



8-Zone Staff Alert Panel

Installation Guide





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Warnings / Cautions / Compliance

It is important for your facility to implement and enforce the following WARNINGS and CAUTIONS in order to keep all equipment functioning properly. Disregarding the information and instructions in this document is considered abnormal use and may result in injury or system failure.

Warnings



ACCESSORIES (SUPPLIES)—To ensure resident safety and proper operation of equipment, use only parts and accessories manufactured or recommended by RF Technologies, Inc. Parts and accessories not manufactured or recommended by RF Technologies, Inc. may not meet the requirements of the applicable safety and performance standards.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

EXPLOSION HAZARD—These devices should not be used in the presence of flammable gas mixtures. It should also not be used in oxygen enriched atmospheres.

INSTALLATION AND CONFIGURATION—It is the responsibility of the facility to follow the installation instructions carefully, as outlined in the applicable system guides, and to use the components and supplies specified by RF Technologies, Inc. for all installations.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

INSTRUCTIONS FOR SET UP AND USE—It is the responsibility of the facility to follow the instructions for set up and use carefully, as outlined in this manual, and to use the components and supplies specified by RF Technologies, Inc. for set up and use. Do not attempt to use extension cords or other equipment not supplied by RF Technologies, Inc.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

STATIC DISCHARGE—Do not touch the conductor portion of any conductor or port. Damage to the device may result.

SYSTEM WIRING—All permanent supply connections must be done in accordance with National Electric Code, NFPA 70.

SYSTEM INSPECTION—It is the responsibility of the facility to establish and facilitate a regular inspection schedule for your system. RF Technologies, Inc. recommends quarterly inspections of your system for safety and performance by a qualified RF Technologies, Inc. representative.

To arrange for a quarterly inspection by RF Technologies, Inc., call our Technical Support Department at (800)-669-9946 or (262) 790-1771.

Failure to provide regular inspection of these products may result in equipment and/or system failure.

SYSTEM MAINTENANCE AND TESTING—It is the responsibility of the facility to establish and facilitate a regular maintenance schedule for your system, as outlined in the applicable system guides. This includes regular inspection, testing, and cleaning. RF Technologies, Inc. recommends monthly maintenance and testing of your system. It is also recommended that your facility keep records of maintenance and test completions.

Failure to provide regular maintenance and testing of these products may result in equipment and/or system failure.

USER TRAINING—Only users who have received adequate training on the use of the system, as outlined in this manual, should use the system. It is the responsibility of the facility to ensure all users have been trained.

Failure to adequately train employees may cause system failure due to user error. In addition, incorrect use of the equipment may also result in system failure.

Cautions



WORN OR DAMAGED PARTS—If the control unit pads or cables are worn or damaged, you must have the product serviced. For more information, see the section entitled “Service and Return.”

DISPOSAL—At the end of their service life the products described in this manual, as well as accessories (i.e. lithium batteries, banding material, disposable pads, etc.), must be disposed of in compliance with all applicable federal, state and local guidelines regulating the disposal of products containing potential environmental contaminants. Dispose of the packaging material by observing the applicable waste control regulations.

RESIDENT GENERATED ALARMS—Do not rely exclusively on resident generated alarms for resident care and safety. The alarm function of equipment in the possession of residents must be verified periodically and regular resident surveillance is recommended.

RESIDENT MONITORING—The most reliable method of resident monitoring combines close personal surveillance with correct operation of monitoring equipment. It is the responsibility of the facility to periodically check on residents in possession of RF Technologies, Inc.'s equipment (i.e. Pendants, Pull Cords, Control Units) to mitigate risk of inappropriate use of equipment or strangulation and stumbling hazards from cables and cords.

PRODUCT WARRANTIES—Failure to follow the Warnings and Cautions in this guide voids any and all Product Warranties.

Bio- Incompatibility Notice

Do not use Pendants with people that have sensitivities or allergies to device materials. The device materials include Acrylonitrile butadiene styrene (ABS), Silicon, Rubber, and Neoprene.



Conforms to **UL Std. 294**

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Preface

Overview

This guide provides detailed information about installing a component of the 9450 System, wiring, testing, and component specifications for the 8-Zone Staff Alert Panel.

The 9450 8-Zone Staff Alert Panel is a component of the Exit Alarm System which is part of the overall 9450 System. The 9450 System monitors doors, elevators, hallways, and stairwells, to assist staff in monitoring patients in a facility. A small transmitter is placed on the ankle or the wrist of a patient. If a transmitter is detected in an Exit Alarm Zone, an alarm sounds at the exit. Depending on which equipment is installed, the 9450 System can automatically lock doors, deactivate elevators, and activate remote cameras.

In addition, if the 9450 System in your facility includes computers, an alarm also sounds at a central server and its network of client workstations. The central server and clients also identify which patient sounded the alarm and the exit where the alarm occurred.

The 9450 System Cut Band Feature Option provides further security by alerting staff if a transmitter band is tampered with or cut. The Staff Alert Panel provides a redundant alarm notification if a band is cut, a door is breached, or if the system is tampered with.



NOTE: This guide focuses on the local installation of the Staff Alert Panel.

For information on installing the 9450 system or to integrate the Staff Alert Panel into a computer based system, refer to the *Ethernet and 9450 Device Network Installation Guide* (0510-1013).



WARNING: The 9450 System is designed and intended to work in conjunction with a facility's overall patient security program, including reasonable operating policies and procedures. The 9450 System, by itself, cannot prevent the mismatch, abduction or elopement of patients.

Intended Audience

The 9450 8-Zone Staff Alert Panel Installation Guide is intended for those who install and configure the 9450 System.

Additional Documentation

Documentation for your system is available in Portable Document Format (PDF) on the System Documentation CD-ROM. Please contact your RF Technologies sales representative for replacement CD-ROMs.

Contact Information

For more information about RF Technologies, Inc. products, go to www.rft.com.

For technical support, contact the Technical Support Team at (800) 669-9946 or (262) 790-1771.

For questions or comments about the System Documentation, contact the RF Technologies Technical Publications team at techpubs@rft.com.

Product Warranty

Product Warranty information can be found on the System Documentation CD or with your original system proposal and invoice.

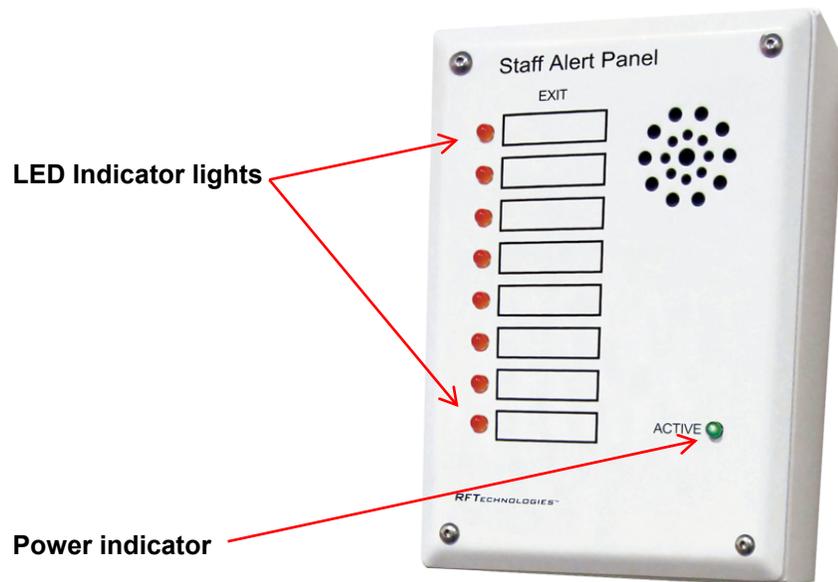
Chapter 1 – Installation

Introduction

The Staff Alert Panel receives alarm signals from touchpad exit controllers (TEC) and alarming band receivers (ABR) and indicates with a tone and a red LED that an alarm has occurred. In the space next to each red LED, you can affix a label identifying the zone or device that issued the alarm.

If your facility requires the staff alert panel to be visible, it must be located on a wall near the nurse's station, otherwise it can be located elsewhere such as a security office, or a phone operator room.

Display



When installing product, you must follow standard accepted safety practices such as wearing safety glasses.

Before cutting openings or drilling holes through walls, you must verify that you will not strike any wiring or plumbing.

Active LED

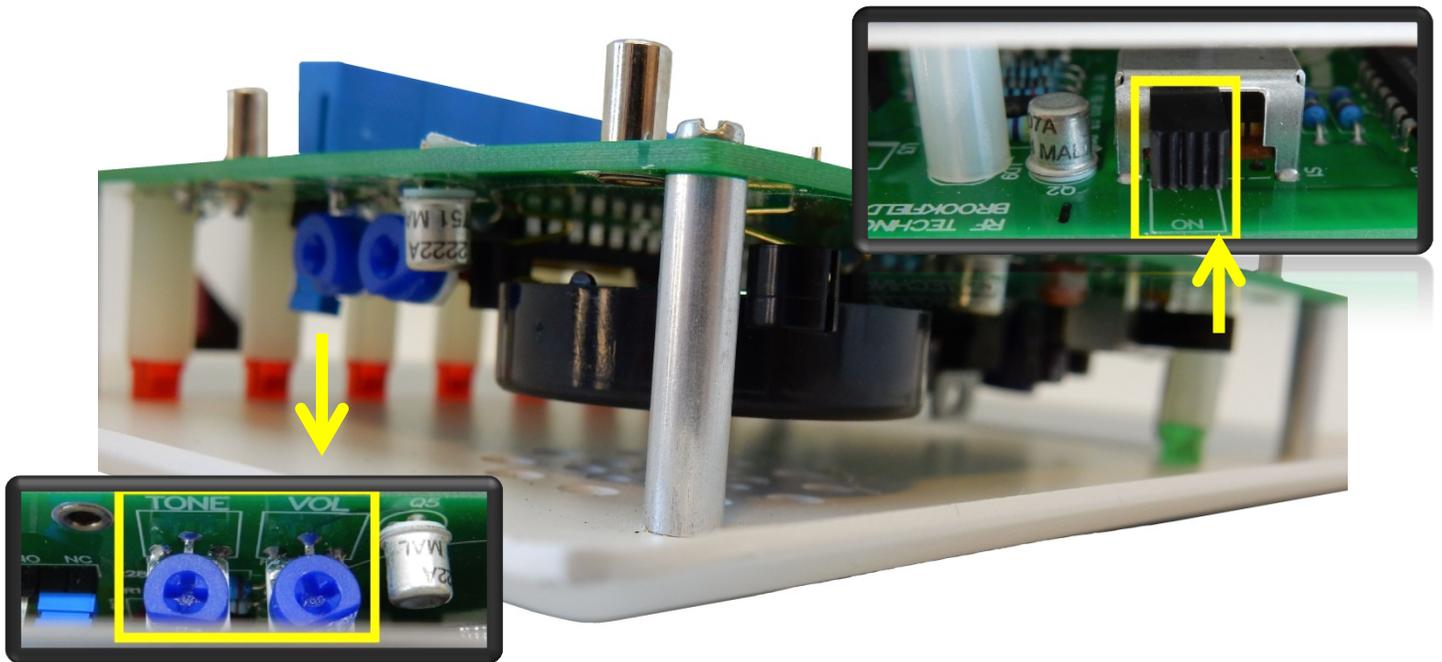
The front of the Staff Alert Panel includes a green LED marked as **ACTIVE**. This power indicator is continuously illuminated when the Staff Alert Panel is operational. The indicator flashes when any of the alarm zones are active.

Zone LED's

The front of the Staff Alert Panel includes eight red LEDs. Each LED represents one alarm zone. A Zone LED is illuminated continuously when an alarm zone is active.

Power Switch

The Staff Alert Panel must have its Power Switch set to the **ON** position. The Power Switch is located along the right edge of the circuit board.



Tone / Volume Adjustments

Along the top edge of the circuit board are two adjustment potentiometers for adjusting the volume and tone marked as **VOL** and **TONE**. The Volume Pot adjusts the output level of the panel's alarm buzzer. The Tone adjustment varies the pitch of the alarm buzzer. The alarm buzzer sounds whenever any of the alarm zone inputs become active.

Relay Output

A set of relay contacts, marked as **RELAY**, is available through a terminal block on the circuit board. The relay output contacts signal when any of the alarm zones are active. The state of the relay output contact switches from Normally Open to Closed during an alarm.

A fully configured 9450 System includes touchpad exit controller(s) and alarm band receivers/controller(s). Due to the discharge feature within the server software, alarm indications for these are different. A touchpad exit controller always signals its alarm condition on its staff alert panel relay output contacts. However, the alarming band controller or receiver only signals a cut band alarm on its staff alert relay output contacts when it is not in regular communication with the server.

Mounting

The staff alert panel can be mounted in both surface and flush mount configurations. This section provides detailed instructions about how to mount the staff alert panel in both configurations.

Surface Mount

To surface mount an 8-zone staff alert panel:

1. Determine the desired mounting location and that it is in compliance with facility standards
2. Hold the empty enclosure against the wall and use standard installation practices to position and level the enclosure, then mark out the four mounting holes at the back of the enclosure
3. Drill holes where you made the marks. If the drilled holes do not hit a stud you must use wall anchors (not included).
4. Line up the holes at the back of the enclosure with the newly drilled holes
5. Using four drywall screws, attach the empty surface-mount enclosure to the wall

Flush Mount

To flush mount an 8-zone staff alert panel:

1. Determine the desired mounting location and that it is in compliance with facility standards
2. Hold the empty enclosure against the wall and use standard installation practices to position and level the enclosure, then mark out the area around the enclosure
3. Using a drywall hole saw, cut out the area where the enclosure is to be mounted
4. You will need to create notches at the top and bottom for the clamps
5. Be sure that the area is only as big as the enclosure or the clamps will not attach securely to the wall
6. Place the empty enclosure into the opening and tighten the clamps using the provided screws

Wiring

After you mount the staff alert panel, you must connect the touchpad exit controllers and alarming band receivers to the staff alert panel.

For information on integrating the staff alert panel into a computer based system, refer to the *Ethernet and 9450 Device Network Installation Guide* (0510-1013).

Unused Zones

On the 9450 Staff Alert Panel all the alarm zones must be wired since the system is supervised, meaning, it expects each zone to have a closed loop circuit. Unused alarm zone connections must be wired from the zone terminal directly to the Common terminal.



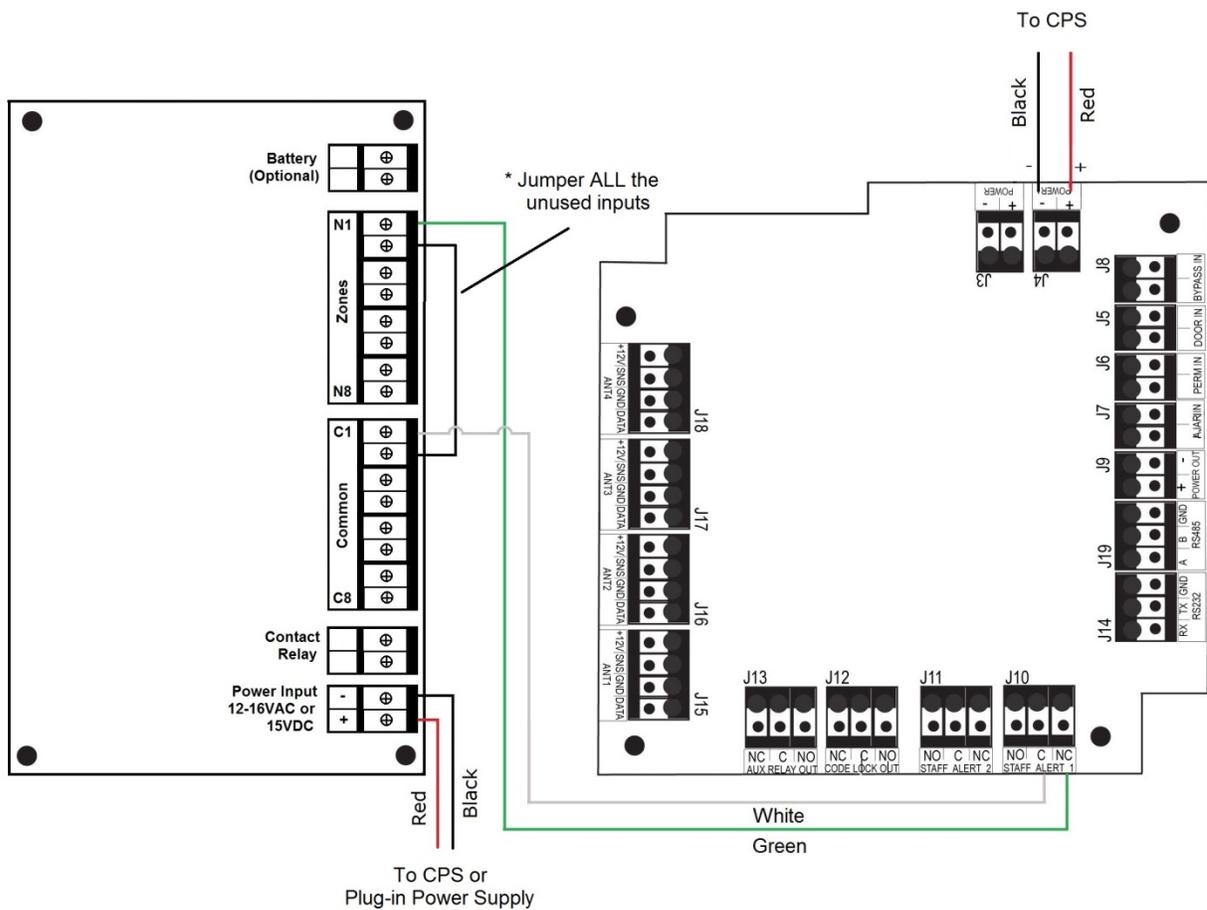
WARNING: You must verify that the 9450 system's Central Power Supply is **OFF** before wiring any system components. Failing to do this may result in equipment failure, injury, or death.

Standalone Configuration

Touchpad Exit Controller

To wire a touchpad exit controller to the staff alert panel:

1. Verify that the 9450 system's Central Power Supply is **OFF** before wiring
2. When connecting a touchpad exit controller (TEC) directly to the staff alert panel, use a single Cat5e or a single 22/4 cable
3. Connect one conductor of the wire pair to the terminal labeled **STAFF ALERT C** on the TEC and then to the appropriate **Common** terminal on the staff alert panel
4. Connect the other conductor of the wire pair to the terminal labeled **STAFF ALERT NC** on the TEC and then to the appropriate **Zone** terminal on the staff alert panel



NOTE: * All unused inputs on the staff alert panel must be jumpered to common. Any zones not jumpered to common will alarm on power up.

The **STAFF ALERT** connection is a normally closed (NC), dry contact. Loss of power to the unit will drop out the relay which will open the contact, causing an alarm condition at the Staff Alert Panel.

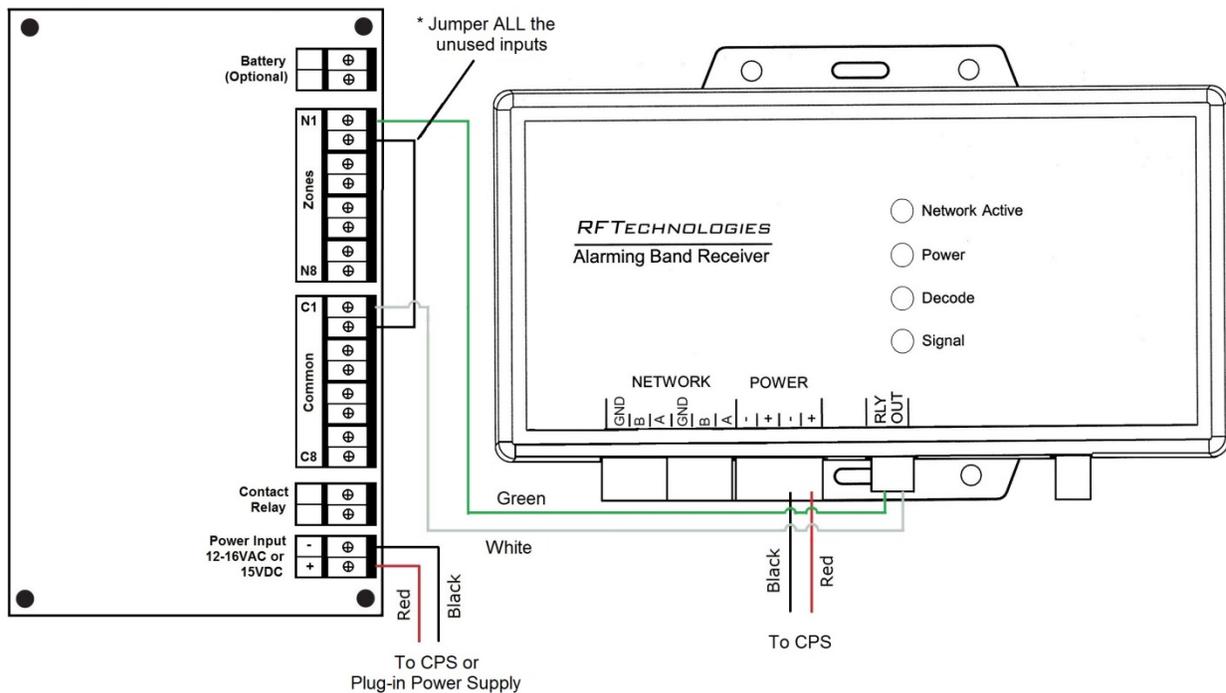
Alarming Band Receiver

To wire an alarming band receiver to the staff alert panel:

1. Verify that the 9450 system's Central Power Supply is **OFF** before wiring
2. When connecting an alarming band receiver (ABR) directly to the staff alert panel, use a single 22/4 cable
3. Connect both conductors of the wire pair to the terminal labeled **RLY OUT** on the ABR then connect one conductor to the appropriate **Zone** terminal on the staff alert panel and the other to the appropriate **Common** terminal on the staff alert panel



NOTE: The **RLY OUT** connection is a normally closed (NC), dry contact. Loss of power to the unit drops out the relay which opens the contact, causing an alarm condition at the staff alert panel.



NOTE: * All unused inputs on the staff alert panel must be jumpered to common. Any zones not jumpered to common will alarm on power up.

The **STAFF ALERT** connection is a normally closed (NC), dry contact. Loss of power to the unit will drop out the relay which will open the contact, causing an alarm condition at the staff alert panel.

Central Power Supply

To wire the staff alert panel to the central power supply:

1. Use 16AWG 2-conductor cable to connect the staff alert panel **Power** terminals to the 9450 System Central Power Supply



NOTE: If the staff alert panel is remotely located and is inconvenient to wire to the Central Power Supply, a 12-16 VAC Class 2 transformer can be used instead. In this case, position the transformer in a place where it will not be disturbed.

External Alarm Annunciator

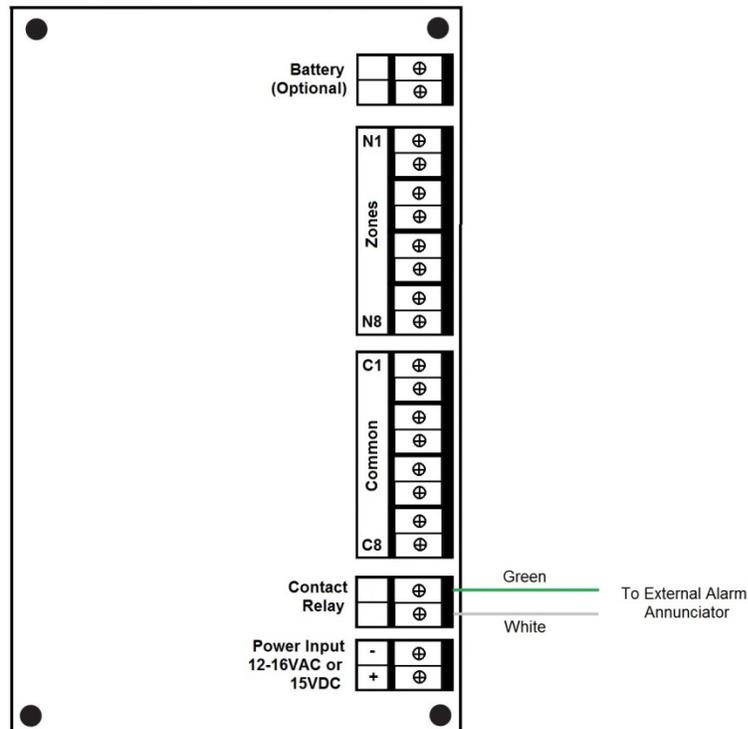
When remote notification from the staff alert panel is required, external alarm annunciators (i.e.: external speakers, dome lights, quick looks, etc...) can be connected to the system.

To wire an external alarm annunciator to the staff alert panel:

1. Wire the alarm indicator device to the **Contact Relay** on the staff alert panel
2. The relay output contacts signal when any zone is in alarm. The output contacts are Normally Open dry contacts that close during an alarm.



NOTE: Only UL listed devices are supported.



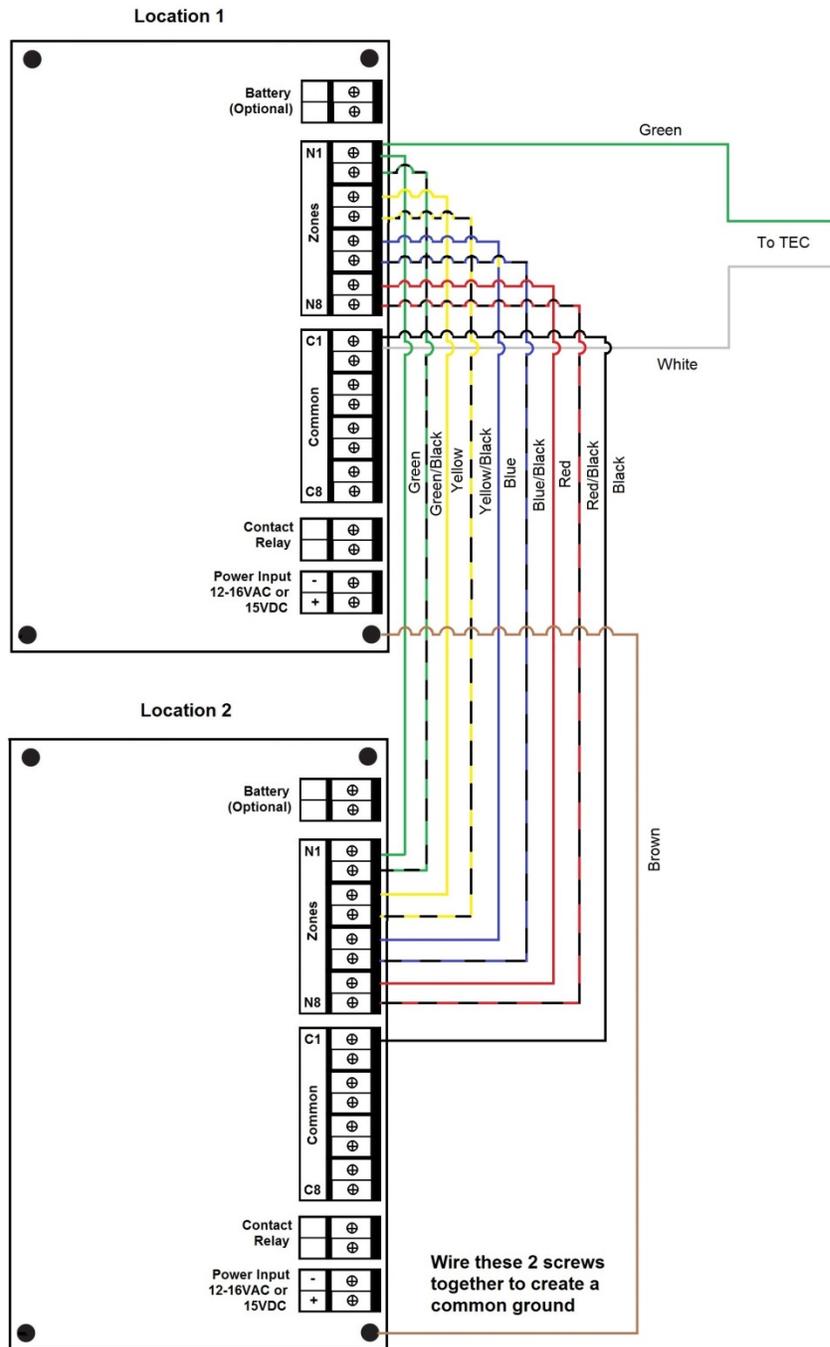
Multiple Device Configuration

Multiple touchpad exit controllers or alarming band receivers can be connected to represent one Exit Alarm Zone on the staff alert panel. If any one of the exit controllers or receivers in the zone issues an alarm, only one LED, representing one zone is illuminated on the staff alert panel.

Staff Alert Panel

It is possible to install two staff alert panels in separate locations that will receive signals from the same control units.

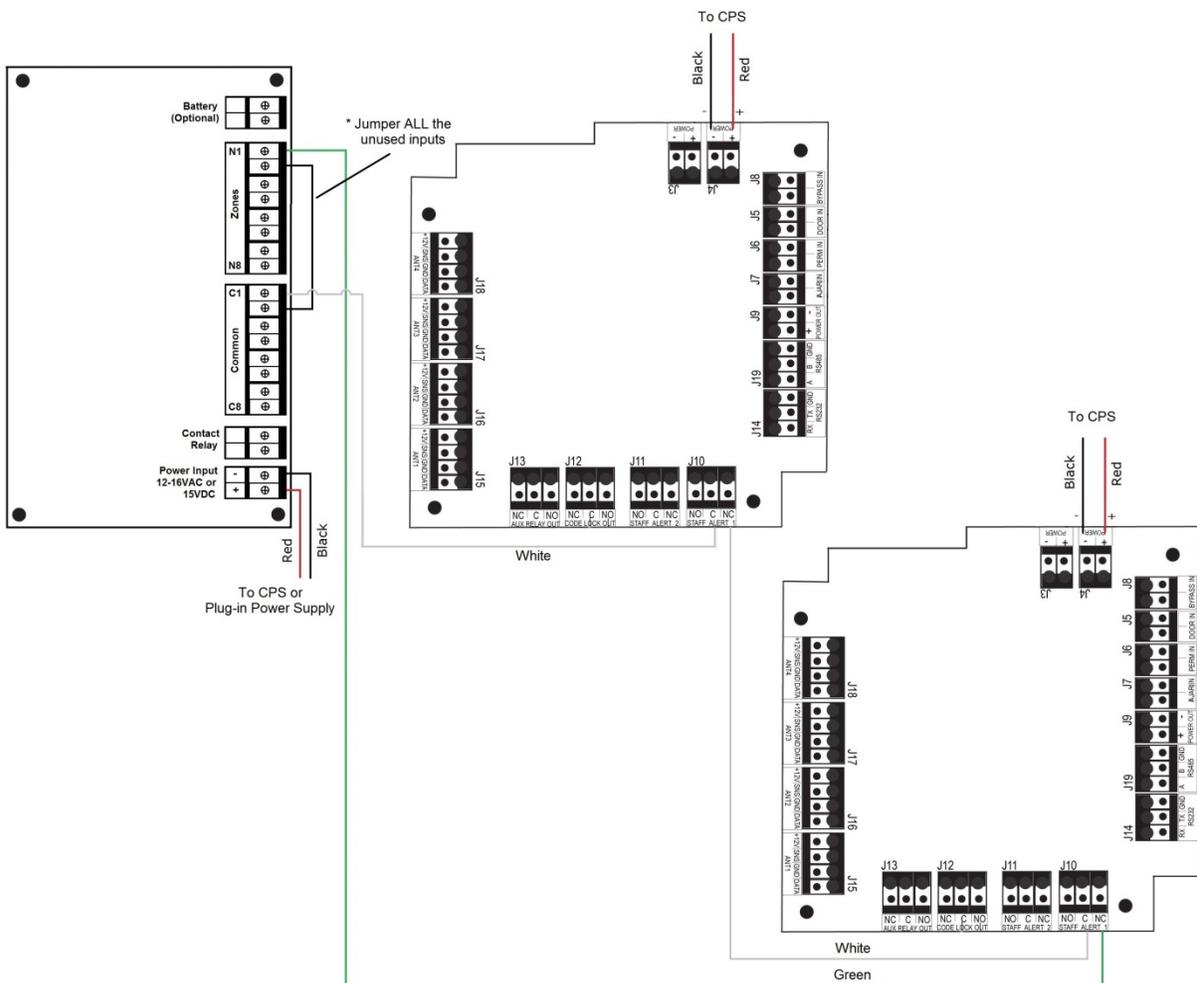
The staff alert panels may be connected using 22 AWG, 10-conductor, stranded, jacketed wire. Run the wires according to the diagram below:



Touchpad Exit Controller

To wire multiple touchpad exit controllers to one staff alert panel zone:

1. Verify that the 9450 system's Central Power Supply is **OFF** before wiring
2. Two conductor wire needs to be run in series
3. Connect one conductor of the wire to the terminal labeled **STAFF ALERT C** on the touchpad exit controller (TEC) and then to the appropriate **Common** terminal on the staff alert panel
4. Connect another conductor wire to the terminal labeled **STAFF ALERT NC** on the same TEC and then to the terminal labeled **STAFF ALERT C** on the additional TEC(s). Repeat as necessary.
5. On the last TEC in the chain, connect one conductor of the wire to the terminal labeled **STAFF ALERT NC** on the TEC and then to the appropriate **Zone** terminal on the staff alert panel



NOTE: * All unused inputs on the staff alert panel must be jumpered to common. Any zones not jumpered to common will alarm on power up.

The **STAFF ALERT** connection is a normally closed (NC), dry contact. Loss of power to the unit will drop out the relay which will open the contact, causing an alarm condition at the staff alert panel.

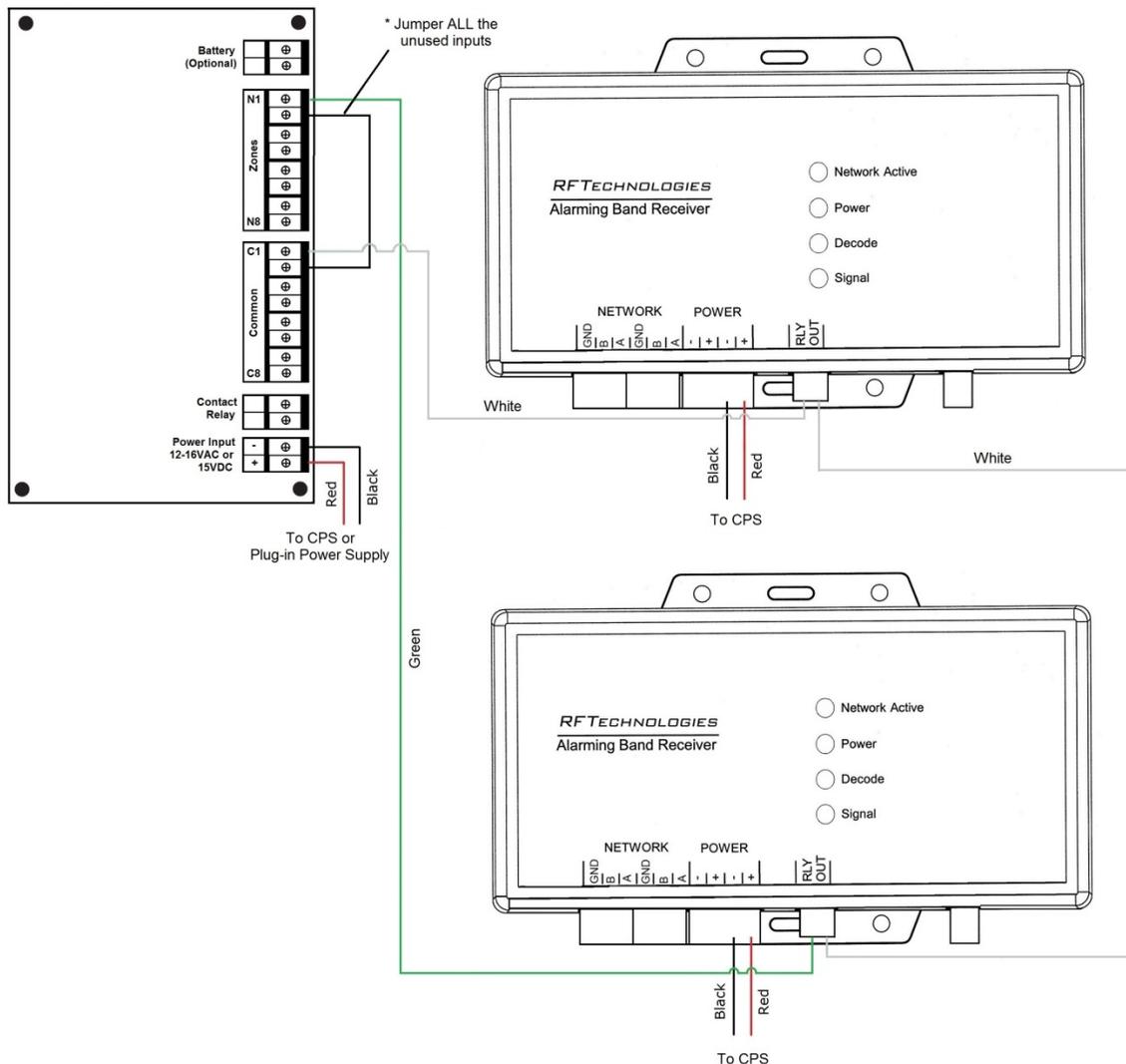
Alarming Band Receiver

To wire multiple alarming band receivers to one staff alert panel zone:

1. Verify that the 9450 system's Central Power Supply is **OFF** before wiring
2. Two conductor wire needs to be run in series
3. Connect both conductors of the wire pair to the terminal labeled **RLY OUT** on the alarming band receiver (ABR) then connect one conductor wire to the appropriate **Zone** terminal on the staff alert panel and connect another conductor wire to the terminal labeled **RLY OUT** on the additional ABR(s). Repeat as necessary.
4. On the last ABR in the chain, connect one conductor of the wire to the terminal labeled **RLY OUT** on the ABR and then connect to the appropriate **Common** terminal on the staff alert panel



NOTE: The **RLY OUT** connection is a normally closed (NC), dry contact. Loss of power to the unit drops out the relay which opens the contact, causing an alarm condition at the Staff Alert Panel.





NOTE: * All unused inputs on the staff alert panel must be jumpered to common. Any zones not jumpered to common will alarm on power up.

The **STAFF ALERT** connection is a normally closed (NC), dry contact. Loss of power to the unit will drop out the relay which will open the contact, causing an alarm condition at the staff alert panel.

Chapter 2 – Testing and Troubleshooting

Introduction

Prior to activating the 9450 System, it is important to test the overall functionality of each component and its wiring, including the Staff Alert Panel. This chapter provides detailed steps about testing and troubleshooting steps if issues occur.



CAUTION: You must test all Staff Alert Panels prior to use to verify proper operation. Failure to test the staff alert panels before use can result in system failure and/or a mismatch, abduction, or elopement. In addition, failure to test voids the RF Technologies Product Warranty.

Testing

For each alarm zone, go through each touchpad exit controller (TEC) and alarming band receiver (ABR) individually to ensure proper alarm signalling at the staff alert panel.

To test the staff alert panel:

1. In the first zone, momentarily switch the power off to one of the devices (TEC or ABR) to simulate an alarm condition
2. The alarm condition is displayed on the staff alert panel by illuminating the LED in the correct zone
3. Clear the alarm at the device
4. The staff alert panel zone LED is turned off
5. Repeat for each device in the zone
6. Repeat the above steps for each alarm zone

Troubleshooting

The following section provides detailed information about troubleshooting the staff alert panel. The table provides possible issues and solutions.

If you have consistent issues with the system, contact RF Technologies, Inc. Technical Support at 1-800-669-9946 or (262) 790-1771.

Issue	Solution
No active light	Verify power is turned ON
No volume during an alarm	Verify that the volume control potentiometer is not turned all the way down (refer to page 10)
Alarm lights when devices are not in alarm	Verify wires are connected to the correct terminals on the TEC
	Verify that any unused zones are jumpered out
	Verify that multiple devices in the same zone are wired in a closed "series" circuit
Power switch does not turn the SAP off	Verify that there is no DC power on the incoming pair of wires
	Verify the polarity of the incoming pair of wires

Chapter 3 – Specifications

Introduction

This section contains information on the specifications for the 8-Zone Staff Alert Panel, including details about the specific requirements and certifications.

Staff Alert Panel		
Dimensions	6.5" L x 4.5" D x 2.25" W	
Weight	1 lb	
Color	Off-White	
Enclosure	Steel, surface or flush mount available	
Power	16 VAC class 2 transformer, or 14-18 VDC from Central Power Supply, 300 mA	
Inputs	8 set, 1 set per zone, normally closed	
Outputs	Normally open, dry contact, activated upon alarm, 10 A rating	
LED Colors	8 red LEDs, 1 per zone 1 green LED, indicates power	
Wiring Requirement	Data: 22/4 AWG standard plenum-rated Power: 16/2 AWG standard plenum-rated	
Volume	95 dBA	
Certifications	UL Standard 294	
Part Number(s)	9450-0410K	Code Alert 8-Zone Staff Alert Panel Kit, Surface Mount
	9450-1410K	Code Alert 8-Zone Staff Alert Panel Kit, Flush Mount
	9450-0400K	Safe Place 8-Zone Staff Alert Panel Kit, Surface Mount
	9450-1400K	Safe Place 8-Zone Staff Alert Panel Kit, Flush Mount

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Revision History

Revision	Change
A	Release
B	Added: ETL (UL294) information
C	Updated: ETL number
D	Updated: Part numbers to include Safe Place and Code Alert kits
E	Updated: Legalize information
F	Updated: Cut band information
G	Added: Wiring diagram
H	Updated: Wiring diagram
I	Updated: Entire document
J	Updated: Document to latest format Updated: Combined 0510-1109 (Staff Alert Panel Installation Guide with Touchpad Exit Cont) into this document as they covered the same information
K	Added: Volume to specifications

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