

# Tempest<sup>®</sup>2400 Wireless

## CM-244 4-Channel Wireless BaseStation



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### Description

The Tempest **CM-244** is a 4-channel 2.4GHz Frequency Hopping Spread Spectrum (FHSS) digital wireless intercom system. The CM-244 BaseStation provides connection to four separate hard-wired intercom channels: two 3-pin XLR and one 4-wire port per channel. The 2-wire (TW) interface is compatible with Clear-Com<sup>®</sup>, RTS<sup>®</sup>, Telex<sup>®</sup> and most other TW intercom systems, 4-wire intercoms and other devices.

The CM-244 front panel offers easy access to the hardware intercom settings and levels. Each wireless BeltStation can simultaneously monitor and/or talk on two of the four hard-wired channels. Each BeltStation user may select between channels A or B and C or D. The CM-244 BaseStation is also compatible with common hard-wired system features, such as Call and Remote Mic Kill.

### Versatility

The CM-244 BaseStation offers a Stage Announce (SA) output with a relay closure. This is ideal for use with Public Address Systems (PA), city-wide IFB transmitters or virtually any application that can be triggered with a General Purpose Input/Output (GPIO).

### RF Performance

The CM-244 BaseStation comes standard with two whip antennas (RP-TNC RF connectors) and an RJ-45 connector for the (optional) remote transceiver. Along with redundant data transmission (2xTX), the two antennas provide polarization and spacial diversity yielding superior RF performance. The remote transceiver allows the antenna functionality to be located up to 1500 ft (450 m) away from the base station over CAT-5/6 cable with no loss of RF signal. The CAT-5/6 cable also supplies power to the remote transceiver. An additional RJ-45 enables remote monitoring and control of the entire wireless system over a Local Area Network (LAN) with the aid of the Tempest T-Desk software.

### Expandability

Utilizing the Tempest system's TDMA technology and proprietary Accu-Sync<sup>™</sup> BaseStation coordination, up to 10 CM-222 BaseStations and 50 full-duplex wireless BeltStations (in Normal Mode) can be operated in close proximity to each other within the 2.4 GHz band while maintaining excellent system performance. By switching to Shared Mode, an unlimited number of BeltStations can be connected to one BaseStation.

### Features:

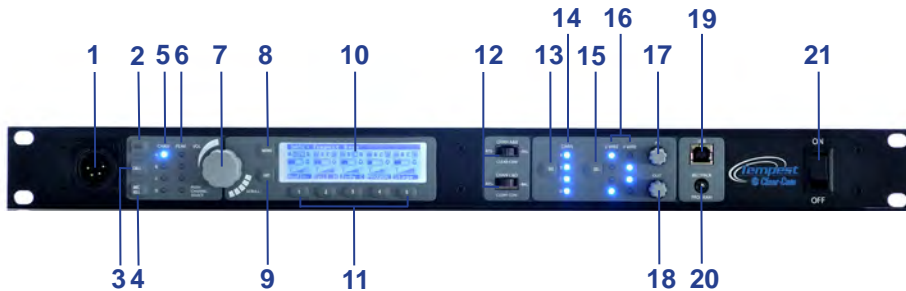
- 4-channel digital wireless BaseStation
- 2.4 GHz, license free operation
- Frequency Hopping Spread Spectrum technology
- Connect an unlimited number of BeltStations per BaseStation
- 2xTX redundant data transmission
- Large LCD front panel screen showing current status of each beltstation
- Simple configuration of 2- and 4-wire audio settings, including Input/Output levels
- Compatible with Clear-Com<sup>®</sup>, RTS<sup>®</sup>, AudioCom<sup>®</sup>
- T-Desk software enables remote monitoring via LAN interface
- Optional Remote Transceiver extends antenna coverage up to 1500 ft (450 m) from BaseStation
- Flexible Power Options: Universal voltage power supply (85-264 VAC) or 11-32 DC voltage
- >94 dB dynamic audio range
- Lost Packet Concealment prevents "clicks" and "pops" when a data packet is lost

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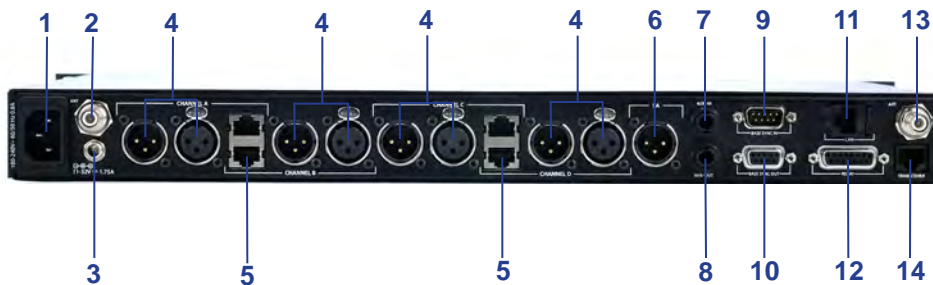
### Front Panel



#### Front Panel Legend:

- 1) Local Headset Connector
- 2) Talk Button
- 3) Call Button
- 4) Mic Kill Button
- 5) Local Headset Channel LEDs A-D
- 6) Peak LEDs
- 7) Volume Control
- 8) Menu Button
- 9) Enter Button
- 10) LCD
- 11) Buttons 1-5
- 12) 2-Wire Intercom Type Slide Switches
- 13) Wired Intercom Channel Select Button
- 14) Channel LEDs
- 15) 2-Wire/4-Wire Select Button
- 16) 2-Wire/4-Wire LEDs
- 17) IN Level Control
- 18) OUT Level Control
- 19) USB Connector
- 20) BeltStation Program Connector
- 21) Power ON/OFF Switch

### Back Panel



#### Back Panel Legend:

- 1) AC Power Input Connector
- 2) Antenna Connector
- 3) DC Power Input Connector
- 4) Intercom Channel A/B/C/D Connectors
- 5) RJ-45 4-Wire Intercom A/B/C/D Connectors
- 6) Stage Announce Connector
- 7) Aux IN Connector
- 8) Aux OUT Connector
- 9) Base Sync IN Connector
- 10) Base Sync OUT Connector
- 11) Local Area Network RJ-45 Connector
- 12) Relay Connector
- 13) Antenna Connector
- 14) Remote Transceiver RJ-45 Connector

### Technical Specifications:

#### System Specifications

RF Frequency:	2400 to 2480 GHz
RF Scheme:	FHSS with TDMA
Effective Radiated Power:	100mW using 2dBi antenna
Receiver Sensitivity:	-93 dBm for 10 <sup>-5</sup> BER
Radio Certification:	FCC Part 15.247 and ETS 300.328 rules, license free
Transmission Range:	Up to 1,000ft (305m); 500 - 900ft (150 - 275m) typical
Audio Dynamic Range:	>94dB
Audio Frequency Response:	300Hz - 3.8kHz with proprietary audio voice shaping

#### BaseStation Specifications

Intercom Audio Channels:	4
Full-duplex BeltStations per BaseStation:	5 (in Normal Mode)
Half-duplex, Shared BeltStations per BaseStation:	Unlimited
Number of Antenna Ports per BaseStations:	2
Antenna Connector Type:	RP-TNC

Number of Synchronized BaseStations:	10
BaseStation/BeltStation Pairing:	Mini-jack/cable
Programming Port:	USB
Stage Announce and GPO Closures:	6 relays via DB15
2-wire Intercom Interface:	4 channels via XLR-3F with XLR-3M loop Clear-Com, RTS and balanced compatible
2-wire Compatibility:	4 ports via RJ-45
4-wire/Matrix Connection:	1/4" 3-conductor jack accepts -4 to +8dB, balanced, transformer isolated
Aux Input:	1/4" 3-conductor jack nominal -4 to +8dB, balanced, transformer isolated
Aux Output:	1/4" 3-conductor jack nominal -4 to +8dB, balanced, transformer isolated
Stage Announce Output:	XLR-3M, nominal -4 to +8dB, balanced, transformer isolated
Front Panel Headset:	4-pin male XLR
Microphone Type:	Dynamic or Electret, Auto-Selected

#### Environmental

-4° – 122° F (-20° – 50° C)

#### Dimensions

19 in W x 1.76 in H x 12 in D  
(483 mm x 44 mm x 190 mm)

#### Weight

#### Notice About Specifications

While Clear-Com makes every attempt to maintain the accuracy of the information contained in its product manuals, that information is subject to change without notice. Performance specifications included in this manual are design-center specifications and are included for customer guidance and to facilitate system installation. Actual operating performance may vary.

[www.clearcom.com](http://www.clearcom.com)