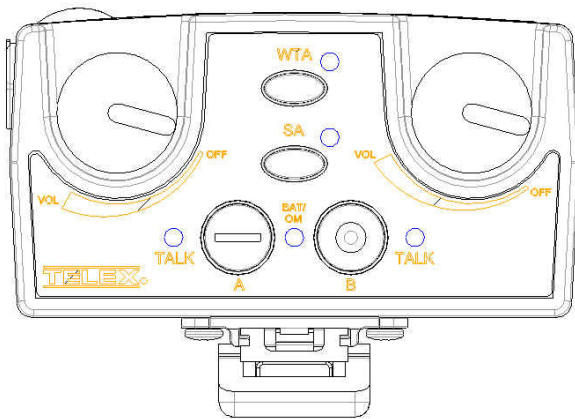# Telex Model TR-82N Beltpack

Owners / Users Manual
(Preliminary Information)

General Description:

The Telex model TR-82N beltpack transceiver is a component of the BTR-80N wireless intercom system. The TR-82N is intended for use as a belt worn wireless full duplex portable intercom radio for use in a professional installation such as television or cinema production.

Each BTR-80N base station can be used with one to four TR-82N beltpacks. The TR-82N transmits within the 614 to 722 MHz range (TV Channels 38-55). It receives in the 482 to 608 MHz range (TV Channels 16-36). The TR-82N transmitter operates on a single frequency within an 18 MHz wide section of the transmit frequency range. The receiver also operates on a single frequency within an 18 MHz wide section of the receiver frequency range.

The RF coverage range of the TR-82N communicating to a base station may be up to 200 meters (656 ft).

The transmitter has three selectable conducted output power output levels; 5mW, 50mW and 100 mW. The transmit power can also be set to automatically reduce to the above listed power levels when the unit is close-in to the base station to aid in intermodulation reduction and unnecessary transmit power.

Operating frequencies can be selected from pre-set groups or the user can select special operating frequencies within the 18 MHz wide allotments.

The LCD display and buttons are located on the back panel.

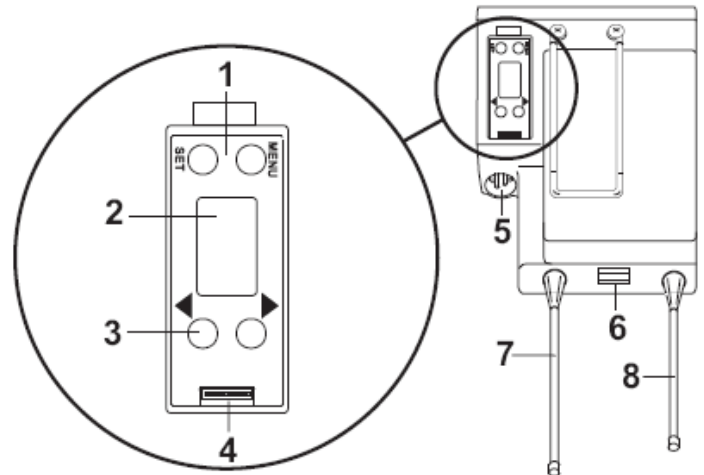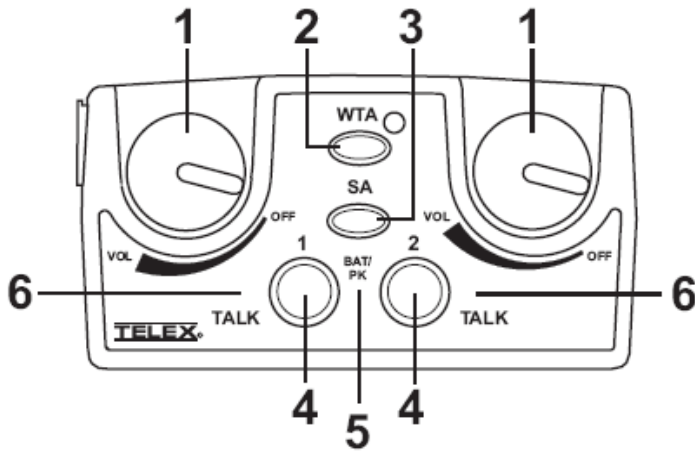From the LCD display and buttons the following menus may be obtained:

- Group and Channel
- Transmit Frequency
- Receive Frequency One
- Receive Frequency Two
- Microphone Gain Setting
- Battery Life
- Transmit power level (5mW, 50mW 100mW or Auto between the values)
- Receiver Squelch Level
- Push-to-Talk / Push-to-TX mode
- Headset configuration settings
- Top Panel LEDs on or off.

The on/off/volume controls, low battery indicator, microphone overmod. light, audio channel 1 or 2 button and lights, wireless talk around (WTA) and stage announce (SA) buttons are located on the top panel.

Transmit and receive antennas are attached to the TR-82N. Either or both unscrew for field replacement but are not coaxial connectors.

The TR-82N beltpack can be powered by AA Alkaline or a Nickel-Metal Hydride Battery pack.

1. **ON/OFF & Volume Control** – Either interom 1 or intercom 2 knob turns beltpack on. Both knobs must be off to turn the unit off.

2. **WTA Button and Light** – Wireless talk button. When pressed, the user's audio is disconnected from the wired intercom at the base station.

3. **SA Button and Light** – Wireless talk button. When pressed, the user's audio is routed to the stage annouce connector on the back of the base station. The user also loses their sidetone as an indication that stage announce is activated.

4. **Audio Channel Select Buttons and Lights** –Allows the user to select either audio channel 1 or 2.

5. **BAT/O.M. Light** –
   Battery - Light flashes on power up = Battery OK
   Light on continuously = Battery Low
   Light does not flash or come on = Battery Dead

   Microphone Lvl: Light flashes on loudest speech = Gain OK
   Light flashes on all speech = Gain too High
   Light never flashes on loudest speech = Gain too Low

6. **Talk Buttons and Lights** – LED is on when a talk button, SA or WTA is active. Press a button to enable the audio path from the headset.
   Software Selectable modes: Push-to-Talk
   Push-to-Latch

1. **[MENU] and [SET] buttons** – Used to select menus and set options on the LCD.

2. **LCD display**.

3. **[UP] and [DOWN] buttons** - Used to select menus and set options on the LCD.

4. **Programming Connector** – Used to update flash in unit.

5. **Headset Connector** – XLR Plug for Telex units, XLR Receptacle for RTS units.

6. **Battery Latch** – Press down to enable the battery pack to be released. While the latch is held down, slide the battery pack about 1/8 inch back, toward the latch, until it stops, then lift out.

7. **Receive Antenna** – The antennas are screw type, ¼ wave, replaceable antennas. The color dot on the screw end of the antenna must match color dot on antenna receptacle.

8. **Transmit Antenna** – The antennas are screw type, ¼ wave, replaceable antennas. The color dot on the screw end of the antenna must match color dot on antenna receptacle.

Specifications:

General:

Input Power…………..9.0 VDC Alkaline or NiMH.
Antennas…………………………………Attached
TX / RX………………..One TX, two RX
                        Frequency agile, 25 KHz steps,
                        within 18MHz wide allotments.
Frequency Range
                        TX……………614 – 722 MHz
                        RX……………482 – 608 MHz
                        (within 18MHz wide allotments)
FCC ID: B5DM531

Transmitter:

RF Power Output……………Selectable or Auto
                            between levels: 5mW,
                            50mW, 100mW typical
                            (terminated)
Final Voltage (100mW)…………..4.75 VDC
Final Current (100mW)…………..25mA
Modulation type…………………….FM
Deviation………………………….5 kHz
Audio Frequency Response………100 Hz to 7 kHz
Microphone Sensitivity ……..……10 mV

Receiver:

Sensitivity…………<0.6uV for 12 dB SINAD Typical
Audio Frequency Response….100 Hz to 7 KHz
Audio Output (headset)…….40 mW, 600 Ohms
                            (1% Distortion)

Approval Information:

FCC
The Telex TR-82N Transmitter/Receiver is type
accepted under United States Federal Communications
Commission Part 74.

This device complies with Part 15 of the FCC Rules.
Operation is subject to the condition that this device
does not cause harmful interference.

Licensing of Telex equipment is the users
responsibility and licensability depends upon the
user's classification, user's application and frequency
selected. Telex strongly urges the user to contact the
appropriate telecommunications authority for any
desired clarification.

CAUTION: Any changes or modifications made to the
above equipment could void the user's authority to
operate the equipment. NOTE: The beltpack is
intended to be worn on the belt of the user with both
antenna's vertical for best operating range and
performance. Placing the beltpack in other locations
on the body may reduce preformance and void the
user's authority by the FCC to operate the equipment.

Industry Canada
The Telex TR-82N Transmitter/Receiver is Certified
to Industry Canada RSS-123 rules.

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