



**ARCHITECTS and ENGINEERS GUIDELINE
SPECIFICATIONS for
JERON PRO-ALERT™ 480 INTERCOM
SYSTEM**

VERSION 1.9

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Specifications for the JERON Pro-Alert™ 480 Intercom System.

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1.0 GENERAL

- 1.1 The contractor shall furnish and install all equipment, accessories and materials necessary for a complete operating system in accordance with the specifications and applicable drawings.
- 1.2 The equipment furnished under this specification shall be the standard product of one manufacturer and shall be equal in performance and quality to that manufactured by Jeron Electronic Systems, Inc.
- 1.3 All components and the system as a whole shall meet or exceed the minimum standards issued by the EIA. All work in conjunction with this installation shall meet the provisions of the National Electrical Code.
- 1.4 The system shall conform to the requirements stated in the current Americans with Disabilities Act (ADA). The power transformer shall be listed by Underwriters Laboratories Inc. Proof of such listings shall be made by submitting the UL listing cards describing the equipment by model number, with the bid documents. Alternate manufacturers shall submit the listing cards as part of prior approval, ten days before the bid date.
- 1.5 Each major component shall bear the manufacturer's name, and catalog number. Alternate equipment shall be considered only when the following have been submitted and approved in writing by the architect/engineer ten (10) days prior to opening of bid:
 - A list of such alternate equipment and materials, together with three (3) copies of working and shop drawings. The base bid shall be on the equipment as specified. Alternate equipment must be so noted on a separate bid form with an add or deduct to the base bid.
- 1.6 The contractor shall be responsible for providing a complete functional system including all necessary components, whether included in this specification or not.
- 1.7 The contractor shall guarantee availability of local service by factory-trained personnel from an authorized distributor of the equipment manufacturer. The distributor shall have available a stock of the manufacturer's standard parts. On-the-premises maintenance shall be provided, at no cost to the purchaser, for a period of twelve (24) months from date of completion of installation, unless damage or failure is caused by misuse, abuse or accident.
- 1.8 On the premises demand service at other than normal working hours shall also be available and may be charged for by the manufacturer's distributor at the prevailing labor rates.

2.0 SYSTEM DESCRIPTION

The system shall be Jeron Pro-Alert 480 series or an approved equivalent and shall provide at least the following features and functions:

- 2.1. The system shall comply with the Americans with Disabilities Act of 1990.
- 2.2. Multiplex, microprocessor-controlled main control unit, master consoles, and remote stations.
- 2.3. Main control unit shall be capable of accepting combinations of 4875/4876 Masters and 4855 Touchscreen Console without modifications or additional equipment.
- 2.4. In a non-networked system the main control shall provide connections for up to two 4855 consoles and up to four 4875/4876 Master Consoles. A single non-networked main control shall support up to 128 Remote Call Stations. A Main Control unit that needs additional control or audio expansion equipment shall not be acceptable.
- 2.5. A fully networked system shall support up to two 4855 Consoles and up to eight 4875/76 Master Consoles and a maximum of 256 Remote Call Stations.
- 2.6. Main control shall provide power, voice amplification, signal tones, and multiplex control logic for Consoles and Remote Stations.
- 2.7. System wiring shall not require shielded cable. System shall be capable of utilizing Category-5 type cable to interconnect system components. Category-5 wire termination shall be connectorized according to ANSI Standard T568A.
- 2.8. System shall employ multiplexed data transmission requiring no more than eight (8) common conductors, with no unique or "home run" conductors.
- 2.9. A self-charging battery backup (4851 only) shall maintain full system function during line power outages. Non-volatile program memory shall eliminate the need to reprogram the system if power is disconnected.
- 2.10. The main control shall continuously test system for master and remote call station response. Diagnostic messages shall be reported to master consoles.
- 2.11. Master Consoles shall be available for desk and flush wall mounting.
- 2.12. Master Consoles shall provide alphanumeric display of station number and location.
- 2.13. Communication from master shall be handset privacy or hands-free.
- 2.14. Provision for programmable station name/location display at Master Consoles.
- 2.15. Master Console shall be able to page a group of up to 10 Remote Call Stations.

- 2.16 Master Console shall display multiple calls simultaneously.
- 2.17 PC-based programming, using 4890 application.
- 2.18 Remote Call Stations shall be available in indoor thermoset plastic and vandal brushed stainless steel.
- 2.19 Canceling a call from a Remote Station shall only be possible after acknowledging the call at the Master Console.
- 2.20 Communication from the Remote Call Stations shall be hands-free.
- 2.21 Ability to interface with a PBX Telephone system to allow calls from Remote Stations to be forwarded to outside telephones. Systems not capable of forwarding calls to outside phones shall not be acceptable.
- 2.22 Ability to interface with a Radio Page system to allow manual or automatic paging. Systems not capable of interfacing radio page shall not be acceptable.
- 2.23 Auto-answer by lifting handset or scroll to any call at Master Console.
- 2.24 Provision for digital volume controls at the Master Console.
- 2.25 Plug-in terminations on all Master Consoles and Remote Call Stations.
- 2.26 Spill-proof membrane keypad on Master Console. Touch keypad on touchscreen console.
- 2.27 Backlit display panel shall provide low-light readability on the Master Console (4875/4876 only).
- 2.28 System shall have capability to interface with a computer via the 4861 Computer/Radio Page Interface, a 4862 PBX Telephone Interface for off-site call forwarding, and a 4681 Computer/Radio Page Interface in conjunction with a 4891 Radio Page Module.
- 2.29 Remote stations (with the exception of 4886) shall have the ability to include optional Relay Contacts N.O. (03 Option).

3.0 SYSTEM OPERATION

The specified Pro-Alert 480 System shall operate in the following manner:

3.1 PLACING CALLS FROM REMOTE CALL STATIONS

Calls shall be placed on the system by momentarily pressing the call button on the Remote Call Station. This action shall cause the following to occur:

- A. The Remote Call Station's green call placed LED indicator shall light steadily.
- B. An alert tone shall pulse once at the Remote Call Station to verify call placement on the system.
- C. The LCD display at the Master Console shall show the location of the calling station by name and number and an alert tone shall sound.
- D. The Master Console shall have the capability to display multiple calls simultaneously.

3.2 ACKNOWLEDGING/ANSWERING CALLS AT THE MASTER CONSOLE

- A. The attendant shall acknowledge the call by either pressing the Push-to-Talk button on 4875/76, touching the incoming call field on 4855 or by lifting the handset.
- B. When the call is acknowledged at the Master Console, the green Call Placed LED shall remain lit, the red Monitor LED on the Remote Call Station shall light steadily, and an alert tone shall pulse once.
- C. The LCD display on the Master Console shall show the name and number of the selected station and "CONNECTED", indicating that voice communication between the Master Console and the Remote Station exists.
- D. Hands-free, two-way communication may be conducted with the Master Console using the Remote Call Station's built-in loudspeaker.
- E. If an acknowledged call is placed on hold, the Remote Call Station green LED indicator shall flash, the red LED shall extinguish, and a pulse tone shall be emitted every two seconds.

3.3 CANCELING CALLS

An incoming call shall only be canceled from the Master Console after it has been acknowledged. After the call has been canceled, the LED indicator extinguishes and communication is terminated. On the 4886 station, calls originated at the remote station can also be canceled at the station via the key reset switch.

3.4 ORIGINATING CALLS AT THE MASTER CONSOLE

The Master Console shall be capable of initiating audio communication with a Remote Call Station at any time by dialing the station number on its keypad. The Master shall also be capable of paging a group of up to 10 Remote Call Stations to broadcast evacuation information.

3.5 PBX TELEPHONE INTERFACE

The Pro-Alert 480 System shall function as described above regardless of whether the Telephone Interface is, or is not utilized. When the Telephone Interface is employed, calls placed from Remote Stations to an unstaffed Master Console may be forwarded to outside telephones.

Each Interface Unit shall connect to a dedicated, analog extension port on the local telephone switch equipment having the capability to provide calling party release. A disconnect pushbutton shall be provided to override the release function of the telephone switch. The Telephone Interface Unit shall be equipped with three diagnostic LEDs to indicate status of the unit.

When this feature is included, the system shall have the ability to perform the following functions:

- A. Auto-Dial a single preprogrammed outside DTMF phone number when a call button is pressed on the Remote Stations.
- B. Have a call from a remote station to an unstaffed Master Console forwarded to an outside phone via auto-dial.

3.6 RADIO PAGE INTERFACE

System shall have capability to interface with a Radio Page system through the Computer/Radio Page Interface in conjunction with a 4861 Radio Page Module, and shall provide the following features:

- A. Two programmable operating modes: Manual and Automatic.
 - 1. Manual mode setting shall transmit pages by pre-selecting or originating to stations, then entering pager addresses at master console.
 - 2. Automatic mode setting shall transmit pages with no operator intervention when a call is placed from a remote station.
- B. Individual user programmable pager assignment for all remote stations and all shifts.
- C. All system diagnostic calls shall automatically transmit page to a special diagnostic pager group regardless of mode setting.
- D. Programmable pager assignment utilizing direct pager identity number.
- E. Multiple shift programming and pager assignments.
- F. Alphanumeric pages display arch address and location and an optional fully customizable English language tag message.

G. Special tag messages may be added to pager transmissions. Provision for programmable special tag messages to be customized.

3.7 SUPERVISION

In the event of circuit trouble with any Remote Call Station, the Master Console shall display the name and number of the station and "TROUBLE."

3.8 03 OPTION RELAY CONTACT N.O. ON REMOTE STATIONS

Relay Contacts are closed when the call is placed and acknowledged. Relay Contacts are open when the call is placed on hold or canceled.

4.0 EQUIPMENT

To provide the preceding features and functions, the following equipment shall be provided:

4.1 TOUCHSCREEN CONSOLE

The Touchscreen Console shall be Jeron Model 4855 or approved equal and shall provide two-way voice communication between the Console and the Remote Call Stations. The Console shall be housed in a beige molded plastic console with a 5.7" backlit touchscreen that displays up to 128 calls. It provides touchscreen menu-driven navigation with English prompts. The console is equipped with buttons for the most common operations and provides handset privacy or hands-free communication.

On screen touchpoints:

- A. 16 touchpoint input keypad
- B. Volume Up/Down

Control buttons:

- A. Clear
- B. Enter
- C. In/Out
- D. Menu
- E. Mute
- F. Cancel
- G. Cancel All

The Console shall incorporate:

- A. Flame retardant UL 94-5VA, PC/ABS blended enclosure with metal base
- B. Built-in microphone and speaker
- C. Long life LED backlit 5.7" (14.5 cm), 320 x 240 resolution touchscreen

The Master Console shall indicate the name and number of the calling station on its display.

It shall be possible to page a group of up to 10 Remote Call Stations.

The minimal desktop footprint design provides a wall-mount option with Model 9769 Wall Bracket.

4.2 MASTER CONSOLE

The Master Console shall be Jeron Model 4875 or Model 4876 or approved equal and shall provide two-way voice communication between the Master Console and the Remote Call Stations. The Master shall be housed in a beige molded plastic console and shall include a spill-proof keypad providing the following touchpoints:

- | | |
|---------------------------|-------------------|
| A. 16 button input keypad | F. Scroll |
| B. Enter/Talk | G. Volume Up/Down |
| C. Hold/Clear | H. Cancel |
| D. Speed Menu | I. Cancel All |
| E. Tone Silence | J. Menu |

The Master Console shall incorporate:

- A. High impact, flame-retardant ABS telephone handset.
- B. Built-in microphone
- C. Yellow backlit display with four-line x 16-character LCD panel

The Master Console shall indicate the name and number of the calling station on its LCD display.

It shall be possible to page a group of up to 10 Remote Call Stations.

Model 4875 shall mount on a desk or a wall with 9769A Wall Bracket. Model 4876 shall flush wall mount with 4812 back box.

4.3 MAIN CONTROL

The Main Control shall be a Jeron Model 4850 or Model 4851 with battery backup, or approved equal. Main Control shall be multiplex, microprocessor-based and shall provide signal control electronics, audio amplifier, and line power supply for the system. Main Control shall be equipped with quick disconnect circuitry. Built-in diagnostic shall indicate wiring or component failure.

If Model 4851 Main Control with battery backup is employed, non-volatile program memory shall eliminate the need to reprogram the system if power is disconnected.

The Main Control shall be equipped with the following diagnostic indicator LEDs:

- A. Green – valid configuration
- B. Red – data bus fault

The unit shall be enclosed in a Jeron Model 8888 Central Equipment Enclosure.

4.4 REMOTE CALL STATION

Remote Call Station shall be Jeron Model 4882 or approved equal and shall be equipped with a black molded, thermoset plastic, momentary call pushbutton, a green Status LED, a red Monitor LED, and a 2.75 in. (7 cm) oval speaker. The speaker shall provide for communication with the Master Console.

Model 4882/03 includes Relay Contact N.O.

The two-gang faceplate shall be constructed of thermoset plastic with separate red and white modular subplates and matching plastic hardware. The unit shall be suitable for flush wall mounting. Mounting: Raco 232 2-gang box with 778 raised 2-gang cover or equivalent.

4.5 HIGH SECURITY REMOTE CALL STATIONS, 2 GANG

The High Security Remote Call Stations shall be Jeron Model 4884 and Jeron Model 4885 or approved equal and shall be equipped with a 3 in. (7.6 cm) square, loudspeaker/microphone. The speaker shall provide for communication between the Master Console and the Remote Call Station. A stainless steel momentary pushbutton switch (4885) or a red metal mushroom-type pushbutton (4884) shall provide the means for placing a call on the system.

Model 4884/03 and 4885/03 include Relay Contact N.O.

The two-gang faceplate shall be constructed of 1/8 inch (0.32 cm) thick stainless steel panel and equipped with tamper-proof hardware. The unit shall be suitable for flush wall mounting. Mounting: Raco 232 2-gang box with 778 raised 2-gang cover or equivalent.

4.6 HIGH SECURITY REMOTE CALL STATIONS, 3 GANG

The High Security Remote Call Stations shall be Jeron Model 4887 and Jeron Model 4888 or approved equal and shall be equipped with a 3 in. (7.6 cm) square, loudspeaker/microphone. The speaker shall provide for communication between the Master Console and the Remote Call Station. A stainless steel momentary pushbutton switch (4888) or a red metal mushroom-type pushbutton (4887) shall provide the means for placing a call on the system.

Model 4887/03 and 4888/03 include Relay Contact N.O.

The High Security Remote Call Station w/Reset Switch shall be Jeron Model 4886 or approved equal and shall be equipped with a 3 in. (7.6 cm) square, loudspeaker/microphone. The speaker shall provide for communication between the Master Console and the Remote Call Station. A red metal mushroom-type pushbutton shall provide the means for placing a call on the system. A key reset switch shall provide the means for canceling the call at the originating station.

The three-gang faceplate shall be constructed of 1/8 inch (0.32 cm) thick stainless steel panel and equipped with tamper-proof hardware. The unit shall be suitable for flush wall or surface mounting. Mounting: Flush: Raco 952 3-gang box with 822 raised 3-gang cover or equivalent. Surface: Jeron Cat. 4317 Surface box or equivalent.

4.7 PBX TELEPHONE INTERFACE

The PBX Telephone Interface shall be Jeron Model 4862 or approved equal and shall be equipped with diagnostic indicators to continuously verify proper operation and a disconnect switch for manual override of the PBX loop connection.

The PBX Telephone Interface shall connect to a dedicated extension port on a PBX/key phone system that supports analog terminals. Connection shall be made to any unused master port on the Main Control with the provided 10 foot plug-ended cable.

The unit shall be housed in a sturdy aluminum surface mount enclosure with a medium grey finish.

4.8 COMPUTER/RADIO PAGE INTERFACE

Computer/Radio Page Interface unit shall be Jeron 4861 or approved equal and shall have two RS232C ports. The unit shall interface with the following: a serial printer, video display terminal, computer, and a radio page interface. All system activity shall be transmitted in standard ASCII code. It shall be possible to select which master consoles shall report activity to the Computer Interface.

5.0 TRAINING OF PERSONNEL

The facility's Staff shall be thoroughly instructed in the use of the Jeron Pro-Alert 480 Intercom System by an authorized distributor of the manufacturer.

The system supplier shall provide instruction to the staff by means of a portable demonstration system, which shall be set up in a conference room or auditorium to give the staff hands-on experience without disrupting normal duties.

The demonstration system shall include representative components as utilized in the installation. The instructor shall demonstrate the functions of the system with all indicators and tones operational.

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