



RadioCom™

BTR-1 and TR-1

wireless that works™

BTR-1 / TR-1

1 to 1 UHF - Full Duplex, Frequency Agile, Digitally Encrypted Wireless Intercom

The Telex® BTR-1 UHF wireless intercom system is truly unique. The BTR-1 is a One to One (one base station to one belt pack) full duplex, digitally encrypted wireless intercom that offers a list of standard features that is unparalleled in the industry.

Features like UHF frequency agility, digital audio encryption, advanced ClearScan™, three audio channel capability with 2-wire line mix, signal relay closure, TR-1 battery telemetry to the base station, base station RF meter and much, much more. Combine all of these features with an easy-to-use graphical user interface that lets you get started right out of the box, and you've got the most versatile wireless intercom ever produced. The BTR-1 is packed full of the latest technology like Intelligent Power Control™, DSP Digital Audio Processing and proprietary digital audio encryption. This wireless intercom system not only sounds great but, provides secure communications at the same time. If your application requires the highest performance and the ultimate in reliability, you need the new Telex RadioCom™ BTR-1 wireless intercom system.

Frequency Agile

1440 Selectable Frequencies

Available on 34 Different Frequency Band Splits

Advanced ClearScan™ Auto Frequency Selection

1 Beltpack to 1 Base Station (Full Duplex)

Multiple Beltpacks to 1 Base Station (Half Duplex)

Digital Audio Encryption

Three Audio Channel Capability with 2-Wire Line Mix

Signal Relay Closure

Cast Magnesium Beltpacks

And so much more



SYSTEM

Each BTR-1 base station can support one TR-1 beltpack in fulltime transmit, full duplex operation. Multiple TR-1 beltpacks can be used in Push to Transmit mode (transmitter engaged when TALK button is active) providing half duplex operation with "First ON – Latch OUT" feature.

UHF OPERATION

The BTR-1 and TR-1 operate in the UHF frequency band from 482 MHz to 746 MHz. Base stations and beltpacks operate in specific 18 MHz frequency bands.

FREQUENCY AGILE

Choose from 34 different frequency band splits providing 1440 user selectable frequencies per band split. OR, choose from 50 preprogrammed factory selected intermod avoiding frequency groups that are provided for each frequency band split. Either way, the BTR-1 will allow the user to get started right out of the box. Telex has done most of the work for you.

ADVANCED ClearScan™

ClearScan™ Group:

Scans all Factory and User defined Channel Groups and produces a list of open groups in order of maximum number of Channels available for a given Group. Once the Group is selected, pressing SET with that Group showing starts the ClearScan™ Channel function.

ClearScan™ Channel:

Scans the channels in the selected Group and produces a list of open Channels within the Group in order of best Channel first

ClearScan™ Band:

Scans the entire 18 MHz band for clear frequencies regardless of Groups or Channels and is used to find one frequency in a tough RF environment.

THREE-CHANNEL INTERCOM ACCESS FROM BELTPACK

Each TR-1 can select their own mix of up to six 2-wire intercom lines on each (up to three) beltpack selected audio channels. You can program the system to TALK, LISTEN ONLY, or MUTE any of the six intercom lines on any of the beltpack audio channels and you have complete control of the level settings for each intercom channel. The BTR-1 is fully compatible with AudioCom®, RTST™, and Clear-Com® hardwired intercom systems.

RadioCom™ SPECIFICATIONS

BTR-1 SPECIFICATIONS

RF Frequency Range.....	470-608 MHz (TV CH14-35) in 18MHz Tx Bands 614-740 MHz (TV CH 38-58) in 18 MHz Rx Bands
Power Requirements	12-15 Volts AC/DC
Temperature Range	-4°F to 130°F (-20°C to 55°C)
Dimensions.....	8.25"W x 1.72"H x 9.00 " D (20.9 cm x 4.4 cm x 22.9 cm)
Weight	3lbs 8oz (1.59kg)
Transmit Antenna	1/2 Wave (supplied) TNC Male Connector
Receive Antenna	1/2 Wave (supplied) TNC Male Connector
Frequency Response	100Hz - 4000Hz
Microphone Audio Input.....	30-3500 Ohms
Microphone Input Sensitivity	10mV
Local Headset Output	40mW output into 150 ohms (1% distortion)

2-WIRE INPUT/OUTPUT (TELEX/RTS/CLEAR-COM)

Telex	Input/Output level adjustable (1VrmsTypical) Line impedance 300 ohms
RTS	Input/Output level adjustable (0.775 VrmsTypical) Line impedance 200 ohms
Clear-Com.....	Input/Output level adjustable (1VrmsTypical) Line impedance 200 ohms

TR-1 SPECIFICATIONS

RF Frequency Range.....	470-608 MHz (TV CH14-36) in 18MHz Rx Bands 614-740 MHz (TV CH38-58) in 18MHz Tx Bands
Power Requirements	6 "AA" cells, Alkaline or Nickel Metal Hydride
Battery Life	Alkaline 10 hours continuous duty Nickel Metal Hydride 8-9 hours continuous duty
Temperature Range	-4°F to 130°F (-20°C to 55°C)
Dimensions.....	3.75"W x 5.10" H x 1.65" D (9.5 cm x 12.9 cm x 4.2 cm)
Weight	15 oz (425 g) with alkaline batteries
Transmit Antenna	1/4 Wave (supplied) Screw type, replaceable
Receive Antenna	1/4 Wave (supplied) Screw type, replaceable
Frequency Response	100Hz - 4000Hz
Microphone Input Sensitivity	7.8 mV Gain Max
Local Headset Output	40mW output into 150 ohms (1% distortion)

4-WIRE INPUT/OUTPUT (RTS)

4-Wire Input.....	Level Adjustable (2Vrms typical)
4-Wire Output.....	Level Adjustable (2Vrms typical)

BTR-1 TRANSMITTER SPECIFICATIONS

Type.....	Synthesized Transmitter, 720 channels
Transmit Power	50mW Max (High), 5mW (Normal)
RF Frequency Stability	0.005%
FCC Acceptance.....	Type Accepted under Part 74

BTR-1 RECEIVER SPECIFICATIONS

Type.....	Dual Conversion Superhetrodyne
RF Sensitivity.....	<0.7 uV for 12dB SINAD
IF Selectivity.....	3dB at 230KHz
Image Rejection	70dB or better
Squelch Quieting	90dB
RF Frequency Stability	0.005%
Distortion.....	<1% at peak level

TR-1 TRANSMITTER SPECIFICATIONS

Type	Synthesized Transmitter, 720 channels
Transmit Power	50mW Max, Selectable
RF Frequency Stability	0.0005%
FCC Acceptance	Type Accepted under Part 74

TR-1 RECEIVER SPECIFICATIONS

Type.....	Dual Conversion Superhetrodyne
RF Sensitivity.....	<0.7 uV for 12dB SINAD
IF Selectivity.....	3dB at 230 KHz
Image Rejection	70dB or better
Squelch Quieting	90dB
RF Frequency Stability	0.005%
Distortion.....	<1% at peak level

Licensing of this equipment is the User's responsibility and licensibility depends on the User's classification, User's application and frequency selected.

ACS-101



FEATURES:

- The ACS-101 Antenna Combiner - Splitter provides up to ten BTR-1 transmit and receive antenna feeds to one transmit and one receive antenna
- Provides power for up to 10 BTR-1 base stations
- Frequency Range 470 - 608 MHz Tx and 614 - 746 MHz Rx
- 2 Rack Units Tall.

FM-1



FEATURES:

- The System Manager (FM-1) provides an interface to a BTR-1 system that will enable frequency and system configurations to be easily maintained and updated.
- Utilize Multi-Media Card (MMC) for memory interface to BTR-1 system including frequencies and systems settings.
- 1 Rack Unit Tall

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BTR-1

The BTR-1 system operates in TV channels 16 to 36 and 38 to 59. This is the frequency range of 482 to 608 MHz and 614 to 746 MHz. The BTR-1 frequency bands are typically 18 MHz wide, however band 7 is 24 MHz wide.

Frequency bands F to E are always BTR-1 transmit bands (TR-1 receive bands) and frequency bands 1 to 7 are BTR-1 receive bands (beltpack transmit bands).

The BTR-1 is offered on 34 frequency band splits (see table below).

BTR-1 Transmit Bands	BTR-1 Receive Bands
F	1, 2, 3, 4, 5, 6, 7
H	1, 2, 3, 4, 5, 6, 7
A	2, 3, 4, 5, 6, 7
B	3, 4, 5, 6, 7
C	4, 5, 6, 7
D	5, 6, 7
E	6, 7

BTR-800 and BTR-700

The BTR-800 and BTR-700 systems operate in TV channels 14 to 36 and 38 to 58. This is the frequency range of 470 to 608 MHz and 614 to 740 MHz. The BTR-800 and BTR-700 frequency bands are 18 MHz wide.

Frequency bands A, B, C and E are always base station transmit bands (beltpack receive bands) and frequency bands 2, 4, 6, 88 are base station receive bands (beltpack transmit bands).

The BTR-800 is offered on 4 frequency band splits: A2, B4, C6 and E88 (see table below).

The BTR-700 is offered on 3 frequency band splits: A2, B4 and C6 (see table below).

BTR-800 Transmit Bands	BTR-800 Receive Bands
A	2
B	4
C	6
E	88

BTR-700 Transmit Bands	BTR-700 Receive Bands
A	2
B	4
C	6
G	9

Note: The G9 Frequency Band is not authorized for use in the USA or Canada

RadioCom™ UHF Frequency Band Chart					
BTR-1	TV CHANNEL	START FREQUENCY	END FREQUENCY	TV CHANNEL	BTR-800 BTR-700
F	14	470	476	14	88
	15	476	482	15	
	16	482	488	16	
	17	488	494	17	
H	18	494	500	18	
	19	500	506	19	
	20	506	512	20	
	21	512	518	21	
A	22	518	524	22	A
	23	524	530	23	
	24	530	536	24	
B	25	536	542	25	B
	26	542	548	26	
	27	548	554	27	
C	28	554	560	28	C
	29	560	566	29	
	30	566	572	30	
D	31	572	578	31	
	32	578	584	32	
	33	584	590	33	
E	34	590	596	34	E
	35	596	602	35	
	36	602	608	36	
NOT USED	37	608	614	37	NOT USED
1	38	614	620	38	
	39	620	626	39	
	40	626	632	40	
2	41	632	638	41	2
	42	638	644	42	
	43	644	650	43	
3	44	650	656	44	
	45	656	662	45	
	46	662	668	46	
4	47	668	674	47	4
	48	674	680	48	
	49	680	686	49	
5	50	686	692	50	
	51	692	698	51	
	52	698	704	52	
6	53	704	710	53	6
	54	710	716	54	
	55	716	722	55	
7	56	722	728	56	
	57	728	734	57	
	58	734	740	58	
	59	740	746	59	

796	802		G
802	808		
808	814		

844	850		9
850	856		
856	862		