

# BTR 700

W I R E L E S S I N T E R C O M S Y S T E M



*At last a wireless intercom with the features you need. UHF operation, frequency agile, all metal beltpack, an easy to use user interface and much, much more! The new BTR-700 wireless intercom system utilizes cutting edge technology to ensure the utmost in range, interference resistance and high audio quality. Combine all of that with new Enhanced ClearScan™ technology that enables you to select intermod and interference free frequencies with the touch of a button, and you've got the wireless intercom to get you through virtually any challenge you face.*

- **Four beltpacks per base station.** Each BTR-700 base station can support up to four TR-700 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 700'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.** Both the BTR-700 and the TR-700s operate in the UHF band from 518 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 pre-intermoded 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 700 system comes with 24 factory selected, pre-intermoded 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!
- **"Fifth Person" Talk/Listen station at base.** The BTR-700 base station features a full talk/listen headset station so that an additional user can communicate on the intercom channel.
- **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-700 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.** Both the BTR-700 and the TR-700 have easy to use user interfaces utilizing state of the art LCD displays. Custom graphical menus on the BTR-700 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.
- **Detachable beltpack antennas.** TR-700 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-700 beltpacks can be operated from standard Alkaline AA batteries that provide over 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 a full 12 hours of operation. Drop-in chargers are also available in single and four-gang configurations.







BTR-700 Base Station Back

## TR-700 Metal Beltpack Transceiver

### Overall

RF Frequency Range:	518 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands
Power Requirements:	6 "AA" Cells Alkaline (NiMH optional)
Current Draw:	140 mA (Push-to-Talk, Talk On)
Temperature Range:	-4°F to 130°F (-20°C to 55°C)
Dimensions:	3.75" W × 5.05" H × 1.65" D (9.5 cm × 12.8 cm × 4.2 cm)
Weight:	15 oz. (.425 kg) with alkaline batteries
Transmit Antenna:	1/4 Wave (supplied), Screw type
Receive Antenna:	1/4 Wave (supplied), Screw type
FCC ID:	B5DM515
Frequency Response:	300-8 KHz
Microphone Input Sensitivity:	7 mV
Local Headset Output:	40 mV output into 600 $\Omega$ (1% distortion)

### Transmitter

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

### Receiver

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

### Ordering Information

Model No.	Description	Order by Cat.
BTR-700	AudioCom Version C6 Base Transceiver	71303C6
TR-700	AudioCom Version C6 Beltpack Transceiver	71304C6
BTR-700	RTS Version C6 Base Transceiver	71303C6R
TR-700	RTS Version C6 Beltpack Transceiver	71304C6R
BTR-700	RTS 5-Pin Version C6 Base Transceiver	71303C6R5
TR-700	RTS 5-Pin Version C6 Beltpack Transceiver	71304C6R5

All specifications are subject to change without notice.

## BTR-700 Base Station Transceiver

### Overall

RF Frequency Range:	518 – 608 MHz, 614 – 740 MHz in 18 MHz TX and RX bands
Power Requirement:	100-240 VAC, 50 - 60 Hz, IEC receptacle
Temp Range:	-4°F to 130°F (-20°C to 55°C)
Dimensions:	19.00" W × 1.72" H × 14.00" D (48.3 cm × 4.4 cm × 35.6 cm)
Weight:	6 lbs. 15 oz. (3.15 kg)
Transmit Antenna:	1/2 Wave (supplied) TNC Male Connector
Receive Antenna:	1/2 Wave (supplied) TNC Male Connector
FCC ID:	B5DM514
Frequency Response:	300-8 KHz
Four Wire Input:	Level Adjustable (2 Vrms typical)
Four Wire Output:	Level Adjustable (2 Vrms typical)
Telex® Intercom:	Input/Output Level Adjustable (1 Vrms typical), Line impedance 300 $\Omega$
RTS® Intercom:	Input/Output Level Adjustable (0.775 Vrms typical), Line Impedance 200 $\Omega$
ClearCom® Intercom:	Input/Output Level Adjustable (1 Vrms typical), Line Impedance 200 $\Omega$
Auxiliary Input:	Adjustable (2 Vrms typical)
Auxiliary Output:	Adjustable (2 Vrms typical into 600 $\Omega$ )
Microphone Input Sensitivity:	9 mV
Local Headset Output:	40 mW output into 600 $\Omega$ (1% Distortion)

### Transmitter

Type:	Synthesized, 720 channels
Transmit Power:	50 mW Max. (High), 10 mW (Normal)
Modulation Type:	FM
Deviation:	40 KHz
RF Frequency Stability:	0.005%
Modulation Limiter:	Peak-Responding Compressor
Radiated Harmonics & Spurious:	Exceeds FCC specifications

### Receiver

Type:	Dual Conversion Superheterodyne, Synthesized, FM, 720 channels
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IF Selectivity:	3 dB at 230 KHz
Image Rejection:	70 dB or better
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RF Frequency Stability:	0.005%
Distortion:	<1% at full deviation

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# TELEX BTR-700/800/825 -vs- BTR-80N

Feature	Telex 700	Telex 800/825		Telex 80N	
	<b>BASE STATION AND SYSTEM FEATURES</b>				
RF FREQUENCY RANGE	518-608, 614-740 MHz	470-608, 614-746 MHz		482-608, 614-722 MHz	
FREQUENCY BANDS	<b>5</b> (A2, B4, C3, <b>C6</b> , <b>G9</b> )	<b>18</b> F1, F2, F3, F4 H1, H2, H3, H4 A2, A3, A4 B3, B4, <b>B6</b> C3, C4, <b>C6</b> E88		<b>32</b> F1, F2, F3, F4, F5, <b>F6</b> H1, H2, H3, H4, F5, <b>F6</b> A1, A2, A3, A4, A5, <b>A6</b> B2, B3, B4, B5, <b>B6</b> C3, C4, C5, <b>C6</b> D4, D5, <b>D6</b> E5, <b>E6</b>	<b>"6" &amp; "G9" BANDS ARE INTENDED FOR SALE AND USE OUTSIDE OF THE USA</b>
TRANSMITTER OCCUPIED BANDWIDTH	100 KHz	100 KHz		25 KHz	
Simultaneous 2 Wire & 4 Wire Operation	NO	YES - Either Channel		YES - Each Channel	
BASE STATION ANTENNA (Supplied)	1/2 Wave	1/2 Wave		1/2 Wave	
FREQUENCY SCANNING	YES ClearScan®	YES ClearScan®		YES ClearScan®	
BASE STATION TRANSMIT POWER	50 & 5mW	100 & 10mW		249, 100, 50 & 10mW	
BASE STATION DUAL TRANSMIT ANTENNA OUTPUT	N/A	OPTIONAL		OPTIONAL	
WARRANTY	3 YRS	3 YRS		3 YRS	
USER ADJUSTABLE SQUELCH CONTROL	NO	NO		YES	
RF METER (Rx SIGNAL STRENGTH)	NO	NO		YES	
BELTPACK BATTERY GAUGE ON BTR DISPLAY	NO	NO		YES	
ABILITY TO TURN OFF TR Tx FROM BTR	NO	NO		YES	
AC or DC POWER OPERATION	YES - KIT	YES - KIT		YES	
AUXILIARY AUDIO ASSIGNABLE	NO	NO		YES	
WIRELESS TALK AROUND - WTA	YES	YES		YES	
STAGE ANNOUNCE - SA	YES	YES		YES	
INTELLIGENT POWER CONTROL (TR Tx POWER)	YES	YES		YES	
FIRST ON - LATCH OUT OPERATION WITH TONE WARNING	NO	NO		YES Tone Defeatable	
SELECTABLE DC POWER FEED ON Rx LINE	NO	NO		YES 9 volts DC	
	<b>BELTPACK FEATURES</b>				
	<b>TR-700</b>	<b>TR-800</b>	<b>TR-825</b>	<b>TR-80N</b>	<b>TR-82N</b>
BELTPACK CONSTRUCTION	METAL DIE CAST MAGNESIUM	METAL DIE CAST MAGNESIUM	METAL DIE CAST MAGNESIUM	METAL DIE CAST MAGNESIUM	METAL DIE CAST MAGNESIUM
BELTPACK BATTERY LIFE (6 AA Alkaline)	14 Hrs	14Hrs	11Hrs	10 Hrs	9 Hrs
BELTPACK BATTERY LIFE (BP-800NM)	11 Hrs	11 Hrs	9.5 Hrs	10 Hrs	8 Hrs
PROGRAMMABLE BUTTONS ON BELTPACK	YES	YES	YES	YES	YES
PROGRAMMING AT BELTPACK	YES	YES	YES	YES	YES
BELTPACK TRANSMIT POWER	AUTO; 5 - 50mW	AUTO; 5 - 50mW	AUTO; 5 - 50mW	AUTO; 5 - 50mW	AUTO; 5 - 50mW
SELECTABLE-	NO	NO	NO	YES - AUTO, 100, 50, 5mW	YES - AUTO, 100, 50, 5mW
BELTPACK LOW BATTERY INDICATOR	YES	YES	YES	YES	YES
BELTPACK LOW BATTERY TONE WARNING	NO	NO	NO	YES	YES Tone Defeatable
ABILITY TO DISPLAY FREQUENCY AT BELTPACK	YES	YES	YES	YES	YES
EXTRA PDA DEVICE REQUIRED FOR PROGRAMMING	NO	NO	NO	NO	NO
BELTPACK TETHERED PROGRAMMING TO BASE STATION	NO	NO	NO	NO	NO
USER ADJUSTABLE SQUELCH CONTROL	NO	NO	NO	YES	YES
RF METER (Rx SIGNAL STRENGTH)	NO	NO	NO	YES	YES