RATH by AVIRE

# SmartCommand

Version 2

## Installation & Operations Manual


2 YEAR WARRANTY

RP85000BOSS32 v2 | 08/2026

# Table of Contents



| Manual Version | Release Date | System Release | SW/FW Versions |
|---|---|---|---|
| **2.0** | | 1.0 | |
| **2.1** | 8/17/2026 | 2.0 | BOSS (Loop): 1.3.0<br>BOSS (Compute): 1.3.0<br>BOSS (PSTN): 1.3.0<br>Call Commander: 1.3.0<br>Call Box: 1.3.0<br>Call Box Tool: 1.3.0<br>AOR Configuration: 1.3.0<br>BBM firmware: 1296 |

# Pre-Installation Requirements

1. SmartCommand BOSS (Part #: 3400(v3), 3400-128(v3), 3400A(v1), 3400-64A(v1))
   - USB programming cable
   - USB flash drive with Configuration Software
   - AC power cable
   - 4-pin loop connectors
   - 2-pin phone line connector
2. SmartCommand Call Commander (Part #: 3200S, 3200F, or 3200D)
3. SmartCommand Call Boxes (Part #: 3300FSN, 3300SS, 3300S4, 3300FSCN, 3300SSC, 3300S4C)
4. (Optional) Battery Backup Unit (Part #: 3100)
5. 18 AWG, 4 conductor, 2 pair cable
   - Plenum Part #: RP7500094B
   - 2 Hour Fire-Rated Part #: AV000015/AV000016
6. 120 VAC power
7. Multimeter
8. Windows based laptop (Windows 7 or newer required)
9. Dedicated external phone line (if the system needs the ability to call off site)
10. Analog, Digital, VoIP, and Cellular (Rath Part #: 2100-LTEGSM4, 2100-LTEVER4 and 8100-V4GS) supported

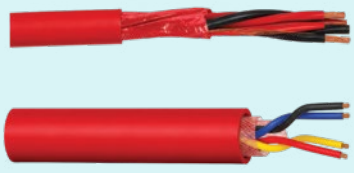
    ***Note:*** *If using VoIP it must be converted to analog before connecting to the system.*


**BOSS UNIT**

3400(v3), 3400-128(v3), 3400A(v1), 3400-64A(v1)


**CALL BOXES**

3300FSN, 3300SS, 3300S4, 3300FSCN, 3300SSC, 3300S4C



**CABLE**

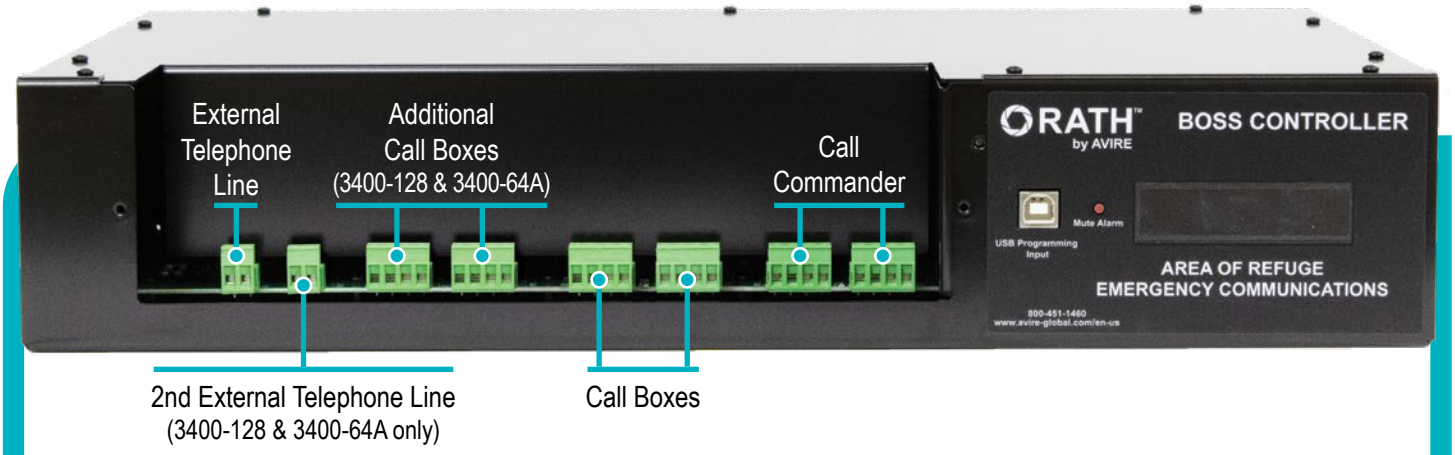
AV000015/AV000016, RP7500094B


**POWER SUPPLY**

3100

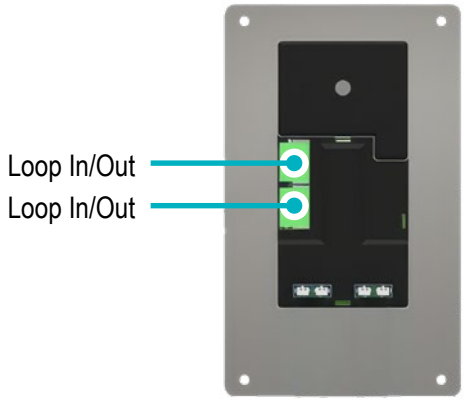
# SmartCommand Internal Overview

## Brains of Smart System (BOSS) Controller




*Note: To expose these connectors, remove the two screws on the front of the housing to remove the cover.*

### Call Box




### Call Commander

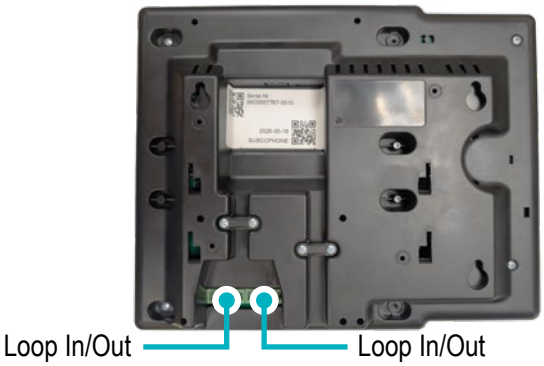



*Fig 1. Connectors in the components of the SmartCommand System (BOSS Unit: 3400, Call Boxes 3300, Call Commander 3200)*

**Battery Backup**

Optional RATH® 3100 Battery Backup Units can provide emergency operating power to the SmartCommand system during a loss of primary AC power. When battery backup is not installed, the BOSS Controller operates using the factory-installed jumper provided for battery-less operation. When a 3100 Battery Backup Unit is installed, this jumper must be removed before connecting the battery backup equipment.

**External Telephone Line**

The BOSS Controller supports connection to one or two external telephone lines, depending on the controller model, allowing emergency calls to be routed off-site when configured. The system requires an analog telephone connection at the BOSS. Analog telephone service may be connected directly, while other supported telephone services, including VoIP and cellular service, must provide an analog connection to the system. The telephone line must provide voltage and dial tone. Ring-down style telephone lines are not supported.

## System Architecture

**A typical SmartCommand installation consists of:**

- One BOSS Controller
- One Call Commander
- Up to 128 addressable call boxes, depending on the controller model
- One or two external telephone lines, depending on the controller model and system configuration
- Optional RATH® 3100 Battery Backup Unit(s)
- 18/4 cable providing power and communication between the BOSS Controller, Call Commander, and addressable call boxes

The BOSS Controller supervises connected devices, communication loops, and external telephone service. Primary power and optional battery backup can also be monitored when power and battery fault monitoring is enabled through the Configuration Software. When a monitored fault occurs, the BOSS Controller annunciates the condition through its internal sounder and display to assist with system troubleshooting and maintenance.

# Package Contents

Carefully inspect the shipping carton upon receipt. Verify that all components have been received and are free from visible damage. If any items are missing or damaged, contact RATH® by AVIRE before beginning installation.

## Included with BOSS Controller

**Each Addressable SmartCommand System Controller includes:**

- BOSS Controller (model as ordered)
- Mounting brackets for wall or rack installation
- AC power cable
- USB programming cable
- USB flash drive with Configuration Software
- 4-pin loop connectors
- 2-pin phone line connector

***NOTE:*** *The specific BOSS Controller model included (3400, 3400A, 3400-64A, or 3400-128) is identified on the product label affixed to the controller.*

## Required Components (Sold Separately)

**The following components are required to complete a SmartCommand installation:**

- SmartCommand Call Commander (Part #: 3200S, 3200F, or 3200D)
- SmartCommand addressable call boxes
- 18 AWG, 4-conductor, 2-pair communication cable
- Plenum: Part #: RP7500094B
- 2-Hour Fire-Rated: Part #: AV000015/AV000016
- 120 VAC power
- Dedicated external telephone line, if the system requires the ability to place calls off-site

## Optional Components (Sold Separately)

- RATH® 3100 Battery Backup Unit
- Analog, digital, VoIP, or supported cellular telephone service for off-site calling

***NOTE:*** *If using VoIP, the service must be converted to analog before connecting to the SmartCommand system.*

## Installer-Supplied Equipment

**The following tools and equipment are required but are not included:**

- Standard hand tools appropriate for the installation
- Wire stripper/cutter
- Multimeter
- Windows-based laptop with an available USB port
- Personal protective equipment (PPE) as required by applicable safety requirements

# Typical System Layouts

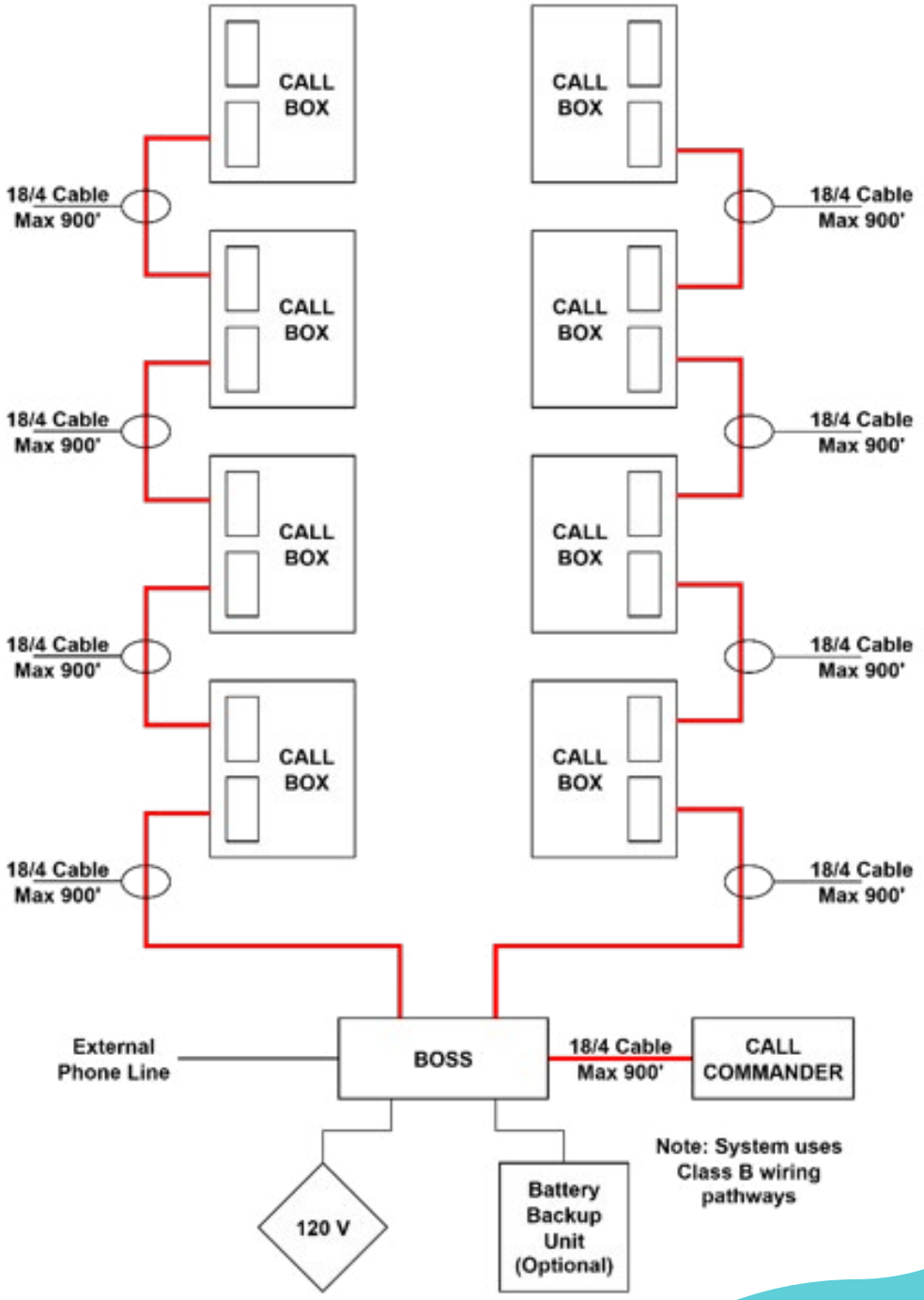
Below are examples of topologies that may be used when installing the SmartCommand system. Different variants of the BOSS unit enable different topologies, so examples are given for each such variant.

## Circuit Information

| Circuit | Power-Limited | Supervised |
|---|---|---|
| **Call  Box Loops** | Yes | Yes |
| **Call Commander Loop** | Yes | Yes |
| **AC Input** | No (fused) | Open Only |
| **Battery Backup Connections** | Yes | No |
| **External Phone Line** | Yes | Open/Short Only |

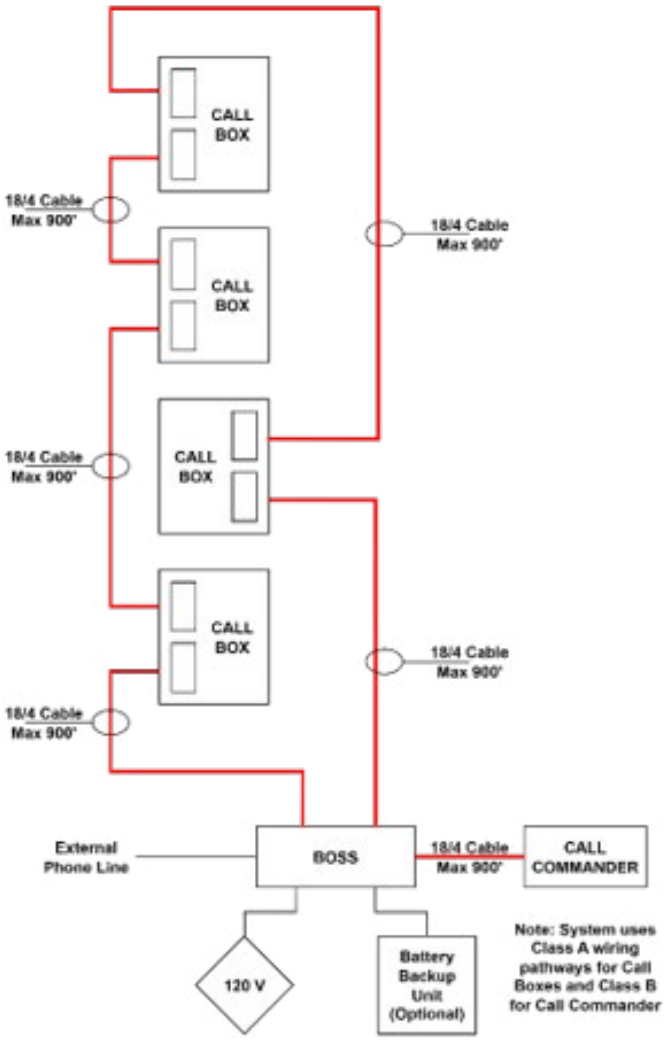
**Ground fault annunciation impedance:** 14 kΩ.

## **3400** (Class B, 2 Loop max, 32 Call Boxes Max)

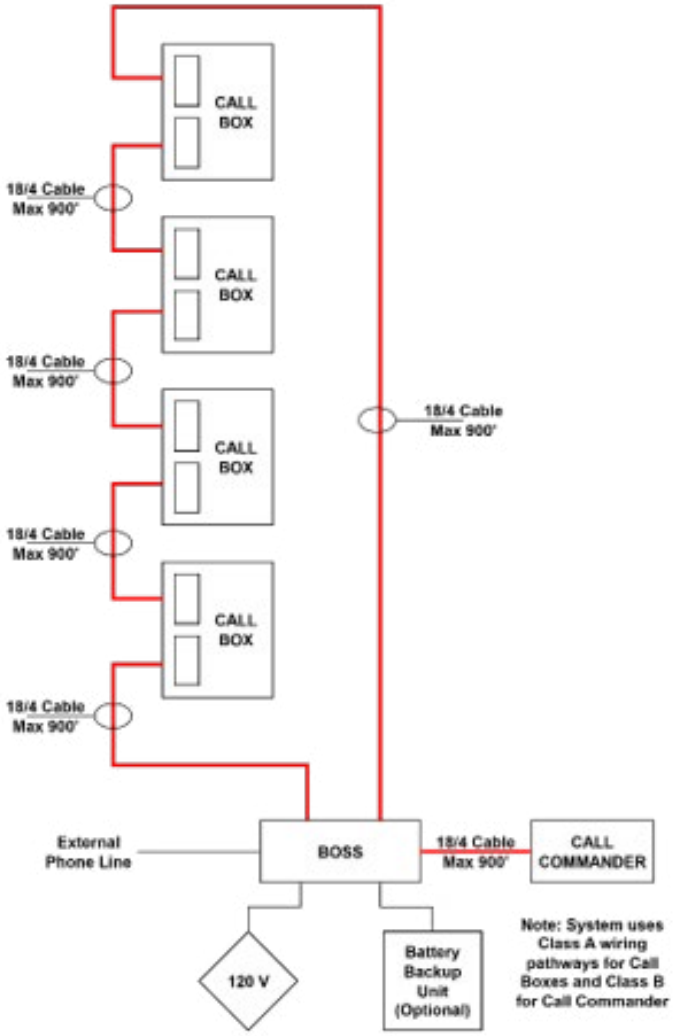


## **3400A** (Class A, 1 Loop max, 32 Call Boxes Max)

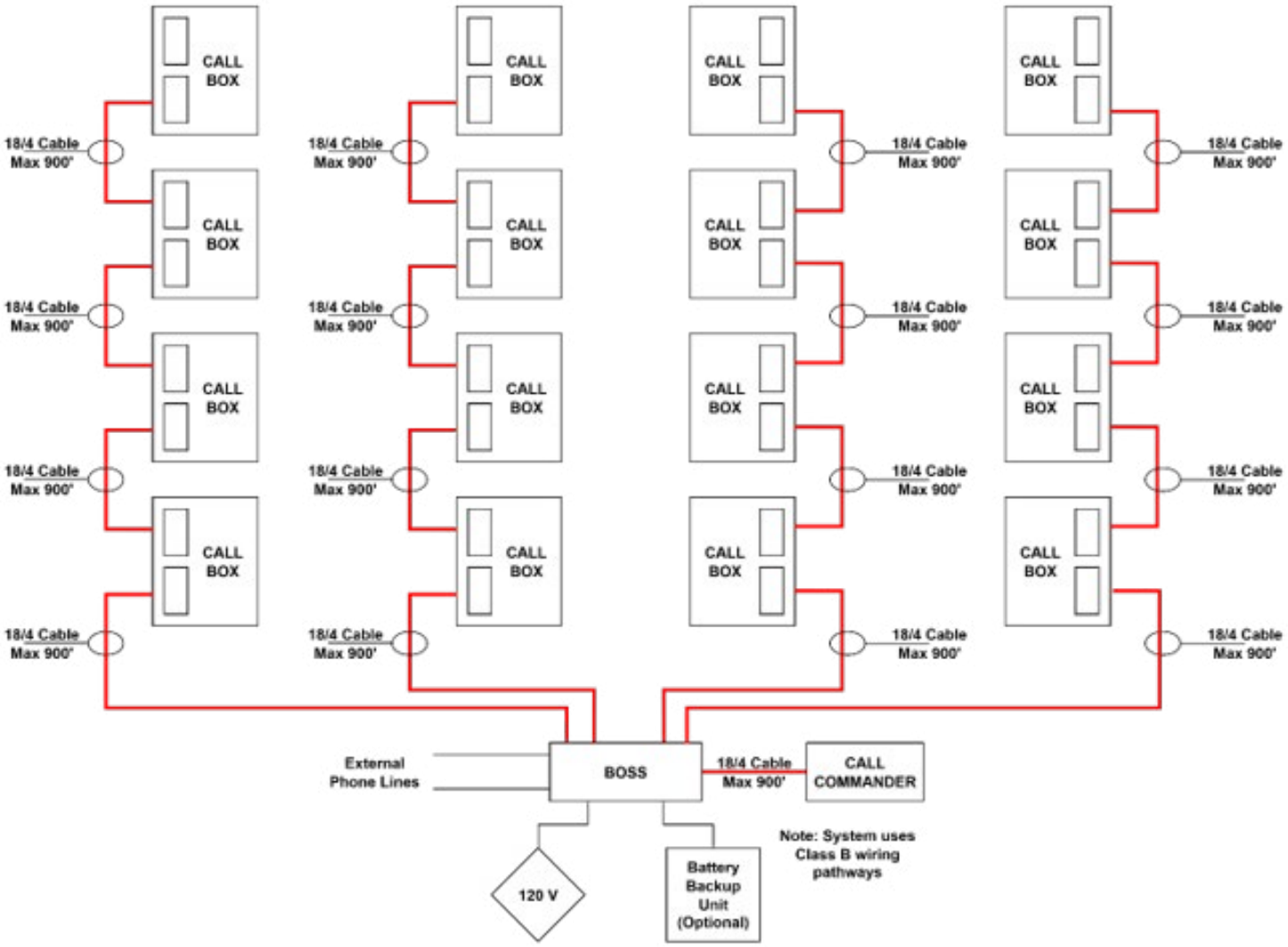
### Option 1



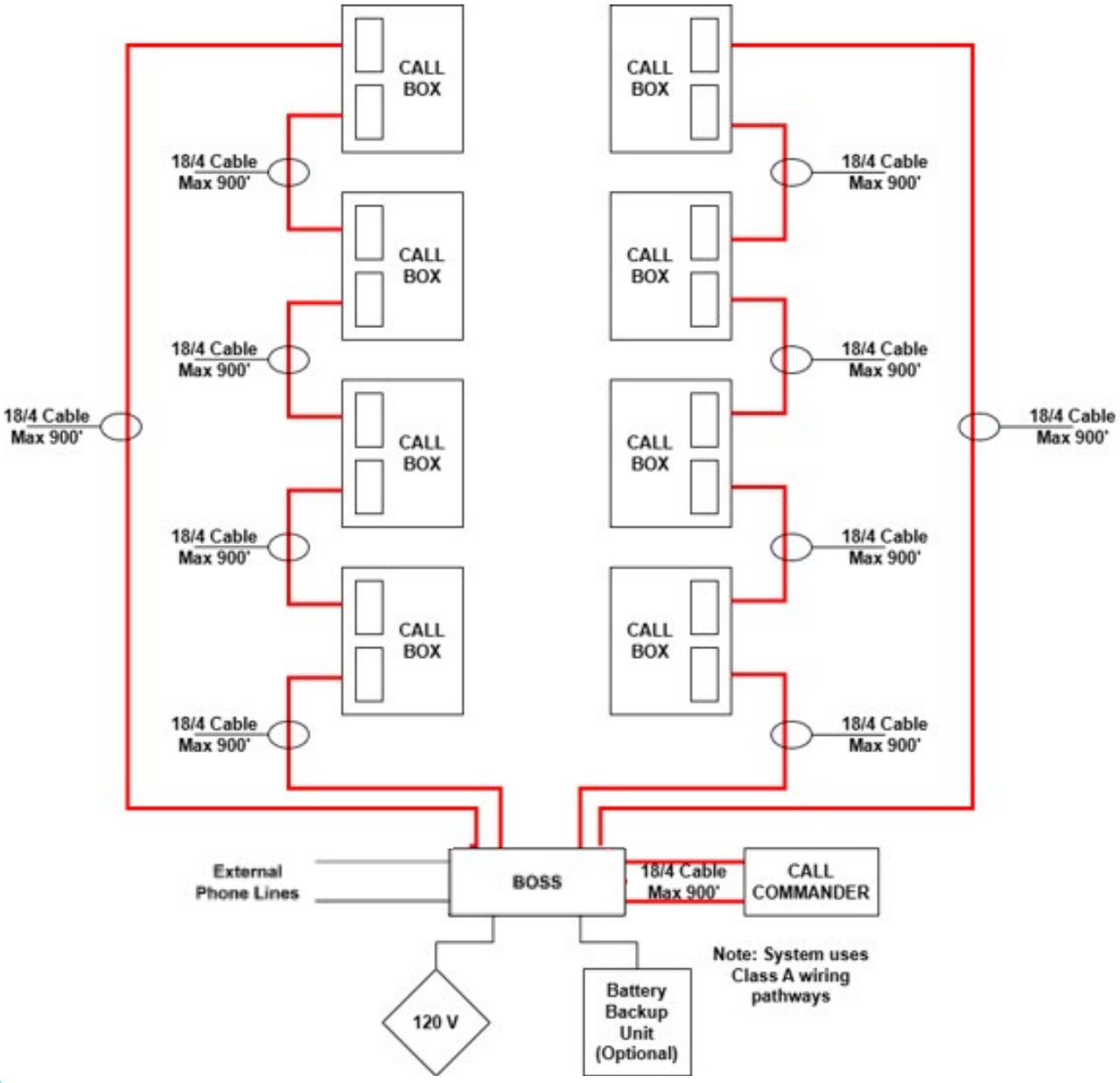

### Option 2



## **3400-128** (Class B, 4 Loop max, 128 Call Boxes Max)



## **3400-64A** (Class A, 2 Loop max, 64 Call Boxes Max)



# System Installation and Wiring

## BOSS Installation

**1. Mount the BOSS Unit**

a. Install the BOSS unit in a central control point within the building that can be securely locked to prevent unauthorized access.

b. You can mount the BOSS on a wall or in a rack using the included mounting arms.

***NOTE:*** *Failing to install the BOSS unit in a secure location may invalidate building codes.*

**2. Connect the BOSS to Power**

Use the provided power cable:

a. Plug the 3-pin female end into the power input next to the power switch on the back of the BOSS unit.

b. Plug the 3-prong male end into an available mains outlet.

***Important:*** *Do not turn on the BOSS unit until all connections are complete.*

**3. Access the Terminal Connectors**

a. If not already done, remove the two screws holding the rear cover plate.

b. Remove the rear cover to reveal the internal terminal connectors.

**4. Prepare for Cable Routing**

a. Remove the knock-out panel on the left side of the BOSS unit to allow cables to pass through.

b. If using the backup power supply (#3100), remove the top cover of the BOSS unit.

## Backup Battery Installation

The Battery Backup Unit is provided with an 8-way interface cable that connects the unit directly to the BOSS unit. This cable is terminated on the BOSS end with 8 insulated ferrules, which are fitted into the 8-way pluggable terminal blocks shown in Figure 3. The BOSS unit is delivered with the pluggable terminal blocks in place and fitted with a jumper wire that connects terminals 1 and 8 for battery-less operation. Please ensure that this jumper wire is NEVER fitted at the same time as the 3100 Battery Backup Unit.

***NOTE:*** *BOSS unit AC input should be switched off at the start of this installation procedure.*

**1. Mount the Battery Unit**

a. The battery unit should be mounted near the BOSS unit. The cable provided has a length of 2 m.

b. The battery unit has 4 mounting holes, 2 on either side of the back box. Fit the screws to the wall in the appropriate positions without fully tightening them, leaving 2–3 mm between the screw head and the wall.

c. Attach the battery unit by passing the screw heads through the wider part of the mounting holes, then sliding the unit down to lock it in place. Tighten the screws so there is no movement in the unit.

**2. Prepare for Cable Routing**

Unplug the pluggable terminal blocks and remove the wire connecting pins 1 and 8.

**3. Route the Cable**

Insert both Battery Backup Unit 8-way cables through the most convenient holes in the back of the BOSS.

**4. Terminate the Wires**

For each cable, insert the ferrules from the Battery Backup Unit 8-way cables into one of the pluggable terminal blocks, ensuring the color coding below is followed for both.

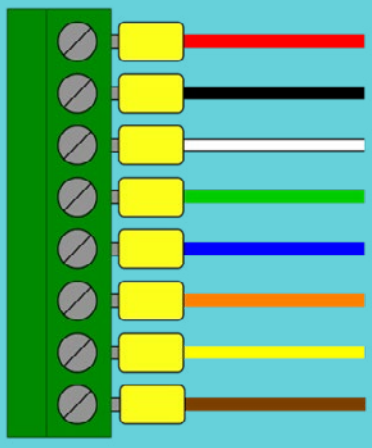
**5. Plug in the Connectors**

Replace the pluggable terminal blocks in the BOSS unit.

**6. Secure the BOSS Back Box and Top Cover**

Screw in the back box and top cover of the BOSS unit.


**FIGURE 3:** Image of the battery unit showing the mounting screw holes in the back



Color coding for battery unit cable installation with the BOSS unit. Pluggable terminal block viewed from above, with the screw-terminal side facing up and the plug side facing down.

**7. Perform the Battery Connection Sequence**

a. Remove the cover of the 3100 Battery Backup Unit and disconnect all cables inside the unit.
b. Switch on AC power to the BOSS unit.
c. Plug in the 12 V in connector to the battery unit board (brown/yellow cable next to the 12 V power cable), then switch on the battery unit board using the rocker switch.
d. Wait until the status LEDs on top of the unit stop flashing. The AC power LED should turn green, the status LED should turn RED, and the Battery LED should be off.
e. Plug in the charging power cable (barrel connector with orange/blue cables).
f. Plug in the Battery cable (red/yellow/black/orange).
g. All LEDs should now turn GREEN.
h. Plug in the 12 V out/monitoring connector (red/black/green/white 8-way cable) to the top of the power board.
i. Replace the battery unit cover.

## Call Commander Installation

We offer two wiring options for the Call Commander: **Desk Mount** (#3200D) and **Class A** (available with BOSS unit #3400-64A) which provides added redundancy and keeps the system running even if a wiring fault occurs.

**1. Install the Call Commander**

**Desk Mount (#3200D)**

a. Attach the included foot stand to the back of the Call Commander.
b. Place it in the central control point within the building specified by the building owner or Authority Having Jurisdiction (AHJ).

**Cabinet Mount (#3200S, #3200F)**

a. Use the provided Allen wrench to remove the back box or back box from the cabinet.
b. Remove any necessary knockouts.
c. Mount the back box or plate at the central control location specified by the building owner or AHJ, using appropriate mounting hardware.

***Important:*** *Do not reassemble the cabinet until all wiring is complete.*

## 2. Run the Cable

### Class B Call Commander

Run an 18/4 cable from the Call Commander back to the BOSS unit.

### Class A Call Commander

Run **2** 18/4 cables from the Call Commander back to the BOSS unit.

***Notes:*** *This cable supplies both power and communication. Max cable length between the BOSS and Call Commander is 900 feet. Only one Call Commander can be connected to the system.*

## 3. Prepare the Cable Ends

Strip about ¼ inch of insulation from wire at both ends of the 18/4 cable.

## 4. Route the Cable (#3200S or #3200F only)

Feed the cable through the knockouts you opened during step 1.

## 5. Terminate the Wires

a. Attach the four wires to the provided 4-pin loop connector, following the wiring scheme in figure 6.
b. Verify the wires are seated fully into the connector and the screw terminals are firmly tightened down before moving on.
c. Repeat this process for both ends of the cable(s).

**FIGURE 6:** Wiring scheme for terminated wires into provided 4-pin connector

**P/N: RP7500094B**

**P/N: AV000015/ AV000016**

## 6. Plug in the Connectors

### Class B Call Commander

a. At the Call Commander end, plug the 4-pin connector into one of the green terminal ports on the back.
b. At the BOSS end, plug the other connector into L1A.

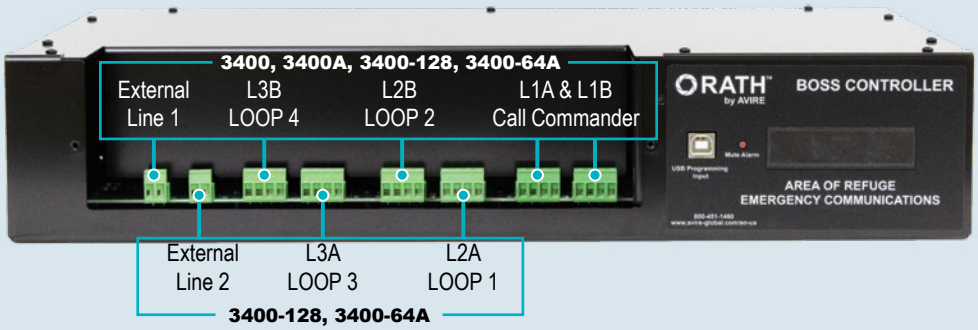
### Class A Call Commander

a. At the Call Commander end, plug the 4-pin connector from each cable into one of the green terminal ports on the back.
b. At the BOSS end, plug the other connectors on the two cables into L1A and L1B, as shown in Figure 7.

## 7. Finish Cabinet Installation (if using #3200S or #3200F)

Install the cabinet faceplate back onto the back box and secure using the provided Hex screws and Allen wrench.

**Figure 7:** SmartCommand Loop Port Labels Diagram. Note: L3B and L3A are only present in 3400-128 and 3400-64A variants




a. Each loop supports up to 32 Call Boxes.
b. System limits:
  - 3400 & 3400A: 32 Call Boxes total
  - 3400-64A: 64 Call Boxes total
  - 3400-128: 128 Call Boxes total
c. Call Boxes can be distributed across available loops in any configuration.
d. Class A wiring must connect.

## Call Box Installation

**We offer two wiring options for Call Boxes: Class B** (Available with BOSS units #3400, #3400-128, #3400A, #3400-64A): Daisy-chained wiring, reducing wire needed.
**Class A** (Available with BOSS units #3400A, #3400-64A): Provides added redundancy and keeps the system running even if a wiring fault occurs.

### 1. Install the Call Boxes

**Surface Mount (Interior Rated: #3300SS, #3300SSC; Exterior Rated: #3300S4, #3300S4C)**

a. Remove any applicable knockouts in the back box to align with the conduit run to the Call Box mounting location.
b. Mount the included back box in the location specified by the building owner or AHJ, using appropriate mounting hardware.
***Note:*** *The mounting location must comply with all applicable code and regulatory requirements.*
c. Repeat for all Call Boxes.

**Flush Mount (#3300FSN, #3300FSCN)**

a. Remove any applicable knockouts from the flush mount back box (#RP7700504) to align with conduit run to the Call Box mounting location.
b. Install the flush mount back box in the cutout in the wall at the specified locations.
***Note:*** *The mounting location must comply with all applicable code and regulatory requirements.*
c. Repeat for all Call Boxes.
***Note:*** *Flush mount back boxes (#RP7700504) are sold separately and do not come with the flush mount Call Box.*

### 2. Run the Cable to the First Call Box

Run an 18/4 cable from the BOSS to the first Call Box.
***Note:*** *This cable provides communication and power. No additional power is required.*
***Note:*** *Maximum cable length to the first Call Box is 900 feet.*

### 3. Prepare the Cable Ends

On both ends of the 18/4 cable, strip back and expose 1/4” of wire on the individual conductors.

### 4. Route the Cable to the First Call Box

Feed the cable through the knockouts opened during the Call Box installation.

**5. Terminate the Wires**

a. Screw the 4 wires from the 18/4 cable into the provided 4-pin loop connector, following the wiring scheme in Figure 6.

b. Ensure each wire is fully seated into the connector and the screw terminals are securely tightened down before moving on.

c. Repeat for both ends of the cable.

**6. Plug in the Connectors**

a. At the first Call Box end, plug the 4-pin loop connector into either of the green terminal ports on the back of the first Call Box.
***Note:*** *Either terminal port on the Call Box can be used for input or output. However, best practice is to consistently use the same port across all Call Boxes, designating one for input and the other for output, to simplify installation and maintenance. Specifically, it is recommended to connect the incoming cable from the BOSS unit to the bottom terminal port on the Call Box for easier troubleshooting and system consistency.*

b. At the BOSS end, plug the 4-pin loop connector into one of the designated Call Box ports on the BOSS. Call Box ports vary by BOSS model (#3400 and #3400A: L2A, L2B; #3400-128 and #3400-64A: L2A, L2B, L3A, L3B). See Fig. 7 for detailed port labels on the BOSS.

**7. Run the Cable from Call Box to Call Box**

**Class B Call Box Wiring**

a. Run an 18/4 cable from the previously wired Call Box to the next Call Box in the loop.

**Class A Call Box Wiring**

a. Either run an 18/4 cable from the previously wired Call Box to the next Call Box in the loop, or, if distance constraints are a concern, wire alternate Call Boxes on the outbound loop and connect the remaining Call Boxes on the return loop to complete the Class A circuit. Refer to the typical system layout diagrams for models 3400A and 3400-64A.

***Note:*** *Maximum wire run length between each Call Box is 900 feet.*

**8. Prepare the Cable Ends**

On both ends of the 18/4 cable, strip back and expose 1/4” of wire on the individual conductors.

**9. Route the Cable for both Call Boxes**

Feed the cable through the knockouts in both Call Boxes opened during the Call Box installation.

**10. Terminate the Wires**

a. Screw the 4 wires from the 18/4 cable into the provided 4-pin loop connector, following the wiring scheme in the diagram in step 5.

b. Ensure each wire is fully seated into the connector and the screw terminals are securely tightened down before moving on.

c. Repeat for both ends of the cable.

**11. Plug in the Connectors**

a. Plug the 4-pin loop connector into the remaining green terminal port on the previously wired Call Box.

b. Plug the other end of the cable into either port on the back of the second Call Box in the loop.

***Note:*** *Either terminal port on the Call Box can be used for input or output. However, best practice is to consistently use the same port across all Call Boxes, designating one for input and the other for output, to simplify installation and maintenance. Specifically, it is recommended to connect the incoming cable from the previous Call Box to the bottom terminal port, and the outgoing cable to the next Call Box to the top terminal port, for easier troubleshooting and system consistency.*

**12. Repeat for all Call Boxes**

a. Repeat steps 7–11 for each Call Box you want to include on the same loop.

***Note:*** *A maximum of 32 Call Boxes can be connected on a single loop.*

b. To utilize additional loops, repeat steps 2–11 as needed. Loop availability depends on your BOSS model. See the diagram in step 6.

- 3400A: 1 loop available, L2A
- 3400: 2 loops available, L2A, L2B
- 3400-64A: 2 loops available, L2A, L3A
- 3400-128: 4 loops available, L2A, L2B, L3A, L3B

***Note:*** *Maximum wire run length for a single loop is 4,750 feet.*

***Note:*** *3400 and 3400A support up to 32 Call Boxes, 3400-64A supports up to 64 Call Boxes, and 3400-128 supports up to 128 Call Boxes; these Call Boxes can be distributed across available loops in any configuration.*

**13. Run the Return Cable to the BOSS Unit (Class A Wiring Only: #3400A, #3400-64A)**
Run an 18/4 cable from the last Call Box in the loop back to the BOSS unit. This step applies only to Class A wiring and is supported only on BOSS models 3400A and 3400-64A.
***Note:*** *Maximum cable length from the last Call Box to the BOSS is 900 feet.*

**14. Prepare the Cable Ends (Class A Wiring Only: #3400A, #3400-64A)**
On both ends of the 18/4 cable, strip back and expose 1/4" of wire on the individual conductors.

**15. Route the Cable from the Call Boxes (Class A Wiring Only: #3400A, #3400-64A)**
Feed the cable through the knockouts in the Call Box opened during the Call Box installation.

**16. Terminate the Wires (Class A Wiring Only: #3400A, #3400-64A)**
a. Screw the 4 wires from the 18/4 cable into the provided 4-pin loop connector, following the wiring scheme in the diagram in step 5.
b. Ensure each wire is fully seated into the connector and the screw terminals are securely tightened down before moving on.
c. Repeat for both ends of the cable.

**17. Plug in the Connectors (Class A Wiring Only: #3400A, #3400-64A)**
a. Plug the 4-pin loop connector into the open green terminal port on the last Call Box.
b. Then connect the other end, located at the BOSS controller, to the second loop port from the same loop card used for this loop.

***Note:*** *Be sure to match the loop ports correctly: L2A connects with L2B, and L3A connects with L3B.*

**18. Secure the Call Box Faceplate**s
Once all Call Boxes are connected, use the included screws and Torx bit to mount each Call Box faceplate to its back box.

## Dedicated Phone Line Wiring

### 1. Connect the Phone Line

Connect the analog phone line or equivalent connection (cable modem, VoIP gateway, or cellular device) to the 2-pin screw terminal connector. Then, connect it to the External Line 1 connection.

***Note:*** *The phone line input is not polarity sensitive.*
***Note:*** *If using an external phone line with the system, it is recommended the line is verified and functional before connecting to the system. The phone line should have voltage, as well as dial tone.*
***Note:*** *"Ring-down" style phone lines cannot be used with this system.*

### 2. Connecting a Second Line (Available with BOSS Units: #3400-128, #3400-64A)

If using a 3400-128 or 3400-64A and you want to use two external lines, repeat step 1 using the second External Line connection.

## Powering on the System

### 1. Verify all Connections

Confirm that all wiring and connections are properly terminated for the complete SmartCommand system.

### 2. Secure the Terminal Connector Cover

Screw the terminal connector cover onto the front of the BOSS unit.

### 3. Power on the BOSS using the power switch on the back of the unit.

a. The Call Commander will begin the boot process.
b. While the Call Commander is booting, the BOSS should display:

- The correct number of connected Call Boxes
- One Call Commander
- The correct number of external phone lines

c. All Call Boxes should have the green power LED on the faceplate illuminated.

***Note:*** *If the information on the BOSS display is not correct upon start-up, there is likely a wiring or connection issue. Power down the system and correct the issue before resuming system setup.*

### 4. Initial Alarm and Configuration

On first power-up, the BOSS controller will activate its internal alarm due to missing configuration. You may see multiple scrolling "SYS CONFIG XX" error messages.

- To silence the alarm, press and hold the Mute button located next to the display on the front of the BOSS controller for two seconds.
- Once configuration is completed, these faults will automatically clear.

# System Programming

**1. Verify System Boot**
Before programming, verify the Call Commander has fully booted.

**2. Connect Laptop or PC to the BOSS Unit**
a. Use the provided USB cable to connect a laptop or PC to the BOSS Unit.
b. Plug the USB-B side of the cable into the USB-B port on the BOSS located to the left of the display.
c. Plug the USB-A side of the cable into any open USB port on the laptop or PC.

**3. Insert the USB Flash Drive**
Plug the provided USB flash drive into any open USB port on the laptop/PC.

**4. Launch the Configuration Software**
Open the Configuration Software by double-clicking the file on the flash drive.

**5. Log into the Software**
Once the Configuration Software has opened, log into it using the following credentials:
• Username: admin
• Password: password

**6. Quick Start & Connection to SmartCommand System**
a. After logging in, the Quick Start screen will appear. Review the overview and click Begin.
b. Click Connect to link the software to the BOSS unit. The connection may take a few minutes to complete.
c. Once connected, the Configurator should show the correct number of Call Boxes, Call Commanders, and external phone lines.

***Note:*** *If configuration software shows incorrect information, there is likely a wiring or connection issue. Please exit the configuration software, power down the system, and verify all the wiring and connections before resuming setup of system.*

**7. Program General System Information**
a. Click Configuration in the left-hand menu.
b. The app will automatically go to the General Information menu and System Information tab.
c. Click Edit Device, type in the connected number of Call Boxes, Call Commanders, and phone lines, then click Finish Edit.
d. A box will pop up asking you to confirm the information just entered.

***Note:*** *If the entered values do not match the BOSS display, return to Edit Device and correct them. Mismatched data will trigger a fault and sound the internal alarm.*

**8. Program Address Information**

a. Click Address Information and then click Edit Device.

b. Enter the address where the system is installed, then click Finish Edit.

***Note:*** *This address will be used in the outbound message when calling off-site.*

**9. Program Telephone Information**

a. Click Telephone Information, then Edit Device.

b. Enter up to two outbound phone numbers that the system will call out to if not answered at the Call Commander.

c. At Ring Time set the time (in seconds) for how long the Call Boxes will ring at the Call Commander before dialing out.

d. If you are not using a location message, click Finish Edit. If you are using a location message, proceed to step 11.

***Note:*** *If two numbers are programmed, the system will ring the first number for 30 seconds before dialing the second number if the call is unanswered.*
***Note:*** *If the system only needs to ring at the Call Commander, set Ring Time to "0".*
***Note:*** *The Call Commander will continue to ring until the call is answered, joined at the Call Commander or hung-up by the external line.*

**10. Program Location Message Setting (Optional)**

a. If using a location message, stay in the Telephone Information tab.

b. Click the drop-down menu next to Outbound Message Replay to select if the location message will play once, twice, or continuous.

c. Click Finish Edit.

***Note:*** *The continuous option is recommended, especially for call centers with long wait times. The message will loop until the answering party presses any key.*

**11. Configure Call Boxes**

a. Click Call Boxes in the Configuration menu.

b. Select the first Call Box listed, click Edit Device, and enter its location or desired Call Box name in the Location field (maximum 16 characters).

c. Click Finish Edit.

d. Repeat for all Call Boxes until all show Set under status.

***Note:*** *The system will use this information at the Call Commander as well as the outbound message if calling off site.*

**12. Program Outbound Message (Optional)**

If your system will be calling off-site or to an in-building location other than the Call Commander, follow the steps below. Skip to the next step if calls only ring to the Call Commander.

a. Click the Outbound Message in the left-hand menu.
b. Use the drop-down next to Message Voice to select either a male or female voice.
c. In the message table, check the boxes next to all call stations that require a message uploaded.
   ***Note:*** *If uploading messages for the first time, make sure the first six boxes are checked for address information and operating instructions. Failure to do so may result in delays or an inability to answer an emergency call.*
d. To hear an audio sample of each line, click Test.
e. If the pronunciation of the text needs to be modified:
   • Click on the Call Box that needs to be modified.
   • Enter correct text under Update Audio.
   • Click Test.
   • Use phonetic spelling if needed for clarity.
   • Click Generate New to save the updated message.
   • Repeat for each Call Box as necessary.

***Note:*** *Do NOT put any special characters in the Update Audio field. Only standard letters are supported.*

f. After finalizing all Call Box messages and adjusting audio if necessary, click the Upload button.
   • Uploading will take roughly two minutes per message.
   • Wait until all messages upload before exiting the message tab.

**13. Class A/B Configuration (Only Applicable to Systems with BOSS Unit 3400A, 3400-64A)**

a. Click on System Loop Class configuration.
b. For each loop, click the drop-down next to “LXA and LXB Class Configuration” and select Class A.
c. Click Finish Edit.

***Note:*** *Although the configuration is saved immediately, for the loop to start operating in the desired class, the system needs to be power cycled, as warned by the Configuration Software.*
***Note:*** *All loops are set as Class B by default. To enable Class A loops, the system must be configured with the Configuration Software.*

**14. Close Configuration Software**

a. Once all configuration is complete, close the Configuration Software before testing by clicking the “X” / Close icon in the top right corner.
b. Power cycle the system by turning off the power switch.
c. If any 3100 Battery Backup Units are installed, these should be switched off to complete the power cycle. This is done by removing the cover in the 3100 and pressing the rocker button inside.

# Optional Programming

## System Time

**1. Launch the Configuration Software**

Open the Configuration Software following steps 1-6 in the System Programming section.

**2. Program System Time**

a. Click Settings located in the bottom left corner.
b. Next to time, the current system information will be displayed.
c. Click Sync Time. This will sync the system time with the PC.

***Note:*** *Ensure time on the PC is correct before syncing with the system.*

## System Fault

**1. Launch the Configuration Software**

Open the Configuration Software following steps 1-6 in the System Programming section.

**2. Program System Fault**

a. In the General Information tab under the Configuration menu there is the option for enabling power and battery monitoring on the system. By default this feature is disabled.
b. To enable and for more information about fault monitoring, see “Power Failure and Battery Fault Monitoring”

## Factory Reset

Performing a factory reset will erase all configuration settings and return the system to its original factory defaults. To perform a reset:

**1. Launch the Configuration Software**

Open the Configuration Software following steps 1-6 in the System Programming section.

**2. Initiate the Reset**

It is recommended to download the Call Box information before a factory reset.

a. Click Settings in the bottom left corner.
b. Click the Factory Reset button.
c. When the pop-up appears asking “Are you sure you want to perform a factory reset?” click Yes.
d. The BOSS controller and system will power down and reboot. Wait until the system has fully booted before reconfiguring it.

***Note:*** *It is recommended to close and restart the Configuration Software after performing a reset.*

# Call Commander Operating Instructions

In accordance with NFPA 72, the Call Commander can assign a call as “Urgent” or “Not Urgent”. Calls tagged as “Urgent” have the highest prioritization after any unanswered calls. Calls are grouped within the call queue in the following order: not yet handled, urgent, non-urgent. Within each of those three groupings, calls are listed in the order in which they were placed. A call from a Call Box tagged as urgent would therefore only appear at the top of the queue if all other calls still in the queue were from Call Boxes tagged as non-urgent.

## Answering the Call Commander

**1. Answering an Incoming Call**

When the Call Commander is ringing, you can answer the highlighted call by either:

- Lifting the handset
- Pressing the “Select” button
- Pressing the “Hands-Free” button

You are now in a live call with the Call Box, supporting two-way communication.

**2. Managing Multiple Incoming Calls**

If multiple calls are coming in:

a. Press the Hold button to place the current call on hold.
b. Use the Scroll Up or Scroll Down buttons to navigate to the desired incoming call.
c. Press the Select button to answer.

You are now in a live call with the Call Box. Repeat this process for each additional incoming call.

**3. Ending the Call**

To hang up:

a. Press the “Disconnect Internal” button.
b. Hang up the handset.

**4. Assigning Call Priority After Disconnect**

After disconnecting the call:

a. Use the Scroll Up or Scroll Down button to assign the call as “Urgent” or “Not Urgent”.
b. Press the “Select” button.
c. Repeat this step for each call.

***Note:*** *In emergency situations, it is recommended to assign high-traffic areas as Urgent.*

**5. Repeat Until all Calls are Handled**

Repeat the steps above until all calls have been answered and, if used, the handset has been hung up.

## Joining a Call Already in Progress from the Call Commander

**1. Take Control of the Call**
Lift handset or press “Hands Free” button and announce you have control of the site. You are now in a live two-way call between the Call Box and the outside party. Both can hear each other, but the Call Commander maintains control, in accordance with UL 2525’s definition of a three-way call.

**2. Disconnect the External Line**
After receiving acknowledgment from the party on the external line, press the “Disconnect External” button to disconnect the external line.

***Note:*** *If no speech is detected from either the Call Commander or the external line, the system will automatically disconnect the external line after 10 seconds.*

**3. Assign Call Priority**
After disconnecting the internal call, use the Scroll Up or Scroll Down button to assign the call as “Urgent” or “Not Urgent”, then press the Select button. Repeat until all calls have been answered.

## Calling a Call Box from the Call Commander

**1. Press the “Directory” Button on the Call Commander to Open the Directory**

**2. Select the Call Box**

a. Scroll to the desired Call Box using the Scroll Up or Scroll Down buttons.

b. To initiate the call, either:
- Lift handset, then press “Select”
- Press “Select” with the handset on-hook for a hands-free call.

You are now in a live call with the Call Box, supporting two-way communication.

**3. Ending the Call**

a. To disconnect a call using the handset, hang up the handset.

b. To end a hands-free call, press “Disconnect Internal”.

**4. Press the “Directory” Button to Exit**

## Broadcast a Message to all Call Boxes using All Call Feature

**1. Initiate All Call Mode**
With the Call Commander handset hung up, press the All Call button.

**2. Record the Broadcast Message**
a. Lift the Call Commander handset and press and hold the Select button.

b. While pressing and holding the Select button, speak the desired broadcast message (maximum 10 seconds), then release the Select button.

**3. Review the Message**
To review the recorded message, press and release the Select button.

**4. Broadcast the Message**
To broadcast the message, hang up the handset and press the Select button.

**5. Message Delivery**
The message will broadcast to four Call Boxes at a time until it has been played at all Call Box locations. When the broadcast is complete, the Call Commander display will return to its home screen for normal operation.

***Note:*** *During All Call, the Call Commander cannot answer an incoming call until message broadcast is complete.*

## Call Indicators at the Call Commander

**WTG:** Call Waiting to be Answered
**ACT:** Active Call
**HLD**: Call on Hold
**EXT:** Call Box using External Line
**3WY:** Call Box in a Call with External Line and Call Commander

## Adjust Volume on a Call Commander

**1. Adjust Ringer Volume**
- When the system is idle, press the Volume button on the Call Commander.
- Each press will cycle the volume setting on the display from 0 to 3 (0 lowest, 3 highest).
- This selected volume level will be saved automatically.

**2. Adjust Handset Volume**
- While on a call, press the Volume button on the Call Commander.
- Each press will cycle the volume setting on the display from 0 to 3 (0 lowest, 3 highest).
- This selected volume level will be saved automatically.

# Power Failure and Battery Fault Monitoring

The BOSS controller has built-in external power and backup battery monitoring. To use this feature, fault monitoring must be enabled in the Configuration Software (see the “Power and Battery Fault Monitoring” section). Incoming power is routed through two independent power supply units within the BOSS unit, which in turn feed into the power supervisor board. This board also receives the Battery Level Fault and Charging Fault signals from both 3100 battery units, which are then combined into a single Battery/Charging Fault signal. Both the Battery/Charging Fault and Power Fault signals are then input into the BOSS unit, which can trigger an alarm if either condition is detected. Note that the BOSS itself cannot distinguish between a Battery Level Fault and a Charging Fault, or detect which 3100 battery unit is at fault. If either fault occurs on either battery unit, the BOSS will signal a generic Battery Fault, which can then be disambiguated using the LEDs on the 3100 battery units as described below:

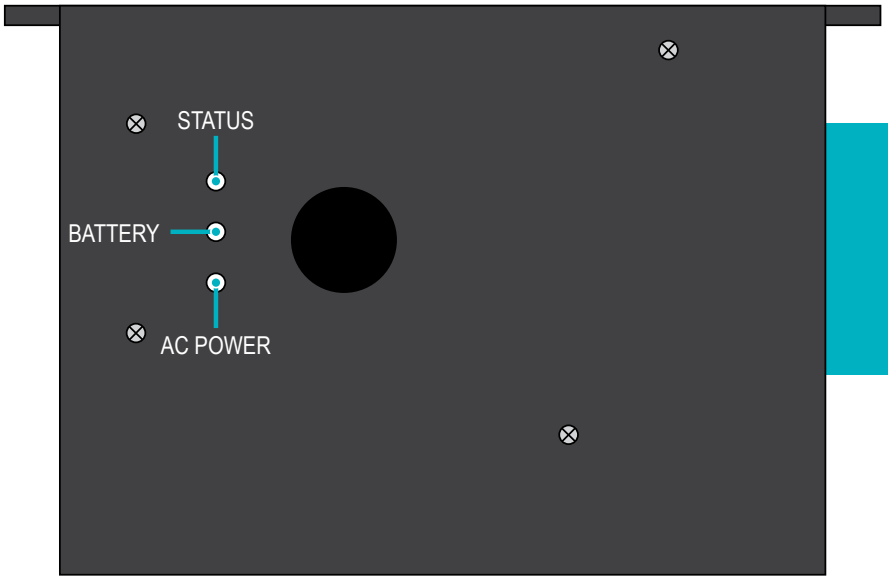



**Fig 8. LED position on the unit.**
Viewed from above, wall side on the top of the image

| State | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Status | ● | ● | ● | ● | ● | ● | ◉ | ◉ | ● |
| AC Power | ● | ● | ● | ● | ● | ● | ○ | ● | ● |
| Battery | ◉ | ● | ● | ◉ | ◉ | ● | ○ | ◉ | ◉ |

1. AC on, battery charging/balancing.
2. AC on, battery charged.
3. AC off, battery powered.
4. AC on, charger failure (not connected).
5. AC off, low battery voltage:
   a. slow Red/Green.
6. External AUX alarm active.
7. External EPO engaged.
8. Battery over current.
9. Battery error:
   a. fast Red/Green.
   b. fuse blown.
   c. cell over/under voltage.

**Grey Circle:** LED off
**Dashed Circle:** Flashing LED
**White Dashed Circle:** LED may flash Red or Green depending on current state when alarm occurred.

**Figure 9:** LED state tables. The top table shows the state number for each LED combination; the bottom table describes the status of the unit in each state. **When in fault, the System Fault Relay output will change state. This application is recommended only for use with the 3100 power supply.**

## BOSS System Monitoring Hardware Overview

1. **System Fault Relay Output:** Changes state when any fault occurs on the system.
2. **Call Box Active Call Relay Output:** Changes state if any Call Box is attempting a call.
3. **Cable Strain Relief**
4. **IEC Power Supply Input**
5. **Power Supply Fuse**


**Figure 10:** BOSS system monitoring hardware ports.

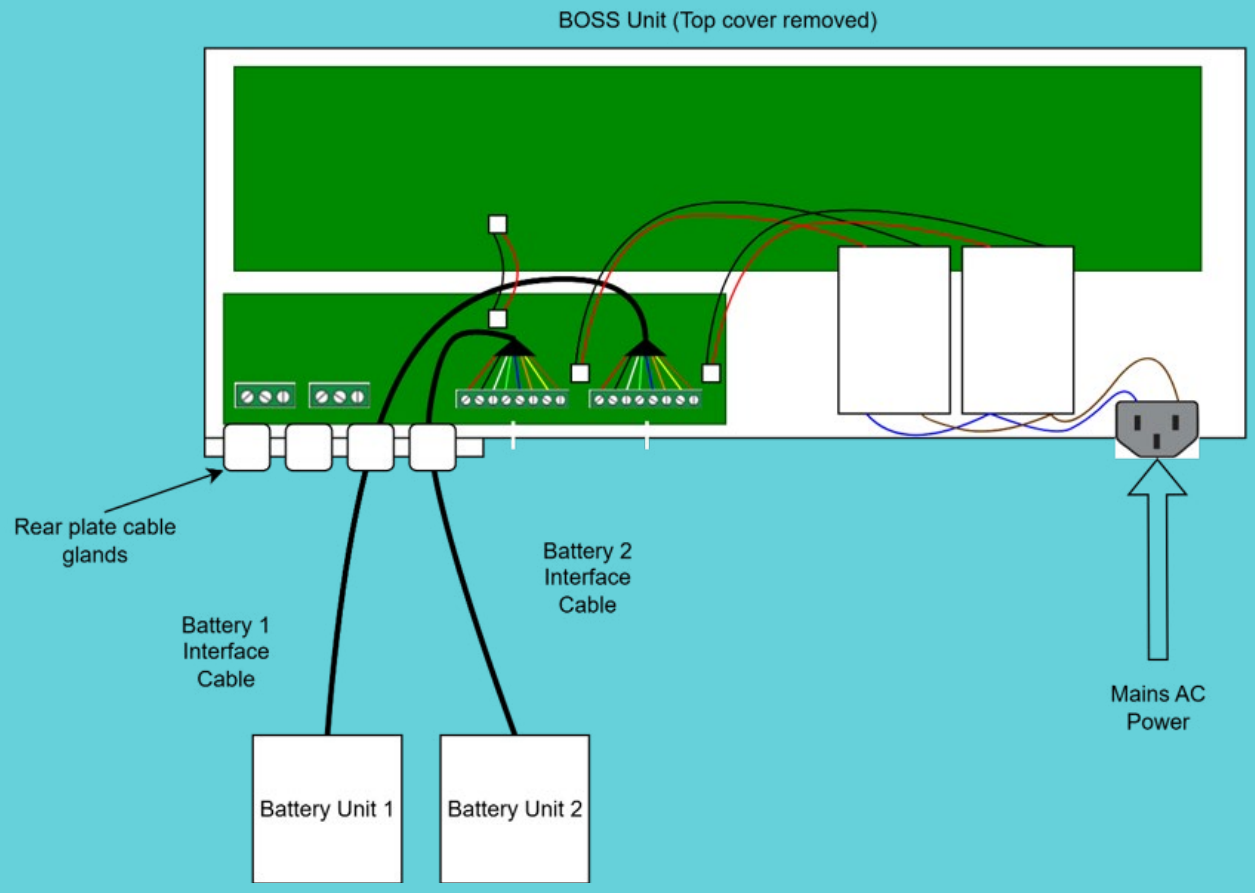



**Figure 11:** BOSS power wiring diagram. BOSS shown with top cover removed and non-power connections omitted. Internal connections are shown for reference only, as they are provided pre-connected on delivery. Only the mains AC power requires installation, along with Battery Unit cables 1 and 2 if the optional Backup Battery is required.

## Power and Battery Fault Monitoring

By default, fault monitoring of input power and battery on the system is disabled. To enable this feature, perform the following steps:

**1. Launch the Configuration Software**
Open the Configuration Software following steps 1-6 in the System Programming section.

**2. Access the Configuration Settings**
Click on the Configuration menu on the left-hand side.

**3. Open System Fault Configuration**
In the General Information tab, click on System Fault Config.

**4. Edit Fault Monitoring Settings**
a. Click Edit Device.
b. Click the drop-down next to Supply Fault Input and select Active Low.
c. Click Finish Edit to save.

***Note:*** *Do not use the Active High setting, as it will trip when voltage is applied instead of when voltage is lost.*

**5. Close Configuration Software**
a. Once all configuration is complete, close the Configuration Software before testing by clicking the “X” / Close icon in the top right corner.
b. Power cycle the system by turning off the power switch.
c. If any 3100 Battery Backup Units are installed, these should be switched off to complete the power cycle. This is done by removing the cover in the 3100 and pressing the rocker button inside.

## Testing

**1. Power Loss**
a. Unplug 120 VAC incoming power from the 3100 power supply.
b. Within 90 seconds, the BOSS display should show a Supply Fault Input fault.
c. The system fault relay output should change state.

**2. Battery Loss**
a. Disconnect the battery from the 3100 power supply.
b. When the battery drops below 5 VDC, the BOSS display should show Battery Fault within 90 seconds.
c. The fault relay output should change state.

***Note:*** *If the battery on the 3100 power supply is fully charged, it may take up to 24 hours for the battery to drop below 5 VDC.*

## System Fault Notifications

As part of the built-in system monitoring, the BOSS controller will report a fault if certain monitored error conditions occur. When a fault occurs, the built-in sounder on the BOSS controller will sound and a fault code will appear on the BOSS display. If there are multiple faults, the display will scroll between them.

**Explanation of System Faults**

- **System Fault:** Error signal detected on the alarm input monitoring the backup battery.
- **Power Supply:** Error signal detected on the alarm input monitoring the power supply.
- **Ground Fault:** There is a grounding fault in the installation wiring.
- **Sys Config CC:** The number of Call Commanders connected does not match the configuration set in the Configuration Software.
- **Sys Config CB:** The number of Call Boxes connected does not match the configuration set in the Configuration Software.
- **Sys Config EL:** The number of external lines connected does not match the configuration set in the Configuration Software.
- **Loc:XXX CRC High:** Messaging errors detected on loop XXX, indicative of multiple possible connection issues on the loop.
- **Loc:XXX CRC Low:** Messaging errors detected on loop XXX, indicative of possible connection issues on the loop.
- **Loc:XXX a-x-b:** Loop break detected on loop XXX.
- **Loc:XXX Amps Hi:** Over-current event on loop XXX.
- **Loc:XXX Volts Hi:** Over-voltage event on loop XXX.
- **Loc:XXX Volts Lo:** Under-voltage event on loop XXX.
- **Loc:XXX Ext. Line:** Fault on external phone line XXX.
- **ABRK:** XX a-x-b: Loop break detected on Class A loop XX between a and b, 00 is used to represent both loop ports. Devices are counted from Port A to Port B (Class A only).
- **Setup LX:** Incorrect setup for Class B configured Loop X, which has resulted in disabling of the loops.
- **Setup LX a-x-b:** Incorrect setup for Class A configured loop LX. Devices are counted from Port A to Port B (Class A only).
- **Sys Discovery:** System has failed to successfully conclude the discovery of the loop devices.
- **Mic Fault:** The Call Commander has detected a fault on one of its microphones.

***Note:*** *To silence the sounder on the BOSS controller press and hold the Mute button to the left of the display for two seconds. This will silence the alarm for 24 hours or until the fault is resolved.*

# Firmware Updates

**WARNING:** Firmware updates should not be attempted when the system is in a fault condition. Under the presence of any loop errors, listed in System Fault Notifications section, the updates are not expected to complete with success. First, any system faults should be cleared before attempting firmware updates. A Class A-enabled system operating in Class B fallback is considered to be in a fault condition, and should be returned to Class A operation before attempting a firmware update.

Firmware updates can be performed on Call Boxes and Call Commanders that are on firmware 1.3.0 or a later version by using the Configuration Software:

**1. Launch the Configuration Software**
Open the Configuration Software following steps 1-6 in the System Programming section.

**2. Open the Firmware Updates Menu**
Click on the Firmware Updates in the left-hand menu.

**3. Enable Firmware Update Access**
Input the passcode 8055 into the field and click Enable.

**4. Select Device**
Click the drop-down next to Choose Target Device Type and select Call Box or Call Commander, based on the intended update.

**5. Upload New Firmware**

a. Click the Upload New Firmware box.
b. In the launched Firmware Upload pop-up, click on the Select File box next to Choose SREC file.
***Note:*** *The type of file chosen must be SREC.*
c. Browse to the location where the firmware file is saved, select the file and click Open to load it.
***Note:*** *Up to 2 firmware versions can be stored per device type.*
d. If you already have 2 firmware versions uploaded, select the firmware version to be overwritten from the drop-down menu that appears below the text warning that the limit has been reached.
e. Click Upload. The upload may take a few minutes depending on the size of the firmware file.
f. Once the upload is complete as indicated by the tick icon, close the pop-up. Click the drop-down next to Choose Firmware. Select the newly uploaded firmware from the menu.

**6. Update Devices**

a. To initiate the update process on all the devices of the chosen type, click Update All Devices.

b. To update a single device, click the drop-down next to Choose device to update and select the target device. If the device has been configured, its configured name will be shown; otherwise, its UID will be displayed. Click Update Selected Device.

**7. Close Configuration Software**

a. Once all configuration is complete, close the Configuration Software before testing by clicking the “X” / Close icon in the top right corner.

b. Power cycle the system by turning off the power switch.

c. If any 3100 Battery Backup Units are installed, these should be switched off to complete the power cycle. This is done by removing the cover in the 3100 and pressing the rocker button inside.

***Note:*** *If the update completes successfully, the system will reflect the new firmware version.*

***Note:*** *If an update fails with the message “Firmware update not performed as firmware matched existing firmware” despite uploading a new version, try the following:*

*a. Close the Configuration Software.*

*b. Reconnect to the system.*

*c. Relaunch the Firmware Updates menu.*

# Troubleshooting

| Problem | Possible Cause & Solutions |
|---|---|
| **Can't connect to the Configuration Software** | • Make sure the Call Commander is fully booted before attempting to open the configuration software.<br>• Verify the USB cable is plugged into a working USB port on the laptop or PC.<br>• Verify the USB cable is seated fully in the USB port on the BOSS controller.<br>• Close the software and power cycle the BOSS using the power switch on the back of the unit (and on the 3100 battery unit, if fitted). After the Call Commander reboots, attempt to open the configuration software again.<br>• The computer being used may not have a Virtual Com Port (VCP) driver installed. Either install a VCP driver on the PC or try a different computer. |
| **Call Commander won't power on or boot** | • Verify the Call Commander is connected to port L1A on the BOSS.<br>• Verify the Call Commander is on its own loop. The Call Commander cannot share a loop with any Call Boxes.<br>• Verify the outer pins of the wiring on the 4-pin loop connector. The pins should have 44-48 VDC on pins 1 and 4.<br>• Verify at least one Call Box is connected to the BOSS controller. The Call Commander will not boot without a Call Box connected.<br>• If L1 on BOSS is configured as Class A, check correct Class A wiring and ensure that the Call Commander is not connected to port L1B as a Class B loop. (Class A only) |
| **Call Boxes won't call out to external line** | • Verify the phone line is connected to PSTN 1 on the BOSS.<br>• Verify the phone line has 48-52 VDC on it as well as dial tone.<br>• Verify an analog phone can be connected to the line and can successfully place a call out to the number being entered into the configuration software.<br>• Verify the connected phone line doesn't require an access digit such as an 8 or 9 to dial out. |
| **BOSS not displaying the correct amount of Call Boxes after booting** | • Verify the Call Boxes have 44-48 VDC on pins 1 and 4 of the terminal connector.<br>• Verify the pin-out of the 4-pin terminal connector on both ends.<br>• Verify the wires are stripped back and fully seated in connectors.<br>• Go to the last Call Box in the loop that the BOSS has recognized and verify the connector and the pin-out to the rest of the loop. |
| **System has a Ground Fault Error Code** | • Verify that no more than 32 Call Boxes are connected to a single loop.<br>• Identify which Call Box is causing the fault by looking for the first Call Box in the loop without its power LED illuminated. Try swapping that Call Box with a known good unit to see whether the issue follows the Call Box.<br>• Verify the wires in the terminal connector are not touching or broken off inside of connector.<br>• Verify that the wires going from Call Box to Call Box are truly daisy-chained, with no splices that could break the loop.<br>• If the fault remains after wiring and device checks, power-cycle the system after correcting the underlying issue and confirm that the Ground Fault code clears. |

| Problem | Possible Cause & Solutions |
|---|---|
| **Can't clear fault notification** | • Refer to the "Explanation of System Faults" list in the System Fault Notifications section to verify the fault type.<br>• If the fault is for the external line, verify the line has active dial tone, voltage, and can place a call in and out.<br>• If the fault is for a loop break, verify the wiring and pin-out between the locations listed in the fault code on the BOSS display.<br>• If fault is for over-current or under-voltage, verify the pin-out of the wiring between Call Boxes. Wiring should be connected in a daisy-chained scheme only. Wires cannot be spliced into a loop.<br>• Configuration faults will be due to a mismatch of the information entered into the configuration software and what is connected to the BOSS controller.<br>• Verify no more than 32 Call Boxes are connected to a single loop.<br>• See additional help with fault codes within this troubleshooting section.<br>• Most faults will require a power cycle on the system to correct, after they are fixed (Class A only). |
| **Call Box has no power LED** | • Verify the Call Boxes are only connected to L2A, L2B, L3A, or L3B. See figure 7 for a detailed connection diagram.<br>• Verify the pin-out of the 4-pin terminal connector. See Figure 6 for the 4-pin connector wiring scheme.<br>• Verify the wires are seated into the terminal connector properly and secured firmly within the screw terminals.<br>• Verify the wire in the terminal connector is stripped back with minimal amounts of the raw wire conductor visible after securing.<br>• Verify maximum loop length isn't being exceeded. A single loop cannot be more than 4,750 ft.<br>• Verify the first Call Box is within 900 ft. of the BOSS controller.<br>• Verify the Call Boxes have 44-48 VDC on pins 1 and 4 of the terminal connector. |
| **System has a loop setup error code.** | • If the code is in format "Setup LX a-x-b", check if loop X is intended to be configured as Class A. If this is the intention, then there is a break in the Class A wiring. Go to the Call Box "a" and verify the connector and the pin-out to the rest of the loop. Verify the loop starts from port LXA and is connected to LXB.<br>• If the code is "Setup LX", verify there is no continuous loop from port LXA to LXB.<br>• Verify no more than 32 Call Boxes are connected to a single loop, regardless of the loop class configuration. |

# Specifications

### Connections
Power | Public Switched Telephone Network (PSTN) | Battery Management System (BMS) Relay In/Out | USB Type B

### Power Requirements/Protection
120 V, 2.5 A | Short Circuit, Overload, Over-Voltage

### Supervision
Primary Power | Secondary Power
Telephone Line | Loop Monitoring

### Operating Temperature
**Call Boxes:**
-13 °F to 131 °F (-25°C to 55 °C)
**Call Commander:**
23 °F to 131 °F (-5 °C to 55 °C)
**BOSS:**
23 °F to 131 °F (-5 °C to 55 °C)

***Note:*** *For Indoor Use Only*

### Product Dimensions (W x H x D)
**BOSS:** 17.20” x 12.59” x 3.46” (437 x 320 x 88mm)
**Call Commander:** 7.95” x 9.84” x 2.91” (202 x 250 x 74mm)
**Surface Mount Call Box:**
4.72” x 7.87” x 1.85” (120 x 200 x 47mm)
**Flush Mount Call Box:**
5.11” x 8.66” x 3.62” (130 x 220 x 92mm)

### Certifications
UL 2525

### FCC Disclaimer
This device complies with Part 68 and Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.
   FCC Reg. No: AW7AL01A8055
   Ringer Equiv. 01A

### Telco Voltage
48-52 VDC with at least 25 mA of loop current and valid dial tone. Line must be dedicated for the system. Line must have an open-loop or CPC disconnect signal enabled.

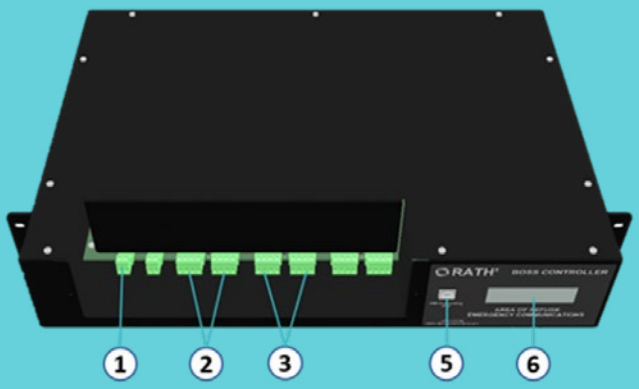
### Safety
- Do not expose to liquids or excessive humidity.
- Do not expose any of the components to fire.
- Do not try to modify any of the equipment.
- Do not use the equipment in hazardous areas.

### Maintenance
It is recommended for the system to be tested monthly to verify operation. If Call Boxes are in need of cleaning, use a soft dry cloth.
It is not recommended to use solvent or spray cleaners around the speaker and microphone holes.

# Appendix A: BOSS Detail and Mounting

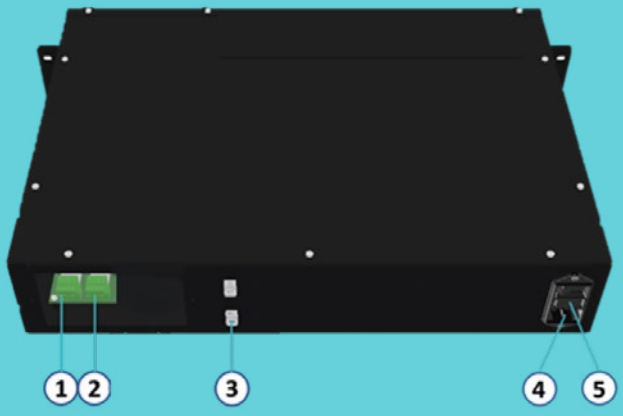
### BOSS Front

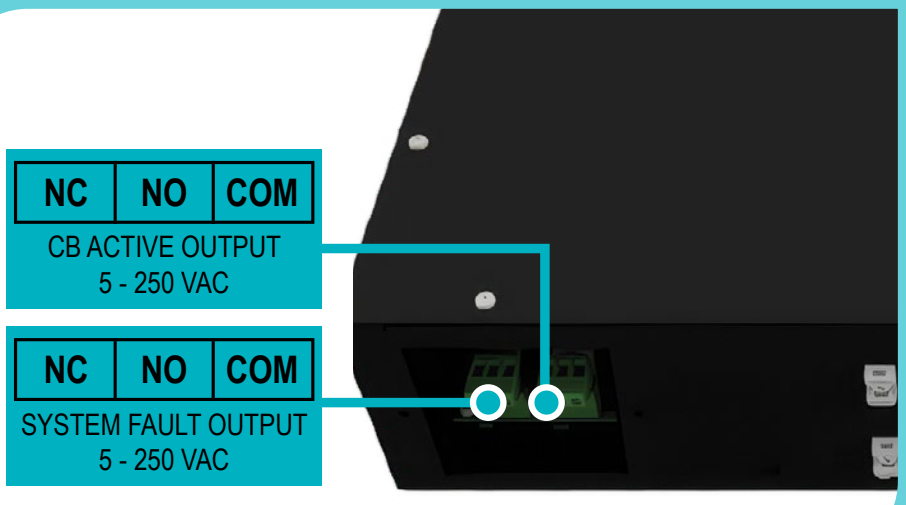
1. PSTN Lines
2. Call Commander I/O
3. Call Box Loop 1 I/O
4. Call Box Loop 2 I/O
5. USB Type B Programming Input
6. BOSS System Status Display



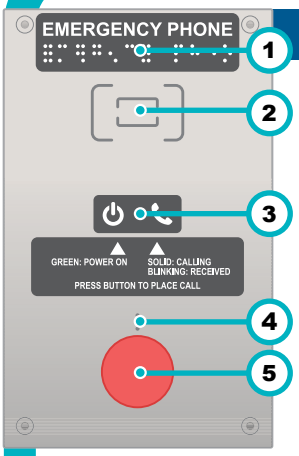

### BOSS Rear

1. System Fault Relay Output
2. Call Box Pressed Relay Output
3. Cable Strain Relief Points
4. IEC Power Supply Input (120 VAC)
5. Power Supply Fuse Compartment



# Appendix B: Call Box Detail and Mounting

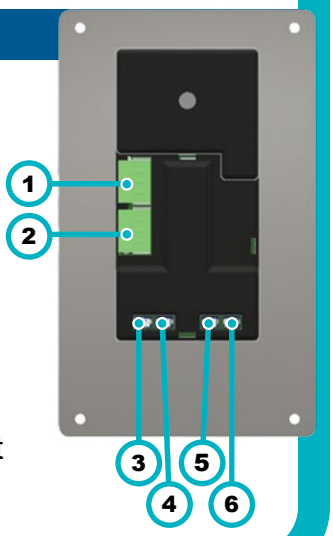



## Call Box Front

1. Braille/Emergency Phone Label
2. Speaker Grille
3. Emergency Call Pictograms
4. Microphone
5. Emergency Call Button

## Call Box Rear

1. Loop Input/ Output 1
2. Loop Input/ Output 2
3. External LED
4. External Alarm Button
5. 24 VDC Input
6. 24 VDC Output




### Flush Mount

The Flush Mount Call Box is designed to be mounted onto a standard 4-gang wall box.

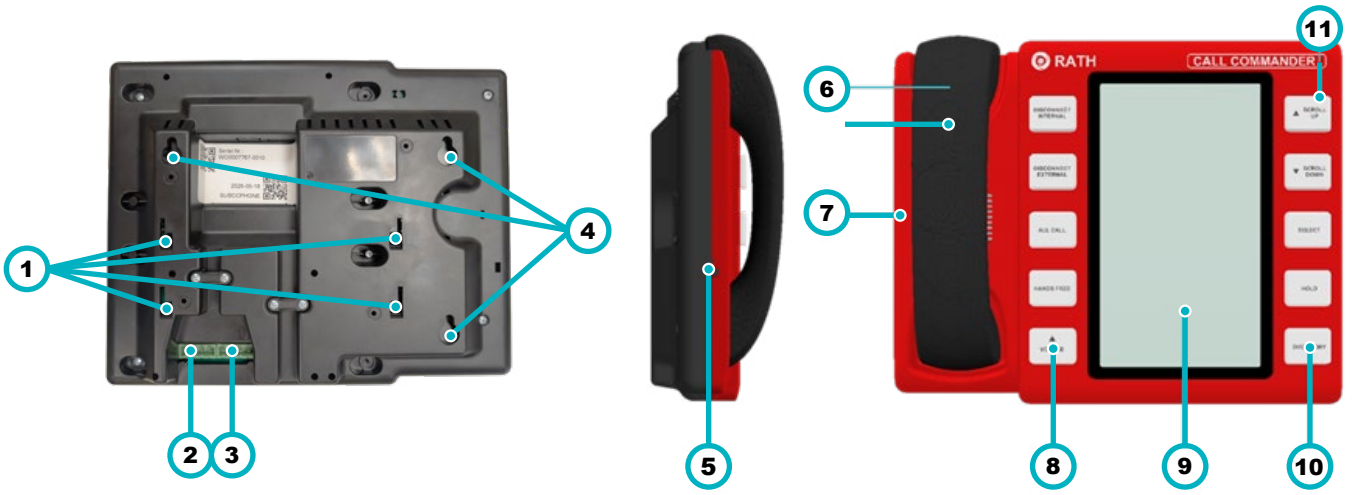
### Surface Mount

The Surface Mount Call Box can be fitted to any wall using the 4 keyhole slots in the metal back box. Cable entry points are on the top, bottom, and rear of the enclosure.

### Weatherproof

The Weatherproof Call Box can be easily drilled and mounted onto any surface. Careful attention must be taken to any new fixing holes, to ensure the enclosure doesn't lose its water resistance.

# Appendix C: Call Commander Detail and Mounting

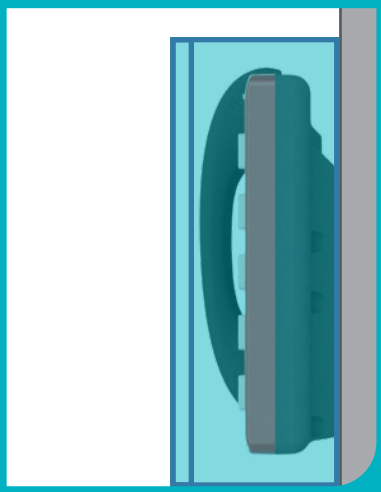



**Call Commander (Rear | Side | Front)**

1. Desk Stand Mounting Clips
2. Call Commander Input\Output 1
3. Call Commander Input\Output 2
4. Wall Mounting Keyhole Slots
5. Handset Plug
6. Phone Handset & Hook Switch
7. Hands-Free Speaker
8. Call Management Buttons
9. 7-Inch Display
10. Software Navigation Buttons
11. Hands-Free Microphone

**Wall Installation**

**Cabinet Wall Installation**



**Desk Stand Installation**

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