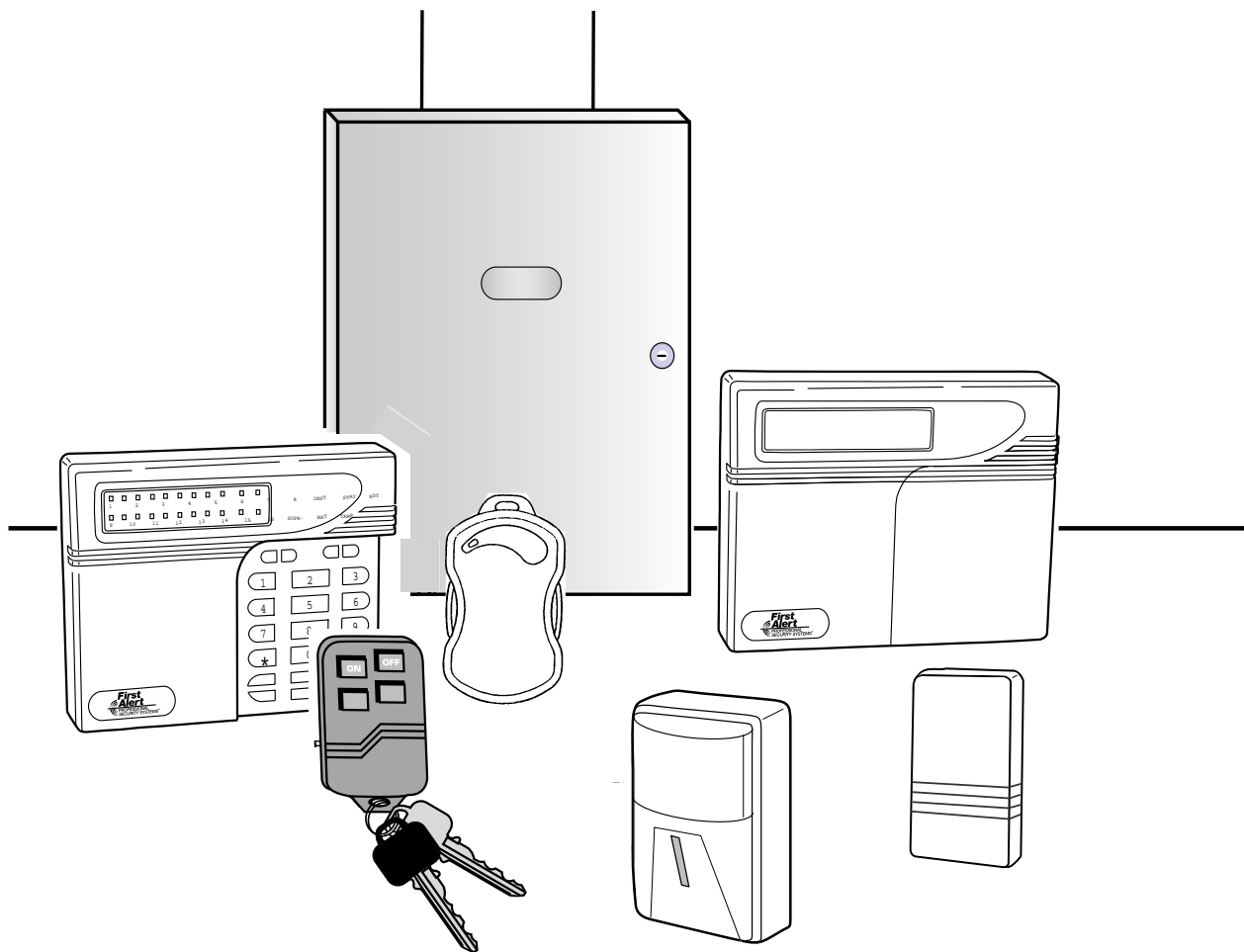


FA848C

Security System

Installation and Setup Guide



THANK YOU for your purchase of the FA848C Security System.

The purpose of this manual is to give you a brief overview of the FA848C control panel, and provide instructions for installing a basic system. First Alert Professional is always available to serve YOU. Our SALES and TECHNICAL SUPPORT staff are available to assist you in every way possible.

**FOR SALES, REPAIRS
OR
TECHNICAL SERVICE,
CALL TOLL-FREE
(1-800) 538 - 5585**

Before you call Technical Service, PLEASE be sure you:

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

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

FOR YOUR CONVENIENCE, a separate Programming Guide is included with this manual. It provides space for listing entries for each programming question.

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Conventions Used in This Manual

Before you begin using this manual, it is important that you understand the meaning of the following symbols (icons) and text note.

UL

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



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



This symbol indicates a critical note that could seriously affect the operation of the system, or could cause damage to the system. Please read each warning carefully. This symbol also alerts the user to the possibility of physical harm if instructions are not followed as written.

NOTE: These text notes are provided throughout the manual to provide informative information and shortcut tips for the installer.

Introduction

System Features

The FA848C is a state-of-the-art microprocessor-based control/communicator that provides 3 partitions plus a common partition, and supports both hardwire and wireless zones. Programming can be performed through any of the compatible keypads; or the system can be uploaded and downloaded remotely using the Compass Downloader Software. Additionally, the software can be programmed to control remote actions, such as arming, disarming, bypassing, etc. Programming options are stored in an Electrically Erasable Programmable Read-Only Memory (EEPROM). The EEPROM is nonvolatile, meaning that programmed instructions will not be lost in the event of a loss of power.

Features of the FA848C include:

- Multi-lingual support for LCD keypad displays
- 4 partitions: 3 independent partitions plus a common partition
- 8 hardwire Zones (all fully programmable, including keyswitch), expandable to 8 additional hardwire zones using optional plug-in OMNI-EXP8 Expansion Module
- Hardwire zones can be configured as standard or double balanced, or can be set for zone doubling (providing up to 32 hardwire zones if zone expander is used)
- 48 wireless protection zones plus up to 8 wireless keys
- Cross zoning capability
- 64 user codes (either 4-digit or 6-digit codes can be used)
- Up to 12 keypads (FALCDKP, FALEDKP)
- Keypad programming and remote programming via PC and modem
- Upload/download and remote commands
- 3 methods of uploading/downloading: PC operator-initiated, unattended downloading & on-line downloading
- Paging (audio format) capabilities
- Auto Arming at a specific time of day with capability to arm in either Away, Stay, or Instant Modes
- Two entry timers
- 128 event history log (alarms, troubles, low battery, bypasses, control station (cs) test, openings & closings) and keypad events
- 3 emergency keypad conditions (panic, fire & auxiliary)
- 20 programmable relay outputs (using optional XL4705 modules)
- 4 built-in programmable trigger outputs (2 triggers if relay module is used)
- Real-time clock (displays time & date via LCD keypad) with reminder when clock needs to be set
- CS test timer by event, time or both (1 hour, 1, 7, 27, 60, 90 days)
- Customer control of chime mode and pager mode
- Quick arming, quick bypass, and quick force arming
- CS reporting by zone
- False alarm prevention features: crossed zones, exit error, recent close, swinger shutdown
- Cancel code & system stabilization during power up
- Arming by keyswitch in Away or Stay modes
- Keypad tamper/lockout with optional CS reporting
- Restore transmission options: after loop or after bell
- Fire zone reset through keypad
- Glassbreak reset through keypad
- Bell Test, Low Battery Test, AC Loss and Communications Failure indications
- Input power: 16.5VAC, 25VA; 12VDC, 4-7AH
- Output power: 12VDC, 500mA
- Bell output power: 12VDC, 3A

Special Notes

UL

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 Listings, contact Underwriters Laboratories, Progress Department, 333 Pfingsten Road, Northbrook IL 60062.

UL Listings

The FA848C is the Residential (Household) version of the control panel, and has been Listed by Underwriters Laboratories for the following applications:

- UL 1023 Household Burglary
- UL 985 Household Fire Warning
- UL Commercial Burglary (pending)
- ULC Household Burglary and Fire

FCC Registration Number: AC3 USA-40133-MD-T
REN: 0.4B

References to Programming Questions

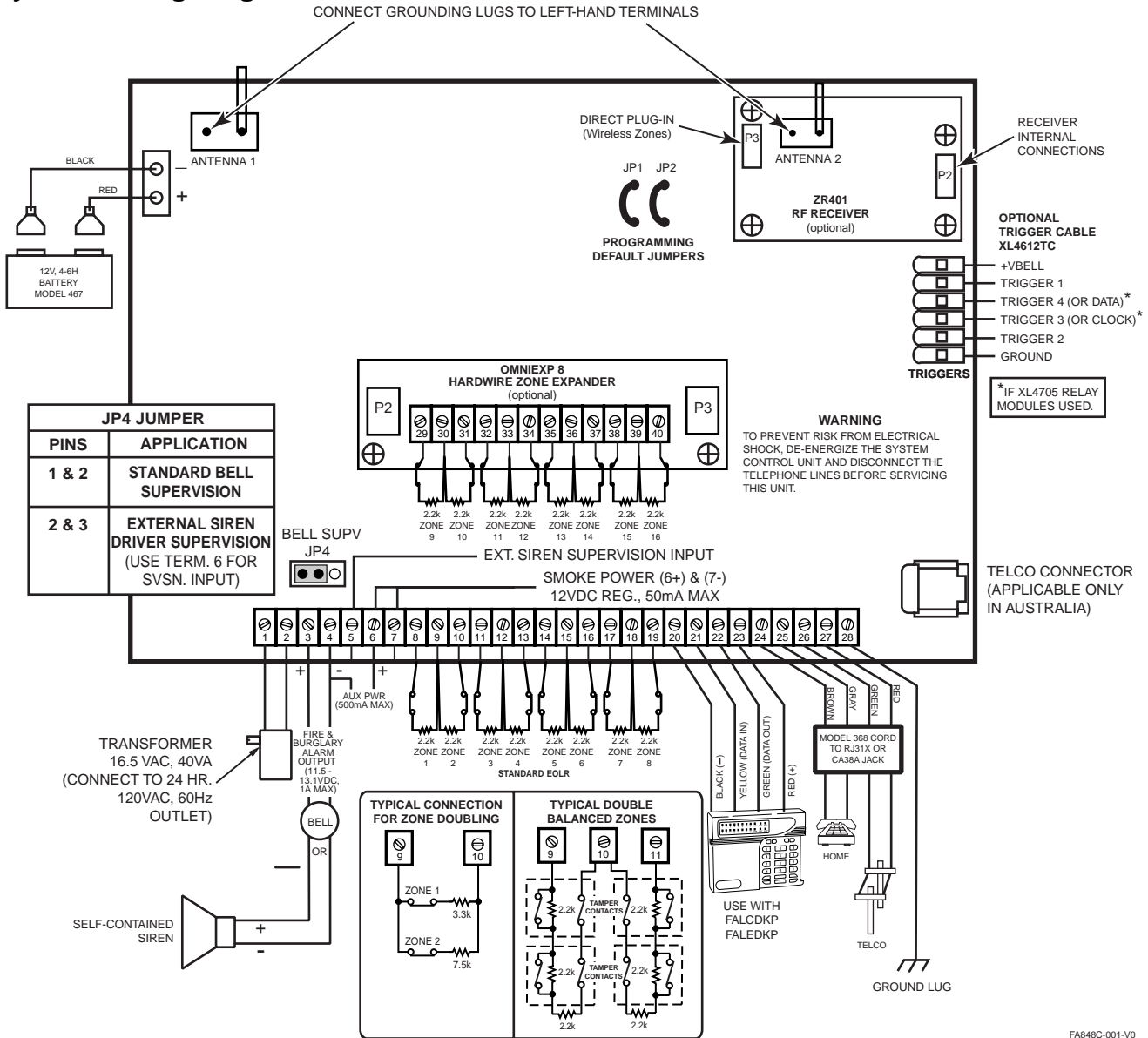
Programming questions are grouped into 4 installer programming submodes, as follows:

- 1 – System Options
- 2 – Zone and Report Code Programming
- 3 – Wireless Zone/Keyfob Programming
- 4 – Zone Descriptor Programming

Throughout this manual, programming question references without a submode designation pertain to questions in submode 1 (system options). Programming questions for other submodes include the appropriate submode number.

System Wiring and Hookup

System Wiring Diagram



FA848C-001-V0

IMPORTANT: All control panel wiring should be completed prior to applying power to avoid possible harm to circuits due to electrostatic discharge.

SYSTEM STABILIZATION MODE: Upon power-up of the system and after completion of system programming, all the lights on the LED keypads flash momentarily and the LCD keypads display "STANDBY!" HOWEVER, THE ZONES WILL NOT RESPOND TO ALARM CONDITIONS FOR APPROXIMATELY 2 MINUTES. The 2-minute interval is used to allow motion detectors (interior zones) to stabilize on power-up in order to prevent false alarms. The 2-minute response time can be disabled by simply entering a valid user code, which disarms the system and reduces the power-up reset time to approximately 5 seconds.

NOTE: If total system power is lost, then upon power restoral, the system returns to the previously armed state.

Terminal Connections

TERMINALS

1 & 2

DESCRIPTION

TRANSFORMER:

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

The system can supply up to 1.8 amps of total current.

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

The "AC/LOW BAT" keypad LED remains ON while AC power is present. If an AC loss occurs, the "AC/LOW BAT" LED turns off immediately. If AC power remains OFF for 15 minutes, the system pulses the keypad buzzer and transmit a power-loss message to the central station, if programmed to do so. The keypad buzzer can be silenced by entry of any valid user code. When AC restores, the "AC/LOW BAT" LED lights immediately, and a Restore code is reported, if programmed.

3(+) & 4(-)

BELL OUTPUT:

The total output power available for sounding devices is 1 amp at 11.5 - 13.1VDC. These terminals will deliver constant output on burglary, audible panic and bell test. On a fire condition, a pulsed or temporal output can be generated. There are separate bell cutoff times programmable for burglary and fire conditions within the programming sequence. For UL Household Fire Warning System installations, the speaker must be mounted indoors for best audibility. Also, for UL installations, use only one speaker.

NOTE: Before connecting sounding devices, please consult their specifications for proper current draw.

NFPA 72 REQUIREMENT: All the interconnecting pathways (cable, wire, etc.) between the alarm system initiating device (control panel) and the signaling device (bell, speaker, siren, etc.) shall be monitored for an occurrence of an open circuit, which prevents the normal operation of the system. An occurrence of an open circuit shall be indicated by a distinctive trouble signal

BELL SUPERVISION (Bell) - To meet the NFPA 72 requirement, program any zone as a fire zone. The bell is then supervised for an open circuit (not a short circuit) across the bell output terminals; a bell supervision fault will be displayed at the keypad and reported to the central station if a report code is enabled. If the bell is already ringing, the supervision will not take effect until after bell cutoff time.

SIREN SUPERVISION (Self-Contained Siren/Speaker)

(Not for use in UL installations.) To meet the NFPA 72 requirement program any zone as a Fire Zone. The siren is then supervised for an open circuit (not a short circuit) across the bell output terminals; the keypad will indicate that a supervision condition has occurred and bell supervision is reported to the CS if enabled (program mode 2, Question 79, locations 1,2). If the siren is already sounding, the supervision will not take effect until after bell cutoff time.

5

SIREN SUPERVISION INPUT:

The bell output may be supervised when a conventional bell or a self-contained siren is connected. When you connect a conventional bell or a self-contained siren to the bell output terminals (3 & 4), place the jumper JP4 across pins 1 and 2. When you connect an external siren driver to the bell output terminals, connect the supervision wire to the siren supervision terminal of the siren driver, and place the jumper JP4 across pins 2 and 3. A supervisory condition will generate a pulsing keypad sounder. Also, the supervisory LED on the keypad will pulse. The sounder may be silenced by entering a valid user code while the system is disarmed. The LED will continue to pulse until the supervision is fixed. If a bell, self-contained siren, or external siren driver is not connected to the bell output terminals, a 100-ohm resistor must be placed across the siren supervision input to prevent a bell supervision error. Bell supervision will be reported to the CS if CS code is enabled.

6(+) & 7(-)
B+

SMOKE DETECTOR POWER OR TRIGGER OUTPUT:

SMOKE DETECTOR POWER: This system accepts 9.5 - 12VDC 4-wire smoke detectors only. Approximately 50mA of current is available at these terminals for powering all detectors. For UL installations hookup, see wiring diagram.

These terminals adhere to the fire verification and reset logic, which is explained in the zone types section of this manual.

6(+) & 4(-)
B+

REGULATED POWER (11.5 - 13.1VDC):

The total regulated output power for motion detectors and other external devices is 500mA at 11.8 - 12.5V for residential applications, or 12.0 - 12.5V for commercial applications, with less than 100 mVPP ripple. The total regulated output capacity of the FA848C includes the power available from these terminals (6 & 4) as well as the power used by the keypads (23 [+] & 20 [-]) and smoke detectors (7 [-] & 6 [+]). Therefore, to determine the total power available from these terminals, subtract the power consumed by the keypads and smoke detectors.

ZONE INFORMATION (HARDWIRED ZONES):

8(+) & 9(-)	Zone 1	[Default = DELAY]
10(+) & 9(-)	Zone 2	[Default = INTERIOR]
11(+) & 12(-)	Zone 3	[Default = INSTANT]
13(+) & 12(-)	Zone 4	[Default = INSTANT]
14(+) & 15(-)	Zone 5	[Default = INSTANT]
16(+) & 15(-)	Zone 6	[Default = INSTANT]
17(+) & 18(-)	Zone 7	[Default = INSTANT]
19(+) & 18(-)	Zone 8	[Default = INSTANT]

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

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

- RF RECEIVER** **ZONE INFORMATION (WIRELESS ZONES):**
Up to 48 wireless zones can be used if the ZR401 Wireless Expansion Module is installed. The maximum number of zones (48) includes the 8 basic wired zones, wired zones using the expansion module, and the wireless zones. Compatible ADEMCO 5800 Series wireless devices must be used. See the "Wireless Zones" paragraph in the **System Configuration** section for more information on using wireless zones and for a list of compatible transmitters.
- 20(BLK), 21(YEL)
22(GREEN) &
23(RED)** **KEYPADS:**
Up to 12 keypads (FALCDKP, FALEDKP) may be wired to these terminals, but no more than 8 of any one type. The connections are as follows: 20 (BLACK = negative), 21 (YELLOW = data in), 22 (GREEN = data out), and 23 (RED = positive power). Each keypad draws approximately 65mA. Maximum keypad length is 500 feet using 22-gauge wire.
NOTE: In some installations, it may be necessary to use shielded wire to prevent radio frequency interference.
- 24(BRN), 25(GRAY),
26(GREEN) &
27(RED)** **TELEPHONE LINE:**
Connect the RJ31X cord as follows: 24 (BROWN = Home Tip), 25 (GRAY = Home Ring), 26 (GREEN = Telco Tip), 27 (RED = Telco Ring). Insert the plug into an USOCRJ31X Jack (or a CA31A Jack for Canadian installations).
The FCC registration number is AC3 USA-40133-MD-T, and the ringer equivalence is 0.4B. The system should not be connected to party lines or coin-operated phones.
If this control panel will be used for uploading, downloading, or remote-command applications, the telephone line connected to the control panel **must not** be shared with a fax machine or modem. Furthermore, this device should not be connected to a phone line that has Call Waiting, unless the Call Waiting Interrupt numbers are programmed into the panel dialing sequence.
- 28** **EARTH GROUND:**
Connect this grounding lug to a cold water pipe utilizing #18awg wire at a distance of no greater than 15 ft. Use a noncorrosive metal strap firmly secured to the pipe to which the lead is electrically connected and secured. If the premises pipes terminate in PVC, this terminal **must** be connected to a 6-foot grounding rod.
- BACKUP BATTERY:** The RED (+) and BLACK (-) flying leads must be connected to a 12VDC 4-7AH battery to serve as backup power in the event of AC loss. A battery test occurs approximately every minute. Low-battery condition occurs at nominal 11VDC. The keypad AC/LOW BAT LED and buzzer pulse slowly when a low-battery condition is detected. The system reports this condition to the CS if programmed to do so. There is also an option that prevents the system from arming if a low battery has been detected (see Question 19, L2). Battery restoral will occur within 4 minutes, at the next battery test. The buzzer may be silenced by entering any valid user code.
NOTE: For UL installations, use two 4AH batteries connected in parallel.

TRIGGER/RELAY OUTPUTS:

The control panel has four built-in programmable trigger outputs. In addition, up to four XL4705 Relay Modules can be connected, providing 20 additional programmable relay outputs. If the Relay Modules are used (enable modules in Question 17, L2), then built-in triggers 3 and 4 are no longer used as trigger outputs, but serve as clock and data inputs for the relay modules. See programming questions 37-48 for valid trigger/relay types and programming.

NOTE: In order to connect devices to the triggers, use connector XL4612TC (trigger cable). Connect to terminal P1 VBELL to obtain a POSITIVE reference point. Triggers 1, 2, 3, and 4 (3 & 4 when not using XL4705) will go to a negative ground potential when active. For UL installations, the trigger outputs shall be connected to devices rated to operate over the range from 10.1 - 14.0VDC at 50mA.

Auxiliary Device Current Draw Worksheet

DEVICE	CURRENT DRAW FOR EACH	NUMBER OF UNITS	TOTAL CURRENT FOR EACH
FALCDKP	38mA		
FALEDKP	28mA		
XL4705 (per active relay)	40mA		
PIR	**		
Smoke Detector	**		
Glassbreak Detector	**		
	**		
	**		
TOTAL CURRENT FOR ALL DEVICES =			
			(500mA max.)

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

*** For UL installations, do not exceed 180 mA.



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

Wiring Information For Keypads & Other Devices

If single or multiple devices are connected to a single 4-wire or 2-wire run ("daisy chained") to the control terminals, determine the current drawn by the unit(s) connected to the single wire run, then refer to the Wiring Run Table below to determine the maximum wire length that can be safely used for each wire size.

In some cases, the total current drawn may result in a value not shown in the table. For example, if you plan to use #22 gauge wire and the total current drawn is 400mA (a value between 300mA and 500mA), the maximum wire length you should use is approximately 65 ft. (a length between 50 and 80 ft.). Other maximum wire lengths for values of current not shown in the table can be calculated in a similar manner.

Maximum wire lengths for a device that is "home run" to the control can also be determined from the table, based on the current draw of that device alone.

Wiring Run Table for Devices Drawing Power From Terminals 23 (+) & 20 (-)

WIRE SIZE	TOTAL CURRENT DRAWN BY ALL UNITS ON A SINGLE WIRE RUN			
	50mA or less	100mA	300mA	500mA
#22	500 ft. (152 m.)	250 ft. (76 m.)	80 ft. (24 m.)	50 ft. (15 m.)
#20	750 ft. (228.6 m.)	380 ft. (116 m.)	130 ft. (39.6 m.)	80 ft. (24 m.)
#18	1300 ft. (396 m.)	650 ft. (198 m.)	220 ft. (67 m.)	130 ft. (39.6 m.)
#16	2000 ft. (609.6 m.)	1000 ft. (305 m.)	330 ft. (100.5 m.)	200 ft. (70 m.)

Examples:

- What is the maximum distance from the control panel for one keypad drawing 30mA using #20 gauge wire?
Using the table, the keypad can be placed no greater than 750 ft. away from the panel (50mA or less).
- What is the maximum distance for 3 keypads drawing 150mA using #20 gauge wire connected in a single wire run?
Using the tables above, the farthest keypad can be placed no more than 317.5 ft. away from the panel. (380-130=250; 250÷2=125; 130+125=255 ft for 200mA; then 380-255=125; 125÷2=62.5; 62.5+255=317.5 ft.
- What is the maximum distance for 5 smoke detectors drawing 0.25mA (50 microA each) using #22 gauge wire connected in a single wire run?
Using the table, the farthest smoke detector can be placed no more than 500 ft. away from the panel.

Keypad Addressing

The keypad address identifies the keypad number to the control panel as programmed in Questions 49-52. LED style and LCD style keypads can share the same addresses (e.g. you can have LED keypad address 1 and LCD keypad address 1).

Set the keypad addresses by using the keypad's DIP switches and referring to the following table:

Address	Switch		
	1	2	3
8	off	off	off
7	ON	off	off
6	off	ON	off
5	ON	ON	off
4	off	off	ON
3	ON	off	ON
2	off	ON	ON
1	ON	ON	ON

NOTE: Access the DIP switches by removing the keypad's cover.

PC Board Mounting

Mounting the FA848C PC Board

NOTE: The door of the metal cabinet may be removed to make it easier to install the control panel.

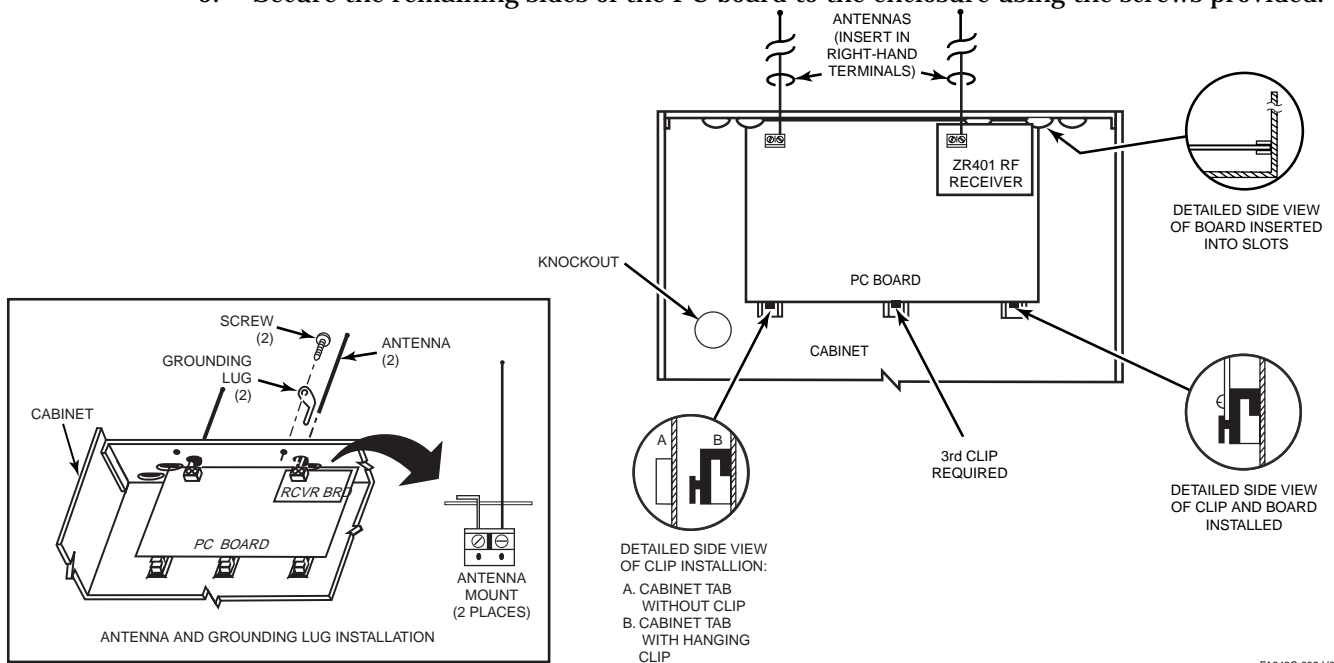
Remove the door as follows:

1. With the cabinet lying on a flat surface, swing open the door to its full-open position.
2. Slide the door out of its retaining slots in the cabinet and store in a safe place.

BEFORE MOUNTING PRINTED CIRCUIT BOARD, BE CERTAIN THAT APPROPRIATE METAL KNOCKOUTS HAVE BEEN REMOVED FROM THE METAL CABINET. DO NOT ATTEMPT TO REMOVE THE KNOCKOUTS AFTER CIRCUIT BOARD HAS BEEN INSTALLED.

Mount the circuit board as follows:

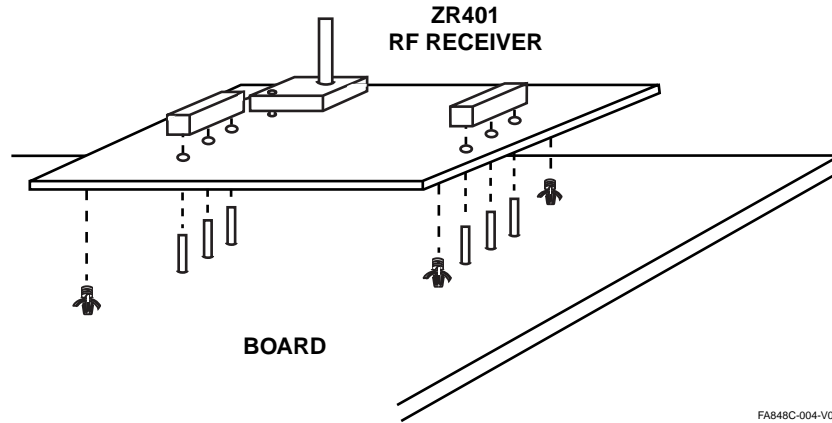
1. Hang three mounting clips on the raised cabinet tabs. Observe proper clip orientation to avoid damage to clip when mounting screws are tightened and to avoid problems with insertion and removal of PC board.
2. Insert top of circuit board into slots at top of cabinet. Make sure that circuit board rests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



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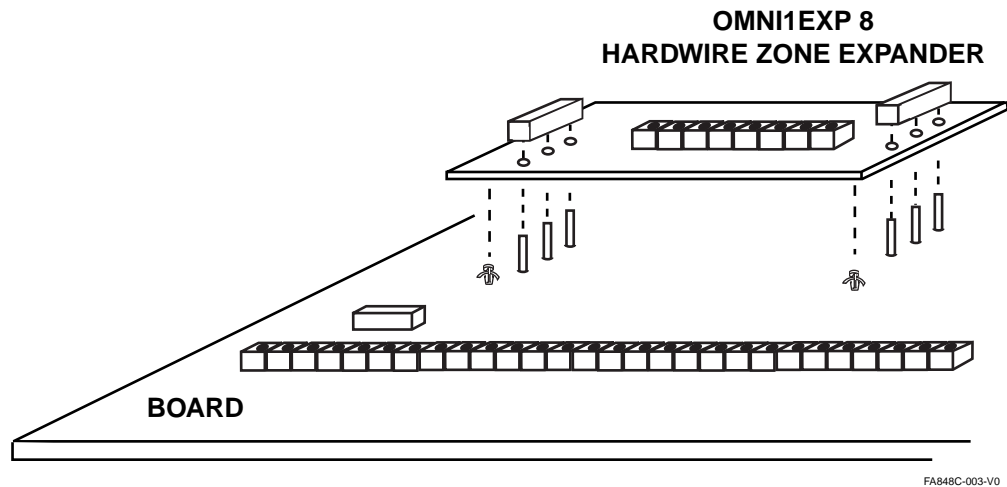
Mounting the RF Expander Module

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



Mounting the Zone Expander Module

1. Mount the zone expander board onto the control PC board pins where shown in the diagram below.
2. Connect zone wiring as shown on the wiring diagram earlier in this manual.



System Configurations

Partitioning

This system provides the ability to arm and disarm up to 3 different areas, known as partitions, plus a common partition, each as if it had its own control. Partitions are used when the user desires to disarm certain areas while leaving other areas armed, or to limit access to certain areas to specific individuals. Each user of the system can be assigned to operate any or all partitions, and can be given a different authority level in each. Users with authority levels of 1 and 2 may view or program users in other partitions, using the [#] [0] command.

Partitions are defined when programming zone information (submode 2 Questions 1-48). Once the enabled zones have been established, each zone definition will be read and, if the zone is enabled, the partition information from each of these zones will be used to enable the systems partitioning. Partitioning must start with partition 1 and must be used sequentially (i.e., you cannot have partition 3 without using partition 2).

Common Partition: When an installation consists of a partition shared by users of other partitions in a building, the shared partition may be assigned as the common partition for the system. An example of this might be in a medical building where there are two doctor's offices and a common entrance area.

For a common partition to be valid, at least partitions 1 and 2 must exist (i.e., the installer may not assign zones to partitions 1 and 3 without assigning zones to partition 2).

The common partition operates as follows:

- When any partition is disarmed, the common partition will also be disarmed.
- The common partition cannot be armed unless all other partitions are armed.
- Arming the last partition automatically arms the common partition in the state of the last partition to arm (i.e., if the last partition arms in Stay mode, the common partition is armed in Stay mode).

Keypads: Each keypad must be given a unique "address" and assigned to one partition (Installer Mode 1, Questions 49-52). Keypads may be assigned to partitions 1, 2, 3, or a common keypad that views the status of all partitions. Keypads mapped to the fourth partition (common) show only the armed status of all partitions. The fourth partition, if alarmed, is displayed in the other 3 partitions and may be cleared by any partition. When the common alarm(s) are cleared, the other armed partitions do not display the common zone alarm. If a partition no longer has any alarm, that partition is taken out of alarm mode.

Zones: Each zone must be assigned to one partition (submode 2, Questions 01-48). The zones assigned to a partition are displayed on that partition's keypad(s).

Users: Each user can be assigned to one or more partitions. A user with access to more than one partition (multiple access) can "log on" to one partition from another partition's keypad using the [#] [0] command.

Hardwire Zones and Zone Expansion Module

Hardwired Zones: Consist of 8 on-board hardwired zones with a plug-in expansion module to allow 8 additional hardwired zones. System options allow for all hardwired zones to be configured as EOL, NC, NO, double balanced, or configured for zone doubling.

Standard Mode: Each zone may be programmed as an EOL (2.2k), normally closed or normally open. Zones 7 and 8 can be set as fast zones (for normally closed loops only). Refer to the connection diagram for wiring connections.

Double Balanced Zones: In this configuration, tampers may be detected for both shorted and opened loops. Tamper conditions will cause an alarm if armed and a fault if disarmed, with visible tamper indication on the keypad. Up to nine 2.2k resistors are wired in series across normal shorted detectors, with one 2.2k end-of-line resistor. Any device that opens adds 2.2k ohms of resistance to the loop causing an alarm. If the loop resistance exceeds 22k, the loop is considered tampered. Double-balanced zones override any individual zone settings.

Zone Doubling: Up to 32 zones may be used as hardwired if an expander is also used when this zone option is selected. The zones are consecutive on each physical loop. The low zone uses a 3.3k resistor and the next zone uses a 7.5k resistor. The loop is wired with normally shorted devices in parallel. This means that Loop 1 uses the 3.3k resistor for zone 1 and the 7.5k resistor for zone 2; loop 2 contains zones 3 and 4, etc. In Zone programming (sub mode 2, Question 90 L3 and 4), program the first odd numbered loop that zone doubling is to begin, or, to disable zone doubling, enter 00. For example, programming a 15 in the zone doubling question means that loop 15 on the zone expander will contain zones 15 & 16, and loop 16 will contain zones 17 & 18. Only odd numbers may be selected because the system scans 2 consecutive zones at a time.

Cross Zoning: Two groups of 2-zone crosses can be programmed, but the two zones in a group must be within the same partition. Two cross-zone timers are programmable (Questions 91 and 92 in Zone Programming) in 15-second increments (15 Sec. to 4 min.) Cross zone processing only occurs when controlled zones are armed or on 24 hour zones.

Cross zoning works in the following way:

The first zone in a group that trips will load and start the cross-zone timer. There are 3 ways that an alarm may occur from this point:

- The other zone in the same group trips before the timer reaches 0. This causes an alarm on the second zone to trip. The first zone to trip will only go into alarm if it is still violated at the time the second zone causes an alarm.
- The zone is crossed to itself (Zone 1 = Zone 2) and the zone has tripped 3 times within the timing period (Pulse counter).
- The timer expires and the zone that started the timer is still violated and has not restored during the entire timing cycle.

Zone Expander Module: Using the OMNIEXP8 Zone Expander Module, up to 8 additional hardwire zones can be used. These zones can be configured as standard (EOL, NC, NO), double-balanced, or set for zone doubling. Refer to the ***PC Board and Keypad Mounting*** section for information on installing the Zone Expander Module.

Wireless Transmitters

Using the ZR401 wireless Expander Module, up to 48 wireless zones plus up to 8 wireless keyfobs can be used. Each zone or keyfob must be programmed and its serial number entered in programming mode.

The ZR401 features two antennas to provide diversity. One is located on the module and the other is located on the control's PC board.

The 8 hardwired zones on board may be eliminated from the system in order to use an all-wireless system that supports up to 48 zones. The system can be programmed without skips in zone usage by assigning an offset to the first RF zone (submode 2, Question 90). For example, if 14 hardwired zones are used (8 on board and 6 on the hardwired expander), the offset may be set to 15 to start the usage of wireless points. The default value for the wireless offset is 9.

The following list shows the most popular compatible wireless devices.

Device	Model
4-Button Remote	5801
2-Zone Transmitter	5816
Dual Element PIR	5890
Single-Button Pendant	5802MN
Dual Button Pendant	5802MN2
Smoke Detector	5807
4-Button Keyfob	5804
2-Button Keyfob	5804-2
Photoelectric Smoke Detector	5807LS
Photoelectric Smoke Detector w/sounder	5807LST
Photoelectric Smoke Detector w/heat	5808LST
135° Heat Detector	5809
1-Zone Mini Transmitter	5814
2-Zone Transmitter	5816
2-Zone Mini Transmitter	5816MN
45° Low Temperature Sensor	5816TEMP
3-Zone Transmitter	5817
1-Zone Recessed Transmitter	5818
Wireless Keypad	5827
Dual-Tech Shock/Glass Break	5849
Glass Break W/ "Flex" Technology	5850
Passive infrared detector	5890
PIR with Pet Immune Feature	5890PI
4-Pack Magnets	5899

NOTE: The FA848C system is not compatible with the ADEMCO bi-directional devices.

Relay/Trigger Outputs

The system allows up to 22 programmable outputs. It provides 4 built-in triggers with the option of adding up to four XL4705 Relay Modules (which provides up to 20 relay outputs). If the relay modules are used, built-in triggers 3 and 4 no longer function as triggers but serve as clock and data inputs for the modules. The remaining 2 built-in triggers provide a total of up to 22 programmable outputs. See Programming Questions 37-48 for individual trigger programming options.

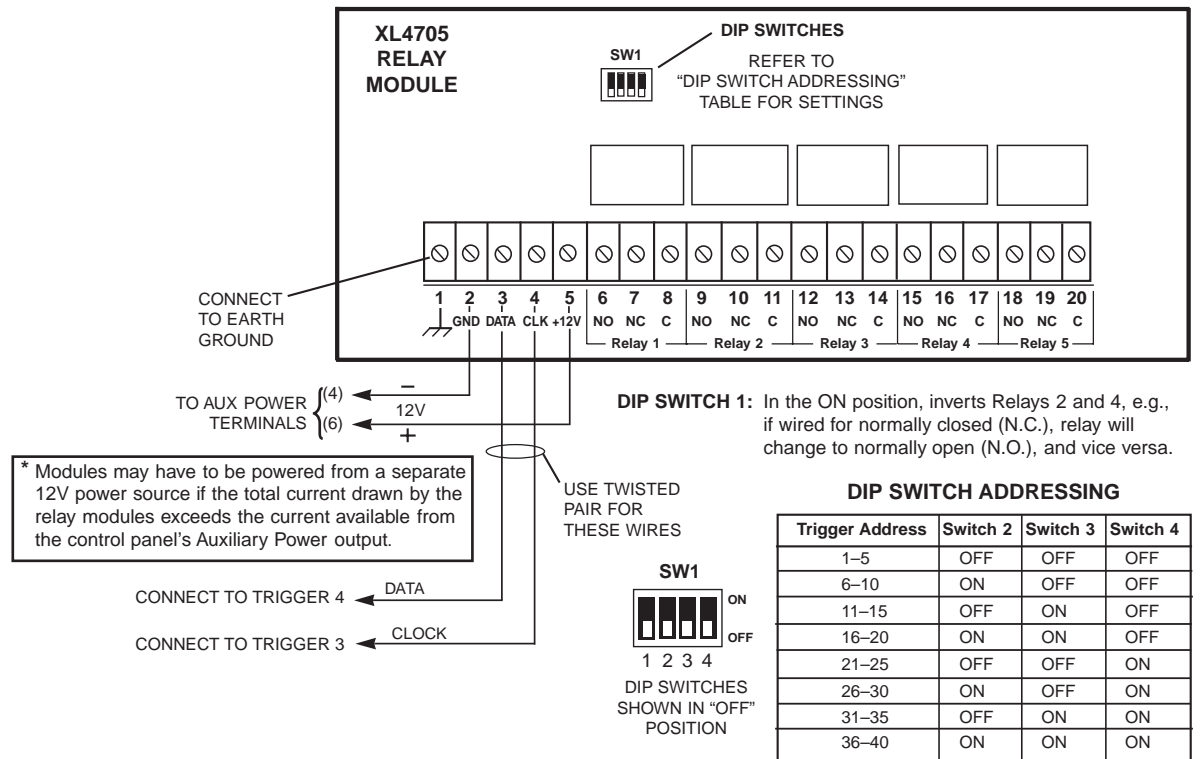
Each XL4705 Relay Module provides five form C relays. Each module must be assigned a unique module address (0-3) using its DIP switches. The module addresses allow the system to identify the specific relay numbers being used, according to the following table:

Module Number	Module DIP Address	Relay Numbers	Program Question
1	0	1-5	Q37-39
2	1	6-10	Q39-41
3	2	11-15	Q42-44
4	3	16-20	Q44-46

Built-in triggers 1-4 are programmed in Questions 47-48.

NOTE: If using relay modules, only triggers 1 and 2 are available.

Connect the relay modules as shown:



XL4705 Current Advisory: Standby = 16mA

Each active relay = 40mA

Total current drain with all five relays active = 200mA

If a separate power supply is used to power the module, you must connect the power supply ground to the control panel ground terminal.

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Paging/Beeps (Audio Tone Format)

Summary: Upon certain system events (listed below), the system can send audio tones to one “pager” (phone) number per partition. The data from these tones can be displayed on certain pagers (see format below), or the tones can be listened to on a telephone by the end user (audio tone format). The phone numbers are initially programmed in Questions 4-6, but can be changed by the end user by using the #58 “follow-me” command. In addition, the following can be programmed:

- The number of attempts to dial the pager number (1-3 times) when reporting an event (Question 18, L3)
- The events that cause a pager report, by partition, consisting of the following (Question 28, L1-L3): zone alarms, 24-hour zone troubles, openings/closings (system wide enable)
- Enabling/disabling of a particular partition’s open/close reporting to the pager number (Question 28, L4 or [#] [8] command)
- Individual user open/close reporting to the pager number can be enabled/disabled using the [#] [7] command

Opening and Closing Reports

For reports of an opening or a closing to be sent, the following must be true:

1. The partition must not have an alarm or trouble condition;
2. The partition must have the open or close enabled (Question 28, L1, L2, L3);
3. The partition must have the open/close enable set by using the [#] [8] command (see below);
4. The user must be enabled to send a page (user enable programming using [#] [7] command).
5. Enable phone number for each partition (Questions 04, 05, 06).
6. The pager attempts option must be set (Question 18, L3).

User Enables and Options:

[#] [7] [code] [user number] [4] - This quick command allows a user with an authority level of 1 or 2 to enable users in multiple partitions and also enables a user’s open/close reporting to the pager number. The [4] toggles open/close reporting to the pager on and off.

[#] [8] - Allows the end user to turn on/off open and close page reports for that partition. This does not affect alarm and trouble pages if enabled. Also, the installer must program reports for opens and/or closes to page.

LCD - Displays if open/close pages are on/off. Press [#] to toggle, press [*] to exit.

LED - Toggles if open/close will send a page.

[#] [5] [8] [code optionally] - Lets the end user change the pager number. This mode times out in 10 seconds without saving the phone number if no key is pressed, or exits without saving if the [*] key is pressed.

Key functions:

[*] Key - Exits mode without saving

[#] Key - Saves new phone number and blanks digits from last digit entered to end

[Code] key - Enters a “C” in the string, which gives an additional 2 second dialing pause.

LCD - Displays 16-digit phone number. Enter the new phone number and press [#] to save or press [*] to exit. After saving the number, pressing any other key (except *) will display the pager enable status (set with [#] [8] command).

LED - Emits acknowledgment sound. Enter the phone number then press [#] to save, or press [*] to exit.

Paging/Beeps Sequence and Data Display: The pager feature will not begin until the dialer is off and dialer delay is not active. By partition, the system checks if any event needs to be dialed. If a dialing event occurs, the pager/beeps number for that partition is dialed, followed by a 6-second pause, followed by the data tones. Dialing is repeated 1,2 or 3 times, as programmed.

The pager format is as follows:

Account	Event	Zone/User	Terminator
1234	0,1, or 9	000-255	[#]

where:

Opening = 0

Closing= 1

Alarm or Trouble = 9

This data is transmitted 2 times with a 5-second pause between rounds.

NOTE: Only one event at a time is reported based on the following priority: Alarms take priority over troubles, and troubles take priority over open/close.

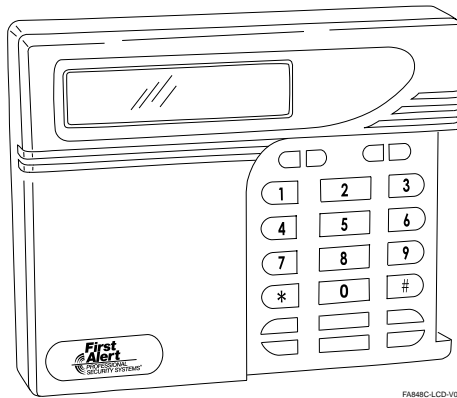
System Operations

Power Up/System Reset

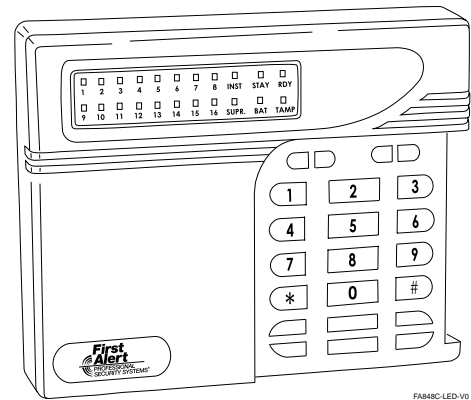
SYSTEM STABILIZATION MODE: Upon power-up of the system and after completion of system programming, if the system was previously armed, all the lights on the LED keypad(s) turn ON momentarily or, in the case of an LCD display installation, the keypad(s) display "STANDBY!" However, the zones will not respond to alarm conditions for approximately 2 minutes. The 2-minute interval is used to allow motion detectors (interior zones) to stabilize in order to prevent false alarms. This 2-minute delay can be disabled by shorting the yellow and black keypad wires (reduces the power-up reset time to approximately 5 seconds). Upon system power-up, if the system was previously disarmed, the power-up reset time is approximately 5 seconds. If total system power is lost, upon power restoral, the system returns to its previously armed state.

Keypads

The FA848C supports the following keypads:



FALCDKP Alpha Keypad
(uses alpha display of system and zone status)



FALEDKP LED Keypad
(uses LEDs to display the status of up to 16 zones)

ZONE STATUS LEDS (FALEDKP)

These LEDs display the current zone status, including alarms, bypasses, and faults. Each condition causes these LEDs to operate differently, as follows:

- Fast Blink*: Alarms/Tampers.
- Slow Blink*: Troubles, zone low battery if bat LED also lit.
- Flash*: Bypasses; zone bypasses are displayed as a quick flash of the zone LED light.
- Solid ON: Faulted Zones. Faulted zones are the lowest priority indication. Faulted zones are displayed with the LED solidly ON while the system is disarmed.
- OFF: Normal zone condition.

* See note on next page for definitions of these terms.

NOTE: Fast Blink = approx. 150mS ON - 150mS OFF
Slow Blink = approx. 600mS ON - 600mS OFF
Flash = approx. 100mS ON - 900mS OFF



Upon entry, the keypad sounder annunciates to warn the user to disarm the system. In addition, the respective zone LED(s) are ON to indicate which zones are violated (e.g., entry door and motion detector).

ARM/DISARM LED (all keypads)

This LED/display indicates that the system is currently armed (ON) or disarmed (OFF).

- ON: System armed
- OFF: System disarmed
- Fast Blink: Alarm mode (alarms have occurred)
- Slow Blink: Unable to communicate with central station (communication failure)

STAY LED

This LED/display indicates that the system has been armed in the STAY, STAY/INSTANT, or AUTOSTAY mode. STAY/INSTANT is enabled in programming question 19 location 1.

The STAY LED indicates the following:

- ON: Interior zones are bypassed
- OFF: Interior zones are normal
- Slow Blink: Cross partition mode

INSTANT LED

This LED/display indicates that the system has been armed in the INSTANT or STAY/INSTANT mode, meaning that the system is currently armed, all delay zones are instant (no entry delay time).

- ON: Delay zones are currently instant
- OFF: Delay zones are normal
- Slow Blink: Common partition alarm canceled

See programming Question 19, Location 1 for various Instant arming options.

BAT LED

This LED/display indicates the current power status of the panel as follows:

- OFF: AC is present
- ON: No AC, running on battery backup
- Slow Blink: Low-system battery condition detected if no zone LED lit;
if zone LED also lit, low battery on that zone
- Fast Blink: Keyfob low battery

READY LED

This LED/display indicates that the system is ready for arming. The READY LED is common to all BURGLARY ZONES, with the following indications:

- ON: System ready to be armed
- OFF: System not ready to be armed
- Slow Blink: Installer Programming Mode
- Fast Blink: Alarm Memory Mode

SUPR LED

This LED/display indicates a supervisory condition as follows:

- ON: Supervisory condition exists
- OFF: No supervisory conditions present
- Slow Blink: Bell supervisory condition exists
- Flash: Keypad is in standby mode

TAMPER LED

This LED/display indicates a tamper or phone fail condition as follows:

- OFF: No tamper conditions present
- Slow Blink: Phone line failure
- Fast Blink: Tamper condition present on a zone

STAY BUTTON

The STAY button arms the system, excluding zones programmed as interior zones. This provides exterior protection of the premises while allowing full access throughout the interior.

BYPASS BUTTON

The BYPASS button is used to temporarily exclude protection to a specific zone(s).

INSTANT BUTTON

If pressed, the INSTANT button allows arming the system in the INSTANT mode and with the STAY button it enables arming the system in the STAY/INSTANT mode.

NOTE: INSTANT mode is enabled in Question 19, L1.

CODE BUTTON

The CODE button is used to allow entry into the Installer Programming Mode and permits the entry of user codes.

KEYPAD EMERGENCY KEYS

Pressing the emergency keys (e.g., FALCDKP pressing 1/3, 7/9, or */# at same time) initiates a CS transmission, if programmed, of programmed functions (e.g., PANIC, AUXILIARY or FIRE), and causes annunciation of the keypad sounder and turns on the bell output.



See the "Keypad Emergency Conditions" paragraph for alternate auxiliary keys.

Keypad Sounder

The sounder (or loudspeaker) housed inside the keypad, emits (annunciates) sounds according to the condition of the security system.

Enabling keypad sounder: Set the 4th DIP switch on the back of the keypad (remove cover) on or off to turn sounder on/off.

The keypad sounder annunciates differently to indicate the following conditions:

Chirp	A short chirp confirms each keystroke.
Steady	A steady sound during entry time, and/or during burglary alarm.
Chime Acknowledge	Steady 1 second tone (SYSTEM DISARMED ONLY). Upon successful entry of certain commands, the system will sound for approximately half a second.
Pulsing	A pulsing sound (approximately half a second ON then OFF) indicates a trouble condition such as AC loss, Low Battery, or Fire Trouble.
Negative Acknowledgment	Upon entry of an illegal command the keypad will sound 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 may be silenced through entry of a valid user code.



The keypad is **NOT** operational if none of the LEDs are lit and the keypad does not beep when keys are pressed. This is an indication that service is required. Consult the troubleshooting section of this manual.

Arming the System

The system can be armed only if all burglary zones are in ready state (not faulted):

Indicator	FALCDKP	FALEDKP
LED Lit	Ready	Ready
Display	SYSTEM READY	n/a

TO ARM:

Enter any programmed four digit user code. **NOTE:** The factory default for user #1 is 1234. The **ARMED** LED will light and the user may exit through an exit/entry zone for the time period programmed as the exit delay.

The system can be armed without the backup battery being connected, however the **AC/LB** or **BAT** light will flash depending on the keypad used.

Keypads will indicate the following message:

Indicator	FALCDKP	FALEDKP
LED Lit	Armed	Armed
Display	ON: AWAY; EXIT NOW	n/a

Arm While Faulted If programmed (Question 19 location 2), the user can arm the system while a delay or interior zone is still faulted.

Stay Arming

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

This will arm the system with all programmed interior zones excluded.

Indicator	FALCDKP	FALEDKP
LED Lit	Armed	Armed, Stay
Display	ON: STAY	n/a

Instant Arming

TO ARM: Press the **INSTANT** key followed by a four digit user code. The **INSTANT** and **ARM** LEDs will light continuously.

Indicator	FALCDKP	FALEDKP
LED Lit	Armed	Armed, Instant
Display	ON: INSTANT	n/a

The entire security system (interior and exterior) is armed at this time, eliminating the entry time delay(s) that have been programmed into the system.

NOTE: The INSTANT mode can be enabled through programming Question 19.

Stay/Instant Arming

TO ARM: Press the **STAY** key; press the **INSTANT** key and enter a four digit user code.

The **STAY/INSTANT** mode will arm the system with the characteristics of both the **STAY** and **INSTANT** modes. The keypads will have the **ARM**, **INSTANT** and **STAY** LEDs turned ON continuously.

Indicator	FALCDKP	FALEDKP
LED Lit	Armed	Armed, Instant, Stay
Display	ON: STAY/INS	n/a

The system will be armed with the interior zones bypassed and the delay zones instant.

NOTE: The STAY/INSTANT mode can be enabled through programming Question 19.

Disarming

TO DISARM: Enter any valid four-digit user code and the **ARM** LED will extinguish. If an alarm condition exists or had occurred while the system was armed, the respective zone LED will blink rapidly. This condition is classified as Alarm Memory and can be cleared by entering a valid user code again.

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 sounders, or clear the keypad display.

Bypass by Zone

Bypassing is enabled to temporarily exclude zones or points that are faulty or otherwise not ready for operation, from activating the security system.

TO BYPASS by ZONE: Press the **BYPASS** key followed by any valid 4-digit user code, followed by the zone number (01-48), representing the respective zone to be bypassed.

EXAMPLE: To Bypass Zone 6 (Assume user code of 1234) = **BYPASS 1234 06**

Quick Bypass By Zone

Quick Bypassing is a programmable option (Question 19 L4) and allows the user to bypass zones and points without using a user code.

TO BYPASS by ZONE: Press the **BYPASS** key followed by the zone number (01-48), representing the respective zone to be bypassed.

EXAMPLE: Bypass Zone 06 = **BYPASS 06**

BYPASS
ZONE 1, 2

In addition, note the following rules for bypass:

- 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(CS) upon arming if a bypass code has been programmed.



BYPASSED ZONES ARE NOT PROTECTED WHEN THE SYSTEM IS ARMED.

Bypass Limit 3

The system can be programmed to allow a maximum of 3 zones to be bypassed in a partition. See Question 21 L1. You can also program the system to display bypasses while armed. See Question 21 L1.

Auto Unbypass

All burglary zones which are bypassed are automatically unbypassed upon system disarm. 24-hour zones which have been bypassed will be unbypassed only if they are normal.

Manual Unbypass

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

KEYPAD TAMPER/LOCKOUT: If programmed (Question 18 L2), upon entry of 21 keystrokes in succession without entry of a valid command, the system will initiate a keypad tamper/lockout condition. This will be a silent alarm. In addition, a code can be programmed for transmission to the Central Station (see Submode 2, Question 77, L1, L2).

User Code Programming

User codes can be entered or modified directly through the keypad. The system supports up to 64 user codes (4 or 6 digits each) with the following applications:

USER NUMBER	APPLICATION	DEFAULT CODE
01	Master User (see note 1)	1234
02 - 49	Normal Users	NULL
50-60	Door Strike (see note 2)	NULL
61-64	Ambush (see note 3)	NULL

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

1. User number 1 - programs all user codes (01-64); cannot be deleted.

2. User numbers 50-60 (Door Strike) - will be the system "door strike" code if any of the triggers are defined as a door strike trigger. If any of the output triggers are defined as door strike, then entry of this user code will activate that trigger for a period of 5 seconds. In addition, there is an option to allow all user codes to act as a door strike code. If this option is selected (question 18, L1) then all users can activate the door strike through the [#][5][7] command (See Quick Command Modes). If a door strike (or access) trigger is not defined, then this user code can be utilized as a normal user code.

3. User numbers 61-64 (ambush; enabled in Submode 1, Question 18, L1) - will activate a system-wide ambush code if there is an ambush CS report code programmed into submode 2, Question 73, L1, L2. If no CS code is defined in question 73, then these user numbers will be normal user codes. In this mode, an entry of the user number code will arm or disarm the system and transmit the ambush code to the central station. Furthermore if the CS transmission format contains the user number, then user number will be transmitted. If duress transmission code has been programmed and a user does not exist it will not be possible to activate the duress feature.

Authority Levels

Each user is assigned one of four authority levels, which determines the system functions that user can perform.

Level	Functions Allowed
1	Primary Master, access all partitions, can view log and set time, assign other user codes, all system functions
2	Secondary master, same as primary master except cannot change the primary master's code
3	User, can arm and disarm only
4	Limited user, same as level 3, except can disarm the system only if it was armed by another user with level 4 authority (cannot disarm if armed with user of higher authority level).

4/6-Digit User Codes

The system supports either 4- or 6- digit user codes. A bit option in Question 17, L3, selects if the user codes are to be 4 or 6 digits in length for the entire system. A new or changed user code will be automatically active in the partition from which the code was programmed. The default user code for the master is 1234 with an authority level of 1, and is valid in partition 1. The system is defaulted to 4 digit user/installer code. If the bit is set in installer mode, each currently programmed code will change to six digits by adding a "0-0" before the known 4-digit code.

For example, If 4-digit codes are being changed to 6 digits and a user code was 1-2-3-4, it will become 0-0-1-2-3-4. Conversely, if the user code length was 6, and it is changed back to 4 digits, the code 1-2-3-4-5-6 will become 3-4-5-6.

Once "6-digit user codes" is selected, new codes entered can be any combination of 6 digits.

NOTE: Selecting "6-digit user codes" also affects the installer code by adding "00" to the code (default installer code 2468 becomes 002468). Use Question 00 to enter a new installer code.

To Add Or Change Users:

[CODE KEY] [MASTER USER CODE] [USER no.] [NEW USER CODE] [AUTHORITY LEVEL]

where:

[CODE KEY] Press Code button on keypad.
[MASTER USER] Enter 4 or 6-digit* Master User code (user with authority level 1 or 2)
[USER #] Enter Desired user number to be programmed (01-64).
[NEW USER CODE] Enter 4 or 6-digit* user code for the new user. Valid digits are 0-9.
[AUTHORITY LEVEL] The desired authority level for the new user.

*(depending on the whether the system is set for 4 or 6 digit security codes)

Example: Define user number 03 with a code of 7493 and authority level 3. (Assume master code is 1234) = CODE 1234 03 7493 3

An acknowledgment sound (steady tone) verifies a successful user code programming. A negative acknowledgment sound (4 short tones) indicates unsuccessful programming. If additional user programming is necessary, repeat the procedure listed above. If a dialing format is programmed which transmits opening/closing by user ID, each user will report their user number.

Assigning Partitions and Pager Open/Close Reports to Users

Users are automatically enabled for the partition where their code was added. You can also allow users to access other partitions and/or enable open/close pager reports for a user by using the #7 command as follows:

[#][7] [master code] [user no.] [1, 2, 3, or 4]

where:

master code user with authority level 1 or 2
user no. the user that will be assigned access to other partitions
1, 2, 3, or 4 select 1, 2, 3 to assign access to a partition to that user
select 4 to enable open/close paging report for that user

To exit this mode, press [*].

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



User Deletion

User codes (02-64) can be deleted from any disarmed partition's keypad, regardless of where the user's code was first added. Once deleted their values will be null.

TO DELETE USERS: [CODE] [MASTER CODE] [USER no.] [*]

where: [CODE] Press CODE button on keypad.
[MASTER CODE] Enter Master User code.
[USER #] Press the desired user number being deleted (02-64).
[*] Press the ★ (star) button.

Keypad Emergency Conditions

The system is capable of transmitting four keypad auxiliary conditions as follows:

CONDITION	KEYSTROKES	CS REPORT ENABLE	OPTIONS (aud./silent; arm beeps; relays)
PANIC	# & * (at the same time)	submode 2, Question 74, L1-L2	See Question 32, L1, L2 Immediate and unabortable
FIRE	7 & 9 (at the same time)	submode 2, Question 76, L1-L2	See Question 31, L3, L4
AUXILIARY	1 & 3 (at the same time)	submode 2, Question 76, L3-L4	See Question 31, L1, L2
DURESS	User code #61-64	submode 1, Question 18, L1	Always SILENT

In addition, the keypads have additional keys dedicated for emergency conditions. These can be activated by pressing both keys at the same time (see the Keypad Layout section). Audible Panic, Fire and Audible Auxiliary can be RESET BY ENTERING ANY VALID USER CODE.

Quick Command Modes

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

COMMAND	KEYSTROKES	DESCRIPTION
Change partition	# 0 [code] [0,1-4,9]	Changes mapping of current keypad to the partition specified. •4• is for multi partition display mode. This mode displays the current armed state of all 4 partitions. Changing a keypad's partition with this command directly changes the keypad/partition assignment programmed in Questions 49-52. Entering a •0" arms all partitions and a •9" disarms all partitions. The arm all partitions command (0) will only be valid if zones in the system are in a ready state.
Quick Arming	# 1	Will arm the current partition, if system is ready to arm. Question 19, L4
Quick Forced Arming	# 2	Will bypass all currently faulted zones and arm system. Question 19, L4
Set Time	# 3	Enter Hours, Minutes, Month, Day, Year. This question may require a user code with an authority level of 1, 2, or 3, to set the clock based on Installer program (Question 21, L2)
Display Zone Directory (LCD Keypad Only)	# 4	Displays all zones enabled in the current partition. Always Enabled
Display Directory of Quick Commands (LCD Keypad Only)	#50	Allows the user to view the different quick commands.
Display Time (LCD Keypad Only)	#51	Used to verify the real time clock settings used for CS test, auto arm and logging events. Displays hour, minute, month day and year. The time is displayed as either military or conventional and the date may be displayed as day or month first based on programming options in Question 21 L3.
Display auto arm time (if auto arm option is on) (LCD Keypad Only)	#52	Displays hour and minute of auto arm time for partition to which the keypad is mapped.
View Event Log (LCD Keypad Only)	#53x	This option is enabled for users in Question 22. If enabled the event log may be seen for the entire system, or only the current partition based on the option programmed in question 22. Additionally the time and date display options are adhered to, meaning the time may be military or conventional, and the date may have either the day or month displayed first. When the log is viewed through the quick command, the clear log function is blocked. Either the stay or the star key may be used to exit this mode. Pressing any other key advances to the next valid entry.

Set Auto Arm Time (LCD Keypad Only)	# 54	Enter Hour, Minutes. This question may require a user code with the appropriate authority level to set the clock. Questions 34-36
Display Version (LCD only)	#55	Displays the revision level of the system software.
Test Keyfobs	#56	Mode to test keyfobs for low battery.
Door Strike	# 57	Door Strike trigger/relay activation. All Users
Change pager/audio tone number (LCD only)	#58	Lets the user modify the current pager/audio tone phone number to dial for keypad's partition. NOTE: Once the number is changed, pager/audio tone reports will go to that number until the number is changed again using the #58 command.
Display/Toggle Chime (LCD only)	#6	The LCD keypad will display current state and provide option to toggle the current state. The LED pads will simply toggle the chime state and beep once to indicate the state has changed.
Multi-partition assignment	#7 [Code] [user no.] [1, 2, 3, or 4] (4 = enable paging)	Allows the assignment of user codes to multiple partitions. User with authority of 1 or 2 is required to enter this mode. This allows users to be enabled in multiple partitions (1,2,3) and also enables the user for paging (4).
Pager/audio tone enable	#8	Toggle the state of pager/audio tone reporting for keypad's partition. Works same as chime. For user open/close only.
User On-line Download	# 9	Starts remote connect sequence with PC downloader.

Quick commands are valid for 10 seconds of no activity, unless otherwise stated.

CHANGE PARTITION: #0

#0 [CODE] [0, 1-4, 9]

FALCDKP keypads display "EC" (enter code) after pressing #0, then it displays "CP" (change partition) after entering the user code.

QUICK ARMING: # 1

If programmed, then quick arming will be permitted. Quick Arming allows arming the system without entry of a user code and will report as user #01.

NOTE: The system must be in ready mode. A user code is required to disarm the system. Options include:

[STAY] # 1 Quick Arm the System in the STAY mode
 [INSTANT] # 1 Quick Arm the System in the INSTANT mode
 [STAY][INSTANT] # 1 Quick Arm the System in the STAY/INSTANT mode

QUICK FORCED ARMING # 2

If programmed, then quick forced arming will be permitted. Quick Forced Arming allows arming the system without entry of a user code and bypass any bypassable zones that are not ready. It will report user #01.

NOTE: Bypassed zones will include all of the individual points assigned to the zone. To disarm a user code is required.

SET TIME: # 3

Pressing # 3 will set the time of the system clock. If a user code is required to set the time, then enter:

3 [USER] [HOUR] [MINUTE] [MONTH] [DAY] [YEAR]

where:

[USER] Enter a valid 4-digit user code
 [HOUR] Enter two-digit hour of day in military time; ex: 7AM = 07; 3PM = 15
 [MINUTE] Enter two-digit minutes of hour ; ex: 9 min = 09; 29 min. = 29
 [MONTH] Enter two-digit month of year (01 - 12); ex: Feb = 02; Oct = 10
 [DAY] Enter two digit day of month (01-31)
 [YEAR] Enter two-digit year 00-99; ex: 1998 = 98; 2000 = 00

If a user code is **not** required to set the time, then enter:

3 [HOUR] [MINUTE] [MONTH] [DAY] [YEAR]

In either case, the LCD keypads will display a prompt for each entry. On LED keypads the sounder will beep after each entry. The system will exit this mode either automatically (no keys are pressed), after the last entry (YEAR) or by simply pressing the star (★) key.
NOTE: The system time clock is used for the system test transmission as well as the auto arming function and log.

DISPLAY ZONE DIRECTORY (LCD KEYPAD ONLY): # 4

Pressing # 4 will scroll through the zone # and zone descriptors on the LCD keypad. The keypad will display the following:

DIRECTORY	ZN #
ZONE #	DESCRIPTOR

The system will exit this mode either automatically (no keys pressed) or by pressing the star (★) key.

DISPLAY TIME: # 51 (LCD Keypads Only)

Pressing # 51 will display on the LCD keypads the current time of the system.

NOTE: The time is set by using # 3. The keypad will display the following:

14 JULY 2000
09:13AM

The system will exit this mode either automatically (no keys pressed) or by pressing the star (★) key.

DISPLAY AUTO ARM TIME: # 52 (LCD Keypads Only)

If auto arming is programmed, then pressing # 52 will display on the LCD keypads the current auto arm time for the current area. **NOTE:** Auto arming is enabled in programming Question 33, L1-L3 and the auto arm time is set by using # 54. The keypad will display the following:

AUTO ARM TIME:
12:00AM

The system will exit this mode either automatically (no keys pressed) or by simply pressing the star (★) key.

SET AUTO ARM TIME: # 54

If auto arming is enabled in programming Question 33, L1-L3 (partitions 1-3), then pressing # 54 will set the auto arm time of the current partition. If a user code is required to set the time, then enter:

54 [USER] [HOUR] [MINUTE]

where: [USER] Enter an valid 4 digit user code
 [HOUR] Enter two-digit hour of day in military time; ex: 7AM = 07; 3PM = 15
 [MINUTE] Enter two-digit minutes of hour ; ex: 9 min = 09; 29 min. = 29

If a user code is **not** required to set the time, then enter:

#54 [HOUR] [MINUTE]

In either case, the LCD keypads will display a prompt for each entry. On LED keypads the sounder will beep after each entry. The auto arm time represents the time of day that the area will automatically arm if it is not already armed. In addition, it can be programmed to arm in the STAY or INSTANT modes and an audible warning can be generated at the keypad 2 minutes prior to arming if programmed in Question 20, L2. This signal (four (4) short beeps every 15 seconds for 2 minutes prior to arming), will warn the occupants 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 acknowledgment (1 second keypad sounder) and the lights on the LED display will scroll to show that the auto arm time was suspended. LCD based keypads will display an AUTO ARM CANCELED display.

The system will exit this mode either automatically (no keys pressed), after the last entry (MINUTE) or by simply pressing the star (★) key. **NOTE:** Auto arming will arm the system and bypass any zones which are not ready. Therefore, it is recommended that bypasses

should be reported to the CS if auto arming is programmed. Auto arming is not suitable for UL applications.

LOSS OF TIME WARNING: If auto-arming has been enabled and no time is defined, a warning will appear on the keypads. This can occur if time (#3 command) has not been entered or if the system has totally lost power (AC & DC) and the time is probably incorrect. The loss of time warning is displayed as "ERROR-SET SYSTEM CLOCK" on FALCDKP keypads. There is no display for FALEDKP keypads.

DOOR STRIKE: # 57

The door strike trigger can be activated as follows: # 57 [USER] [TRIGGER NUMBER]

NOTES:

- (1) The trigger number (1 or 2) 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.

UL

DOOR STRIKE is not a permitted programming option for any UL installation.

DISPLAY/TOGGLE CHIME: # 6

If the chime option is programmed for any of the zones (submode 2, Questions 01-48, L4), then pressing # 6 will display and toggle (turn OFF/ON) the system chime. The system will exit this mode either automatically (no keys pressed) or by simply pressing the star (★) key.

USER ON-LINE DOWNLOAD: # 9

If programmed (Question 18, L1), the user can initiate a remote communications session with the CS Downloading computer by pressing # 9 buttons on the keypad. On-line Downloading allows the user to call the office, discuss the action required and allows the CS operator to complete the request while on-line with no additional telephone call needed. On-line connection is made as follows:

1. User dials the CS Downloading modem telephone line from the premise telephone. Connection is made with a person at the CS Downloading computer and the account to be downloaded is verbally identified. The CS computer is placed into a mode in which it attempts to establish a connection with the site.
2. Next, the user will be instructed to enter # CODE on the keypad which causes the control panel to behave as if it had received a request for a remote communications session and looks for the standard panel-to-CS protocol.
3. Once the standard connection is made, the remote communications session can take place (upload, download, remote commands).

System Programming

The system can be programmed using either of two methods:

- Directly using FALCDKP keypad.
NOTE: If there are no FALCDKP keypads connected to the system, keypad address 8 is automatically enabled. This allows an FALCDKP to be temporarily connected for programming the system.
- Remotely using the PC DOWNLOADING Software (Compass Downloader).

System Default

The system is shipped from the factory with specific default values suitable 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.

To reset the system to the default values, do one of the following:

- Press the [1] and [3] keys at the same time while in the programming mode.
- Use Installer Mode 5 (press [CODE] [★] [installer code] [5]).
- Remove power (AC & DC), short JP1 & JP2, then re-apply power (with JP1 & JP2 still intact). Wait at least 8 seconds, then remove the short with power still applied.

When the system is defaulted, the system reverts to factory programmed values and goes through the reset and warmup time sequence.



You can select a programming option through the Compass Downloader Software known as **Default Lockout**. If selected, a system default reset will change all of the programmable options except the CSID (a code used by the software to identify the panel during remote connections) and the installer code. This prevents hostile account takeovers.

Installer Modes Summary

The following lists the various installer modes in this panel.

TO ENTER INSTALLER MODES, press [CODE] [★] [INSTALLER] [X]

where: [CODE]	Press the CODE button
[★]	Press the star (★) button
[INSTALLER]	Enter the installer code (4- or 6-digits as programmed; default = 2468)
[X] (mode)	Press the single digit indicating the installer mode, as follows:
	1 INSTALLER KEYPAD PROGRAMMING
	4 submodes: 1-System Options
	2-Zone and Report Code Programming
	3-Wireless Zone/Keyfob Programming
	4-Zone Descriptor Programming
	2 PROGRAMMING REVIEW MODE (no changes can be made)
	4 submodes: 1-System Options
	2-Zone and Report Code Programming
	3-Wireless Zone/Keyfob Programming
	4-Zone Descriptor Programming
	3 WALK TEST WITH REDUCED RF GAIN
	4 SYSTEM LOG VIEW
	5 SYSTEM DEFAULT
	6 CLEAR TAMPERS (if programmed)
	7 NOT USED
	8 UNATTENDED DOWNLOAD
	9 ON-LINE DOWNLOADING

INSTALLER MODE 1 (INSTALLER KEYPAD PROGRAMMING)

Enters the installer into keypad programming mode, which has 4 submodes (see below). To exit, simply press the **STAY** key and return to the prior panel status. To change between these submodes, press [*] [BYPASS] [submode no.].

The LCD display for Installer Mode 1, submodes 1-3 is as follows:

Q:xx	MX	Edit	L:yy
Data	dddd		DDD

where: Qxx = question number (00-99)

MX = programming submode (1-3)

Edit = shows you are in edit mode, meaning that changes to values can be made

Lyy = location within the programming question

dddd = 4 digits of the data entries (press [#] to display the next 4 digits for those questions having more than 4 digit entries.

DDD = Mode description (1-System, 2-Zn/Cde, 3-RF Prg.)

For submode 4, the display is as follows:

Q:xx	DESC	Z:zz
<i>16-character descriptor</i>		

where: Qxx = question number

DESC = shows you are in descriptor mode (submode4)

Zzz = zone number for which descriptor is being programmed

2nd line = up to 16-character descriptor

Sub-Mode 1: System (Questions 1-86)

Use this mode to program system options.

Sub-Mode 2: Zone programming, zone enables, report codes (Questions 1-93)

Use this mode to program zone information/attributes and all CS report codes, and to assign the first wireless zone and/or first zone-doubling zone.

Sub Mode 3: Wireless Zone/Keyfob Programming (Questions 1-56)

Use this mode to configure wireless transmitters and to enter transmitter/keyfob serial numbers.

Sub Mode 4: Descriptor Programming (Questions 1-51)

Use this mode to enter alpha descriptors for each zone and for each partition.

NOTE: There exists an option in the Compass Downloader Software to inhibit keypad programming. If selected, then 4 short beeps will be heard after attempting to enter this mode.

INSTALLER MODE 2 (PROGRAM REVIEW)

This mode is the same as Mode 1, except no changes to programming data can be made. It is intended as a way to review the settings of programming submodes 1-4 without altering their values.

INSTALLER MODE 3 (WALK TEST with Reduced RF Gain)

Once the points are placed in their desired locations, open or short circuit each point. The keypad will beep and annunciate with activation of each zone or point while in this mode. Pressing 1 toggles the external bell on and off.

To exit, simply press the ★ key and return to the prior panel status.

INSTALLER MODE 4 (SYSTEM LOG VIEW)

The system retains history of the past 128 events (alarms, troubles, openings, closings, bypasses, etc.). Upon entry to the system log view, LCD-based keypads show either the events for the entire system, or only the current partition from which the installer code is entered, based on the option programmed in Question 22, L 1. The time may be displayed in 24-hour or am/pm format, and the date may have either the day or month displayed first, depending on programming. When the log is viewed through the quick command, the Clear Log function is blocked.

Pressing either the STAY or the [*] key exits this mode.
Pressing any other key advances to the next valid entry.

LCD keypads display events as follows:

L 001 ALARM ZN 01 20 APR, 10:38 P1

where:

Line 1: event number (L001-L128), event display, zone no. (01-48) or user no. (01-64).
Line 2 date, time, and partition

Event Displays

Event	Display	Event	Display
System Troubles System AC loss System Low Batt Comm. Fail CS Test System Download Phone Fail	Lnnn AC Loss Lnnn Batt. Fail Lnnn Comm. Fail Lnnn CS Test Lnnn Downloaded Lnnn Phone Fail	Special Arming Quick Arm Quick Force Arm Stay Key Arm Remote Arm Auto Arm	Lnnn Quick Armed Lnnn Forced Arm Lnnn Keysw Armed Lnnn Remote Arm Lnnn Auto Armed
Special Alarms Keypad * & # Keypad 7 & 9 Keypad 1 & 3 Keypad Duress Keypad Tamper	Lnnn Keypad *&# Lnnn Keypad 7&9 Lnnn Keypad 1&3 Lnnn Duress Lnnn Key Tamper	Other Events Alarms Troubles Zone Low Battery Zone Supervision Zone Bypass Zone Tamper Opening Closing	Lnnn Alarm Zn xx Lnnn Troub Zn xx Lnnn Lo Bat Zn xx Lnnn Super Zn xx Lnnn Bypas Zn xx Lnnn Tampr Zn xx Lnnn Opn User xx Lnnn Clo User xx

INSTALLER MODE 5 (SYSTEM DEFAULT)

This mode can initiate a system default of the system. The system then reverts to factory-programmed values and goes through the reset and warm-up time sequences.

INSTALLER MODE 6 (CLEAR TAMPERS)

This mode clears all tamper displays that have restored, regardless of partition, and is an engineer reset function.

INSTALLER MODE 8 (INSTALLER UNATTENDED DOWNLOAD)

For UL installations, Installer Unattended Download may **NOT** be used.

The control panel dials (up to 8 times) the telephone number of the CS Downloading Computer without the need to have the operator present. Basically the CS Downloading computer telephone number will be programmed into the callback number (Question 03) and an identification number (same as the account # in the Downloader Software) will be programmed into the Secondary Telephone (question 02).

NOTE: These are temporary values since they will be reprogrammed after downloading.

Unattended download requires the following sequence:

1. The PC operator must select UNATTENDED DOWNLOAD in the Downloader Software Main Menu.
2. Enter unattended download mode: [CODE] [*] [INSTALLER] [8].
3. The system will now enter keypad programming, question 01. Enter the telephone number of the Central Station Downloading computer (each digit followed by the # key, ex: 1 # 2 # 3 # etc.) into this question (12 digits max). This phone number should be the same as the CS Callback number (question 03 from keypad programming if the panel is programmed for callback).
4. Proceed to question 02 through the sequence * 02. Next, enter the desired account number (each digit followed by the # key). This will be used by the CS downloading computer to determine the proper account information to download to this subscriber. The account number must be 6 digits in length and it is the Downloader's Account designator (not the account number) that will be communicated to the receiver. For account numbers less than 6 digits you must enter leading 0's to make the number 6 digits long.
Example: for account number 345, enter 0 # 0 # 0 # 3 # 4 # 5 #
5. Press the **STAY** key to exit programming mode. The control panel will now dial the telephone number entered into the callback number (Question 03). The downloading computer must be placed into the Unattended Communications option from the main menu. Upon connection with the computer the customer account number programmed in step 3 will be obtained and the system will perform the desired download operation.

NOTE: The CS Downloading computer must be waiting in the unattended communications option and preprogrammed with the account information in order for the unattended download to be functional. Press the **INST** key to exit programming mode without activating Unattended mode.

INSTALLER MODE 9 (ON-LINE DOWNLOAD)

In this mode, the installer can initiate a remote communications session with the CS Downloading computer from the control panel location. Typically, a remote communications session is initiated by the CS. On-line Downloading allows the installer to call the office (from the same telephone line as the panel), discuss the action required and allow the CS operator to complete the request while on-line, no additional telephone call is needed. On-line connection can be made as follows:

1. Installer completes installation and attaches a handset to telco terminals (tip & ring) or uses the standard home telephone to dial the CS Downloading modem telephone line. Connection is made with a person at the CS Downloading computer and the account to be downloaded would be verbally identified. The downloading computer operator will select the On-line Remote Operations from the device menu
2. The installer should enter the on-line download sequence: [CODE] [*] [INSTALLER] [9] or use the end-user command of # 9, if enabled (Question 18, L1). This will cause the control panel to behave as if it received a request for a remote communications session and will look for the standard panel-to-CS protocol.
3. Once the standard connection is made, the necessary remote communications sessions can take place (upload, download, remote commands).
4. Hang up the telephone or remove headset from the line to prevent interference which may affect upload/download data. The downloader software will automatically terminate the connection after remote communications end.

Data Entry Via Keypads

This section describes the physical keystrokes necessary to perform keypad programming and how to interpret the data displayed on the LED based keypads and on the LCD keypads during programming operations.

NOTE: Actual keypad programming should be performed only after completion of the programming sheet.

How To Enter Programming Mode

The SYSTEM programming mode can be entered WHILE DISARMED ONLY as follows:
TO ENTER INSTALLER PROGRAMMING: [CODE] [*] [INSTALLER] [1], then select the programming submode 1-4 from the prompt (shown below).

1=System 2=Zones 3=ZR401 4=Descr

Where:

[CODE]	Press the CODE button
[*]	Press the star (*) button
[INSTALLER]	Enter the 4 or 6-digit [†] installer code (default = 2468)
[1]	Press "1" button. This indicates Installer Mode 1.

[†] user/installer codes can be 4 or 6 digits, as set in Question 17, L3.

Installer Mode 1 Submodes:

- 1 = System Options
- 2 = Zone and All Central Station Report Code Programming
- 3 = Wireless Zone/Keyfob Programming
- 4 = Zone Descriptor Programming

What You See on the LCD Keypad

Upon entering the System Options submode, the following display appears on the LCD keypads:

Q#: 01 M1 Edit	L:01
DATA: 1234	System

The display shows:

- Q# = the current question number
- M1 = the submode number
- L: = the location within the question
- DATA: = the current value within that location
- System = the submode title

Movement Between and Within Questions

Random jumps to a specific question: Press the * (star) button followed by the desired 2-digit question number.

Example: Jump to question 07= Press * 0 7

Sequential to next question: Press the [INSTANT] button

Accept data entry and move to
Next data location in question: Press [#]

Switch Submode: Press [*] [BYPASS] then select submode from prompt

Data Entry

To alter the value in any location , enter the desired digit and press the [#] key.



The [#] key **must** be pressed after the entry of the desired digit. The system will not accept the digit until the pound (#) key is pressed, therefore if a mistake is made it can be changed.

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

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

VALUE	KEYSTROKES
A	CODE 1
B	CODE 2
C	CODE 3

VALUE	KEYSTROKES
D	CODE 4
E	CODE 5
F	CODE 6

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

Exit System Program Mode

After all programming has been completed, press the STAY button to exit the system program mode.

Question Acknowledgment

The keypad will 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 an invalid input, you remain at the same question number and location as prior to the input error.

Summary of System Programming

To Enter Programming: [CODE] [*] [4 or 6-digit Installer Code] [1] [submode 1-4]

To Skip a Question: [*] [2-digit Question Number]

To Move Within a Question: Press the [#] until the desired location is reached

To Enter Data: [single digit: 0-9, A-F] [#]

Hexadecimal Entries:

A = [CODE] [1] D = [CODE] [4]

B = [CODE] [2] E = [CODE] [5]

C = [CODE] [3] F = [CODE] [6]

To Exit Programming: Press the [STAY] button

This section defines the programming questions and the values for each question. You should complete the SYSTEM PROGRAMMING WORKSHEET (insert) before entering data.

Installer Mode 1, Submode 1: SYSTEM OPTIONS

Enter Installer Programming mode, then press [1] at the submode prompt to enter System Options mode.

QUESTIONS 01-06 TELEPHONE and PAGER NUMBERS

Enter the telephone number (including area code and/or dialing prefix IF NECESSARY) of the primary central station receiver in Question 01, L1 – L20.

Example: If the primary telephone number to be entered is: 1-516-921-6704, you would enter (on Programming Worksheet): 15169216704.

Enter the valid digits from the table below.

Entry	Function	Comments
0-9	0-9	
A	Signifies end of the phone number	Enter after last digit of phone number
B	Star (★)	Enter whenever the star is used
C	3 Second pause	Provides delay to wait for dial tone
D	Pound (#)	Enter whenever the pound is used
E	★ 70C (Touch-tone) ★ 1170C (Rotary)	Enter to disable Call Waiting
F	800	Enter to dial 800

REPORTING ROUTE:

The system can report to 1 or 2 central station phone numbers. If split reporting has been selected then OPENING and CLOSING signals will be directed to the secondary phone number while all other signals will be transmitted to the primary phone number. If backup reporting is selected, the panel will alternate between the primary and secondary receivers (if the second phone number is programmed) for a programmable number of attempts (Question 16, L3) to each phone number in the event the signal has not been acknowledged. If dual reporting is selected, then signals are sent to both primary and secondary phone numbers. 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 number only.

Enter the telephone number (including area code or dialing prefix IF NECESSARY) of the secondary central station receiver in Question 02, L1 – L20. An entry of the digit A skips that digit and system will examine the next digit.

Q 01 PRIMARY TELEPHONE NUMBER

Q 02 SECONDARY TELEPHONE NUMBER

Q 03 CALLBACK TELEPHONE NUMBER

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 Downloading Software 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 hang up and dial the callback number. For no callback capability enter "A" in L1-L20.

Q 04 PAGER PARTITION 1 TELEPHONE NUMBER

Enter the pager number for reports from partition 1, up to 16 digits, (including area code or dialing prefix if necessary). For no pager report enter "A" in L1-L16.

Q 05 PAGER PARTITION 2 TELEPHONE NUMBER

Enter the pager number for reports form partition 2, up to 16 digits, (including area code or dialing prefix if necessary). For no pager report enter "A" in L1-L16.

Q 06 PAGER PARTITION 3 TELEPHONE NUMBER

Enter the pager number for reports from partition 3, up to 16 digits, (including area code or dialing prefix if necessary). For no pager report enter "A" in L1-L16.

QUESTIONS 07-14 ACCOUNT NUMBERS

Primary account: Enter the three (3) or four (4) digit subscriber account number for central station phone number 1 in Questions 07, 09, 11 and 13. If a three (3) digit number is used then enter an A in L4. Valid entries are 0-9, and B-F. The value A is interpreted as the null value for account numbers.

Secondary account: Enter the three (3) or four (4) digit subscriber account number for Central Station phone number 2 in Questions 08, 10, 12 and 14. If the second phone number is not used, this question can be left as factory defaulted.

THIS ACCOUNT NUMBER MUST BE ENTERED IF YOU HAVE PROGRAMMED A SECOND RECEIVER PHONE NUMBER FOR BACKUP/SPLIT REPORTING AND DUAL REPORTING.

Q 07 PRIMARY ACCOUNT NUMBER PARTITION 1

L1 L2 L3 L4

Q 08 SECONDARY ACCOUNT NUMBER PARTITION 1

L1 L2 L3 L4

Q 09 PRIMARY ACCOUNT NUMBER PARTITION 2

L1 L2 L3 L4

Q 10 SECONDARY ACCOUNT NUMBER PARTITION 2

L1 L2 L3 L4

Q 11 PRIMARY ACCOUNT NUMBER PARTITION 3

L1 L2 L3 L4

Q 12 SECONDARY ACCOUNT NUMBER PARTITION 3

L1 L2 L3 L4

Q 13 PRIMARY ACCOUNT NUMBER PARTITION 4 (COMMON)

L1 L2 L3 L4

Q 14 SECONDARY ACCOUNT NUMBER PARTITION 4 (COMMON)

L1 L2 L3 L4

QUESTION 16 REPORTING OPTIONS

L1
 L2
 L3
 L4

This question defines the reporting options.

Q 16: L1

Enter the L1 digit for the desired reporting options from the table below.

L1 Entry	Report Type				Report Stay Bypass	First to Open Last to Close
	Backup	Dual	Split	Disabled		
0	✓					
1		✓				
2			✓			
3				✓		
4	✓				✓	
5		✓			✓	
6			✓		✓	
8	✓					✓
9		✓				✓
A			✓			✓
C	✓				✓	✓
D		✓			✓	✓
E			✓		✓	✓

Backup: The system first dials central station 1. If dialing fails, the system will dial central station 2 (if programmed). If dialing fails again the system will begin alternating dialing between central station 1 and central station 2 until contact is established or the maximum number of dialing attempts (see Question 16 location 3) expires.

Dual: Events will be sent to both central station phone numbers.

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.

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.

NOTE: If Local Alarm is desired, then no other options are needed to be disabled (Telephone #, CS Codes). Remote operations with the PC Downloader software can still be made if the telephone line is connected.

Report Stay Bypass: This option specifies that bypasses will be transmitted upon Stay arming. If this option is 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 submode 2, Question 80, L1).

First To Open/Last To Close: If selected, open/close reports will only be sent after all partitions are armed/disarmed. The open report will indicate only the partition that first disarmed the system. The close report will indicate only the partition that was the last to arm the system (thus causing all partitions to be armed).

Q 16, L2 – Restore Reporting

Enter the digit for the type of restore reports to be sent. Program the actual trouble restore report code in Submode 2, Question 83, L4.

L2 Entry	Supervision Restore	Tamper Restore	RF Low Bat. Restore
0			
1	✓		
2		✓	
3	✓	✓	
4			✓
5	✓		✓
6		✓	✓
7	✓	✓	✓

Q 16, L3 CS Dialer Attempts

This option selects the number of times the communicator will attempt to dial both CS receivers. If CS #2 is not programmed, then this option determines the dialer attempts to CS #1. Enter the number of attempts, 1-15.

NOTE: This option is valid for all CS receiver formats.

L3 Entry	Dialer Attempts
0	same as "1"
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
A	10
B	11
C	12
D	13
E	14
F	15

UL

For UL installations, you must select a value between 5 and 10.

Q 16, L4 Restore Reporting

Enter the digit for the type of restore reports to be sent. Program the actual trouble restore report code in Question 83, L4.

L4 Entry	Send AC Restore	Send Low Bat. Restore	Send Zone Restore	Restore Follows Loop
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Send Zone Restore & Restore Follows Loop: Normally, zone restores are sent at bell cutoff. If you select Restore Follows Loop, zone restore reports will be sent as soon as the zone restores.

Q 17 SYSTEM OPTIONS

L1
 L2
 L3
 L4

This question defines various system-wide options.

Q 17, L1

Enter the L1 digit for the desired options from the table below (note values are from 8-F).

L1 Entry	No Bell if Dial Delay	Fast Zones 7/8	Double Balanced Zones
8			
9	✓		
A		✓	
B	✓	✓	
C			✓
D	✓		✓
E		✓	✓
F	✓	✓	✓

No Bell if Dial Delay: If selected, bell sounding will not occur until the dialer is activated (bell is delayed by the same amount of time as the dial delay setting). See Question 24, L4 for setting the dial delay (15-255 seconds).

Fast Zones 7/8: Sets zones 7 and 8 to fast response (10ms). If set, these zones must be wired as NC loops (cannot be double-balanced zones or part of zone doubling).

Double Balanced Zones: Select this option if using double balanced zones. This option allows hardwired zones to be wired such that a tamper will be detected on an open or a shorted loop. If selected, **all** hardwire zones are treated as double balanced zones.

Q 17, L2

Enter the L2 digit for the desired options from the table below.

L2 Entry	Dial Tone Detect	XL4705 Relay Enable	AC Freq.		RF Receiver Used
			60Hz	50Hz	
0			✓		
1	✓		✓		
2		✓	✓		
3	✓	✓	✓		
4				✓	
5	✓			✓	
6		✓		✓	
7	✓	✓		✓	
8			✓		✓
9	✓		✓		✓
A		✓	✓		✓
B	✓	✓	✓		✓
C				✓	✓
D	✓			✓	✓
E		✓		✓	✓
F	✓	✓		✓	✓

Dial Tone Detect: If selected, the system will determine that dial tone is present before dialing. If not selected, the system dials after a brief pause, regardless of actual dial tone being present.

4705 Relay Enable: Enables the relay module. If used, the system's built in triggers 3 and 4 will no longer be available as triggers. Instead, they will serve as clock and data lines, respectively, for the relay module.

AC Frequency: Select the AC line frequency, 50Hz or 60Hz.

ZR401 RF Enable: Enables the RF expander module, if used.

Q 17, L3 Enter the L3 digit for the desired options from the table below.

L3 Entry	Euro Pulse Dialing	TouchTone Dialing	U.S. Pulse Dialing	User Codes		Bell Supervision
				4-digit	6-digit	
0			✓	✓		
1	✓			✓		
2		✓		✓		
4			✓		✓	
5	✓				✓	
6		✓			✓	
8			✓	✓		✓
9	✓			✓		✓
A		✓		✓		✓
C			✓		✓	✓
D	✓				✓	✓
E		✓			✓	✓

Dialing Method: Select the type of dialing desired.

User Codes 4/6 Digits: The system supports either 4-digit or 6-digit user codes. If this option is selected, the system is set to use 6-digit codes. Existing 4-digit user codes will be automatically changed to include "00" before the existing code (e.g., 1234 becomes 001234). If the system is set to 6-digit codes and is changed to 4-digit codes, the system automatically deletes the first two digits of existing 6-digit user codes (e.g., 123456 becomes 3456).

Bell Supervision – Select this option to comply with NFPA 72 requirements. If selected, the bell will be supervised for an open circuit across the bell output terminals. If a fault is detected, the keypad will display a fire trouble condition.

Q 17, L4 Enter the L4 digit for the desired options from the table below.

L4 Entry	Send Test Report at Fixed Interval	Don't Send Test Report if Event Occurs	Test Time Interval							
			dis	Every 1 hour	1 day	7 days	27 days	60 days	90 days	180 days
0			✓							
1	✓				✓					
2	✓					✓				
3	✓						✓			
4	✓							✓		
5	✓								✓	
6	✓									✓
7	✓			✓						
9		✓			✓					
A		✓				✓				
B		✓					✓			
C		✓						✓		
D		✓							✓	
E		✓								✓

Send Test Report at Fixed Interval: Test reports will be sent at the time interval selected. See Question 27 to set the time of day for the test report transmission.

Don't Send Test Report if Event Occurs: Test reports will be sent at the time interval selected unless an event that caused a dialer report occurred before the time interval expired. In this case, no test report is sent. This cuts down the communication traffic to the central station.

Test Time Interval: Select the test reporting time interval. Enter 0 to disable test reporting.

QUESTION 18 OTHER SYSTEM OPTIONS

L1
 L2
 L3
 L4

This question defines other system options.

Q 18, L1 Enter the L1 digit for the desired user options from the table below.

L1 Entry	User On-Line	Users 61-64 Duress	No Code for Door Strike	Door users 50-60
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

User On-Line: Allows Quick Command downloading (#9) while on the telephone with the central station.

Users 61-64 Duress: Allows up to 4 duress codes to be assigned. A duress code must be programmed in submode 2, Question 73, L1-L2. If duress is not selected, then users 61-64 may be used as standard user codes.

No Code For Door Strike: Allows Quick Command for door strike (#57).

Door Users 50-60: Allows up to 11 codes to be assigned that when used will activate the door strike trigger (trigger type 1E). See Questions 37-48 for programming the trigger types. If this option is not selected, then users 50-60 may be used as standard user codes.

Q 18, L2 Enter the L2 digit for the tamper options from the table below.

L2 Entry	Keypad Tamper Lockout	Installer Reset Tamper	Tone Burst
0			
1	✓		
2		✓	
3	✓	✓	
8			✓
9	✓		✓
A		✓	✓
B	✓	✓	✓

Keypad Tamper Lockout: If selected, 21 key presses at a keypad without a valid sequence (arm, disarm, etc.) will disable all keypads in that partition for 20 minutes.

Installer Reset Tamper: If selected, only the installer can reset zone tamper conditions by using installer mode 6.

Tone Burst: If selected, the control emits a tone burst when the following events occur:

- When the control answers on a ring count (programmable or 2 call method) of a remote download connection.
- After the control performs a callback to the download PC and the downloader answers.

This feature is required when using a modem that requires a tone to operate.

Q 18, L3 Enter the L3 digit from the table below.

L3 Entry	Pager Attempts			Supervision Time (hours)			
	1	2	3	2	6	18	24
0	disabled			✓			
1	✓			✓			
2		✓		✓			
3			✓	✓			
4	disabled				✓		
5	✓				✓		
6		✓			✓		
7			✓		✓		
8	disabled					✓	
9	✓					✓	
A		✓				✓	
B			✓			✓	
C	disabled						✓
D	✓						✓
E		✓					✓
F			✓				✓

Pager/Beeps Attempts: This sets the number of times the system will send a report to a pager.

Supervision Time: This sets the time interval within which the RF Receiver must hear from transmitters, otherwise an RF trouble report will be sent. 24 hours is recommended.

Q 18, L4 Enter the L4 digit from the table below.

L4 Entry	Swinger Count		
	1	2	3
0	disabled		
1	✓		
2		✓	
3			✓

Swinger Count: Sets the maximum number of messages (controlled zone alarms or troubles) sent during an armed period. Does not affect 24-hour zone types.

QUESTION 19 ARMING OPTIONS

L1 L2 L3 L4

This question defines arming options.

Q 19, L1 Enter the L1 digit from the table below.

L1 Entry	Stay-Arms Stay	No FOB Auto-Stay	Instant Arms Away	Instant Enabled
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Stay Arms Stay: If enabled, the system will arm in the STAY mode by simply pressing the STAY key (user code not required). Otherwise, the user must press the STAY key followed by the user code to arm in STAY mode.

No Fob Auto-Stay: If selected, the auto-stay feature will be disabled when arming from a keyfob (system will arm the system in the mode selected).

Instant Arms Away: If enabled, the system will be armed in the AWAY mode by pressing the INSTANT key.

Instant Enabled: If selected, allows the end user to arm instant mode. Not available if INSTANT ARMS AWAY selected.

Q 19, L2 Enter the L2 digit from the table below.

L2 Entry	Arm with Fault	Bypass Error	Exit Error	No PC if Armed	No Arm if Low Battery
0			✓		
1	✓		✓		
2		✓			
3	✓	✓			
4			✓	✓	
5	✓		✓	✓	
6		✓		✓	
7	✓	✓		✓	
8			✓		✓
9	✓		✓		✓
A		✓			✓
B	✓	✓			✓
C			✓	✓	✓
D	✓		✓	✓	✓
E		✓		✓	✓
F	✓	✓		✓	✓

Arm with Fault: Allows the system to arm even if a delay or interior zone is faulted. However, faulted zones **must** be restored **before** exit time expires or an alarm will result.

Bypass Error/Exit Error: If bypass error is selected, faulted delay or interior zones will be automatically bypassed when exit time expires (no exit error report will be sent). If exit error is selected, faulted zones remain faulted, but an exit error report will be sent.

No PC if Armed: If any partition is armed, the control will not communicate with downloading computer.

No Arm if Low Battery: If selected, no partition will arm if a system low battery exists.

Q 19, L3 Enter the L3 digit from the table below.

L3 Entry	Disable Arm Part. 1	Disable Arm Part. 2	Disable Arm Part. 3	Exit Extends
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Disable Arming: If selected, the respective partition cannot be armed. See Question 84, L1/L2 for entering a report code that is sent if a user attempts to arm the system after this option has been set.

Exit Extends: If selected, reentering the premises during the exit delay time will restart the exit delay timer, allowing someone to exit again without having to disarm, then rearm the system. This can only occur once during an armed period. See Question 19, L4 for related Quick Exit feature.

Q 19, L4 Enter the L4 digit from the table below.

L4 Entry	Quick Arm	Force Arm	Quick Exit	Quick Bypass
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Quick Arm: If selected, Quick Command #1 will arm if the partition is ready.

Force Arm: If selected, Quick Command #2 will arm the system and bypass any faulted zones.

Quick Exit: Allows the user to leave the premises while the system is armed by pressing the STAY key, which restarts the exit delay timer. This way the user does not have to first disarm the system, then re-arm it again to leave.

Quick Bypass: Allows the user to bypass zones without first using the user code.

Q 20 SOUND OPTIONS

L1
 L2
 L3
 L4

This question defines sounder and bell options.

Q 20, L1 Enter the L1 digit from the table below. Applies only to wireless keys.

L1 Entry	FOB/keysw. Ding	Arm Bell Ding	Disarm Ding	Fast Ding
0				
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Fob/Keyswitch Ding: If selected, arming from a keyfob or keyswitch causes the bell to ding twice; disarming causes the bell to ding once, provided that arm/disarm bell ding options (see below) are selected.

Arm Bell Ding: If selected, the bell dings twice upon arming.

Disarm Ding: If selected, the bell dings once upon disarming.

Fast Ding: If selected, the arming dings will be shorter tones.

Q 20, L2 Enter the L2 digit from the table below.

L2 Entry	Threshold Sounder	Threshold Bell	CS Test Ringback	Invert Bell Output
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Threshold Sounder: Alerts the user to the end of exit time by sounding 4 rapid beeps 30, 20, 10 and 5 seconds before exit time expires. When exit time expires, the keypad sounds an acknowledgment tone.

Threshold Bell: Similar to threshold sounder option, except the bell sounds 1 second at 30, 20, 10, and 5 seconds before the end of exit time.

CS Test Ringback: If selected, keypads will beep after the central station has received the system test code.

Inverted Bell Output: If selected, the bell output signal is inverted. This is useful when using bell boxes requiring inverted signals.

NOTE: If inverted bell output option is used, bell supervision must be disabled (Q17, L3).

Q 20, L3 Enter the L3 digit from the table below.

L3 Entry	Phone Fail Enable	Phone Fail Sounder	Phone Fail Bell	Bell Ring Cancel
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Phone Fail Enable: If selected, the phone line is monitored once per minute. If it is not detected for 4-8 minutes, a phone fail message will be displayed, and, if the phone fail sounder and/or phone fail bell options (L3) are enabled a sound will occur.

Bell Ring Cancel: If selected, the bell will ding upon receiving “cancel” code.

Q 20, L4 This option defines whether you want the system to sound upon the listed conditions. This option does not affect keypad display of these events.

Enter the L4 digit from the table below.

L4 Entry	RF Supervision Fault	RF Low Battery Sounder	Low Battery Sounder Enable	AC Loss Sounder Enable
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

RF Supervision Sounder: Setting this option starts a pulsing keypad trouble sounder. Valid user code silences sounder in its partition.

RF Low Battery Sounder: Setting this option starts a pulsing keypad trouble sounder. Valid user code silences sounder in its partition.

System Low Battery Sounder: Setting this option starts a pulsing keypad trouble sounder. Valid user code silences sounder in its partition. Only partition 1 may be enabled to send system low battery.

AC Loss Sounder: Setting this option starts a pulsing keypad trouble sounder. Valid user code silences sounder in its partition. Only partition 1 may be enabled to send AC loss to the CS (submode 2, Question 73, L3-L4).

Any time the sounder is on, it must be acknowledged with a user code before arming is allowed. If the system is armed and a trouble sounder starts, entry of a valid user code will disarm and silence the sounder for that partition. AC loss is a system event and will be displayed/annunciated in all partitions. Thus if the system is partitioned, each partition's sounder requires individual acknowledgment with a user code.

Q 21 DISPLAY OPTIONS

L1
 L2
 L3
 L4

This question defines display options.

Q 21, L1 Enter the L1 digit from the table below.

L1 Entry	Armed Bypass Display	Display Fault On Entry	No AC Loss Display	Manual Bypass Limit 3
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Armed Bypass Display: If selected, pressing the BYPASS key will scroll bypassed zones while the system is armed.

Display Fault on Entry: Displays faults (open zones) during entry delay time.

No AC Loss Display: If selected, the AC loss message is not displayed on FALCDLCD keypads.

Bypass Limit 3: If selected, no more than 3 zones can be manually bypassed within a partition.

Q 21, L2 Enter the L2 digit from the table below.

L2 Entry	No Code Set Time	Daylight Saving Time	Keypad Extinguish	Keyfob Low Bat Display
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

No Code Set Time: If selected, allows Quick Command #3 to set time. Intended for low security installations.

Daylight Saving Time: If selected, the system will automatically adjust for daylight savings time (U.S. standard: First Sunday in April at 2:00 AM, the clock goes forward 1 hour; on the last Sunday in October at 2:00 AM, the clocks return to standard time).

Keypad Extinguish: If selected, the keypad display and LEDs will turn off after 1 minute of no key presses.

Keyfob Low Battery Display: This option determines whether low-battery messages from keyfobs will be displayed. If selected, display is enabled. Note that even if this display is disabled, keyfob low battery conditions can be checked by using the #56 Quick Command.

Q 21, L3 This location selects the type of clock displays. Enter the L3 digit from the table below.

L3 Entry	Clock		Day/Month		Display Time	Display Clock Fail
	Am/Pm	24hr	mm/dd	dd/mm		
0	✓		✓			
1		✓	✓			
2	✓			✓		
3		✓		✓		
4	✓		✓		✓	
5		✓	✓		✓	
6	✓			✓	✓	
7		✓		✓	✓	
8	✓		✓			✓
9		✓	✓			✓
A	✓			✓		✓
B		✓		✓		✓
C	✓		✓		✓	✓
D		✓	✓		✓	✓
E	✓			✓	✓	✓
F		✓		✓	✓	✓

Clock: Shows time in military time 00-23 hours. Otherwise 1-12 hours with A or P.

Day/Month: Time displayed as day then month (23, Feb. 1990) , otherwise, as US standard (Feb. 23, 1999).

NOTE: Clock set is always entered as 24-hour time, with order the same (in case LED.) See quick command [#][3].

Display Time: LCD only; displays time during status scroll on line 2, the last six digits.

NOTE: The partition descriptor should be limited to 10 characters when time is displayed or it will be overwritten by the time.

Display Clock Fail: LCD only; if the system goes through a hardware reset (loss of all power or watchdog reset), the clock will not be correct and a message will be displayed indicating this.

Q 21, L4 **Language Select:** This location selects the language for the keypad display as follows:

- | | |
|-------------|----------------|
| 0 = English | 3 = French |
| 1 = Italian | 4 = Dutch |
| 2 = Spanish | 5 = Portuguese |

Q 22 LOG OPTIONS

L1
 L2
 L3
 N/A L4

This question defines event log options.

Q 22, L1 Enter the L1 digit from the table below.

L1 Entry	Event Log by Part. / All	Enable #53 Log Command	Log Zone Alarms	Log Zone Troubles
0		✓		
1	✓			
2		✓		
3	✓		✓	
4		✓		✓
5	✓			✓
6		✓		✓
7	✓		✓	
8		✓		✓
9	✓			✓
A		✓		✓
B	✓			✓
C		✓	✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓		✓	✓

By Part. / All: If selected, only the events having occurred in the partition in which the keypad is mapped are displayed. Otherwise, all system events are displayed.

Enable #53 Log Command: If selected, users can view the log using the #53 command.

Log Zone Alarms/ Troubles: If selected, alarms and troubles are included in the event log.

Q22, L2 Enter the L2 digit for the desired events to be recorded in event log.

L2 Entry	Log Open	Log Close	Log System Events	Log Key Events
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q22, L3

Enter the L3 digit for the desired events to be recorded in event log.

L3 Entry	Log RF Battery	Log RF Supervision	Log Tamper	Log Bypass
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 23

BELL TIMEOUTS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1 burg timeout	L2 Fire timeout	L3 AC dial delay	L4 ring count

Q 23, L1/L2 Burglary Bell/Fire Bell Time-Out

Enter the L1 and L2 digits for the desired burglary and fire bell timeouts respectively, from the table below.

Entry	Burglary & Fire Bell Timeouts
1	3 MINUTES
2	6 MINUTES
3	9 MINUTES
4	12 MINUTES
5	15 MINUTES
6	18 MINUTES
7	21MINUTES
8	24 MINUTES

Entry	Burglary & Fire Bell Timeouts
9	27 MINUTES
A	30 MINUTES
B	33 MINUTES
C	36 MINUTES
D	39 MINUTES
E	42 MINUTES
F	INFINITE

Q23, L3

AC Dial Delay

AC loss reporting time may be delayed in 15 minute increments for values 1-F. Zero selects random delay, which can be anywhere between 10 to 225 minutes. Enter AC loss dial delay from the table below.

L3 Entry	AC Dial Delay (min)
0	random 10-255
1	15
2	30
3	45
4	60
5	75
6	90
7	105
8	120
9	135
A	150
B	165
C	180
D	195
E	210
F	255

Q23, L4 Ring Count

Enter the digit for the desired ring count (number of rings before the system picks up the phone line when downloading) from the table below.

L4 Entry	Ring Count
0	disabled*
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
A	10
B	11
C	12
D	13
E	14
F	15

* if ring count is disabled, the control cannot be accessed remotely (downloading).

Q 24 EXIT DELAYS/DIALER DELAY

L1 Part. 1
 L2 Part. 2
 L3 Part. 3
 L4 dial delay

This question defines exit delay and dialer delay values. Enter the digit for the desired exit delay for partitions 1-3 in L1-L3 as follows.

L1-L3 Entry	Exit Timeouts
0	4 MINUTES, 30 SECONDS
1	10 SECONDS
2	20 SECONDS
3	30 SECONDS
4	40 SECONDS
5	50 SECONDS
6	1 MINUTE
7	1 MINUTE, 10 SECONDS

L1-L3 Entry	Exit Timeouts
8	1 MINUTE, 20 SECONDS
9	1 MINUTE, 30 SECONDS
A	1 MINUTE, 40 SECONDS
B	1 MINUTE, 50 SECONDS
C	2 MINUTES
D	2 MINUTES, 10 SECONDS
E	2 MINUTES, 20 SECONDS
F	2 MINUTES, 30 SECONDS

NOTE: Entry delay time-outs are selected for each partition in questions 25-26.

Q24, L4 Dialer Delay

Enter the L4 digit for the desired dialer delay from the following table.

L4 Entry	Dialer Delay Seconds
0	15
1	20
2	25
3	30
4	40
5	50
6	60
7	75
8	90
9	105
A	120
B	150
C	180
D	210
E	240
F	255

Q 25/26 ENTRY DELAYS 1 and 2

L1 **L2** **L3** **L4**
 Part. 1 Part. 2 Part. 3 Part. 4
 (common)

These questions define entry delays 1 and 2 for each partition. Enter the digits from the following table:

L1-L4 Entry	Entry Delay Seconds
0	1
1	5
2	10
3	15
4	20
5	30
6	45
7	60

L1-L4 Entry	Entry Delay Seconds
8	75
9	90
A	105
B	120
C	150
D	180
E	210
F	240

Q 25 ENTRY DELAY 1

Default = 5555

Q 26 ENTRY DELAY 2

Default = 3333

Q 27 TEST REPORT TIME

L1 **L2** **L3** **L4**
 Hour Minute

This question sets the time of day that test reports will be sent. Enter the 2-digit hour in locations L1/L2. Enter the 2-digit minutes in locations L3/L4. All entries are decimal numbers.

Q 28, L1-L3 PAGER OPTIONS

L1 **L2** **L3** **L4**
 Part 1 Part. 2 Part.3 enables

This question defines the events that will cause reports to be sent to a pager (L1-L3) by partition and enables pager open/close reporting for each partition (L4). Enter the L1-L3 digits as follows:

L1-L3 Entry	Zone Alarm	Zone Trouble	User Open	User Close
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Zone Alarm/Zone Trouble: Upon an alarm or trouble, a message is sent to the partition's pager number. Only one event is reported at a time.

User Open/User Close: This enables system-wide open and/or close pager reports. See L4 to enable each partition's open/close pager report. Use the #7 command to enable/disable a particular user's open/close pager report.

Q 28, L4 **Pager Enables for Partitions and Follow Me**

L4 Entry	Enable User Page Part. 1	Enable User Page Part. 2	Enable User Page Part. 3	Enable #58 Follow Me
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Enable User Page Part. 1-3: If selected, the open and/or close events selected in L1-L3 above will be reported to a pager for users in a particular partition. This setting can be toggled by using the #8 command.

Enable #58 Follow Me: If selected, the user can change the pager/audio tone phone number using the #58 command.

Q 29/30 **NOT USED**

Q 31/32 **SOFT KEY FUNCTIONS (1&3/7&9/*&#)**

For L1 and L3 make selections from the table below (Q31, L1 = 1 & 3 keys; Q31, L3 = 7 & 9 keys; Q32, L1 = * & # keys).

L1/L3 Entry	Sounder Options				Relay Options			
	Silent	Keypad	Burg. Bell	Temporal	No Relay	Mom. seconds	Mom. Minutes	Toggle
0	✓				✓			
1		✓			✓			
2			✓		✓			
3				✓	✓			
4	✓					✓		
5		✓				✓		
6			✓			✓		
7				✓		✓		
8	✓						✓	
9		✓					✓	
A			✓				✓	
B				✓			✓	
C	✓							✓
D		✓						✓
E			✓					✓
F				✓				✓

Sounder Options: Selects the sounding that to occur when the designated soft keys are pressed.

Relay Options: Selects the type of relay action when the designated soft keys are pressed. See Questions 37-48 to program relays.

For L2 and L4 make selections from the table below (Q31, L2 = 1 & 3 keys; Q31, L4 = 7 & 9 keys; Q32, L2 = * & # keys).

L2/L4 Entry	Arm Away	Arm Stay	Pager Alert
0			
1	✓		
2		✓	
3	✓	✓	
4			✓
5	✓		✓
6		✓	✓
7	✓	✓	✓

Arm Away/Stay: Selects the arming mode that the designated soft key will activate.

Pager/Audio Tone Alert: If selected, a message will be sent to the pager/audio tone phone number when the designated soft key is pressed. This can be used to send a “help me” message. The message is sent to the pager number for the partition in which the initiating keypad is mapped.

Q 31 SOFT KEY FUNCTIONS FOR [1] & [3]/[7] & [9]

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
1&3 Keys		7&9 Keys	

Q 32 SOFT KEY FUNCTIONS FOR [*] & [#]

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox" value="N/A"/>	<input type="checkbox" value="N/A"/>
L1	L2	L3	L4
* & # Keys			

Q 33, L1-L3 AUTO ARM ENABLES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
part. 1	part. 2	part. 3	Up/About

This question enables auto arming for each partition (L1-L3). See Questions 34-36 for setting the auto-arm times for each partition. Enter the L1-L3 digits as follows:

L1-L3 Entry	Auto Arm	Audible Arm Warning	Instant Arming	Stay Arming
0				
1	✓			
3	✓	✓		
5	✓		✓	
7	✓	✓	✓	
9	✓			✓
B	✓	✓		✓
D	✓		✓	✓
F	✓	✓	✓	✓

Auto Arm: Arms the system in AWAY mode at time specified in Questions 34-36 for partitions 1-3, respectively.

Audible Arm Warning: If enabled, allows an audible sound and/or bell (Question 20, L2) to warn of auto-arming. If enabled, sound begins 30 seconds before arming. See Question 20, L2 for more information.

Instant Auto Arming: Arms the system with entry delay disabled.

Stay Auto Arming: Arms the system in STAY mode.

NOTE: All auto arm modes will force-arm the system. This means any open zones at the time of auto arming will be bypassed. To report these bypassed zones, program a bypass code in submode 2, Question 80, L1.

Q 33, L4 Up and About Enables

L4 Entry	Up and About Part. 1	Up and About Part. 2	Up and About Part. 3
0			
1	✓		
2		✓	
3	✓	✓	
4			✓
5	✓		✓
6		✓	✓
7	✓	✓	✓

Up and About: If no controlled zone is violated within a 24-hour period (beginning at midnight), a signal is sent to the central station. This can serve as a safety feature for elderly, infirm, or disabled persons.

Q 34-36 AUTO ARM TIMES

These questions set the auto arming time for each partition.

L1/L2: Enter hour 00-23 by entering the first digit of the hours (0-2) in L1 and the second digit (0-9) of the hours in L2. (00 = 12 midnight)

L3/L4: Enter minute 00-59 by entering the first digit of the minutes (0-5) in L3 and the second digit (0-9) of the minutes in L4.

For example, to set an auto arm time of 11:35pm, enter 2 in L1 and 3 in L2, then enter 3 in L3 and 5 in L4.

Q 34 AUTO ARM TIME PARTITION 1

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L1	L2	L3	L4
hours		minutes	

Q 35 AUTO ARM TIME PARTITION 2

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L1	L2	L3	L4
hours		minutes	

Q 36 AUTO ARM TIME PARTITION 3

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L1	L2	L3	L4
hours		minutes	

Q 37-48 TRIGGER/RELAY TYPES

These questions set the relay type for relays and triggers. Momentary trigger times in seconds or minutes for each partition are set in Questions 70 and 71.

Each trigger definition requires 2 locations to define its operation. L1 defines the partition in addition to the type that the trigger is to respond to. L2 completes the type definition entry. Some triggers types are not partition-independent functions, such as loss of AC. Triggers that are momentary can follow either a second timer or a minute timer as described for that trigger type. Each partition has both a minute and second programmable time. Note that all momentary triggers for a partition will follow the momentary time (seconds or minutes) programmed for that partition. Each timer may be programmed for 1-15.

Enter a relay type from the following table for each relay used.

P1	P2	P3	C	Relay Type	Description
00	40	80	C0	Disabled	
01	41	81	C1	Burg Bell no Bell Test	Turns on with the burg bell and turns off when the bell times out or is shut off.
02	42	82	C2	Fire Bell no Bell Test	Follows the same temporal pattern as the fire bell. Turns off when the fire bell times out or is turned off.
03	43	83	C3	Partition Armed	Is on when the selected partition is armed otherwise is off.
04	44	84	C4	Partition Ready	Is on when the selected partition is disarmed otherwise is off.
05	45	85	C5	In Entry Delay	Is on if the selected partition is in entry delay, otherwise is off.
06	46	86	C6	In Exit Delay	Is on if the selected partition is in exit delay, otherwise is off.
07	47	87	C7	Armed Instant	Is on if the selected partition is armed in the instant mode, otherwise is off.
08	48	88	C8	Armed Stay	Is on if the selected partition is armed in the stay mode, otherwise is off.
09	49	89	C9	Sounder on/pulsing	Follows either a pulsing sounder or steady sounder for the selected partition.
0A	4A	8A	CA	Chime	Is activated for 1 second if a chime zone is activated for the programmed partition.
0B	n/a	n/a	n/a	Line Seize (System)	System trigger is on if the home phones are disconnected.
0C	n/a	n/a	n/a	Phone Fail (System)	System trigger is on if the phone line monitor has detected the phone line as broken.
0D	n/a	n/a	n/a	AC Loss (System)	System trigger is on when no AC loss is detected.
0E	n/a	n/a	n/a	Low Battery (System)	System trigger is on when the battery voltage falls below 10.2 volts
0F	4F	8F	CF	24 Hr Zone in Trouble	On if any 24-hour trouble in the selected partition is active.
10	50	90	D0	24 Hr Zone Alarmed	On if any 24-hour alarm zone in the selected partition is active.
11	51	91	D1	Instant Zone Faulted	On if any instant zone in the selected partition is faulted.
12	52	92	D2	Delay Zone Faulted	On if any delay zone is faulted in the selected partition.
13	53	93	D3	Interior Zone Faulted	On if any interior zone is faulted in the selected partition.
14	54	94	D4	Zone Tamper	On if any Tamper has occurred on the zone. Includes RF and hardwired if double balanced.
15	55	95	D5	RF Low Battery	On if any low battery has been detected on an RF zone for that partition.
16	56	96	D6	RF Supervision	On if any RF zone has not been received for the programmed supervision interval.
17	n/a	n/a	n/a	Comm. Fail (System)	On when comm fails occurs, off after code is entered, by partition.
18	58	98	D8	Key Tamper, mom. Sec	By partition, if 21 keys are entered without a valid code, keypad tamper activates momentarily for the number of seconds programmed for that partition.
19	59	99	D9	Duress Code, mom. Sec	By partition, momentary output based on Seconds. Activated when user codes 61-64 are enabled for duress (ambush).
1A	5A	9A	DA	Bell Strobe - Internal, No dings	On with either fire or burg, off with code.
1B	5B	9B	DB	Bell Strobe - External, with dings	With arm/disarm dings. Latches on with either a fire or burg bell, off with code.
1C	5C	9C	DC	Trigger Zone, mom Minutes	Follows zones assigned to zone type 9. Momentary based on minutes.
1D	5D	9D	DD	Trigger Zone, mom. Seconds	Follows zones assigned to zone type 9. Momentary based on seconds.
1E	5E	9E	DE	Door Strike, mom. Seconds	Activates for seconds upon valid user code or user code 50-60 as enabled in installer programming.
1F	5F	9F	DF	Shock Reset (*) Seconds	Momentary trigger for seconds when the "*" key is pressed.
20	60	A0	E0	CS Test Momentary Secs.	Momentary second trigger, when CS test transmits to CS.
21	61	A1	E1	Alarm/Restore by partition	By partition, goes on with alarm and off when all zones for the partition have met their restore requirements.
22	62	A2	E2	2-way voice, on after seize rel.	Works in conjunction with a two way voice module. The trigger activates after the dialer is done for the minutes programmed for partition 1. The keypad sounders are silenced until either bell cut-off or a valid user code is entered.
23	63	A3	E3	Momentary by Seconds (fob,soft)	May be activated by any soft key if programmed.
24	64	A4	E4	Momentary by Minutes (fob,soft)	May be activated by any soft key if programmed.
25	65	A5	E5	Toggle (Keyfob, softkeys)	May be activated by keyfobs or soft keys.
26	66	A6	E6	Follows Zn Loop, Trig=Zn 1-20	For the first 20 zones only. The trigger offset is equal to the zone number. Example trigger 2 follows the normal/off normal state of zone 2.
27	67	A7	E7	Follows Zn Loop, Trig=Zn 21-40	Same as type 26, but for zones/triggers 21-40
28	68	A8	E8	On zn alm, off clear alm mem alarm memory zones 1-20	Relays 1-20 correspond to zones 1-20. On with zone alarm, off when is cleared.
29	69	A9	E9	On zn alm, off clear alm mem alarm memory zones 21-40	Relays 1-20 correspond to zones 21-40. On with zone alarm, off when is cleared.
2A	6A	AA	EA	Zone alm/rest - Z 1-20	Relays 1-20 correspond to zones 1-20. On with zone alarm, off when restore for zone occurs.
2B	6B	AB	EB	Zone alm/rest - Z 21-40	Relays 1-20 correspond to zones 21-40. On with zone alarm, off when restore for zone occurs.
2C	6C	AC	EC	Sys Bell, Internal (no Dings)	Follows bell output, but does not respond to bell test.
2D	6D	AD	ED	Sys Bell, External(with Dings)	Follows bell output, but responds to bell test.

Q 37 RELAY 1 and 2 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 1		Relay 2	

Q 38 RELAY 3 and 4 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 3		Relay 4	

Q 39 RELAY 5 and 6 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 5		Relay 6	

Q 40 RELAY 7 and 8 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 7		Relay 8	

Q 41 RELAY 9 and 10 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 9		Relay 10	

Q 42 RELAY 11 and 12 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 11		Relay 12	

Q 43 RELAY 13 and 14 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 13		Relay 14	

Q 44 RELAY 15 and 16 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 15		Relay 16	

Q 45 RELAY 17 and 18 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 17		Relay 18	

Q 46 RELAY 19 and 20 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relay 19		Relay 20	

Q 47 TRIGGER 1 and 2 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trigger 1		Trigger 2	

Q 48 TRIGGER 3 and 4 TYPES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trigger 3		Trigger 4	

Q 49-52 KEYPAD MAPPING

During initial installation, the system reads the addresses of the connected keypads and automatically maps those keypads to partition 1, therefore, programming of Questions 49-52 is unnecessary. Simply use the #0 quick command to assign each keypad to the appropriate partition.

IMPORTANT: Make sure keypads of the same type have been set to unique addresses. See *Keypad Addressing* paragraph in section 5 for details on setting the keypad addresses.

Once a keypad's partition assignment has been changed (using the #0 command), the following questions can be used to enable/disable keypad addresses.

NOTE: In the following tables, LCD = FALCDKP keypad; Non-LCD = FALEDKP keypad. (Set keypad addresses using the keypad's DIP switches.)

Q49-52 L1 Enable keypad addresses 5-8.

L1 Entry	LCD Keypad Address 5	LCD Keypad Address 6	LCD Keypad Address 7	LCD Keypad Address 8
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q49-52 L2 Enable keypad addresses 1-4.

L2 Entry	LCD Keypad Address 1	LCD Keypad Address 2	LCD Keypad Address 3	LCD Keypad Address 4
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q49-52 L3 Enable non-LCD keypad addresses 5-8.

L3 Entry	Non-LCD Address 5	Non-LCD Address 6	Non-LCD Address 7	Non-LCD Address 8
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q49-52 L4 Enable non-LCD keypad addresses 1-4.

L4 Entry	Non-LCD Address 1	Non-LCD Address 2	Non-LCD Address 3	Non-LCD Address 4
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 49 KEYPAD MAPPING for PARTITION 1

L1 L2 L3 L4
 LCD Keypads Non-LCD keypads

This question assigns keypads to partition 1. Enter the digits from the tables above.

Q 50 KEYPAD MAPPING for PARTITION 2

L1 L2 L3 L4
 LCD Keypad Non-LCD keypad

This question assigns keypads to partition 2. Enter the digits from the tables above.

Q 51 KEYPAD MAPPING for PARTITION 3 PART.

L1 L2 L3 L4
 LCD Keypad Non-LCD keypad

This question assigns keypads to partition 3. Enter the digits from the tables above.

Q 52 KEYPAD MAPPING for COMMON

L1 L2 L3 L4
 LCD Keypad Non-LCD keypad

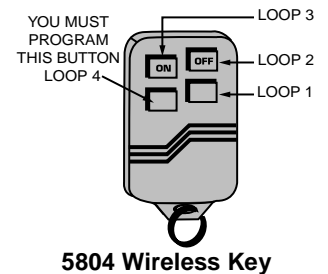
This question assigns keypads to common partition. Enter the digits from the tables above.

Q 54-69 KEYFOB BUTTON FUNCTIONS and USERS

The following even-numbered questions set the keyfob button functions. The odd-numbered questions assign the partition in which the keyfob functions and the associated users for open/close reporting. See Installer Mode 3, Questions 49-56 to assign the number of buttons used by each keyfob and to store their serial numbers.

For even numbered questions, enter the digits in each location as follows:

L1-L4 Entry	Keyfob Function	L1-L4 Entry	Keyfob Function
0	Disabled	6	Keypad Fire
1	Disarm	7	Keypad Panic
2	Arm Away	8	Keypad Aux.
3	Arm Stay	9	Relay Type 23 (mom. seconds)
4	Arm Instant	A	Relay Type 24 (mom. minutes)
5	Arm Stay/Instant	B	Relay Type 25 (toggle)



For odd-numbered questions, enter the digits as follows (L1: not used):

L2: Enter the primary partition number (P1=1; P2=2; P3=3) for arming/disarming for this keyfob. This defines the partition in which the keyfob is located.

L3/L4: Enter the user number (01-64) associated with this keyfob. Enter the first digit of the user number in L3 and enter the second digit in L4.

Q 54 KEYFOB 1 FUNCTIONS

L1 L2 L3 L4
 Button 1 Button 2 Button 3 Button 4

Q 55 KEYFOB 1 USER

L1 L2 L3 L4
 Prim. arm Part. User number

Q 56 KEYFOB 2 FUNCTIONS

L1 L2 L3 L4
 Button 1 Button 2 Button 3 Button 4

Q 57 KEYFOB 2 USER

L1 L2 L3 L4
 Prim. arm Part. User number

Q 58 KEYFOB 3 FUNCTIONS

L1 L2 L3 L4
 Button 1 Button 2 Button 3 Button 4

Q 59 KEYFOB 3 USER

L1 L2 L3 L4
 Prim. arm Part. User number

Q 60 KEYFOB 4 FUNCTIONS

L1 L2 L3 L4
 Button 1 Button 2 Button 3 Button 4

Q 61 KEYFOB 4 USER

L1 L2 L3 L4
 Prim. arm Part. User number

Q 62 KEYFOB 5 FUNCTIONS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Button 1	Button 2	Button 3	Button 4

Q 64 KEYFOB 6 FUNCTIONS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Button 1	Button 2	Button 3	Button 4

Q 66 KEYFOB 7 FUNCTIONS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Button 1	Button 2	Button 3	Button 4

Q 68 KEYFOB 8 FUNCTIONS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Button 1	Button 2	Button 3	Button 4

Q 63 KEYFOB 5 USER

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Prim. arm	Part.	User number	

Q 65 KEYFOB 6 USER

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Prim. arm	Part.	User number	

Q 67 KEYFOB 7 USER

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Prim. arm	Part.	User number	

Q 69 KEYFOB 8 USER

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Prim. arm	Part.	User number	

Q 70/71 RELAY/TRIGGER TIME for MOMENTARY OUTPUTS

These questions set the relay/trigger time for each partition. The time set applies to all triggers within that partition. From the following table, enter the desired time the relay/triggers should remain activated (for Question 70, the times are in minutes, for Question 71 the times are in seconds):

L1-L4 Entry	RELAY TIME (Q70=min/Q71=sec)
0	same as entering "1"
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
A	10
B	11
C	12
D	13
E	14
F	15

Q 70 RELAY/TRIGGER TIME MINUTES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Part.1	Part. 2	Part. 3	Common

Q 71 RELAY/TRIGGER TIME SECONDS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1	L2	L3	L4
Part.1	Part. 2	Part. 3	Common

Q 72-75 OPEN/CLOSE CENTRAL STATION REPORT DISABLES

These questions set the open/close report to central station option for each user. Users are normally enabled for open/close reporting. Selecting the option for a user disables the open/close central station report for that user. See Question 28, L1-L3 for enabling user open/close message to pagers.

Q 72- OPEN/CLOSE REPORT DISABLES FOR USERS 1-16

L1
1-4
 L2
5-8
 L3
9-12
 L4
13-16

Q72, L1 Users 1-4 Open/Close Report Disable (Checkmark means report is disabled)

L1 Entry	User 1	User 2	User 3	User 4
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q72, L2 Users 5-8 Open/Close Report Disable

L1 Entry	User 5	User 6	User 7	User 8
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q72, L3 Users 9-12 Open/Close Report Disable

L1 Entry	User 9	User 10	User 11	User 12
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q72, L4 Users 13-16 Open/Close Report Disable

L1 Entry	User 13	User 14	User 15	User 16
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 73- OPEN/CLOSE REPORT DISABLES FOR USERS 17-32

L1
17-20

L2
21-24

L3
25-28

L4
29-32

Q 73, L1 Users 17-20 Open/Close Report Disable

L1 Entry	User 17	User 18	User 19	User 20
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 73, L2 Users 21-24 Open/Close Report Disable

L2 Entry	User 21	User 22	User 23	User 24
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 73, L3 Users 25-28 Open/Close Report Disable

L3 Entry	User 25	User 26	User 27	User 28
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 73, L4 Users 29-32 Open/Close Report Disable

L4 Entry	User 29	User 30	User 31	User 32
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 74- OPEN/CLOSE REPORT DISABLES FOR USERS 33-48

L1
33-36

L2
37-40

L3
41-44

L4
45-48

Q 74, L1 Users 33-36 Open/Close Report Disable

L1 Entry	User 33	User 34	User 35	User 36
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 74, L2 Users 37-40 Open/Close Report Disable

L2 Entry	User 37	User 38	User 39	User 40
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 74, L3 Users 41-44 Open/Close Report Disable

L3 Entry	User 41	User 42	User 43	User 44
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 74, L4 Users 45-48 Open/Close Report Disable

L4 Entry	User 45	User 46	User 47	User 48
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q 75- OPEN/CLOSE REPORT DISABLES FOR USERS 49-64

L1
49-52

L2
53-56

L3
57-60

L4
61-64

Q75, L1 Users 49-52 Open/Close Report Disable

L1 Entry	User 49	User 50	User 51	User 52
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q75, L2 Users 53-56 Open/Close Report Disable

L2 Entry	User 53	User 54	User 55	User 56
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q75, L3 Users 57-60 Open/Close Report Disable

L3 Entry	User 57	User 58	User 59	User 60
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Q75, L4 Users 61-64 Open/Close Report Disable

L4 Entry	User 61	User 62	User 63	User 64
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Submode 2: ZONE PROGRAMMING / REPORT CODES

Press [*] [BYPASS] while in Installer Mode 1, then press [2] to enter Zone Programming submode.

QUESTION 01-48 ZONE TYPES AND ATTRIBUTES

 L1 L2 L3 L4
 Zone Part./ silent/ stay/chime
 Type config swing dial delay

These questions are used to program zone information. Use the separate Programming Form to enter the actual values for each zone. For each of the following questions, enter the digits as follows:

L1

Zone Types

L1 Entry	ZONE TYPE	DESCRIPTION
	Controlled Types	
0	Disabled	Will not affect the system in any way.
1	Instant	An instant zone shows not ready when disarmed and goes immediately in to alarm when faulted while armed.
2	Delay	A controlled zone, that is bypassed during exit and starts entry time 1, when violated when the system is armed. If the system is not disarmed at before the end of entry time, an alarm is generated.
3	Delay 2	Same as Type 2 except uses the entry 2 time.
4	Interior	Upon arming, this zone begins system exit delay and will cause an alarm if faulted when exit delay ends. With system armed, faulting an entry delay zone causes "interior" zones to begin the respective entry delay (depending on the entry zone faulted), during which time the zone can be faulted. Interior zones cause immediate alarms if faulted without an entry zone being activated first (while the system is armed).
5	Day Zone	When faulted, causes trouble condition (keypad sounder will pulse, displays "Not Ready," and the trouble report will be sent if the zone is not restored after 15 seconds) when disarmed, or an alarm while armed.
	24-Hour Types	
8	Keyswitch	Used to arm/disarm the control by momentary, non-latching switch.
9	Trigger Zone	Zone's status (fault/normal) determines activation of associated momentary trigger (e.g. button can activate a trigger). See trigger programming in submode 1, Questions 37-48 to enable appropriate trigger/relay using relay type 1C (momentary minutes) or 1D (momentary seconds).
A	Trouble Zone	Produces a trouble condition. Keypad sounder will pulse if enabled (L3), keypad will display "trouble," and the zone report code will be sent if the zone is not restored after 15 seconds.
B	Alarm Zone	Activates burg bell on any faulted condition. If zone is off-normal after alarm memory is cleared, the alarm is converted to a trouble display.
C	Alarm/Trouble	24-hour zone that causes an alarm with the burg bell on short and a trouble condition on an open (keypad sounder will pulse, displays "Not Ready," and the trouble report will be sent if the zone is not restored after 15 seconds). Must be EOL to derive trouble condition. Dialer sends zone alarm code for short and trouble code for open.
E	Fire No Verification	Fire zone that works like a 24-hour alarm zone but uses the fire bell.
F	Fire With Verification	<p>Intended for a 4-wire smoke detector connected to the smoke power terminals. A short produces a temporal fire bell and an open produces a zone trouble. Must be EOL to report the trouble condition.</p> <p>Verification process: Verification will not occur if any fire zone in the system is already in alarm. Upon detection of a short, power is removed from the smoke detector power terminals for 8 seconds. After restoring power, the system waits another 4 seconds then tests the zone again. If a short still exists, an alarm occurs.</p> <p>Fire Trouble: Fire trouble can occur two different ways. The first way is for the loop to open. The second way is if the loop is still shorted after a fire alarm has been silenced and the user clears alarm memory. The alarm is changed to a trouble. No trouble is reported to the CS at this time (serves as a reminder to let the end user know the zone is not active). On clearing alarm memory, if a fire verification zone is still shorted the verification process is repeated about every 4 minutes to try to reset the smoke detector. A tamper on a fire zone results in a trouble, not alarm.</p>

L2: Partition, zone configuration, supervision options

L2 Entry	Partition				Hardwire Loop Type			Wireless Supervision	
	1	2	3	C	EOL	N/C	N/O	Supervise	Tamper
0	✓				✓			✓	✓
1		✓			✓			✓	✓
2			✓		✓			✓	✓
3				✓	✓			✓	✓
4	✓					✓			✓
5		✓				✓			✓
6			✓			✓			✓
7				✓		✓			✓
8	✓						✓	✓	
9		✓					✓	✓	
A			✓				✓	✓	
B				✓			✓	✓	

Partition: Select the partition in which the zone is located.

Hardwire Loop Type: If this is a hardwire zone, select the type of loop. This selection **does not** apply if double-balanced loops or zone doubling is used.

EOL = use a 2.2k loop resistor. Not applicable for double-balanced, fast, or zone doubling zones.

NC/NO = Not applicable for double-balanced, fast, or zone-doubling zones.

Wireless Supervision – If this is a wireless zone, select whether it will be supervised and/or have tamper protection active.

L3

L3 Entry	Silent Zone	Swinger
0		
1	✓	
2		✓
3	✓	✓

Silent Zone – If selected, alarms will be sent to the central station but no sounding (bell, keypad sounder) will occur.

Swinger – If selected, this zone will stop reporting alarms during a single armed period if the number of alarms within that armed period exceeds the number set in Question 18, L4.

L4

L4 Entry	Stay	Auto-Stay	Chime	Dial Delay
0				
1	✓			
2		✓		
3	✓	✓		
4			✓	
5	✓		✓	
6		✓	✓	
7	✓	✓	✓	
8				✓
9	✓			✓
A		✓		✓
B	✓	✓		✓
C			✓	✓
D	✓		✓	✓
E		✓	✓	✓
F	✓	✓	✓	✓

Stay – If selected, zone will be bypassed if the system is armed in STAY mode.

Auto-Stay – If selected, zone will be automatically bypassed if a delay zone (e.g., entry/exit door) is not faulted during exit delay.

Chime – If selected, a fault on this zone while the system is disarmed will cause the keypad to emit a 1-second beep.

Dial Delay – If selected, transmission of alarms on this zone will be delayed by the time selected in Question 24, L4.

Typical Question 01-48 Layout

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1 Zone Type	L2 Part./ config	L3 silent/ swing	L4 stay/chime dial delay

Q 01 ZONE 1 (type/attributes)
Q 02 ZONE 2 (type/attributes)
Q 03 ZONE 3 (type/attributes)
Q 04 ZONE 4 (type/attributes)
Q 05 ZONE 5 (type/attributes)
Q 06 ZONE 6 (type/attributes)
Q 07 ZONE 7 (type/attributes)
Q 08 ZONE 8 (type/attributes)
Q 09 ZONE 9 (type/attributes)
Q 10 ZONE 10 (type/attributes)
Q 11 ZONE 11 (type/attributes)
Q 12 ZONE 12 (type/attributes)
Q 13 ZONE 13 (type/attributes)
Q 14 ZONE 14 (type/attributes)
Q 15 ZONE 15 (type/attributes)
Q 16 ZONE 16 (type/attributes)
Q 17 ZONE 17 (type/attributes)
Q 18 ZONE 18 (type/attributes)
Q 19 ZONE 19 (type/attributes)
Q 20 ZONE 20 (type/attributes)
Q 21 ZONE 21 (type/attributes)
Q 22 ZONE 22 (type/attributes)
Q 23 ZONE 23 (type/attributes)
Q 24 ZONE 24 (type/attributes)

Q 25 ZONE 25 (type/attributes)
Q 26 ZONE 26 (type/attributes)
Q 27 ZONE 27 (type/attributes)
Q 28 ZONE 28 (type/attributes)
Q 29 ZONE 29 (type/attributes)
Q 30 ZONE 30 (type/attributes)
Q 31 ZONE 31 (type/attributes)
Q 32 ZONE 32 (type/attributes)
Q 33 ZONE 33 (type/attributes)
Q 34 ZONE 34 (type/attributes)
Q 35 ZONE 35 (type/attributes)
Q 36 ZONE 36 (type/attributes)
Q 37 ZONE 37 (type/attributes)
Q 38 ZONE 38 (type/attributes)
Q 39 ZONE 39 (type/attributes)
Q 40 ZONE 40 (type/attributes)
Q 41 ZONE 41 (type/attributes)
Q 42 ZONE 42 (type/attributes)
Q 43 ZONE 43 (type/attributes)
Q 44 ZONE 44 (type/attributes)
Q 45 ZONE 45 (type/attributes)
Q 46 ZONE 46 (type/attributes)
Q 47 ZONE 47 (type/attributes)
Q 48 ZONE 48 (type/attributes)

QUESTION 49-72 ZONE REPORT CODES

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L1	L2	L3	L4
1 st digit	2 nd digit	1 st digit	2 nd digit
zone "a"		zone "b"	

These questions assign zone report codes. Any zone with a reporting code other than AA will report to the CS. For single-digit report formats, enter only L1 and L3 digits for each zone. For 2-digit report formats, enter the event code in L1/L3 and the zone number in L2/L4 for each zone. For CID the first digit is used for the event code and the zone is the actual zone number. Refer to the **Central Station Reporting Formats** section for details on Contact ID reporting codes. Use the separate Programming Form to enter the actual values for each zone's report.

L1 and L2: Enter the first and second digits (if applicable) of the report code for the first zone (zone "a") listed in the question.

L3 and L4: Enter the first and second digits of the report code for the next zone (zone "b").

Reports for...

	Zone "a"	Zone "b"		Zone "a"	Zone "b"
Q 49	Zone 1	Zone 2	Q 61	Zone 25	Zone 26
Q 50	Zone 3	Zone 4	Q 62	Zone 27	Zone 28
Q 51	Zone 5	Zone 6	Q 63	Zone 29	Zone 30
Q 52	Zone 7	Zone 8	Q 64	Zone 31	Zone 32
Q 53	Zone 9	Zone 10	Q 65	Zone 33	Zone 34
Q 54	Zone 11	Zone 12	Q 66	Zone 35	Zone 36
Q 55	Zone 13	Zone 14	Q 67	Zone 37	Zone 38
Q 56	Zone 15	Zone 16	Q 68	Zone 39	Zone 40
Q 57	Zone 17	Zone 18	Q 69	Zone 41	Zone 42
Q 58	Zone 19	Zone 20	Q 70	Zone 43	Zone 44
Q 59	Zone 21	Zone 22	Q 71	Zone 45	Zone 46
Q 60	Zone 23	Zone 24	Q 72	Zone 47	Zone 48

QUESTION 73-85 SYSTEM REPORT CODES

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L1	L2	L3	L4
1 st digit	2 nd digit	1 st digit	2 nd digit

These questions enable the reporting of the event indicated if the value is not "A" for single digit events or "AA" for double-digit events. Selections can be 0-9, A-F. Refer to the **Central Station Reporting Formats** section for details on Contact ID reporting codes. Use the separate Programming Form to enter the actual values for each zone.

For each of the following questions, enter the report code digits as follows:

	L1	L2	L3	L4
Q 73	Ambush 1st digit	Ambush 2nd digit	AC Loss 1st digit	AC Loss 2nd digit
Q 74	Keypad *&# 1st digit	Keypad *&# 2nd digit	Battery Loss 1st digit	Battery Loss 2nd
Q 75*	Open Report	Close Report	n/a	n/a
Q 76	Keypad 7&9 1st digit	Keypad 7&9 2nd digit	Keypad 1&3 1st digit	Keypad 1&3 2nd digit
Q 77	Key Tamper 1st digit	Key Tamper 2nd digit	Cs Test Report 1st digit	Cs Test 2nd digit
Q 78*	<i>false alarm reports:</i>			
	Exit Error	Recent Close	Lockout	Cancel
Q 79	Bell Supervision 1st digit	Bell Supervision 2nd digit	n/a	n/a
Q 80*	Bypass	Restore	Fire Trouble	Zone Trouble
Q 81	Download Report 1st digit	Download 2nd digit	Walk Test Report 1st digit	Walk Test 2nd digit
Q 82	Event Log 90% Full 1st	Event Log 90% Full 2nd	Event Log 100% Full 1st	Event Log 100% 2nd
Q 83*	<i>RF supervision reports:</i>			
	Supervision	Tamper	Low Battery	Trouble Restore
Q 84	Arm Disable 1st digit	Arm Disable 2nd digit	n/a	n/a
	(must be "d" if disable arming is set in Q 19, l3)			
Q 85	Up-About 1st digit	Up-About 2nd digit	Clock Fail Report 1st digit	Clock Fail 2nd digit

QUESTION 90 FIRST RF ZONE/FIRST DOUBLED ZONE

L1 L2 L3 L4
 First RF Zone First Doubled Zone

This question assigns the first RF zone and the first hardware doubled zone. Enter digits as follows:

L1/L2: Enter the 2-digit zone number of first RF zone (wireless zone numbers must start after the last hardware zone). All zones starting with this number and higher will respond only to inputs from the RF receiver. The RF receiver is enabled in submode 1, Question 17, L2. Entering 00 means there are no RF zones.

L3/L4: Enter the 2-digit zone number of the first doubled zone (use only zones 01, 03, 05, 07, 09, 11, 13, 15 as first doubled zone). This option doubles the number of hardwired zones from the first zone entered here upward. That is, loop 1 becomes zones 1 and 2, loop 2 becomes zones 3 and 4, etc. **Zone doubling must begin on an odd-numbered zone only.** This can provide up to 32 hardware zones. If this is selected, there will be 16 zones available as wireless zones.

QUESTION 91-93 CROSSED ZONES

These questions assign up to 2 pairs of cross zones (questions 91/92) and set the cross zone timing (question 93) for each pair. Zones may be crossed without respect to partitioning.

Q 91 CROSSED ZONES GROUP 1

Enter the digits as follows:

L1 L2 L3 L4
 First zone Second zone

Q 92 CROSSED ZONES GROUP 2

Enter the digits as follows:

L1 L2 L3 L4
 First zone Second zone

When one of the zones assigned in a cross zone group is tripped, a timer begins (Question 93 sets the timer). An alarm will be sent only if the other zone in the group is tripped within the cross zone time. Otherwise no alarm is sent.

L1/L2: First and second digit respectively of first zone of cross zone group 1

L3/L4: First and second digit respectively of second zone of cross zone group 1

Example: Locations 1,2 = 15; Locations 3,4 = 25: This results in a cross between zones 15 & 25.

Q 93 CROSSED ZONES TIME

This option sets the time period (number of seconds) in which both zones in a cross zone group must be faulted for an alarm to be sent. The timer begins when either of the zones in a cross zone group is faulted. Enter the digits as follows:

L1 L2 L3 L4
 Group 1 Group 2 not used

L1: Enter the cross zone time for group 1.

L2: Enter the cross zone time for group 2.

L1-L2 Entry	Cross Zone Time (secs.)
0	15
1	30
2	45
3	60
4	75
5	90
6	105
7	120
8	135
9	150
A	165
B	180
C	195
D	210
E	225
F	240

Submode 3: WIRELESS TRANSMITTER PROGRAMMING

Press [*] [BYPASS] while in Installer Mode 1, then press [3] to enter Wireless Programming submode.

QUESTION 01-48 WIRELESS ZONE CONFIGURATION/SERIAL NUMBER

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L1	L2	L3	L4	L5	L6	L7	L8	L9
No. of zones	enable RF	Transmitter 7-digit serial number						

These questions assign the number of zones used by each transmitter and store the transmitter serial numbers. See Installer Mode 2, Question 90 for assigning the first wireless zone number. Use the separate Programming Form to enter the actual values for each zone.

L1: Number of zones used on the transmitter (1-4).

L2: Should always be "1," unless you want to swap the order of zone numbering for the transmitter's loops 1 and 2, in which case enter "9."

L3-L9: Enter the transmitter's 7-digit serial number.

- | | | | |
|------|------------------|------|------------------|
| Q 01 | WIRELESS ZONE 1 | Q 25 | WIRELESS ZONE 25 |
| Q 02 | WIRELESS ZONE 2 | Q 26 | WIRELESS ZONE 26 |
| Q 03 | WIRELESS ZONE 3 | Q 27 | WIRELESS ZONE 27 |
| Q 04 | WIRELESS ZONE 4 | Q 28 | WIRELESS ZONE 28 |
| Q 05 | WIRELESS ZONE 5 | Q 29 | WIRELESS ZONE 29 |
| Q 06 | WIRELESS ZONE 6 | Q 30 | WIRELESS ZONE 30 |
| Q 07 | WIRELESS ZONE 7 | Q 31 | WIRELESS ZONE 31 |
| Q 08 | WIRELESS ZONE 8 | Q 32 | WIRELESS ZONE 32 |
| Q 09 | WIRELESS ZONE 9 | Q 33 | WIRELESS ZONE 33 |
| Q 10 | WIRELESS ZONE 10 | Q 34 | WIRELESS ZONE 34 |
| Q 11 | WIRELESS ZONE 11 | Q 35 | WIRELESS ZONE 35 |
| Q 12 | WIRELESS ZONE 12 | Q 36 | WIRELESS ZONE 36 |
| Q 13 | WIRELESS ZONE 13 | Q 37 | WIRELESS ZONE 37 |
| Q 14 | WIRELESS ZONE 14 | Q 38 | WIRELESS ZONE 38 |
| Q 15 | WIRELESS ZONE 15 | Q 39 | WIRELESS ZONE 39 |
| Q 16 | WIRELESS ZONE 16 | Q 40 | WIRELESS ZONE 40 |
| Q 17 | WIRELESS ZONE 17 | Q 41 | WIRELESS ZONE 41 |
| Q 18 | WIRELESS ZONE 18 | Q 42 | WIRELESS ZONE 42 |
| Q 19 | WIRELESS ZONE 19 | Q 43 | WIRELESS ZONE 43 |
| Q 20 | WIRELESS ZONE 20 | Q 44 | WIRELESS ZONE 44 |
| Q 21 | WIRELESS ZONE 21 | Q 45 | WIRELESS ZONE 45 |
| Q 22 | WIRELESS ZONE 22 | Q 46 | WIRELESS ZONE 46 |
| Q 23 | WIRELESS ZONE 23 | Q 47 | WIRELESS ZONE 47 |
| Q 24 | WIRELESS ZONE 24 | Q 48 | WIRELESS ZONE 48 |

QUESTION 49-56 KEYFOB CONFIGURATION/SERIAL NUMBER

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
L1	L2	L3	L4	L5	L6	L7	L8	L9
No. of buttons	enable RF	Keyfob 7-digit serial number						

These questions assign the number of buttons used by each keyfob and store the keyfob's serial numbers. See Installer Mode 1, Questions 54-69 to assign the keyfob button functions. Use the separate Programming Form to enter the actual values for each keyfob.

L1: Number of buttons used on the transmitter (1-4).

L2: Should always be "1."

L3-L9: Enter the keyfob's 7-digit serial number.

Q 49 KEYFOB 1 CONFIGURATION/SERIAL NUMBER

Q 50 KEYFOB 2 CONFIGURATION/SERIAL NUMBER

Q 51 KEYFOB 3 CONFIGURATION/SERIAL NUMBER

Q 52 KEYFOB 4 CONFIGURATION/SERIAL NUMBER

Q 53 KEYFOB 5 CONFIGURATION/SERIAL NUMBER

Q 54 KEYFOB 6 CONFIGURATION/SERIAL NUMBER

Q 55 KEYFOB 7 CONFIGURATION/SERIAL NUMBER

Q 56 KEYFOB 8 CONFIGURATION/SERIAL NUMBER

Submode 4: DESCRIPTOR PROGRAMMING

Press [*] [BYPASS] while in Installer Mode 1, then press [4] to enter Descriptor Programming submode.

To create a descriptor:

1. Press [*] then the Question number representing the zone number desired.
2. Press the INSTANT key to move the cursor to the desired location within that question.
3. Press one of the character display keys (see table below) to display the character set.
4. When the desired character appears, press INSTANT. The character is accepted and the cursor moves to the next location. To move to a previous location to change a character, if needed, press CODE.
5. When the descriptor is complete, accept the entry by pressing [*] then the next question number.

Refer to the following chart when entering descriptors:

Key	Function
INSTANT	Accepts displayed character and moves cursor forward one position.
CODE	Moves cursor backward one position.
[7]	Displays next character in character set.
[9]	Displays previous character in character set.
[#] [7]	Automatically scrolls character set display forward.
[#] [9]	Automatically scrolls character set display backward.
[8]	Stops auto scrolling.
[0]	Inserts a blank character.

QUESTION 01-48 ZONE DESCRIPTORS FOR ZONES 01-48

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16

These questions allow you to enter up to 16 descriptor digits for each zone. Each digit corresponds to a single descriptor character. Use the separate Programming Form to enter the actual descriptors for each zone.

DESCRIPTOR FOR:

- Q 01 ZONE 1
- Q 02 ZONE 2
- Q 03 ZONE 3
- Q 04 ZONE 4
- Q 05 ZONE 5
- Q 06 ZONE 6
- Q 07 ZONE 7
- Q 08 ZONE 8
- Q 09 ZONE 9
- Q 10 ZONE 10
- Q 11 ZONE 11
- Q 12 ZONE 12
- Q 13 ZONE 13
- Q 14 ZONE 14
- Q 15 ZONE 15
- Q 16 ZONE 16
- Q 17 ZONE 17
- Q 18 ZONE 18
- Q 19 ZONE 19
- Q 20 ZONE 20
- Q 21 ZONE 21
- Q 22 ZONE 22
- Q 23 ZONE 23
- Q 24 ZONE 24

DESCRIPTOR FOR:

- Q 25 ZONE 25
- Q 26 ZONE 26
- Q 27 ZONE 27
- Q 28 ZONE 28
- Q 29 ZONE 29
- Q 30 ZONE 30
- Q 31 ZONE 31
- Q 32 ZONE 32
- Q 33 ZONE 33
- Q 34 ZONE 34
- Q 35 ZONE 35
- Q 36 ZONE 36
- Q 37 ZONE 37
- Q 38 ZONE 38
- Q 39 ZONE 39
- Q 40 ZONE 40
- Q 41 ZONE 41
- Q 42 ZONE 42
- Q 43 ZONE 43
- Q 44 ZONE 44
- Q 45 ZONE 45
- Q 46 ZONE 46
- Q 47 ZONE 47
- Q 48 ZONE 48

QUESTION 49-51 PARTITION DESCRIPTORS

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16

These questions allow you to enter up to 16 partition descriptor digits for partitions 1-3. There is no provision for the common partition descriptor. Each digit corresponds to a single character in the descriptor.

- Q 49 DESCRIPTOR FOR PARTITION 1
- Q 50 DESCRIPTOR FOR PARTITION 2
- Q 51 DESCRIPTOR FOR PARTITION 3

Summary of Keypad Functions

User Functions

ARMING/DISARMING:	[user code]
STAY ARMING:	[STAY] [user code]
INSTANT ARMING:	[INSTANT] [user code]
STAY/ INSTANT ARMING:	[STAY] [INSTANT] [user code]
BYPASS/UNBYPASS:	[BYPASS] [user code] [zone number]
MULTIPLE BYPASS:	[BYPASS] [user code] [zone no.] [BYPASS] [zone no.], etc.
QUICK BYPASS:	[BYPASS] [zone number]
USER CODE PROGRAMMING:	[CODE] [master user code] [user #] [new user code] [auth lev]
USER PART/PAGER ASSIGN:	[#] [master code] [user no.] [1, 2, 3, or 4 (pager)]
USER CODE DELETION:	[CODE] [master user code] [user no.] [*]
CHANGE PARTITION:	# 0 [code] [0,1-3,9]
QUICK ARM:	[#] [1]
QUICK FORCED ARM:	[#] [2]
SET TIME:	[#] [3] [user code] [Hour] [Minute] [Day] [Year]
DISPLAY ZONE DIR.:	[#] [4] (LCD Keypads only)
SET AUTO ARM TIME:	[#] [54] [user code] [Hour] [Minute]
DISPLAY/TOGGLE TIME:	[#] [6]
DISPLAY TIME:	[#] [51] (LCD Keypads only)
DISPLAY AUTO ARM TIME:	[#] [52] (LCD Keypads only)
DOOR STRIKE:	[#] [57] [code] [Trigger number]
USER ON-LINE DOWNLOAD:	[#] [9]
PANIC:	[#] & [*] at the same time
FIRE:	[7] & [9] at the same time
AUXILIARY:	[1] & [3] at the same time
AMBUSH:	[Enter user code 60-64, if programmed]

NOTES:

- User codes can be 4 or 6 digits, depending on system programming (Question 17, L3).
- Zone numbers hour/minute, day/year, and trigger numbers require 2-digit entries.

Installer Modes

KEYPAD PROGRAMMING:	[CODE] [*] [installer code] [1] [1-4 submode]
SYSTEM DEFAULT:	[CODE] [*] [installer code] [1] [1-4 submode] then press [1] & [3] at the same time
DEFAULT USER CODES:	[CODE] [*] [installer code] [1] [1-4 submode] then press [7] & [9] at the same time
PROGRAM REVIEW MODE:	[CODE] [*] [installer code] [2]
WALK TEST	[CODE] [*] [installer code] [3]
SYSTEM LOG VIEW:	[CODE] [*] [installer code] [4]
SYSTEM DEFAULT:	[CODE] [*] [installer code] [5]
CLEAR TAMPERS:	[CODE] [*] [installer code] [6]
DEFAULT USER CODES:	[CODE] [*] [installer code] [7]
UNATTENDED DOWNLOAD:	[CODE] [*] [installer code] [8]
ON-LINE DOWNLOAD:	[CODE] [*] [installer code] [9]

NOTES:

- Installer code can be 4 or 6 digits, depending on system programming (Question 17, L3).
- Pressing [*] exits installer mode. The system will also automatically exit Installer mode if no keys are pressed for a period of time.

Central Station Reporting Formats

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

In transmitting data to the CS receiver, the first event that occurs is that the system's digital communicator will seize the home phone lines. Then, it will dial the CS#1 telephone number. When the CS receiver picks up the ringing phone line, it will transmit a "Handshake" frequency (1400Hz, 2300Hz or HiLo) back to the digital communicator. After receiving the "Handshake" frequency, the digital communicator will transmit the data in the format programmed in Question 15, L1-L4. Assuming the CS receiver verifies the data transmission as valid (after 2 successful rounds of data or 1 valid parity round), it will transmit a "Kissoff" frequency back to the digital communicator. This causes the communicator to stop transmitting, unless more data is available, in which case additional data transmissions and "Kissoffs" will occur. After the final "Kissoff", the CS receiver will release the phone line and process the data to its display and associated peripherals (computer and printer). If for any reason the digital communicator, does not receive the "Kissoff", it will proceed to dial the CS#2 telephone number or dial again the CS#1 telephone number (if CS#2 is not used). It will continue to dial for a programmed number of times until a "Kissoff" is received. If after dialing all attempts for each CS Telephone number programmed a "Kissoff" is not received, the system will display "Communication Failure" at the keypad. This message is cleared after the next successful transmission or by the user at the keypad.

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

Standard (3x1 or 4x1)

The Standard Reporting Format: AAA E or AAAA E where:

AAAA = Three or Four digit Account Number

E = Single digit Event code; it is the first of the 2 programmable reporting code digits

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

3x1 w/o PARITY	3x1 w/PARITY
123 3 (1st round)	123 3 6 (single round)
123 3 (2nd round)	123 3 (resulting data)
123 3 (resulting data)	
4x1 w/o PARITY	4x1 w/PARITY
1234 3 (1st round)	1234 3 2 (single round)
1234 3 (2nd round)	1234 3 (resulting data)
1234 3 (resulting data)	



Parity is a number derived automatically by the dialer utilizing a mathematical formula (modulo 15). E.g., 123 3 adds up to 9. This is subtracted from the next highest multiple of 15; in this case, $15 - 9 = 6$. If the CS receiver accepts a valid parity digit, it considers the data transmission valid, delivers a "Kissoff" and processes the data. The parity digit is not displayed. Its only purpose is for validation of data transmitted. It is not a programmable digit; it is generated automatically by the dialer when the parity option is selected in programming Question 15, L2/L4. The obvious advantage of using parity is speed. The transmission time between dialer and receiver is shorter because fewer digits are transmitted with it as opposed to without it.

Extended (3x1 Ext. or 4x1 Ext.)

The Extended Reporting Format: **AAA EZ** or **AAAA EZ**

where:

AAAA = three or four digit account number (Question 15)

E = single digit event code; it is the first of the 2 programmable reporting code digits

Z = zone or user identifier; it is the second of the 2 programmable reporting code digits

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

3x1 Ext. W/O PARITY 3x1 Ext. W/PARITY

123 3 (1st round) 123 3 (2nd round) 123 3 6 (1st round)

333 1 (3rd round) 333 1 (4th round) 333 1 5 (2nd round)

123 31 (resulting data) Burglary Zone 1 123 31 (resulting data) Burglary Zone 1

4x1 Ext. W/O PARITY 4x1 Ext. W/PARITY

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

3333 1 (3rd round) 3333 1 (4th round) 3333 1 2 (2nd round)

1234 31 (resulting data) Burglary Zone 1 1234 31 (resulting data) Burglary Zone 1

Partial Extended (3x1 Part. Ext. or 4x1 Part. Ext.)

The Partial Extended Reporting Format: **AAA EZ** or **AAAA EZ**

where:

AAAA = three or four digit account number (Question 15)

E = single-digit event code; it is the first of the 2 programmable reporting code digits

Z = zone or user identifier; it is the second of the 2 programmable reporting code digits

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

3x1 Stand. W/O PARITY (Alarm)

123 3 (1st round)

123 3 (2nd round)

123 3 (resulting data) Burglary

3x1 Part. Ext. W/O PARITY (Restore)

123 E (1st round) 123 E (2nd round)

EEE 1 (3rd round) EEE 1 (4th round)

123 E1 (resulting data) Burglary

3x2 or 4x2

The 3x2 or 4x2 Reporting Format: **AAA EZ** or **AAAA EZ**

where:

AAAA = three or four digit account number (Question 15)

E = single digit event code; it is the first of the 2 programmable reporting code digits

Z = zone or user identifier; it is the second of the 2 programmable reporting code digits

This format is also in Pulse and is an alternative to the Extended format; it also transmits a 2-digit reporting code. Its specific meaning is a 3- or 4-digit account number followed by a 2-digit alarm code. It can be transmitted with parity (1 round of data) or without parity (2 rounds of data).

There are 15 possible event codes, each of which can have up to 15 different zone identifiers. It is different from the extended format in the way it transmits. This is illustrated in the examples below:

3x2 w/o PARITY

123 31 (1st round)
123 31 (2nd round)
123 31 (resulting data) Burglary Zone 1

4x2 w/o PARITY

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

3x2 w/PARITY

123 31 5 (1st round)
123 31 (resulting data) Burglary Zone 1

4x2 w/PARITY

1234 31 1 (1st round)
1234 31 (resulting data) Burglary Zone 1

FBI Superfast (4x3x1)

The FBI Superfast Reporting Format: **AAAA AZZ S**

where:

AAAA = four digit account number (Program Question 15)

A = alarm type; it is the first of the 2 programmable reporting code digits

ZZ = zone or user identifier; it is the second of the 2 programmable reporting code digits

S = signal type; it is the first of the 2 programmable reporting code digits

This format is commonly known as 4x3x1. A total of 9 digits (including the parity digit) are sent in DTMF. It enables reporting of up to 256 (00 - FF) unique zone or user identifiers instead of the 15 possible identifiers of most other pulse formats. In addition, it transmits at a much greater speed than the conventional pulse formats, since it uses DTMF (touch tones) instead of pulses to transmit the data and it always sends a parity digit.

For alarms, openings, and closings, the alarm type digit will be the same as the signal type. This will indicate the type of activity or condition that has occurred. However, on bypasses, restores, and troubles, the alarm type will not be the same as the signal type. Instead, the Signal Type will change indicating the current condition of the zone. NOTE: This is a unique feature of this format which allows more intelligent reporting of the activity occurring in the system. For instance, the following unique messages can be transmitted:

1234 1 01 1	Fire Zone 001
1234 1 01 E	Restore Fire Zone 001
1234 1 01 F	Trouble Fire Zone 001

ADEMCO 4x1 Express

The 4x1 Express Reporting Format: **AAAA E** where:

AAAA = three or four digit account number (Question 15)

E = single digit event code; it is the first of the 2 programmable reporting code digits

This format transmits in DTMF a total of 6 digits (including the parity digit). It is similar to the Standard format in that it can only transmit a total of 15 reporting codes. However, its advantage is speed because it transmits touch tones instead of pulses and it always sends a parity digit. Examples:

123 3 6 (1st round)
123 3 (resulting data) Burglary

ADEMCO 4x2 Express

The 4x2 Express Reporting Format: **AAAA EZ** where:

AAAA = three or four digit account number (Question 15)

E = single digit event code; it is the first of the 2 programmable reporting code digits

Z = zone or user identifier; it is the second of the 2 programmable reporting code digits

This format transmits in DTMF a total of 7 digits (including the parity digit). This format is similar to the 4x1 Extended or 4x2 formats in that the output sends a 4-digit account and 2-digit event code. However, its advantage is speed because it transmits touch tones instead of pulses and it always sends a parity digit. Examples:

1234 31 1 (1st round)
 1234 31 (resulting data) Burglary Zone 1

ADEMCO Point ID

The Point ID Reporting Format: **AAA 18 QXYZ GG ZZZ**

where:

AAAA = Four digit Account Number (Program Questions 7-14)

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

Q= Event qualifier, which gives specific event information

1 = New Event or Opening

3 = New Restore or Closing

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

GG= Group number; this represents the partition number (01-04, with 04 being the common partition).

ZZZ = Zone, sensor or user identifier (3 decimal digits). For user initiated actions such as openings/closings, this will be the actual user number (01 - 15).

This format is also known as ADEMCO contact ID. A total of 16 digits (including the parity digit) are sent in DTMF. It enables reporting of 999 (001 - 999) unique zone or user identifiers instead of the 15 possible identifiers of most other pulse formats. This feature allows the full reporting capability of this system (48 zones and 64 users). In addition, it transmits at a much greater speed than the conventional pulse formats, since it uses DTMF (touch tones) instead of pulses to transmit the data and it always sends a parity digit. Its main advantage over all the other formats is its large number of event codes (see tables below) with the ability to pinpoint an event (alarm, trouble, bypass, restore, etc.) to a specific zone (up to 48 zones in this system) and to report openings/closings for many users.

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

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

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

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

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

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

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

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

DEDICATED CODES	
EVENT CODE	ENGLISH OUTPUT AT CS RECEIVER
137	Keypad Tamper
156	Day Trouble
301*	AC Loss
309*	Battery Test Fail
321	Trouble Bell 1
371	Trouble-Protection Loop
373	Fire Trouble
380	RF Trouble Restore
381	Loss of Rf Supervision
383	Sensor Tamper
384	RF Low Battery
401	O/C by User
403	Auto Arm
406	Cancel on Open
407	Remote Arm
408	Quick Arm
409	Key switch Zone
412*	Download Good
457	Exit Error
459	Recent Close
575	Swinger Bypass
602*	Test - Periodic
412*	Download Code
457	Exit Error
459	Recent Close
551*	Dialer Disable (Arm Disable)
575	Swinger Bypass (Lockout)
602*	Test - Periodic
607*	Walk Test Mode
623*	Log 90% Full
624*	Log 100% Full
626*	Clock not Set
641*	Senior Watch Trouble (Up & About)

Troubleshooting

SYMPTOM	POSSIBLE CAUSE	REMEDY
1. LED or LCD: Keypad display not lit.	1a. AC & DC power out 1b. Keypad not powered	1a. Check transformer & battery connection; check AC input & batt. volt. (w/transformer disconnected). 1b. Check term. 15(+) & 12(-) for 12VDC.
2. LED KP: AC/LB light OFF LCD KP: AC LOSS	2a. Primary AC power out 2b. Faulty keypad	2a. Check transformer connection; check AC input voltage. 2b. Replace keypad
3. LED KP: AC/LB light slowly blinking LCD KP: LOW BAT	3a. DC power out 3b. Low battery voltage	3a. Check battery connections; check battery voltage (w/transformer disconnected). 3b. Same as 3A except volt. < 11 VDC; let battery charge; replace battery.
4. LED KP: ARM light slowly blinking LCD KP: COMM FAILURE	4a. Failure to communicate w/Central Station 4b. Faulty panel/dialer 4c. Faulty telephone lines	4a. Telephone lines cut or disconnected; CS information misprogrammed. 4b. Replace panel. 4c. Consult local telephone company.
5. LED KP: ZONE light ON & READY light OFF LCD KP: NOT READY: ZN # & SYSTEM NOT READY	5a. Zone faulted; system not ready 5b. Faulty keypad 5c. Faulty panel	5a. Check loop wiring for open/short & repair: check EOL resistor for open or wrong value. 5b. Replace keypad. 5c. Check zone terminal voltage for 3.3VDC; bypass zone temporarily; replace panel.
6. Siren/Speaker does not sound	6a. Faulty Siren/Speaker 6b. Faulty Wiring 6c. Faulty Panel/Bell Output	6a. Connect 12 VDC to siren/speaker; if no sound is produced, replace siren/speaker. 6b. Check wiring for an open or short circuit and replace wiring if necessary. 6c. Check terminals 22 (+) & 23 (-) for 12VDC when panel is in alarm (if programmed for bell output). If no voltage is measured, replace panel.

For more complicated problems, consult our Technical Support at (1-800) 538-5585.

Regulatory/Limitations Statements

CANADIAN DEPARTMENT OF COMMUNICATIONS (DOC) STATEMENT

NOTICE

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: User should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100.

AVIS

L'étiquette du ministère des Communications du Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunications. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. Dans certains cas, les fils intérieurs de l'entreprise utilisés pour un service individuel à la ligne unique peuvent être prolongés au moyen d'un dispositif homologué de raccordement (cordon prolongateur téléphonique interne). L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations. Actuellement, les entreprises de télécommunications ne permettent pas que l'on raccorde leur matériel aux prises d'abonnés, sauf dans les cas précis prévus par les tarifs particuliers de ces entreprises.

Les réparations du matériel homologué doivent être effectuées pas un centre d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise en terre de la source d'énergie électrique, des lignes téléphoniques de réseau de conduites d'eau s'il y en a, soient raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

L'indice de charge (IC) assigné à chaque dispositif terminal pour éviter toute surcharge indique le pourcentage de la charge totale qui peut être raccordé à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100.

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

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

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

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

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

The user may find the 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.

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 lines. If the regular 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.

FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 68 STATEMENT

This equipment complies with Part 68 of the FCC rules. On the front cover of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This equipment uses the following jacks: An RJ31X is used to connect this equipment to the telephone network.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please contact the manufacturer for repair and warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

There are no user serviceable components in this product, and all necessary repairs must be made by the manufacturer. Other repair methods may invalidate the FCC registration on this product.

This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs.

This equipment is hearing-aid compatible.

When programming or making test calls to an emergency number, briefly explain to the dispatcher the reason for the call. Perform such activities in the off-peak hours; such as early morning or late evening.

Warnings and Limitations

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 diagrammed 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 150°F, the detection performance can decrease.
- Alarm warning devices such as sirens, bells or horns may not alert people or wake up sleepers who are located on the other side of closed or partly open doors. If warning devices sound on a different level of the residence from the bedrooms, then they are less likely to waken or alert people inside the bedrooms. Even persons who are awake may not hear the warning if the alarm is muffled by noise from a stereo, radio, air conditioner or other appliances, or by passing traffic. Finally, alarm warning devices, however loud, may not warn hearing-impaired people or waken deep sleepers.
- Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be 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.

LIMITED WARRANTY

Pittway Corporation, and its divisions, subsidiaries and affiliates ("Seller"), 165 Eileen Way, Syosset, New York 11791, warrants its First Alert Professional 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 36 months from the date stamp control on the product or, for products not having a date stamp, for 30 months from date of original purchase unless the installation instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any product which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than First Alert Professional factory service. For warranty service, return product transportation prepaid, to First Alert Professional Factory Service, 165 Eileen Way, Syosset, New York 11791.

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

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



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