PowerSeries neo

DSC
From Tyco Security Products

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Alarm Central Installation Guide v1.1

Quick Setup

1	Plan	Plan the installation to include all alarm detection devices, zone expanders, keypads, and other required modules.
2	Mount	Decide on a location for the alarm panel and secure it to the wall with the appropriate mounting hardware.
3	Wire	Complete all wiring, including modules, zones, bells/sirens, telephone line connections, and ground connections. Record the module serial numbers on page 21.
4	Power	Connect the battery and power the system. The battery must be connected.
5	Associate first keyboard	Wired: Wire the keypad to the Corbus, power the alarm panel, and press any button on the keypad. Wireless: Wire the HSM2Host to the Corbus, then power the alarm panel and a wireless keypad. Press any button on the keypad to associate it. The HSM2Host associates with the alarm panel. Alternatively, associate an RF keypad.
6	Associate modules	[*][8][Installer Code][902] subsection [000].Press [*] to begin auto-association.Module slots are assigned automatically.Use the scroll keys to view the slots.Change slots by typing a 2-digit number.
7	Associate wireless devices	[*][8][Installer Code][804] subsection [000].Note: An HSM2HOST or RF Keypad must be associated first.
8	Basic Programming	Program: [*][8][installer code] [001]/[002]> Zone Type/Zone Attribute [005]> [001] Partition 1 Timers: – Entry Delay 1 – Entry Delay 2 – Exit Delay [301]>[001] Phone #1 [310]>[000] System Account Code Test
9	Test	the panel thoroughly to ensure all features and functions are operating as programmed.– [901] Walk Test – [904][000] Wireless Placement Test

Supported Devices In this document, x in the model number represents the operating frequency of the device: 9 (912-919 MHz), 8 (868 MHz), 4 (433 MHz).

Note: Only models operating in the 912-919 MHz band are UL/ULC Listed where indicated. Only UL/ULC Listed devices should be used. UL with systems approved by

Table 1-1 Supported Devices

Modules

Wireless keyboards:	HS2LCDWFxUL	HS2LCDWFPVxUL
	HS2LCDWFPxUL	
Wired keyboards with integration module	HS2LCDRFxUL	HS2ICNRFxUL
Two-way wireless:	HS2LCDRFPxUL	HS2ICNRFPxUL
Wired keyboards:	HS2LCDUL	HS2ICNPUL
	HS2LCDPUL	HS2LEDUL
	HS2ICNUL	
Touchscreen keyboard	HS2TCHP	
Note: For ULC-s559 listed applications the HS2TCHP touchscreen keypad is for supplemental use only.		
Bi-directional wireless integration module:	HSM2HOSTxUL	
8-zone expander:	HSM2108UL	
8-output expander:	HSM2208UL	
Power supply:	HSM2300UL	
4 High Current Output Expanders:	HSM2204UL	
Alternate communicator:	3G2080UL	TL2803GUL
	3G2080RUL	TL2803GRUL
	TL280UL	PCL-422UL
	TL280RUL	

Wired devices

2-wire smoke detectors:	FSA-210xUL	FSA-210xRUL
y= A, B, or C	FSA-210xTUL	FSA-210xRTUL
A: ULC Approved Models	FSA-210xSUL	FSA-210xRSUL
B: UL Listed Models	FSA-210xSTUL	FSA-210xRSTUL
C: European and Australian models	FSA-210xLSTUL	FSA-210xLRSTUL
4-wire smoke detectors:	FSA-410xUL	FSA-410xRUL
	FSA-410xTUL	FSA-410xRTUL
y= A, B, or C	FSA-410xSUL	FSA-410xRSUL
A: ULC Approved Models	FSA-410xSTUL	FSA-410xRSTUL
B: UL Listed Models	FSA-410xLSTUL	FSA-410xLRSTUL
C: European and Australian models		
CO Detectors:	CO-12/24UL	FW-CO1224UL
	12-24SIRUL	CO1224UL
	FW-CO12UL	

Wireless devices

PG Wireless Smoke Detectors	PGx926UL
PG Wireless Smoke and Heat Detector	PGx916UL
Wireless CO PG Detector:	PGx916UL
Wireless PG PIR Motion Detectors:	PGx904(P)UL
PIR motion detector + wireless PG camera	PGx934(P)UL
Wireless PG curtain motion detector	PGx924UL
PG Dual Tech Wireless Motion Detector	PGx984(P)
Wireless PG Mirror Motion Detector	PGx974(P)UL
PG Wireless Outdoor Motion Detector	PGx994UL
Wireless PG Glass Break Detector:	PGx912
Wireless PG Shock Detector:	PGx935UL
Wireless PG Flood Detector:	PGx985UL
Wireless PG Temperature Detector (Indoor Use):	PGx905UL
Outdoor temperature probe (requires PGx905)	TEMP. PROBE PG
Wireless PG Key:	PGx939UL
	PGx929UL
Wireless PG Panic Key	PGx938UL
PG Wireless 2-Button Key	PGx949UL

AVERTISSEMENT: Le présent manual contient des informations relatives aux limitations concernant l'utilisation et les fonctionnalités du produit also que les limitations de la responsabilité du manufacturer. Lisez attentively le manuel dans son intégralité.

Wireless PG Sirens:	PGx901UL PGx911UL
Wireless PG Repeater:	PGx920UL
Wireless PG Door/Window Contact:	PGx975UL
Wireless PG Door/Window Contact w/AUX	PGx945UL

Central station receivers

SG System I, II, III, IV

Cabinet

PC5003C, PC4050CR (ULC Fire Monitoring), PC4050CAR (UL Commercial Burglary), CMC-1 (UL Commercial Burglary) Other enclosures are available to accommodate a variety of configurations. system.

Safety instructions for service personnel

Warning: When using equipment connected to the telephone network, always follow the basic safety instructions provided with this product. Retain these instructions for future reference. Inform the end user of the safety precautions that must be observed when operating this equipment.

Before installing the equipment Make sure your package includes the following items: l Installation and user manuals, including the INSTALLATION INSTRUCTIONS SECURITY.

READ and KEEP these instructions!

Follow ALL WARNINGS AND INSTRUCTIONS specified in this document and/or on the equipment.

l HS2016/HS-2016/2032/2064/2128 Alarm Controller l Power Supply, Direct Connection l Mounting Components

Selecting a Suitable Location for the Alarm Controller Use the following list as a guide to find a suitable location to install this equipment: l Locate it near a telephone socket and a power socket. l Select a location free from vibration and shock. l Place the alarm controller on a flat, stable surface and follow the instructions.

installation instructions.

DO NOT locate this product where people will walk on the secondary circuit wires.

DO NOT connect the alarm controller to the same electrical circuit as that used by large appliances.

DO NOT select a location that exposes your alarm controller to direct sunlight, excessive heat, moisture, vapors, chemicals, or dust.

DO NOT install this equipment near water (e.g., bathtub, kitchen/laundry sink, wet basement, near a swimming pool).

DO NOT install this equipment and its accessories in areas where there is a risk of explosion.

DO NOT connect this equipment to outlets controlled by wall switches or automatic timers.

AVOID sources of interference.

AVOID installing the equipment near heaters, air conditioners, fans and refrigerators.

AVOID placing the equipment near or on top of large metal objects (e.g., structural studs).

See "Detector Placement and Escape Plan" on page 24 for information on the location of smoke and CO detectors.

Safety measures required during installation

Never install this equipment and/or telephone wiring during a thunderstorm . electric.

l **Never** touch uninsulated telephone wires or terminals unless the line is telephone line has been disconnected at the network interface. l Route the cables so that accidents cannot occur. Connected cables must NOT be subjected to excessive mechanical stress. l Only use the power supply supplied with this equipment. The use of unauthorized power supplies may damage the repeater. l For direct plug-in versions, use the supplied transformer .

supplied with the device.

WARNING: THIS EQUIPMENT DOES NOT HAVE AN ON/OFF SWITCH. THE POWER SUPPLY PLUG IS DESIGNED TO SERVE AS THE DISCONNECT DEVICE IF THE EQUIPMENT MUST BE QUICKLY DISCONNECTED. IT IS ESSENTIAL THAT ACCESS TO THE PLUG AND THE CORRESPONDING POWER SOCKET NEVER BE OBSTRUCTED.

IMPORTANT NOTE FOR NORTH AMERICA!

This alarm system must be installed and operated within an environment providing a maximum pollution degree of 2 and overvoltage category II FOR NON-HAZARDOUS LOCATIONS, indoors only. The equipment is DIRECT PLUGGED (external transformer) and is intended to be installed and maintained by service personnel only; (service person is defined as a person who has the appropriate technical training and experience necessary to understand the hazards to which that person may be exposed when performing a task and also the measures to minimize the risks to that person or others). This equipment does not have a mains power switch. The power supply plug is designed to serve as the disconnect device if the equipment must be quickly disconnected. It is imperative that access to the plug and the corresponding mains socket outlet is never obstructed. There are no end-user serviceable parts inside this equipment. Wiring (cables) used for the installation of the alarm system and accessories must be insulated with PVC, TFE, PTFE, FEP, neoprene or polyamide. (a) The equipment enclosure must be secured to the building structure prior to operation. (b) Internal wiring must be routed to prevent: - Excessive tension or loosening of the wire at terminal connections; - Damage to conductor insulation. (c) Disposal of used batteries must be in accordance with recovery and recycling regulations. (d) Before servicing, DISCONNECT the power supply and telephone connection. (e) DO NOT run any cables above the circuit board. (f) The installer is responsible for ensuring that a readily accessible disconnect device is incorporated into the building for permanently connected installations.

The power supply shall be Class II, FAULT SAFE with double or reinforced insulation between the PRIMARY and SECONDARY CIRCUIT and the ENCLOSURE and be of an approved type acceptable to the local authorities. All national wiring rules shall be observed.

Facility

Mounting the Cabinet Place the panel in a dry area, preferably near an unswitched AC power source and the incoming telephone line.
Complete all wiring before applying AC or connecting the battery.

Terminal Descriptions The following terminals are available on the PowerSeries Neo alarm controller.

Terminal	**Description** Battery
BAT+, BAT-	terminals. Use these to provide backup power and additional current when system demands exceed the transformer's power output, for example when the system is in alarm. Do not connect the battery until all other wiring is complete.
AC	Power terminals. Connect the battery before connecting the AC power. Do not connect the battery or transformer until the rest of the wiring is complete.
AUX+, AUX-	Auxiliary terminals. Use them to power power modules, detectors, relays, LEDs, etc. (700 mA MAX). Connect the positive side of the device to AUX+, and the negative side to AUX-.
SIREN+, SIREN- Bell/Siren	Power Supply (700mA MAX).Connect the positive side of any alarm warning device to SIREN+, and the negative side to SIREN-.
RED, NEG, AMR, VER Corbus	Terminals. They provide communication between the alarm controller and the connected modules. Each module has four Corbus terminals that must be connected to Corbus.
PGM1 to PGM4	Programmable output terminals. They activate devices such as LEDs. (PGM1, PGM3 and PGM4: 50 mA; PGM2: 300 mA or can be configured as one input)
Z1 to Z8, COM	Zone input terminals. Ideally, each zone should have one detection device; however, multiple detection devices can be wired to the same zone.

Terminal	Description
EGND	Ground connection.
TIP, RING, T-1, R-1	Telephone line terminals.
PCLINK_1	DLS/SA
PCLINK_2	DLS/SA, Alternate Communicator

Corbus wiring

Corbus terminals ROJ and NEG are used to provide power while AMR and VER are used for communications data.The 4 Corbus terminals of the alarm controller must be connected with the 4 Corbus terminals or with the wires of each module.

The following conditions apply:

- The Corbus should be laid with four 22 gauge wires as minimum, preferably with two twisted pairs.
- Modules can be routed to the panel, connected in series or derivatives in T.
- Do not use shielded wire for Corbus wiring.

Note: Any module can be connected anywhere in the Corbus. No separate runs required for keyboards, expanders, area, etc.

Note: No module may be longer than 1000 ft/305 m (in length) of the wire) from the panel. Do not use shielded wire for wiring Corbus.

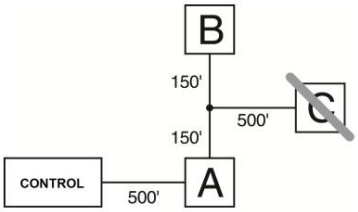

Figure 1-1 Corbus Wiring

Module (A) is wired correctly because it is within 1000 ft/305 m from the panel, in wire distance. Module (B) is wired correctly because it is within 1000 ft/305 m from the panel, in wire distance. Module (C) is NOT wired correctly because it is more than 1000 ft/305 m from the panel.

Nominal currents

For the system to function properly, the power output of the alarm controller and power supply modules cannot exceed. Use the following data to ensure that the current available do not exceed.

Table 1-2 Nominal system output values

Device Output	Nominal Value (12 VDC)
HS2016 HS2032 HS2064 HS2128	AUX: 700 mA . Subtract the nominal value mentioned for each keyboard, expansion module and accessory connected with AUX or Corbus. At least 100 mA should be reserved for the Corbus.
	SIREN: 700 mA. Continuous operation. 2.0A. Short periods. Available only with standby battery connected. Not for UL/ULC or EN certified applications.
HSM2208	AUX: 250mA. Continuous operation. Subtract for each device. connected. Subtract the total load on this terminal from the output AUX/Corbus from alarm panel.
HSM2108	AUX: 100mA. Subtract for each connected device. Subtract the total load on this terminal of the AUX/Corbus output of the panel.

Alarm control panel

AUX - 700 mA available for devices connected to the AUX and PGM terminals and modules connected to Corbus. Therefore less than 100 mA should be reserved for the Corbus.

Calculating the alarm controller current

Panel calculation

Maximum (standby or alarm)

Corbus (700 mA max. including PGM 1-4)

Corbus (700 mA max.)***

PCLink+ (Alt. Comm.:125 mA)

Total (should not exceed 700 mA)

*** See "Corbus Current Calculation Table" on page 3.
For UL, ULC listed commercial applications, the total current in standby and alarm current cannot exceed 700 mA.

Table 1-3 Corbus current calculation table

Element	Current (mA)	x	Total Amount	(mA)
HS2016/HS2032 /HS2064/HS2128	85	X	1	85
HS2LCD	105	x		
HS2ICN	105	x		
HS2LED	105	x		
HS2LCDP	105	x		
HS2ICNP	105	x		
HS2LCDRF	105	x		
HS2ICNRF	105	x		
HS2ICNRFP	105	x		
HS2TCHP	160	x		
Current required for connected devices =				
HSM2108*	30	x		
AUX output current of HSM2108				
HSM2208*	40	x		
AUX output current of HSM2208				
HSM2300/2204*	35	x		
HSM2HOSTx	35	x		
HSM2955**		x		
3G208(R)/TL2803G(R)/TL280 (R)	125 (PCLINK) x			
Total Corbus current =				

*These units draw power from the Corbus to feed the devices external to the module. This current must be added to the total Corbus current.See manufacturer's specifications for the current consumption of each device.
** For current consumption of the HSM2955, refer to the user manual.
HSM2955 installation.

Capacitance limits

An increase in capacitance in the Corbus affects data transmission and makes the system slower. The capacitance increases for every foot of

wire added to the Corbus. The capacitance rating of the cable used will determine the maximum length of the Corbus.

Table 1-4 Wire capacitance

Wire capacitance per 1000 ft (300 m)	Total length of wire Corbus
15 nF	5300 ft/1616 m
20 nF	4000 feet/1220m
25 nF	3200 feet/976 m
30 nF	2666 ft/810 m
35 nF	2280 ft/693 m
40 nF	2000 feet/608m

AC (UL Listed Installations)

Primary: 120 VAC/60 Hz./0.33 A
Secondary: 16.5 VAC/40 VA Transformer DSC PTD1640U, DSC PTC1640U Class 2.

Note: Use DSC PTD1640 for Canadian installations.

Warning: Do not connect the battery or transformer until all other wiring is complete.

For ULC S559 applications, you must use the Standex transformer (Model FTC3716) for direct connection.

Note: For UL/ULC installations use only 60 Hz.

Batteries

Do not connect the battery until the rest of the wiring is completed.

Note: A sealed, rechargeable, lead-acid, or gel-type battery is required to meet UL requirements for standby power.

Connect the RED battery cable to the positive battery terminal and the BLACK battery cable to the negative battery terminal.

Note: See "Aux. Charging and Battery Selection" on page 22.

Additional wiring

Wiring of the area

Turn off the alarm controller and complete all zone wiring.
Zones can be wired to monitor normally open devices (such as smoke detectors) or normally closed devices (such as door contacts). The alarm panel can also be programmed for single end-of-line or dual end-of-line resistors.

Zone programming is performed using the following programming sections: l [001] selects the zone
definition l [013] Option [1] for Normally Closed or
EOL; Option [2] for SEOL or DEOL l [201 - 208] Partition assignment.

Observe the following guidelines when wiring zones: l
For UL Listed installations use only SEOL or
DEOL
l 22 AWG minimum, 18 AWG maximum wire gauge l Do not use shielded wire l Do not exceed 100 ÿ
wire resistance. See table
following:

Table 1-5 Burglary Zone Wiring Table

Wire Gauge Maximum Length	at EOL Resistance (ft-s/m)
22	3000 / 914
20	4900 / 1493
19	6200 / 1889
18	7800 / 2377
Figures are based on a maximum wiring resistance of 100 ÿ.	

Aux Power Wiring

These terminals provide 11.3-12.5 VDC/700 mA of current (shared with the PGM outputs). Connect the positive side of any device to the AUX+ terminal, and the negative side to GND. The AUX output is protected; if too much current is drawn from these terminals (a wiring short), the output will temporarily shut off until the problem is corrected.

Note: If using a 12V 14Ah battery, the maximum AUX capacity for 24 hours in reserve is 470mA.

PGM Wiring

The minimum/maximum operating voltages for devices, sensors and modules are 9.5 VDC - 14 VDC.
PGMs switch to ground when activated from the alarm controller. Connect the positive side of the device to the AUX+ terminal, and the negative side to the PGM terminal.
PGM 1, 3, 4 supply up to 50 mA; PGM 2 supplies up to 300 mA.
A relay is required for currents greater than 50 mA or 300 mA. PGM2 can also be used for 2-wire smoke detectors, 24-hour burglar entry alarm.

Note: Use SEOL heaters only in fire zones.

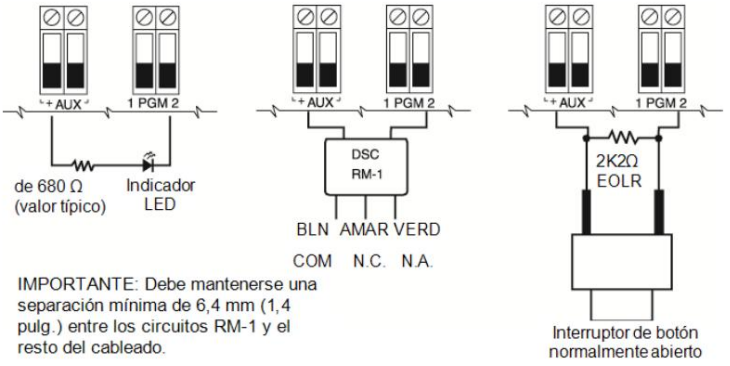

Figure 1-2 LED output with current limiting resistor and optional relay driver output.

The UL Compatibility ID for the FSA-210B series is: FS200 **Note:** For ULC listed installations, use the FSA-210A and FSA-410A series.

Single End-of-Line (SEOL) resistor

When SEOL resistors are installed at the end of a zone loop, the alarm panel detects whether the circuit is secure, open, or shorted. The SEOL resistor must be installed at the end of the loop for proper supervision. To enable SEOL supervision, program section [013], options [1] and [2] to OFF.

Note: This option must be selected if normally closed or normally open contacts or detection devices are used.

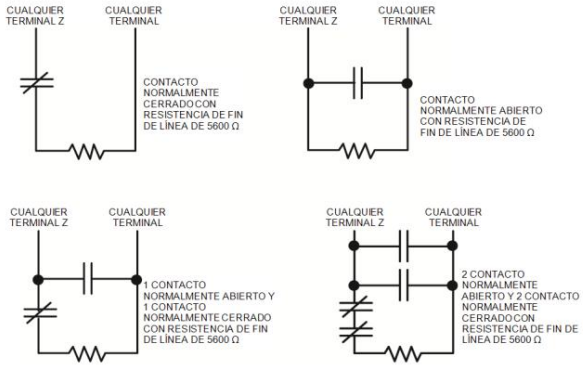

Figure 1-3 SEOL Wiring

Double End-of-Line (DEOL) Resistors

When dual end-of-line (DEOL) resistors are installed at the end of a zone loop, the second resistor enables the panel to determine if the area is open, closed, sabotaged or faulty.

Note: Any zone programmed for fire or 24-hour supervision will be must be wired with a SEOL resistor regardless of the type of supervision of the zone wiring selected for the panel. If you change the DEOL to SEOL or NC to DEOL zone monitoring options, Turn the system off completely and then turn it back on to achieve a correct operation.

To enable DEOL monitoring, program section [013], options [1] to OFF and [2] to ON.

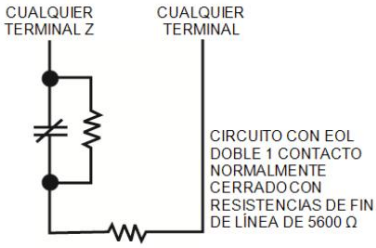

Figure 1-4 DEOL Wiring

Siren terminal wiring

These terminals supply 700 mA of current at 10.4-12.5 VDC to commercial and residential facilities.To meet the requirements of the three-pulse temporal pattern of NFPA 72, section [013] option [8] must be ON. Note that alarms are also supported. constant pulses.

Figure 1-5 Siren Terminal Wiring

The output of the Siren is supervised and limited in power by a 2 A thermistor. If not used, connect a 1000 ÿ resistor between Buzzer+ and Buzzer- to prevent the panel from displaying a fault.

Telephone line wiring

Wire the telephone connection terminals (TIP, Ring, T-1, R-1) to a RJ-31x connector as shown in the diagram below. For connection from multiple devices to the telephone line, wire in sequence indicated. Use a minimum 26 AWG wire for wiring.

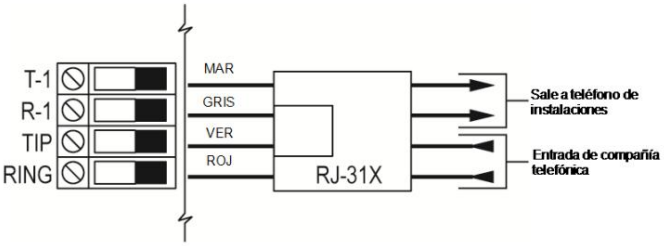

Figure 1-6 Telephone line wiring

The telephone format is programmed in option [350]. The addresses of Phone calls are programmed in options [311]-[318].

Ground wiring

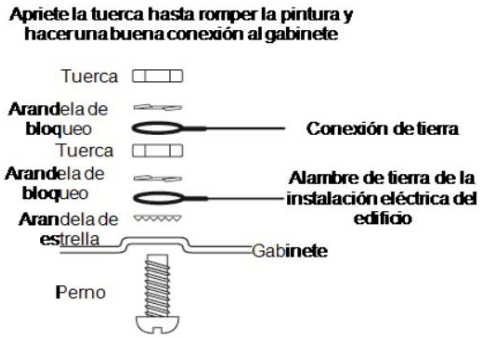

Figure 1-7 Grounding Installation

Note: Using a green insulated wire (minimum 22AWG), connect the EGND terminal on the Corbus and the installation ground wire electrical connection of the building to any of the available holes in the back back or side of the metal cabinet. See the diagram attached to the cabinet for the location of the GROUND point and the recommendations of the fixing components.

Note: Wire and installation components are not included.

Association

All optional modules and devices must be associated in the system. During association, the electronic serial number (ESN) of Each device is identified on the control panel and zones are assigned. A HSM2HOST wireless transceiver must first be associated or an RF keyboard before the wireless devices are paired.

Module association

During automatic and manual pairing, if you try to pair more than maximum number of modules, an error tone will sound and an error message will be displayed. message on LCD keypads.

Table 1-6 Module Capacity

Module	HS2016	HS2032	HS2064	HS2128
HSM2108 8 Zone Expander	1	3	7	15
HSM2208 8 Output Expander	2	4	8	16
Wireless Keyboard: HS2LCDRF(P)4; HS2ICNRF(P)4; HS2LCDWF(P)(V)4	8	8	8	16
HS2TCHP Touchscreen Keypad	8	8	8	16
HSM2300 Power Supply 1 A	3	3	3	4
HSM2204 4 High Current Output	1	1	3	4
HSM2HOSTx Transceiver	1	1	1	1
HSM2955 (not evaluated by UL)	1	1	1	1

Modules can be associated automatically or manually using the section [902] of the installer programming.
To confirm that a module has been successfully associated, use the section installer programming [903].

Pair wireless devices

Wireless devices are associated via the wireless transceiver module and the installer programming section [804] [000].

Automatic association

To pair a wireless device using this method, press and hold Press the Pair button on the device for 2 to 5 seconds until the LED lights up and then release the button. The alarm panel automatically recognizes the device and the keyboard displays a message confirmation. The device ID and the next number are displayed available area. Press [*] to accept or scroll to another number available zone. The wireless device must have the following installed: batteries to associate.

Pre-association

Pre-association is a two-step process. The first step requires entering the ID of each device ([804][001]-[716]). Each wireless device has an ID printed on a label attached to the device. The format is XXX-YYYY, where:

l XXX identifies the type or model of the device l YYYY is a short encrypted ID used by the system to identify the specific device Pre-association can be done at a remote location using DLS/SA. The second step is to press the association button on the device, which is typically done on-site. Installer programming does not need to be entered during this step. Both steps must be performed to complete the association.

Programming Methods The alarm system can be programmed by the following methods: **Table 1-7 Programming Methods**

Method	Description	Procedure
Scheduling	Use predefined templates to quickly apply basic scheduling and configure DLS offloading.	Press [899] on the "Enter Section" screen. See details in the Template programming below.
Programming a PC-Link	Download and apply programming using DLS 5 and for Neo v1.0 and DLS 5 panels a laptop with DLS-5 v1.4+ software installed. For Neo v1.0 products, use a DLS-5 v1.1 software.	v1.3 For local DLS, use For remote DLS, use a telephone line, cellular network, or the Internet.
Programming device options	Manually program all system and alarm by the installer.	Press [*][8][installer code] while the system is disarmed.

Viewing Programming Programming sections can be viewed from any keypad in the system. The method for viewing and selecting programming options with LCD, LED, and ICON keypads depends on the type of keypad being used. See below for specific instructions on programming with each keypad type.

Generally, programming options are accessed as follows:
manner:

1. Enter installer programming mode ([*][8]).
2. Navigate to a specific programming section.
3. Select an option to view or change your schedule.

All programming options are numbered and can be accessed by navigating through the menu (LCD) or by entering the program section number. For switchable options, the option name is displayed (LCD) or LEDs 1-8 are illuminated (LEDs and ICONS).
Use the numbers on the keypad to enable or disable options. Sections requiring data entry, such as phone numbers, display all data in fields up to 32 characters long (LCD). To enter data, use the navigation keys to select a character and then press the keypad button that corresponds to the required number or letter. Scroll to the next character and repeat as necessary. Press the [#] key to save your changes and exit the program section.

Minimum programming required Once the basic installation of the alarm panel is complete, the following general configuration options can be set.

[000] Language Selection (for LCD keypads only)

Use this section to set the language displayed by the LCD keypads. To select a language: 1. Enter Installer Programming mode [*][8][Installer Code] [installer].
2. Enter the [000]>[000] section of the programming.
3. Enter the 2-digit number that corresponds to the required language. See below:

01 = English	11 = Swedish	22 = Bulgarian
02 = Spanish	12 = Norwegian	23 = Latvian
03 = Portuguese	13 = Danish	24 = Lithuanian
04 = French	14 = Hebrew	25 = Ukrainian
05 = Italian	15 = Greek	26 = Slovak
06 = Dutch	16 = Turkish	27 = Serbian
07 = Polish	18 = Croatian	28 = Estonian
08 = Czech	19 = Hungarian	29 = Slovenian
09 = Finnish	20 = Romanian	
10 = German	21 = Russian	

Time and Date

Use this section to program the alarm system clock.
Menu: [*][6][Master Code] > Time & Date Keypad: [*][6] [Master Code] + 01 Enter the time and date using the following format: (HH:MM); (MM-DD-YY). Valid time entries are 00-23 hours, 00-59 minutes. Valid time entries are 01-12 months, 01-31 days.

Setting a Partition Partitions are added or removed from the system by applying or removing a partition mask using the installer programming section [200]. The number of partitions available depends on the alarm panel model.

Bell/Siren Operation Each partition must have a siren. The system siren, connected to the alarm controller's bell output, can be mounted in a central location within hearing range of all partitions.

Each partition can also have wireless sirens activated only in the assigned partition.

Keypad Partition Configuration Keypads can be configured to control an individual partition or all partitions. Typically, a partition keypad controls the partition to which it is assigned. A global keypad controls all partitions. Global keypads should be placed in common areas of the facility, such as entry points or reception areas, where the ability to arm and disarm more than one partition at a time is required.

Partition keypads can also be temporarily loaned to other partitions.

To select a keypad operating mode: 1. Enter Installer Programming mode [*][8][Keypad Code] [installer].
2. Select [861]-[876] to program keypads 1-16. l Press [000] for partition assignment. l For global operation, enter 00. l To assign a keypad to a partition, enter 01-08 for partition 1-8.
3. Press [#] and repeat step 2 for the next keypad. When you finish programming all keypads, press the [#] key twice to exit programming.

Partition access rights are assigned to users using the [*][5] menu.

Assign sirens to partitions:

[804]>[000]>[551]-[556]>[000]

Configure partition account codes:

[310]>[001]-[008]

Configure Partition Timers: l Entry/Exit Delay,

Set Delay – [005]>[001]-[008] l Auto Arm/Disarm Schedule – [151]-[158]>[001]/

[002]
l Automatic holiday disarming program – [151]-[158]>
[003]
l No Activity Arming – [151]-[158]>[006] l Auto Clock
Adjustment – [005]>[000], option 6 l Delay Between Redial
Attempts – [377]>[012]

Assigning zone types

A zone type defines how a zone functions within the system and how it responds when activated.

000 - Null zone	040 - Gas 24 hours
001 - Delay 1	041 - CO 24 hours
002 - Delay 2	042 - 24-hour robbery*
003 - Instant	043 - 24-hour Panic
004 - Interior	045 - 24-hour heat
005 - Present/Absent inside	046 - 24-hour medical*
006 - Present/Absent Delay	047 - 24 Hour Emergency
007 - 24-hour fire retardant	048 - 24-hour sprinkler*
008 - Standard Fire 24 hours	049 - Flood 24 hours
009 - Present/absent	051 - Sabotage with 24-hour instant retention
010 - Interior delay	052 - 24 Hour Non-Alarm 056
011 - Day area	- 24 Hour High Temperature 057 -
012 - Night area	24 Hour Low Temperature 060 - 24
016 - Final door adjustment	Hour Non-Latching Tamper 066 - Momentary
017 - 24-hour robbery	Keyswitch Arming
018 - 24-hour siren/buzzer	067 - Keyswitch sustained arming 068 -
023 - 24-hour supervision	Keyswitch momentary disarming 069 - Keyswitch
024 - 24-hour monitoring buzzer	sustained disarming
025 - Self-checking fire	071 - Door siren
027 - Fire Supervision	072 - Press to set
	* Not evaluated by UL

Assign zone attributes:

[002]>[001]-[128]>Select one of the following zone attributes:
1 – Audible siren
2 – Constant siren
3 – Bell function
4 – Unenabled
5 – Forced armed
6 – Zone exclusion
7 – Transmission delay
8 – Theft verification
9 – EOL normally closed
10 – Simple EOL
11 – Double EOL
12 – Fast/Normal Loop Response
13 – 2-Way Zone Audio Activation
14 – Assault verification

Create labels:

[000]>[001]-[821] 2 x 14 ASCII characters.

Add access codes:

To program an access code: [006] then one of the following: [001] – Installer Code [002]
– Master Code [003] – Maintenance Code Access codes are 4
or 6 digits long, depending on the
setting in programming section [041]. Duplicate codes are invalid.

Setting Up the Alternate Communicator The alternate

communicator is an optional wireless or Ethernet communications device that can be used as a backup to the PSTN connection or as the primary means of communication between the alarm panel and the central monitoring station. The alternate communicator communicates via 3G.

(HSPA) or Ethernet. The following steps are required to configure the
alternate communicator: l Install the alternate
communicator and connect it to the alarm panel (use PCLINK_2 header) l
Associate the alternate cellular
communicator with Connect 24 l Establish the communications
path: [300] l Enable the alternate communicator: [382]
option 5 l Enable event reporting: [307]/[308] l Program the
communication delay timer: [377] l Program DLS
access: [401] option 07. Refer to the 3G2080(R)/TL2803G(R)/TL280(R)
installation manual for further details.

[300] Panel/receiver communication paths

This section is used to select the communication path between the alarm system and the central station.
To use PSTN as the communications path, program section [300] options 001 through 004 as [01] PSTN 1.
To use the alternate communicator to establish a communications path, program two of the receivers (section [300] options 001, 002, 003 or 004) as [03] and [04] for Ethernet, and two of the receivers as [05] and [06] for cellular.

System test

Installer Pass Test

The walk test allows the installer to test the operation of each detector by triggering zones which cause a real alarm. Enter section [901] to initiate a walk test. When a zone is triggered, all sirens on the system sound a tone to indicate that the zone is working correctly.

After 15 minutes of no zone activity, the walk test automatically ends. To manually exit walk test mode, enter [901] again.

Viewing the Event Log

The event memory contains records of events that have occurred in the alarm system, starting with the most recent. The event memory capacity is scalable and can hold 500/1000 events (depending on the panel model) before it needs to be replaced. The memory displays events according to their recording time, starting with the most recent. The event memory can be loaded using DLS.

Each event displays the time and date, a description of the event, the zone label, the access code number, or any other pertinent information. To view the event log, press [*][6]
[Master Code][*].

Troubleshooting LCD Keypad with

Programmable Message: l Press [*][2] followed
by an access code if necessary to view a trouble condition

l The trouble light flashes and the LCD displays the first trouble condition. l
Use the arrow keys to
scroll through all the conditions.
of problems present in the system.

Note: When additional information is available for a specific trouble condition, a [*] is displayed. Press the [*] key to view the additional information.

LED and ICON Keypads: l Press [*]
[2] to view a trouble condition l The trouble light flashes l
Refer to the Trouble Summary list
below to determine the trouble conditions existing in the system

[*][2] Summary of problems

The following list describes the problem indications displayed on the keypads.

Problem	Detailed problem	
01 – Service is Necessary	01 – Siren circuit 02 – RF Interference detected 03 – Font problem aux.	04 – Time and date 05 – Exit failure 1
02 – Low module battery 01 – Low panel	battery 02 – Panel without battery 04 – HSM2204 1- 4 with low battery	05 – HSM2204 1- 4 without 07 – HSM2300 1-4 with low battery 08 – HSM2300 1- 4 without battery
03 – Bus voltage	01 – Voltage of HSM2HOSTx 02 – Keyboard voltage 1- 04 – HSM2108 Voltage 05 – HSM2300 Voltage 1-4	06 – HSM2204 Voltage 1-4 08 – HSM2208 Voltage 16 1-4 09 – HSM2955 Voltage 1-15 1-4
04 – AC Problem	01 – AC zone 1-128 03 – Siren 1-16 CA 04 – Repeater 1-8 CA	05 – HSM2300 AC 1-4 06 – AC of HSM2204 1-4 07 – Alarm Controller AC
05 – Device failures	01 – Zone 001 - 128 02 – Keyboard 1-16	03 – Mermaid 1-16 04 – Repeater 1-8
06 – Low device battery	01 – Zone 1-128 02 – Keyboard 1-16 03 – Mermaid 1-16	04 – Repeater 1-8 05 – User 1-32
07 – Sabotage on device 01 – Zone 1-128	02 – Keyboard 1-16 03 – Mermaid 1-16	04 – Repeater 1-8 05 – Audio Station 01 - 04
08 – RF Interference	01 – Zone 1-128 02 – Keyboard 1-16	03 – Mermaid 1-16 04 – Repeater 1-8
09 – Module 01 Supervision – HSM2HOSTx	02 – Keyboard 1-16 04 – HSM2108 1-15 05 – HSM2300 1-4	06 – HSM2204 08 – HSM2208 1-4 09 – HSM2955
10 – Module sabotage	01 – HSM2HOSTx 02 – Keyboard 1-16 04 – HSM2108 1-15 05 – HSM2300 1-4	06 – HSM2204 08 – HSM2208 1-4 09 – HSM2955
11 – Communications	01 – TLM 06 – Receiver 1-4 absent 02 – FTC Receiver 1-4 07 – Receiver 1-4 03 – SIM lock alt. com. supervision 04 – Alt. Commun. Cellular 05 – Common Ethernet alt. common. alt.	09 – High comm. failure 10 – FTC Failure of
12 – No network connection	01 – Zone 1-128 02 – Keyboard 1-16 03 – Mermaid 1-16	04 – Repeater 1-8 05 – User 1-32

Breakdown [1] Service required	Press [01] to determine specific problem
Problem	**Troubleshooting**
[01] Doorbell Circuit Disconnect the Doorbell-/+ wires and measure the Doorbell+, Doorbell-...circuit resistance: open.	Open circuit indicates break in the faulty wiring or siren/bell. Bridge the Timbre+/- terminals with a 1K resistor (brown, black, red):
[02] RF Interference Detected Review the event memory to determine the specific problem. Wireless Receiver - Excessive noise detected.	If the memory records RF interference, check for RF interference. Disable RF interference: section [804] subsection [801].
[03] Auxiliary Supply Check for a short between Aux+ and Aux- or ground of another auxiliary power supply. There is a problem.	Make sure that the current consumption has not exceeded the limits mentioned in the documentation.
[04] Time and Date To set the time and date: The controller's internal clock has not been set. Enter [*] [6][Master Code] and then press [01].	Enter the time and date (24-hour clock) using the following format: HH:MM MM/DD/YY for example, For 6:00 pm, June 29, 2010: Enter: [18] [00] [06] [29] [10]
[05] Output 1 Fault HSM2204 output#1 open. are bridged	If output #1 is not used: make sure that the circuit terminals O1, AUX with a 1K resistor (brown, black, red). If output #1 is used: disconnect the wires from terminals O1, AUX and measure the resistance of the wires: An open circuit indicates a break in the wiring.

Fault [2] – Module battery fault	Press [02] to determine specific problem
Problem	**Troubleshooting**
[01] Panel Low Battery Verify that the voltage measured across the AC battery terminals is below the threshold The panel detects that the AC battery is 16-18 VAC. Replace the transformer if applicable. low battery (less than 11.5 VDC).	Disconnect battery cables: NOTE: This trouble
condition will not clear until the battery voltage is at least 12.5 VDC, under charge. NOTE: If the battery is new, allow 1 hour to charge. Verify that the voltage measured across the	Verify that the battery charging voltage measured between the battery cables is equal to 13.70 - 13.80 VDC. Aux terminals is at least 12.5 VDC.
[02] Panel without battery Check that the battery is connected. The panel detects that there is no battery present or that the battery is shorted. Refer to the troubleshooting steps for the panel's low battery.	
[04] 4 High Current Output 1-4 Replace the battery if it can no longer support a load due to age. HSM2204 battery with less than 11.5 VDC. NOTE: This trouble condition will not clear until the battery voltage is at least 12.5 VDC under load. Charge the battery. It may be low due to a long period without AC.	
[05] 4 High current output 1-4 Check that the battery is connected. without battery (HSM2204) low battery. HSM2204 does not have a battery connected.	Refer to the troubleshooting steps for Enter 05 to see which panel's

Fault [2] – Module battery fault	Press [02] to determine specific problem
[07] Power Supply 1-4 Charge the battery. It may be low due to a long period without AC. Enter 07 to see which battery Replace the battery if it can no longer support a charging voltage less than 11.5 V due to age.	
[08] Power Supply 1-4 Check that the battery is connected. no battery (HSM2300) Refer to the troubleshooting steps for Enter 08 to see which panel's low battery. HSM2300 does not have a battery connected.	

Troubleshooting [3] Troubleshooting	Press [03] to determine specific bus voltage Troubleshooting
[01] Low bus voltage HSM2HOST Ensure the voltage at the	
Problem	module is higher than the limits stated
in the documentation. The bidirectional wireless integration module has detected a voltage lower than Check the panel battery voltage. Ensure the wire run is not too long. 6.3V on its auxiliary input.	The problem should clear when AC is reapplied and the battery has
and allow the panel to operate Enter 02 for powered battery keypads. Ensure the voltage at the module is higher than the limits stated in the documentation. ICONS/LCD that include a wireless transmitter- receiver, 7.7V for ICONS/LCD/LED models that do not include one.	had time to charge. [02] Bus Low Voltage keypad 1-16 Disconnect AC
[04] HSM2108 Bus Low Voltage Enter 04 to view zone expanders with a voltage less than 5.9V.	
[05] HSM2300 Bus Low Voltage Enter 05 to view power supplies with a voltage less than 6.9V.	
[06] HSM2204 Bus Low Voltage Enter 06 to view high current output modules that have detected a bus voltage of less than 6.9V.	
[08] HSM2208 Bus Low Voltage The low current output module has detected a voltage less than 5.9V on its auxiliary input.	
[09] HSM2255 Bus Low Voltage The audio module has detected a voltage less than 9.65V on its auxiliary input.	

Fault [4] AC Failure	Press [04] to determine specific problem Troubleshooting
	Verify that the
Problem	voltage measured between
[01] Zone 1-128 AC [03] – Siren 1-16 AC [04] – Repeater 1-8 AC [05] – HSM2300 AC 1-4 [06] HSM2204 AC 1-4 [07] Alarm Cancelled An AC problem has been detected on a device or module.	the AC terminals is 16-18 VAC. Replace the transformer if applicable.

Fault [05] Device failures	Press [05] to determine specific problem
Problem	**Troubleshooting**
[01] Zone 1-128 Fault Ensure fire zones have a 5.6K resistor (green, blue, red) connected. Wireless Zones: Enter [01] to view the fault zones. Remove the wires from the Z and COM terminals and measure the wire resistance: generated by a wireless supervision problem. This problem is caused by a fault. Check that there is no short circuit in the DEOL zones or an open condition in area. SEOL fire zones. Connect a 5.6K resistor between terminals Z and COM. Check if the trouble condition disappears. Placement test a wireless device and relocate it if you get poor results.	
Hardwired Zones: Ensure there is a 2.2K EOL resistor connected (red, red, red). Enter [01] to view faulted zones. Remove the wires from the PGM2 and AUX+ terminals and measure the resistance of the wires: If there is an open circuit on a 2-wire smoke detector input, “Fire Zone” is displayed in the [*][2] menu. An open circuit indicates a break in the wired or no resistor connected. PGM2 and AUX+.Verify that the problem disappears. This problem is caused by a short circuit in the wired zones when using DEOL.	
[02] Keypad 1-16 Fault Perform a placement test on the keypad and relocate it if necessary. Enter [02] to view the faulty wireless keypads. This problem is caused by a wireless supervision failure if the keypad is wireless.	
[03] Siren 1-16 Fault See [02] Keypad 1-16 faults above. This problem is caused by a wireless supervision failure on a wireless siren.	
[04] Repeater 1-8 Fault See [02] Keypad 1-16 faults above. This issue is caused by a wireless supervision failure on a wireless repeater, or by the repeater shutting down due to a loss of AC/ DC power.	
Additional conditions problems: of Fire (Smoke 2- W, PGX916, PGX926) Freezing (PGX905) Self-Test (PGX984) CO (PGX913) Disconnected from the probe (PGX905)	

Fault [6] Low device battery	Press [06] to toggle between specific devices with low battery problem
Problem	**Troubleshooting**

Fault [6] Low device battery	**Press [06] to toggle between specific devices with low battery problem**
[01] Zones 1-128 [02] Keypad 1-16 [03] Siren 1-16 [04] Repeater 1-8 [05] User 1-32 One or more wireless devices have low battery. NOTE: The event is not logged in the event memory until the wireless device's low battery delay time expires. Programming Section [377], Option 002.	Check the operation of the area. Verify that the tamper and low battery conditions have disappeared and been reported. See which device has low battery using the [*][2] menu.

Breakdown [7] Sabotage of dis	**Press [07] to determine specific positive problem**
Problem	**Troubleshooting**
[01] Zone 1-128 Tamper Check that the tamper switch is [02] Keypad 1-16 Tamper securely attached to the wall. [03] Siren 1-16 Tamper Remove the I/O and COM cables and measure the [04] Repeater 1-8 resistance of the cables. [05] – Audio Station Sabotage Connect a 5.6K resistor (green, blue, red) between the I/O and COM terminals. An open circuit is present. Check if the trouble condition disappears. in one or more zones with DEOL resistors enabled.	
A tamper condition exists on one or more wireless devices. Check that the device cover is secured. Ensure the device is mounted correctly for wall tamper operation. Trip and then reset the tamper protection. If the tamper condition persists, replace the wireless device.	

Breakdown [8] Interference of RF	**Press [08] to determine specific problem**
Problem	**Troubleshooting**
[01] Zone 1-128 Fault Open/close the device press a key on the keypad or [02] Keypad 1-16 tamper/reset. [03] Siren 1-16 Fault Ensure the device is physically present. [04] Repeater 1-8 Fault HSM2HOST has not received a supervision Check for device failures (such as a low battery signal). wireless device for 20 minutes. Check the current and previous signal strength. 24 hours. Battery replacement. Replace the device.	

Fault [9] Module supervision	**Press [09] to determine specific zones with a tamper problem**
Problem	**Troubleshooting**
[01] HSM2HOST [02] Keypad 1-16 [04] HSM2108 1-15 [05] HSM2300 1-4 [06] HSM2204 [08] HSM2208 1-4 [09] - HSM2955 No supervisory response from the associated module.	Modules are associated and supervised immediately. If a module is removed, or if the keypad slot is changed, module supervision must be reset. View the event log to identify specific modules in trouble. To reset module monitoring: Enter section [902] of the programming. Select automatic or manual association. Enter programming section [903] to identify the modules connected to Corbus.

Failure [10] Module sabotage	**Press [10] to determine specific problem**
Problem	**Troubleshooting**
[01] HSM2HOST Ensure that the TAM terminal on the HSM2108, HSM2300, HSM2204, and HSM2208 modules is shorted to ground if [02] HSM2108 1-16 tamper support is not used. [05] HSM2300 1-4 [06] HSM2204 Check that the module cover is [08] HSM2208 1-4 secured. [09] - HSM2955 Ensure the module is properly mounted on one or more modules. A tamper condition exists for wall tamper operation. Trip and then reset the tamper protection. If the tamper condition persists, replace the module.	

Breakdown [11] Communications	**Press [11] to determine specific problem**
Problem	**Troubleshooting**
[01] Telephone line fault Telephone line voltage at TIP, RING on main panel is less than 3 VDC.	Measure the voltage between TIP and RING on the panel: No phone off-hook – 50 VDC (approx.). Any phone off the hook – 5 VDC (approx.). Wire the incoming line directly to TIP and RING. If the problem goes away, check the wiring or RJ-31 connector.
[02] – FTC Receiver 1-4 Ensure proper line voltage is present at the panel (on-hook ~41 VDC, off-hook ~7 VDC). Tip and Ring The system was unable to communicate with a receiver using enabled phone numbers. Make sure the panel phone number is programmed correctly when using it. If using IP or cellular phone numbers, make sure the alternate communicator has the correct IP address and programming. communication problems. failure	
[03] SIM Lock Refer to the alternate communicator installation manual for details. SIM lock is enabled and the unit does not have the correct SIM PIN.	
[04] Communicator Cell Refer to the alternate communicator installation manual for more details. The alternate communicator has detected a radio or SIM failure, a cellular network outage, or insufficient signal strength.	
[05] Communicator Ethernet Refer to the alternate communicator installation manual for details. The alternate communicator has detected a network condition absent.	
[06] Receiver 1-4 Missing Refer to the alternate communicator installation manual for details. Supervision Loss or Failure to initialize a receiver.	
[07] Receiver Supervision 1-4 Refer to the communicator installation manual for more details. The alarm system loses communication with an Ethernet or cellular receiver in the system.	
[09] Alternate Communicator Failure Refer to the communicator installation manual for details. The alternate communicator has not responded to any polling commands. Alternate Communicator Failure is displayed in [*][2] and the event memory.	
[10] Alternate Communicator Failure Refer to the FTC Communicator Installation Manual for further details.	

Failure [12] No network connection	Press [12] to scroll through the faults
Problem	**Troubleshooting**
[01] Zones 1-128 Ensure the device is physically present. [02] Keypad 1-16 [03] Siren 1-16 Check the current signal strength and over the past 24 hours. [04] Repeater 1-8 [05] User 1-16 Replace the battery or press the tamper switch. A device is out of sync with the wireless network or has not paired with the network after pairing. Pair the device again. with	

IMPORTANT!

Make sure you have the following information available before contacting Customer Support: Alarm controller type and version (e.g., HSM2064 1.0).
Note: The version number can be obtained by entering [*][Installer Code][900] on any LCD keypad. This information is also found on a label on the printed circuit board. List of modules connected to the control panel, (e.g., HSM2108, HSM2HOSTx, etc.).

[*][2] Problem visualization

This feature is used to view system troubles. If there is a trouble, the keypad trouble indicator illuminates and an audible indication sounds (two short beeps every 10 seconds, except during AC failure). Silence the audible indicator by pressing [#].
Troubles can be viewed while the system is armed or disarmed.
The system can be programmed to display all troubles while armed or only fire troubles.
The system can be configured to require a user code to view [*][2] system troubles. See section [023] option 5.
To view fault conditions:

l Press [*][2] to enter the Trouble menu. l On an LCD keypad, scroll to a trouble type and then press [*] to view the specific trouble. The zone name and trouble condition for each trouble are displayed on the screen. l On LED/ICON keypads, zone indicator lights illuminate to identify existing trouble types (for example, Zone Light 1 represents Service Required Trouble Type). Press the number key corresponding to a zone light to view the specific trouble. Lights 1-12 illuminate to indicate the trouble as follows: **Table 1-8 : Trouble Indication Trouble 01** – **Service Required: [01]** Bell Circuit Trouble: The bell circuit is open.

[02] RF Interference: The HSM2HOSTx has detected an RF interference condition.

[03] Aux Supply Trouble: The alarm controller, HSM2204 or HSM2300 has an overcurrent condition on Aux.

[04] Clock Loss: System time and date require programming.
[05] Output 1 Fault: An HSM2204 module has detected an open condition on output #1.

Issue 02 – Battery Problem: [01] Panel Low Battery
Problem: Battery voltage (under load) is below 11.5V. Resets to 12.5V.

[02] Panel without battery: No battery connected to the alarm controller.
[04] HSM2204 01 - 04 Low Battery: An HSM2204 has a battery voltage of less than 11.5 V.

[05] HSM2204 01 - 04 No Battery: No battery connected to the HSM2204.
[07] HSM2300 01 - 04 Low Battery: An HSM2300 has a battery voltage of less than 11.5V **[08]** HSM2300 01 - 04 No
Battery: No battery connected to the HSM2300.

Issue 03 – Bus Voltage: [01] HSM2HOSTx Bus
Low Voltage: The HSM2HOSTx module has measured less than 6.3V at its Aux input.

[02] Keypad Bus Low Voltage 01 - 16: A wired keypad has a bus voltage of less than 6.9V for ICON/LCD models (RF version) and 7.7V for non-RF models.

[04] HSM2108 01 - 15 Bus Low Voltage: A zone expander has a bus voltage of less than 5.9 V.

[05] HSM2300 Bus Low Voltage 01 - 04: A power supply has a bus voltage of less than 6.9 V.

[06] HSM2204 Bus Low Voltage 01 - 04: A high current output module has a bus voltage of less than 6.9 V.

[08] HSM2208 Bus Low Voltage 01 - 16: The low current output module has detected a voltage less than 5.9 V on its auxiliary input.
[09] HSM2955 Bus Low Voltage: The audio module has detected a voltage less than 9.65V on its auxiliary input.

Trouble 04 – AC Trouble: [01] Zone 001 - 128 AC
Trouble: An AC trouble has been detected on a PGX934 PIR + Camera.

[03] Siren 01 - 16 AC: A siren has an AC problem.
[04] Repeater Sabotage 01 - 08: A wireless repeater has an AC problem.
[05] CA HSM2300 01 - 04: An HSM2300 has an AC problem.
[06] CA HSM2204 01 - 04: An HSM2204 has an AC problem.
[07] Panel AC: The alarm controller has an AC fail condition.

Trouble 05 – Device Faults: [01] Zones 001 - 128: A zone is in trouble. Additional information displayed on the LCD keypads for the following troubles: Fire (2-Wire Smoke, PGX916, PGX926), Freeze (PGX905), Self Test (PGX984), CO (PGX913), and Probe Disconnected (PGX905). Also generated by a short circuit on hardwired zones when using DEOL or by a wireless supervisory fault.

[02] Keypad 01 - 16: A wireless or wired keypad is faulty.
[03] Siren 01 - 16: A siren is out of order.
[04] Repeater 01 - 08: A wireless repeater is in trouble (supervisory or AC/DC loss).

Issue 06 – Low Device Battery: [01] Zones 001 - 128: The wireless zone has a low battery.
[02] Keyboard 01-16: The keyboard has a low battery.
[03] Siren 01 - 16: The siren has a low battery.
[04] Repeater 01 - 08: The repeater has a low battery.
[05] User 01 - 95: The wireless key has a low battery.

Issue 07 – Device Tamper: [01] Zone 001 - 128 Tamper: A wireless or wired zone configured for DEOL operation is in tamper.

[02] Keypad Tamper 01 - 16: A wired or wireless keypad is in tamper.
[03] Siren Tamper 01 - 16: A wireless siren is in tamper.
[04] Repeater Sabotage 01 - 08: A wireless repeater is in sabotage.
[05] Audio Station Tamper 01 - 04: An audio station connected to an HSM2955 is in tamper.

Trouble 08 – RF Inactivity Trouble: [01] Zone 001 - 128 RF Inactivity:
No response from a wireless zone for 13 minutes. This trouble prevents arming until acknowledged or cleared using [*] [2].

[02] Keypad 01 - 16 RF Inactivity: No response from a wireless keypad for 13 minutes.

[03] Siren 01 - 16 RF Inactivity: No response from a wireless siren for 13 minutes.

[04] Repeater 01 - 16 RF Inactivity: No response from a wireless repeater for 13 minutes.

Issue 09 – Module monitoring issue: [01] HSM2HOSTx is not responding.

[02] Keyboard 01 - 16 does not respond.
[04] HSM2108 01 - 15 does not respond.
[05] HSM2300 01 - 04 not responding.
[06] HSM2204 01 - 04 does not respond.
[08] HSM2208 01 - 16 does not respond.
[09] HSM2955 does not respond.

Fault 10 – Module sabotage: [01] HSM2HOSTx sabotage.
[02] Keyboard Sabotage 01 - 16.
[04] Sabotage of HSM2108 01 - 15.
[05] HSM2300 Sabotage 01 - 04.
[06] HSM2204 Sabotage 01 - 04.
[08] HSM2208 Sabotage 01 - 16.
[09] Sabotage of HSM2955

Problem 11 – Communications: [01] TLM:
Telephone line disconnected from the control panel.
[02] Receiver Problem 01-04 FTC: Communication is not possible using the programmed receiver routes.

[03] Alternate communicator SIM lock: The SIM card has an incorrect or unrecognized PIN.

[04] Alternate communicator cell phone: Radio or SIM card failure, low signal strength detected or cellular network failure.
[05] Alternate Communicator Ethernet: Ethernet connection unavailable. No valid IP address is programmed or the module was unable to obtain an IP using DHCP.
[06] Receiver 01-04 absent: The alternate communicator cannot initialize a receiver.
[07] Receiver Supervision 01-04: The alternate communicator cannot communicate with a receiver.

[09] Alternate communicator failure: The alternate communicator has stopped responding.
[10] Alternate Comm FTC Problem: The alternate communicator failed to communicate an internal event not generated by the panel.

Issue 12 – No network connection issues: [01] No network connection
issue in Zone 001-128: Generated when a zone is out of sync with the wireless network or if it was not synchronized with the network after associating it.

[02] No Network Connection Issue on Keyboard 01-16: Generated when a keyboard is out of sync with the wireless network or if it was not synchronized with the network after being associated.

[03] Siren 01-16 No Network Connection Issue: Generated when a siren is out of sync with the wireless network or if it was not synchronized with the network after associating it.

[04] No network connection problem on Repeater 01-08: Generated when a repeater is out of sync with the wireless network or if it was not synchronized with the network after associating it.

[05] User Network Connection Issue 01-95: Generated when a wireless dongle is out of sync with the wireless network or if it was not synchronized with the network after being associated.

IMPORTANT!

Make sure you have the following information available before contacting Customer Support: l Alarm controller type and
version (e.g., HSM2064
1.0):

Note: The version number can be obtained by entering [*][Installer Code][900] on any LCD keypad. This information is also located on a label on the printed circuit board.

l List of modules connected to the control panel, (e.g.,
HSM2108, HSM2HOSTx, etc.).

Specifications Zone

Configuration l Supports 16,
32, 64, or 128 wireless zones and up to 8 hardwired zones available on the controller l 40 zone types and 14 programmable zone
attributes l Available zone configurations: normally closed, simple
EOL, and supervised DEOL l Hardwired (fully supervised) zone expansion available

Available using the HSM2108 model (eight-zone expansion module)

l Wireless zone expansion (fully supervised) dis-
wearable using the bi-directional wireless integration module HSM2Host (operating at 915 MHz (North America), 433 MHz (Europe) and 868 MHz (international))

Access Codes l Up to
97 access codes: 94 (Level 2-EN), one system master code (Level 3-EN), one installer code (Level 3-EN), and one maintenance code l Programmable attributes for each user code (see
"Access Code Attributes" on page 1) l When using 6-digit access codes, the minimum number of access code variations is
10526 for HS2128/HS2064, 13888 for HS2032, and 20833 for HS2016

Warning Device Output l Integral 85 dB @ 3
m, self-powered sounder type
Z
l 2 wireless remote warning devices of inter-
Indoor/outdoor: PGX901 (indoor), PGX911 (outdoor) models (X=4, 8 or 9) l Programmable as
constant, pulsed or three-pulse temporary output (according to ISO8201) and four-pulse temporary output (CO alarm)
The warning device sounds the alarms with the following priority: fire, CO, burglary

Memory l
CMOS EEPROM memory l Retains
system programming and status in the event of AC or battery failure for at least 20 years. (not UL verified)

Power Supply - North America

Transformer: DSC PTD1640U, PTD1640
Primary: 120 V, 60 Hz Class II
Secondary: 16.5 VAC, 40 VA maximum

Power Supply - International

l Input ratings: 220V-240V AC, 50/60Hz, 200mA l Transformer required, mounted in the same cabinet, permanently connected l Transformer secondary power rating: 16.5V AC, 40Hz

VA min.

Note: For installations using the transformer mounted inside the cabinet, replace the fuse only with another of the same type (20 mm) and for 250 V/315 mA.

Regulated power supply:
l 1.7 A regulated, supervised and integral to the control unit l Type A in accordance with EN50131-6 l 700 mA, 12 V DC auxiliary supply l Positive temperature coefficient (PTC) for Buzzer terminals,
Aux+ and Battery
l Reverse battery detection/protection l AC power and low battery supervision l Normal and high current battery charging options l Supervised battery charging circuit

Current consumption (panel): l 85
mA (nominal) 2A (maximum)
Bell output:
l 12 V, 700 mA supervised (1k Ohm) buzzer output (current limited to 2 amps) l Constant,
pulsed, temporary alarm cadences of 3 pulses of Fire, storm 4 CO l Short
circuit detection in doorbell (software + hardware)
Aux+: l
Voltage range = 9.6 V - 13.8 V DC l Current = 700 mA (shared with Corbus R8ed)) l Ripple voltage output: 270 mVp-p max. l On-board programmable outputs: l PGM 1 - 50 mA switched programmable output l
Current-limited switched programmable output

PGM 2 - 300 mA. This PGM supports 2-wire smoke detectors (90 mA current limited) l PGM 3 - 50 mA switched programmable output l PGM 4 - 50 mA switched programmable output l PGM overcurrent protection

Battery l
12V Sealed Lead Acid, Rechargeable l Battery Capacity:
l 4 hours (UL Commercial Burglary/Residential Burglary), l 12 hours (EN50131), l 24
hours (UL/ULC Residential Fire, Commercial Burglary ULC, commercial fire monitoring ULC - no siren loading allowed); INCERT [Belgium])

Note: For T 014 compliance (INCERT certification), only 14 Ah batteries (2x7 Ah) were tested and are accepted for INCERT certified systems.

l Maximum standby time: 24 hours (with 14 Ah battery and auxiliary current limited to 470 mA) l Recharge time up to 80%: 72 hours l Recharge rate: 240 mA (12 hours max), 480 mA (24-hour backup)

l Backup time: 24 hours (UL) l Battery life: 3-5 years l Low battery trouble indicator
threshold: 11.5 V DC l Battery reset voltage: 12.5 V l Main board current consumption (battery only):

l HS2016/32/64/128 (without alternate communicator) standby 85 mA DC

l HS2016/32/64/128, (including alternate communicator) in standby 190 mA DC

l Transmission (alternate communicator module) 195 mA DC

l Resettable (PTC) fuses on circuit board l Supervision for loss of main power supply (AC fail), battery fail, or low battery voltage (battery fail) with indication provided on the keypad. l Internal clock fixed to the AC mains frequency . **Ambient Operating Conditions** l Temperature range: UL= 0°C to +49°C (32°F to 120°F), l Relative humidity: <93% non-condensing

Alarm Transmitter Equipment (ATE) Specification

l Digital dialer integrated into the main control board l Supports SIA and Contact ID l Meets telecommunications equipment requirements TS203 021-1, -2, -3 and with EN50136-1-1, EN50136-2-1, EN50136-2-3 ATS 2

Optional dual IP/cellular communicators can be installed (3G2080(R)/TL2803G(R)/TL280(R)) in the same enclosure and configured as primary or backup, with 128-bit AES encryption

l Meets the requirements of EN50136-1-1, EN50136-2-1 ATS2

System monitoring functions

PowerSeries Neo continuously monitors a number of conditions potential trouble conditions and provides audible and visual indication on the keypad. Trouble conditions include: l AC power failure l Zone trouble l Fire trouble l Telephone line trouble l Communicator trouble l Low battery condition l RF interference l AUX power supply failure l Communication failure l Module failure (supervisory or tamper)

Additional Features l Two-Way Wireless Device Support l Visual Verification (Pictures + Audio)* l Proximity Tag Support l PGM Programming l Quick Arming l User, Partition, Module, Zone, and System Labels l Watch Test* l Programmable System Loop Response l Keypad and Panel Software Versions Directly Viewable bles via keypad l Door siren zone type l Low battery PGM type *Feature not evaluated by UL/ULC.

Programming Directory

This section provides a list of all available programming options in numerical order. To program, access Installer Programming mode by entering [*][8][Installer Code]. Use the navigation keys to navigate through the menus or jump directly to a specific section by entering a section number and pressing [*]. Programming consists of enabling or disabling options in each section or filling out data fields. Press [*] to select options and [#] to exit to the previous menu. For descriptions of all options and programming worksheets, refer to the PowerSeries Neo Reference Manual. ÿ= Predefined **Label Programming**

Label programming 000

000 – Language selection (01)
001 – Zone labels
001-128 – Zone 1-128 Labels

051 – Zone Sabotage Tag
052 – Zone Fault Label
064 – CO alarm message
065 – Fire alarm message
066 – Arm Failure Event Message

067 – Alarm on arming event message

100 – System Label
101-108 – Partition labels 1-8

201-208 – Partition 1-8 Command Output Labels
001-004 – Command output labels 1-4
601-604 – Program Labels 1-4

801 – Keyboard Labels
001-016 Keyboard Labels 1-16

802 – Expander Labels area
001-015 – Zone 1-15 Expander Labels
803 – Output Expander Labels

001 Output Expander Label 1

806 – HSM2HOST Label
808 – Label HSM2955
809 – Power Supply Label

001-004 Power Supply Label 1-4

810 – High Current Output Source Label

001-004 Power Supply Label 1-4

815 – Alternate Communicator Label

820 – Mermaid Tag
001-016 Mermaid Tag 1-16

821 – Repeater Label
001-008 Repeater Label 1-8

999 – Labels with factory settings

Type of area

001 Zone type

001-128 Zone Types (000)
000 – Null Zone
001 – Delay 1
002 – Delay 2
003 – Instant
004 – Interior
005 – Present/Absent interior

006 – Present/ Absent Delay
007 – 24-hour delayed fire

008 – Standard Fire 24 Hours
009 – Instant present/absent

010 – Interior delay
011 – Day area
012 – Night area
016 – Final door adjustment
017 – 24-hour robbery
018 – 24-hour siren/buzzer

023 – 24-Hour Supervisory 024 – 24-Hour Supervisory Buzzer 025 – Fire Auto-Test 027 – Fire Supervisory 040 – 24-Hour Gas 041 – 24-Hour CO 042 – 24-Hour Holdup
043 – 24-Hour Panic
045 – 24-Hour Heat 046 – 24-Hour Medical* 047 – 24-Hour Emergency 048 – 24-Hour Sprinkler 049 – 24-Hour Flood 051 – 24-Hour Latching Tamper 052 – 24-Hour Non-Alarm 056 – 24-Hour High Temp 057 – 24-Hour Low Temp 060 – 24-Hour Non-Latching Tamper
066 – Keyswitch Momentary Arm
067 – Keyswitch Maintained Arm
068 – Keyswitch Momentary Disarm 069 – Keyswitch Maintained Disarm 071 – Siren Zone

door
072 – Press to set

002 – Zone Attributes

001-0128 (see PowerSeries Neo Reference Manual for factory defaults)

1 – Audible siren
2 – Constant siren
3 – Doorbell
4 – Unenabled
5 – Forced armed
6 – Zone exclusion
7 – Transmission delay
8 – Theft verification
9 – EOL normally closed

10 – Simple EOL
11 – Double EOL
12 – Fast/Normal Loop Response
13 – 2-Way Zone Audio Activation
14 – Robbery verification

System Times 005 System Times 000 – System Area Siren Cut-Off (004 min.)

Siren Delay Time (000 min.)

Theft verification timer (060 sec.)

Holdup verification timer (008 sec.)

Zone loop response (250 ms)

Automatic clock adjustment (060 sec.)
001 – 008 System Times-Partition 1-8

Entry Delay 1 (030 sec.)

Entry Delay 2 (045 sec.) (CP-01 030 sec.)
Exit delay (120 sec.) (CP-01 060 sec.)
Reset Delay (010 sec.) (CP-01 000 sec.)
900 – Siren Delay Partition Mask (S,S,S,S,S,S,S,S)

901 – Start of daylight saving time:
Month (003)
Week (002)
Day (000)
Time (002)
Increase (001)
902 – End of Daylight Savings Time
Month (011)
Week (001)
Day (000)
Time (002)
Decrease (001)

Access codes

006 Installer-defined access codes (4-digit decimal)

001 – Installer code (555555)

002 – Master Code (123456)
003 – Maintenance code (AAAA00)

PGM Programming

007 – PGM Programming

000 – Main siren partition assignment

1 – Partition 1
2 – Partition 2
3 – Partition 3
4 – Partition 4
5 – Partition 5
6 – Partition 6
7 – Partition 7
8 – Partition 8
001-164 – Partition Assignment PGM 1-164 (default: partition 1)

1-8 – Partition 1-8

008 – PGM Timer Programming

000 – PGM Timer - minutes or seconds (seconds)
001-164 – PGM Timer 1- 164 (005)

009 – Types of PGM

001-164 – PGM Types 1-164 Assignment (predefined: PGM1=121, PGM2=156, 3-164=101)
100 – PGM null
101 – Robbery and Fire Siren Follower
102 – Fire and theft delayed
103 – Sensor Reset [*] [7][2]

104 – Two-way smoke
109 – Courtesy Pulse
111 – Keyboard Buzzer Follower

114 – Ready to assemble
115 – Armed State of the system
116 – Armed State absent
117 – Armed State present
120 – Away Armed with No Zone in Bypass Status
121 – Command output 1
122 – Command output 2
123 – Command output 3
124 – Command output 4
129 – Partition status alarm memory

132 – Robbery Exit
134 – Silent Entry 24 hours
135 – 24 Hour Audible Input
146 – TLM and Alarm 147 – Answer Tone 148 – Ground Start 149 – Alternate Communicator 155 – System Trouble 156 – Latched System Event 157 – System Tamper 161 – DC Trouble 165 – Prox. used 175 – Siren Status and Programming Access
Output 176 – Remote Operation 184 – Open After Alarm 200 – Zone Follower 201 – Follower-Zones 1-8 202 – Follower-Zones 9-16 203 – Follower-Zones 17-24 204 – Follower-Zones 25-32 205 – Follower-Zones 33-40 206 – Follower-Zones 41-48 207 – Follower-Zones 49-56 208 – Follower-Zones 57-64 209 – Follower-Zones 65-72 210 – Follower-Zones 73-80 211 – Follower-Zones 81-88 ÿ= Default

212 – Follower-Zones 89-96
213 – Follower-Zones 97-104
214 – Follower-Zones 105-112
215 – Follower-Zones 113-120
216 – Follower-Zones 120-128

010 PGM Attributes

000 – Main Mermaid Mask
Fire Alarm ÿ
CO Alarm ÿ
Burglar Alarm ÿ
Flood alert 24 hours ÿ
Siren Squawks ÿ
001-164 PGM Attributes 1-164
100 – PGM null
101 – Fire and Theft
01 – True Exit ÿ
03 – Code required ÿ
102 – Delayed Fire and Theft
01 – True output
103 – Sensor Reset [*][7][2]
03 – Required code
109 – Courtesy Pulse
01 – True output
111 – Keyboard Buzzer Follower
01 – True Exit ÿ
02 – Synchronized departure
09 – Entry delay ÿ
10 – Exit delay ÿ
11 – Doorbell ÿ
12 – Keyboard Buzzer Zone ÿ
13 – Audible Exit Failure ÿ
14 – Automatic arming pre-alert ÿ
114 – Ready to assemble
01 – True Exit ÿ
115 – Armed State
01 – True Exit ÿ
116 – Away Armed Mode
01 – True Exit ÿ
117 – Armed Mode Present
01 – True Exit ÿ
121-124 – Command Exit 1-4
01 – True Exit ÿ
02 – Synchronized output ÿ
03 – Code required ÿ
(NZ off)
129 – Partition status alarm memory
01 – True Exit ÿ
132 – Robbery Exit
01 – True Exit ÿ
02 – Synchronized departure
146 – TLM and alarm
01 – True Exit ÿ
147 – Answer tone output
01 – True Exit ÿ
148 – Ground Start
01 – True Exit ÿ
149 – Alternate Communicator
01 – True Exit ÿ
02 – Synchronized departure ÿ
04 – Fire Alarm
05 – Panic Alarm
06 – Burglar Alarm
07 – Open/Close
08 – Zone with automatic override
09 – Medical Alarm
10 – Verified Theft
11 – Open after alarm
12 – Emergency Alarm
13 – Duress Alarm
14 – Robbery verified
155 – System failure
01 – True Exit ÿ
02 – Synchronized departure
04 – Service is Necessary ÿ
05 – Loss of watch ÿ
06 – AC Failure ÿ
07 – DC Failure ÿ
08 – TLM ÿ
09 – FTC ÿ
10 – Ethernet ÿ
11 – Zone Failure ÿ
12 – Zone Sabotage ÿ
13 – Low battery zone ÿ
156 – System Event Held
01 – True Exit ÿ
02 – Synchronized departure
04 – Fire Alarm ÿ
05 – Panic Alarm ÿ
06 – Burglar Alarm ÿ
07 – Medical Alarm ÿ
08 – Supervision ÿ
09 – Priority Event ÿ
10 – Robbery ÿ
11 – Coercion ÿ
12 – Emergency ÿ
13 – Fire Supervision ÿ
14 – Fire Problem ÿ
15 – CO Alarm ÿ
157 – System Sabotage
01 – True Exit ÿ
02 – Synchronized departure
09 – Module Sabotage ÿ
10 – Zone Sabotage ÿ
161 – CC Problem
01 – True Exit ÿ
02 – Synchronized departure
09 – Low battery ÿ
10 – Battery missing ÿ
165 – Prox. used 01
– True output ÿ 175 – Siren prog. access 01 – True output ÿ
176 – Remote Operation
01 – True Exit ÿ
184 – Open after alarm
01 – True Exit ÿ
02 – PGM Timer ÿ
201-216 Zone Follower - Zones 1-128
01 – True Exit ÿ
02 – Synchronized departure
09-016 – Zone Terminals 1-16

011 Configuration Options PGM

001-164 – PGM Configuration 1-164
Zone-by-zone follower
Used proximity card
Command output programs

012 System lock (attempts/min.)
Keyboard lock attempts (000)
Keyboard lock duration (000)
Remote locking attempts (006)
Remote lock duration (060)

System Options

013 System Options 1

1 – NC/EOL Loop
2 – DEOL/SEOL
3 – Show all problems when armed ÿ
4 – Sabotage/Faults not showing as open
5 – Automatic arming program in [*][6] ÿ
6 – Audible Exit Failure ÿ
7 – Event memory follows exclusion ÿ
8 – Temporary fire signaling of three

014 System Options 2

1 – Siren Squawk
2 – Auto-arm siren squawk
3 – Siren squawks upon exiting
4 – Siren squawks upon entering
5 – Siren's squawk before problem
6 – Not used
7 – Exit delay termination
8 – Continuous fire siren

015 System Options 3

1 – [F] Key ÿ
2 – [P] key announcement
3 – Quick Exit
4 – Quick Arm/Function Key ÿ
5 – Not used
6 – Master code not modifiable by the user
7 – Telephone line monitor enabled ÿ
8 – Audible TLM when armed

016 System Options 4

1 – Problem visualization CA ÿ
2 – AC Trouble Light Flashes
3 – Blank keyboard
4 – Blank keyboard requires code
5 – Keyboard backlight turning on ÿ
6 – Power saving mode
7 – Display of override before arming
8 – Keyboard sabotage enabled

017 System Options 5

1 – Bell when opening
2 – Bell when closing
3 – Audible RF interference
4 – Multiple positive detection
5 – Late to close
6 – Daylight Saving Time
7 – Not used
8 – Siren's squawk before Arm/Disarm Away Only

018 System Options 6

1 – Exception of test transmission
2 – Real-time Cancellation Report
3 – Not used
4 – Not used
5 – Keypad Buzzer Alarm
6 – Not used
7 – Exit Delay Reset (CP-01 ÿ)
8 – AC failure trouble beeps

019 System Options 7

1 – Wireless zone failure audible
2 – Problems with retention
3 – Not used
4 – R Button
5 – Audible bus failure
6 – Emergency codes
7 – Temperature in Celsius ÿ
8 – Restart after zone activation

020 System Options 8

1 – Access code entry during entry delay
2 – Entry procedure EU
3 – [*][8] Access while armed 4 – Remote reset 5 – Engineer restore 6 – Keyswitch disarm during entry delay
7 – Installer Access and DLS
8 – Faults inhibit arming

021 System Options 9

1 – Fault display
2 – Blank keyboard while armed
3 – Override automatic arming
4 – Show Ready
5 – Blank PGM Keypad
6 – Show assembly
7 – Open Armed Gate
8 – Audible exit delay for Armed Present

022 System Options 10

1 – [F] Key Option
2 – Not used
3 – Not used
4 – Test transmission counter in hours
5 – Toggle Absent to Present
6 – Full length two-way ÿ
7 – Trouble beeps are silent
8 – Key switch for arming in Away mode

023 System Options 11

1 – Ready LED flashes for Force armed
2 – Not used
3 – Sabotage/fault detection
4 – Access code required for [*][1]
5 – Access code required for [*][2]
6 – Access code required for [*][3]

ÿ= Predefined

7 – Access code required for [*][4]

8 – [*][6] Accessibility

024 System Options 12

1– 50Hz AC/60Hz AC (ARG ÿ)
2 – Crystal time base
3 – AC/DC inhibit arming
4 – Sabotage inhibits arming
5 – Real-time clock option
6 – Not used
7 – Not used
8 – DLS disconnected

025 System Options 13

1 – European marking (ARG ÿ)
2 – Force dialing ÿ
3 – Test transmission counter in minutes
4 – Not used
5 – ID Tone
6 – Generated tone-2100 Hz
7 – 1-hour DLS window
8 – Audible FTC Siren

040 User Authentication

01 – User code or Prossimità Tag ÿ

02 – User code and Prossimità Tag

041 Access code digits

00 – 4-digit access codes ÿ

01 – 6-digit access codes

042 Event Verification

01 – Theft counter verified (002)

02 – Robbery Counter (002)
03 – Theft verification selection

001 – Police Code ÿ
002 – Zone crossing
003 – Sequential detection in EU

151-158 Automatic arming/

disarming in partition 1-8

001 – Auto arming times (9999) 24 hours

Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

002 – Automatic disarming hours (9999) 24 hours

Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

003 – Automatic Disarm Holiday Program

Holiday 1
Holiday 2
Holiday 3
Holiday 4

004 – Automatic arming pre-alert (004)

005 – Auto Arm Snooze Timer (000)

006 – No Activity Arm Timer (000)

007 – No Activity Arming Pre-Alert Timer (001)

200 Partition Mask

001 – Enable Partition Mask 1 to 8

1 – Partition 1 ÿ
2 – Partition 2
3 – Partition 3
4 – Partition 4
5 – Partition 5
6 – Partition 6
7 – Partition 7
8 – Partition 8

201-208 Partition Zone Assignment

1-8

001 – Zone 1-8 ÿ
002 – Zn 9-16 ÿ
003 – Zn 17-24
004 – Zn 25-32
005 – Zn 33-40
006 – Zn 41-48
007 – Zn 49-56
008 – Zn 57-64
009 – Zn 65-72
010 – Zn 73-80
011 – Zn 81-88
012 – Zn 89-96
013 – Zn 97-104
014 – Zn 105-112
015 – Zn 113-120
016 – Zn 121-128

300 Communication Road of the

Panel/Receiver

001 – 004 Receiver 1-4 01 – Phone Line ÿ 02 – Alternate Comm Auto Routing 03 – Alternate Comm Rec.

1- Ethernet
04 – Alternate Comm Rec. 2- Ethernet 05 – Alternate Comm Rec. 3- Cellular 06 – Alternate Comm Rec. 4- Cellular

301 Phone

Number Programming

001 – 004 Programming phone number 1-4 (DFFF...32 digits)

304 Call Waiting Cancellation Chain

(DB70EF)

Event report

307 Zone Report

001-128 Zone report for zones 1-128

01 – Alarm ÿ
02 – Alarm reset ÿ
03 – Sabotage ÿ 04 – Sabotage Reset ÿ 05 – Failure ÿ 06 – Failure Reset ÿ

308 Event Report

001 – Miscellaneous alarm 1

01 – Duress Alarm ÿ
02 – Open after alarm ÿ
03 – Recent Closing Alarm ÿ 04 – Zone Expander Supervisory Alarm ÿ 05 – Zone Expander Supervisory Alarm Reset ÿ 06 – Burglary Verified ÿ 07 – Burglary Alarm Not Verified ÿ 08 – Alarm Cancelled ÿ

002 – Miscellaneous Alarm 2

01 – Robbery alarm verified ÿ

011 – Priority alarms

01 – Keypad Fire Alarm-Key F ÿ
02 – Restore keyboard fire ÿ
03 – Keypad Medical Alarm-Key M ÿ
04 – Restore Medical Keyboard ÿ
05 – Keypad Panic Alarm (P) ÿ
06 – Restore Keyboard Panic ÿ
07 – Auxiliary input alarm ÿ
08 – Restore auxiliary input alarm ÿ

021 – Fire Alarm 1

03 – 2-wire alarm PGM 2 ÿ
04 – Restore 2 threads of PGM 2 ÿ

101 – Sabotage Events

03 – Module Sabotage ÿ
04 – Restore Module Sabotage ÿ
05 – Keyboard Lock ÿ
07 – Remote locking ÿ

201 – Open/Close Events 1

01 – User closing ÿ
02 – User opening ÿ
03 – Future use
04 – Future use
05 – Special Closing ÿ
06 – Special opening ÿ
07 – Key switch opening ÿ
08 – Key switch closure ÿ

202 – Open/Close Events 2

01 – Automatic closing ÿ
02 – Automatic disarming ÿ
03 – Cancel/postpone automatic arming ÿ

211 – Miscellaneous Open/Close Events

01 – Afternoon to close ÿ
02 – Time to Disarm Finished ÿ
05 – Exit Failure ÿ

221 – Cancellation Events

01 – Automatically bypass zone
02 – Automatically unbypass zone
03 – Partial closure ÿ

301 – Panel Events 1 01 – Panel AC Fail Trouble ÿ 02 – Panel AC Fail Restore ÿ 03 – Panel Low Battery ÿ 04 – Panel Low Battery Restore ÿ 05 – Panel Battery Missing ÿ 06 – Panel Battery Missing Trouble Restore ÿ 302 – Panel Events 2 01 – Bell Circuit Trouble ÿ
02 – Bell Circuit Trouble Restore ÿ
03 – Phone Line Trouble ÿ 04 – Phone Line Trouble Restore ÿ 05 – Auxiliary Trouble ÿ 06 – Auxiliary Trouble Restore ÿ 305 – Panel Events 5 03 – PGM 2 2-Wire Trouble ÿ 04 – PGM 2 2-Wire Restore ÿ

311 – Maintenance Events 1

01 – RF Interference Trouble ÿ 02 – RF Interference Trouble Reset 03 – Fire Trouble ÿ 04 – Fire Trouble Reset ÿ 05 – Cool Activ ÿ 06 – Idle ÿ 07 – Self Test Trouble ÿ 08 – Self Test Trouble Reset ÿ 312 – Maintenance Events 2

01 – Cable installer ENTRANCE ÿ
02 – Cable installer EXIT ÿ
03 – DLS Cable IN ÿ
04 – DLS Cable OUTPUT ÿ
05 – SA Cable INPUT ÿ
06 – SA OUTPUT Cable ÿ
07 – Event memory 75% full ÿ

313 – Maintenance Events 3

01 – Start firmware update ÿ
02 – Firmware update successfully ÿ
03 – Firmware update failure ÿ

314 – Maintenance Events 4

01 – Gas problem ÿ
02 – Restore Gas Problem ÿ
03 – Heat problem ÿ
04 – Restore heat problem ÿ
05 – Freezing problem ÿ

ÿ= Predefined

06 – Restore freezing problem ÿ

07 – Probe disconnected ÿ

08 – Restore disconnected probe ÿ

321 – Receiver Events

02 – Receiver Reset 1 FTC ÿ

04 – Receiver 2 FTC Reset ÿ

06 – Receiver Reset 3 FTC ÿ

08 – Receiver Reset 4 FTC ÿ

331 – Module 1 Events

01 – Module CA Problem ÿ

02 – Reset module AC problem ÿ

03 – Module battery problem ÿ

04 – Restore module battery problem ÿ

05 – Missing module battery ÿ

06 – Restore Missing Module Battery ÿ

332 – Module Events 2 01 – Module Low Voltage ÿ 02 – Module Low Voltage Reset ÿ 03 – Module Supervisory ÿ 04 – Module Supervisory Reset ÿ

05 – Module Aux. Trouble ÿ 06 – Aux. Module Trouble Reset ÿ 335 – Module Events 5

01 – Output 1 Fault ÿ 02 – Output 1 Fault Restore ÿ 351 – Alternate Communicator 1 01 – Alt. Comm. Module Comm. Trouble ÿ 02 – Alt. Comm. Module Comm. Trouble Reset ÿ 07 – Alt. Comm. Radio/SIM Trouble ÿ 08 – Alt. Comm. Radio/SIM Trouble Reset ÿ 352 – Alternate Communicator 2

01 – Common network failure. alternate ÿ

02 – Rest. common network failure. alt. ÿ 05 – Common Ethernet alt. ÿ 06 – Rest. Common Ethernet problem. alt. ÿ 354 – Alternate Communicator 4

01 – Common receiver. alt. 1 ÿ

02 – Common Receiver Reset. alt. 1 ÿ 03 – Common receiver. alt. 2 ÿ

04 – Common Receiver Reset. alt. 2 ÿ 05 – Common receiver. alt. 3 ÿ 06 – Common Receiver Reset. alt. 3 ÿ 07 – Common receiver. alt. 4 ÿ 08 – Common Receiver Reset. alt. 4 ÿ

355 – Alternate Communicator 5

01 – Alternate communicator receiver supervision failure 1 ÿ

02 – Restore failure alternate communicator receiver supervision 1 ÿ

03 – Alternate communicator receiver supervision failure 2 ÿ

04 – Restore alternate communicator receiver supervision fault 2 ÿ

05 – Alternate communicator receiver supervision failure 3 ÿ

06 – Restore failure alternate communicator receiver supervision 3 ÿ

07 – Alternate communicator receiver supervision failure 4 ÿ

08 – Restore alternate communicator receiver supervision fault 4 ÿ

361 – Wireless Device Events

01 – Device AC Failure ÿ

02 – Restore Device CA ÿ

03 – Low device battery ÿ

04 – Restart Low Battery Device ÿ

05 – Device failures ÿ

06 – Restore failure device ÿ

401–System Test Events

01 – Start of step test ÿ

02 – End of Pass Test ÿ

03 – Diagnostic Test Transmission ÿ

04 – Periodic test transmission with problem ÿ

05 – System Test ÿ

Communications

309 System Call Address

001– Maintenance Events

1 – Receiver 1 ÿ

2 – Receiver 2

3 – Receiver 3

4 – Receiver 4

002 – Test Transmission Events

1 – Receiver 1 ÿ

2 – Receiver 2

3 – Receiver 3

4 – Receiver 4

310 Account Codes

000 – System account code (FFFF)

001-008 – Account code Partition 1-8 (FFFF)

311-318 Call Direction Partition 1-8

001 – Burglar alarm partition/Restore call address

1 – Receiver 1 ÿ

2 – Receiver 2

3 – Receiver 3

4 – Receiver 4

002 – Manipulate Partition/Restore Call Address

1 – Receiver 1 ÿ

2 – Receiver 2

3 – Receiver 3

4 – Receiver 4

003 – Partition Open/Close Call Direction

1 – Receiver 1 ÿ

2 – Receiver 2

3 – Receiver 3

4 – Receiver 4

350 Communicator Formats (04 - SIA)

001 – Communicator format - Receiver 1

002 – Communicator format - Receiver 2

003 – Communicator format - Receiver 3

004 – Communicator format - Receiver 4

377 Communication Variables

001 – Zone Bypass Attempts – Alarms and Restore (003) (CP-01 002 sec.) – Sabotage and Restore (003) – Maintenance and Restore (003)

002 – Communication delays – Zone delay (000 sec.) (CP-01 030 sec.) – Communication delay of AC failure (030 min./hours) – TLM failure delay (010 sec. x 3) – Transmission delay due to low battery in wireless zone (007 days) – Inactivity transmission delay (030 hours/days) – Communication cancellation window (000 min.) (CP-01 005 sec.)

003 – Transmission Cycle of Diagnostic Test (030 days/hours):

004 – Periodic test transmission time of day (9999)

011 – Maximum dialing attempts (005)

012 – PSTN Delay (003 sec.)

013 – Delay between attempts forced (020 sec.)

014 – Post marked waiting for exchange protocol (040 sec.)

015 – T-Link waits for recognition (060 sec.)

016 – IP/Cellular Failover Timer (010 sec.)

380 Communicator Option 1

1 – Communications enabled ÿ

2 – Restart on siren timeout 3 – Pulse dialing 4 – Pulse dialing after 5th attempt 5 – Parallel communications 6 – Alternate dialing ÿ 7 – Reduced dialing attempts 8 – Activity inactivity **381 Communicator Option 2**

1 – Keyboard Callback

2 – Siren Callback

4 – Closing confirmation

8 – Communications priority

382 Communicator Option 3

2 – Communications of the passage test

4 – Call cancellation in wait

5 – Alternate communicator enabled

6 – AC Fail TX in hours

8 – Sabotage limit

383 Communicator Option 4

1 – Phone number account code

2 – 6-digit account code

5 – Communicate FTC events

384 Communicator Backup Options

2 – Backup Options - Receiver 2 ÿ

3 – Backup Options - Receiver 3

4 – Backup Options - Receiver 4

385 Audio Module Mask Speaking/Listening

1 – Speak/Listen on Phone Number 1

2 – Speak/Listen on Phone Number 2

3 – Speak/Listen on Phone Number 3

4 – Speak/Listen on Phone Number 4

DLS Programming 401 DLS/SA Options 1 – Double Call 2 – User Enables DLS 3 – DLS Call Back 4 – User Call 6 – Panel Call and Baud Rate 7 – DLS Comm Alt. ÿ

402 DLS Telephone Number Programming (31-Digit Decimal)

403 DLS Access Code (factory settings based on model)

HS2128 models (212800)

HS2064 models (206400)

HS2032 models (203200)

HS2016 models (201600)

404 DLS/SA Panel ID (factory values are based on model)

ÿ= Predefined

HS2128 models (2128000000)
HS2064 models (2064000000)
HS2032 models (2032000000)
HS2016 models (2016000000)

405 PSTN Double Call Timer (060 sec.)

406 Number of PSTN rings to answer (000)

407 SA Access Code (FFFFFF)

410 Auto DLS Options 001 – Automatic DLS Switchable Options 1 – Periodic DLS 3 – DLS on Event Buffer 75% Full 5 – SA on Event Buffer 75% Full 8 – or DLS on Changeover programming

002 – Periodic DLS days (000 days)

003 – Periodic DLS time (0000)

007 – Delay call window

– Start of delay call window (0000)

– End of delay call window (0000)

560 Virtual Entry (000)

001 - 032 – Virtual input 1-32

Program schedule

601-604 Program Schedule 1-4

101 – Interval 1 Start time (0000)

102 – Interval 1 End time (0000)

103 – Interval 1 Day Assignment

01 – Sunday
02 – Monday
03 – Tuesday
04 – Wednesday
05 – Thursday
06 – Friday
07 – Saturday

104 – Interval 1 Holiday Assignment

09 – Holiday 1
10 – Holiday 2
11 – Holiday 3
12 – Holiday 4

201 – Interval 2 Start time (0000)

202 – Interval 2 End time (0000)

203 – Interval 2 Day Assignment

01 – Sunday
02 – Monday
03 – Tuesday
04 – Wednesday
05 – Thursday
06 – Friday
07 – Saturday

204 – Interval 2 Holiday Assignment

09 – Holiday 1
10 – Holiday 2
11 – Holiday 3
12 – Holiday 4

301 – Interval 3 Start time (0000)

302 – Interval 3 End time (0000)

303 – Interval 3 Day Assignment

01 – Sunday
02 – Monday
03 – Tuesday
04 – Wednesday
05 – Thursday
06 – Friday
07 – Saturday

304 – Interval 3 Holiday Assignment

09 – Holiday 1
10 – Holiday 2
11 – Holiday 3
12 – Holiday 4 201 – Interval 2 Start time (0000)

402 – Interval 4 End time (0000)

403 – Interval 4 Day Assignment

01 – Sunday
02 – Monday
03 – Tuesday
04 – Wednesday
05 – Thursday
06 – Friday
07 – Saturday

404 – Interval 4 Holiday Assignment

09 – Holiday 1
10 – Holiday 2
11 – Holiday 3
12 – Holiday 4

711-714 Holiday Group 1-4

001 – 099 Holiday Group 1-4 Date 1-99 (000000, MMDDYY)

Audio station programming

802 Audio Station Assignment

001 - 128 – Station Assignment 1 - 128 (00)

600 – Activate two-way audio Option 1

01 – Sabotage
03 – [A] Key alarm ÿ
04 – [P] Key Alarm ÿ
05 – Duress Alarm ÿ
06 – Open after alarm ÿ
07 – Future use
08 – Monitoring alarm area

603 – Two-Way Audio Control Option 1

01 – Future use
02 – Listen to all zones/Listen to zones in alarm ÿ
03 – Future use
04 – Siren active during two-way audio
05 – Automatic hang-up detection
06 – User call
07 – Future use
08 – Two-way audio initiated by CS

605 – Recording Options

01 – Audio capture enabled ÿ
02 – Delete in FTC

606 – Audio Station Recording Control Option 1

01 – Recording Audio Station 1 ÿ
02 – Recording Audio Station 2 ÿ
03 – Recording Audio Station 3 ÿ
04 – Recording Audio Station 4 ÿ

610 – Window duration redial recovery (05)

611 – Callback Acknowledgement Code (9999)

612 – Cancel answering machine (00)

613 – Double Call Timer (030)

614 – Number of rings to answer (00)

615 – Audio duration (90 sec.)

616 – Recording time (105 sec.)

617 – Erase time: (15 min.)

606 – Audio Station Sabotage Option 1 01 – Audio Station Sabotage 1 02 – Audio Station Sabotage 2
03 – Audio Station Sabotage 3
04 – Audio Station Sabotage 4

Wireless programming

804 Wireless Programming

000 – Device Assignment WLS

Zones (3-digit decimal)
Zone type (2-digit decimal)
Partition assignment
Zone Label (LCD only)
WLS keys
Partition assignment
User assignment
Mermaids
Partition Assignment Siren Label (LCD only)
Keyboards
Keyboard Assignment
Keyboard Label (LCD only)
Repeaters
Repeater Label (LCD only)

001-128 – Configure Wireless Zones Refer to the installation instructions provided with the HSM2Host for more wireless programming options.

850 Cellular Signal Strength

851 Alternate Communicator Programming

See the installation instructions provided with the alternate communicator for details.

Keyboard programming

860 Keyboard Slot Number

861-876 Keyboard Programming

000 – Keyboard Partition Mask

00 – Global Keyboard
01 – Partition 1 ÿ
02 – Partition 2
03 – Partition 3
04 – Partition 4
05 – Partition 5
06 – Partition 6
07 – Partition 7
08 – Partition 8

001 – Function key 1 (03)
002 – Function key 2 (04)
003 – Function key 3 (06)
004 – Function key 4 (22)
005 – Function key 5 (16)

00 – Null key
02 – Arm for instant presence
03 - Armed Present
04 – Armed Away
05 – Armed without entry
06 – Doorbell
On/Off
07 – System Test
09 – Night Armed
12 – Build for global presence
13 – Arming for global absence
14 – Global disarmament
16 – Quick Exit
17 – Assemble the interior
21-24 – Command Exit 1-4
29 – Remember to cancel group
31 – Activate local PGM
32 – Ring Mode
33 – Remember to cancel
34 – User Programming
35 – User Functions
37 – Time/Date Programming
39 – Problem Visualization
40 – Alarms in Memory
61-68 – Select Partition 1-8

011 – Keyboard I/O (000)

012 – Exit timer

Local PGM

Pulse time (00 minutes)
Pulse time (05 sec.)

021 – Keyboard Option 1

1 – [F] key enabled ÿ
2 – [M] key enabled ÿ
3 – [P] key enabled ÿ
4 – View code or several Xs ÿ

022 – Keyboard Option 2

1 – Display local clock ÿ
2 – Display 24-hour local clock
3 – Automatic alarm offset ÿ

ÿ= Predefined

5 – Power LED Option ÿ

6 – AC Power LED present ÿ

7 – Alarms displayed if armed ÿ

8 – Automatic scrolling of open areas ÿ

023 – Keyboard Option 3

1 – LED energy saving assembly*

2 – Keypad shows arming mode ÿ *

3 – 5th terminal is exit/zone PGM

7 – Local Temp display.

8 – Low Temperature Warning **030 – LCD Message** (16 x 2 hex)

031 – Downloaded LCD message duration (000)

041 – Indoor temperature zone entry (000)

042 – Outdoor temperature zone entry (000)

101-228 – Doorbell sound – Zone 1-128

00 – Disabled 01 – 6 beeps ÿ

02 – “Bing-Bong” Sound

03 – “Ding-Dong” sound

04 – Alarm tone

05 – Zone name

899 Template Programming

– 5-digit template code (5-digit decimal)

– Central station telephone number (32-digit decimal)

– Central station account code (4/6 digit decimal)

– Partition account code (4-digit decimal)

– DLS access code (6-digit decimal)

– Partition Entry Delay (000-255 sec.)

– Partition Exit Delay (000-255 sec.)

– Installer Code **System Information and Test 900 System Information**

000 – Control Panel Version 001-016 – Keypad Version Info 1-16 101-116 – Version Info 8-HSM2108 1-16

201-216 – HSM2208 Version Info 460 – Alternate Communicator 461 – HSM2HOST Version Info 481 – HSM2955 Version Info 501 – 504 HSM2300 Version Info 1- 4 521 – 524 HSM2204 Version Info 1- 4

901 Installer Pass Test

Module programming

902 Add/Remove Modules

000 – Automatically associate all modules

001 – Module Association

002 – Slot Assignment

003 – Edit Module Slot Assignment

101 – Eliminate keyboards

102 – Remove HSM2108

103 – Delete HSM2208

106 – Delete HSM2HOST

108 – Delete HSM2955

109 – Remove HSM2300

110 – Delete HSM2204

903 Confirm modules

000 – See all modules

101 – Keyboards

102 – HSM2108

103 – HSM2208

106 – HSM2HOST

108 – Confirm HMS2955

109 – HSM2300

110 – HSM2204

904 Placement Test wireless

001-128 – Zone Placement Test 1-128

521-528 – Placement test repeaters 1-28

551-566 – Siren Placement Test 1-16

601-632 – Wireless Key Placement Test 1-32

701-716 – Wireless Keyboard Placement Test 1-16

912 Observation Test

000 – Zone Observation Test Duration (Default: 014):

001-128 – Zone Observation Test – Zones 1-128

Battery configuration

982 Battery Configuration

000 – Panel Battery Configuration

01– High panel charging current

010 – Battery Configuration HSM2204

01 – 1 High charging current of HSM2204

02 – 2 High charging current of HSM2204

03 – 3 High charging current of HSM2204

04 – 4 High charging current of HSM2204

020 – Battery Configuration HSM2300

01 – HSM2300 1 Charge

02 – HSM2300 2 Cargo

03 – HSM2300 3 Cargo

04 – HSM2300 4 Cargo

Predefined

989 Factory Master Code

990 Enable/Disable Installer Lock

991 Factory Keyboards

901-916 – Factory keyboard 1-16

999 – All factory keyboards

993 Common factory alternate 996 factory HSM2HOST

998 HSM2955 factory

999 Factory System

* Wireless keyboards only

ÿ = Predefined

Zone registration

Area	Label	Location	Guy	Attribute		Area	Label	Location	Guy	Attribute
001						002				
003						004				
005						006				
007						008				
009						010				
011						012				
013						014				
015						016				
017						018				
019						020				
021						022				
023						024				
025						026				
027						028				
029						030				
031						032				
033						034				
035						036				
037						038				
039						040				
041						042				
043						044				
045						046				
047						048				
049						050				
051						052				
053						054				
055						056				
057						058				
059						060				
061						062				
063						064				
065						066				
067						068				
069						070				
071						072				
073						074				
075						076				
077						078				
079						080				
081						082				
083						084				
085						086				
087						088				
089						090				
091						092				
093						094				
095						096				
097						098				
099						100				
101						102				
103						104				
105						106				
107						108				
109						110				
111						112				

Area	Label	Location	Guy	Attribute		Area	Label	Location	Guy	Attribute
113						114				
115						116				
117						118				
119						120				
121						122				
123						124				
125						126				
127						128				

Module registration

Module type	Slot	Serial number		Module type	Slot	Serial number

Wireless Device Registration

Device type	Area	Serial number		Device type	Area	Serial number

Access codes defined by the installer

001 – Installer Code:	
002 – Master Code:	
003 - Maintenance code:	

System account code

Auxiliary Load and Battery Selection

HS2128/HS2064/ HS2032/HS2016 **Current consumption of the 85 mA board**	**Resi Robo UL** **Resi Robbery ULC**	**Against theft, commercial UL**	**Resi Fuego UL Medical care in the UL home Resi Fuego ULC With ULC Theft**	**Fire Monitoring ULC EN50131 Grade 2/Class II**	**Grade 2/Class II**
Max. AUX charging current (NSC)	0.7A	0.7A	0.5A	0.5A	0.5 A
Max. charging current SIREN (Alarm)	0.7A	0.7A	0.7A	0.7 A (without alarm notification) local permitted only remote transmission to SRC)	0.7A
Accommodations approved by UL/ULC	PC500C PC5003C	CMC-1 PC4050CAR	PC5003C	PC5003C PC4050CR (red/transformer) mounted inside)	PC5003C UC1 Power Supply
Transformer requirements	16.5 V/40 VA (typ. plug-in) PTC1640U (USA) PTC1640CG (CAN)			FTC1637 (approved by cUL) 16.5V/37VA (wired type, mounted inside the cabinet or outside using box electric)	16.5 V/40 VA (typ. wiring, mounted inside of the cabinet)
Battery capacity requirements 7 Ah		7 Ah	14 Ah (2 x 7 Ah in parallel)	14 Ah (2 x 7 Ah in parallel)	7 Ah
Waiting time	4 hours	4 hours	24 hours	24 hours	12 hours
Alarm time	4 minutes	15 minutes	4 min. (Resi Fuego UL) 5 min. (Medical Care) Home and Resi Fire ULC)	5 minutes (streaming only) alarm)	N/A
Charging current adjustment	400 mA, 700 mA	400 mA, 700 mA	400 mA, 700 mA	400 mA, 700 mA	400 mA, 700 mA

UL/ULC Installations

This product has been tested and found to comply with the following standards:

l UL1610 Central Station Burglar Alarm Units l UL365 Central Station Connected Burglar Alarm Units and Systems
police
l UL1023 Home Burglar Alarm System Units l UL985 Home Fire Warning System Units l UL1635 Digital Alarm Communicator System Units l UL1637 Home Health Care Signaling Equipment l ULC-S304-06 Signal Receiving Center and Alarm Control Units

theft on the premises
l ULC-S559-04 Equipment for Fire Signal Receiving Centers and Systems l ULC-S545-02 Residential Fire Warning System Control Units
fire
l ORD-C1023-1974 Home Burglar Alarm System Units

This product has also been tested and found to comply with ANSI/SIA CP-01-2010 Control Panel Standard – Features for False Alarm Reduction
alarms.

This product is UL/ULC Listed in the following categories:

l AMCX/AMCXC Central Station Alarm Units l APAW Police Station Connected Alarm Units l DAYRC Central Station Fire Alarm System Units l UTOU/UTOUC Control Units and Accessories, Home System Type l NBSX/NBSXC Home Burglar Alarm System Units l AMTB Control Panels, SIA False Alarm Reduction

The product is labeled with the UL and ULC marks along with the SIA CP-01 Declaration of Conformity (also classified according to SIA-CP-01 standard) as evidence of compliance with the aforementioned standards. For more information on the listings of this product, please also refer to the official listing guides published on the UL website (www.ul.com) under the Online Directions section.

UL/ULC Residential Fire and Burglary Installations: For ULC installations, refer to the standard for the installation of residential fire alert systems, CAN/ULC-S540.

l All theft type zones must be configured as SEOL or DEOL.Use the EOLR-2 model. l
(refer to section [002], bit 10 or 11 must be ON) l Use at least one PG9926 or PG9916 smoke detector to install
Fire installations (section [001], the fire zone will be programmed as type 025)

l The entry delay will not exceed 45 seconds (see section [005]) l The exit delay will not exceed 60 seconds (see section [005]) l The minimum siren timeout is 4 minutes (see section [005])

[005])

Note: For residential ULC fire installations the minimum siren wait time is 5 minutes

For UL home health care installations the minimum siren wait time is 5 minutes.

For UL commercial burglar alarm installations the minimum siren wait time is 15 minutes.

l Three-digit temporary fire signaling must be enabled (section [013], option 8 ON) l Arming/disarming must be enabled
when using the PG4939 wireless key,
PG4929, PG4949 (section [014], option 1 must be ON)
l A code will be required to override (section [023], option 4 will be ON) l Fault beeps
must be enabled (section [022], option 7 must be set to ON).
ON)
l AC Fault LED must be enabled (Keypad Programming, section [022], options 5 and 6 must be ON) l DACT Communicator must be enabled for Supervising Station monitoring
(section [380], option 1 must be ON)

Note: The DACT communicator for this product does not have line security.

Telephone Line Monitoring (TLM) must be enabled (section [015], option 7 must be ON)

Note: This product will be programmed to make 5 (minimum) to 10 (maximum) attempts to communicate an event to the supervising station. If it fails to do so, a Failure to Communicate (FTC) fault is generated.

The test transmission cycle will be set for monthly transmission (see section [351])

Note: For residential/commercial ULC installations, configure daily test transmission.

l The wireless monitoring window should be set to 4 hours to ins-
Fire installations (Wireless programming, section [804]>[802] must be programmed with the value 16)

The wireless supervision window must be set to 4 hours for burglary installations only (Wireless Programming, section [804]>[802] must be programmed with the value 96)

l RF interference detection must be enabled (see Wireless Programming (section [804][801], option 00 must be OFF) l New alarms will disconnect two-way audio (section [022], option 00 must be OFF)
6 OFF)

The UL Central Station and Police connect to standard or encrypted line security service . The installation must utilize the TL2803G(R) IP/3G interface,
3G2080(R) 3G interface, or TL280(R) IP interface models, which communicate over a cellular data network or a 10/100BaseT Ethernet network to a compatible Sur-Gard System I/II/III/IV receiver. The polling time will be 200 seconds, and the detection time will be 200 seconds.

promised it will be 6 minutes.
l For encrypted line security applications, the TL2803G(R) IP/3G interface, 3G2080(R) 3G interface, or TL280(R) IP interface must have the encryption key enabled (the AES 128-bit encryption algorithm is validated according to NIST Certificate No. 2645). l The wireless supervision window must be enabled (refer to Wireless
Programming, sections [804]>[802]).

Local UL listed commercial alarms, Central Station, and Police are connected without line security service. l The facility will use a UL listed siren
for local commercial alarms. An example of a UL listed siren that may be used is the Amseco model MBL10B siren with model AB-12 siren housing. Connections from the control unit to the siren will be made in conduit. (Optional for the central station) l The siren time-out will be programmed for 15 minutes.

minimum
l At least one remote system keypad with a switch must be used.
against sabotage.
l The integral DACT must be enabled and programmed to provide a low battery transmission
l The control panel shall be housed in an attack-resistant enclosure. The separately approved CMC-1 or PC4050CA attack-resistant enclosure shall be used. l The maximum entry delay time shall not exceed 45
seconds as a result of the attack test. The maximum exit delay time shall not exceed 60 seconds.

l A tamper switch shall be used to protect the control unit cabinet cover. A tamper switch shall also be used on the rear keypad to detect removal from the wall.

l 24-hour verification shall be enabled on the transmission . l Open/Close
Confirmation enabled. (Non-Police Station) l The facility shall use the Internal Dialer (DACT) alone or in conjunction with the TL2803G(R) IP/3G Interface, 3G2080(R) 3G Interface, or TL280(R) IP Interface models communicating over a cellular data network or a 10/100BaseT Ethernet network with a compatible Sur-Gard System I/II/III/IV receiver.

UL Home Health Care Signage Equipment

There must be at least two keypads, and one of them must be one of the supported keypad models HS2LED, HS2LCD(P), HS2ICN(P), HS2LCDRF(P)9,
HS2ICNRF(P)9 and HS2TCHP
l Each system shall be programmed to activate an audible trouble signal within 90 seconds of loss of microprocessor memory . l The HS2TCHP shall be used in conjunction with another compatible keypad model to provide audible supervision for home healthcare or medical installations.

ULC Central Station Fire and Burglary Monitoring Installations l For installation requirements, security levels, communication modules,
Communication and configurations (see Installation Information Sheet)
ULC, DSC #29002157) l Use
a CSA/cUL approved transformer (hardwired connections required)
for fire monitoring)
l All tamper circuits can be connected to the same zone l The HS2TCHP touchscreen keypad is for supplementary use with the
ULC-Listed Commercial Fire Monitoring

Programming

The notes in the programming sections of the PowerSeries Neo Reference Manual that describe system configurations for UL/ULC Listed installations must be implemented.

Control of Protected Premises To have a UL-listed system, the protected area must be under the responsibility of one owner and one management (i.e., one company under one name). This can be a group of adjacent or separate buildings with different addresses but under the responsibility of someone with a mutual interest. The person of mutual interest is not the alarm installation company.

Note: This does not apply to open-air shopping malls where each independent business must have its own separate alarm system.

Example 1: A commercial partitioned system that has an office and a warehouse area in a building where each area can be armed or disarmed independently. Example 2: A residential partitioned system to arm the garage area separately from the house.

Each of the above examples is under the sole responsibility of a single owner. The DACT siren and power supply must be in a protected area, including partitioned systems. The DACT siren and power supply must be located where they can be heard by the person or persons responsible for maintaining the security system during the daily arming cycle.

Location of the siren

The alarm sound device (siren) shall be located where it can be heard by the person operating the security system during the daily arming and disarming cycle.

Protection of the control unit

l The local control unit and local power supply must be protected in one of the following ways: l The control unit and audible alarm device must be in a protected area armed 24 hours a day. l Each partition must arm the area protecting the control unit and the audible alarm device.

power supply to the audible alarm device. This may require duplicate protection armed for each partition. Access to this protected area, without causing an alarm, will require all partitions to be disarmed. l In all cases described above, the protected area for the alarm unit

control must be programmed as non-overridable.

Occasional users

The installer must warn users not to give system information (such as codes, override methods, etc.) to occasional users (babysitters or service personnel). Only one-time codes will be given to occasional users.

User information

The installer must advise users and note in the user manual: l The name of the service company and phone number l The scheduled departure time l The scheduled entry time l Test the system weekly l The installer code cannot arm or disarm the system

Smoke and CO **Alarm Placement and Escape Plan** The following information is for general guidance only and it is recommended that you consult local fire codes and regulations when placing and installing smoke and CO alarms.

Smoke Detectors:

Research has shown that hostile fires in homes generate smoke to a greater or lesser extent. Experiments with typical home fires indicate that detectable amounts of smoke precede detectable levels of heat in most cases. For these reasons, smoke detectors should be installed outside each bedroom and on each level of the home.

The following information is for general guidance only, and it is recommended that local fire codes and regulations be consulted when installing smoke alarms.

It is recommended that smoke alarms be installed in addition to those required for minimum protection. Additional areas that must be protected include: basements; bedrooms, particularly those where smokers sleep; dining rooms; boiler and utility rooms; and any hallways not protected by the required units. On smooth ceilings, detectors may be spaced 9.1 m (30 ft) apart as a guide. Other spacing may be required depending on ceiling height, air movement, the presence of joists, uninsulated ceilings, etc. Refer to the National Fire Alarm Code NFPA 72, CAN/ULC-S553-02, or other appropriate national standards for installation recommendations.

l Do not place smoke alarms on top of peaked or gabled roofs; air pockets in these locations may prevent the unit from detecting smoke. l Avoid areas with turbulent airflow, such as near doors, vents, or windows. Rapid air movement around the alarm may prevent smoke from entering the unit.

l Do not place the detectors in areas with high humidity. l Do not place the detectors in areas where the temperature rises above 38°C (100°F) or falls below 5°C (41°F).

l In the U.S., smoke detectors should be installed in accordance with Chapter 11 of NFPA 72, the National Fire Alarm Code: 11.5.1.1.

Where required by applicable laws, codes, or standards for a specific type of occupancy, single- or multiple-station smoke alarms shall be installed as follows: 1. In all bedrooms and guest rooms.

2. Outside each sleeping area of a separate dwelling unit, within 6.4 m (21 ft) of any bedroom door, with the distance measured along a path of travel.
3. On each level of a dwelling unit, including basements.
4. On each level of a residential board and care facility (small facility), including basements and not including very low ceiling spaces and unfinished attics.

5. In the living areas of a guest room.
6. In the living areas of a residential board and care facility (small facility).

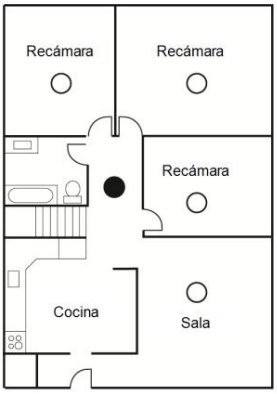

Figure 1

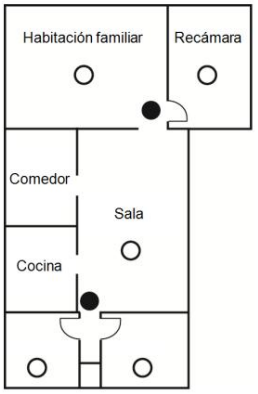

Figure 2

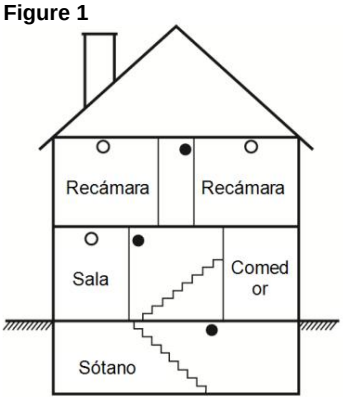

Figure 3

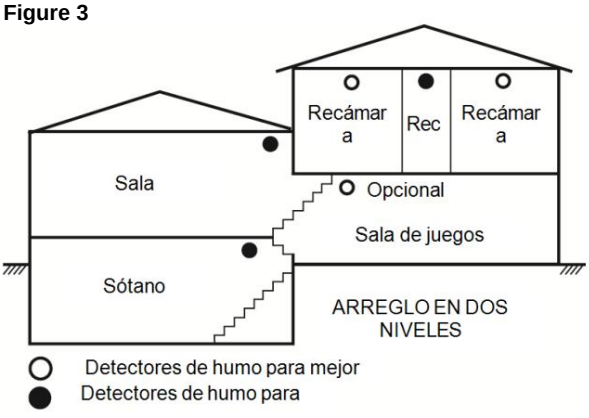

Figure 3a

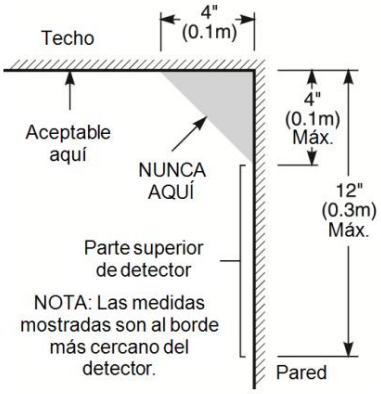

Figure 4

Fire Escape Planning There is often very little time between detecting a fire and it becoming fatal. It is very important to develop and rehearse a family escape plan.

1. All family members must participate in developing the escape plan.

Study possible escape routes from each location within the house. Since many fires occur at night, pay special attention to escape routes from bedrooms.

Escape from a bedroom must be possible without opening the interior door. Consider the following when developing your escape plan: l Make sure all exterior doors and windows can be opened easily. Make sure they have not been painted shut and that locking mechanisms operate smoothly. l If the exit is too difficult for children, the elderly, or the disabled to open or use, plans for their rescue should be developed. This includes ensuring that those who must perform the rescue can immediately hear the fire alarm signal. l If the exit is above ground level, an approved fire ladder or rope must be provided, as well as training.

in its use.

Ground- level exits must be kept clear. Make sure snow is removed from exterior patio doors in the winter and that outdoor furniture or equipment does not block exits.

l Each person should know a predetermined meeting place where everyone can gather (e.g., across the street or at a neighbor's house). Once everyone is out of the house, call the Fire Department.

A good plan emphasizes a quick escape. Don't investigate or attempt to fight the fire, and don't gather your belongings, as this could waste valuable time. Once outside, don't re-enter the house. Wait for the fire department to arrive.

l Write a fire escape plan and hold drills frequently so that, in case of an emergency, everyone knows what to do. Review the plan as conditions change, such as the number of people in the home, or if there are changes in the building's construction. l Make sure your fire alarm system is working properly by testing it weekly. If you are unsure about the system's operation, contact your installer.

We recommend that you contact your local fire department and request additional information on fire safety and escape planning. If possible, request that your local fire safety officer conduct a fire safety inspection of your home.

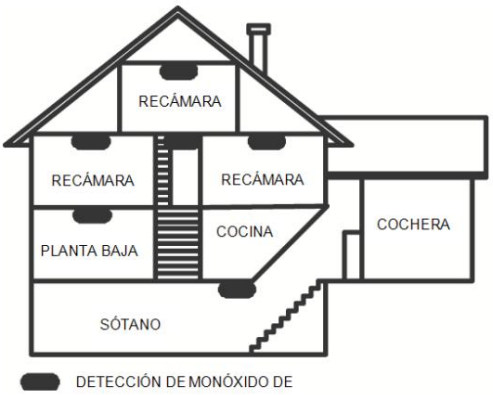

Figure 5

Carbon monoxide detection

Carbon monoxide is colorless, odorless, tasteless, and highly toxic, and it moves freely in the air. CO detectors can measure its concentration and sound a shrill alarm before a potentially harmful level is reached. The human body is most vulnerable to the effects of CO gas during sleeping hours; therefore, CO detectors should be placed in or as close as possible to the bedrooms in the home. For maximum protection, a CO alarm should be placed outside the master bedrooms or on each level of your home. Figure 5 indicates suggested locations in the home.

DO NOT place the CO alarm in the following areas:

l Where temperatures may drop below -10°C or exceed 40°C l Near paint thinner fumes l Within 5 feet (1.5 m) of open flame appliances such as furnaces, stoves, and fireplaces l In gas engine exhaust streams, air ducts, flues, or chimneys l Do not place near automobile exhaust pipes;

This will damage the detector. REFER TO THE CO DETECTOR INSTALLATION AND OPERATION INSTRUCTIONS FOR SAFETY INSTRUCTIONS AND EMERGENCY INFORMATION.

Limited Warranty Digital

Security Controls warrants to the original purchaser that for a period of twelve months from the date of purchase, the product is free from defects in materials and workmanship under normal use. During the warranty period, Digital Security Controls will, at its option, repair or replace any defective product upon return of the product to its factory, free of charge for labor and materials. Any replacement or repaired part is warranted for: the remainder of the original warranty or ninety (90) days, whichever is longer. The original owner must promptly notify Digital Security Controls in writing of a defect in material or workmanship; such written notice must be received in all cases prior to the expiration of the warranty period. There is absolutely no warranty of any kind on software, and all software products are sold as a single-user license under the terms of the software license agreement included with the product. The purchaser assumes all responsibility for the proper selection, installation, operation, and maintenance of any product purchased from DSC. The warranty on custom-made products applies only to products that are not functional upon delivery. In such cases, DSC may replace or credit them, at its discretion.

International Warranty The

warranty for international customers is the same as for any customer in Canada and the United States, with the exception that Digital Security Controls will not be responsible for any customs fees, taxes, or VAT that may apply.

Warranty Procedure To obtain service under

this warranty, please return the item(s) in question to the point of purchase. All authorized dealers have a warranty program. Anyone returning products to Digital Security Controls must first obtain an authorization number. Digital Security Controls will not accept any shipments without an authorization number.

Conditions for Cancelling the Warranty This warranty

applies only to defects in parts and workmanship resulting from normal use. It does not cover:

l damage incurred in the handling of shipment or cargo l damage caused
by disasters such as fire, flood, winds, earth-
motorcycles or electric lightning.
Damage due to causes beyond the control of Digital Security Controls, such as excessive voltage,
mechanical shock, or water damage. Damage caused by unauthorized
attachments, alterations, or modifications.
or foreign objects.
l damage caused by peripherals (unless the peripherals were supplied)
provided by Digital Security Controls);
l defects caused by failure to provide an appropriate environment for the ins-
felling of the products;
l damage caused by the use of products, for different purposes, for which
which were designated; l damage
due to improper maintenance; l damage caused by
other abuses, mishandling, or improper application of the products.

Items Not Covered by the Warranty In addition to

items that void the Warranty, the following items are not covered by the Warranty: (i) freight cost to the repair center; (ii) products not identified with the DSC product label and its lot or serial number; (iii) products that have been disassembled or repaired in a manner that adversely affects operation or does not allow adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement under the warranty will be credited or replaced at DSC's option.

Products not covered by this warranty, or otherwise out of warranty due to age, misuse, or damage, will be evaluated, and a repair estimate will be provided. No repair work will be performed until a valid purchase order submitted by the Customer is received and a Return Merchandise Authorization (RMA) number is issued by DSC Customer Service.

Digital Security Controls' liability for failure to repair the product under this warranty after a reasonable number of attempts shall be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall Digital Security Controls be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages shall include, but are not limited to, lost profits, loss of products or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities, or services, downtime, buyer's time, claims of third parties, including customers, and injury to property. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such jurisdiction apply to any claim by or against DSC, the limitations and disclaimers contained herein shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

Disclaimer of Warranties This

warranty contains the entire warranty and shall be in lieu of any other warranties and all other guarantees, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) and all other obligations or liabilities on the part of Digital Security Controls. Digital Security Controls neither assumes nor authorizes any other person to act on its behalf to modify or change this warranty, or to assume any other warranty or liability concerning this product. This disclaimer of warranty and

Limited warranty is governed by the government and laws of the province of Ontario, Canada.

WARNING: Digital Security Controls recommends that the entire system be thoroughly tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal sabotage or power interruption, this product may fail to perform as expected.

Out-of-Warranty Repairs Digital Security Controls will,
at its option, replace or repair out-of-warranty products returned to its factory under the following conditions.

Anyone returning products to Digital Security Controls must first obtain an authorization number. Digital Security Controls will not accept any shipment without an authorization number first.

Products determined by Digital Security Controls to be repairable will be repaired and returned. A fixed fee, predetermined by Digital Security Controls and reviewed from time to time, is charged for each repaired unit.

Products that Digital Security Controls determines are not repairable will be replaced with the most equivalent product available at that time. The current market price for the replacement product will be charged for each replaced unit.

WARNING - READ CAREFULLY

Note to Installers: This warning contains
vital information. As the sole person in contact with the user's system, it is their responsibility to address each item in this warning to the attention of users of this system.

System Failures The

system has been carefully designed to be as effective as possible. There are circumstances, however, including fire, burglary, or other emergencies where it will not be able to provide protection. Any alarm system of any type can be deliberately compromised or may fail to operate as intended for a number of reasons. Some, but not all, are: **Improper Installation** A security system must be installed correctly in order to provide adequate protection. Each installation should be evaluated by a
security professional to ensure that

all access points and areas are covered. Locks and latches on windows and doors must be secure and operate as designed.

Windows, doors, walls, ceilings, and other building materials must be of sufficient strength and construction to provide the expected level of protection. A re-evaluation must be performed during and after any construction activity.
An evaluation by the police or fire department is highly recommended if this service is available.

Criminal Knowledge: This system

contains security features that were known to be effective at the time of manufacture. It is possible that individuals with criminal intent may develop techniques that reduce the effectiveness of these features.

It is very important that the security system be reviewed periodically to ensure its features remain effective and that they be updated or replaced if they are found to not provide the expected protection.

Intruder Access Intruders

may enter through an unprotected access point, bypass a sensor device, evade detection by moving through an area of insufficient coverage, disconnect a warning device, or interfere with or prevent proper system operation.

Power Failure Control

units, intrusion detectors, smoke detectors, and many other security devices require an adequate power supply for proper operation. If a device is battery-operated, it is possible for the batteries to fail. Even if the batteries have not failed, they must be charged, in good condition, and installed correctly. If a device is AC-powered, any interruption, even a short one, will render the device inoperable until it is powered off. Power interruptions of any length are often accompanied by voltage fluctuations, which can damage electronic equipment such as security systems.

After a power outage occurs, immediately conduct a complete system test to ensure the system is operating properly.

Replaceable Battery Failure The wireless

transmitters in this system have been designed to provide years of battery life under normal conditions. Expected battery life is a function of the environment, usage, and device type. Environmental conditions such as excessive humidity, high or low temperatures, or significant temperature fluctuations may reduce battery life.

While each transmitting device has a low-battery monitor that identifies when the battery needs to be replaced, this monitor can fail to operate properly. Regular testing and maintenance will keep the system in good working order.

Commitment of Radio Frequency (Wireless) Devices

Signals may not reach the receiver under all circumstances, including metallic objects placed in or near the radio path or deliberate jamming and other inadvertent radio signal interference.

System Users A user may be

unable to operate a panic or emergency switch due to a permanent or temporary physical disability, inability to reach the device in time, or unfamiliarity with its proper operation. It is very important that all system users be trained in the proper operation of the alarm system and that they know how to respond when the system indicates an alarm.

Smoke detectors , which are

part of the system, may not properly alert occupants to a fire for a number of reasons, some of which are as follows: Smoke detectors may have been installed or located incorrectly.

Smoke

may not be able to reach smoke detectors, such as when the fire is in the chimney, walls or ceilings, or on the other side of closed doors. Smoke detectors cannot detect smoke from fires on other levels of the residence or building.

Every fire is different in the amount of smoke produced and the speed of the fire. Smoke detectors cannot detect all types of fires equally well. Smoke detectors cannot provide early warning of fires caused by carelessness or lack of safety precautions, such as smoking in bed, violent explosions, escaping gas, improper storage of combustible materials, overloaded electrical circuits, children playing with matches, or arson.

Even if the smoke detector works as designed, there may be circumstances where there is insufficient warning time to allow occupants to escape in time to avoid injury or death.

Motion Detectors Motion detectors can

only detect motion within designated areas as shown in their installation instructions. Motion detectors cannot discriminate between intruders and occupants of the premises or residence. Motion detectors do not provide volumetric area protection. They have multiple detection beams, and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion occurring behind walls, ceilings, floors, closed doors, glass partitions, or glass doors or windows. Any type of sabotage, whether intentional or unintentional, such as covering up, painting, or spraying any type of material on lenses, mirrors, windows, or any other part of the detection system will impair its proper operation. Passive infrared motion detectors operate by detecting changes in temperature. However, their effectiveness may be reduced when the ambient temperature increases or decreases above body temperature, or if there are intentional or unintentional sources of heat in or near the detection area. Some of the heat sources can be heaters, radiators, stoves, grills, fireplaces, sunlight, steam vents, lighting, and so on.

Warning Devices Warning devices such

as sirens, bells, horns, or strobes will not alert or awaken a sleeping person if there is an intervening door or wall.

If warning devices are located on a different level of the residence or premises, it is less likely that occupants will be warned or awakened. Audible warning devices can be interfered with by other noise sources such as stereos, radios, televisions, air conditioners or other appliances, or traffic. Audible warning devices, even those with loud noises, may not be heard by people with hearing problems.

Telephone Lines: If telephone

lines are used to transmit alarms, they may be out of service or busy for a period of time. An intruder could also cut the line or sabotage its operation through more sophisticated means, which would be very difficult to detect.

Insufficient Time There may

be circumstances when the system may not function as designed, and occupants will still not be protected from emergencies due to their inability to respond to warnings in a timely manner. If the system is monitored, the response may not occur in time to protect the occupants or their belongings.

Component Failure Despite all efforts

to make the system as reliable as possible, the system may fail to function as designed due to component failure.

Improper Testing Most

problems that prevent an alarm system from operating properly can be found through regular testing and maintenance. The entire system should be tested weekly and immediately after an intrusion, attempted intrusion, fire, storm, earthquake, accident, or any type of construction activity inside or outside the premises. The test should include all sensor devices, keypads, consoles, alarm indicating devices, and other operational devices that are part of the system.

Security and Insurance

Despite its capabilities, an alarm system is not a substitute for property or life insurance. Nor is an alarm system a substitute for property owners, tenants, or other occupants acting prudently to prevent or minimize the harmful effects of an emergency situation.

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WARNING: DSC recommends that the entire system be thoroughly tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or power outages, this Software Product may fail to perform as expected.

Regulatory Approvals

FCC COMPLIANCE STATEMENT

CAUTION: Changes or modifications not expressly approved by Digital Security Controls could void your authority to use this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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:

- l Re-orient the receiving antenna. l
- Increase the separation between the equipment and receiver. l
- Connect the equipment into an outlet on a different circuit from that to which the receiver is connected.
- l Consult the dealer or an experienced radio/television technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/ Television Interference Problems." This booklet is available from the US Government Printing Office, Washington DC 20402, Stock # 004-000-00345-4.

IMPORTANT INFORMATION

This equipment complies with Part 68 of the FCC Rules. On the side of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this number must be provided to the Telephone Company.
HS2128 Product Identifier US: F53AL01BHS2128; REN: 0.1B; USOC Jack: RJ-31X

Telephone Connection Requirements

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

Ringer Equivalence Number (REN)

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENsshould not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local Telephone Company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format. US: AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (eg, 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Incidence of Harm

If this equipment HS2016/HS2032/HS2064/HAS2128 causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the Telephone Company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

Changes in Telephone Company Equipment or Facilities

The Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the Telephone Company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

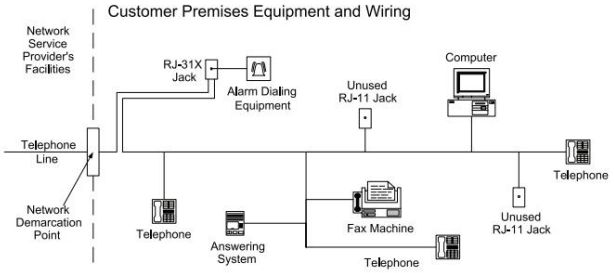
Equipment Maintenance Facility

If trouble is experienced with this equipment HS2016/HS2032/HS2064/HAS21284 for repair or warranty information, please contact the facility indicated below. If the equipment is causing harm to the telephone network, the Telephone Company may request that you disconnect the equipment until the problem is solved. This equipment is of a type that is not intended to be repaired by the end user. DSC c/o APL Logistics, 757 Douglas Hill Rd., Lithia Springs, GA 30122

Additional Information

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

Alarm dialing equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialing equipment must be connected to a properly installed RJ-31X jack that is electrically in series with and ahead of all other equipment attached to the same telephone line. Proper installation is depicted in the figure below. If you have any questions concerning these instructions, you should consult your telephone company or a qualified installer about installing the RJ-31X jack and alarm dialing equipment for you.



SIA False Alarm Reduction Installations: Quick Reference The minimum required system consists of a model HS2128 or HS2064 or HS2032 or HS2016 control unit and any of the listed compatible keypads: HS2LCDRF9, HS2LCDRFP9, HS2ICNRF9, HS2ICNRFP9, HS2LCD, HS2LCDP, HS2ICN, HS2ICNP, HS2LED HS2TCHP.

The following wireless keys can also be used in SIA compliant installations: PG9929, PG9939, PG9949.

Note: For models PG9929 and PG9939, the panic/emergency key must be disabled for SIA compliant installations.

For a list of the factory settings programmed when the unit is shipped from the factory, and for any other programming information, refer to the table below. The following optional subassembly modules also carry SIA CP-01-2010 classification and may be used if desired: HSM2108 Zone Expander, HSM2208 PGM Output Module, HSM2300 Auxiliary Power Supply, HSM2204 Output Module, HSM2HOST9 Two-Way Wireless Transceiver, PG9901 Indoor Siren, PG9911 Outdoor Siren, and TL2803G(R)/ TL280(R) Cellular and PSDN 3G Communication Module.

Caution l For

SIA FAR installations, only use modules/devices listed on this page. l The Fire Alarm Verification feature (Fire Auto-Verify Zone Type [025]) is not supported on zones with 2-wire smoke detectors, models FSA-210B(T)(S)(ST)(LST)(R)(RT)

(RD)(RST)(LRST). This feature can only be enabled for 4-wire smoke detectors (FSA-410B(T)(S)(ST)(LST)(R)(RT) (RST)(LRST) and for wireless detectors PG9916/PG9926).The fire alarm delay is 60 s.

l The Call Waiting Cancellation feature (Section [382], Option 4) on a non-call waiting line will prevent proper communication with the monitoring station.

l All smoke detectors in the system must be tested annually using the installer's walk test. Before exiting walk test mode, a sensor reset must be performed on the system, [*][7][2], to reset all latching 4-wire smoke detectors. Refer to the installation instructions supplied with the detector for further details.

Notes

l Programming at the facility may be subordinate to other UL requirements for the intended application. l Zone crossings have the ability to protect individual the intended area (e.g., overlapping motion detectors). l Zone crossing is not recommended for line security installations nor shall it be implemented in exit/entry zones. l This control panel has a communication delay of 30

seconds. It can be eliminated or increased to up to 45 seconds by the end user in consultation with the installer. The security system must be installed with the device . sound activated and the communicator enabled for transmission using the SIA or CID format. l Commercial ULC burglar installations require resistors DEOL.

SIA Function Programming Section	Comments	Range/Predefined Requirement	
Exit time [005]>[001], option 3	Access entry and exit delays and siren timeout for the system.	Range: 45 - 255 seconds Default: 60 sec.	Required (programmable)
Exit Delay Reset [018], Option 7	Opening a door in a delay zone after it has been opened and closed for a Preset: Exit delay restarts the exit delay timer.	Enabled	Requested
Auto Stay Arm on Function Key: Forces the [001]>[001]-[128] Zone type 05, 06, 09	system to arm in away mode if the occupant does not exit the unoccupied premises after pressing the Away function key.	If it doesn't come out after assembly Default: Enabled	Required full
Time of exit Announcement/Disable Progress and or or Remote Arming [861]>[001]- [005], option 4	System times and audible exit beeps can be disabled when using the wireless key Default: for Stay Arming the system. When Away Arming, beeps cannot be disabled. Enabled	audible exit	Permitted
Entry Delay(s) Access entry and exit delays window) should not exceed 60 seconds.	and bell timeout for the system Range: 30 sec to 4 Required [005]>[001]-[008], options 1 and 2 minutes (programmable) Note: The entry delay combined with the communications	Default: 30 sec.	delay (timeout
Interrupt window for Access to zone attributes, i.e. zone exclusion, transmission delay, and zone crossing. Non-fire zones can be disabled by zone or zone type. > [001] - [128], option 7 ON		Enabled [002]	Requested
Programmable Access Window Delay Time Default: 30 seconds [377]>[002], option 1	Before Communicating Alarms Range: 0 to 45 sec. Note: The entry delay combined with the communications delay (break-in window) should not exceed 60 seconds.		Required (programmable)
Interrupt ad	An audible tone is generated when an alarm is interrupted during the interruption window.	Manual assignment ON	Requested
Duress Function When this feature is enabled, selected user codes send a duress reporting code to the central station when used to perform any function on the system. Section [019], option [6] must be enabled.			Requested
Cancellation window [377]>[002], option 6	Access the communication cancellation window. The minimum duration must be 5 minutes.	Range: 005-255 Default: 005	
Cancellation Notice [308]>[001], Option 8	Access to the reporting code for the canceled alarm.	A was broadcast required Default: Enabled	Cancellation
Zone crossing [042]>Selection 3, option 002	Enables cross zoning for the entire system. Zones can be enabled for cross zoning using the Zone Attribute Programming option 8 in sections [002][101]- [128]. Required Default: Disabled		Requested
Access Verification Timer to the Programmable Cross Zone Timer. Burglary [005]>[000], option 3		Range: 000-255 sec. Default: 60 seconds	Permitted
Zone Bypass for Alarms [377]>[001], Option 1	Zone Exclusion Boundary Access for Zone Alarms For all non-fire zones, turn off in 1 to 6 shots.	Preset: shots 2	Required (programmable)
Zone Bypass Enabled [002] > [001] - [128], Option 6 ON	Zone Bypass, Transmission Delay, and Zone Crossover access attributes. Zone attribute option 6 (Zone Bypass Enabled) is ON.	Response zones or Default: Enabled	Police permit
24 hr.Auto-verified Fire 24 hr.Access.Auto-verified Fire [001]>[001]-[128], Zone Type Activates if not restored within the specified time. 025 ON		You must choose the type of area for application	Required
Call Cancel on Access the dialing sequence used to cancel the call on hold. The call waiting string can be programmed in [304] Required user's phone line. Default: Disabled wait [382], option 4 OFF			
System Test: The system activates all keypad sounders, bells, or sirens for 2 seconds and all [*][6] Master Code, Option keypad lights turn on. Refer to Owner's Manual (Part No. 29008365). 04			
Pass Test Mode: [*] [8] [Installer Code] [901]	This mode is used to test the proper functionality of each zone in the system.		
Walk Test Communications Allows communication of zone alarms while the walk test is active. Step [382], option 2		Default: Disabled	
Start/End Report Codes Access Report Codes for step test start and end times. of the step test [308][401], options 1 and 2			

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