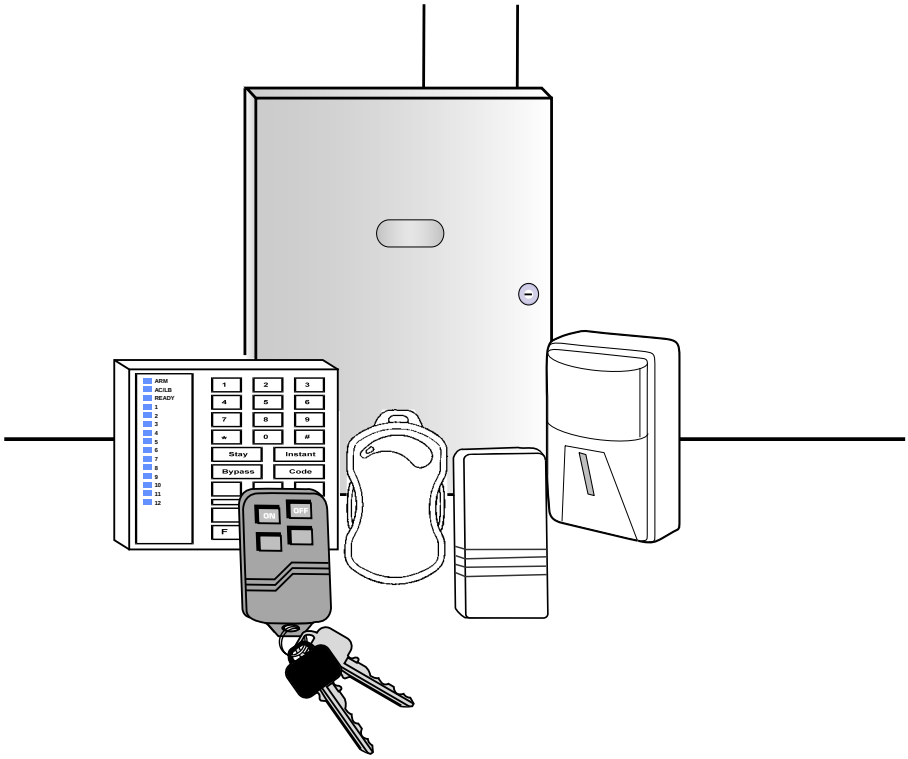
OMNI SERIES

Hardwired/Wireless System

OMNI-408A

Installation and Setup Guide



FBII®
FIRE BURGLARY INSTRUMENTS, INC.

N9941 1/00

THANK YOU for your purchase of the FBII OMNI-408A Hardwired/Wireless System.
The purpose of this guide is to give you a brief overview of the OMNI-408A 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 Summary of Connections 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 guide 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 guide. This can be removed to help you record account information.

Table of Contents

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Conventions Used in This Manual

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

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

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.

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.

Feature Summary of Version 1

The following system feature are supplied in Version 1:

Exit Bypass – This feature allows any delay zone or interior that is violated at the end of exit time to be bypassed for that armed period if the bit is set. This feature, if enabled, takes precedence over exit error (question 26, location 4, bit 3).

Pager/Follow-Me – This feature allows the end user to access a user-programmable phone number that can serve as a pager number or forwarding (site) number where the user can receive digital messages from the OMNI-408A that are a result of programmable events occurring on the system.

Bell Test from RF Keyfobs – This feature, if enabled, will activate bell test on arming/disarming only from keyfobs. Arming/disarming from the keypad via user codes or quick function will not trip the bell test (question 05, location 4, bit 2).

RF Board Detect – The panel senses if the ZR401 RF board is attached to the control panel. This option is only viewable through the downloader.

Bell Test on Arming – If the "bell test chirp" is selected (question 08, location 1, bit 3) Bell Test on Arm provides a single Bell chirp when arming and a double chip on disarming.

Strobe Trigger – Allows the trigger output to Pulse with the same timing as the Bell Test option (chirp or non-chirp).

Limited Access to Programming – Prevents the installer from accessing questions 01 through 03 and 09 and 10 in keypad programming. This feature is set in the downloader only.

RF Programming Using Bypass Key – This feature, if enabled, allows access to RF programming by pressing the [Bypass] key and the 2-digit RF question number. Otherwise the method is to press [*] [#] and the 2-digit RF question number.

Recent Panic – If enabled in question 37, location 4, when the Panic is pressed on a keyfob followed by an arm or disarm function within a 1-minute window, the panel sends a recent panic code to the central station.

Exit Programming Central Station Report – This feature, if enabled, sends a code to the central station when exiting keypad programming.

Introduction

In This Section

About the OMNI-408A

The OMNI-408A 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 information from being lost in the event of a complete loss of power. Other features of the OMNI-408A 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
- Capacity for 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 options
- Arm Faulted Quick Arming
- Quick Exit
- Indications on keypad for AC loss, low battery and communication failure
- Additional CS reporting formats (ADEMCO 4X2 Express and 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
- Exit Bypass
- Pager/Follow-Me
- Ability to 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

In This Section

Wiring the OMNI-408A

Refer to the Summary of Connections diagram in *Appendix F* at the back of this guide for visual information concerning the wiring and hookup of the OMNI-408A. The connections shown meet Household Fire / Burglar Alarm System standards set by UL (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 minutes, 10 seconds if the system was last armed. This system stabilization mode 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-minute, 10-second 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.

Compatible ADEMCO 5800 Series Wireless Devices

- 5802MN Single-Button Transmitter
- 5802CP Belt Clip Panic Transmitter
- 5804 4-Button Transmitter
- 5806 Photoelectric Smoke Detector
- 5807 Photoelectric Smoke Detector
- 5808 Photoelectric Smoke Detector
- 5816 Miniature Transmitter
- 5817 3-Point Transmitter
- 5818 Recessed Magnetic Contact Transmitter
- 5849 Glassbreak Detector
- 5890 Dual-Element PIR

NOTE: The OMNI-408A system is not compatible with the ADEMCO bi-directional devices.

Terminal Connections

TERMINALS	FUNCTION	DESCRIPTION
1 & 2	Transformer	Connect the 16.5VAC 25VA transformer, utilizing #18awg wire at a distance not to exceed 15 feet from the panel, to an **unswitched** 120VAC outlet. Do not use any other transformer, as this may result in improper operation or damage to the unit. The AC/LB keypad LED will remain on while AC power is present. If an AC loss occurs, the AC/LB LED turns off immediately. If AC power remains off for 15 minutes, the system pulses the keypad buzzer (if enabled in Programming question 07, location 4, bit 2) and transmits 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/LB LED lights immediately, and a Restore code is reported, if programmed.
3	Earth Ground	Connect this grounding lug to a cold-water pipe utilizing #18awg wire at a distance of no greater than 15 ft. Use a non-corrosive 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 **must** be connected to a 6-foot grounding rod.
4(+) & 5(-)	Bell Output	The total output power available for sounding devices is 1A at 11.5 - 13.1VDC. These terminals 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. **NOTE:** Before connecting sounding devices, consult their specifications for proper current draw. Otherwise, the bell fuse (F1) may be blown.
6	Siren Supervision Input	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 and 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 generates a pulsing keypad sounder. Also, the supervisory LED on the keypad pulses. Entering a valid user code while the system is disarmed silences the sounder. The LED continues 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 is reported to the CS if enabled.

TERMINALS	FUNCTION	DESCRIPTION
7(-) & 8(+) (Trigger 1)	Smoke Detector Power or Trigger 1 Output	**Smoke Detector Power:** This system accepts 9.5 - 12VDC 4-wire smoke detectors only. Approximately 50mA of current are 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. 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 1 Output:** These terminals which are commonly wired to trigger 1, 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 OMNI-408A includes the power available from these terminals (8 and 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.
9(+) & 10(-) 11(+) & 10(-) 12(+) & 13(-) 14(+) & 13(-)	Zone Information (hardwired zones)	Zone 1 (Requires 2.2K EOL resistor) [Default = Delay] Zone 2 (Requires 2.2K EOL resistor) [Default = Interior] Zone 3 (Requires 2.2K EOL resistor) [Default = Perimeter] 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. See further explanation of the zone types in the *Section 9*: *System Programming*. **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” description below for zone 4 usage.
RF Zone 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.

TERMINALS	FUNCTION	DESCRIPTION
15 (Black), 16 (Yellow), 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 (Brown), 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, and 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 12VDC 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/LB LED and buzzer will pulse slowly when a low-battery condition is detected. The system reports this condition to the central station if programmed to do so. Battery restoral occurs 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 that 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 operates as a standard delay zone when the system is armed and the momentary switches start the entry time.

Figure 1 shows the wiring connections needed to use Zone 4 as a Pool Zone.

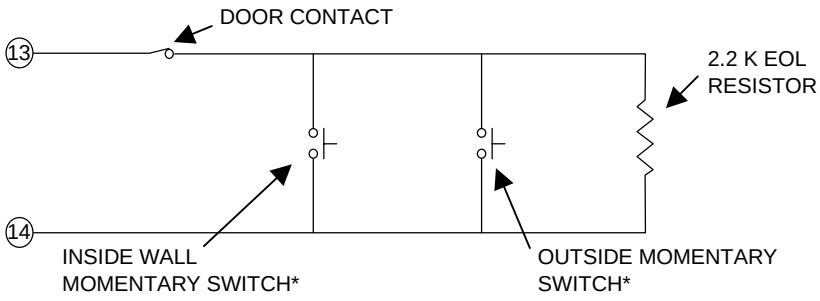


Figure 1. Pool Zone Connections

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	**		
	**		
	**		
Total Current or all Devices = (500mA max.)			

**If devices such as PIRs, smoke detectors, etc. are used, 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

In This Section

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.

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 perform steps 1 and 2, otherwise proceed to step 3:

1. Open the door to its fully extended position (approximately 90 degrees)
2. Lift the control panel door to remove it from the enclosure.
3. To mount the PC board, 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.
4. 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 figure below.
5. Swing the base of the board onto the mounting clips.

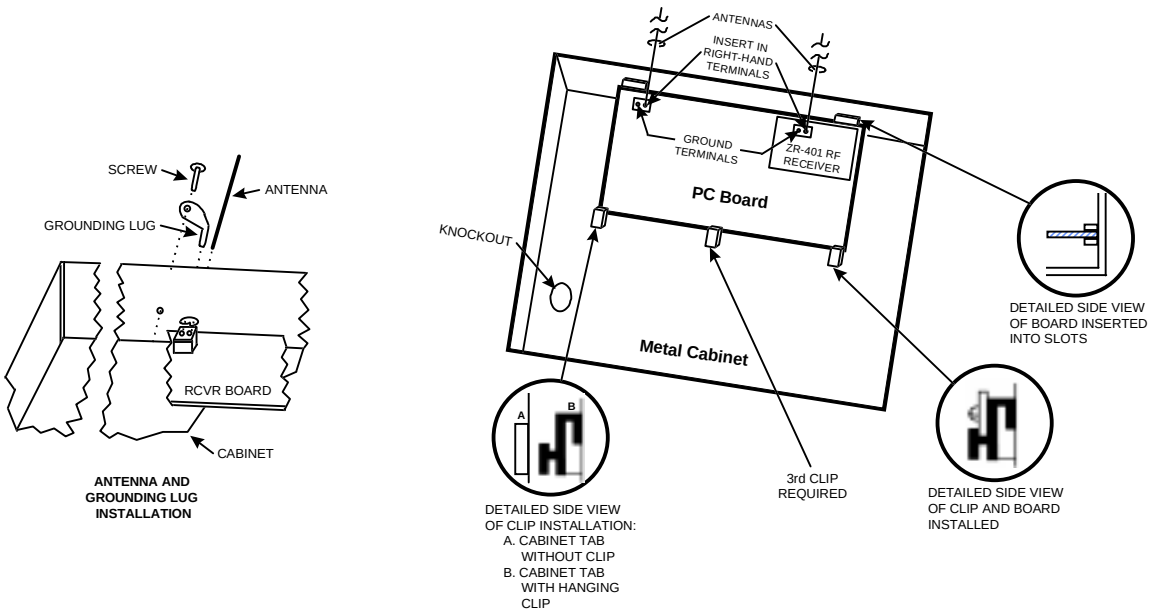


Figure 2. Mounting the Control Board

6. 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.
7. Secure the remaining sides of the PC board to the enclosure, using the screws provided.

Mounting the Receiver and Antennas

1. Mount the receiver board on top of the control PC board as shown in the figure 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

In This Section

How to Mount the XK-108 Keypad

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

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

Removing the Keypad Cover Assembly

Remove the keypad cover assembly from the rear mounting plate by inserting a small screwdriver blade in the COVER PRY-OFF SLOTS at the lower edge of the keypad (see Figure 3) and twist to pry off the cover assembly.

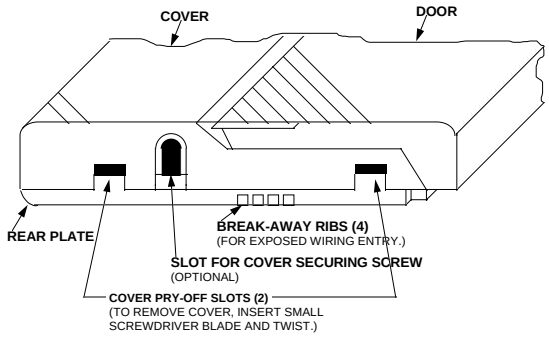


Figure 3. Bottom View of Keypad

Mounting the Rear Plate

Mount the rear plate as shown in Figure 4. Note that the plate is correctly oriented when its part number, molded into the plastic, is upright.

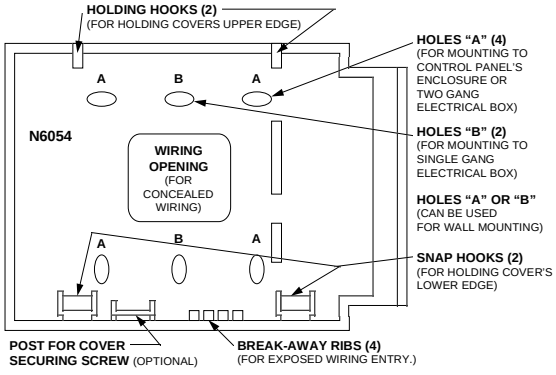


Figure 4. Rear Mounting Plate

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 Figure 4) with the four screws and nuts provided.

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.

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.

1. Complete the keypad wiring as required for the control with which the keypad is to be used.
2. 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 Figure 4) 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.

The XK-108 Keypad

In This Section

XK-108 Keypad

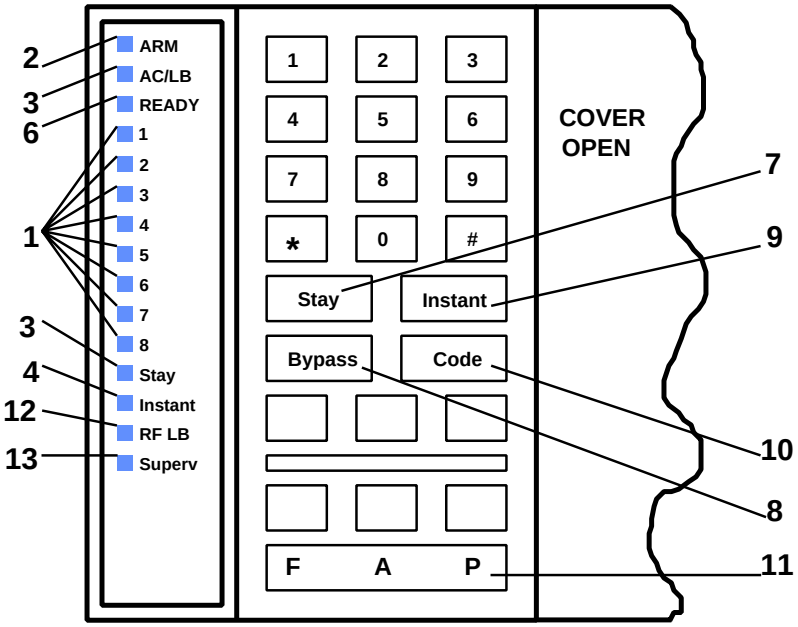


Figure 6. XK-108 Keypad

Table 1. XK-108 Keypad Controls and Indicators

INDEX NO.	CONTROL/ INDICATOR	DESCRIPTION
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. 150mS on - 150mS off). Troubles — Slow Pulse (approx. 600mS on - 600mS off). Bypasses — Wink (100mS on - 900mS 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.

INDEX NO.	CONTROL/ INDICATOR	DESCRIPTION
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 08, location 3. 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 08, location 3. On — Delay zones are currently instant. Off — Delay zones are normal. Pulse — Central station is not monitoring the account.
5	AC/LB 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 LED 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] Key	The [Stay] key enables arming the system, excluding zones programmed with the Stay option. This provides exterior protection of the location while allowing full access throughout the interior. The [Stay] key is also used to exit Installer Programming mode.
8	[Bypass] Key	The [Bypass] key is used to temporarily exclude protection of a specific zone.
9	[Instant] Key	The [Instant] key enables arming the system, eliminating the entry delays. If enabled with the [Stay] key, it enables arming the system in the Stay/Instant mode. **NOTE:** Instant modes are enabled in question 08, location 3.
10	[Code] Key	The [Code] key is used to enter the Installer Programming mode and for entry of user codes.

INDEX NO.	CONTROL/ INDICATOR	DESCRIPTION
11	Keypad Auxiliary Keys	Pressing any two keys (top and bottom) above the "F A P " label at the same time initiates a central station transmission, if programmed, of fire (F), auxiliary (A), or panic (P), 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 04, location 4 and question 05, location 1): Keypad sounder — Steady for panic, pulsing for fire and auxiliary. Bell output — Steady for panic, pulsing for fire. **NOTE:** See question 05, location 1 for alternate auxiliary keys.
12	RF LB LED	This LED pulses whenever any RF transmitter has a low battery. Also, the corresponding zone LED for that transmitter pulses.
13	Superv LED	This LED indicates 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 makes 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 sounds 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 Acknowledgement —** Upon entry of an illegal command, the keypad sounds four short beeps. For example, if you are attempting to define a new user and the Master User is not entered, four short beeps 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 non-operational 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

In This Section

Power Up/System Reset

When the system is in an armed state only, it may enter System Stabilization Mode. This occurs upon power-up of the system, and causes all of the LEDs on the keypad(s) to light, and then go off for approximately 2 minutes, 10 seconds (if system was previously armed). This occurs on a total power-up, system reset, or after completion of system programming. If total system power is lost, upon power restoral, the system returns to the previous arming state. The 2-minute, 10-second 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 enabled in programming question 05, location 2.

To arm: Enter any programmed 4-digit user code.

NOTE: The factory default for user code no. 1 is 1234.

The ARM LED lights 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 LED will flash.

Stay Arming

To arm: Press the [Stay] key followed by a 4-digit user code.

The ARM and Stay LEDs 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] key followed by the [Stay] key and a 4-digit user code.

The Stay/Instant mode arms the system with the characteristics of both the Instant and Stay modes. The system is armed with the interior zones bypassed and the delay zones instant.

LED keypads will have the ARM, Stay, and Instant LEDs lit.

NOTE: This option is enabled in programming question 08, location 3.

Disarming

To disarm: Press any valid 4-digit user code. The ARM LED goes out.

If an alarm condition exists or occurred while the system was armed, the zone LED(s) and the READY LED blink rapidly. This Alarm Memory condition can be cleared by entering a valid user code or using the [*] 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. **The 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.

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] key followed by any valid 4-digit user code followed a number from 1 to 8, which represents the zone to be bypassed.

Example: To bypass Zone 2 (assuming a user code of 1234), press:

[Bypass] [1] [2] [3] [4] [2]

Subsequent Bypasses

Can be made by pressing the [Bypass] key 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, an acknowledge beep sounds at the keypad sounder, and the respective zone LED blinks 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 is 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] key followed by a number from 1 to 8, which represents the zone to be bypassed.

Example: To bypass zone 2, enter:

[Bypass] [2]

Exit Bypass

Exit Bypass is a programmable option (see question 26, location 4 of the programming sequence) and if set, any delay zone or interior that is violated at the end of exit time will be bypassed for that armed period. This feature, if selected, takes precedence over exit error.

Auto Unbypass

All burglary zones that are bypassed can be automatically unbypassed upon system disarm. 24-hour zones that have been bypassed are 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:

1. User Number 1 - programs all user codes (1-6); cannot be deleted.
2. 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 is used for a maid service or any person with limited access.
3. User Number 6 - can be programmed as an Ambush code if there is an Ambush CS transmission code programmed into question 19, locations 1 and 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: press [Code] Master User, User no., User ID

Where:

[Code] — [Code] key.

Master User — Master User ID code (User no. 1).

User no. — Desired user to be programmed (1-6).

User ID — 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] [1] [2] [3] [4] [3] [7] [4] [9] [3]

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 reports 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: press [Code] Master User, User no., [*]

Where:

[Code] — [Code] key.

Master User — Master User ID code (User no. 1).

User no. — Desired user no. being deleted (2-6).

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

[*] — [*] (Asterisk) key.

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 no. 6	Question 19, locations 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.

Pager Follow Me Displays

The display shown on your pager will be "ACCTEXXX":

Where

"ACCT" is the 4-digit central station #2 account number.

"E" is the event code. There are 4 event types: alarms, troubles, openings, and closings. These event codes are as follows:

Openings = 0, Closings = 1, Alarm or Trouble = 9

If multiple events occur, the highest event takes priority. Events from highest to lowest priority are alarms, trouble, open, and close.

"XXX" is, depending on the event, either the zone (01-08) or user (1-14) designations.

USER DESIGNATION	FUNCTION
1-6	User codes
7	Remote arm/disarm
8	Quick Arm #1, Quick Forced Arm #2
9-14	Keyfobs

Entering Pager Follow-Me Phone Numbers

To enter pager follow-me phone number: press [#] [5] [8] [Code] (optional), Pager #, [#]

Where:

[#] [5] [8] — Accesses end user pager number programming (acknowledge tone should be emitted).

[Code] — Optional command that if pressed will insert a "C" or 2 second pause.

Pager # — Including the [Code] key, allows for 16 digits for the pager phone number.

[#] — Pressed after entering changes, will save new pager number, null out remaining locations, and exit pager-programming mode. An acknowledge tone should be emitted.

[*] — Exits #58 mode without saving changes. An acknowledge tone should be emitted.

NOTE: If no key is pressed for 10 seconds, the mode times out and exits automatically without saving changes.

Quick Command Modes

In This Section

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
Toggle Pager	[#] [8]	Always enabled
On-line Download	[#] [9]	Question 05, location 4

On-line Download is not documented in the end user guide because it is only 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 allows arming of the system without entry of a user code, and reports 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), Quick Force Arming allows arming of the system without entry of a user code and bypasses any zones that are not ready. It reports as User no. 8 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: Press [#] [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 always enabled. If any zones are programmed with a Chime option (see programming questions 11–18), then [#] [6] will turn the system chime on or off, depending on its original state.

- The Toggle Chime command toggles the Chime feature for the entire system. Because there are no visual indications on the keypads after toggling the chime, you must be aware of its present state.
- The installer must enable the Chime option for any zone that requires chime.

Toggle Pager [#] [8]

This quick-command feature provides any user the ability to toggle on or off open/close events, if the events are enabled, from tripping the pager. This feature is non-selectable. The feature toggles an internal bit that indicates to the system if the feature is engaged or not. There is no visual indication with this feature, only an acknowledgement tone upon pressing [#] [8].

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:

Stage	What Happens
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 causes the control panel to react as if it had 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

In This Section

Entering Installer Modes

There are 4 installer modes in the panel.

To enter installer modes: press [Code] [*] Installer Code, X

Where:

Installer Code — The 4-digit Installer code (**default = 2468**)

X — The single digit indicating the Installer mode, as follows:

1	Installer Keypad Programming	
	Press [1] [3] (at the same time)	System Default
	Press [7] [9] (at the same time)	User Code Default
	Press [*] [#] XX	RF Programming or Press [Bypass] XX (selectable in question 07, L4)
2	(Not Used)	
3	Unattended Download	
4	On-line Download	
5	Walk Test (Reduced Gain) Mode	

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 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 CS ID (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 [Bypass] XX or [*] [#] XX, where XX is 01 to 14 and selects the desired RF Programming question number. Refer to *Section 10: Programming Questions - RF Programming* for specific information.

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

Installer Mode 3 (Unattended Download)

The Unattended Download function allows the control panel to dial the telephone number of CS downloading computer so that the control panel can be downloaded without having the operator present. The CS downloading computer telephone number is programmed into the callback number (question 03) and an unattended identification number is programmed into the secondary telephone (question 02).

NOTE: These are temporary values, as 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: **press** [Code] [*] Installer Code, [3].
3. The system now enters keypad programming at question 01. Enter the telephone number of the central station downloading computer. Enter [#] after each digit; for example: press [1] [#] [2] [#] [3] [#]. You can enter up to 16 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 [*] [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. The downloader's account designator, not the account number, 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 now dials 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 before continuing.) Upon connection with the computer, the system obtains the customer account number programmed in step 3 and performs 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 use a 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 Code, [4] or use the end-user command of [#] [9], if enabled. This causes the control panel to react as if it has 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 automatically terminates 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/LB, and READY LEDs. An 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.

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.

System Programming

In This Section

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: OMNI-408A System Programming Worksheet*. There are 38 total programming questions, numbered 01 through 37 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: OMNI-408A System Programming Worksheet*.

QUESTION 01
PRIMARY TELEPHONE NUMBER **DEFAULT = 234AAAAAAAAAAAA**

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 (TouchTone) ✳ 1170C (Rotary)	Enter to disable Call Waiting
F	800	Enter whenever the “800” prefix is needed

REPORTING ROUTE:

The system reports all signals to the primary receiver phone number. If the secondary phone number has been programmed, the panel alternates 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 = AAAAAAAAAAAAAAA**
OR PAGER FOLLOW-ME NUMBER

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 or a Pager Follow-Me number in L1 - L16.

The secondary telephone number is 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 are directed to the secondary CS phone number only, while all other conditions are reported to the primary number.

If enabled in question 08, location 4 and question 26, location 4, the Pager Follow-Me number is used as a pager number or forwarding (site) number where the user can receive digital messages from the OMNI-408A that are a result of programmable events occurring on the system.

The pager number can be programmed here or via the end user method using the [#] [5] [8] keys.

Refer to *Section 6 - System Operations* for pager programming and operation.

If neither split nor backup reporting is necessary, or if the Pager Follow-Me feature is not desired, 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 = AAAAAAAAAAAAAAA**

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 calls 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 hangs up and dials the callback number.

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

QUESTION 04
CS DIALER OPTIONS **DEFAULT = E435**

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 = E***

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

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

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

Question 04, L2
CS Receiver Type ***Default = 4***

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 = 3***

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 directs all opening and closing signals to the secondary receiver telephone number. All other conditions (alarms, troubles, restores, etc.) 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 = 5

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) activates the bell and the keypad buzzer. In either case, a signal is 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 do 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 are the system restores (see question 19, location 2).

SYSTEM DIAL DELAY - If this option is selected, all zones 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 = 33E5**

This question contains 4 locations (L1-L4).

Question 05, L1
Keypad Panic, Fire and Auxiliary ***Default = 3***

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	KEYPAD AUXILIARY	
				AUDIBLE	SILENT
0	NONE (K.P. CONDITIONS DISABLED)				
1	✓				
2		✓			
3	✓	✓			
4			✓		✓
5	✓		✓		✓
6		✓	✓		✓
7	✓	✓	✓		✓
8					
9	✓				
A		✓			
B	✓	✓			
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) annunciates the keypad sounder (STEADY SOUND) and turns on the bell output (STEADY SOUND). If SILENT, it does **not** annunciate the keypad sounder and turn on the bell output. In both cases, it transmits 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) annunciates the keypad sounder (PULSING SOUND) and turns on the bell output (PULSING SOUND). It transmits 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) **ONLY** annunciates the keypad sounder (PULSING SOUND). If SILENT, then it does **not** annunciate the keypad sounder or turn on the bell output. It transmits a CS code if programmed to do so in question 23, locations 3 and 4.

Question 05, L2
Misc Options ***Default = 3***

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 occurs 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 is always armed in the STAY mode with all interior zones enabled with the Stay option bypassed. The Stay zones 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 starts the entry delay time.

Question 05 L3
Quick Commands & Quick Exit ***Default = E***

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]) is permitted. If chosen, Quick Forced Arming arms the system bypassing any faulted zones. Openings/Closings report User no. 8 to the CS if enabled.

UL For UL installations, do not select Quick Forced Arming.

QUICK ARMING - Specifies whether Quick Arming ([#] [1]) is permitted. If chosen, Quick Arming arms the system ONLY if the system is READY. Openings/Closings 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 starts exit time, causes the keypad to beep once, and allows the

user to exit without disarming the system. The system returns to its last armed state after exit time has expired.

Question 05, L4
Rest. Foll. Loop, User On-line, Bell Test from RF Keyfobs, & User 5 Arm Default = 5

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	BELL TEST FROM RF KEYFOBS	USER 5 ARMS ONLY
0	✓				
1		✓			
2	✓		✓		
3		✓	✓		
4	✓			✓	
5		✓		✓	
6	✓		✓	✓	
7		✓	✓	✓	
8	✓				✓
9		✓			✓
A	✓		✓		✓
B		✓	✓		✓
C	✓			✓	✓
D		✓		✓	✓
E	✓		✓	✓	✓
F		✓	✓	✓	✓

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

RESTORE FOLLOWS LOOP - Restores are 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]).

BELL TEST FROM RF KEYFOBS - When set, bell test on arming/disarming (refer to question 8, location 1) activates only from keyfobs. Arming/disarming from the keypad via user codes or quick function does not trip bell test.

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 is used as an ARM-only code (Maid code); it does not disarm the system.

QUESTION 06
SYSTEM TIMEOUTS **DEFAULT = 6622**

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 = 2***

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 time. 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 = 2***

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 time. For UL installations, the minimum fire bell cutoff time shall be 6 minutes.

QUESTION 07
MISCELLANEOUS SYSTEM OPTIONS **DEFAULT = 8026**

There are 4 locations (L1-L4) for system timing and system options, as follows:

Question 07 L1
Entry Delay 2 ***Default = 8***

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 = 0***

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

Digit	REMOTE COMMUNICATIONS RING COUNT
0	NONE (REMOTE COMMUNICATIONS 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 pick up 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 is disabled.

Question 07, L3
CS Test Time Interval ***Default = 2***

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 21, locations 3 and 4.

CS TEST BY EVENT - If this feature is enabled, the system transmits 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 resets the CS Test clock. For example, if a business opens and closes 6 days a week, then a test signal is generated at the interval selected after the last closing signal.

CS TEST BY TIME - If this feature is enabled, the system transmits 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 is sent to the central station every 24 hours.

UL The CS Test Time Interval feature must be selected for UL installations.

Question 07, L4
RF Trouble Sounder, AC Loss Sounder & Euro. Ring Detect ***Default = 6***

Digit	RF PROGRAM USING BYPASS KEY	RF TROUBLE SOUNDER	AC LOSS SOUNDER	EUROPEAN RING DETECT
0	NONE			
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

RF PROGRAMMING ACCESS USING THE BYPASS KEY - Allows the installer to select the procedure for accessing the RF program questions in Installer programming mode. If the bit is **NOT** enabled, the procedure for RF programming requires pressing the [*] key followed by the [#] key followed by the 2-digit RF question number to access the RF questions. If the bit **IS** enabled, the procedure now is to press the [Bypass] key followed by the 2-digit RF question number.

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 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
SYSTEM OPTIONS, KEYPAD DISPLAY, ARMING FEATURES, PAGER EVENTS **DEFAULT = 00C0**

There are 4 locations (L1-L4).

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, two 1-second bell outputs when system arms (or a double chirp if the Bell Test Chirp option is selected).

DISARM BELL TEST - Choosing this option causes, a 1-second bell output when system disarms (or a single chirp if the Bell Test Chirp option is selected).

BELL TEST CHIRP - This option is for use with sirens that respond quickly to an output. If selected, this option shortens both the Arming Bell Test (double chirp) and Disarm Bell Test (single chirp) from a 1-second to a 100-mS output.

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	None		
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 the CS is not monitoring their account.

All dialer functions are maintained, regardless of whether the Instant LED Pulse 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 = C***

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 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 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 05, 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 05, location 3.

Question 08, L4
Pager Events ***Default = 0***

Digit	ALARMS	TROUBLES	OPEN	CLOSE
0	None			
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

NOTE: Pager alarms are limited to zone alarms only. Pager troubles are limited to zone troubles only (fire trouble, day trouble, 24-hr trouble).

NOTE: The quick command Toggle Pager ([#] [8]) enables and disables the ability to send pager openings and closings.

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, SPLIT REPORTING, OR PAGER FOLLOW-ME.

Zone Programming

Questions 11-18 represent all the options related to programmable zones 1-8. Each question contains 4 locations, L1-L4. The first 2 locations (L1 and L2) define the zone type and options. The second 2 locations (L3 and 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:

	BURGLARY (CONTROLLED) ZONES						
L1, L2 Digits	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 begins entry time. If the system is not disarmed within the programmed entry time, an alarm occurs. 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 below.

INTERIOR - All interior zones have exit delay time upon system arming. Furthermore, all interior zones have entry delay time if a delay zone is violated first. If this zone is violated first, however, it generates 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) generates 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 are turned on during the entry and exit times.

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 results 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 pulse for as long as the violation remains. In addition, if the violation remains for 15 seconds, the System Trouble Code is 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 acts as an alarm when violated.

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

L1, L2 Digits	24-HOUR ZONES				
	ZONE TYPE			ZONE OPTIONS	
	24-HOUR ALARM	FIRE	24-HOUR TROUBLE	AUDIBLE	SILENT
81	✓			✓	
82			✓	✓	
84		✓		Always Audible	
89	✓				✓
8A			✓		✓

24-Hour Zones

FIRE - Fire zones on the system contain Fire Verification Logic. Upon detection of the first violation, smoke detector power is 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 2-minute period will result in a pulsing bell output, rapid pulsing zone LED, and immediate transmission to the central station. Fire signals cannot be aborted.

Entry of any valid user code silences the sounder and bell, and resets smoke detector power. If the system detects that the fire zone is still violated within 2 minutes after power reset, the zone LED pulses slowly to indicate a fire trouble. Thereafter, smoke detector power is 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) is reported to the central station

The keypad sounder can be silenced through entry of any valid user code.

NOTE: Fire zones **cannot** be bypassed.

24-HOUR 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 pulses rapidly (audible zones only) and an immediate central station transmission occurs 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-HOUR 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 pulses slowly. Trouble condition must exist for 15 seconds before a transmission will occur. The keypad display and sounder clears 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 specified previously, locations L3 and L4 of the zone questions represent the Alarm code that is reported to the central station.

NOTE: Zones 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 is not used.

EXTENDED (3X1 Ext. or 4X1 Ext.): Enter the desired first digit of the Alarm code for the specific zone in location L3. Enter 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 generates a single-digit transmission for alarms and troubles (the second digit is **not** used) and an extended transmission for all system conditions such as restores, bypasses, openings/closings, etc. (the second digit is 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 are 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 selects 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.

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

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 = 2061**

Question 11, L1 & L2 - Zone 1 Type ***Default = 20***
Question 11, L3 & L4 - CS Code for Zone 1 ***Default = 61***
Zone 1 = Delay (Entry/Exit) w/CS Reporting code = 61

QUESTION 12
ZONE 2 TYPE & CS CODE **DEFAULT = 4142**

Question 12, L1 & L2 - Zone 2 Type ***Default = 41***
Question 12, L3 & L4 - CS Code for Zone 2 ***Default = 42***
Zone 2 = Interior Follower w/CS Reporting code = 42

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

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.

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 = AABA**

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 and L2.

NOTE: Ambush transmissions are immediate and not abortable.

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

The same rules apply here regarding dialer format. If transmission is not desired, program AA in locations L3 and L4.

NOTE: AC loss is reported 15 minutes after detection.

QUESTION 20
CS CODES for PANIC and LOW BATTERY **DEFAULT = 8ACA**

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

Question 20, L1 & L2 - Panic Code ***Default = 8A***

The same rules for programming regarding dialer format apply here. If transmissions are not desired, program AA in locations L1 and L2.

NOTE: Panic transmissions are immediate and not abortable.

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

The same rules for programming regarding dialer format apply here. If transmissions are not desired, program AA in locations L3 and L4. Low-battery transmissions are reported 4 minutes after detection. Low-Battery Restore Code is reported within 4 minutes after detection of good battery condition.

QUESTION 21
CS CODES for OPEN/CLOSE and CS TEST **DEFAULT = AA1A**

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 is the user number.

Question 21, L3 & L4 - CS Test Code ***Default = 1A***

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

NOTE: Any digit entered is 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 = A1FA**

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 is 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 is followed by the programmed second digit of the Zone code.

Question 22, L2 - Restore Code ***Default = 1***

L2 is the single-digit system Restore code reported to the central station. Restores are 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 is 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 is reported on day trouble and fire trouble. If a 2-digit format has been programmed this code is 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 is 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 transmits the Cancel code. If the zone is programmed for restoral, then the Restore code is 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 = 2AAA**

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

Question 23, L1 & L2 - Keypad Fire Code ***Default = 2A***

L1 and L2 are the Alarm code that is 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 and L4 are 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 = 1111**

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

Question 24, L1 - RF Low Battery Code ***Default = 1***
Question 24, L2 - RF Low Battery Restore ***Default = 1***
Question 24, L3 - RF Supervisory ***Default = 1***
Question 24, L4 - RF Supervisory Restore ***Default = 1***

NOTE: In any question 24 location, if a 2-digit format has been programmed, the second digit of the respective Zone code follows this code.

QUESTION 25
CS CODES BELL SUPERVISION & TAMPER **DEFAULT = 1A11**

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

Question 25, L1 & L2 - Bell Supervision Code ***Default = 1A***
Question 25, L3 - RF Tamper Code ***Default = 1***
Question 25, L4 - RF Tamper Reset ***Default = 1***

NOTE: In any question 25 location, if a 2-digit format has been programmed the second digit of the respective Zone code follows this code.

QUESTION 26
RF ZONES **DEFAULT = 00A8**

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 were hardwired, the first RF zone number assigned is 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 does not arm; and the Reporting code is 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 - Pager Options / Exit Bypass ***Default = 8***

For additional pager options refer to question 08, location 4.

Refer to the chart below to select the following options.

Digit	ENABLE #58	PAGER OPEN/CLOSE USER SELECT	PAGER 2 ATTEMPTS	EXIT BYPASS
0	None			
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

#58 COMMAND: When selected, enables users (1-6) to access the #58 quick command to change the Pager Follow-Me phone number.

PAGER OPEN/CLOSE USER SELECT: Selects whether user codes 1-6 or 4-6 only are authorized for pager openings and closings. If the bit for pager openings and closings is set and this user bit is ***not set,*** then all users are enabled for opening and closing pager. With this user bit ***set,*** the open/close pager capabilities are limited to users 4-6 only. The Pager Toggle ([#] [8]) quick command feature gives any user the ability to toggle on/off the ability for open/close events, if the events are enabled, by tripping the pager.

NOTE: Keyfob users are considered 9-14 and are not affected by this option.

PAGER ATTEMPTS: Selects the number of attempts for dialing the Pager Follow-Me phone number. If the bit is set, 2 attempts are made. If the bit is not set, then 1 attempt is made.

EXIT BYPASS: The Exit Bypass feature disables the Exit Error feature. When selected, any delay zone or interior that is violated at the end of exit time is bypassed for that armed period.

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	NONSUPERVISED 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	NONSUPERVISED 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***

From the tables below, select 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 = 0A00**

The control panel contains 2 voltage level output triggers. Triggers 1 and 2 are selected in this question. To select a trigger type, enter in either L1 and L2 or L3 and 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 = 0A***
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 ARM 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 (see note below)	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
12	32	Keypad Sounder	Active when keypad sounder activates
13	33	RF Momentary	Active when keyfob momentary Trigger 1 or 2 activates

NOTE: The trigger selection for "strobe" follows the same timing as selected in the bell test option (chirp/non-chirp) (question 08, location L1). This is in addition to its normal operation of a latched output on alarm that is reset after the system is disarmed.

TWO-WAY VOICE - This trigger activates when line seizure occurs if the event is any of the following: burglary, fire, duress, keypad panic, keypad fire, or keypad auxiliary. It does not activate for CS test, openings/closing, trouble, bypass, cancel, or restore. It deactivates about 1 second before disconnecting the telephone line. Also, at the time of release, keypad sounders are silenced for the remaining duration of the bell output cycle. The bell times out or a valid user code terminates.

NOTE: The trigger outputs are limited to approximately 50mA 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 = 0200**

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 = 02***

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 and L2 and 30 into L3 and L4.

NOTE: The CS Test Interval is selected in question 07, location 3, and is enabled in question 21, locations 3 and 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 is sent when account number 1 is used. L3 and L4 contain the group number that is sent when account number 2 is used.

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

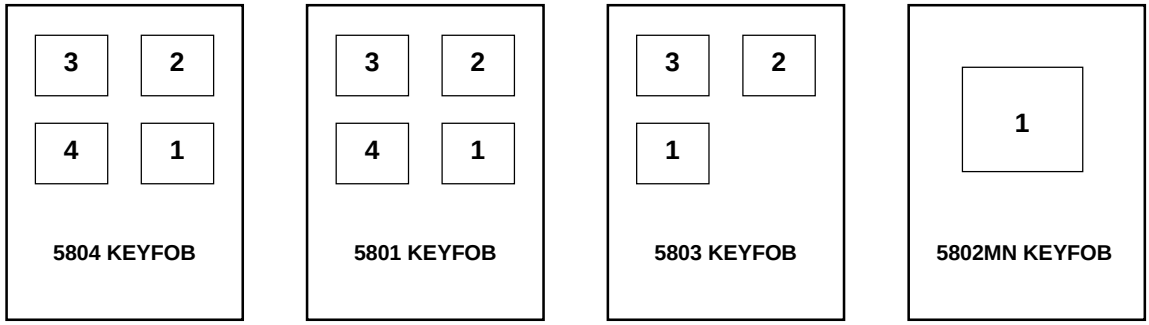


Figure 6. Keyfob Buttons

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. See Figure 6 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. See Figure 6 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. See Figure 6 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. See Figure 6 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. See Figure 6 for keyfob buttons.

QUESTION 37
CS CODES: EXIT PROGRAM, EXIT ERROR, RECENT PANIC ***Default = AAAA***
Question 37, L1 -L2 Exit Programming CS Code
Question 37, L3 - Exit Error CS Code
Question 37, L4 - Recent Panic CS Code

EXIT PROGRAM CS REPORTING - The Exit Program CS Reporting feature is enabled by placing an event code in question 37, locations 1 and 2. A letter "A" in location 1 disables the feature. Once enabled, this code is sent ONLY upon exiting keypad programming, by pressing the [Stay] [1] [3] (default), or [7] [9] (user default) keys. The feature is NOT affected by the following: remote upload/download, power down/up, hardwire default, system reset, and entering or exiting other installer modes such as walk test, unattended, and online download.

EXIT ERROR CS REPORTING - The Exit Error CS Reporting feature is enabled in question 37, location 3. A letter "A" disables the CS report. During an exit error, this code is sent after the control panel's entry time expires and the zone goes into alarm. If the system is

disarmed before entry time expires, the Exit Error code is not sent. If an alarm results, the zones Alarm code is sent before the Exit Error code.

RECENT PANIC CS REPORTING - This feature is intended to reduce false alarms. Enable this feature by placing a CS Report code other than "A" in question 37, location 4. **This feature involves only the use of the Model 5804 RF key.** This CS code is sent if a (5804) panic alarm occurs followed within 1 minute by a (5804) arm/disarm type event. The 5804 arm/disarm programmable events include disarm, force arm, force stay arm, force instant arm, and force stay/instant arm.

Tripping an RF panic starts the 1-minute timer. At this time, the control panel attempts to send a keypad panic. If an RF arm or disarm event occurs within 1 minute, the panel sends the Recent Panic CS code upon the execution of the RF arm or disarm.

NOTE: Subsequent RF arms or disarms will not cause additional Recent Panic CS transmissions.

If the 1-minute timer expires without an RF arm or disarm, the Recent Panic code (recent close (459) if PID) is not sent, only the initial Panic code.

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

NOTE: You must be in Installer Mode Programming to perform the following.

This section of the guide defines the programming questions along with the values expected for each question for RF devices. If the RF Program using [Bypass] key bit (question 07, location 4) is **NOT** enabled, enter RF Programming mode by pressing [*] [#] XX, where XX is 01 to 14 and selects the desired RF Programming question number. If the RF Program using [Bypass] key bit (question 07, location 4) **IS** enabled, enter RF Programming mode by pressing [Bypass] XX, where XX is 01 to 14 and selects the desired RF Programming question number.

NOTE: The question number LEDs on the keypad **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

For all 5800 RF devices to be used, enter the 7-digit serial number printed on the device.

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.

DESCRIPTION	KEYPAD ENTRY
1. Enter RF programming	*# or Bypass
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

Below is 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
1	2	3	4	5	6	7	8	9
OPT	TYPE	SERIAL NUMBER						

Default: 000000000

Data Entry via LED Based Keypads

In This Section

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.

Entering Programming Mode via Keypad

The System Programming mode can be entered ONLY WHILE DISARMED, as follows:

To enter Installer Programming: Press [Code] [*] 4-digit Installer code (default 2468) [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 slowly pulses, and continues to pulse until you leave this mode. The remaining LEDs display the question number and location contents as indicated below:

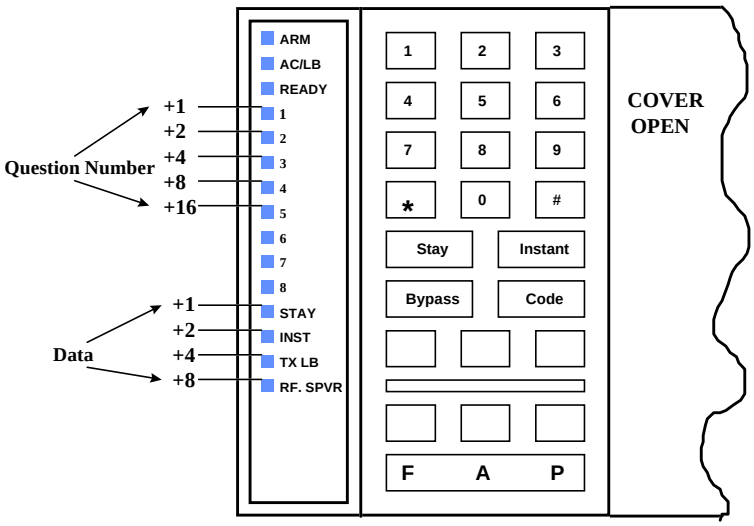


Figure 7. Keypad Programming

Question Numbers = Zone LEDs

Zone LEDs 1 through 5 display the current question number (not the specific location within each question). In Figure 7, the question number is the total you get when you add the values of all LEDs that are lit.

Examples:

Zone 1 lit, Zones 2-5 off = question 01

Zone 1 lit, Zone 2 lit, Zones 3-5 off = question 03

Zone 2 lit, Zone 3 lit, Zone 4 lit, 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 lit must be added to calculate the total data for each location.

Examples:

Stay lit, Inst, TX LB and RF Sprv off = 1

Stay and Inst lit, TX LB and RF Sprv off = 3

Inst and RF Sprv lit, 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.

Digit	Binary Value	Description
A	10	Inst and RF Sprv lit
B	11	Stay, Inst, and RF Sprv lit
C	12	TX LB, and RF Sprv lit
D	13	Stay, TX LB, and RF Sprv lit
E	14	Inst, TX LB and RF Sprv lit
F	15	Stay, Inst, TX LB, and RF Sprv lit

Entering Data

This section of the guide 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 [*} key and the 2-digit question number.

Questions can be accessed directly or sequentially.

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

The zone LEDs display the question number. The status LEDs 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 1 to the next location within any question can be performed by pressing the [#] key.

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

Data Entry

To alter the value in any location, enter the desired digit from the program sheet, then press the [#] key to advance to the next location, or if no further changes need to be made, press [Stay] to exit programming.

NOTE: If an entry error was made and the [#] key was not yet pressed, re-enter the desired entry, then press the [#] key to advance to the next program location or press [Stay] to exit programming.

Pressing the respective key on the keypad can perform numeric entries 0-9. Entries of A-F require 2 keystrokes, as follows:

Press the [Code] key followed by 1-6 keys 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 the [Code] key followed by the [1] key.

Exit System Program Mode

After all programming has been completed, press the [Stay] key to exit the system Program mode.

Question Acknowledgment

The keypad chirps on each keystroke. In addition, a beep confirms 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 (if RF Programming using [Bypass] key is selected):
[Bypass], 2-digit Question Number

Question LEDs pulse in RF Programming mode.

TO ENTER RF PROGRAMMING (if RF Programming using [Bypass] key is not selected):
[*] [#] 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

In This Section

User Functions

Arming/Disarming:	Enter any valid 4-digit user code
Stay Arming:	Press [Stay] any valid 4-digit user code
Stay/Instant Arming:	Press [Stay] [Instant] any valid 4-digit user code
Bypass:	Press [Bypass] any valid 4-digit user code, Zone No.
Quick Bypass:	Press [Bypass] Zone No.
Quick Exit:	Press [Stay]
User Code Programming:	Press [Code] Master User code, User No., 4-digit user code
User Code Deletion:	Press [Code] Master User code, User No., [*]
Quick Arming:	Press [#] [1]
Quick Force Arming:	Press [#] [2]
Set Clock:	Press [#] [3]
Toggle Chime:	Press [#] [6]
On-Line Downloading:	Press [#] [9]
Panic:	Press [*] and [#] at the same time
Fire:	Press [7] and [9] at the same time
Auxiliary:	Press [1] and [3] at the same time
Ambush:	Enter user code 6

Installer Modes

Installer Mode Programming:	Press [Code] [*] Installer code [1]
RF Mode Programming:	Press [Code] [*] Installer code [1], then press [*] [#] XX or [Bypass] XX, where XX is 01-14
Unattended Download:	Press [Code] [*] Installer code [3]
On-Line Download:	Press [Code] [*] Installer code [4]
Walk Test Mode:	Press [Code] [*] Installer code [5]
System Default:	Press [Code] [*] Installer code [1], then press [1] and [3] at the same time
User Code Default:	Press [Code] [*] Installer code [1], then press [7] and [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 on 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.

Stage	What Happens
1	The system's digital communicator seizes the home phone lines. Then it dials the CS #1 telephone number (programming question 01).
2	When the CS receiver picks up the ringing phone line, it transmits a "handshake" frequency (1400Hz, 2300Hz, or HiLo) back to the digital communicator.
3	After receiving the "handshake" frequency, the digital communicator transmits the data in the format programmed in question 04 (either in Pulse or DTMF).
4	Assuming the CS receiver verifies the data transmission as valid (after 2 successful rounds of data or 1 valid parity round), it transmits 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" occur.
5	After the final "kissoff," the CS receiver releases the phone line and processes the data to its display and associated peripherals (computer and printer). If for any reason the digital communicator does not receive the "kissoff," it proceeds to dial the CS #2 telephone number or to redial the CS #1 telephone number (if CS #2 is not used). It continues 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 displays "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 and 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 transmit only a total of 15 event codes (0 - 9, B - F) without identifying zones or users. Examples:

3X1 w/o Paritiy	**3X1 w/Parity**
123 3 (1st round)	123 3 6 (single round)
123 3 (2nd round)	123 3 (resulting data)
123 3 (resulting data)	

4X1 w/o Parity	**4X1 w/Parity**

1234 3 (1st round) 1234 3 2 (single round)

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

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 (programming questions 09 and 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		**3X1 Ext. w/Parity**
123 3 (1st round)	123 3 (2nd round)	123 3 **6** (1st round)
333 1 (3rd round)	333 1 (4th round)	333 1 **5** (2nd round)
123 31 (resulting data)	Burglary Zone 1	123 31 (resulting data) Burglary Zone 1
4X1 Ext. w/o Parity		**4X1 Ext. w/Parity**
1234 3 (1st round)	1234 3 (2nd round)	1234 3 **2** (1st round)
3333 1 (3rd round)	3333 1 (4th round)	3333 1 **2** (2nd round)
1234 31 (resulting data)	Burglary Zone 1	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 and 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)	**3X1 Part. Ext. w/o Parity (Restore)**	
123 3 (1st round)	123 E (1st round)	123 E (2nd round)
123 3 (2nd round)	EEE 1 (3rd round)	EEE 1 (4th round)
123 3 (resulting data) Burglary	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 and 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	**3X2 w/Parity**
123 31 (1st round)	123 31 5 (1st round)
123 31 (2nd round)	123 31 (resulting data) Burglary Zone 1
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 and 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 (Program Questions 09 and 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 reports the group number stored in question 30.

ZZZ = Zone, sensor or user identifier (3 decimal digits). For zone conditions, this is the physical point number as programmed within the individual point (01 - 32). For user initiated actions such as openings/closings, this is 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, because 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, program AA in locations 1 and 2. Refer to the following tables to select the PID Event codes to be transmitted.

BURGLARY ZONE TYPES		
Digit	**EVENT CODE**	**ENGLISH OUTPUT AT CS RECEIVER**
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	Poll Break
D	156	Day Trouble

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

FIRE ZONE TYPES		
Digit	**EVENT CODE**	**ENGLISH OUTPUT AT CS RECEIVER**
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-Burglary
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

24-HOUR TROUBLE TYPES		
Digit	**EVENT CODE**	**ENGLISH OUTPUT AT CS RECEIVER**
0	100	Medical
1	122	Silent Panic
2	123	Audible Panic
3	137	Tamper
4	150	24-Hour Non-Burglary
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-Burglary
E	115	Fire Pull station
* The Zone/User code transmitted will come from the second digit of the 2-digit event code.		

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
457	Exit Error
459	Recent Close
551	Dialer Disabled
602*	Test Periodic
628	Exited Program Mode
* These codes have no Zone/ User code associated with them; they report 000 for these digits.	

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	Burglary Zone Type Bypassed
4	574	Point Group Bypass
7	551	Dialer Disabled

OMNI-408A System Programming Worksheet

Name: _____ **Address:** _____

Account Number: _____ **Programmed by:** _____

INSTALLER MODE PROGRAMMING

01 PRIMARY TELEPHONE NUMBER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Default: 234AAAAAAAAAAAAA

02 SECONDARY TELEPHONE NUMBER or PAGER FOLLOW-ME NUMBER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Default: AAAAAAAAAAAAAAAA

03 CALLBACK TELEPHONE NUMBER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Default: AAAAAAAAAAAAAAAA

04 CS DIALER OPTIONS

1	2	3	4

Default: E435

05 KEYPAD CONDITIONS

1	2	3	4

Default: 33E5

06 SYSTEM TIMEOUTS

1	2	3	4

Default: 6622

07 MISCELLANEOUS SYSTEM OPTIONS

1	2	3	4

Default: 8026

08 BELL OPTIONS, ARMING OPTIONS, PAGER ENABLES

1	2	3	4

Default: 00C0

09 ACCOUNT NUMBER 1

1	2	3	4

Default: 1234

10 ACCOUNT NUMBER 2

1	2	3	4

Default: AAAA

11 ZONE 1 TYPE AND CS CODE

1	2	3	4

Default: 2061

12 ZONE 2 TYPE AND CS CODE

1	2	3	4

Default: 4142

13 ZONE 3 TYPE AND CS CODE

1	2	3	4

Default: 1033

14 ZONE 4 TYPE AND CS CODE

1	2	3	4

Default: 1034

15 ZONE 5 TYPE AND CS CODE

1	2	3	4

Default: 1035

16 ZONE 6 TYPE AND CS CODE

1	2	3	4

Default: 1036

17 ZONE 7 TYPE AND CS CODE

1	2	3	4

Default: 1037

18 ZONE 8 TYPE AND CS CODE

1	2	3	4

Default: 1038

19 CS CODES FOR AMBUSH AND AC LOSS

1	2	3	4

Default: AABA

20 CS CODES FOR PANIC AND LOW BATTERY

1	2	3	4

Default: 8ACA

21 CS CODES FOR OPEN/CLOSE AND CS TEST

1	2	3	4

Default: AA1A

22 CS CODES FOR BYPASS, RESTORE, TROUBLE AND CANCEL

				Default: A1FA
1	2	3	4	

23 CS CODES FOR KEYPAD FIRE AND KEYPAD AUXILIARY

				Default: 2AAA
1	2	3	4	

24 CS CODES RF LOW BATTERY, RF LOW BATT RESTORE, SUPERVISION, & TAMPER

				Default: 1111
1	2	3	4	

25 CS CODES BELL SUPERVISION

				Default: 1A11
1	2	3	4	

26 RF ZONES/EXIT BYPASS/PAGER OPTIONS

				Default: 00A8
1	2	3	4	

27 NONSUPERVISED/TAMPER RF ZONES

				Default: 0000
1	2	3	4	

28 TRIGGERS 1 & 2

				Default: 0A00
1	2	3	4	

29 CS TEST TIME

				Default: 0200
1	2	3	4	

30 CID GROUP NUMBER

				Default: AAAA
1	2	3	4	

31 RF REMOTE KEYFOB 1 BUTTON DEFINITIONS

				Default: 0000
1	2	3	4	

32 RF REMOTE KEYFOB 2 BUTTON DEFINITIONS

				Default: 0000
1	2	3	4	

33 RF REMOTE KEYFOB 3 BUTTON DEFINITIONS

				Default: 0000
1	2	3	4	

34 RF REMOTE KEYFOB 4 BUTTON DEFINITIONS

				Default: 0000
1	2	3	4	

35 RF REMOTE KEYFOB 5 BUTTON DEFINITIONS

				Default: 0000
1	2	3	4	

36 RF REMOTE KEYFOB 6 BUTTON DEFINITIONS

				Default: 0000
1	2	3	4	

37 EXIT PROGRAM/EXIT ERROR/RECENT PANIC

				Default: AAAA
1	2	3	4	

RF MODE PROGRAMMING

TO ENTER RF PROGRAMMING:
Press [*] [#] 2-digit Question Number; or [Bypass] 2-digit Question Number

Question LEDs pulse in RF programming mode.
NOTE: If RF Receiver Board is not available, RF Programming can not be modified.

TO SKIP A QUESTION:
Press [*] 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]
B = [Code] [2]
C = [Code] [3]
D = [Code] [4]
E = [Code] [5]
F = [Code] [6]

TO EXIT RF PROGRAMMING:
Press [Stay]

Questions 01-14, 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)

Questions 01-14, 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 01-14, L3 through L9 - 5800 Serial Number

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

01 RF DEVICE 1 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

02 RF DEVICE 2 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

03 RF DEVICE 3 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

04 RF DEVICE 4 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

05 RF DEVICE 5 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

06 RF DEVICE 6 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

07 RF DEVICE 7 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

08 RF DEVICE 8 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

09 RF KEYFOB 1 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

10 RF KEYFOB 2 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

11 RF KEYFOB 3 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

12 RF KEYFOB 4 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

13 RF KEYFOB 5 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

14 RF KEYFOB 6 DEFINITION Default: 000000000
1 2 3 4 5 6 7 8 9
OPT TYPE SERIAL NUMBER

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 improperly installed batteries. 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

"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 and Setup Guide or User Guide. 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

FBII LIMITED WARRANTY

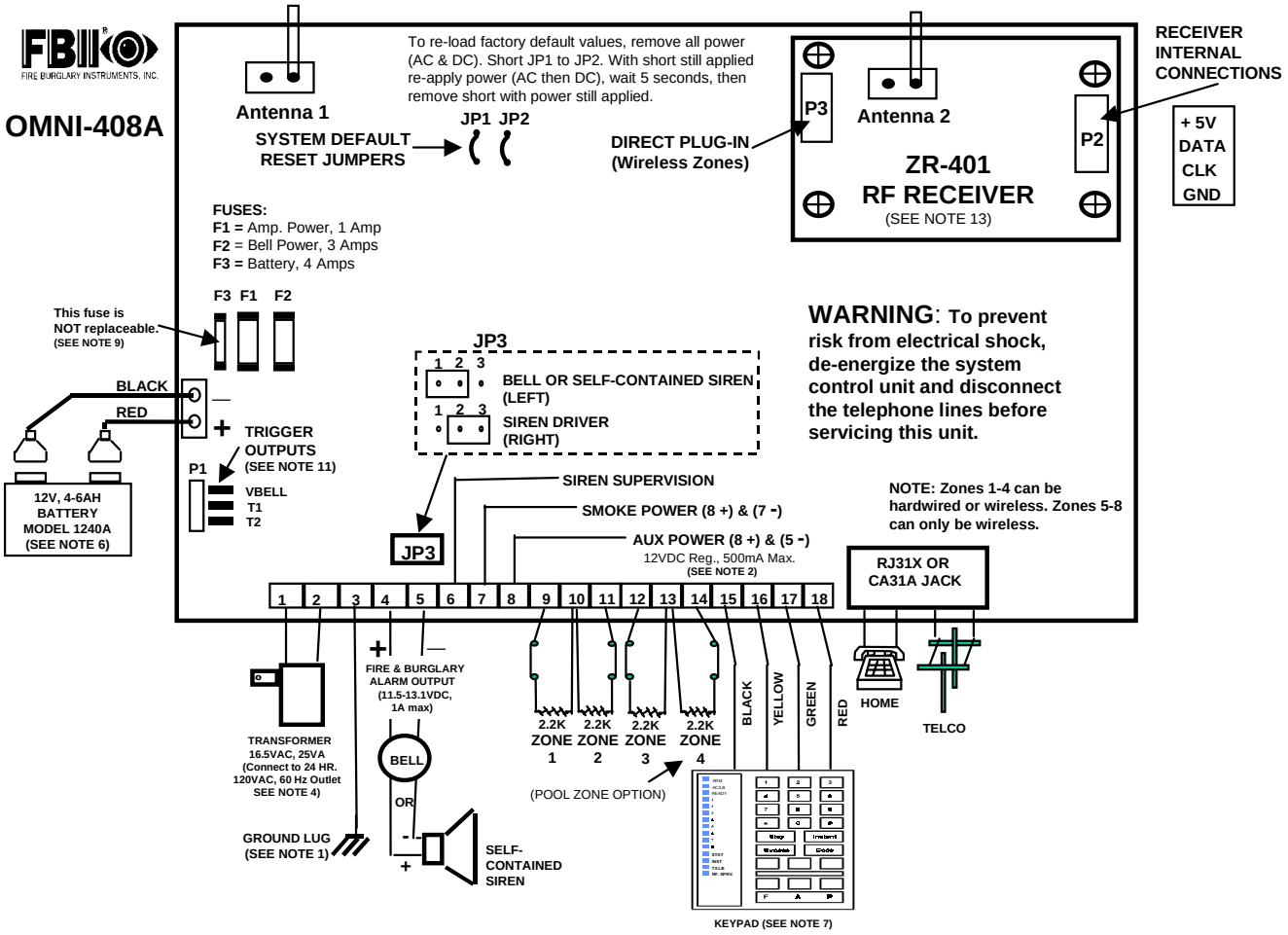
Fire Burglary Instruments Inc., a Subsidiary of Pittway Corporation and its divisions, subsidiaries, and affiliates (“Seller”), 149 Eileen Way, Syosset, New York 11791, warrants its products to be in conformance with its own plans and specifications, and to be free from defects in materials and workmanship 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 that 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, THAT 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.

Summary of Connections

Summary of Connections

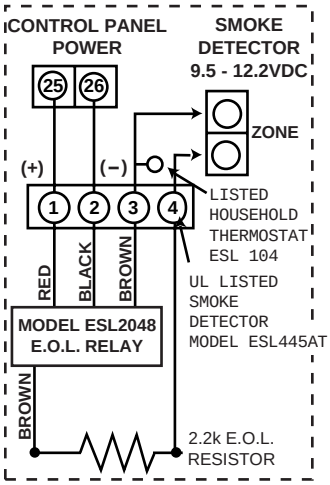


Summary of Connections

NOTES:

1. Connect control panel to a grounded metal water pipe (16 gauge 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 this guide.
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 an exact replacement.
7. Maximum of 4 keypads allowed.
8. Limited-energy cable must be used.
9. Nonreplaceable fuse (F3). Return to manufacturer if blown. Do not solder in field.
10. Maximum for UL installations: Entry Delay, 45 seconds; Exit Delay 60 seconds.
11. Programmable trigger outputs.
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.
13. Removing the ZR-401 will prevent RF Programming.

Detail A



* 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 #4,791,658

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Subsidiary of Pittway Coporation

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