

Endeavor

Specifications

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Endeavor Specifications

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Endeavor Specifications

1. General

- 1.1. The contractor shall furnish all equipment, accessories and material complete in strict accordance with specifications and applicable drawings as required for an electronic intercommunications system. The system will meet or exceed required states' health planning and development regulations, and state fire marshall building codes.
- 1.2. The equipment furnished under this specification shall be the standard product of one manufacturer and shall be provided by West-Com Nurse Call Systems. A catalog of designs and materials will be provided with the system. The supplier shall submit the manufacturer's complete service notes and drawings detailing all interconnections.
- 1.3. All equipment shall be UL listed as under NBRZ Hospital Signaling and Nurse Call Equipment, conforming to UL 1069 standards. Submitting the UL listing cards describing the equipment by model number shall be proof of such listing.
- 1.4. All items of equipment, including wire and cable, shall be manufactured and assembled in the United States and designed by the manufacturer to operate as complete system. All systems must state "Made In America."
- 1.5. Alternate equipment will be considered only when the following have been submitted and approved by the hospital ten (10) days prior to opening of the bid: A list of the alternate equipment and materials, together with three (3) copies of working and shop drawings, and a list of six (6) installations of a similar Nurse Call System which have been satisfactorily installed and maintained on the user's premises over a period of one (1) year.
- 1.6. Nursing and Maintenance staff of the hospital shall be thoroughly instructed in the use of the system by factory authorized distributor personnel. Such in-service shall be provided in conjunction with the installation of the system equipment. The in-service shall comply with section 9 of this specification.
- 1.7. Systems shall contain a one-year warranty for parts and labor, after which time a maintenance contract shall be available from a factory authorized distributor. Free annual training for engineering and support staff shall be available to every facility in which the equipment is installed. This training shall be for the life of the system.
- 1.8. The successful bidder must have a four-hour response time for system failures. Service must be offered 24 hours a day, seven days a week.

2. Proposal Standards

- 2.1. Alternate proposals are not acceptable. All proposals shall include the following:
 - 2.1.1. Manufacturer's name, model numbers and three copies of factory specification sheets for each equipment item to be supplied by the factory authorized distributor. All function variations of equipment shall be clearly indicated in written form, and be pre-approved by the architect/owner 21 days prior to bid date.
 - 2.1.2. Written confirmation on the type of speech offered includes Full Duplex Speech (uninterrupted two-way speech). Systems that use "VOX" circuitry (voice operated switching) or "Push-To-Talk" audio are not acceptable.
 - 2.1.3. Written confirmation on the expansion of the system shall state whether the system offers Radio Paging, Remote Maintenance or a Computer Display option.

3. System Description – General

- 3.1. The system shall be a West-Call® Endeavor micro-controller based system and shall provide the following features:
 - 3.1.1. Expandable up to 4,064 ports.
 - 3.1.2. Productivity reports.
 - 3.1.3. Radio paging interface.
 - 3.1.4. Computer display option.
 - 3.1.5. System failure alarms.
 - 3.1.6. User configurable.
 - 3.1.7. Capable of interfacing with computerized system to receive external equipment alarms.
 - 3.1.8. Ability to interface with infant security system and various monitor alarms and identify at least 7 levels of call.
 - 3.1.9. Patient Station with capability of controlling the TV and room lights.
 - 3.1.10. User programmable priority levels for patient station.
 - 3.1.11. The system shall provide non-interrupted (Full Duplex) speech. Manual (Push-To-Talk) or voice activated (VOX) is not acceptable.
 - 3.1.12. Patient Stations must be compatible with side rail bed communications and Bed Exit emergency alarms.
 - 3.1.13. All remote stations shall plug into system wiring for ease of installation, replacement and/or maintenance.
 - 3.1.14. All station functions shall be controlled through system I/O boards. Every I/O port shall be field programmable.
 - 3.1.15. All equipment must meet current UL 1069 for hospital usage NBRZ category, and be listed as a complete system.
 - 3.1.16. All components of the system must be “Made In America.” These components shall include faceplates, circuit boards, membrane switches and circuit board assembly, etc. Systems that do not comply with this requirement are not acceptable and shall be considered non-responsive to this specification.

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4. System Feature Description

4.1. General Description

- 4.1.1. Two-way signaling and communication between visual display panels.
- 4.1.2. Two-way signaling and communication between nurse master station and patient rooms or staff areas.
- 4.1.3. Full Duplex (non-interrupted) Speech without having a "Push-To-Talk" button or voice-activated switching circuitry. Each patient and staff station must have a microphone and separate speaker.
- 4.1.4. Ability to create zone page areas with any amount of rooms.
- 4.1.5. Ability to remotely cancel calls.
- 4.1.6. Ability to step a switch through a series of flashing lights or priority options.
- 4.1.7. Ability to program any port to page a pager(s) with a specific text message.
- 4.1.8. Capability of signaling at least 64 ASD (auxiliary signaling device) zones, activating an unlimited number of lights and/or duty stations on a system.
- 4.1.9. Ability to program any room to activate any of the ASD zones (lights and/or duty stations) in any combination.
- 4.1.10. System shall incorporate built-in fault diagnostics and be capable of remote system maintenance.
- 4.1.11. In the event of microprocessor failure, the system shall be capable of immediately reporting the failure to a computer display.
- 4.1.12. The system shall be capable of interfacing with radio paging systems and must meet all requirements of radio paging per section 6.1 of this specification.
- 4.1.13. Optional availability to have up to eight (8) computerized master stations on the system connected via network. All masters shall operate independently of each other. Patient calls can be routed to any master on the network.
- 4.1.14. Ability to move calls (swing) between master stations.
- 4.1.15. Ability to interface with hospital ADT system and gather patient information automatically.
- 4.1.16. Ability to interface with infant security, IV pumps, telemetry, etc., and send emergency pages to appropriate levels of staff.
- 4.1.17. Ability to add a modem for shop/factory troubleshooting, maintenance, reprogramming and downloading future software upgrades.
- 4.1.18. Password protected levels of system setup, allowing access to non-critical sections to authorized personnel only.

- 4.1.19. Volume control adjustable on screen, with automatic volume adjustment at designated time of day (Quiet Mode). Quiet Mode shall also affect pager-beeping sequence. *Note: Quiet Mode is a Future Enhancement.*
- 4.1.20. Ability to produce productivity reports that can be easily customized by date, room number and call type. All data shall be stored in a database. SQL database is an option

4.2. Computer display.

- 4.2.1. A 15" CRT display and a mouse shall be used as the primary interface to Nurse Call functions. On-screen "buttons" shall be sized and spaced for easy use.
- 4.2.2. A 15" LCD Touch-Screen shall be optional.
- 4.2.3. An on-screen keyboard shall be provided for sites with limited space requirements and/or when a system keyboard is absent.
- 4.2.4. The system shall be "user friendly," with help buttons displaying step-by-step procedural instructions on the screen. *Note: On-Screen Help Buttons are a Future Enhancement.*
- 4.2.5. Display at least ten incoming calls and visual indicators if there are more than seven listed calls. Call types shall be indicated by separate tone and color (tones, colors and flash to be designated by hospital).
- 4.2.6. Provisions for registering and locating staff by constant display in both a list and graphical format.
- 4.2.7. Simultaneous and constant display of patient requests and staff location available in both a list and graphical format. Two level locations shall be separate and will be designated by unique colors.
- 4.2.8. Incoming calls displayed by room number, bed number and status of call. Call status shall be differentiated by tone and color. Colors to be determined by hospital and changeable by hospital staff if desired. Patient Name can be configured to display on screen with call.
- 4.2.9. Map mode, allowing staff to view entire unit in a graphical format, shall be customizable by unit. Calls shall be displayed in each room with no limit on the number of simultaneously displayed calls. Patient requests, staff presence and admitted patients shall be visually indicated on the map. *Note: Map Mode is a Future Enhancement.*
- 4.2.10. Ability to monitor staff requests by viewing screen in both a list and graphical format.
- 4.2.11. Distinctive display of re-called service request not answered within an allotted amount of time. An elapse timer shall indicate the length of time the call is in the system. The hospital shall have the ability to set "recall" time limits for all call types individually, as well as each task for all levels of staff.
- 4.2.12. The display must show previous request with the ability to use the same or add additional requests as required. *Note: This is a Future Enhancement.*
- 4.2.13. Ability to place current call on hold while answering a higher priority call. Any number of calls can be placed on hold but must indicate on the screen that they are on hold and the elapsed timer must continue to run.
- 4.2.14. Ability to program patient status at the master station to be routine, priority or emergency and display calls on screen based on status with unique tones and colors for each station.

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- 4.2.15. Ability to differentiate between male or female patients by the color of the patient information screen and color of bed icons on the map display. *Note: Map Mode is a Future Enhancement.*
- 4.2.16. Hospital name and floor displayed on screen. Time of day and system status indicators shall be present and visible on the screen at all times.
- 4.2.17. Ability to mute calls for a pre-determined amount of time to allow staff to assist patients without toning the call at the master station. *Note: Mute Until Time-Out Mode is a Future Enhancement.*
- 4.2.18. System shall be user configurable, permitting on-site changes to room numbers, zone paging, patient priority, zone lights and duty station assignments. Any combination of alpha numeric room configuration shall be capable to a maximum of nine digits.
- 4.2.19. Capability of an “auto-page” feature allowing the assigned staff member(s) to be paged automatically when any patient call is placed. The message on the pager shall indicate where the call originated (room and bed), and the type of call placed (routine, bath, etc.).

4.3. Staffing

- 4.3.1. Staff database shall include the following:

| | |
|---|--|
| Staff member name. | Assigned bed (using grid to select beds). |
| Pager number, with the ability to disable routine pages per staff member. | Staff level. |
| Team membership. | Shift assignment(s). Staff members shall be allowed to work multiple shifts. |
| Staff ID. | Phone number (for cellular or cordless use). |
| Supervisor status; any staff member may be designated a supervisor, and multiple supervisors shall be possible. | Memo area for useful information about the staff member. |

- 4.3.2. Unlimited number of staff levels definable at a master station. Each level may have a unique color code as specified by hospital staff.
- 4.3.3. Unlimited number of patient requests (tasks) definable for each level of staff, with a unique recall time-out for each task.
- 4.3.4. Ability to send a service request for any level of staff.
- 4.3.5. Staff assignments and settings assignable by shifts, with the ability to set up shift data prior to shift change without affecting current shift settings. The new data must activate when the shift starts without user interaction.

4.4. Patient Information System

- 4.4.1. Patient information database shall include the following:

| | |
|---|--|
| Patient name (first, last). | Age (with years/months/weeks/days indication). |
| Gender. | Smoking permissions. |
| Status (normal, emergency, priority). | Religion (with ability to choose from a pre-defined list). |
| Diagnosis (with ability to choose from a pre-defined list). | Doctor and staff assignments. |
| Memo field for patient information purposes. | Memo field for staffing information purposes. |

- 4.4.2. Ability to display all patients on screen by level of priority on screen.
- 4.4.3. Ability to transfer patient data to other rooms without re-entering patient information. Staff assignments must also be transferable in the same step.
- 4.4.4. Ability to program unlimited levels of patient team member responses to each patient bed (i.e., RN, LVN, Aide, etc.).
- 4.4.5. Discharge function to delete patient information and staff assignments, with the ability to automatically send a pager message to housekeeping upon a patient's discharge.

4.5. Pagers:

- 4.5.1. Ability to store unlimited pre-set alphanumeric pager messages which may be sent to any combination of specific staff member(s), team(s) or individual pager numbers.
- 4.5.2. User configurable timed auto-pages to be sent to select staff member(s), team(s) or staff level(s) at a specified time and day(s) of the week. **Note: Timed Auto Pages is a Future Enhancement.**
- 4.5.3. Auto-page feature allowing the assigned staff member(s) to be paged automatically when any patient call is placed. Page shall indicate where call originated (room, bed) and the type of call placed (i.e., Normal, Bath, Staff Emergency, etc.).
- 4.5.4. Support Page feature allowing a secondary staff member to be paged when the primary staff member is unable to respond to patient needs within a specified period of time.
- 4.5.5. Supervisor Page feature allowing staff members designated as supervisors to be automatically paged when a patient request cannot be completed by either the primary staff member or his/her support level within a specified period of time.
- 4.5.6. Paging system shall store the last eight sent messages and their recipients to allow easy re-paging when necessary.

4.6. Reports:

- 4.6.1. Built-in Staffing Reports shall include the following: **Note: Staffing Reports is a Future Enhancement.**

| | |
|--------------------------|------------------------|
| Staff member name. | Staff level. |
| Shift(s) assignment. | Team(s) assignment. |
| Bed/Patient assignments. | Pager number assigned. |
| Phone number. | Supervisor status. |

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- 4.6.2. Built-in Patient Information Reports shall include the following: *Note: Patient Information reports is a Future Enhancement.*

| | |
|---------------------|--------------------------|
| Patient name. | Patient priority status. |
| Patient age. | Patients admit date. |
| Patient diagnosis. | Patient gender. |
| Doctor assignments. | Staff assignments. |

- 4.6.3. Reports may be sorted by any of the preceding fields. *Note: Reports are a Future Enhancement.*
- 4.6.4. Built-in Pager Log shall track pager assignments for 90 days. *Note: Pager Log is a Future Enhancement.*
- 4.6.5. Built-in Log file shall report all activity on a master station for a specified day. The Log file shall store information for 90 days.

5. Equipment Description:

5.1. Nurse Call Master Station (EV-NMS):

5.1.1. Function:

The Endeavor AV comes complete with a 15" CRT, an IBM compatible computer, keyboard, mouse, and a phone. An optional 15" touch screen flat panel display is also available. The interactive interface uses a call list, displaying active calls and staff location. Large descriptive buttons with colorful animated graphics make finding and using functions simple. Help buttons located throughout the Endeavor program allow the user to receive answers to operational questions on demand. Full duplex voice communication is available from the master station to patient stations, staff stations, duty stations, and other master stations. Other features include fully integrated radio paging, staffing reports, staff assignment, and patient information, all customizable to meet the nursing unit's needs.

5.1.2. General Description:

The nurse call master station shall contain the following:

- 5.1.2.1. A means by which to annunciate all routine, priority and emergency calls throughout the nurse call system.
- 5.1.2.2. Ability to switch between a Call List mode and a Graphical Floor Map mode with a one-button selection. *Note: Floor Map Mode is a Future Enhancement.*
- 5.1.2.3. Unlimited call tones, with adjustable volume level and repeat interval for each call type.
- 5.1.2.4. Handset with full-duplex audio and adjustable volume level.
- 5.1.2.5. Automatic location of staff by level (i.e., RN, LVN, Aide).
- 5.1.2.6. Automatic recall of patient calls to which staff has not yet responded (within a hospital selected pre-set period of time).
- 5.1.2.7. An alert for staff for incoming calls to an unattended nurse station.
- 5.1.2.8. Ability to interface with the hospital's ADT information systems.
- 5.1.2.9. Ability to interface with hospital's telemetry system.
- 5.1.2.10. Ability to send full alphanumeric pages from any Nurse Call Master Station to specific pagers programmed to the radio page system that is interfaced with the nurse call system.
- 5.1.2.11. Ability to network eight (8) Master Stations together with Endeavor Multi Master Controller.

5.1.3. Technical Description:

5.1.3.1. Monitor Technical Specifications:

| | |
|-----------------------------------|---|
| CRT Size: | 15" Diagonal (13.8" Viewable) |
| Deflection Angle: | 90 Degrees |
| Phosphor Pitch: | 0.28 MM |
| Graphics Standards Compatibility: | Non-Interlaced 1024 x 768, XGA, SVGA, VGA |
| Resolution (Max): | 1024 x 768 Non-Interlaced |
| Video bandwidth (HXV): | 75 MHz |
| Horizontal Sync: | 30-56 KHz |
| Vertical Sync: | 50-120 Hz |
| Video Input Signal: | RGB Analog 0.7 VP-P/75 Ohms Positive |
| Sync Input Signal: | TTL Separate/Composite (+/-) |
| Display Colors: | Unlimited |
| Display Area (HXV): | 270mm x 202mm (Recommended) |
| Power Source: | 90-264 VAC |
| Power Consumption: | 80W |
| Input Connector: | 15 Pin Mini D-Sub |
| Dimension/Weight: | 398mm(D) x 363mm(W) x 374mm(H)/12.5kg |
| Operating Temperature: | 0° To 40° |
| Operating Humidity: | 10% To 80% |

5.1.3.2. Computer Technical Specifications:

| | |
|---------------|--|
| Power: | 100Watt, 110/220C Auto Switch |
| Motherboard: | PCI architecture, All-In-One Board |
| Processor: | 2.8 GHZ D4 |
| Memory: | 256 MB |
| Video: | Onboard 128-bit graphics system supports up to 1920 x 1200 resolution |
| Connectivity: | One Serial Port, One EPP/ECP Parallel Port, 32 Bit PCI 10/100BaseT LAN connection, DVI Video Port, Six USB Ports |
| Disk Drives: | CD-RW/DVD Drive, 3.5" IDE Hard Disk Drive |
| Dimensions: | 310mm (L) x 272mm (W) x 82mm (H) |
| Weight: | 14 lbs. |

5.1.3.3. Other Parts Technical Specifications:

| | |
|-----------|---|
| Phone: | DC 12V |
| Keyboard: | 84 Keys Mini Keyboard |
| Cabling: | Category 5 Cable From Master Computer To Endeavor Central. West-Call® Special Black Cable From Master Phone to Central. |

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5.2. Central Control Terminal:

5.2.1. Function:

The Endeavor Central consists of one to four micro controller-based I/O boards, power supplies, CNTR-1, and an EV-ASM module. One Endeavor I/O board supports up to 32 ports. Up to 127 I/O boards may be networked together, expanding the system to 4,064 ports. Each I/O board can support seven flash rates, eight duty station ports, and has one relay output. All boards can be field programmable and communicate using the RS-485 protocol. The Endeavor Central is for use with the West-Call® Endeavor and West-Call Endeavor AV.

5.2.2. General Description:

5.2.2.1. 32 Ports per I/O.

5.2.2.2. Ability to connect up to 127 I/O (4,064 ports) boards together via RS-485 network with optional high performance controller (EV-CNTR-2) or Ability to connect up to 16 EV I/O boards to a EV-MMC.

5.2.2.3. Seven flash rates available. Each port can be programmed to a specified flash rate.

5.2.2.4. EV-I/O boards shall be field programmable with optional EV-Configurator software.

5.2.2.5. One relay output per I/O board.

5.2.2.6. Each port is custom programmable.

5.2.2.7. Eight duty station ports available per I/O board.

5.2.2.8. Ability to report system failures.

5.2.2.9. Ability to report to up to eight (8) EV Master Stations with optional EV- MMC.

5.2.2.10. Ability to interface with radio paging equipment with optional computer equipment.

5.2.3. EV-I/O Board Technical Specifications:

| | |
|---|---|
| Operating Voltage: | 24-28VDC \pm 5% |
| Power Consumption: | 2 watt. |
| Mounting Cabinet for the EV-32 and 64: | 18"H x 22"W x 4"D, electrical enclosure or equivalent. Flush or surface mount available. |
| Mounting Cabinet for the EV-96 and 128: | 36"H x 24"W x 6"D, electrical enclosure or equivalent. Flush or surface mount available. |
| Termination: | Device identity lines terminate to mass termination connectors on I/O board. Mating connectors are Panduit CD100F22-6 connectors. |

5.2.4. CNTR-1/EV-MMC Technical Specifications:

| | |
|---------------------|---|
| Operating Voltage: | 12VDC \pm 5% |
| Power Consumption: | 6 watts. |
| Mounting: | 12"H x 22"W x 4"D, electrical enclosure or equivalent. |
| Termination EV-MMC: | RS-485 Network Terminates via Screw Down Pressure Terminals. Field audio lines terminate to mass termination connectors on EV-ASM. Mating connectors are Panduit CD100F22-5 connectors. |

5.3. Endeavor Audio/Visual Patient Stations (EV-SPS2):

5.3.1. Function:

The West-Call® Endeavor AV Patient Stations are located in the patients' room, providing patient(s) with a convenient means of originating calls to the nurses' station. When used with a paging system, calls can be routed directly to a patient's caregiver. The voice communication from the patient's room to the nurses' station is hands-free and two-way (duplex). Remote devices can be associated to patient's room for additional functionality.

5.3.2. General Description:

- 5.3.2.1. Inlaid membrane switch with call and monitor indicator LED and call buttons.
- 5.3.2.2. Full Duplex speech for uninterrupted communication between patient and nurse.
- 5.3.2.3. Manual call origination via either a call button or corresponding cord-set; automatic cord out call is placed when the cord-set is unplugged from its receptacle.
- 5.3.2.4. The cord-out call must have a override feature so there is no need for dummy plugs.
- 5.3.2.5. Cord-set receptacles are conveniently located on station.
- 5.3.2.6. Solid-state circuitry throughout for long life and reliability.
- 5.3.2.7. Quick connect/disconnect pre-wired edge connector for simplified installation and service.
- 5.3.2.8. 2 3/4" Mylar cone speaker with a separate electret condenser microphone for full duplex communication.
- 5.3.2.9. Standard four-gang hospital grade ABS plastic faceplate. (Three-gang box adapter ring is also available.)
- 5.3.2.10. Stations are fully compatible with all bedside "In-Rail" communications systems.
- 5.3.2.11. Red nurse monitor/privacy LED.

5.3.3. Endeavor Audio/Visual Patient Station Technical Specifications:

| | |
|---------------------|--|
| Operating Voltage: | 24-28VDC \pm 5% |
| Power Consumption: | 0.85W (standby); 6W (maximum with both dome lamps on) |
| Size: | 4 1/2"H x 8 1/4"W x 3 1/2"D |
| Mounting: | Four-gang back-box Raco #698. Normal mounting is Horizontal. BOX MUST BE LEVEL. |
| Faceplate: | Hospital grade ABS UL94V-0 molded thermoplastic with inlaid membrane |
| Faceplate Color: | Standard Warm Grey (Pantone 1C). Special colors supplied on individual basis. |
| Membrane: | .010 Lexan with hard-coat finish |
| Membrane Color: | Background color, Pantone 4C Warm Grey, copy color Grey (Pantone 1C and 11C). |
| Termination: | Plug-on connectors allowing rapid mass termination mating connectors - Panduit needed include one CE100F22-8 (home run), one CE100F22-3 (dome), one CE100F22-10 (audio), one CE100F22-7 (bed interface), and up to two CE100F22-4 (priority and emergency external call devices) |
| Microphone: | Cardiod Electret, sensitivity is -64db @ 1 microbar @ 1KHz |
| Speaker: | 2 3/4" Mylar cone with .5 ounce magnet. Minimum sensitivity is 90db SPL @ .25 watts @ 1ft. |
| Cable Requirements: | 6 conductor #22AWG (home run), 4 conductor #22AWG (station to dome, station to call device), 2 twisted shielded pairs #22AWG (audio), and appropriate wire for TV audio and lamp control |

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Endeavor Staff Station (EV-STF2):

5.3.4. Function:

Staff Stations are used where voice communication is needed between the nurse station and other non-patient occupied areas. Nurses' lounge, waiting rooms, locker rooms and break rooms are all examples of where staff stations are used. Staff stations are also available with a duty alert option.

5.3.5. General Description:

5.3.5.1. Inlaid membrane switch with call and monitor indicator LED and call buttons.

5.3.5.2. Duplex speech for uninterrupted communication between staff station and nurses' station.

5.3.5.3. Manual call origination by the call button.

5.3.5.4. Red nurse monitor/privacy LED.

5.3.5.5. Solid-state circuitry throughout for long life and reliability.

5.3.5.6. Quick connect/disconnect pre-wired edge connector for simplified installation and service.

5.3.5.7. Large 2 3/4" Mylar cone speaker with a separate electret condenser microphone for natural full duplex communication.

5.3.5.8. Standard four-gang hospital grade ABS plastic faceplate. (3 Gang box adapter ring is available.)

5.3.6. Endeavor EV-STF2 Technical Specifications:

| | |
|---------------------|--|
| Operating Voltage: | 24-28VDC \pm 5% |
| Power Consumption: | 0.85W (standby); 6W (maximum with both dome lamps on) |
| Size: | 4 1/2"H x 8 1/4"W x 3 1/2"D |
| Mounting: | 4-gang backbox Raco #698. Normal mounting is Horizontal. BOX MUST BE LEVEL. |
| Faceplate: | Hospital grade ABS UL94V-0 molded thermoplastic with inlaid membrane |
| Faceplate Color: | Standard Warm Grey (Pantone 1C). Special colors supplied on individual basis. |
| Membrane: | .010 Lexan with hard-coat finish |
| Membrane Color: | Background color, Pantone 4C Warm Grey, copy color Grey (Pantone 1C and 11C). |
| Termination: | Plug-on connectors allowing rapid mass termination mating connectors - Panduit needed include one CE100F22-8 (home run), one CE100F22-3 (dome), one CE100F22-10 (audio), and up to two CE100F22-4 (priority and emergency external call devices) |
| Microphone: | Cardiod Electret, sensitivity is -64db @ 1 microbar @ 1KHz |
| Speaker: | 2 3/4" Mylar cone with .5 ounce magnet. Minimum sensitivity is 90db SPL @ .25 watts @ 1ft. |
| Cable Requirements: | 6 conductor #22AWG (home run), 4 conductor #22AWG (station to dome, station to call device), 2 twisted shielded pairs #22AWG (audio) |

5.4. Endeavor Patient Station (EV-SPS1):

5.4.1. Function:

The Endeavor Patient Station is a single-gang device that allows patients to place a routine call and control the television and room lights through a pillow speaker. It also works with a standard call cord. When the cord is

removed from the station, it will place a call. The red button on the station lights when a call is placed and cancels the call when pressed.

5.4.2. General description:

- 5.4.2.1. Places a routine call.
- 5.4.2.2. Works with pillow speakers or call cords.
- 5.4.2.3. Places a call when cord is removed from station.
- 5.4.2.4. Large call cancel button.
- 5.4.2.5. Fits into a single gang back box.
- 5.4.2.6. Capable of controlling the rooms' TV and room lights when used with the appropriate pillow speaker.
- 5.4.2.7. Call assurance light on station.
- 5.4.2.8. Places a call if station loses power.
- 5.4.2.9. Manual call origination via either a call button or corresponding cord-set; automatic cord out call is placed when the cord-set is unplugged from its receptacle. The cord-out call also has an override feature so there is no need for dummy plugs.

5.4.3. EV-SPS1 Technical Specifications:

| | |
|--------------------------|---|
| Operating Voltage: | 24-28 VDC \pm 5% |
| Power Consumption: | 1 watt maximum. |
| Dimensions: | 4 1/2"H x 2 3/4"W x 1 1/2"D. |
| Mounting: | 4-inch square back-box with one-gang plaster ring, Raco 190 with 768 one-gang adapter or equivalent. Minimum 2 1/8" depth required. Normal mounting is vertical. For remodel areas, use Raco #500 or 503 with #977 Grip-Lok's or equivalent. Minimum 2 1/2" depth required. |
| Faceplate: | Anodized aluminum. |
| Lamp Life: | 10,000 hour minimum. |
| Switch Life: | 100,000 cycles minimum. |
| Cable Requirement: | Use 6-conductor #22AWG cable. |
| Termination Requirement: | Plug-on connector allows rapid mass termination. Mating connector is a Panduit CE100F22-6. |

Endeavor Specifications

5.5. Visual Patient Station (EV-VPS):

5.5.1. Function:

The single gang Visual Patient Station is designed to be used with the West-Call Endeavor and West-Call Endeavor AV systems. When used with the West-Call Endeavor or West-Call Endeavor AV systems, it is a stand-alone patient station. The EV-VPS includes a standard 1/4" phono receptacle for use with a call cord, CC96-030 or CC144-100. The patient uses the call cord to signal for assistance. A call is automatically placed when the call cord is removed.

5.5.2. General Description:

- 5.5.2.1. Standard 1/4" phono socket for a call cord used by the patient to signal for assistance.
- 5.5.2.2. Automatic placement of call when call cord is removed.
- 5.5.2.3. Highly visible call LED to assure that a call has been placed.
- 5.5.2.4. Large color-coded "CANCEL" label for cancellation of calls.
- 5.5.2.5. Fire retardant high-impact hospital-grade molded thermoplastic with inlaid membrane.
- 5.5.2.6. Attractive Lexan membrane (Pantone 1C Warm Grey).
- 5.5.2.7. Solid-state circuitry.
- 5.5.2.8. Easy plug-in connection into the system wiring.
- 5.5.2.9. Manual call origination via either a call button or corresponding cord-set; automatic cord out call is placed when the cord-set is unplugged from its receptacle.
- 5.5.2.10. The cord-out call must have an override feature so there is no need for dummy plugs.

5.5.3. EV-VPS Technical Specifications:

| | |
|---------------------------|---|
| Operating Voltage: | 24-28 VDC \pm 5% |
| Power Consumption: | 1 watt maximum. |
| Dimensions: | 4 1/2"H x 2 3/4"W x 1 1/2"D |
| Mounting: | 4-inch square back-box with one-gang plaster ring, Raco 190 with 768 one-gang adapter or equivalent. Minimum 2 1/8" depth required. Normal mounting is vertical. For remodel areas, use Raco #500 or 503 with #977 Grip-Lok's or equivalent. Minimum 2 1/2" depth required. |
| Faceplate: | Hospital grade UL94V-0 ABS molded thermoplastic with inlaid membrane |
| Faceplate Color: | Standard color is Pantone 1C Warm Grey |
| Membrane: | .010 Lexan with hard-coat finish background color Pantone 4C Warm Grey. Cancel color Pantone 1C and 11C Warm Grey. |
| Lamp Life: | 500,000 hour minimum |
| Switch Life: | 100,000 cycles minimum |
| Call Cord Socket: | 1/4" Phono |
| Cable Requirement: | Use 4-conductor #22AWG cable. |
| Termination Requirements: | Plug on connector allows rapid mass termination. Mating connector is a Panduit CE156F22-10. |

5.6. Single Locator Station (EV-LOC):

5.6.1. Function:

The Locator station provides two levels of staff location, as well as other unique features, such as cancellation of calls and activation of special staff emergency, nurse follower and selective page functions. When used with the West-Call® Endeavor or West-Call Endeavor AV, locators can be a signaling device for any purpose.

5.6.2. General Description:

5.6.2.1. Highly visible call LED to assure the call has been placed; 500,000 hour life expectancy.

5.6.2.2. Easily operated push color-coded area.

5.6.2.3. Fire retardant high impact molded thermoplastic.

5.6.2.4. Solid-state circuitry.

5.6.2.5. Plug-in connectors for easy system connection/service.

5.6.3. EV-LOC Technical Specifications:

| | |
|---------------------|---|
| Operating Voltage: | 24-28 VDC \pm 5%. |
| Power Consumption: | 1 watt maximum. |
| Size: | 4 1/2"H x 2 3/4"W x 1 1/4"D |
| Mounting: | 4" square back-box with 1-gang plaster ring, Raco 190 with 768 or equivalent. 2 1/8" minimum depth required. Normal mounting is <u>Vertical</u> . |
| Faceplate: | Hospital-grade ABS UL94V-0 molded thermoplastic with inlaid membrane. |
| Faceplate Color: | Warm Grey (Pantone 1C). |
| Membrane: | .010 Lexan with hard-coat finish. |
| Membrane Color: | .010 Lexan with hard-coat finish background color Grey (Pantone 4C). Copy color Warm Grey (Pantone 1C and 11C). |
| Termination: | Plug-on connector allows rapid mass termination. Mating connector - Panduit CE156F22-10. |
| Cable Requirements: | 6 conductor #22AWG cable to I/O board. |

Endeavor Specifications

5.7. Duty Alarm Station (DTY-100):

5.7.1. Function:

The Duty Alarm Station shall provide remote annunciation of the nurse call system status in staff areas. Staff personnel can monitor patient calls continuously in areas without a master station. The Duty Alarm Station shall tone at the highest priority call level. The zone and call mode of this station can be programmed in the EV-I/O Board.

5.7.2. General Description:

- 5.7.2.1. Easy programming to any zone or mode.
- 5.7.2.2. Programmable tones and intervals per duty station.
- 5.7.2.3. LED installed for a visual indication of a call in the system.
- 5.7.2.4. Fire retardant, painted, cold rolled steel faceplate.
- 5.7.2.5. Optional mute function on duty station.

5.7.3. DTY-100 Technical Specifications:

| | |
|---------------------|--|
| Operating Voltage: | 24-28 VDC \pm 5%. |
| Power Consumption: | 1 watt maximum. |
| Size: | 4 1/2"H x 2 3/4"W x 1 1/2"D |
| Mounting: | 4" square back-box with 1 gang plaster ring, Raco 190 with 768 or equivalent. 2 1/8" minimum depth required. |
| Faceplate: | Painted cold rolled steel. |
| Faceplate Color: | Warm grey Pantone 1C. |
| Termination: | 2 wire splice connection. |
| Cable Requirements: | 4 conductor #22AWG cable to I/O board. |

5.8. Pillow Speakers:

5.8.1. Function:

The pillow speaker shall be a compact unit, easily cleaned and sterilized. It shall have a high fidelity mylar speaker for private listening, and a wide variety of controls governing patient entertainment systems (i.e., radio, television) and for patient convenience in contacting hospital personnel. *UL-1069 listed pillow speakers must be used.*

5.8.2. Optional Functions:

- 5.8.2.1. Room light controls.
- 5.8.2.2. Room drapery control.
- 5.8.2.3. Headset feature for private listening of entertainment systems.

5.8.3. General Description:

- 5.8.3.1. A nurse call button.
- 5.8.3.2. A TV (on/off/channel change) button.
- 5.8.3.3. A volume control for incoming audio.
- 5.8.3.4. A mylar coned speaker.
- 5.8.3.5. An eight-foot cord with a ten-pin modular plug.
- 5.8.3.6. Pillow speakers are made of Huntsman #799 Polystyrene (UL94V-0) thermoplastic.

Endeavor Specifications

5.9. Emergency Pull Cord (EV-EPC):

5.9.1. Function:

Emergency Pull Cord Stations alert staff members of the location where prompt emergency help is required. Pulling on a cord that goes from the station to the ground places an emergency call. This allows patients who may have fallen to place a call while lying on the floor.

5.9.2. General Description:

- 5.9.2.1. Large color-coded emergency label for placement of calls.
- 5.9.2.2. Highly visible call LED to assure that a call has been placed.
- 5.9.2.3. Large color-coded "CANCEL" or "CANCEL AT TOILET" label for cancellation of calls.
- 5.9.2.4. Fire-retardant high-impact hospital grade molded thermoplastic with inlaid membrane.
- 5.9.2.5. Attractive Lexan membrane (Pantone 1C Warm Grey).
- 5.9.2.6. Solid-state circuitry.
- 5.9.2.7. Easy plug-in connection into the system wiring.
- 5.9.2.8. Eight-foot pull cord with a tassel on the end for ease of gripping.
- 5.9.2.9. Waterproof gasket for shower stations.

5.9.3. EV-EPC Technical Specifications:

| | |
|---|---|
| Operating Voltage: | 24-28 VDC \pm 5%. |
| Power Consumption: | 1 watt maximum. |
| Dimensions: | 4 1/2"H x 2 3/4"W x 1 1/2"D. |
| Mounting: | 4-inch square back-box with one-gang plaster ring, Raco 190 with 768 one-gang adapter or equivalent. Minimum 2 1/8" depth required. Normal mounting is vertical. For remodel areas, use Raco #500 or 503 with #977 Grip-Lok's or equivalent. Minimum 2 1/2" depth required. |
| Faceplate: | Hospital grade UL94V-0 ABS molded thermoplastic with inlaid membrane. |
| Faceplate Color: | Standard color is Pantone 1C Warm Grey. |
| Membrane: | .010 Lexan with hard-coat finish background color Pantone 4C Warm Grey. Cancel color Pantone 1C and 11C Warm Grey. |
| Lamp Life: | 500,000 hour minimum. |
| Switch Life: | 100,000 cycles minimum. |
| Cable Requirement for the EPC and WPC: | Use 4 conductor #22AWG cable to associated patient station or EV-I/O Board. |
| Cable Requirement for the SPC and SWPC: | Use 4 conductor #22AWG cable to associated EPC or PBE. |
| Termination Requirement: | Plug-in connector allows rapid mass termination. Mating connector is a Panduit CE156F22-10. |

5.10. "Staff Emergency" Station (EV-PBE/SE):

5.10.1. Function:

The EV-PBE/SE is intended for use in patient rooms and other areas where priority calls require immediate attention. The EV-PBE/SE shall consist of a red push button area, a color-coded "CANCEL" button, and a red LED indicator. They are designed for patient areas where assistance is needed.

5.10.2. General Description:

- 5.10.2.1. Large color-coded call type label for placement of calls.
- 5.10.2.2. Highly visible call LED to assure that a call has been placed.
- 5.10.2.3. Large color-coded "CANCEL" label for cancellation of calls.
- 5.10.2.4. Fire retardant high-impact hospital grade molded thermoplastic with inlaid membrane.
- 5.10.2.5. Attractive Lexan membrane (Pantone 1C Warm Grey).
- 5.10.2.6. Solid-state circuitry.
- 5.10.2.7. Easy plug-in connection into the system wiring.

5.10.3. EV-PBE/SE Technical Specifications:

| | |
|--------------------------|---|
| Operating Voltage: | 24-28 VDC \pm 5%. |
| Power Consumption: | 1 watt maximum. |
| Dimensions: | 4 1/2"H x 2 3/4"W x 1 1/2"D |
| Mounting: | 4-inch square back-box with one-gang plaster ring, Raco 190 with 768 one-gang adapter or equivalent. Minimum 2 1/8" depth required. Normal mounting is vertical. For remodel areas, use Raco #500 or 503 with #977 Grip-Lok's or equivalent. Minimum 2 1/2" depth required. |
| Faceplate: | Hospital grade UL94V-0 ABS molded thermoplastic with inlaid membrane. |
| Faceplate Color: | Standard color is Pantone 1C Warm Grey.. |
| Membrane: | .010 Lexan with hard-coat finish background color Pantone 4C Warm Grey. Cancel color Pantone 1C and 11C Warm Grey. |
| Lamp Life: | 500,000 hour minimum. |
| Switch Life: | 100,000 cycles minimum. |
| Cable Requirement: | Use 4 conductor #22AWG cable to associated I/O board. |
| Termination Requirement: | Plug-on connector allows rapid mass termination. Mating connector is a Panduit CE156F22-10. |

Endeavor Specifications

5.11. "Push For Help" Station (EV-PBE):

5.11.1. Function:

The EV-PBE is intended for use in patient rooms and other areas where priority calls require immediate attention. The EV-PBE shall consist of a red push button area, a color-coded "CANCEL" button, and a red LED indicator. They are designed for patient areas where assistance is needed.

5.11.2. General Description:

- 5.11.2.1. Large color-coded call type label for placement of calls.
- 5.11.2.2. Highly visible call LED to assure that a call has been placed.
- 5.11.2.3. Large color-coded "CANCEL" label for cancellation of calls.
- 5.11.2.4. Fire-retardant high-impact hospital grade molded thermoplastic with inlaid membrane.
- 5.11.2.5. Attractive Lexan membrane (Pantone 1C Warm Grey).
- 5.11.2.6. Solid-state circuitry.
- 5.11.2.7. Easy plug-in connection into the system wiring.

5.11.3. EV-PBE Technical Specifications:

| | |
|--------------------------|---|
| Operating Voltage: | 24-28 VDC \pm 5%. |
| Power Consumption: | 1 watt maximum. |
| Dimensions: | 4 1/2"H x 2 3/4"W x 1 1/2"D |
| Mounting: | 4-inch square back-box with one-gang plaster ring, Raco 190 with 768 one-gang adapter or equivalent. Minimum 2 1/8" depth required. Normal mounting is vertical. For remodel areas, use Raco #500 or 503 with #977 Grip-Lok's or equivalent. Minimum 2 1/2" depth required. |
| Faceplate: | Hospital grade UL94V-0 ABS molded thermoplastic with inlaid membrane. |
| Faceplate Color: | Standard color is Pantone 1C Warm Grey. |
| Membrane: | .010 Lexan with hard-coat finish background color Pantone 4C Warm Grey. Cancel color Pantone 1C and 11C Warm Grey. |
| Lamp Life: | 500,000 hour minimum. |
| Switch Life: | 100,000 cycles minimum. |
| Cable Requirement: | Use 4 conductor #22AWG cable to associated I/O board. |
| Termination Requirement: | Plug-on connector allows rapid mass termination. Mating connector is a Panduit CE156F22-10. |

5.12. "Code Blue" Station (EV-PBE/CB):

5.12.1. Function:

The EV-PBE/CB is intended for use in Recovery, ICU, CCU and other areas where priority calls require immediate attention. The EV-PBE/CB shall consist of a blue push button area, a color-coded "CANCEL" button, and a red LED indicator. All "Code Blue" calls shall annunciate locally at the nurses station, pagers and at PBX. They are designed for patient areas where Code Blue assistance is needed.

5.12.2. General Description:

- 5.12.2.1. Large color-coded call type label for placement of calls.
- 5.12.2.2. Highly visible call LED to assure that a call has been placed.
- 5.12.2.3. Large color-coded "CANCEL" label for cancellation of calls.
- 5.12.2.4. Fire retardant high-impact hospital grade molded thermoplastic with inlaid membrane.
- 5.12.2.5. Attractive Lexan membrane (Pantone 1C Warm Grey).
- 5.12.2.6. Solid-state circuitry.
- 5.12.2.7. Easy plug-in connection into the system wiring.

5.12.3. EV-PBE/CB Technical Specifications:

| | |
|--------------------------|---|
| Operating Voltage: | 24-28 VDC \pm 5%. |
| Power Consumption: | 1 watt maximum. |
| Dimensions: | 4 1/2"H x 2 3/4"W x 1 1/2"D. |
| Mounting: | 4-inch square back-box with one-gang plaster ring, Raco 190 with 768 one-gang adapter or equivalent. Minimum 2 1/8" depth required. Normal mounting is vertical. For remodel areas, use Raco #500 or 503 with #977 Grip-Lok's or equivalent. Minimum 2 1/2" depth required. |
| Faceplate: | Hospital-grade UL94V-0 ABS molded thermoplastic with inlaid membrane. |
| Faceplate Color: | Standard color is Pantone 1C Warm Grey |
| Membrane: | .010 Lexan with hard-coat finish background color Pantone 4C Warm Grey. Cancel color Pantone 1C and 11C Warm Grey. |
| Lamp Life: | 500,000 hour minimum. |
| Switch Life: | 100,000 cycles minimum. |
| Cable Requirement: | Use 4 conductor #22AWG cable to associated I/O board. |
| Termination Requirement: | Plug-on connector allows rapid mass termination. Mating connector is a Panduit CE156F22-10. |

Endeavor Specifications

5.13. "Code Pink" Station (EV-PBE/CP):

5.13.1. Function:

The EV-PBE/CP is intended for use in Nurseries, ICN and other areas where priority calls require immediate attention. The EV-PBE/CP shall consist of a pink push button area, a color-coded "CANCEL" button, and a red LED indicator. All "Code Pink" calls shall annunciate locally at the nurses station, pagers and at PBX. They are designed for patient areas where Code Blue assistance is needed.

5.13.2. General Description:

- 5.13.2.1. Large color-coded call type label for placement of calls.
- 5.13.2.2. Highly-visible call LED to assure that a call has been placed.
- 5.13.2.3. Large color-coded "CANCEL" label for cancellation of calls.
- 5.13.2.4. Fire retardant high-impact hospital grade molded thermoplastic with inlaid membrane.
- 5.13.2.5. Attractive Lexan membrane (Pantone 1C Warm Grey).
- 5.13.2.6. Solid-state circuitry.
- 5.13.2.7. Easy plug-in connection into the system wiring.

5.13.3. EV-PBE/CP Technical Specifications:

| | |
|--------------------------|---|
| Operating Voltage: | 24-28 VDC \pm 5%. |
| Power Consumption: | 1 watt maximum. |
| Dimensions: | 4 1/2"H x 2 3/4"W x 1 1/2"D |
| Mounting: | 4-inch square back-box with one-gang plaster ring, Raco 190 with 768 one-gang adapter or equivalent. Minimum 2 1/8" depth required. Normal mounting is vertical. For remodel areas, use Raco #500 or 503 with #977 Grip-Lok's or equivalent. Minimum 2 1/2" depth required. |
| Faceplate: | Hospital grade UL94V-0 ABS molded thermoplastic with inlaid membrane. |
| Faceplate Color: | Standard color is Pantone 1C Warm Grey. |
| Membrane: | .010 Lexan with hard-coat finish background color Pantone 4C Warm Grey. Cancel color Pantone 1C and 11C Warm Grey. |
| Lamp Life: | 500,000 hour minimum. |
| Switch Life: | 100,000 cycles minimum. |
| Cable Requirement: | Use 4 conductor #22AWG cable to associated I/O board. |
| Termination Requirement: | Plug-on connector allows rapid mass termination. Mating connector is a Panduit CE156F22-10. |

5.14. Dome Lights (CDL-100x):

5.14.1. Function:

The West-Call® Corridor Dome Light provides the required visual signal to notify staff members of a room's status. It can be used with the Endeavor, and the Endeavor AV systems. The Dome Light can be equipped with up to four sections with one lamp per section, offering a wide variety of signals. High intensity five-watt incandescent lamps are easily visible from any reasonable angle. The Corridor Dome Light can be mounted on the wall or ceiling, and the lamps are available in various colors. Typical applications include corridor indication of patient calls, patient waiting, staff calls, emergency, code blue, and code pink indications, as well as zone light applications.

5.14.2. General Description:

- 5.14.2.1. Translucent wedge-shaped dome lens for maximum visibility in all directions, even at great distances and under high ambient lighting conditions.
- 5.14.2.2. Front-replaceable lamp(s) for simplified service.
- 5.14.2.3. Oversized two-gang faceplate, hospital-grade ABS plastic.
- 5.14.2.4. Color is Pantone 1C Warm Grey.
- 5.14.2.5. Lens is made from unbreakable polystyrene UL94V0 plastic.
- 5.14.2.6. Normal and emergency calls distinguished by different visual signals for positive identification of call priority.

5.14.3. CDL-100x Technical Specifications:

| | |
|--------------------|--|
| Operating Voltage: | 24-28 VDC ± 5%. |
| Power Consumption: | 5 watts per lamp. |
| Size: | 5 1/4"H x 5 1/4"W x 3 3/4"D. |
| Mounting: | 4 11/16" square back-box with two-gang plaster ring. Raco 257 with 818 or equivalent. |
| Faceplate: | Hospital grade ABS plastic back plate with attractive finish. Pantone 1C Warm Grey. |
| Termination: | CDL-1001 through 1004 have 6" wired pigtails. |
| Luminarie: | Molded white Polystyrene plastic, replaceable. |
| Lamp Colors: | White, Green, Amber, Red, and Blue. Note: Blue is not recommended due to poor visibility at distances of more than 10 feet, or where fluorescent lamps are within 10 feet. |

Endeavor Specifications

5.15. Wiring:

All nurse call system wiring shall be in accordance with the equipment manufacturer's recommendations. All components shall be provided with plug-in connections to system wiring. Local codes will apply to all plenum cabling requirements.

6. System Interfaces:

6.1. Radio Page Interface:

The nurse call system shall have the ability to interface paging systems and must have the following system features:

- 6.1.1. Ability to interface with the ASCOM System 5000 (ESPA 4.4.4 Protocol) and standard TAP (v1.8) Protocol.
- 6.1.2. Ability to assign any bed to any pager or pager group.
- 6.1.3. Ability to assign an unlimited amount of pagers to any patient bed.
- 6.1.4. Ability to send an unlimited number of hospital-selected messages to any pager in the system from any nurse call master in the system.
- 6.1.5. Ability to send detailed, 32-character special messages to any pager in the system from any nurse call master in the system.
- 6.1.6. Ability to send detailed, 32-character special messages to any pager in the system from any in-house PC with optional I-Page Server.
- 6.1.7. Ability to automatically send "Staff Emergency" calls to all staff members by patient care group, by simply pressing one button. "Staff Emergency" calls shall be indicated by an emergency tone, and the pager shall indicate the room number of the call and state "Staff Emergency" in plain English format on pagers.
- 6.1.8. Ability to automatically send all "Code Blue" calls to staff members by simply pressing one button. Pager shall give a separate and distinct code blue tone, and shall indicate room number of code call, and state "Code Blue" in plain English format on pagers.
- 6.1.9. Ability to have calls routed directly to the R.N. assigned to that patient. The nurse call system must continue to indicate the call until the R.N. assigned enters the room or the patient call is answered at the master station. The pager shall give routine call indication and indicate room and bed number of the call, as well as "patient need" in plain English format on format.
- 6.1.10. If the radio page feature is placed in "Auto-Page" mode, all levels of call shall go directly to the pager(s) assigned to the bed placing the call. Hospital must have the ability to determine which level(s) of calls go to any or all of the pagers assigned to the bed.
- 6.1.11. When a patient service request is re-called from the service mode, a second page shall be sent to the pager assigned to that specific bed. The pager shall give a general call tone and re-indicate room and bed number.
- 6.1.12. Pager assignments shall be easily made and/or displayed from any nurse call master in the system. Hospital shall have the ability to assign levels of call to individual pagers.
- 6.1.13. Ability to have bathroom emergency calls go directly to the R.N. assigned to that room by simply pulling the bathroom emergency call cord. The pager shall sound an emergency call and indicate room number, and shall state "Bathroom Emergency" in plain English format on pagers.
- 6.1.14. Ability to send a stat call to the R.N. assigned to a bed by simply pressing one button on the master station while talking to the room. All pagers on the floor shall give an emergency tone and indicate the room and bed number of the stat call. **Note: This is a Future Enhancement.**
- 6.1.15. The system shall be capable of placing unlimited timed auto-pages, programmed as needed at the master station. These pages shall be sent automatically at specified times and days. **Note: This is a Future Enhancement.**
- 6.1.16. In the event that a patient call is re-called in excess of two times (number of re-calls to be programmable by hospital) without the proper level of staff entering the room, a page will automatically be sent to the Supervisor's pager. An emergency tone on the pager shall alert the Supervisor of a problem, and the pager will display the room and bed number of the patient needing assistance.

6.2. Automatic Tracking Systems:

Automatic tracking system shall consist of a small, lightweight badge that emits invisible, digitized infrared light with a unique identification code. The code is received by sensors and relayed to the nurse call system master station where the badge's location is displayed. When a staff member wearing an IR badge enters a patient's room, the dome light indicates his/her presence by turning on the appropriate lamp. Routine patient calls are also automatically canceled when the correct staff member enters a patient's room. The nurse call master station has

automatic location features such as low battery indication and badge log file. Instant voice communication to staff members using a location badge is also possible. Staff location information can be stored in the reporting database to produce productivity reports that includes staff member’s name, location, and their response time on all patient calls. *Note: Automatic Tracking Interface is a Future Enhancement.*

6.3. ADT Systems:

- 6.3.1. The nurse call system shall receive information form the hospital’s Admit-Discharge-Transfer system in real time.
- 6.3.2. The nurse call system shall be capable of receiving the information in a variety of formats, including HL7.
- 6.3.3. The nurse call system shall receive the information through a serial or TCP/IP connection.
- 6.3.4. No filtering is required by the ADT system. The nurse call system shall handle all filtering.
- 6.3.5. Information shall be automatically placed in the appropriate patient information file in the nurse call system if required. The following is a list of fields that can be uploaded:

| FIELD |
|----------------------|
| BED ID |
| NAME, LAST |
| NAME, FIRST |
| ADMIT DATE |
| DIAGNOSIS |
| RELIGION |
| MEMO (Personal data) |
| MEMO (staff data) |
| AGE |
| AGE YMD |
| GENDER |
| SMOKER |
| ACCOUNT# |
| DOCTOR (s) |
| NURSE (s) |

7. Management Reports:

The nurse call system shall be capable of collecting data and storing it in an SQL database so a variety of reports may be produced. This data shall include a recap of all events associated with a bed, patient, staff, patient requests and response time.

If a hospital has multiple floors or wings with independent Central Terminals, the system shall be configured to use a common database. A report can be generated for one or multiple centrals terminals.

Summary information included in the report includes but not limited to:

- 7.1. Total number of calls in report.
- 7.2. Percentage of calls of this type that were answered on time.
- 7.3. Total number of recalls.
- 7.4. Percentage of calls that recalled.
- 7.5. Total number of calls for all types.
- 7.6. Total number of recalls for all types.
- 7.7. Overall percentage of calls that recalled.
- 7.8. Percentage of calls answered per staff member.

The statistics table displays for **each** call type; the average (AVG), highest (HIGH), and lowest (LOW) times in the report for:

- Desk Response:** The length of time for a call to be answered at the Master.
- Room Response:** The length of time for a staff member to arrive in the room, either by a call answered at the Master, or a direct response.
- Total Response:** The cumulative time before a patient has been serviced. (Desk Response + Room Response)

Endeavor Specifications

Stay in room: The length of time the staff member(s) stayed in the patient's room.

8. Network/Centralization:

- 8.1. All Endeavor centrals must have the ability to be networked and centralized, if desired.
- 8.2. All routine calls placed in the nurse call must be able to be cancelled from the device where the call originated, from any main panel on the system, any EV-NMS, or at a designated remote visual station. All emergency and code calls must be able to be cancelled at the calling device only.
- 8.3. The network must be RS-485 based.
- 8.4. All Endeavor centrals must be able to run networked, or independently from the network.

9. Training:

9.1. In-Service Training:

All in-service shall include user manuals. The vendor is to supply one in-service per year, minimum, at no additional charge to the hospital. Schedule one month in advance minimum.

The in-service shall be coordinated with the nursing education department of the hospital and signed off by nursing administration before installation of the system can begin. The pre-agreed upon in-service schedule shall become part of the contract.

9.2. Factory Training:

A factory technical training seminar shall be supplied at no additional cost to the facility. This training seminar shall be held at the factory on an annual basis and shall offer a minimum of three days hands-on training to all hospital engineering and bio-medical staff. Hospital personnel shall have access to this school for the life of the system.

10. Conditions:

10.1. Equipment:

- 10.1.1. All equipment listed above and supplied by a U.S. manufacturer and shall be acceptable in the above listed specifications.
- 10.1.2. All equipment shall be listed for "UL 1069 Standards for Hospital Usage".
- 10.1.3. Part numbers designated may change according to the manufacturer's new product releases; however, the equipment specified shall meet or exceed the specifications as outlined.
- 10.1.4. No deviation from the above-specified equipment shall be acceptable.

10.2. History:

The successful bidder must have at least six (6) installations of comparable systems and supply a complete list of references with their bid.

10.3. Service:

All service shall be performed by an authorized factory servicing company with a minimum of six service vehicles in the immediate area (subcontractors are not acceptable).

10.4. Installation:

Company employees of the company selling the above-listed system shall perform all installation. Vendor shall have at least one factory certified installer for the installation. Use of sub-contractors or hospital personnel to perform installation is not acceptable. The authorized installation company shall have a minimum of six service vehicles in the immediate area.

10.5. Warranty:

Full five year warranty on all equipment and labor. Pillow speakers and light bulbs shall be guaranteed for 60 days.

