PC1404 v1.1
Programming Descriptions

PowerSeries™
SECURITY SYSTEM

PC1404 Programming Descriptions

The following is a description of the programming features and options available in the PC1404 control panel.

Note: This manual shall be used in conjunction with the PC1404 Installation Guide (part number 29008503).

[000] Keypad Function Programming

Function Key	Description
[00] Null	The key is not used and will perform no function when pressed.
[01]-[02] Not Used	
[03] Stay Arm	Arms the partition to which the keypad is assigned. All stay/away and night type zones will be automatically bypassed. Delay type zones will provide entry and exit delay. The quick arm feature controls whether an access code must be entered after pressing this function key. The exit delay will be silent if the panel is armed using this function key.
[04] Away Arm	Arms the partition to which the keypad is assigned. All stay/away and night type zones will be active at the end of the exit delay. Delay type zones will provide entry and exit delay. The quick arm feature controls whether an access code must be entered after pressing this function key. The exit delay will be audible if the panel is armed using this function key.
[05] [*][9] No Entry Arming	After this function key is pressed, the user must enter a valid access code. The partition will arm and remove entry delay from the partition when the exit delay expires. The key can be pressed again to enable the entry delay. This function key always requires an access code entry after it has been pressed.
[06] [*][4] Door Chime On/Off	Pressing the key will toggle the door chime feature on or off. One solid beep means the feature has been disabled, three short beeps means it has been enabled.
[07] Not Used	
[08] Zone Bypassing	When this function key is pressed, the system enters the [*][1] Zone Bypassing menu. If desired, the panel can be configured to require an additional access code entry before the system enters zone bypassing
[09] Trouble Display	When this function key is pressed, the system enters the [*][2] Trouble Display menu.
[10] Not Used	
[11] User Code Programming	When this function key is pressed, the keypad prompts for an access code entry. If the master code or an access code with similar permissions is entered, the system enters the [*][5] User Code Programming menu.
[12] User Functions	When this function key is pressed, the keypad prompts for an access code entry. If the master code or an access code with similar permissions is entered, the system enters the [*][6] User Functions menu.
[13] [*][7][1] Command Output	This function key provides the user with a simple method of activating a PGM output programmed as Command Output 1. By default, an access code must be entered after the key is pressed before the output will activate, but this can be changed by disabling PGM attribute 5.
[14] [*][7][2] Smoke Detector Reset	Pressing this key will cause the panel to deactivate any output programmed as Sensor Reset.
[15] Not Used	
[16] [*][0] Quick Exit	Pressing this key will cause the panel to activate the Quick Exit feature.
[17] [*][1] Reactivate Stay/Away Zones	This function key provides the user with a simple method of adding stay/away zones into the system, and it changes the stay armed mode to away armed mode.
[18] Not Used	
[19] [*][7][3] Command Output 3	This function key provides the user with a simple method of activating PGMs programmed as Command Output #3. An access code may be required after pressing this key if PGM attribute 5 is enabled.
[20] Night Arming	The system arms with all Night Zones bypassed, even if the delay zones are violated during exit delay. This key only works while the system is disarmed, or armed in the stay mode. The panel logs Armed in Night Mode for this closing type. If no night zone types are programmed on the system, the panel will arm in away mode with an audible exit delay. Normally, no acknowledgement beeps are sounded and the exit delay is silent if this function key is used to arm.The quick arming toggle option controls whether an access code must be entered after the function key is pressed.
[21] [*][7][4] Command Output 4	This function key provides the user with a simple method of activating a PGM output programmed as Command Output 4.
[22]-[24] Not Used	

[25] Instant Stay Arming	This feature operates similarly to the stay arming function key except for the following: When this function key is pressed, no acknowledgement beeps are sounded, there is no exit delay; and the system arms immediately. The panel logs "Armed in Stay Mode" for this closing type. If no stay/away zone types are programmed, the system arms in Away mode with no exit delay.
	Note: This function key must not be used in CP-01 listed systems.
[26]-[33] Not Used	Not Used.

Zone Programming

Zones 1-8 are enabled by default. Disable unused zones or enable additional zones in Section [001] Zone 1–8 Definitions. The zone definitions describe how each of the zones you use will operate. Program a two-digit code describing the zone definition. Select a definition from the list below.

In addition, each zone has 16 different attributes which may be programmed in Sections [101]-[108] Zone Attributes. (See also programming descriptions Section [101]-[108] Zone Attributes)

[001] Zone Definitions

[00] Null Zone

This zone type should be programmed if an input is not going to be used. Programming this zone type should clear any trouble conditions present on the zone input. An EOL resistor is not required for this zone definition.

[01] Delay 1

This zone type, normally used for entry/exit doors, can be violated and restored during the exit delay time without causing an alarm. After the exit delay has expired and the system is armed, violating this zone shall start the entry delay 1 timer. During the entry delay time, the keypad buzzer will sound steadily to advise the user that the system should be disarmed. If the panel is disarmed before the entry time expires, no alarm will be generated.

[02] Delay 2 Zone

This zone type operates the similar to the delay 1 zone; however, it follows a different entry delay timer, defined as Entry Delay 2 in Section [005] System Times. Typically this zone type is used for garage doors or for entry/exit points that require a different delay time than what is being used for the main entry/exit point. The Delay 2 entry delay time can be set independently of Delay 1 in programming Section [005] (System Times).

[03] Instant Zone

This zone type causes an instant alarm if it is violated when the panel is armed; it does not provide an entry delay when violated while armed. This zone type does not generate an alarm when disarmed. Typically, this zone is used for windows, patio doors or other perimeter zones, and glass break detectors.

[04] Interior Zone

Interior zones have an exit delay and an entry delay if a delay zone has been violated first. The zone goes into alarm when the entry delay of the delay type zone has expired if the system has not been disarmed. If the zone is violated without an entry or exit delay being active on the system, an immediate alarm is generated. This zone will not cause an alarm if violated during the entry delay. If the zone is violated before the entry delay has begun, it will cause an instant alarm. Typically, this zone is used for interior protection devices, such as motion detectors.

[05] Interior Stay/Away Zone

If the system is stay armed, this zone is bypassed. If the system is armed in away or night mode, the zone acts like an Interior Zone type *[04]*.

[06] Delay Stay/Away Zone

If the system is stay armed, this zone is bypassed. If the system is armed in away or night mode, this zone acts like a Delay 1 type *[01]*.

[07] Delayed 24-hr Fire Zone

Note: Do not wire Fire zones on keypad zone terminals if the DEOL supervision option is enabled for the panel (Section [013], Option [2]).

This zone type requires a SEOL resistor, and it cannot be reconfigured using the NC, EOL or DEOL options in the panel. The alarm state is short, the restored state is 5k6, and an open condition will generate a zone tamper and fire trouble. When this zone is violated, the alarm output will be immediately activated (pre-alert) but the communicator will be delayed for 30 seconds. If the alarm is acknowledged by pressing any key during this delay or by tripping a keyswitch zone, the alarm output and the communicator will be delayed an additional 90 seconds, giving the user time to correct the problem. If the zone is still violated after the 90 second delay, the sequence will repeat.

If the user does not press a key during the 30 second pre-alert, the alarm output will latch and the panel will communicate the alarm to the central station. The alarm will sound until the Bell Cutoff time expires ([005] System Times) or until a code is entered.

Note: If a second Fire type zone is violated or if the Fire keys are pressed during the delay period, the panel will latch the alarm output and will immediately communicate the alarm.

A violated Fire zone will be displayed on all keypads and can be delayed at any keypad. Typically this zone is used for latching smoke detectors.

[08] Standard 24-hr Fire Zone (hardwired)

Note: Do not wire Fire zones on keypad zone terminals if the DEOL supervision option is enabled for the panel (Section [013], Option [2]).

This zone type requires a SEOL resistor, and it cannot be reconfigured using the NC, EOL or DEOL options in the panel. The alarm state is short, the restored state is 5k6, and an open condition will generate a zone tamper and fire trouble. When violated, the bell output will sound a pulsing alarm tone to indicate that the fire loop has been activated. If enabled, the communicator will immediately send an alarm to the central station.The alarm will sound until the Bell Cutoff time expires (Section [005] "System Times"), or until a code is entered. A violated Fire zone will be displayed on all keypads. Typically this zone is used for pull stations.

[09] 24-hr Supervisory Zone

This zone type requires a SEOL resistor, and it cannot be reconfigured using the NC, EOL or DEOL options in the panel. The restored state of this zone is 5.6k, the alarm state is short and the tamper state is open. This zone does not cause the bell to activate, but will be displayed in alarm memory regardless of the armed state of the panel. If this zone is violated when the system is either armed or disarmed, the panel will report to the central station, and will log the zone alarm to the event buffer. This zone gives a silent alarm by default.

Note: Do not wire 24-hr Supervisory zones on keypad zone terminals.

[10] 24-hr Supervisory Buzzer Zone

If this zone is violated when the system is either armed or disarmed, the panel will immediately latch the keypad buzzer until a valid access code is entered and will immediately communicate to the central station.

[11] 24-hr Burglary Zone

If this zone is violated when the system is either armed or disarmed, the panel will immediately latch the alarm output and communicate to the central station. The alarm will sound until the Bell Cutoff time expires (Section [005] "System Times"), or until a code is entered.

[12] Not Used

[13] 24 Hr. Gas

This zone type is active at all times, regardless of the armed state, and when tripped will generate an audible, pulsing alarm. This zone type is typically used with CO detectors or for monitoring gas lines.

[14] 24 Hr. Heat

This zone type is active at all times, regardless of the armed state, and when tripped will generate an audible, steady alarm. This zone type is typically used with heat detectors.

[15] 24 Hr. Medical

This zone type is active at all times, regardless of the armed state, and when tripped will generate an audible, steady alarm. This zone type is typically used for medical emergency pull stations.

[16] 24 Hr. Panic

This zone type is active at all times, regardless of the armed state, and when tripped will generate an audible, steady alarm. This zone type is typically used with panic pendants.

[17] 24 Hr. Emergency

This zone type is active at all times, regardless of the armed state, and when tripped will generate an audible, steady alarm. This zone type is typically used for non-medical emergency situations.

[18] Not Used

[19] 24 Hr. Water

This zone type is active at all times, regardless of the armed state, and when tripped will generate an audible, steady alarm. This zone type is typically used for monitoring flood conditions.

[20] 24 Hr. Freeze

This zone type is active at all times, regardless of the armed state, and when tripped will generate an audible, steady alarm. This zone type is typically used in applications that monitor low temperatures.

[21] 24-hr Latching Tamper

This zone type, when violated, will cause arming of the system to be inhibited until the installer accesses Installer Programming or the condition has been reset using DLS. This zone type is normally used for monitoring the panel's cabinet. If the cabinet has been opened, someone may have tampered with the system's wiring, so this zone type is used to generate an installer service call. This zone type generates an audible, steady alarm in both armed and disarmed states.

[22] Momentary Keyswitch Arm Zone

A keyswitch device (mechanical switch controlled by a key) may be connected to the zone input programmed as momentary keyswitch. Momentary activation (open and close) of the zone alternately arms/disarms the system and silences alarms. Tampers and faults will only initiate their respective trouble sequence. The keypad will not display an indication when this type of zone is activated. When an audible alarm is active, using the keyswitch when disarmed is the same as entering an access code at the keypad. The system will log special closing or special opening if the keyswitch is used for arming/disarming. If a keyswitch device is bypassed, the bypass must be manually removed.

[23] Maintained Keyswitch Arm Zone (Hardwired)

A keyswitch device (mechanical switch controlled by a key) may be connected to the zone input programmed as maintained keyswitch. In the restored state, the system is disarmed. In the violated state, the panel will arm. Tampers and faults will only initiate their respective trouble sequence. The keypad will not display an indication when this type of zone is activated. If the system is armed using this zone (violated), but the system is disarmed using a different method, the keyswitch must be restored and violated again to start a new arming sequence. The same is true for disarming.
A bypass of this zone type must be manually removed.

With an audible alarm active, using the keyswitch when disarmed is the same as entering an access code at the keypad. Activating this zone type during the first 30 seconds of a delayed fire alarm is the same as entering an access code at the keypad (the 90 second delay will start). If left in the violated state, the system will not arm until the zone is restored and violated again.

[24] Not Used

[25] Interior Delay Zone

This zone type is normally used with interior motion detectors and has a standard exit delay time. If the panel is armed in away or night mode, the interior delay zone will be active at the end of exit delay. The zone then acts like an Interior zone *[04]*. If the system is armed in stay mode, the zone behaves like a delay 1 zone. Violating this zone during exit delay will not cause the system to arm in away mode like regular delay 1 zones do.

[26] 24 Hour Non-Alarm (or local alarm) Zone

Zones programmed as this type are active at all times but do not cause an alarm, and are not saved in alarm memory. Zone attributes such as Zone Bypassing and Door Chime affect the functionality of this zone. Typically, this zone type is used in conjunction with a zone follower PGM to trigger an output when violated but not cause alarm conditions.

Note: This zone type sounds the bell but does not communicate during a walk test. Tampers and faults on zones programmed as 24-Hour non-alarm type do not cause alarms.

[27]-[28] Not Used

[29] Auto-Verified Fire

This zone type is used with hardwired smoke detectors. This zone definition will ensure that an alarm condition persists by removing power to a smoke detector in the alarm state. When the power is restored after 20 seconds, the system will check the state of the zone again. If the zone is still violated, the system will sound a pulsing alarm using the system siren and will communicate the alarm to the monitoring station.

Auto-verify Alarm Sequence:
Step 1 - Perform a 20 second sensor reset (remove power to smoke detector).
Step 2 - Allow 10 seconds for devices to settle.
Step 3 - Check for verified alarm for 60 seconds.
This zone is used for CP-01 and UL/ULC Fire Monitoring applications.
If a secondary fire alarm is detected at any time during the above delay sequence, the auto-verify sequence is immediately terminated and alarms are generated for all pending fire alarms.

[30] Not Used

[31] Day Zone

Violating this zone when disarmed sounds the keypad buzzer but does not log or report the events. Violating this zone when armed sounds the bell and communicates the event.

[32] Instant, Stay-Away Zone

This zone is bypassed when the system is Stay armed or disarmed, but it functions similarly to an Instant Zone [03] when Away or Night armed. This zone type is useful for motion detectors that must NOT follow the entry delay after a delay zone is violated, but must still retain the Stay/Away functionality.

[33]-[34] Not Used

[35] 24-Hr. Bell/Buzzer

This zone type will behave like a 24 hour burglary zone when armed and a 24 hour buzzer zone while disarmed. When the panel is armed, the siren will activate for the duration of bell time out when this zone is violated. When the panel is disarmed, the keypad buzzers will latch until a valid disarming procedure is used.

[36] 24-Hr. Non-Latching Tamper

This zone type is always active and will report a tamper condition if the panel is armed or disarmed. The communications generated for this zone type do not follow transmission delay. In DEOL configuration, a tamper or open condition will generate a tamper event. A short condition will generate a fault event.

[37] Night Zone

This zone type is bypassed if the panel is disarmed, armed in stay mode or armed in night mode. It is active in the armed state and behaves like an Interior zone. If entry delay is active, the zone type will not create an alarm until the entry delay expires. If violated while away armed, but entry delay isn't active, the zone will generate an instant alarm.

[41] 24-Hr. CO Zone (hardwired)

This zone definition is only to be used with hardwired carbon monoxide detectors. The zone is active in all armed states. This zone definition has its own bell cadence. The siren shall sound 4 cycles of 100mS On/Off pulses, followed by a 5 second pause and then the sequence repeats. After four minutes, the 5 second pause will be extended to a 60 second pause. The bell will be silenced upon bell time out or when a code has been entered at the keypad. No bell delay or transmission delay will affect this operation. Tampers and faults from a CO zone type will not impede arming.

If a CO zone is in Device Fault, the control panel will sound CO cadence. This is different when compared to a low sensitivity fault in a smoke detector, which will not generate an alarm.

A tamper restore must be created on the device to remove any device faults, which will prevent run-away transmission from a device going in and out of fault.

[81]-[88] Not Used

[005] System Times

Enter Section **[005]** then Subsection **[01]** to program the **Entry Delay 1**, **Entry Delay 2** and **Exit Delay** for the system. Entries are in seconds. A value of 000 in the entry or exit delay sections causes a 255 second delay; however, the time is displayed as 000. Enter Section **[005]** then Subsection **[09]** to program the **Bell Cut-Off Time**. Valid entries are in minutes. A value of 000 in the BTO section produces a 1 minute bell cut-off time. However, this time is displayed as 000.

[006] Installer Code

The default Installer Code is **[5555]** or **[555555]** if 6-digit access codes is enabled.

[007] Master Code

The default Master Code is **[1234]** or **[123456]** if 6-digit access codes is enabled.

[008] Maintenance Code

The Maintenance Code is a system user code that can only arm and disarm. Any other system function that requires an access code is not accessible by this code. The default Maintenance code is [AAAA] or [AAAAAA] if 6-digit access codes are programmed. See [701] First International Options Opt. 5.

[009]–[011] PGM Programming (Zones/PGMs)

Program the programmable outputs PGM 1 and PGM 2 on the main board and on PC5208 and PC5204 by selecting one of the output options listed below (exceptions noted)].

PGM Output Options

01   **Burglary and Fire Bell Output**. This output will activate when the siren output is active and will turn off when the alarm output deactivates. If the siren is sounding a pulsing alarm, the PGM output will pulse as well. This PGM will follow:
- Fire alarm pre-alert
- Temporal three fire signal (if enabled)
- All burglary and fire alarms
- Bell cut-off time

This output does will **NOT** activate for siren squawk events of any type.

i	Fire alarms take precedence over burglary. Therefore, if the PGM is indicating a steady burglary alarm, and a fire alarm occurs, the PGM will follow a pulsing cadence. If the PGM is already on when a silent alarm occurs, the output will remain on.

02   Not Used

03   **Sensor Reset**. This output is normally active (switched to ground). This option is used to remove and restore power for latching smoke detectors. The output will deactivate for 5 seconds when the [*][7][2] command is entered (refer to [*][7] command outputs). When this PGM is programmed, the PGM output is normally low, which is the opposite of how most PGMs operate at default. This is because the PGM is used as the negative return for power to 4-wire smoke detectors (positive comes from the Aux + terminal). To activate this output and reset smoke detectors, [*][7][2] must be entered at the keypad or an equivalent function key must be used. The PGM terminal will go high (open circuit) and thus remove power from the devices connected.

04   **2-Wire Smoke.** When this PGM is programmed, the onboard PGM 2 functions as an input instead of an output. It behaves much like the sensor reset PGM in that it is normally low supplying the negative return. Two-wire smoke devices can be connected to this input. The PGM is also supervised, and a trouble condition is generated if a 2.2K resistor is not present between the PGM terminal and AUX+. The two-wire smoke detector input creates an instant and latching alarm.

05   **System Armed Status.** This output will activate (switch to ground) when the system is armed and will deactivate when disarmed. Depending on the market, the panel may turn off this PGM when keypad blanking is active.

06   **Ready to Arm**. The PGM switches to ground when the system is ready to arm (all non-force armable zones on the system are restored). When an access code is entered to arm the system and the exit delay begins, the PGM output is de-activated. This PGM operates as described during walk test mode (if all zones are restored).

07   **Keypad Buzzer Follow.** The PGM output switches to ground when the keypad buzzer is activated by the events described below:

- 24-hour supervisory buzzer zone alarm
- Entry delay
- Door chime
- Auto-Arm or No activity arm pre-alert
- Audible exit delay

The PGM output remains switched to ground while the keypad buzzer is active. This PGM type does not activate for local key presses or trouble beeps.

08   **Courtesy Pulse.** This PGM output switches to ground for 2 minutes past the end of entry or exit times to allow enough time for complete entry to or exit from the premises. This option can also be used to turn on a light along the entry/exit route during the entry or exit delay times. If the system is armed through the *No Activity Arming* method this output will NOT activate.

PGM Output Options

09   **System Trouble.** This PGM output switches to ground when any of the selected Troubles are detected. The output de-activates when all of the selected Troubles are restored. The PGM attributes for this output are unique for this PGM type and the standard attributes do not apply. The PGM attributes for this output are as follows:

1	Service Required*	**5**	Fire Trouble/Zone Fault
2	A.C. Failure	**6**	Zone Tamper
3	Telephone Line Fault	**7**	Future Use
4	Communications (Failure to Communicate)	**8**	Loss of Clock

Note: * = Battery, Bell circuit, General System Trouble, General System Tamper, General System Supervisory Troubles, PC5204 Low Battery and PC5204 AC Fail

10   **System Event Output.** This PGM output switches to ground when any of the selected system events (alarms) occur on the system. In the armed state, the output will deactivate only once the system is disarmed.
If an alarm causes this output to activate in the disarmed state, the output will deactivate if a user enters a valid access code while the bell is still active. If BTO has occurred, the PGM will deactivate if someone arms the system after the bell cut-off has expired. This output can be used to indicate that an alarm has occurred before entering the premises. The PGM attributes for this output are unique and the standard attributes do not apply. Program the events that will activate the output by selecting some or all of the following PGM attributes:

1	Burglary	Delay, Instant, Interior, Stay/Away and 24-Hour Burg. zones
2	Fire	🔥 Key, Fire zone
3	Panic	🛡 Key and Panic zone
4	Medical	Auxiliary Key, Medical and Emergency zones
5	Supervisory	Supervisory, Freezer and Water zones
6	Priority	Gas, Heat, Sprinkler and 24-Hour Latching zones
7	Not Used	
8	Latched	Output Follows Pulse timer/Output Latching

i   **Note:** This PGM output activates for alarm conditions only. Pre-alerts or delays do NOT activate the output. When this output follows the output timer, events that have been disabled from activating the output do not restart the timer.

11   **System Tamper.** This PGM output switches to ground when any Tamper condition occurs on the system and deactivates when all Tamper conditions on the system are cleared. These tampers include zone tampers (DEOL), 24 Hr Latching or Non-latching Tamper Zones, module tampers and keypad tampers. This output will also activate for the following events): Bell Circuit Trouble, TLM Trouble, Keybus Fault, Zone Expander Supervisory, General System Supervisory, and General System Tamper.

12   **TLM and Alarm.** The output activates when a Telephone Line Trouble (TLM) condition is present followed by an alarm condition. The output will remain active until an access code is entered to disarm the partition. The output will activate for all audible and silent alarms except for duress if a TLM trouble is present at the time of the alarm. If an alarm activates this output in the disarmed state, it will deactivate when the system is armed or the telephone line trouble is restored.

13   **Kiss-off.** This output will activate (switch to ground) for two seconds after the panel receives the kiss-off signal from the central station receiver.

14   **Ground Start.** This PGM output is used for old telephone systems where Tip and Ring need to be shorted together briefly to get dial tone. The output will activate for two seconds before the panel attempts dialing to obtain a dial tone on Ground Start telephone equipment. Two 2-second pauses (hex E) must be inserted at the beginning of the telephone number when using this option.

15   **Remote Operation.** This output can be activated or deactivated remotely by using DSC's Downloading Software.

16   Not Used

17   **Away Armed Status.** This output will activate at the beginning of exit delay when the system is armed using away mode.

18   **Stay Armed Status.** This output will activate when the system is armed with the stay/away zones bypassed.
PGM output types [17] and [18] are designed to follow the status of the stay/away zones. If the system is armed with stay/away zones bypassed, the stay output should be active. If the system is armed with the stay/away zones active, the AWAY armed status PGM will turn on. The following indicates how these arming techniques work:

STAY key	Stay
[*][9] + Code	Stay
AWAY key	Away
Keyswitch Arm	Depends on delay type zone during exit delay
[*][0] Quick Arm	Depends on delay type zone during exit delay
Access Code Arm	Depends on delay type zone during exit delay
DLS Arm	Away
Auto Arm	Away
Stay Armed, then [*][1]	Away

PGM Output Options

19 **Command Output #1.** This output is activated by entering the [*][7][1] command. The configuration of the corresponding attributes determines how this PGM will activate. Command outputs 1-4 are user initiated by entering [*][7][1-4] at any keypad. When any output is activated, three ack beeps will be sounded by the keypad. This feature is User controlled. This function can be performed when a Programmable Output is programmed as Type [19].

This output can be used for operating devices such as garage door opener, special lighting or door strikes.

Note: If there are multiple outputs programmed with the same PGM type, the PGM attributes must be the same for each of them.

20 **Command Output #2.** This output is activated by entering the [*][7][2] command. The configuration of the corresponding attributes determines how this PGM will activate. Only one sensor reset or command output #2 PGM can be programmed on the system. This feature is User controlled. This function can be performed when a Programmable Output is programmed as Type [03] or Type [20], but not both.

This output can be used to reset all smoke detectors on the system (2-Wire and 4-Wire).

21 **Command Output #3.** This output is activated by entering the [*][7][3] command. The configuration of the corresponding attributes determines how this PGM will activate. This feature is User controlled. This function can be performed when a Programmable Output is programmed as Type [21].

This output can be used for operating devices such as garage door opener, special lighting or door strikes.

22 **Command Output #4.** This output is activated by entering the [*][7][4] command. The configuration of the corresponding attributes determines how this PGM will activate. This feature is User controlled. This function can be performed when a Programmable Output is programmed as Type [22].

This output can be used for operating devices such as garage door opener, special lighting or door strikes.

23-24 Not Used

25 **Delayed Fire and Burg Output.** This programmable output type operates the same as the fire and burglary output (PGM type 01), except that it follows the transmission delay timer programmed in Section [377]. If a zone is violated that has the transmission delay attribute enabled (bit 7), the Bell and Regular Fire and Burg PGMs will activate. At the end of the transmission delay, the delayed fire and burg output will activate. This PGM is usually used to control outdoor sirens: if a "false" alarm occurs on the panel, the user has the duration of transmission delay to disarm the system before the external sirens activate.

Note: If a zone is violated that causes an alarm, but does not follow transmission delay, this PGM will activate immediately, even if transmission delay is active for a different zone alarm.

Note: This output activates for audible exit fault.

26 Not Used

27 **Police Code Output.** When the police code event occurs, this output will activate until the panel is either armed or disarmed. If police code is not configured to communicate, the PGM will still activate for the event.

29 **Zone Follower 1-8.** This output type is normally active and allows an output to deactivate for the duration that a zone is violated. The PGM attributes are programmed through an 8 bit toggle mask that selects which zones the output will follow. The toggle mask is programmable in Sections [551-564]. Example: If PGM is programmed as Type 29 with extended attributes 1, 6 and 8 ON, the output will turn off when any of the three zones are violated, and will restore when all three zones are restored.

30 **Status Alarm Memory Output.** This feature is intended to be used on a keyswitch plate, with a light controlled by this PGM to indicate system status. The status alarm memory output will activate (steady) at the beginning of exit delay, when the partition is armed. If an alarm occurs on the armed partition, the output will flash (1 sec ON/1 sec OFF) for the remainder of the armed period. If an alarm occurs on a disarmed partition (24 Hr Zone), the output will flash (1 sec ON/1 sec OFF) until the alarm is acknowledged (bells are silenced during BTO, or the partition is armed after BTO). This output will not activate in walk test.

[012] Keypad Lockout Options

This section determines how the keypad function operates. The panel can be configured to "lockout" keypads if a series of incorrect access code entries are made.

Number of Invalid Codes Before Lockout

Program a number from 001 to 255 to determine the number of invalid master, user or installer access code entries to reach keypad lockout. When keypad lockout occurs, the system is rendered inoperative via the keypad for the programmed duration only (keyswitch zones still function). When any keys are pressed, an error tone sounds. Entering 000 disables keypad lockout.

Lockout Duration

Program a time from 001 to 255 minutes to determine the length of time before lockout resets and the keypad can once again be used.
- If lockout is not reached within the hour roll-over (01:59 to 02:00 for example), the number of invalid attempts is reset to 0.
- After a valid access code is entered, the number of invalid attempts is reset to 0.
- Fire, Auxiliary and Panic keys are still active during keypad lockout.
- Key presses do not reset the timer.
- If the lockout timer was active before powering down, the system lockout is active for the programmed duration on power up.

[013] First System Options

Option	Description

[1]
Zone Loop Type

ON: Normally Closed Loops. All zones are wired as normally closed circuits with returns connected to a COM terminal. The end-of-line resistor is not required. An alarm will be generated when the circuit is opened.

OFF: End-of-Line Resistors. All zones must be wired with an end-of-line resistor configuration, determined by Option 2 in Section [013].

[2]
End-of-Line Option

ON: Double End-of-Line Resistors. All zones will use Double End-of-Line resistors, except Standard Fire, Delayed Fire and 24 Hr Supervisory. These zones must be connected using the EOL resistor. Double EOL resistors enable the detection of zone faults and tampers. The tamper resistor (5k6) is placed across the alarm activating device, and the single EOL resistor (5k6) is placed between the alarm and tamper contacts. This configuration will allow the panel to detect zone faults (zone shorted), zone tampers (open zone), zone alarms (11.2k) and restored zones (5k6).
If the zone/system is disarmed and placed in the tamper or fault state, trouble beeps will be generated on all system keypads until a key is pressed. If the zone is armed and a tamper is activated, the tamper alarm and zone alarm will be logged and transmitted. The zone will begin the normal alarm sequence (bells, alarms in memory, etc.).

OFF: Single End-of-Line Resistors. All zones must have a 5k6 resistor across the terminals. If the zone is shorted or opened, it will be treated as a violated state. If the zone is open and programmed as a fire zone, it will be in the trouble state.

[3]
Trouble Display

ON: Panel Shows All Troubles While Armed. The panel will activate the trouble LED in both the armed and disarmed state when any trouble is present on the system.

OFF: Panel Shows Fire Troubles While Armed. The panel will activate the trouble LED for all troubles while disarmed, but the LED will only activate for Fire Troubles while the system is armed.

[4]
Tamper/ Fault Display

ON: Tampers and Faults Do Not Show As Open. The panel will not activate the respective Zone LED if the zone is in the tamper or fault states, only the Trouble LED will be on.

OFF: Tampers and Faults Show as Open. The panel will illuminate the respective Zone LED (LED Keypads) if the zone is in the tamper or fault state.

[5]
Auto- Arm Schedule

ON: Auto-Arm Schedule in [*][6]. The auto-arm schedules (Section [181]) are accessible via [*][6] as well as Installer Programming.

OFF: Auto-Arm Schedule in Installer Programming Only. The auto-arm schedules (Section [181]) are only accessible via Installer Programming.

[6]
Audible Exit Fault

ON: Audible Exit Fault is Enabled. If a delay type zone is violated or is still violated within 4 seconds after the exit delay has expired, the panel will sound the entry delay warning through the keypad and siren alerting the customer that an improper exit was made. If the panel is disarmed within the entry delay, no signal is sent. If not, the panel will continue to sound the alarm and send a signal to central station. Audible Exit Fault Pre-Alert will be logged when the entry delay begins, and audible exit fault will be logged and communicated when the exit delay expires.

OFF: Audible Exit Fault is Disabled. The siren will not activate during the entry delay created by leaving a delay zone violated when exit delay expires.

[7]
Zone Doubling

ON: Zone Doubling Enabled. When the Zone Doubler option is enabled on a PC1404, Zone 1 will become Zones 1 and 5, Zone 2 will become Zones 2 and 6, and so on, up to 8 hardwired zones. The 4 zones on the main board now act as 8 zone inputs. When enabled, Options 1 and 2 in Section 013 are ignored. Keypad Zones should not be used on zones designated for Zone Doubling (PC1404: Zones 1-8). Fast Loop Response Feature (Section 030) will not work when Zone Doubling is enabled.
Note: Only normally closed devices may be used with zone doubling.
Note: A fault condition from either zone will create a zone fault trouble for both zones.

OFF: Zone Doubling is Disabled.
The 4 zones on the main board act as 4 zone inputs.

[8]
Fire Signaling

ON: Temporal 3 Fire Signal. To comply with NFPA 72, all Fire Bells will sound the temporal 3 fire cadence as described in the NFPA standard if this option is enabled. The cadence is 500ms ON, 500ms OFF, 500ms ON, 500ms OFF, 1.5 sec OFF.

OFF: Standard Pulsing Fire Signal. All fire bells will sound with the standard 1 second ON/1 second OFF fire bell cadence.

[014] Second System Options

Option	Description

[1]
Bell Squawk

ON: Arm/Disarm Bell Squawk Enabled. The system squawks the bell output once when armed (including auto-arming) and twice when disarmed. If there are alarms in memory, 3 distinct squawk pairs will sound (6 squawks in total).

OFF: Arm/Disarm Bell Squawk Disabled. Bell output does not activate when the system is armed or disarmed in any manner.

[2]
Bell Squawk for Auto- Arming

ON: Bell Squawk For Auto-Arming Enabled. The bell output will sound a single squawk every 10 seconds during the auto-arm pre-alert time. This also applies to no activity arming pre-alerts.

OFF: Bell Squawk For Auto-Arming Disabled. The bell output will not be activated during auto arming or no activity arming pre-alerts.

[3]-[6]   Future Use

[7]	**Exit Delay Termination Enabled.** The exit delay will be reduced to 5 seconds when the system detects that a delay 1 zone
Exit	has been restored during exit delay. All audible indications associated with the exit delay (keypad tones, bell squawks) will
Delay	be silenced when the exit delay is reduced and terminates. Force armable delay 1 zones will still cause the exit delay to be
Termina-	reduced if they restore during the exit period.
tion	

[7]
Exit Delay Termination

Exit Delay Termination Enabled. The exit delay will be reduced to 5 seconds when the system detects that a delay 1 zone has been restored during exit delay. All audible indications associated with the exit delay (keypad tones, bell squawks) will be silenced when the exit delay is reduced and terminates. Force armable delay 1 zones will still cause the exit delay to be reduced if they restore during the exit period.

Exit Delay Termination Disabled. The exit delay timer will continue to count down even after the delay zone for the entry/exit door or area is restored.

[8]
Fire Bell Timeout

ON: Fire Bell is Continuous. The bell output will sound for all fire type alarms until a valid disarming procedure is entered to silence the alarm or disarm the system, regardless of the time programmed for bell timeout in Section [005].

OFF: Fire Bell Follows Timeout. The bell output will sound for all fire type alarms for the duration of bell timeout or until an access code is entered.

[015] Third System Options

Option	Description

[1]
[F] Key
Annunciation

ON: Fire Key Enabled. Pressing and holding the fire ⬇ key for 2 seconds generates a fire alarm. The keypad sounds a set of 3 beeps to acknowledge the valid alarm and the bell activates and sounds the fire cadence. Communication of the alarm to the central station is immediate. The bell sounds for the length of the bell time-out unless Fire Bell is Continuous is enabled.

OFF: Fire Key Disabled. The Fire ⬇ key does not sound or report an alarm when pressed.

Note: When enabled, this key generates alarms at all times, regardless of what is happening on the system, unless the panel is in Installer Programming.

[2]
[P] Key
Annunciation

ON: Panic Key Audible. When a valid Panic key 🛡 alarm is generated, the keypad buzzer sounds a series of 3 beeps to acknowledge the alarm. The bell or siren will also sound for the duration of BTO.

OFF: Panic Key Silent. When a valid Panic key 🛡 alarm is generated, the keypad buzzer and the bell output remain silent, but the alarm reporting code is still transmitted to the central station (if programmed).

[3]
Quick Exit

ON: Quick Exit Enabled. When the system is armed, users may enter the [✱][0] command to allow a single delay 1 or delay 2 zone to be activated and restored so they can leave the premises without disarming the system. Only one delay zone may be activated; a second zone trip will initiate its respective alarm sequence. If the delay zone is still open two minutes after the [✱][0] command is entered, the entry delay will begin. If armed in stay mode, the automatic bypass of the stay/away zones will not be removed.

OFF: Quick Exit Disabled. When the system is armed, users cannot perform a quick exit by pressing [✱][0].

[4]
Quick Arming

ON: Quick Arming Enabled/Function Keys Do Not Require Code. [✱][0] arming and Stay/Away function keys may be used to arm the system without the entry of a valid access code. All other function keys may also be used without the entry of an access code.

OFF: Quick Arming Disabled/Function Keys Require Code. [✱][0] arming is not permitted, and all function keys (including Stay/Away) require the entry of an access code to arm the system.

[5]
Bypass Access Code

ON: Code Required for Bypassing. After entering the **[✱][1]** Bypass Zones command, an access code must be entered before zones may be bypassed.

OFF: No Code Required. The user can enter **[✱][1]** and gain access to zone bypassing without the use of an access code.

[6]
Master Code

ON: Master Code Not Changeable. The Master Code (access code 40) may not be changed by the user with **[✱][5]** access code programming. The Master Code can only be programmed in Installer Programming, Section **[007]**.

OFF: Master Code Changeable. The Master Code (access code 40) may only be programmed by the user in Installer Programming.

[7]
Telephone Line Monitoring

ON: TLM Enabled. The Telephone Line Monitor function is active and the system indicates if a Telephone Line Trouble condition exists when using the **[✱][2]** View Trouble Conditions command.

OFF: TLM disabled. The Telephone Line Monitor function is shut off and telephone line troubles are NOT indicated by the system.

[8]   For Future Use

[016] Fourth System Options

Option	Description

[1]
AC Trouble Display

ON: AC Trouble Displayed. If AC power fails, the condition will be reported to the monitoring station and will be indicated as a trouble condition on the system's keypads.

OFF: AC Trouble Not Displayed. If AC power fails, the condition will be reported, but the trouble LED will not be activated on the system's keypads. If [*][2] is entered to view the system troubles, Trouble #2 will still be displayed.

[2]
AC Trouble Flash

ON: Trouble Light Flashes if AC Fails. When AC power is lost from the system, the Trouble LED will flash in the base Ready and Armed modes within 30 seconds of the AC loss. When AC restores, the Trouble LED will stop flashing within 30 seconds.

OFF: Trouble Light Does Not Flash if AC Fails. When AC power is lost, the trouble LED will not flash but instead will turn on steady, depending on the programming of [016] Option 1.

[3] Keypad Blanking	**ON: Blank Keypad When Not Used.** If no keys are pressed for 30 seconds, the display and all keypad lights except backlighting (if enabled) turn **OFF** until the next keypress, entry delay, audible alarm, or keypad buzzer condition. Keypad function and FAP keys still operate during keypad blanking.
	OFF: Keypad Always Active. The keypad lights remain **ON** at all times.

[4] Keypad Blanking Restore Options	**ON: Access Code required to remove Keypad Blanking.** A valid access code must be entered before blanking can be removed.
	OFF: Access Code Not Required. Pressing any key on a blanked keypad removes the blanking.

[5] Keypad Backlight-ing	**ON: Keypad Backlighting Enabled.** All keypads on the system have backlighting on at all times.
	OFF: Keypad Backlighting Disabled. Keypad backlighting is always off.

[6] Power save mode	**ON: Power Save Mode Enabled.** If AC Power fails, all keypad lights, including backlighting, will be shut off. The keypad lights will come back ON after a keypress, entry delay, audible alarm or keypad buzzer condition (except door chime). The keypad lights will return to the off state after 30 seconds of no activity. If the AC Fail condition restores, the keypad lights will be reactivated.
	OFF: Power Save Mode Disabled. If AC Power fails, the keypads will not go into power save mode.

[7] Bypass Status Display	**ON: Bypass Status Displayed While Armed.** The bypass light will be ON if there are zones bypassed when the system is armed.
	OFF: Bypass Status Not Displayed While Armed. The bypass light will be ON only while the system is disarmed to indicate that there are bypassed zones on the system. When the system is armed, the bypass light will be OFF.
	Note: The bypass status LED will be ON if there are Stay/Away zones auto-bypassed at the time of arming, regardless of whether or not this option is enabled. This option only enables and disables manual bypass display.

[8] Keypad Tampers	**ON: Keypad Tampers are Enabled.** All keypads containing Tamper switches will generate tamper alarms and Restores.
	OFF: Keypad Tampers are Disabled. The tamper switches on all keypads will not generate tamper alarms.
	Note: If this option is used, all keypads should be properly installed and secured (tamper restored) before enabling the option. Alternatively, the panel can be powered down/up after enabling this option to ensure all the tampers are detected.

[017] Fifth System Options

Option	Description
[1]-[3]	Future Use
[4] Double Hit	**ON: Double Hit Enabled**. Two alarms from the same zone within the Cross Zone Timer Duration will cause the Police Code or Cross Zoning events to be logged and transmitted.
	OFF: Double Hit Disabled. Two alarms from the same zone will not cause the Police Code or Cross Zoning events to be logged and transmitted. Two different zones must be in alarm to transmit the Police Code or verify the Cross Zone.
i	This feature only applies to zones defined as Interior, Interior Delay, Interior Stay/Away, Instant Stay/Away, Delay Stay/Away, or Night Zones (PIR Zones).
[5] Late to Close	**ON: Late to Close Enabled.** The panel will log and communicate a late-to-close event at the time programmed for auto-arm. This system toggle controls whether the late-to-close reporting code is sent at the end of the auto-arming pre-alert. This feature is used in installations that require an audible warning that the panel should be armed at a specific time of day, but are not required to auto-arm.
	OFF: Late to Close Disabled. The panel will not communicate or log late to close for any reason.
	Note: If the auto-arm toggle option is disabled, the auto-arm pre-alert will still occur if there is a time programmed for that day and this option is ON. This option does not directly affect the operation of auto-arm. If late to close is enabled, and auto-arming is not, LCD keypads will still display "System arming in progress" during the late to close pre-alert.
[6] Daylight Savings Time	**ON: Daylight Savings Time Enabled.** The panel will adjust between daylight and standard times according to the programmed month, day, year, week and hours in Sections [168] and [169].
	OFF: Daylight Savings Time Disabled. The panel will make no automatic time adjustments for daylight savings time.
[7]-[8]	Future Use

[018] Sixth System Options

Option	Description
[1]-[4]	Future Use
[5] Keypad Buzzer Alarm	**ON: Keypad Buzzer Follows Bell Enabled.** The keypad buzzers will follow the partition's bell activity. The buzzer will turn on when the siren activates and the buzzer will turn off when the siren deactivates.
	OFF: Keypad Buzzer Follows Bell Disabled. The keypad buzzer will not follow bell activity. Only alarms designated to activate the keypad buzzer will do so.

[6] **Cross Zoning/ Police Code**	**ON: Cross Zoning is Enabled.** The panel will use the Cross Zone attribute for Burglary Verification. This feature requires two or more trips from a zone that has the Cross Zone attribute enabled within a specified time before starting an alarm sequence. When a zone with cross zoning enabled is violated, no alarm occurs on the system; however, entry delay may start or the system event PGM may activate. The cross zoning timer will be started. If another zone with the cross zone attribute is violated before the timer expires, the panel will transmit the first alarm signal—a Cross Zone event, followed by the second zone alarm, and begins the appropriate local alarm sequence. If no other zones are violated before the timer expires, no alarm sequence occurs and a Burglary Not Verified event is logged in the buffer. If the double hit feature is enabled, the panel will react to two violations of the same zone during the cross zoning timer and start the alarm sequence. This option will not function for zones that don't create alarm conditions (day zone while disarmed, instant zone while disarmed, etc.)

Note: The cross zoning timer counts in seconds when this feature is enabled. Police code timer counts in minutes when this feature is disabled.

Note: Fire Zones should never have cross zoning enabled.

OFF: Police Code is Enabled. The panel will use the police code feature for burglary verification.

[7] **Exit Delay Restart**	**ON: Exit Delay Restart Enabled.** This CP-01 feature is used to prevent a false alarm caused by the user exiting and then immediately re-entering the protected area. If a delay zone is violated and restored during the exit delay, it is considered an exit. If a delay zone is then violated again, it is considered a re-entry. With this option enabled, the panel will restart the exit delay ONCE. Further violations of the same zone or other delay zones shall not restart the exit delay. **OFF: Exit Delay Restart Disabled.** Delay zone violations and restores will not restart the exit delay.
[8] **AC Trouble Beeps**	**ON: AC Trouble Beeps Enabled.** When an AC trouble occurs on the panel, all keypads will sound an audible trouble indication (2 beeps every 10 seconds). **OFF: AC Trouble Beeps Disabled.** AC troubles will remain silent.

[020] Keypad Zone Assignment

Enter the two-digit zone number to be assigned to each keypad assigned to a specific slot. Only one keypad can be assigned to a specific slot. See also Section [020] Keypad Zone Assignments. Valid entries are from [00] to [08].

[022] Ninth System Options

Option	Description
[1]-[2]	Future Use
[3] **Auto- Arming and Force Arming**	**CP-01 operation** **ON: Auto-Arming Force-Arms Open Zones.** All zones that are open at the end of the <u>auto-arming exit delay</u> will be force-armed, even if force-arming is disabled in Sections [101]-[108]. **OFF: Auto-Arming Follows Force-Arming Attribute.** Only zones with the force-arm attribute enabled will be force-armed; if the force-arming attribute is disabled for the zone, the zone will go into alarm if violated when exit delay expires. **Non-CP-01 operation** **ON: Auto-Arming Force-Arms Open Zones.** All zones that are open at the end of the <u>auto-arming pre-alert</u> will be force-armed. **OFF: Auto-Arming Follows Force-Arming Attribute.** Only zones with the force-arming attribute enabled will be force- armed when the pre-alert expires. Non-force armable zones will go into alarm.
[4]-[7]	Future Use
[8] **Audible Stay Arming**	**ON: Audible Exit Delay for Stay Arming.** When the system is armed in stay mode, the exit delay will be sounded by 1 beep every 3 seconds. **OFF: Stay Arming is Silent.** When the system is armed in stay mode, the exit delay will be silent.

[023] Tenth System Options

Option	Description
[1]-[4]	Future Use
[5] **Stay/Away**	**ON: Switching from Away to Stay Disabled.** The system cannot be switched from Away to Stay mode by pressing the [Stay] Function key. **OFF: Away to Stay Toggling Enabled.** The system can be switched from Away to Stay mode by pressing the [Stay] function key, but only if entry delay is not active and the system is not in alarm.
[6]	Future Use
[7] **Silent Trouble Beeps**	**ON: Trouble Beeps are Silent.** When a trouble is detected on the system, trouble beeps will not be sounded at the system keypads. **OFF: Trouble Beeps are Audible.** When a trouble is detected on the system, trouble beeps will be sounded at the system keypads.

[8]

Keyswitch Arming Option

ON: Keyswitch Arms in Away Mode. When a keyswitch zone is used to arm the system, the panel will always arm in away mode, regardless of whether a delay zone was violated and restored during exit delay.

OFF: Keyswitch Arms in Stay or Away Mode. When a keyswitch is used to arm the system, the panel will arm in away mode if a delay zone is violated and restored during the exit delay, or if there are no stay/away zones on the system. If neither of these conditions is met, the panel will arm in stay mode.

[030] Zone Loop Response Options

Fast loop response for the onboard zones is programmable using Installer Programming Section [030]. Section [030] is an 8 bit toggle option that controls which main board zones will use fast loop response (~40mS) or normal loop response (~250mS).

Note: Fast loop response should not be enabled for zones that are "doubled" by using the zone doubler feature.

Option		Description
[1]	ON: Zone 1 is Fast Loop Response	OFF: Zone 1 is Normal Loop Response
[2]	ON: Zone 2 is Fast Loop Response	OFF: Zone 2 is Normal Loop Response
[3]	ON: Zone 3 is Fast Loop Response	OFF: Zone 3 is Normal Loop Response
[4]	ON: Zone 4 is Fast Loop Response	OFF: Zone 4 is Normal Loop Response

[101]-[108] Zone Attributes

The following options can be enabled or disabled for each zone. Pressing [9] in one of these sections brings the installer to the upper bank (attributes 9 to 16). From the upper bank, press [9] to return to the lower bank (attributes 1 to 8).

i	These attributes override default settings. Do NOT change fire zone attributes from their default settings.

Option	Description	
[1]	Bell options	ON: An alarm activates the Siren. OFF: Silent alarm.
[2]	Steady or Pulsed-Bell Type	ON: The bell output is steady when the zone is in alarm. OFF: The bell output pulses (1 sec on/off) when the zone is in alarm.
[3]	Chime	ON: The keypad chimes when the zone is opened/closed. OFF: The zone does not chime the keypad when the zone is opened/closed.
[4]	Bypass	ON: The zone may be manually bypassed in [✶][1]. OFF: The zone cannot be manually bypassed in [✶][1].
[5]	Force Arming	ON: The zone can be violated and system arming will not be impeded. OFF: The system cannot be armed if the zone is open.
[6]	Swinger Shutdown	ON: When the zone goes into alarm for the number of times programmed in the Swinger Shutdown Counter (see Section [377]), it shuts down with no further transmissions sent to the monitoring station. OFF: Swinger Shutdown is disabled. All alarms are transmitted and do not follow the Swinger Shutdown Counter.
[7]	Transmission Delay	ON: Reporting of zone alarms (and police code) are delayed for the time programmed in Section [377]. OFF: When an alarm occurs, the reporting code is transmitted immediately.
[8]	Not Used	
[9]	Cross Zoning	ON: The zone can start or complete the cross zoning sequence. It can generate a confirmed burglary alarm. OFF: This zone type will not start or complete the cross zoning sequence. It cannot generate a confirmed burglary alarm.
[10]-[13]	Not Used	
[14]	Normally Closed Loops*	ON: If the zone type is assigned to an onboard zone, it will not require an end of line resistor if this option is enabled (Normally Closed Loops). This overrides the EOL configuration programmed in Section [013]. OFF: The zone type will follow the end of line configuration programmed in Section [013]
[15]	Single End of Line (SEOL) Resistors*	ON: If the zone type is assigned to an onboard zone, it will require a single end of line resistor (SEOL). This overrides the EOL configuration programmed in Section [013]. OFF: The zone type will follow the end of line configuration programmed in Section [013]
[16]	Double End of Line (DEOL) Resistors*	ON: If the zone type is assigned to an onboard zone, it will require double end of line resistors (DEOL). This overrides the EOL configuration programmed in Section [013] OFF: The zone type will follow the end of line configuration programmed in Section [013]

 * Some zone types only support single end-of-line configuration, regardless of how the panel is configured, such as Fire Zones which are always single end-of-line.

Daylight Savings Time

These sections are used to program the date, time and increment that the clock moves ahead for Daylight Saving Time each year. Daylight savings time can be programmed to adjust the time by 1 or 2 hours (backward or forward) at an exact date and time, or on a specific weekday of a specific month. To enable daylight saving's time, the installer must enable Option 6 in Section [017] and program

Sections [168] and [169] to configure the system to change the time automatically for daylight savings. Enter [168] when setting the clock forward and enter [169] when setting the clock backward.

[168] Daylight Savings Time Begins

Month	[001] to [012] represents January to December.
Week	[000] indicates that the day of the month is programmed in the Day section below. [001] to [005] represents weeks 1 to 5 of the month. Week 5 always represents the last week in the month, regardless of whether the number of weeks in the month is 4 or 5.
Day	[001] to [031] represents the day of the month if [000] was programmed in the Week section above. If [001] to [005] was programmed in the Week section above, then [000] to [006] represents Sunday to Saturday.
Hour	[000] to [022] represents the hour that Daylight Saving Time takes effect.
Increment	[001] to [002] represents the number of hours to advance the clock for Daylight Savings Time.

i	Do not program the Hour outside of the valid range or the time will not change. Do not program the value of the Increment to be greater than the number of hours remaining in the current day.

Example:

E.g., Set the clock 1 hour ahead at March 5th, 2006 at 2:00am.
1. Enter Section [168].
2. Program the first entry (Month) with 003 for March.
3. Program the second entry (Week) with 000 since the week doesn't matter in this example.
4. Program the third entry (Day) with 005 for the 5th.
5. Program the fourth entry (Hour) with 002 for 2 am.
6. Program the fifth entry (Interval) with 001, which correlates to a 1 hour change to the time of day.

[169] Daylight Savings Time Ends

These sections are used to program the date, time and increment that the clock moves back for Standard Time each year. The following attributes can be programmed:

Month	[001] to [012] represents January to December.
Week	[000] indicates that the day of the month is programmed in the Day section below. [001] to [005] represents weeks 1 to 5 of the month. Week 5 always represents the last week in the month, regardless of whether the number of weeks in the month is 4 or 5.
Day	[001] to [031] represents day of the month if [000] was programmed in the Week section above. If [001] to [005] was programmed in the Week section above, then [000] to [006] represents Sunday to Saturday.
Hour	[000] or [023] represents the hour that Standard Time takes effect.
Increment	[001] or [002] represents the number of hours to roll back the clock for Daylight Saving Time.

i	If Daylight Saving Time occurs at Midnight program the time 2:00AM.

[170] PGM Output Timer

This value, programmable in seconds, is accessible by using Installer Programming Section [170]. This value represents the period of time that a PGM will activate if programmed to follow the PGM Timer. The default value is 005 seconds. Valid entries are 001-255 seconds, although some PGM types can be configured to latch. This timer does not affect PGM type 03, Sensor Reset.

Note: If a system event PGM is programmed to follow the Command Output Timer, all PGM attributes must be enabled.

[175] Auto-Arm Postpone Timer

In this section, program the time (in minutes) for which the system will postpone automatic arming if the auto-arming process is interrupted. After the programmed time, the system will attempt to auto-arm again. If [000] is entered in this section, the system will abort the auto-arm sequence instead of postponing it.

[176] Cross Zone/Police Code Timer

Program the time, in seconds (Cross Zone) or minutes (Police Code), that the panel uses to determine if a Cross Zone or Police Code event has occurred. If [000] is programmed when using the Police Code feature, the panel generates a Police Code event (if any two zones go into alarm during an armed-to-armed period). Valid entries are [000] to [255].

[181] Auto-Arm Time of Day

Program the desired auto-arming time of day in military time format, HH:MM. The PC1404 will attempt to auto-arm at this time every day unless the feature is disabled in [*][6] User Functions. Valid entries are 00:00 to 23:59, 99:99 to disable.

[190] No Activity Arming Pre-Alert

Program the time, in minutes, for the No Activity Arming Pre-Alert Duration. The keypad provides a steady tone warning the user that the system is arming. The user can either violate a zone or press any key to abort the arming sequence. Valid entries are [000] to [255].

[191] No Activity Arming Timer

Program the time, in minutes, for the No Activity Arm Timer. If any delay 1 zone is restored and no zone activity is detected on the system for the programmed duration, the system will start the automatic arming sequence. Valid entries are [000] to [255]. An entry of 000 disables this feature.

[199] Auto-Arming Pre-Alert Timer

In this section, program the time (in minutes) for the Auto-Arming Pre-Alert time. This timer is used for all programmed auto-arming features (it is not used for no-activity arming). The keypads will provide a steady tone, warning the user that the system is preparing to arm. The user can enter a valid access code, or valid disarming procedure, to abort the arming sequence. Valid entries are 001 to 255.

[301]-[303], [305] Communication Telephone Numbers

The information in this section applies to Sections [301], [302], [303] and [305].

These sections determine which type of communicator is activated in the event of an alarm condition or other communicated event. The PC1404 only supports one method of communications, PSTN. GPRS and Ethernet communicators are not supported.

- Entry of [D] followed by a [Telephone Number] terminated with "F" configures the section for telephone dialing. E.g.: [D12223334444F]

Telephone Communications

All telephone number sections are 32 digits in length. Hexadecimal digits may be programmed in the telephone number to perform additional functions as follows:

Enter [✱][2][✱] – HEX B to dial "✱"
Enter [✱][3][✱] – HEX C to dial "#"
Enter [✱][4][✱] – HEX D for an additional dial tone search, as is required for PBX telephone systems
Enter [✱][5][✱] – HEX E to insert a 2-second pause in the telephone number

i	There is an automatic 2-second pause before additional dial tone searches are initiated.

HEX A is not used.
HEX F represents the end of the phone number (everything after F is ignored).
Pressing [#] in these sections exits and saves the entire phone number.
The panel does not attempt to communicate if no phone number is programmed. This applies to phone numbers 1 to 4.

[304] Call Waiting Cancel String

This is a 6-digit HEX entry that is used to disable the call waiting on a call waiting equipped phone line. This is typically ✱70 and is programmable using Installer Section [304]. Dialing this string before a phone number will disable call waiting for the duration of the call. If this section is programmed (not FFFFFF), and Section [382] Option 4 is ON, the panel dials this string in place of the first digit of the phone number. This only applies to the first attempt that is made to each phone number. If 6 digits are not required, terminate the string with hex Fs to create a 6 digit string.

[310] System Account Number

Program the System Account Number, which will be used by the panel when communicating. Only the SIA format supports 6-digit account numbers. If a 4-digit account number is required, program the last two digits as data [FF]. If the account code needs to have a 0 in it, and the format is programmed as CID or BPS, a HEX digit A must be used to send a 0.

[320]-[324] Alarm Reporting Codes

These reporting codes are used by the communicator to transmit zone alarms and restores for Zones 1 to 8. These reporting codes are sent to the Alarm & Restore call direction group

i	Zone alarms transmit to the System Test Transmission Call Direction when they are being transmitted as part of the walk test (enabled if Section [382] Option [2] is ON).

[328] Miscellaneous Alarm Reporting Codes

Duress Alarm

This reporting code is transmitted whenever a Duress code is used to perform any function on the system. The reporting code is sent to the Alarm & Restore call direction group.

Opening After Alarm

This reporting code is transmitted when the system is disarmed after an alarm; if an alarm occurred during the previous armed period. The reporting code is sent to the Alarm & Restore call direction group.

Recent Closing

This reporting code is transmitted when an alarm occurs within two minutes of system arming.

Zone Expander Supervisory Alarm/Restore

This reporting code is generated when a keypad with a keypad zone enrolled is no longer responding to the panel on keybus. The reporting code is sent to the Alarm & Restore call direction group.

Police Code Alarm

Two zones on the same partition go into alarm during any given armed-to-armed period (including 24-Hr. zones).

[329] Priority Alarm and Restore Reporting Codes (Fire, Auxiliary, and Panic Alarms/Restores)

If enabled and used to generate manual alarms, these reporting codes are sent to the Alarm & Restore Call Direction group.

Note: Auxiliary alarms can be any non-medical alarm.

[330]-[334] Tamper/Restore Reporting Codes, Zones 01-8

These reporting codes are used by the communicator to transmit zone tampers and restores for Zones 1 to 8. These reporting codes are sent to the Tamper Alarm & Tamper Restore call direction group of the system.

[338] Miscellaneous Tamper Reporting Codes

General System Tamper & Restore
These reporting codes are sent to the system Tamper Alarm & Tamper Restore call direction group when a panel tamper occurs.

Keypad Lockout
Whenever the system enters keypad lockout, this reporting code is sent to the system Tamper Alarm & Tamper Restore call direction group.

[339]-[340] Closing (Arming) Reporting Codes (Access Codes 1-32)

When the system is armed, a closing reporting code is transmitted after the exit delay expires for the user code that armed the system. These reporting codes are sent to the Opening & Closing call direction group of the system. In addition, "Armed in Stay Mode," "Armed in Away Mode" or "Armed in Night Mode" is logged to the event buffer.

[341] Miscellaneous Closing (Arming) Reporting Codes

Automatic Zone Bypassing
This stops transmission of zone bypass information for systems set up for an automatic communication format (SIA and Contact ID). Enter [00] to disable the automatic zone bypassing communications. If the zones are to be identified, they are transmitted with the Partial Closing to the Opening & Closing call direction group. (24 Hour zone types transmit that they have been bypassed when the user exits the bypassing menu).

Partial Closing
If zones were manually bypassed at the time of arming, this reporting code is transmitted to the central station with the Closing code to warn of a security compromise. Automatic bypasses caused by Stay arming do not cause this code to be transmitted. Zones force armed by automatic arming transmit in the manner described above. If SIA is used, each zone is identified using the UB-XX (un-typed bypass) identifier. The identified zones follow the partial closing code and precede the closing transmission. This reporting code is sent to the Opening & Closing call direction group.

Special Closing
This reporting code is transmitted if the system is armed without an access code using Keyswitch Zone, Downloading, Quick Arm [✱][0], or Stay or Away function keys. In addition, either "Armed in Stay Mode," "Armed in Away Mode," or "Armed in Night Mode" is logged to the event buffer for all closing types. This reporting code is sent to the Opening & Closing call direction group.

Late to Close
This reporting code is transmitted whenever the auto-arm pre-alert sounds (if the Late to Close option is enabled).

Exit Fault
If an Exit Error occurs and entry delay expires before the system is disarmed, this reporting code is sent. This reporting code is sent to the Openings & Closings call direction group

i	If the delay zone that caused the exit error has cross zoning enabled, the exit fault and zone alarm still transmit if a second zone is not violated. This is to inform the central station that the premise is not secure. The local alarm sequence follows the cross zoning rules. The exit error is transmitted with the zone alarm that caused the fault, even if that zone has a transmission delay enabled.

[342]-[343] Opening (Disarming) Reporting Codes (Access Codes 1-32)

When the system is disarmed, an opening Reporting code for the corresponding user is transmitted.
These reporting codes are sent to the Opening & Closing call direction group.

[344] Miscellaneous Opening (Disarming) Reporting Codes

Auto-Arm Cancellation
This reporting code is transmitted if Auto-Arming is Cancelled or Postponed.

Special Opening
If the system is disarmed (opened) by using keyswitch zone or downloading, this reporting code is transmitted to the Opening & Closing call direction group.

[345]-[346] Maintenance Alarm and Restore Reporting Codes

Battery Trouble & Restore
This trouble is reported if the standby battery is low or disconnected. These reporting codes are sent to the System Maintenance call direction group.

AC Failure Trouble & Restore
If the AC supply has failed or has been restored, these reporting codes are sent. A programmable delay (001-255 minutes, Section [377]) applies to both the trouble and the restore. These reporting codes are sent to the System Maintenance call direction group.

Bell Circuit Trouble
An open or short circuit detected across bell terminals causes this trouble to be reported.

Fire Trouble & Restore
An open circuit or any Low Sensitivity, Tamper or Fault report from a smoke detector causes this trouble to be reported. These reporting codes are sent to the System Maintenance call direction group.

Auxiliary Power Supply Trouble & Restore
If an auxiliary voltage supply trouble occurs (the Aux PTC has caused the auxiliary supply to stop outputting power), this trouble is reported. These reporting codes are sent to the System Maintenance call direction group.

i	When the Aux Positive Temperature Co-efficient (electronic fuse) enters the open state due to a short or high current draw, if the short is removed and a load is still applied, the Aux+ output will not recover. It must be powered down and back up again to restore this condition.

TLM Alarm
The TLM Restore code is sent when the telephone trouble condition is restored. This reporting code is sent to the System Maintenance call direction group.

General System Trouble & Restore
These reporting codes are transmitted via System Maintenance call direction group to report hardware fault troubles that occur on the system.

General System Supervisory Trouble & Restore
These reporting codes are transmitted via the System Maintenance call direction group when an enrolled TLXXX module has been detected as absent or restored.

System Reset (Cold Start)
In the event of a total power failure, the Cold Start reporting code is transmitted to the central station when power is restored to the panel. The reporting code is sent after 2 minutes to allow the panel to stabilize, although the event is logged in the buffer at 00:00. An entry of 00 in this section disables the reporting code.

[347] Miscellaneous Maintenance Reporting Codes

Failure to Communicate (Phone Numbers 1, 2, 3 & 4)
When events fail to communicate to either telephone number, this reporting code is transmitted the next time a communication is successful. The information is transmitted in the following order:
• Old Event(s)
• Failure To Communicate (Phone #1)
• New Event(s)
The FTC reporting code does not follow any call direction "group." It is sent to every group's call directions upon transmission of "failed to communicate" events. When event(s) fail to communicate to a telephone number, no attempt to communicate is made again until another event is sent to that phone number.

Event Buffer 75% Full
This reporting code is generated after 96 events have been logged to the system event buffer since the panel was last uploaded with DLS. This reporting code is sent to the system maintenance call direction group.

DLS Lead In and Lead Out
When call-back is enabled, the control panel transmits the DLS Lead In reporting code before calling back the downloading computer. The DLS Lead Out reporting code is transmitted by the panel every time DLS has completed a successful DLS session with the control panel. The DLS Lead In reporting code is transmitted in two ways: after the panel has been successfully called by DLS, but before the panel calls DLS back via the downloading telephone number when call-back is enabled, or upon a user-initiated call-up. These reporting codes are sent to the System Maintenance call direction group.

i	If DLS is terminated by an alarm, the alarm system will not communicate the DLS lead out event.

General Zone Fault & Restore
This reporting code is sent whenever a zone has entered the fault state. This occurs when there is a short on DEOL hardwired zones. These reporting codes are sent to the System Maintenance call direction group.

Delinquency Reporting Code
The Delinquency Reporting code is transmitted in one of two ways. If Section [380] Option [8] is OFF, it is transmitted when the system has not been armed for the number of days programmed in Section [377]. If Section [380] Option [8] is ON, it is transmitted when no zone activity has been detected on the system for the number of hours programmed in Section [377]. This reporting code is sent to the System Maintenance call direction group.

i	The Activity Delinquency timer is active when the system is armed in Stay mode, and not active in Away mode or Night mode arming.

Installer Lead In and Lead Out
The Installer Lead In and Lead Out reporting codes are sent when the panel enters and exits Installer Programming respectively.

[348] Test Transmission Reporting Codes

Walk Test Begin/End
These reporting codes are sent when the walk test is initiated and terminated. These codes precede and terminate the alarm reporting codes for the zones that are activated during the walk test period, if the alarms are to be transmitted (Section [382] Option [2]). The walk test reporting codes are sent to the System Test Transmission call direction group.

Periodic Test Transmission
When the programmed interval and time of day have elapsed, this reporting code is transmitted. This reporting code is sent to the System Test Transmission call direction group.

System Test
When the [✱][6][Master Code][4] command is used to perform a manual system test, this reporting code is sent to test the communicator. This reporting code is sent to the System Test Transmission call direction group.

[350] Communications Format Options
This section requires four 2-digit entries (1 per phone number). See Appendix B: Communicator Format Options.

[351]-[376] Communicator Call Direction Options
Communicator call directions can be configured for 4 different phone numbers. Each reporting code falls under one of the following 5 groups:
- Alarms & Restores
- Openings & Closings
- Tampers & Restores (including System Tampers)
- System Maintenance Alarms & Restores
- System Test Transmissions

Each group can be assigned to the following call directions:

Option 1:   1st Telephone Number

Option 2:   2nd Telephone Number

Option 3:   3rd Telephone Number

Option 4:   4th Telephone Number

[377] Communicator Variables
Program a 3-digit number for each program entry:

Option	Description
[1]	**Swinger Shutdown (Alarms):** Maximum number of alarm/restore transmissions per zone. Valid entries: [000] to [014]. Program data [000] to disable shutdown. For CP-01, valid entries are 001-006 and 000 is an invalid entry.
[2]	**Swinger Shutdown (Tamper):** Maximum number of tamper alarm/restore transmissions per zone. Valid entries: [000] to [014]. Program data [000] to disable shutdown.
[3]	**Swinger Shutdown (Maintenance):** Maximum number of trouble alarm/restore transmissions per trouble condition. Valid entries: [000] to [014]. Program data [000] to disable shutdown.
[4]	**Communicator (Transmission) Delay:** Time, in seconds, panel delays reporting an alarm event. Valid entries: [000] to [255]. For CP-01, valid entries are 015-045.
[5]	**AC Failure Communication Delay:** Time in minutes or hours that panel delays reporting an AC trouble event or restore. Valid entries [000] to [255] **Note:** AC Restore communications follow the same delay.
[6]	**TLM Trouble Delay:** Time, in 3 second checks, before the system considers the phone line disconnected. Valid entries: [003] to [255] (e.g., 3 x 3 seconds = 9 seconds). **Note:** TLM Restore follows the same delay.
[7]	**Test Transmission Cycle (Land Line):** Number of days between test transmission reporting events. Valid entries: [001] to [255]. [000] disables the Test Transmission.
[8]	For Future Use

[9]   **Delinquency Transmission Delay:** Number of hours (Activity Delinquency) or days (Arming Delinquency) the panel delays before transmitting the event to the central station. Whether this value is in hours or days is determined if Delinquency is for Activity (Hours) or Closing (Days) as specified in Section [380] Option 8. The timer starts under the following conditions:
1. When the system is armed in Stay Mode;
2. When the system is disarmed;
3. When a zone is violated and restored while system is disarmed or stay armed (Interior, Interior Delay, Interior Stay/Away, Delay Stay/Away, Interior Delay or Night zones only.

The activity delinquency timer will be ignored when the system is armed in away mode. Zones that are bypassed in [*][1] will not reset the timer. Automatic restore conditions or activity from fire or CO zones should not reset this counter. If the system is programmed to monitor Closing Delinquency, the timer will be programmed in days. The timer will restart every time the system is disarmed. Valid entries: [001] to [255].

[10]   **Communication Cancel Window:** Time, in minutes, after an alarm has occurred that the system will report a Communication Cancel reporting event if the system is disarmed. The keypad will beep rapidly to indicate that the Communication Cancel reporting event has been communicated successfully. Valid entries: [001] to [255]. Entering [000] will disable this window.

[378] Test Transmission Time of Day

The panel can be configured to communicate a test transmission signal to the monitoring station. Program 4 digits – [HHMM] using military standard. For a test transmission at 11:00 pm, program data [2300]. Valid entries are [0000] to [2359], [9999] to disable.

[380] First Communicator Options

Option	Description
[1] **Communications**	**ON: Communications Enabled.** The system communicator is enabled and all events with reporting codes will be reported to the monitoring station. **OFF: Communications Disabled.** The communicator is disabled and events will not be transmitted to the monitoring station. Downloading may still be performed if enabled.
[2] **Restore Transmission**	**ON: Restores Transmissions on Bell Time-out.** Zone restore reporting codes will not be transmitted until the zone has been restored, the bell cut-off time has expired, and the zone is not in swinger shutdown. If the zone is not restored when the bell cut-off time expires, the restore will be transmitted when the zone physically restores or when the system is disarmed. **Note:** 24 Hr Zones will not restore until physically restored. **OFF: Restore Transmissions Follow Zones.** Zone restore reporting codes will be transmitted when the zone is physically restored and the zone is not in swinger shutdown. If the zones are still violated when the system is disarmed, the restore codes will be transmitted when the system is disarmed.
[3] **Dialing Method**	**ON: Pulse Dialing Enabled**. The panel uses rotary (pulse) dialing. **OFF: DTMF Dialing.** The panel uses touchtone (DTMF) dialing.
[4] **Pulse Dialing Options**	**ON: Switch to Pulse Dialing after 4 DTMF Attempts.** If DTMF dialing is enabled, the control panel dials telephone numbers using DTMF dialing for the first 4 attempts. If unsuccessful, the control panel switches to pulse (rotary) dialing for the remaining attempts. **OFF: DTMF Dial for all Attempts.** If DTMF dialing is enabled, the control panel dials telephone numbers using DTMF dialing for all dialing attempts.
[5]	Future Use
[6]	**ON: Alternate Dialing Enabled.** The communicator switches to the next backup phone number in the sequence after each failed dialling attempt. This continues until communications are successful, or the sequence has been repeated 5 times. **OFF: Call Primary Number, Backup to Secondary.** If 5 attempts to communicate to the primary telephone number fail, the communicator switches to the next backup and makes up to 5 more attempts. If the communication failure condition persists, the communicator will attempt the second and third backup phone numbers if programmed.
[7]	Future Use
[8] **Delinquency**	**ON: Delinquency Follows Zone Activity (Hours).** The Delinquency feature follows zone activity—if there is no zone activity on the system, the delinquency transmission delay counter in Section [377] begins counting in hours. When the counter reaches the programmed value, the panel communicates the delinquency code to the central station. **Note:** This code will not be transmitted for partitions that are "Away" armed. Activity on bypassed zones does not affect this timer. The timer is reset on arming. **OFF: Delinquency Follows Arming (Days).** The Delinquency feature follows arming—if a partition has not been armed for a programmed number of days, the panel communicates the delinquency code. This feature may be disabled by entering 000 in Section [377].

[381] Second Communicator Options

Option	Description
[1] Ringback	**ON: Opening After Alarm Keypad Ringback Enabled.** When the Opening After Alarm reporting code is successfully transmitted to the monitoring station, the keypad sounds a series of 8 beeps to confirm to the end user that the Opening After Alarm Code was sent and received. This Ringback occurs for each Opening After Alarm code successfully reported. **OFF: Opening After Alarm Ringback Disabled.** When the opening after alarm reporting code is successfully transmitted to the monitoring station, no keypad indications will be provided.
[2]	Future Use
[3] SIA Reporting Codes	**ON: SIA Uses Programmed Reporting Codes.** This option is for use with the SIA communication format. If 00 is programmed in the reporting code section, the event will not be communicated. When this option is ON and there is a valid reporting code programmed in the reporting code section, the programmed reporting code will be transmitted. If FF is programmed as a reporting code, the event will not be communicated.

Reporting Code Entry	Option ON	Option OFF
00	No Transmission	No Transmission
FF	No Transmission	Auto Rep Code Sent
01-FE	01-FE Sent	Auto Rep Code Sent

OFF: SIA Uses Automatic Reporting Codes. When this option is OFF and there is a valid reporting code (01-FE) or FF programmed in the reporting code section, the panel transmits an automatic reporting code for SIA only. This would be used when automatic reporting codes are required but there is a requirement for a different reporting code (like a pulse format).

Option	Description
[4] Closing Confirmation	**ON: Closing Confirmation Enabled.** The system beeps the keypad 8 times after successfully transmitting a Closing reporting event. **OFF: Closing Confirmation Disabled.** The keypad does not beep.
[5]-[6]	Future Use
[7] CID Reporting Codes	**ON: Contact ID Uses Programmed Reporting Codes.** The Contact ID communications format uses programmed reporting codes when transmitting to a central station. **OFF: Contact ID Uses Automatic Reporting Codes.** The Contact ID communications format uses automatic reporting codes as shown in Appendix A when transmitting to central station.
[8]	Future Use

[382] Third Communicator Options

Option	Description
[1]	Future Use
[2] Walk Test Communications	**ON: Alarm Communications Enabled During Walk Test.** The system transmits all alarms during Walk Test. **OFF: Alarm Communications Disabled During Walk Test.** The system does not report alarm events during Walk Test, even if alarms are programmed.
[3] Communications Cancelled Message	**ON: Communications Cancelled Message Enabled.** The Communications Cancelled (LCD) or CC (Icon) message will be displayed if alarms are acknowledged during the transmission delay time + arming cancellation window. This message will be displayed for 5 seconds on all keypads. The acknowledgement can be made with an access code, disarming function key or a Keyswitch zone. **OFF: Communications Cancelled Message Disabled.** The Communications Cancelled LCD message and CC Icon keypad message will not be created by any method.
[4] Call Waiting Cancel	**ON: Call Waiting Cancel Enabled.** The call waiting dialing string programmed in Section [304] will be dialed before the first attempt of each phone number. All subsequent dialing attempts to the same phone number will not use the call waiting cancel string. **OFF: Call Waiting Cancel Disabled.** The system does not dial the Call Waiting Cancel string. **Note:** A call waiting cancel on a non-call waiting line will prevent successful connection to the central station.
[5]	Future Use
[6] AC Fail Communications Timing	**ON: System AC Failure Transmission Delay in Hours.** The System AC Failure Transmission Delay in Section [377], Option 5 is programmed in hours. **OFF: System AC Failure Transmission Delay in Minutes.** The System AC Failure Transmission Delay in Section [377], Option 5 is programmed in minutes.

[7] **Residential Dial**	**ON: Number of Dialing Attempts is 1 for Residential Dial.** If the residential dial format is programmed, the panel will only attempt to call the user's phone once. Regardless of whether the alarm is acknowledged by the end user by pressing a DTMF digit, the panel will not call back unless a new alarm has occurred. **OFF: Residential Dialing Attempts is 5.** If the residential dial format is programmed the panel will attempt to call the user's phone until the alarm is acknowledged. The panel will attempt to call the user up to 5 times if no DTMF digits are detected.
[8]	Future Use

[383] Fourth Communicator Options

Option	Description
[1]	Future Use
[2] **PH#2 Backup Option**	**ON: PH#2 Backs Up PH#1.** Phone number 2 backs up phone number 1 if phone number 1 fails to communicate (FTC). Phone number 2 communicates using the same format as phone number 1 when this option is ON. **OFF: PH#2 is Dedicated.** Phone number 2 does NOT back up phone number 1. Events are communicated to PH#2 if the call directions are enabled for it, and the format is programmable in Section [350].
[3] **PH#3 Backup Option**	**ON: PH#3 Backs Up PH#2.** Phone number 3 backs up phone number 2 if phone number 2 fails to communicate (FTC). Phone number 3 communicates using the same format as phone number 2 when this option is ON. **OFF: PH#3 is Dedicated.** Phone number 3 does NOT back up phone number 2. Events are communicated to PH#3 if the call directions are enabled for it, and the format is programmable in Section [350].
[4] **PH#4 Backup Option**	**ON: PH#4 Backs Up PH#3.** Phone number 4 will back up phone number 3 if phone number 3 fails to communicate (FTC). Phone number 4 communicates using the same format as phone number 3. **OFF: PH#4 is Dedicated.** Phone number 4 does NOT back up phone number 3. Events are communicated to PH#4 if the call directions are enabled for it, and the format is programmable in Section [350].
[5] **FTC Option**	**ON: FTC Events Communicate.** The panel will attempt to retransmit events that have failed to communicate. The FTC Restore reporting code is transmitted via the corresponding call direction. **OFF: FTC Events Do Not Communicate.** The panel will not attempt to retransmit events that have failed to communicate.
[6]-[8]	Future Use

[401] Downloading Option Codes

Option	Description
[1] **Answering Machine Override**	**ON: Answering Machine Override Enabled.** The system will answer calls for downloading if a successful double call routine is detected by the panel. Have the downloading computer call the system and let the phone line ring once or twice. After 1 or 2 rings, hang up. If called back within the programmed double call time (000 to 255 seconds), the panel will answer on the first ring. **OFF: Answering Machine Override Disabled.** The system will not answer incoming calls using the double call routine unless the user enables the DLS window. This option can be enabled by turning Option 2 in Section [401] ON.
[2] **DLS Window**	**ON: User Can Enable DLS Window.** The user can use [*][6][Master Code][5] to enable a 6 hour window in which the panel will answer calls for downloading if a successful Double Call routine is detected. If this option is enabled, the window is open upon power up. The window is on for the full 6 hours if enabled. **OFF: User Cannot Enable DLS Window.** The user cannot enable a window for DLS calls. **Note:** Options 1 and 2 are not related. One does not need to be enabled for the other to perform its function.
[3] **Call Back**	**ON: Call-Back Enabled.** When the system answer the downloading computer's call, both the computer and the panel will hang up. The panel will then call the downloading computer's telephone number programmed in Section [402], and connect to the DLS computer. If more than one downloading computer is used, this option should be disabled. **OFF: Call-Back Disabled.** The downloading computer will have immediate access to the panel once it is identified as a valid system.
[4] **User Call-up**	**ON: User Call-up Enabled.** When this feature is enabled, the user may initiate a single call of the Downloading Telephone Number by entering [*][6][Master Code][6]. **OFF: User Call-up Disabled.** An error tone will be generated when [*][6][Master Code][6] is entered.
[5] **Auto-Event Buffer Upload**	**ON: Auto Event Buffer Upload Enabled.** After the panel has communicated the "Event Buffer 75% Full" event to the central station, the panel will call the Downloading Computer's telephone number. DLS software will then perform an event buffer upload upon successful connection. **Note:** The DLS software must be waiting for the incoming call, and have a batch file configured to perform this function. **OFF: Auto Event Buffer Upload Disabled.** After the panel has communicated the "Event Buffer 75% Full" event to central station, the panel will not call the Downloading Computer's telephone number.

[6] **Baud Rate Selection**	**ON: 300 Baud Call-up.** 300 baud is the minimum baud rate used by 56K modems. When performing call-back or user initiated call-up with a 56K modem, this option should be enabled. **OFF: 110 Baud Call-up.** 110 baud is the supported baud rate for the MD-12 modem. When performing call-back or user initiated call-up with an MD-12, this toggle option should be disabled.
[7]-[8]	Future Use

[402] DLS Downloading Computer's Telephone Number

This is a 32-digit hexadecimal programming section. The downloading computer telephone number is for user-initiated call-up and call-back DLS functions. Program the phone number as required. HEX digits can be included for special applications:

HEX [A]	**Not used**
HEX [B]	**Simulates a [✱] key press**
HEX [C]	**Simulates a [#] key press**
HEX [D]	**Additional dial tone search**
HEX [E]	**2-second pause**
HEX [F]	**End of phone number marker**

[403] DLS Downloading Access Code

This 6-digit hexadecimal code allows the panel to confirm that it is communicating with a valid downloading computer. The DLS access code in the panel and the DLS computer must match.

Note: The Downloading Access Code MUST BE PROGRAMMED BY THE INSTALLER. For security reasons this value must never be left at default.

[404] Panel ID Code

Program the 6-digit Panel Identification Code. This code is used by the downloading computer to verify the correct account is calling back (Call Back feature) or to identify which customer account file should be used (User Initiated DLS features). It is not used if the DLS computer calls the panel.

[405] Double Call Timer

Program the maximum time in seconds, between calls, when connecting to the panel using the Double Call feature.

[406] Number of Rings to Answer On

The value in this section determines how many rings the panel will automatically pick up on in order to establish a DLS connection.

Default value is 000 rings. Valid entries are [000] to [020].

i	If Section [401] Option 1 is enabled, and there is a value greater than 000 in Section [406], either method will allow a DLS connection depending on how the installer calls the premises.

[501]-[514] PGM Output Attributes

Allows the installer to customize PGM attributes. The following attributes can be enabled or disabled for each PGM output. When a PGM option is changed, the corresponding PGM's attributes are defaulted.

Option   Description

[1]-[2]	Future Use
[3]	**Output Level** **ON:** Output energizes when activated. **OFF:** Output de-energizes when activated.
[4]	**Output Options** **ON: Output Pulsed.** When using [✱][7], the output activates for the duration programmed in the PGM output timer, Section [170]. The default activation time is 5 seconds. **OFF: Output On/Off.** The output toggles between on and off when the corresponding [✱][7] command is entered.
[5]	**Access Code Options** **ON:** Access code required for activation. **OFF:** No access code required for activation.

Note: PGM Attribute 3 applies to PGM types 01, 03, 05, 06, 07, 08, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 25, 27, 29 and 30.

Note: PGM Attribute 4 applies to PGM types 11, 19, 20, 21 and 22.

Note: PGM Attribute 5 applies to PGM types 19, 20, 21, and 22.

The following attributes are available for the System Trouble PGM Option [09].

System Trouble PGM (Type 09)

[1] Service Required
[2] A.C. Failure
[3] Telephone Line Fault
[4] Communications (Failure to Communicate)
[5] Device (Fire) Fault
[6] Device Tamper—hardwired device
[7] Future Use
[8] Loss of Clock

The following attributes are available for the System Event PGM Option [10]

System Event PGM (Type 10)

[1]	Burglary	Delay, Instant, Interior, Stay/Away, Night, and 24 Hour Burglary Zone Types
[2]	Fire	⬓ Key, Fire zone
[3]	Panic	⬓ Key and Panic zones
[4]	Medical	⬓ Key, Medical, and Emergency zones
[5]	Supervisory	Supervisory, Freeze, and Water zones
[6]	Priority	Gas, Sprinkler, CO, 24-Hour Heat and 24-Hour non-Latching Tamper zones
[7]	Hold-up	Duress alarms
[8]	Output Options	**ON:** Output Follows PGM Timer (Attribute 8). The output activates for the duration programmed for the PGM output timer (Section [170]).
		OFF: Output is latched. The output is active until a valid access code is entered.

> **i** If a system event PGM is programmed to follow the command output timer (Attribute 8 On), all other PGM attributes must be enabled.

[551-564] Extended PGM Attributes for PGM Type 29, Zone Follower [551]-[564]

The following attributes are available for the Zone Follower PGM Option [29]:

[1]-[2] Future Use   **ON:** Output energizes when activated
[3]   Output level   **OFF:** Output de-energizes when activated

[4]-[7] Future Use   **ON:** AND Logic
[8]   Priority   **OFF:** OR Logic

The following attributes are programmable in Installer Sections [551-564]. Depending on which PGM is used for zone follower (Onboard, PC5208 or PC5204), the attributes need to be changed in the appropriate section.

Zone 1	**ON:** Zone 1 Enabled for Zone Follower
	OFF: Zone 1 Disabled for Zone Follower
Zone 2	**ON:** Zone 2 Enabled for Zone Follower
	OFF: Zone 2 Disabled for Zone Follower
Zone 3	**ON:** Zone 3 Enabled for Zone Follower
	OFF: Zone 3 Disabled for Zone Follower
Zone 4	**ON:** Zone 4 Enabled for Zone Follower
	OFF: Zone 4 Disabled for Zone Follower
Zone 5	**ON:** Zone 5 Enabled for Zone Follower
	OFF: Zone 5 Disabled for Zone Follower
Zone 6	**ON:** Zone 6 Enabled for Zone Follower
	OFF: Zone 6 Disabled for Zone Follower
Zone 7	**ON:** Zone 7 Enabled for Zone Follower
	OFF: Zone 7 Disabled for Zone Follower
Zone 8	**ON:** Zone 8 Enabled for Zone Follower
	OFF: Zone 8 Disabled for Zone Follower

[601] Closing by Master Code

When the system is armed, a closing reporting code is transmitted after the exit delay expires for the master code that armed the system. This reporting code is sent to the Opening & Closing call direction group of the system. In addition, either "Armed in Stay Mode" or "Armed in Away Mode" is logged to the event buffer.

[605] Opening by Master Code

When the system is disarmed, an opening Reporting code for the Master code is transmitted. These reporting codes are sent to the Opening and Closing call direction group.

[700] Automatic Clock Adjust

The value entered here adds or subtracts seconds at the end of each day to compensate for inaccuracies in the system time. Valid entries are 00-99, with 60 seconds being the default. To determine the value to be programmed in this section, perform the following:
1. Monitor the time lost by the panel over a period of time.
2. Calculate the average amount of time per day the panel gains or loses.
3. Add or subtract this value (seconds) from 60 and enter the value.

Example 1: The clock loses an average of 9 seconds a day. Solution: Instead of loading 60 seconds for the last minute of each day, program the panel to load 51 seconds in Section [700]. This will speed up the panel by 9 seconds every day, correcting the problem.
Example 2: The clock gains an average of 11 seconds a day. Solution: Program the panel to adjust the clock by 71 seconds for the last minute of each day in Section [700]. This will slow down the panel's clock by 11 seconds, correcting the problem.

[701] First International Options

Option		Description
[1]	AC Configuration	**ON: 50 Hz AC.** The incoming AC power cycles at 50Hz. **OFF: 60 Hz AC.** This is the North American standard where the incoming AC power cycles at 60Hz.
[2]	Crystal Time Base	**ON: Crystal Time Base Enabled.** The system uses the internal crystal for the internal panel clock; used in case of unstable AC power output. **OFF: Crystal Time Base Disabled.** The 50Hz or 60Hz AC power input is usually very stable and can be used to keep time.
[3]	Arming Inhibit	**ON: AC/DC Arming Inhibit and Battery Check Enabled.** When an AC or DC trouble is present, the system will not arm. This includes Keypad, Keyswitch, Automatic and DLS arming. If enabled and arming is attempted, the system will perform a System Battery check as well as a Battery Check on all peripheral modules that support a backup battery (PC5204, PC5200). **OFF: AC/DC Arming Inhibit Disabled.** The system can be armed, regardless of the presence of an AC or DC trouble, and will not check system batteries upon arming. It is highly recommended that AC troubles be displayed if this option is used (Section [016] Option 1).
[4]	Latching System Tampers	**ON: All System Tampers Require Installer Reset.** If any system tamper condition occurs, which includes module and zone tampers, the Installer Code must be entered before the system is permitted to arm. The tamper condition must also be restored prior to entering Installer Programming to reset the condition. All arming methods are impeded, including auto-arming and no activity arming. The latched tamper can also be reset via DLS. **OFF: System Tampers Do Not Require Installer Reset.** If any system tamper condition occurs, an installer reset is not required.
[5]	Access Code Length	**ON: 6-digit User Access Codes.** All access codes are 6 digits long except the panel ID code and the DLS Access code. -System Master Code = XXXX56 XXXX = Previous Code (1234) -Installer Code = YYYY55 YYYY = Previous Code (5555) **OFF: 4-digit User Access Codes.** All access codes are 4 digits long. If any 6 digit user codes are programmed, the last 2 digits are removed.
[6]	Busy Tone Detection	**ON: Busy Tone Detection Enabled.** If a busy tone is detected, the communicator will release the phone line and try to place the call again after the Delay Between Dialing Attempts counter has expired. **OFF: Busy Tone Detection Disabled.** The communicator will use the standard dialing procedure for each attempt, and shall wait 40 seconds for a handshake after dialing a phone number, even if the number being called is busy.
[7]-[8]	Future Use	

[702] Second International Options

Option		Description
[1]	Pulse Dialing Option	**ON: Pulse Dialing Make/Break ratio is 33/67.** The communicator uses 33/67 make/break ratio when pulse dialing. **OFF: Pulse Dialing Make/Break ratio is 40/60.** The system uses 40/60 make/break ratio.
[2]	Force Dialing	**ON: Force Dialing Enabled.** If the first attempt by the panel to call the monitoring station fails to detect a dial tone, on every subsequent attempt the panel will dial regardless of the presence of dial tone. **OFF: Force Dialing Disabled.** The system dials the programmed telephone number only if dial tone is detected.
[3]	Future Use	Future Use
[4]	Handshake	**ON: 1600Hz Handshake.** The communicator responds to a 1600Hz handshake for BPS formats. **OFF: Standard Handshake.** The communicator responds to the handshake designated by the format selected (1400Hz or 2300Hz).

[5]	I.D. Tone	**ON: ID Tone Enabled.** After the telephone number is dialed, the panel will emit a tone (as specified by Option 6).
		OFF: ID Tone Disabled. After the telephone number is dialled, the panel will not emit an I.D. Tone.
[6]	I.D. Tone Frequency	**ON: 2100 Hz I.D. Tone.** After the telephone number is dialed, the panel will emit a 2100 Hz ID tone if enabled in Section [701] Option 5.
		OFF: 1300 Hz. ID Tone. After the telephone number is dialed, the panel will emit a 1300 Hz ID tone if enabled in Section [701] Option 5.
[7]	DLS Window	**ON: One-Time 1 Hour DLS Window.** The user-enabled DLS window, accessible through [*][6] user functions, is 1 hour in length and will be closed after a hang-up from a successful downloading call. This also controls the length of the DLS window following a power-up of the system.
		OFF: 6-Hour DLS Window. The user-enabled DLS window, accessible through [*][6] user functions, is 6 hours in length and will remain open after a hang-up from a successful downloading call. This also controls the length of the DLS window following a power-up of the system.
[7]	Future Use	
[8]	Future Use	

[703] Delay Between Dialing Attempts

For standard (force) dialing, the panel will go off-hook, search for dial tone for 5 seconds, hang-up for 20 seconds, go off-hook, search for dial tone for 5 seconds, and then dial. If there is no initial handshake recognized within 40 seconds, the panel will hang up. This programmable timer in Section [703] adds a delay before the next call is attempted, and is defaulted to 001 for a total of 6 seconds.

[900] Panel Version

This section will display the panel version, 0100.

[901] Installer Walk Test Mode Enable/Disable

The Installer Walk Test can be used to test the alarm state of each zone of the panel. Before beginning the walk test, ensure the following conditions are met:
1. The panel is disarmed.
2. The keypad blanking option is disabled (Section [016]: [3]).
3. The fire bell is continuous option is disabled (Section [014]: [8]).
4. The transmission delay is disabled, if transmission delay is not required (Section [377]).

Note: Fire Troubles are not supported in walk test. They will be visible when walk test ends.

To perform a walk test, do the following:
1. Enter Installer Programming.
2. Enter Section [901].

When any zone is violated, the panel activates the bell output for 2 seconds, logs the event to the event buffer, and communicates the condition to the monitoring station if programmed to do so. Check the event buffer or alarms in memory to ensure that all zones and FAP keys are functioning properly.

Note: If there is no zone activity on the system for a period of 15 minutes, the system ends walk test mode and returns to the normal state.

To stop the test, you must do the following:
1. Enter Installer Programming.
2. Enter Section [901].

Zones do not have to be restored to stop the test. The system will not create an alarm condition for zones still violated when walk test ends. The zones will need to be restored and a new alarm must be detected.

Note: The Alarm Memory is cleared upon entering Walk Test mode. When the walk test is complete, the Alarm Memory will indicate the zones tested. The Alarm Memory will be cleared the next time the panel is armed.

Note: While the walk test is in progress, the Armed, Ready and Trouble LEDs will flash at a rapid rate. At the start of the walk test, a TS (test begin) signal will be communicated. When the test is stopped, a TE (test end) signal is communicated.

[902] Module Supervision Reset

All modules will automatically enroll within one minute upon power-up. If modules are to be removed, this section should be entered after the removal of the modules so that it may clear any supervisory troubles that may still be present. When this mode is entered, the system will re-evaluate the components of the system.

Note: It may take up to a minute to enroll or delete a module. Before entering Section [903] to view the module field, this time should be taken into account.

If there is a module that is not communicating properly with the system and this section is entered, the module will be deleted from the system. Once the module supervision reset is performed, all pending supervisory trouble restore reporting codes will not be logged or transmitted.

[903] View Module Supervision

In this mode, the system displays all of the modules presently enrolled on the system as indicated by the corresponding lights below:

Indicator Light	Module
1-8	Keypads 1-8
18	PC5208
19	PC5204
26-29	PC520X 1-4

[990] Installer Lockout Enable

If enabled, the panel gives a distinctive audible indication on power-up (the phone line relay clicks 10 times). This feature has no effect on a software default (all programming will return to the factory defaults). However, if a hardware default is attempted while Installer Lockout is enabled, the default does not occur, and the fraudulent attempt is logged to the event buffer.

To enable Installer Lockout perform the following:

1. Enter Installer Programming.
2. Enter Section [990].
3. Enter the Installer Code.
4. Enter Section [990] again.

[991] Installer Lockout Disable

If Installer Lockout is disabled, the panel will restore all programming to factory defaults if a hardware or software default is performed on the main control panel.

To disable Installer Lockout perform the following:

1. Enter Installer Programming.
2. Enter Section [991].
3. Enter the Installer code.
4. Enter Section [991] again.

Factory Default Main Panel (Hardware)

Perform the following to restore the main control panel to its default settings:

1. Remove AC and battery from panel.
2. Remove all wires from the Zone 1 and PGM1 terminals.
3. With a piece of wire, short the Zone 1 terminal to the PGM1 terminal.
4. Apply AC power to the main panel.
5. When Zone 1 is lit on the keypad (or when Zone 1 shows as open on an LCD keypad) the default is complete.
6. Remove AC Power from the control panel.
7. Reconnect all original wiring and power up the panel.

NOTE: The panel will not default unless AC is used to power the panel.

[999] Restore Panel Factory Defaults

Perform the following to return control panel programming to its factory defaults:

1. Enter Installer Programming.
2. Enter Section [999].
3. Enter the Installer Code.
4. Enter section [999] again.

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