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Technical Data Sheet

Model

BTR-240 &TR-240 2.4GHz Wireless Intercom

The RTS BTR-240 is a digital, multi-channel, wireless intercom system offering reliable and secure, full-duplex communications supporting up to eight (8) wireless TR-240 beltpacks and an almost unlimited number or half-duplex beltpacks. Operating in the 2.4GHz frequency band, the BTR-240 system uses the widely adopted IEEE 802.11 technology and is approved for license-free use in most countries. The system also incorporates the intelligence called ClearScan, which automatically selects the optimal RF (Radio Frequency) channel for communication.
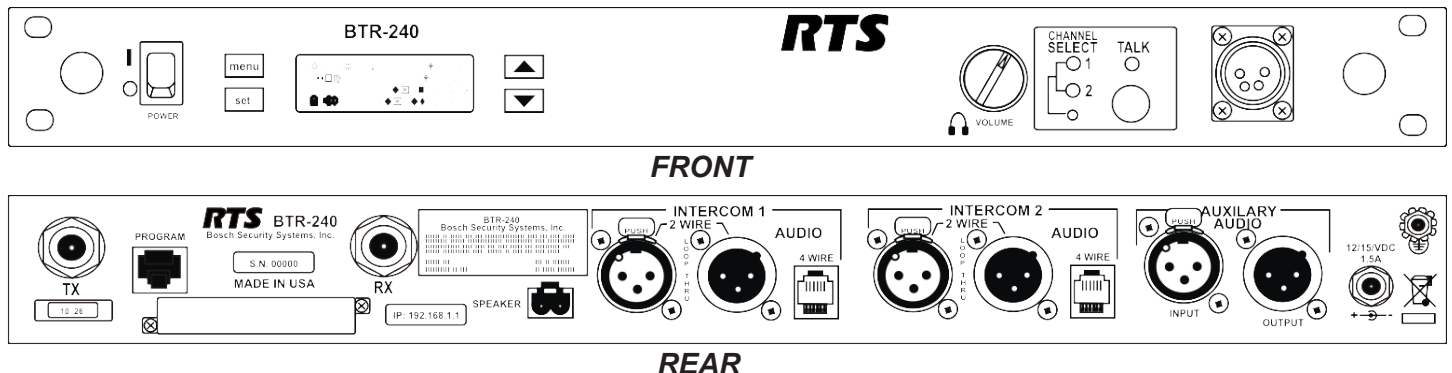
The BTR-240 system has the ability to configure multi-level 802.11 wireless security features, such as data encryption and MAC address filtering, as well as 64-bit audio encryption to provide a highly secure wireless intercom system. The BTR-240 system offers two (2) audio channel operation, allowing users to select between two (2) individual audio channels of communication. The system permits users to talk and listen, or listen only, to any individual audio channel or both channels simultaneously. The BTR-240 system is perfectly suited for standalone operation and can also interface with 2-wire systems including RTS, Audiocom, and Clear-Com, as well as 4-wire intercom systems, such as the RTS Matrix system. In addition to the external intercom system interfaces, the system provides connectivity for auxiliary balanced audio input and output, and speaker output.

The TR-240 beltpacks have the ability to be configured in one of three operating modes: wireless, wired, or master wireless. In wireless (normal) mode, beltpacks communicate to each other using the base station as a relay. In wired mode, beltpacks turn off their wireless ability and communicate via Ethernet cable or through a building's existing Ethernet infrastructure. In master wireless mode, the beltpack acts as a mobile access point to provide wireless coverage for other beltpacks to communicate without an actual BTR-240 base station. The TR-240 beltpack has a removable lithium ion battery pack that provides up to eight (8) hours of uninterrupted operation. The battery pack can be charged directly in the case by plugging a power adapter into the beltpack or by placing the battery in the CHG-240 4-bay charger.

Features

- License Free 2.4GHz, IEEE 802.11b WLAN technology
- Expand coverage using BTR-24 access points
- Multi-level security and audio encryption
- 2-wire and 4-wire intercom interface
- ClearScan channel selection
- Auto-select Electret or Dynamic microphone
- Choice of two (2) independent or simultaneous audio channels

- TR-240 beltpacks operate wired or wireless
- Eight (8) full-duplex beltpacks with virtually unlimited number of half-duplex beltpacks
- TR-240 beltpacks can operate as an access point
- Multiple antenna options and accessories
- Durable ABS construction
- Easy-to-read LCD indicates system status
- Removable Li-Ion batteries with wide temperature range and up to eight (8) hours of operation.

Line Art

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Specifications

RF Technology: IEEE 802.11b WLAN
FCC License: None Required
Frequency Band of Operation:
  North America: 2.412 to 2.462GHz
  Europe: 2.412 to 2.472GHz
BTR-240 Transmitter Output Power:
  North America: 200mW
  Europe: 70mW
TR-240 Transmitter Output Power: 70mW
BRT-240 Antennas: Multiple Omni and Directional Available
TR-240 Antennas: Internal Dipoles
Security and
Encryption Technology: 802.11 WiFi: 40-bit and 104-bit WEP
Audio: 64-bit DES
Number of Full-Duplex Beltpacks: 8
Number of Half-Duplex Beltpacks: ≥ 100
Audio Frequency Range: 350Hz to 3.5kHz
Dynamic Range: ≥62dB
System Latency: ≤ 140msec
BRT-240 Headset Output: 100mWrms into 300 Ohms
TR-240 Headset Output: 70mWrms into 300 Ohms
4-Wire Input/Output: Level Adjustable (2Vrms typical)
Audiocom 2-Wire Input/Output: Level Adjustable (0.775Vrms typical)
Line Impedance: 200 Ohms
RTS 2-Wire: Level Adjustable (1Vrms typical)
Input/Output: Line Impedance 200 Ohms
Clear-Com 2-Wire: Level Adjustable (1Vrms typical)
Input/Output: Line Impedance 200 Ohms
Auxiliary Input: Level Adjustable (2Vrms typical)
Auxiliary Output: Level Adjustable (2Vrms typical into 600 Ohms)
Speaker Output: Level Adjustable (1Vrms max into 8Ω)
Front Panel LCD: 122 x 32 Dot Matrix with Adjustable Contrast
Programming Port: Ethernet (RJ-45)

BTR-240 Power Requirements: 12–15VDC, 1.5 Amps
TR-240 Power Requirements: Lithium Ion Rechargeable Battery, 7.5VDC
Battery Life: Up to eight (8) hours
Battery Recharge Time:
  Via TR-240: approx. 8 hours
  Via CHG-240 four bay charger: approx. 2.5 hours
TR-240 Low Battery Indication: Approx. 15 minutes of battery life left
Temperature Range: -4°F to 130°F (-20°C to 55°C)
BTR-240 Dimensions: 1RU, 7.5" L x 19"W x 1.75"H (191mm x 483mm x 45mm)
BTR-240 Weight: 3lb. 7.5oz. (1.58kg)
TR-240 Dimensions: 1.75" L x 3.75"W x 5.25"H (45mm x 95mm x 133mm)
TR-240 Weight: 12.9oz. (0.37kg)

System Components
- BTR-240 A4F 2.4GHz multi-channel wireless base station access point with A4F headset connector.
- TR-240 A4F 2.4GHz wireless beltpack with A4F headset connector.
- BTR-240 A4M 2.4GHz multi-channel wireless base station access point with A4M headset connector.
- TR-240 A4M 2.4GHz wireless beltpack with A4M headset connector.
- BTR-24 2.4GHZ access point
- CHG-240 4-bay rapid battery charger for BP-240 batteries
- BP-240 Li-Ion battery for TR-240
- HOL-240 Holster for TR-240

These specifications are subject to change without notification.
Brand names mentioned are the property of their respective companies.

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RTS BTR wireless intercom

The RTS BTR-240 is a digital multi-channel wireless intercom system offering extremely reliable and secure full-duplex communication with up to eight wireless TR-240 beltpacks and an almost unlimited number of half-duplex beltpacks.

Operating in the 2.4 GHz frequency band, the BTR-240 system uses the widely adopted IEEE 802.11 technology and is approved for license-free use in most countries. The system also incorporates unique ClearScan™ technology, allowing users to select the optimal radio frequency (RF) channel for communication at the touch of a button.

Key Features:

- License-free 2.4 GHz IEEE 802.11b WLAN technology
- Multi-level security and audio encryption
- ClearScan™ channel selection
- Choice of two independent or simultaneous audio channels
- Eight full-duplex beltpacks with virtually unlimited number of half-duplex beltpacks
- Multiple antenna options and accessories
- Easy-to-read LCD indicates system status
- Expand coverage using BTR-24 access points

- Two-wire and four-wire interface wired intercom interface
- Auto-select condenser or dynamic microphone
- TR-240 beltpacks operate wired or wireless and can operate as access point
- Durable ABS construction
- Removable Li-Ion batteries with wide temperature range and up to eight hours operation

For further information, visit www.rtsintercoms.com

Performance

The BTR-240 has the ability to configure multi-level 802.11 wireless security features, including data encryption, MAC address filtering, and 64-bit audio encryption, to provide a highly secure wireless intercom system. The system allows users to select between two individual audio channels of communication, and to talk and listen or listen only to any individual audio channel or both channels simultaneously.

The BTR-240 system is perfectly suited for stand-alone operation and can also interface with two-wire systems, including RTS, Telex® Audiocom®, and Clear-Com®, as well as four-wire intercom systems such as the RTS matrix systems. In addition to the external intercom system interfaces, the system provides connectivity for auxiliary balanced audio input and output and speaker output.

The TR-240 beltpacks may be configured in one of three operating modes: wireless, wired, or master wireless. In wireless (normal) mode, beltpacks communicate to each other using the base station as a relay. In wired mode, beltpacks turn off their wireless ability and communicate via Ethernet cable or through a building's existing Ethernet infrastructure. In master wireless mode, a beltpack acts as a mobile access point to provide wireless coverage for other beltpacks to communicate without an actual BTR-240 base station. The TR-240 beltpack has a removable Li-Ion battery pack that provides up to eight hours of uninterrupted operation. The battery pack can be charged directly in the case by plugging a power adapter into the beltpack or by placing the battery in the CHG-240 four-bay charger.

Specifications:

RF Technology	IEEE 802.11b WLAN
FCC License	None Required
Frequency Band of Operation	North America: 2.412 to 2.462GHz Europe: 2.412 to 2.472GHz
BTR-240 Transmitte Output Power	North America: 200mW Europe: 70mW
TR-240 Transmitter Output Power	70mW
BTR-240 Antennas	Multiple Omni and Directional Available
TR-240 Antennas	Internal Dipoles
Security and Encryption Technology	802.11 WiFi: 40-bit and 104-bit WEP Audio: 64-bit DES
Number of Full- Duplex Beltpacks	81
Number of Half-Duplex Beltpacks	≥ 100
Audio Frequency Range	350Hz to 3.5kHz
Dynamic Range	≥ 62dB
System Latency	≤ 140msec
BTR-240 Headset Output 4-Wire Input/Output	100mWrms into 300 Ohms Level Adjustable (2Vrms typical
TR-240 Headset Output	70mWrms into 300 Ohms
Audiocom 2-Wire Input/Output	Level Adjustable (0.775Vrms typical Line Impedance 200 Ohms
RTS 2-Wire Input/ Output	Level Adjustable (1Vrms typical) Line Impedance 200 Ohms
Clear-Com 2-Wire Input/Output	Level Adjustable (1Vrms typical) Line Impedance 200 Ohms
Auxiliary Input	Level Adjustable (2Vrms typical)
Auxiliary Output	Level Adjustable (2Vrms typical into 600 Ohms)
Speaker Output	Level Adjustable (1Vrms max into 8 Ohms)
Front Panel LCD	122 x 32 Dot Matrix w/ Adjustable Contrast
Programming Port	Ethernet (RJ-45)
BTR-240 Power Requirements	12–15VDC, 1.5 Amps
BTR-240 Power Requirements	Lithium Ion Rechargeable Battery, 7.5VDC
Battery Life	Up to eight (8) hours
Battery Recharge Time	Via TR-240: approx. 8 hoursVia CHG-240 four bay charger: approx. 2.5 hours
TR-240 Low Battery Indication	Approx. 15 minutes of battery life left
Temperature Range	-4°F to 130°F (-20°C to 55°C
BTR-240 Dimensions	1RU, 7.5" L x 19"W x 1.75"H (191mm x 483mm x 45mm)
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