CM-222 2-Channel Tempest Wireless BaseStation

Description

The Tempest **CM-222** is a 2-channel 2.4GHz Frequency Hopping Spread Spectrum (FHSS) digital wireless intercom system. The CM-222 BaseStation provides connection to two 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®, RTS®, Telex® and most other TW intercom systems, 4-wire intercoms and other devices.

The CM-222 front panel offers easy access to the hardwire intercom settings and levels. Each wireless BeltStation can simultaneously monitor and/or talk on both of the hard-wired channels. Each BeltStation user may simultaneously talk/listen on A and B or toggle between A and B in "Single Listen" mode. The CM-222 BaseStation is also compatible with common hard-wired system features, such as Call and Remote Mic Kill.

Versatility

The CM-222 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-222 BaseStation comes standard with a single whip antenna (RP-TNC RF connector) and an RJ-45 connector for the (optional) remote transceiver. Redundant data transmission (2xTX) provides time and frequency diversity yielding outstanding RF performance. The remote transceiver allows the antenna functionality to be located up to 1500 ft (450 m) away from the BaseStation 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™ 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.
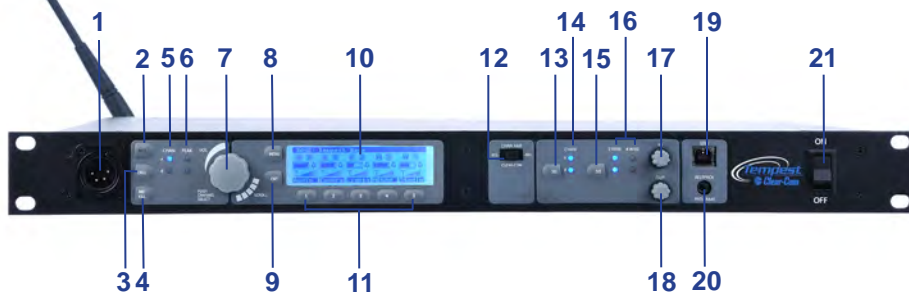
Features:

- 2-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®, RTS®, AudioCom®
- 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
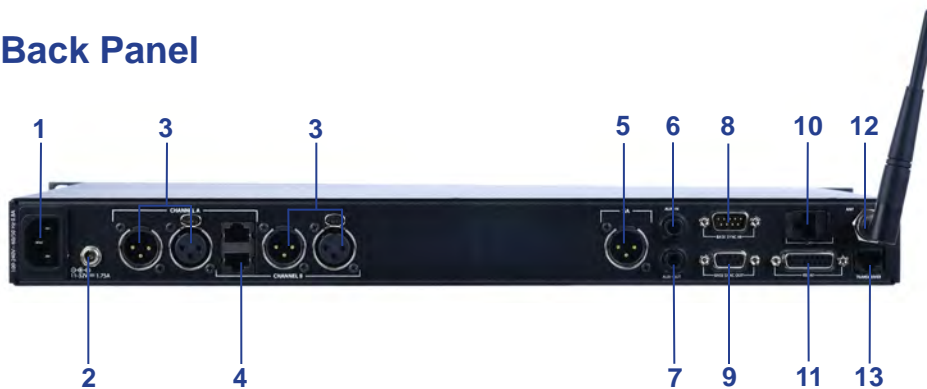
Front Panel

Back Panel

Front Panel Legend:
1) Local Headset Connector
2) Ta k Button
3) Call Button
4) Mic Kill Button
5) Local Headset Channel LEDs A/B
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 Legend:
1) AC Power Input Connector
2) DC Power Input Connector
3) Intercom Channel A/B Connectors
4) RJ-45 4-Wire Intercom A/B Connectors
5) Stage Announce Connector
6) Aux IN Connector
7) Aux OUT Connector
8) Base Sync IN Connector
9) Base Sync OUT Connector
10) Local Area Network RJ-45 Connector
11) Relay Connector
12) Antenna Connector
13) 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^{-5} 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:	2
Full-duplex BeltStations per BaseStation:	5 (in Normal Mode)
Half-duplex, Shared BeltStations per BaseStation:	Unlimited
Number of Antenna Ports per BaseStation:	1

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:	2 channels via XLR-3F with XLR-3M loop
2-wire Compatibility:	Clear-Com, RTS and balanced compatible
4-wire/Matrix Connection:	2 ports via RJ-45
Aux Input:	1/4" 3-conductor jack accepts -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: MicrophoneType:	4-pin male XLR Dynamic or Electret, Auto-Selected

Environmental
-4º – 122º F (-20º – 50º C)

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

Weight
10.5 oz (4.75kg)

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.

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