

Wireless Nurse Call MV500Z

- The Wireless Nurse Call MV500Z Console is a high-performance central monitoring master station engineered to streamline emergency alerts and communications within modern healthcare facilities. Operating on fully supervised 900 MHz spread-spectrum wireless technology, the system establishes a secure, redundant link between patients and caregivers without the high costs or disruptions of physical facility wiring.
- Featuring a vibrant 7-inch color touchscreen interface, the MV500Z dynamically registers and translates incoming alerts from a wide array of wireless transmitters. It decodes specific room assignments, device types, and unique patient identifiers instantly. This highly scalable platform acts as an automated facility communication hub, prioritizing critical events and expanding effortlessly to meet the changing infrastructure needs of hospitals, nursing homes, and assisted living environments.

Architects' and Engineers' Specification

- The central wireless emergency monitoring console shall be the Model MV500Z, utilizing a dedicated 900 MHz frequency-hopping spread-spectrum radio architecture operating in the 902–928 MHz ISM band. The system must provide a minimum of 26 separate communication channels to establish redundant transmissions and protect against local signal interference. The master console shall feature an integrated 7-inch diagonal high-contrast color LCD touchscreen display to facilitate visual monitoring, field configuration, and intuitive system navigation.
- The console software shall support fully supervised device monitoring, capable of tracking up to 256 wireless call stations and peripheral transmitters. It must dynamically parse location name metadata, device tags, and priority-level indicators for each incoming broadcast. The device shall include multi-tone programmable audio alarms with software-driven step volume steps, continuous background maintenance alerts, and an escalation matrix for unacknowledged events. Built-in configurations must provide WiFi-based programming alongside integrated HDMI outputs for secondary monitoring displays. The hardware unit shall feature field-programmable terminology parameters, non-volatile configuration memory, and support local power protection circuits for immediate backup changeovers during full primary power loss.

Products Specifications

- **Model:** MV500Z
- **Display Type:** 7-inch High-Contrast Color LCD Touchscreen
- **Operating Frequency:** 902 MHz to 928 MHz Band (Spread-Spectrum Technology)
- **Supervised Radio Channels:** 26 Redundant Communication Channels
- **Maximum Node Capacity:** Up to 256 Wireless Stations / Transmitters
- **Configuration Utilities:** Local Screen Interface & Wifi-Assisted Programming
- **External Visual Output:** 1x Dedicated HDMI Interface
- **Alert Signaling System:** Programmable Multi-Tone Audio Alarms with Variable Level Control
- **Mounting Configuration:** Ergonomic Table-Top / Desk Mount
- **System Programming:** Non-Volatile Field-Configurable Naming and Numbering Logics

System Components

The wireless network architecture centered around the MV500Z master station interfaces with a variety of localized emergency and secondary environmental tracking modules:

- **Central Control Hub:** Master Desk Console with a 7" Touchscreen Display, onboard WiFi programming modules, and HDMI outputs.
- **Patient Call Interface Stations:** Wireless Single and Dual Bed/Patient Stations featuring integrated 1/4" call cord jacks.
- **Emergency In-Room Transmitters:** Wireless Pull Cord Stations, Push Button Stations, and Vandal-Resistant Push Buttons.
- **Wearable Safety Devices:** Micro-transmitter Personal Neck Pendants, Wrist Pendants, and specialized Wireless Wander Wrist Bands.
- **Environmental & Safety Monitoring:** Integrated Door/Window Exit Sensors, Smoke, Motion, and Glass Breakage Detectors.
- **Specialized Patient Safeguards:** Ventilator Monitor Modules (with hardware timers), Chair Exit Pads, Bed Exit Pads, and Floor Mats.
- **Visual Notification Hardware:** Multi-color Corridor Lights and Zone Light assemblies.
- **Mobile Notification Distribution:** Alphanumeric Pocket Pagers, Pager Transmitters, and wireless Reader Board Display panels.
- **Infrastructure Extension Components:** Fully supervised 120V Line-Powered Signal Repeaters and Boosters.

Features and Benefits

- **Centralized Facility Alerts:** Simplifies response paths by consolidating multiple transmitter nodes into one unified, responsive terminal.
- **900 MHz Spread-Spectrum Security:** Outperforms standard 300 MHz variants by leveraging higher allowed power outputs, ensuring deep signal penetration across large buildings.
- **Priority-Based Alert Hierarchy:** Intelligently separates routine assistance workflows from urgent emergency calls or specialized equipment alarms.
- **Drastic Infrastructure Cost Savings:** Prevents costly retrofits by entirely omitting the material, labor, and downtime associated with running physical structured cabling.
- **Comprehensive Supervision Protocols:** Routinely audits paired device check-ins, battery levels, and signal degradation parameters to verify round-the-clock reliability.
- **Scalable Modular Framework:** Allows operators to expand or modify node structures on-demand to easily adjust for facility growth.
- **Intuitive Operations Management:** Features a rapid-response touchscreen control surface that minimizes caregiver training and accelerates alert clearance workflows.

Compliance and Certification

- **FCC Status:** Fully compliant under Part 15 regulations for intentional radiators operating within the 902–928 MHz spread spectrum band.
- **UL Status:** Engineered to meet standard healthcare signaling and regulatory requirements, surpassing traditional baseline safety criteria.
- **RoHS Status:** Constructed using lead-free, environmentally responsible electronic components and manufacturing processes.