

SmartCommand Engineering Specifications



Part 1 - General

1) Section Includes

- a) Area of Refuge/Elevator Landing Two-Way Communication Systems with the following components:
 - i) Call Commander (Master Station)
 - ii) Distribution Module (BOSS)
 - iii) Call Boxes
 - iv) Power Supply
 - v) Accessories

2) References

- a) National Fire Protection Association (NFPA)
- b) International Building Code (IBC)
- c) Americans with Disabilities Act (ADA)

3) Submittals

- a) Installation and operations manual
- b) Product data sheets
- c) Wiring or shop diagrams detailing wiring schematics and cabling

4) Quality Assurance

- a) Installer Qualifications: Company specializing in performing work of this section with minimum one-year documented experience with projects similar scope and complexity.
 - i) Approved by Manufacturer.
- b) Provide each type of product from a single manufacturing source to ensure uniformity.
- c) Store in a location that will protect from damage due to weather, excessive temperature, or other construction operations.
- d) System shall be installed in compliance with all state and local electrical codes.

5) Warranty

- a) Manufacturer's Warranty: 2 years from date of shipment.

Part 2 – Products

1) Manufacturers

- a) Acceptable Manufacturer: RATH® Communications, located at N56 W24720 North Corporate Circle; Sussex, WI 53089; Phone: 800-451-1460; Website: www.rathcommunications.com
- b) Substitutions not permitted.

2) Call Commander (Master Station)

- a) The Call Commander is to be located at a central control point on the first floor.
- b) Call Commander(s) shall be connected to designated ports on the Distribution Module.
- i) Call Commander(s) shall wire to the Distribution Module using two wire pairs.
 - ii) Call Commander cabling used shall be RATH® Cable RP7500094B or equivalent. Where local municipal codes require CI 2 hour fire-rated cable, RATH® Part # 66120 shall be used.
- c) Must comply with ADA requirements.
- d) The Call Commander shall be surface, flush, or desk mounted.

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3) Call Boxes

- a) Call Boxes (3300 series) must be in full compliance with ADA requirements. Call Boxes require a hands-free speakerphone with an LED to indicate status of call.
 - i) Call Boxes are to be located no higher than 48" front reach or 54" side reach to the center of the button above ground level.
 - ii) Call Boxes must include braille identifying the unit as an "Emergency Phone".
 - iii) Where local municipal codes require, Call Boxes shall include a protective cover (RATH® Part # 3300FSCN or 3300SSC).
 - iv) Call Boxes shall include a button with a diameter of 1 inch or greater.
- b) Call Box(es) shall be connected to designated ports on the Distribution Module.
 - i) Call Box(es) shall be daisy-chained from the Distribution Module.
 - ii) A Call Box Loop shall support up to 24 Call Boxes.
 - iii) A maximum of 2 Loops may be installed on a single system.
 - iv) Call Box(es) shall wire to the Distribution Module using two wire pairs.
 - v) Call Box cabling used shall be RATH® Cable RP7500094B or equivalent. Where local municipal codes require CI 2 hour fire-rated cable, RATH® Part # 66120 shall be used.
- c) Call Box(es) shall be an ADA compliant and vandal resistant speakerphone.
- d) Call Box(es) shall be wall mounted surface or flush.

4) Distribution Module (BOSS)

- a) Includes connections for Call Box(es) and Call Commander(s).
- b) Distribution Module shall be wall mounted or rack mounted.
- c) Distribution Module shall be powered by a manufacturer approved power supply and battery backup (Part # 1000).
- d) System and Call Box programming shall be done via the BOSS.

5) Power Supply

- a) The system shall be powered by an approved power supply (Part # 1000).
- b) The power supply shall be wall mounted or rack mounted.

6) Accessories

- a) Signage
 - i) One location and instruction sign (Part # 7049SS) to clearly indicate location of designated area at each Call Box.
 - ii) One tactile sign (Part # 7043/7044 or 7087) with raised letter and braille shall be located at the entrance area where a Call Box is installed.
 - iii) One illuminated egress sign (7041/7041E or 7050/7050E) in the area where each Call Box is installed.
 - iv) Tactile signage shall comply with ADA requirements.
- b) Cabling
 - i) Cabling for two-way communication system shall meet the applicable requirements for pathway survivability. Cabling used for installation shall consist of one or more of the following:
 - (1) 2 Pair UL Listed Plenum Rated Cable – RATH® Part # RP7500094B.
 - (2) 2 Pair UL Listed Circuit Integrity (CI) 2 hour fire-rated cable – RATH® Part #66120.
 - (3) 2 hour fire-rated cable system.
 - ii) 2 hour fire-rated enclosure of protected area.

7) Performance Requirements

a) Call Boxes

- i) Call Boxes must allow for programming of a specific location message of the unit to allow rescue personnel to know the location of the activated Call Box.
- ii) Call Boxes shall be hands-free and require a single button push to initiate a call.
 - (1) Once the button is pushed the Call Box shall call the Call Commander. If there is no answer the system must be capable of automatically dialing a preprogrammed emergency number.
 - (2) Once a call has been made, the call can only be terminated by the called party.
 - (3) Call Box shall include an LED indication of when the call has been placed and received.
- iii) The Call Box shall have location message capability. Each Call Box must have the capability to record a minimum 18-second message.
 - (1) The message shall be programmable to play 1 or 2 times.
 - (2) The message shall be played for both the calling and receiving party.
 - (3) The message shall be recorded through voice or text-to-speech software.

b) Call Commander

- i) The Call Commander must provide an audible and visual indicator that a Call Box has been activated.
- ii) The Call Commander shall be capable of displaying the location of each Call Box.
- iii) The Call Commander shall display each active Call Box and have unique indicators if the Call Boxes connected offsite, connected onsite, or on hold.
 - (1) Active calls shall be displayed in the order they were placed.

c) Distribution Module (BOSS)

- i) BOSS shall include visual indicators of a Call Box failure.
- ii) The power supply shall require 120vac power and provide battery backup for a minimum of 24 hours standby and 5 minutes active talk time.
- iii) The BOSS shall annunciate primary power loss, Call Box activation, and system faults both audibly and visually.

8) Certifications

- a) Primary system components shall be compliant with FCC Part 15.
- b) Fire-rated cabling shall be certified to UL 2196 by a Nationally Recognized Testing Laboratory (NRTL).
- c) Plenum cabling shall be certified to UL 444 by a NRTL.
- d) Backup battery/uninterruptible power systems shall be certified to UL 1778 or equivalent standard by a NRTL.

Part 3 – Execution

1) Preparation

- a) Prepare surfaces using methods recommended by manufacturer for achieving the best results.

2) Installation

- a) Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with other construction.
 - i) Install equipment firmly secured and level.
 - ii) Cable runs shall be tagged and identified at main terminal board and junction boxes.

3) Startup and Testing

- a) Include all software necessary for system configuration.
- b) Turn on system and adjust as necessary to meet indicated requirements.
- c) Program system as specified.
- d) Test system to ensure all components, stations, speakers, and accessories are working properly.