

# **RadioCom**<sup>™</sup>

pecifications

	BTR-600 Base	BTR-500 Base	BTR-200 II Base	TR-600 Belt Pack	TR-500 Belt Pack	TR-200 Belt Pack
Overall	Station Repeater	Station Repeater	Station Repeater	Transceiver	Transceiver	Transceiver
Power Requirements	115 Vac, 60 Hz, 8W (230 Vac, 50 Hz, Model Avail.) or 12 to 15 V AC/DC (external)	115 Vac, 60 Hz, 8W (230 Vac, 50 Hz, Model Avail.) or 12 to 15 V AC/DC (external)	115 Vac, 60 Hz, 8W (230 Vac, 50 Hz, Model Avail.) or 12 to 15 V AC/DC (external)	6 "AA" Cells (Alkaline) Nickel Metal Hydride optional	6 "AA" Cells (Alkaline) Nickel Metal Hydride optional	6 "AA" Cells NiCad optional
Current Drain				120 mA	120 mA	65 mA
Temp Range Dimensions	-4°F to 130°F (-20°C to 55°C) 8.25″W × 1.75″H × 11.25″D	-4°F to 130°F (-20°C to 55°C) 8.25"W × 1.75"H × 11.25"D	-4°F to 130°F (-20°C to 55°C) 15.75″W × 1.75″H × 10.5″D	-4°F to 130°F (-20°C to 55°C) 4″W × 5 <sup>7</sup> / <sub>8</sub> ″H × 1 <sup>5</sup> / <sub>8</sub> ″D	-4°F to 130°F (-20°C to 55°C) 4″W × 5 <sup>7</sup> /₅″H × 1 <sup>5</sup> /₅″D	-4°F to 130°F (-20°C to 55°C 4.25″W × 4.125″H × 2.0″D
Weight	(21cm × 4.5cm × 25.6cm) 4 lbs. (1.8kg)	(21cm × 4.5cm × 28.6cm) 4 lbs. (1.8kg)	(40cm × 4.5cm × 27cm) 4.5 lbs. (2kg)	(102mm × 149mm × 41mm) 1 lb. 6 oz (625g) with batteries	(102mm × 149mm × 41mm) 1 lb. 6 oz (625g) with batteries	(108mm × 105mm × 51mm 13 oz (369g) with batteries
Transmit Antenna	1/2 wave (supplied) TNC connector on chassis	1/2 wave (supplied) TNC connector on chassis	5/8 wave (supplied) S0239 connector on chassis	1/4 wave wire (attached)	1/4 wave wire (attached)	1/4 wave wire (attached)
Receive Antenna	1/2 wave (supplied) TNC connector on chassis	1/2 wave (supplied) TNC connector on chassis	5/s wave (supplied) S0239 connector on chassis	1/4 wave wire (attached)	1/4 wave wire (attached)	1/4 wave wire (attached)
Transmit						
RF Frequency Range	520 to 608 and 614 to 760 MHz	520 to 608 and 614 to 760 MHz	150 to 216 MHz	520 to 608 and 614 to 760 MHz	520 to 608 and 614 to 760 MHz	150 to 216 MHz
RF Frequency Stability	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%
RF Power Output	40 mW Typical	40 mW Typical	50 mW Typical	40 mW Typical	40 mW Typical	50 mW Typical
Modulation	F-1-E ±32 KHz deviation 62.5 K baud	F3 40 KHz deviation, 100 micro-seconds Pre-emphasis	F3 4 KHz deviation, 100 micro-seconds Pre-emphasis	F-1-E ±32 KHz deviation 62.5 K baud	F3 40 KHz deviation 100 micro-seconds Pre-emphasis	F3 4 KHz deviation, 100 micro-seconds Pre-emphasis
Mod. Limiter	Internal Compressor	Internal Compressor	Internal Compressor	Internal Compressor	Internal Compressor	Internal Compressor
Modulation Freq. Range	300 to 4500 Hz ±2 dB	300 to 8000 Hz ±2 dB	300 to 5000 Hz ±2 dB	300 to 4500 Hz ±2 dB	300 to 8000 Hz ±2 dB	300 to 5000 Hz ±2 dB
Microphone Audio Input	30 ohms to 3500 ohms	30 ohms to 3500 ohms	30 ohms to 3500 ohms	30 ohms to 3500 ohms	30 ohms to 3500 ohms	30 ohms to 3500 ohms
Microphone Input Sensitivity	2 mV	2 mV	2 mV Dynamic, 4 mV Electret	2 mV	2 mV	2 mV Dynamic, 4 mV Electret
Radiated Harmonics and Spurious Emissions	-45 dBC	-45 dBC	-45 dBC	-45 dBC	-45 dBC	-45 dBC
External Audio Input	Auxiliary & Intercom Inputs	Auxiliary & Intercom Inputs	Auxiliary & Intercom Inputs			
FCC	Type accepted under FCC Part 74	Type accepted under FCC Part 74	Type accepted under FCC Parts 74 and 90	Type accepted under FCC Part 74	Type accepted under FCC Part 74	Type accepted under FCC Parts 74 and 90
Receive RF Frequency	520 to 608 and	520 to 608 and	150 to 216 MHz	520 to 608 and	520 to 608 and	150 to 216 MHz
Range	614 to 760 MHz	614 to 760 MHz	150 to 2 to Winz	614 to 760 MHz	614 to 760 MHz	130 to 2 to Winz
RF Frequency Stability	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%	Crystal Controlled, 0.005%
Туре	Single Conversion Superheterodyne, FM	Single Conversion Superheterodyne, FM	Dual Conversion Superheterodyne, FM	Single Conversion Superheterodyne, FM	Single Conversion Superheterodyne, FM	Dual Conversion Superheterodyne, FM
RF Sensitivity	<0.7 μV for 12 dB SINAD	<0.7 μV for 12 dB SINAD	<0.5 µV for 12 dB SINAD	<0.7 µV for 12 dB SINAD	<0.7 µV for 12 dB SINAD	<0.5 μV for 12 dB SINAD
IF Selectivity	3 dB at 230 KHz (Ceramic Filter)	3 dB at 150 KHz (Ceramic Filter)	3 dB at 30 KHz (4 pole Monolythic Filters)	3 dB at 230 KHz (Ceramic Filter)	3 dB at 150 KHz (Ceramic Filter)	3 dB at 30 KHz (Ceramic Filter)
Image Rejection	70 dB or better	70 dB or better	70 dB or better	70 dB or better	70 dB or better	70 dB or better
Squelch Quieting	67 dB	65 dB	90 dB	67 dB	65 dB	90 dB
Squelch Threshold	3.0 μV (Internal)	1.5 μV (Internal)	1 μV (Internal)	3.0 μV (Internal)	1.5 μV (Internal)	3.0 μV (Internal)
Signal-to- Noise Ratio	55 dB	63 dB	90 dB	55 dB	63 dB	90 dB
Audio Output	32 mW into 600 ohms (Headset)	32 mW into 600 ohms (Headset)	32 mW into 600 ohms (Headset)	32 mW into 600 ohms (Headset)	32 mW into 600 ohms (Headset)	32 mW into 600 ohms (Headset)
Other Audio Outputs	Audio, Auxiliary, Intercom Aux in-out/four wire/IC 2 chnl	Audio, Auxiliary, Intercom Aux in-out/four wire/IC 2 chnl	Speaker, Auxiliary, Intercom			
Distortion	<3.5% at Rated Output	<1% at Rated Output	<1% at Rated Output	<3.5% at Rated Output	<1% at Rated Output	<1% at Rated Output
FCC	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15	Notification under FCC Part 15
	SC-600 Frequency Range: 520-76 Antenna Connectors: Sta AC Power Input: 110/220 DC Power Output: 15 VDC Dimensions: 3.5" H × 17" (88.9mm × 431.8mm × 31 Weight: 15 lbs.	ndard TNC receptacles VAC 50/60 Hz, 130 VA C 1.3 A W × 12.5"D	Splitter 3rd Order Intercept Output: >28 dBm Net Gain: >2 dB Noise Figure: <4 dB Output Isolation: >20 dB		Combiner Net Gain: 0 dB Noise Figure: 10 dB Typ 3rd Order Intercept Output: -55 dBm @ +13 dBm Input, each transmitter	

**Telex**<sup>®</sup>

TELEX COMMUNICATIONS, INC. • 9600 Aldrich Avenue South, Minneapolis, MN 55420 • Tel: 612-887-5550, Fax: 612-884-0043 • E-mail: pro.sound@telex.com • Web page: www.telex.com

International Offices:

# BTR-600

The Telex® RadioCom™ BTR-500/600 UHF Wireless intercom systems offer the ultimate in reliable, high performance, high fidelity, full duplex communications. Operating in the 520 to 760 MHz range the units operate reliably at distances of over 1,000 feet. Various types of log periodic antennas are available that can increase the effective range to ½ mile or more depending on site conditions.

The BTR-600 series incorporates Autoswitching 2 channel audio operation, permitting the belt pack user to select between 2 separate audio channels of communication. Auto-switching provides the flexibility to create private and party lines within the same belt pack.

The BTR-500/600 series also incorporates two channel frequency agility. The base station and belt pack have two UHF transmit frequencies and two UHF receive frequencies that allow the user to escape frequency interference problems that may arise.

The BTR-500/600 series is perfectly suited for stand-alone (single drop) operation and easily expands up to 16 BTR/TR sets permitting up to 32 discrete full duplex channels. The systems are fully compatible with RTS™TW and Audiocom™ party line intercoms, as well as RTS Digital Matrix systems and other 4 wire communications systems. The systems easily adapt to other types of party line intercom. The base station also allows connections for auxiliary balanced line level audio input and output.

The BTR-600 series includes a unique patented digital encryption process for those who need secure full duplex communications. The 600 series offers over 65,000 code settings that can be changed on the fly by means of 4 cipher code switches on the units.

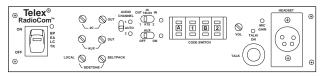


Code Switch:

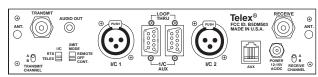
Allows operator to select up to 65,000 different cipher codes (BTR-600 set only).



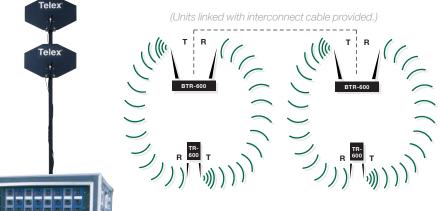
m s



Front



Back



#### How The System Works:

The BTR-500/600 set provides full duplex communications with a single belt pack transceiver. The BTR-500/600 base station transmits a UHF frequency that the TR-500/600 receives and simultaneously transmits a UHF frequency that the base station receives.

1 to 16 BTR-500/600 sets may be operated simultaneously permitting full duplex communications. Units can be linked together to create private or party line communications (units linked with interconnect cable provided).



National Football League Coaches' System featuring 8 BTR-600 sets and an SC-600 Antenna combiner.

# **RadioCom**<sup>™</sup>

wireless intercoms

Telex® SC-600

TRANSMIT ANTENNA

# SC-600

The SC-600 Amplified Broadband
Splitter-Combiner makes it possible to
operate eight UHF wireless intercom base
transceivers using only two antennas. In
addition to accommodating eight transmit
and eight receive antennas, it provides
power connection for up to eight base
transceivers. It also features a high degree of
output isolation—a necessity in multi-frequency systems
to prevent intermodulation. It is the ideal compliment
to your BTR500/600 UHF Wireless Intercom System.



System Configuration

TRANSCEIVER 1

TRANSCEIVER 3

TRANSCEIVER 4

TRANSCEIVER 4

TRANSCEIVER 6

TRANSCEIVER 6

TRANSCEIVER 7

TRANSCEIVER 8

RECEIVE ANTENNA

# TT-44

The Telex RadioCom TT-44 is a 16 channel synthesized wireless IFB transmitter designed to provide a wireless link to on-air talent in the studio or while you are in the field. Operating in the 64-68 MHz range the units operate reliably at distances of over 750 feet.

The TT-44 transmitter has a 3 pin XLR input on the back of the unit with a selector switch to accept either RTS TW, Telex Audiocom/RadioCom, or other types of wired and wireless intercom input. There is also a 1/2" unbalanced line level signal input jack. The TT-44 offers the flexibility of tuning 8 of its frequencies in the TV channel 3 band and 8 in the TV channel 4 band for ultimate agility while in the field. Up to 5 transmitters will operate simultaneously within the same environment.

#### TR-34

TR-34

The TR-34 is a 16 channel tunable talent receiver that is designed to be used with the standard IFB earpieces such as the Telex Telethin announcers earpiece systems or any other 8-500 ohm earphone. The TR-34 features a selectable high frequency boost control to equalize the high frequency loss associated with the use of behind the collar acoustic tubes and earphone drivers. The receiver also features a lighted bezel for easy channel identification and auto power off when the earphone is removed from the jack. The TR-34 operates on two standard AA batteries and will operate for up to 40 hours on alkaline batteries.

#### **Earsets**

The Telex earset components are designed for inconspicuous listening for on-camera talent and are used by nearly every major television network. Earset components are made up of interchangeable parts which simply snap together—this allows the users to construct a version that best suits their particular needs.

The earset components shown in the photo (left) include an earmold (available in left or right—small, medium, or large); an acoustic eartube with clothing clip (model ET-2); a Telethin audio driver (model RTV-04 is a 125 ohm driver—other impedance values are available); and a 5 foot, low luster beige cord with 1/2" plug (model CMT-92).

There are other options for the earpiece component—one of which is called an "earcone" (not shown). A complete earset system including one of each size earcone (small, medium, or large) can be ordered as follows: Model CES-2 includes one of each size earcone (BT-2, BT-3, BT-4); an acoustic eartube with clothing clip (model ET-4); a Telethin audio driver (model RTV-04); and a cord with %" plug (model CMT-98).

4



Α

В

С

D

Ε

F

G

Н

J

Κ

# RadioCom<sup>™</sup>

CX-4

Coax antenna cable 4' (1.2m) 50 ohm

Coax antenna cable 25' (7.6m) 50 ohm

UA-58B (shown)

5/8 wave transmit/receive antenna Frequency range 154-172 MHz

UX-58Y (not shown)

Frequency range 169-185 MHz

UX-58W (not shown)

Frequency range 185-200 MHz

UX-58R (not shown)

Frequency range 200-216 MHz

**NCB-AA** 

NiCad AA battery for TR-200 (requires 6)

Leather swivel holster with belt loop for TR-200

ASA-1

Mic stand bracket for 5/8 wave antenna

Wall bracket for 1/8 wave antenna

PA-2

Power supply for BTR-200 II 120 V

PA-2E

Power supply for BTR-200 II 240 V

NiCad battery charger; sled for TR-200; and 6 AA NiCad batteries

BSL-1

Spare battery sled for TR-200 (batteries not included)

### Not shown:

accessories

# High Performance directional VHF Yagi antennas

Available in three frequency ranges: 150-157 MHz, 169-186 MHz, and 204-216 MHz

High performance log periodic antenna. 165-216 MHz







Broadband unidirectional log periodic antenna Frequency range 450 to 900 MHz

## **ALP-600**

Broadband bi-directional log periodic antenna Frequency range 450 to 900 MHz

# **ALP-600 Antenna Mast and Bracket Kit**

Four section, clear anodized aluminum mast with extended length of 90" Aluminum brackets with vertical or horizontal mounting capability

#### **BC-500NM**

Nickel metal battery pack with charger

# BP-500NM

Spare nickel metal battery pack

Single rack mount kit for one BTR-500/BTR-600

#### RMD-BTR

Dual rack mount kit for two BTR-500/BTR-600

### **Not Shown: BP-500**

Spare battery sled for alkaline batteries (batteries not included)



#### Not Shown:

CXU-25 UHF Coax Antenna Cable 25' CXU-50 UHF Coax Antenna Cable 50' CXU-75 UHF Coax Antenna Cable 75'



#### RadioCom<sup>™</sup> headsets



#### PH-2

Dual-sided headset with foam-filled cushion effectively reduces ambient noise. Dynamic, monaural earphones with dynamic noise cancelling microphone attached to a continuously adjustable ball joint. Five foot straight cord with clothing clip and XLR-4 type plug.

#### V-210/V-220

The V-Series headsets are high fidelity, studio quality products that may be tailored to most any need using modular cord sets and microphones. The V-210 is a single-sided headset, the V-220 is dual-sided, and both have a unique ball and socket boom with a hinge on boom's center for extra-flexible mic movement. The V-Series' unique floating earcups adjust to virtually any head size or shape for maximum comfort.

#### HR-1/HR-2

The HR-1 and HR-2 are medium-weight noisereduction headsets with dynamic noise cancelling microphones, a noise reduction rating of 21 dB — suitable for use in moderately noisy environments. These models feature a unique headband design that distributes ear cushion pressure evenly over the entire ear with no pressure points, and fold into an extremely compact shape for storage. Straight cord with XLR-4 type plug.

#### PH-4

Super lightweight, dual-sided for day-long comfort. High quality monaural dynamic earphones with dynamic noise cancelling microphone on adjustable boom. Straight cord with XLR-4 type plug.

#### **PH-8**

Super lightweight, single-sided headset for the ultimate in day-long comfort. High quality monaural dynamic earphone with dynamic noise cancelling microphone on adjustable boom that can be bent to practically any position. Straight cord with XLR-4 type plug.

#### PH-8000

Super lightweight single-sided headset with waterproof microphone and sealed headband that make it a great choice for high-moisture environments. The PH-8000 is ideal for maximum comfort in a low noise environment, or for wearing under a helmet or under hearing protection gear. Only available with electret type microphone element.

#### PH-1

Single-sided headset with foam-filled cushion effectively reduces ambient noise. Dynamic, monaural earphones with dynamic noise cancelling microphone attached to a continuously adjustable ball joint. Five foot straight cord with clothing clip and XLR-4 type plug.

#### Note:

All RadioCom<sup>™</sup> brand base/beltpack units shown in this catalog require a headset with a female XLR-4 plug.

## **TT-44 Transmitter**

RF Frequency Range: 64.5-67.5 MHz Modulation: FM +25 KHz deviation

Signal-To-Noise Ratio: 58 dB (64 dB A weighted) Maximum Deviation: ±25 KHz Maximum Rated Power: 50 mW

Audio Input: Balanced XLR-3F 150K ohms, Unbalanced 1/4" Jack 100K ohms/70 MV-7 Volt input range Antenna Type: 1/4 wave omnidirectional telescoping whip (supplied) or external type (optional)

Audio Controls: Input levels, Intercom select Power Requirements: 15-24 Vdc or 13 Vac; 115 Vac 60 Hz plug-in wallpack power supply

**Dimensions:**  $7.5'' \text{W} \times 6.815'' \text{H} \times 1.75'' \text{D}$ 

(19.2cm × 19cm × 4.5cm) **FCC ID:** B5DM507

Visual Indicators: 5 segment audio level LED,

# **TR-34 Talent Receiver**

RF Frequency Range: 64.5-67.5 MHz
Harmonic and Spurious Emissions: Meets FCC Part 15

**Sensitivity:** 1.0 μv maximum, 12 dB SINAD 25 **Distortion:** <2% THD

Audio Output: into 8 Ohms 2.0 V/15 mW,

into 32 Ohms 2.0 V/10 mW

Antenna Type: 1/4 wave, in earphone cord Battery Type: (2) AA Alkaline, or NiCad

Battery Life: 24-40 hours continuous use Alkaline;

10-15 hours continuous use NiCad **Audio Controls:** Volume, On/Off high frequency boost

control (push On type)

c i f i c a t i o

Ear Piece Connector: 3.5mm mini stereo or mono Channels Tuned: 2 TV Channels: 64.5-65.9 MHz & 66.1-67.5 MHz. (TV-3) 64.5, 64.7, 64.9, 65.1, 65.3, 65.5, 65.7, 65.9. (TV-4) 66.1, 66.3, 66.5, 66.7, 66.9, 67.1,

Temperature Range: 32°F to 120°F (0°C to 50°C) **Weight:** 3 oz. (85g) **Dimensions:** 2.7" W × 1"H × 3.750"D

 $8.7 \text{cm} \times 2.5 \text{cm} \times 9.5 \text{cm}$ FCC: Part 15

Visual Indicators: Backlit ON/Channel indicator