SmartCommand Engineering Specifications

RATH™ by AVIRE

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.