Quick Setup

1. Plan
   Plan the installation including 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 using suitable mounting hardware.

3. Wire
   Complete all wiring including modules, zones, bells/sirens, telephone line connections and ground connections. Record module serial numbers on page 13.

4. Power
   Connect the battery and power up the system. The battery must be connected.

5. Enroll
   Hardwired: Wire the keypad to the Corbus, power up the alarm panel then press any button on the keypad.
   Wireless: Wire the HSM2Host to the Corbus, then power up the alarm panel and a wireless keypad. Press any button on the keypad to enroll it. The HSM2Host is then enrolled on the alarm panel. Alternately, enroll an RF keypad.

6. Enroll modules

7. Enroll wireless devices
   ["[8] Installer Code][804] subsection [000]. Note: An HSM2HOST or RF keypad must be enrolled first.

8. Program
   Basic programming:
   ["[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

9. Test
   Test the panel completely to ensure that all features and functions operate as programmed.
   – [901] Walk Test
   – [904][000] Wireless Placement Test

Compatible Devices

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

NOTE: Only models operating in the band 912-919 MHz are UL/ULC listed where indicated. Only UL approved devices are to be used with UL/ULC listed systems.

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless keypads:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HS2LCDWFxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDWFPAxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDWFPAxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDRPFxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDRFPAxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDRFOFxUL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Hardwired keypads with 2-way wireless integration module:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HS2LCDWFxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDRFPAxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDRPFxUL</td>
</tr>
<tr>
<td></td>
<td>HS2LCDRFOFxUL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Hardwired keypads:</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td></td>
<td>HS2LCDUL</td>
</tr>
<tr>
<td></td>
<td>HS2ICNUL</td>
</tr>
<tr>
<td></td>
<td>HSM2HOSTxUL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>2-way wireless integration module:</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-zone expander:</td>
<td>HSM2100UL</td>
</tr>
<tr>
<td>8-output expander:</td>
<td>HSM2200UL</td>
</tr>
<tr>
<td>Power supply:</td>
<td>HSM2300UL</td>
</tr>
<tr>
<td>4 high current output expander:</td>
<td>HSM2204UL</td>
</tr>
<tr>
<td>Alternate communicator:</td>
<td>3G2080UL</td>
</tr>
<tr>
<td></td>
<td>3G2080UL</td>
</tr>
<tr>
<td></td>
<td>3G2080UL</td>
</tr>
<tr>
<td></td>
<td>PCL-422UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Hardwired Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>x = A, B, or C</td>
</tr>
<tr>
<td>A: ULC listed models</td>
<td>FSA-210UL</td>
</tr>
<tr>
<td>B: UL listed models</td>
<td>FSA-210FL</td>
</tr>
<tr>
<td>C: European and Australian models</td>
<td>FSA-210EL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>4-way smoke detectors:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FSA-410UL</td>
</tr>
<tr>
<td></td>
<td>FSA-410FL</td>
</tr>
<tr>
<td></td>
<td>FSA-410EL</td>
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</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wireless PG smoke detectors:</td>
</tr>
<tr>
<td></td>
<td>PGx926UL</td>
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<tr>
<td></td>
<td>PGx916UL</td>
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<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG CO detector:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>PGx913</td>
</tr>
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<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG PIR motion detectors:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>PGx904UL</td>
</tr>
<tr>
<td></td>
<td>PGx904(P)UL</td>
</tr>
<tr>
<td></td>
<td>PGx905(P)UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG glass break detector:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx912</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG shock detector:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx935UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG flood detector:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx906UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG temperature detector (indoors):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx905UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Outdoor temperature probe (requires PGx905):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGTEMP-PROBE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG keys:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx909UL</td>
</tr>
<tr>
<td></td>
<td>PGx909(P)UL</td>
</tr>
<tr>
<td></td>
<td>PGx905(P)UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG sirens:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx907UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG repeater:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx920UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Wireless PG door/window contacts:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PGx953UL</td>
</tr>
<tr>
<td></td>
<td>PGx953(P)UL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Central Station Receivers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SG-System I, II, III, IV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modules</th>
<th>Enclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PC5003C, PC4050CR (ULC Fire Monitoring), PC4050CAR (UL Commercial Burg), CMC-UL (UL Commercial Burg)</td>
</tr>
</tbody>
</table>

Other enclosures are available to suit a variety of system configurations.

WARNING: This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer. The entire manual should be carefully read.
Safety Instructions for Service Persons
Warning: When using equipment connected to the telephone network, always follow the basic safety instructions provided with this product. Save 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 – Ensure package includes the following:
- Installation and user manuals, including the SAFETY INSTRUCTIONS
- READ and SAVE these instructions!
- Follow ALL WARNINGS AND INSTRUCTIONS specified in this document and/or on the equipment.
- HS2016/2032/2064/2128 alarm controller
- Power supply, direct plug-in
- Hardwired transformer (ULC Fire Monitoring)

Selecting A Suitable Location for the Alarm Controller
Use the following list as a guide to find a suitable location to install this equipment:
- Locate near a telephone socket and power outlet.
- Select a location free from vibration and shock.
- Place alarm controller on a flat, stable surface and follow the installation instructions.
Do NOT locate this product where people may walk on the secondary circuit cable(s).
Do NOT connect alarm controller to electrical the same circuit as 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 accessories in areas where risk of explosion exists.
Do NOT connect this equipment to electrical outlets controlled by wall switches or automatic timers.
AVOID interference sources.
AVOID installing equipment near heaters, air conditioners, ventilators, and refrigerators.
AVOID locating equipment close to or on top of large metal objects (e.g., wall studs).

Safety Precautions Required During Installation
- Never install this equipment and/or telephone wiring during a lightning storm.
- Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Position cables so that accidents can not occur. Connected cables must not be subject to excessive mechanical strain.
- Use only the power supply provided with this equipment. Use of unauthorized power supplies may cause damage.
- For direct plug-in versions, use the transformer supplied with the device.

WARNING: THIS EQUIPMENT HAS NO MAINS ON-OFF SWITCH. THE PLUG OF THE DIRECT PLUG-IN POWER SUPPLY IS INTENDED TO SERVE AS THE DISCONNECTING DEVICE IF THE EQUIPMENT MUST BE QUICKLY DISCONNECTED. IT IS IMPERATIVE THAT ACCESS TO THE MAINS PLUG AND ASSOCIATED MAINS SOCKET/OUTLET IS NEVER OBSTRUCTED.

IMPORTANT NOTE!
This alarm system must be installed and used within an environment that provides the pollution degree max 2 and over-voltages category II NON-HAZARDOUS LOCATIONS, indoor only. The equipment is direct plug-in (external transformer) and is designed to be installed, serviced and/or repaired by service personnel only; [service person is defined as an individual having the appropriate technical training and experience to recognize hazards associated with the installation and operation of this equipment and of measures to minimize the risks to themselves and others]. This equipment contains no user-serviceable parts. The wiring (cables) used for 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 before operation.
(b) Internal wiring must be routed in a manner that prevents:
- Excessive strain or loosening of wire on terminal connections or damage of conductor insulation.
(c) Disposal of used batteries must be made in accordance with local waste recovery and recycling regulations.
(d) Before servicing, disconnect the power and telephone connection.
(e) Do not route any wiring over circuit boards.
(f) The installer must ensure that a readily accessible disconnect device is incorporated into the building for permanently connected installations.
The power supply must be Class II, fail safe with double or reinforced insulation between the primary and secondary circuit enclosure and be an approved type acceptable to the local authorities. All national wiring rules must be observed.

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

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC</td>
<td>Power terminals. Connect the battery before connecting the AC. Do not connect the battery or transformer until all other wiring is complete.</td>
</tr>
<tr>
<td>BAT+, BAT-</td>
<td>Battery terminals. Use to provide backup power and additional current when system demands exceed the power output of the transformer, such as when the system is in alarm. Do not connect the battery until all other wiring is complete.</td>
</tr>
<tr>
<td>AUX+, AUX-</td>
<td>AUX terminals. Use to power modules, detectors, relays, LED's, etc. (700mA MAX). Connect the positive side of device to AUX+, the negative side to AUX-.</td>
</tr>
<tr>
<td>BELL+, BELL-</td>
<td>Bell/Siren power. Connect the positive side of any alarm warning device to BELL+, the negative side to BELL-.</td>
</tr>
<tr>
<td>RED, BLK, YEL, GRN</td>
<td>Corbus terminals. Use to provide communication between the alarm controller and connected modules. Each module has four Corbus terminals that must be connected to the Corbus.</td>
</tr>
<tr>
<td>PGM1 to PGM4</td>
<td>Programmable output terminals. Use to activate devices such as LED's, (PGM1, PGM3, and PGM4: 50mA; PGM2: 300mA or can be configured as an input).</td>
</tr>
<tr>
<td>Z1 to Z8, COM</td>
<td>Zone input terminals. Ideally, each zone should have one detection device; however, multiple detection devices can be wired to the same zone.</td>
</tr>
<tr>
<td>TIP, RING, T-1, R-1</td>
<td>Telephone line terminals.</td>
</tr>
<tr>
<td>EGND</td>
<td>Earth ground connection.</td>
</tr>
<tr>
<td>PCLINK_1, PCLINK_2</td>
<td>DLS/SA, Alternate Communicator</td>
</tr>
</tbody>
</table>

Corbus Wiring
The RED and BLK Corbus terminals are used to provide power while YEL and GRN are used for data communications. The 4 Corbus terminals of the alarm controller must be connected to the 4 Corbus terminals or wires of each module.
The following conditions apply:
- Corbus should be run with minimum 22 gauge quad, two pair twisted preferred.
- The modules can be home run to the panel, connected in series or can be T-tapped.
- Any module can be connected anywhere along the Corbus. Separate wire runs for keypads, zone expanders etc. are not necessary.
- No module can be more than 1,000’/305m (in wire length) from the panel.

NOTE: Do not use shielded wire for Corbus wiring.

Diagram 1-1: Corbus Wiring
Module (A) is wired correctly as it is within 1,000’/305m of the panel, in wire distance. Module (B) is wired correctly as it is within 1,000’/305m of the panel, in wire distance. Module (C) is NOT wired correctly as it is further than 1,000’/305m from the panel.

Current Ratings
In order for the system to operate properly, the power output of the alarm controller and power supply modules cannot be exceeded. Use the data below to ensure that the available current is not exceeded.

Table 1-1 System Output Ratings

<table>
<thead>
<tr>
<th>Device</th>
<th>Output</th>
<th>Rating (12Vdc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS2016</td>
<td>AUX:</td>
<td>700mA. Subtract the listed rating for each keypad, expansion module and accessory connected to AUX or Corbus. At least 100mA must be reserved for the Corbus.</td>
</tr>
<tr>
<td>HS2032</td>
<td>BELL:</td>
<td>700mA. continuous rating. 2.0A. short term. Available only with standby battery connected. Not for UL/ULC or EN certified applications only.</td>
</tr>
<tr>
<td>HS2064</td>
<td>AUX:</td>
<td>250mA. Continuous rating. Subtract for each device connected. Subtract the total load on this terminal from the alarm panel AUX/Corbus output.</td>
</tr>
<tr>
<td>HS2128</td>
<td>BELL:</td>
<td>700mA. continuous rating. 2.0A. short term. Available only with standby battery connected. Not for UL/ULC or EN certified applications only.</td>
</tr>
<tr>
<td>HSM2208</td>
<td>AUX:</td>
<td>100mA. Subtract for each device connected. Subtract the total load on this terminal from the panel AUX/Corbus output.</td>
</tr>
<tr>
<td>HSM2108</td>
<td>AUX:</td>
<td>100mA. Subtract for each device connected. Subtract the total load on this terminal from the panel AUX/Corbus output.</td>
</tr>
</tbody>
</table>

Installation
Mounting the Enclosure
Locate the panel in a dry area, preferably near an uninterrupted AC power source and the incoming telephone line. Complete all wiring before applying AC or connecting the battery.
An increase in capacitance on the Corbus causes the system to slow down. The following Capacitance Limits the current draw of each device.

Table 1-3 Wire Capacitance chart indicates the total wire distance allowed for the capacitance rating of the wire used:

Current must be added to the total Corbus current. See manufacturer’s specifications for *

**These units draw current from the Corbus to power devices external to the module. This

The AUX output is protected; if too much current is drawn from these terminals (wiring

Connect the positive side of any device to the AUX+ terminal, the negative side to GND.

The AUX output is protected; if too much current is drawn from these terminals (wiring short) the output is temporarily shut off until the problem is corrected.

NOTE: If using a 12V, 14Ah battery, maximum AUX capacity for 24-hour standby is 470mA.

PGM Wiring

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 a PGM terminal.

A relay is required for current levels greater than 50mA or 300mA. PGM can also be used for 2-wire smoke detectors.

NOTE: Use SEOL resistors on fire zones only.

Diagram 1-2: LED output with resistor and optional relay driver output.

Diagram 1-3: SEOL Wiring

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.

Double End of Line (DEOL) Resistors

When double end-of-line (DEOL) resistors are installed at the end of a zone loop, the alarm panel detects if the circuit is secure, open, or shorted.

Diagram 1-4: DEOL Wiring

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

Bell Wiring

These terminals supply 700mA of current at 10.4 - 12.5VDC for commercial/residential installations. To comply with NFPA 72 Temporal Three Pattern requirements, section [013] Opt [8] must be ON. Note that steady and pulsed alarms are also supported.

Diagram 1-5: Bell Wiring

The Bell output is supervised and power limited by 2A PTC. If unused, connect a 100Ω resistor across Bell+ and Bell- to prevent the panel from displaying a trouble.

Telephone Line Wiring

Wire the telephone connection terminals (TIP, Ring, T-1, R-1) to an RJ-31x connector as indicated in diagram 1.6. For connection of multiple devices to the telephone line, wire in the sequence indicated. Use 26 AWG wire minimum for wiring.

Diagram 1-6: Telephone Wiring

Telephone format is programmed in option [350]. Telephone call directions are programmed in options [311]-[318].

Connecting AC Power

For UL Listed Installations

Primary: 120VAC/60Hz/0.33A Secondary: 16.5VAC/40VA DSC PDT1640U, DSC PTC1640U Class 2 transformer:

NOTE: Use DSC PDT1640 for Canadian installations.

For UL S559 applications, Standard transformer (Model FTC3716) shall be employed for direct-wiring.

NOTE: For UL/ULC installations use only 60Hz

Batteries

A sealed, rechargeable, lead acid or gel type battery is required to meet UL requirements for power standby times. Refer to Aux Loading and Battery Selection on page 15.

NOTE: Wire and installation hardware not included.

Alarm Controller Current Calculation Maximum (Standby or Alarm)

AUX (700mA max. including PGM1/2/3/4)

Maximum (Standby or Alarm) PCLink+ (Alt. Com: 125mA)

Total (must not exceed 700mA)

**See “Corbus Current Calculation Chart” below.

NOTE: For UL, ULC and Commercial Listed applications, the total standby and alarm current cannot exceed 700mA.

Table 1-2 Corbus Current Calculation Chart

<table>
<thead>
<tr>
<th>Item</th>
<th>Current (mA)</th>
<th>Quantity</th>
<th>Total (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H52 LCD</td>
<td>105</td>
<td>x</td>
<td>105</td>
</tr>
<tr>
<td>H52 ICN</td>
<td>105</td>
<td>x</td>
<td>105</td>
</tr>
<tr>
<td>H52 LED</td>
<td>105</td>
<td>x</td>
<td>105</td>
</tr>
<tr>
<td>H52 LCPD</td>
<td>105</td>
<td>x</td>
<td>105</td>
</tr>
<tr>
<td>H52 ICN</td>
<td>105</td>
<td>x</td>
<td>105</td>
</tr>
<tr>
<td>H52 LCPD</td>
<td>50</td>
<td>x</td>
<td>50</td>
</tr>
<tr>
<td>Current required for connected devices = H52108*</td>
<td>30</td>
<td>x</td>
<td>30</td>
</tr>
<tr>
<td>H52208*</td>
<td>40</td>
<td>x</td>
<td>40</td>
</tr>
<tr>
<td>H52300/2204*</td>
<td>35</td>
<td>x</td>
<td>35</td>
</tr>
<tr>
<td>HSM2HOSTx</td>
<td>35</td>
<td>x</td>
<td>35</td>
</tr>
<tr>
<td>3G2080(R)/TL203G(R)/TL2080(R) 125 (PCLINK) Total Corbus Current =</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These units draw current from the Corbus to power devices external to the module. This current must be added to the total Corbus current. See manufacturer’s specifications for the current draw of each device.

Capacitance Limits

An increase in capacitance on the Corbus causes the system to slow down. The following chart indicates the total wire distance allowed for the capacitance rating of the wire used:

Table 1-3 Wire Capacitance

<table>
<thead>
<tr>
<th>Wire Capacitance per 1000' (300m)</th>
<th>Total Corbus Wire Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>15nF</td>
<td>2000'/608m</td>
</tr>
<tr>
<td>20nF</td>
<td>1600'/471m</td>
</tr>
<tr>
<td>25nF</td>
<td>1280'/382m</td>
</tr>
<tr>
<td>30nF</td>
<td>1020'/311m</td>
</tr>
<tr>
<td>35nF</td>
<td>800'/241m</td>
</tr>
<tr>
<td>10nF</td>
<td>5300'/1616m</td>
</tr>
</tbody>
</table>

Figure 1-4 Burglary Zone Wiring Chart

<table>
<thead>
<tr>
<th>Wire Gauge</th>
<th>Maximum Length to EOL Resistor (ft/meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>3000 / 914</td>
</tr>
<tr>
<td>20</td>
<td>4900 / 1493</td>
</tr>
<tr>
<td>19</td>
<td>6200 / 1889</td>
</tr>
<tr>
<td>18</td>
<td>7800 / 2377</td>
</tr>
</tbody>
</table>

Aux Power Wiring

These terminals provide 11-12.5VDC/700mA of current (shared with PGM outputs). Connect the positive side of any device to the AUX+ terminal, the negative side to GND. The AUX output is protected; if too much current is drawn from these terminals (wiring short) the output is temporarily shut off until the problem is corrected.
Enrollment

All optional modules and devices must be enrolled on the system. During enrollment, the
electronic serial number (ESN) of each device is identified to the control panel and zones
are assigned. A wireless transceiver HSM2HOST or an RF keypad must be enrolled first
before wireless devices can be enrolled.

Enrolling Modules

During automatic and manual enrollment, if an attempt is made to enroll more than
the maximum number of modules, an error tone sounds and a message is displayed on LCD
keypads.

<table>
<thead>
<tr>
<th>Table 1-5 Module Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module</td>
</tr>
<tr>
<td>HSM2108 8 Zone expander</td>
</tr>
<tr>
<td>HSM2208 8 Output expander</td>
</tr>
<tr>
<td>Wireless keypad:</td>
</tr>
<tr>
<td>HS2LCDRF(P)V4</td>
</tr>
<tr>
<td>HS2CNRF(P)V4</td>
</tr>
<tr>
<td>HSM2360 Power Supply 1A</td>
</tr>
<tr>
<td>HSM2204 4 High Current Output</td>
</tr>
<tr>
<td>HSM2HOSTx Transceiver</td>
</tr>
<tr>
<td>PC5950 Audio Verification</td>
</tr>
</tbody>
</table>

Modules can be enrolled automatically or manually using section [902] of Installer pro-
ingramming. To confirm that a module has been successfully enrolled, use Installer Programming sec-
tion [903].

Enroll Wireless Devices

Wireless devices are enrolled via the wireless keypad and Installer Programming menu.

<table>
<thead>
<tr>
<th>Wireless Keypad:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSM2208 8 Zone expander</td>
</tr>
<tr>
<td>HS2CNRF(P)V4</td>
</tr>
<tr>
<td>HSM2360 Power Supply 1A</td>
</tr>
<tr>
<td>HSM2204 4 High Current Output</td>
</tr>
<tr>
<td>HSM2HOSTx Transceiver</td>
</tr>
<tr>
<td>PC5950 Audio Verification</td>
</tr>
</tbody>
</table>

Auto Enrollment

To enroll a wireless device using this method, press and hold the Enroll button on the
device for 2-5 seconds until the LED lights then release the button. The alarm panel auto-
matically recognizes the device and the keypad displays a confirmation message. The
device ID and next available zone number are displayed. Press [*] to accept or scroll to
another available zone number.

Pre-Enrollment

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

- XXX identifies the type or model of the device
- YYYY is a short encrypted ID used by the system to identify the specific device

Pre-enrollment can be done at a remote location and using DLS. The second step is to
press the enrollment button on the device, usually done on location. Installer Programming
does not have to be entered at this step. Both steps must be performed in order to complete
the enrollment.

Programming Methods

The alarm system can be programmed using the following methods:

<table>
<thead>
<tr>
<th>Table 1-6 Programming Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
</tr>
<tr>
<td>Template programming</td>
</tr>
<tr>
<td>DLS programming</td>
</tr>
<tr>
<td>Installer programming</td>
</tr>
</tbody>
</table>

Viewing Programming

Programming sections can be viewed from any system keypad. The method for viewing
and selecting programming options using LCD, LED and ICON keypads depends on the
keypad type used.

Generally, programming options are accessed in the following way:

1. Enter Installer Programming mode ([*][8]).
2. Navigate to a specific programming section.
3. Select an option to view or change it’s programming.

All programming options are numbered and can be accessed by navigating through the
menu (LCD) or by keying in the programming section number.

For toggle options, the name of the option is displayed (LCD) or LEDs 1-8 are illuminated
(LED and ICON).

Use the keypad numbers to toggle options on or off. Sections requiring data input, such as
phone numbers, display the full data in fields up to 32 characters long (LCD). To input
data, use the scroll keys to select a character then press the keypad button corresponding to
the number/letter required. Scroll to the next character and repeat the procedure as needed.
Press the [8] key to save changes and exit the programming section.

Minimum Required Programming

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

[000] Language Selection

(LCD keypads only)

Use this section to set the language displayed by LCD keypads. To select a language:

1. Enter Installer Programming: [*][8][Installer Code].
2. Enter programming section [000][000].
3. Key in the 2-digit number corresponding to the language required. See below:

<table>
<thead>
<tr>
<th>Language Code</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>English</td>
</tr>
<tr>
<td>11</td>
<td>Swedish</td>
</tr>
<tr>
<td>21</td>
<td>Russian</td>
</tr>
<tr>
<td>02</td>
<td>Spanish</td>
</tr>
<tr>
<td>12</td>
<td>Norwegian</td>
</tr>
<tr>
<td>22</td>
<td>Bulgarian</td>
</tr>
<tr>
<td>03</td>
<td>Portuguese</td>
</tr>
<tr>
<td>13</td>
<td>Danish</td>
</tr>
<tr>
<td>23</td>
<td>Latvian</td>
</tr>
<tr>
<td>04</td>
<td>French</td>
</tr>
<tr>
<td>14</td>
<td>Hebrew</td>
</tr>
<tr>
<td>24</td>
<td>Lithuanian</td>
</tr>
<tr>
<td>05</td>
<td>Italian</td>
</tr>
<tr>
<td>15</td>
<td>Greek</td>
</tr>
<tr>
<td>25</td>
<td>Ukrainian</td>
</tr>
<tr>
<td>06</td>
<td>Dutch</td>
</tr>
<tr>
<td>16</td>
<td>Croatian</td>
</tr>
<tr>
<td>26</td>
<td>Serbian</td>
</tr>
<tr>
<td>07</td>
<td>Polish</td>
</tr>
<tr>
<td>18</td>
<td>Hungarian</td>
</tr>
<tr>
<td>27</td>
<td>Estonian</td>
</tr>
<tr>
<td>08</td>
<td>Finnish</td>
</tr>
<tr>
<td>19</td>
<td>Romanian</td>
</tr>
<tr>
<td>28</td>
<td>Hungarian</td>
</tr>
<tr>
<td>09</td>
<td>German</td>
</tr>
<tr>
<td>20</td>
<td>Romanian</td>
</tr>
<tr>
<td>03</td>
<td>Slovenian</td>
</tr>
</tbody>
</table>

Time and Date

Use this section to program the alarm system clock.

Menu: [*][6][master code] > Time and Date

Keypad: [*][6][master code] + 01

Enter time and date using the following format: (HH:MM); (MM-DD-YY). Valid time entries are 00-23hours, 00-59 minutes. Valid date entries are 1-12 months, 1-31 days.

Setting Up a Partition

Partitions are added or removed from the system by applying or removing a partition mask
via Installer Programming section [200]. The number of available partitions depends on
the alarm panel model.

Bell/Siren Operation

Each partition must have a siren. The system siren connected to the bell output of the
alarm controller can be mounted in a central location within hearing range of all partitions.
Each partition can also have wireless sirens activated only on the assigned partition.

Keypad Partition Setup

Keypads can be configured to control an individual partition or all partitions.

1. Enter Installer Programming [*][8][installer code].
2. Select [861]-[876] to program keypads 1-16.
   - Press [000] for partition assignment.
   - For global operation, key in 00.
   - To assign a keypad to a partition, key in 01-08 for partition 1-8.
3. Press the [8] key twice to exit programming.

Continue this procedure at each keypad until all have been programmed.

Users are assigned partition access rights via the [*][5] menu.

Assign sirens to partitions:

([804][000]-[151][556]-[008])

Set up partition account codes:

([310][001]-[008])

Set up partition timers:

- Entry/exit delay, settle delay – [005][001]-[008]
- Automatic arming/disarming schedule – [151][158]-[001][002]
- Auto disarming holiday schedule – [151][158]-[003]
- No activity arming – [151][158]-[006]
- Automatic clock adjust – [005][000], option 6
- Delay between dialing attempts – [377]-[012]

PowerSeries Neo Installation Guide
Assign Zone Types
[001]–[007]–[128] > Every zone on the system must be assigned one of the following zone types:

<table>
<thead>
<tr>
<th>Number</th>
<th>Type of Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>000 –</td>
<td>Null Zone</td>
</tr>
<tr>
<td>001 –</td>
<td>Delay 1</td>
</tr>
<tr>
<td>002 –</td>
<td>Delay 2</td>
</tr>
<tr>
<td>003 –</td>
<td>Instant</td>
</tr>
<tr>
<td>004 –</td>
<td>Interior</td>
</tr>
<tr>
<td>005 –</td>
<td>Interior Stay/Away</td>
</tr>
<tr>
<td>006 –</td>
<td>Delay Stay/Away</td>
</tr>
<tr>
<td>007 –</td>
<td>Delayed 24-Hour Fire</td>
</tr>
<tr>
<td>008 –</td>
<td>Standard 24-Hour Fire</td>
</tr>
<tr>
<td>009 –</td>
<td>Instant Stay/Away</td>
</tr>
<tr>
<td>010 –</td>
<td>Interior Delay</td>
</tr>
<tr>
<td>011 –</td>
<td>Day Zone</td>
</tr>
<tr>
<td>012 –</td>
<td>Night Zone</td>
</tr>
<tr>
<td>017 –</td>
<td>24-Hour Burglary</td>
</tr>
<tr>
<td>018 –</td>
<td>24-Hour Bell/Buzzer</td>
</tr>
<tr>
<td>023 –</td>
<td>24-Hour Supervisory</td>
</tr>
<tr>
<td>024 –</td>
<td>24-Hour Supervisor Buzz</td>
</tr>
<tr>
<td>025 –</td>
<td>Auto Verified Fire</td>
</tr>
<tr>
<td>027 –</td>
<td>Fire Supervisory</td>
</tr>
<tr>
<td>040 –</td>
<td>24-Hour Gas</td>
</tr>
</tbody>
</table>

Assign zone attributes:
[002]–[001]–[128] > Select one of the following zone attributes:

<table>
<thead>
<tr>
<th>Number</th>
<th>Zone Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 –</td>
<td>Bell Audible</td>
</tr>
<tr>
<td>02 –</td>
<td>Bell Steady</td>
</tr>
<tr>
<td>03 –</td>
<td>Chime Function</td>
</tr>
<tr>
<td>04 –</td>
<td>Bypass Enabled</td>
</tr>
<tr>
<td>05 –</td>
<td>Force Arm</td>
</tr>
<tr>
<td>06 –</td>
<td>Swinger Shutdown</td>
</tr>
<tr>
<td>07 –</td>
<td>Transmission Delay</td>
</tr>
<tr>
<td>08 –</td>
<td>Burglary Verification</td>
</tr>
</tbody>
</table>

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 either 4 or 6 digits in length, depending on the setting of programming section [041]. Duplicate codes are not valid.

Alternate Communicator Setup
The following configuration steps are required to set up the alternate communicator:
- Install the alternate communicator and wire it to the alarm panel
- Enroll the alternate communicator with Connect 24
- Set the communication path: [300]
- Enable the alternate communicator: [382] option 5
- Enable the alternate communicator: [307]/[308]
- Set the communication path: [300]
- Enroll the alternate communicator with Connect 24
- Install the alternate communicator and wire it to the alarm panel

Panel/Receiver Communication Paths
This section is used to select the path of communications between the alarm system and the control station.
- To use as the communications path, program section [300] options 001 through 004 as [01] 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.

Testing the System
Installer Walk Test
Enter section [091] to initiate a walk test. When a zone is tripped, all sirens emit a tone to indicate that the zone is working correctly.
After 15 minutes without zone activity, the walk test terminates automatically. To manually exit walk test mode, enter [901] again.

Viewing the Event Buffer
The event buffer displays events that have occurred on the alarm system beginning with the most recent. To view the event buffer, press [*][2][master code][*][4].

Troubleshooting
To view troubles:
- Press [*][2] followed by an access code if required.
- Use the arrow keys to scroll through all trouble conditions present on the system.
- Refer to the trouble summary list below for trouble descriptions.

Trouble Summary

<table>
<thead>
<tr>
<th>Trouble</th>
<th>Detailed Trouble</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – Service Required</td>
<td>01 – Bell circuit</td>
</tr>
<tr>
<td>02 – Module Low Battery</td>
<td>02 – Panel low battery</td>
</tr>
<tr>
<td>03 – Bus Low Voltage</td>
<td>03 – Panel low battery</td>
</tr>
<tr>
<td>04 – AC Troubles</td>
<td>04 – Keypad 1-16 voltage</td>
</tr>
<tr>
<td>05 – Device Faults</td>
<td>05 – Keypad 1-16</td>
</tr>
<tr>
<td>06 – Device Low Battery</td>
<td>06 – Keypad 1-16</td>
</tr>
<tr>
<td>07 – Device Tamperers</td>
<td>07 – Keypad 1-16</td>
</tr>
<tr>
<td>08 – RF Delinquency</td>
<td>08 – Keypad 1-16</td>
</tr>
<tr>
<td>09 – Module Supervisory</td>
<td>09 – Keypad 1-16</td>
</tr>
<tr>
<td>10 – Module Tamper</td>
<td>10 – Keypad 1-16</td>
</tr>
<tr>
<td>11 – Communications</td>
<td>11 – Keypad 1-16</td>
</tr>
<tr>
<td>12 – Not Networked</td>
<td>12 – Keypad 1-16</td>
</tr>
</tbody>
</table>

Trouble Module Battery
Press [02] to determine specific trouble

Trouble | Troubleshooting |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – Bell Circuit</td>
<td>Disconnect Bell+/− leads and measure resistance:</td>
</tr>
<tr>
<td>02 – RF Jam Detected</td>
<td>Disconnect Bell+/− leads and measure resistance:</td>
</tr>
<tr>
<td>03 – Aux Supply</td>
<td>Disconnect Bell+/− leads and measure resistance:</td>
</tr>
<tr>
<td>04 – Time and date</td>
<td>Connect bell circuit and verify wiring is correct.</td>
</tr>
<tr>
<td>05 – Output 1 Fault</td>
<td>Connect bell circuit and verify wiring is correct.</td>
</tr>
<tr>
<td>06 – Repeater 1-8</td>
<td>Connect bell circuit and verify wiring is correct.</td>
</tr>
<tr>
<td>07 – Keypad 1-16</td>
<td>Connect bell circuit and verify wiring is correct.</td>
</tr>
<tr>
<td>08 – HSM2204 1-4</td>
<td>Connect bell circuit and verify wiring is correct.</td>
</tr>
<tr>
<td>Trouble</td>
<td>Troubleshooting</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>[O2]</strong> Panel No Battery</td>
<td>The panel detects that no battery is present or that the battery is shorted.</td>
</tr>
<tr>
<td><strong>[O4]</strong> 4 High Current output 1-4 Low Battery (HSM2204)</td>
<td>HSM2204 battery less than 11.5VDC. NOTE: This trouble condition will not clear until the battery voltage is 12.5VDC min., under load.</td>
</tr>
<tr>
<td><strong>[O5]</strong> 4 High Current output 1-4 No Battery (HSM2204)</td>
<td>Enter 05 to view which HSM2204 does not have a battery connected.</td>
</tr>
<tr>
<td><strong>[O7]</strong> Power Supply 1-4 Low Battery (HSM2300)</td>
<td>Enter 07 to view which HSM2300 has a battery voltage less than 11.5V.</td>
</tr>
<tr>
<td><strong>[O8]</strong> Power Supply 1-4 No Battery (HSM2300)</td>
<td>Enter 08 to view which HSM2300 does not have a battery connected.</td>
</tr>
<tr>
<td><strong>[O2]</strong> Keypad 1-16 faults</td>
<td>Enter [02] to view keypads in fault. This trouble is caused by a wireless supervisory fault if the keypad is wireless.</td>
</tr>
<tr>
<td><strong>[O3]</strong> Siren 1-16 faults</td>
<td>Enter [03] to view sirens in fault. This trouble is caused by a wireless supervisory fault on a wireless siren.</td>
</tr>
<tr>
<td><strong>[O4]</strong> Repeater 1-8 faults</td>
<td>Enter [04] to view repeaters in fault. This trouble is caused by a wireless supervisory fault on a wireless repeater, or by the repeater shutting down due to a loss of AC/DC power.</td>
</tr>
<tr>
<td><strong>[O7]</strong> Device Tamper</td>
<td>Enter [07] to view devices in fault. This trouble is caused by a tamper on one or more wireless devices.</td>
</tr>
<tr>
<td><strong>[O8]</strong> RF Delinquency</td>
<td>Enter [08] to view RF delinquency. This trouble is caused by a wireless device for 13 minutes. Arming disabled until trouble acknowledged for 13 minutes. Arm again to arm the system.</td>
</tr>
<tr>
<td><strong>[O9]</strong> Module Supervisory</td>
<td>Enter [09] to determine specific zones with a tamper fault.</td>
</tr>
</tbody>
</table>

**Troubleshooting**

1. **Verify battery is connected.**
2. **Refer to troubleshooting steps for panel low battery.**
3. **Charge battery. It may be low due to a long period without AC.**
4. **Replace battery if it is no longer able to hold a charge due to age.**
5. **Verify battery is connected.**
6. **Refer to troubleshooting steps for panel low battery.**
7. **Verify wire leads from Z and COM terminals.**
8. **Remove wire leads from PGM2 and AUX+ terminals.**
9. **Ensure a 2.2K EOL resistor is connected (red, red, red).**
10. **Ensure fire zones have a 5.6K resistor (green, blue, red) connected.**
11. **Remove wire leads from Z and COM terminals and measure resistance of the wire leads:**
   - Check for a short on DEOL zones or an open condition on SEOL zones.
   - Check that the tamper switch is securely attached to the wall.
12. **Verify voltage across AC terminals is 16-18 VAC. Replace transformer if required.**
13. **Verify fire zones have a 5.6K resistor (green, blue, red) connected.**
14. **Remove wire leads from Z and COM terminals and measure resistance of the wire leads:**
   - Check for a short on DEOL zones or an open condition on SEOL fire zones.
   - Connect a 5.6K resistor across the Z and COM terminals. Placement test a wireless device and re-locate it if bad results are received.
15. **Connect a 2.2K resistor across PGM2 and AUX+ terminals. Verify that trouble clears.**
16. **Verify zone operation.**
17. **Verify that tamper and low battery condition is cleared and reported.**
18. **View which device is in low battery though the [*][2] menu.**
19. **Check for device faults (e.g., low battery).**
20. **Ensure device cover is secure.**
21. **Verify device is correctly mounted for wall tamper operation.**
22. **Trip, then restore the tamper. If tamper condition persists, replace wireless device.**
23. **Modules are immediately enrolled and supervised.**
24. **If a module is removed, or if the keypad slot is under load, enter programming section [902].**
25. **View the event buffer to identify the specific trouble.**
26. **Modules are immediately enrolled and supervised.**
27. **If a module is removed, or if the keypad slot is changed, module supervision must be reset.**
28. **View the event buffer to identify the specific module(s) in trouble.**
29. **To reset module supervision:**
   - Enter programming section [902].
   - Select auto or manual enrollment.
   - Enter programming section [903] to identify modules connected to the Corbus.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[01] HSM2HOST</td>
<td>• Ensure the TAM terminal on HSM2108, HSM2300, HSM2204 and HSM2208 modules is shorted to ground if tamper support is not used.</td>
<td></td>
</tr>
<tr>
<td>[02] Keypad 1-16</td>
<td>• Ensure module cover is secure.</td>
<td></td>
</tr>
<tr>
<td>[04] HSM2108 1-15</td>
<td>• Ensure module is correctly mounted for wall tamper operation.</td>
<td></td>
</tr>
<tr>
<td>[05] HSM2300 1-4</td>
<td>• Trip, then restore the tamper. If tamper condition persists, replace the module.</td>
<td></td>
</tr>
<tr>
<td>[06] HSM2204</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>[08] HSM2208 1-4</td>
<td>A tamper condition is present on one or more modules.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[01] Phone Line Trouble</td>
<td>• Measure the voltage across TIP and RING on the panel:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No phone off-hook − 50VDC (approx).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Any phone off-hook − 5VD (approx).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Wire incoming line directly to TIP and RING.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If trouble clears, check wiring or the RJ-31 jack.</td>
<td></td>
</tr>
<tr>
<td>[02] Phone Number 1-4 FTC</td>
<td>• Ensure adequate line voltage at the panel TIP and Ring (On hook ~41VDC, Off hook ~7VDC).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ensure panel phone number is programmed correctly when using.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If using IP or cellular, ensure alternate communicator has the correct IP addresses and programming.</td>
<td></td>
</tr>
<tr>
<td>[03] Alternate Comm SIM Lock</td>
<td>• See the communicator installation manual for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SIM lock is enabled and the unit does not have the correct SIM PIN.</td>
<td></td>
</tr>
<tr>
<td>[04] Alternate Comm Cellular</td>
<td>• See the communicator installation manual for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The alternate communicator has detected a radio or SIM failure, a cellular network trouble, or insufficient signal strength.</td>
<td></td>
</tr>
<tr>
<td>[05] Alternate Comm Ethernet</td>
<td>• See the communicator installation manual for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The alternate communicator has detected a network absent condition.</td>
<td></td>
</tr>
<tr>
<td>[06] Receiver 1-4 Absent</td>
<td>• See the communicator installation manual for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alternate communicator supervision loss or failure to initialize a receiver.</td>
<td></td>
</tr>
<tr>
<td>[07] Receiver 1-4 Supervision</td>
<td>• See the communicator installation manual for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The alarm system loses communication with an Ethernet or cellular receiver on the system.</td>
<td></td>
</tr>
<tr>
<td>[09] Alternate Comm Fault</td>
<td>• See the communicator installation manual for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The alternate communicator has not responded to any poll commands. Alt Comm Fault is displayed in [*][2] and the event buffer.</td>
<td></td>
</tr>
<tr>
<td>[10] Alternate Comm FTC Fault</td>
<td>• Refer to the communicator installation manual for more details.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[01] Zones 1-28</td>
<td>• Ensure the device is physically present.</td>
<td></td>
</tr>
<tr>
<td>[02] keypad 1-16</td>
<td>• Check the current signal strength and during the last 24 hours.</td>
<td></td>
</tr>
<tr>
<td>[03] Siren 1-16</td>
<td>• Replace the battery or press the tamper switch.</td>
<td></td>
</tr>
<tr>
<td>[04] Repeater 1-8</td>
<td>• Enroll the device again.</td>
<td></td>
</tr>
<tr>
<td>[05] User 1-16</td>
<td>• Roll the device again.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specifications</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Warning Device Output</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integral sounder capable of 85 dB @ 3m, self-powered type Z</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 remote, wireless warning devices supported: PGX901 (indoor), PGX911 (outdoor) (X=4, 8, or 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programmable as steady, pulsed or temporal three (as per ISO8201) and temporal four (CO alarm) output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warning device sounds alarms in the following priority: fire, CO, medical, burglar alarm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMOS EEPROM memory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retains programming and system status on AC or battery failure for 20 years min.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Transformer: DSC PTD1640U</th>
<th>Primary:120V, 60Hz Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Secondary:16.5VAC, 40VA Max.</td>
<td></td>
</tr>
<tr>
<td>Regulated power supply:</td>
<td>• 700mA auxiliary supply, 12V DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Positive temperature coefficient (PTC) for Bell, Aux+ and Battery terminals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reverse battery detection/protection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Supervision for AC power and low battery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Normal and high current battery charge options</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Superseded battery charging circuit</td>
<td></td>
</tr>
<tr>
<td>Current draw (panel):</td>
<td>85mA (nominal) 2A(Max)</td>
<td></td>
</tr>
<tr>
<td>Bell Output:</td>
<td>12V, 700mA supervised (1k Ohm) bell output (current limited at 2 amps)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Steady, Pulsed, Temporal 3 fire, CO alarm cadences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Bell short detection (software + hardware)</td>
<td></td>
</tr>
<tr>
<td><strong>Aux+:</strong></td>
<td>• Voltage range = 9.6V - 13.8V DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Current = 700mA (shared with PGM outputs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Output ripple voltage: 270mVp-p max.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Onboard programmable outputs:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PGM 1 - 50mA switched programmable output</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PGM 2 - 300mA current-limited switched programmable output, 2-Wire smoke detectors (90mA current limited) are supported using this PGM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PGM 3 - 50mA switched programmable output</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PGM 4 - 50mA switched programmable output</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Hardware PGM over current protection</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Battery</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12V sealed lead acid, rechargeable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery capacity:</td>
<td>• 4Ah (PS4-12)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 7Ah (BD7-12)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 14Ah</td>
<td></td>
</tr>
<tr>
<td>Maximum standby time: 24 hours (with 14Ah battery and Aux current limited to 470mA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recharging time to 80% 72 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recharging rate: 240mA (12 hours max.), 480mA (24 hour backup)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backup time: 24 hours (UL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery lifespan: 3-5 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low battery trouble indication threshold 11.5VDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery restore voltage 12.5V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main board current draw (battery only):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• HS2016/32/64/128 (no alternate communicator) standby 80mA DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• HS2016/32/64/128, (including alternate communicator) standby 190mA DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Transmit (alternate communicator module)195mA DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rechargeable batteries (PTC) used on circuit board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervision for loss of primary power source (AC fail), battery loss or battery low voltage (battery trouble) with indication provided on the keypad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal clock locked to AC power frequency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Battery Charging Current:** 400mA/700mA* | | |
| **Battery Size** | **Standby** | **24Hr** | **4Ah** | 700mA | | |
| | | | | | | |
| | | | | | | |
| **Temperature range:** UL~ 0°C to +49°C (32°F-120°F) | | |
| **Relative humidity:** ~93% non condensing | | |

| **Alarm Transmitter Equipment (ATE) Specification** | | |
| **Digital dialer integral to the main control board** | | |
| **Supports SIA and Contact ID** | | |
| **Complies with TS203 021-1, -2, -3 Telecom equipment requirements and EN50136-1, EN50136-2-1, EN50136-2-3 ATS 2** | | |
| **Optional Dual IP/Cellular communicators (3G2080(R)/TL2803G(R)/TL280(R)) can be installed in the same enclosure and configured as primary or back-up, with AES 128-bit encryption** | | |
| **Compliant with EN50136-1, EN50136-2-1 ATS2 requirements** | | |

**Operating Environmental Conditions** | | |
| **Temperature range:** UL~ 0°C to +49°C (32°F-120°F) | | |
| **Relative humidity:** ~93% non condensing | | |
Programming Directory

This section provides a list of all available programming options in numerical order. To program, access Installer Programming mode by keying in [{*}*][8][Installer Code]. Use the scroll keys to navigate through the menus or jump directly to a specific section by keying in [*][section #] and pressing [*]. Programming consists of toggling on and off options in each section or by populating data fields. Press [*] to select options and [#] to exit to the previous menu. For descriptions of all programming options and programming worksheets, refer to the PowerSeries Neo Reference Manual. ✓ = Default

Label Programming

000 Label Programming

000 – Language Selection (01)
001 – Zone Labels
001-128 – Zone Labels 1-128
010 – System Label
011-108 – Partition 1-8 Labels
201-208 – Partition 1-8 Command Output Labels
001-004 – Command output 1-4 Labels
060-604 – Schedule 1-4 Labels
800 – Keypad Labels
001-016 Keypad 1-16 Labels
820 – Zone Expander Labels
001-015 – Zone Expander 1-15 Labels
821 – Repeater Label
001-008 Repeater 1-8 Label
999 – Default Labels

Zone Type

001 Zone Type
001-128 Zone Types (000)
000 – Null Zone
001 – Delay 1
002 – Delay 2
003 – Instant
004 – Interior
005 – Interior Stay/Away
006 – Delay Stay/Away
007 – Delayed 24-Hour Fire
008 – Standard 24-Hour Fire
009 – Instant Stay/Away
010 – Interior Delay
011 – Day Zone
012 – Night Zone
017 – 24-Hour Burglar
018 – 24-Hour Bell/Buzzer
023 – 24-Hour Supervisory
024 – 24-Hour Supervisor
025 – Auto Verify Fire
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 Temperature
057 – 24 Hour Low Temperature

001-008 Repeater 1-8 Label
001-004 Power Supply 1-4 Label
001-128 Keypad 1-16 Labels
001-164 Keypad 1-164 Labels
001-0128 – Zone Labels 1-128
000 – Keypad Programming

002 – Zone Attributes

002-003 (see PowerSeries Neo reference manual for defaults)
1 – Bell Audible
2 – Bell Steady
3 – Door Chime
4 – Bypass Enabled
5 – Force Arm
6 – Swinger Shutdown
7 – Transmission Delay
8 – Burglary Verification
9 – Normally Closed EOL
10 – Single EOL
11 – Double EOL
12 – Fast Loop/Normal Loop

System Times

005 System Times

000 – System Area
001-008 System Times - Partition 1-8
901 – Daylight Savings Begin:
902 – Daylight Savings End

Access Codes

006 Installer Defined Access Codes

001-500 – Access Code (1-500)
501 – Master Code (5000)
502 – System Times (5001)

PGM Programming

007 – PGM Programming

000 – Main Bell 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
101-164 – PGM 1-164 Partition Assignment (default: partition 1)
11 – Partition 1.8

008 – PGM Timer Programming

000 – PGM Timer-Minutes or Seconds
001 – PGM 1-164 Timer (005)

009 – PGM Types

001-164 – PGM 1-164 Type Assignment (default: PGM1=121, PGM2=156, 3-164=101)
100 – Null PGM

101 – Burg and Fire Bell
102 – Delayed Fire and Burg
103 – Sensor Reset [*][*][2]
104 – 2-Wire Smoke
109 – Courtesy Pulse
111 – Keypad Buzzer Follow
114 – Ready To Arm
115 – System Armed Status
116 – Away Armed Status
117 – Stay Armed Status
120 – Away Armed with no Zone Bypass Status
121-124 – Command Output 1-4
122 – Command Output 2
123 – Command Output 3
124 – Command Output 4
129 – Partition Status Alarm Memory
132 – Holdup Output
147 – Kissoff
148 – Ground Start
149 – Alternate Communicator
155 – System Trouble
156 – Latched System Event
157 – System Tamper
161 – DC Trouble
165 – Prox Used
175 – Bell Status and Programming Access Output
176 – Remote Operation
184 – Open After Alarm
200 – Zone Follower
201-208 – Follower-Zones 1-8
209 – Follower-Zones 9-16
210 – Follower-Zones 17-24
211 – Follower-Zones 25-32
212 – Follower-Zones 33-40
213 – Follower-Zones 41-48
214 – Follower-Zones 49-56
215 – Follower-Zones 57-64
216 – Follower-Zones 65-72
217 – Follower-Zones 73-80
218 – Follower-Zones 81-88
219 – Follower-Zones 89-96
220 – Follower-Zones 97-104
221 – Follower-Zones 105-112
222 – Follower-Zones 113-120
223 – Follower-Zones 121-128

010 PGM Attributes

000 – Main Bell Mask
001 – Fire Alarm (✓)
002 – Burg and Fire Bell
003 – Fire Alarm (✓)
004 – Bell Squawks (✓)
005 – Panic Alarm (✓)
006 – Burglary Alarm (✓)
007 – AC Fail (✓)
008 – DC Fail (✓)
009 – Priority Event (✓)
010 – Holdup (✓)
011 – Duress Alarm
012 – Emergency Alarm
013 – Fire Supervisory (✓)
014 – Fire Trouble (✓)
015 – CO Alarm (✓)
016 – System Tamper
017 – True Output (✓)
018 – Latched System Event
019 – Alarm Output (✓)
020 – Delayed Output
021 – Fire Alarm (✓)
022 – Service Required (✓)
023 – Loss of Clock (✓)
024 – AC Troubles
025 – DC Troubles
026 – Burglary Alarm (✓)
027 – Fire Supervisory (✓)
028 – Fire Trouble (✓)
029 – Panic Alarm (✓)
030 – Burglary Alarm (✓)
031 – Fire Alarm (✓)
032 – Service Required (✓)
033 – Loss of Clock (✓)
034 – System Trouble
035 – Burglary Alarm (✓)
036 – DC Fail (✓)
037 – AC Fail (✓)
038 – 24-Hour Flood Alarm (✓)
039 – Service Required (✓)
040 – 2-Wire Smoke
041 – 2-Wire Smoke
042 – Fire Alarm (✓)
043 – Burg and Fire Bell
044 – Burglary Alarm (✓)
045 – Fire Alarm (✓)
046 – 24-Hour Medical
047 – 24-Hour Emergency
048 – 24-Hour Sprinkler
049 – 24-Hour Flood
050 – 24-Hour Latching Tamper
056 – 24-Hour High Temperature
057 – 24-Hour Low Temperature

* 24-Hour Medical not UL evaluated

8 ✓ = Default
09 – Battery Low (✓)
10 – Battery Absent (✓)
165 – Prox Used
01 – True Output (✓)
175 – Bell Prog Access (✓)
01 – True Output (✓)
176 – Remote Operation(1) – True Output (✓)
184 – Open After Alarm (✓)
01 – True Output (✓)
02 – PGM Timer (✓)
201-216 Zone Follow Zones 1-128
01 – True Output (✓)
02 – Timed Output
09-016 – Zone Terminal 1-16
011 PGM Configuration Options
001-164 – PGM 1-164 Configuration
Zone Follower by Zone
Proximity Tag Used
Command Output Schedules
012 System Lockout (attempts/min.)
Keypad Lockout Attempts (000)
Keypad Lockout Duration (000)
Remote Lockout Attempts (000)
Remote Lockout Duration (060)
System Options
013 System Options 1
1 – NC Loop/EOL
2 – DEOL/SEOL
3 – Show All Troubles when Armed (✓)
4 – Tamper/Faults Do Not show as open
5 – Auto-Arm Schedule in [*][6] (✓)
6 – Not Used
7 – Real-Time Bypass Reporting (✓)
8 – Bell Squawk on Away
6 – Not Used
3 – Not Used
2 – [P] Key Annunciation (✓)
8 – FTC Audible Bell
7 – Not Used
6 – Daylight Savings Time
5 – Late to Close
4 – Tamper/Faults Do Not show as
3 – Quick Exit
2 – [P] Key Annunciation
1 – Bell Squawk
001 – Zone 1-8 (✓)
8 – AC Fail Trouble Beeps
7 – Installer Access follows DLS
3 – [*][8] Access While Armed
2 – Latching Troubles
1 – Not Used
015 System Options 3
4 – Temporal Three Fire Signaling
3 – Keyswitch Arms in Away Mode
2 – Audible Exit Fault (✓)
1 – TLM Audible When Armed
016 System Options 4
1 – [F] Key (✓)
2 – [P] Key Annunciation
3 – Quick Exit
4 – Quick Arming/Function Key (✓)
5 – Not Used
6 – Master Code Not User Changeable
7 – Telephone Line Monitor Enable (✓)
8 – TLM Audible When Armed
017 System Options 5
1 – Chime On Opening
2 – Chime On Closing
3 – Multi-Hit
4 – Not Used
5 – Late to Close
6 – Daylight Savings Time
7 – Not Used
8 – Bell Squawk on Away Arm/Disarm Only
018 System Options 6
1 – Test Transmission Exception
2 – Real-Time Bypass Reporting
3 – Not Used
4 – Not Used
5 – Keypad Buzzer Alarm
6 – Not Used
7 – Exit Delay Restart
8 – AC Fail Trouble Beeps
019 System Options 7
1 – Not Used
2 – Latching Troubles
3 – Not Used
4 – Not Used
5 – Audible Bus Fault
6 – Duress Codes
7 – Temperature in Celsius (✓)
020 System Options 8
1 – Access Code Entry during Entry Delay
3 – [*][8] Access While Armed
7 – Installer Access follows DLS
021 System Options 9
1 – Not Used
2 – Not Used
3 – Auto-Arming Bypass
8 – Audible Exit Delay for Stay Arming
7 – Not Used
6 – Not Used
5 – Not Used
4 – Not Used
3 – Not Used
2 – [P] Key Annunciation
1 – Bell Squawk
011 – Priority Alarms
002 – Miscellaneous Alarm 2
001 – Miscellaneous Alarm 1
003 – Auto-Arming (003)
004 – Aut-Arming Postpone Timer (004)
005 – Auto-Arming Postpone Timer (005)
006 – No Activity Arming Timer (006)
007 – No Activity Arming Pre-Alert Timer (007)
022 System Options 10
1 – [F] Key Option
2 – Not Used
3 – Not Used
4 – Test Transmission Counter in Hours
5 – Away to Stay Toggle
6 – Trouble Beeps are Silent
7 – Keyswitch Arms in Away Mode
023 System Options 11
1 – Ready LED Flash for Force Arm
2 – Access Code Required for [*][1] (✓)
3 – Access Code Required for [*][2] (✓)
4 – Access Code Required for [*][3] (✓)
5 – [*][6] Accessibility (✓)
024 System Options 12
1 – 50Hz AC / 60 Hz AC
2 – Crystal Timebase
3 – AC/DC Inhibits Arming
4 – Not Used
5 – Real Time Clock Option
6 – Not Used
7 – Not Used
8 – DLS Connect
025 System Options 13
1 – European Dual
2 – Force Dual (✓)
3 – Not Used
4 – Not Used
5 – ID Tone
6 – Tone Generated-2100Hz
7 – 1 Hour DLS Window
8 – FTC Audible Bell
040 User Authentication
01 – User Code or Proximity Tag (✓)
02 – User Code and Proximity Tag
041 Access Code Digits
01 – 4-Digit Access Codes (✓)
02 – 6-Digit Access Codes
042 Event Verification
01 – Burglary Verified Counter (002)
03 – Burglary Verification Selection
001 – Police Code (✓)
002 – Cross Zoning
151-158 Partition 1-8 Auto-Arm/Disarm
001 – Auto-Arming Times (9999)
24-Hour
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
002 – Auto-Disarm Times (9999)
24-Hour
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
003 – Auto-Disarming Holiday
Holiday 1
Holiday 2
Holiday 3
Holiday 4
004 – Auto-Arming Pre-Alert (004)
005 – Auto-Arming Postpone Timer (005)
006 – No Activity Arming Timer (006)
007 – No Activity Arming Pre-Alert Timer (007)
200 Partition Mask
001 – Partition 1 to 8 Enable Mask
1 – Partition 1 (✓)
2 – Partition 2
3 – Partition 3
4 – Partition 4
5 – Partition 5
6 – Partition 6
7 – Partition 7
8 – Partition 8
201-208 Partition 1-8 Zone
Assignment
001 – Zone 1-8 (✓)
8 – AC Fail Trouble Beeps
7 – Installer Access follows DLS
3 – [*][8] Access While Armed
2 – Latching Troubles
1 – Not Used
02 Panel/Receiver
Communications Path
001 – 004 Receiver 1-4
01 – Phone Line (✓)
02 – Al Comm Auto Routing
03 – Al Comm Req 1- Ethernet
04 – Al Comm Req 2- Ethernet
05 – Al Comm Req 3- Cellular
06 – Al Comm Req 4- Cellular
301 Phone Number Programming
001 – 004 Phone Number 1-4
Programming (DFF,..32-digit)
304 Call Waiting Cancel String
(DB70EF)
Event Reporting
307 Zone Reporting
001-128 Zone Reporting for Zones 1-128
01 – Alarm
02 – Alarm Restore
03 – Tamper
04 – Tamper Restore
05 – Fault
06 – Fault Restore
308 Event Reporting
001 – Miscellaneous Alarms
1 – Duress Alarm (✓)
2 – Opening After Alarm (✓)
3 – Recent Closing Alarm (✓)
4 – Zone Expander Supervisory Alarm (✓)
5 – Zone Expander Supervisory Alarm Restore (✓)
6 – Burglary Verified (✓)
7 – Burg Not Verified (✓)
8 – Alarm Cancel (✓)
002 – Miscellaneous Alarm 2
01 – Value Arm/Disarm
02 – Value Arm/Disarm Restore
03 – Priority Alarms
01 – Keypad Fire Alarm M Key (✓)
02 – Keypad Fire Restore (✓)
03 – Keypad Medical Alarm M Key (✓)
04 – Keypad Medical Restore (✓)
05 – Keypad Panic Alarm (P) (✓)
06 – Keypad Panic Restore (✓)
07 – Auxiliary Input Alarm (✓)
331 – Module Events
01 – Module AC Trouble (✓)
02 – Module AC Trouble Restore (✓)
03 – Module Battery Trouble (✓)
04 – Module Battery Trouble Restore (✓)
05 – Module Battery Absent (✓)
351 – Alternate Communicator 1
01 – Alt. Comm. Module Comm Fault (✓)
02 – Alt. Comm. Module Comm Fault Restore (✓)
07 – Alt. Comm. Radio/SIM Failure (✓)
08 – Alt. Comm. Radio/SIM Failure Restore (✓)
352 – Alternate Communicator 2
01 – Alternate Communicator Network Fault (✓)
02 – Alternate Comm. Network Fault Restore (✓)
03 – Alt. Comm. Low Signal Trouble (✓)
04 – Alt. Comm. Low Signal Trouble Restore (✓)
05 – Alt. Comm. Ethernet (✓)
06 – Alt. Comm. Ethernet Trouble Restore (✓)
07 – Alt. Comm. Lockout (✓)
08 – Alt. Comm. Lockout Trouble Restore (✓)
354 – Alternate Communicator 4
01 – Alt. Comm. Receiver 1 (✓)
02 – Alt. Comm. Receiver 1 Restore (✓)
03 – Alternate Comm. Receiver 2 (✓)
04 – Alternate Comm. Receiver 2 Restore (✓)
05 – Alternate Comm. Receiver 3 (✓)
06 – Alternate Comm. Receiver 3 Restore (✓)
07 – Alternate Comm. Receiver 4 (✓)
08 – Alternate Comm. Receiver 4 Restore (✓)
355 – Alternate Communicator 5
01 – Alternate Comm. Receiver 1 Supervision Failure (✓)
02 – Alternate Comm. Receiver 1 Supervision Failure Restore (✓)
03 – Alternate Comm. Receiver 2 Supervision Failure (✓)
04 – Alternate Comm. Receiver 2 Supervision Failure Restore (✓)
05 – Alternate Comm. Receiver 3 Supervision Failure (✓)
06 – Alternate Comm. Receiver 3 Supervision Failure Restore (✓)
07 – Alternate Comm. Receiver 4 Supervision Failure (✓)
08 – Alternate Comm. Receiver 4 Supervision Failure Restore (✓)
361 – Wireless Device Events
01 – Device AC Fail (✓)
02 – Device AC Restore (✓)
03 – Device Low Battery (✓)
04 – Device Low Battery Restore (✓)
05 – Device Fault (✓)
06 – Device Fault Restore (✓)
401 – System Test Events
01 – Walk Test Start (✓)
02 – Walk Test End (✓)
03 – Periodic Test Transmission (✓)
04 – Periodic Test Transmission with Trouble (✓)
05 – System Test (✓)

Communications

309 System Call Direction
001 – Maintenance Events
1 – Receiver 1 (✓)
2 – Receiver 2 (✓)
3 – Receiver 3 (✓)
4 – Receiver 4 (✓)
002 – Test Transmission Events
1 – Receiver 1 (✓)
2 – Receiver 2 (✓)
3 – Receiver 3 (✓)
4 – Receiver 4 (✓)

310 Account Codes
000 – System Account Code (FFFFF)
001-008 – Period-1-8 Account Code (FFFFF)

311-318 Partition 1-8 Call Direction
001 – Partition Burglary Alarm/Restore Call Direction
1 – Receiver 1 (✓)
2 – Receiver 2 (✓)
3 – Receiver 3 (✓)
4 – Receiver 4 (✓)
002 – Partition Tamper/Restore Call Direction
1 – Receiver 1 (✓)
2 – Receiver 2 (✓)
3 – Receiver 3 (✓)
4 – Receiver 4 (✓)
003 – Partition Opening/Calling Call Direction
1 – Receiver 1 (✓)
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 – Swinger Shutdown Attempts
– Alarms and Restore (003)
– Tamper and Restore (003)
– Maintenance and Restore (003)
002 – Communication Delays
– Zone Delay (000 sec.)
– AC Failure Communication Delay (030 min./hrs.)
– TLM Trouble Delay (010 sec.)
– WLS Zone Low Battery Transmission Delay (007 days)
– Delinquency Transmission Delay (030 hours/days)
– Communications Cancel Window (000 min.)
003 – Periodic Test Transmission Cycle
(030 hrs./days)
004 – Periodic Test Transmission Time of Day (9999)
011 – Maximum Dialing Attempts (005)
012 – PSTN Delay (003 sec.)
013 – Delay Between Force Attempts (020 sec.)
014 – Post Dial Wait for Handshake (040 sec.)
015 – “T” Link Wait for Ack (060 sec.)
016 – IP/Cellular Fault Check Timer (010)

380 Communicator Option 1
1 – Communications Enabled (✓)
2 – Restore on Bell Timeout
3 – Pulse Dialing
4 – Pulse Dial After 5th Attempt
5 – Parallel Communications
6 – Alternate Dial
7 – Reduced Dialing Attempts
8 – Activity Delinquency

381 Communicator Option 2
1 – Keypad Ringback
2 – Bell Ringback
4 – Closing Confirmation
8 – Communications Priority

382 Communicator Option 3
2 – Walk Test Communication
4 – Call Waiting Cancel
5 – Alternate Communicator Enable
6 – AC Failure TX in Hours

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 (✓)
3 – Backup Options - Receiver 3
4 – Backup Options - Receiver 4

DLS Phone Number Programming
2 – Number after DLS

401 DLS/SA Options
1 – Double Call
2 – User Enables DLS
3 – DLS Callback
4 – User Call Up
6 – Panel Call-Up and Baud Rate
8 – Alt. Comm. Fault

402 DLS Phone Number Programming
(31-digit decimal)

403 DLS Access Code (212800)

404 DLS/SA Panel ID

405 PSTN Double Call Timer (060 sec.)

406 PSTN Number of Rings to Answer On (000)

407 SA Access Code (FFFFF)

410 Automatic DLS Options
001 – Automatic DLS Toggle Options
1 – Periodic DLS
3 – DLS on Event Buffer 75% Full
5 – SA on Event Buffer 75% Full
002 – Periodic DLS Days (000 days)
003 – Periodic DLS Time (0000)
007 – Delay Call Window
3 – Delay Call Window Start (0000)
4 – Delay Call Window End (0000)

Schedule Programming

601-604 Programming Schedule 1-4
101 – 401 Interval 1-4
101 – Start Time (0000)
102 – End Time (0000)
103 – Days Assignment
01 – Sunday
02 – Monday
03 – Tuesday
04 – Wednesday
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06 – Friday
07 – Saturday
104 – 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)

800 Wireless Programming

804 Wireless Programming
000 – WLS Device Enrollment
Zones (3-digit decimal)
Zone Type (2-digit decimal)
Partition Assignment
Zone Label (LCD only)
WLS Keys
Partition Assignment
User Assignment
Sirens
Partition Assignment
Siren Label (LCD only)

Keypads
Keypad Assignment
Keypad Label (LCD only)
Repeaters
Repeat Label (LCD only)

001-012 – 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
Refer to the installation instructions provided with the alternate communicator for details.

Keypad Programming
860 Keypad Slot Number
861-876 Keypad Programming

000 – Keypad Function Mask
00 – Global Keypad
1 – Keypad 1 (✓)
2 – Keypad 2 (✓)
3 – Keypad 3 (✓)
4 – Keypad 4 (✓)
5 – Keypad 5 (✓)
6 – Keypad 6 (✓)
7 – Keypad 7 (✓)
8 – Keypad 8 (✓)
9 – Keypad 9 (✓)
0 – Keypad 0 (✓)

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)
006 – Function Key 6 (25)

007 – System Test
008 – Test Mode
009 – Test Alarm
010 – Test Feedback
011 – Test Night Alarm
012 – Global Stay Arm
013 – Global Away Arm
014 – Global Disarming
015 – Quick Exit
016 – Arm Window
21-24 – Command Output 1-4
29 – Bypass Group Recall
31 – Local PGM Activate
32 – Bypass Mode
33 – Bypass Group Recall
34 – User Programming
35 – User Functions
36 – Time/Date Programming
37 – Trouble Display
40 – Alarm Memory
51 – [M] Key Alarm
52 – [P] Key Alarm
53 – [J] Key Alarm
61-68 – Partition Select 1-8

011 – Keypad U/O (000)
012 – Local PGM Output Timer

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

021 – Keypad Option 1
1 – [F] Key Enabled (✓)
2 – [M] Key Enabled (✓)
3 – [P] Key Enabled (✓)
4 – Display Code or X’s (✓)

022 – Keypad Option 2
1 – Local Clock Display (✓)
2 – Local Clock Display 24 Hour
3 – Auto Alarm Scroll (✓)
5 – Power LED Option
6 – Power LED AC Present (✓)
7 – Alarms Displayed if Armed (✓)
8 – Auto Scroll Open Zones

023 – Keypad Option 3
1 – Armed LED Power Save*
2 – Keypad Show Arm Mode (✓)
3 – 5th Terminal is PGM Output/Zone
7 – Local Display of Temp.
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Module Programming

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# Power Series New Installation Guide

## Module Record

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## Wireless Device Record

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## Installer-Defined Access Codes

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

## System Account Code

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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:

- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult 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 U.S. Government Printing Office, Washington, D.C. 20402, Stock #004-000-0054-4.

IMPORTANT INFORMATION

This equipment has been certified to comply with FCC rules. This section describes the means by which the equipment can be connected to the telephone company's network without impairing the quality of service that the telephone company provides. It also describes the functions that the equipment must perform to comply with these rules. If you have any questions about these requirements, contact your telephone company or AMCX/AMCXCCentral Stations Alarm Units

For ULC Residential/Burglary installations set for daily transmission

For ULC Residential/Commercial installations set for daily transmission

UL/ULC Installations

Note: The wireless devices are not suitable for ULC Commercial installations

Wireless Supervision window shall be set to 4 hours for Fire Installations (Wireless Programming, section [084]-[086] shall be programmed with the value 16)

RF Jam detection shall be enabled (refer to Wireless Programming, section [084]-[086], option 0 shall be OFF).

UL/ULC Burglary All units are to be installed in protected premises. UL Central Station and Police Connect with Standard or Encrypted Line Security Service. The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of this equipment. If such changes would impair the operation of this equipment, the telephone company is required to give advance notice in order for you to make necessary modifications to maintain uninterrupted service.

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.

If trouble is experienced with this equipment HS2016/HS2032/HS2064/HS2128 causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If that advance notice is not practical, the Telephone Company shall notify you 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.

The Telephone Company may take action to interrupt service to all users on a line if trouble is caused by equipment connected to the telephone line or the manner in which it is used. If the telephone company determines that such action is required, they will give you advance notice to allow you to make the necessary corrections.

The telephone number is your unique identifier on the telephone network. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity (DOC) and it is not a registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity (DOC) and it is not a registration number.
Aux Loading and Battery Selection

HS212/BS2064H/S2023H/S2016
Board current draw 50mA
UL Resi Burg
UL Com Burg
UL Resi Fire/UL Home Health Care/
UL Resi Fire/ UL Com Burg
UL Fire Monitoring

Max AUX (NSC) current loading
0.7A
0.7A
0.8A
0.7A

Max BELL (Alarm) current loading
0.7A
0.7A
0.8A
0.7A

UL/ULC Listed enclosure
PC503C
PCI003C
CMC-1
PC503CAR
PC503C
PC503CR (used when in conjunction with hard-wired transformer mounted in an electrical box)

Transformer requirements
16V-50VA (plug in type)
PC14605
(PC14605C)
(CND)

Battery Capacity requirement
7Ah
7Ah
14Ah (2 x 7Ah in parallel)
14Ah (2 x 7Ah in parallel)

Standby Time
4 hours
4 hours
24 hours
24 hours

Alarm time
4 minutes
15 minutes
4 minutes (UL fire
5 minutes (Home Health Care and UL Resi Fire)
Alarm Transmission only)

Recharging current setting
400mA, 700mA
400mA, 700mA
400mA, 700mA
400mA, 700mA

WARRANTY - READ CAREFULLY

Note to Installers
This user may not obtain vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warranty to the attention of the users of this system. System Failure This system has been carefully designed to be as effective as possible. There are circumstances, however, involving fire, bombing, or other situations, where the system may not ensure complete protection. Inadequate Installation A security system must be installed properly in order to provide adequate protection. Every installation should be evaluated by a security professional. The homeowner should be made aware of the proper operation of the system. Recharging current setting Alarm time

Power Failure Control units, intrusion detectors, smoke detectors and many other security devices require an adequate power supply for proper operation. If a device operates from batteries, it is possible for the batteries to fail. Even if the batteries have not failed, they may be discharged, in good condition and installed correctly. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage the electronic equipment such as a security system. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

Failure of Replaceable Batteries This system’s electronic transmitters have been designed to provide several years of battery life under normal conditions. The expected battery life is a function of the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. While each transmitting device has a low battery monitor which identifies when the batteries need to be replaced, this monitor may fail to operate as expected. Regular testing and maintenance will keep the system in good operating condition.

Compromise of Radio Frequency (Wireless) Devices Signals may not reach the receiver under all circumstances which could include metal objects placed on or near the radio path or deliberate jamming or other inadvertent radio signal interference.

System Users This user must be able to operate a panic or emergency switch possibly due to permanent or temporary physical disabilities, inability to reach the device in time, or unfamiliarity with the correct operation. It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm.

Smoke Detectors Smoke detectors are a part of the system in which proper detection requires a continuous supply of a voltage, house of which follows. The smoke detectors may have been improperly installed or positioned. Smoke may not be able to reach the smoke detector when smoke is present. If a smoke detector is installed too far from the smoke source, it will not detect smoke.

Smoke detectors may not detect smoke from fires on another level of the residence or building.

Extinguishing smoke detectors can be affected in smoke. Smoke detectors Federal Emission Testing Federal Emission Testing

Motion Detectors Motion detectors are intended only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection.

Installation / Maintenance Instructions

UL Resi Burg
UL Com Burg
UL Resi Fire/UL Home Health Care/
UL Resi Fire/ UL Com Burg
UL Fire Monitoring

If the alarm system is not in a suitable place for property or life insurance. An alarm system also is not a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation.
### SIA False Alarm Reduction Installations: Quick Reference

Minimum required system consists of one Control unit model HS2128 or HS202 or HS2016 and any one of the compatible listed keypods: HS2128, HS202, HS2016, HS2128N, HS202N, HS2128D, HS202D, HS2128C, HS202C, HS212LD, HS202LD.

The following wireless keypods can also be used in SIA compatible installations: PG9092, PG9093, PG9094.

**Note:** For models PG9092 and PG9093, the panic/emergency keypad shall be disabled for SIA compliant installations.

For a list of the default values programmed when the unit is shipped from the factory, and for any other programming information, refer to the table below.

The following optional subassemblies modules also bear the SIA CP-01-2010 classification and may be used if desired: HSM208 PGM output module, HSM200 auxiliary power supply, HSM204 output module, HSM208 2-way wireless transmitter, PG9091 indoor sirens, PG9091 outdoor sirens, and 3G2080(R)/TL2803(GR)/TL280(R) cellular and PSDN communication module.

**Caution:**
- For SIA FAR installations use only modules/devices that are listed on this page.
- Fire Alarm Verification feature (Auto Verified Fire Zone type [025]) is not supported on 2-wire smoke detector zones, model FSA-210B(T)(S)(ST)(LST)(R)(RT)(RST)(LRST). This feature may be enabled for 4-wire smoke detector zones only (FSA-4108F(T)(S)(ST)(LST)(R)(RT)(RST)(LRST) and wireless detectors PG9091(PG9092)). The fire alarm delay is 60 seconds.
- Call Waiting Cancel (Section [382], Option 4) feature on a non-Call Waiting line will prevent successful communication to the supervising station.
- All smoke detectors on the system must be tested annually by conducting the Installer Walk Test. Prior to exiting walk test mode, a sensor reset must be done on the system, [*][7][2], to reset all latching 4-wire smoke detectors. Refer to the installation instructions supplied with the detector for details.

**Notes:**
- Programming at installation may be subordinate to other UL requirements for the intended application.
- Cross zones have the ability to individually protect the intended area (e.g. motion detectors which overlap).
- Cross zoning is not recommended for line security installations nor is it to be implemented on exit/entry zones.
- All smoke detectors on the system must be tested annually by conducting the Installer Walk Test. Prior to exiting walk test mode, a sensor reset must be done on the system, [*][7][2], to reset all latching 4-wire smoke detectors. Refer to the installation instructions supplied with the detector for details.
- ULC commercial burglary installations require DOOL resistors.

### SIA Feature Programming Section

<table>
<thead>
<tr>
<th>Exit Time</th>
<th>[005]=[001], option 3</th>
<th>Access to Entry and Exit delays and Bell Time Out for the system.</th>
<th>Range: 45-255 seconds Default: 60 sec. Required (programmable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Annunciation/Disable - for Silent Exit</td>
<td>[014], option 6 ON</td>
<td>Enables audible exit beeps from the keypad for the duration of exit delay.</td>
<td>Individual keypads may be disabled Default: Enabled Allowed</td>
</tr>
<tr>
<td>Exit Delay Restart</td>
<td>[018], option 7</td>
<td>Opening a Delay zone door after it has already been opened and closed during an exit delay restarts the exit delay timer.</td>
<td>Default: Enabled Required</td>
</tr>
<tr>
<td>Auto Stay Arm on Un-vacated Premises</td>
<td>[001]=[001]-[128] Zone type 05, 06,09</td>
<td>Function key: Forces the system to arm in Stay mode if the occupant does not exit the premises after pressing the Away Function key.</td>
<td>If no exit after full arm Default: Full arm Required</td>
</tr>
<tr>
<td>Exit Time and Progress Annunciation/Disable or Remote Arming</td>
<td>[861]=[001]-[005], option 4</td>
<td>System times and audible exit beeps can be disabled when using the wireless key to stay arm the system. When away arming, audible exit beeps can not be disabled.</td>
<td>Default: Enabled Allowed</td>
</tr>
<tr>
<td>Entry delay(s)</td>
<td>[005]=[001]-[008], options 1 and 2</td>
<td>Access to entry and exit delays and bell time out for the system Note: Combined entry delay and communications delay (abort window) shall not exceed 60s.</td>
<td>Range: 30 sec. to 4 min. Default: 30 sec. Required (programmable)</td>
</tr>
<tr>
<td>Abort Window for Non-Fire zones</td>
<td>[002]=[001]-[128] Zone 7 ON</td>
<td>Access to zone attributes, i.e., swinger shutdown, transmission delay and cross zone. May be disabled by zone or zone type.</td>
<td>Default: Enabled Required</td>
</tr>
<tr>
<td>Abort Window Time - for Non-Fire zones</td>
<td>[377]=[002], option 1</td>
<td>Access to the programmable delay before communicating alarms Note: Combined entry delay and communications delay (abort window) shall not exceed 60 seconds.</td>
<td>Range: 00 - 45 sec. Default: 30 sees Required (programmable)</td>
</tr>
<tr>
<td>Abort Annunciation</td>
<td></td>
<td>An audible tone is generated when an alarm is aborted during the abort window.</td>
<td>Hard-coded ON Required</td>
</tr>
<tr>
<td>Dares Feature</td>
<td>[*][5]= master code&gt; user 2-95&gt; 5~ 2</td>
<td>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.</td>
<td>Default: N Required</td>
</tr>
<tr>
<td>Cancel Window</td>
<td>[377]=[002], option 6</td>
<td>Access to the communications cancel window. Minimum duration must be 5 minutes.</td>
<td>Range: 005-255 Default: 005</td>
</tr>
<tr>
<td>Cancel Annunciation</td>
<td>[382]=[001], option 8</td>
<td>Access to the reporting code for Alarm Canceled. A Cancel was transmitted Default: Enabled Required</td>
<td></td>
</tr>
<tr>
<td>Cross Zoning</td>
<td>[042]=Selection 3, option 002</td>
<td>Enables cross zoning for entire system. Zones can be enabled for cross zoning via zone attribute option 8 in sections [002][101]-[128].</td>
<td>Programming required Default: Disabled Required</td>
</tr>
<tr>
<td>Burglary Verification Timer</td>
<td>[005]=[001], option 3</td>
<td>Access to the programmable Cross Zone timer.</td>
<td>Range: 000-255 sec. Default: 60 seconds Allowed</td>
</tr>
<tr>
<td>Swinger Shutdown for Alarms</td>
<td>[377]=[001], option 2</td>
<td>Access to the swinger shutdown limit for zone alarms For all non-fire zones, shut down at 11 trips.</td>
<td>Default: 2 trips Required (programmable)</td>
</tr>
<tr>
<td>Swinger Shutdown Enable</td>
<td>[002]=[001]-[128], option 6 ON</td>
<td>Access to swinger shutdown, transmission delay and cross zone attributes. Zone attribute option 6 (Swinger Shutdown enabled) is ON.</td>
<td>Non-police response zones Enabled</td>
</tr>
<tr>
<td>24-Hr. Auto-verified Fire</td>
<td>[001]=[001]-[128], Zone type 025 ON</td>
<td>Access to 24-Hr. Auto-verified Fire Activates if Not restored within the specified time.</td>
<td>Must choose zone type for application Required</td>
</tr>
<tr>
<td>Call Waiting Cancel</td>
<td>[382], option 4 OFF</td>
<td>Access to the dialing sequence used to disable call waiting. Call waiting string can be programmed in [034]</td>
<td>Depends on user phone line Default: Disabled Required</td>
</tr>
<tr>
<td>System Test: [*][6]= Master Code, option 4</td>
<td></td>
<td>The system activates all keypad sounders, bells or sirens for 2 seconds and all keypad lights turn on. Refer to user manual (part no. 29008365).</td>
<td>Required</td>
</tr>
<tr>
<td>Walk Test Mode: [*][8]=Installer code[001]</td>
<td></td>
<td>This mode is used to test each zone on the system for proper functionality.</td>
<td></td>
</tr>
<tr>
<td>Walk Test Communications</td>
<td>[382], option 2</td>
<td>Enables communication of zone alarms while walk test is active.</td>
<td>Default: Disabled</td>
</tr>
<tr>
<td>Walk Test Start/End Reporting Codes</td>
<td>[308][401], options 1 and 2</td>
<td>Access to the reporting codes for walk test start and end times.</td>
<td>Requires (programmable)</td>
</tr>
</tbody>
</table>