

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND BUILDING PERMIT



This is to certify that

MARKEN PROPERTIES LLC /Cunningham Security
Systems

PERMIT ID: 2012-65568

Located at

41 CHESTNUT ST

CBL: 026 F013001

has permission to **install supervised fire alarm system.**

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise clsoed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

Bjambal
Fire Prevention Officer

58

Code Enforcement Officer / Plan Reviewer

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
THERE IS A PENALTY FOR REMOVING THIS CARD**

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703 (ONLY)
or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**

- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**

- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

REQUIRED INSPECTIONS:

Final - Fire

Final - Electric

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 2012-65568	Date Applied For: 12/10/2012	CBL: 026 F013001
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Location of Construction: 41 CHESTNUT ST	Owner Name: MARKEN PROPERTIES LLC	Owner Address: 16 SARGENT ST	Phone:
Business Name:	Contractor Name: Cunningham Security Systems	Contractor Address: 10 Prince Point Road Yarmouth	Phone (207) 846-3350
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	

Proposed Use: SAME: 16 Residential Dwelling units	Proposed Project Description: install supervised fire alarm system.
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Dept: Zoning	Status: Approved	Reviewer: Marge Schmuckal	Approval Date: 12/10/2012
Note:			Ok to Issue: <input checked="" type="checkbox"/>

Dept: Fire	Status: Approved w/Conditions	Reviewer: Ben Wallace Jr	Approval Date: 01/17/2013
Note:			Ok to Issue: <input checked="" type="checkbox"/>

- 1) Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.
- 2) The installation shall comply with the following:
City of Portland Chapter 10, Fire Prevention and Protection;
NFPA 1, Fire Code (2009 edition), as amended by City Code;
NFPA 101, Life Safety Code (2009 edition), as amended by City Code;
City of Portland Fire Department Rules and Regulations;
NFPA 72, National Fire Alarm and Signaling Code (2010 edition), as amended by Fire Department Rules and Regulations; and
NFPA 70, National Electrical Code (2011 edition) as amended by the State of Maine
- 3) The fire alarm system shall be certified by a master fire alarm company and have a new fire alarm inspection sticker.
- 4) In field installation shall be installed per code as conditions dictate.
- 5) Manual Pull Stations are required per NFPA 101:30.3.4.2.1 at all exit doorways and within 200 feet of travel.
- 6) Automatic fire detection devices shall be installed as follows:
(1) Smoke detectors shall be installed in all common areas and work spaces outside the living unit, such as exit stairs, egress corridors, lobbies, storage rooms, equipment rooms, and other tenantless spaces in environments suitable for proper smoke detector operation.
(2) Heat detectors shall be located within each room of the living unit (exception: bathrooms not exceeding 55 ft² and closets not exceeding 24 ft² and no more than 3 ft. deep).
- 7) System CO detectors shall be located on the ceiling in the same room as permanently installed fuel-burning appliances and centrally located on every habitable level and in every HVAC zone of the building per NFPA 720:5.5.5.3.1. System CO detectors shall activate an audible alarm at the detector and FACP, and send an alarm signal the remote station. It shall not trip a/the master box.
- 8) System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.
- 9) All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".
- 10) Through-penetrations and membrane penetrations in fire walls, fire barrier walls, and fire resistance rated horizontal assemblies shall be protected by firestop systems or devices in conformance with NFPA 101:8.3.5 (ASTM E 814 or ANSI/UL 1479). Providing firestop labels at each firestop system or device and an onsite manual containing the detail for each firestop system or device used for the project will streamline final inspection approvals.
- 11) Supervising Station monitoring for addressable fire alarm systems shall be by point.
- 12) A 4100 series Knox Box is required.

Location of Construction: 41 CHESTNUT ST	Owner Name: MARKEN PROPERTIES LLC	Owner Address: 16 SARGENT ST	Phone:
Business Name:	Contractor Name: Cunningham Security Systems	Contractor Address: 10 Prince Point Road Yarmouth	Phone (207) 846-3350
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	

- 13 Fire protection systems shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.
- 14 Audible and visible notification signals are not required in exit stair enclosures by NFPA 101:9.6.3.5.5 and NFPA 101:9.6.3.6.4.
- 15 A master box connection is not authorized for this building.
- 16 All smoke detectors shall be photoelectric.

City of Portland, Maine - Building or Use Permit Application
 389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 2012-65568	Issue Date:	CBL: 026 F013001
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Location of Construction: 41 CHESTNUT ST	Owner Name: MARKEN PROPERTIES LLC	Owner Address: 16 SARGENT ST	Phone:
Business Name:	Contractor Name: Cunningham Security Systems	Contractor Address: 10 Prince Point Road Yarmouth	Phone: (207) 846-3350
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	Zone: B2 R6
Past Use: 16 Residential Dwelling Units	Proposed Use: SAME: 16 Residential Dwelling units	Permit Fee: \$250.00	Cost of Work: \$23,000.00
		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied <input type="checkbox"/> N/A 1/17/13	INSPECTION: Use Group: Type:
Proposed Project Description: Fire Alarm Permit		Signature:	Signature:
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)			
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied			
		Signature:	Date:

Permit Taken By: bjs	Date Applied For: 12/10/2012	Zoning Approval		
1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. 2. Building permits do not include plumbing, septic or electrical work. 3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..		Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: 12/10/12	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date:

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE



Fire Alarm Permit

Elect Permit # 201265569

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

Installation address: 41 Chestnut Street CBL: 26-F-13-1

Exact location: (within structure) Basement

Type of occupancy(s) (NFPA & ICC): Eleven to twenty family

Building owner: Marken Properties LLC

System Designer (point of contact): Michael Major

Designer phone: 207-846-3350 E-mail: mmajor@cunninghamsecurity.cc

Installing contractor: Cunningham Security Systems Certificate of Fitness No: 1004

Contractor phone: 207-846-3350 E-mail: mmajor@cunninghamsecurity.cc

This is a new application: YES NO New AES Master Box: YES NO
(Include Master Box approval form)

Amendment to an existing permit: YES NO Permit no: _____

The following documents shall be provided with this application:

- Floor plans
- Wiring diagram
- Annunciator details
- Input/ Output Matrix
- Equipment data sheets
- Electrical Permit Pulled (check alarm/com)
- Scope of Work
- 11 1/2 x 17s
- pdf copy (may be e-mailed)
- Designer qualifications
- Battery/ voltage drop calcs

23,000
~~22,900.00~~

COST OF WORK: _____

PERMIT FEE: 250.00
(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

RECEIVED
DEC 10 2012
Dept. of Building Inspections
City of Portland Maine

Master box approval only: YES NO
(If yes check *New AES Master Box* above)

The designer shall be the responsible party for this application. Download a new copy of this application at www.portlandmaine.gov/fire for every submittal. Submit all plans in electronic PDF in addition to readable 11 1/2 x 17s to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

Prior to acceptance of any fire alarm system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with the *City of Portland Technical Standard for Signaling Systems for the Protection of Life and Property*, available at www.portlandmaine.gov/fire.

Applicant signature: *Michael Major* Date: 12.7.12

CUNNINGHAM

Security Systems

10 Princes Point Road • Yarmouth, Maine 04096
(207) 846-3350 • Fax (207) 846-6080 • (800) 210-0257

12/7/12

Lieutenant Benjamin Wallace, Jr.
Portland Fire Department
380 Congress Street
Portland Maine 04101

Please find attached a permit application for the property located at 41 Chestnut Street. This is a new installation in an existing building consisting of residential uses. We are using a combination of hard wired and wireless initiation devices. We will also be installing a Lexan lockable cover for the annunciator keypad.



Michelle Perkins, Operations Manager

Planning • Installation • Monitoring • Service
Visit our web site at: www.cunninghamsecurity.com



5600 Series Mechanical Heat Detectors

System Sensor's 5600 series mechanical heat detectors offer a low-cost means for property protection against fire, and for non-life-safety installations where smoke detectors are inappropriate.



Features

- Multiple configurations for installations:
 - Single- and dual-circuit models
 - Fixed temp and combination fixed- temp/rate-of-rise 135°F or 194°F ratings.
- Plain housing for residential installations (Model 5601P)
- Easy-to-use terminal screws
- A broad range of back box mounting options:
 - Single gang
 - 3.5" and 4" Octagonal
 - 4" square with square to round plaster ring
- Reversible mounting bracket

Multiple configurations. The 5600 series offers a full-line of configurations to accommodate a broad range of applications. Both single- and dual-circuit models are available for low- and high-temperature ratings with either fixed temperature or combination fixed temperature/rate-of-rise (ROR) activation. The ROR element of the fixed/ROR models is restorable to accommodate field-testing.

Installation flexibility. To satisfy a variety of installation needs, the 5600 series easily mounts to single-gang and octagonal back boxes. And these models accommodate four-square back boxes, when used with a square to round plaster ring. The reversible mounting bracket permits both flush- and surface-mount back box installations.

Visual identification. The 5600 series provides clear markings on the exterior of the unit to ensure that the proper detector is being used. Alphanumeric characters identify the activation method, as well as the temperature rating, in Fahrenheit and Celsius degrees. Fixed temperature models are identified FX, while combination fixed/rate-of-rise units are marked FX/ROR. The 5600 series also provides a post-activation indicator in the form of a collector. When the detector is activated, the collector drops from the unit, making it easy to identify the unit in alarm.

Agency Listings



Specifications

Architectural/Engineering Specifications

Mechanical heat detector shall be a System Sensor 5600 series model number _____, listed to Underwriters Laboratories UL 521 for Heat Detectors for Fire Protective Signaling Systems. The detector shall be either a single-circuit or a dual-circuit type, normally open. The detector shall be rated for activation at either 135°F (57°C) or 194°F (90°C), and shall activate by means of a fixed temperature thermal sensor, or a combination fixed temperature/rate-of-rise thermal sensor. The rate-of-rise element shall be activated by a rapid rise in temperature, approximately 15°F (8.3°C) per minute. The detector shall include a reversible mounting bracket for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a square to round plaster ring. Wiring connections shall be made by means of SEMS screws that shall accommodate 14–22AWG wire. The detector shall contain alphanumeric markings on the exterior of the housing to identify its temperature rating and activation method. The rate-of-rise element of combination fixed temperature/rate-of-rise models shall be restorable, to allow for field-testing. The detectors shall include an external collector that shall drop upon activation to identify the unit in alarm.

Physical/Operating Specifications

Maximum Installation Temperature	5601P, 5603, 5621, and 5623: 100°F (38°C) 5602, 5604, 5622, and 5624: 150°F (65.6°C)
Operating Humidity Range	5 to 95% RH non-condensing
Dimensions with mounting bracket	Diameter: 4.57 inches (11.6cm) Height: 1.69 inches (4.3cm)
Alarm Temperature	5601P, 5603, 5621, and 5623: 135°F (57°C) 5602, 5604, 5622, and 5624: 194°F (90°C)
Weight	6 oz. (170 grams)
Rate-of-Rise Threshold	15°F (8.3°C) rise per minute (models 5601P, 5602, 5621, and 5622 only)
Mounting	3½-inch octagonal back box 4-inch octagonal back box Single gang back box 4-inch square back box with a square to round plaster ring

Electrical Specifications

Operating Voltage / Contact Ratings	6–125VAC / 3A 6–28VDC / 1A 125VDC / 0.3A 250VDC / 0.1A
Input Terminals	14–22 AWG



Ordering Information

Model	Circuit	Identification Method on Exterior	Temperature Rating	Activation	UL Protected Spacing – 10 Foot Ceiling*
5601P	Single	None	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5602	Single	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5603	Single	Lettering	135°F (57°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5604	Single	Lettering	194°F (90°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5621	Dual	Lettering	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5622	Dual	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5623	Dual	Lettering	135°F (57°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5624	Dual	Lettering	194°F (90°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)

*NOTE: Refer to NFPA72 guidelines for spacing reductions when ceiling heights exceed 10 feet.



3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

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Product specifications subject to change without notice. Visit systemsensor.com for current product information, including the latest version of this data sheet.
A05-0351-002 • 11/06 • #1676



UOXX.S789 Control Unit Accessories, System

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Control Unit Accessories, System

[See General Information for Control Unit Accessories, System](#)

HONEYWELL SECURITY

S789

SUITE 100
2 CORPORATE CENTER DR
PO BOX 9040
MELVILLE, NY 11747 USA

Backup dialer modules, Model(s) 5140DLM

Eight-zone remote point Class A interface modules, Model(s) 4208SNF

Eight-zone remote point modules, Model(s) 4208SN, 4208U

Enclosures, Model(s) 5800BOX

End-of-line resistors, Model(s) 4100EOLR, EOL100, EOL20, EOL22, EOL82, EOLR470K

Fire system annunciator keyswitch modules, Model(s) FSAKSM (d)

Fire system annunciator modules, Model(s) FSA-24F, FSA-8F

Internet and Digital Cellular Fire Communicator, Model(s) iPGSM-COM, IPGSM-DP

Internet communicators, Model(s) 7845i-ent, 7845i-entF (c)

Isolation modules, Model(s) ECP-Isolator, VPLEX-VSI

Keyswitches, Model(s) 4146 (a)

LCD keypads, Model(s) 6160CR-2, FA570CR

Polling loop extender modules, Model(s) 4297

RF receivers, Model(s) 5881ENHC

RF transceiver subassemblies, Model(s) 5883H

Sensor Interface Module Gateway, Model(s) 472368

Supervised notification appliance modules, Model(s) 4204CF

Transformers, Model(s) 1451

Universal group zoning multiplex modules, Model(s) 4209U

Wireless transmitters, Model(s) 5817CB

Zone expander modules, Model(s) 4190SN, 4193SN (b), 4193SNP (b)

(a) - Must be installed adjacent to an alphanumeric (English language) keypad, Model 6160CR-2 when used as a fire alarm silencing switch.

(b) - Must be mounted inside control panel cabinet or within a Listed junction box. Supervised Zone is required for Fire. Unsupervised Zone may be

used for Burglary.

(c) - For use with Model FOCUS 200 PLUS control unit.

(d) - Keypress module must be installed adjacent to FSA unit if remote silence/reset desired.

NOTE - Model numbers may include a prefix or suffix consisting of numbers and/or letters. For use with compatible Listed control unit systems as indicated in the installation instructions.

Last Updated on 2011-07-18

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An independent organization working for a safer world with integrity, precision and knowledge



5193SD/5193SDT

V-PLEX® ADDRESSABLE SMOKE DETECTOR



Honeywell's 5193SD/SDT Addressable Photoelectric Smoke Detector is designed to provide open area protection and to be used with compatible UL-listed Honeywell control panels that support V-Plex technology. The detector incorporates a state-of-the-art optical sensing chamber and an advanced microprocessor. Built-in Drift Compensation algorithms automatically maintain proper operation at factory calibrated detection levels, even when sensitivity is altered due to the presence of contaminants settling into the unit's chamber. The 5193SDT also features a restorable, built-in, fixed temperature (135° F/57.2° C) thermal detector.

FEATURES

- **Easy Installation:** Installation of the 5193SD/SDT detector is simplified by the use of a mounting base that may be pre-wired to the system, allowing the detector to be easily installed or removed for maintenance or service. (See Figure 1).
- **LED Status Indicators:** Two LEDs (green and red) provide local visual indication of the detector's status – including normal operation, alarm, out of sensitivity and trouble conditions.
- **Test button:** This button allows the user to perform periodic testing of the detector's circuitry and verify that the detector is within the sensitivity limits.
- **Versatile Mounting:** Mounting is made simple with the included hardware and the large mounting ports, which accommodate drywall anchors for easy surface mounting. (See Figure 1).
- **Tamper Protection and Tamper Resistance:** The detector contains a built-in tamper switch that can communicate back to the control panel in the event the detector is removed from its base. For an added level of security, the detector also includes a tamper resistant element that prevents removal from the base without the use of tools. (See Figure 1).

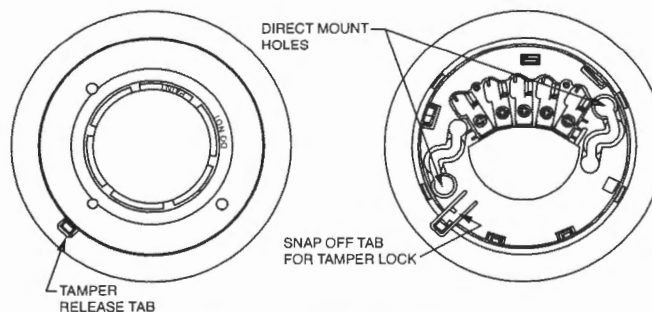


Figure 1: Tamper-Resistant Feature/Wiring

5193SD/5193SDT

V-PLEX® ADDRESSABLE SMOKE DETECTOR

SPECIFICATIONS

- **Heat Sensor:** (Model 5193SDT):
135° F (57.2° C);
Fixed Temperature Electronic Thermistors
- **Operating Ambient Temperature Range:**
32° to 100° F (0° to 38° C)
- **Operating Humidity Range:**
0 to 95% RH non-condensing
- **Storage Temperature Range:**
-4° to 158° F (-20° to 70°C)
- **Diameter (including base):** 5.3 inches
- **Height (including base):** 2.0 inches
- **Weight:** 6.3 oz.
- **Agency Listing:** UL-268
- **System Voltage Range:** 7-14V
- **Standby Current** (maximum @ 12V)
LED off: 1.2mA
LED on: 2.8mA

ACCESSORY (sold separately)

To measure the detector's sensitivity, the SENS-RDR Infrared Sensitivity Reader tool (sold separately) should be used. It reduces testing time, simplifies sensitivity measurements and displays them precisely in terms of percent per foot obscuration. The SENS-RDR eliminates the need for magnets, voltmeters and ladders.

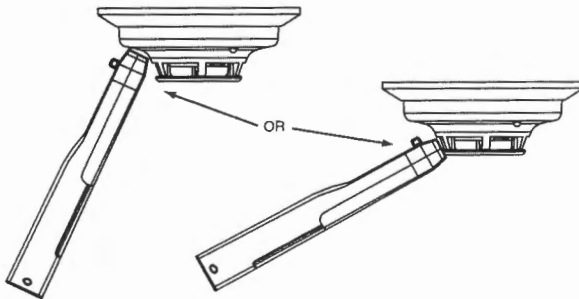
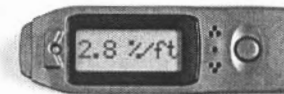


Figure 2: Position of Reader



ORDERING

- | | |
|----------------|--|
| 5193SD | Addressable Photoelectric Smoke Detector |
| 5193SDT | Addressable Photoelectric Smoke Detector with Integral Heat Sensor |

Accessory sold separately:

- | | |
|-----------------|-----------------------------|
| SENS-RDR | Handheld Sensitivity Reader |
|-----------------|-----------------------------|

Automation and Control Solutions
Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
P.O. Box 9040
Melville, NY 11747
www.honeywell.com

L/5193SDT/D
May 2009
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Honeywell

BG-12LX

Addressable Manual Pull Station



Addressable Devices

General

The Fire-Lite BG-12LX is a state-of-the-art, dual-action (i.e., requires two motions to activate the station) pull station that includes an addressable interface (mounted inside) for Fire-Lite's addressable fire alarm control panels (FACPs). Because the BG-12LX is addressable, the control panel can display the exact location of the activated manual station. This leads fire personnel quickly to the location of the alarm.

Features

- Maintenance personnel can open station for inspection and address setting without causing an alarm condition.
- Built-in bicolor LED, which is visible through the handle of the station, flashes in normal operation and latches steady red when in alarm.
- Handle latches in down position and the word "ACTIVATED" appears to clearly indicate the station has been operated.
- Captive screw terminals wire-ready for easy connection to SLC loop (accepts up to 12 AWG/3.25 mm² wire).
- Can be surface mounted (with SB-10 or SB-I/O) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Smooth dual-action design.
- Meets ADAAG controls and operating mechanisms guidelines (Section 4.1.3[13]); meets ADA requirement for 5 lb. maximum activation force.
- Highly visible.
- Attractive shape and textured finish.
- Key reset.
- Includes Braille text on station handle.
- Optional trim ring (BG12TR).
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.

Construction

Shell, door, and handle are molded of durable polycarbonate material with a textured finish.

Specifications

- **Shipping Weight:** 9.6 oz. (272.15 g)
- **Normal operating voltage:** 24 VDC.
- **Maximum SLC loop voltage:** 28.0 VDC.
- **Maximum SLC loop current:** 230 μ A.
- **Temperature Range:** 32°F to 120°F (0°C to 49°C)
- **Relative Humidity:** 10% to 93% (noncondensing)
- **For use indoors in a dry location**

Installation

The BG-12LX will mount semi-flush into a single-gang, double-gang, or standard 4" (10.16 cm) square electrical outlet box, or will surface mount to the model SB-10 or SB-I/O surface backbox. If the BG-12LX is being semi-flush mounted, then the optional trim ring (BG12TR) may be used. The BG12TR is



FLPullStation.jpg

usually needed for semi-flush mounting with 4" (10.16 cm) or double-gang boxes (not with single-gang boxes).

Operation

Pushing in, then pulling down on the handle causes it to latch in the down/activated position. Once latched, the word "ACTIVATED" (in bright yellow) appears at the top of the handle, while a portion of the handle protrudes from the bottom of the station. To reset the station, simply unlock the station with the key and pull the door open. This action resets the handle; closing the door automatically resets the switch.

Each manual station, on command from the control panel, sends data to the panel representing the state of the manual switch. Two rotary decimal switches allow address settings (1 – 159 with Breakaway Tab removed for MS-9600 Series, 1 – 99 and MS-9200UDLS, 1 – 50 for MS-9050UD).

Architectural/Engineering Specifications

Manual Fire Alarm Stations shall be non-coded, with a key-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red-colored polycarbonate material with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger. Stations shall be suitable for surface mounting on matching backbox SB-10 or SB-I/O; or semi-flush mounting on a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box, and shall be installed within

the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

Manual stations shall connect with two wires to one of the control panel SLC loops. The manual station shall, on command from the control panel, send data to the panel representing the state of the manual switch. Manual stations shall provide address setting by use of rotary decimal switches.

Product Line Information

BG-12LX: Dual-action addressable pull station. Includes key locking feature.

SB-10: Surface backbox; metal.

SB-I/O: Surface backbox; plastic.

BG12TR: Optional trim ring.

17003: Keys, set of two.

Agency Listings and Approvals

In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S711
- **MEA:** 67-02-E
- **CSFM:** 7150-0075:0184
- **FDNY:**
- **FM Approved**

Patented: U.S. Patent No. D428,351; 6,380,846; 6,314,772; 6,632,108.

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This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.



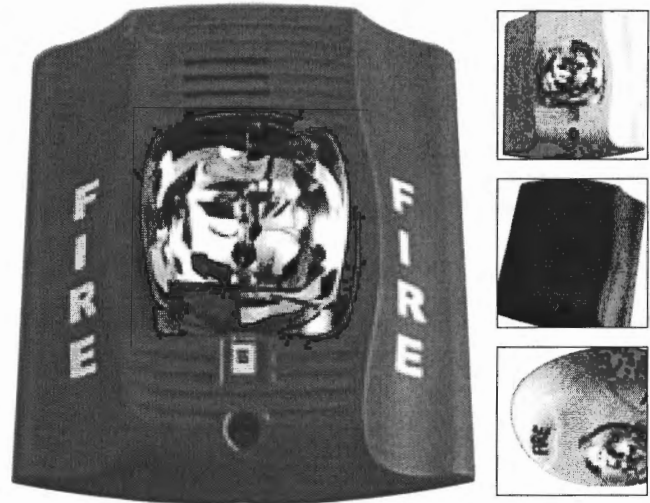
Made in the U.S. A.

For more information, contact Fire•Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105.
www.firelite.com



Selectable-Output Horns, Strobes, and Horn Strobes

SpectrAlert® Advance selectable-output horns, strobes, and horn strobes are rich with features guaranteed to cut installation times and maximize profits.



SPECTRAlert
ADVANCE
from System Sensor

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on wall and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for wall and ceiling units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with existing SpectrAlert products
- Compatible with MDL sync module

The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, which make installations fast and foolproof while virtually eliminating costly and time-consuming ground faults. Furthermore, a universal mounting plate with an onboard shorting spring tests wiring continuity before the device is installed, protecting devices from damage.

In addition, field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections enables installers to easily adapt devices to suit a wide range of application requirements.

Agency Listings

SIGNALING



54011 (chimes, horn strobes, horns)
55512 (strobes)



3023572

MEA
approved

MEA452-05-E



7125-1653:186 (indoor strobes)
7125-1653:188 (horn strobes,
chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 x 4 x 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 x 4 x 1⅞-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync-Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync-Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three-pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync-Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4⅞ x 4⅞ x 2⅞-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR ¹
Operating Voltage Range ²	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter x 2.5" high (173 mm diameter x 64 mm high)
Wall-Mount Dimensions (including lens)	5.6" L x 4.7" W x 2.5" D (142 mm L x 119 mm W x 64 mm D)
Horn Dimensions	5.6" L x 4.7" W x 1.3" D (142 mm L x 119 mm W x 33 mm D)
Wall-Mount Back Box Skirt Dimensions (BBS-2, BBSW-2)	5.9" L x 5.0" W x 2.2" D (151 mm L x 128 mm W x 56 mm D)
Ceiling-Mount Back Box Skirt Dimensions (BBSC-2, BBSCW-2)	7.1" diameter x 2.2" high (180 mm diameter x 57 mm high)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS, TRW-HS)	5.7" L x 4.8" W x 0.35" D (145 mm L x 122 mm W x 9 mm D)
Ceiling-Mount Trim Ring Dimensions (sold as a 5 pack) (TRC-HS, TRCW-HS)	6.9" diameter x 0.35" high (175 mm diameter x 9 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

	Candela	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
High Candela Range	115	NA	NA	210	205
	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

Sound Pattern	dB	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15-115 cd)

DC Input	8-17.5 Volts		16-33 Volts		30	75	95	110	115
	15	15/75	15	15/75					
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135-185 cd)

DC Input	16-33 Volts				FWR Input	16-33 Volts			
	135	150	177	185		135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

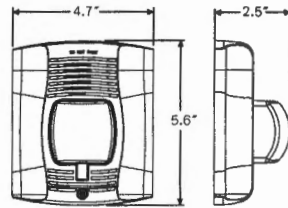
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

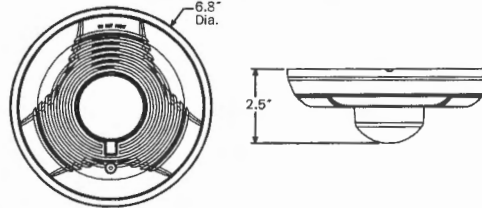
Switch Position	Sound Pattern	dB	8-17.5 Volts		16-33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
			DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7 [†]	Coded	High	82	82	88	88	93	92	101	101
8 [†]	Coded	Medium	78	78	85	85	90	90	97	98
9 [†]	Coded	Low	75	75	81	81	88	85	96	92

[†]Settings 7, 8, and 9 are not available on 2-wire horn strobe.

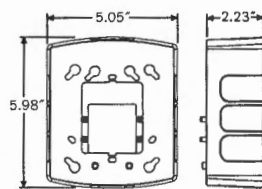
SpectrAlert Advance Dimensions



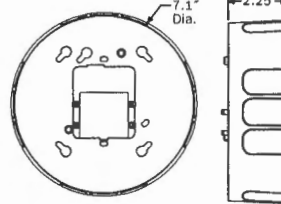
Wall-mount horn strobes



Ceiling-mount horn strobes



Wall back box skirt



Ceiling back box skirt

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2R**	2-Wire Horn Strobe, Standard cd†, Red
P2RH*	2-Wire Horn Strobe, High cd, Red
P2W*	2-Wire Horn Strobe, Standard cd, White
P2WH*	2-Wire Horn Strobe, High cd, White
P4R*	4-Wire Horn Strobe, Standard cd, Red
P4RH	4-Wire Horn Strobe, High cd, Red
P4W	4-Wire Horn Strobe, Standard cd, White
Wall Strobes	
SR**	Strobe, Standard cd, Red
SRH**	Strobe, High cd, Red
SW*	Strobe, Standard cd, White
SWH*	Strobe, High cd, White
Ceiling Horn Strobes	
PC2R*	2-Wire Horn Strobe, Standard cd, Red
PC2RH	2-Wire Horn Strobe, High cd, Red
PC2W*†	2-Wire Horn Strobe, Standard cd, White
PC2WH*	2-Wire Horn Strobe, High cd, White
PC4R	4-Wire Horn Strobe, Standard cd, Red
PC4RH	4-Wire Horn Strobe, High cd, Red
PC4W	4-Wire Horn Strobe, Standard cd, White

Model	Description
Ceiling Strobes	
SCR	Strobe, Standard cd, Red
SCRH	Strobe, High cd, Red
SCW*	Strobe, Standard cd, White
SCWH	Strobe, High cd, White
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
BBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
BBSC-2	Back Box Skirt, Ceiling, Red
BBSCW-2	Back Box Skirt, Ceiling, White
TR-HS	Trim Ring, Wall, Red
TRW-HS	Trim Ring, Wall White
TRC-HS	Trim Ring, Ceiling, Red
TRCW-HS	Trim Ring, Ceiling, White

Notes:

* Add *-P* to model number for plain housing (no "FIRE" marking on cover), e.g., P2R-P.

† Add *-SP* to model number for "FUEGO" marking on cover, e.g., P2R-SP.

‡ Standard cd* refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. *High cd* refers to strobes that include 135, 150, 177, and 185 candela settings.



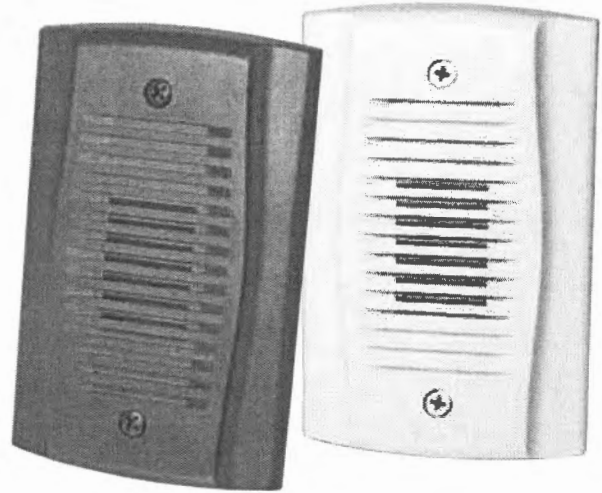
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A05-0395-007 • 4/09 • #2132



Mini-Horns

The SpectrAlert® Advance series of mini-horn sounders are designed to simplify installations to provide primary and secondary signaling for fire and security applications.



SPECTRAlert
ADVANCE
from System Sensor

Features

- 12 and 24V operation
- High and low volume settings
- Temporal and non-temporal tones
- Mounts to single gang back box
- Compatible with MDL sync module
- Mechanically and electrically compatible with PA400 series Mini-Alert™ sounders

The MHR and MHW mini-horns operate at 12 and 24 volts and are ideal for hotel, motel or residential fire system applications, where a smaller notification device is desired. The mini-horns offer high and low volume settings, and temporal or non-temporal tones. The horns can be mounted to single gang back boxes for aesthetically sensitive applications. Synchronization is also provided when using the MDL module.

The MHR and MHW mini-horns can operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified, unfiltered power supply. They are listed to Underwriter's Laboratories Standard UL 464 for fire protective signaling systems.

Agency Listings



S4011



3028007



MEA7-07-E



7135-1653196

SpectrAlert® Advance Mini-Horn Specifications

Architectural/Engineering Specifications

Mini-horns shall be a System Sensor Model MHR or MHW capable of operating at nominal 12 or 24VDC and shall mount to a deep single gang back box. Mini-horn shall be listed to Underwriter's Laboratories Standard UL464 for fire protective signaling systems. Mini-horns shall operate between 32 and 120 degrees Fahrenheit from a regulated DC, or full-wave rectified, unfiltered power supply. When used with the Sync-Circuit™ Module, 12-volt rated notification appliance circuit outputs shall operate between nine and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 17 and 33 volts.

Physical Specifications

Dimensions	4.6"L x 2.9"W x .45"D
Weight	2.67 oz.
Operating Temperature Range	32°F to 120°F (0°C to 49°C)
Mounting	Surface: deep single-gang back box (2¾" deep) Flush: Standard 4" x 4" back box

Electrical Specifications

Input Terminals	12 to 18 AWG
Nominal Voltage	Regulated 12DC/FWR or regulated 24DC/FWR
Operating Voltage	8-33
Operating Voltage with MDL	9-33

UL Sound Output and Current Draw Data

Sounder Output (dBA)

Switch Setting	Pattern	Output Level	8-17.5 VDC	8-17.5 VFWR	Nominal 12 VDC	Nominal 12 VFWR	16-33 VDC	16-33 VFWR
1	Temporal	High	68	67	71	70	78	76
2	Temporal	Low	66	65	69	68	76	75
3	Non-temporal	High	72	71	75	74	80	79
4	Non-temporal	Low	70	69	73	72	78	77

Sounder Current Draw (mA RMS)

Switch Position	Sound Pattern	Volume	8-17.5 Volts		16-33 Volts	
			DC	FWR	DC	FWR
1	Temporal	High	12	10	17	15
2	Temporal	Low	10	9	14	13
3	Non-temporal	High	22	17	29	25
4	Non-temporal	Low	17	13	21	19

Ordering Information

Part No.	Description
MHR	Mini-Horn, Red
MHW	Mini-Horn, White



3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

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A05-0414-001 • 12/09 • #2266

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND
BURGLARY ALARM CONTROL PANEL



Now UL864 9th Edition Approved

Designed to integrate seamlessly with CCTV, access control and Honeywell's full range of fire and burglary components, the new VISTA-128FBP provides the ultimate protection of life and property. The UL Listed commercial fire and burglary control panel supports up to eight partitions and up to 128 zones/points using hardwired, wireless and V-Plex®

addressable technologies. A diverse line of Honeywell initiating devices, notification circuits, communication devices, keypads, RF receivers and relays are also supported. The VISTA-128FBP has been designed to mount quickly and easily in an attack resistant cabinet, and is available in 12V and 24V models.

FEATURES

- Eight hardwired zones standard, expandable to 120 V-Plex addressable points/zones or 128 wireless points/zones
- Can control eight separate areas independently (8 partitions)
- Supports commercial wireless fire and burglary devices
- Stores up to 512 events
- Accommodates 150 user codes and up to 250 access card holders using VistaKey
- Supports V-Plex addressable VistaKey access control (1 to 8 doors)
- Two on-board notification (bell) circuits delivering 2.3A @ 12V or 3.4A @ 24V
- Automatic smoke detector sensitivity maintenance testing
- Four-wire smoke reset using onboard J2 output trigger
- Supports Dynamic Signaling for AlarmNet Communicators
- Supports Remote Control via the Internet*
- Supports Internet Alarm Reporting*
- Supports Graphical User Interface Consoles
- Listed to UL864 9th Edition
- Upload/download via Ethernet*
- Carbon monoxide (CO) zone support

* When used with AlarmNet devices.

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND
BURGLARY ALARM CONTROL PANEL

Honeywell

ADDITIONAL FEATURES

- Notification Appliance Circuits (two):
 - Programmable
 - Temporal code compliant
 - Individually silenceable
- Programmable on-board auxiliary relay
- False alarm reduction features:
 - Exit error logic
 - Exit delay reset
 - Cross zoning
 - Call waiting defeat
 - Recent close report
- Supports commercial hardwired, addressable V-Plex polling loop and wireless zones
- Hardwired zones
 - Provides eight style B hardwired zones
 - EOLR supervised for Fire and UL burglary installations
 - Supports N.O. or N.C. sensors
 - Individually assignable to any eight partitions
 - Up to ~~32~~¹⁶ two-wire smoke detectors each on zone one and two (~~64~~³² total)
- Up to 50 two-wire glassbreak detectors on zone eight
- Patented addressable V-Plex polling loop technology
 - Supports 120 two-wire zones points
 - Global polling technology for faster processing
 - Supervised by panel
 - Zones individually assignable to partitions, notification circuit (bell) output or auxiliary relay
 - 4,000 ft. capability without the use of shielded cable
 - Extender/Isolation bus modules
 - Eight zone – Class A and B expander module
 - Eight zone – Class B expander module
 - One zone supervised contact monitor module
- UL Listed wireless expansion
 - Supports up to 128 wireless zones/points
- Supervised by control for check-in signals
- Tamper protection for transmitters
- Individually assignable up to eight partitions
- Supports commercial wireless smoke detectors
- Access Control integration
 - Full integration with PassPoint Access Control System Complete Gateway interface of VISTA and access functions
- Up to eight doors using VistaKey V-Plex Access Control
- Event reporting
- Local printer of access or VISTA related events
- Communication
 - Phone mapping by zone response type
 - Panel operation during download

SPECIFICATIONS

Applications

The VISTA-128FBP control is well suited for a variety of applications as an integrated fire and burglary control. A diverse line of Honeywell initiating devices supports this extremely powerful control. Some of the applications supported are: medical and professional buildings, churches or synagogues, office buildings, schools, strip malls, larger residences and factory or warehouse environments.

Electrical

- Primary power: 18VAC @ 72VA Honeywell No. 1451
 - Control panel quiescent current draw: 300mA
 - Backup battery:
 - 12VDC, 12AH min to 34.4AH max
 - Lead acid battery (gel type)
 - Alarm power: 12VDC, 1.7A max for each notification (bell) circuit output Total 2.3A @ 12V
 - Aux. standby pwr: 12VDC, 1A max
 - Total power: 2.3A at 12VDC, 3.4A at 24VDC from all sources
 - Standby time: 24 hours with 1A standby load using 34.4AH battery
- Fusing: Battery input, aux. and notification (bell) circuit outputs are protected using PTC circuit protectors. All outputs are power limited.
 - Optional 24-volt power supply, PS 24 supplies two 24 VFW, 1.7A full wave rectified, unfiltered outputs

Main Dialer

- Line seize: Double Pole
- Ringer equiv.: 0.7B
- Formats: ADEMCO Low Speed, ADEMCO 4+2 Express, ADEMCO High Speed, ADEMCO Contact ID, Sescoa and Radionics
- Dual phone line capability (using 5140DLM module)

Cabinet dimensions

- 18" H x 14.5" W x 4.3" D

Environmental

- Storage temp: 14° F to 158° F (-10° C to 70° C)
- Operating temp: 32° F to 122° F (0° C to 50° C)
- Humidity: 85% RH

- EMI: Meets or exceeds the following requirements:
 - FCC Part 15, Class B Device
 - FCC Part 68
 - IEC EMC Directive

Agency Listings

- UL609 Grade A Local Mercantile Premises and Mercantile Safe and Vault
- UL611/1610 Grades A, AA, Central Station
- UL365 Grades A, AA Police Connect
- UL864/NFPA72 Local, Central Station and Remote Station
- UL985
- Factory Mutual
- California State Fire Marshal
- MEA
- CAN/ULC S304 – Central and Monitoring Station Burglar Alarm Unit
- CAN/ULC S527 – Central Unit for Fire Alarm Systems
- CAN/ULC S303 – Local Burglar Alarm Unit
- CAN/ULC S525 – Audible Signal Appliances

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND BURGLARY ALARM CONTROL PANEL

COMPATIBLE DEVICES

Auxiliary Devices

- 6160CR-2 – Red Alpha Keypad
- 4204 – Relay Module, four form C contacts
- 4204CF – Two supervised output circuits
- 5881 Series RF receiver
- 5883H RF receiver
- 6220S – System printer used with 4100SM serial module
- 6160CR-2 – Red Fire Keypad
- 6160 – Burglary Keypad

Two-Wire Smoke Detectors

Conventional

- System Sensor
- ESL
- DSC

Horn/Strobes

- System Sensor
- Wheelock
- Gentex

Manual Pull Stations

- 5140MPS-1
- 5140MPS-2

V-Plex (Addressable) Devices

- 4208U Loop Expansion Module – eight zones
- 4101SN Single Relay/Zone Module

- 4208SNF Class A/B Expander Module
- 4190SN Remote Point Module – two zones
- 4193SN Two-Zone Serial Interface Module
- VSI Module
- 4293SN One-Zone Serial Interface Module

V-Plex Extender/Isolation Modules

- 4297 Extender/Isolator Module
- VSI Isolator Module

V-Plex Smoke Detectors:

- 5193SD
- 5193SDT

V-Plex Passive Infrared Detectors

- 998MX
- IS2500SN
- DT7500SN

V-Plex (Addressable) Contacts

- 4939SN-WH
- 4944SN-WH
- 4959SN

V-Plex Glassbreak Detectors

- FG1625SN

Optional 24V Power Supply

- PS24 – 24V power supply – 3.4A

Commercial Wireless Devices

- 5808W3 – Photoelectric Smoke/Heat Detector
- 5806W3 – Photoelectric Smoke Detector
- 5809 – Wireless Heat Detector
- 5817CB – Wireless Commercial Transmitter
- 5869 – Hold-Up Transmitter
- 5881ENHC – RF Receiver
- 5883H – RF Receiver

Access Control

- VistaKey V-Plex (addressable) Access Control
- VistaKey-SK Starter Kit
- VistaKey-EX Expansion Kit

Alarm Communications

- 7845i-ENT – Internet/Intranet Communicator
- 7845GSM – Digital Cellular Communicator
- 7845i-GSM – Internet and Digital Cellular Communicator
- GSMCF/iGSMCF – Commercial Fire Communication Kits (when available)

Product specifications subject to change.

ORDERING

V128FBP-9

Commercial Fire and Partitioned Burglary Alarm Control Panel 12V Model

V128FBP9-24

Commercial Fire and Partitioned Burglary Alarm Control Panel 24V Model

For more information: www.honeywell.com/security/hsc

Automation and Control Solutions

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Honeywell

L/VSTA128FBPD/D
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IPGSM-DP

IP Internet & Digital Cellular Dual Path Fire Alarm Communicator

General

The IPGSM-DP is a compact fire alarm communicator panel with selectable configurable paths: Cellular Only, IP Only, or IP Primary/Cellular Backup. It connects to the primary and secondary communication ports of the Fire Alarm Control Panel's DACT. In the event of an off-normal condition, the panel sends contact ID formatted information to the IPGSM-DP communicator panel. The IPGSM-DP then reformats the data into highly encrypted Ethernet packets for transmission to the AlarmNet receiver via customer-provided internet/intranet connection or GSM (Global System for Mobile) network.

Alternative communication methods are critical in the marketplace due to VoIP (Voice over IP), migration from POTS (Plain Old Telephone Service) and growth of digital radio networks. The IPGSM-DP delivers secure, reliable and complementary Internet and digital communications via the GSM (Global System for Mobile) network. Our exclusive, Dual-Path Communications solution combines internet service with GSM for added reliability and an extra level of security. The GSM radio technology is unique in that it uses GPRS service (General Packet Radio Service) for data and alarm communications. Through the Internet or GSM radio, the IPGSM-DP offers contact ID reporting with any Fire Alarm Control Panels.

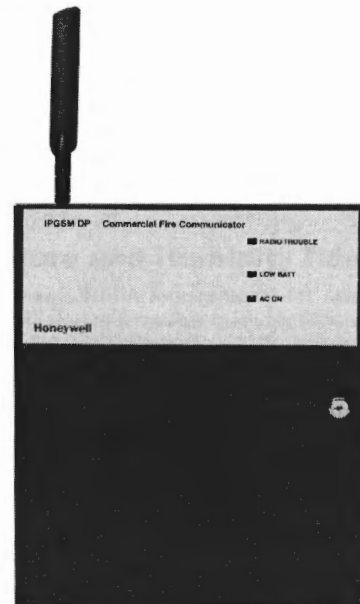
All signals from the IPGSM-DP communicator panel are delivered to Honeywell's AlarmNet Network Control Center, which routes the information to the appropriate central station. The state of the art AlarmNet Network Control Center is fully redundant and monitored 24/7. AlarmNet has the ability to route messages using AlarmNet-i and 800 PLUS services, providing true redundancy and multi-path message delivery.

Features

- Saves the cost of two dedicated phone lines.
- Dual path communications: Uses Internet or GSM (cellular) as primary.
- Requires no change to the existing Fire Alarm Control Panel configuration. The IPGSM-DP connects directly to the primary and secondary telephone ports.
- Works over any type of customer provided Ethernet 10/100 Base network connection (LAN or WAN), DSL modem or cable modem.
- Data transmits over standard contact-ID protocol but is secured with the industry's advanced encryption standard (AES 256 bit).
- Supports both dynamic (DHCP) or Public and Private Static IP addressing.
- Built-In Power Supply module: On board charging circuit design accommodates back-up battery. Includes primary power and battery supervision.
- Diagnostic LEDs: Signal strength and status indications.
- Reliable connection: IP and GSM tested every day.
- QOS: Quality of Service diagnostics via AlarmNet supply vital information including when message was received, battery voltage, input voltage, signal strength, and message path.
- Web-Based Programming or hand held programmer for setup.

Operation

When an event occurs, the Fire Alarm Control Panel goes off hook to dial the central station. The IPGSM-DP Dialer Capture



Module detects the off-hook condition and provides the fire panel with a dial tone. When the fire panel detects the dial tone, it begins dialing the central station. The Dialer Capture Module considers the three second period after dialing as the number dialing has been completed. After the dialing is completed, the Dialer Capture Module returns a handshake to the fire panel. The fire panel then sends the contact ID reports to the Dialer Capture Module, which in turn sends a kiss-off after the report is successfully received from the fire panel. The Dialer Capture Module sends the contact ID reports to the iGSM communications module. When all the reports are sent, the fire panel goes on-hook. The iGSM communications module then transmits the messages to the central station either over the GSM network or internet (primary).

Easy to Program

There are two ways to configure the IPGSM-DP communicator panel:

1. Handheld programmer 7720P
2. Web-Based Programming - Allows complete interactive programming from AlarmNet Direct.

<https://services.alarmnet.com/AlarmNetDirect>

The IPGSM-DP Communicator can be pre-programmed. Use the 7720P programmer or the Web-Based Program to enter all central-station information. This is saved to the IPGSM-DP communicator panel memory. When the IPGSM-DP Communicator is installed at the site and connected to the Internet/Intranet, it registers itself with the AlarmNet receiver. This eliminates the need for a PC at the remote site for programming.

For most installations, the only required parameters are:

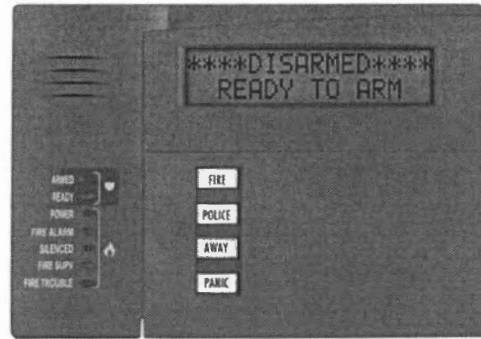
- Primary City ID (two digits) obtained from your monitoring station.
- Primary Central Station ID (two digits) obtained from your monitoring station.
- Primary Subscriber ID (four digits) obtained from your monitoring station.
- Communication Module's MAC ID, and MAC CRC number located on outside of box, and inside of the module.

All of these parameters are assigned by the monitoring station.

See *IPGSM-DP Installation and Setup Guide* for full details.

6160CR-2

COMMERCIAL FIRE ALPHA KEYPAD
UL864 REV 9 LISTED



The 6160CR-2 is an addressable remote keypad intended for use in commercial fire applications with Honeywell's commercial fire control panels. The keys are continuously backlit for convenience and easy visibility. The LCD display

is backlit only when a key is depressed*, or when the system is in alarm or trouble condition.

*Note: The LCD may be programmed to remain on at all times (see panel instructions for details).

FEATURES

- Four programmable function keys
- Built-in sounder
- Seven Status LEDs
 - Armed (Red)
 - Ready (Green)
 - Power (Green)
 - Fire Alarm (Red)
 - Silenced (Yellow)
 - Supervisory (Yellow)
 - Trouble (Yellow)
- Large easy-to-read display
- Red removable door
- Physical
5.250" W x 7.437" H x 1.312" D

SPECIFICATIONS

Sounder

- High-quality speaker

Electrical

- 45mA standby 160mA in alarm (sounder, back light and LED on)

Compatibility

- Supports Control Panels
 - VISTA-32FB Rev 5 and higher
 - VISTA-128FBP Rev 4 and higher
 - VISTA-250FBP Rev 4 and higher

UL/CUL and residential Listed for commercial fire and burglary installations. To be employed with manufacturer's listed control units as indicated in the installation instructions.

Product specifications subject to change.

ORDERING

6160CR-2 Commercial Fire Alpha Keypad

For more information: www.honeywell.com/security/hsc

Automation and Control Solutions

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Honeywell

5808W3

PHOTOELECTRIC SMOKE/HEAT
DETECTOR WITH BUILT-IN
WIRELESS TRANSMITTER



Honeywell's 5808W3 is a 3V lithium powered, photoelectric smoke/heat detector with a built-in wireless transmitter. It is intended for use with any 5800 Series Wireless Receiver/Transceiver for residential installations (for commercial installations, the 5881ENHC or the 5883H receiver is required).

The transmitter can send alarm, tamper, maintenance (when control panels are equipped to process maintenance signals), and battery condition messages to the system's receiver.

Smoothing algorithms minimize nuisance alarms by smoothing out short term spikes from dust and smoke – virtually eliminating nuisance alarms.

Since there are no holes to drill or wires to run, you can preserve the beauty of the building while protecting it. The 5808W3 is an ideal smoke detector for those difficult to wire locations, applications where room aesthetics are critical, or where hazardous materials exist.

All models also feature a restorable, built-in, fixed temperature (135°F) thermal detector that is also capable of sensing a pre-freeze condition if the temperature is below 41°F.

FEATURES

- **Improved Robust RF Field Strength**

The distance between the detector and receiver has been significantly increased without the need for a repeater

- **Smoothing Algorithms**

Mathematical calculations in the detector's software that minimize nuisance alarms by smoothing out short term spikes from dust and smoke

- **Smart Check**

A signal is sent to the control panel when the detector requires cleaning. This allows a regular, non-emergency service call to clean the detector before it goes into alarm.

- **Drift Compensation**

Virtually eliminates nuisance alarms from long-term dust build-up by automatically adjusting the detector's sensitivity

- **Removable Detector Cover and Chamber Top**

The technician is able to quickly and easily clean the detector chamber without disassembling the detector head

- **Approved UL Listings for Residential and Commercial Applications**

Both residential and commercial installation requirements are met

- **Additional LED Status Indicators**

Identifying between alarm or trouble conditions is a snap with green and red LED status indicators. A green LED denotes a normal condition while the red LED indicates abnormal conditions.

- **Easy-to-install Mounting Base**

The sturdy mounting base allows the detector to be more easily installed on uneven surfaces (i.e. stucco). The mounting base has larger mounting ports, which accommodate drywall anchors for easy surface mounting.

ADDITIONAL FEATURES:

- Utilizes one long-life 3V lithium battery
- Microcontroller runs on a 4.0 MHz clock
- Horn operates at 3.3 KHz with sound pressure level of 85 dBA at 10 feet
- Built-in wireless transmitter, temporal code 3 sounder
- Maintenance signal fully complies with the sensitivity test requirement specified in NFPA 72, 7-2.2 and is approved by UL

ADEMCO 5881EN Series RF Receiver

INSTALLATION AND SETUP GUIDE

INTRODUCTION

The 5881EN series of RF receivers is designed for use with control panels that support an RF receiver connection *via the keypad terminals*. The receiver recognizes alarm, status, and keypad control messages from wireless transmitters operating at 345MHz.

One or two individually identified receivers can be employed, depending on the control used. Connection of multiple receivers to a control can provide redundant coverage or extend coverage in large areas.

These receivers feature a Spatial Diversity System that virtually eliminates the possibility of "nulls" and "dead spots" within the coverage area. The 5881EN series of receivers use ADEMCO's High Security technology, and can be used in commercial fire installations. Additionally, the 5881ENHC receiver contains front and back tamper that permits its use in commercial burglary installations.

- In commercial fire applications, the receiver can only be used with control panels that are approved for use in Commercial Fire Installations. When the 5881EN is used in commercial fire applications, DIP switch 5 must be in the ON position.
- In commercial burglary applications, the 5881ENHC can only be used with control panels that are approved for use in Commercial Burglary Installations.
- In commercial fire applications, a keypad must be connected to Keypad Port 2 in the control. The keypad must be mounted on the control or within 3 feet of the control with the wiring encased in conduit.

UL

Each receiver supports the number of zones shown below.

5881ENL	Up to 8 zones
5881ENM	Up to 16 zones
5881ENH	*See below
5881ENHC	*See below

* The number of zones that the 5881ENH receiver can support depends on the control with which it is used. See the control panel's instructions for specific details.

If a receiver is connected to a system in which more than the permitted number of wireless zones have been programmed, a "SET UP ERROR" message (on alpha keypads) or an "E4 or "E8" message (on fixed-word keypads) will be displayed on the system's keypad, and none of the zones will be protected.

The instruction manual that accompanies the control includes recommendations regarding receiver and transmitter locations, the types of wireless zones that can be programmed (e.g., ENTRY/EXIT, PERIMETER, INTERIOR, etc.) and the procedure for programming the receivers.

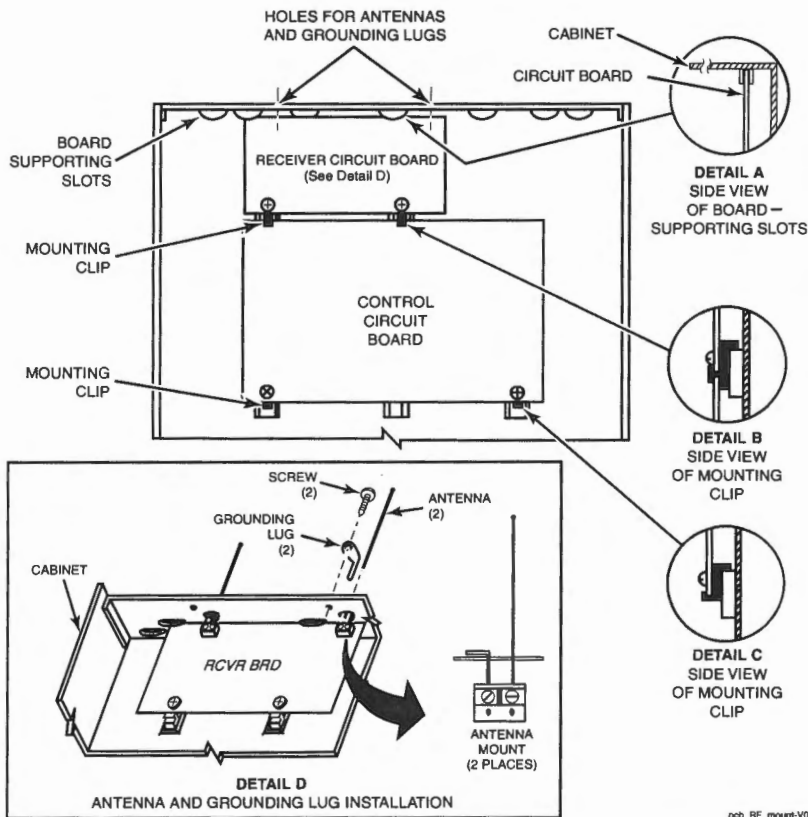
These receivers should not be installed in an area subject to environmental extremes of below freezing (such as an unheated warehouse) or extremely high temperatures (such as an attic).

INSTALLATION

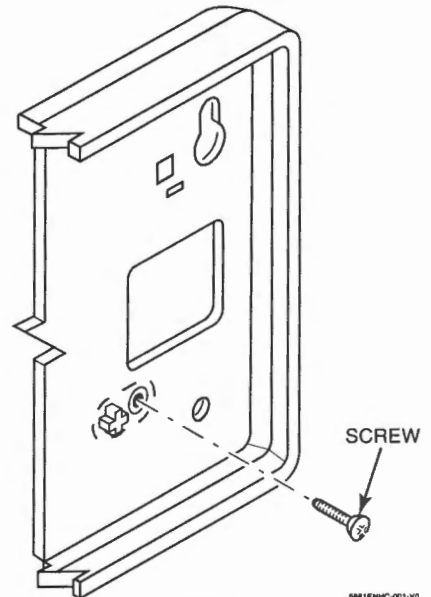
With some controls, a receiver may be mounted directly inside the control's cabinet (receiver circuit board only, without its plastic housing) instead of remotely (in its own housing). In both cases, avoid mounting the receiver antennas against a metal surface.

NOTE: You may only mount the 5881ENHC its own plastic housing. If you attempt to mount the 5881ENHC in the control's cabinet, the receiver constantly reports a tamper condition.

1. **Remove the receiver's cover** by inserting and twisting a screwdriver blade in the slot at the center of the cover's lower edge.
2. **If the receiver is to be mounted within the control's cabinet (refer to Figure 1):**
 - a. Remove the receiver's circuit board from its base by bending back the two flexible plastic tabs that hold the board's lower edge.
 - b. In the control's cabinet, unfasten and move the control circuit board downward (if already installed).
 - c. Hang two mounting clips (provided with the receiver) on the raised cabinet tabs, as shown in Detail B of Figure 1.
 - d. Insert the top of the receiver board between the rows of slots at the top of the cabinet, as shown in Detail A.
 - e. Position the base of the receiver board onto the mounting clips and secure to the cabinet with the supplied screws. See Detail B.
 - f. Hang two mounting clips (supplied with the control board), on the raised cabinet tabs as shown in Detail C in Figure 1.
 - g. Insert the top of the control board into the slots of the mounting clips secured in step e above.
 - h. Position the lower end of the control board into place on the mounting clips and secure both to the cabinet with the two supplied screws.
 - i. Insert both grounding lugs (supplied with the receiver) through the top of the cabinet into the *left-hand* terminals of the antenna blocks (located on the upper edge of the receiver board), and secure them to the cabinet with the screws provided, as shown in Detail D.
 - j. Insert the receiver's antennas through the top of the cabinet, into the blocks' *right-hand* terminals, and tighten the screws.
 - k. Affix the receiver's Summary of Connections label to the inside of the control's cabinet door.
 - l. Discard the receiver's unused plastic cover and base.
3. **If the receiver is to be located remotely from the control in its own plastic enclosure (not in a cabinet):**
You will not need the circuit board mounting clips, grounding lugs and screws included with the receiver.
 - a. If concealed wiring is to be used, route it through the rectangular opening at the rear of the base before mounting. For surface wiring entry, a thin breakaway area is provided along the base's right edge.
 - b. Mount the receiver in the selected location. For greatest security, use all four mounting holes (two key slot holes and two round holes) provided in the plastic base.
 - c. If installing a 5881ENHC, install a flat-head screw (supplied) in the case tamper tab as shown in Figure 2. When the receiver is pried from the wall, the tamper tab will break off and remain on the wall. This will activate a tamper switch in the receiver and cause generation of a tamper signal. Note that this signal will also be generated when the receiver's front cover is removed.
 - d. Affix the receiver's Summary of Connections label to the inside of the housing cover.



pcb_rf_mount-V0



8881ENC-001-V0

Figure 1: Installing the Receiver Board in the Control's Cabinet

Figure 2: Tamper Protection

4. Setting the DIP switches (All Receivers):

- a. Set the receiver's DIP switch (#2 through #4) to identify the receiver's address (refer to the DIP switch chart in Figure 3).
- b. Verify that DIP switch #1 is in the OFF position.
- c. Set DIP switch #5 according to the following chart.

DIP SWITCH #5	
For ...	Set to ...
Commercial Fire Applications	ON
Non-commercial Fire Applications	OFF

NOTES:

- If multiple receivers are used on one control, DIP switch #5 must be set to the same position on all receivers.
- DIP switch #5 reduces sensitivity during supervision message reception. For commercial fire applications, DIP switch #5 **must** be in the ON position.

5. Insert the wiring plug (with 4 flying leads) into the mating socket on the receiver (see Figure 3 for socket location). Connect the 4 wires to the control's corresponding keypad terminals (see "Interface Wiring" in the SPECIFICATIONS section).

6. Install the antennas in the right-hand terminals of the two terminal blocks at the upper edge of the circuit board, one into each block's right-hand terminal, and tighten the screws to secure them.

Caution: Avoid mounting the receiver antennas against a metal surface.

7. Proceed with any programming of the control that may be necessary for RF operation, and the installation of the system's wireless transmitters, as described in the control's installation and setup guide and the transmitter's installation instructions.

NOTES:

- The receiver can support up to 16 high security (encrypted) wireless transmitters (keys). The total quantity of wireless keys (encrypted and unencrypted) that can be used is determined by the control panel.
- Wireless key buttons must be enrolled to zones in the control panel via zone programming first. If the wireless key is to be used for arming and disarming the VISTA-40 and up, a user number must then be assigned to the wireless key via user programming. If it is not done in this order, you will be unable to respond successfully to the RF button zone number prompt in user programming.
- If more than one receiver is being used and you are using encrypted wireless keys, we recommend that you (a) enter the GO/NO GO mode, (b) disconnect one receiver, (c) enroll all encrypted keys into the connected receiver, (d) reconnect the disconnected receiver, (e) exit the GO/NO GO mode, and then (f) repeat (a) through (e) for the receiver that was disconnected.
- The RED LED located on the receiver's circuit board should be used as an indicator of strong local radio frequency interference. If this LED is continuously illuminated, the receiver should be relocated.
- After a successful enrollment of an encrypted key, the GREEN LED blinks the number of spaces that are free for additional encrypted key enrollment.

8. Replace the receiver's cover.

ENCRYPTED KEYS

The receiver can support up to 16 encrypted wireless transmitters (keys) at one time. If the number on the receiver microprocessor is WAK 4406-4 or higher, the receiver provides you with the capability to check space available and/or delete encrypted keys using the procedures below.

The GREEN LED located on the receiver's circuit board may be used to determine how many more encrypted keys may be enrolled into the receiver. This LED is also used to indicate when encrypted keys may be deleted. To determine how many more encrypted keys may be enrolled and/or to delete enrolled encrypted keys:

1. **Remove power from the receiver and set DIP switch 1 to the ON position.**
2. **Apply power to the receiver and watch the GREEN LED.** You will see one of the following indications:
 - a. The GREEN LED blinks the number of spaces that are free for additional encrypted key enrollment and then goes to constantly ON.
 - b. The GREEN LED is constantly ON, indicating the receiver is full.
 - c. The GREEN LED is OFF, indicating no encrypted keys are enrolled.
3. **If you do not want to delete any enrolled encrypted keys, advance to step 4. If you want to delete enrolled encrypted keys, wait until the GREEN LED is constantly ON in step 2 a. or 2 b. above and then:**
 - a. **Record the positions of DIP switches 1 through 5.**
 - b. **Set DIP switches 1 through 5 to the opposite positions of their current settings and wait a few moments.**
 - c. **Set DIP switches 1 through 5 back to their original positions as recorded in step a.** All enrolled encrypted keys will be deleted.
4. **Place DIP switch 1 back into the OFF position to return to normal receiver operation.**

SPECIFICATIONS

Dimensions: 7-3/8" W x 4-3/8" (10-7/8" w/antennas) H x 1-7/16" D
188mm W x 112mm H (277mm w/antennas) x 37mm D

Input Voltage: 12VDC (from control's keypad terminals)

Current: 60mA (typical)

Operating Temperature: 0-50°C

Interface Wiring:

RED 12VDC input (+) Aux. Power
GREEN: Data Out to Control
YELLOW: Data In from Control
BLACK: Ground (-)

Range: 200ft (60m) nominal indoors from wireless transmitters (the actual range to be determined with the security system in the Test mode).

TO THE INSTALLER

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system.

The installer should assume the responsibility of developing and offering a regular maintenance program to the user, as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing (at least weekly) to insure the system's operation at all times.

WARNING! LIMITATIONS OF THIS WIRELESS ALARM SYSTEM

While this System is an advanced wireless security system, it does not offer guaranteed protection against burglary, fire or other emergency. Any alarm system, whether commercial or residential, is subject to compromise or failure to warn for a variety of reasons. For example:

- Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
- Intrusion detectors (e.g., passive infrared detectors), smoke detectors, and many other sensing devices will not work without power. Battery-operated devices will not work without batteries, with dead batteries, or if the batteries are not put in properly. Devices powered solely by AC will not work if their AC power supply is cut off for any reason, however briefly.
- Signals sent by wireless transmitters may be blocked or reflected by metal before they reach the alarm receiver. Even if the signal path has been recently checked during a weekly test, blockage can occur if a metal object is moved into the path.
- A user may not be able to reach a panic or emergency button quickly enough.
- While smoke detectors have played a key role in reducing residential fire deaths in the United States, they may not activate or provide early warning for a variety of reasons in as many as 35% of all fires, according to data published by the Federal Emergency Management Agency. Some of the reasons smoke detectors used in conjunction with this System may not work are as follows. Smoke detectors may have been improperly installed and positioned. Smoke detectors may not sense fires that start where smoke cannot reach the detectors, such as in chimneys, in walls, or roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level of a residence or building. A second floor detector, for example, may not sense a first floor or basement fire. Finally, smoke detectors have sensing limitations. No smoke detector can sense every kind of fire every time. In general, detectors may not always warn about fires caused by carelessness and safety hazards like smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches, or arson. Depending on the nature of the fire and/or location of the smoke detectors, the detector, even if it operates as anticipated, may not provide sufficient warning to allow all occupants to escape in time to prevent injury or death.
- Passive Infrared Motion Detectors can only detect intrusion within the designed ranges as diagrammed in their installation manual. Passive Infrared Detectors do not provide volumetric area protection. They do create multiple beams of protection, and intrusion can only be detected in unobstructed areas covered by those beams. They cannot detect motion or intrusion that takes place behind walls, ceilings, floors, closed doors, glass partitions, glass doors, or windows. Mechanical tampering, masking, painting or spraying of any material on the mirrors, windows or any part of the optical system can reduce their detection ability. Passive Infrared Detectors sense changes in temperature; however, as the ambient temperature of the protected area approaches the temperature range of 90° to 105°F (32° to 40°C), the detection performance can decrease.
- Alarm warning devices such as sirens, bells or horns may not alert people or wake up sleepers if they are located on the other side of closed or partly open doors. If warning devices are located on a different level of the residence from the bedrooms, then they are less likely to waken or alert people inside the bedrooms. Even persons who are awake may not hear the warning if the alarm is muffled by noise from a stereo, radio, air conditioner or other appliance, or by passing traffic. Finally, alarm warning devices, however loud, may not warn hearing-impaired people.
- Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be out of service or temporarily out of service. Telephone lines are also subject to compromise by sophisticated intruders.
- Even if the system responds to the emergency as intended, however, occupants may have insufficient time to protect themselves from the emergency situation. In the case of a monitored alarm system, authorities may not respond appropriately.
- This equipment, like other electrical devices, is subject to component failure. Even though this equipment is designed to last as long as 20 years, the electronic components could fail at any time.
- The most common cause of an alarm system not functioning when an intrusion or fire occurs is inadequate maintenance. This alarm system should be tested weekly to make sure all sensors and transmitters are working properly. The security console (and remote keypad) should be tested as well.

Limitations of this Wireless Alarm System, Continued

This system's wireless transmitters are designed to provide long battery life under normal operating conditions. Longevity of batteries may be as much as 7 years, depending on the environment, usage, and the specific wireless device being used. External factors such as humidity, high or low temperatures, as well as large swings in temperature, may all reduce the actual battery life in a given installation. This wireless system, however, can identify a true low battery situation, thus allowing time to arrange a change of battery to maintain protection for that given point within the system. Installing an alarm system may make the owner eligible for a lower insurance rate, but an alarm system is not a substitute for insurance. Homeowners, property owners and renters should continue to act prudently in protecting themselves and continue to insure their lives and property. We continue to develop new and improved protection devices. Users of alarm systems owe it to themselves and their loved ones to learn about these developments.

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information: This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.

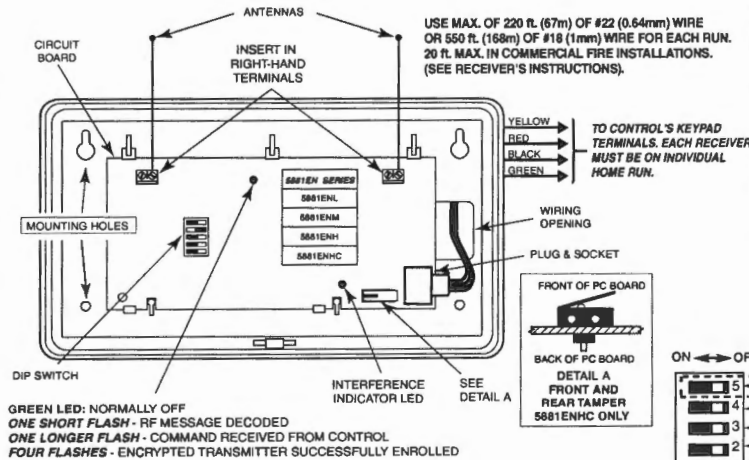
If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user or installer may find the following booklet prepared by the Federal Communications Commission helpful: "Interference Handbook". This booklet is available under Stock No. 004-000-00450-7 from the U.S. Government Printing Office, Washington, DC 20402. The user shall not make any changes or modifications to the equipment unless authorized by the Installation and Setup Guide or User Guide. Unauthorized changes or modifications could void the user's authority to operate the equipment.

LIMITED WARRANTY

Honeywell International Inc., acting through its Security & Custom Electronics business ("Seller") 165 Eileen Way, Syosset, New York 11791, warrants its product(s) to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 24 months from the date stamp control on the product(s) or, for product(s) not having a manufacturer's date stamp, for 12 months from date of original purchase unless the installation instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any product(s) which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product(s) is altered or improperly repaired or serviced by anyone other than Honeywell factory service. For warranty service, return product(s) transportation prepaid, to Honeywell Factory Service, 165 Eileen Way, Syosset, New York 11791. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO CASE SHALL SELLER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, OR UPON ANY OTHER BASIS OF LIABILITY WHATSOEVER, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT. Seller does not represent that the product(s) it sells may not be compromised or circumvented; that the product(s) will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product(s) will in all cases provide adequate warning or protection. Customer understands that a properly installed and maintained alarm system may only reduce the risk of a burglary, robbery, fire, or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THAT THE PRODUCT(S) FAILED TO GIVE WARNING. HOWEVER, IF SELLER IS HELD LIABLE, WHETHER DIRECTLY OR INDIRECTLY, FOR ANY LOSS OR DAMAGE ARISING UNDER THIS LIMITED WARRANTY OR OTHERWISE, REGARDLESS OF CAUSE OR ORIGIN, SELLER'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT(S), WHICH SHALL BE THE COMPLETE AND EXCLUSIVE REMEDY AGAINST SELLER. This warranty replaces any previous warranties and is the only warranty made by Seller on this product(s). No increase or alteration, written or verbal, of the obligations of this Limited Warranty is authorized.

NOTE: WHEN CIRCUIT BOARD IS MOUNTED IN CONTROL'S CABINET, GROUNDING LUGS (2) PROVIDED MUST BE INSERTED IN LEFT-HAND TERMINALS OF ANTENNA BLOCKS AND SECURED TO CABINET (SEE RECEIVER'S AND CONTROL'S INSTRUCTIONS). WHEN BOARD IS MOUNTED IN A SEPARATE CABINET (COMMERCIAL FIRE APPLICATION), DO NOT USE THE GROUNDING LUGS.

TO RELEASE CIRCUIT BOARD, BEND BACK BOTTOM TABS (2). FOR COMMERCIAL FIRE APPLICATION. USE TWO SCREWS (NOT SUPPLIED) WITH INSULATING WASHERS BENEATH THE HEADS. TO MOUNT BOARD IN SEPARATE CABINET. (SEE RECEIVER'S INSTRUCTIONS).



THIS DEVICE COMPLIES WITH PART 15 OF 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 UNDESIRABLE OPERATION.

FCC ID CFB8DL5882A
CANADA:17481021751A

DIP SWITCH #5
ON: FOR USE IN COMMERCIAL FIRE APPLICATIONS. (SEE THE RECEIVER'S INSTRUCTIONS).
OFF: USE IN NON-COMMERCIAL FIRE INSTALLATIONS.

DIP SWITCH: WHITE AREAS = SWITCH HANDLES
POSITION 2-4: DETERMINE RECEIVER'S ADDRESS

CONSULT CONTROL'S INSTRUCTIONS FOR ADDRESS TO USE.

DIP SWITCH BELOW SHOWN SET FOR ADDRESS "0".

SWITCH POSITION	RECEIVER ADDRESS SETTINGS (- means "OFF")
5	0 1 2 3 4 5 6 7
4	- ON - ON - ON - ON
3	- - ON ON - - ON ON
2	- - - - ON ON ON ON
1	1 MUST BE IN OFF POSITION

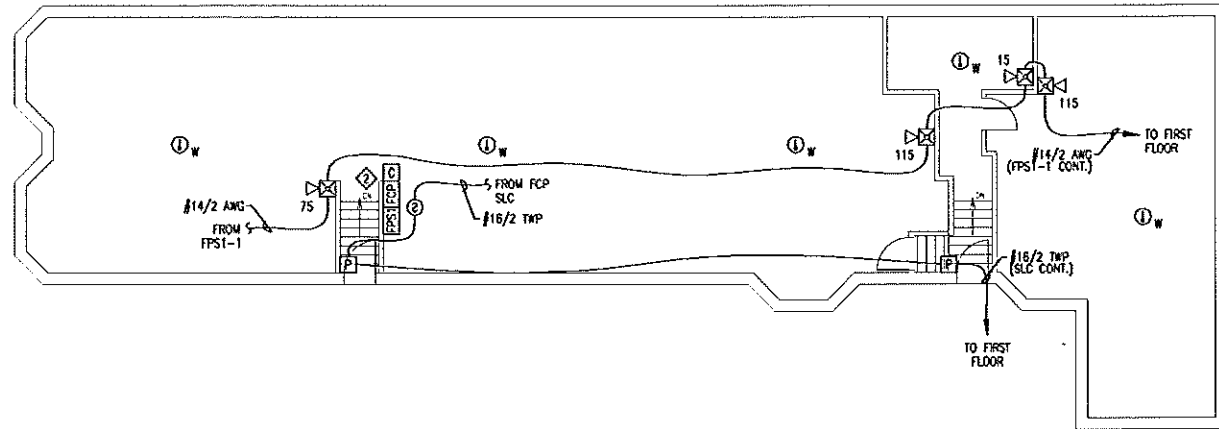


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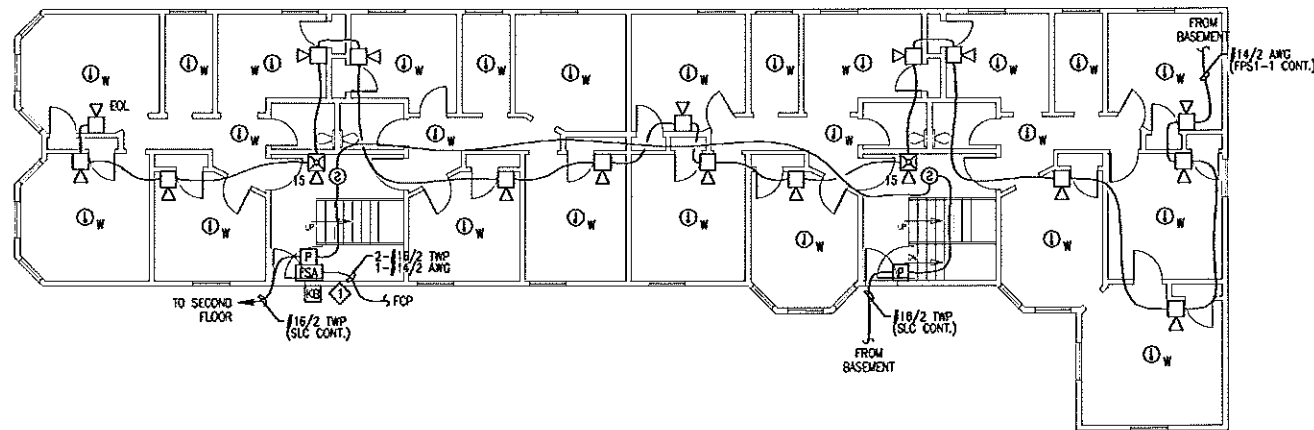
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N7635-3V3 1/01 Rev. C



BASEMENT FIRE ALARM PLAN
SCALE: 1/8"=1'-0"



FIRST FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

- THESE DRAWINGS ARE DIAGRAMMATIC. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
- INSTALLATION SHALL COMPLY WITH NEC, NFPA 72 AND ALL OTHER APPLICABLE CODES AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- WIRING DEPICTED ON THESE PLANS IS SCHEMATIC - ACTUAL WIRE LOCATIONS MAY DIFFER FROM THESE PLANS. WIRING SHALL BE PERFORMED AS ACTUAL BUILDING CONSTRUCTION CONDITIONS ALLOW AND TO MINIMIZE PENETRATIONS THROUGH AREA SEPARATION WALLS AND FIRE WALLS. THE USE OF A RACEWAY IS PERMITTED AS LONG AS NO 110V OR HIGHER VOLTAGE CABLES ARE IN THE SAME RACEWAY.
- FIRE RATINGS SHALL BE MAINTAINED FOR ALL PENETRATIONS THROUGH FIRE-RATED CONSTRUCTION.
- POWER FOR ALL FIRE ALARM PANELS AND FIRE ALARM POWER SUPPLIES MUST BE PROVIDED BY A DEDICATED AC BRANCH CIRCUIT.
- POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST REMAIN SEPARATED IN CABINET. ALL POWER-LIMITED CIRCUIT WIRING MUST REMAIN AT LEAST 0.25" AWAY FROM ANY NONPOWER-LIMITED CIRCUIT WIRING. FURTHERMORE, ALL POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST ENTER AND EXIT THE CABINET THROUGH DIFFERENT KNOCK OUTS AND/OR SEPARATE CONDUITS.
- WHEN UTILIZING CLASS "A" CIRCUITS, SEPARATE OUTGOING AND RETURN CONDUCTORS OF CLASS "A" CIRCUITS BY A MINIMUM OF 12" WHERE RUN VERTICALLY AND 48" WHERE RUN HORIZONTALLY.
- WHEN UTILIZING SHIELDED CABLE TIE SHIELDS THROUGH AND INSULATE AT EACH JUNCTION BOX. INSULATE AND TAPE BACK AT END.
- ALL FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE.
- SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER CONSTRUCTION CLEAN-UP IS COMPLETED AND FINAL.
- LOCATE SMOKE DETECTORS A MINIMUM OF THREE (3) FEET FROM MECHANICAL DIFFUSERS. WALL-MOUNTED SMOKE DETECTORS SHALL BE LOCATED A MINIMUM OF 4" AND A MAXIMUM OF 12" FROM CEILING. CEILING-MOUNTED SMOKE DETECTORS SHALL BE MOUNTED ON CEILINGS AND NOT ON THE BOTTOMS OF BEAMS OR JOISTS.
- PROVIDE SYNCHRONIZATION OF ALL VISUAL NOTIFICATION APPLIANCE CIRCUITS. PROVIDE ALL REQUIRED SYNC MODULES. PROVIDE A MULTI-SYNC MODE SLAVE CONNECTION BETWEEN ALL SYNC MODULES.
- VERIFY ALL FIELD SELECTABLE AUDIBILITY SETTINGS OF NOTIFICATION APPLIANCES WITH FIRE ALARM CONTRACTOR.
- UPON COMPLETION OF THE FIRE ALARM SYSTEM INSTALLATION AND PROGRAMMING, THE INSTALLING CONTRACTOR SHALL PERFORM FINAL TESTING OF THE ENTIRE SYSTEM, PER ALL APPLICABLE CODES, AND SHALL COORDINATE AND PERFORM A FINAL FIRE ALARM SYSTEM INSPECTION.
- PROVIDE OFF-SITE MONITORING AS REQUIRED BY THE INTERNATIONAL FIRE CODE, SECTION 907.15 AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- INSTALLING CONTRACTOR SHALL, PHYSICALLY, LABEL ALL INITIATING DEVICES AND NOTIFICATION APPLIANCE CIRCUIT END OF LINE (WHEN WIRING CLASS "B"). THESE LABELS SHALL BE IN PLACE PRIOR TO START-UP AND TESTING.

SHEET NOTES:

- ANNUNCIATOR TO HAVE A LOCKABLE LEXAN COVER OVER IT.
- FIRE ALARM DOCUMENTS BOX TO BE LOCATED NEXT TO FCP.

FIRE ALARM SYMBOL LEGEND
NOTE: ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT

SYMBOL	DESCRIPTION	MOUNTING
[FCP]	FIRE ALARM CONTROL PANEL	WALL-TOP @ 66"
[FPS]	FIRE ALARM POWER SUPPLY	FIELD VERIFY
[FSA]	FIRE SYSTEM ANNUNCIATOR	WALL-TOP @ 66"
[C]	DUAL PATH COMMUNICATOR	FIELD VERIFY
[WR]	WIRELESS RECEIVER	FIELD VERIFY
[FSD]	FIRE/SMOKE DAMPER	BY OTHERS
⊙	SMOKE DETECTOR	CEILING
⊙	DUCT SMOKE DETECTOR	BY OTHERS
⊙ W	WIRELESS HEAT DETECTOR	CEILING
[AM]	ADDRESSABLE CONTROL MODULE	FIELD VERIFY
[AM]	ADDRESSABLE MONITOR MODULE	FIELD VERIFY
[P]	MANUAL PULL STATION	WALL @ 48"
[R]	CONTROL RELAY (MULTI-VOLTAGE)	FIELD VERIFY
[RM]	ADDRESSABLE RELAY MODULE	FIELD VERIFY
[KB]	KNOW BOX	FIELD VERIFY
⊙	MAGNETIC DOOR HOLDER	FIELD VERIFY
⊙	WATER FLOW SWITCH	BY OTHERS
⊙	VALVE TAMPER SWITCH	BY OTHERS
⊙	BELL	BY OTHERS
⊙	CEILING MOUNT STROBE	FIELD VERIFY
⊙	CEILING MOUNT HORN / STROBE	FIELD VERIFY
⊙	CEILING MOUNT SPEAKER / STROBE	FIELD VERIFY
⊙	HORN	WALL @ 10'-0"
⊙	HORN / STROBE	WALL @ 80"-96"
⊙	SPEAKER / STROBE	WALL @ 80"-96"
⊙	SPEAKER	WALL @ 90"
⊙	STROBE	WALL @ 90"-96"

ABBREVIATION	DESCRIPTION
E	EXISTING
G	WITH GUARD
P	PENDENT MOUNT
R	RESIDENTIAL (110V)
S	SCOURER BASE
WP	WEATHER PROOF
EOL	END OF LINE RESISTOR
EOLR	END OF LINE RELAY
AWG	AMERICAN WIRE GAUGE
TWP	TWISTED PAIR
TWSP	TWISTED SHIELDED PAIR
FPLP	FIRE POWER LIMITED PLENUM
FPLR	FIRE POWER LIMITED RISER

⊙	DOCK ADDRESS	⊙	L10001 OR D01
⊙	DOCK LOOP	⊙	DOCK DETECTOR OR MODULE ID

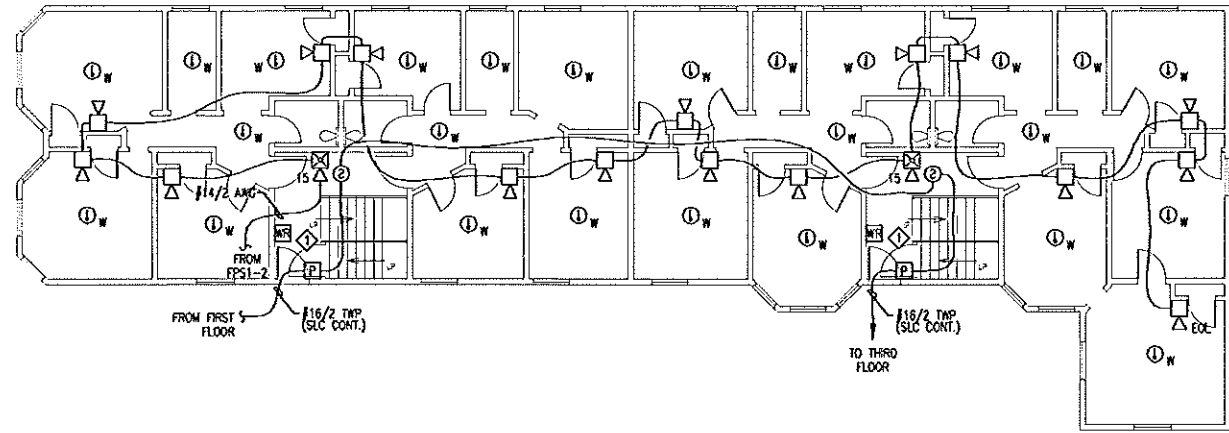
1-#16/2 TWP	WIRE TYPE ASSOCIATED CONDUCTOR COUNT
WIRE SIZE	# OF WIRES IN CABLE (IF LIMITED BY CODES (IN QUANTITY ONLY IF CABLE NEEDED))

OPERATIONS MATRIX

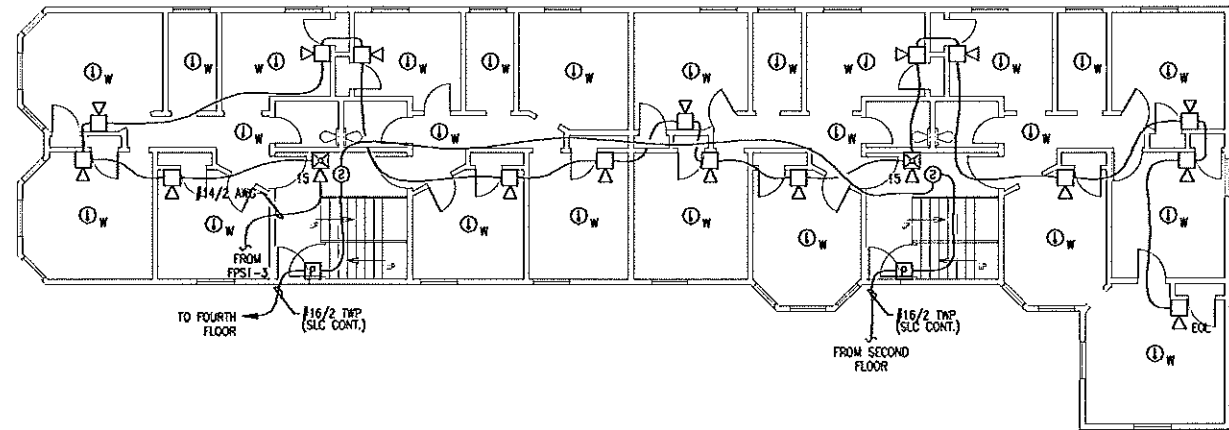
	FIRE ALARM OUTPUT	ACTIVATE ALARM INDICATOR	ACTIVATE AUDIBLE ALARM	ACTIVATE TROUBLE INDICATOR	ACTIVATE TROUBLE INDICATOR	TRANSMIT ALARM SIGNAL	TRANSMIT TROUBLE SIGNAL
FIRE ALARM INPUT							
SMOKE DETECTORS	●	●	●	●	●	●	●
HEAT DETECTORS	●	●	●	●	●	●	●
PULL STATIONS	●	●	●	●	●	●	●
FIRE ALARM AC POWER FAIL			●	●	●	●	●
FIRE ALARM LOW BATTERY			●	●	●	●	●
OPEN CIRCUIT			●	●	●	●	●
GROUND FAULT			●	●	●	●	●
NAC SHORT CIRCUIT			●	●	●	●	●
LOSS OF AC TO BUILDING			●	●	●	●	●

41 CHESTNUT STREET
PORTLAND, MAINE
BASEMENT & FIRST FLOOR FIRE ALARM PLAN

DRAWN	JPS UNICAD JOB #12509
CHECKED	WAYNE B. HAINES NICET # 90456
DATE	11/12/2012
REVISION	0
SCALE	1/8" = 1'-0"



SECOND FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"



THIRD FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

SHEET NOTES:

- FIELD VERIFY EXACT MOUNTING LOCATION OF WIRELESS RECEIVER (WR).

FPS1 Battery Calculation 11/13/2012

PROJECT NAME: 41 CHESTNUT STREET
Required Standby Time: 24 Hours
Required Alarm Time: 5 Minutes

Regulated Load in Standby			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
Altronix AL802ULADA	1	0.09000	0.09000
TOTAL STANDBY LOAD 0.09000			
Regulated Load in ALARM			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
Altronix AL802ULADA	1	0.17500	0.17500
FPS1-1	1	1.95300	1.95300
FPS1-2	1	1.26200	1.26200
FPS1-3	1	1.26200	1.26200
FPS1-4	1	1.26200	1.26200
TOTAL ALARM LOAD 5.91400			
Battery Requirements			
Standby Load Current (Amps)	0.09000	Required Standby Time in Hours	24.00000
Alarm Load Current (Amps)	5.91400	Required Alarm Time in Hours	0.08333
Total Ampere Hours (before derating factor)		2.65283	
Derating Factor			1.2
TOTAL AMPERE HOURS REQUIRED		3.18340	
BATTERIES TO BE PROVIDED (2 - 12v)		7 AH	

NAC Circuit Voltage Drop Calculation 11/12/2012

Project Name: 41 CHESTNUT STREET
Circuit Number: FPS1-1

Nominal System Voltage: 20.4 volts
Minimum Device Voltage: 16 volts
Distance from source to 1st device: 8
Wire Gauge for balance of circuit: 14

Max Output Current: 2.7 amps
Total Circuit Current: 1.953 amps

Circuit is within limits					
Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.176		20.33	0.07	0%
Device 2	0.218	62	19.65	0.75	4%
Device 3	0.079	18	19.50	0.90	4%
Device 4	0.218	2	19.48	0.92	5%
Device 5	0.069	28	19.26	1.14	6%
Device 6	0.069	4	19.23	1.17	6%
Device 7	0.069	15	18.13	1.27	6%
Device 8	0.069	24	18.98	1.42	7%
Device 9	0.069	22	18.84	1.58	8%
Device 10	0.069	4	18.82	1.58	8%
Device 11	0.079	12	18.76	1.64	8%
Device 12	0.069	13	18.70	1.70	8%
Device 13	0.069	11	18.65	1.75	9%
Device 14	0.069	6	18.62	1.78	9%
Device 15	0.069	11	18.59	1.81	9%
Device 16	0.069	11	18.55	1.85	9%
Device 17	0.069	26	18.48	1.91	9%
Device 18	0.069	4	18.48	1.92	9%
Device 19	0.079	11	18.46	1.94	10%
Device 20	0.069	17	18.44	1.98	10%
Device 21	0.069	11	18.43	1.97	10%
Device 22	0.069	4	18.43	1.97	10%
Totals	1.953	320			

Honeywell Security Battery & Power Budget Calculator

Location: 41 CHESTNUT STREET
Model: Vista-850RBP
Date: 11/13/2012

SELECTED PANEL MAXIMUM OUTPUT RATINGS	
Panel	Max. Power (Watt)
Panel 1	1700
Panel 2	1700
Panel 3	1700
Panel 4	1700
Panel 5	1700
Panel 6	1700
Panel 7	1700
Panel 8	1700
Panel 9	1700
Panel 10	1700
Panel 11	1700
Panel 12	1700
Panel 13	1700
Panel 14	1700
Panel 15	1700
Panel 16	1700
Panel 17	1700
Panel 18	1700
Panel 19	1700
Panel 20	1700
Panel 21	1700
Panel 22	1700

NAC Circuit Voltage Drop Calculation 11/13/2012

Project Name: 41 CHESTNUT STREET
Circuit Number: FPS1-2

Nominal System Voltage: 20.4 volts
Minimum Device Voltage: 16 volts
Distance from source to 1st device: 31
Wire Gauge for balance of circuit: 14

Max Output Current: 1.8 amps
Total Circuit Current: 1.262 amps

Circuit is within limits					
Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.079		20.16	0.24	1%
Device 2	0.069	17	20.04	0.36	2%
Device 3	0.069	11	19.96	0.44	2%
Device 4	0.069	4	19.94	0.46	2%
Device 5	0.069	30	19.76	0.64	3%
Device 6	0.069	4	19.73	0.67	3%
Device 7	0.069	26	19.60	0.80	4%
Device 8	0.069	11	19.55	0.85	4%
Device 9	0.069	11	19.50	0.90	4%
Device 10	0.069	6	19.48	0.92	5%
Device 11	0.069	11	19.44	0.96	5%
Device 12	0.079	13	19.40	1.00	5%
Device 13	0.069	12	19.37	1.03	5%
Device 14	0.069	4	19.36	1.04	5%
Device 15	0.069	22	19.32	1.08	5%
Device 16	0.069	16	19.30	1.10	5%
Device 17	0.069	4	19.30	1.10	5%
Device 18	0.069	15	19.29	1.11	5%
Totals	1.262	248			

NAC Circuit Voltage Drop Calculation 11/13/2012

Project Name: 41 CHESTNUT STREET
Circuit Number: FPS1-3

Nominal System Voltage: 20.4 volts
Minimum Device Voltage: 16 volts
Distance from source to 1st device: 14
Wire Gauge for balance of circuit: 14

Max Output Current: 2.0 amps
Total Circuit Current: 1.262 amps

Circuit is within limits					
Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.079		20.08	0.32	2%
Device 2	0.069	17	19.96	0.44	2%
Device 3	0.069	11	19.88	0.52	3%
Device 4	0.069	4	19.86	0.54	3%
Device 5	0.069	30	19.68	0.72	4%
Device 6	0.069	4	19.66	0.74	4%
Device 7	0.069	26	19.52	0.88	4%
Device 8	0.069	11	19.47	0.93	5%
Device 9	0.069	11	19.42	0.98	5%
Device 10	0.069	6	19.40	1.00	5%
Device 11	0.069	11	19.36	1.04	5%
Device 12	0.079	13	19.32	1.08	5%
Device 13	0.069	12	19.29	1.11	5%
Device 14	0.069	4	19.28	1.12	5%
Device 15	0.069	22	19.25	1.15	6%
Device 16	0.069	16	19.23	1.17	6%
Device 17	0.069	4	19.22	1.18	6%
Device 18	0.069	15	19.22	1.18	6%
Totals	1.262	258			

NAC Circuit Voltage Drop Calculation 11/13/2012

Project Name: 41 CHESTNUT STREET
Circuit Number: FPS1-4

Nominal System Voltage: 20.4 volts
Minimum Device Voltage: 16 volts
Distance from source to 1st device: 31
Wire Gauge for balance of circuit: 14

Max Output Current: 2.0 amps
Total Circuit Current: 1.262 amps

Circuit is within limits					
Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.079		20.00	0.40	2%
Device 2	0.069	17	19.88	0.52	3%
Device 3	0.069	11	19.81	0.59	3%
Device 4	0.069	4	19.78	0.62	3%
Device 5	0.069	30	19.60	0.80	4%
Device 6	0.069	4	19.58	0.82	4%
Device 7	0.069	26	19.44	0.96	5%
Device 8	0.069	11	19.39	1.01	5%
Device 9	0.069	11	19.35	1.05	5%
Device 10	0.069	6	19.32	1.08	5%
Device 11	0.069	11	19.28	1.12	5%
Device 12	0.079	13	19.24	1.16	6%
Device 13	0.069	12	19.21	1.19	6%
Device 14	0.069	4	19.21	1.19	6%
Device 15	0.069	22	19.17	1.23	6%
Device 16	0.069	16	19.15	1.25	6%
Device 17	0.069	4	19.14	1.26	6%
Device 18	0.069	15	19.14	1.26	6%
Totals	1.262	268			

DATE	DESCRIPTION
11/14/2012	ISSUED FOR REVIEW & APPROVAL
0	REVISION

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41 CHESTNUT STREET
PORTLAND, MAINE
SECOND & THIRD FLOOR FIRE ALARM PLAN

DRAWN	JPB UNICAD JOB #12509
CHECKED	WAYNE B. HAYS NCEET N 90496
DATE	11/12/2012
REVISION	0
SCALE	1/8" = 1'-0"

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