

# BTR 800



**RadioCom**<sup>™</sup>

2-Channel UHF Fully User Synthesized Wireless Intercom

*wireless that works*<sup>™</sup>



The most versatile wireless intercom ever!

# BTR 800

frequency agile

1440 selectable frequencies

2 independent intercom channels

ClearScan™ auto frequency selection

stage announce output with relay closure

wireless talk around (broadcast ISO)

dual listen operation (TR-825)

4 belt packs per base station

cast magnesium belt packs

and so much more



The Telex® RadioCom™ BTR-800 UHF wireless intercom is truly different. The 800 offers a list of standard features that is unparalleled in the industry and will change the way wireless intercom is done forever. Features like full UHF operation, two intercom channel access from each belt pack, stage announce output with relay closure, wireless talk around (ISO), Enhanced ClearScan™, talk/listen headset station at the base, and much, much more. Combine all of that with an easy-to-use graphical user interface that lets you get started right out of the box, and you've got the most innovative and versatile wireless intercom ever made. But features aren't the only story. The BTR-800 wireless intercom is a serious performer too. With technology leaps like Intelligent Power Control™, combination tone code/RF noise squelch and DSP digital audio processing, this is one wireless intercom that sounds great, even at a great distance! If your application requires the highest performance and utmost reliability, you need the new Telex RadioCom BTR-800 wireless intercom system.

*RadioCom, wireless that works!™*



BTR-800 battery charger

## 2-Channel UHF Fully User Synthesized Wireless Intercom



Screen sample of BTR-800 graphical user interface

- **Four beltpacks per base station.** Each BTR-800 base station can support up to four TR-800 or TR-825 wireless beltpacks in fulltime transmit, full duplex operation. Multiple base station/beltpacks systems can be used together to meet the needs of virtually any wireless communications application.
- **Frequency agile.** Choose from 1440 user selectable frequencies using the 800's new revolutionary graphical user interface. Frequencies can be selected from groups of intermod free choices, or any frequency in 25 KHz increments. Select from 720 TX and 720 RX frequencies each from independent 18 MHz operational windows.
- **UHF operation.** The BTR-800, TR-800 and TR-825 operate in the UHF band from 470 to 740 MHz. Bases and beltpacks operate in specific 18 MHz operational bands. Contact Telex customer service for complete operational band details.
- **Enhanced ClearScan™ frequency auto selection.** Frequency selection has never been easier! This is an advanced form of our existing ClearScan technology. It actually looks at all of the available frequencies in the factory and user defined groups and ranks them so that the user knows the best frequencies to use. Now you can walk into a new venue in a new city and have a clear set of frequencies in less than a minute with the push of a couple of buttons!
- **Intermodulation-free factory selected groups.** Each 800 system comes with 24 factory selected, intermod avoiding groups that allow even the most uninitiated user to get started right out of the box. Telex has done all of the work for you!
- **Two-channel intercom access from each beltpack.** Each TR-800 and TR-825 beltpack in the system can select between two hardwired intercom channels. Channels are run to the BTR-800 base station and can be 2-wire, 4-wire or mixed. The BTR-800 is fully compatible with AudioCom®, RTS™ and Clear-Com® hardwired intercom systems.
- **Dual Listen operation.** Each TR-825 beltpack provides two volume controls: one for each intercom channel that allow for individual level control. Listen to Production in one ear and Tech in the other ear. The TR-825 can operate in either Stereo (split-feed) or Mono mode.
- **Detachable beltpack antennas.** TR-800 and TR-825 beltpacks feature detachable antennas that utilize stud type threaded connectors that do not have a fragile center pin to break off or bend. Detachable antennas make storage or shipping a breeze.
- **Two great battery options.** TR-800 and TR-825 beltpacks can be operated from standard Alkaline AA batteries that provide up to 14 hours of continuous duty operation. For applications where rechargeable batteries are required optional NiMH battery packs are available. NiMH batteries do not develop harmful memories like NiCads and offer up to 12 hours of operation. Drop-in chargers are also available in single and four-gang configurations.
- **Stage Announce output with relay closure.** Each beltpack can initiate the Stage Announce feature. The user's audio is routed out the back of the base station via a 3-pin XLR connector. The signal is dry, line level +8 dB and adjustable. A convenient relay closure is provided for triggering two-way radios, IFB sends, green-room speakers or any other closure activated device.
- **Wireless Talk Around (Broadcast ISO).** Each beltpack can momentarily route its audio only to the other wireless beltpacks on its current channel with the push of a button. The user's audio is lifted off of the intercom bus so that only the other wireless beltpacks can hear. This is great for private conversations in the heat of battle.
- **"Fifth Person" Talk/Listen station at base.** The BTR-800 base station features a full talk/listen headset station so that an additional user can communicate on one, the other, or both intercom channels at once.
- **Intelligent Power Control™.** This new breakthrough technology takes system range and performance to a whole new level. Each beltpack senses when it is close to the base station and intelligently reduces its output by 10 dB. This effectively eliminates overloading the base station receiver front end which is the primary cause for the "near – far" desensing problem experienced in other wireless intercoms.
- **Cast magnesium beltpacks.** TR-800 and TR-825 beltpacks are constructed of extremely light, strong and durable cast magnesium. That's the metal "mag" wheels are made from! Using magnesium substantially decreases the weight of the beltpack while assuring the utmost ruggedness and durability.
- **Graphical user interface.** The BTR-800, TR-800 and TR-825 have easy to use user interfaces utilizing state of the art LCD displays. Custom graphical menus on the BTR-800 allow access to all of the powerful features and system operational parameters. The menu structure has been specifically designed to be intuitive and easy to use right out of the box.



BTR-800 Base Station Back

### TR-800 Metal Beltpack Transceiver

### TR-825 Metal Beltpack Transceiver

#### Overall

<b>RF Frequency Range:</b>	470 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands
<b>Power Requirements:</b>	6 "AA" Cells Alkaline (NiMH optional)
<b>Typical Battery Life</b>	
Alkaline:	14 Hours Continuous Duty
NiMH (1500 mAh):	11 Hours Continuous Duty
<b>Current Draw:</b>	140 mA (Push-to-Talk, Talk On)
<b>Temperature Range:</b>	-4°F to 130°F (-20°C to 55°C)
<b>Dimensions:</b>	3.75" W × 5.05" H × 1.65" D (9.5 cm × 12.8 cm × 4.2 cm)
<b>Weight:</b>	16 oz. (454 g) with alkaline batteries
<b>Transmit Antenna:</b>	1/4 Wave (supplied), Screw type
<b>Receive Antenna:</b>	1/4 Wave (supplied), Screw type
<b>FCC ID:</b>	B5DM515
<b>Frequency Response:</b>	300 Hz-8 KHz
<b>Microphone Input</b>	
<b>Sensitivity:</b>	7 mV
<b>Local Headset Output:</b>	40 mV output into 600 Ω (1% distortion)

#### Overall

<b>RF Frequency Range:</b>	470 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands
<b>Power Requirements:</b>	6 "AA" Cells Alkaline (NiMH optional)
<b>Typical Battery Life</b>	
Alkaline:	11 Hours Continuous Duty
NiMH (1500 mAh):	9 Hours Continuous Duty
<b>Current Draw:</b>	190 mA (Push-to-Talk, A and B Talk On)
<b>Temperature Range:</b>	-4°F to 130°F (-20°C to 55°C)
<b>Dimensions:</b>	3.75" W × 5.35" H × 2.02" D (9.5 cm × 13.5 cm × 5.1 cm)
<b>Weight:</b>	21 oz. (595 g) with alkaline batteries
<b>Transmit Antenna:</b>	1/4 Wave (supplied), Screw type
<b>Receive Antenna:</b>	1/4 Wave (supplied), Screw type
<b>FCC ID:</b>	B5DM517
<b>Frequency Response:</b>	300 Hz-8 KHz
<b>Microphone Input</b>	
<b>Sensitivity:</b>	7 mV
<b>Local Headset Output:</b>	40 mV output into 600 Ω (1% distortion)

#### Transmitter

<b>Type:</b>	Synthesized, 720 channels
<b>Transmit Power:</b>	50 mW Max. (Auto-power reduction when close to base)
<b>Modulation Type:</b>	FM
<b>Deviation:</b>	40 KHz
<b>RF Frequency Stability:</b>	0.005%
<b>Modulation Limiter:</b>	Peak-Responding Compressor
<b>Radiated Harmonics &amp; Spurious:</b>	Exceeds FCC specifications

#### Transmitter

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#### Receiver

<b>Type:</b>	Dual Conversion Superheterodyne, Synthesized, FM, 720 channels
<b>RF Sensitivity:</b>	<0.7 uV for 12 dB SINAD
<b>Squelch Threshold:</b>	20 dB SINAD (About 1.0 uV)
<b>IF Selectivity:</b>	3 dB at 230 KHz
<b>Image Rejection:</b>	70 dB or better
<b>Squelch Quieting:</b>	90 dB
<b>RF Frequency Stability:</b>	0.005%
<b>Distortion:</b>	<1% at full deviation

#### Receiver

<b>Type:</b>	Two, Dual Conversion Superheterodyne, Synthesized, FM, 720 channels
<b>RF Sensitivity:</b>	<0.8 uV for 12 dB SINAD
<b>Squelch Threshold:</b>	20 dB SINAD (About 1.0 uV)
<b>IF Selectivity:</b>	3 dB at 230 KHz
<b>Image Rejection:</b>	70 dB or better
<b>Squelch Quieting:</b>	90 dB
<b>RF Frequency Stability:</b>	0.005%
<b>Distortion:</b>	<1% at full deviation

#### BTR-800 Channel Groups

Channel Group	Base Transmit	Beltpack Receive	Base Receive	Beltpack Transmit
A2	518-536 TV 22, 23, 24		632-650 TV 41, 42, 43	
B4	536-554 TV 25, 26, 27		668-686 TV 47, 48, 49	
C6	554-572 TV 28, 29, 30		704-722 TV 53, 54, 55	
E88	590-608 TV 34, 35, 36		470-488 TV 14, 15, 16	

BTR-800/TR-800 are available with AudioCom A4M or RTS; A4F and A5F headset connector. TR-825 is available with AudioCom; A4M and A5M or RTS; A4F and A5F headset connector.

### BTR-800 Base Station Transceiver

#### Overall

<b>RF Frequency Range:</b>	470 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands
<b>Power Requirement:</b>	100-240 VAC, 50 – 60 Hz, IEC receptacle
<b>Temp Range:</b>	-4°F to 130°F (-20°C to 55°C)
<b>Dimensions:</b>	19.00" W × 1.72" H × 14.00" D (48.3 cm × 4.4 cm × 35.6 cm)
<b>Weight:</b>	7 lbs. 2 oz. (3.24 kg)
<b>Transmit Antenna:</b>	1/2 Wave (supplied) TNC Male Connector
<b>Receive Antenna:</b>	1/2 Wave (supplied) TNC Male Connector
<b>FCC ID:</b>	B5DM514
<b>Frequency Response:</b>	300 Hz-8 KHz
<b>Four Wire Input:</b>	Level Adjustable (2 Vrms typical)
<b>Four Wire Output:</b>	Level Adjustable (2 Vrms typical)
<b>Telex® Intercom:</b>	Input/Output Level Adjustable (1 Vrms typical), Line Impedance 300 Ω
<b>RTS® Intercom:</b>	Input/Output Level Adjustable (0.775 Vrms typical), Line Impedance 200 Ω
<b>ClearCom® Intercom:</b>	Input/Output Level Adjustable (1 Vrms typical) Line Impedance 200 Ω
<b>Auxiliary Input:</b>	Adjustable (2 Vrms typical)
<b>Auxiliary Output:</b>	Adjustable (2 Vrms typical into 600 Ω)
<b>Stage Announce Output:</b>	Internally Adjustable (1 Vrms typical at rated deviation into 100 KΩ)
<b>Stage Announce Relay:</b>	Dry contact, rated at 1Amp, 24 V Max.
<b>Microphone Input Sensitivity:</b>	9 mV
<b>Local Headset Output:</b>	40 mW output into 600 Ω (1% Distortion)

#### Transmitter

<b>Type:</b>	Synthesized, 720 channels
<b>Transmit Power:</b>	100 mW Max. (High), 10 mW (Normal)
<b>Modulation Type:</b>	FM
<b>Deviation:</b>	40 KHz
<b>RF Frequency Stability:</b>	0.005%
<b>Modulation Limiter:</b>	Peak-Responding Compressor
<b>Radiated Harmonics &amp; Spurious:</b>	Exceeds FCC specifications

#### Receiver

<b>Type:</b>	Dual Conversion Superheterodyne, Synthesized, FM, 720 channels
<b>RF Sensitivity:</b>	<0.8 uV for 12 dB SINAD
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<b>IF Selectivity:</b>	3 dB at 230 KHz
<b>Image Rejection:</b>	70 dB or better
<b>Squelch Quieting:</b>	90 dB
<b>RF Frequency Stability:</b>	0.005%
<b>Distortion:</b>	<1% at full deviation

#### Distributed by:

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