



AlphaRefuge™ 2100 Series (V3) Area of Refuge and Rescue Assistance system Installation, Use and Wiring Instructions



Pre-Installation Requirements:

- 120V Power
- Determine Communication:
 1. Dedicated analog phone line from POTS, PBX, or Central Office.
 2. VoIP - requires use of Alpha Model **ABL-VOIP** to connect Master to VoIP phone system.
 3. Internal Intercom (no offsite calling) - requires Alpha Model **2100-LINESIM**.
- Twisted, shielded 22 or 24 AWG wire cabling to connect each Refuge Call Box (RCB) to the Refuge Command Center (RCC)
- Use 24V 18/2 wire for powering the Emergency Phones from the 24VDC Power Supply.

NOTE: Terminals and markings shown in this manual may not be in the order in which they appear on the actual equipment. When installing, observe all national and local electrical and building codes.

Installation Steps:

Step 1

Remove the front cover from the SmartRescue and mount the SmartRescue back box to the wall using suitable mounting screws (not included).

Step 2

Punch out the conduit knockouts for the analog phone line and phone cabling runs.

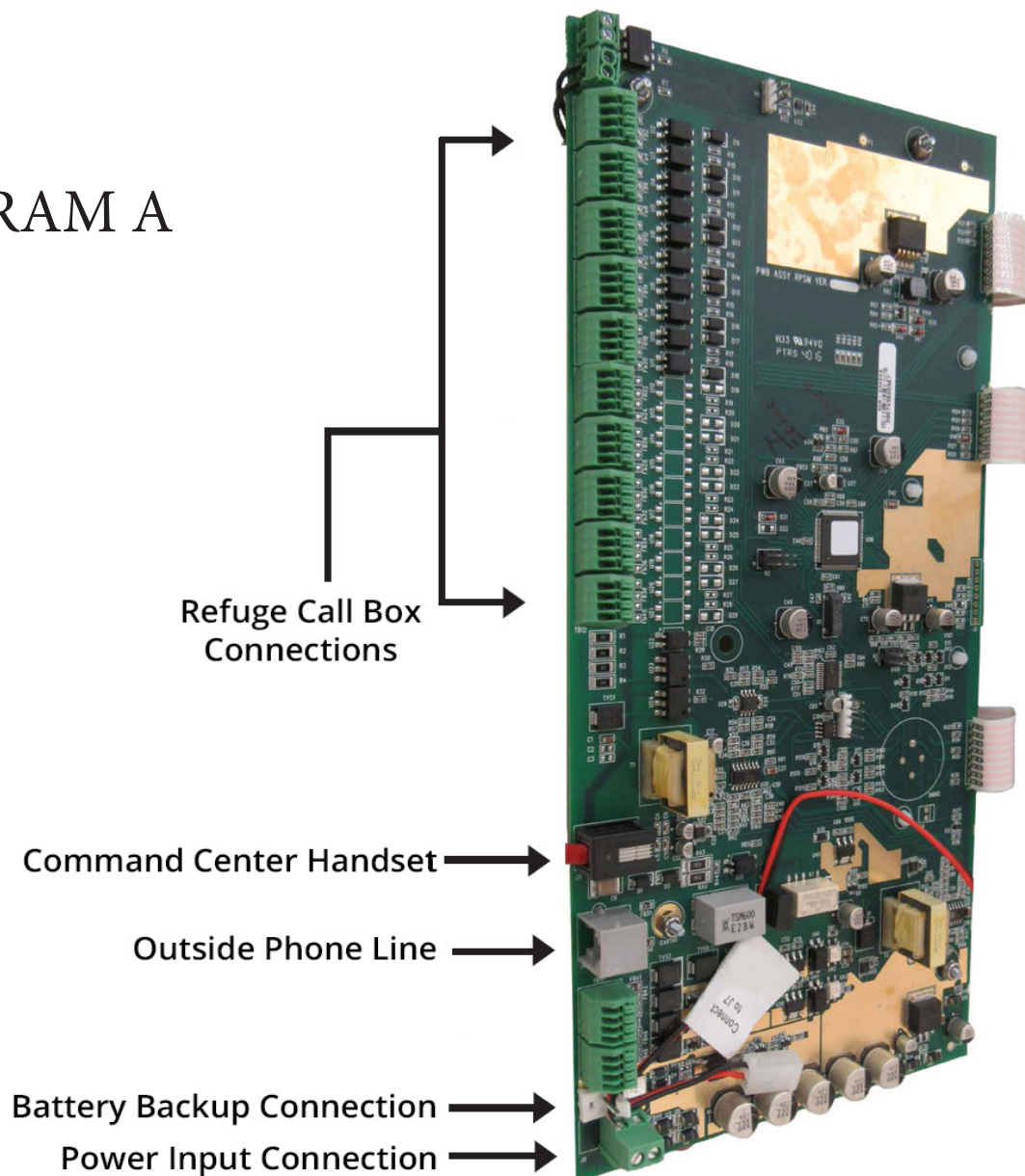
Step 3

Connect an analog phone line to the outside phone line (Diagram A)

Step 4

Connect the backup battery cable to the battery terminal (battery included). (Diagram A)

DIAGRAM A

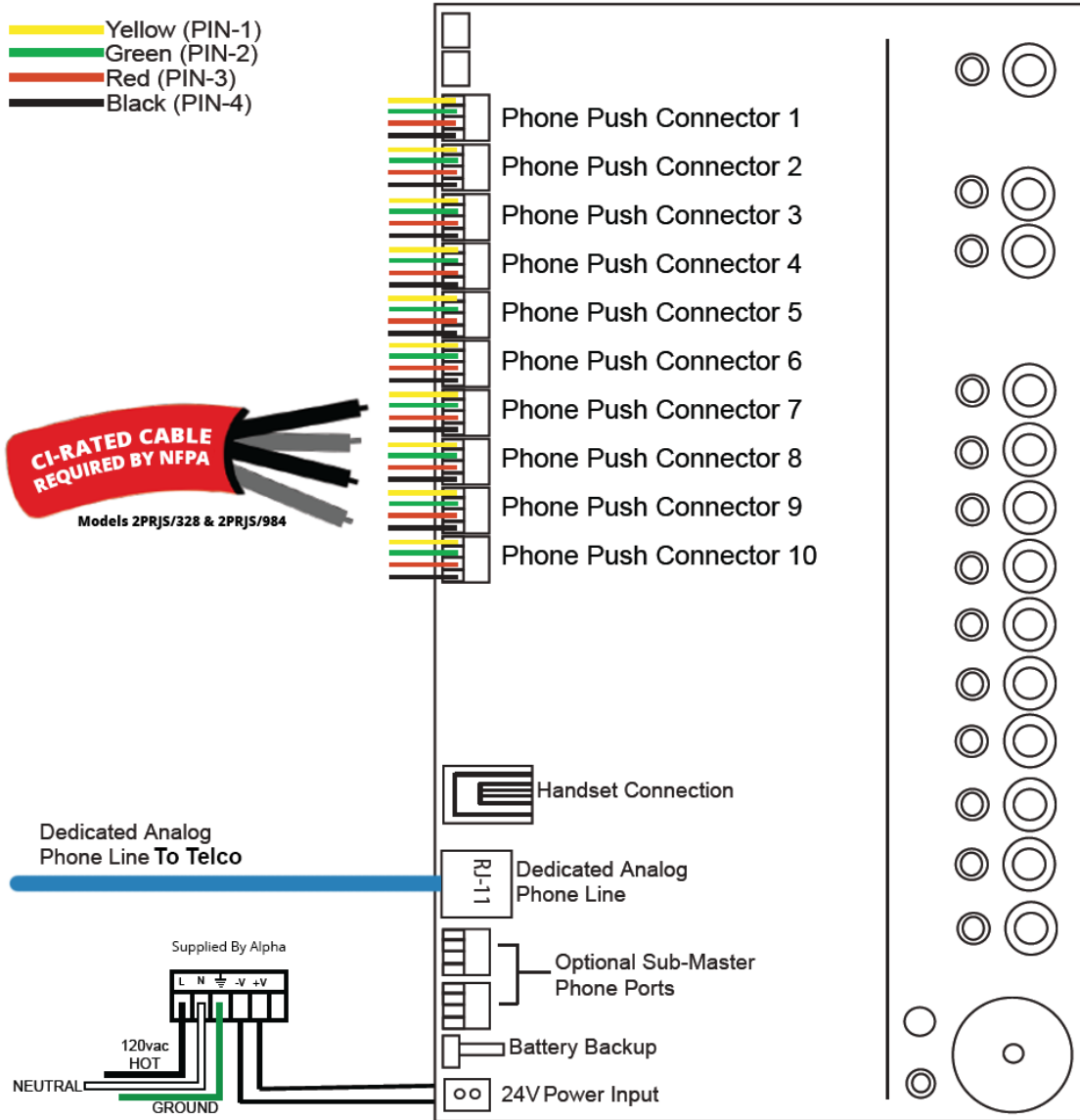


Step 5

Wire your Refuge Command Center to a 120VAC Power Source

(If your Refuge Command Center comes with a plug-in transformer, simply plug it in, and connect to 24VDC on RCC board).

- Connect the hot wire of the 120vac to the L screw
- Connect the neutral wire of the 120vac to the N screw
- Connect the ground wire of the 120vac to the ground screw
- Connect one lead of the DC power connection to the -V screw and the other to the +V screw, polarity is not important.
- Connect the DC power connection to the SmartRescue. The power connection is on the lower left hand side of the board.



Wiring Refuge Call Boxes to Refuge Command Center

Step 6

Wire the Refuge Call Boxes to the Refuge Command Center

Refuge Call Box



*Use 22 or 24 AWG 2-pair twisted, shielded cable between the phones and the SmartRescue. The maximum communication run is 5,100'

Connecting wire run:

To Refuge Command Center: Insert 4 wires for each phone as shown below.

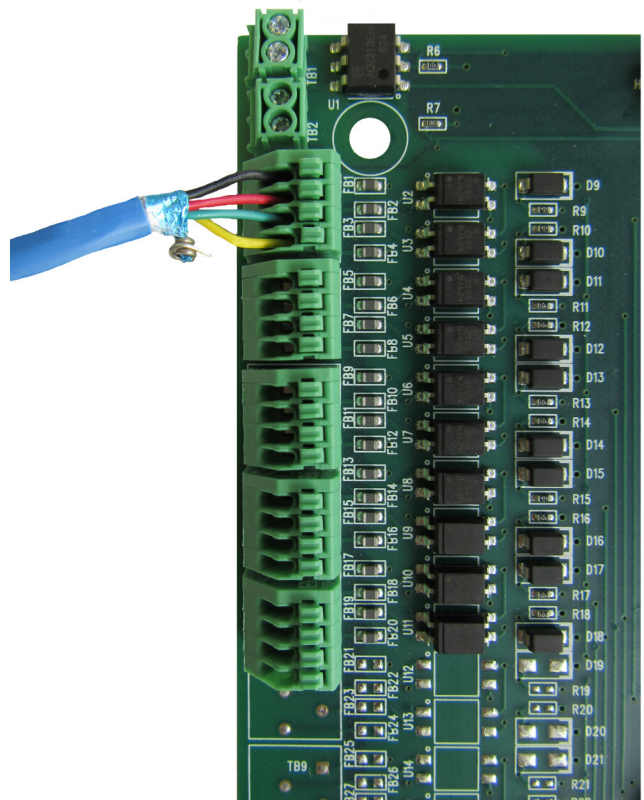
To Refuge Call Box: Wire out to a standard 2-pair RJ11 phone jack. Connect this jack to the 5' cord supplied by Alpha.

The Refuge Call Boxes come with a 5' cord with an RJ11 on both ends. If you received a spade connector, your company requested it. Wire according to your company guidelines.

-  Yellow (PIN-1)
-  Green (PIN-2)
-  Red (PIN-3)
-  Black (PIN-4)

*Shields from the cabling runs (if used) should be attached to one of the mounting screws on the SmartRescue housing.

Refuge Command Center



Step 7

Mount the front cover back onto the enclosure.

Programming the Refuge Command Center

Step 8

Programming Options for Refuge Command Center

Option 1 (Factory Default)

The Emergency Phones will call directly offsite and not stop at the Refuge Command Center. That phone's button will light at the Refuge Command Center during the call.

(Keep in Default Mode if site is not manned 24/7 to answer calls onsite)

Option 2

Program the Refuge Command Center to Allow the Emergency Phones to call it first, then outside number(s):

(Used when staff are available at certain times to answer calls)

1. Hold down Red Disconnect and Submaster 1 buttons for 5 seconds
2. Release buttons (you will hear a confirmation tone)
3. Press Phone 2 button, then Red button, and then the Phone 1 button
4. Press Submaster 2 button, then Submaster 1 button (you will hear a confirmation tone)

***Note:** If you need to restore the Refuge Command Center to Default Mode see page 11.

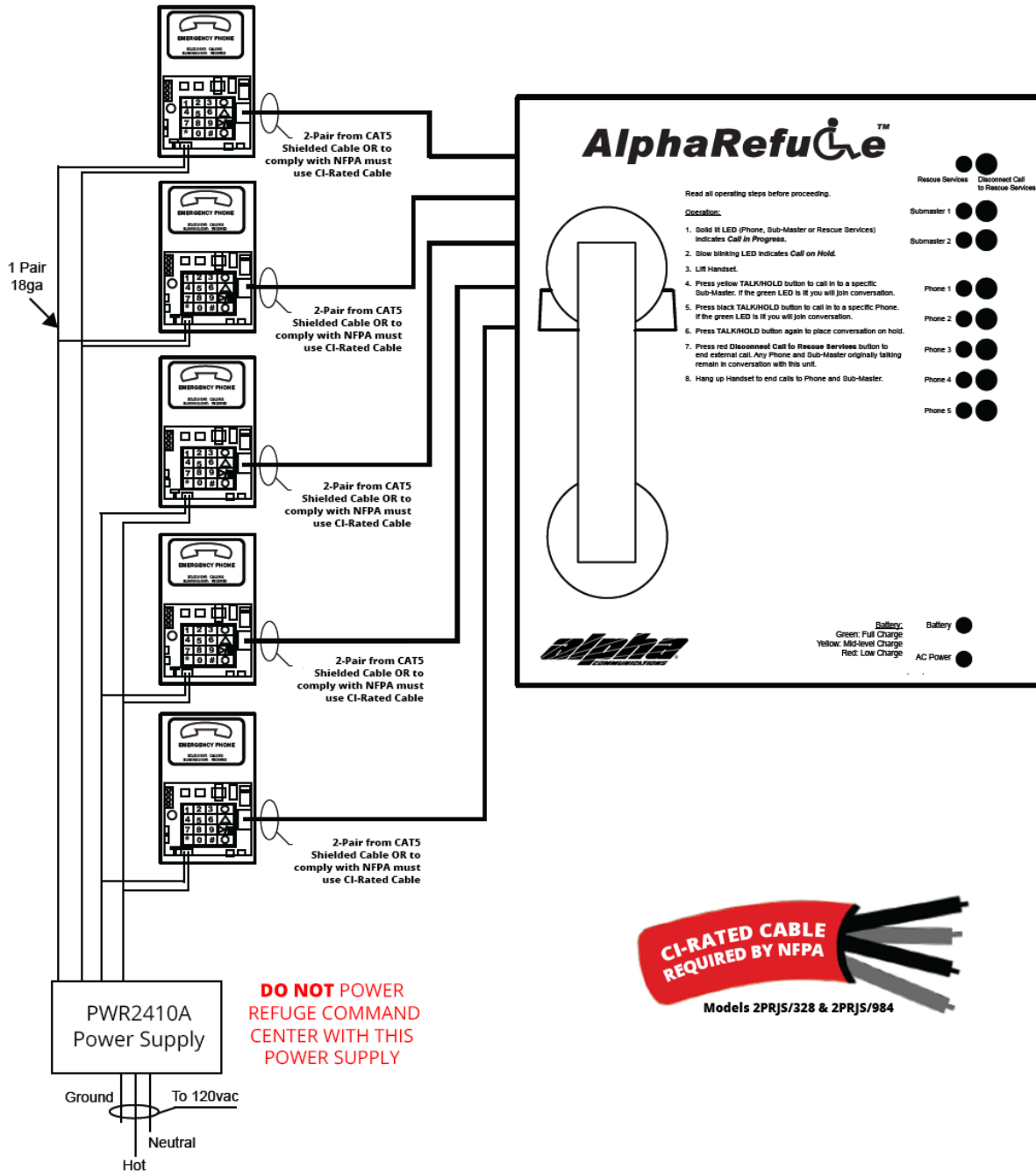
Powering The Refuge Call Boxes

Step 9

Provide power to the Refuge Call Boxes through one of the following 3 options:

Option 1: Powering up to ten Refuge Call Boxes via PWR2410A Power Supply

- Use 1-pair 18 AWG wire for power, maximum distance of 5,100'
- Do NOT wire more than 3 devices per wire run and a maximum of 10 devices per Power Supply



Option 1:

Transformers (Only if your phone comes with one supplied by Alpha). Requires 120VAC

Option 2:

Powered Directly by Elevator Car. Requires 120VAC.

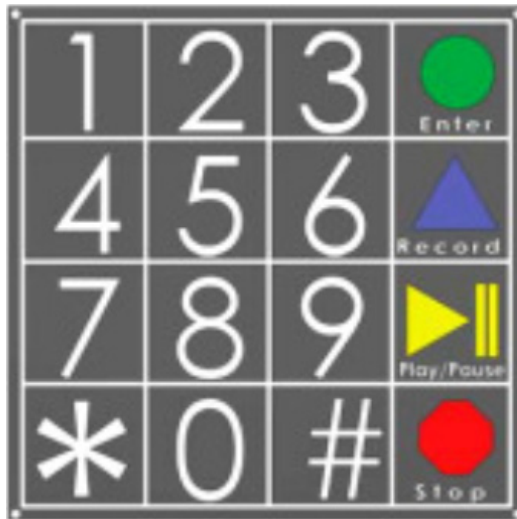
Programming The Refuge Call Boxes

Step 10a

Program appropriate options for each of your Refuge Call Boxes

Option 1: Bypass Refuge Command Center and Dial Directly to Offsite Number(s)

- Press Enter to get into program mode
- Press 1, Enter, (Emergency Number), Stop
- If using two emergency numbers: Press 2, Enter, (Emergency Number), Stop
- Repeat for up to 5 total emergency numbers
- To exit programming mode: Press and hold Stop for 2-3 seconds until warble sound



Option 2: Call Refuge Command Center and if No Answer, Dial Offsite Number(s)

- Press Enter to get into program mode
- Press 1, Enter, (Emergency Number), Stop
- Press 2, Enter, (same Emergency Number as entered in b.), Stop
- To exit programming mode: Press and hold Stop for 2-3 seconds until warble sound

Step 10b

Program the Location Message

NOTE: This Should ALWAYS be done, unless your call center requests otherwise!!!

- Press Enter to get into program mode
- To turn on message, press 1, 3, Enter, 2
- For no message, press 1, 3, Enter, 0
- Press 6, Record, (wait for beep, speak your message), Stop
- To program frequency of message, press 1, 3, Enter, ____
 - 1 = plays message once
 - 2 = plays message twice (this is standard configuration)
 - 3 = plays message until the called party presses * on their phone
- To exit program mode, press and hold Stop for 2-3 seconds until warble sound

System Operation & Testing

A. Once finished, the following Refuge Command Center LEDs should be lit:

- Power LED, located on bottom edge of the faceplate, will be constant lit green
- Battery LED, also located on bottom edge of the faceplate, will be constant lit.
 - Red = Low level charge
 - Yellow = Mid level charge
 - Green = Full Charge

B. Initiate a Call to an Emergency Phone or Sub-Master from the Refuge Command Center:

- Lift handset on Refuge Command Center
- Press the Talk button for the corresponding Refuge Call Box or Sub-Master you wish to call into
- The green LED will light next to that button
- You should have two-way communication to that device
- You can place the device on hold by pressing the Talk button a second time
- To resume communication, press the Talk button a third time
- To disconnect, hang up the Refuge Command Center handset

C. Emergency Phone places a call into the Base Station:

- You will hear an alternating audible tone at the Refuge Command Center indicating a call has been initiated by one of the phones
- The corresponding green LED will light on the Refuge Command Center next to the phone that placed the call
- Lift the handset and there is two-way communication between the Refuge Command Center and the Refuge Call Box. The handset can be hung up on the Refuge Command Center at any time to end the call

D. Refuge Call Box places a call to the Refuge Command Center then an Outside Number, or Just to an Outside Number:

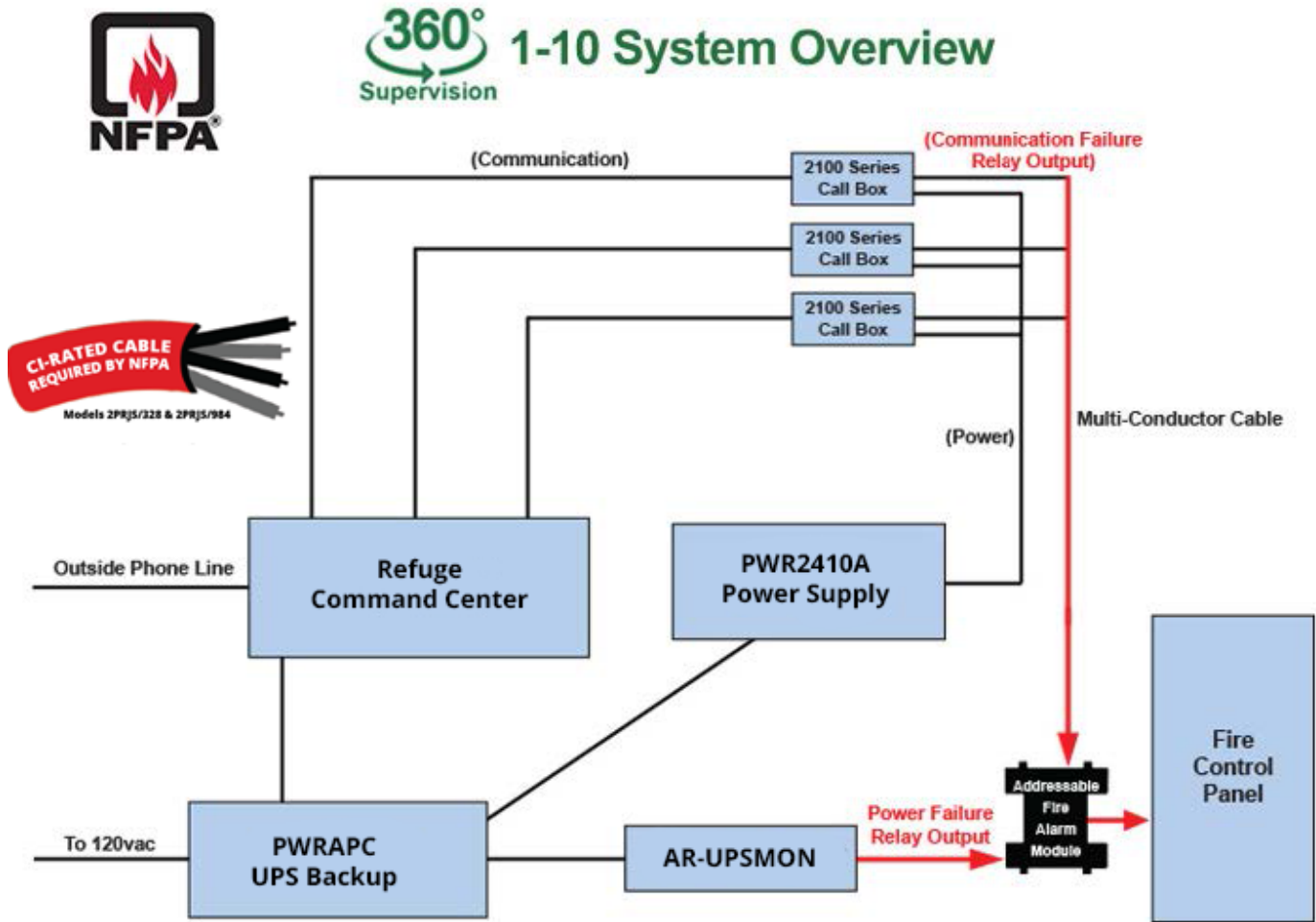
- You will hear an alternating audible tone at the Refuge Command Center indicating a call has been initiated by one of the Refuge Call Boxes (if programmed to call outside line only, no tone)
- The corresponding green LED will light on the Refuge Command Center next to the Refuge Call Box that placed the call
- If call is not answered at the Refuge Command Center, the Refuge Call Box will hang up and dial the second number programmed into the phone
- The CO Line LED, located next to the red button, will also be lit indicating that the outside line is active. Two-way communication can then take place between the outside line and the Refuge Call Box once the call is answered
- The Refuge Command Center can join the conversation by lifting the handset
- To talk to rescue services **only** from the Refuge Command Center, place the Refuge Call Box on hold by pressing the corresponding Talk button. To bring them back into the conversation, press the Talk button again.
- To disconnect rescue services, press the red button at the top of the Refuge Command Center faceplate. The Rescue Services LED will go off and leave you communicating with the Refuge Call Box only.
- Handset on the Refuge Command Center can be hung up at any time to end the call.

If above testing works and voice communication is clear, congratulations, you have successfully installed the system!

Appendix

System Supervision

NFPA-Required for Area of Refuge Systems, not Required for Elevator Industry



NFPA-2016

24.10.4 - All pathways between a remote area of refuge station 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.

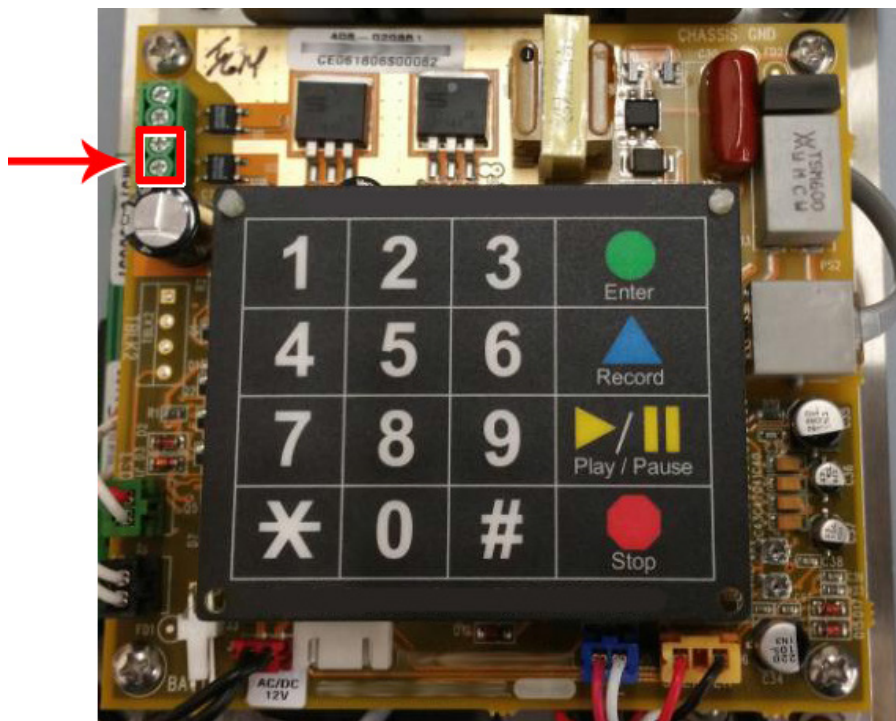
10.6.9.1.1 Failure of either the primary or secondary power supply shall result in a trouble signal in accordance with section 10.14

10.6.7.2.1 The secondary power supply (battery back up) 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.

Appendix

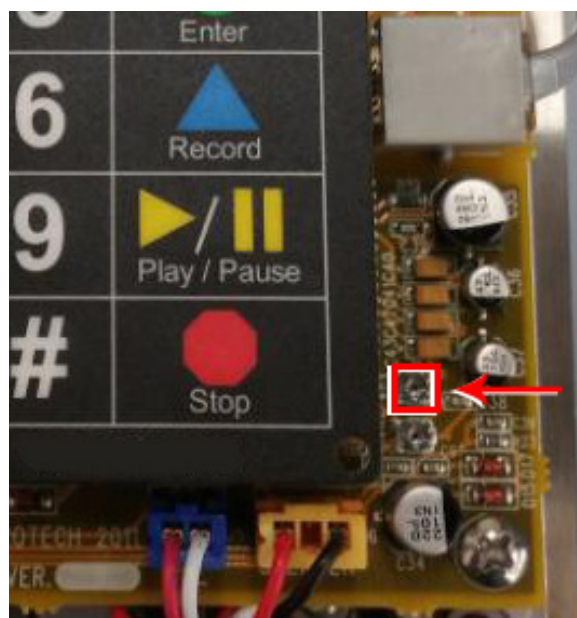
Phone Line Supervision

Alpha Refuge Call Boxes have a built-in Line Check Feature. The station constantly looks for a phone line. When a phone line is not detected it will trigger the onboard relay. Connect the relay to an alarm device for notification.



Adjusting Volume on Refuge Call Boxes

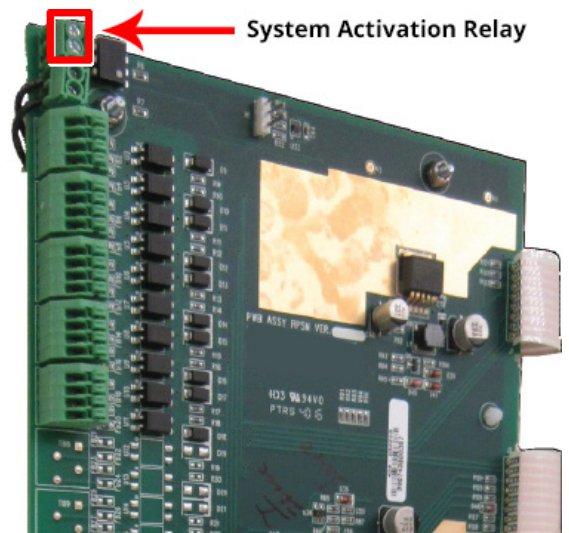
- Locate the silver VR1 port on the bottom right corner of the Refuge Call Box board
- Using a fine Philips Head screwdriver, turn the VR1 clockwise to increase the volume and counterclockwise to decrease the volume.



Appendix

Refuge Call Box System Activation Relay

When an Emergency phone has been activated, this relay changes state and can be connected to an alarm panel, strobe, or other notification means.



Restoring Refuge Command Center Factory Default Settings

- Hold down Red Disconnect and Submaster 1 buttons for 5 seconds
- Release buttons (you will hear a confirmation tone)
- Press Phone 2 button, then Red button, then Submaster 2 button, and then the Phone 5 button
- Press Submaster 2 button, then Submaster 1 button (you will hear a confirmation tone)

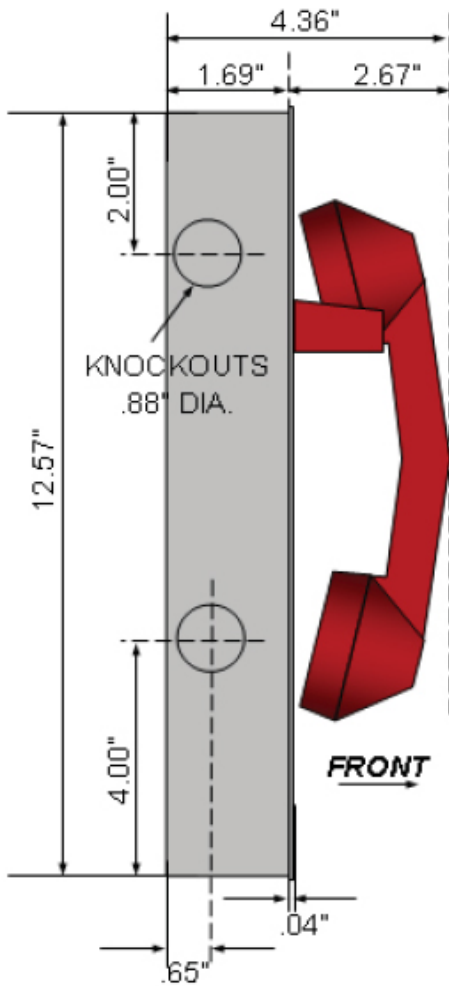
Appendix

Troubleshooting

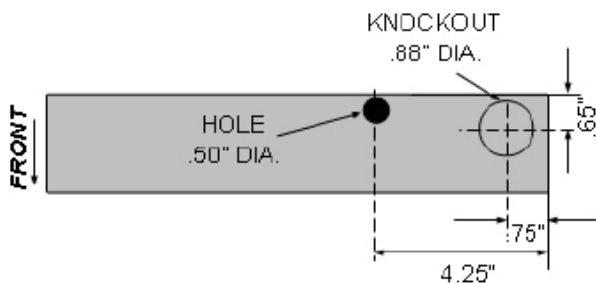
PROBLEM	POSSIBLE CAUSE & SOLUTION
Power LED is not illuminated:	<ul style="list-style-type: none"> • Check to make sure the transformer is connected to a good 120V power source. If 24V powered, check the power supply. • Make sure power connection on the circuit board is secure.
Battery LED is not illuminated or always shows red:	<ul style="list-style-type: none"> • Battery has not charged for long enough. Wait 18 hours for the battery to trickle charge. When fully charged it will have 19v. • Battery plug is not connected to circuit board. Verify connection. • Battery is worn. It is recommended to replace every 2 years.
LEDs on Refuge Call Box flash when button is pressed:	<ul style="list-style-type: none"> • Verify the phone line is working and is connected properly. • Verify dial tone is present at the Refuge Command Center.
Submaster and Phone LEDs blinking on Refuge Command Center:	<ul style="list-style-type: none"> • Verify power is applied and the backup battery is connected properly to the Refuge Command Center board.
Refuge Command Center LEDs stay on:	<ul style="list-style-type: none"> • Wires may be crossed. Verify wiring from the Refuge Command Center to the Refuge Call Boxes is correct.
Two-way communication from Refuge Call Box is poor:	<ul style="list-style-type: none"> • There is likely feedback on the line. Adjust the VR1 and VR2. • Verify wiring is not spliced onto the phone line cord.
Refuge Command Center will not dial phones:	<ul style="list-style-type: none"> • Verify wires are connected properly from the Refuge Command Center to the Refuge Call Box(es).
Refuge Command Center will dial Refuge Call Boxes, but Call Boxes will not dial Command Center:	<ul style="list-style-type: none"> • No outside phone line connected to Refuge Command Center. • Phone line connected does not have working 24v to 52v. • Line connected has voltage but does not have working dial tone. • Plug analog phone into phone line and place a call out to verify line.
No sound or tone on Command Center handset:	<ul style="list-style-type: none"> • Verify 24v power is connected to the Command Center base.
Dial tone present on Command Center handset and phone is not calling out:	<ul style="list-style-type: none"> • There should not be a dial tone on the Command Center handset. • Wire pairs are out of order. Verify wire pairs are connected to the correct pins. • Wires are shorted and need to be replaced.

AlphaRefuge™ Base Station Mounting Dimensions (Standard Surface Mount)

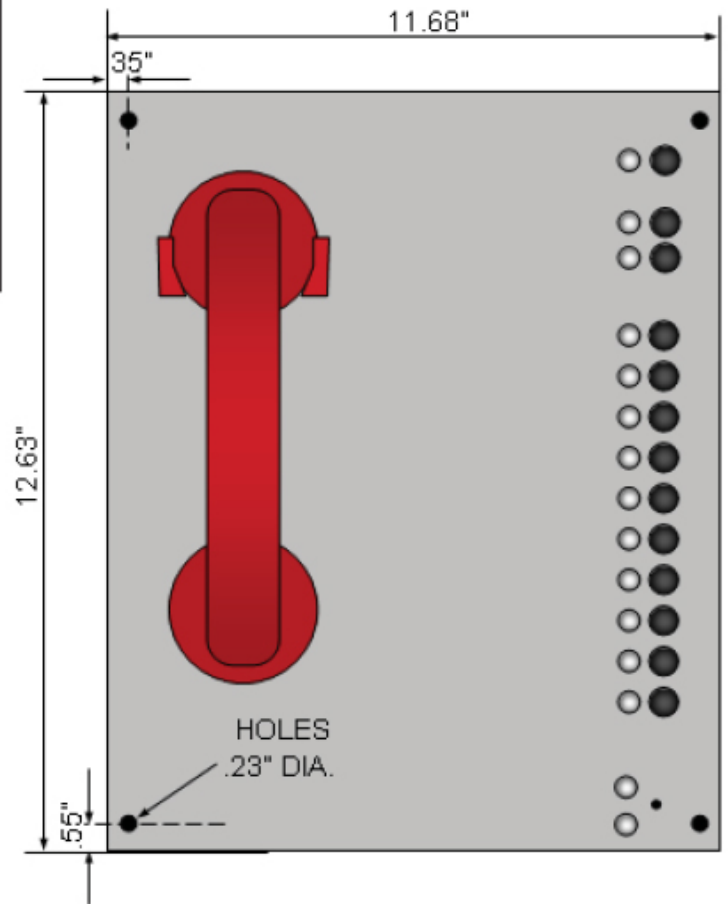
SIDE DETAILS



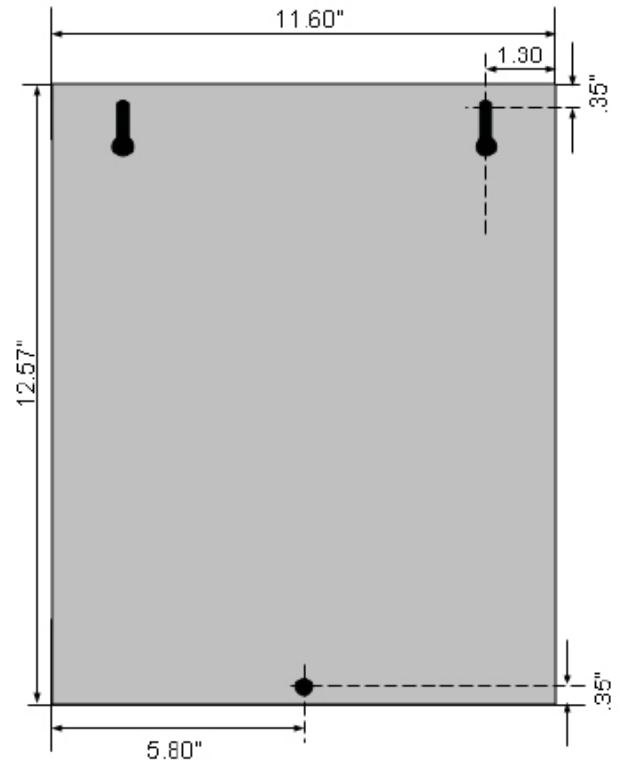
BOTTOM BOX DETAILS



FRONT DETAILS

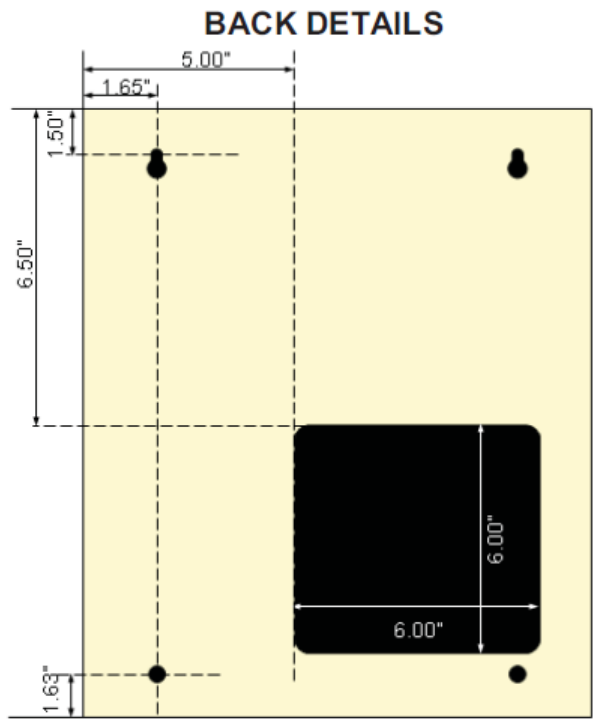
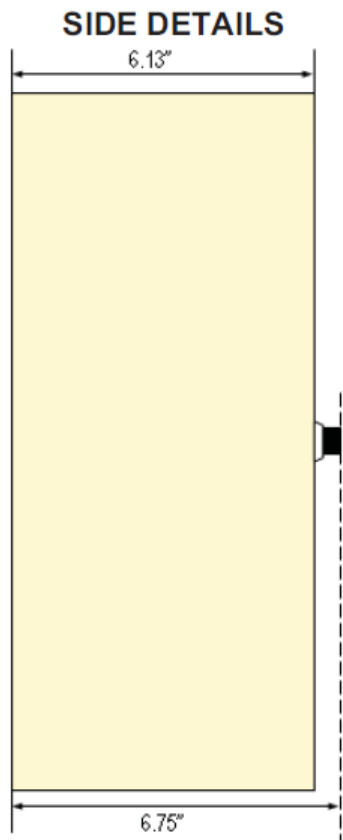
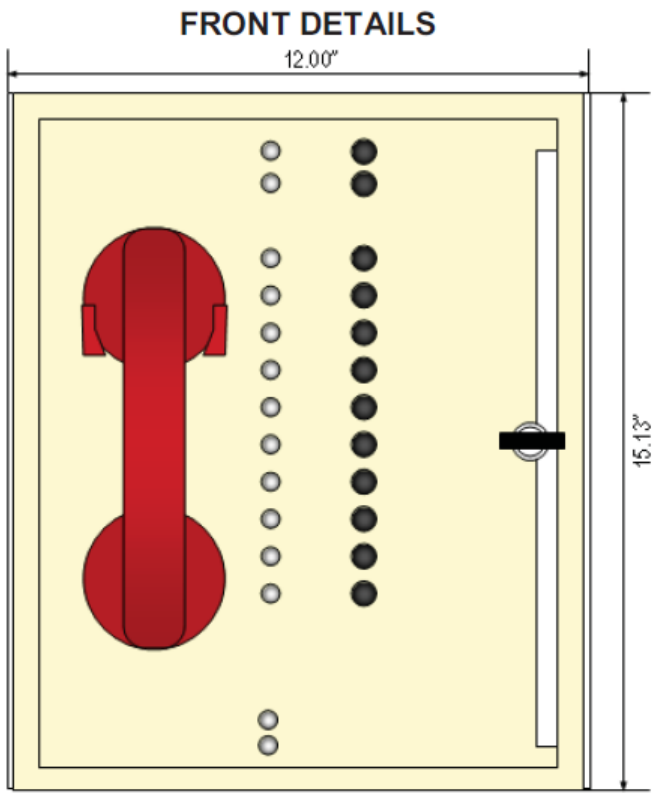


BACK BOX DETAILS



DIMENSIONS ARE APPLICABLE TO BOTH 10 BUTTON AND 5 BUTTON MODELS.

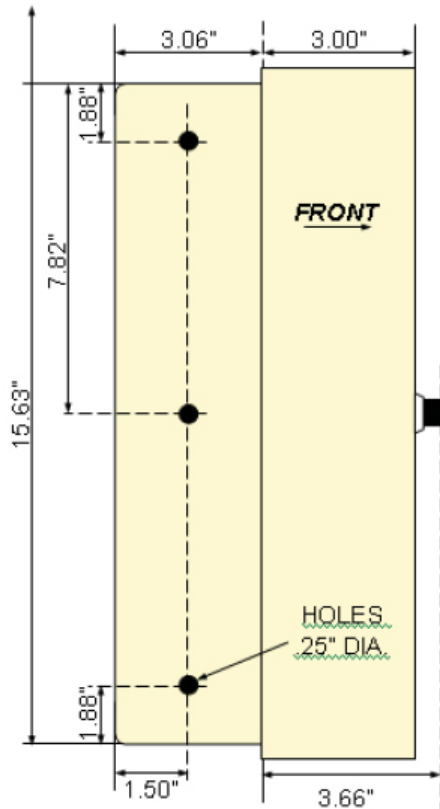
AlphaRefuge™ Base Station Mounting Dimensions (Surface Mount Cabinet)



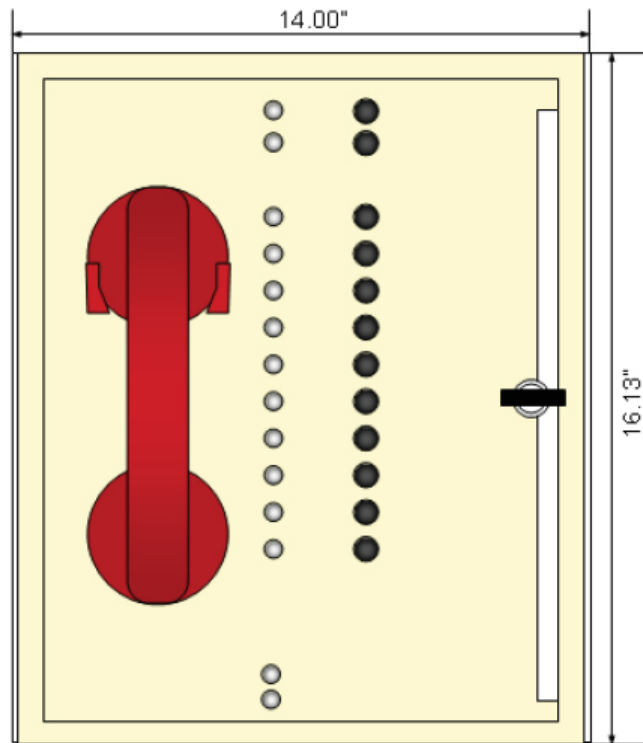
**NOTE:
DIMENSIONS ARE APPLICABLE
TO BOTH 10 BUTTON AND 5
BUTTON MODELS**

AlphaRefuge™ Base Station Mounting Dimensions (Flush Mount Cabinet)

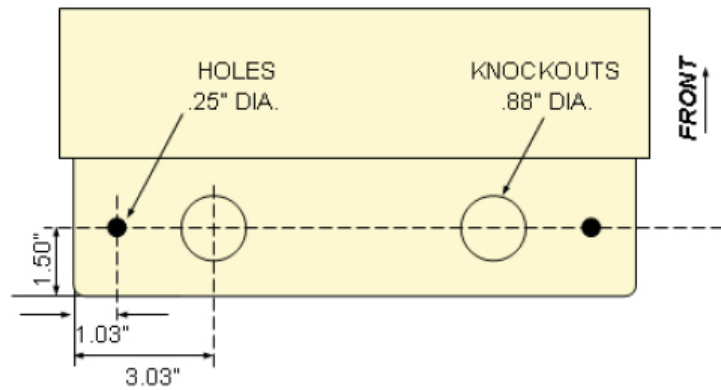
SIDE DETAILS



FRONT DETAILS



TOP & BOTTOM DETAILS

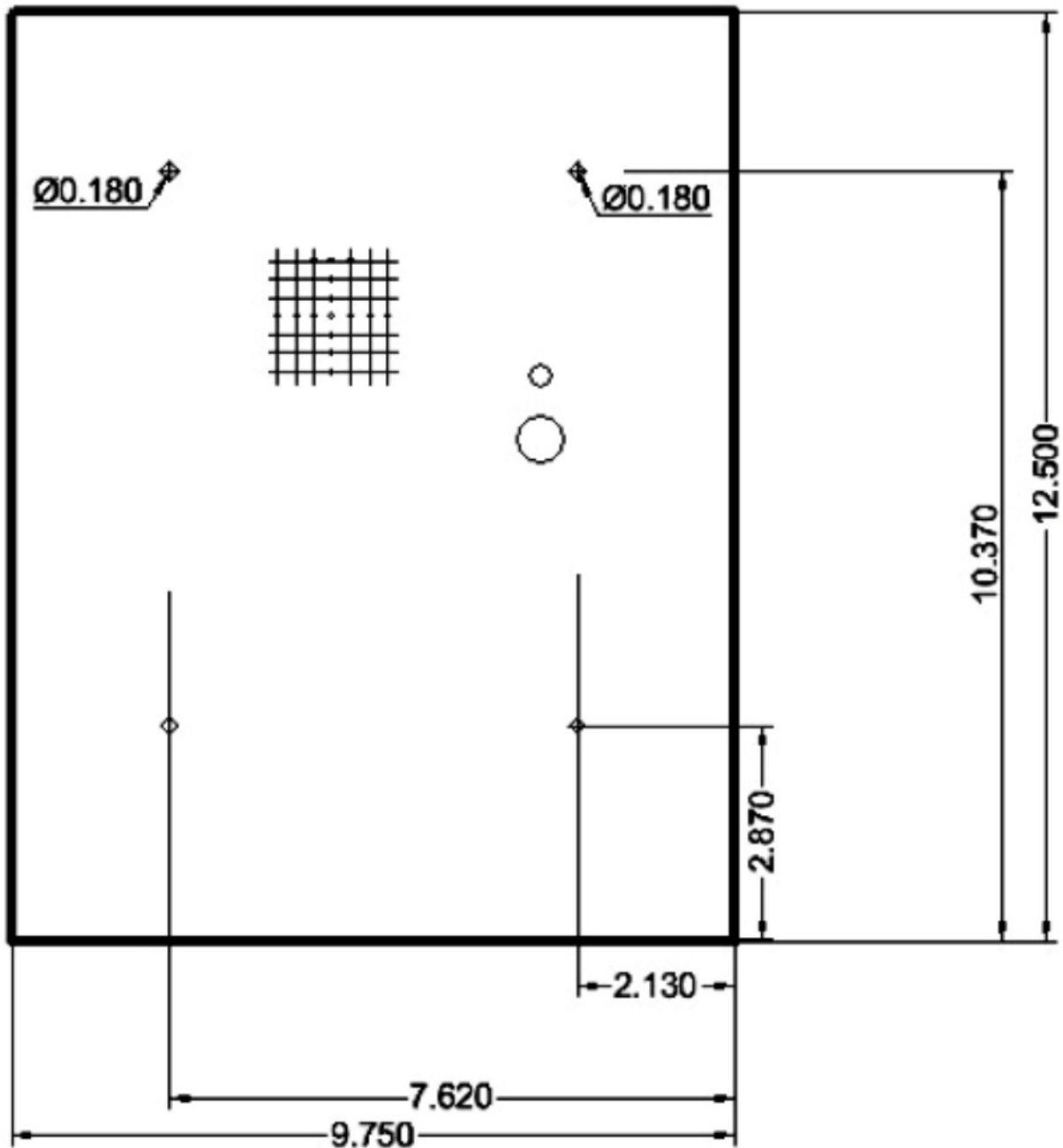


NOTE: DIMENSIONS ARE APPLICABLE TO BOTH 10 BUTTON AND 5 BUTTON MODELS.

RCB2100SF Flush Mount St. Steel Remote Call Box Station

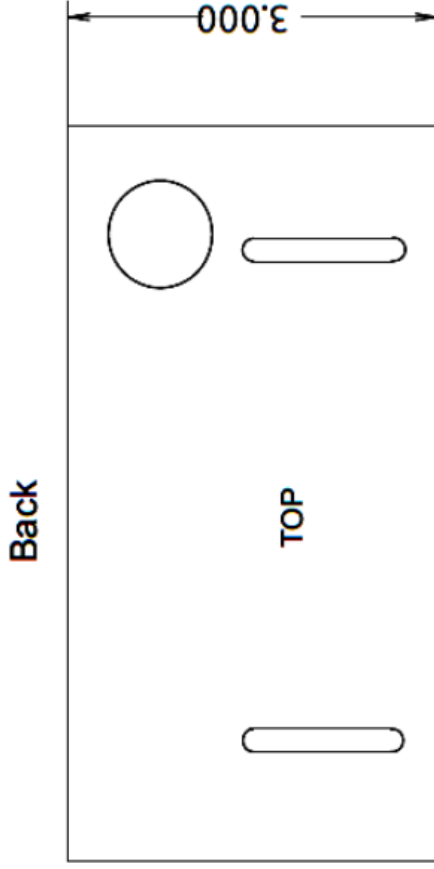
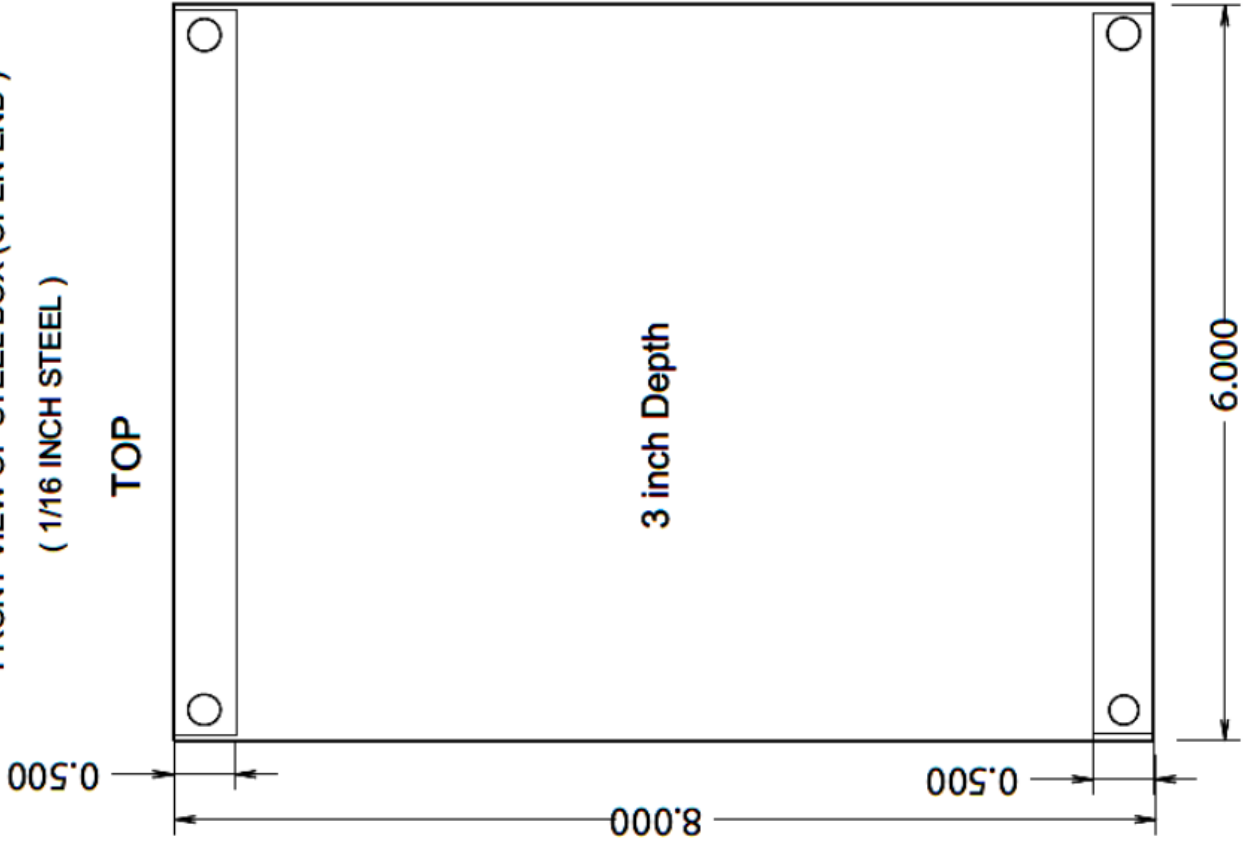
9.75 x 12.5 11 GAUGE BRUSHED STAINLESS STEEL WITH B4 FINSH

FRONT VIEW



RCB2100SF Flush Mount St. Steel Remote Call Box Station

FRONT VIEW OF STEEL BOX (OPEN END)
(1/16 INCH STEEL)



Front (open end)

Front (open end)

