

# XL-20

Version 2

## Hardwired/Wireless System Hookup and Installation Instructions



FIRE BURGLARY INSTRUMENTS INC.

Subsidiary of Pittway Corp.

149 Eileen Way, Syosset, NY 11791

**THANK YOU for your purchase of the FBII XL-20 Hardwired/Wireless System.**

The purpose of the manual is to give you a brief overview of the XL-20 Control Panel, and provide instructions for installing a basic system. FBII is always available to serve YOU. Our SALES and TECHNICAL SUPPORT staff are available to assist you in any way possible.

**FOR  
TECHNICAL SUPPORT,  
CALL TOLL-FREE:  
(800) 645-7492**

Before you call Technical Service, be sure you:

- Check the wiring diagram and verify your connections.
- Check all fuses.
- Assure that the transformer and backup battery voltages are supplying the proper voltage levels.
- Verify your programming information.
- Read this manual thoroughly.
- Note the proper model number of this product, and the version level (if known) along with any documentation that came with the product.
- Have your company name and telephone number ready.

This information will allow us to service you more quickly and effectively. Please, remember to BE PATIENT while waiting on the telephone; your call will be answered as soon as possible.

FOR YOUR CONVENIENCE, a System Programming Worksheet is included at the back of this manual. This can be removed to help you record account information.

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# Conventions Used in This Manual

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Before you begin using this manual, it is important that you understand the meaning of the following symbols.

**UL**

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These notes include specific information which must be followed if you are installing this system for a UL Listed application.

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These notes include information that you should be aware of before continuing with the installation, and which, if not observed, could result in operational difficulties.

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These notes warn of conditions that could seriously affect the operation of the system, or could cause damage to the system. Please read each warning carefully. This symbol also denotes warnings about physical harm to the user.

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# New Features of Version 2

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The following new features have been added to the system in Version 2:

**Single Button Away Arming** - If selected, a single press of the Instant key will arm the system in the Away mode (Question 8 Location 3).

**Single Button Stay Arming** - If selected, a single press of the Stay key will arm the system in the Stay mode (Question 8 Location 3).

**CS Monitoring Indication** - This feature allows the CS to pulse the Instant LED a the end users keypad. This could be used to indicate to the user that their system is not being monitored and they should contact the CS (Question 8 location 2).

**Open/Close Transmission (Users 4 & 12)** - Option to restrict open close transmission to users 4 and 12 (keyfob 4).

**Tamper Disable** - Allows optional disable of the tamper from wireless points (Question 27 locations 1 and 2).

**Pool Zone** - Allows zone 4 to operate as a pool zone (as defined within the state of Florida) [question 5 location 4).

**Auto Stay Option** - When selected, all interior zones will automatically bypass at the end of exit time if a delay has not been violated during exit time.

## New Keyfob Definitions

B = Trigger 1 momentary operation (5-6 seconds)

C = Trigger 2 momentary activation

## New Trigger Types (Question 29)

12 = Trigger follows keypad sounder

13 = Momentary trigger for keyfob operation

# Introduction

The XL-20 Security System is a state-of-the-art microprocessor-based control/communicator. It is a hardwired/wireless system. You can program the system through any of the compatible keypads; or the system can be uploaded and downloaded remotely using the EZ-Mate PC Downloader Software. In addition, the software can perform remote control actions (arming, disarming, bypassing, etc.). Programming options are stored in nonvolatile reprogrammable EEPROM memory, which prevents from being lost in the event of a complete loss of power. Other features of the XL-20 include:

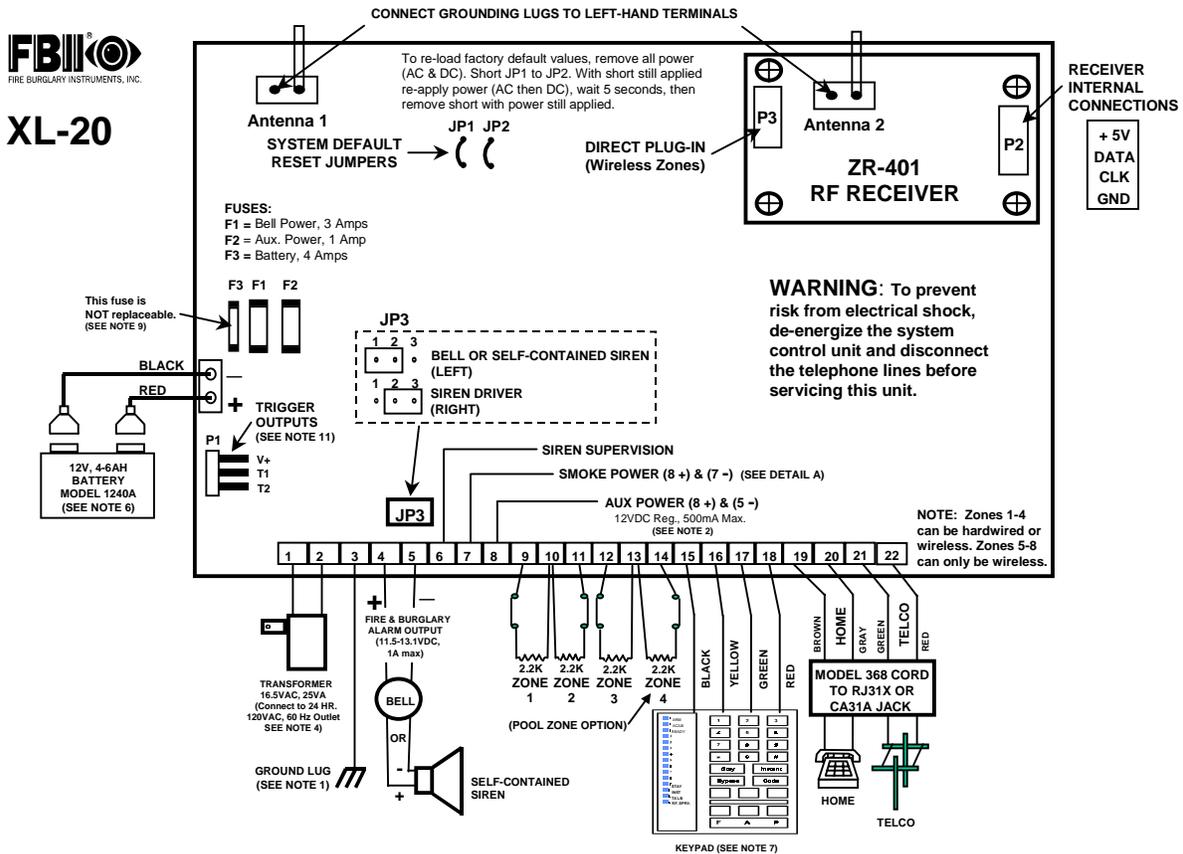
- 8 Zones (4 hardwired or up to 8 wireless)
- On-board RF receiver compatible with ADEMCO 5800 Series Transmitters
- Up to 6 remote wireless keyfobs for quick one-button commands
- Can handle up to 4 XK-108 keypads
- 6 user codes with capability for Ambush code and an arm-only user
- Dedicated Bell Supervision input
- Temporal Bell option for fire sound
- 4 selectable keypad emergency conditions
- Upload/download with remote commands with answering machine bypass
- Unattended and on-line downloading
- Default Lockout option to prevent hostile account takeovers
- Quick Arming, Quick Forced Arming and Quick Bypass option
- Arm Faulted Quick Arming
- Quick exit
- Indications on keypad for AC loss, Low Battery and Communication Failure
- Additional CS reporting formats (ADEMCO 4X2 Express & ADEMCO Point ID)
- Real-time AC-based system clock
- Central station reporting for Alarms, Troubles, Restores, Bypasses, Openings, Closings, Ambush, Panic, Keypad Fire, Keypad Medical, CS Test, Cancels, AC Loss, Low Battery, RF Tamper, RF Supervisory, RF Low Battery
- Can be programmed as a local system (No CS reporting)
- 4-wire smoke detectors with fire verification logic plus smoke power reset
- 2 entry and 1 exit time delays
- Swinger Shutdown capability
- Exit Error Warning
- European Ring Detect
- 98 Event Log History (viewable by PC downloading software only)
- End user chime ON/OFF toggle capability
- 2 programmable trigger outputs for various functions (including armed/ready indication and glassbreak detector reset)
- Input power: 16.5VAC 25VA; 12VDC, 4 - 7 AH
- Output power: 11.5 - 13.1VDC, 500mA
- Bell output power: 10 - 15.5VDC, 1A



# System Wiring And Hookup

## System Wiring Diagram

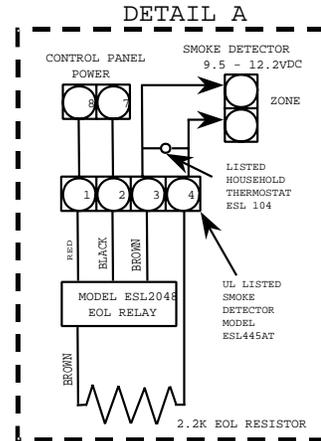
Connections for Household Fire/Burglar Alarm System (Per UL Standards UL985 And UL1023)



**SYSTEM STABILIZATION MODE:** Upon initial power-up of the system, all of the lights on the LED keypad(s) will go ON and then go OFF for approximately 2 min. 10 secs. if system was last armed. This occurs on a total power-up, on a system reset, or after completion of system programming. If the total system power is lost, then upon power restoral the system will return to the previous arming state. The 2 min. 10 secs.-interval is used to allow motion detectors (in interior zones) to stabilize on power-up in order to prevent false alarms. PUTTING A MOMENTARY JUMPER BETWEEN TERMINAL 15 AND 16 ON POWER-UP CAN DISABLE THIS OPTION. IF DISABLED, THE POWER-UP RESET TIME IS APPROXIMATELY 5 SECONDS. This is a normal condition.

**NOTES:**

1. Connect to a grounded metal water pipe (16ga. at 15 ft.).
2. Total aux. power available (including keypad power) is 500mA max. (180mA for UL and CSFM). Used for connection of devices. rated from 11.5 to 13.1VDC.
3. System must be tested on a weekly basis. For information, refer to manual.
4. Do not connect the transformer to a switch-controlled receptacle.
5. Installation of equipment and wiring methods must be in accordance with the National Electrical Code and ANSI/NFPA No. 74.
6. UL and CSFM require backup battery standby time of 24 hours minimum. Under normal conditions this battery will last 3 years. Use only exact replacements.
7. Maximum of 4 keypads.
8. Limited-energy cable must be used.
9. Non-replaceable fuse (F3). Return to manufacturer if blown. Do not solder in field.
10. Maximum for UL installations: Entry Delay, 45 sec.; Exit Delay, 60 sec.
11. Programmable trigger outputs. See manual for programming information.
12. If the Pool Zone option is enabled, program zone 4 as a delay zone and equip all doors that have access to the pool with switches for activating alarms, as described in the "Pool Zone Connections" paragraph later in this section.



UL INSTALLATIONS REQUIRE LISTED END-OF-LINE DEVICE. USE RESISTOR FROM EOL22 KIT. LOOK FOR LISTING MARK ON ITEM.

**WARNING:**  
THIS UNIT INCLUDES AN ALARM VERIFICATION FEATURE THAT WILL RESULT IN A DELAY OF THE SYSTEM ALARM SIGNAL FROM THE INDICATED CIRCUITS. THE TOTAL DELAY (CONTROL UNIT PLUS SMOKE DETECTOR) SHALL NOT EXCEED 60 SECONDS. NO OTHER INITIATING DEVICES SHALL BE CONNECTED TO THESE CIRCUITS UNLESS APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

CIRCUIT (ZONE)	CONTROL UNIT DELAY-SEC	SMOKE DETECTOR MODEL DELAY-SEC

20

PRODUCT COVERED UNDER  
US PATENT #4,791,668

**Compatible ADEMCO 5800 Series Wireless Devices**

1. 5801 4-Button Transmitter
2. 5802 Pendant Panic Transmitter
3. 5802MN Single-Button Transmitter
4. 5802CP Belt Clip Panic Transmitter
5. 5803 3-Button Transmitter
6. 5804 4-Button Transmitter
7. 5806 Photoelectric Smoke Detector
8. 5807 Photoelectric Smoke Detector
9. 5808 Photoelectric Smoke Detector
10. 5816 Miniature Transmitter
11. 5817 3-Point Transmitter
12. 5818 Recessed Magnetic Contact Transmitter
13. 5819 Wireless Shock Processor
14. 5849 Glassbreak Detector
15. 5890 Dual-Element PIR

**NOTE:** The XL-20 system is not compatible with the ADEMCO bi-directional devices.

## Terminal Connections

TERMINALS	DESCRIPTION
1 & 2	<p><b>TRANSFORMER:</b></p> <p>Connect the 16.5VAC 25VA transformer, utilizing 18awg wire at a distance not to exceed 15 feet from the panel, to an <b>unswitched</b> 120VAC outlet.</p> <p>Do not use any other transformer, since this may result in improper operation or damage to the unit.</p> <p>The “AC/LOW BAT” keypad LED will remain ON while AC power is present. If an AC loss occurs, the “AC/LOW BAT” LED will turn off immediately. If AC power remains OFF for 15 minutes, the system will pulse the keypad buzzer and transmit a power-loss message to the central station, if programmed to do so. THE KEYPAD BUZZER CAN BE SILENCED by entry of any valid user code. When AC restores, the “AC/LOW BAT” LED will light immediately, and a Restore code will be reported, if programmed.</p>
3	<p><b>EARTH GROUND:</b></p> <p>Connect this grounding lug to a cold water pipe utilizing #18awg wire at a distance of no greater than 15 ft. Use a noncorrosive metal strap firmly secured to the pipe to which the lead is electrically connected and secured. If the premises pipes terminate in PVC, this terminal <b>must</b> be connected to a 6-foot grounding rod.</p>
4(+) & 5(-)	<p><b>BELL OUTPUT:</b></p> <p>The total output power available for sounding devices is 1 amp at 11.5 - 13.1VDC. These terminals will deliver CONSTANT output on BURGLARY, AUDIBLE PANIC and BELL TEST. On a FIRE condition, a PULSED or TEMPORAL output can be generated. There are separate bell cutoff times programmable for Burglary and Fire conditions within the programming sequence. For UL Household Fire Warning System installations, the speaker must be mounted indoors for best audibility. Also, for UL installations, use only one speaker.</p> <p><b>NOTE:</b> Before connecting sounding devices, please consult their specifications for proper current draw. Otherwise, the bell fuse (F1) may be blown.</p>
6	<p><b>SIREN SUPERVISION INPUT:</b></p> <p>The Bell Output may be supervised when a conventional bell or a self-contained siren is connected. When connecting a conventional bell or a self-contained siren to the bell output terminals (4 &amp; 5), the jumper JP3 must be placed across pins 1 and 2. When connecting an external siren driver to the bell output terminals, the supervision wire is connected to the siren supervision terminal of the siren driver, and the jumper JP3 must be placed across pins 3 and 4. A supervisory condition will generate a pulsing keypad sounder. Also, the supervisory LED on the keypad will pulse. The sounder may be silenced by entering a valid user code while the system is disarmed. The LED will continue to pulse until the supervision is fixed. If a bell, self-contained siren, or external siren driver is not connected to the bell output terminals, a 100-ohm resistor must be placed across the siren supervision input to prevent a bell supervision error. Bell supervision will be reported to the CS if enabled.</p>

7(-) & 8(+)

**SMOKE DETECTOR POWER OR TRIGGER OUTPUT:**

**SMOKE DETECTOR POWER:** This system will accept 9.5 - 12VDC 4-wire smoke detectors only. Approximately 50mA of current is available at these terminals for powering all detectors and an EOL relay FBII Model 620. For UL installations, see wiring diagram for hookup.

These terminals adhere to the fire verification and reset logic, which is explained in the zone types section of this manual. You can reset the smoke detector power manually by entering a valid user code after clearing alarm memory or by using the asterisk (\*) key.

**TRIGGER OUTPUT:** These terminals can be used for a trigger output. See programming question 28, locations 1 and 2 for valid trigger types.

5(-) & 8(+)

**REGULATED POWER (11.5 - 13.1VDC):**

The total regulated output power for motion detectors and other external devices is 500mA at 11.8 - 12.5V for residential applications, or 12.0 - 12.5V for commercial applications, with less than 100 mVPP ripple. The total regulated output capacity of the XL-20 includes the power available from these terminals (8 & 5) as well as the power used by the keypads and smoke detectors. Therefore, to determine the total power available from these terminals, subtract the power consumed by the keypads and smoke detectors.

**ZONE INFORMATION (HARDWIRED ZONES):**

9(+) & 10(-)	Zone 1 (Requires 2.2K EOL resistor)	[Default = DELAY]
11(+) & 10(-)	Zone 2 (Requires 2.2K EOL resistor)	[Default = INTERIOR]
12(+) & 13(-)	Zone 3 (Requires 2.2K EOL resistor)	[Default = PERIMETER]
14(+) & 13(-)	Zone 4* (Requires 2.2K EOL resistor)	[Default = PERIMETER]

Normally-closed devices may be wired in series; normally open devices may be wired in parallel. A 2.2k-ohm end-of-line resistor must be installed on all zones. (Refer to the wiring diagram.) The standard loop response time is **280** ms on all zones. The factory default values for each zone are listed in the table above; however, **any** zone can be programmed for the following types: Delay, Perimeter, Interior, Fire, 24-Hr. Alarm, or 24-Hr. Trouble. Further explanation of the zone types can be found in the System Programming section of this manual.

**NOTE:** Loop response is defined as the minimum time required for a fault to trip a zone.

\* If Pool Zone option is enabled, see the "Pool Zone Connections" paragraph below for zone 4 usage.

RF RECEIVER  
INTERFACE

**ZONE INFORMATION (WIRELESS ZONES):**

Zone 5 (Compatible RF Devices)	[Default = PERIMETER]
Zone 6 (Compatible RF Devices)	[Default = PERIMETER]
Zone 7 (Compatible RF Devices)	[Default = PERIMETER]
Zone 8 (Compatible RF Devices)	[Default = PERIMETER]

Wireless zones can be enabled in program question #26, locations 1 and 2. All 8 zones can be wireless; or up to 4 zones can be hardwired and the remaining ones wireless. Compatible ADEMCO 5800 Series wireless devices must be used.

15(BLK), 16(YEL)  
17(GREEN) &  
18(RED)

**KEYPADS:**

Up to 4 keypads (XK-108) may be wired to these terminals. The connections are as follows: 15 (BLACK = negative), 16 (YELLOW = data in), 17 (GREEN = data out) and 18 (RED = positive power). Each keypad draws approximately 30mA. Maximum keypad length is 500 feet using 22-gauge wire.

**NOTE:** In some installations, it may be necessary to use shielded wire to prevent radio frequency interference.

19(BRN), 20(GRAY),  
21(GREEN) &  
22(RED)

**TELEPHONE LINE:**

Connect the model 368 cord as follows: 19 (BROWN = Home Tip), 20 (GRAY = Home Ring), 21 (GREEN = Telco Tip), 22 (RED = Telco Ring). Insert the plug into an USOCRJ31X Jack (or a CA31A Jack for Canadian installations).

The FCC registration number is AE398E-69554 AL-E, and the ringer equivalence is 0.0B. The system should not be connected to party lines or coin-operated phones.

If this control panel will be used for uploading, downloading or remote-command applications, the telephone line connected to the control panel **must not** be shared with a fax machine or modem. Furthermore, this device should not be connected to a phone line that has Call Waiting, unless the Call Waiting Interrupt numbers are programmed into the panel dialing sequence.

**BACKUP BATTERY:**

The RED (+) and BLACK (-) flying leads must be connected to a 12 VDC 4-7AH GELL CELL, to serve as backup power in the event of AC loss.

A battery test occurs approximately every 4.5 minutes. Low-battery condition occurs at nominal 11VDC. The keypad AC/LOW BAT LED and buzzer will PULSE SLOWLY when a low-battery condition is detected.

The system reports this condition to the CS if programmed to do so.

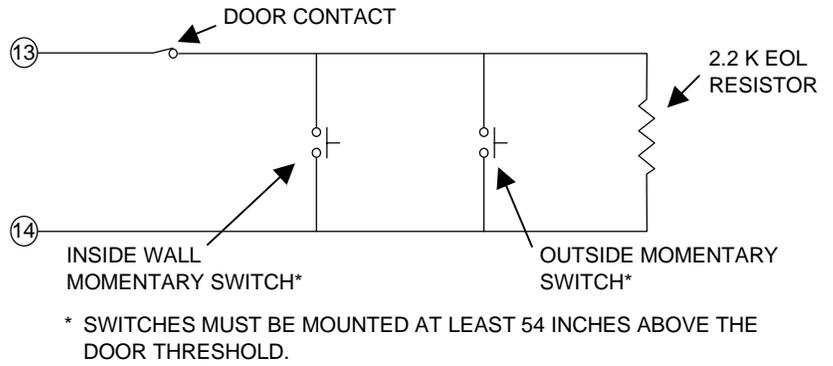
Battery restoral will occur within 4.5 minutes, at the NEXT battery test. THE BUZZER MAY BE SILENCED by entry of any valid user code.

**POOL ZONE CONNECTIONS:**

Zone 4 can be used for the Pool Zone Option. To use Zone 4 for the Pool Zone Option, all doors with direct access to the pool shall be equipped with an alarm, which produces an audible warning when the door and its screen are opened. The alarm will sound continuously for a minimum of 30 seconds immediately after the door is opened, and must be capable of being heard throughout the house during normal household activities. The alarm automatically resets under all operating conditions. The momentary switches provide temporary alarm deactivation (15 seconds) so that the door can be opened without the alarm sounding.

When the Pool Zone Option has been selected, Zone 4 will operate as a standard delay zone when the system is armed and the momentary switches start the entry time.

The following illustration shows the wiring connections needed to use Zone 4 as a Pool Zone.



**Auxiliary Device Current Draw Worksheet**

DEVICE	CURRENT DRAW FOR EACH	NUMBER OF UNITS	TOTAL CURRENT FOR EACH
XK-108 Keypad	30mA		
PIR	**		
Smoke Detector	**		
Glassbreak Detector	**		
	**		
	**		
<b>TOTAL CURRENT FOR ALL DEVICES =</b>			
(500mA max.)			

**NOTE:** \*\* If using devices such as PIRs, smoke detectors, etc., refer to the specifications for that particular device's current draw. If the total current draw exceeds 500mA, then use an additional power supply.



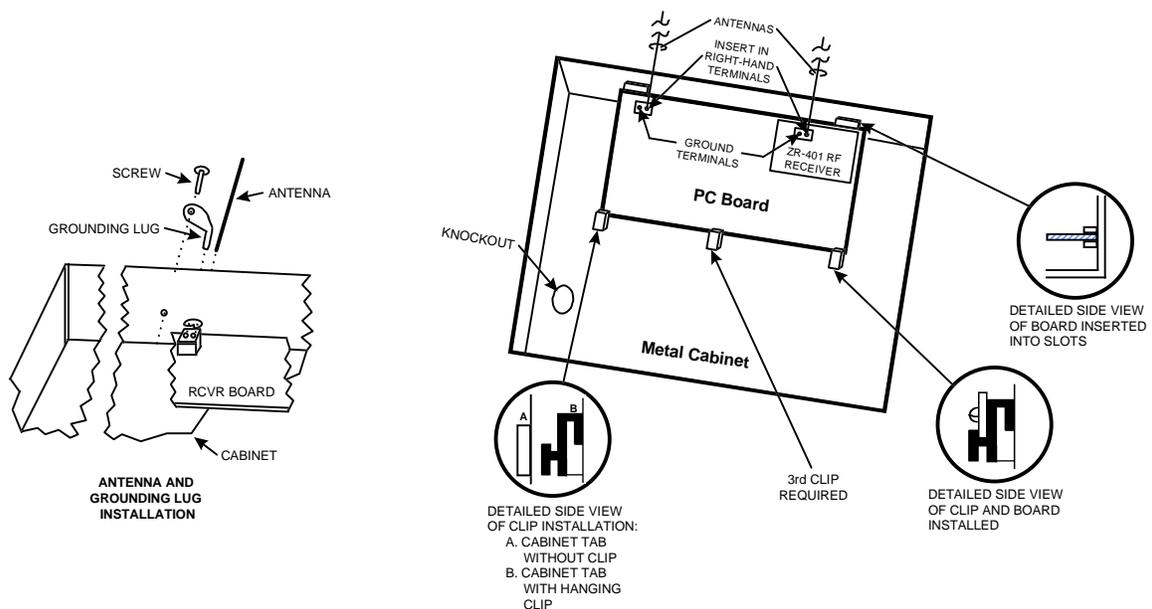
NFPA, UL, and the California State Fire Marshal require the backup battery to provide power for 24 hours. The maximum aux. power will vary by the ampere/hour rating of the battery used: 5AH = 95mA; 7AH = 180mA; 8AH = 210mA.

# PC Board Mounting

## Mounting the Control Board

Before mounting the printed circuit board, be certain that the appropriate metal knockouts have been removed. **DO NOT ATTEMPT TO REMOVE THE KNOCKOUTS AFTER THE CIRCUIT BOARD HAS BEEN INSTALLED.**

1. Hang the three mounting clips on the raised cabinet tabs. Observe proper clip orientation to avoid damage to the clip when mounting screws are tightened and to avoid problems with insertion and removal of the PC board.
2. Insert the top of the circuit board into the slots at the top of the cabinet. Make sure that the board rests in the slots as indicated in the diagram below.
3. Swing the base of the board onto the mounting clips.
4. Place the washer provided over the wire jumpers located within the middle of the PC board. Secure the PC board to the middle mounting clip of the enclosure through the washer, using the screw provided.
5. Secure the remaining sides of the PC board to the enclosure, using the screws provided.



**NOTE:** The front face (door) of the enclosure can be completely removed to gain unrestricted access to the control panel during installation. To remove the door:

1. Open the door to its fully extended position (approx. 90 degrees)
2. Lift the control panel door to remove it from the enclosure.

## **Mounting the Receiver and Antennas**

1. Mount the receiver board on top of the control PC board as shown in the diagram above.
2. Insert grounding lugs (supplied) into the left-hand terminals of the antenna blocks and secure them to the cabinet with the screws provided.
3. Insert the receiver's antennas through the top of the cabinet into the blocks' right-hand terminals. Tighten screws.

# Keypad Mounting

## XK-108 Keypad

The XK-108 Keypad may be surface-mounted in the following ways:

- A. Directly to a control panel enclosure if it has a keypad cutout on the front.
- B. Directly to a single- or double-gang electrical junction box.
- C. Directly to a wall or other surface.

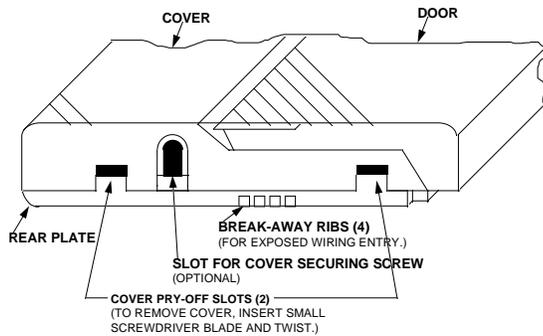


Diagram 1: BOTTOM VIEW OF KEYPAD

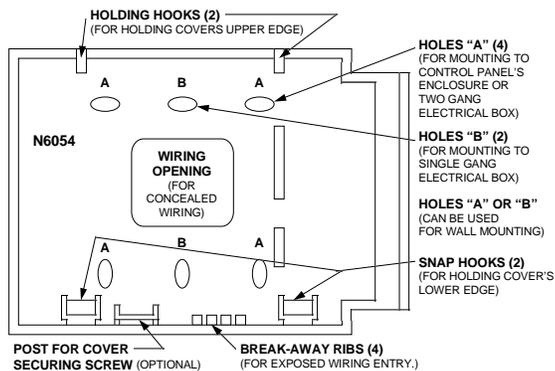


Diagram 2: REAR MOUNTING PLATE

1. Remove the keypad cover assembly from the rear mounting plate. Insert a small screwdriver blade in the COVER PRY-OFF SLOTS at the lower edge of the keypad (see Diagram 1) and twist to pry off the cover assembly.
2. Mount the rear plate (see Diagram 2).

**NOTE:** The plate is correctly oriented when its part number, molded into the plastic, is upright.

### A. Mounting Directly to Control Panel Enclosure:

If the control panel enclosure has a keypad cutout on the front face, remove the cutout and mount the plate to the enclosure's face via HOLES "A" (see Diagram 2) with the four screws and nuts provided.

### B. Mounting Directly to an Electrical Junction Box:

The plate can be mounted directly to a single- or double-gang electrical junction box. Use the screw holes provided and HOLES "B" for a single-gang box or HOLES "A" for a double-gang box.

### C. Mounting Directly to a Wall or Other Surface:

Provide a wiring hole in the mounting surface. Position the plate's WIRING OPENING over the hole and mounting plate, using HOLES "A" and/or "B" in conjunction with appropriate mounting hardware (not provided) for the type of surface.

3. Complete the keypad wiring as required for the control with which the keypad is to be used.

4. Replace the keypad cover assembly on the rear plate. Starting at the upper edge of the plate, engage the plate's two HOLDING HOOKS (see Diagram 2) into the recesses provided for them inside the upper edge of the cover assembly. Snap the lower edge of the cover assembly and the lower edge of the cover onto the two SNAP HOOKS at the lower edge of the plate.

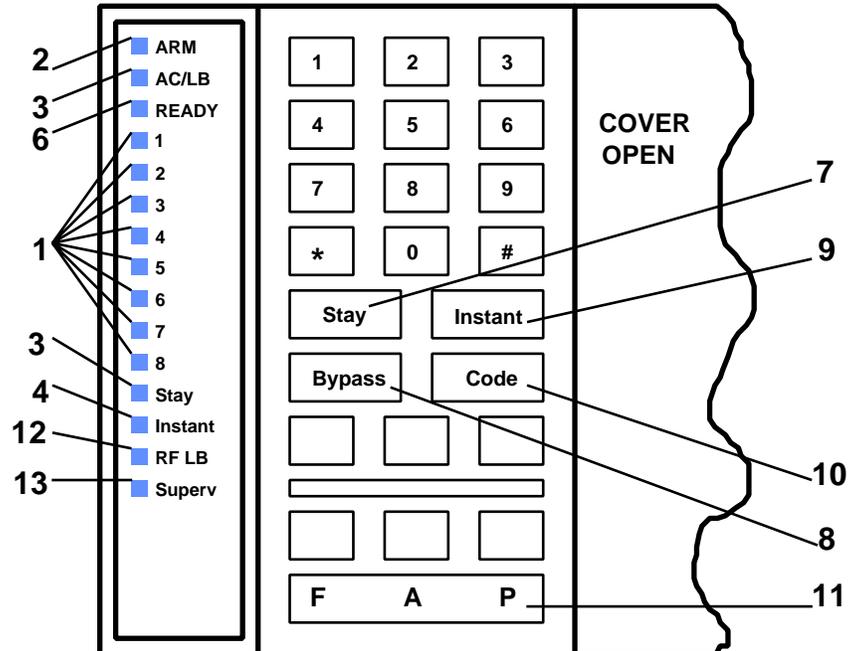
**NOTE:** If desired, cover and plate can be further secured together by inserting a screw (provided) into the SLOT at the keypad's lower edge.

**NOTE:** When surface mounting the keypad, and using screws with heads larger than the screws provided with the unit, place electrical tape over the screws to prevent them from interfering with the keypad operation.



# Keypad Layout

## XK-108 Keypad



### 1. ZONE STATUS LEDS

These LEDs display the current zone status including Alarms, Bypasses, Troubles and Faults. Each condition will cause these LEDs to operate differently, as follows:

**ALARMS** Fast Blink (approx. 150 ms ON - 150 ms OFF).

**TROUBLES** Slow Pulse (approx. 600 ms ON - 600 ms OFF).

**BYPASSES** Wink (100 ms ON - 900 ms OFF). Zone bypasses are displayed as a very slow wink of the zone LED light.

**FAULTED ZONES** Solid ON. Faulted zones are the lowest priority indication.

Faulted burglary zones are displayed with the LED solidly ON while the system is disarmed.

**NORMAL** OFF

### 2. ARM/DISARM LED

This LED indicates whether the system is currently armed (ON) or disarmed (OFF). This LED will also blink fast to show that alarms have occurred; or blink slowly upon failure to communicate with the central station.

### 3. STAY LED

This LED displays whether the system has been armed in the STAY mode or the STAY/INSTANT mode. If the INSTANT LED is ON and the STAY LED is ON, then the system is in the STAY/INSTANT mode. If the INSTANT LED is OFF and the STAY LED is ON, then the system is in the STAY mode only. STAY/INSTANT is enabled in programming question 05, location 2. In either mode the STAY LED indicates the following:

ON All zones enabled for STAY are bypassed

OFF Zones are active-armed

4. INSTANT LED

This LED displays whether the system has been armed in the STAY/INSTANT mode, INSTANT mode, or indicates if the account is not being monitored by the CS. STAY/INSTANT means that the system is currently armed, all delay zones are instant and all interior zones are bypassed. INSTANT means that the system is currently armed, all delay zones are instant and no zones are bypassed. **NOTE:** See programming question 05, location 2 and question 08, location 2.

ON	Delay zones are currently instant
OFF	Delay zones are normal
PULSE	Account is not being monitored by the CS

5. AC/LOW BATTERY LED

This indicator light displays the current power status of the panel as follows:

ON	AC is present
OFF	No AC, running on battery backup
Slow Blink	Low-battery condition detected

6. READY LED

This LED displays whether the system is ready for arming. The READY light is common to all BURGLARY ZONES with the following indications:

ON	System ready to be armed
OFF	System not ready to be armed
Slow Blink	Indicates Installer programming mode
Fast Blink	Alarm Memory mode

7. STAY BUTTON

The STAY button enables arming the system, excluding zones programmed with the Stay Option. This will provide exterior protection of the location while allowing full access throughout the interior.

8. BYPASS BUTTON

The BYPASS button is used to temporarily exclude protection of a specific zone.

9. INSTANT BUTTON

The INSTANT button enables arming the system, eliminating the entry delays. If enabled with the STAY button, it enables arming the system in the STAY/INSTANT mode.



---

The INSTANT modes are enabled in question 05, location 2.

---

10. CODE BUTTON

The CODE button is used to enter the Installer Programming mode and for entry of user codes.

11. KEYPAD AUXILIARY KEYS

Pressing the two keys (top and bottom) labeled "P" at the same time initiates a CS transmission, if programmed, of PANIC, AUXILIARY, or FIRE, annunciates the keypad sounder and turns on the bell output. If not programmed to transmit, these keys can only result in a local warning as follows (see question 05, location 1):

Keypad Sounder	- Steady for PANIC, pulsing for FIRE and AUXILIARY
Bell Output	- Steady for PANIC, pulsing for FIRE



See question 05, location 1 for alternate auxiliary keys.

#### 12. TX LB LED

This LED will pulse whenever any RF transmitter has a low battery. Also, the corresponding zone LED for that transmitter will pulse.

#### 13. RF SPVR LED

This LED will indicate three different RF supervisory conditions and one bell output supervisory condition, as follows:

OFF	No Supervision conditions exist (normal)
ON	RF transmitter has not checked in for more than 12 hours
BLINKING (fast)	RF transmitter reports a Tamper condition
BLINKING (slow)	Bell output is in Supervision

### Keypad Sounder

The keypad sounder annunciates differently to indicate the following conditions:

**CHIRP** - Keypad sounds a short chirp to confirm each keystroke.

**STEADY** - The keypad will make a steady sound during entry time, and/or during burglary alarm.

**CHIME** - steady 1-second tone (SYSTEM DISARMED ONLY).

**ACKNOWLEDGE** - Upon successful entry of certain commands, the system will sound for approximately half a second.

**PULSING** - A pulsing sound (approximately half a second ON, then OFF) indicates a trouble condition such as AC Loss, Low Battery, or a Fire Zone.

**NEGATIVE ACKNOWLEDGMENT** - Upon entry of an illegal command, the keypad will sound four short beeps. For example, if you are attempting to define a new user and the Master User is not entered, four short beeps will indicate that the command was unsuccessful.

**SOUNDER RINGBACK** - Several short beeps indicate successful communication to the central station. This occurs for all signals, excluding ambush and silent zones.

**FAST-PULSING SOUNDER**- Sound generated during entry time period AFTER an Alarm condition has occurred and the system has reached bell cutoff. A pulsing sounder will follow the bell output on Fire conditions. Trouble conditions also generate a pulsing sounder, and may be silenced through entry of a valid User code.



The keypad is nonoperational if none of the LEDs are lit and the keypad does not beep when keys are pressed. This is an indication that service is required.



# System Operations

## Power Up/System Reset

(The following System Stabilization mode statement is True for the Armed state only.)

**SYSTEM STABILIZATION MODE:** Upon initial power-up of the system, all of the lights on the LED keypad(s) will go ON and then go OFF for approximately 2 min. 10 secs (if system was previously armed). This occurs on a total power-up, system reset or after completion of system programming. If the total system power is lost, upon power restoral the system will return to the previous arming state. The 2 min. 10 secs. interval is used to allow motion detectors (in interior zones) to stabilize on power-up in order to prevent false alarms. THIS OPTION CAN BE DISABLED BY PUTTING A MOMENTARY JUMPER BETWEEN TERMINAL 15 AND 16 ON POWER-UP. IF DISABLED, THE POWER-UP RESET TIME IS APPROXIMATELY 5 SECONDS. This is a normal condition.

## Arming the System

The system can be armed only if all burglary zones are not faulted. On LED-based keypads, this requires that the READY LED be on. Arm faulted is only allowed for Delay or Interior zones if programming question 05 is set to 2.

**TO ARM:** Enter any programmed 4-digit user. **NOTE:** The factory default for User no. 1 is 1234.

The ARMED LED will light and the user may exit through an exit/entry zone for the time period programmed as the exit delay. The system can be armed without the backup battery being connected, however the AC/LB light will flash.

## Stay Arming

**TO ARM:** Press the STAY button followed by a four-digit user code.

The ARMED and STAY LEDs will light on LED-based keypads.

The system is armed at this time, with all programmed Stay zones excluded.

## Stay/Instant Arming

**TO ARM:** Press the INSTANT button then the STAY button and a 4-digit User code.

The INSTANT STAY mode will arm the system with the characteristics of both the INSTANT and STAY modes. The system will be armed with the interior zones bypassed and the delay zones instant.

LED keypads will have the ARMED, STAY and INSTANT LEDs lit. **NOTE:** This option is enabled in programming question 05, location 2.

## Disarming

**TO DISARM:** Press any valid 4-digit User code and the ARMED LED will extinguish.

If an Alarm condition exists or occurred while the system was armed, the zone LED(s) and the READY LED will be blinking rapidly. This ALARM MEMORY condition can be cleared by entering a valid User code or using the asterisk (\*) key, if programmed.

## Reset

After an alarm occurs, the system enters Alarm Memory mode either after Bell timeout or by a user entering a valid user code silencing the bell and keypad buzzer. **Alarm memory and communications failure can be cleared by entering a valid User code.** If a fire alarm occurs, then clearing Alarm Memory resets the smoke detectors for approximately 8 seconds.

**In addition, you can use the \* key to act as a fire reset. This option is programmable in question 05, location 3.**

## Bypass

Bypassing is performed to temporarily exclude zones that are faulty or not ready from activating the system.

**If Quick Bypass is not enabled, then press the BYPASS button followed by any valid 4-digit user code, followed a number from 1 to 6, which represents the zone to be bypassed.**

EXAMPLE: BYPASS ZONE 2 (Assume User code of 1234)  
BYPASS 1234 2

Subsequent bypasses can be made by pressing the BYPASS button and then pressing another zone number within a 10-second period. After this 10-second period, the entire command - including the user code - must be entered.

After a successful bypass, the keypad sounder will sound the acknowledge beep, and the respective zone LED will WINK SLOWLY.

The bypass rules are:

- FIRE zones cannot be bypassed
- 24-hour zones can be bypassed; however, they CANNOT be unbypassed if they are violated.
- Zones can only be bypassed while the system is disarmed, at which time visual indication will be displayed.
- Bypass signals are transmitted to the central station UPON ARMING if a Bypass code has been programmed.



Zones that are bypassed are not protected when the system is armed.

---

## Quick Bypass

Quick Bypass is a programmable option (see question 05, location 3 of the programming sequence) and allows the user to bypass zones without using a User code.

**Press the BYPASS button followed by a number from 1 to 6, which represents the zone to be bypassed.**

Example: To bypass zone 2, enter:  
BYPASS 2

## Auto Unbypass

**All burglary zones which are bypassed can be automatically unbypassed upon system disarm, assuming no other zone(s) were in alarm.** 24-hour zones that have been bypassed will be unbypassed only if they are normal.

This feature is ALWAYS enabled.

## Manual Unbypass

This function removes an existing bypass from a currently bypassed zone. **The procedure is the same as Bypass.**

## User Code Programming

User codes can be entered or modified directly through the keypad. The system contains up to six User codes (4 digits each) with the following applications:

USER NUMBER	APPLICATION	DEFAULT CODE
1	Master User (see note 1)	1234
2	Normal User	NULL
3	Normal User	NULL
4	Normal User	NULL
5	Arm Only (see note 2)	NULL
6	Ambush (see note 3)	NULL

### NOTES:

- User Number 1** - programs all user codes (1-6); cannot be deleted.
- User Number 5** - can be programmed as an arm-only user in question 05, location 4. This means that the User code can only arm but not disarm the system. Typically, this would be used for a maid service or any person with temporary access.
- User Number 6** - can be programmed as an Ambush code if there is an Ambush CS transmission code programmed into question 19, locations 1 & 2. In this mode, entry of the User number 6 code will ARM or DISARM the system and transmit the ambush code to the central station. Furthermore, if opening/closing by User reporting is programmed, User number 6 will be reported along with the Ambush code. If no CS code is defined in question 19, then User number 6 will be a normal User code.

TO ADD or CHANGE USERS: **[CODE] [USER] [USER #] [USER ID]**

Where:

- [CODE]** Press CODE button
- [USER]** Enter Master User ID code (User no. 1)
- [USER #]** Press desired user to be programmed (1-6)
- [USER ID]** Enter new 4-digit User code. Valid digits are 0-9

Example: Define User no. 3 with an ID of 7493. (Assume Master User code is 1234).

[CODE] 1234 3 7493

An acknowledgment sound (steady tone) verifies a successful User code programming. A negative acknowledgment sound (4 short tones) indicates unsuccessful programming.

If additional user programming is necessary, repeat the procedure listed above. If a dialing format that transmits opening/closing by user ID is programmed, each user will report the respective user number.



User code programming can be performed ONLY while the system is DISARMED.

## User Deletion

User codes (2 - 6) can be deleted directly through the keypad. Once deleted, their values will be null.

TO DELETE USERS: [CODE] [USER] [USER #] [\*]

Where:

[CODE] Press CODE button

[USER] Enter Master User ID code (User no. 1)

[USER #] Press the desired User no. being deleted (2-6)

**NOTE:** User no. 1 cannot be deleted, but it can be changed.

[\*] Press the \* (asterisk) button

## Keypad Emergency Conditions

The system has the ability to transmit four separate keypad emergency conditions as follows:

CONDITION	KEYSTROKES	ENABLED IN	AUDIBLE OR SILENT
PANIC	Both Panic keys (at the same time) or [#] and [*] (at the same time)	Question 05, location 1	Question 04, location 4
FIRE	Both Fire keys (at the same time) or 7 and 9 (at the same time)	Question 05, location 1	Always AUDIBLE
AUXILIARY	Both Aux keys (at the same time) or 1 and 3 (at the same time)	Question 05, location 1	Question 05, location 1
AMBUSH	User code #6	Question 19, location 1 and 2	Always SILENT

For example, the 24-Hr Keypad Panic can be initiated by pressing both keypad Panic keys at the same time. The Panic condition can be silent (no bell output) or audible, based on the programming option. **NOTE:** The default value for Panic is audible.

Audible Panic, Fire and Audible Auxiliary can be RESET BY ENTERING ANY VALID USER CODE or using the asterisk \* key.

# Quick Command Modes

## Quick Command Mode Listing

The end user can perform the following commands (if programmed):

COMMAND	KEYSTROKES	ENABLED IN
Quick Arming	# 1	Question 05, location 3
Quick Forced Arming	# 2	Question 05, location 3
Set Time/Date	# 3	Always enabled
Toggle Chime	# 6	Always enabled
On-line Download	# 9	Question 05, location 4



On-line Download is not documented in the end user manual because it will only be done when the end user is in communication with someone at the downloading computer.

## Quick Arming (# 1)

If programmed (see programming question 05, location 3), Quick Arming will be permitted. Quick Arming allows arming of the system without entry of a User code, and will report as User no. 8 to the CS if a 2-digit transmission format is defined. **NOTE:** The system must be in Ready mode. A User code is required to disarm the system.

## Quick Force Arming (# 2)

If programmed (see programming question 05, location 3), then Quick Force Arming will be permitted. Quick Force Arming allows arming of the system without entry of a User code and bypasses any zones that are not ready. It will report User no. 7 to the CS if a 2-digit transmission format is defined. **NOTE:** To disarm, the User code is required.

## Set Time/Date (# 3)

The AC-based clock can be set at the keypad, but it can only be viewed by the PC downloader software.

TO SET TIME/DATE: [#] [3] [Hours] [Minutes] [Month] [Day] [Year]

Where:

[Hours] = 2 digits (00-23)      [Month] = 2 digits (01-12)      [Year] = 2 digits (00-99)  
 [Minutes] = 2 digits (00-59)      [Day] = 2 digits (01-31)

## Toggle Chime (#6)

This quick command is enabled in question 05, location 4 by selecting User On-line Downloading. If any zones are programmed with a chime option (see programming questions 10 - 15), then # 6 will turn the system chime ON or OFF, depending on its original state.



1. This will toggle the chime feature for the entire system. Since there are no visual indications on the keypads after toggling the chime, you must be aware of its present state.
2. The installer must first enable the chime option for any zone requiring chime.

## **On-Line Download (#9)**

If programmed (see programming question 05, location 4), the user can initiate a remote communications session with the CS downloading computer at the control panel. Typically, a remote communications session is initiated by the CS. On-line downloading allows the user to call the office, discuss the action required and allow the CS operator to complete the request while on-line. No additional telephone call is needed. On-line connection can be made as follows:

1. The user dials the CS downloading modem telephone line from the premises telephone line that the alarm system uses. Connection is made with a person at the CS downloading computer, and the account to be downloaded is verbally identified. The CS computer attempts to establish a connection with the site.
2. The user is instructed to enter #9 on the keypad, which will cause the control panel to behave as if it received a request for a remote communications session and to look for the standard panel to CS protocol.
3. Once the standard connection is made, the remote communications session can take place (upload, download, and remote commands).
4. The user hangs up the telephone to prevent interference that may affect upload/download data. The downloader software automatically terminates the connection after remote communications end.

# Installer Modes

## Entering Installer Modes

There are 4 installer modes in the panel.

TO ENTER INSTALLER MODES: [CODE][\*][INSTALLER][X]

Where:

[CODE]	Press the CODE button
[*]	Press the asterisk (*) button
[INSTALLER]	Enter the 4-digit installer code ( <b>default = 2468</b> )
[X]	Press the single digit indicating the Installer mode, as follows:
	<ol style="list-style-type: none"> <li>1 Installer Keypad Programming           <ul style="list-style-type: none"> <li>Press [1] &amp; [3] (at the same time) SYSTEM DEFAULT</li> <li>Press [7] &amp; [9] (at the same time) USER CODE DEFAULT</li> <li>Press [*] [#] [X] [X] RF PROGRAMMING</li> </ul> </li> <li>2 (Not Used)</li> <li>3 Unattended Download</li> <li>4 On-line Download</li> <li>5 Walk Test (Reduced Gain) Mode</li> </ol>

## Installer Mode 1 (Installer Keypad Programming)

Installer Mode 1 enters the installer into the Keypad Programming mode. *Refer to Section 11: Data Entry Via LED Based Keypads.*

The EZ-Mate Downloader Software contains an option to inhibit keypad programming. If you select it, you will hear a negative acknowledgment (4 short beeps) after you attempt to enter this mode. The software has another option (Default Lockout) to inhibit a different installer from defaulting the panel and entering keypad programming. This prevents hostile account takeovers.

### Installer Mode 1 (System Default)

You can initiate a system default through the keypad by **pressing the “1” and “3” keys at the same time**, while in the Programming mode. The system will then default (revert to factory-programmed values) and go through the reset sequence. You can also initiate a system default by removing power (AC and DC), shorting JP1 and JP2, reapplying power (with JP1 and JP2 still intact) waiting 8 seconds, and then removing the short with power still applied. **NOTE:** You can select a programming option can be selected through the EZ-Mate Downloader Software called **Default Lockout**. If you select it, a system default reset will change all of the programmable options with the exception of the CSID (a code used by the software to identify the panel during remote connections) and the Installer code. This prevents hostile account takeovers.

### Installer Mode 1 (User Code Default)

The User codes can be reset to factory default values (User Code 1 = 1234) by pressing the **“7” and “9” keys at the same time**, while in the Programming mode. The user codes will default and the system will go through the reset sequence.

### **Installer Mode 1 (RF Programming)**

You can enter the RF Programming mode by pressing [\*] [#] [X] [X] where [X] [X] is 01 to 14 and selects the desired RF Programming question no. See *Section 10: Programming Questions - RF Programming* for specific information.

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When RF Programming mode is entered, the question number LEDs will **blink rapidly**.

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### **Installer Mode 3 (Unattended Download)**

The Unattended Download function allows the installation of the control panel and then have the control panel dial the telephone number of CS downloading computer so that the control panel can be downloaded without having the operator present. Basically, the CS downloading computer telephone number will be programmed into the callback number (question 03) and an identification number (same as the account number in the downloader software) will be programmed into the secondary telephone (question 02). **NOTE:** These are temporary values since they will be reprogrammed after downloading.

Unattended Download requires the following sequence:

1. The PC operator must select UNATTENDED DOWNLOAD in the Downloader Software Main Menu.
2. Enter Unattended Download mode: **[CODE][\*] [INSTALLER][3]**.
3. The system will now enter keypad programming at question 01. Enter the telephone number of the central station downloading computer. Enter [#] after each digit; for example: [1] [#] [2] [#] [3] [#]. You can enter up to 12 digits. This phone number should be the same as the CS callback number (question 03 from Keypad Programming if the panel is programmed for callback).
4. Go to programming question 02 by entering the sequence [\*] [0] [2]. Enter the desired account number, following each digit with [#]. This will be used by the CS downloading computer to determine the proper account information to download to this subscriber. The account number must be 6 digits in length and it is the downloaders account designator not the account number that will be communicated to the receiver. For ID's less than 6 digits long you must enter leading 0's to make the number 6 digits long. Example: for ID 345 enter [0] [#] [0] [#] [0] [#] [3] [#] [4] [#] [5] [#].
5. Press the "STAY" key to exit Programming mode. The control panel will now dial the downloading computer telephone number entered into the callback number. (If you have not already selected the Unattended Communications option from the main menu of the downloading computer, select it prior to continuing.) Upon connection with the computer the customer account number programmed in step 3 will be obtained and the system will perform the desired download operation. **NOTE:** The CS downloading computer must be waiting in the Unattended Communications option and preprogrammed with the account information in order for the Unattended Download to be functional.

### **Installer Mode 4 (On-Line Download)**

In this mode, the installer can initiate a remote communications session with the CS Downloading computer at the control panel location. Typically, a remote communications session is initiated by the CS. On-line downloading allows the installer to call the office (from the same telephone line as the panel), discuss the action required and allow the CS operator

to complete the request while on-line. No additional telephone call is needed. On-line connection can be made as follows:

1. After completing the installation, attach a handset to the telco terminals (tip and ring) or uses the standard home telephone to dial the CS downloading modem telephone line. Connection is made with a person at the CS downloading computer and the account to be downloaded is verbally identified. The downloading computer operator selects "On-line Remote Operations" from the Device menu.
2. Enter the on-line download sequence: [CODE] [\*] [INSTALLER] [4] or use the end-user command of [#] [9], if enabled. This will cause the control panel to behave as if it received a request for a remote communications session, and to look for the standard panel to CS protocol.
3. Once the standard connection is made, the necessary remote communications sessions can take place (Upload, Download, and Remote commands).
4. Hang up the telephone or remove headset from the line to prevent interference that may affect upload/download data. The downloader software will automatically terminate the connection after remote communications end.

### Installer Mode 5 (Walk Test - Reduced Gain Mode)

This mode tests the RF receiver in a Reduced Gain mode. This mode is maintained until the [STAY] key is pressed. The keypad displays this mode by pulsing the Arm, AC and Ready LEDs. A LED that is steadily ON indicates the zone that is currently faulted. A blinking LED indicates the zone has restored. The keypad sounder is activated on faulting and restoring of zones. To exit, press the [STAY] key to cause a complete system reset.



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All RF zones must be returned to normal before exiting Walk-Test mode (i.e., doors and windows should be closed). If these RF zones are not returned to normal, they will be displayed as normal even though they are actually faulted.

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# System Programming

## General Information

You can program the system in either of the following methods:

- Directly, through the keypad
- Remotely, using the EZ-MATE PC DOWNLOADER Model 7700

## UL

The EZ-Mate Downloader has not been tested for UL applications.

This section describes how to program the system through the keypad. (The EZ-MATE PC DOWNLOADER includes documentation describing its programming procedures.) Keypad programming is accomplished by understanding the “Programming Questions - Installer Programming” paragraphs below and completing the *Appendix B: XL-20 Programming Worksheet*. There are 37 total programming questions numbered 01 through 35 and 00.

Within each question, there are several locations labeled L1, L2, etc. for data entry. The system is shipped from the factory with SPECIFIC DEFAULT VALUES, which were selected for a typical installation. If the default values are suitable for your installation, programming can be simplified. The default values are listed with each programming question.

## Programming Questions - Installer Programming

This section of the manual defines the programming questions along with the values expected for each question.



DO NOT attempt to enter data before completely filling out *Appendix B: XL-20 Programming Worksheet*.

### QUESTION 01

#### PRIMARY TELEPHONE NUMBER

**DEFAULT = 234AAAAAAAAAAAAA**

Enter the telephone number (including area code and/or dialing prefix, if necessary) of the primary central station receiver in L1 - L16. Enter the valid digits from the table below.

Digit	FUNCTION	COMMENTS
0-9	0-9	Dialing digits
A	Signifies end of the phone number	Enter after last digit of phone number
B	Asterisk (*)	Enter whenever the asterisk is used
C	3 Second pause	Provides delay to wait for dial tone
D	Pound (#)	Enter whenever the pound is used
E	*70C (Touch-tone) * 1170C (Rotary)	Enter to disable Call Waiting
F	800	Enter whenever the “800” prefix is needed

#### REPORTING ROUTE:

The system will report all signals to the primary receiver phone number. If the secondary phone number has been programmed, the panel will alternate between the primary and secondary receivers for a maximum of 8 attempts each until the signal has been acknowledged.

**QUESTION 02**

**SECONDARY TELEPHONE NUMBER**

**DEFAULT = AAAAAAAAAAAAAAAAAA**

Using the table in question 01 to determine valid digits, enter the telephone number (including area code and/or dialing prefix, if necessary) of the secondary central station receiver in L1 - L16.

The secondary telephone number will be used if the panel is unable to reach the central station via the primary number. This is known as BACKUP reporting. If the SPLIT REPORTING feature is programmed, then OPENING and CLOSING signals will be directed to the secondary CS phone number only, while all other conditions will be reported to the primary number.

If neither split nor backup reporting is necessary, this question may be left at the factory default values and all conditions will be routed to the primary telephone number only.

**QUESTION 03**

**CALLBACK TELEPHONE NUMBER**

**DEFAULT = AAAAAAAAAAAAAAAAAA**

Using the table in question 01 to determine valid digits, enter the telephone number (including area code and/or dialing prefix, if necessary) for this control panel to reach the callback location. The callback number is the optional location of the EZ-Mate Downloader where the control panel will call during a remote communications (upload/download etc) session. During remote communications, the programming device and the control panel will first confirm the CS security code. If it is valid, communications can begin. If you have programmed a callback number, the control panel will the hang up and dial the callback number.

**NOTE:** If you do not want callback capability, enter AAAAAAAAAAAAAAAAAA.

**QUESTION 04**

**CS DIALER OPTIONS**

**DEFAULT = 0511**

There are 4 locations (L1-L4) within this question, which define various dialer and system options as follows:

**Question 04, L1**

**CS Dialer Formats**

**Default = 0**

Enter the digit for the desired dialer format from the table below in location L1.

Digit	CS REPORTING FORMAT	FORMAT TRANSMISSION TYPE
0	3X1 Standard	PULSE
1	4x1 Standard	PULSE
2	3x1 Extended	PULSE
3	4x1 Extended	PULSE
4	3x1 Partial Extended	PULSE
5	4x1 Partial Extended	PULSE
6	3x2	PULSE
7	4x2	PULSE
A	ADEMCO 4x2 Express *	DTMF
E	ADEMCO Point ID *	DTMF

**NOTE:** \* These formats require a high/low handshake frequency from the CS receiver.




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For more information on CS reporting formats refer to Appendix A at the back of this manual.

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**Question 04, L2**  
**CS Receiver Type**

**Default = 5**

Enter the digit for the desired receiver type from the table below in location L2. **NOTE:** The checkmarks highlight which options are selected.

Digit	FORMAT PULSE SPEED			HANDSHAKE FREQUENCY		PARITY	TYPICAL CS RECEIVER
	10 PPS	20 PPS	40 PPS	1400 HZ	2300 HZ		
0	✓			✓			FBI, ADEMCO, SILENT KNIGHT
1		✓		✓			FBI
2			✓	✓			FBI
4	✓				✓		FBI, SILENT KNIGHT, ADCOR, ADEMCO
5		✓			✓		FBI
6			✓		✓		FBI, RADIONICS
8	✓			✓		✓	FBI, FRANKLIN, SESCOA, DCI, VARITECH
9		✓		✓		✓	FBI, RADIONICS
A			✓	✓		✓	FBI
C	✓				✓	✓	FBI
D		✓			✓	✓	FBI
E			✓		✓	✓	FBI, RADIONICS

**NOTE:** UL-compatible receivers are: FBI CP220 (all formats), ADEMCO 685, Silent Knight 8520, 9000, RADIONICS.

**Question 04, L3**  
**AC Line Frequency, Split Reporting & Pulse Type**

**Default = 1**

Enter the digit for the desired message length from the table below in location L3. **NOTE:** The checkmarks highlight which options are selected.

Digit	AC LINE FREQUENCY		SPLIT REPORTING	DIALING TYPE	
	50 HZ	60 HZ		PULSE	Touch Tone
0		✓		✓	
1		✓			✓
2	✓			✓	
3	✓				✓
4		✓		CS DIALER DISABLE	
6	✓			CS DIALER DISABLE	
8		✓	✓	✓	
9		✓	✓		✓
A	✓		✓	✓	
B	✓		✓		✓



Please consult your central station manager to determine the formats and message lengths that are accepted by the receiver.

**UL**

European dialing format has not been tested by UL.

**SPLIT REPORTING** - The Split Reporting option will direct all opening and closing signals to the secondary receiver telephone number. All other conditions (Alarms, Troubles, Restores etc.) will adhere to the reporting route described in question 01. If Split Reporting is selected, the secondary receiver telephone number **MUST** be programmed.

**If Local Alarm is desired, no other options need to be disabled (telephone number, CS codes).**

**Question 04, L4**

**K.P. Panic, System Swinger Shutdown, Zone Restore & System Bell Test Default = 1**

Enter the digit for the desired system options from the table below in location L4. **NOTE:** The checkmarks highlight which options are selected.

Digit	KEYPAD PANIC		SYSTEM SWINGER SHUTDOWN	TRANSMIT ZONE RESTORE	SYSTEM DIAL DELAY	
	AUDIBLE	SILENT			15 sec	30 sec
0		✓			✓	
1	✓				✓	
2		✓	✓		✓	
3	✓		✓		✓	
4		✓		✓	✓	
5	✓			✓	✓	
6		✓	✓	✓	✓	
7	✓		✓	✓	✓	
8		✓				✓
9	✓					✓
A		✓	✓			✓
B	✓		✓			✓
C		✓		✓		✓
D	✓			✓		✓
E		✓	✓	✓		✓
F	✓		✓	✓		✓

**KEYPAD SILENT/AUDIBLE PANIC** - Determines whether the keypad panic condition ([\*] & [#] entered on the keypad) will activate the bell and the keypad buzzer. In either case, a signal will be transmitted to the central station if a Panic code has been programmed.

**NOTE:** The keypad panic condition can be enabled through question 05, location 1.

**SWINGER SHUTDOWN** - If selected, 3 activations of the same zone within the same arming interval will not activate the bell or the dialer. This applies only to Burglary zones and 24-Hr. Audible zones.

**UL**

For UL installations, Swinger Shutdown must not be selected.

**TRANSMIT ZONE RESTORE** - If enabled, this option enables the transmission of zone Restores along with the system Restores (AC Loss, Low Battery, etc.). If not enabled, the ONLY Restores transmitted will be the system Restores (see question 19, location 2).

**SYSTEM DIAL DELAY** - If this option is selected all zones will have capability of a 15- or 30-second dial delay before reporting to the CS. Each individual zone must be enabled in questions 11-18, location 4.

**QUESTION 05**

**KEYPAD CONDITIONS**

**DEFAULT = 1004**

This question contains four locations (L1-L4) for various keypad-definable options.

**Question 05, L1**

**Keypad Panic, Fire and Auxiliary**

**Default = 1**

Enter the digit for the desired system options from the table below in location L1. **NOTE:** The checkmarks highlight which options are selected.

Digit	KEYPAD PANIC	KEYPAD FIRE	KEYPAD AUXILIARY	
			AUDIBLE	SILENT
0	NONE (K.P. CONDITIONS DISABLED)			
1	✓			
2		✓		
3	✓	✓		
4				✓
5	✓			✓
6		✓		✓
7	✓	✓		✓
C			✓	
D	✓		✓	
E		✓	✓	
F	✓	✓	✓	

**NOTE:** The Keypad Auxiliary Audible/Silent selection refers to keypad sounder only (not the bell). Keypad Fire is always Audible. Keypad Panic may be Audible or Silent based on the choice made in question 04, location 4.

**KEYPAD PANIC** - If AUDIBLE, **pressing the two Panic keys at the same time (or [#] & [\*] at the same time)** will annunciate the keypad sounder (STEADY SOUND) and turn on the bell output (STEADY SOUND). If SILENT, it will **not** annunciate the keypad sounder and turn on the bell output. In both cases, it will transmit a CS code if programmed to do so in question 20, locations 1 and 2.

**KEYPAD FIRE** - If selected, **pressing the two Fire keys at the same time (or 7 & 9 at the same time)** will annunciate the keypad sounder (PULSING SOUND) and turn on the bell output (PULSING SOUND). It will transmit a CS code if programmed to do so in question 23, locations 1 and 2.

**KEYPAD AUXILIARY** - If AUDIBLE, **pressing the two Aux keys at the same time (or 1 & 3 at the same time)** will **ONLY** annunciate the keypad sounder (PULSING SOUND). If SILENT, then it will **not** annunciate the keypad sounder or turn on the bell output. It will transmit a CS code if programmed to do so in question 23, locations 3 and 4.

**Question 05, L2**

**Misc Options**

**Default = 0**

Enter the digit from the table below in location L2. **NOTE:** The checkmarks highlight which options are selected.

Digit	ARM FAULTED	DIALING PULSE TYPE		AUTO STAY	POOL ZONE (ZONE 4)
		US	EUROPEAN		
0		✓			
1	✓	✓			
2			✓		
3	✓		✓		
4		✓		✓	
5	✓	✓		✓	
6			✓	✓	
7	✓		✓	✓	
8		✓			✓
9	✓	✓			✓
A			✓		✓
B	✓		✓		✓
C		✓		✓	✓
D	✓	✓		✓	✓
E			✓	✓	✓
F	✓		✓	✓	✓

**ARM FAULTED** - If enabled, this allows the user to arm the system independent of the status of any delay or interior zones. If the system is armed with any delay or interior zone

faulted, an Exit Error will occur at the end of the exit time unless the faulted zones become restored.

**DIALING PULSE TYPE** - Specifies how this control will perform pulse dialing (U.S. Pulse or European Pulse) when CS transmissions are enabled.

---

**UL**

European Pulse has not been tested for UL installations.

---

**AUTO STAY** - If enabled, the system will always be armed in the STAY mode with all interior zones enabled with the Stay option bypassed. The Stay zones will become armed only if someone exits through a delay zone during the exit delay period.

**POOL ZONE** - If enabled, activates the Pool Zone (zone 4) when the system is disarmed. When the system is armed, zone 4 acts like a normal delay zone and depressing one of the Pool Zone momentary switches will start the entry delay time.

**Question 05 L3**

**Quick Commands & Quick Exit**

**Default = 0**

Enter the digit from the table below in location L2. **NOTE:** The checkmarks highlight which options are selected.

Digit	QUICK COMMANDS			QUICK EXIT
	QUICK FORCED ARMING	QUICK ARMING	QUICK BYPASS	
0				
1	✓			
2		✓		
3	✓	✓		
4				✓
5	✓			✓
6		✓		✓
7	✓	✓		✓
8			✓	
9	✓		✓	
A		✓	✓	
B	✓	✓	✓	
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

**QUICK FORCED ARMING** - Specifies whether Quick Forced Arming (#2) will be permitted. If chosen, Quick Forced Arming will arm the system bypassing any faulted zones. Openings/Closings will report User no. 8 to the CS if enabled.

---

**UL**

For UL installations do not select this option.

---

**QUICK ARMING** - Specifies whether Quick Arming (#1) will be permitted. If chosen, Quick Arming will arm the system ONLY if the system is READY. Openings/Closings will report User no. 8 to the CS if enabled.

**QUICK BYPASS** - Specifies whether bypassing a zone without a User code is permitted.

---

**QUICK EXIT** - If enabled, this feature allows the user to exit without having to disarm, then arm, the system. It is activated by pressing the STAY key while the system is armed and not in entry delay. This will start exit time, cause the keypad to beep once and allow the user to exit without disarming the system. The system will return to its last armed state after exit time has expired.

**Question 05, L4**

**Rest. Foll. Loop, User On-line, CS Test K.P. Ringback & User 5 Arm**      **Default = 4**

Enter the digit from the table below in location L4. **NOTE:** The checkmarks highlight which options are selected.

Digit	RESTORE AFTER BELL	RESTORE FOLLOWS LOOP	USER ON-LINE	CS TEST KEYPAD RING BACK		USER 5 ARMS ONLY
				SILENT	AUDIBLE	
0	✓				✓	
1		✓			✓	
2	✓		✓		✓	
3		✓	✓		✓	
4	✓			✓		
5		✓		✓		
6	✓		✓	✓		
7		✓	✓	✓		
8	✓				✓	✓
9		✓			✓	✓
A	✓		✓		✓	✓
B		✓	✓		✓	✓
C	✓			✓		✓
D		✓		✓		✓
E	✓		✓	✓		✓
F		✓	✓	✓		✓

**RESTORE AFTER BELL** - Restores will be transmitted after the loop has returned to normal after bell cutoff, or upon system disarming, regardless of the loop status.

**RESTORE FOLLOWS LOOP** - Restores will be transmitted immediately upon zone restoral while the system is armed, or upon system disarm, regardless of the loop status.

**USER ON-LINE & CHIME TOGGLE ENABLE** - Enables the end user command (#9) for the on-line download. This command instructs an end user on how to initiate an on-line download, possibly preventing a service call. This option also enables the user chime toggle (#6).

**CS TEST RING BACK** - Normally, after a CS Test report has reached the central station, a sounder ringback can be heard from the keypad indicating a successful communication to the CS. If SILENT is selected, then **NO sounder ringback** will be heard from the keypad after a CS Test report. If AUDIBLE is selected, then **a sounder ringback** will be heard from the keypad after a CS Test report.



Audible ringback automatically occurs on all alarms except silent alarms, regardless of the setting of this option.

**USER 5 ARMS ONLY** - If selected, then User 5 will be used as an ARM-only code (Maid code); it will not disarm the system.

**QUESTION 06**

**SYSTEM TIMEOUTS**

**DEFAULT = 1000**

There are 4 locations (L1-L4) within this question, which defines various system timing options, as follows:

**Question 06, L1**

**Entry Delay 1**

**Default = 6**

Enter the desired entry delay time for zones 1-3. Refer to Exit/Entry Times below for valid choices. **If zones 1-3 are delay zones, they follow Entry Delay 1.** For UL applications, the maximum Entry Delay shall not exceed 45 seconds for household applications or 15 seconds for commercial burglary applications. **NOTE:** See programming question 07, location 1 for Entry Delay 2.

Digit	ENTRY TIMEOUTS
0	1 SECOND
1	5 SECONDS
2	10 SECONDS
3	15 SECONDS
4	20 SECONDS
5	25 SECONDS
6	30 SECONDS
7	35 SECONDS
8	40 SECONDS
9	45 SECONDS
A	50 SECONDS
B	55 SECONDS
C	1 MINUTE
D	1 MINUTE 5 SECONDS
E	1 MINUTE 10 SECONDS
F	3 MINUTES

**Question 06, L2**

**Exit Delay**

**Default = 6**

Enter the desired exit time. **NOTE:** For UL applications, the maximum exit delay shall not exceed 60 seconds.

Digit	EXIT TIMEOUTS
0	1 SECOND
1	10 SECONDS
2	20 SECONDS
3	30 SECONDS
4	40 SECONDS
5	50 SECONDS
6	1 MINUTE
7	1 MINUTE 10 SECONDS
8	1 MINUTE 20 SECONDS
9	1 MINUTE 30 SECONDS
A	1 MINUTE 40 SECONDS
B	1 MINUTE 50 SECONDS
C	2 MINUTES
D	2 MINUTES 10 SECONDS
E	2 MINUTES 20 SECONDS
F	3 MINUTES

**Question 06 L3**

**Burglary Bell Cutoff**

**Default = 5**

Enter the desired bell cutoff time on alarm conditions for burglary and panic in 3-minute intervals (for example, 3 = 9 minutes). The valid range of input is 1 - F, with F indicating an infinite burglary bell cutoff. For UL installations, the minimum bell cutoff shall be 15 minutes in commercial applications, or 6 minutes in household burglary applications.

Digit	BURGLARY & FIRE BELL TIMEOUTS
1	3 MINUTES
2	6 MINUTES
3	9 MINUTES
4	12 MINUTES
5	15 MINUTES
6	18 MINUTES
7	21 MINUTES
8	24 MINUTES
9	27 MINUTES
A	30 MINUTES
B	33 MINUTES
C	36 MINUTES
D	39 MINUTES
E	42 MINUTES
F	INFINITE

**Question 06, L4**  
**Fire Bell Cutoff**

**Default = F**

Using the table in question 06 location 3 to determine valid choices, enter the desired bell cutoff time for Fire conditions in 3-minute intervals (for example, 3 = 9 minutes). The valid range of input is 1 - F, with F indicating an infinite fire bell cutoff. For UL installations, the minimum fire bell cutoff time shall be 6 minutes.

**QUESTION 07**  
**MISCELLANEOUS SYSTEM OPTIONS**

**DEFAULT = 2C06**

There are 4 locations (L1-L4) within this question, which defines various system timing options, as follows:

**Question 07 L1**  
**Entry Delay 2**

**Default = 2**

Using the table in question 6 location 1 to determine valid choices, enter the desired entry delay time for zones 4-8. **If zones 4-8 are delay zones, then they follow entry delay 2.** For UL applications, the maximum entry delay shall not exceed 45 seconds for household applications or 15 seconds for commercial burglary applications.

**Question 07, L2**  
**Remote Communications Ring Count**

**Default = C**

Selecting from the choices below, enter a digit in location L2.

Digit	REMOTE COMMUNICATIONS RING COUNT
0	NONE (REMOTE COMM. DISABLED)
1	1 RING
2	2 RINGS
3	3 RINGS
4	4 RINGS
5	5 RINGS
6	6 RINGS
7	7 RINGS
8	8 RINGS
9	9 RINGS
A	10 RINGS
B	11 RINGS
C	12 RINGS
D	13 RINGS
E	14 RINGS
F	15 RINGS

**REMOTE COMMUNICATIONS RING COUNT** - is the number of rings required for the control panel to pickup and begin a remote communications session. Select a value that does not interfere with normal operation of the panel. The default value is 12 rings. **NOTE:** A value of 0 means that remote connect will be disabled.

**Question 07, L3**

**CS Test Time Interval**

**Default = 0**

Digit	CS TEST TIME INTERVAL					CS TEST RESET BY	
	24 HOURS	WEEKLY	27 DAYS	60 DAYS	90 DAYS	TIME	EVENT
0	NONE (CS TEST DISABLED)					✓	
1	✓					✓	
2		✓				✓	
3			✓			✓	
4				✓		✓	
5					✓	✓	
9	✓						✓
A		✓					✓
B			✓				✓
C				✓			✓
D					✓		✓

**CS TEST TIME INTERVAL** - There are 2 modes of test transmission for the CS Test Time Interval. One mode is reset by an event and the other mode operates only by time as described below. Enter the CS code in question 18, location 3.

**CS TEST BY EVENT** - If this feature is enabled, the system will transmit the Test code to the central station at the interval selected, in the absence of any other signal. Select from daily (24 hour), weekly, 27 days, 60 days, or 90 days. Transmission of any signal will reset the CS Test clock. For example, if a business opens and closes 6 days a week, then a test signal will be generated at the interval selected after the last closing signal.

**CS TEST BY TIME** - If this feature is enabled, the system will transmit the Test code to the central station at the interval selected. Select from daily (24 hour), weekly, 27 days, 60 days, or 90 days. For example, if a 24-hour CS Test is selected, the CS Test signal will be sent to the central station every 24 hours.

**UL**

This feature must be selected for UL installations.

**Question 07, L4**

**RF Trouble sounder, AC Loss Sounder & Euro. Ring Detect**

**Default = 6**

Digit	RF TROUBLE SOUNDER	AC LOSS SOUNDER	EURO. RING DETECT
0	NONE		
2	✓		
4		✓	
6	✓	✓	
8			✓
A	✓		✓
C		✓	✓
E	✓	✓	✓

**RF TROUBLE SOUNDER** - Choosing this option causes the keypad sounder to pulse until either a valid user is entered or the trouble is restored, in the case of a low battery or supervision.

**AC LOSS SOUNDER** - Choosing this option causes the keypad sounder to pulse after a 15 minute long AC power loss.

**EUROPEAN RING DETECT** - Select this option only if the system uses a European Telephone System. This option changes the ring detection frequency used for Automatic Answer mode for remote (downloading) purposes only, according to the programmed ring count (see programming question 07, location 2). If you choose this option, the ring detection frequency range is 10 - 90Hz. If not, the frequency range is 16 - 90Hz.

**QUESTION 08**

**BELL RING ON CANCEL, ARM/DISARM BELL TEST, BELL TEST CHIRP**

**DEFAULT = 0000**

There are 4 locations (L1-L4) within this question, which defines various system timing options as follows:

**Question 08, L1**

**Bell Ring on Cancel, Arm Bell Test, Disarm Bell Test & Bell Test Chirp** *Default = 0*

Digit	BELL RING ON CANCEL	ARM BELL TEST	DISARM BELL TEST	BELL TEST CHIRP
0	NONE			
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

**BELL RING ON CANCEL** - Choosing this option causes the bell to ring for 1 second after kissoff of cancel to central station.

**ARMING BELL TEST** - Choosing this option causes a 1-second bell when system starts

**DISARM BELL TEST** - Choosing this option causes a 1-second bell when system disarms

**BELL TEST CHIRP** - This option is for use with sirens that respond quickly to an output. It shortens (to 100ms) both the Arming Bell Test and Disarm Bell Test.

**Question 08, L2**

**Instant Led Pulse, Open/Close Users 4/12, Temporal Bell**

**Default = 0**

Digit	INSTANT LED PULSE	O/C USERS 4/12	TEMPORAL BELL
0			
1	✓		
2		✓	
3	✓	✓	
8			✓
9	✓		✓
A		✓	✓
B	✓	✓	✓

**INSTANT LED PULSE** - Choosing this option causes the Instant LED to reflect the CS monitoring status. When selected, by either the installer or a download, a pulsing Instant LED indicates to the user that their account is not being monitored by the CS.



All dialer functions are maintained, regardless of whether this option is selected or not.

**O/C USERS 4/12** - If this option is selected (along with other open and close codes programmed), only keypad (User code 4) and keyfob 4 (User code 12) can report Open and Close signals. No other keypad or keyfob will report to the CS.

**TEMPORAL BELL** - If this option is selected, the fire bell becomes temporal: 500ms on/500ms off/500ms on/500ms off/1 second off. The temporal output option is available for Fire conditions. If not selected, the fire bell output will be pulse.

**Question 08, L3**

**Arm Instant, Arming Stay Instant,  
Instant Key Arms Away, Stay Key Arms Stay**

**Default = 0**

Digit	ARM INSTANT ENABLE	ARM STAY/ INSTANT ENABLE	INSTANT KEY - ARMS AWAY	STAY KEY - ARMS STAY
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓			
E				
F	✓			

**ARM INSTANT ENABLE** - If selected, this option allows the system to be armed in the Instant mode. **NOTE:** If the INSTANT key is also enabled to arm away, only a keyfob can be programmed to arm instant. This option must be selected to allow even the keyfob to arm in this mode.

**ARM STAY/INSTANT ENABLE** - If selected, this option allows the system to be armed in the Stay/Instant mode. **NOTE:** If the INSTANT or STAY keys are programmed to arm the system, only a keyfob can be used to enable the system in this mode. This option must be selected to allow even the keyfob to arm in this mode.

**INSTANT KEY - ARMS AWAY** - If this option is selected, pressing the INSTANT key on the keypad will arm the system in the Away mode. **NOTE:** To use this option, Quick Arming must be enabled in Question 5, location 3.

**STAY KEY - ARMS STAY** - If this option is selected, pressing the STAY key on the keypad will arm the system in the Stay mode. **NOTE:** To use this option, Quick Arming must be enabled in Question 5, location 3.

**Question 08, L4**

**Not Used**

**Default = 0**

**QUESTION 09**

**ACCOUNT NUMBER 1**

**DEFAULT = 1234**

Enter the 3- or 4-digit subscriber account number for central station phone number 1. If a 3-digit number is used then enter an "A" as the fourth digit. Valid entries are 0-9, and B-F. The value "A" is interpreted as the null value for account numbers.

**QUESTION 10**

**ACCOUNT NUMBER 2**

**DEFAULT = AAAA**

Enter the 3- or 4-digit subscriber account number for central station phone number 2. If a 3-digit number is used then enter an "A" as the fourth digit. Valid entries are 0-9, and B-F. The value "A" is interpreted as the null value for account numbers. If the second phone number is not used this question can be left as factory-defaulted.

**THIS ACCOUNT NUMBER MUST BE ENTERED IF YOU HAVE PROGRAMMED A SECOND RECEIVER PHONE NUMBER FOR BACKUP OR SPLIT REPORTING.**

**Zone Programming**

Questions 11-18 represent all the options related to programmable zones 1-8. Each question contains 4 locations L1-L4. The first two locations (L1 & L2) define the zone type and options. The second two locations (L3 & L4) define the Alarm code transmitted to the central station for that zone.

**Zone Types**

You can program Zones 1-8 for any one of the zone types in the following table:

L1L2 Digits	BURGLARY (CONTROLLED) ZONES						
	ZONE TYPE			ZONE OPTIONS			
	INSTANT (PERIMETER)	DELAY (EXIT/ENTRY)	INTERIOR FOLLOWER	CHIME	DAY	BYPASS IN STAY	DIALER DELAY
10	✓			NONE (INSTANT ZONE W/O OPTIONS)			
11	✓					✓	
12	✓				✓		
13	✓				✓	✓	
14	✓			✓			
15	✓			✓		✓	
18	✓						✓
19	✓					✓	✓
1A	✓				✓		✓
1B	✓				✓	✓	✓
1C	✓			✓			✓
1D	✓			✓		✓	✓
20		✓		NONE (DELAY ZONE W/O OPTIONS)			
21		✓				✓	
24		✓		✓			
25		✓		✓		✓	
40			✓	NONE (INTERIOR ZONE W/O OPTIONS)			
41			✓			✓	
44			✓	✓			
45			✓	✓		✓	
48			✓				✓
49			✓			✓	✓
4C			✓	✓			✓
4D			✓			✓	✓

**Burglary (Controlled) Zones**

**DELAY** - This is the industry standard exit/entry zone. When the system is armed, exit time begins. After the exit time expires, any violation of this zone will begin entry time. If the

system is not disarmed within the programmed entry time, an alarm will occur. The keypad sounder annunciates steadily during entry time, unless there has been an alarm condition, in which case it pulses. Delay zones activate instantly when the system is armed using the STAY/INSTANT mode, if enabled. Delay zones employ the Exit Error Warning feature described in the note below.

**INTERIOR** - All interior zones have exit delay time upon system arming. Furthermore, all interior zones will have entry delay time if a delay zone is violated first. If this zone is violated first, however, it will generate an immediate alarm. Interior zones are bypassed if the system is armed in the STAY mode. Interior zones employ the Exit Error Warning feature described in the note below.

**PERIMETER** - This zone type (sometimes known as INSTANT) will generate an alarm when violated while the system is armed.

**EXIT ERROR WARNING - When a user code is entered to arm the system, the burglary bell and keypad sounder will be turned on during the entry and exit time.**

**Burglary Zone Options**

**RESTORE** - This option is selected for all burglary zones by enabling the Restore report code (question 19, location 2) and enabling zone Restores in question 04, location 4. The programmed Restore code will be reported upon bell cutoff, assuming the loop is restored, unless Restore Follows Loop is selected in question 05, location 4. The Restore code will also be reported if the system is disarmed during an alarm. **NOTE:** Restore is not selectable by zone.

**BYPASS IN STAY** - This option allows zones to be bypassed when the system is armed in the STAY mode.

**CHIME** - If this option is selected, the keypad sounder will annunciate for 1 second when this zone is violated in the disarmed mode.

**DIALER DELAY** - If this option is selected, the system will allow a 15-second delay (or 30 seconds, as per question 04, location 4) before dialing, allowing the end user to ABORT the transmission. If this option is not selected, any alarm condition will result in an immediate transmission that cannot be aborted.

**UL**

For UL installations dialer delay may not be used.

**DAY FEATURE** - If a zone with this option is violated while the system is DISARMED, the keypad sounder and zone LED will pulse for as long as the violation remains. In addition, if the violation remains for 15 seconds, the SYSTEM TROUBLE CODE will be transmitted to the central station. THE SOUNDER CAN BE SILENCED through entry of any valid user code. While the system is armed, a DAY zone will act as an alarm when violated.

Zones 1-8 can be programmed for any one of the following 24-hour zone types:

L1L2 Digits	24-HOUR ZONES				
	ZONE TYPE			ZONE OPTIONS	
	24 HR. ALARM	FIRE	24 HR. TROUBLE	AUDIBLE	SILENT
81	✓			✓	
82			✓	✓	
84		✓		ALWAYS AUDIBLE	
89	✓				✓
8A			✓		✓

## 24-Hr. Zones

**FIRE** - FIRE zones on the system contain Fire Verification Logic. Upon detection of the first violation, smoke detector power will be reset for a period of 8 seconds. After this time period, power is restored. For 5 seconds the fire zone will not be scanned, allowing the smoke detectors to settle. Future violations within a two-minute period will result in a PULSING BELL OUTPUT, RAPID PULSING ZONE LED, and IMMEDIATE transmission to the CS. Fire signals cannot be aborted.

Entry of any valid user code will silence the sounder and bell, and reset smoke detector power. If the system detects that the fire zone is still violated within 2 minutes after power reset, the zone LED will pulse slowly to indicate a Fire Trouble. Thereafter, smoke detector power will be reset every 4 minutes automatically in an attempt to clear the fire zone.

In the event the fire zone experiences an Open, the system indicates Fire Trouble by pulsing the keypad zone LED and sounder slowly. The system Trouble code (followed by the Zone code) will be reported to the CS.

The keypad sounder can be SILENCED through entry of ANY VALID USER CODE. **NOTE:** FIRE ZONES **cannot** be bypassed.

**24-HR. ALARM** - This zone type is always active, independent of the system arming status. Programming options include audible (STEADY BELL) or silent (NO BELL or keypad indications). Upon violation, the zone LEDs will pulse rapidly (audible zones only) and an immediate CS transmission will occur which cannot be aborted.

24-Hour Alarm zones can be bypassed; however, they cannot be unbypassed if a violation exists on the zone terminals.

**24-HR. TROUBLE** - This zone type is always active, independent of the system arming status. Programming options include audible (PULSING KEYPAD SOUNDER) or silent. Upon violation, the zone LED will pulse slowly. Trouble condition must exist for 15 seconds before a transmission will occur. The keypad display and sounder will clear upon zone restoral.

24-Hour Trouble zones can be bypassed; however, they cannot be unbypassed if a violation exists on the zone terminals.

**NOTE:** 24-hour Trouble is not to be used for Fire and Burglary Detection zones. 24-Hour Silent Alarm zones are not to be used for perimeter protection. THE SOUNDER MAY BE SILENCED THROUGH ENTRY OF ANY VALID USER CODE.

## Zone Alarm Codes

As previously specified, locations L3 and L4 of the zone questions represent the Alarm code that will be reported to the central station.

**NOTE: Zones will transmit to the central station unless these digits are defined as AA for any individual zone; or unless the local dialer option is selected for all zones in question 04, location 3.**

Based on the dialer format selected, enter the Alarm code as follows:

**STANDARD FORMAT (3X1 or 4X1):** Enter the desired single-digit Alarm code in location L3 for the specific zone. The value placed in L4 will not be used.

**EXTENDED (3X1 Ext. or 4X1 Ext.):** Enter the desired first digit of the Alarm code for the specific zone, in location L3 and the second digit in L4.

**PARTIAL EXTENDED (3X1 Part. Ext. or 4X1 Part. Ext.):** Enter the desired digit in both locations L3 and L4 for the specific zone. This will generate a single-digit transmission for Alarms and Troubles (the second digit will **not** be used) and an extended transmission for all system conditions such as Restores, Bypasses, Openings/Closings, etc. (the second digit will be used).

**3X2 or 4x2:** Enter the desired first digit of the Alarm code in location L3 and the second digit in L4 for the specific zone. Both digits will be used for all transmissions.

**ADEMCO 4X2 EXPRESS:** Enter the desired first digit of the Alarm code into the first location and the second digit into the second location.

**ADEMCO POINT ID (PID) Format:** The digit entered in the first location will select the PID Event code to be transmitted; refer to Appendix A for the PID Event Codes to be selected.

The selections on the charts below are used to disable supervision for each zone.

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For more information on CS Reporting Formats, refer to Appendix A at the back of this manual.

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### QUESTIONS 11 - 18 ZONES 1 - 8

There are 4 locations (L1-L4) within each of these questions that define the operation of the zones. Enter a 2-digit number in locations L1 and L2 from the zone chart for the desired zone type. Enter the desired Alarm code in locations L3 and L4 for this zone based on the dialer format selected.

#### QUESTION 11

##### ZONE 1 TYPE & CS CODE

**DEFAULT = 2031**

*Question 11, L1 & L2 - Zone 1 Type*

*Default = 20*

*Question 11, L3 & L4 - CS Code for Zone 1*

*Default = 31*

Zone 1 = Delay (Entry/Exit) w/CS Reporting code = 31

#### QUESTION 12

##### ZONE 2 TYPE & CS CODE

**DEFAULT = 4132**

*Question 12, L1 & L2 - Zone 2 Type*

*Default = 41*

*Question 12, L3 & L4 - CS Code for Zone 2*

*Default = 32*

Zone 2 = Interior Follower w/CS Reporting code = 32

#### QUESTION 13

##### ZONE 3 TYPE & CS CODE

**DEFAULT = 1033**

*Question 13, L1 & L2 - Zone 3 Type*

*Default = 10*

*Question 13, L3 & L4 - CS Code for Zone 3*

*Default = 33*

Zone 3 = Instant (Perimeter) w/CS Reporting code = 33

<p><b>NOTE: If zones 1 - 3 are programmed as DELAY zones, they follow ENTRY DELAY 1. If zones 4 - 8 are programmed as DELAY zones, they follow ENTRY DELAY 2.</b></p>
---

#### QUESTION 14

##### ZONE 4 TYPE & CS CODE

**DEFAULT = 1034**

*Question 14, L1 & L2 - Zone 4 Type*

*Default = 10*

*Question 14, L3 & L4 - CS Code for Zone 4*

*Default = 34*

Zone 4 = Instant (Perimeter) w/CS Reporting code = 34

**QUESTION 15****ZONE 5 TYPE & CS CODE****DEFAULT = 1035***Question 15, L1 & L2 - Zone 5 Type**Default = 10**Question 15, L3 & L4 - CS Code for Zone 5**Default = 35*

Zone 5 = Instant (Perimeter) w/CS Reporting code = 35

**QUESTION 16****ZONE 6 TYPE & CS CODE****DEFAULT = 1036***Question 16, L1 & L2 - Zone 6 Type**Default = 10**Question 16, L3 & L4 - CS Code for Zone 6**Default = 36*

Zone 6 = Instant (Perimeter) w/CS Reporting code = 36

**QUESTION 17****ZONE 7 TYPE & CS CODE****DEFAULT = 1037***Question 17, L1 & L2 - Zone 7 Type**Default = 10**Question 17, L3 & L4 - CS Code for Zone 7**Default = 37*

Zone 7 = Instant (Perimeter) w/CS Reporting code = 37

**QUESTION 18****ZONE 8 TYPE & CS CODE****DEFAULT = 1038***Question 18, L1 & L2 - Zone 8 Type**Default = 10**Question 18, L3 & L4 - CS Code for Zone 8**Default = 38*

Zone 8 = Instant (Perimeter) w/CS Reporting code = 38

**QUESTION 19****CS CODES for AMBUSH and AC LOSS****DEFAULT = AAAA**

There are 4 locations (L1-L4) in this question as follows:

*Question 19, L1 & L2 - Ambush Code**Default = AA*

If an Ambush code is defined, User no. 6 is the Ambush code. The same rules apply here regarding dialer format. If transmission is not desired, program AA in locations L1 & L2. **NOTE:** AMBUSH transmissions are immediate and not abortable.

*Question 19, L3 & L4 - AC Loss Code**Default = AA*

The same rules apply here regarding dialer format. If transmission is not desired, program AA in locations L3 & L4. **NOTE:** AC LOSS is reported 15 minutes after detection.

**QUESTION 20****CS CODES for PANIC and LOW BATTERY****DEFAULT = 22AA**

There are 4 locations (L1-L4) in this question:

*Question 20, L1 & L2 - Panic Code**Default = 22*

The same rules for programming regarding dialer format apply here. If transmissions are not desired, program AA in locations 1 & 2. **NOTE:** PANIC transmissions are immediate and not abortable.

*Question 20, L3 & L4 - Low Battery Code**Default = AA*

The same rules for programming regarding dialer format apply here. If transmissions are not desired, program AA in locations 3 & 4. LOW-BATTERY transmissions will be reported 4 minutes after detection. LOW-BATTERY RESTORE CODE will be reported within 4 minutes after detection of GOOD BATTERY condition.

**QUESTION 21**

**CS CODES for OPEN/CLOSE and CS TEST**

**DEFAULT = AAAA**

There are 4 locations (L1-L4) in this question:

**Question 21, L1 - Opening Code**

**Default = A**

**Question 21, L2 - Closing Code**

**Default = A**

L1 is the single-digit OPENING CODE. L2 is the single-digit CLOSING CODE. Entry of AA into these two locations means that openings and closings are not desired. If a dialer format other than standard is programmed, the second digit transmitted will be the user number.

**Question 21, L3 & L4 - CS Test Code**

**Default = AA**

L3 - L4 is the CS Test code. The CS Test code will be transmitted at the interval selected in question 07, location 3.

**NOTE:** Any digit entered will be transmitted unless CS Test is disabled; to disable CS Test, see question 07, location 3.

**QUESTION 22**

**CS CODES for BYPASS, RESTORE, TROUBLE and CANCEL**

**DEFAULT = AAFA**

There are 4 locations (L1-L4) in this question:

**Question 22, L1 - Bypass Code**

**Default = A**

L1 is the single-digit system BYPASS CODE that upon arming, will be reported to the central station if a zone is bypassed. Entry of an "A" means that bypasses are not to be transmitted. If a 2-digit dialing format has been selected, the Bypass code will be followed by the programmed second digit of the Zone code.

**Question 22, L2 - Restore Code**

**Default = A**

L2 is the single-digit system RESTORE CODE reported to the central station. Restores will be reported for all Burglary or 24-hour zones by enabling this code (digits 0-9, B-F) and enabling zone Restores in question 04, location 3. Entry of an "A" means that Restores are not to be transmitted. If a 2-digit dialer format has been programmed, the Restore code will be followed by the programmed second digit of the Zone code. **NOTE:** Restore is not selectable by zone.

**Question 22, L3 - Trouble Code**

**Default = F**

L3 is the single-digit system TROUBLE CODE reported to the central station. This code will be reported on DAY TROUBLE and FIRE TROUBLE. If a 2-digit format has been programmed, this code will be followed by the second digit of the respective Zone code.

**Question 22, L4 - Cancel Code**

**Default = A**

L4 is the single-digit system CANCEL CODE reported to the central station. This code will be sent if a user code is entered after a violation of a controlled zone. If the zone is still violated, entry of a User code will transmit the Cancel code. If the zone is programmed for restoral, then the Restore code will be transmitted when the loop status has returned to normal. Entry of an "A" in this field indicates that Cancel codes are not transmitted. In formats requiring 2 digits, the User number functions as the second digit.

**QUESTION 23**

**CS CODES for KEYPAD FIRE and KEYPAD AUXILIARY**

**DEFAULT = AAAA**

There are 4 locations (L1-L4) in this question:

**Question 23, L1 & L2 - Keypad Fire Code** **Default = AA**

L1 - L2 is the Alarm code that will be transmitted upon activation of the Keypad Fire condition (pressing the two Fire keys or the 7 & 9 keys on the keypad). This code can vary from any of the zones that are programmed as Fire.

**Question 23, L3 & L4 - Keypad Auxiliary Code** **Default = AA**

L3 - L4 is the code transmitted to the CS for Keypad Aux. condition (pressing the two Aux keys or 1 & 3 from the keypad).

**NOTE:** These keypad emergency conditions are optional and can be enabled within question #05 of the programming sequence. If either or both of these transmissions are not desired, program their respective locations as "AA."

**QUESTION 24**

**CS CODES RF LOW BATTERY & SUPERVISION**

**DEFAULT = AAAA**

There are 4 locations (L1-L4) in this question:

**Question 24, L1 - RF Low Battery Code** **Default = A**

**Question 24, L2 - RF Low Battery Restore** **Default = A**

**Question 24, L3 - RF Supervisory** **Default = A**

**Question 24, L4 - RF Supervisory Restore** **Default = A**

**QUESTION 25**

**CS CODES BELL SUPERVISION & TAMPER**

**DEFAULT = AAAA**

There are 4 locations (L1-L4) in this question:

**Question 25, L1 & L2 - Bell Supervision Code** **Default = AA**

**Question 25, L3 - RF Tamper Code** **Default = A**

**Question 25, L4 - RF Tamper Reset** **Default = A**

**QUESTION 26**

**RF ZONES**

**DEFAULT = 00A0**

There are 4 locations (L1-L4) in this question:

**Question 26, L1 - RF Zones 5-8** **Default = 0**

**Question 26, L2 - RF Zones 1-4** **Default = 0**

**L1 - RF Zones 5-8**

Digit	RF ZONES			
	8	7	6	5
0	None			
1				✓
2			✓	
3			✓	✓
4		✓		
5		✓		✓
6		✓	✓	
7		✓	✓	✓
8	✓			
9	✓			✓
A	✓		✓	
B	✓		✓	✓
C	✓	✓		
D	✓	✓		✓
E	✓	✓	✓	
F	✓	✓	✓	✓

**L2 - RF Zones 1-4**

Digit	RF ZONES			
	4	3	2	1
0	None (Zones 1-4 Are Hardwired)			
1				✓
2			✓	
3			✓	✓
4		✓		
5		✓		✓
6		✓	✓	
7		✓	✓	✓
8	✓			
9	✓			✓
A	✓		✓	
B	✓		✓	✓
C	✓	✓		
D	✓	✓		✓
E	✓	✓	✓	
F	✓	✓	✓	✓



RF zone numbers must begin after assigned hardwired zone numbers. For example, if zones 1 through 4 are hardwired, the first RF zone number assigned would be 5.

Any zone using an RF point must be enabled in this question so that the system knows where to look for zone data.

To disable a RF point that has been previously programmed:

1. Remove the RF enable for the appropriate zone in Question 26; and
2. Make the first 2 digits in the RF programming for that zone "00."

**Question 26, L3 - Disable Account**

**Default = A**

This option is enabled when L3 is set to D. All other entries for L3 will not enable this option. While this option is enabled, the system will not arm; and the Reporting code will be transmitted, with user number trying to arm (if the dialer format requires it), to the CS. If the format is CID, the code for this event is 551 (Dialer Disabled Event code).

**Question 26, L4 - Not Used**

**QUESTION 27**

**NONSUPERVISED/TAMPER RF ZONES**

**DEFAULT = 0000**

There are 4 locations (L1-L4) in this question:

**Question 27, L1 & L2 - Nonsupervised RF Zones**

**Default = 00**

Select the RF zones not to be supervised. This refers to wireless transmitters that will be removed from the premises and will be out of the receiver's range. To avoid generating CS transmissions (RF point supervisory) they MUST NOT be supervised. Select the nonsupervised RF zones from the tables below. **NOTE:** The checkmarks indicate which points are selected. Keyfobs are not included.

**L1 - Nonsupervised Zones 5-8**

Digit	NON-SUPERVISED ZONES			
	8	7	6	5
0	None (All RF Zones Supervised)			
1				✓
2			✓	
3			✓	✓
4		✓		
5		✓		✓
6		✓	✓	
7		✓	✓	✓
8	✓			
9	✓			✓
A	✓		✓	
B	✓		✓	✓
C	✓	✓		
D	✓	✓		✓

**L2 - Nonsupervised Zones 1-4**

Digit	NON-SUPERVISED ZONES			
	4	3	2	1
0	None (All RF Zones Supervised)			
1				✓
2			✓	
3			✓	✓
4		✓		
5		✓		✓
6		✓	✓	
7		✓	✓	✓
8	✓			
9	✓			✓
A	✓		✓	
B	✓		✓	✓
C	✓	✓		
D	✓	✓		✓

**Question 27, L3 & L4 - Tamper Disable RF Zones**

**Default = 00**

Select from the tables below, the RF Zones where tamper is to be disabled. **NOTE:** The checkmarks indicate which points are selected.

**L3 - Tamper Disable Zones 5-8**

Digit	TAMPER DISABLED ZONES			
	8	7	6	5
0	None (All Zones Enabled)			
1				✓
2			✓	
3			✓	✓
4		✓		
5		✓		✓
6		✓	✓	
7		✓	✓	✓
8	✓			
9	✓			✓
A	✓		✓	
B	✓		✓	✓
C	✓	✓		
D	✓	✓		✓
E	✓	✓	✓	
F	✓	✓	✓	✓

**L4 - Tamper Disable Zones 1-4**

Digit	TAMPER DISABLED ZONES			
	4	3	2	1
0	None (All Zones Enabled)			
1				✓
2			✓	
3			✓	✓
4		✓		
5		✓		✓
6		✓	✓	
7		✓	✓	✓
8	✓			
9	✓			✓
A	✓		✓	
B	✓		✓	✓
C	✓	✓		
D	✓	✓		✓
E	✓	✓	✓	
F	✓	✓	✓	✓

**QUESTION 28**

**TRIGGERS 1 & 2**

**DEFAULT = 0003**

The control panel contains 2 voltage level output triggers. Triggers 1 & 2 are selected in this question. To select a trigger type, enter in either L1 L2 or L3 L4, the 2 digits representing the desired trigger type for each output trigger. Certain triggers can be selected as Noninverting or Inverting (see description below). Consult the table below to determine the trigger types available.

**Question 28, L1 & L2 - Define Trigger #1**

**Default = 00**

**Question 28, L3 & L4 - Define Trigger #2**

**Default = 03**

**NOTE:** If the trigger is unused, enter "00".

Digits		TRIGGER TYPE DEFINITION	DESCRIPTION OF OPERATION
NON-INVERT	INVERT		
00	N/A	Smoke Power (Trigger #1 Only)	Used in Fire Verification to reset smoke power
01	N/A	Smoke Power - NO Verification	Used to power smoke detectors with no verification
02	22	Two-Way Voice	SEE BELOW
03	23	Burglary Bell ON	Follows Burglary Bell Timer
04	24	Ready	Follows Ready LED; used for keyswitch
05	25	Armed	Follows Armed LED; used for keyswitch
06	26	Exit Time	ON during exit time
07	27	Entry Time	ON during entry time
08	28	Fire-Only Latch	ON w/Fire Bell, OFF w/code
09	29	Burglary-Only Latch	ON w/Burglary Bell, OFF w/code
0A	2A	Strobe	ON steady w/Burglary Bell, Pulse w/Fire Bell
0B	2B	Panic Alarm	Follows Keypad panic
0C	2C	Shock Asterisk Reset	Asterisk "*" activates for 2-6 seconds
0D	2D	Duress	Pulses for 2-6 seconds following entry of Duress code
0E	2E	RF Trouble	Active if any RF zone is in supervision or low battery, or the bell is in supervision
0F	N/A	RF Button Toggle	Any keyfob button can toggle this trigger; intended for lighting control
10	30	Alarm/Restore	Active on any zone alarm. Inactive on alarm restore
11	31	Chime	Active when a zone programmed with chime activates

Digits		TRIGGER TYPE DEFINITION	DESCRIPTION OF OPERATION
NON-INVERT	INVERT		
12	32	Keypad Sounder	Active when keypad sounder activates
13	33	RF Momentary	Active when keyfob momentary Trigger 1 or 2 activates

**TWO-WAY VOICE** - This trigger will activate when line seizure occurs if the event is any of the following: Burglary, Fire, Duress, Keypad Panic, Keypad Fire, or Keypad Auxiliary. It will not activate for CS Test, Openings/Closing, Trouble, Bypass, Cancel, or Restore. It will deactivate about 1 second before disconnecting the telephone line. Also, at the time of release, keypad sounders will be silenced for the remaining duration of the bell output cycle. The bell will timeout or a valid User code will terminate.

**NOTE:** The trigger outputs are limited to approximately 50 mA each.

**NONINVERT TRIGGER** - The trigger output (positive to negative) is normally floating and actively sinks (becomes a negative) on activation.

**INVERT TRIGGER** - The trigger output (positive to negative) is normally sinking (negative with respect to positive), and actively floats on activation.

**QUESTION 29**

**CS TEST TIME**

**DEFAULT = 0000**

If the control panel transmits a system test at a specific time of day, enter the hour and minute in military time (24-hour clock) as follows:

**Question 29, L1 & L2 - Hour of Day (00 - 23)** **Default = 00**

Enter the hour of the day in military time: 12 A.M. - 12 P.M. (00 - 23). **NOTE:** Quick Rule: 00 = Midnight; for times after 12 noon, add 12 hours to obtain the hour.

**Question 29, L3 & L4 - Minute within Hour (00 - 59)** **Default = 00**

Example: To transmit at 5:30 PM, enter a 17 into L1 & L2 and 30 into L3 & L4.

**NOTE:** The CS Test Interval is selected in question 07, location 3, and is enabled in question 21, locations 3 & 4.

**QUESTION 30**

**CID GROUP NUMBER**

**DEFAULT = AAAA**

**Question 30, L1 & L2 - Account 1 Group Number** **Default = AA**

**Question 29, L1 & L2 - Account 2 Group Number** **Default = AA**

This question contains the group number that is to be sent in Contact ID format. L1 and L2 contain the group number that will be sent when using account number 1. L3 and L4 contains the group number that will be sent when using account number 2.

**QUESTION 31**

**RF REMOTE KEYFOB 1 BUTTON DEFINITIONS**

**DEFAULT = 0000**

**Question 31, L1 - RF Remote Keyfob 1 Button 1** **Default = 0**

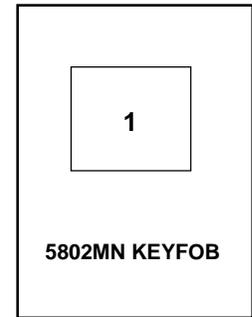
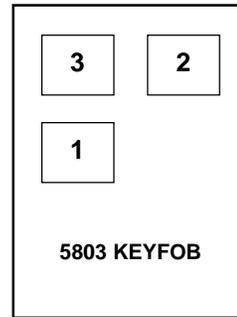
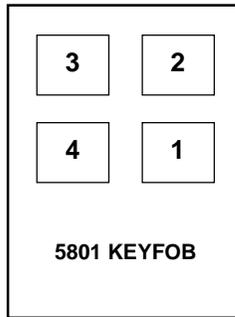
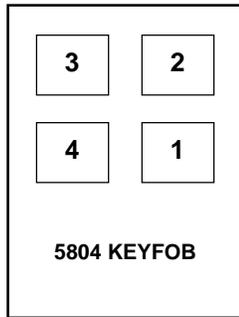
**Question 31, L2 - RF Remote Keyfob 1 Button 2** **Default = 0**

**Question 31, L3 - RF Remote Keyfob 1 Button 3** **Default = 0**

**Question 31, L4 - RF Remote Keyfob 1 Button 4** **Default = 0**

In locations L1-L4, enter the digit for the desired system options from the table below.

Digit	BUTTON OPERATION	EXPLANATION
0	DISABLED	NOT WORKING
1	Disarm	Pressing Button Disarms System
2	Force Arm	Pressing Button Arms System
3	Force Stay Arm	Pressing Button Arms System in Stay Mode
4	Force Instant Arm	Pressing Button Arms System in Instant Mode
5	Force Stay/Instant Arm	Pressing Button Arms System in Stay/Instant Mode
6	Keypad Fire	Pressing Button Activates Keypad Fire
7	Keypad Panic	Pressing Button Activates Keypad Panic
8	Keypad Aux	Pressing Button Activates Keypad Aux
9	Toggle Trigger 1	Pressing Button Activates Trigger 1
A	Toggle Trigger 2	Pressing Button Activates Trigger 2
B	Momentary Trigger 1	Pressing Button Momentarily Activates Trigger 1
C	Momentary Trigger 2	Pressing Button Momentarily Activates Trigger 2



**QUESTION 32**

**RF REMOTE KEYFOB 2-BUTTON DEFINITIONS**

**DEFAULT = 0000**

- Question 32, L1 - RF Remote Keyfob 2 Button 1* *Default = 0*
- Question 32, L2 - RF Remote Keyfob 2 Button 2* *Default = 0*
- Question 32, L3 - RF Remote Keyfob 2 Button 3* *Default = 0*
- Question 32, L4 - RF Remote Keyfob 2 Button 4* *Default = 0*

In locations L1-L4, enter the digit for the desired system options from the table above. Refer to diagram above for keyfob buttons.

**QUESTION 33**

**RF REMOTE KEYFOB 3 BUTTON DEFINITIONS**

**DEFAULT = 0000**

- Question 33, L1 - RF Remote Keyfob 3 Button 1* *Default = 0*
- Question 33, L2 - RF Remote Keyfob 3 Button 2* *Default = 0*
- Question 33, L3 - RF Remote Keyfob 3 Button 3* *Default = 0*
- Question 33, L4 - RF Remote Keyfob 3 Button 4* *Default = 0*

In locations L1-L4, enter the digit for the desired system options from the table above. Refer to diagram above for keyfob buttons.

**QUESTION 34**

**RF REMOTE KEYFOB 4 BUTTON DEFINITIONS**

**DEFAULT = 0000**

- Question 34, L1 - RF Remote Keyfob 4 Button 1* *Default = 0*
- Question 34, L2 - RF Remote Keyfob 4 Button 2* *Default = 0*
- Question 34, L3 - RF Remote Keyfob 4 Button 3* *Default = 0*
- Question 34, L4 - RF Remote Keyfob 4 Button 4* *Default = 0*

In locations L1-L4, enter the digit for the desired system options from the table above. Refer to diagram above for keyfob buttons.

**QUESTION 35**

**RF REMOTE KEYFOB 5 BUTTON DEFINITIONS**

**DEFAULT = 0000**

*Question 35, L1 - RF Remote Keyfob 5 Button 1*

*Default = 0*

*Question 35, L2 - RF Remote Keyfob 5 Button 2*

*Default = 0*

*Question 35, L3 - RF Remote Keyfob 5 Button 3*

*Default = 0*

*Question 35, L4 - RF Remote Keyfob 5 Button 4*

*Default = 0*

In locations L1-L4, enter the digit for the desired system options from the table above. Refer to diagram above for keyfob buttons.

**QUESTION 36**

**RF REMOTE KEYFOB 6 BUTTON DEFINITIONS**

**DEFAULT = 0000**

*Question 36, L1 - RF Remote Keyfob 6 Button 1*

*Default = 0*

*Question 36, L2 - RF Remote Keyfob 6 Button 2*

*Default = 0*

*Question 36, L3 - RF Remote Keyfob 6 Button 3*

*Default = 0*

*Question 36, L4 - RF Remote Keyfob 6 Button 4*

*Default = 0*

In locations L1-L4, enter the digit for the desired system options from the table above. Refer to diagram above for keyfob buttons.

**QUESTION 37 - NOT USED**

**QUESTION 00**

**INSTALLER CODE**

**DEFAULT = 2468**

There are 4 locations (L1 - L4) in this question. Enter any 4 digits (0-9 Installer code desired). This code is used to ENTER the system Programming mode via the keypad.

**Typically, each installing company uses a unique Installer code in order to prevent unauthorized people from gaining access to their panels.**

# Programming Questions - RF Programming

This section of the manual defines the programming questions along with the values expected for each question for RF devices. Enter RF Programming Mode by pressing [\*] [#] [X] [X], where [X] [X] is 01 to 14 and selects the desired RF Programming question no.

**NOTE:** The question number LEDs on the keypad will **blink rapidly** when RF Programming Mode is entered.

**Question 01 RF Device 1 Serial Number** **Default = 000000000**  
 Select the options for RF Device 1 in L1 - L9. Enter the valid digits from the tables below.

**Question 02 RF Device 2 Serial Number** **Default = 000000000**  
 Select the options for RF Device 2 in L1 - L9. Enter the valid digits from the tables below.

**Question 03 RF Device 3 Serial Number** **Default = 000000000**  
 Select the options for RF Device 3 in L1 - L9. Enter the valid digits from the tables below.

**Question 04 RF Device 4 Serial Number** **Default = 000000000**  
 Select the options for RF Device 4 in L1 - L9. Enter the valid digits from the tables below.

**Question 05 RF Device 5 Serial Number** **Default = 000000000**  
 Select the options for RF Device 5 in L1 - L9. Enter the valid digits from the tables below.

**Question 06 RF Device 6 Serial Number** **Default = 000000000**  
 Select the options for RF Device 6 in L1 - L9. Enter the valid digits from the tables below.

**Question 07 RF Device 7 Serial Number** **Default = 000000000**  
 Select the options for RF Device 7 in L1 - L9. Enter the valid digits from the tables below.

**Question 08 RF Device 8 Serial Number** **Default = 000000000**  
 Select the options for RF Device 8 in L1 - L9. Enter the valid digits from the tables below.

**Question 09 RF Keyfob 1 Serial Number** **CS User Number 8 Function Q30** **Default = 000000000**  
 Select the options for Keyfob 1 in L1 - L9. Enter the valid digits from the tables below.

**Question 10 RF Keyfob 2 Serial Number** **CS User Number 9 Function Q31** **Default = 000000000**  
 Select the options for Keyfob 2 in L1 - L9. Enter the valid digits from the following tables.

**Question 11 RF Keyfob 3 Serial Number** **CS User Number 10 Function Q32** **Default = 000000000**  
 Select the options for Keyfob 3 in L1 - L9. Enter the valid digits from the tables below.

**Question 12 RF Keyfob 4 Serial Number** **CS User Number 11 Function Q33** **Default = 000000000**  
 Select the options for Keyfob 4 in L1 - L9. Enter the valid digits from the following tables.

**Question 13 RF Keyfob 5 Serial Number** **CS User Number 12 Function Q34** **Default = 000000000**  
 Select the options for Keyfob 5 in L1 - L9. Enter the valid digits from the tables below.

**Question 14 RF Keyfob 6 Serial Number** **CS User Number 13 Function Q35** **Default = 000000000**  
 Select the options for Keyfob 6 in L1 - L9. Enter the valid digits from the following tables.

**Questions 01-10, L1 - RF Device Options**

Digit	OPTION	EXPLANATION
0	DISABLED	NOT APPLICABLE
1	1 Zone or Button	Only 1 Zone or 1 Button
2	2 Zones or Buttons	2 Consecutive Zones or 2 Buttons
3	3 Zones or Buttons	3 Consecutive Zones or 3 Buttons
4	4 Buttons	4 Buttons (Keyfobs)

**NOTE:** Any zones programmed in RF Programming must also be enabled in question 26.

**Questions 01-10, L2 - RF Device Type**

Digit	TYPE	EXPLANATION
0	DISABLED	NOT APPLICABLE
1	5800 Transmitter	5800 Series Transmitters (Select for Keyfobs)
9	5816 Transmitter	5816 Transmitter using magnetic relay only

**Questions 01-10, L3 through L9 - 5800 Serial Number**

Enter the 7-digit Serial Number printed on the device for all 5800 RF devices to be used.

If an RF device is **not** to be used, program a "00" into the locations corresponding to the device.

**NOTE:** When programming a device that uses multiple zones, you must skip the additional ZONES supported by that device by disabling them. For example, if Zone 2 has a device that has been programmed to support three zones, the next two zones must be disabled, and the following zone must be zone 5.

To disable an RF point that has been previously programmed, you must:

1. Remove the RF enable for the appropriate zone in Question 26; and
2. Make the first 2 digits in the RF programming for that zone "00."

**Example of RF Programming**

In this example of RF Programming assume that a four button keyfob is being enabled as keyfob number 1, the keyfob has a serial number of "A 123 4567" and that only one question (09) is being programmed at this time.

<u>DESCRIPTION</u>	<u>KEYPAD ENTRY</u>
1. Enter RF programming	*#
2. Select question 09 for keyfob 1	09
3. Select the 4 button keyfob option (table L1- RF Device Options)	4
4. Select 5800 transmitter type (table L2 - RF Device Type)	1
5. Enter 7-digit serial number from the keyfob as L3 through L9 (ignore letter A at the beginning)	1234567
6. Exit RF Programming	STAY

A completed RF Programming Worksheet for the above example would appear as:

**09 RF KEYFOB 1 DEFINITION**

4	1	1	2	3	4	5	6	7	Default: 00000000
1	2	3	4	5	6	7	8	9	
OPT TYPE		SERIAL NUMBER							

# Data Entry Via LED Based Keypads

## General Information

This section describes the physical keystrokes necessary to perform keypad programming, and tells how to interpret the data displayed on LED-based keypads during programming operations. **NOTE:** Actual keypad programming should be performed after completion of the programming sheet.

## How to Enter Programming Mode Via Keypad

The SYSTEM programming mode can be entered ONLY WHILE DISARMED, as follows:

TO ENTER INSTALLER PROGRAMMING: **[CODE][\*][INSTALLER][1]**

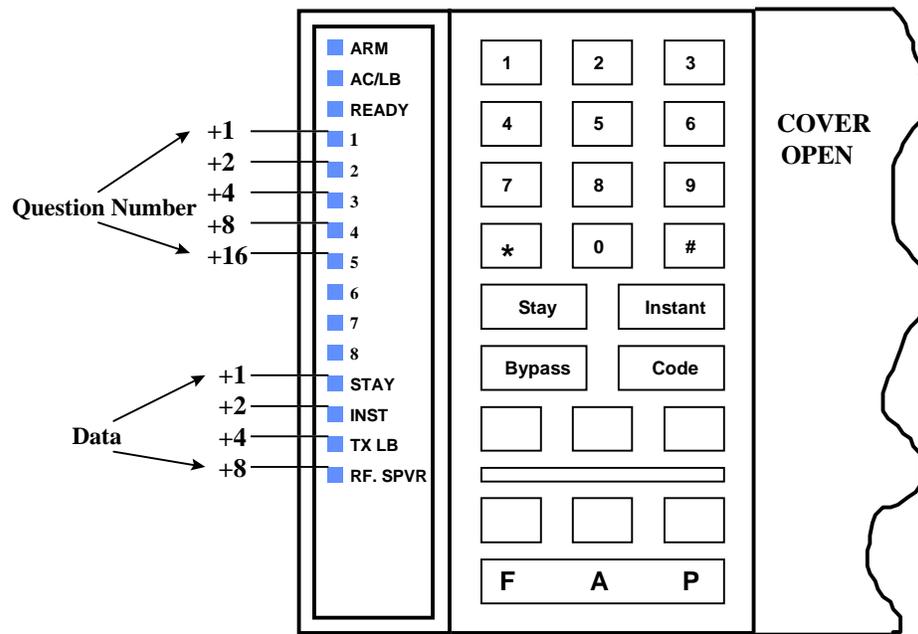
Where:

- [CODE]** Press the CODE button
- [\*]** Press the asterisk (\*) button
- [INSTALLER]** Enter the 4-DIGIT INSTALLER CODE (**default = 2468**)
- [1]** Press "1" button. This indicates Installer Mode 1.

## What You See on the LED Keypad

### Program Mode = Ready LED Pulsing

As soon as you enter the Installer Keypad Programming mode, the READY LED will slowly pulse, and will continue to pulse until you leave this mode. The remaining LEDs display the question number and location contents as indicated below:



### **Question Numbers = Zone LEDs**

Zone LEDs 1 through 5 display the current QUESTION NUMBER (not the specific location within each question). In the diagram above, the question number is the total you get when you ADD the values of all LEDs that are ON.

Examples:

Zone 1 ON, Zones 2-5 OFF = Question 01

Zone 1 ON, Zone 2 ON, Zones 3-5 OFF = Question 03

Zone 2 ON, Zone 3 ON, Zone 4 ON, Zones 1 and 5 OFF = Question 14

### **Location Contents = System Status LEDs**

The remaining status LEDs (STAY, INST, TX LB and RF SPRV) display DATA that resides in each location within the current question. As shown in the diagram above, the value located next to each LED that is on must be ADDED to calculate the total data for each location.

Examples:

Stay ON, Inst, TX LB and RF Sprv OFF = 1

Stay and Inst ON, TX LB and RF Sprv OFF = 3

Inst and RF Sprv ON, Stay and TX LB OFF = A

The following chart shows binary values that you will see on these LEDs for the letters A-F that may be entered in some locations of the program sheet.

- A 10 Inst & RF Sprv ON
- B 11 Stay, Inst, & RF Sprv ON
- C 12 TX LB, & RF Sprv ON
- D 13 Stay, TX LB, & RF Sprv ON
- E 14 Inst, TX LB & RF Sprv ON
- F 15 Stay, Inst, TX LB, & RF Sprv ON

### **How to Enter Data**

This section of the manual describes the physical keystrokes to enter the data written on the program sheet.

#### **Movement Between Questions**

System Program mode starts with question 1 displayed. DIRECT JUMPS TO ANY QUESTION CAN BE MADE BY PRESSING THE \* (ASTERISK) BUTTON AND THE 2-DIGIT QUESTION NUMBER.

Questions can be accessed directly or sequentially.

Example: To jump to question 07, Press \* 0 7

The question number will be displayed by the zone LEDs. The status LEDs will display the contents of the FIRST location in that question.

#### **Movement Within Questions**

The zone LEDs display the question number and the other status LEDs display the contents (data) within each location. MOVEMENT FROM LOCATION L1 TO THE NEXT LOCATION WITHIN ANY QUESTION CAN BE PERFORMED BY PRESSING THE # (POUND) BUTTON.

The other status LEDs will display the contents of each location as this button is pressed.

#### **Data Entry**

**To alter the value** in any location, enter the desired DIGIT from the program sheet, and **press the # button.**

**NOTE: THE #, \*, or STAY BUTTON MUST BE PRESSED AFTER THE ENTRY OF THE DESIRED DIGIT. THE SYSTEM WILL NOT PROGRAM THE DIGIT UNTIL ONE OF THESE BUTTONS IS PRESSED. THEREFORE, IF A MISTAKE IS MADE, IT CAN BE CHANGED.**

Numeric entries 0-9 can be performed by pressing the respective keypad button. Entries of A-F require 2 keystrokes, as follows:

Press the **CODE** button followed by 1-6 for values A-F.

VALUE	KEYSTROKES	VALUE	KEYSTROKES
A	CODE 1	D	CODE 4
B	CODE 2	E	CODE 5
C	CODE 3	F	CODE 6

Example: To enter an A = Press CODE followed by 1.

### Exit System Program Mode

After all programming has been completed, PRESS THE **STAY** BUTTON TO EXIT THE SYSTEM PROGRAM MODE.

### Question Acknowledgment

The keypad will chirp on each keystroke. In addition, a beep will confirm advancement between question numbers.

Four beeps signify an invalid input entry. After you make an invalid entry, the system positions you at the same question number and location as immediately before you made the invalid entry.

## Summary of System Programming

### TO ENTER PROGRAMMING:

***[CODE] [\*] [4-digit Installer Code] [1]***

LEDs illuminate steadily in normal programming mode.

### TO ENTER RF PROGRAMMING:

***[\*] [#] [2-digit Question Number]***

Question LEDs pulse in RF programming mode.

### TO SKIP A QUESTION:

***[\*] [2-digit Question Number]***

### TO MOVE WITHIN A QUESTION:

***Press [#] until the desired location is reached.***

### TO ENTER DATA:

***[single digit: 0 - 9, A - F] [#]***

A = CODE 1	D = CODE 4
B = CODE 2	E = CODE 5
C = CODE 3	F = CODE 6

### TO EXIT PROGRAMMING:

***[STAY]***



# Summary Of Keypad Functions

## User Functions

Arming/Disarming:	[Enter any valid 4-digit User code]
Stay Arming:	[STAY] [Enter any valid 4-digit User code]
Stay/Instant Arming:	[STAY] [INSTANT] [Enter any valid 4-digit User code]
Bypass:	[BYPASS] [Enter any valid 4-digit User code] [Zone #]
Quick Bypass:	[BYPASS] [Zone #]
Quick Exit:	[STAY]
User Code Programming:	[CODE] [Enter Master User code] [User #] [Enter 4-digit User code]
User Code Deletion:	[CODE] [Enter Master User code] [User #] [*]
Quick Arming:	[#] [1]
Quick Force Arming:	[#] [2]
Set Clock:	[#] [3]
Toggle Chime:	[#] [6]
On-Line Downloading:	[#] [9]
Panic:	[*] & [#] at the same time
Fire:	[7] & [9] at the same time
Auxiliary:	[1] & [3] at the same time
Ambush:	[Enter User code 6]

## Installer Modes

Installer Mode Programming:	[CODE] [*] [Enter Installer code] [1]
RF Mode Programming:	[CODE] [*] [Enter Installer code] [1], then [*] [#] [X] [X] where [X] [X] is 01-10
Unattended Download:	[CODE] [*] [Enter Installer code] [3]
On-Line Download:	[CODE] [*] [Enter Installer code] [4]
Walk Test Mode:	[CODE] [*] [Enter Installer code] [5]
System Default:	[CODE] [*] [Enter Installer code] [1], then press [1] & [3] at the same time
User Code Default:	[CODE] [*] [Enter Installer code] [1], then press [7] & [9] at the same time



# Central Station Reporting Formats

This security system is designed to transmit data to a central station receiver when an Alarm, System Trouble, or an Opening/Closing occurs. Due to the many different types of CS receivers in the market, this system can transmit data in various formats. Each installing company determines which format best suits its needs based on many factors. Of these, the CS receiver type is a major factor.

In transmitting data to the CS receiver, the first event that occurs is that the system's digital communicator will seize the home phone lines. Then, it will dial the CS#1 telephone number (programming question 01). When the CS receiver picks up the ringing phone line, it will transmit a "Handshake" frequency (1400Hz, 2300Hz or HiLo) back to the digital communicator. After receiving the "Handshake" frequency, the digital communicator will transmit the data in the format programmed in question 04, locations 1, 2 & 3 (either in Pulse or DTMF). Assuming the CS receiver verifies the data transmission as valid (after 2 successful rounds of data or 1 valid parity round), it will transmit a "Kissoff" frequency back to the digital communicator. This causes the communicator to stop transmitting, unless more data is available, in which case additional data transmissions and "Kissoffs" will occur. After the final "Kissoff," the CS receiver will release the phone line and process the data to its display and associated peripherals (computer and printer). If for any reason the digital communicator does not receive the "Kissoff," it will proceed to dial the CS#2 telephone number or dial again the CS#1 telephone number (if CS#2 is not used). It will continue to dial (8 times for each CS telephone number programmed) until a "Kissoff" is received. If after dialing 8 times for each CS Telephone number programmed a "Kissoff" is not received, the system will display "Communication Failure" at the keypad. This message is cleared after the next successful transmission or by the user at the keypad.

The following is a general description of the various formats transmitted by this system.

## Standard (3X1 or 4X1)

The Standard Reporting Format: AAA E or AAAA E

Where:

**AAAA** = 3- or 4-digit Account Number (PROGRAM QUESTIONS 09 & 10)

**E** = Single-digit Event code; it is the first of the 2 programmable Reporting code digits

Standard format is transmitted in Pulse and involves a 3- or 4-digit account number followed by a single-digit Event code. It can be transmitted with parity (1 round of data) or without parity (2 rounds of data). A disadvantage of this format is that it can only transmit a total of 15 event codes (0 - 9, B - F) without identifying zones or users. Examples:

**3X1 W/O PARITY**

123 3 (1st round)  
123 3 (2nd round)  
123 3 (resulting data)

**3X1 W/PARITY**

123 3 **6** (single round)  
123 3 (resulting data)

**4X1 W/O PARITY**

1234 3 (1st round)  
1234 3 (2nd round)  
1234 3 (resulting data)

**4X1 W/PARITY**

1234 3 **2** (single round)  
1234 3 (resulting data)

**NOTE: Parity is a number derived automatically by the dialer utilizing a mathematical formula (modulo 15). For example: 123 3 adds up to 9. This is subtracted from the next highest multiple of 15; in this case, 15 - 9 = 6. If the CS receiver accepts a valid parity digit, it considers the data transmission valid, delivers a "Kissoff" and processes the data. The parity digit is not displayed. Its only purpose is for validation of data transmitted. It is not a programmable digit; it is generated automatically by the dialer when the parity option is selected in programming question 04, location 2. The obvious advantage of using parity is speed. The transmission time between dialer and receiver is shorter because fewer digits are transmitted with it as opposed to without it.**

### Extended (3X1 Ext. or 4X1 Ext.)

The Extended Reporting Format: AAA EZ or AAAA EZ

Where:

**AAAA** = 3- or 4-digit Account Number (PROGRAM QUESTIONS 09 & 10)

**E** = Single-digit Event code; it is the first of the 2 programmable Reporting code digits

**Z** = Zone or User identifier; it is the second of the 2 programmable Reporting code digits

Extended format is transmitted in Pulse and involves a 3- or 4-digit account number followed by a double-digit reporting code. The only purpose for using the Extended format (sometimes known as Universal or Expanded format) is to be able to transmit more than 15 codes to the CS receiver. It does this by extending the Event code from the previous round of data resulting in a 2 digit reporting code. It can be transmitted with parity (2 rounds of data) or without parity (4 rounds of data). There are 15 possible event codes, each of which can have 15 different zone or user identifiers. As a result, a total of 225 individual events can be reported. Examples:

**3X1 Ext. W/O PARITY**

123 3 (1st round)            123 3 (2nd round)  
 333 1 (3rd round)        333 1 (4th round)  
 123 31 (resulting data) Burglary Zone 1

**4X1 Ext. W/O PARITY**

1234 3 (1st round)        1234 3 (2nd round)  
 3333 1 (3rd round)      3333 1 (4th round)  
 1234 31 (resulting data) Burglary Zone 1

**3X1 Ext. W/PARITY**

123 3 **6** (1st round)  
 333 1 **5** (2nd round)  
 123 31 (resulting data) Burglary Zone 1

**4X1 Ext. W/PARITY**

1234 3 **2** (1st round)  
 3333 1 **2** (2nd round)  
 1234 31 (resulting data) Burglary Zone 1

### Partial Extended (3X1 Part. Ext. or 4X1 Part. Ext.)

The Partial Extended Reporting Format: AAA EZ or AAAA EZ

Where:

**AAAA** = 3- or 4-digit Account Number (PROGRAM QUESTIONS 09 & 10)

**E** = Single-digit Event code; it is the first of the 2 programmable Reporting code digits

**Z** = Zone or User identifier; it is the second of the 2 programmable Reporting code digits

The Partial Extended format is a combination of both the Standard and Extended formats. It transmits in Pulse a standard message for Alarm conditions and an extended message for Restores and other system conditions. To report a standard message, enter a numerical digit (0 - 9) in the first of the 2-digit reporting code; for an extended message, enter a hexadecimal digit (B - F) in the first of the 2-digit reporting code. The extended messages are used whenever a zone or user identification is needed (Bypasses, Restores, Openings/Closings, etc.). It can also transmit with and without parity. Examples:

**3X1 Stand. W/O PARITY (Alarm)**

123 3 (1st round)  
 123 3 (2nd round)  
 123 3 (resulting data) Burglary

**3X1 Part. Ext. W/O PARITY (Restore)**

123 E (1st round)    123 E (2nd round)  
 EEE 1 (3rd round)    EEE 1 (4th round)  
 123 E1 (resulting data) Burglary

**3X2 or 4X2**

The 3X2 or 4X2 Reporting Format: AAA EZ or AAAA EZ

Where:

**AAAA** = 3- or 4-digit Account Number (PROGRAM QUESTIONS 09 & 10)

**E** = Single-digit Event code; it is the first of the 2 programmable Reporting code digits

**Z** = Zone or User identifier; it is the second of the 2 programmable Reporting code digits

This format is also in Pulse and is an alternative to the Extended format; it also transmits a 2-digit reporting code. Its specific meaning is a 3- or 4-digit account number followed by a 2-digit alarm code. It can be transmitted with parity (1 round of data) or without parity (2 rounds of data). There are 15 possible Event codes, each of which can have 15 different zone identifiers. As a result, a total of 225 individual events can be reported. It is different from the extended format in the way it transmits. This is illustrated in the examples below:

**3X2 W/O PARITY**

123 31 (1st round)

123 31 (2nd round)

123 31 (resulting data) Burglary Zone 1

**3X2 W/PARITY**

123 31 5 (1st round)

123 31 (resulting data) Burglary Zone 1

**ADEMCO 4X2 Express**

The 4X2 Express Reporting Format: AAAA EZ

Where:

**AAAA** = 3- or 4-digit Account Number (PROGRAM QUESTIONS 09 & 10)

**E** = Single-digit Event code; it is the first of the 2 programmable Reporting code digits

**Z** = Zone or User identifier; it is the second of the 2 programmable Reporting code digits

This format transmits in DTMF a total of 7 digits (including the parity digit). This format is similar to the Extended or 4X2 formats in that it can transmit a total of 225 individual reporting events. However, its advantage is speed because it transmits touch-tones instead of pulses, and it always sends a parity digit. Examples:

1234 31 1 (1st round)

1234 31 (resulting data) Burglary Zone 1

**ADEMCO Point ID**

The Point ID Reporting Format: AAAA 18 QXYZ GG ZZZ

Where:

**AAAA** = 4-digit Account Number (PROG. QUESTS. 09 - 10)

**18** = Uniquely identifies this format to the receiver and to an automation system, but is not displayed or printed.

**Q** = Event qualifier, which gives specific event information

**1** = New Event or Opening

**3** = New Restore or Closing

**XYZ** = Event Code: The Event code is a 3-digit code (3 decimal digits). For zone alarms and some conditions this can be specified; other conditions are dedicated (see the tables below).

**GG** = Group number; this panel will report the group number stored in question 30.

**ZZZ** = Zone, sensor or user identifier (3 decimal digits). For zone conditions this will be the physical point number as programmed within the individual point (01 - 32). For user initiated actions such as openings/closings, this will be the actual user number (01 - 15).

This format is also known as ADEMCO Contact ID. A total of 16 digits (including the parity digit) are sent in DTMF. It enables reporting of 999 (001 - 999) unique zone or user identifiers instead of the 15 possible identifiers of most other pulse formats. This feature allows the full reporting capability of this system (32 points and 15 users). In addition, it

transmits at a much greater speed than the conventional pulse formats, since it uses DTMF (touch-tones) instead of pulses to transmit the data, and it always sends a parity digit. Its main advantage over all the other formats is its large number of Event codes (see tables below) with the ability to pinpoint an event (Alarm, Trouble, Bypass, Restore, etc.) to a specific sensor (up to 32 points in this system) and to report Openings/Closings for many users (up to 15 users in this system).

For some Reporting codes, the first of the two programmable digits determines the PID Event code to be transmitted. Other reporting codes transmit a dedicated PID Event code regardless of the digit programmed in the first location. In both cases, if transmissions are not desired, then program AA in locations 1 and 2. Refer to the following tables to select the PID Event codes to be transmitted.

<b>BURGLARY ZONE TYPES</b>		
<b>Digit</b>	<b>EVENT CODE</b>	<b>ENGLISH OUTPUT AT CS RECEIVER</b>
0	122	Silent Panic
1	123	Audible Panic
2	130	Burglary
3	131	Perimeter
4	132	Interior
5	133	24-Hour Alarm
6	134	Entry/Exit
7	135	Day/Night
8	136	Outdoor
9	137	Tamper
A	140	General Alarm
B	144	Sensor Tamper
C	155	Foil Break
D	156	Day Trouble

<b>FIRE ZONE TYPES</b>		
<b>Digit</b>	<b>EVENT CODE</b>	<b>ENGLISH OUTPUT AT CS RECEIVER</b>
0	110	Fire Alarm
1	111	Smoke
2	112	Combustion
3	113	Water Flow
4	114	Heat
5	115	Pull Station
6	116	Duct
7	117	Flame
8	140	General Alarm
9	150	24-Hour Non-Burg
A	158	High Temperature
B	159	Low Temperature
C	200	Fire Supervisory
D	201	Low H2O Pressure
E	202	Low CO2
F	203	Gate Valve Sensor

<b>24-Hour ALARM TYPES</b>		
<b>Digit</b>	<b>EVENT CODE,</b>	<b>ENGLISH OUTPUT AT CS RECEIVER</b>
0	100	Medical
1	101	Pendant Transmitter
2	120	Panic Alarm
3	122	Silent Panic
4	123	Audible Panic
5	130	Burglary
6	133	24-Hour Alarm
7	135	Day/Night
8	137	Tamper
9	140	General Alarm
A	150	24-Hour Non-Burg
B	151	Gas Detected
C	152	Refrigeration
D	153	Loss of Heat
E	154	Water Leakage
F	155	Foil Break

<b>24-Hour TROUBLE TYPES</b>		
<b>Digit</b>	<b>EVENT CODE</b>	<b>ENGLISH OUTPUT AT CS RECEIVER</b>
0	100	Medical
1	122	Silent Panic
2	123	Audible Panic
3	137	Tamper
4	150	24-Hour Non-Burg
5	153	Loss of Heat
6	155	Foil Break
7	156	Day Trouble
8	158	High Temperature
9	159	Low Temperature
A	300	System Trouble
B	301	AC Loss
C	302	Low System Battery
D	310	Ground Fault
E	373	Fire Trouble
F	380	Sensor Trouble

KEYPAD ZONE TYPES (Fire,* Panic,* Aux.,* Ambush)		
Digit	EVENT CODE	ENGLISH OUTPUT AT CS RECEIVER
0	100	Medical
1	101	Pendant Transmitter
2	110	Fire Alarm
3	111	Smoke
4	112	Combustion
5	117	Flame
6	120	Panic Alarm
7	121	Duress
8	122	Silent Panic
9	123	Audible Panic
A	130	Burglary
B	133	24-Hour Alarm
C	140	General Alarm
D	150	24-Hour Non-Burg
E	115	Fire Pull Station

**\*NOTE:** These keypad conditions have no Zone/User code associated with them

BYPASS TYPES		
Digit	EVENT CODE	ENGLISH OUTPUT AT CS RECEIVER
0	570	Zone Type Bypassed
1	571	Fire Zone Type Bypassed
2	572	24-Hour Zone Type Bypassed
3	573	Burg. Zone Type Bypassed
4**	574	Point Group Bypass

DEDICATED CODES	
EVENT CODE	ENGLISH OUTPUT AT CS RECEIVER
156	Day Trouble
301*	AC Loss
309*	Battery Test Fail
321	Trouble Bell
373	Fire Trouble
381	RF Supervision
383	RF Sensor Tamper
384	RF Low Battery
401	O/C by User
403	Auto Arm
406	Cancel on Open
407	Remote Arm
408	Quick Arm
409	Key Switch Zone Type
551	Dialer Disabled
602*	Test Periodic

**\*NOTE:** These codes have no Zone/User code associated with them; they will report 000 for these digits.



# XL-20 System Programming Worksheet



Name: \_\_\_\_\_ Address: \_\_\_\_\_

Account Number: \_\_\_\_\_ Programmed by: \_\_\_\_\_

## INSTALLER MODE PROGRAMMING

### 01 PRIMARY TELEPHONE NUMBER

<input type="text"/>															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Default: 234AAAAAAAAAAAAA

### 02 SECONDARY TELEPHONE NUMBER

<input type="text"/>															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Default: AAAAAAAAAAAAAA

### 03 CALLBACK TELEPHONE NUMBER

<input type="text"/>															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Default: AAAAAAAAAAAAAA

### 04 CS DIALER OPTIONS

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 0511

### 13 ZONE 3 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1033

### 05 KEYPAD CONDITIONS

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1004

### 14 ZONE 4 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1034

### 06 SYSTEM TIMEOUTS

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 665F

### 15 ZONE 5 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1035

### 07 MISCELLANEOUS SYSTEM OPTIONS

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 2C06

### 16 ZONE 6 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1036

### 08 BELL RING ON CANCEL, ARM/DISARM BELL TEST, BELL TEST CHIRP

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 0000

### 17 ZONE 7 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1037

### 09 ACCOUNT NUMBER 1

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1234

### 18 ZONE 8 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 1038

### 10 ACCOUNT NUMBER 2

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: AAAA

### 19 CS CODES FOR AMBUSH AND AC LOSS

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: AAAA

### 11 ZONE 1 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 2031

### 20 CS CODES FOR PANIC AND LOW BATTERY

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 22AA

### 12 ZONE 2 TYPE AND CS CODE

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: 4132

### 21 CS CODES FOR OPEN/CLOSE AND CS TEST

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: AAAA

### 22 CS CODES FOR BYPASS, RESTORE, TROUBLE AND CANCEL

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4

Default: AAFA

**23 CS CODES FOR KEYPAD FIRE AND KEYPAD AUXILIARY**

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1 2 3 4      Default: AAAA

**24 CS CODES RF LOW BATTERY, SUPERVISION, & TAMPER**

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1 2 3 4      Default: AAAA

**25 CS CODES BELL SUPERVISION**

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1 2 3 4      Default: AAAA

**26 RF ZONES**

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1 2 3 4      Default: 00A0

**27 NONSUPERVISED/TAMPER RF ZONES**

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1 2 3 4      Default: 0000

**28 TRIGGERS 1 & 2**

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1 2 3 4      Default: 0003

**29 CS TEST TIME**

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1 2 3 4      Default: 0000

**30 CID GROUP NUMBER**

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1 2 3 4      Default: AAAA

**31 RF REMOTE KEYFOB 1 BUTTON DEFINITIONS**

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1 2 3 4      Default: 0000

**32 RF REMOTE KEYFOB 2 BUTTON DEFINITIONS**

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1 2 3 4      Default: 0000

**33 RF REMOTE KEYFOB 3 BUTTON DEFINITIONS**

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1 2 3 4      Default: 0000

**34 RF REMOTE KEYFOB 4 BUTTON DEFINITIONS**

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1 2 3 4      Default: 0000

**35 RF REMOTE KEYFOB 5 BUTTON DEFINITIONS**

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1 2 3 4      Default: 0000

**36 RF REMOTE KEYFOB 6 BUTTON DEFINITIONS**

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1 2 3 4      Default: 0000





# Warnings and Limitations

## Warning Limitations Of This Alarm System

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

- Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
- Intrusion detectors (e.g., passive infrared detectors), smoke detectors, and many other sensing devices will not work without power. Battery operated devices will not work without batteries, with dead batteries, or if the batteries are not installed properly. Devices powered solely by AC will not work if their AC power supply is cut off for any reason, however briefly.
- Signals sent by wireless transmitters may be blocked or reflected by metal before they reach the alarm receiver. Even if the signal path has been recently checked during a weekly test, blockage can occur if a metal object is moved into the path.
- A user may not be able to reach a panic or emergency button quickly enough.
- While smoke detectors have played a key role in reducing residential fire deaths in the United States, they may not activate or provide early warning for a variety of reasons in as many as 35% of all fires, according to data published by the Federal Emergency Management Agency. Some of the reasons smoke detectors used in conjunction with this System may not work are as follows: Smoke detectors may have been improperly installed and positioned. Smoke detectors may not sense fires that start where smoke cannot reach the detectors, such as in chimneys, in walls or roofs, or on the other side of closed doors. Smoke detectors may not sense a fire on another level of a residence or building. A second-floor detector, for example, may not sense a first-floor or basement fire. Moreover, smoke detectors have sensing limitations. No smoke detector can sense every kind of fire every time. In general, detectors may not always warn about fires caused by carelessness and safety hazards like smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches, or arson. Depending on the nature of the fire and/or the location of the smoke detectors, the detector, even if it operates as anticipated, may not provide sufficient warning to allow all occupants to escape in time to prevent injury or death.
- Passive Infrared Motion Detectors can detect intrusion only within the designed ranges as diagrammed in their installation manual. Passive Infrared Detectors do not provide volumetric area protection. They do create multiple beams of protection, and intrusion can be detected only in unobstructed areas covered by the beams. They cannot detect motion or intrusion that takes place behind walls, ceilings, floors, closed doors, glass partitions, glass doors, or windows. Mechanical tampering, masking, painting, or spraying of any material on the mirrors, windows, or any part of the optical system can reduce their detection ability. Passive Infrared Detectors sense changes in temperature; however, as the ambient temperature of the protected area approaches the temperature range of 90° to 150°F, the detection performance can decrease.
- Alarm warning devices, such as sirens, bells, or horns, may not alert people or wake up sleepers who are located on the other side of closed or partly open doors. If warning devices sound on a different level of the residence from the bedrooms, then they are less likely to waken or alert people inside the bedrooms. Even persons who are awake may not hear the warning if the alarm is muffled by noise from a stereo, radio, air conditioner, or other appliances, or by passing traffic. Finally, alarm warning devices, however loud, may not warn hearing-impaired people or waken deep sleepers.
- Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be temporarily or permanently out of service. Telephone lines are also subject to compromise by sophisticated intruders.
- Even if the system responds to the emergency as intended, however, occupants may have insufficient time to protect themselves from the emergency situation. In the case of a monitored alarm system, authorities may not respond appropriately.
- This equipment, like other electrical devices, is subject to component failure. Even though this equipment is designed to last as long as 10 years, the electronic components could fail at any time.

The most common cause of an alarm system not functioning when an intrusion or fire occurs is inadequate maintenance. This alarm system should be tested weekly to make sure all sensors are working properly. Installing an alarm system may make one eligible for lower insurance rates, but an alarm system is not a substitute for insurance. Homeowners, property owners, and renters should continue to act prudently in protecting themselves and continue to insure their lives and property.

We continue to develop new and improved protection devices. Users of alarm systems owe it to themselves and their loved ones to learn about these developments.



# ***FCC Statement and Telephone Problems***

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## **“Federal Communications Commission (FCC) Statement”**

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information.

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

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

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

The user may find the “Interference Handbook,” prepared by the Federal Communications Commission, helpful. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00450-7.

The user shall not make any changes or modifications to the equipment unless authorized by the installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

## **In the Event of Telephone Operational Problems**

In the event of telephone operational problems, disconnect the control panel by removing the plug from the RJ31X (CA38A in Canada) wall jack. We recommend that you demonstrate disconnecting the phones upon installation of the system. Do not disconnect the phone connection inside the control panel. Doing so will result in the loss of your phone lines. If the regular phone works correctly after the control panel has been disconnected from the phone lines, the control panel has a problem and should be returned for repair. If, upon disconnection of the control panel, there is still a problem on the line, notify the telephone company that it has a problem, and request prompt repair service. The user may not under any circumstances (in or out of warranty) attempt any service or repairs to the system. It must be returned to the factory or an authorized service agency for all repairs.



# Warranty

## FBI LIMITED WARRANTY

Fire Burglary Instruments Inc., a Subsidiary of Pittway Corporation and its divisions, subsidiaries, and affiliates ("Seller"), 149 Eileen Way, Syosset, New York 11791, warrants its products to be in conformance with its own plans and specifications, and to be free from defects in materials and workmanship under normal use and service for 5 years from the date stamp control on the product, or, for products not having a date stamp, for 5 years from the date of original purchase, unless the Installation Instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any product which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Seller. For warranty service, return, transportation prepaid, to Factory Service, 149 Eileen Way, Syosset, New York 11791.

THERE ARE NO WARRANTIES EXPRESSED OR IMPLIED OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO CASE SHALL SELLER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, OR UPON ANY OTHER BASIS OF LIABILITY WHATSOEVER, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT.

Seller does not represent that the products it sells may not be compromised or circumvented; that the products will prevent any personal injury or property loss by burglary, robbery, fire, or otherwise; or that the products will in all cases provide adequate warning or protection. Customer understands that a properly installed and maintained alarm system may only reduce the risk of a burglary, robbery, fire, or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO GIVE ANY WARNING. HOWEVER, IF SELLER IS HELD LIABLE, WHETHER DIRECTLY OR INDIRECTLY, FOR ANY LOSS OR DAMAGE ARISING UNDER THIS LIMITED WARRANTY, OR OTHERWISE, REGARDLESS OF CAUSE OR ORIGIN, SELLER'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT, WHICH SHALL BE THE COMPLETE AND EXCLUSIVE REMEDY AGAINST SELLER. This warranty replaces any previous warranties, and is the only warranty made by seller on this product. No increase or alteration, written or verbal, on the obligations of this Limited Warranty is authorized.



# ***Notes***

**ADEMCO**  
**GROUP**

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