



MADE FOR LIFE

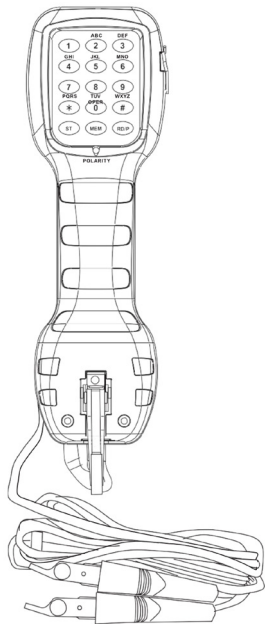


TBS-200 TELEPHONE BUTT SET INSTRUCTION MANUAL

GENERAL:

This Telephone Butt Set is newly designed to provide both DTMF (Touch Tone) and Dial Pulse output. It also features line-powered operation, so no additional power is required unless operating on low voltage or dry circuits.

This butt set is typically used by installers, repair technicians, and other authorized personnel for line testing and temporary communication.



FEATURES:

1. The latest in integrated circuit design, providing the industry standard.
2. Talk/Ring/Monitor tests functions, which can be changed using the switch on the inside of the handgrip.
3. Switchable Tone or Pulse dialing. TONE/PULSE switch is located on the inside of the handgrip.
4. Hi impedance monitoring will not disturb data, conversation or signaling.
5. LED indicates reversed polarity.
6. Last number redial (31 digits maximum).
7. Protection against excessive voltage, transient ringer signals, and direct connection to most batteries and power supplies.
8. Volume Control with 3 position control for up to 12dB of gain.
9. Spring loaded belt clip for mounting or storage.
10. Durable cloth covered cord equipped with strain relief, modular RJ11X plug, and two five-way ABN test clips.
11. Water-Resistant, with extra protection against severe weather conditions.
12. Spade connector cord included.

OPERATION:

• Connection:

This Telephone Butt Set comes with an RJ-11 modular jack, and an Angled Bed of Nail Cord (ABN). The cord is similar to a standard card (STD), except that each alligator clip is equipped with a "Bed of Nails" and an insulation piercing spike. (Figure 1).

• Keypad:

The 15 standard keys will send either DTMF tones or dial pulse, depending on the TONE/PULSE switch setting. It also includes a 0-9, *, # keys and more.

3 function keys for storage management: Store (ST), Memory (MEM), and Redial/Pause (RD/P). (Figure 2).

• Monitor / Ring / Talk Switch:

1. Monitor Mode:

In Monitor mode, the butt set is on-hook with Hi impedance coupling to the telephone line. This allows you to monitor the telephone line without disrupting conversations, data, or signaling. (Figure 3)

2. Ring Mode:

In Ring mode, the butt set is on-hook with an electronic ringer connected to the telephone line. This provides Low impedance coupling to telephone line to monitor optional line identification tones. (Figure 3)

3. Talk Mode:

To answer a call, stop the line, or initiate signaling, switch to TALK mode. If dialing, select the PULSE or TONE mode, whichever is appropriate. To terminate a call, release the line by switching to Ring or Monitor Mode. (Figure 3)

• Function Select:

1. Volume Switch (H/M/L): This three-position slide switch is located on the inside of the handgrip, which allows you to change the volume to High/Middle/Low. (Figure 3)

2. Tone/Pulse Switch (TONE/PULSE): This two-position slide switch, labeled TONE/PULSE, selects the signaling output. Select TONE for DTMF or PULSE for dial pulse. (Figure3)

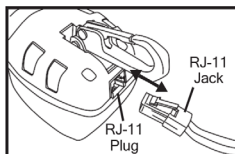


Figure 1

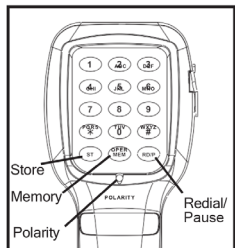


Figure 2

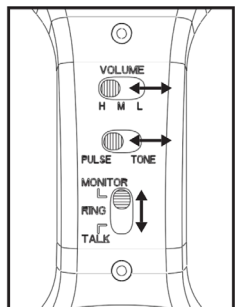


Figure 3

• **Polarity Check:**

Polarity is automatically indicated when in Talk mode. The polarity indicator LED will illuminate if the polarity is reversed. Correct polarity is when the red lead is connected to RING(-), and the black lead on TIP(+). A modular telephone line may be connected directly in to the Butt Set to check polarity as well.

• **Last Number Redial:**

The last number dialed (up to 31 digits) in the Talk mode is stored. To redial, press the redial button on the keypad. Memory is backed-up by the device's internal battery. The number may be redialed in either pulse or tone mode.

• **How to Store Numbers into Memory:**

This Telephone Butt Set is equipped with Flash Memory inside. It can allow you to store up to 10 frequently dialed numbers for easy access.

While in Talk mode:

1. Press the ST (Store) button.
2. Enter the number to be stored (15 digits max.)
3. Press the ST (Store) button again.
4. Press one of the number keys (0-9) to store the number in that position

• **How to Store a Pause in a Stored Number:**

It may be necessary to program a pause into the dialing sequence. Programming a pause into memory will cause the phone to wait 3 seconds before dialing any more numbers.

This may be necessary when accessing a trunk that requires 2 to dial out, for example. You can do this by pressing the RD/P button when the pause is required.

For example, to store the number 2 9429441 with a pause between the 2 and 9, enter 2 and press RD/P 9429441. Each pause will count as one digit. A longer pause can be inserted by pressing RD/P more than once.

• **How to Dial a Stored Number:**

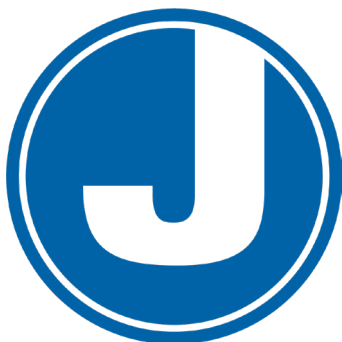
After receiving a dial tone, press MEM and the number key (0-9) for the memory location in which the number is stored. For example, to call the number stored in memory location 1, press MEM and then the number 1.

The number will be dialed automatically.

SPECIFICATIONS:

Loop Limit	4K ohms max. at 48VDC(5K meter - 26Ga non loaded) nominal 15mA minimum loop current.
DC Resistor	150 ohms Typical at 80mA current.
Monitor Impedance	Low impedance - 600 ohms Typical at 1KHz. (Ring Position) Hi impedance - 100K ohms Typical at 1KHz. (Monitor Position)
Rotary Dial Output Pulsing Rate Percent Break Interdigital Pause Leakage During Break	10 +/- 0.5 pulses/sec 0% +/- 2% 8.5ms Typical > 50K ohms
DTMF Output Tone Frequency Error Level of Tone Pair Low v.s High Tone Difference	+/- 1.5% + 2 dBm max. , -11 dBm min. -4 dBm max.
Dimensions Length Width Height Weight	22.4 cm (8 4/5 inches) 7.12 cm (2 4/5 inches) 7.0 cm (2 3/4 inches) 380 g (13.4 ounces)

NOTES:



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