

USER MANUAL

TELEPHONE TEST SET

DATA SAFE



WARNING

The safety condition is not to connect Test Set to public electrical power lines (220/110 VAC)

1. GENERAL

The Handset Portable Test Telephone employs technology in integrated circuit design to provide both DTMF (Touch Tone) and dial pulse output for both a).Public telephone network of voice service, and b). ADSL network for voice on data service with DSL safe capability. The Handset also provides last number redial, 10 speed dial, flash, mute, high impedance monitoring, and electronic ringer, with field replaceable test leads and belt clips. This Portable Test Telephone, often called a “butt -in” is a self-contained line–powered, portable handset used by installers, repair technicians, and other authorized personnel for line testing and temporary communications.

2. DESCRIPTION

Physical Characteristics (Figure 1):

The case (A) is designed to give rugged service and withstand the rough handling normally associated with craft tools.

The keypad (B) has 15 buttons conductive rubber that is recessed into the receiver end of the housing. The recessed bezel provides physical protection to the keypad and prevents accidental button operation.

The spring – loaded belt clip (C) located on the bottom of the housing, ensures a secure connection to a belt top or D – ring. The belt clip may be replaced in the field.

The Portable Test Telephone is equipped with test leads (D) may be replaced in the field.

The Hanging loop (E) located on top of case for any purposes of hanging up handset

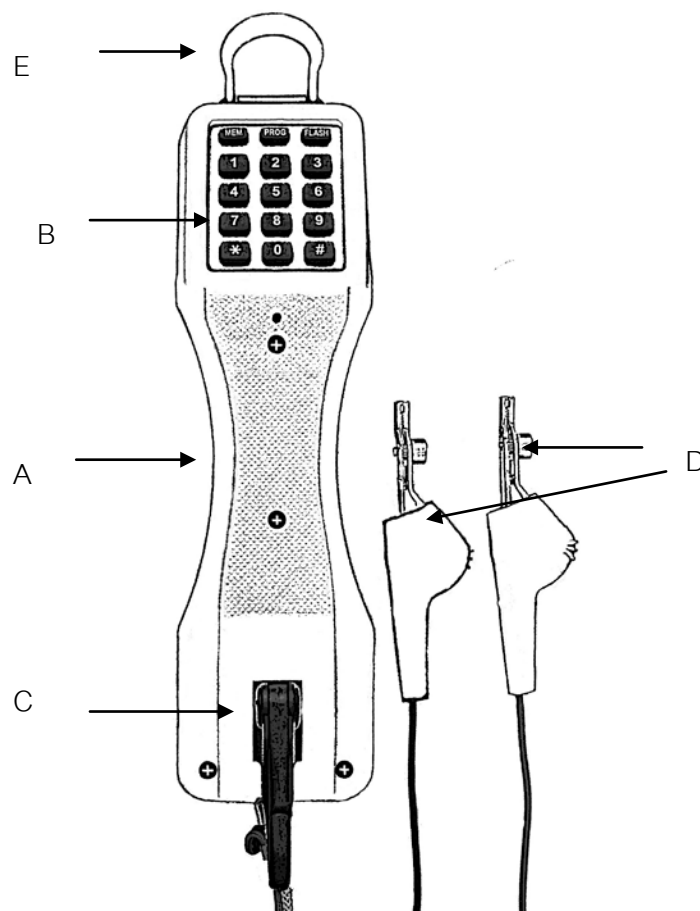


Figure 1.

3. SPECIFICATIONS:

General Spec

Loop Resistance	2.2 K Ω at 48 VDC (20 mA loop current)
Talk Mode Resistance	200 Ω typical at 20 mA
Monitor Mode Resistance	120 K Ω at 1 KHz
Pulse Dial Output Rate	10 PPS
Percent Break	58 – 66 mS
Interdigit interval	740 – 820 mS

DTMF Output

Frequency		
Key	Input	Freq.Output (Hz)
Row	1	697
	2	770
	3	852
	4	941
Col	1	1209
	2	1336
	3	1477
Tone Output	194 mv(-12dBm)	
Distortion to Tone level	-20dB	
Frequency error	$\pm 1\%$	
Level per Tone Pair	- 8 dBm min	
High versus Low Tone difference	4dB max	
Level variation	± 5 dB	

Physical

Case	Rugged and Withstand Nylon 6/6
Keypad	15 conductive rubber buttons
Belt loop connect	Spring – loaded belt clip
Test leads	Tinsel wire PVC insulated with Nylon braided Jacket 1.5 meter long terminated by Bed-of-nail and Spike alligator clips

Dimension

Length	22 cm
width	6 cm
Height	8.5 cm
Weight	0.3 Kg

Environmental

Temperature	Operate - 5 to + 50 C Storage -40 to + 70 C
Humidity	90%
Shock test	drop 7 meters

4. CONTROLS AND INDICATORS

4.1 Handgrip controls (Figure 2):

TALK/RING/MONITOR Switch. This three-position slide switch is located under the handgrip just above microphone. The switch is labeled as MONITOR for high impedance monitoring, RING for ringer , and TALK for off-hook

- In the MONITOR position, the Handset is a high impedance coupling to the telephone line. This allows for telephone line monitoring without current drawing from the lines so not making any interrupt to conversation on telephone lines.
- In the RING position is on-hook with electronic ringer for in-coming call alert. On this position If unit touch to AC lines ringer will alarm with continuously ringing sound which user should disconnect handset from the lines immediately and carefully
- In the TALK position, the Handset is off-hook and may be used for dialing and talking. In this mode, the Handset performs as an ordinary telephone.
- All positions will not disrupt to data service on xDSL and High speed network

PULSE/TONE Switch. This two-position slide switch, labelled PULSE/TONE, is located under the handgrip just below the receiver. The switch selects the signalling output : TONE for DTMF or PULSE for dial pulse.

4.2 Keypad Controls and indicator (Figure 3) :

Keys The 12 standard keys will send either DTMF Tones or Pulses, depending on the PULSE/TONE switch setting. And also 3 functional keys

Last Number Redial Button. “R” serves as a last number dialled key (Figure 2). The number may be redialled in either pulse or tone mode, as selected by the PULSE/TONE switch

Polarity LED This red LED is Located just below the keypad. The LED indicates line polarity. The LED will not light if the red test lead is connected to the Ring (negative) side of the line and the black test lead is connected to the Tip(positive) side of the line. The red LED with light if the test leads are reversed : that is, with the red test lead connected to the Tip (positive) side and with the black test lead connected to the Ring (negative) side.

5. OPERATION

5.1. Monitoring. by move the TALK/RING/MONITOR switch to the MONITOR position then connect the test lead clips to the line under test for audio monitoring in high impedance. This will not disrupt voice and data service to the line.

“Optional monitoring in medium impedance be done by moving switch to RING position for a higher sound level receiving”.

- 5.2 Dialling (select signalling to be dialed by PULSE/TONE switch, often set to TONE)
- Move the TALK/RING/MONITOR switch to the MONITOR position then connect the lead clips to the telephone line. Listen to receiver (ear piece) to verify that the line is idle (silent)
 - Move the TALK/RING/MONITOR switch to the RING position and if AC present on the lines, ringer will alarm with continuous ringing, user should disconnect lead clips from the line immediately and carefully. Avoid touching any metal parts and short test clips to each other.

! WARNING

- Move the TALK/RING/MONITOR switch to TALK position and verify if dial tone is received. Key the calling number to the keypad. If tone signalling being selected. The responsible frequency tones of each digit will be generated for each button pressing.
- End the dialling by moving back the TALK/RING/MONITOR switch to the MONITOR position (recommended when stanby or store the test set).
- Press FLASH button to on and off-hook if need to dial again.

Note: Operating on xDSL and data lines will not disrupt service on network during and after dialing

- 5.3 Polarity Check. Move the TALK/RING/MONITOR switch to MONITOR then connect the lead clips to the line under testing. Move the same switch from MONITOR to TALK with instruction described in 5.2 above. The red LED will not light if the red lead clip is connected to the ring (negative) side of the line and the black lead clip is connected to the tip (positive) side of the line. The red LED will light if the lead clips are reversed that is, with the red lead clip connected to the tip (positive) side and the black lead clip connected to the ring (negative) side.

- 5.4 Programing and Making a Speed dialing. (repertory memory)
- Program number, connect handset to the lines then off-hook by slide bottom switch to TALK then 1) press PROG 2) press MEM 3) press digit 0 - 9 for memory location 4) enter telephone number which can include * # or FLASH 5) press PROG

Speed dialing, off-hook then 1) press MEM 2) press digit 0 - 9 for memory location

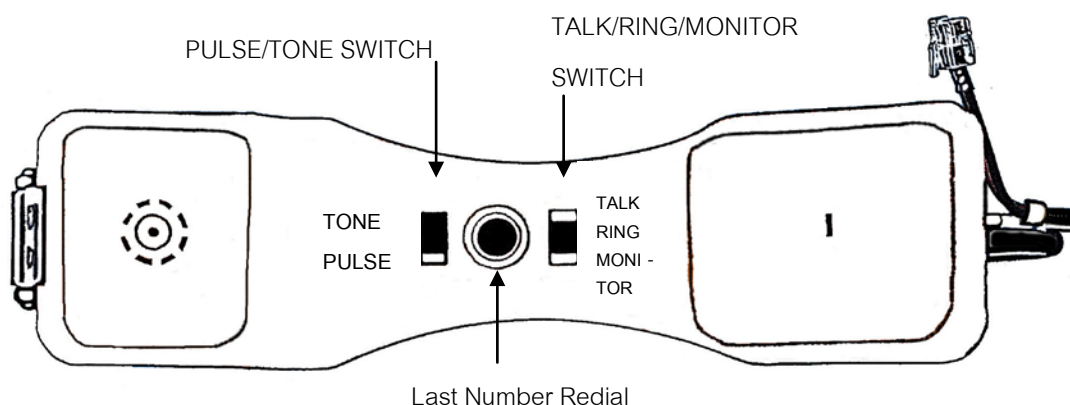


Figure 2

- 5.5 MUTE. Is toggle button located together with PROG button and use to cancel microphone to transmitting voice, By this microphone off user can also have clearer sound on receiver when operate in the noisy area.
- 5.6 Last Number Redial (repertory memory) The last number dialled can be automatically redialled with the PULSE/TONE switch set to either PULSE or TONE.

Use the following procedure for a number up to 18 digits long

- Go on-hook (move the TALK/RING/MONITOR switch to the RING position) for at least 1/2 second.
- Move the TALK/RING/MONITOR switch back to the TALK position
- Press the “R” button and the number will be automatically redialled

- 5.7 Electronic Ringer (ON/OFF). Move the TALK/RING/MONITOR switch to RING position and connect test leads to the telephone line. The piezo-electric transducer electronic ringer will “ring” whenever it detects ringing voltage on the lines. Answer the call by moving the TALK/RING/MONITOR switch to TALK.

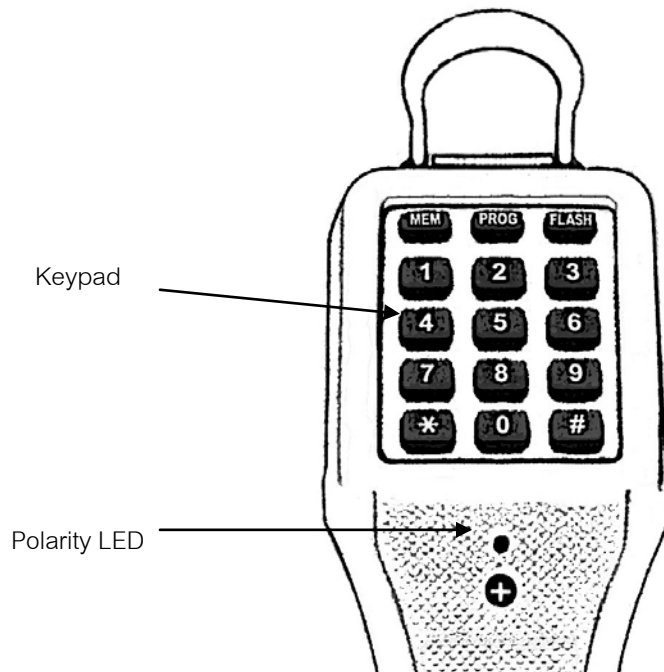


Figure 3.

6. CONNECTION

Handset comes with test leads which one end terminated by RJ11 for connecting to Handset. Handset designed with RJ11 jack on the bottom for connection with either test leads or telephone lines with RJ11 jack. The other end of test lead terminated by bed-of-nail and spike alligator clips for connection to telephone lines.

7. WARRANTY

We guarantee our equipment and workmanship for a period of 1 year after purchase. The warranty with not cover for product that was defected by accident, improper uses and one repaired by other than manufacturer's personnels.