glow "RED" when you connect the RED test lead to the TIP SIDE of the line.

- **Identifying line condition (switch to "off")**

1. Connect the RED test lead to the RING SIDE of the line and the BLACK to the TIP.
2. Watch the LED :
  - 1.1 A BRIGHT "GREEN" LED indicates a CLEAR line.
  - 1.2 A DIM "GREEN" LED indicates a BUSY line.
  - 1.3 A BRIGHTLY FLICKERING "GREEN and RED" LED indicates a RINGING line.

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- **Verifying lines (switch to "off" then "cont")**

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

- **Sending tone (switch to "tone")**

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

1. Connect the test leads to the pair, or attach one lead to ground and one lead to either side of the line.(See figure 4)
2. A fast dual alternating tone, or a slow dual alternating tone can be selected from the switch inside the tone generator.
3. 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 hand set or head phone may be used to receive the tone.

- **Testing continuity (switch to "cont")**  
**CAUTION : DO NOT CONNECT TO ANY ACTIVE AC OR DC CIRCUIT IN THIS MODE.**
  1. Connect the test leads to the subject pair.
  2. Use "cont" position.
  3. A bright "GREEN" light indicates continuity. The LED will not glow if the line resistance exceeds 12k $\Omega$ .
  
- **Testing continuity using tone (switch to "tone")**  
**CAUTION : DO NOT CONNECT TO ANY ACTIVE AC OR DC CIRCUIT IN THIS MODE.**
  1. Connect the test leads to the subject pair.
  2. Use a handset or headset at the remote end and touch the wire end(s) with the clip lead(s).
  3. Reception of tone is an indication of continuity.
  
- **Modular testing**

All above tests are available through the modular plug for line 1 only - red and green wires.
  
- **Coax testing**
  1. To test unterminated coax, connect red to outer shield and black to center conductor or red to outer shield and black to ground.
  2. To test terminated coax, connect red to connector housing and black to center pin or red to connector housing and black to ground.

## **MAINTENANCE**

### **BATTERY REPLACEMENT INSTRUCTIONS**

1. Separate the case, install a fresh 9V battery and reassemble. **DO NOT OVER TIGHTEN.**
2. Warranty limited solely to repair or replacement; no warranty of merchantability, fitness for a particular purpose or consequential damages.



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