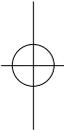
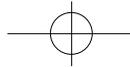


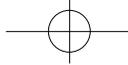
MINI BUTT SET

MODEL TT-300



AMPROBE



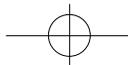


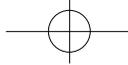
INTRODUCTION

The TT-300 is designed for the installers, repair technicians, and other authorized personnel for line testing and temporary communications. The test set employs the latest in integrated circuit design to provide DTMF (Touch Tone). Different from other test sets, it contains a mega ohm (M) meter for testing insulation resistance and telephone capacity. The repairman can independently find out line conditions (faults) without the help of central office (CO) by measuring the insulation resistance and telephone capacity. The mini size and ear-microphone allows for hands free operation. The mini size and hands-free function enables the line-man to use both hands, thus enhancing safety, work efficiency, and easiness to carry.

FEATURES

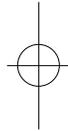
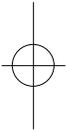
1. Monitor (Data Safe) Function
2. Hands-free Conversation with Ear-Microphone
3. Conversation without Ear-Microphone
4. Subscriber Calling
5. Tone Dialing
6. Call Receiving
7. Last Number Redial
8. Flash Function
9. Piercing Pin and Angled Bed of Nails Cord (ABN)
10. Telephone Line Capacity
 - Earth-State
 - Line-Cut (open)
 - Line-Short
11. Line Continuity Testing
12. Over-Voltage & Current Protection
13. Battery Check Function





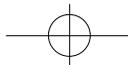
PHYSICAL DESCRIPTION (See Figure 2)

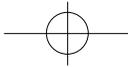
1. **Test Jack** - For "Test cord".
2. **Contrast Jack** - To connect "Line Cord for Continuity
3. **Ear-Microphone Jack**
4. **Hole for "Neck Strap"**
5. **Mega Ohm (M Ω) Meter**
6. **Dial Keypad**
7. **PUSH/INSUL** - Button for measuring insulation resistance or subscriber calling.
8. **MON/RCV Switch** -
LED 'Off' mode - For subscriber calling (same as 'Off Hook').
LED 'On' mode - To monitor line without data loss and receive calls (same as 'On Hook').
9. **CALL (PUSH)/CONTRAST, HOT-LINE Switch** -
LED 'On', you can do line contrast, subscriber calling and hot-line.
10. **Speaker** - Used for subscriber calling without Ear-Microphone.
11. **Ringer** - For receiving call.
12. **Microphone** - Used for subscriber calling without Ear-Microphone
13. **Battery Cover** - Compartment for one 9V battery.



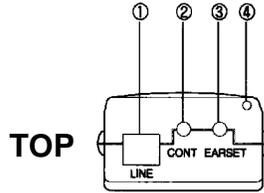
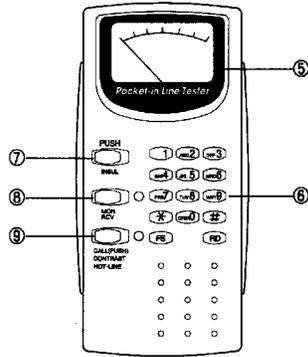
ITEMS INCLUDED WITH TT-300

- **Cordset** - The cordset with one red and one black conductor. Each conductor is fitted with an alligator clip, offset 20 degrees, with piecing pin and angled bed of nails. (P/N TT-300-1)
- **Line Cord** - Used for line continuity test. The black conductor is fitted with an alligator clip, offset 20 degrees, with piecing pin and angled bed of nails. (P/N TT-300-2)
- **Ear-Microphone Set** - Used for hands-free operation. (P/N TT-300-3)
- **Neck Strap** (P/N TT-300-4)
- **Carrying Case** (P/N TT-300-5)





FRONT



BACK

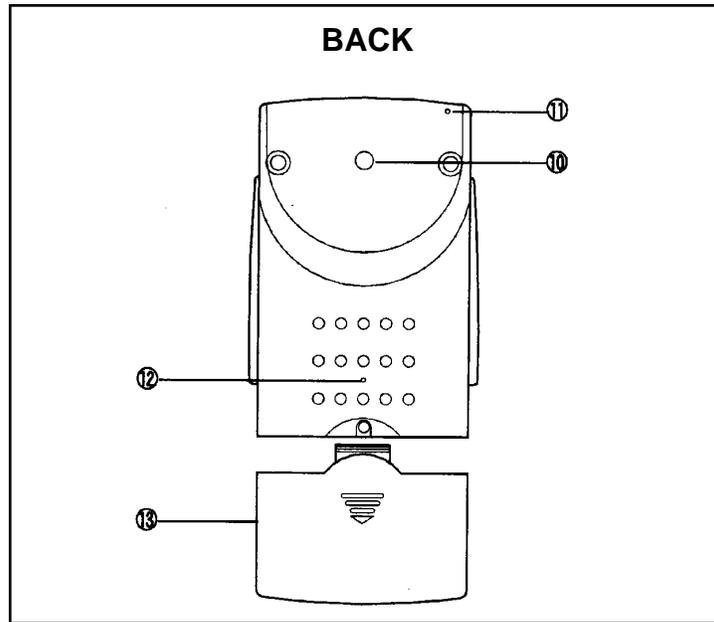
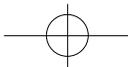
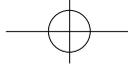


Figure 2





OPERATION INSTRUCTIONS

PLACING A NORMAL CALL

A calling signal is sent to the subscriber's telephone causing it to ring.

1. Set to data safe mode by pressing the MON/RCV (8) switch.
2. Connect the alligator clips to L1 and L2 of subscriber side.
3. Listen for a clear line (no data).
4. Release the data safe mode by pressing MON/RCV switch again. A dial tone should be heard.
5. Enter the desired number on the keypad. To terminate the call, press the MON/RCV switch.

SUBSCRIBER CALLING

A calling signal is sent to the subscriber's telephone causing it to ring. You can also talk with the subscriber. This function is useful when the 48V power is not supplied from the telephone office

1. Connect the alligator clips to L1 and L2 of subscriber side.
2. Push the CALL (PUSH) (9) switch and the Led will illuminate.
3. Push the PUSH/INSUL (7) button to make subscriber's telephone ring. To conserve the battery life, press button several times.

FLASH (FS)

The tester produces a line break (hook flash). It is typically used for register recall or redialing.

1. Press the FS button for a new dial tone.

REDIAL (RD)

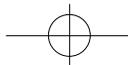
Will redial the last number entered.

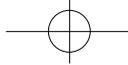
1. Press the FS button for a new dial tone.
2. Press the RD button to redial the last number entered. Up to 32 digits can be redialed.

MONITOR FUNCTION (MON)

The monitor position provides a high impedance (100k @ 1kHz) coupling to the line without disrupting conversation, data or signaling.

1. Press the MON (8) button the LED will illuminate. The unit is in a high impedance condition.
2. Connect the alligator clips to L1 and L2 of subscriber side.
3. Pressing the MON button again, the LED turns off and the high impedance condition is removed.





OPERATION INSTRUCTIONS (CON'T)

INSULATION RESISTANCE & CAPACITY MEASUREMENT

1. Connect the alligator clips to L1 and L2 of subscriber side.
2. Push the PUSH/INSUL (7) button.
3. The insulation resistance will be displayed on the 'Mega Ohm meter, when the METER CALL button is pressed.

Generally, there are two conditions:

Normal condition (good insulation between L1 and L2)

The meter scale goes to 0.2 generally and then back. This is caused by the capacity of the connected subscriber's telephone or the line and terminal.

Abnormal condition (bad insulation between L1 and L2)

The meter scale goes up to a low value (below 1M) and stays there. This indicates a faulty circuit on L1 and L2.

Note - The meter will not move if the line is an open circuit.

CABLE LINE CONTINUITY TEST

With another TT-300 or other handset tester, you can test cable continuity.

1. By using the "Test Line Cord", make a hot-line with the other TT-300.
2. Push the CALL (PUSH) switch on both TT-300's and the LED's turns on. Both TT-300's are able to communicate now.
3. By using the "Line Cord for Continuity" at the CONT jack, you can hear a tone when the hot-line and "Line Cord for Continuity" are in a loop. Refer to the figure below.

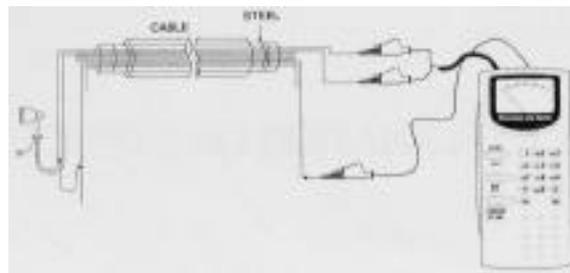
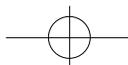


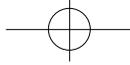
Figure 2

BATTERY CHECK

Indicates if 9-volt battery requires replacement.

1. Connect the two alligator leads together.
2. Press the PUSH / INSUL (7) button. A good battery is indicated if the needle is in the BT section of the meter. If the needle is below, the battery should be replaced.





MAINTENANCE

BATTERY REPLACEMENT

Remove the cover & replace the battery with an alkaline or lithium 9V battery.

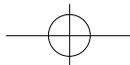
SPECIFICATIONS

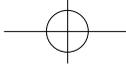
ELECTRICAL

Loop Resistance	2k @ 48VDC (Minimum Current: 20mA)
DC Resistance	300 and below
Monitor Impedance	100k @ 1kHz
DTMF Level	High -6dBm Low -8dBm
DTMF Frequency	CCITT standard
Last Number Redial	32 digits
Insulation Resistance Measurement Range	0-10M @ DC 90V
Tone Transmitting for Line Continuity	800Hz 0dBm
Power Source	DC 9V battery

PHYSICAL

Length	5.00" (127mm)
Width	2.25" (57mm)
Height	1.02" (26mm)
Weight	6 ounces (170g)





WARRANTY

Congratulations! You are now the owner of an AMPROBE® instrument. It has been quality crafted according to the highest standards of quality and workmanship. This instrument has been inspected for proper operation of all its functions and tested by qualified factory technicians according to the long-established standards of AMPROBE®.

Your AMPROBE® instrument has a limited Lifetime Warranty against defective materials and/or workmanship provided that the seal is unbroken or, in the opinion of the factory, the instrument has not been tampered with or taken apart. This warranty is limited to the original purchaser and is not transferable.

Should your instrument fail due to defective materials, and/or workmanship, you may return it along with a copy of your dated bill of sale which must identify instrument by model number and manufacturing number. Please contact the factory at the number on the back cover of this manual to obtain a Return Materials Authorization and return instructions.

IMPORTANT: For your protection, please use the instrument as soon as possible. If damaged, or should the need arise to return your instrument, place it in a shipping carton packed with sufficient packing material. It must be securely wrapped. Amprobe is not responsible for damage in transit. Be sure to include a packing slip (indicating model and manufacturer number) along with a brief description of the problem. Make certain your name and address appears on the box as well as the packing slip.

-Outside the U.S.A. the local Amprobe representative will assist you. Above limited warranty covers repair and replacement of instrument only and no other obligation is stated or implied.



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