

## BTR-300 & TR-300

### Single Channel VHF Fixed Crystal Wireless Intercom

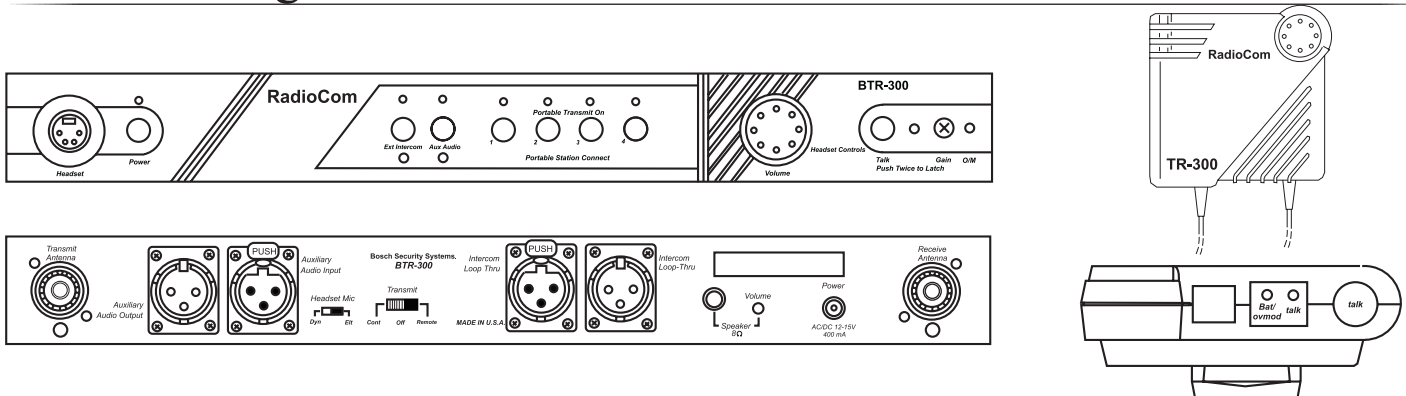


The RTS RadioCom models BTR-300 and TR-300 are specifically designed to provide the user with a highly flexible wireless 2-way communication system with the capability to interface with a wired intercom system and other auxiliary audio. At the BTR-300 operator's command, the remote stations can communicate with each other, with a wired intercom system or with an auxiliary system. The BTR-300 base station, with its one (1) transmit and four (4) receive channels is designed to operate in full-duplex (simultaneous 2-way communications) with up to four (4) TR-300 beltpack transceivers. The system operates on selected frequencies within the 174–216MHz band. The BTR-300 system is fully compatible with a number of other wired intercom manufacturers. As many as four (4) TR-300 beltpack transceivers can operate in a full-duplex network with one (1) RTS RadioCom model BTR-300 base station.

## Features

- Unique audio shaping circuitry and a superior RF design.
- High Q Front end filtering.
- Beltpacks can operate at ranges of up to 1000 feet line of sight.
- Extended battery life.
- In-Pack charging - allows optional NiMH batteries to be recharged without removing them from the beltpack.
- Base station may be powered by any 12V AC/DC 700mA source.
- Full-duplex operation - allows users to talk and listen simultaneously for more natural communications.
- Base station has a metal case for superior shielding.
- Simultaneous operation and support of up to four (4) base stations and 16 beltpacks.
- Push-to-Talk with Lock-to-Talk feature switch on beltpack.
- Table or rack mountable.

## Line Drawings



# Specifications

## Overall

RF Frequency Range: ..... 174–216MHz  
 RF Frequency Stability: ..... Crystal Controlled, 0.005%

## Beltpack Overall

TR-300 Power Requirements: ..... 6 “AA” Cells  
 (Alkaline, NEDA, MN 1500)  
 Nickel-metal hydride optional  
 TR-300 Current Drain: ..... Typical 82mA  
 Transmit Antenna: ..... 1/4 wave wire (attached)  
 Receive Antenna: ..... 1/4 wave wire (attached)  
 Temperature Range: ..... -4°F to 130°F  
 (-20°C to 55°C)

## Base Station Overall

Input Power (minimum): ..... 12V AC/DC at 360mA  
 Transmit Antenna: ..... 5/8 wave (supplied)  
 SO239 connector  
 Intercom Output: ..... 330mV (Low) or  
 1V (Hi) RMS into 300Ω load typical  
 (at rated deviation)  
 Intercom Input (Gain Minimum): ..... 300 mVrms typical  
 (for rated deviation)  
 Auxiliary Output: ..... 2Vrms into 600Ω load typical  
 (for rated deviation)  
 Auxiliary Input (Gain Maximum): ..... 60mVrms typical  
 (for rated deviation)  
 Local Headset Input: ..... 2mVrms input nominal  
 1.5mVrms input at  
 compression (Dynamic)  
 Local Headset Output: ..... 32mV maximum  
 output into 600Ω  
 Speaker/Local Monitor  
 Output (into 8Ω): ..... 2 Watts (at rated deviation)

## Transmit

RF Power Output: ..... 50 mW Typical  
 Modulation: ..... FM, 3kHz deviation  
 115 micro-seconds Pre-emphasis  
 Modulation Limiter: ..... Internal Compressor  
 Modulation Frequency Range: ..... 300 to 5000Hz ±2dB  
 Radiated Harmonics  
 and Spurious Emissions: ..... Complies with FCC Specifications  
 FCC: ..... Type Accepted Under Parts 74

## Receive

Receiver Type: ..... Dual Conversion Superheterodyne, FM  
 RF Sensitivity: ..... Less than 0.6µV for 12dB SINAD  
 IF Selectivity: ..... 3dB at 30kHz (Ceramic Filter)  
 Image Rejection: ..... 70dB or better  
 Squelch Quieting: ..... 90dB  
 Squelch Threshold: ..... 3.0µV (Internal)  
 Signal-to-Noise Ratio: ..... 90dB  
 Audio Output: ..... 32mW into 600Ω (Headset)  
 Distortion: ..... Less than 1% at Rated Output

## Product Dimensions/Weight

BTR-300: ..... 15.75” W x 1.75” H x 10.5” D  
 (40cm x 4.5cm x 27cm)  
 6lb (2.73kg)  
 TR-300: ..... 4.25” W x 5” H x 2.0” D  
 (10.79cm x 12.7cm x 5.08cm)  
 13oz (369g) with batteries

## Shipping Dimensions/Weight

BTR-300: ..... 14.5” W x 5.50” H x 20.25” D  
 (36.8cm x 14cm x 51.4cm)  
 10lb 3oz (4.6kg)  
 TR-300: ..... 7” W x 3” H x 10” D  
 (17.8cm x 7.6cm x 25.4cm)  
 1lb (454g)

# Order Information

BTR-300 • VHF Wireless Base Station with A4M headset jack  
 TR-300 • VHF Wireless Transceiver with A4M headset jack  
 TR-300M • VHF Wireless Transceiver in mirror image frequency  
 with A4M headset connector

### CONSUMER ALERT

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliWatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC’s wireless microphone website at [www.fcc.gov/cgb/wireless-microphones](http://www.fcc.gov/cgb/wireless-microphones).

For ordering information, contact your regional sales representative at:  
<http://rtsintercoms.com/us/intercom/contact>

The specification information is preliminary and is subject to change without notification.  
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