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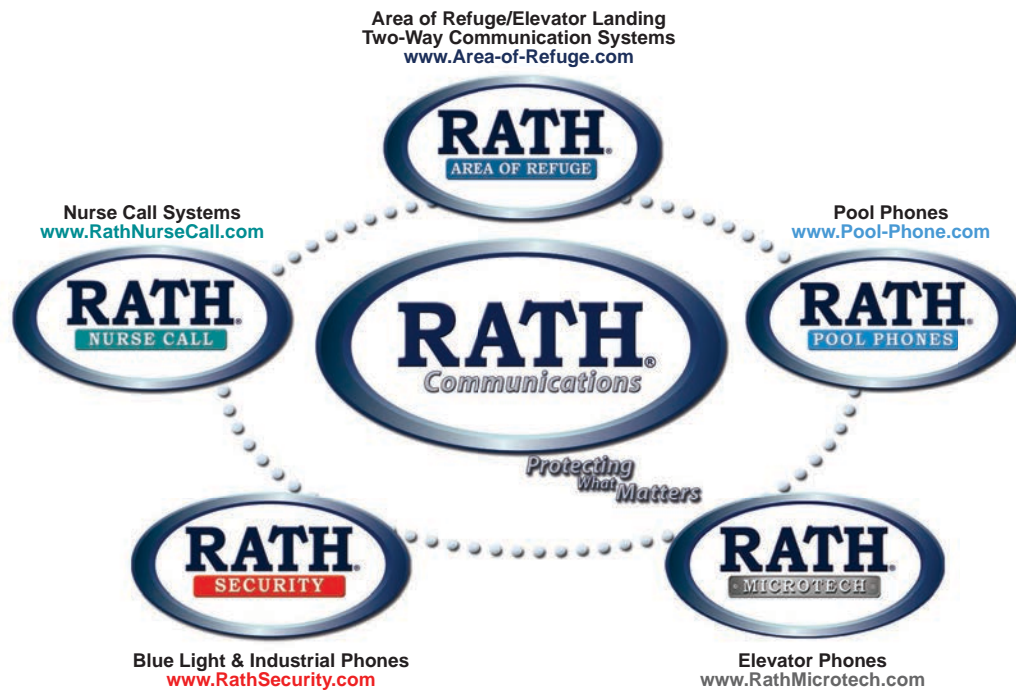
BASE STATIONS



CALL BOXES



SIGNAGE



We are the largest Emergency Phone Manufacturer in North America and have been in business for over 35 years.

In addition to exceptional product quality and customer support, we believe that ongoing education is paramount to your professional development and our continuous improvement. You will find all relevant codes for each of our industries on our websites. We offer webinars to the architectural and engineering community and courses certified for The American Institute of Architects (AIA) credits. In addition, our product information is provided in multiple formats from written documents to diagrams and videos. Our goal is to provide relevant information to help you make the right decisions when it comes to *Protecting What Matters*.

Our commitment to your success will be found in the quality of our products and professionalism of our staff from the first inquiry to years after installation.

Thanks for considering us,

*Tom Touchett*  
President

## Table of Contents

System Requirements . . . . .	3
1-10 Systems . . . . .	4-5
1-92 Systems . . . . .	6-7
IP Systems . . . . .	8-9
Supervision . . . . .	10-11
Signage . . . . .	12-13
Codes . . . . .	14-17

# System Requirements

## For 1-10 Systems

### In Elevator Landings:



### In Areas of Refuge:



## For 1-92 & IP Systems

### In Elevator Landings:



### In Areas of Refuge:



## Emergency Two-Way Communication Systems Have Three Main Components: (Must Include Battery Backed Up Power)

### 1. Base Station (1-10 Systems) OR Command Center (1-92 & IP Systems) (Command Center Includes Base Station & Distribution Module):

- Central control point where the Call Boxes will call for emergency assistance. Also provides off-site Two-Way Communication if the Base Station is not manned 24/7.

### 2. Call Boxes:

- Hands-free, Two-Way Emergency Communication devices located on each floor above and below the story of exit discharge.

### 3. Signage:

- Instructions on the use of the area and directions on the use of the Two-Way Communication System shall be posted (#7049).
- Tactile signage located at the entrance to each area (#7087 or #7044).
- Where exit sign illumination is required, signs shall be illuminated (#7050E/7050 or #7041E/7041).

# 1-10 Systems

## Call Boxes

PART #	DESCRIPTION
2100-956SR	STAINLESS STEEL BOX, SURFACE MOUNT
2100-956SRM	STAINLESS STEEL BOX, MUSHROOM BUTTON, SURFACE MOUNT
2100-956RR	RED METAL BOX, SURFACE MOUNT
2100-984LR	EXTERIOR, RED, NEMA 4 FIBERGLASS BOX, SURFACE MOUNT
2100-956SSRC2	STAINLESS STEEL BOX WITH COVER, SURFACE MOUNT
2100-984LRC1	EXTERIOR, RED, NEMA 4 FIBERGLASS BOX WITH COVER, SURFACE MOUNT
2100-958SSRC2	BRUSHED STAINLESS STEEL FACE PLATE WITH BACK BOX & COVER, FLUSH MOUNT
2100-958NSR	BRUSHED STAINLESS STEEL FACE PLATE WITH BACK BOX, FLUSH MOUNT
2100-958NMBR	ANTIQUE BRONZE FACE PLATE WITH BACK BOX, FLUSH MOUNT



2100-956SR



2100-956SRM



2100-956RR



2100-984LR  
(Exterior)



2100-956SSRC2



2100-984LRC1  
(Exterior)



2100-958SSRC2



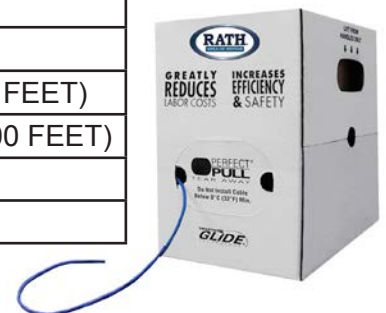
2100-958NSR



2100-958NMBR

## Power/Communication Cable

PART #	DESCRIPTION
RP6600100M	CI 2 HOUR FIRE RATED COMMUNICATION CABLE (100 METER)
RP6600300M	CI 2 HOUR FIRE RATED COMMUNICATION CABLE (300 METER)
RP66010001	UL LISTED CI 2 HOUR FIRE RATED COMMUNICATION CABLE (500 FEET)
RP66010002	UL LISTED CI 2 HOUR FIRE RATED COMMUNICATION CABLE (1,000 FEET)
RP7500094	2 PAIR 22 AWG SHIELDED COMMUNICATION CABLE
RP7500094P	18-2 SOLID SHIELDED POWER CABLE



# 1-10 Systems

## SmartRescue Base Stations

PART #	DESCRIPTION
2500-205D	STAINLESS STEEL SURFACE MOUNT BOX (5 ZONE)
2500-205PSS	STAINLESS STEEL FLUSH MOUNT WITH BACK BOX (5 ZONE)
2500-205B	SURFACE MOUNT CABINET WITH DOOR (5 ZONE)
2500-205FM	FLUSH MOUNT CABINET WITH DOOR (5 ZONE)
2500-210D	STAINLESS STEEL SURFACE MOUNT BOX (10 ZONE)
2500-210PSS	STAINLESS STEEL FLUSH MOUNT WITH BACK BOX (10 ZONE)
2500-210B	SURFACE MOUNT CABINET WITH DOOR (10 ZONE)
2500-210FM	FLUSH MOUNT CABINET WITH DOOR (10 ZONE)



2500-205D/2500-205PSS



2500-205B



2500-205FM



2500-210D/2500-210PSS



2500-210B



2500-210FM

Power Supply:  
2500-PWR24



# 1-92 Systems

## Call Boxes

PART #	DESCRIPTION
2400-805SP	STAINLESS STEEL BOX, SURFACE MOUNT
2400-805SPM	STAINLESS STEEL BOX, MUSHROOM BUTTON, SURFACE MOUNT
2400-805RP	RED METAL BOX, SURFACE MOUNT
2400-805LP	EXTERIOR, RED, NEMA 4 FIBERGLASS BOX, SURFACE MOUNT
2400-805SSPC2	STAINLESS STEEL BOX WITH COVER, SURFACE MOUNT
2400-805LPC1	EXTERIOR, RED, NEMA 4 FIBERGLASS BOX WITH COVER, SURFACE MOUNT
2400-808SSPC2	BRUSHED STAINLESS STEEL FACE PLATE WITH BACK BOX & COVER, FLUSH MOUNT
2400-808NSP	BRUSHED STAINLESS STEEL FACE PLATE WITH BACK BOX, FLUSH MOUNT
2400-808NMP	ANTIQUE BRONZE FACE PLATE WITH BACK BOX, FLUSH MOUNT



2400-805SP



2400-805SPM



2400-805RP



2400-805LP  
(Exterior)



2400-805SSPC2



2400-805LPC1  
(Exterior)



2400-808SSPC2



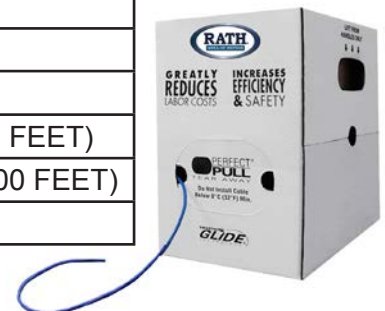
2400-808NSP



2400-808NMP

## Communication Cable

PART #	DESCRIPTION
RP6600100M	CI 2 HOUR FIRE RATED COMMUNICATION CABLE (100 METER)
RP6600300M	CI 2 HOUR FIRE RATED COMMUNICATION CABLE (300 METER)
RP66010001	UL LISTED CI 2 HOUR FIRE RATED COMMUNICATION CABLE (500 FEET)
RP66010002	UL LISTED CI 2 HOUR FIRE RATED COMMUNICATION CABLE (1,000 FEET)
RP7500094	2 PAIR 22 AWG SHIELDED COMMUNICATION CABLE



# 1-92 Systems

## Command Center Base Station

PART #	DESCRIPTION
2500-12RC(F)	12 ZONE- SURFACE MOUNT (F=FLUSH MOUNT)
2500-12NC	12 ZONE- DESK MOUNT
2500-16RC(F)	16 ZONE- SURFACE MOUNT (F=FLUSH MOUNT)
2500-16NC	16 ZONE- DESK MOUNT
2500-28RC(F)	28 ZONE- SURFACE MOUNT (F=FLUSH MOUNT)
2500-28NC	28 ZONE- DESK MOUNT
2500-36RC(F)	36 ZONE- SURFACE MOUNT (F=FLUSH MOUNT)
2500-36NC	36 ZONE- DESK MOUNT
2500-56RC(F)	56 ZONE- SURFACE MOUNT (F=FLUSH MOUNT)
2500-56NC	56 ZONE- DESK MOUNT
2500-76RC(F)	76 ZONE- SURFACE MOUNT (F=FLUSH MOUNT)
2500-76NC	76 ZONE- DESK MOUNT
2500-92RC(F)	92 ZONE- SURFACE MOUNT (F=FLUSH MOUNT)
2500-92NC	92 ZONE- DESK MOUNT

**Note:** Distribution Module is included with the Base Station.



**Desk Mount**



**Surface/Flush Mount**

### Power Supplies:

**RP7700104**



**RP7701500**



# IP Systems

## Call Boxes

PART #	DESCRIPTION
2100-956SIP	STAINLESS STEEL BOX, SURFACE MOUNT
2100-956SIPM	STAINLESS STEEL BOX, MUSHROOM BUTTON, SURFACE MOUNT
2100-956SIPC2	STAINLESS STEEL BOX WITH COVER, SURFACE MOUNT
2100-984RIP	RED, NEMA 4 FIBERGLASS BOX, SURFACE MOUNT
2100-958NSIP	STAINLESS STEEL FACE PLATE WITH METAL BACK BOX, FLUSH MOUNT
2100-958SIPC2	BRUSHED STAINLESS STEEL FACE PLATE WITH BACK BOX & COVER, FLUSH MOUNT
2100-958NMBIP	ANTIQUE BRONZE FACE PLATE WITH BACK BOX, FLUSH MOUNT



2100-956SIP



2100-956SIPM



2100-956SIPC2



2100-984RIP  
(Exterior)



2100-958NSIP



2100-958SIPC2



2100-958NMBIP

## Communication Cable

PART #	DESCRIPTION
RP6600100M4	CI 2 HOUR FIRE RATED 4 PAIR COMM CABLE (100 METER)
RP6600300M4	CI 2 HOUR FIRE RATED 4 PAIR COMM CABLE (300 METER)





# IP Systems

## Command Center Base Station

PART #	DESCRIPTION
2500-10NCV	10 ZONE- DESK MOUNT
2500-10R_V	10 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-16NCV	16 ZONE- DESK MOUNT
2500-16R_V	16 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-32NCV	32 ZONE- DESK MOUNT
2500-32R_V	32 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-48NCV	48 ZONE- DESK MOUNT
2500-48R_V	48 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-64NCV	64 ZONE- DESK MOUNT
2500-64R_V	64 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-80NCV	80 ZONE- DESK MOUNT
2500-80R_V	80 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-96NCV	96 ZONE - DESK MOUNT
2500-96R_V	96 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-112NCV	112 ZONE- DESK MOUNT
2500-112R_V	112 ZONE- FLUSH OR SURFACE MOUNT CABINET
2500-128NCV	128 ZONE- DESK MOUNT
2500-128R_V	128 ZONE- FLUSH OR SURFACE MOUNT CABINET

**Note:** Distribution Module is included with the Base Station.



**Desk Mount**



**Surface/Flush Mount**



# Supervision

## Communication Supervision:

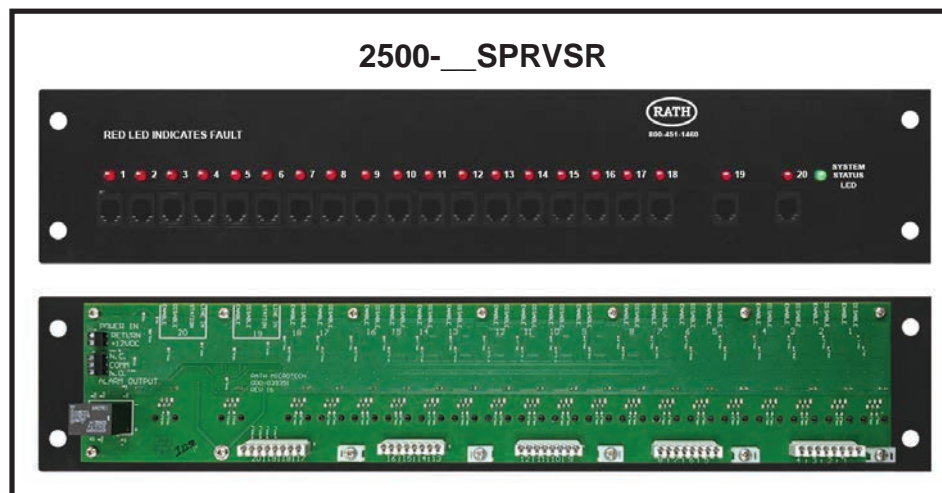
### 1-10 Analog Systems



Each 2100 Series Call Box comes with built-in communication verification software and failure relay output which can be connected to an addressable fire alarm module or the fire control panel.



### 1-92 Analog Systems



- Supervisor monitors remote Call Boxes, Base Station phone, and telephone lines
- Provides relay output when it does not detect a component of the system
- Connections: RJ11 connections to each Call Box, Base Station phone, and phone line. Punch down terminal connections to Distribution Module.
- Power: 12vdc (includes UL listed transformer that plugs into a 120vac backed up source or use Rath model RP7700104 or RP7701500)
- Wall mounted swing out bracket

## IP Systems



- Power: 120vac from a backed up power source or Rath RP7700104
- Current draw: 270mA
- Output: (2) Form 1C SPDT switches, (1) NO and (1) NC. Rated 277vac at 20A
- Ethernet: (2) 10 Base-T or 100 Base-T, 8-pin RJ45 connection
- Network: Ethernet IPv4
- Requires static IP addresses for all components
- Supports web browser: HTTP/HTTPS, XML, Modbus/TCP & SNMP protocols
- LED indicators: green (power on), yellow (network)
- Temperature range: -40F – 150F
- Non-volatile memory
- Electromagnetic compliance: IEC CISPR 22, 24. FCC 47CFR15 (Class B)
- UL 61010-1
- Wall mount enclosure with door

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## Power Supervision:

Power Supervision requires additional purchase of:

- UPS Backup RP7700104 or RP7701500



- 2500-UPSMONITOR which comes with Power Failure Relay Output



# Signage

PART #	DESCRIPTION
7049	8" X 6" LOCATION & INSTRUCTION
7087	8" X 8" WHITE WITH BRAILLE
7080	8" X 6" RESCUE ASSISTANCE BLUE WITH BRAILLE
7047L or R	5" X 15" BLUE DIRECTIONAL WITH BRAILLE (L=LEFT R=RIGHT)
7086	11" X 5" BLUE EXTERIOR AREA OF ASSISTED RESCUE WITH BRAILLE
7041E	8" X 8" PHOTO LUMINESCENT (EMERGENCY COMMUNICATION)
7041	8" X 8" PHOTO LUMINESCENT (AREA OF REFUGE)
7046	8" X 8" PHOTO LUMINESCENT WITH BRAILLE
7085	8" X 8" PHOTO LUMINESCENT RESCUE ASSISTANCE
7050E	14" EMERGENCY COMMUNICATION LED LIGHT UP WITH BATTERY BACKUP-120/277V
7050ED	14" EMERGENCY COMMUNICATION LED LIGHT UP DOUBLE SIDED
7050	14" AREA OF REFUGE LED LIGHT UP WITH BATTERY BACKUP-120/277V
7050D	14" AREA OF REFUGE DOUBLE SIDED 7050
7090	14" AREA OF RESCUE ASSISTANCE LED LIGHT UP WITH BATTERY BACKUP-120/277V
7090D	14" AREA OF RESCUE ASSISTANCE DOUBLE SIDED 7090
7043	8" X 6" WHITE WITH BRAILLE
7044	8" X 6" BLUE WITH BRAILLE
7045	17" D FLOOR DECAL



7049



7087



7086



7047L/R



7080



7041E



7041



7046



7085



7050E/7050ED



7050/7050D



7090/7090D



7043/7044



7045

All signs available with the Active Wheelchair Icon



# Code Requirements: International Building Code (IBC)

## IBC 2009 & 2012

Requires a two-way communication system for all area(s) of refuge in new construction, significant remodels, or change of building use, regardless if they have a sprinkler system or not.

- **1007.6.3 Two-Way Communication.** Areas of Refuge shall be provided with a two-way communication system complying with Sections 1007.8.1 and 1007.8.2.
- **1007.8 Two-Way Communication.** A two-way communication system shall be provided at the elevator landing on each accessible floor that is one or more stories above or below the story of exit discharge complying with Sections 1007.8.1 and 1007.8.2.  
**Exception:** Two-way communication systems are not required at the elevator landing where the two-way communication system is provided within areas of refuge in accordance with Section 1007.6.3 (stairwell areas of refuge).
- **1007.8.1 System Requirements.** Two-way communications shall provide communication between each required location (**Rath Call Boxes**) and the fire command center or central control point location (**Rath Base Stations**) approved by the fire department. Where the central control point is not constantly attended, a two-way communication system shall have a timed automatic telephone dial-out capability to a monitoring location or 911. The two-way communication system shall include both audible and visible signals.  
**Note:** Most local Authorities Having Jurisdiction (AHJ) require two-way off-site person to person voice communications.
- **1007.8.2 Directions.** Directions (**Part #7049**) for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system and written identification of the location shall be posted adjacent to the two-way communication system.
- **1007.9 Signage.** Signage indicating special accessibility provisions shall be provided as shown:
  - 1) Each door providing access to an area of refuge from the adjacent floor shall be identified by a sign stating: AREA OF REFUGE (**Part #7044**).
  - 2) Signage shall comply with the ICC A117.1 requirements for visual characters and include the International Symbol of Accessibility. Where exit sign illumination is required by Section 1011.2, the signs shall be illuminated (**Part #7050**). Additionally, tactile signage complying with ICC A117.1 shall be located at each door to an area of refuge (**Part #7044**).
- **1007.10 Directional Signage.** Direction signage indicating the location of the other means of egress and which are accessible means of egress shall be provided at the following (**Part #7047L-Left or #7047R-Right**):
  - 1) At exits serving a required accessible space but not providing an approved accessible means of egress.
  - 2) At elevator landings.
  - 3) Within areas of refuge.
- **1007.11 Instructions.** In areas of refuge and exterior areas for assisted rescue, instructions on the use of the area under emergency conditions shall be posted. The instructions shall include all of the following (**Part #7049**):
  - 1) Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
  - 2) Information on planned availability of assistance in the use of stairs or supervised operation of elevators and how to summon such assistance.
  - 3) Directions for use of the two-way communications system where provided.
- **403.5.3.1 Stairway Communication System.** A telephone or other two-way communication system connected to an approved constantly attended station shall be provided at not less than every fifth floor in each stairway where the doors to the stairway are locked.

## IBC 2015 & 2018

- **1009.6.5 Two-Way Communication.** Area of refuge shall be provided with a two-way communication system complying with Sections 1009.8.1 and 1009.8.2.
- **1009.8 Two-Way Communication.** A two-way communication system complying with Sections 1009.8.1 and 1009.8.2 shall be provided at the landing serving each elevator or bank of elevators on each accessible floor that is one or more stories above or below the level of exit discharge.  
**Exceptions:**
  - 1) Two-way communication systems are not required at the landing serving each elevator or bank of elevators where the two-way communication system is provided within areas of refuge in accordance with Section 1009.6.5.
  - 2) Two-way communication systems are not required on floors provided with ramps conforming to the provisions of Section 1012.
  - 3) Two-way communication systems are not required at the landings serving only service elevators that are not designated as part of the accessible means of egress or serve as part of the required accessible route into a facility.
  - 4) Two-way communication systems are not required at the landings serving only freight elevators.
  - 5) Two-way communication systems are not required at the landing serving a private residence elevator.
- **1009.8.1 System Requirements.** Two-way communication systems shall provide communication between each required location (**Rath Call Boxes**) and the fire command center or a central control point location (**Rath Base Stations**) approved by the fire department. Where the central control point is not a constantly attended location, a two-way communication system shall have a timed automatic telephone dial-out capability to a monitoring location or 9-1-1. The two-way communication system shall include both audible and visible signals.
- **1009.8.2 Directions.** Directions (**Part #7049**) for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system and written identification of the location shall be posted adjacent to the two-way communication system. Signage shall comply with the ICC A 117.1 requirements for visual characters.
- **1009.9 Signage.** Signage indicating special accessibility provisions shall be provided as shown:
  - 1) Each door providing access to an area of refuge an adjacent floor area shall be identified by a sign stating: AREA OF REFUGE (**Part #7044**).
  - 2) Each door providing access to an exterior area for assisted rescue shall be identified by a sign stating: EXTERIOR AREA FOR ASSISTED RESCUE (**Part #7086**).
  - 3) Signage shall comply with the ICC A 117.1 requirements for visual characters and include the International Symbol of Accessibility. Where exit sign illumination is required by Section 1013.3, the signs shall be illuminated (**Part #7050**). Additionally, visual characters, raised character and braille signage complying with ICC A 117.1 shall be located at each door to an area of refuge and exterior area for assisted rescue in accordance with Section 1013.4 (**Part #7044**).
- **1009.10 Directional Signage.** Directional Signage indicating the location of all other means of egress and which of those are accessible means of egress shall be provided at the following (**Part #7047L-Left or #7047R-Right**):
  - 1) At exits serving a required accessible space but not providing an approved accessible means of egress.
  - 2) At elevator landings.
  - 3) Within area(s) of refuge.
- **1009.11 Instructions.** In areas of refuge and exterior areas for assisted rescue, instructions on the use of the area under emergency conditions shall be posted. Signage shall comply with the ICC A 117.1 requirements for visual characters. The instructions shall include all of the following (**Part #7049**):
  - 1) Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
  - 2) Information on planned availability of assistance in the use of stairs or supervised operation of elevators and how to summon such assistance.
  - 3) Directions for use of the two-way communication system where provided.
- **403.5.3.1 Stairway Communication System.** A telephone or other two-way communication system connected to an approved constantly attended station shall be provided at not less than every fifth floor in each stairway where the doors to the stairway are locked.

# Code Requirements: National Fire Protection Association (NFPA)

## NFPA 72- 2016

### **Two-Way Communication Requirements:**

- **24.10.1:** Where required by the building code in force, an area of rescue assistance two-way communications system shall be installed in accordance with 24.10.
- **24.10.2:** The area of refuge (rescue assistance) emergency communications systems shall be comprised of remotely located area of refuge stations and a central control point.
- **24.10.5:** If the central control point is not constantly attended, it shall have a timed automatic communications capability to connect with a constantly attended monitoring location acceptable to the Authority Having Jurisdiction where responsible personnel can initiate the appropriate response.
- **24.10.6:** The physical location of the central control point shall be as designated by the building code in force or the Authority Having Jurisdiction.
- **24.10.8:** Instructions for the use of the two-way communications system, instructions for summoning assistance via the two-way communications system, and written identifications, including in braille, of the location shall be posted adjacent to the two-way communication system.

### **Supervision Requirements:**

- **24.10.4:** All pathways between remote area of refuge stations and the central control point shall be monitored for integrity.
- **24.13.4:** Power Supplies- All control units shall meet the power supply requirements of section 10.6s.
- **10.6.9:** Monitoring Integrity of Power Supplies.
  - **10.6.9.1:** Unless otherwise permitted or required by 10.6.9.1.3 and 10.6.9.1.6 all primary and secondary power supplies shall be monitored for the presence of voltage at the point of connection to the system.
  - **10.6.9.1.1:** Failure of either the primary or secondary power supply shall result in a trouble signal in accordance with section 10.14.
  - **10.6.7.2.1:** The secondary power supply (battery backup) shall have sufficient capacity to operate the system under quiescent load (system operating in a nonalarm condition) for a minimum of 24 hours and, at the end of that period, shall be capable of operating all alarm notification appliances used for evacuation or to direct aid to the location of an emergency for 5 minutes.

### **Cable Requirements:**

#### **24.3.13.9.1:**

Area of refuge emergency communications systems shall have a pathway survivability of Level 2 or Level 3 (Level 1 is permitted if where the building is less than 2-hour fire rated construction).

**12.4.3 Pathway Survivability Level 2:** Shall consist of one or more of the following:

- (1) 2-hour fire rated circuit integrity (CI) or fire-resistive cable.
- (2) 2-hour fire-rated cable system (electrical circuit protective systems).
- (3) 2-hour fire-rated enclosure or protected area.
- (4) performance alternatives approved by the Authority Having Jurisdiction.



**12.4.4 Pathway Survivability Level 3:** Shall consist of pathways in buildings that are fully protected by an automatic sprinkler system in accordance with NFPA13 and one or more of the following:

- (1) 2-hour fire rated circuit integrity (CI) or fire-resistive cable.
- (2) 2-hour fire-rated cable system (electrical circuit protective systems).
- (3) 2-hour fire-rated enclosure or protected area.
- (4) performance alternatives approved by the Authority Having Jurisdiction.

**Testing Requirements:**

• **Table 14.3.1 #25:**

“Periodic testing frequency” – Annual

**INSPECTION, TESTING, AND MAINTENANCE**

**72-83**

<b>Table 14.3.1 Continued</b>				
Component	Initial Acceptance	Periodic Frequency	Method	Reference
24. Reserved				
25. Area of refuge two-way communication system	X	Annual	Verify location and condition.	
26. Reserved				
27. Supervising station alarm systems-receivers				
(a) Signal receipt	X	Daily	Verify receipt of signal.	
(b) Receivers	X	Annual	Verify location and normal condition.	
28. Public emergency alarm reporting system transmission equipment			Verify location and condition.	
(a) Publicly accessible alarm box	X	Semiannual		
(b) Auxiliary box	X	Annual		
(c) Master box				
(1) Manual operation	X	Semiannual		
(2) Auxiliary operation	X	Annual		
29. Reserved				