XL-31

Hookup and Installation Instructions

(Includes XL-31 and XL-31B)

FIRE BURGLARY INSTRUMENTS, INC.

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INTRODUCTION

The XL-31 and the XL-31B security systems are state-of-the-art EPROM-based control/communicators. The system features twelve fully programmable zones, full uploading/downloading capability and remote control, a built in siren driver and four programmable trigger outputs. Programming can be performed through the keypad or the system can be uploaded and downloaded remotely using the EZ-Mate PC Downloader. Both systems contain up to thirty user codes, with the capability for user codes to also activate an access trigger. All of the keypads are four wire devices, with up to four keypads per system.

Both security systems are functionally equivalent as the features, capability and operation are similar. The XL-31 series security systems are sold as a panel only and are compatible with the following keypads only: XL4612RM, XL4612SM, 700, 7005L and the 7015. NOTE: The XL4612RM and XL4612SM keypads may be used with each other but cannot be used in combination with the 7005, 7005L and the 7015.

The XL-31 is the Residential (Household) version of the control which has been listed by Underwriters Laboratories for the following applications:

UL 1023	Household Burglar
UL 985	Household Fire Warning

The model XL-31B is the Commercial Burglary configuration of the control panel and has been listed by Underwriters Laboratories for the following applications:

UL365 Police Connected Burglar (Grade AA, Grade A Mercantile, Grade B)

UL609 Local Burglar (Grade A Mercantile, Grade B)

UL1610 Central Station Burglar (Grade B, Grade C)

UL1635 Digital Burglar (Grade A Police Connect, Grade B, Grade C)

Important: Failure to install and program this unit in accordance with the UL requirement is a violation of the Listing mark. For more information on UL Listing, contact Underwriters Laboratories, Inc., Progress Dept., 333 Pfigsten Road, Northbrook, IL 60062 (708) 272-8800.

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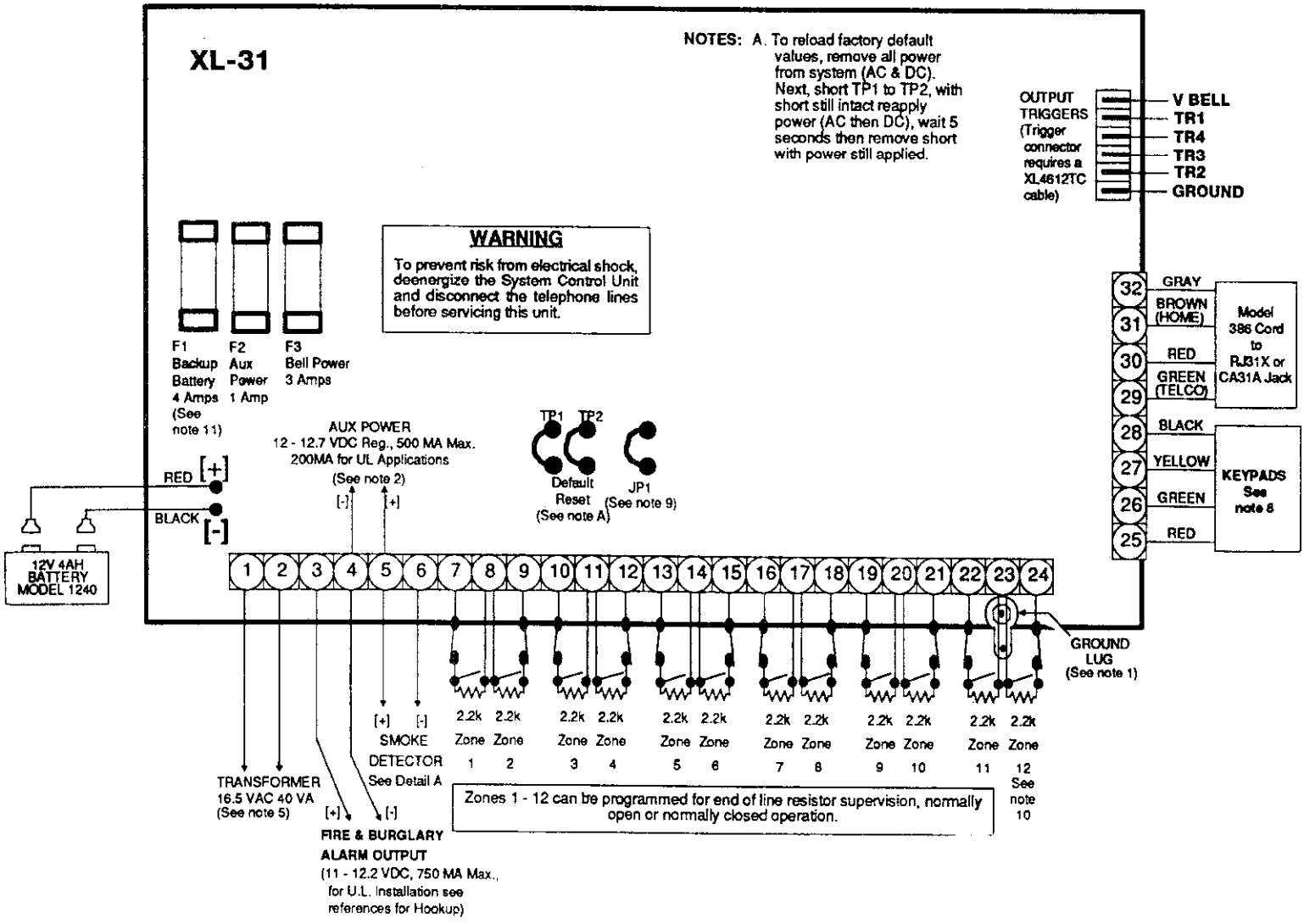
1. SYSTEM WIRING AND HOOKUP

1.1. SYSTEM WIRING DIAGRAM



CONNECTIONS FOR HOUSEHOLD FIRE/BURGLARY ALARM SYSTEMS UL 985 AND 1023

NOTES:

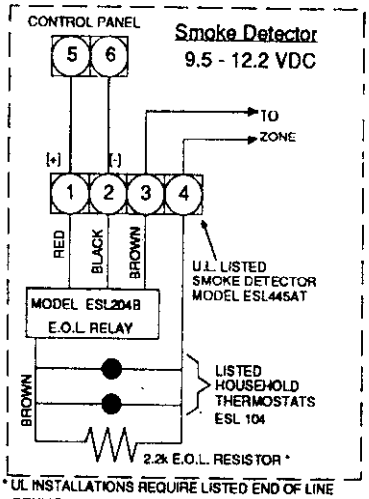
1- Connect to a grounded cold water pipe, 16 ga. at 15 feet.
2- Total AUX. power available is 500 mA(200 mA for UL installations), which includes keypad power.
3- Limited energy cable must be used.
4- System must be tested on a weekly basis. For information refer to references.
5- Do not connect the transformer to a receptacle controlled by a switch.
6- Installation of equipment and wiring methods are required to be in accordance with the National Electricians code and ANSI/NFPA no 74. More information may be obtained from the NFPA, Battery March Park, Quincy, MA 02269
7- Battery capacity for Emergency Standby is a minimum of 4 hours. Under normal circumstances this battery will last 3 years, use only exact replacements.
8- Maximum of four keypads. Keypads can consist of the following: XL4612 RM, XL4612 SM, 7005 and 7015.
CAUTION: XL4612 RM and XL4612 SM keypads CANNOT be used on the same system with any other type of keypad
9- Cut this jumper if trigger #3 desired and Zone 12 is used for standard loop response.
10- Zone 12 should not be programmed for fast loop response (approx. 8mSec) for UL installations.
11- Non-replaceable fuse, return to manufacturer if blown, do not solder in field.

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.

Detail A



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

FCC Registration Number AE398E-69554 AL-E Ringer Equivalence

Product covered under U.S. Patent #4,791,658

References: XL-31 Hookup and Installation Instructions N9340 and Owners Manual N9339

N9338 11/93

GRADE A CENTRAL STATION BURGLARY APPLICATIONS XL-3B

Using the Ademco 7622CD transmitter with the XL-3B will permit Grade A Central Station Service.

INSTALLATION:

1-Refer to Ademco 7620ADV2 and 7920SE installation instruction for additional information and complete transmitter interface programming.

2-Program the XL-3B trigger questions for; trigger 1 - burglary, trigger 2- phone failure, trigger 3 - AC loss, and trigger 4 - low battery.

3-Program channels used on 7621AD for inverted input with no delay.

4-The XL4612TC trigger cable is needed to interconnect the 7621AD transmitter interface with the XL-3B.

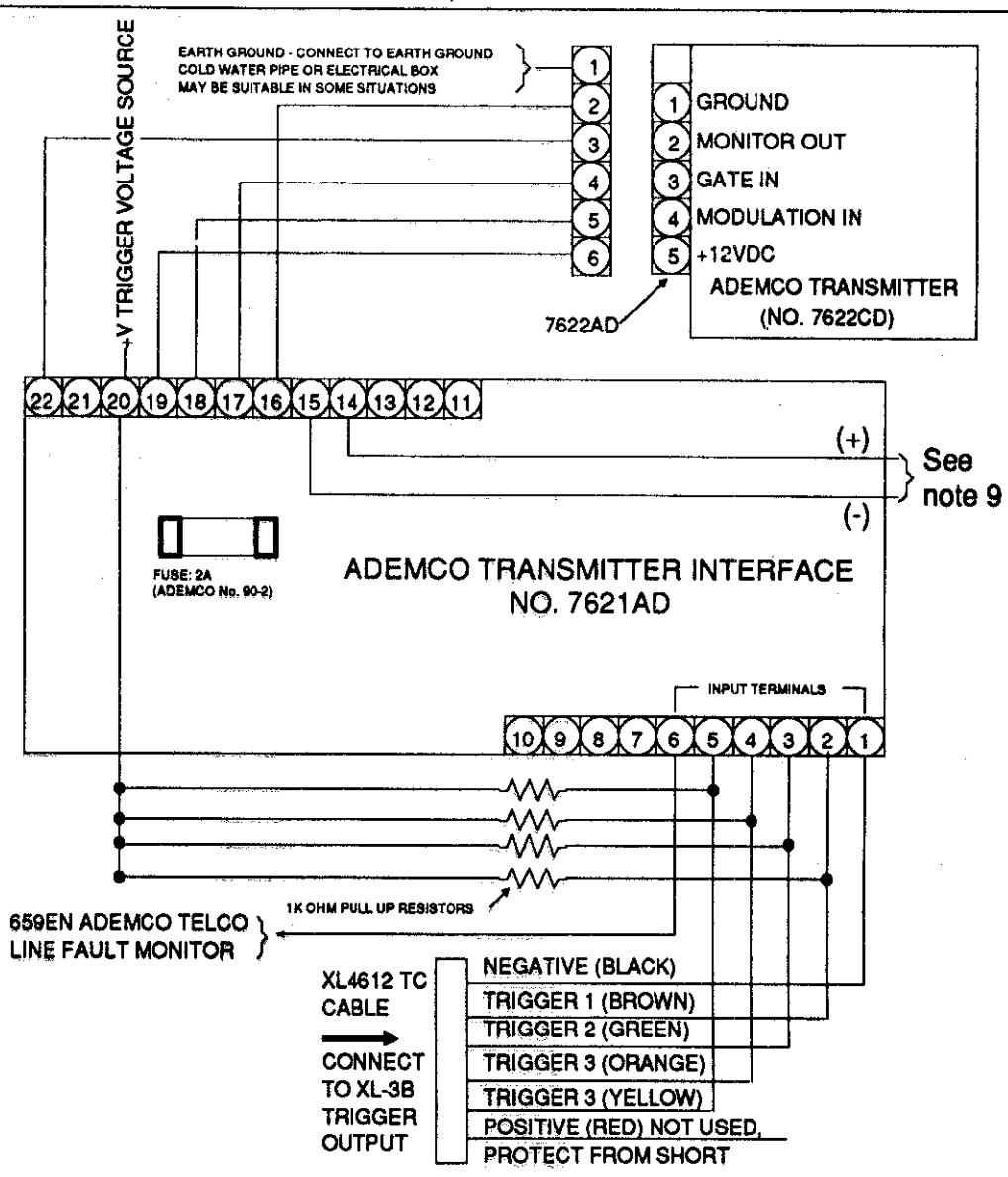
5-See the special instructions on page 9 of the 7620ADV2 manual.

6-Refer to Fire Burglary Instruments XL-3B, No. N9116 installation instructions for complete programming and hook-up data on the XL-3B.

7-The 7621AD transmitter interface shall be installed within the control panel enclosure.

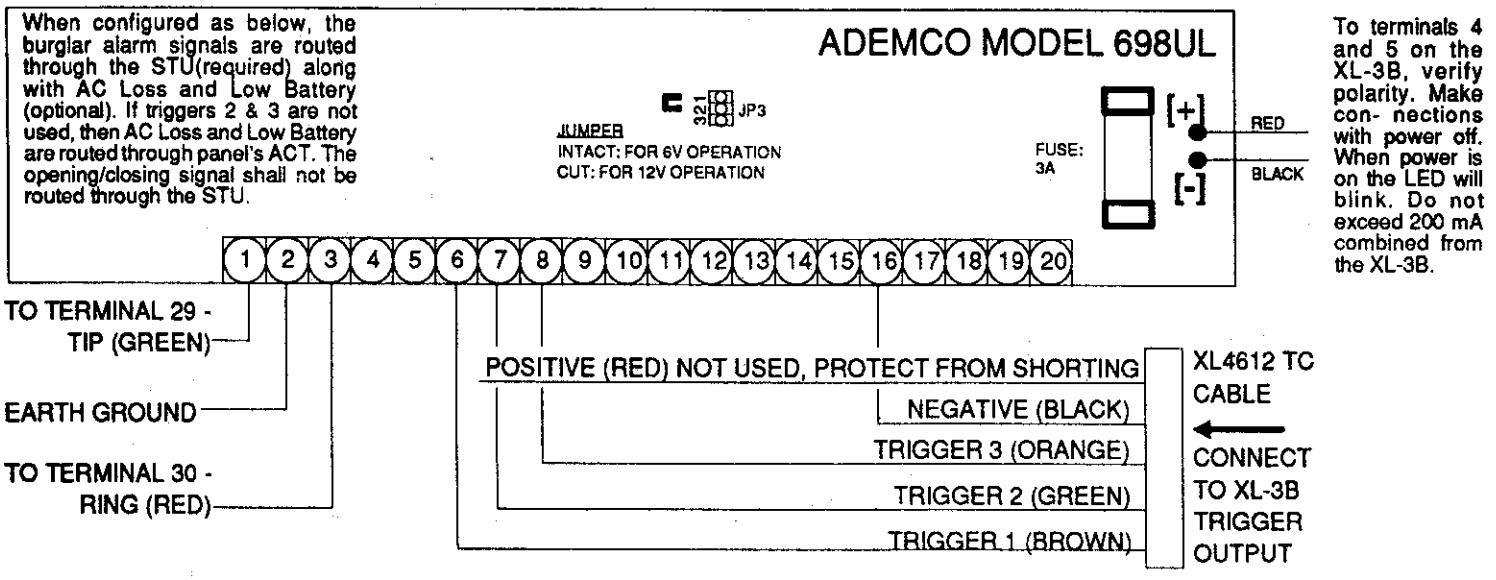
8-The radio system transmits the following signals: Burglary, AC Loss, Low Battery and Telco Failure. The Opening/Closing signal is optional. The control's DACT handles all system signals including radio transmitter troubles.

9-Obtain power from ADEMCO model 488-12 power supply. Refer to Installation Instructions P9918 for further information.



GRADE AA CENTRAL STATION BURGLARY APPLICATIONS XL-3B

Using the 698UL STU with the XL-3B will permit Grade AA Central Station Service.



INSTALLATION:

1-Refer to Ademco 698STU, No. N1172, installation instruction for additional information and complete STU programming data.

2-Set jumper at JP3 on the 698 to cover the 1 and 2 position.

3-Program channels used on 698 for inverted input with no delay.

4-Program the XL-3B triggers questions for; Trigger 1 = Burglary, Trigger 2 = AC Loss and Trigger 3 = Low Battery.

5-The XL4612TC, trigger cable is needed to interconnect the 698STU with the XL-3B.

6-The Control and STU must be close-nippled.

7-The tamper in the STU enclosure must be wired.

8-Refer to Fire Burglary Instruments XL-3B, No. N9116, Installation Instructions for complete programming and hookup data on the XL-3B control.

1.2. TERMINAL CONNECTIONS

TERMINALS	DESCRIPTION
1 & 2	**TRANSFORMER:**

Connect an the 16.5 VAC 40VA transformer, utilizing 18awg wire at a distance not to exceed 15 feet from the panel, to an **unswitched** 120 VAC outlet.

Do not use any other transformer since this may result in improper operation or damage to the unit.

The AC/LOW BAT LED on the keypad will remain ON while AC power is present. If an AC loss occurs the AC/LOW BAT LED will turn off immediately. If AC remains OFF for 15 minutes, the system will pulse the keypad buzzer and transmit to the central station, if programmed. THE KEYPAD BUZZER CAN BE SILENCED by entry of any valid user code. When AC restores the AC/LOW BAT LED will light and a restore code will be reported, if programmed.

3(+) & 4(-) **SIREN/BELL OUTPUT:**

The control panel contains a built in siren driver which is selected within question number 07 of the programming sequence. If the siren driver is selected then the programmed sounds will be generated for fire and burglary conditions. If programmed as a bell output then the total output power available for sounding devices is 1 amp (750mA for UL installations) at 11-12.2V. In UL household installations, you must use an FBI model 671 speaker and it must be mounted indoors. These terminals will deliver CONSTANT output on BURGLARY, AUDIBLE PANIC and BELL TEST. On a FIRE condition, a PULSED output will be generated. There are separate bell cutoff times programmable for Burglary and Fire conditions within the programming sequence.

5(+) & 4(-) **REGULATED POWER (12.2-12.7VDC):**

The total regulated output power for motion detectors and other external devices is 500mA (200mA for UL installations at 13.8VDC, with less than 100 mVPP ripple.

The total regulated output capacity of the control system includes the power available from these terminals 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.

5(+) 6(-) **SMOKE DETECTOR POWER: (9.5-12.2V)**

This system will accept 12VDC four(4) wire smoke detectors only. Approximately 50mA of current is available at these terminals for powering all detectors and an E.O.L. relay FBI model 620. For UL installations see wiring diagram for hookup. Due to the different power requirements of smoke detectors, the system may only support one smoke detector.

These terminals adhere to the fire verification and reset logic which is explained in the Zone types section of this manual. Manual reset of smoke detector power can be accomplished by entry of any valid user code after clearing alarm memory.

7 & 8 (-)	Zone 1 (Optional 2.2K EOL resistor)	[Default = DELAY]
8(-) & 9	Zone 2 (Optional 2.2K EOL resistor)	[Default = INTERIOR]
10 & 11(-)	Zone 3 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
11(-) & 12	Zone 4 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
13 & 14(-)	Zone 5 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
14(-) & 15	Zone 6 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
16 & 17 (-)	Zone 7 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
17(-) & 18	Zone 8 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
19 & 20(-)	Zone 9 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
20(-) & 21	Zone 10 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
22 & 23(-)	Zone 11 (Optional 2.2K EOL resistor)	[Default = PERIMETER]
23(-) & 24	Zone 12 (Optional 2.2K EOL resistor)	[Default = PERIMETER]

NOTE: Connecting JP1 on the circuit board and enabling the option in Question 6 location 4 configures Zone 12 as a fast loop response zone (8 - 10 msec.response). When selected, trigger number 3 cannot be used. Also the fast response zone must be an alarm on open type of device. If trigger number 3 is used then cut JP1 and disable fast loop response in question 6 location 4.

ZONE INFORMATION

Normally closed devices may be wired in series, and/or normally open devices in parallel with the 2.2k ohm end of line resistor on all zones (EOL supervision optional per zone). The maximum loop resistance may not exceed 100 ohms. The loop response time is **280** ms on all zones, except for zone 12 which can be programmed for fast response (8 - 10 msec). The factory default values for each zone is listed in the table above, however **any** zone can be programmed for the following types: Delay, Perimeter, Interior, Fire, Keyswitch, 24 Hr. Alarm, or 24 Hr. Trouble. Further explanation of the zone types can be found in the System Programming section of this manual.

GROUNDING LUG **EARTH GROUND:**

Connect this grounding lug to a cold water pipe utilizing #16AWG wire at a distance of no greater than 15 ft. If the premises pipes terminate in PVC, this terminal **must** be connected to a six(6) foot grounding rod.

25 26 27 28 **KEYPADS:**

A maximum of 4 keypads may be wired to these terminals. The connections are as follows; 25 (RED = positive power), 26 (GREEN = data out), 27 (YELLOW = data in), 28 (BLACK = negative). Each XL4612RM and XL4612SM keypad draws approximately 30mA, others draw approx. 60mA. Maximum keypad length is 500 feet using 22 gauge wire. NOTE: XL4612RM and XL4612SM cannot appear on the same system with the 7005L,7005 or 7015 keypads.**NOTE:** Keypads must be connected to system prior to powerup. If the keypad contains a dip switch for addressing then the address must be set to the appropriate address prior to powerup. A system powerup must be performed when adding new keypads to the system.

29 30 31 32 **TELEPHONE LINE:**

Connect the FBI model 368 cord as follows; 29 (GREEN = Telco Tip), 30(RED = Telco Ring), 31(BROWN= Home Tip), 32(GRAY= Home Ring). Insert the modular plug into an approved 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). This security system should not be connected to party lines, or coin operated phones.

Furthermore, this device should not be connected to a phone line which has call waiting, unless the call waiting interrupt numbers are programmed into the panel dialing sequence.

TRIGGER OUTPUTS

The control panel contains four programmable outputs. These utilization of these outputs are selectable within the programming sequence (questions 29 & 30). In order to connect devices to the triggers use connector XL4612TC (trigger cable). Trigger outputs are switched negative.

The trigger output labeled VBELL is a **regulated** power supply. This output is protected by the BELL fuse and should only be used with devices requiring constant regulated voltage (12VDC). For UL installations, the trigger outputs shall be connected to devices rated to operate over the range from 10.1 - 14.0VDC at 50mA. The connected devices shall be mounted within 20 feet of the system or with the connection completed with a dedicated, grounding circuit.

BACKUP BATTERY

The RED(+) and BLACK(-) flying leads must be connected to a 12 VDC 4-6AH GEL CELL, to serve as backup power in the event of AC loss.

The system performs a battery test approximately every 4.5 minutes. Low battery condition occurs at nominal 11VDC during this test. The keypad AC/LOW BAT LED and buzzer will PULSE SLOWLY when low battery condition is detected. The system will report this condition to the CS if programmed. Battery restoral will occur WITHIN 4.5 minutes, at the NEXT battery test. THE BUZZER MAY BE SILENCED by entry of any valid user code.

GROUND START

Ground start capability can be added to the system through the output triggers of the control panel. If ground start is desired then this must be programmed as trigger number 1. Ground start must not be used in a UL installation.

1.3. PC Board Mounting

Mounting the XL-31 PC Board

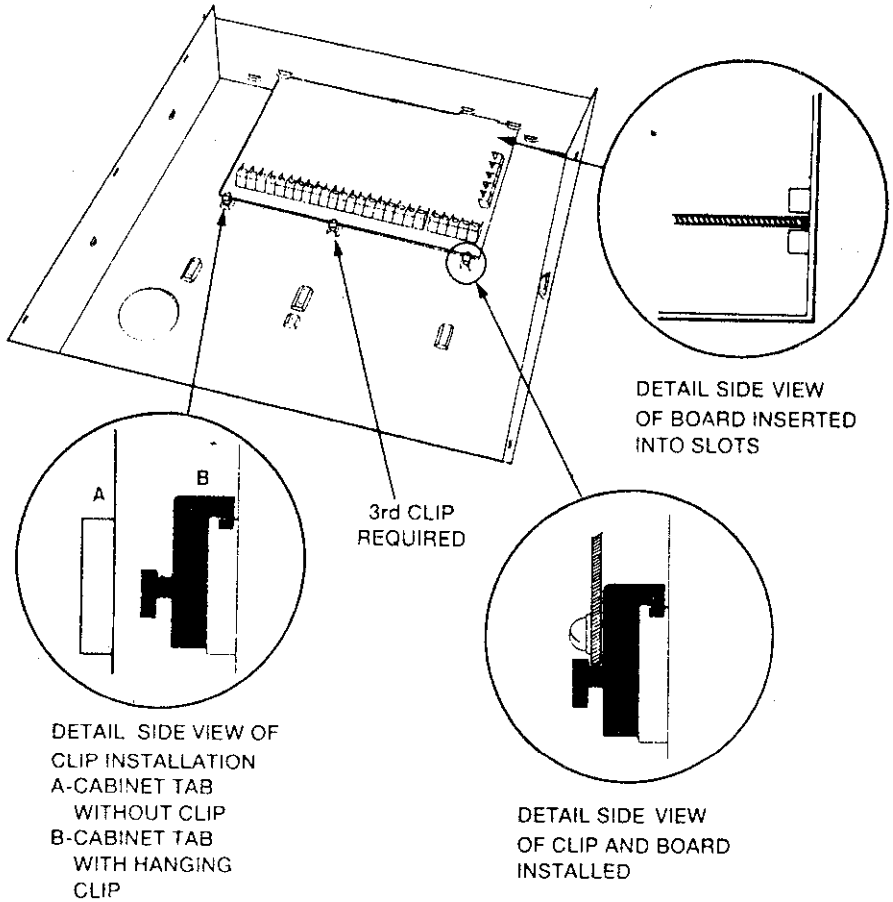
Before mounting the circuit board, be certain that the appropriate metal knockouts have been removed. DO NOT ATTEMPT TO REMOVE THE KNOCKOUTS AFTER THE CIRCUIT BOARD HAS BEEN INSTALLED.

1. Hang the three mounting clips on the raised cabinet tabs. Observe proper clip orientation to avoid damage to the clip when mounting screws are tightened and to avoid problems with insertion and removal of the PC board.

2. Place the plastic spacer provided into the hole between terminals 27 and 28 from the back of the board. This will provide additional support for the PC board.

3. Insert the top of the circuit board into the slots at the top of the cabinet. Make sure that the board rests in the slots as indicated in the diagram shown below.

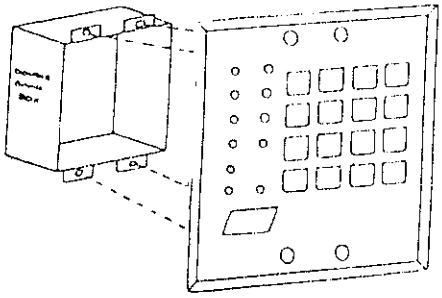
4. Swing the base of the board into the mounting clips. Place the grounding lug provided on top of the PC board near terminal 23 of the control panel and secure the ground lug to the PC board. Secure the board into the cabinet with the accompanying screws.



2. KEYPAD MOUNTING

2.1. XL4612RM METAL KEYPAD

FLUSH MOUNTING USING DOUBLE GANG BOX

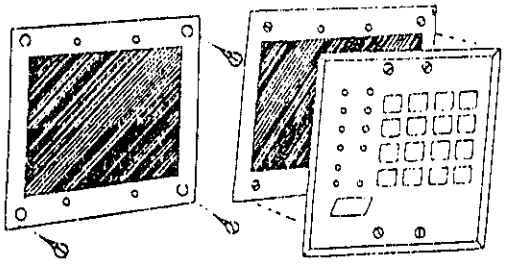


1- Create an opening and mount a standard double gang box.

2- Secure keypad to double gang box as shown in diagram below. Note: The double gang box should be mounted flush with the wall in order for the keypad screws to fit.

NOTE: For UL installations, mount the XL4612RM to an earth grounded outlet box.

FLUSH MOUNTING WITH MOUNTING RING (Using the XL4600TR)

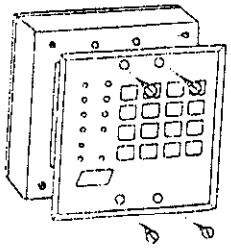


1- Create the desired opening where keypad is to be mounted, using the inside of the mounting ring as a template. NOTE: This opening should be made between studs.

2- Secure mounting plate to wall through the four outer holes using suitable mounting hardware (not provided).

3- Connect keypad wiring to control panel and secure the keypad to the mounting ring using the four painted screws provided.

SURFACE MOUNTING (Using optional XL4600RMBX)

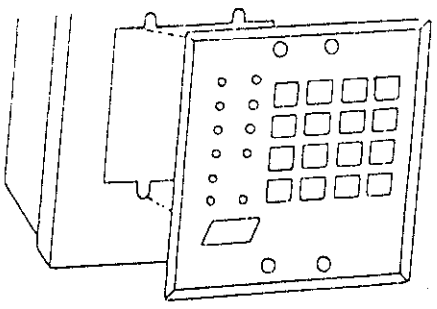


1- Depending on type of installation run the keypad wiring out of the rear, top bottom or sides of the backbox.

2- Attach backbox to wall at desired height

3- Insert XL4612RM keypad into backbox and secure with the four screws provided.

MOUNTING KEYPAD IN CONTROL PANEL ENCLOSURE



1- Remove keypad knockout from front of metal box enclosure as shown.

2- Insert XL4612RM into opening from front of enclosure.

3- Secure keypad to enclosure using the four painted metal screws and nuts provided.

2.2. XL4612SM KEYPAD

The XL4612SM Keypad may be surface mounted in the following ways:

A. Directly to a control panel having a keypad cutout on the front of its enclosure.

B. Directly to a single or double gang electrical junction box.

C. Directly to a wall or other surface.

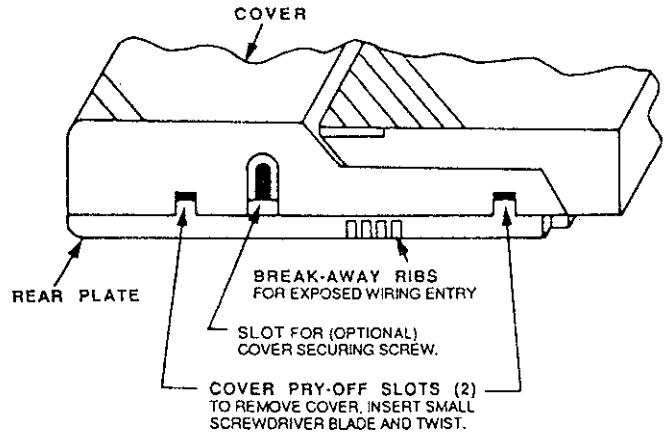


Diagram 2: BOTTOM VIEW OF KEYPAD

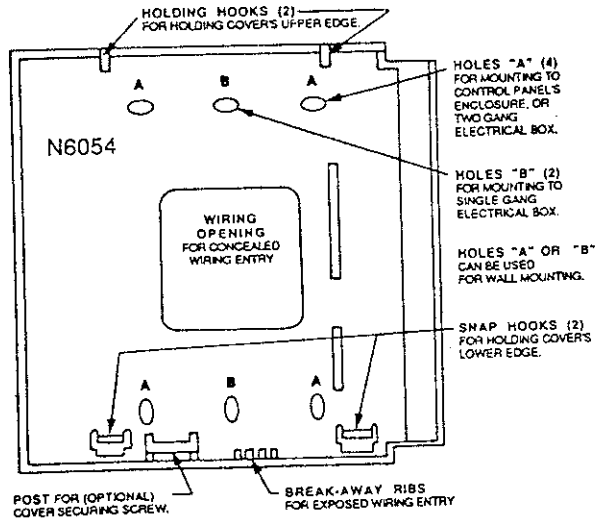


Diagram 3: REAR MOUNTING PLATE

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

2. Mount the rear plate (see Diagram 3).

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

A. MOUNTING DIRECTLY TO CONTROL PANEL ENCLOSURE:

If the control panel has a keypad cutout on the front face of its enclosure, remove the cutout and mount the plate to the enclosure's face via HOLES "A" (see diagram 3) and the four screws and nuts provided.

Note: Certain attack-proof enclosures are not provided with a keypad cutout.

B. MOUNTING DIRECTLY TO AN ELECTRICAL JUNCTION BOX:

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

C. MOUNTING DIRECTLY TO A WALL OR OTHER SURFACE

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

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

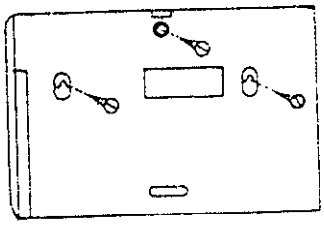
4. Replace the keypad cover assembly on the rear plate. Starting at the upper edge of the plate, engage the plate's two HOLDING HOOKS (see diagram 3) into the recesses provided for them inside the upper edge of the cover assembly and snap the lower edge of the cover assembly and snap the lower edge of the cover onto the two SNAP HOOKS at the lower edge of the plate.

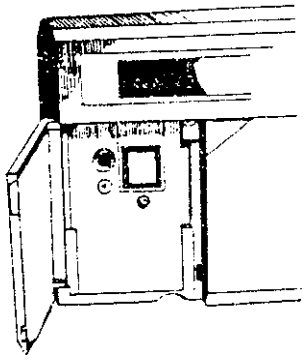
Note: (Optional) If desired, cover and plate can be further secured together by inserting a screw (provided) into the SLOT at the keypad's lower edge.

2.3. MOUNTING 7005 and 7015 KEYPADS

Keypad mounting is identical for both the 7015 LED and 7005 LCD versions. Keypads can be surface mounted or flush mounted as described below. NOTE: After mounting the 7005 LCD Keypad at eye level, you can adjust the display intensity level to suit the user by adjusting the intensity control located behind the keypad door.

SURFACE MOUNTING





1. Select a mounting location and place the rear plate of the keypad on the wall. Mark the location of the cutout for the keypad wiring cable.

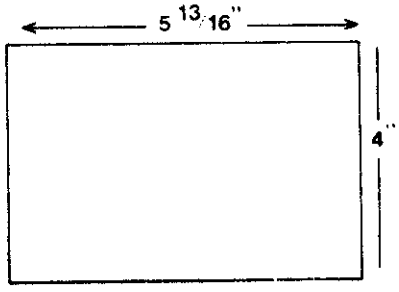
2- Create a keypad opening . Connect the keypad wiring to the control panel w/ 4-wire connector.

3- Place the keypad wiring through the cutout and secure the backplate to the wall (see diagram).

4- Connect the keypad wiring connector to the keypad and place the keypad on the mounting plate attached to the wall.

5- Secure the keypad to the rear mounting plate by attaching the 5/8 inch screw provided in the lower hole, located behind the keypad door.

RECESSED MOUNTING



1- Select a mounting location. For recessed mounting this must be between two studs. The rear mounting plate is not used for recessed installations.

2- Create an opening in the wall exactly 4 inches high by 5 13/16 inches wide.

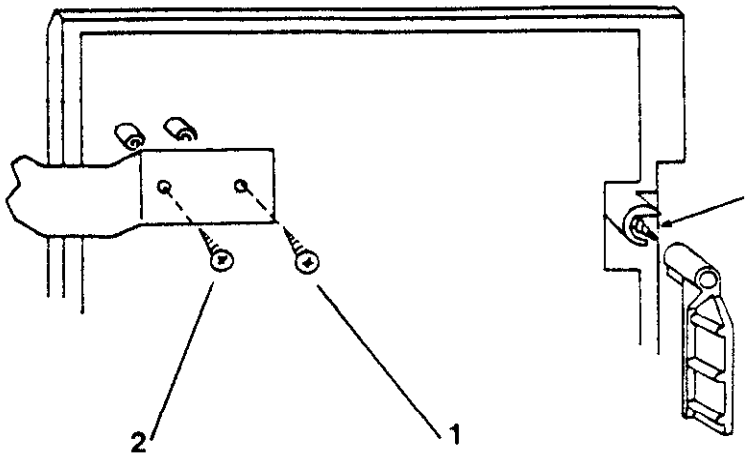
3- Turn over the keypad and remove the Phillips head screw (item 1 on diagram) in the upper left hand side of the keypad printed circuit board. Note: This screw is located immediately to the left of the keypad connector.

4- Attach the black metal mounting strap to the rear of the keypad as follows (see diagram);

- Face the pointed end of the mounting strap facing the keypad front. This will be used to latch onto the inside of the wall.

- Place the small white plastic spacer underneath the mounting strap. Secure the mounting strap using the 5/8 inch Phillips head screw (supplied) and the plastic spacer to location 1.

- Secure the other end of the strap (location 2 on diagram) to the white plastic opening using the Phillips head screw removed in step 2.



5- Connect the white plastic tab into the round opening immediately behind the keypad door. Place the longer Phillips head screw (included) through the opening inside the keypad door and begin to tighten the screw. Tighten the screw and leave the tab in a down position.

6- Run the keypad wiring to the control panel and attach the wiring to the keypad.

7- Place the keypad into the wall opening with the side containing the black metal strap first until it grabs the inside of the wall.

8- After inserting the side of the keypad with the metal strap, insert the other side into the opening until the entire keypad is firmly in the wall.

9- Tighten the screw inserted in step 5.

3. KEYPAD ADDRESSING

The 7005, 7005L and 7015 keypads contain dip switches to set the address of the keypad. This identifies the keypad to the system. **NOTE:** There is no switch on the XL4612RM or XL4612SM keypads.

This switch contains 4 locations and is numbered SW1 - SW4 and is located as follows:

7005, 7005L, 7015 Keypads — Inside of open door on left hand side of keypad

Each keypad **must** be assigned a unique keypad address from the table below. For example, if there are 4 keypads (2 LCD and 2 LED) then the LCD keypads can be numbered 1 & 2, and the LED keypads should be numbered 1 & 2.

KEYPAD NUMBER	SW1	SW2	SW3
1	ON	OFF	OFF
2	OFF	ON	OFF
3	ON	ON	OFF
4	OFF	OFF	ON
5	ON	ON	OFF
6	OFF	ON	OFF
7	ON	OFF	OFF
8	OFF	OFF	OFF

NOTE: SW4 is not used on these keypads.

IMPORTANT: Keypad addresses must be set for the 700, 7005L5 and 7015 keypads prior to system powerup for all of the keypads connected to the system. If additional keypads are added to the system, the keypads must be set to the desired addresses (in accordance with table above). Next a power up must be performed on the control panel in order for the new keypads to be recognized.

4. SYSTEM COMPONENTS AND ACCESSORIES

The following configurations and accessories are available for the XL-31 and XL-31B systems:

CONTROL PANELS

XL-31 A 12-zone control/communicator for UL Residential Burglary /Fire applications. Keypads available separately

XL-31B A 12-zone control/communicator for UL Commercial Burglary applications. The control is housed in a UL Listed attack-proof enclosure. Keypad available separately.

SYSTEMS KEYPADS

XL4612RM Surface mount metal plate LED based keypad for XL3/XL3B systems. Includes XL4600TR trim ring for flush mount installations.

XL4612SM Surface Mount LED keypad for the XL3 and XL3B systems.

7005L LCD based keypad, containing large character LCD display, surface or recessed mount with two line LCD display.

7005 LCD based keypad, surface or recessed mount with two line LCD display.

7015 LED based keypad, surface or recessed mount.

Note: The XL4612RM and the XL4612SM cannot be used on the same system with the 7005/7015 keypads.

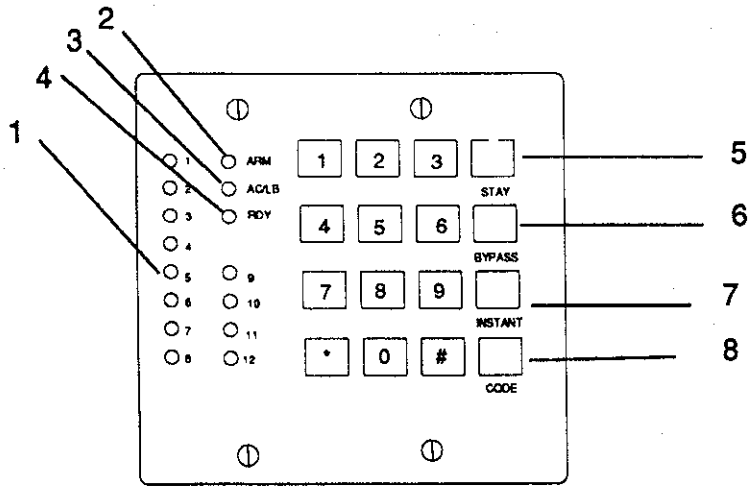
ACCESSORY PRODUCTS

***XL4612TC** Trigger cable connector for XL-31 systems.

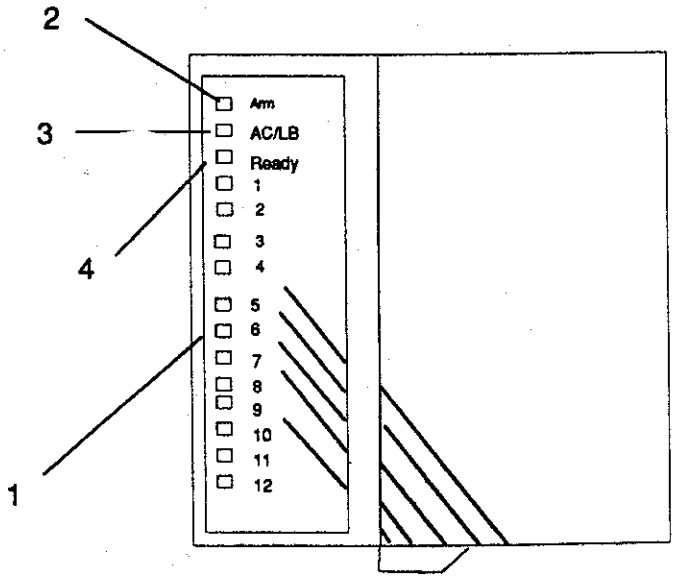
***XL4600RMBX** Back box to surface mount the XL4612RM metal keypad.

*Not tested for UL applications.

5. KEYPAD LAYOUT



XL4612RM KEYPAD



XL4612SM KEYPAD

1) ZONE STATUS LEDS

These LEDS display the current zone status including alarms, bypasses, troubles and faults. Each condition will cause these LEDS to operate differently as follows:

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

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

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

FAULTED ZONES Solid ON. Faulted zones are the lowest priority indication. Faulted burglary zones are displayed with the LED solidly ON while the system is disarmed.

NORMAL OFF

2) ARM/DISARM LED

This LED indicates whether the system is currently armed (ON) or disarmed (OFF).

Fast Blink = Alarm Mode

Slow Wink = Fail to Communicate with Central Station

3) AC/LOW BATTERY LED

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

ON = AC is present, Battery condition normal

OFF = No AC, running on battery backup

Slow Blink = Low battery condition detected

Fast Blink = Telephone Line failure

4) READY LED

This ready LED displays the current ready status of the system while disarmed, and displays the arming status when the system is armed as follows:

DISARMED STATUS (Armed LED OFF)

ON =	System ready to be armed
OFF =	System not ready to be armed
Slow Blink =	Indicates Installer programming mode

ARMED STATUS (Armed LED ON)

OFF =	Armed in AWAY mode
Slow Blink =	Armed in STAY mode
Fast Blink =	Armed in INSTANT mode
Slow & Fast Blink =	Armed in STAY-INSTANT mode

5) STAY BUTTON

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

6) BYPASS BUTTON

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

7) INSTANT BUTTON

The INSTANT button enables arming of the system, eliminating the entry/exit delay.

8) CODE BUTTON

The CODE button is used to enter the installer programming mode and entry of user codes.

5.1. KEYPAD SOUNDER

The keypad sounder annunciates differently to indicate the following conditions:

CHIRP Keypad emits a short chirp to confirm each keystroke.

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

CHIME - steady 1 second tone.

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

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

NEGATIVE ACKNOWLEDGMENT - Upon entry of an illegal command the keypad will emit four short beeps. For example, if attempting to define a new user and the master user is not entered, four short beeps will be made indicating that the command was unsuccessful.

SOUNDER RINGBACK - Several short beeps to 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 reached bell cutoff. A pulsing sounder will follow the bell output on Fire conditions. Trouble conditions also generate a pulsing sounder and will follow the loop or be silenced through entry of a valid user code.

AUTO ARM WARNING - If the auto arming function has been selected then the keypad will emit a sound two minutes prior to the auto-arming time period. In addition the lights will scroll on the LED based keypads.

The keypad is non-operational if none of the LED's are lit and the keypad does not beep when keys are pressed. This is indication that service is required.

6. SYSTEM OPERATIONS

6.1. POWER UP/SYSTEM RESET

Upon initial system powerup all of the lights on LED based keypads will go on and the sounder will operate for approximately 10 seconds. This occurs on a total powerup, 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.

6.2. ARMING THE SYSTEM

FAIL-SAFE ARMING:

The system can be armed only if all burglary zones are good (not faulted) and the READY LED is on.

ARMING: Enter any programmed four digit user code.

NOTE: The factory default user **number 1** arming code is 1234.

The ARMED LED will light and the user may exit through an exit/entry zone for the time period programmed as the exit delay. The LCD keypad displays "EXIT NOW" on the second line for the duration of the exit delay.The system can be armed without the backup battery being connected, however the AC/LB light will flash.

6.3. STAY ARMING

Depress the STAY BUTTON followed by a four digit user code. This will arm the system with all programmed interior zones excluded.

KEYPAD RESPONSES:

XL4612RM, XL4612SM	ARM = ON RDY = Slow Blink
7015	ARM = ON STAY = ON.
7005	

ON STAY

6.4. INSTANT ARMING

Depress the INSTANT button and a four digit user code.

The INSTANT mode will arm the system with all programmed exit/entry zones as instant.

KEYPAD RESPONSES:

XL4612RM	ARM = ON	RDY = Fast Blink
7015	ARM = ON	INSTANT = ON
7005		

ON INSTANT

NOTE: The INSTANT mode can be disabled through programming question 06.

6.5. INSTANT-STAY ARMING

Depress the INSTANT then STAY buttons and a four digit user code.

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

KEYPAD RESPONSES:

XL4612RM	ARM = ON	RDY = Fast & Slow Blink
7015	ARM = ON	INSTANT = ON STAY = ON.
7005		

ON STAY INSTANT

6.6. DISARMING

Depress any valid four(4) digit user code. The ARMED LED will extinguish.

If an alarm condition exists or had occurred while the system was armed, the respective zone(s) LED(s) will blink rapidly. On the XL4612RM and XL4612SM keypads the ARMED LED will blink rapidly , on the other keypads the READY LED will be blinking rapidly. This condition is classified as ALARM MEMORY and can be cleared through entry of a valid user code.

6.7. RESET

Reset is accomplished through the entry of any valid user code. This can be used to reset the smoke detectors attached to the system, silence any bells, or clear the keypad display or sounder.

In addition an option exists, for making the * key to act as a reset for clearing the sounder, and alarm memory. This programmable option can be obtained through location 1 of question 06.

6.8. BYPASS

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

Depress the BYPASS button followed by any valid four(4) digit user code, followed the zone number (01 - 12).

EXAMPLE: BYPASS ZONE 6 (Assume user code of 1234)

BYPASS 1234 06

Subsequent bypasses can be made by depressing the BYPASS button followed by another zone number within a ten second period. After this ten second period it will be necessary to enter the entire command including the user code.

NOTE: An option exists for Quick Bypassing which does not require entry of a valid user code. If this option is selected (see question 06 location 3) then BYPASS followed by the two digit zone number (01 - 12) will bypass any bypassable zone.

In addition, an option exists to restrict user bypasses to a maximum of three zones. This option can be selected through programming question 07 location 3.

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

In addition the following rules for bypass exist;

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

NOTE: Zones which are bypassed are not protected when the system is armed.

Programmable options exist to determine whether bypassed zones are automatically unbypassed after disarm and whether bypasses are displayed on the keypad when the system is armed. Both of these options can be programmed within location 3 of question 07.

6.9. AUTO UNBYPASS

All burglary zones which are bypassed can be automatically unbypassed upon system disarm. 24 hour zones which have been bypassed will be unbypassed only if they are normal. The autounbypass feature is a programmable option (see question 07 of the programming sequence).

6.10. MANUAL UNBYPASS

UNBYPASS removes an existing bypass from a currently bypassed zone. The procedure is the same as bypass.

6.11. USER CODE PROGRAMMING

Users codes can be entered or modified directly through the keypad.

The system contains up to thirty user codes (4 digits each) with the following applications;

USER NUMBER	APPLICATION
01 & 02	Master User [Default = 1234 User #1] (See note 1)
03 - 27	User Number 03 - 27 [Default = null]
28	User Number 28 Door strike (See note 2)
29	User Number 29 [Default = null] ARM only code, see note 3
30	Ambush Code [Default = null] See note 4

NOTES: 1. Only the master users (user number 1 & 2) can program or modify other users.

2. **User number 28** will be the system "door strike" code if any of the triggers is defined as a door strike trigger. If the trigger is defined then entry of this user code will activate that trigger for a period of 5 seconds. If a door strike (or access) trigger is not defined then this user code can be utilized as another user code. In addition there is an option to allow **all** user codes to act as a door strike code. If this option is selected (question 06, location 3) then all users can activate the door strike through the #9 command. (See command modes)

3. User **number 29** is a system wide arm (maid) code if the ARM only code is selected for question 06 location 3.

4. User **number 30** will be the systemwide ambush code if there is an ambush CS transmission code programmed into question number 23. If no code is defined then this user **number 30** will be another available user code.

USER DEFINITION PROCEDURE: **CODE [USER] [USER number] [USER ID]**

CODE	Code button on keypad
[USER]	Master User ID code (user #1 or #2)
[USER number]	Desired user to be programmed (01-30)
[USERID]	Four digit user code. Valid digits are 0-9
Example:	Define user number 03 with an ID of 7493. (Assume master user code is 1234).

CODE 1234 03 7493

An acknowledge sound (steady tone) verifies a successful user code programming.

A negative acknowledge sound (4 short tones) indicates unsuccessful programming.

If additional user programming is necessary, repeat the procedure listed above.

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

If a dialing format is programmed which transmits opening/closing by user ID, each user will report the respective user number. User numbers greater than 16 can only be reported as the actual user number if the FBI Superfast or ADEMCO point ID formats are used. Pulse formats can transmit different open/close and cancel codes for users 16 - 30 as defined in question 25.

DURESS/AMBUSH

If ambush capability is required then an ambush transmission code must be entered within the programming sequence. When ambush has been enabled (see programming question 23) then the user **number 30** code will be used as an AMBUSH code. In this mode, entry of the user number 30 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 30 will be reported along with the ambush code.

If ambush has not been programmed then user number 30 can be used as an ordinary user code.

ARM ONLY CODE [USER 29 CODE]

Defining number 29 as an ARM only code means that the code can only arm the system and would be used for a user such as a maid or temporary user of the system. This is obtained through location 3 of question 06.

6.12. USER DELETION

Removal of users from the system can be performed as follows;

USER DELETION PROCEDURE: **CODE [USER] [User number] #**

Where:

CODE is the CODE button on the keypad

[USER] Master user code

[User number] Represents the user number being deleted.(03-30). Note: User number 1 & 2 (master user codes) cannot be deleted, however they can be modified.

is the # (pound) key on the keypad.

6.13. KEYPAD AUXILIARY CONDITIONS

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

CONDITION	KEYSTROKES
PANIC	# *
FIRE	7 9
AUX.	1 3
AMBUSH	[USER CODE number 30] If an ambush code has been programmed.

Audible panic can be RESET BY ENTERING ANY VALID USER CODE.

The keypad FIRE and AUX conditions are selectable through the programming sequence.

The ambush code will be user **number 30** if an ambush code is programmed in question **number 23.**

6.14. INSTALLER MODES

The panel contains the following installer commands:

SEQUENCE: **CODE * [INSTALLER] [1-4]**

Where:

CODE = Depression of the CODE key

* = Depression of the * Key

[INSTALLER] = Entry of the four digit installer code. Note The default installer code is 4612.

[1-4] Entry of 1 - 4 as follows:

1 = Installer Keypad Programming

2 = Walk Test

3 = Walk Test with bell

4 = System log view

NOTE: Either walk test mode disables the panel's alarm functions. The condition is identified by "WALK TEST MODE" on the LCD keypads and flashing of the "RDY" and "ARM" LEDs on the LED type keypads.

WALK TEST

The keypad will beep and annunciate with activation of each zone while in this mode. Press the * key to restart and return to the prior panel status.

WALK TEST WITH BELL

Similar to walk test except that the bell will be tested upon entering the walk test mode.

SYSTEM LOG VIEW

The system retains history the past 6 events (alarms and troubles).

Upon entry to the system log view, LED based keypads will display alarms as fast blinking lights and zone troubles as slow blinking lights. On LCD based keypads the display will show the events one at a time starting from oldest event. Depression of any key (except * or bypass) will scroll backwards through the events. To **exit** from the system log view function press the * key. To **clear** the system log press the **BYPASS** key.

6.15. COMMAND MODES

The end user can perform the following commands:

QUICK ARM [# 1]

If quick arming has been enabled then entry of # 1 will arm the system without the need for a user code.

QUICK FORCED ARMING [# 2]

If quick forced arming has been enabled then entry of # 2 will arm the system and bypass any bypassable zones that are not ready.

SET CLOCK [# 3]

To set the time of the system clock enter:

3 [USER] HR MIN

where:

[USER] valid user code

HR = Hour of day (24 hour time, example 3 PM = 15)

MIN = Minute (00 - 59)

The system time clock is used for the system test transmission as well as the auto-arming function. NOTE: Question 07 location 4 determines if a user code is required to set the system time; otherwise enter # 3 HR MIN.

ZONE DIRECTORY (LCD Keypads) [# 4]

To scroll through the zone descriptions on the LCD keypad enter # 4.

AUTO ARM TIME - [# 5]

To set the time of day for auto-arming on a permanent basis enter:

5 [USER] HR MIN

where:

[USER] valid user code

HR = Hour of day (24 hour time, example 3 PM = 15)

MIN = Minute (00 - 59)

The permanent time represents the time of day that the system will automatically arm if the system is not already armed.

NOTE: Auto-arm time command can also be operated without entry of a user code based on the information programmed in question 07 location 3.

CHIME [# 6]

To turn the system chime on and off enter # 6. If chime had been ON, this will turn it off. NOTE: The chime feature can be selected by zone and the #6 function will toggle the chime feature for the entire system.

DISPLAY CLOCK TIME [#7]

Display the current time by entering #7. A user code is required the user code required option is selected in question 07 digit 3.

DISPLAY AUTO-ARM TIME [#8]

Display the current auto-arm time, press #8. A user code is required the user code required option is selected in question 07 digit 3.

DOOR STRIKE [# 9]

The door strike trigger can be activated as follows;

9 [USER] [Trigger number]

If all users have been authorized for door strike (see question 06 location 3) then any valid user code can activate a door strike trigger. If the "all users" option has not been selected then only user number 28 is the only user code authorized to activate the door strike.

NOTES:(1) The trigger number (1 - 4) is only necessary if there is more than one trigger programmed for door strike capability.

(2) At least one of the triggers must be defined as a door strike trigger in order to use this feature.

(3) DOOR STRIKE, QUICK FORCED ARMING, AUTO ARMING, and AUTO ARMING are not suitable programming options for any UL installation.

6.16. AUTO-ARMING

The system contains an auto arming feature. If an auto-arming time is entered then the system will automatically arm (if disarmed) at the time specified.

AUTO-ARMING TIME

The normal auto-arming time can be entered or modified by the user through the # 5 sequence. This represents the desired time of day for auto-arming.

WARNING PERIOD

An optional audible warning can be generated two minutes prior to the auto-arming time. This signal will warn the residents that the system will auto-arm in two minutes. If a user code is entered within this warning period and the system is disarmed, then the auto-arm time for that day will be canceled. The system will generate an audible acknowledgement (four beeps) and the lights on the LED display will scroll to show that the auto arm time was suspended.

NOTE: If the system is armed or there are any system conditions existing, then entry of a user code during the auto-arming warning period will react as entry of a user code and the auto- arm time will not be affected.

6.17. LOSS OF TIME WARNING

If auto-arming has been enabled then a warning will appear on the keypads if there is no time defined. This can occur if time (#3 command) has never been entered or if the system has totally lost power (AC & DC) and the time is probably incorrect. The loss of time warning consists of the LEDs on the LED keypads scrolling in sequence or a text message on LCD keypads. This will occur every 30 seconds until the time is set (#3 command)

6.18. KEYPAD TAMPER

Upon entry of 21 keystrokes in succession without entry of a valid command, the system will initiate a keypad tamper condition. This condition can only be silenced through entry of a valid user code. In addition, a code can be programmed for transmission to the Central Station (see question 26). NOTE: In two digit transmission formats the system trouble code will be transmitted as the first digit.

7. SYSTEM PROGRAMMING

The systems can be programmed using either of two methods;

- Directly through keypad (XL4612RM, XL4612SM, 7005, or 7015)
- Remotely through the EZ-MATE PC DOWNLOADER model 7700

Keypad programming is accomplished by understanding and completing the PROGRAMMING SHEET located on the **inside cover** of this manual. There are 30 total programming questions numbered 00-29. Additional programming questions are available for the programmable zone descriptors when the LCD based keypad (7005) is used.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 then programming can be simplified. The default values are listed with each programming question and in the SYSTEM DEFAULT section of this manual.

8. PROGRAMMING QUESTIONS

This section of the manual defines the programming questions and the values for each question. Complete the Programming sheet and then enter the data as explained in the section titled Data Entry Through the Keypad.

QUESTION 01 PRIMARY TELEPHONE NUMBER DEFAULT:234AAAAAAAAA

Enter the telephone number (including area code or dialing prefix IF NECESSARY) of the primary central station receiver in L1 - L12. Valid dialing digits are 0-9 , B= * , and C= three second pause, D = #. An entry of the digit A will not dial the digit and the system will examine the next digit. NOTE: Use B and D only if touchtone dialing is selected in question 05 location 3.

The system will report all signals to the primary receiver phone number. Furthermore the panel will alternate between the primary and secondary receivers (if the second phone number is programmed) for a maximum of 8 attempts each in the event the signal has not been acknowledged. All unused locations within this question must be programmed "A".

To disable call waiting for either phone number or PBX prefix enter the following single digit into the field:

DIGIT	TOUCH TONE	ROTARY
E	*70C	1170C
F	*70CC	1170CC

QUESTION 02 SECONDARY TELEPHONE NUMBER DEFAULT:AAAAAAAAAAAA

Enter the telephone number (including area code or dialing prefix IF NECESSARY) of the secondary central station receiver in L1 - L12. Valid dialing digits are 0-9 , B= * , and C= three second pause, D=#. An entry of the digit A will not dial the digit and system will examine the next digit. The secondary telephone number will be used if the panel is unable to reach the Central Station via the primary number. This is known as backup reporting.

If SPLIT REPORTING is programmed, then OPENING and CLOSING signals will be directed to the secondary CS number only, while all other conditions will be reported to primary number.If neither split or backup reporting is necessary then this question may be left as factory defaulted and all conditions will be routed to the Primary Telephone number only.

QUESTION 03 CALLBACK NUMBER DEFAULT: AAAAAAAAAAAA

Enter the telephone number (including area code or dialing prefix if necessary) for this control panel to reach the callback number location . The callback number is the optional location of the EZ-Mate Downloader where the control panel will call during a remote communications (upload/download etc) session.During remote communications the programming device and the control panel will first confirm the CS security code. If valid, communications can begin. If a callback number is defined, the control panel will the hang up and dial the callback number. For no callback capability enter AAAAAAAAAAAA.

QUESTION 04 PBX PREFIX Default = AAAA

This four digit dialing prefix will be added before the primary and secondary telephone numbers. This could be used to if there are some common prefix numbers to be used on a PBX system. Enter AAAA if there is no dialing prefix. Note: The valid dialing digits are identical to the other telephone numbers.

QUESTION 05- DIALER OPTIONS Default = 0514

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

L1 = Dialer Formats
L2 = Receiver Type
L3 = Pulse Type/System Test
L4 = Misc System Options

Question 5: L1 DIALER FORMATS *DEFAULT: 0*

Enter the digit for the desired dialer format from the chart below in location L1;

0 = 3x1, Standard Format
1 = 4x1, Standard Format
2 = 3x1, Extended Format
3 = 4x1, Extended Format
4 = 3x1, Partial Extended
5 = 4x1, Partial Extended Format
6 = 3x2 Format
7 = 4x2 Format
8 = FBI Superfast Format
9 = ADEMCO 4x1 Express Format
A = ADEMCO 4x2 Express Format
E = ADEMCO Point ID Format

Note: The ADEMCO Express and Point ID formats require a high/low handshake from the receiver.

FORMAT EXPLANATIONS

Standard

Standard format involves a 3 or 4 digit account number followed by a single round event code. Examples:

123 3
or
6548 2

Extended

Extended format (sometimes known as universal or expanded format) transmits two rounds of information. The first round includes the account number and an expansion character while the second round repeats the expansion digit as account number before identifying the zone code.

For example;

123 3
333 1
or
4312 E
EEEE 7

PARTIAL EXTENDED

The partial extended format transmits a standard signal for alarm conditions and an extended message for restores and other system conditions. NOTE: The extended message codes must be B-F).

Example:

Alarm Condition	Restore Condition
853 1	853 E
	EEE 2

FBI Superfast

DTMF format transmitting the following information:

ACCT AZZ S

Where:

ACCT = four digit account number

A= Alarm type

ZZ= Zone number (or User Number)

S= Signal Type (Alarm, Restore etc).

ADEMCO 4x1 Express

DTMF format transmitting a four digit account number followed by a single digit alarm code.

ADEMCO 4x2 Express

DTMF format transmitting a four digit account number followed by a two digit alarm code.

ADEMCO POINT ID

The Point ID reporting format: SSSS 18 QXYZ GG CCC

where

SSSS=Four digit Subscriber ID

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 Hex digits). For zone alarms this can be specified as L3 within the zone programming questions 11 - 22.

GG= Group number (always set as 01)

CCC= Zone, sensor or user number (3 Hex digits). For zone conditions this will be the zone number, defined as L4 within the zone programming questions 11-22. For user initiated actions such as open/close, this will be the actual user number (01 - 30).

Question 05 L2 RECEIVER TYPE DEFAULT = 5

Enter the digit for the desired receiver type from the chart below in location L2.

VALUE	DESCRIPTION	TYPICAL CS RECEIVERS
0 =	10 PPS, 1400 Hz., No Parity	FBI, Ademco Slow, Silent Knight Slow
1 =	20 PPS, 1400 Hz, No Parity	FBI, Radionics ADEMCO
2 =	40 PPS, 1400 Hz, No Parity	FBI
4 =	10 PPS, 2300 Hz, No Parity	FBI, Radionics
5 =	**20 PPS, 2300 Hz, No Parity**	**FBI**
6 =	40 PPS, 2300Hz., No Parity	FBI, Radionics
8 =	10 PPS, 1400 Hz, Parity	FBI, Radionics
9 =	20 PPS, 1400 Hz, Parity	FBI
A =	40 PPS, 1400 Hz, Parity	FBI
C =	10 PPS, 2300 Hz, Parity	FBI
D =	20 PPS, 2300 Hz, Parity	FBI
E =	40 PPS, 2300 Hz, Parity	FBI, Radionics

NOTE: This digit is not used if transmitting in one of the DTMF formats (FBI Superfast, ADEMCO PID, ADEMCO Express). For UL installations the acceptable receivers are FBI CP220 (all formats except ADEMCO Express, 4x1 + 4x2, and ADEMCO High Speed), ADEMCO 685 (all formats without parity and not FBI Superfast), Silent Knight 9000 (10PPS, No Parity, 1400 or 2300Hz).

Question 05 L3 - PULSE TYPE / DIALER DISABLE/ SPLIT REPORTING *Default = 1*

Enter the digit for the desired message length from the chart below in location L3.

0 = US Pulse
1 = Touch Tone
2 = European Pulse
3 = Superfast Touch-tone
4 = Dialer Disable
8 = US Pulse, Split Reporting
9 = Touch Tone, Split Reporting
A = European Pulse, Split Reporting
B = Superfast Touch-tone, Split Reporting

WHERE:

DIALING FORMAT - Specifies how this control panel will perform outgoing dialing over the telephone line connected to the control panel (touch-tone, US Pulse, or European pulse format). Note: 1) Superfast Touchtone is a faster transmission of the touch tone frequencies and may not be accepted in all telephone exchanges. 2) The European dialer option has not been tested for UL installations.

DIALER DISABLE: This option will turn OFF the digital dialer making the control a local panel. The dialer disable selection shall not be selected for UL installations.

SPLIT REPORTING - If split reporting is enabled then alarms, restores and troubles will be reported to CS#1, and openings/closings will be transmitted to CS#2.

Question 05 L4- SYSTEM OPTIONS *Default = 4*

Enter the digit for the desired system options from the chart below in location L4.

0 = Zone 12 Slow, Restore After Bell
1 = Zone 12 Slow, Restore Follows Loop
4 = Zone 12 Slow, Swinger Shutdown, Restore After Bell
5 = Zone 12 Slow, Swinger Shutdown, Follows Loop
8 = Zone 12 Fast, Restore After Bell
9 = Zone 12 Fast, Restore Follows Loop
C = Zone 12 Fast, Swinger Shutdown, Restore After Bell
D= Zone 12 Fast, Swinger Shutdown, Restore Follows Loop

Where:

ZONE 12 FAST - Indicates whether zone 12 will be a fast loop response zone on open. If selected then the response of zone 12 will be approx. 8 - 10 Msec. If zone 12 is defined as a fast zone then trigger number 3 cannot be used.

Restore After Bell Restores will be transmitted after the loop has returned to normal after bell cutoff, or upon system disarming regardless of the loop status.

Restore Follows Loop This option will transmit restores immediately upon zone restoral while the system is Armed, or upon system disarm regardless of the loop status.

Swinger Shutdown - This feature allows individual zones to activate the dialer only three times within an arming cycle. If selected, swinger shutdown applies to controlled zones while the system is armed as well as 24hr. audible alarm zones. After the third activation within the arming cycle, another zone violation will transmit the system trouble event followed by the zone code and subsequent activations within the same arming cycle will not transmit.

QUESTION 06 KEYPAD CONDITIONS DEFAULT = 9C01

This question contains four locations for various keypad definable options

*Question 06 L1 - KEYPAD CONDITIONS/ * Reset /Instant Arming DEFAULT =*

This location specifies which of the keypad emergency conditions are active as shown in the chart below:

8 = Silent Keypad Panic, Silent Keypad Aux
9 = Audible Keypad Panic, Silent Keypad Aux
A = Silent Keypad Panic, Audible Keypad Aux
B = Audible Keypad Panic, Audible Keypad Aux
C = Silent Keypad Panic, Silent Keypad Aux, * Reset
D = Audible Keypad Panic, Silent Keypad Aux, * Reset
E = Silent Keypad Panic, Audible Keypad Aux, * Reset
F = Audible Keypad Panic, Audible Keypad Aux, * Reset

Where:

Keypad Panic The keypad panic condition (depression of the * and # keys) can be selected for audible or silent response. Central station transmission will depend on the value entered in question 24 locations 1 and 2.

Keypad Aux The keypad auxiliary condition (depression of the 1 and 3 keys) can be selected for audible or silent response. Central station transmission will depend on the value entered in question 27 locations 3 and 4.

*** Reset** This option indicates that depression of * from the keypad can reset the following conditions: sounder, and alarm memory.

NOTE: The Keypad Fire condition (7 & 9 from the keypad) is always audible, with Central Station transmission determined by the entry in question 27 locations 1 and 2.

Question 06 L2 - PHONE LINE FAILURE OPTIONS DEFAULT = C

This digit determines the amount of time required for detection of telephone line failure and whether the keypad sounder and bell will be activated.

0 = Disable Phone Line Failure Detection
1 = 30 Second Phone line failure, Bell on failure
2 = 30 second Phone line failure, sounder on failure
3 = 30 second Phone line failure, Bell & sounder on failure
4 = 60 Second Phone line failure
5 = 60 Second Phone line failure, Bell on failure
6 = 60 second Phone line failure, sounder on failure
7 = 60 second Phone line failure, Bell & sounder on failure
8 = 90 Second Phone line failure
9 = 90 Second Phone line failure, Bell on failure
A = 90 second Phone line failure, sounder on failure
B = 90 second Phone line failure, Bell & sounder on failure
C = 120 Second Phone line failure
D = 120 Second Phone line failure, Bell on failure
E = 120 second Phone line failure, sounder on failure
F = 120 second Phone line failure, Bell & sounder on failure

NOTE: Do not use Bell On Failure for UL installations.

The actual duration of phone line failure detection time is dependent on the characteristics of the telephone line at the location. To determine the duration of phone line failure time, a test is required.

Question 06 L3 QUICK COMMANDS/ ARM ONLY/ DOOR STRIKE CODE Default = 0

0 = **Quick Commands Disabled**
1 = Quick Forced Arm/Bypass
2 = Quick Arming
3 = Quick Forced Arm/Bypass, Quick Arm
4 = Quick Commands Disabled, Arm Only User
5 = Quick Forced Arm/Bypass, Arm Only User
6 = Quick Arming, Arm Only User
7 = Quick Forced Arm/Bypass, Quick Arm, Arm Only User
8 = Quick Commands Disabled, All Users Strike
9 = Quick Forced Arm/Bypass, All Users Strike
A = Quick Arming, All Users Strike
B = Quick Forced Arm/Bypass, Quick Arm, All Users Strike
C = Quick Commands Disabled, Arm Only User, All Users Strike
D = Quick Forced Arm/Bypass, Arm Only User, All Users Strike
E = Quick Arming, Arm Only User, All Users Strike
F = Quick Forced Arm/Bypass, Quick Arm, Arm Only User, All Users Strike

WHERE:

QUICK Forced Arm/Bypass Enables the quick forced arm [# 2 command] and quick bypass [BYPASS ZONE command]. NOTE: The quick forced arm command shall not be selected for UL installations.

QUICK Arming Enables the quick arming command [#1].

ARM ONLY USER - If this option is selected then user **number 29** will be dedicated as an arm only (maid) code. This means that this user code is capable of arming the system only. The user code cannot be used to disarm the system, If this option is not selected then user **number 29** will act as a normal user code.

ALL USERS DOOR STRIKE - If this option is selected then all of the user codes can be used to activate any triggers defined as a door strike trigger. If this option is selected then any user can activate a door strike trigger through the following command , # 9 [USER] [Trigger number].

If this option is not selected then **user number 28** will be the dedicated system door strike code, if any of the triggers are defined for door strike. In this mode, entry of user code 28 will activate the first trigger defined as door strike. In addition, user 28 cannot be used as an ordinary user code, unless there are no door strike triggers defined.

Question 06 L4 CS Test Interval Default = 1

This question indicates the method of CS Test transmission as follows;

0 = 24 Hour Test by Event
1 = **Weekly Test by Event**
2 = 27 Day Test by Event
3 = 60 Day Test by Event
4 = 90 Day Test by Event
5 = 24 Hour Test by Time
6 = Weekly Test by Time
7= 27 Day Test by Time
8 = 60 Day Test by time
9 = 90 Day Test by Time
A = Weekly Test by Time/Event
B = 27 Day Test by Time/Event
C = 60 Day Test by Time/Event
D = 90 Day Test by Time/Event

Where:

Test Interval - Select daily (24 hour), weekly (7 days), 27 day, 60 day or 90 day.

Test by Time Indicates that system test signals (if selected) will be sent at the time specified in question 28. The interval depends on the test interval selected.

Test by Event This indicates that each event transmitted will restart the test timer. For example, if a daily signal is selected and the last signal was transmitted at 2:15AM then a test signal will be sent the following day at 2:15 AM if no other events were transmitted. Each subsequent transmission will reset the test timer.

Test by Event/Time Test signal will be transmitted at specific time (defined in question 28) after the programmed number of days unless day counter is reset by an event. Each event transmitted restarts the timer. Example: If 60 day test by event/time is selected then a test signal will be sent after 60 days of inactivity at the time programmed in question 27.

QUESTION 07 MISC OPTIONS DEFAULT = 3026

Question 07 L1 Siren Driver/Bell Output Default = 3

This digit defines whether the system will utilize the built in siren driver or have a conventional bell output. If the siren driver is selected then the sounds for fire and burglary conditions will be selected as shown below:

0 = Bell Output
1 = Steady Burg, Steady Fire
3 = Euro Sweep Burg, Steady Fire
5 = Steady Burg, Euro Sweep Fire
7 = Euro Sweep Burg, Euro Sweep Fire
B = Sweep Burg, Steady Fire
D = Steady Burg, Sweep Fire
E = Euro Burg, Sweep Fire
F = Sweep Burg, Sweep Fire

NOTE: If the built in siren driver does not provide sufficient sound for the installation, then program this option for bell output and utilize an external siren driver. Select "0" Bell Output for all UL Listed commercial applications.

Question 07 L2 AUTO-ARMING OPTIONS Default = 0

This digit indicates various auto-arming options. If the system is auto armed, this digit will select whether the system will arm in the AWAY, STAY INSTANT or STAY INSTANT modes. In addition, an optional audible warning can be generated two minutes prior to the auto-arming time.

0 = Auto Arming Disabled
1 = Auto Arm AWAY, No audible warning
3 = Auto Arm AWAY, Audible warning
5 = Auto Arm INSTANT, No audible warning
7 = Auto Arm INSTANT, Audible warning
9 = Auto Arm STAY, No audible warning
B = Auto Arm STAY, Audible warning
D = Auto Arm INSTANT/STAY, No audible warning
F = Auto Arm INSTANT/STAY, Audible warning

NOTE: Do NOT select Auto Arm for UL installations.

Question 07 L3 TIME SET USER CODE , AUTO UNBYPASS, DISP BYPASS, BYPASS RESTRICTION Default = 2

Select the desired options from the chart below:

0 = User Code Required to set Times
1 = User code not Required to Set Times
2 = User Code required to Set Times, Auto Unbypass
3 = User code not Required to Set Times, Auto Unbypass
4 = User Code Required to set Times, Armed Bypass Display
5 = User code not Required to Set Times, Armed Bypass Display
6 = User Code required to Set Times, Auto Unbypass, Armed Bypass Display
7 = User code not Required to Set Times, Auto Unbypass, Armed Bypass Display

This digit defines the following system parameters:

USER CODE REQUIRED FOR TIME ENTRY- This option indicates whether the #3 command (time entry), #7 command (display time) or #8 command (display auto arm time) requires entry of a valid user code.

AUTO-UNBYPASS- If this option is selected then all bypasses will automatically be removed upon disarming the system.

ARMED BYPASS DISPLAY- This option indicates that bypasses will be displayed on keypads when the system is armed.

Question 07 L4 NUMBER OF RINGS, BYPASS STAY, BELL TEST Default = 6

0 = Remote Access Disabled
1 = 5 Rings For Pickup
2 = 10 Rings For Pickup
3 = 15 Rings For Pickup
4 = No Bypass on Stay Arming, Remote Access Disabled
5 = No Bypass on Stay Arming, 5 Rings For Pickup
6 = No Bypass on Stay Arming, 10 Rings For Pickup
7 = No Bypass on Stay Arming, 15 Rings For Pickup
8 = Bell Test At Arming, Remote Access Disabled
9 = Bell Test At Arming, 5 Rings For Pickup
A = Bell Test At Arming, 10 Rings For Pickup
B = Bell Test At Arming, 15 Rings For Pickup
C = Bell Test At Arming, No Bypass on Stay Arming, Remote Access Disabled
D = Bell Test At Arming, No Bypass on Stay Arming, 5 Rings For Pickup
E = Bell Test At Arming, No Bypass on Stay Arming, 10 Rings For Pickup
F = Bell Test At Arming, No Bypass on Stay Arming, 15 Rings For Pickup

Where:

RING COUNT Determines the number of rings required by the control panel to pickup for remote communication purposes. The number of rings should be set to a value which does not interfere with the telephone at the panel location. To disable remote communications select one of the options labeled "Remote Access Disabled". The options for ring count are 0 (Remote access disabled), 5, 10 or 15.

NO BYPASS ON STAY This option specifies that bypasses will not be transmitted upon Stay arming. If this option is not selected then bypasses will be transmitted for each interior zone that has been bypassed with the STAY arming. Note: Bypasses will only be transmitted if there is a bypass code defined (see question 26).

BELL TEST AT ARMING If this option is selected the bell will be activated for one second upon successful arming. This option is required for UL Commercial Burglary applications.

QUESTION 08 ACCOUNT NUMBER 1 DEFAULT = 1234

Enter the three (3) or four (4) digit subscriber account number for Central Station phone number 1 in locations L1-L4.

If a three(3) digit number is used then enter an A in location L4.

Valid entries are 0-9, and B-F. The value A is interpreted as the null value for account numbers.

QUESTION 09 ACCOUNT NUMBER 2 DEFAULT = AAAA

Enter the three(3) or four(4) digit subscriber account number for Central Station phone number 2 in locations L1-L4.

If a three(3) digit number is used then enter an A in location L4.

Valid entries are 0-9, and B-F. The value A is interpreted as the null value for account numbers.

If the second phone number is not used this question can be left as factory defaulted.

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

QUESTION 10 SYSTEM TIMEOUTS

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

LOCATIONS	DEFAULTS
L1 = Entry Delay	30 seconds
L2 = Exit Delay	60 seconds
L3 = Burglary Bell Cutoff	15 minutes
L4 = Fire Bell Cutoff	No Cutoff

Question 10 L1 - ENTRY DELAY *Default = 3*

Enter the desired entry delay time in 10 second increments. The valid range of input is 1 - F, with 1 indicating a 10 second entry delay and F indicating 150 seconds. For UL applications the maximum entrance delay shall not exceed 45 seconds for household applications or 15 seconds for commercial burglary applications.

Question 10 L2 - EXIT DELAY *Default = 6*

Enter the desired exit time in 10 second increments. For UL applications the maximum exit delay shall not exceed 60 seconds.

The valid range of input is 1 - F, with 1 indicating a 15 second exit delay and F indicating 150 seconds.

Question 10 L3 - BURGLARY BELL CUTOFF *Default = 5*

Enter the desired bell cutoff time on alarm conditions for burglary and panic in three minute intervals. The valid range of input is 1 - F, with F indicating an infinite burg bell cutoff. Example 3 = 9 minutes. For UL installations in commercial applications the minimum bell cutoff shall be 15 minutes, or 4 minutes for household burglary applications.

Question 10 L4 - FIRE BELL CUTOFF *Default = F*

Enter the desired bell cutoff time for fire conditions in three minute intervals. The valid range of input is 1 - F, with F indicating an infinite fire bell cutoff. Example 3 = 9 minutes. For UL installations the minimum fire bell cutoff time shall be 4 minutes.

8.1. ZONE PROGRAMMING

Questions 11-22 represent all the options related to programmable zones 1-12. The digits are described below:

L1 Zone Supervision Type
L2 Zone Type
L3 L4 CS Transmission Codes

L1 Zone Supervision Type

0 = EOL Supervised Interior Zone
1 = Normally Open (NO) Interior Zone
2 = Normally Closed (NC) Interior Zone

4 = EOL Supervised Instant Zone
5 = Normally Open (NO) Instant Zone
6 = Normally Closed (NC) Instant Zone

8 = EOL Supervised, 24 Hour Zone or Keyswitch
9 = Normally Open (NO), 24 Hour Zone or Keyswitch
A = Normally Closed (NC), 24 Hour Zone or Keyswitch

C = EOL Supervised Delay Zone
D = Normally Open (NO) Delay Zone
E = Normaliy Closed (NC) Delay Zone

NOTE: EOL Supervision must be programmed for all UL installations. If EOL Supervision is specified then the end of line resistors supplied with the control panel must be used on these zones.

L2 ZONE TYPE -

Select the zone type based on whether the zone is a controlled (burglary) zone or 24 hour zone.

CONTROLLED ZONES

0 = Burg. Zone (No Other Options)
1 = Restore
2 = Day Zone
3 = Restore, Day Zone
4 = Chime
5 = Restore, Chime
6 = Day Zone, Chime
7 = Restore, Day zone, Chime
8 = Dialer Delay
9 = Restore, Dialer Delay
A = Day Zone, Dialer Delay
B = Restore, Day Zone, Dialer Delay
C = Chime, Dialer Delay
D = Restore, Chime, Dialer Delay
E = Day Zone, Chime, Dialer Delay
F = Restore, Day zone, Chime, Dialer Delay

24 HOUR ZONES

0 = Audible 24 Hour Alarm
1 = FIRE
2 = Audible 24 Hour Trouble
3 = Keyswitch
4 = Audible 24 hour alarm, restore
5 = Fire, Restore
6 = Audible 24 hour trouble, Restore
8 = Silent 24 hour alarm
A = Silent 24 hour trouble
C = Silent 24 hour alarm , Restore
E = Silent 24 hour trouble, restore

ZONE TYPE DESCRIPTIONS

Zones 1-12 can be programmed for any one of the following zone types:

BURGLARY (CONTROLLED) ZONES

DELAY

This is the industry standard exit/entry zone. When the system is armed exit time begins. After exit expires, any subsequent violation of this zone will begin entry time. If the system is not disarmed within the programmed entry time an alarm will occur. The keypad sounder will annunciate steadily during entry time,

unless there had been an alarm condition, at which time it will pulse. Delay zones will activate instantly when the system is armed using the INSTANT mode.

INTERIOR

All interior zones have exit delay time upon system arming. Furthermore, all interior zones will have entry delay time if a delay zone is violated first. If this zone is violated first however,it will generate an immediate alarm.

Interior zones will automatically be bypassed if the system is armed in the STAY mode.

INSTANT

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

BURGLARY ZONE OPTIONS

RESTORE

If this option is selected on a burglary zone, then the programmed restore code will be reported upon bell cutoff, assuming the loop is restored. The restore code will also be reported if the system is disarmed during an alarm.

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 before dialing, allowing the end user to ABORT the transmission. If this option is not selected, any alarm condition will result in an immediate transmission that cannot be aborted. **NOTE:** For UL installations dialer delay may not be used.

DAY FEATURE

If a zone with this option is violated while the system is DISARMED, the keypad sounder and zone LED will pulse for as long as the violation remains. In addition, the SYSTEM TROUBLE CODE will be transmitted to the central station. THE SOUNDER CAN BE SILENCED through entry operation of any valid user code.

While the system is armed, a DAY zone will act as an alarm when violated.

24 HR ZONES

FIRE

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

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

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

Any valid user number silences the keypad.

NOTE:Fire Zones cannot be bypassed. 24 HOUR TROUBLE must NOT be used for fire/burglary protection. A 24Hr alarm zone must not be used for perimeter protection.

24 HR ALARM

This zone type is always active, independent of the system arming status. Programming options include audible (STEADY BELL) or silent (NO BELL or keypad indications), with or without restore codes. Upon violation the zone LEDS will pulse rapidly (audible zones only) and an immediate CS transmission will occur which cannot be aborted.

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

24 HR TROUBLE This zone type is always active, independent of the system arming status. Programming options include audible (PULSING KEYPAD SOUNDER) or silent, with or without restore codes. Upon violation the zone LED will pulse slowly. Trouble condition must exist for 15 seconds before a transmission will occur. The keypad display and sounder will clear upon zone restoral.

KEYSWITCH 24 Hour Trouble zones can be bypassed, however they cannot be unbypassed if a violation exists on the zone terminals. Any Valid User ID silences the keypad Keyswitch zones will toggle the arming status of the system. NOTE: Keyswitch Zone operation has NOT been investigated by Underwriters Laboratories.

ZONE ALARM CODES

Locations L3 and L4 of the zone questions represent the alarm code that will be reported to the central station.

Zones will transmit to the Central Station unless these digits are defined as AA for any individual zone, or the local dialer option is selected in question 05. Based on the dialer format selected enter the alarm code as follows;

STANDARD FORMAT: Enter the desired single digit alarm code in location L3. The value placed in L4 will not be used.

Example: Desired transmission 123 2 (account 123, alarm code 2).

Enter a 2 in location L3 of the zone. Any value placed in L4 will be not be used.

EXTENDED: Enter the desired first digit of the alarm code in location L3. The second digit in L4.

Example: Desired transmission 123 3
333 4

Enter 3 in L3, 4 in L4.

PARTIAL EXTENDED: Enter the desired digit in both locations L3 **and** L4. This will generate a single round alarm transmission and an extended transmission for all system conditions such as restores.

Example: Alarm 123 3
Restore 123 E
EEE 3

Enter 3 in L3 and L4.

4x2:Enter the desired first digit of the alarm code in location L3. The second digit in L4.

Example: 4765 32 Enter 3 in L3, 2 in L4.

FBI SUPERFAST: The two digits zone type L3 L4 will be transmitted as the zone code.

ADEMCO EXPRESS FORMATS: In the 4x2 format L3 - L4 will be transmitted, in the 3x1 format only L3 will be transmitted.

ADEMCO POINT ID (PID) Format: The PID format transmits the following information:

The Point ID reporting format: SSSS 18 QXYZ GG CCC

where

SSSS=Four digit Subscriber ID

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 Hex digits). See L3 below.

GG= Group number (fixed as 01)

CCC= Zone or Sensor number (3 Hex digits). Zone Alarm is defined as L4. (Event reports) or User # (Open/Close events)

L3 PID EVENT Code

The PID event code transmitted (shown as XYZ in PID example) depends on the type of event and the table listed below:

Value	Burglary Zn	Fire Zn	24Hr Alarm	24Hr Trouble
0	122 Silent panic	110 Fire Alarm	100 Medical	100 Medical
1	123 Aud. Panic	111 Smoke	101 Pendant Xmit	122 Silent
2	130 Burglary	112 Combustion	120 Panic Alarm	123 Aud Panic
3	131 Perimeter	113 Water Flow	122 Silent Panic	137 Tamper
4	132 Interior	114 Heat	123 Audible Panic	150 24Hr N/Brg
5	133 24Hr. Alarm	115 Pull Station	130 Burglary	153 Heat Loss
6	134 Entry/Exit	116 Duct	133 24 Hr. Alarm	155 Foil Break
7	135 Day/Night	117 Flame	135 Day/Night	156 Day Trbls.
8	136 Outdoor	140 Gen. Alarm	137 Tamper	158 High Temp.
9	137 Tamper	150 24Hr N/Brg	140 Gen. Alarm	159 Low Temp.
A	140 Gen. Alarm	158 High Temp	150 24Gas Detect	300 System Trbls.
B	144 Snsr.Tamper	159 Low Temp	151 Gas Detect	301 AC Loss
C	155 Foil Break	200 Fire Sensor	152 Refrigeration	302 L. Sys. Bat.
D	156 Day Trouble	201 L. Water Pr.	153 Heat Loss	310 Gnd. Fault
E		202 Low CO2	154 Water Leak	373 Fire Trbl.
F		203 Valve Snsr.	155 Foil Break	380 Snsr. Trbl.

Example: For a burglary zone, enter a 2 in L3 to define the zone as an event code of 130.

L4 Zone Sensor No.

Enter the desired zone number to be transmitted to the central station into L4 of the zone number. This is shown as CCC in the format explanation. Enter 0-F, the zone number entered will be transmitted into decimal format.

QUESTION 11 ZONE 1 Default = C031

QUESTION 12 ZONE 2 Default = 0032

QUESTION 13 ZONE 3 Default = 4033

QUESTION 14 ZONE 4 Default = 4034

QUESTION 15 ZONE 5 Default = 4035

QUESTION 16 ZONE 6 Default = 4036

QUESTION 17 ZONE 7 Default = 4037

QUESTION 18 ZONE 8 Default = 4038

QUESTION 19 ZONE 9 Default = 4039

QUESTION 20 ZONE 10 Default = 4030

QUESTION 21 ZONE 11 Default = 403B

QUESTION 22 ZONE 12 Default = 403C Zone 12 can be programmed for Fast Zone response

QUESTION 23 AMBUSH/AC LOSS

There are 4 locations L1-L4 in this question. L1 - L2 is the alarm code that will be transmitted on AMBUSH. If an ambush code is defined then user number 30 is the ambush code. L3 - L4 is the AC LOSS CODE. The same rules for programming regarding dialer format apply here. If either of these transmissions are not desired, program their respective locations AA.

AMBUSH transmissions are immediate and not abortable. AC LOSS is reported 15 minutes after detection.

LOCATIONS		DEFAULTS
L1 - L2	AMBUSH	AA
L3 - L4	AC LOSS	A1

NOTE: If the first digit of AC loss (L3) is an A, then the second digit (L4) will determine whether the keypad sounder will activate upon loss of AC. Entry of A into the second field (L4) will cause the keypad sounder to be inactive during an AC failure (note visual indications will remain unchanged).

AMBUSH CODE PID FORMAT

If PID format is selected then program L1 with the following values to select the desired PID code;

VALUE	PID Code	Description
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	130	Burglary
F	130	Burglary

AC LOSS TYPES (L3)

If transmitted in PID format, select the desired event code in L3 from the table below.

VALUE	PID Code	Description
0	133	24 Hour Alarm
1	140	General Alarm
2	150	24Hr. Non-Burg.
3	300	Sys. Trbl.
4	301	AC Loss

L4 will represent the desired zone code to be transmitted for AC loss.

QUESTION 24 PANIC/LOW BATTERY

There are 4 locations L1-L4 in this question. L1 - L2 is the alarm code that will be transmitted on keypad PANIC. L3 - L4 is the LOW BATTERY CODE. The same rules for programming regarding dialer format apply here. If either or both of these transmissions are not desired, program their respective locations AA.

PANIC transmissions are immediate and not abortable.

LOW BATTERY transmissions will be reported 4 minutes after detection. LOW BATTERY RESTORE CODE will be reported WITHIN 4 minutes after detection of GOOD BATTERY condition.

LOCATIONS	DEFAULTS	
L1 - L2	PANIC	22
L3 - L4	LOW BATTERY	AA

POINT ID FORMAT

If transmitting in PID format then L3 will represent the event code as shown in the table below:

Value	PID Code	Description
0	133	24 Hour Alarm
1	140	General Alarm
2	150	24Hr. Non-Burg.
3	300	Sys. Trbl.
4	302	Low Sys Bat.
5	309	Battery Test Fail

L4 will represent the zone code transmitted to the central station.

QUESTION 25 OPEN/CLOSE, CANCEL, TEST CODE

There are 8 locations L1-L8 in this question.

Question 25 **L1** OPENING CODE for users 1-15. **L2** is the single digit CLOSING CODE for users 1-15. Entry of AA into these two locations means that openings and closings are not desired. If a dialer format other than standard is programmed then the second digit transmitted will be the user number.If PID format is used then see chart below for entries of the event code and the user number will be the actual user number .

Question 25 **L3** is the single digit OPENING CODE for users 16-30. **L4** is the single digit CLOSING CODE for users 16-30. Entry of AA into these two locations means that openings and closings for users 16 - 30 will utilize the codes defined in L1 and L2. If a dialer format other than standard is programmed then the second digit transmitted will be the user number.If PID format is used then see chart below and the user number will be the actual user number.

Question 25 **L5** Cancel Code (Users 1 -15) A cancel code can be transmitted to the Central Station if after violation of a controlled zone, a user code is entered. If the zone is still violated entry of a user code will transmit the cancel code. This is the code transmitted for user numbers 1 - 15. If the zone is programmed for restore then the restore code can be transmitted when the loop status has returned to normal. Entry of A in this field indicates that cancel codes are not transmitted. In formats requiring two digits, the user number functions as the second digit.

Question 25 **L6** Cancel Code (Users 16 - 30) This is similar to the previous location except this transmits the cancel code for users 16 - 30. Entry of A indicates that cancel the cancel code for all users will be obtained from the information programmed in L6.

Question 25 **L7 - L8** TEST CODE These locations indicate the desired Central Station code for transmission of the system test code. The frequency and type of test is defined in question 06 location 4. Entry of AA indicates that system test is not transmitted.

LOCATIONS		DEFAULTS
L1	OPENING CODE (Users 1-15)	A
L2	CLOSING CODE (Users 1-15)	A
L3	OPENING CODE (Users 16-30)	A
L4	CLOSING CODE (Users 16-30)	A
L5	Cancel Code (Users 1 - 15)	A
L6	Cancel Code (Users 16 - 30)	A
L7 - L8	TEST Code	AA

OPEN/CLOSE POINT ID FORMAT

If transmitting in PID format, then L1 - L4 will determine the OPEN/CLOSING event codes to be transmitted as shown in the table below:

VALUE	PID Code	Description
0	400	Open/Close
1	401	User O/C
2	402	User Group
3	403	Auto-Arm
4	404	Late to O/C
5	405	Deferred O/C
6	407	Remote Arm O/C
7	408	Quick Arm Close
8	409	Keyswitch O/C

QUESTION 26 BYPASS/RESTORE/TROUBLE/TAMPER CODE

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

Question 26 **L1** is the single digit system *BYPASS CODE* reported to the central station if a zone is bypassed, UPON ARMING.Entry of an A means that bypasses are not transmitted. If a two digit dialing format has been selected then the Bypass code will be followed by the programmed second digit of the zones code. For point ID format see chart that follows for available options.

Question 26 **L2** is the single digit system *RESTORE CODE* reported to the central station. Restores will be reported for burglary or 24 hour zones which have been programmed with the restore option. Entry of an A means that restores are not transmitted. If a two digit dialer format has been programmed then the restore code will be followed by the programmed second digit of the zones code.

Question 26 **L3** is the single digit system *TROUBLE CODE* reported to the central station. This code will be reported on DAY TROUBLE and any FIRE TROUBLE. If a two digit format has been programmed then this code will be followed by the second digit of the respective zones code. Entry of A indicates that troubles are not transmitted. If PID format is used then select from the following options:

Value	PID Code	Description
0	133	24 Hour Alarm
1	135	Day/Night
2	137	Tamper
3	150	24 Hour N/Burg
4	155	Foil Break
5	156	Day Trouble
6	300	System Troubles
7	373	Fire Trouble
8	380	Sensor Troubles
9	383	Sensor tamper

Question 26 **L4** is the keypad tamper code. If 21 digits are entered through the keypad without entry of a valid user code, then the keypad sounder will activate until a valid user code is entered. If a keypad tamper code is entered then it will be transmitted to the Central Station. If a two digit CS transmission code is selected (example 4x2 or extended) then the trouble code will be the first digit transmitted.

LOCATIONS		DEFAULTS	LOCATIONS		DEFAULTS
L1	BYPASS	A	L2	RESTORE	E
L3	TROUBLE	F	L4	KEYPAD TAMPER	A

PID FORMAT (BYPASSES)

If transmitting PID format then L1 represents the event code as shown below:

Value	PID Code	Description
0	570	Zone Bypassed
1	571	Fire Zone Bypassed
2	572	24 Hour Zone Bypassed
3	573	Burglary Zone Bypassed
4	574	Group Bypass

QUESTION 27 KEYPAD FIRE/ KEYPAD AUX. DEFAULT : 1123

There are 4 locations L1-L4 in this question. L1 - L2 is the code that will be transmitted upon activation of the keypad fire condition (pressing the 7 & 9 keys on the keypad). This code can vary from any of the zones which are programmed as fire. NOTE: To inactivate the keypad fire condition enter AA.

L3 - L4 is the code transmitted to the CS for keypad aux. condition (1 & 3 from the keypad) . To disable the keypad auxiliary condition enter AA. The keypad auxiliary condition can be silent or audible based on the question 06 location 1.

LOCATIONS	DEFAULTS	
L1 - L2	KPAD FIRE	11
L3 - L4	KPAD AUX	23

PID FORMAT (Keypad Conditions)

If transmitting in PID zone format, L1 and L3 will specify the event code transmitted from the table below. L2 and L4 defines the zone number transmitted for PID format.

Value	PID Code	Description
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	24Hr Alarm
C	140	General Alarm
D	150	24Hr Alarm

QUESTION 28 TEST TIME DEFAULT = 04 00

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:

L1 L2 Hour of day [00 - 24] L3 L4 Minute within hour [00 - 59]

Example: 5:30 PM = 17 30

QUESTION 29 Trigger 1 & 2 DEFAULT = 0C01

The control panel contains 4 voltage level output triggers. Enter the desired trigger type for each output trigger (see table below).

L1 L2 Defines Trigger #1 Default = Strobe L3, L4 Defines Trigger #2 Default = Burglary

QUESTION 30 Trigger 3 & 4 DEFAULT = 021B

The control panel contains 4 voltage level output triggers. Enter the desired trigger type for each output trigger.

L1 L2 Defines Trigger #3 Default = Fire L3 L4 Defines Trigger #4 Default = Zone Reset

NOTE: Trigger #3 cannot be used if zone 12 is being used for Fast Response.

TRIGGER TYPES

CODE	DESCRIPTION	ACTION
00	Trigger Disable	None
01 [Trigger 2 Default]	Burglary	Steady follows Burglary timeout
02 {Trigger 3 Deafult]	Fire	Steady follows Fire timeout
03	Duress	2 Second pause following duress code
04	Keypad Tamper	Kpad tamper turns on, valid user code turns off
05	24 Hour Trouble	Follows 24 Hour trouble
06	Fire Trouble	Follows fire trouble
07	Day Trouble	Follows day trouble zone (on after 15 sec)
08	24 Hour Alarm	Audible follows bell, 2 sec. pulse on silent
09	Keypad Fire	Audible follows bell, 2 sec. pulse on silent
0A	Keypad Auxiliary	Audible follows bell, 2 sec. pulse on silent
0B	Keypad Panic	Audible follows bell, 2 sec. pulse on silent
0C [Trigger 1 Default]	Strobe	Follows arming light, until system disarm
0D	AC Loss	Follows AC after 15 min delay
0E	Low Battery	Follows Low battery
0F	Arming	Follows arming state
10	Bypass	Follows any zone bypassed
11	Entry	Follows entry time
12	Exit	Follows exit time
13	Instant	Follows Instant State
14	STAY	Follows STAY state
15	Ready	Follows ready state
16	DOOR STRIKE (Access trigger)	5 Second Pulse on entry of door strike code
17	Comm Failure	Follows comm failure light
18	Phone failure	Follows phone failure light
19	Sounder	Follows keypad sounder
1A	Ground Start	Follows dialing (Trigger #1 only)
1B * [Trigger 4 Default]	Zone Reset	Resets Latched Zones (ie glass break det.)

* NOTE: If Zone reset trigger (type 1B) is selected then depression of * from the keypad will activate the trigger

Question 00 INSTALLER CODE Default = 4612

There are 4 locations L1 - L4 in this question. Enter any 4 digit installer code desired. This code is used to ENTER the system programming mode via the keypad. Typically each installing company would use a unique installer code in order to prevent unauthorized people from gaining access to their panels. Note: The factory default value for the installer code is 4612 in locations L1-L4 respectively.

NOTE: This question is can be accessed only through the direct access mode, select question 00.

9. DATA ENTRY VIA LED BASED KEYPADS

This section describes the physical keystrokes necessary to perform keypad programming and how to interpret the data displayed on the LED based keypads during programming operations. This section describes operation through either the XL4612RM, XL4612SM or 7015 keypads. Actual keypad programming should be performed after completion of the programming sheet.

9.1. HOW TO ENTER PROGRAMMING MODE

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

DEPRESS the **CODE** button.
DEPRESS the * button. (asterisk)
ENTER the four digit INSTALLER CODE (default value= 4612)
ENTER the digit 1 (Installer mode 1 = Keypad programming)

9.2. WHAT YOU SEE ON THE KEYPAD

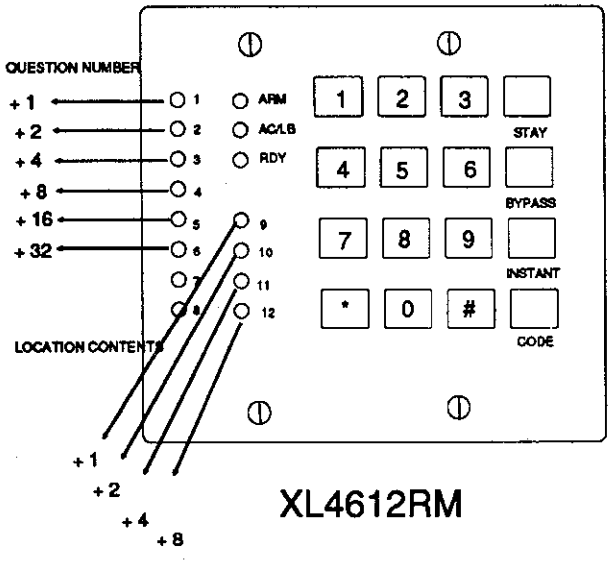
PROGRAM MODE = READY LED:

Upon entering the installer keypad programming mode the READY LED will slowly pulse, and will continue to pulse until leaving this mode.

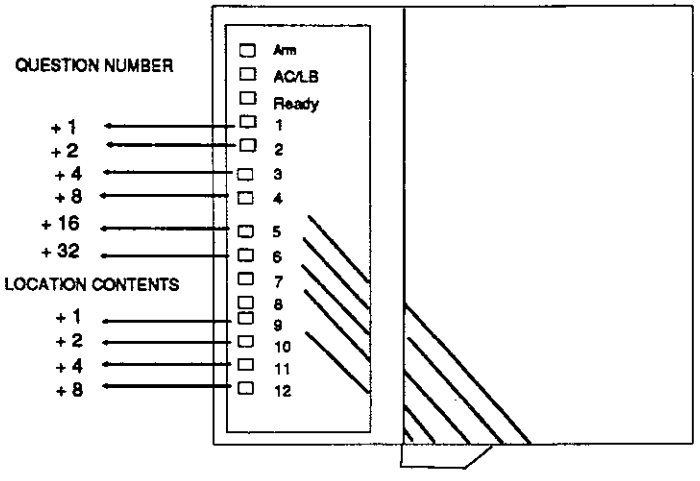
QUESTION NUMBERS = ZONE LEDS:

As previously stated there are 42 total questions, each of which contains multiple data entry locations.

Zone LEDS 1 through 6 display the current QUESTION NUMBER (not the specific location within each question) as follows:



XL4612RM



XL4612SM

In the diagram shown the **question number** is obtained by ADDING the values of all LEDS that are ON. This applies to both the metal and plastic versions of the keypad.

EXAMPLES:

Zone 1 ON, Zones 2-5 OFF	= **QUESTION 01**
Zone 1 ON, Zone 2 ON, Zones 3-5 OFF	= **QUESTION 03**
Zone 2 ON, Zone 3 ON, Zone 4 ON, Zones 1 and 5 OFF	= **QUESTION 14**

LOCATION CONTENTS = Zones 9 - 12 Status

The zone LEDS 9 - 12 displays the DATA that resides in EACH location within the **current** question. As per the diagram and explanation above, the value located next to each LED must be ADDED to calculate the total data, for each location. The following chart presents binary value LED displays for the letters A-F which may be entered in some locations of the program sheet.

A	10	Zone 10 & 12 = ON
B	11	Zone 9 10 12 = ON
C	12	Zone 11 & 12 = ON
D	13	Zone 9 11 12 = ON
E	14	Zone 10 11 12 = ON
F	15	Zone 9 10 11 12 = ON

9.3. HOW TO ENTER DATA

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

MOVEMENT BETWEEN QUESTIONS

Upon entry into the system program mode question number 1 is displayed. Random jumps to any question can be made by depressing the * (asterisk) button and the 2 digit question number.

Questions can be accessed randomly or sequentially.

Example: Jump to question 07 = depress * **0 7**

The proper question number will be displayed by the zone LEDS and the other status LEDS will display the contents of the FIRST location in that question.

MOVEMENT WITHIN QUESTIONS

As previously stated the zones 1-6 LEDS display the question number and zones 9 - 12 will display the contents (data) within each location. Movement from location L1 to the next location within any question can be performed by depressing the # POUND BUTTON.

The status LEDS display the location contents as this button is depressed.

DATA ENTRY

Alter ANY location value by entering DIGITS from the program sheet, then DEPRESS THE # BUTTON to save the information and advance to the next location.

NOTE: Press the # key after each entry . THE SYSTEM WILL NOT PROGRAM THE DIGIT UNTIL THE POUND (#) BUTTON IS DEPRESSED, THEREFORE IF A MISTAKE IS MADE IT CAN BE CHANGED.

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

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

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

Example:

Enter an A = depress **CODE** followed by 1.

EXIT SYSTEM PROGRAM MODE

After all programming has been completed, depress the **STAY** button to exit the system program mode. All the LEDS will turn ON for approximately 10 seconds, before the system returns to normal daily operation. NOTE: Keypad programming will automatically terminate after 10 minutes and no keystrokes have been entered.

QUESTION ACKNOWLEDGMENT

The keypad will emit a beep between keystrokes. In addition a beep will be generated confirming advancement between questions numbers.

Four beeps will be generated if an invalid input is entered. Upon entry of invalid input you are positioned at the same question number and location as prior to the input error.

SUMMARY OF SYSTEM PROGRAMMING

FUNCTION	KEYSTROKES
ENTER PROGRAMMING MODE	CODE * [INSTALLER CODE] 1
EXIT PROGRAMMING MODE	STAY
ADVANCE BETWEEN LOCATIONS (ENTER)	#
GO TO SPECIFIC QUESTION	* [Question Number] Example: * 0 5
Data Entry	0 - 9 A - F entered as follows; A CODE 1 B CODE 2 C CODE 3 D CODE 4 E CODE 5 F CODE 6

10. DATA ENTRY THROUGH LCD KEYPADS

Keypad programming can also be accomplished through 7005 keypads. In addition to the normal 30 programming questions, additional capability is available for entering the zone descriptors directly through the keypad.

10.1. HOW TO ENTER PROGRAMMING MODE

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

DEPRESS the **CODE** button.

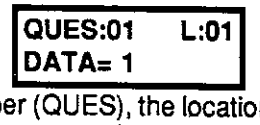
DEPRESS the * button. (asterisk)

ENTER the four digit INSTALLER CODE (default = 4612)

ENTER the digit 1 (Installer mode 1 = Keypad Programming)

10.2. WHAT YOU SEE ON THE KEYPAD

Upon entering the installer keypad programming following display will appear:



The display shows the current question number (QUES), the location within the question (L:) and the current value within that location (DATA =). This corresponds to the programming worksheet.

10.3. HOW TO ENTER DATA

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

MOVEMENT BETWEEN QUESTIONS

Upon entry into the system program mode question number 1 is displayed. Random jumps to any question can be made by depressing the * (asterisk) button and the 2 digit question number.

Questions can be accessed randomly or sequentially.

Example: Jump to question 07 = depress * **0 7**

The proper question number will be displayed by the zone LEDS and the other status LEDS will display the contents of the FIRST location in that question.

MOVEMENT WITHIN QUESTIONS

The display shows the current location within each programming question. Movement from location L1 to the next location within any question can be performed by depressing the # POUND BUTTON.

DATA ENTRY

To alter the value in ANY location , enter the desired DIGIT from the program sheet, then DEPRESS THE # BUTTON to save the information and advance to the next digit.

NOTE: THE # BUTTON **MUST** BE DEPRESSED AFTER ENTRY OF DESIRED DIGIT. THE SYSTEM WILL NOT PROGRAM THE DIGIT UNTIL THE POUND (#) BUTTON IS DEPRESSED, THEREFORE IF A MISTAKE IS MADE IT CAN BE CHANGED.

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

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

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

Example: Enter an A = depress **CODE** followed by 1.

EXIT SYSTEM PROGRAM MODE

After all programming has been completed, depress the **STAY** button to exit the system program mode. All the LEDS will turn ON for approximately 10 seconds, before the system returns to normal daily operation. Keypad programming will automatically be terminated after 10 minutes and no keypad activity.

QUESTION ACKNOWLEDGMENT

The keypad will emit a beep between keystrokes. In addition a beep will be generated confirming advancement between questions numbers. A invalid input produces 4 beeps. Upon entry of invalid input you are positioned at the same question number and location as prior to the input error.

10.4. ZONE DESCRIPTOR PROGRAMMING

The LCD based keypads display 12 character zone descriptors which can be programmed directly through the keypad. These descriptors are entered as programming questions 31 - 42.

NOTE: These questions can only be accessed by an LCD keypad, or the EZ-Mate Programming Devices.

The zone descriptor questions are as follows:

QUESTION	DESCRIPTOR	
31	Zone 1 Descriptor	[Default = ZONE 1]
32	Zone 2 Descriptor	[Default = ZONE 2]
33	Zone 3 Descriptor	[Default = ZONE 3]
34	Zone 4 Descriptor	[Default = ZONE 4]
35	Zone 5 Descriptor	[Default = ZONE 5]
36	Zone 6 Descriptor	[Default = ZONE 6]
37	Zone 7 Descriptor	[Default = ZONE 7]
38	Zone 8 Descriptor	[Default = ZONE 8]
39	Zone 9 Descriptor	[Default = ZONE 9]
40	Zone 10 Descriptor	[Default = ZONE 10]
41	Zone 11 Descriptor	[Default = ZONE 11]
42	Zone 12 Descriptor	[Default = ZONE 12]

For example to program the descriptor for zone 3 enter * 3 3, to access question 33.

When programming the English zone descriptors the following techniques are used to program the characters:

KEYSTROKE	ACTION
0	Inserts a space and advances the cursor
CODE key	Moves the cursor to the left one space
INSTANT key	Moves the cursor to the right one space
7	Increments the character at the cursor
* 7	Scrolls forward (UP) through the character set.
	NOTE: Depression of any-key will stop the scroll
9	Decrements the character at the cursor
# 9	Scrolls backwards through the character set
	NOTE: Depression of any key will stop the scroll

NOTE: Available LCD keypad characters are:!"#$%&'()* +-./0123456789;=@ABCDEFGHIJKLMNOPQRSTUVWXYZ

SYSTEM DEFAULT (LCD keypad only)

Simultaneously pressing the 1 & 3 keys while in programming mode initiates a system default. The system will then default and go through the reset sequence.

USER CODE DEFAULT (LCD keypads only)

The User codes can be reset to the default state by pressing the 7 & 9 keys on the LCD keypad at the same time, while in programming mode. This will bring the user codes back to the original default settings.

11. SYSTEM DEFAULTS

The control panel is preprogrammed from the factory with default values. These values have been selected to meet the requirements of a common installation and may suit your needs.

To reload the factory default values, remove all power from the system (AC & DC). Next short TP1 to TP2, with short still intact reapply power (AC then DC), wait 5 seconds then remove short with the power still applied. NOTE: A programming option exists within the PC Downloader known as DEFAULT LOCKOUT. If this option is selected then a system default will not overwrite the CSID or installer code portion of the program. This will prevent an installer other than the original installer from taking over an account without cooperation.

QUESTION	DEFAULT
00 Installer Code	4612
01 Phone #1	234AAAAAAAAA
02 Phone #2	AAAAAAAAAAAA (none)
03 Callback Number	AAAAAAAAAAAA (none)
04 PBX Prefix	AAAA (none)
05 Dialer Options	3x1 Standard, 20 PPS,2300HZ, No Parity, Touch Tone, Swinger shutdown, Restore After Bell
06 Kpad options	Aud. Keypad panic, Silent keypad Aux, Enab. Instant Arming, 120 Sec Phone Line fail ,Quick commands disabled, 24 Hour Test by Time
07 Misc	Euro Sweep Burg Siren, Steady Fire Siren ,No Auto-Arming, User code req to set time, Auto Unbypass, # Rings = 10, No Bypass on Stay Arming
08 Account #1	1234
09 Account #2	AAAA (null)
10 Timeouts	Entry Delay = 30 sec., Exit Delay = 60 seconds Burg Bell Cutoff = 15 minutes, Fire Bell Cutoff = No Timeout
11 Zone #1	Delay EOL Code = 31
12 Zone #2	Interior EOL Code = 32
13 Zone #3	Perimeter EOL Code = 33
14 Zone #4	Perimeter EOL Code = 34
15 Zone #5	Perimeter EOL Code = 35
16 Zone #6	Perimeter EOL Code = 36
17 Zone #7	Perimeter EOL Code = 37
18 Zone #8	Perimeter EOL Code = 38
19 Zone #9	Perimeter EOL Code = 39
20 Zone #10	Perimeter EOL Code = 30
21 Zone #11	Perimeter EOL Code = 3B
22 Zone #12	Perimeter EOL Code = 3C
23 System Codes	Ambush = AA (null) AC Loss = A1 (no CS transmission, audible sounder)
24 System Codes	Panic = 22 Low Battery = AA (null)
25 System Codes	Open (users 1 - 15) = A (null) Close(users 1 - 15) = A (Null) Open (users 16 - 30) = A (null), Close (users 16 - 30) = A,(null) Cancel (users 1 - 15) = A(null), Cancel (users 16 - 30) = A(null), Test Code = AA (null)
26 System Codes	Bypass = A (null) Restore = E Trouble = F Keypad Tamper = A (null)
27 System codes	Keypad fire = 11 Keypad Aux = 23
28 Test Time	4:00 AM (04 00)
29 Triggers	Trigger 1 = Strobe (0C) Trigger 2 = BURG (01)
30 Triggers	Trigger 3 = Fire(02) Trigger 4 = Zone Reset (1B)
31 Zone 1 Descriptor	ZONE 1 (LCD Keypads Only)
32 Zone 2 Descriptor	ZONE 2 (LCD Keypads Only)
33 Zone 3 Descriptor	ZONE 3 (LCD Keypads Only)
34 Zone 4 Descriptor	ZONE 4 (LCD Keypads Only)
35 Zone 5 Descriptor	ZONE 5 (LCD Keypads Only)
36 Zone 6 Descriptor	ZONE 6 (LCD Keypads Only)
37 Zone 7 Descriptor	ZONE 7 (LCD Keypads Only)
38 Zone 8 Descriptor	ZONE 8 (LCD Keypads Only)
39 Zone 9 Descriptor	ZONE 9 (LCD Keypads Only)
40 Zone 10 Descriptor	ZONE 10 (LCD Keypads Only)
41 Zone 11 Descriptor	ZONE 11 (LCD Keypads Only)
42 Zone 12 Descriptor	ZONE 12 (LCD Keypads Only)

WARNING LIMITATIONS OF THIS ALARM SYSTEM

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

- Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
- Intrusion detectors (e.g., passive infrared detectors), smoke detectors, and many other sensing devices will not work without power. Battery operated devices will not work without batteries, with dead batteries or if the batteries are not put in properly. Devices powered solely by AC will not work if their AC power supply is cut off for any reason, however briefly.
- Signals sent by wireless transmitters may be blocked or reflected by metal before they reach the alarm receiver. Even if the signal path has been recently checked during a weekly test, blockage can occur if a metal object is moved into the path.
- A user may not be able to reach a panic or emergency button quickly enough.
- While smoke detectors have played a key role in reducing residential fire deaths in the United States, they may not activate or provide early warning for a variety of reasons in as many as 35% of all fires, according to data published by the Federal Emergency Management Agency. Some of the reasons smoke detectors used in conjunction with this System may not work are as follows: Smoke detectors may have been improperly installed and positioned. Smoke detectors may not sense fires that start where smoke cannot reach the detectors, such as in chimneys, in walls, or roofs, or on the other side of closed doors. Smoke detectors may not sense a fire on another level of a residence or building. A second floor detector, for example, may not sense a first floor or basement fire. Moreover, smoke detectors have sensing limitations. No smoke detector can sense every kind of fire every time. In general, detectors may not always warn about fires caused by carelessness and safety hazards like smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches, or arson. Depending on the nature of the fire and/or the location of the smoke detectors, the detector, even if it operates as anticipated, may not provide sufficient warning to allow all occupants to escape in time to prevent injury or death.
- Passive Infrared Motion Detectors can only detect intrusion within the designed ranges as diagramed in their installation manual. Passive Infrared Detectors do not provide volumetric area protection. They do create multiple beams of protection, and intrusion can only be detected 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 window. 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 150F, 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 out of service or temporarily 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.

ZONE DESCRIPTIONS

		L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
31	Zone 1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
32	Zone 2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
33	Zone 3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
34	Zone 4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
35	Zone 5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
36	Zone 6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
37	Zone 7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
38	Zone 8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
39	Zone 9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
40	Zone 10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
41	Zone 11	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
42	Zone 12	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

01	Primary Telco. Number	☐ L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ☐ L6 ☐ L7 ☐ L8 ☐ L9 ☐ L10 ☐ L11 ☐ L12
02	Secondary Telco. Number	☐ L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ☐ L6 ☐ L7 ☐ L8 ☐ L9 ☐ L10 ☐ L11 ☐ L12
03	Callback Number	☐ L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ☐ L6 ☐ L7 ☐ L8 ☐ L9 ☐ L10 ☐ L11 ☐ L12
04	PBX Prefix	☐ L1 ☐ L2 ☐ L3 ☐ L4
05	Dialer Information	☐ L1 Format ☐ L2 Rcvr ☐ L3 Pulse ☐ L4 Misc
06	Keypad Conditions	☐ L1 Emer ☐ L2 Phone ☐ L3 Quick ☐ L4 Test Type
07	Miscellaneous	☐ L1 Siren Driver ☐ L2 Auto Arming ☐ L3 User Codes ☐ L4 # Rings
08	Account 1	☐ L1 ☐ L2 ☐ L3 ☐ L4 3 or 4 Digit
09	Account 2	☐ L1 ☐ L2 ☐ L3 ☐ L4 3 or 4 Digit
10	System Timeouts	☐ L1 Entry ☐ L2 Exit ☐ L3 Burg Bell ☐ L4 Fire Bell
11	Zone 1	☐ L1 Super-vision ☐ L2 Type ☐ L3 CS ☐ L4 Code
12	Zone 2	☐ L1 Super-vision ☐ L2 Type ☐ L3 CS ☐ L4 Code
13	Zone 3	☐ L1 Super-vision ☐ L2 Type ☐ L3 CS ☐ L4 Code
14	Zone 4	☐ L1 Super-vision ☐ L2 Type ☐ L3 CS ☐ L4 Code
15	Zone 5	☐ L1 Super-vision ☐ L2 Type ☐ L3 CS ☐ L4 Code
16	Zone 6	☐ L1 Zone ☐ L2 Type ☐ L3 CS ☐ L4 Code

WORKSHEET

17	Zone 7	☐ L1 Super-vision	☐ L2 Type	☐ L3 CS	☐ L4 Code				
18	Zone 8	☐ L1 Super-vision	☐ L2 Type	☐ L3 CS	☐ L4 Code				
19	Zone 9	☐ L1 Super-vision	☐ L2 Type	☐ L3 CS	☐ L4 Code				
20	Zone 10	☐ L1 Super-vision	☐ L2 Type	☐ L3 CS	☐ L4 Code				
21	Zone 11	☐ L1 Super-vision	☐ L2 Type	☐ L3 CS	☐ L4 Code				
22	Zone 12	☐ L1 Super-vision	☐ L2 Type	☐ L3 CS	☐ L4 Code				
23	Ambush/AC Loss	☐ L1 Ambush	☐ L2	☐ L3 AC Loss	☐ L4				
24	Panic/Low Battery	☐ L1 Panic	☐ L2	☐ L3 Low Battery	☐ L4				
25	Open Close Test	☐ L1 Open Users 1 - 15	☐ L2 Close Users 1 - 15	☐ L3 Open Users 16 - 30	☐ L4 Close Users 16 - 30	☐ L5 Cancel 1-15	☐ L6 Cancel 16-30	☐ L7 Test Code	☐ L8 Test Code
26	Bypass Restore Trouble, Tamper	☐ L1 Byp.	☐ L2 Rest	☐ L3 Troub.	☐ L4 Tamper Code				
27	Keypad Fire/Aux.	☐ L1 KP	☐ L2 Fire	☐ L3 Fire	☐ L4 Aux				
28	Test Timer	☐ L1 Hour	☐ L2	☐ L3 Minute	☐ L4				
29	Triggers	☐ L1 Trigger#1	☐ L2	☐ L3 Trigger#2	☐ L4				
30	Triggers	☐ L1 Trigger#3	☐ L2	☐ L3 Trigger#4	☐ L4				
00	Installer Code	☐ L1	☐ L2 4 Digit	☐ L3	☐ L4				

FBII LIMITED WARRANTY

Fire Burglary Instruments Inc., a Subsidiary of Pittway Corporation, and Pittway Corporation 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 five years from the date stamp control on the product, or for products not having a date stamp, for twelve months 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 part which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Seller. For warranty service, return transportation prepaid, to Factory Service, 149 Eileen Way, Syosset , New York 11791.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO CASE SHALL SELLER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, OR UPON ANY OTHER BASIS OF LIABILITY WHATSOEVER, EVEN THE LOSS OR DAMAGE IS CAUSED BY ITS 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, or fire without warning, 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, REGARD LESS 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, of the obligations of this Limited Warranty is authorized.

"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 not 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 following booklet prepared by the Federal Communications Commission helpful:

"Interference Handbook"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00450-7.

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

IN THE EVENT OF TELEPHONE OPERATIONAL PROBLEMS

In the event of telephone operational problems, disconnect the communicator by removing the plug from the RJ31x jack. Do not disconnect the phone connection inside the communicator. Doing so will result in the loss of the phone works correctly after the communicator has been disconnected from the phone lines, the communicator has a problem and should be returned for repair.

If upon disconnecting the communicator, there is still a problem on your line, notify the telephone company that they have a problem and request prompt repair service. The user may not under any circumstances (in or out of warranty) attempt any service or repairs on the system. It must be returned to the factory or an authorized service agency for all repairs.