

Telex Model BTR-800 Base Station

Owners/Users Manual (Preliminary Information)

General Description

The Telex Model BTR-800 is a part of the RadioCom TM wireless intercom series providing all of the Base Station functions.

The BTR-800 Base Station is a four channel receive and a two channel transmit unit operating within the 518-608 and 614-746 MHz range (TV Channels 22 to 59). Each base transmitter operates on selected frequencies in the lower half of the frequency range and the receivers operate on selected frequencies in the upper half of the frequency range.

The primary transmit frequency is used to transmit voice signals to all four of the TR-800 portable (beltworn) units. The secondary transmit frequency is used either as a second independent voice or signaling frequency. Each transmitter is a full power unit (not a sub-carrier) that is fed to a power combiner in order to reduce the number of antennas required for transmit.

Each of the base station receive frequencies are used to receive transmissions from each portable unit. Full Duplex (telephone type) operation is used and any portable can talk to any other portable or, any or all of the base receivers can be deselected allowing the mobiles to monitor only. Independent receive channels can be enabled or disabled by front panel Pushbuttons. The presence or absence of a portable transmit is displayed on the LCD Display.

Two independent 2 wire or 4 wire intercom units can be connected to the base station. Each intercom has independent input and output level adjustments.

An Auxiliary connector is provided for general audio use and also has input and output level controls.

A local headset connector is provided with volume, audio channel A/B or both, microphone gain control and a talk switch.

A front panel readout on the base station indicates the frequency or channel that is in current use. A separate menu is used to select one of several

pre-programmed frequency sets or each base can be programmed to special frequencies by the user.

The BTR-800 has a built-in 100 to 240 VAC 50/60 Hz power supply. Power is controlled by the ON/OFF front panel switch.

Half (1/2) Wave antennas are supplied with the base station. These antennas are ground independent. For improved range distance), Log Periodic Antennas and various lengths of coaxial cable with connectors are available as accessories.

Transmit (RF) power is switchable on the rear panel from 100mW (maximum) to 10 mW (minimum). The transmit power can also be turned off for use in multi systems where only one set of master transmitters is desired. The low power setting can be useful where multi-system intermod could occur or when it is desired to reduce the base transmitter range.

An Intercom (I/C) termination switch on the rear panel allows selecting Telex, RTS or ClearCom connections.

Both Intercom A and B have XLR and RJ Connectors on the rear panel in order to “Loop-Thru” to inter-connect several bases together.

The Auxilliary Audio Input and Output connectors are “one way” ports that are useful for stand-alone applications.

The Stage Announce is an Audio Output useful for any announce or page application . There is a dry “Relay Contact” (N.O.) also available on the rear panel for switching applications when stage announce is activated.

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Specifications:

Input Power.....100-240 VAC, 50-60 Hz.

Transmitter:

Frequency Range.....518-608 and 614-746 MHz.
(within 3 TV Channels, 18 MHz blocks)

RF Channels, two, frequency agile, 25 KHz steps.

RF Power Output.....100 mW Nominal,
Switchable down to 10 mW Nominal.

Frequency Deviation.....40 KHz Peak.

Audio Frequency Response.....200 Hz to 10 KHz Nominal.

Microphone Input Level.....7.75 mV for 40 KHz Deviation.

Receiver:

Frequency Range.....518-608 and 614-746 MHz.
(within 3 TV Channels, 18 MHz Blocks)

RF Channels, four, frequency agile, 25 KHz steps.

Sensitivity..... 0.8 uV for 12 dB SINAD

Squelch (internal).....Open at 20 dB SINAD.

Modulation Acceptance.....40 KHz Nominal.

Audio Frequency Response.....200 Hz to 10 KHz Nominal.

Audio Output (local headset).....200 mW, 600 Ohm Load.

Intercom:

Two independent intercoms are available (A and B). Each intercom has XLR Loop-Thru or 4 Wire “RJ” connectors. The user can select either 2 wire or 4 wire (but not both) from the front panel. The input and output levels are independently adjustable from the front panel. An Auxiliary intercom with XLR Connectors and input/output controls is also available.

Local Headset:

A 4 wire XLR connector is located on the front panel with Headset Volume, Microphone Gain Control, A/B or both Audio Channel Switch and Press to Talk or Lock to Talk switch.

Wireless Talk Around:

Provisions are made for “talk around mode”. Any portable station can select Talk Around mode and talk only to other portables but can still listen to the normal audio feed from the base station.

Stage Announce:

Any portable selecting Stage Announce can talk only to the Stage Announce function but can still listen to the normal audio feed. The stage announce relay contacts are closed when any portable selects stage announce.