Model HM-548 Wireless Remote Pendant and Receiver Set

Installation and Service Instructions

DESCRIPTION

The Model HM-548 is a package consisting of the HM-546 Pendant Transmitter and the HM-547 Wireless Receiver. The HM-547 receiver is connected to the remote call input of the HM-527 Host Panel to equip the panel with wireless capability. When activated by the transmitter pendant, the receiver's output triggers an emergency call signal at the host panel. Up to 60 transmitters may be used to activate one receiver.

At installations with many receivers, the extra standby current draw of 10mA for each must be figured into the voltage drop calculations of the DC supply wiring to assure ample voltage to all components at all times.

PENDANT

The pendant is maintenance free with no batteries to replace. It has a 5 to 10 year life and can provide over 100,000 operations. The case is factory sealed to permit wearing in the shower. The pendant transmitters have over 65,000 possible code combinations. They are encoded at the factory before shipment. The pendant will operate up to 300 feet from the receiver in an unobstructed environment, and is well suited for most apartment applications.

RECEIVER

The Model HM-547 Pendant Receiver is powered, monitored, and supervised by the host panel. During system installation, each receiver is programmed to respond to one or more specific pendant codes. Multiple pendant codes can be programmed into one receiver, allowing the receiver to respond with up to 60 pendants. The non-volatile memory will retain the codes indefinitely through loss of power. An optional, remote programming panel (Model HM-549) is available for allowing the resident to enter pendant codes for visitors.

INSTALLATION

LOCATION

The receiver should be mounted towards the center of the apartment as practical. Generally, the higher the receiver is mounted above ground or floor level, the better the radio signal range will be. Care should be taken not to install receivers within 25' of each other as they may cause interference and reduce range. The receiver is powered by the same pair of wires that power the Sentry smoke detector.

WIRING

The white/red from the host panel is 12 VDC fused, the white/blue is common, the yellow is switch common and the tan is the auxiliary input. The white/red and white/blue pair require an HM-568 Smoke Load Resistor termination and the yellow and tan pair require an HM-585 EOL Resistor at termination. These two resistors are required to prevent the host panel from issuing a SMOKE TROUBLE or CALL TROUBLE. The HM-569 EOL Device can be used in place of both of the aforementioned resistors.

RETROFIT INSTALLATION

During the initial wiring phase of an installation, Sentry recommends that two extra conductors are added to the wiring between the smoke detector and host panel, for the future addition of a Pendant Receiver.

Facilities often add the wireless pendant as an optional feature after the building is fully occupied. In these applications the receiver can be installed in the ceiling mounted electrical box above the smoke detector, if wiring exists.

The receiver is connected to the smoke detector's DC power wires (through an HM-558 Polarity Guard if using the Rev. F Host Panel and HM-560B Smoke Detectors) and the 2 spare conductors. In some installations, the Pendant Receiver can be installed to a smoke detector if only one spare wire is available. The spare conductors are wired to the host panel's emergency call switch input. A model 569 End-Of-Line device at the receiver is required to supervise the DC voltage and the HM-547 receiver contacts. Push the antenna wire out of the electrical box into the ceiling space. Refer to the wiring diagrams for wiring details.

A wiring diagram is also included that shows how to make a receiver hookup when only one spare conductor is available

If no extra conductors are available at the smoke detector, the receiver can be located in a separate, single gang electrical box installed in the wall, towards the ceiling, directly above the host panel. This location must be tested to assure the pendant signal can be received from the entire apartment. Wiring can then be easily run down, inside the wall to the host panel's electrical box. A blank outlet cover provides then encloses the receiver.

NEW CONSTRUCTION

Installations specified with wireless call buttons in every apartment will require a separate, plastic, single gang electrical box to house the receiver. Locate the receiver separate from, but as close as practical, to the host panel, towards the center of the living area. The electrical box can be located in a closet, high on the wall, then covered with a blank wall plate. Where metal studs are used, position the receiver as far away from them (or any metal) as possible. When installing the receiver, hang the antenna wire out of a hole in the bottom of the box and allow it to hang free in the space between the 2 drywalls.

The receiver requires a minimum of 5 conductors to the host panel. The wiring diagrams call for 6 conductors because cable usually is easier to obtain with an even number of conductors. If the receiver's blue wire is not connected to the HM-549 panel, it must be connected to the common wire, and this connection should be made at the host panel's connector wiring. If the cable between the host panel and receiver is greater than 75 feet, make the connection between the blue wire and common at the receiver.

RECEIVER PROGRAMMING

The receiver is programmed by the pendant button or buttons that will be used with it. There are several methods of programming the receiver with a pendant code or to add a pendant code:

1. Remove the small plastic cap on top of the receiver to expose a small push button switch inside. Using a non-metallic object, (pencil eraser), depress the push button, at the same time activate the pendant. When the receiver activates, the new pendant code is loaded. Replace the plastic cap.

2. Push and hold the button on the HM-549 programming panel and activate the transmitter you wish to add.

3. Temporarily connect the receiver's blue wire to the +12 volt supply (receiver's red wire), and activate the transmitter.

RECEIVER MEMORY CLEAR

When the receiver's push-button switch is pressed, blue wire connected, or programming panel button pressed while power is applied to the receiver, the entire contents of the receiver memory is cleared.

CHECKOUT AND TEST

After installing the receiver, the system must be tested. Be sure to notify the personnel at the console of the test.

The Revision D, and newer Host Panels include a test function that will flash the CALL VERIFICATION LED and the indicators on the remote call panels at a fast rate while a call switch is being pulled or the receiver is activated. It will change to a slow flash when the call switch or pendant button is released. The LED will light steady when the console acknowledges the call, however will still flash fast while the emergency input is held.

Operate the Wireless Remote Pendant from various locations within the apartment. Watch the call panel LED's for the fast flashing. This will help locate any possible null areas where structural steel, and/or certain obstacles may interfere with transmission.

TROUBLESHOOTING

If the transmitter fails to activate the receiver, check the receiver for proper connections and DC power. The wiring to the panel input is tested by shorting the green and white leads from the receiver's output relay.

Make sure the receiver has the proper pendant code by programming the receiver as described above.

See Section 7, Application Notes about obstructions and interference.

SPECIFICATIONS

DIMENSIONS: Receiver case with connector installed, 3¼" L x 2d" W x 1" D; mounting holes on 2" centers. Transmitter case, 1¾"T x 1¼"W x ¼"Thick; 28" neck-chain.

RECEIVER CONNECTOR: Pre-wired 6 conductor, with 12" color-coded leads.

VOLTAGE: 10 to 18 Volts DC

CURRENT: 0.008 Amps stand-by, 0.035 Amps activated.

ANTENNA: Attached, insulated wire, 11" long.

CODES: 65,536 (16 bit)

RECEIVER MEMORY: Up to 60 pendant codes

WIRING:

RED - DC Positive

BLACK - DC common (ground)

BLUE- Programming control

GREEN - relay common

ORANGE - N.C. relay contact

WHITE - N.O. relay contact

APPLICATION NOTES

The radio signal range may be reduced due to obstructions and/or interference. Typical obstructions include any metal object(s), metallic foil on insulation, foil wallpaper, reinforced cement structures, reinforced block walls, metal window frames, etc. Interference that reduces the range include: other HM-547 receivers within 50 feet, other similar receivers such as garage door openers, high power radio stations, military aircraft communication stations, and high speed computer networks.

If you suspect interference or obstructions are causing signal problems, verify operation outdoor, in an open field location. Locate any interference by turning off suspected sources. The particular code of the transmitter pendant does not affect range. Contact the factory if you need technical assistance.

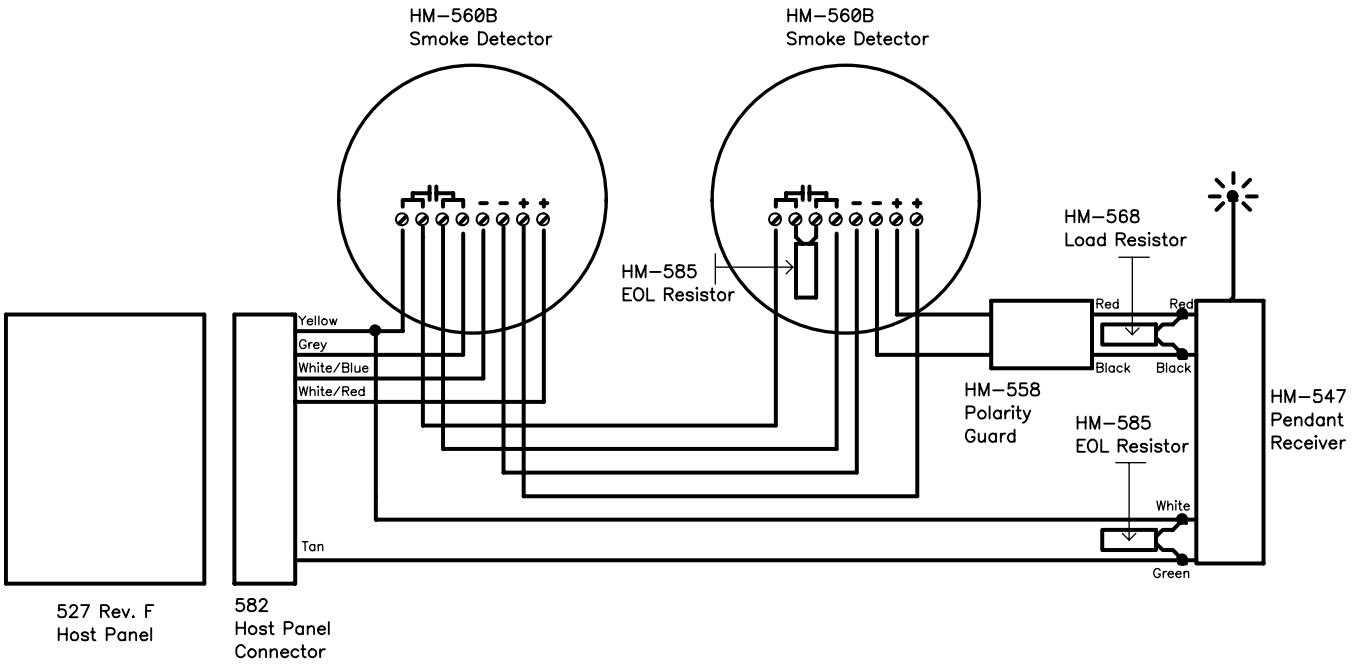
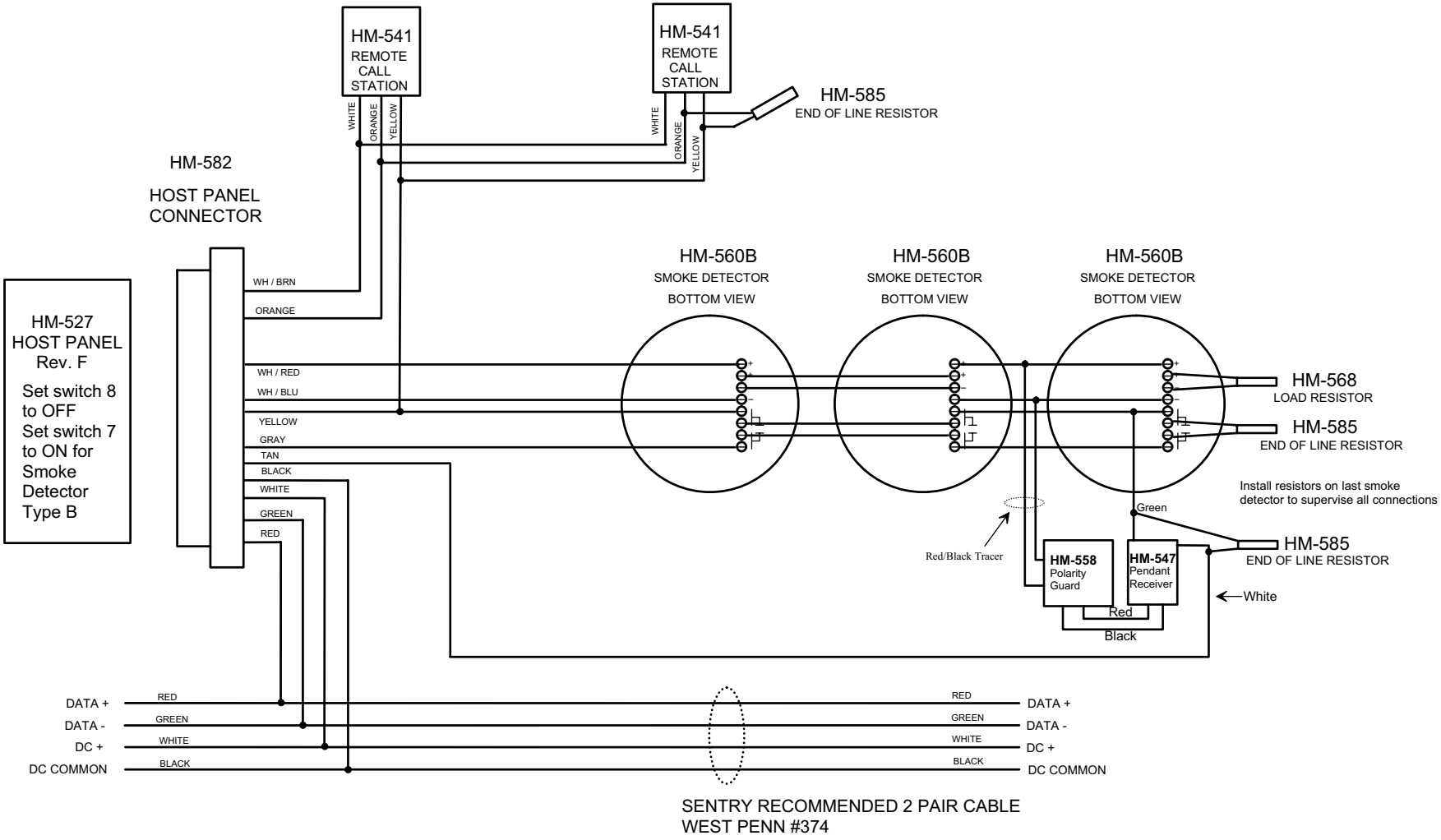


FIGURE 1 HM-547 WIRING DIAGRAM



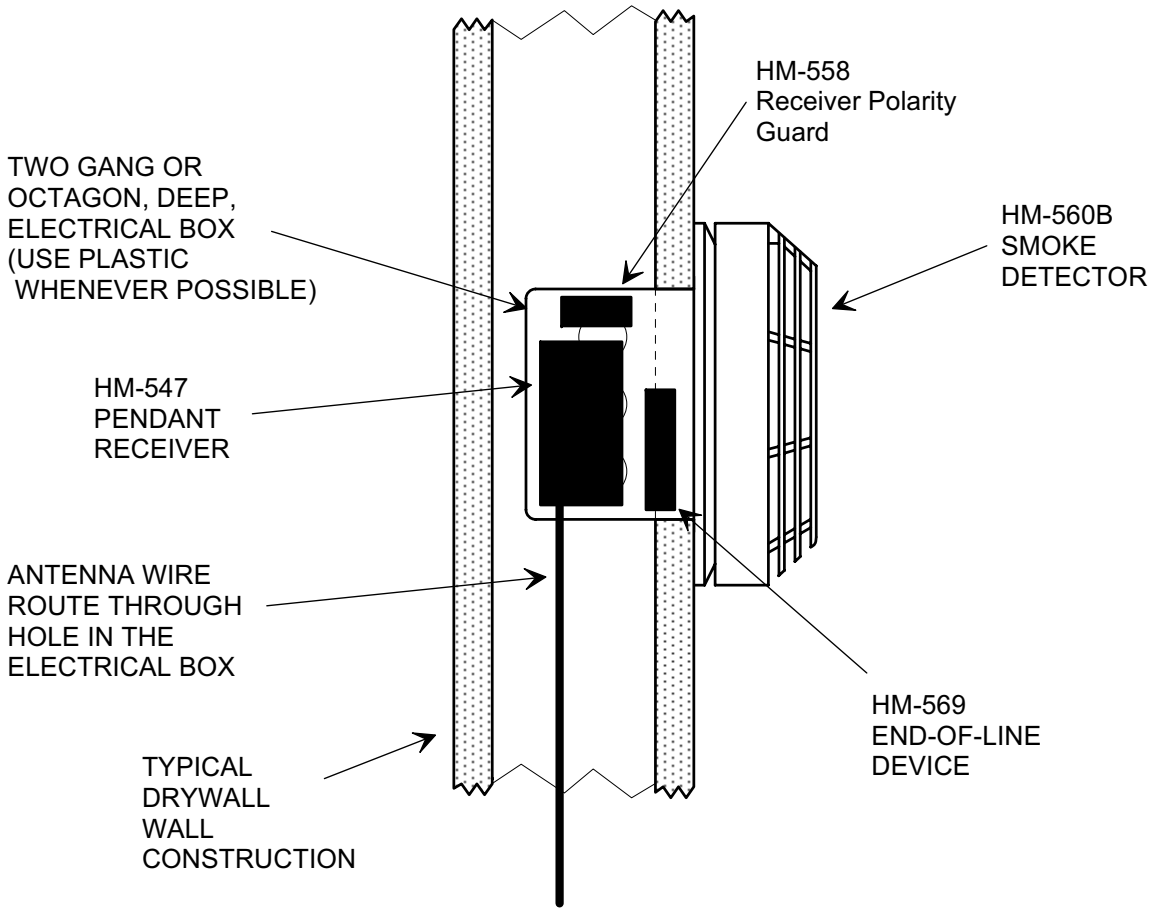
SENTRY RECOMMENDED 2 PAIR CABLE
WEST PENN #374

COLOR CODE ABBREVIATIONS

OR	ORANGE
YEL	YELLOW
GRN	GREEN
BLU	BLUE
PUR	PURPLE
GRY	GRAY
WH	WHITE
BRN	BROWN
BLK	BLACK

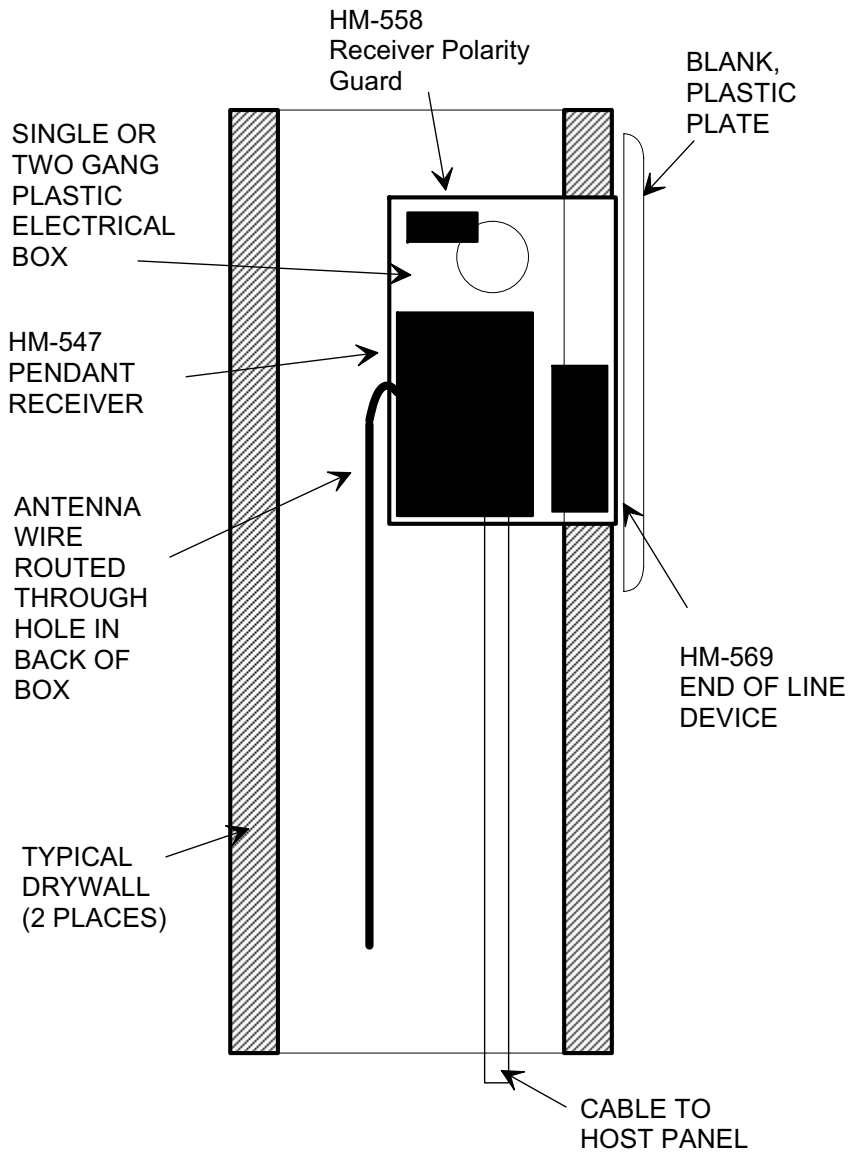
THE WIRE COLORS OF THE 582 HOST CONNECTOR POWER & DATA PAIRS, MATCH THE WIRE COLORS OF THE SENTRY RECOMMENDED 2 PAIR CABLE: #374 MANUFACTURED BY WEST PENN WIRE.

SENTRY EMERGENCY CALL SYSTEM		**HERITAGE MEDCALL TAMPA, FLORIDA**
SCALE N/A	DATE 3-18-05	DRAWN BY JT
TITLE **HOST PANEL WIRING** TYPICAL APARTMENT HOOKUP WITH 3 SMOKE DETECTORS AND REMOTE CALL SWITCHES		
FILE **390-527DB.dsf**		DWG NO **390-527YB**

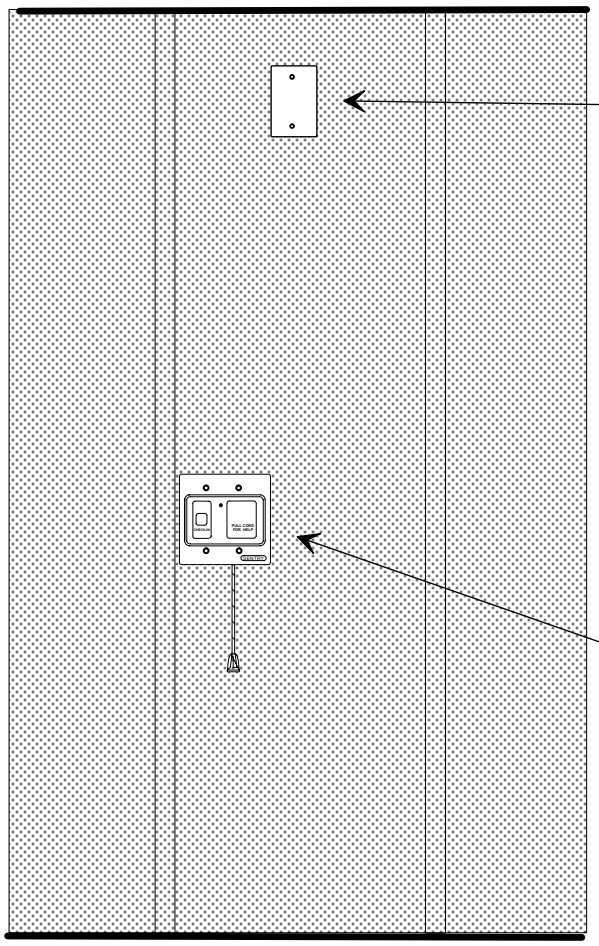


TYPICAL WALL
(SIDE VIEW)

SENTRY EMERGENCY CALL SYSTEM			***HERITAGE MEDCALL TAMPA, FLORIDA***	
DATE 3-21-05	SCALE N/A	REV A	CHECKED	DRAWN BY KJL
TITLE PENDANT RECEIVER INSTALLATION				
AT SMOKE DETECTOR				DWG NO **390-548-3**

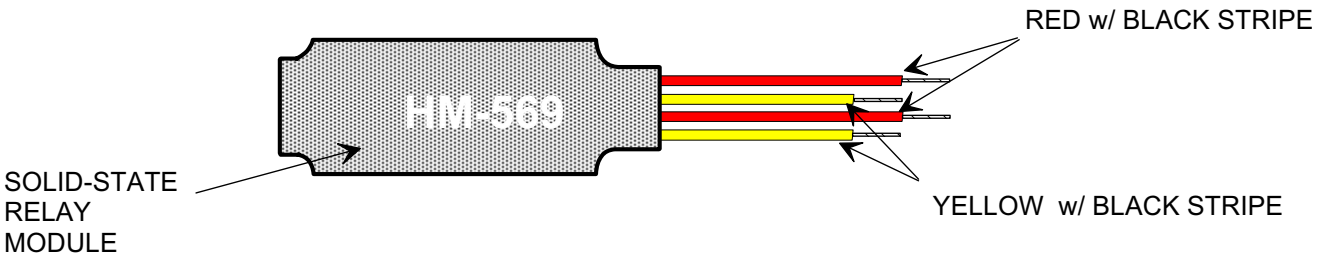


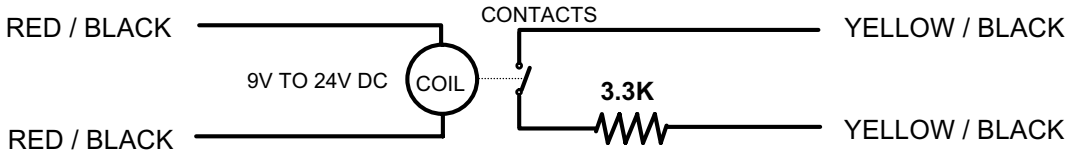
TYPICAL WALL
SIDE VIEW



RECEIVER LOCATION, TYPICAL WALL

SENTRY EMERGENCY CALL SYSTEM			*HERITAGE MEDCALL TAMPA, FLORIDA*	
DATE 03/29/05	SCALE N/A	REV A	CHECKED	DRAWN BY JRP
TITLE PENDANT RECEIVER INSTALLATION				
			DWG NO **390-548-2**	





SOLID-STATE
RELAY

(SYMBOLS SHOW ELECTRO-MECHANICAL EQUIVELENT)

HM-569 END-OF-LINE DEVICE

THIS DEVICE ALLOWS THE SYSTEM TO SUPERVISE THE DC POWER TO A REMOTE DEVICE. ONLY WHEN DC VOLTAGE IS PRESENT, IS THE E.O.L. RESISTOR IN THE CIRCUIT. IF THE DC VOLTAGE IS LOST, THE RESISTOR OPENS THE SUPERVISED ALARM INPUT.

INSTALL THE TWO YELLOW WIRES (WITH BLACK STRIPES) ACROSS THE ALARM DEVICE'S CONTACTS, IN PLACE OF A STANDARD E.O.L. RESISTOR.

CONNECT THE RED (WITH BLACK STRIPE) ACROSS THE ALARM DEVICE'S DC POWER TERMINALS.

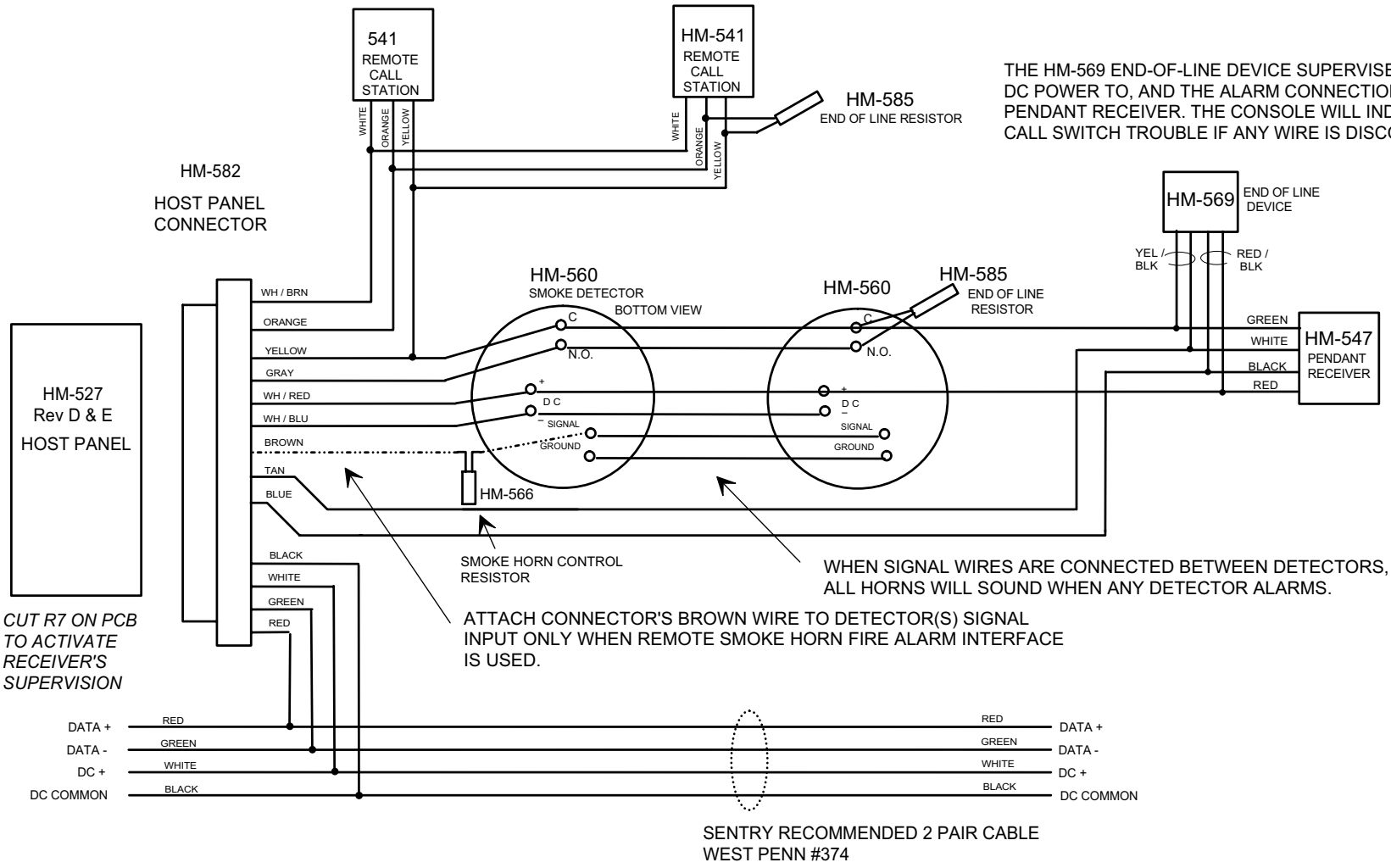
THE HM-569 IS A SOLID-STATE RELAY WITH A BUILT-IN 3.3K OHM RESISTOR IN SERIES WITH THE OUTPUT CONTACTS.
THE RESISTOR IS ONLY CONNECTED WHEN THERE IS VOLTAGE PRESENT ACROSS THE RED LEADS. THE HM-569'S INPUTS AND OUTPUTS ARE NOT AFFECTED BY DC POLARITY.

NOTES:

1. THE HM-569 MARKING ON THE PART IS OPTIONAL AND MAY NOT APPEAR ON ALL PARTS.

SENTRY EMERGENCY CALL SYSTEM			***HERITAGE MEDCALL TAMPA, FLORIDA***	
DATE 9-03-96	SCALE N/A	REV A	CHECKED	DRAWN BY KJL
TITLE END OF LINE DEVICE				
				DWG NO **390-569**

REVISIONS			
DATE	REV	DESCRIPTION	BY
10-27-98	A	ADD SMOKE CONTROL RESISTOR	JT



THE HM-569 END-OF-LINE DEVICE SUPERVISES BOTH THE DC POWER TO, AND THE ALARM CONNECTIONS TO THE PENDANT RECEIVER. THE CONSOLE WILL INDICATE CALL SWITCH TROUBLE IF ANY WIRE IS DISCONNECTED.

WHEN SIGNAL WIRES ARE CONNECTED BETWEEN DETECTORS, ALL HORNS WILL SOUND WHEN ANY DETECTOR ALARMS.

ATTACH CONNECTOR'S BROWN WIRE TO DETECTOR(S) SIGNAL INPUT ONLY WHEN REMOTE SMOKE HORN FIRE ALARM INTERFACE IS USED.

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OR	ORANGE
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SENTRY EMERGENCY CALL SYSTEM		***HERITAGE MEDCALL TAMPA, FLORIDA***
SCALE N/A	DATE 9-3-96	DRAWN BY KJL
TITLE **HOST PANEL WIRING**		
		DWG NO **390-548E**