

## **Telex Model BTR-700 Base Station**

Owners/Users Manual (Preliminary Information)

### **General Description**

The Telex Model BTR-700 is a part of the RadioCom™ wireless intercom series providing all of the Base Station functions.

The BTR-700 Base Station is a four channel receive and a one 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 transmit frequency is used to transmit voice and signals to all four of the TR-700 portable (beltworn) units.

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, microphone gain control and a talk/mute 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-700 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.

Transmit (RF) power is switchable on the rear panel from 50mW (maximum) to 5 mW (minimum). The transmit power can also be turned off for use where several bases are required that only use one transmit frequency. 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.

The Intercom has 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.

**Specifications:**

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

**Transmitter:**

Frequency Range.....518 to 608 MHz.  
( within 3 TV Channels, 18 MHz blocks)

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

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

Frequency Deviation.....40 KHz Peak.

Frequency Stability.....0.005%

Modulation Limiter.....Peak-Responding Compressor

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

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

**Receiver:**

Frequency Range..... 614 to746 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:**

One intercom XLR Loop-Thru and a 4 Wire “RJ11” Loop-Thru wire connection is available. 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 XLR Input and XLR Output is also available.

**Local Headset:**

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

**FCC LICENSING**

The Telex BTR-700 Transmitter/Receiver is Type Accepted Under Federal Communications Commission Part 74. Licensing of Telex equipment is the User's responsibility and licensibility depends on 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:** Changes or modifications made by the user could void the user's authority to operate the equipment.

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**Industry Canada Information:**

The Telex Model BTR-700 approved under RSS123.

**CAUTION:** Changes or modifications made by the user could void the users authority to operate the equipment.

Operation of this device is subject to the following two conditions:  
(1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

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**Mandatory Safety Instructions**  
**to Base Station Installers and Users**

1. Use only manufacturer or dealer supplied antenna. Antenna minimum safe distance, as calculated from FCC requirements, is 4.8cm. However, the FCC default for the minimum safe distance is 20cm. Antenna gain: zero dBd referenced to a dipole.
2. The FEDERAL COMMUNICATIONS COMMISSION has adopted a safety standard for human exposure to RF (Radio Frequency) energy, which is below the OSHA (Occupational Safety and Health Act) limits.
3. To comply with current FCC RF Exposure limits, the antenna must be installed at or exceeding the minimum safe distance shown here, and in accordance with the requirements of the antenna manufacturer or supplier.
4. Antenna substitution: Do Not substitute any antenna for the one supplied by or recommended by the manufacturer or radio dealer. You may be exposing person or persons to harmful radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.
5. **WARNING:** Maintain a separation distance from the antenna to person(s) of at least 20cm.

You, as the qualified end-user of this radio device must control the exposure conditions of bystanders to ensure that the minimum separation distance (above) is maintained between the antenna and nearby persons for satisfying RF Exposure compliance.

The operation of this transmitter must satisfy the requirements of the General Population/Uncontrolled Exposure Environment for work-related use. Transmit only when person(s) are at least the minimum distance from the properly installed, externally mounted antenna.

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