INSTALLATION INSTRUCTIONS and PROGRAMMING GUIDE

FA1340C & FA1340C-UL 8-PARTITION SECURITY SYSTEM with SCHEDULING

First Alert
PROFESSIONAL SECURITY SYSTEMS

N5944-5 6/95

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LIST OF FIGURES

CONVENTIONS USED IN THIS MANUAL

Main Section titles are shown in reverse type.

Each section includes both physical installation information and programming procedures specific to that section's topic. This makes it easier for you to find all the information necessary for a given topic. A separate programming section is also provided, which describes in detail the system's data fields, and provides general programming procedures.

UL requirements are indicated by double lined boxes.	These notes include specific information which must be followed if you are installing this system for a UL Listed application.
Special notes are indicated by single line boxes.	These notes include information that is critical to the installation.
Keypad display prompts are indicated by a dotted line box.	Many system options are programmed by responding to alpha keypad display prompts. These prompts are shown in a dotted line box.
*XX	When programming the system, data fields are indicated by an asterisk (*) followed by the data field number.
[1] (OFF)	Numbers inside boxes indicate the particular key you press to perform the described function.

PRODUCT MODEL NUMBERS: Unless noted otherwise, references to specific model numbers represent Ademco products.

SYSTEM FEATURES & CAPABILITIES

Before installing this partitioned system, become completely familiar with the partitioning concepts, including zone distribution (each zone can be assigned to only one partition), user code usage and authority levels, and the user-friendly menu mode of programming. In addition, become familiar with the scheduling and output relay features.

NOTE: Except where otherwise indicated, all information in this manual is applicable to both the FA1340C and FA1340C-UL.

Control and Zone Features

NOTE: At least one FA550KP addressable alpha display keypad must be used with this system.

When the FA1340C-UL is used in a UL certified Commercial Burglary installation, the number of wired zones is limited to 7, and zone expansion may be achieved using 2-wire polling loop devices only.

Wireless may not be used in UL Commercial Burglary installation.

The following tables list the major features of the FA1340C/FA1340CUL system:

The Control	• The Control is a microprocessor based, programmable, 8 partition system, featuring EEROM technology (with this technology, loss of power will not cause loss of information). • You can allocate protection zones among up to 8 partitions. • The FA1340C and FA1340C-UL have UL Household Fire (UL985) and Burglary (UL1023) Listings. The FA1340C-UL also has these UL Commercial Burglary Listings: UL609 Grade A Local Mercantile Premises/Safe and Vault UL1610 Grades A, AA Central Station UL365 Grades A, AA Police Connect
Zones Supported	• Supports up to 9 traditional wired zones of protection. • Expandable to 86 zones (consisting of combinations of wired and/or wireless zones) using 2-wire polling loop devices, and/or 5700/5800 series wireless transmitters. • Zones can be distributed among up to 8 partitions.
Zone Allocations	• Hardwired: 1-9 • Polling Loop: 10-86/Polling Loop Supervision, 97 • Wireless: 1-86 for 5800 series 1-63 for 5700 series • FA4285 Voice Module: 87 • RF Receiver: 90/91 1st rcvr; 88/89 2nd rcvr • Duress: 92 • Keypad Panics: 95, 96, 99
Fire Zones	• Supports up to sixteen 2-wire smoke detectors (zone 1). • Other zones can be fire zones using 4-wire smoke and heat detectors and/or polling loop detectors.
Wireless Zones	• Wireless support of 5700 or 5800 series transmitters using 4280, 4281 or 5881 type receivers.
Polling Loop Zones	• Built-in polling loop interface, with polling loop terminals located on the panel's terminal block, allows expansion up to 86 zones.
Circuit Breakers	• Self-resetting circuit breaker protection eliminates the need to replace blown cartridge fuses.
Cabinet	• Large cabinet with removable door for easier installations.

Control Modules And Auxiliary Devices

UL Note:
The FA4285 is not permissible for use in UL installations.

The power line carrier devices are not UL Listed for fire and burglary applications.

Glass Break Det.	• Supports up to 50 latching type 2-wire glass break detectors on zone 8.
Remote Keypads and Addressable Devices	• Supports up to 16 addressable devices, which can be any combination of keypads (FA550KP, FA210KP, FA250KP) RF receivers (4281/5881) and relay modules (4204).
Phone Access / Voice Response	• Supports the FA4285 Voice Module. • Permits phone access to the system for performing most system functions using a telephone keypad.
Keyswitch	Supports the Ademco 4146 keyswitch (in one partition only, assigned in program field *15). If used, zone 7 is no longer available as a protection zone.
Output Control	• Supports up to 16 devices (4204 relay modules or power line carrier devices), which can be activated by system events and/or can be put under schedule control.
Access Control	• Provides users with access control command which pulses a relay output for controlled opening of access doors. • Each partition can have its own output device. The trigger will occur on the device tied to the partition for the keypad on which the keys were pressed. • The access control relay is programmed in partition-specific field 1*76.
Voltage Triggers	• Used to interface with LORRA, Audio Alarm Verification module (AAV), or other devices .

User Features

Panic Keys	Provides 3 panic key functions.
Global Arming	• Allows users to easily arm multiple partitions.
Quick Bypass (Forced Bypass)	• Quick (forced) bypass feature bypasses all faulted zones with single key entry sequence.
Memory-Of-Alarm	• Memory-of-alarm feature, which, upon disarming the system, automatically displays all zones that were in an alarm condition while the system was armed.
Built-in Help Keys	• Built-in User's Manual (FA550KP only). By depressing and holding any of the function keys on the keypad for 5 seconds, you can display a brief explanation of that function.
Descriptors	• All programmed descriptors can be displayed (one at a time) by pressing and holding the READY key for 5 seconds, then releasing the key. This serves as a check for installers to be sure all descriptors are entered properly.
Scheduling	• Scheduling feature allows installer and/or user to automate system operation and/or turn on lights, etc. • Auto-arm/disarm of system. • Temporary schedules can be programmed by user. • System operation can be restricted to certain times.
Event Logging	• Event Logging feature keeps record of all events, which can be printed automatically or on demand.
End User Relay Commands	• Allows end users to manually turn on/off relay/power line carrier module outputs to control lights or other devices via keypad or voice module (#70 command).
Speed Key (Macros)	• The "D" key on the keypad can be assigned a macro, or string of keystrokes.

Programming	• Programming can be performed at the office prior to installation, or on the job site directly from the keypad. • Can be downloaded from a remote location or at the job site (using a PC/laptop with 4100SM Serial Module) by using the First Alert Professional Downloading Software. • The Control is pre-programmed with a set of standard values that is designed to meet the needs of many installations. These values, however, can be changed to suit the needs of any particular installation. • The Control can also be pre-programmed by the installer with one of four standard communication default programming values, thus further saving time and effort.
User Codes	• Up to 128 user security code allocations (max. 99 in a given partition) can be programmed, each with various levels of authority. (allows key people in a partition to have complete control and limit system tampering by others)
Installer Code	• Installer code override feature. Installer code will disarm system only if it was used to arm the system.
Alpha Descriptors	• All zones and partitions can be assigned alpha descriptions. • The letter "s" or " 's " can be added to descriptors.
Relay Voice Descriptors	• Separate vocabulary for announcing relay output descriptors when using a voice module to activate relays.
Custom Words	• Up to 20 custom words can be added to the built-in vocabulary.
Custom Word Voice Substitutes	• Provides a means of announcing substitute words for the voice module whenever a custom word is used for alpha keypad displays.
Comm. Fields	• Easy programming for communication fields. Simply enter the report code for each zone.
Comm. Defaults	• Communication default programming can be loaded anytime, and does not affect non-communication program fields.
Downloading	• Direct wire downloading can be done without a modem, by using a 4100SM Serial Module with a PC or Laptop computer.
#93 Menu Mode	• Easy programming of zones using the user friendly #93 Menu Mode.
Scheduling	• Easy programming using the #80 Menu Mode.

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Communication Features

Communication	Ademco low speed, SESCOA/RADIONICS, Ademco Express, Ademco High Speed, Ademco Contact ID
Zone Reports	• All 86 zones can report to a central station, and reporting can use any supported communication format.
Exception Reporting	• Open/close reporting by exception means reports occur only if outside predetermined time windows.
Callback	• Callback defeat option for downloading.
Real-Time Clock	• Real-Time clock for time-related functions. *FA550KP alpha keypad must be used to set the real-time clock, or can be set using Downloader software.*
AC Loss Reporting	• Random AC Loss and AC Restore reporting option sends report randomly from 10-40 minutes after AC loss, to help prevent central stations from receiving an overload of reports due to area blackouts.
Test Reporting	• Intelligent test reporting option means test reports will not be sent if any other report was sent within the programmed test report interval.
Split/Dual Reporting	• Split/Dual reporting communicator options available.
Cancel Report	• Option to allow a cancel report to be sent, even after Bell Time-out has ended.
Voltage Triggers	• PC Downloading software can command output voltage triggers to pulse on for 2 seconds. For use with external devices (AAV module, Long Range Radios, remote keyswitch, etc.).
Phone Numbers	• Primary and secondary phone number capability. • Can program different formats for each phone number.
Audio Alarm Verification (AAV)	• This option allows the central station to "listen-in" at the premises during an alarm, when used with an appropriate AAV unit (ex. Eagle 1241). If programmed, after an alarm report is successfully sent to the central station, the local alarm sounder is automatically silenced and a trigger can be activated by the central station operator allowing him to hear what is happening at the premises and speak directly to persons on the premises via the microphone and speaker built into the AAV unit.
Silent Alarm Notification	• If desired, the system can be programmed to send silent alarms to the central station for any burglary alarm occurrence. If programmed, there will be no audible or visual indication of the alarm, unless communication to the central station has failed or alarm sounder timeout has expired (programmable options). Fire alarms will always produce audible and visual annunciation.

Basic Partitioning Features

Partitioning	• A partitioned environment is one whereby multiple unrelated users are protected by a single security system, yet each user has the operational freedom to have the system behave as if it was theirs alone.
Simple, Secure and Reliable	• Partitioning is easy to use and program. • System Integrity is not compromised. • Inherent reliability of the partitioned system is equal to a stand alone alarm system if purchased separately.

UL NOTE:
Wireless may not be used in UL Commercial Burglary installations.

Keypads	• Flexible number of keypads per partition (up to a total of 16 in a system, any way you want to assign them). • Appropriate sounds and messages to assigned keypads only (each system appears to be independent to users). • Ability to inhibit other keypads from using your partition (total security in a strip mall environment).
Zones	• 86 zones employing wired, wireless or multiplex technology (to solve any type of construction challenge).
Partitions	• Any zone can be assigned to any particular partition. • "GOTO" function provides access to other partitions (ideal for executive access to factory for example). • Intelligent partition/zone menu programming help • Programmable 4-character partition name displayed on alpha keypads when needed (no need to memorize numbers - name and number are shown for you).
Global Features	• In any system, certain physical system components and features are shared by all partitions or assigned to a specific partition. These features include: Shared: Dialer; Alarm Relay/Sounder; Power Supply Assignable To One Partition: Wireless Keypad; Sounder Using Relay Outputs; Keyswitch Station • In addition to the physical devices which are shared, the system shares software features on a global basis as well. Panic Code Reports ..... Common for any partition Low Battery Reporting .....Reports as Partition 1 AC Power Reporting Options ...Reports as Partition 1 Test Reporting Interval .....Global for the Panel Download Phone Number .....Global for the Panel Communication Format .....Global for the Panel Rotary/Touch Tone .....Global for the Panel Download Callback defeat .....Global for the Panel Installer Code .....Global for all Partitions
Partition Specific	• Many devices and functions need to be reserved on a partition basis to provide proper operation and flexibility for installations. Partition specific features include: • Keypads • Enable/Disable Chime Mode • Entry and Exit Delays • "Go To" Partition function • Keypad Sound during Exit Delay • Swinger Suppression • Primary Subscriber Number • Burglary Alarm Comm. Delay • Secondary Subscriber Number • Enable/Disable of Duress • Enable/Disable of Panic Keys • Confirmation of Arming Ding • Open/close for Installer • Alarm Sounder Duration • Multiple Alarm Reporting • User Codes • Inhibit Bypass of one Zone • Quick Arm enable/disable • Speed Key (macros)

Major Features Of Scheduling

Scheduling Mode Arm/Disarm	• User friendly menu mode of programming (#80 mode). • Scheduling can be used to automate some of the system operation: • Auto arming and disarming at predetermined times. • Auto-arm warning • User option to delay auto arm • Provision for temporary schedule of up to one week • Provision for a holiday schedule • Limitation of arming and disarming to specific times • Control of when disarming will occur
Open/close by exception	• Scheduling allows reporting of openings/closings by exception. • Sends fail to open/close report only if action does not occur. • Inhibit opening/closing reports if within a Time Window • Send early to open or late to close reports if done outside the window.
Relay Control (Time Driven Events)	• Scheduling can also automatically perform relay driven actions at predetermined times: • Can turn lights or other devices on/off at specific times • One shot action of light or other device • Power line carrier device control for the automation of lights and appliances. • Time driven events can also be used to assign additional open/close window schedules, so that more than one schedule per day can be programmed. • The system supports up to 20 time driven events.
Daylight Savings Time	• Automatic time adjustment for daylight savings time
End User Scheduling (#83 Menu Mode)	• The system provides up to 20 "timers" for the end user to activate output devices at preset times and days. These timers are similar to the individual appliance timers that might be purchased at department stores. • The typical uses for this feature could be control of lights or appliances , typically via power line carrier modules. These modules are programmed into the system by the installer during #93 Menu Mode–Device Programming. The end user needs only to know the output device number (relay number) and its alpha descriptor, both programmed by the installer via Relay Programming and Alpha Programming respectively. • The installer may set certain relays to be "Restricted", since a system may have some devices (Relays or power line carrier) which are not intended to be under the control of end users, such as relays activating fire doors or relays activating certain machinery. This option, set during #93 Menu Mode–Relay Programming, will restrict operation by the end user.

MOUNTING THE PC BOARD, CABINET & LOCK

Mounting The PC Board And Cabinet

Mount the FA1340C-UL cabinet inside a protected area.

1. Mount the Control cabinet to a sturdy wall using fasteners or anchors (not supplied) in a clean, dry area which is not readily accessible to the general public. The back of the Control cabinet has 4 holes for this purpose.
   For FA1340C-UL installations which are intended to provide certificated burglary service, refer to the special ATTACK RESISTANCE CONSIDERATIONS diagram later in this section.
2. Before mounting the circuit board, remove the metal knockouts for the wiring entry that you will be using.
   DO NOT ATTEMPT TO REMOVE THE KNOCKOUTS AFTER THE CIRCUIT BOARD HAS BEEN INSTALLED.
   Refer to the diagram below when mounting the PC board.
3. Hang the three mounting clips on the raised cabinet tabs. Make sure the clip orientation is exactly as shown in the diagram to avoid damage to the clip when mounting screws are tightened. This will also avoid problems with insertion and removal of the PC board.
4. Insert the top of the circuit board into the slots at the top of the cabinet. Make certain that the board rests in the slots as indicated in step 2 detail.
5. Swing the base of the board into the mounting clips and secure the board to the cabinet with the accompanying screws (as illustrated in step 3 detail).

IMPORTANT: Make certain that the mounting screws are tight. This ensures that there is a good ground connection between the PC board and the cabinet. Also, dress field wiring away from the microprocessor (center) section of the PC board. Use the 2 loops on the left and right sidewalls of the cabinet for anchoring field wiring using tie wraps. These steps are important to minimizing the risk of panel RF interference with television reception.

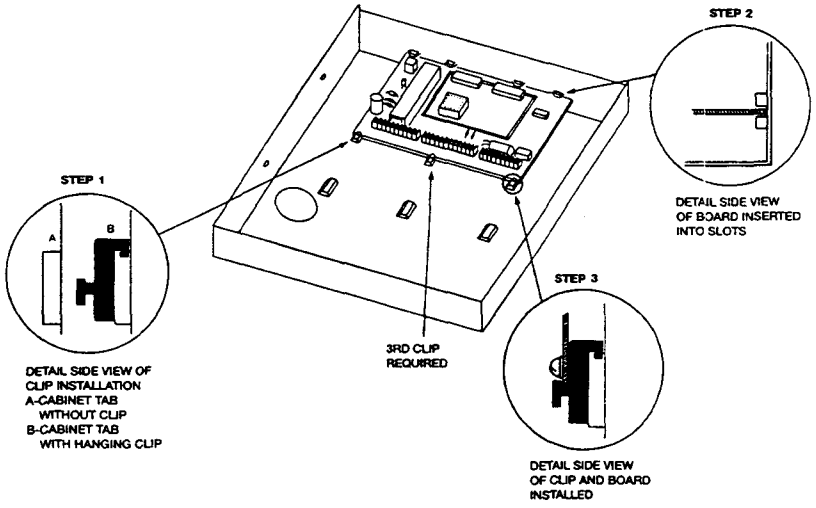


Figure 1. Mounting The PC Board

Mounting The Cabinet Lock

1. Remove the lock knockout on the control cabinet cover. Insert the key into the lock. Position the lock in the hole making certain that the latch will make contact with the latch bracket when the door is closed.
2. While holding the lock steady, insert the retainer clip into the retainer slots.

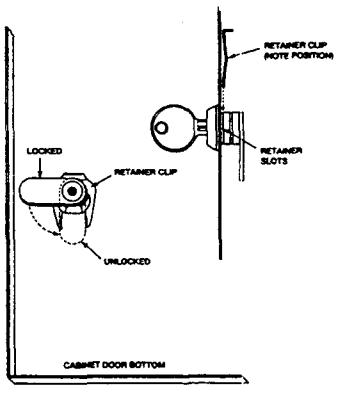


Figure 2. Mounting The Lock

FA1340C-UL Grade A Mercantile Premises Listing

- The panel door must be supervised. Mount the clip-on tamper switch (supplied) to the cabinet's right side wall as shown in the diagram and wire it to an EOLR supervised zone (any zone 1-8). Program this zone for day trouble/night alarm (type 05) or 24 hour audible alarm (type 07) response. The 24 hour alarm response must be used for multiple partitioned systems.
- Fasten the cabinet door to the cabinet backbox using the 20 one inch long Philips head screws (supplied) after all wiring, programming and checkout procedures have been completed.
- Use a bell with a tamper protected housing such as the Ademco AB12. Wire the bell housing tamper switch and inner tamper liner to the same zone that supervises the panel's tamper switch (see EXTERNAL SOUNDER section for more information).
- All wiring between the bell and panel must be run in conduit. Remaining wires do not have to be run in conduit.
- All wiring which is not run in conduit must exit from the knock-out openings on the bottom or back of the cabinet.
- All unused knock-outs must be plugged using the disk plugs and carriage bolts (supplied) as shown.

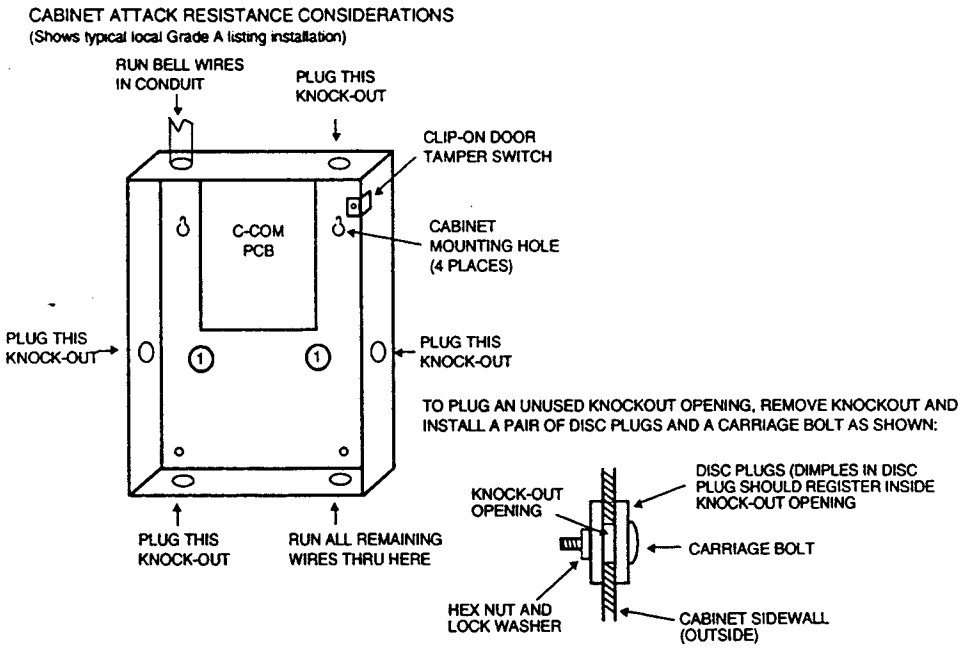


Figure 3. Cabinet Attack Resistance Considerations

FA1340C-UL Grade A Mercantile Safe & Vault Listing

- Follow the instructions for Mercantile Premises Listing, except as follows:
- Mount a shock sensor such as Sentrol No. 5402 to the panel's backbox. Follow the manufacturer's instructions on proper sensor mounting. Wire this sensor to the same zone that supervises the panel's tamper switch.

REMOTE KEYPADS

Keypad Setup

IMPORTANT!
You **must** select an address of 0, 1, 2, or 3 if standard defaults are to be programmed, since these are the only keypad addresses enabled by the defaults.

Auxiliary Power Considerations

- The Control supplies up to 750 mA of auxiliary power for remote keypads, polling loop devices and/or other auxiliary devices such as motion detectors or 4-wire smoke detectors.
- The Control supports, independent of auxiliary power considerations, up to 16 addressable remote keypads (FA210KP, FA250KP, FA550KP).
- Keypads can be powered from the control's auxiliary power, provided that the total current drawn from this output does not exceed 750 mA. The control's backup battery will supply power to these keypads in the event of AC power loss.

  When adding remote keypads, don't overdraw current from the control. This would result in a battery which does not charge properly or possibly a tripped auxiliary solid state circuit breaker.
- If the auxiliary load will be greater than 750 mA, then additional keypads can be powered from a supplementary power supply.

  Use a UL Listed, battery backed supply for UL installations. See ADDITIONAL KEYPADS paragraph below.

Setting Addresses and Wiring and Mounting The Keypads

1. Set the keypad's address from 00-30 using the keypad address programming described in the instructions provided with the keypad.
   - **Set one keypad to address 00 for programming purposes.**
   - Do not use address 31 with this Control. Address 31 causes the keypad to operate in non-addressable mode.
2. Wire keypads to a single wire run, or connect individual keypads to separate wire runs. The maximum wire run length from the control to a keypad which is homerun back to the control must not exceed the lengths listed in the table.

   Connect keypad wiring to control terminals 6-9. Refer to the SUMMARY OF CONNECTIONS diagram for wire colors and functions.

   IMPORTANT: Make no connections to the keypad blue wire (if present).

Wire Run Length Table	
Wire Gauge	**Length**
#22 gauge	450 feet
#20 gauge	700 feet
#18 gauge	1100 feet
#16 gauge	1750 feet

NOTE: The length of all wire runs combined must not exceed 2000 feet when unshielded quad conductor cable is used (1000 feet if shielded cable is used.)
If more than one keypad is wired to a run, then the above maximum lengths must be divided by the number of keypads on the run (i.e. the maximum length would be 225 feet if two keypads are wired on a #22 gauge run).

3. Mount the keypads following the mounting instructions and template included with the keypad. The keypads can be either surface mounted or flush mounted (using an appropriate Trim Ring Kit: FA550TRK).

   Be sure to take the height of the users into account when mounting keypads.

4. If you want to check that the system is working before connecting field wiring from zones and devices, do the following.
   a. Temporarily connect end of line resistors to zones 1-8, and short zone 9 with a wire jumper.
      Without actual zone wiring or EOLR resistors connected, the control will not display the READY TO ARM message.
      Make sure to remove these resistors before connecting field wiring.
   b. Power up the system according to the Temporary Power-Up Procedure found in the POWERING THE SYSTEM section.
   c. After a few seconds, the green READY LED on the keypad(s) should light and the keypad(s) should display the following.

DISARMED
READY TO ARM

   d. Unplug the transformer before continuing with the installation.

Additional Keypads

- When the control's auxiliary power load exceeds 750mA, additional keypads (up to the system maximum of 16) can be powered from a supplementary, regulated 12VDC power supply (e.g. 488-12 rated at 12V, 500mA). Refer to the SUPPLEMENTARY POWER SUPPLY diagram below.
- **Observe the current ratings for the power supply used.**
- The 488-12 power supplies have a backup battery which can power these keypads in the event of AC power loss. Note that keypads powered from supplies which do not have a backup battery **will not function** when AC power is lost. In this case, make sure to power at least one keypad from the Control's auxiliary power output.

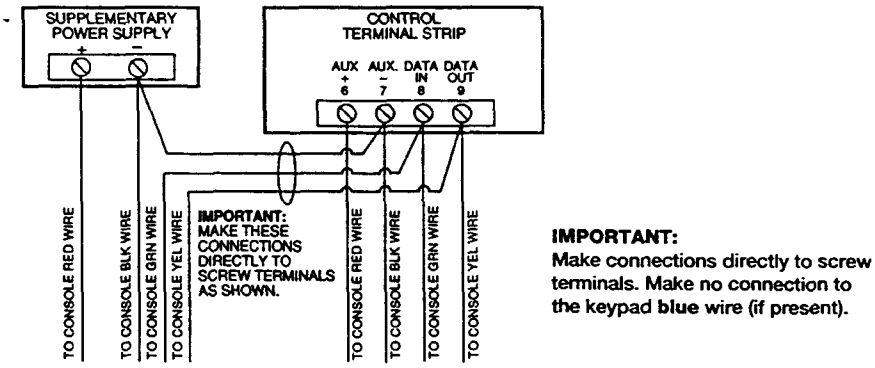


Figure 4. Wiring Additional Keypads

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: Installer code + **8 0 0**.
   Program the following field:
   *22 KEYPAD PANIC ENABLES (partition specific)
   *29 QUICK ARM (partition specific)
   1*43 PERM. KEYPAD "DISPLAY" BACKLIGHT (**1**=enable; **0**=disable)
3. From Data Field Programming mode, press **#93** to display the "ZONE PROG?" prompt.
4. Press **0** (NO) repeatedly until the "DEVICE PROG?" prompt appears.

DEVICE PROG? 1=YES 0=NO	Press **1** (YES) to enter DEVICE PROGRAMMING mode. The following prompts will appear.
DEVICE ADDRESS 01-31, 00=QUIT	The device address identifies the keypad to the control. Enter the 2-digit address number as set at the keypad (**01-31**). Press [*] to accept entry.
DEVICE TYPE	Select the type of addressable keypad as follows: **00** = device not used **01** = alpha keypad (FA550KP) **02** = fixed word keypad (FA210KP, FA250KP) Press [*] to accept entry.
CONSOLE PART.	Enter the keypad's default partition number (**01** to maximum number of partitions programmed for system in field 2*00). This is the primary partition for which the keypad is intended to be used. Press [*] to accept entry.
SOUND OPTION	Addressable keypads can be individually programmed to suppress arm/disarm beeps, entry/exit beeps and chime mode beeps. This helps prevent unwanted sounds from disturbing users in other areas of the premises. Enter a number **00-03** for the keypad sounding suppression options desired for the keypad: **00** = no suppression. **01** = suppress arm/disarm & entry/exit beeps. **02** =suppress chime mode beeps only. **03** = suppress arm/disarm, entry/exit **and** chime mode beeps. The screen will display the next keypad address to be programmed. Repeat the procedure for each keypad used in the system.

5. When all keypads have been programmed, press **00** to exit menu mode .
   Enter ***99** to exit data field programming mode.

NOTE: Keypad address **00** will always be set to an alpha keypad with no sounder suppression options.

POWERING THE SYSTEM

Transformer Connections and Power-Up Procedures

* NOTE: Use 1361CN Transformer in Canadian installations.

General Information

- You can power the Control from the supplied 1361 transformer (1361CN in Canada), rated 16.5VAC, 40VA, which plugs directly into a 24 hour, 120VAC, 60 Hz outlet.
- If using power line carrier devices, you must use the 4300 transformer instead. Refer to the 4204 RELAY MODULE & POWER LINE CARRIER DEVICES section for information on using and connecting the 4300 transformer.

Temporary Power-Up Procedure (for entering program mode)

1. Connect at least one alpha keypad to the control and make sure that it is set to address 00.
2. Wire the 1361 transformer to the panel (DO NOT connect the battery at this time) as shown in the diagram on the next page.
3. Plug the 1361 into a 120VAC, 60Hz outlet.
4. After a few seconds, the keypad display will appear. You may now enter programming mode.
5. **Make sure to unplug the 1361 transformer** before connecting other devices to the control.

Earth Ground Considerations

In order for the lightning transient protective devices in this product to be effective, the designated earth ground terminal (terminal 30), must be terminated in a good earth ground. The following are examples of good earth grounds available at most installations:

- **Metal Cold Water Pipe:** Use a non-corrosive metal strap (copper is recommended) firmly secured to the pipe to which the ground lead is electrically connected and secured.
- **AC Power Outlet Ground:** Available from 3-prong, 120VAC, power outlets only. To test the integrity of the ground terminal, use a three-wire circuit tester with neon lamp indicators, such as the UL-Listed Ideal Model 61-035, or equivalent, available at most electrical supply stores.

Connecting the Transformer and Power-Up Procedure

1. Use the Polling Loop Current Draw and Auxiliary Device Current Draw Worksheets found later in this section. Make sure that the currents drawn from these devices do not exceed their respective ratings.

   IMPORTANT: Failure to observe the polling loop current rating will cause polling loop malfunction. Failure to observe the auxiliary output current rating will result in a battery which does not charge properly or possibly a tripped circuit breaker.
2. Connect all installed devices to the control.
3. Wire the 1361 transformer (1361CN in Canada) to the panel (before connecting the battery) as shown in the diagram.
4. Plug the 1361 transformer into a 24 hour, uninterrupted, 120VAC, 60Hz outlet. After a few seconds, the keypad display will appear.

Connecting The Battery

In the event of an AC power loss, the Control panel will still operate for a period of time (time period varies depending on size of battery used) because the control has a back-up, rechargeable gel cell battery. Ademco No. 467 (12V, 4AH) and YUASA NP7-12 (12V, 7AH) batteries are recommended.

Do not use Gates batteries (sealed lead-acid type).

The standby battery is automatically tested every 24 hours, beginning 24 hours after exiting programming mode. In addition, entry into the test mode will cause a battery test to be initiated.

1. Use the Battery Standby Table to select the appropriate battery for the installation.

   IMPORTANT: The FA1340C-UL must operate for at least 4 hours following an AC power loss in certificated burglary installations. Choose a battery size from the table below that will support the auxiliary power output current draw for 4 or more hours.

2. Connect the battery as shown on the SUMMARY OF CONNECTIONS diagram. **Do not connect the battery until all devices have been wired to the control.**

BATTERY STANDBY TABLE

	Aux. Standby Current Draw			
AMP-HRS.	200mA	400mA	600mA	750mA
4.0	6 hrs.	4 hrs.	3 hrs.	2.5 hrs.
6.0–7.0	11 hrs.	7 hrs.	5.5 hrs.	4 hrs.

NOTE: These figures are approximate, and may vary depending upon the age, quality, and capacity of the battery at the time of the AC loss.

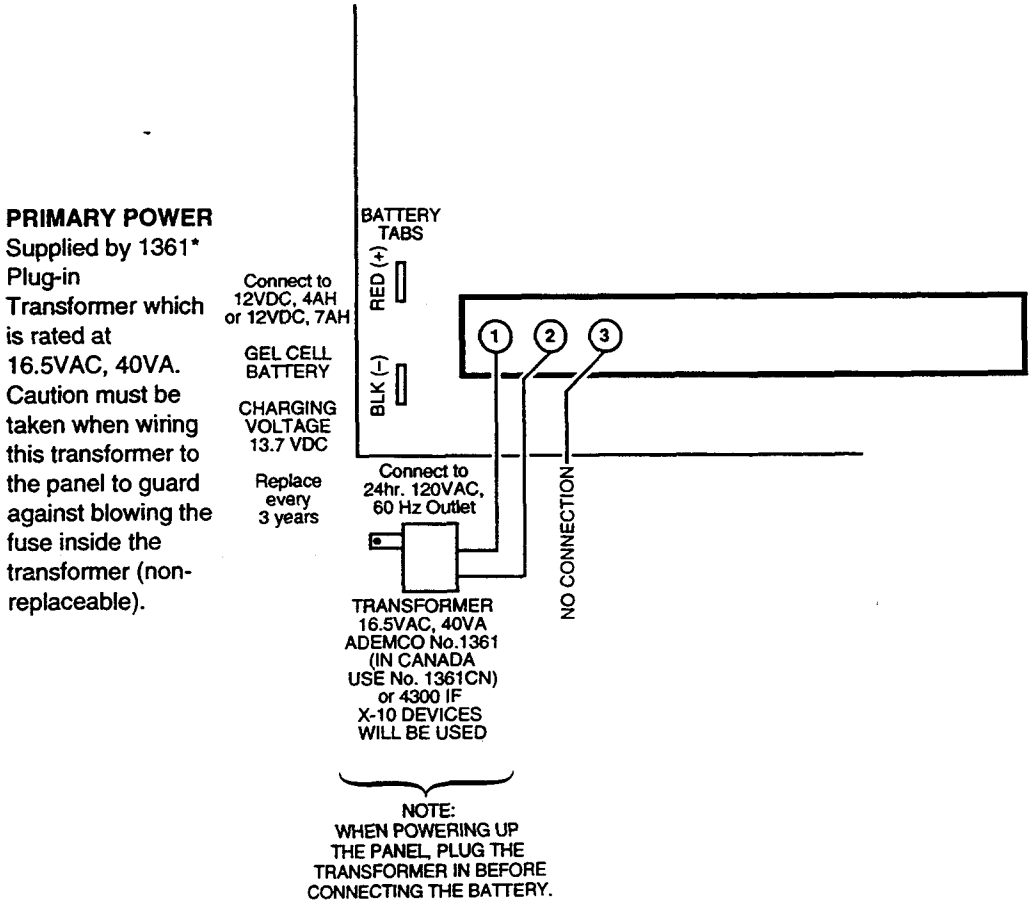


Figure 5. AC Power And Battery Connections

Programming Power and AC Options

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the Temporary Power-Up Procedure earlier in this section.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data fields:
   *17 AC POWER LOSS KEYPAD SOUNDING (**1**=yes; **0**=no)
   *18 AC POWER LOSS EXTERNAL ALARM (**1**=yes; **0**=no)
   *19 AC RANDOMIZE (1=randomize; 0=no)
   *28 POWER UP IN PREVIOUS STATE (**1**=yes; **0**=no)
3. Exit program mode by entering ***99**.

Polling Loop Current Draw Worksheet

RPM DEVICE	CURRENT	# UNITS	TOTAL CURRENT
4194 Contact	1 mA		
4192SD Photo Smoke	0.4 mA		
4192SDT Smoke w/Heat	0.4 mA		
4192CP Ion Smoke	0.4 mA		
4275 Dual PIR	1 mA		
4278 Quad PIR	1 mA		
4190 2-Zone RPM	1 mA (LOW) 2 mA (HIGH)		
4208 8-Zone RPM	16 mA		
4280 63 Zone RF	40 mA		
4280-8 8 Zone RF	40 mA		
	TOTAL **		

** If the total current draw exceeds 64 mA, a 4197 Loop Extender module must be used.
** If using two 4280s or 4280-8s, you can power one of them from auxiliary power instead of using a 4197 loop extender module.

Auxiliary Device Current Draw Worksheet

DEVICE	CURRENT	# UNITS	TOTAL CURRENT
FA210KP Keypad	30mA		
FA250KP Keypad	85mA		
FA550KP Keypad	100mA		
675 Ground Start Module	50 mA		
4280 or 4280-8 Receiver	40 mA†		
Built-in Polling Loop	(total poll loop worksht)		
4281 RF Receiver	35mA		
5881 RF Receiver	50mA		
4197 Poll Loop Extender	80 mA†		
4204 Relay Module	15mA standby 40mA per active relay		
*			
		TOTAL (750mA max)	

* If using hard-wire devices such as PIRs, refer to the specifications for that particular unit's current draw.
†Only applies if powered from Control's auxiliary power.

HARD-WIRED ZONES

Hardwired Zone Setup

General Information

Zones 1-9 are reserved for traditional hard-wired devices. The following table summarizes zone usage.

Zone 1	EOLR supervised or closed circuit unsupervised devices. Also supports 2-wire smoke detectors.
Zones 2, 3, 4, 6	EOLR supervised or closed circuit unsupervised devices. Also supports 4-wire smoke detectors.
Zone 5	EOLR supervised or closed circuit unsupervised devices. Also supports 4-wire smoke detectors. Alternatively, can use to support Audio Alarm Verification module (AAV). If used as AAV zone, cannot be used as protection zone.
Zone 7	EOLR supervised or closed circuit unsupervised devices. Also supports 4-wire smoke detectors. Alternatively, can be used to support remote keyswitch. If used for keyswitch, cannot be used as protection zone.
Zone 8	EOLR supervised or closed circuit unsupervised devices. Also supports 4-wire smoke detectors. Zone 8 also supports latching glass break detectors.
Zone 9	Unsupervised devices only. Programmable for fast response (10mS). Can monitor fast acting glass break detectors or vibration sensors if set for fast response.

UL NOTES:
A zone must be EOLR supervised when used as a fire zone or as a burglary zone in UL Listed Commercial Burglary installations.

Note: Zone 9 is unsupervised and may not be used as a fire zone or as a burglary zone in UL Commercial Burglary installations.

A zone may be closed circuit unsupervised when used as a burglary zone in UL Residential Burglary installations, provided that interconnecting wires are no longer than 3 feet with no intervening walls or barriers.

Applications and Connections

Zone 1:
- Can be used for EOLR supervised or closed circuit unsupervised devices.
- It is the only zone that supports 2-wire smoke detectors.

1. **For EOLR Supervised Usage:**
   - You may use open circuit or closed circuit devices.
   a. Leave the red PC Board jumper intact.
   b. Connect open circuit device in parallel across the loop. Make sure to connect the 2,000 ohm EOLR across the loop wires **at the last device**. If the EOLR is not at the last device, proper supervision is not obtained.
   c. Connect closed circuit devices in series with the loop.
2. **For EOLR Fire Zone Usage:**
   - Zone 1 supports 2-wire smoke detectors.
   a. Leave the red PCB jumper intact.
   b. Assign zone 1 as response type 09 (fire) during #93 Zone Programming.
   c. Connect up to sixteen (16) 2-wire smoke detectors.

Compatible 2-Wire Smoke Detectors

Detector Type	*System Sensor* Model #
Photoelectric w/heat sensor, direct wire	2300TB
Photoelectric, direct wire	2400
Photoelectric w/heat sensor, direct wire	2400TH
Photoelectric	2451 w/B401B base
Photoelectric w/heat sensor	2451TH w/B401B base
Ionization, direct wire	1400
Ionization	1451 w/B401B base
Photoelectric duct detector	2451 w/DH400 base
Ionization duct detect	1451DH w/DH400 base
Low-profile, Photoelectric, w/135°F thermal	2100T
Low-profile, Ionization type, direct wire	1100

To reset the detectors after an alarm, silence the alarm, then reenter your code and press OFF.

3. **For Unsupervised Usage:**
   - Only closed circuit devices can be used.
   1. Cut the red PC Board jumper.
   2. Connect closed circuit devices in series with terminal 10 and 11.

IMPORTANT:

- If the EOLR is not at the end of the loop, the zone is not properly supervised. The system may not respond to an open circuit within the zone.
- The alarm current provided by this zone can support operation of only one detector in the alarmed state.

Zones 2-8:

- Can be used for EOLR supervised or closed circuit unsupervised devices.
- Can support 4-wire smoke detectors.
- Zone 8 can support latching glass break detectors.

1. **For EOLR Supervised Usage:**
   - You may use both open circuit and closed circuit devices.
   a. Enable EOLR supervision in data field *41 (enter 0). If selected, all zones 2-8 require EOLR supervision.
   b. Connect open circuit devices in parallel across the loop. The 2,000 ohm EOLR must be connected across the loop wires **at the last device.**
   c. Connect closed circuit devices in series with the loop.
2. **For EOLR Fire Zone Usage:**
   - Supports as many 4-wire smoke detectors as can be powered.
   a. Assign zone response type 09 (fire) to the zones using smoke detectors.
   b. Enable EOLR supervision in data field *41 (enter 0). If selected, all zones 2-8 require EOLR supervision.
   c. Wire the detectors in parallel, with the EOLR at the last detector for full supervision.
   d. To allow the detector to reset following an alarm, power to the detector must be interrupted. You may accomplish this by doing one of the following:
      - For non-UL Listed installations, a normally closed, momentary switch can be used to interrupt detector power. Wire the switch in series with detector power.
      - For UL Listed installations, one of the relays on the 4204 relay module must be used to interrupt detector power. Wire the relay module as shown in the diagram. Note that detector power must be supervised using a System Sensor No. A77-716B EOL Relay Module.
3. **For Unsupervised Usage:**
   - Only closed circuit devices can be used.
   a. Disable EOLR supervision in data field *41 (enter 1). If selected, EOLR is disabled for all zones 2-8.
   b. Connect closed circuit devices in series with one another if more than one device is used on the same zone.

4. **Glass Break Detectors On Zone 8:**
   - The control supports up to 50 2-wire latching type glass break detectors.
   a. Enable EOLR supervision in data field *41 (enter 0). If selected, all zones 2-8 require EOLR supervision.
   b. Connect compatible detectors in parallel, following the manufacturer's recommendations on proper installation. Refer to the table below for compatible detectors.
   c. To reset the detectors after an alarm, silence the alarm, then reenter your code and press OFF.

Compatible Glass Break Detector Ratings
• Standby Voltage: 5VDC - 13.8VDC
• Standby Resistance: Greater than 20k ohms (equivalent resistance of all detectors in parallel)
• Alarm Resistance: Less than 1.1k ohms (see note below)
• Alarm Current: 2 mA - 10 mA
• Reset Time: Less than 6 seconds
• The IEI 735L series detectors have been tested and are compatible with these ratings. You may use up to 50 IEI 735L detectors, connected in parallel. The alarm current provided by this zone can support operation of only one detector in alarmed state. Follow the manufacturer's recommendations on proper installation.
• Detectors which exceed 1.1k ohms in alarm, but maintain a voltage drop in alarm of less than 3.8 volts can also be used.

IMPORTANT:
- There is a possible problem if latching type devices are installed on both zones 1 & 8, and these zones are assigned to different partitions. The problem is that if both devices go into alarm at the same time, the resetting of one device could cause the loss of alarm memory in the other device.
- Use of N.O. or N.C. contacts on the same zone may prevent proper glass break detector operation.
- If using a remote keyswitch, connect it to zone 7. Zone 7 is then no longer available as a protection zone.

Zone 9:
- This zone is unsupervised and is suitable for monitoring fast acting glass break sensors or vibration sensors when programmed for fast response.
- Use only closed circuit devices.

a. Using only closed circuit devices, connect in series with one another.
b. Program zone 9 as any response type except fire (type 09) during #93 Zone Programming.
c. Program fast (10 msec) or normal (350 msec-500 msec) response in data field *14.

IMPORTANT:
- Avoid using mechanical magnetic or relay type contacts in this zone when programmed for fast response.

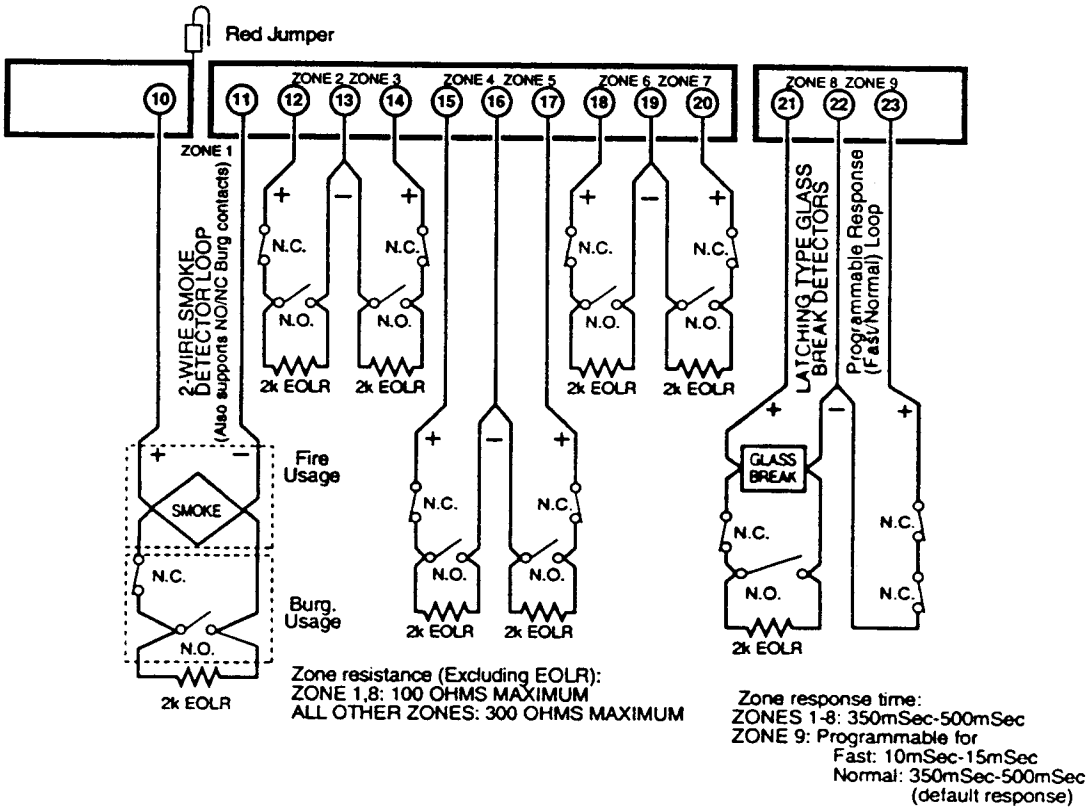


Figure 6. Zones 1–9 Wiring Connections

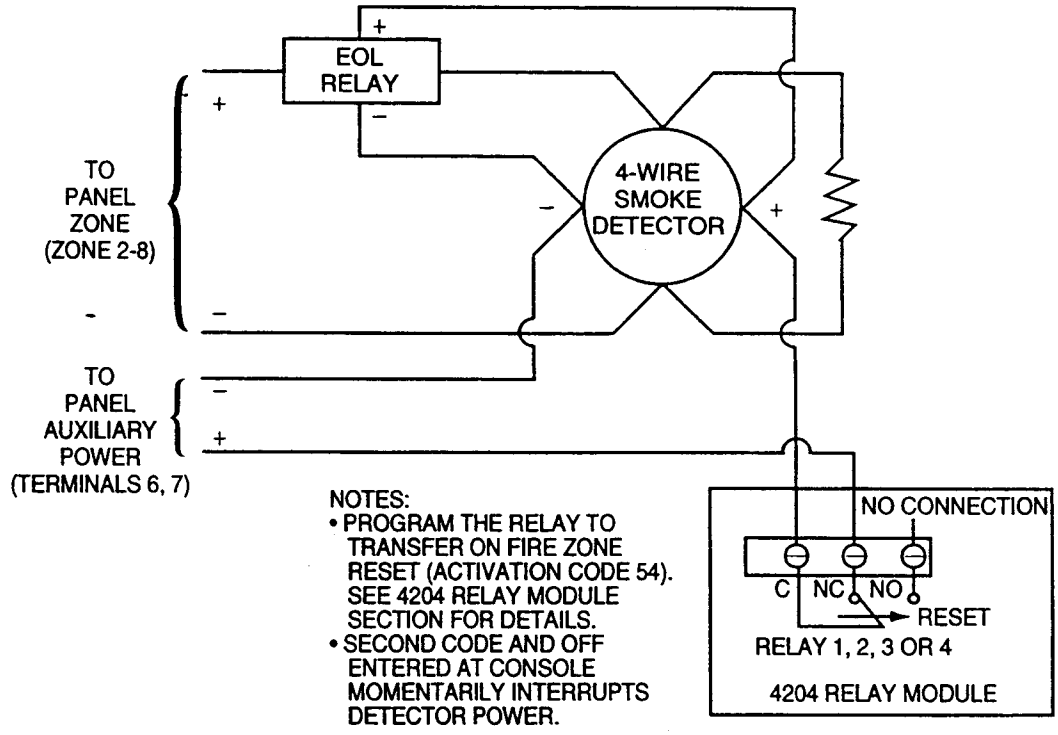


Figure 7. 4-Wire Smoke Detector Power Reset Using 4204 Relay Module

Programming Hardwired Zones

Important!: Note that before programming zone characteristics, you must program fields 1*26 and 1*27 (RF Expander Selects) and field 2*00 (number of partitions) and field 1*32. You must also use #93 Menu Mode to program the RF expander device being used. This identifies the use of RF Receivers and the number of partitions being used in the system.

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data fields:
   *14 ZONE 9 FAST/NORMAL RESPONSE (**1**=fast; **0**=normal)
   *41 EOLR DISABLE FOR ZONES 2-8 (**1**=N.C. loops; **0**=EOLR)
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.

ZONE PROG? 1=YES 0=NO	Press **1** to enter ZONE PROGRAMMING mode. While in this mode, press [*] to display the next screen, or press [#] to display a previous screen.
ENTER ZN NO. 00=QUIT 02	Enter the zone number to be programmed 01-09. Press [*] to accept entry.
Zn ZT P RC In:L 02 00 1 00 HW:N	A summary screen for that zone will appear. Zn = zone number; ZT = zone type; P=partition to which zone is assigned; RC = report code for that zone; In:L = input type of zone Press [*] to continue.
02 Zone Type Zone disabled 00	Each zone in a system must be assigned to a zone type, which defines the way in which the system responds to faults in that zone. Enter the zone response type for each zone. The screen will automatically display the zone type for the number entered. Press [*] to accept entry. If a different zone response type is desired, enter a different number and press [*]

Refer to the ZONE TYPE DEFINITIONS section for definitions of each zone type.

Zones 1-8 can be assigned any response type.

Zone 9 can be assigned any response type **except** fire.

Zone Types are as follows:

- 00 Assign For Unused Zones
- 01 Entry/Exit #1, Burglary
- 02 Entry/Exit #2,
- 03 Perimeter, Burglary
- 04 Interior, Follower, Burglary
- 05 Trouble By Day/Alarm By Night, Burglary
- 06 24 Hour Silent Alarm
- 07 24 Hour Audible Alarm
- 08 24 Hour Auxiliary
- 09 Fire
- 10 Interior, Delay, Burglary
- 11 24 Hour. Burglary
- 20 Arm-Stay (Not For 5700 Transmitters)
- 21 Arm-Away (Not For 5700 Transmitters)
- 22 Disarm (Not For 5700 Transmitters)
- 23 No Alarm Response (Ex. Relay Action)

02 Partition	Enter the partition number (**1-8**) in which this zone is located.
02 Report Code	Enter the report code for this zone.
02 Input Type RF Trans. RF:	Enter the input device type as follows: **0** = not used; **1**=hardwired After completing this entry, the summary display appears. Press [*] to display the zone number question for programming the other hardwired zones. Enter **00** to exit back to normal programming mode.

2-WIRE POLLING LOOP ZONES 10-86

Polling Loop Zone Setup

Applications

- You can expand the system from the basic 9 zones to up to 86 zones using the built-in 2-wire loop with various Remote Point Modules (RPMs). See ADVISORIES below.
- The polling loop provides power to sensors and serves as communication path between the panel and sensors.
- Refer to the list of compatible devices at the end of this section.

Intercom Interference

- If an intercom system is being used, the polling loop wires must be as far from the intercom wiring as possible (minimum 6"). If this spacing cannot be achieved, shielded wire must be used. If this is not done, interference on the intercom system might occur. Also note that the maximum total wire length supported is cut in half when shielded wire is used.

Advisories

- The built-in polling loop has two limitations that must be observed. First, the maximum allowable current draw from the polling loop is 64mA. Refer to the POLLING LOOP CURRENT DRAW WORKSHEET (found in the POWERING THE SYSTEM section of this manual) for current draws of various polling loop devices. Second, regardless of current draw, no more than 64 devices can be connected to this loop. Installations which require up to 86 zones will require the use of 4190WH RPMs (which offer 2-points – a right and a left loop – per device) or the use of a 4197 (which offers another polling loop supporting an additional 64mA/64 points). See diagram below.
- Make certain to include the total current drawn on the polling loop in the AUXILIARY CURRENT DRAW WORKSHEET (see POWERING THE SYSTEM section) when figuring the total auxiliary load on the panel's power supply.

Fault Annunciation

- Since the polling loop and the RF receiver(s) are shared among the 8 partitions, the scheme for announcing their failure is as follows:

  Respective faults (for zones 88-91 & 97) will report as trouble conditions only, and as such, should be assigned either zone type 00 if no annunciation is desired, or zone type 05 if annunciation as trouble condition is desired. If the polling loop or RF link fails, the corresponding zone number will display a trouble condition for each partition that uses the device that failed. In addition, all zones associated with that device will indicate a check condition. The trouble condition will not interfere with the ability to arm the partition, but the faults must first be bypassed.

Polling Loop Connections

1. Set the polling loop device's address (zone number) using its DIP switches. Refer to the device's instructions, or the DIP Switch Tables found at the end of this manual when setting addresses.

   The 4139SN and 4191SN do not need an address set. Instead, they have preprogrammed serial numbers which must "learned" by the control during #93 Menu Mode Zone Programming.

2. Connect polling loop devices to a single run, or connect to separate runs, in a star configuration. Follow the device's instructions and make sure to use correct polarity when wiring. Refer to the Maximum Polling Loop Wire Run Table for maximum wire lengths.

Maximum Polling Loop Wire Runs

Wire Gauge	Max. Length
#22 gauge	650 feet
#20 gauge	950 feet
#18 gauge	1500 feet
#16 gauge	2400 feet

Note: Twisted pair recommended for all normal wire runs.

IMPORTANT: When in a star configuration, no individual run can be longer than the table indicates, and the total length of all the sensor star runs, combined, cannot exceed 4000'. If using unshielded wire in conduit or shielded wire, the maximum is 2000'. If longer wire runs are needed, a 4197 Loop Extender Module must be used.

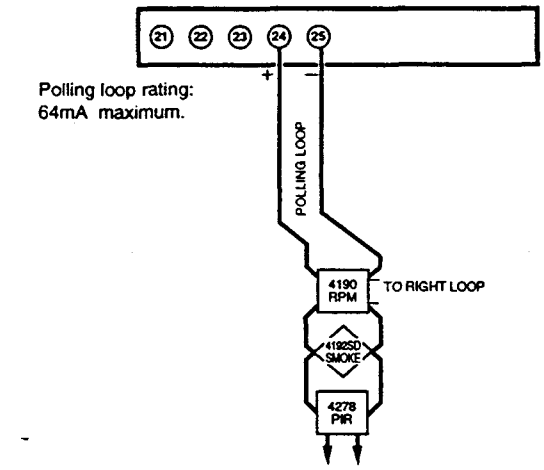


Figure 8. Polling Loop Connections

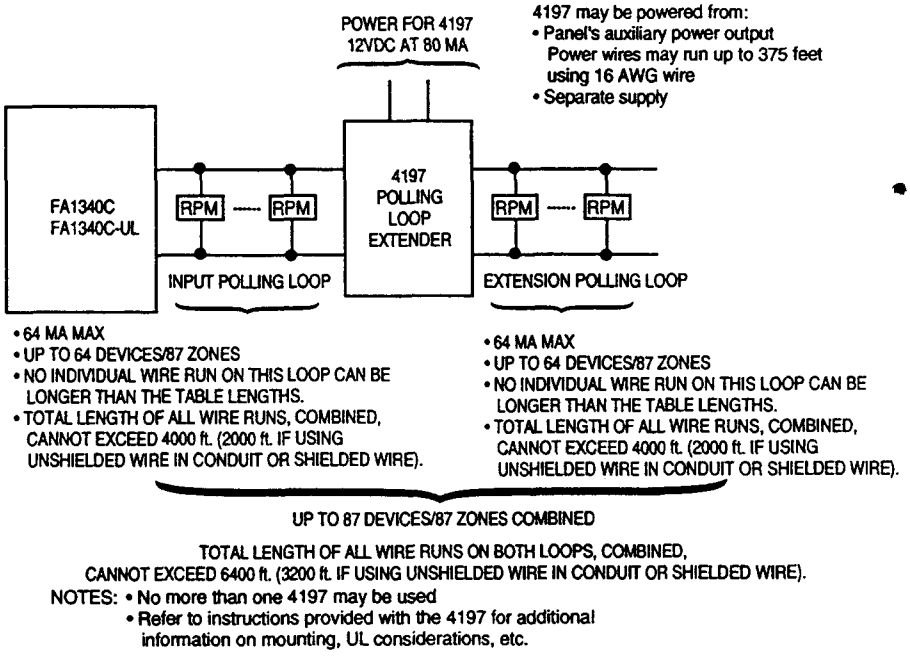


Figure 9. Polling Loop Extender Module Wiring

Programming Polling Loop Zones

Important!: Note that before programming zone characteristics, fields 1*26 & 1*27 (RF Expander Selects) and field 2*00 (number of partitions) and field 1*32 must be programmed. This identifies the use of RF Receivers and the number of partitions being used in the system.

1. With at least one alpha keypad (FA550KP) wired, power up the system.
   Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program field *86 if you are using only zones 10-17 in conjunction with the 4208 module.
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.

ZONE PROG? 1=Yes 0=No	Press **1** to enter ZONE PROGRAMMING mode. Press [*] to display the next screen. Press [#] to display a previous screen.
Enter Zn No. 00=QUIT 20	Enter the zone number to be programmed (10-86). Press [*] to accept entry.
Zn ZT P RC In:L 02 00 1 00 HW:N	A summary screen for that zone will appear. Zn = zone number; ZT = zone type; P=partition to which zone is assigned; RC = report code for that zone; In:L = input type of zone Press [*] to continue.
02 Zone Type Zone disabled 00	Each zone in a system must be assigned to a zone type, which defines the way in which the system responds to faults in that zone. Enter the zone response type for each zone. The screen will automatically display the zone type for the number entered. Press [*] to accept entry. If a different zone response type is desired, enter a different number and press [*] Zone Types are as follows: 00 Assign for unused zones 01 Entry/Exit #1, burglary 02 Entry/exit #2, 03 Perimeter, burglary 04 Interior, follower, burglary 05 Trouble by day/Alarm by night, burglary 06 24 hour silent alarm 07 24 hour audible alarm 08 24 hour auxiliary 09 Fire 10 Interior, delay, burglary 11 24 hour burglary 20 Arm-stay (not for 5700 transmitters) 21 Arm-away (not for 5700 transmitters) 22 Disarm (not for 5700 transmitters) 23 No alarm response (ex. relay action)
	Refer to the ZONE TYPE DEFINITIONS section for definitions of each zone type.
20 Partition	Enter the partition number (1-8) in which this zone is located.
20 Report Code	Enter the report code for this zone.

20 Input Type	Enter the input device type as follows: **6**=serial number polling loop device (SL type); **7**=DIP switch type polling loop device (DP type); **8**=right loop of DIP switch type device (PS type). Right loops refer to the use of the right loop on a 4190WH zone expander module and/or 4278 PIR, which allow hard-wired devices to be monitored by the polling loop.
20 LOOP NUMBER OR	If this is a previously "learned" sensor, the loop number for this zone will appear. Press [*] to continue.
20 LEARN S/N ? 1=YES 0=NO	If type 6 was entered, and the sensor's serial number has not been "learned," the serial number can be learned now by entering **1**, or it can be learned later by using the SERIAL NUMBER LEARN menu. Enter **0** if serial number will be learned later. The summary screen will then appear (see summary screen description on previous page).
20 INPUT S/N :L A000-0000:1	If learning the serial number now (entering 1 at the last prompt), this prompt appears. Fault the sensor two times. The keypad will beep twice after the first fault and three times upon receiving a matching fault signal. When the serial number has been successfully learned, its number appears in the display. A typical display is shown below: 20 PROG AS SL:1 A001-3078:1 Press [*] to continue. The summary screen will then appear (see summary screen description on previous page. After completing this entry, the summary display appears. The display will then repeat with the zone number question for programming the other zones in the system. Enter **00** to exit back to normal programming mode.

Compatible Polling Loop Devices

4208	Eight Zone Expander	Used to supervise up to 8 hard-wired devices via the polling loop. NOTE: Does not support 2-wire smoke detectors. Set DIP switches to identify 8 zones. The first two zones can be either normal or fast response (DIP switch selectable). All zones are EOLR supervised (first six zones = 4.7k ohms, last two zones = 30k ohms), provided with the 4208.
4190WH	Two Zone RPM	Used to supervise 2 hard-wired devices via the polling loop. DIP switch programmable. The left zone can be EOLR supervised, if necessary, and can accept either open or closed circuit sensors, and can be set for fast response. The right zone is unsupervised and can accept closed circuit sensors only.
4278	Quad PIR	Quad element PIR with built-in RPM which is DIP switch programmable and connects directly to the polling loop. Includes mirrors for both wide angle and curtain/long range applications. Features an auxiliary sensor loop that permits connection of another nearby closed circuit alarm sensor (reed contact, etc.).
4275	Dual PIR	Dual element PIR with built-in RPM which is DIP switch programmable. Includes mirrors for both wide angle and curtain/long range applications and can use the 1875PA Pet Alley mirror. Built-in selectable pulse count capability.
4194	Surface Mount Reed Contact (Wide Gap)	Wide gap surface mounted reed contact with built-in RPM, which is DIP switch programmable.
4197	Polling Loop Extender	Can be used if the 2-wire polling loop must be greater than the recommended length (2400 feet maximum if using 16AWG wire). By installing a 4197 at the end of the first loop, the polling loop can be continued. If more than 64mA needs to be drawn from the polling loop to power RPMs, use of the 4197 provides another loop with 64mA available. Connects to the polling loop and is powered from auxiliary power or by a separate 729 power supply with battery backup.

UL NOTE:
For UL Commercial Burglary installations, the 4208 must either be mounted inside the FA1340C-UL cabinet or in a separate enclosure which has a tamper supervised cover.

UL NOTE:
In UL Commercial Burglary installations, the 4190WH right loop must not be used, and the left loop must be EOLR supervised.

UL NOTE:
The 4278 auxiliary sensor loop cannot be used in UL Commercial Burglary installations.

UL NOTE: The 4194 is not UL Listed for UL Commercial Burglary applications.

UL NOTE:
The 4197 must be powered from the FA1340C-UL's auxiliary power output in UL Commercial Burglary installations.

Compatible Polling Loop Devices

4192SD	**Photoelectric Smoke Detector**	One piece photoelectric smoke detector with built-in RPM which is DIP switch programmable.
4192SDT	**Photoelectric Smoke Detector w/Heat Detector**	One piece photoelectric smoke detector with 135°F (57°C) heat detector, and built-in RPM which is DIP switch programmable.
4192CP	**Ionization Smoke Detector**	One piece products of combustion ionization detector with built-in RPM which is DIP switch programmable.
4139SN	**Serial Number Surface Mount Reed Contact**	Compact surface mount magnetic reed contact with built-in RPM. Serial number ID "learned" by control panel.
4191SN	**Serial Number Recessed Reed Contact**	Recessed (1/2" dia.) magnetic reed contact with built-in RPM. Serial number ID "learned" by control panel.
7500	**Single Technology Glass Break Detector**	DIP switch programmable glass break detector which connects directly to the polling loop.
9500	**Dual Technology Glass Break Detector**	DIP switch programmable dual technology glass break detector which connects directly to the polling loop.

5700 SERIES WIRELESS ZONES

(For use with 4281/4280 Series Receivers; zones 1-63)

4281/4280 RF Receiver Setup

UL NOTE: Wireless may not be used in UL Commercial Burglary installations.

Recvr	Zones
4281L	up to 4
4281M	up to 8
4281H	up to 63

The Receivers

- The receiver responds to status and alarm signals from wireless transmitters (@345MHz USA; 315MHz Canada) within a nominal range of 200 feet, and relays this information to the control. The 4280 receiver is connected to the polling loop , and the 4281 receiver is connected to the remote keypad terminals.
- Two of the same type of receivers can be used to provide either a greater area of coverage, or to provide redundant protection.
- Any zone from 1-63 can be used as a 5700 series wireless zone.
- Supervision: The control checks the receiver connections about every 45 seconds and displays a "CHECK" message if the connection between the receiver and the control panel is broken (if type 05 is assigned). Zone 89 refers to the 2nd receiver and zone 91 refers to the 1st receiver. In addition, all zones associated with the receiver will report a trouble condition.

  If, within a programmed interval of time, the receiver does not hear from *any* of its transmitters, a CHECK message will appear for zones 88 or 90 (if type 05 is assigned).

The following table highlights the features of the various receivers.

FEATURE	4280 series	4281 series
Wiring	Connects to polling loop	Connects to keypad lines
House ID	Set via DIP switches	Programmed via #93 Menu Mode.
Receiver Address	Set by cutting blue jumper in 2nd receiver. Enabled via fields 1*26 & 1*27.	Set via DIP switches. Enabled via #93 Device Programming.
Cover Removal	Causes alarm or trouble depending on response type.	Does not cause alarm or trouble.
Go/No Go Mode	Requires cover removal.	Automatic upon entering test mode.
Spatial Diversity	No. Requires 2 receivers for redundancy or to expand area of coverage.	Yes. Eliminates nulls and voids. 2nd receiver expands coverage area or provides additional redundancy.

Fault Annunciation

- Since the polling loop and the RF receiver(s) are shared among the 8 partitions, the scheme for annunciating their failure is as follows:
- Respective faults (for zones 88-91 and 97) will report as trouble conditions only, and as such, should be assigned either zone type 00 if no annunciation is desired, or zone type 05 if annunciation as trouble condition is desired.
- If the polling loop or RF link fails, the corresponding zone number will display a trouble condition for each partition that uses the device that failed. In addition, all zones associated with that device will indicate a check condition.
- The trouble condition will not interfere with the ability to arm the partition, but the faults must first be bypassed.

Advisories

1. Place the receiver in a high, centrally located area for best reception. Do not place receiver on or near metal objects.
2. For maximum range, install the RF receiver at least 10 feet from the Control panel, or any keypads, to avoid interference from their microprocessor.
3. If dual receivers are used:
   A. Both must be at least 10 feet from each other, as well as from the Control panel and remote keypads.
   B. The house IDs must be the same.
   C. Using two Receivers *does not* increase the number of transmitters the system can support (63 transmitters, plus a wireless keypad).

4280 is not recommended for new installations; 4280 receiver is scheduled to be discontinued.

Installing The 4280 Series Receiver

IMPORTANT: If using two 4280 Receivers, one of them must be powered from auxiliary power, so as not to exceed the 64mA polling loop current rating.

1. Set the receiver's house ID using its DIP switches. To be sure you do not use a house ID that might be in use in a nearby system, use the House ID Sniffer Mode, which is described later in this section.
2. If using two receivers, cut the blue jumper on the second receiver. This identifies it as the second receiver.
3. Connect the receiver to the polling loop terminals on the control.
   Refer to the maximum polling loop wire runs described in the POLLING LOOP section when connecting 4280s.
   IMPORTANT: The maximum combined polling loop run is 4000'. If using shielded wire, the maximum is 2000'.
   For more information regarding the 4280 installation, such as installing the antenna, refer to the installation instructions provided with the 4280.
   NOTE: If using a 4280-8, only up to 8 zones can be enabled as RF zones. If more than 8 zones are enabled, the message "SET-UP ERROR" (or E8 on non-alpha keypads) will be displayed.

Important:
4281 microprocessor must have part number N5334Vx, where x is any number. The microprocessor is located just above the DIP switch on the PC board.

Installing the 4281 Receiver

Receivers must be mounted externally to the control.

NOTE: The receiver can detect signals from transmitters within a nominal range of 200 feet. Take this into consideration when mounting the receiver.

1. Set the receiver's device address (01-30) using its DIP switches. Lower numbered address is primary receiver (supervisory fault ID 90, 91). Higher numbered address is secondary receiver (receiver fault ID 88, 89).
2. Connect the receiver's wire harness to the control's keypad terminals.
3. Refer to the installation instructions provided with the receiver for further installation procedures regarding antenna mounting, etc.

House ID Sniffer Mode

- 5700 series receivers respond only to transmitters set to the same house ID (01-31) This prevents system interference from transmitters in other nearby systems.
- Use Sniffer Mode to make sure you do not choose a House ID that is in use in a nearby system.

1. Enter your "Installer Code" + [#] + [2].
2. The receiver will now "sniff" out any House IDs in the area and display them. Keep the receiver in this mode for about 2 hours to give a good indication of the House IDs being used. Use a house ID that is **not displayed**.
3. To exit the Sniffer Mode, simply key your installer code + OFF.

IMPORTANT: Since Sniffer Mode effectively disables RF point reception, Sniffer Mode **cannot** be entered while any partition is armed.

UL NOTE:
For UL Household Fire/Burglary applications, use of 1 or 2 RF RCVRs requires enabling their respective faults (88-91) as applicable (type 5).

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   a. If using a 4280: set data field 1*32 to **0.**
      If using a 4281: set data field 1*32 to **1.**
   b. Set data field 1*30 RF RCVR CHECK-IN INTERVAL (**02-15** times 2).
   c. If using a 4280, also program fields 1*26 and 1*27, FIRST and SECOND RECEIVER SELECT. You may exit program mode now. No Device Programming is necessary for the 4280.
3. If using the 4281: From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
   Press **0** (NO) repeatedly until the "DEVICE PROG?" prompt appears. Follow the instructions below.

DEVICE PROG? 1=yes 0=no	Press **1** to enter DEVICE PROGRAMMING mode.
DEVICE ADDRESS? 01-31	The device address identifies the device to the control. Enter the 2-digit device address number as set by the receiver's DIP switches (01-31). Press [*] to accept entry.
DEVICE TYPE	Enter device type **03** = RF receiver. Press [*] to accept entry.
RF EXPANDER HOUSE ID XX	Enter the 2-digit house ID (00-31) as determined by sniffer mode (use an address not displayed during sniffer mode). The screen will display the next device number to be programmed.

4. Press **00** to exit Menu Mode.

NOTE: After replacing a low or dead battery, activate the transmitter and enter the security code + OFF to clear its memory of the "Low Battery" signal.

General Information

- Each transmitter's zone number (address ID) is set by using its DIP switches. The zone number must then be programmed into the system using #93 Menu Mode–Zone Programming Menus.
- Each transmitter is also assigned an input type during #93 Menu
- 5700 series transmitters must also be set for the corresponding receiver's House ID. After installation, check that all transmitters have been assigned the proper House ID by using the [#] + [3] Sniffer Mode procedure described later.
- Zone number assignments for 5700 transmitters are determined by the zone response type desired. Refer to the Wireless Zone Type paragraph described later for details.

Transmitter Supervision

- Each transmitter (except 5701 and 5727) is supervised by a check-in signal that is sent to the receiver at 70-90 minute intervals. If at least one Check-in is not received from a transmitter within a programmed interval (field 1*31), the keypad displays the zone number and "CHECK."
- Each transmitter (including 5701 and 5727) is also supervised for low battery conditions, and will transmit a low battery signal to the receiver when the battery has approximately 30 days of life remaining. The keypad will display the transmitter number and "LO BAT".

Important Battery Notice

- Batteries in the wireless transmitters may last from 4-7 years, depending on the environment, usage, and the specific wireless device being used. External factors such as humidity, high or low temperatures, as well as large swings in temperature, may reduce the actual battery life in a given installation. The wireless system can identify a true low battery situation, thus allowing the dealer or user of the system time to arrange a change of battery and maintain protection for that given point within the system.
- Button type transmitters should be periodically tested by the installer for battery life (ex. 5701).

Installing the Transmitters

- Zone number assignments can be from **1-63**.
- A variety of RF system transmitters can be used to make up the wireless zones. This includes window/door units, smoke detectors, PIRs, and panic keys.

1. For each 5700 series transmitter, set its DIP switch to the appropriate zone number and house ID. Refer to the Compatible Transmitters Table for zone numbers and programming information for each particular transmitter.
2. Install each transmitter in accordance with the instructions provided with the transmitter.

   To be sure reception of the transmitter's signal at the proposed mounting location is adequate, perform a Go/No Go test, which is described later in this section.
3. Refer to the PROGRAMMING 5700 SERIES WIRELESS ZONES section for programming the transmitters.

Wireless Zone Types

- Each RF zone can be programmed to respond as any zone type such as ENTRY/EXIT, INTERIOR, PERIMETER, etc. (see the ZONE TYPES section for explanations of each zone type).
- Desired alarm responses for 5700 series transmitters are:

Zone Type	Trans/Zone #
Entry/Exit Burg	1 through 47 *
Perimeter Burg	1 through 47 *
24 Hour Burg	1 through 47 *
Interior Burg	1 through 47 *
	32 through 47 * (5775)
Fire	48 through 63 *
	48 through 55 ** (5706)
24 Hour Panic	48 through 63*
(silent or audible)	62 or 63 *** (5701)
Day/Night Burglary	1 through 47 *
24 Hour Auxiliary	1 through 47 *

* Note that zones 1-63 can be used, but have the following limitations: Transmitters set for zones 48-55 will transmit once every 12 seconds while the zone is faulted. Transmitters set for zones 56-63 will transmit once every 3 seconds while faulted. These two ranges of zone numbers could adversely affect transmitter battery life. Transmitters set for an ID of 32 through 47 will have a 3 minute lock-out between transmissions. Use this last range of zone ID numbers for sensors protecting frequently used doors or windows to conserve battery life.

** Transmitter IDs 48 through 55 have highest signal priority.

*** Transmitter IDs 62 and 63 are unsupervised to allow removal of the 5701 off premises -- signal priority is lower than that of fire, but higher than burglary.

Go/No Go Test Mode

- Before mounting transmitters permanently, conduct Go/No Go tests to verify adequate signal strength and reorient or relocate transmitters if necessary.

  Test mode reduces the wireless receiver gain. Checking in this mode assists in determining good mounting locations for the transmitters and verifies that the RF transmission has sufficient signal amplitude margin for the installed system.

1. Enter security code and press [5] (TEST).

   For multi-partition systems, make sure all partitions are disarmed before entering this mode.
2. Once transmitters are placed in their desired locations and the approximate length of wire to be run to sensors is connected to the transmitter's screw terminals, fault each transmitter. *Do not conduct this test with your hand wrapped around the transmitter as this will cause inaccurate results.*
   - If a single receiver is used, the keypad will beep three times to indicate signal reception. If two receivers are used, the keypad will beep once if the first receiver received the signal, twice if the second receiver received the signal and three times if both receivers heard the signal (which is desirable for redundant configurations).
   - If the keypad does not beep, reorient or move the transmitter to another location. Usually a few inches in either direction is all that is required.
3. Mount the transmitter according to the instructions provided with the transmitter.
4. Exit the mode by entering Master code + [1] (OFF).

Compatible 5700 Series Transmitters

UL NOTE:
The 5711, 5715WH, 5716, and 5716WM do not supervise their loop wiring. Therefore, for UL Household Burglary installations, the loop wiring may not exceed 3 feet.

Model	Product	Zone Num.	Description
5701	Panic Transmitter	62 or 63	Programmable for either silent or audible 24 hour alarm.
5706 5707	Photoelectric Smoke Detectors	48-55	One piece smoke detectors with built-in transmitter. Built-in UL Listed 85 dB piezoelectric alarm sounder and audible low battery warning.
5711	Slimline Door/ Window Transmitter	1-63	Can be used with any closed circuit sensor.
5715WH	Universal Transmitter (White)	1-63	DIP switch selectable for fast response, open or closed sensor usage, and has a tamper protected cover. Use in applications where open circuit heat detectors are needed or where fast response devices are employed.
5716 5716WM	Door/Window Transmitter	1-63	Can be used with any open or closed circuit sensor. Features a built-in reed switch. 5716WM includes magnet.
5742	Audio Discriminator	1-63	For use in unoccupied areas to detect the sound of shattering glass when a window is broken.
5743	Dual Technology Glass Break Detector	1-63	Detects the sound *and* shock vibrations of breaking glass and requires the presence of *both* to initiate an alarm condition transmission.
5775	PIR Detector	32-47	Dual element passive infrared detector with built-in selectable pulse count. *Note*: There is a 3 minute lock-out between fault transmissions to conserve battery life. Two interchangeable battery compartments are provided. One accommodates a single battery, and the other, two batteries. Using 2-battery compartment can double time between battery replacement.
5727	Wireless Keypad	House ID	Can be used to turn the burglary protection on and off, and features the same built-in panic functions as wired keypads for either silent or audible 24 hour alarm. An LED indication lights each time a key is pressed, to verify transmission. The keypad is identified as zone "00" (on wired keypads) when it transmits with a low battery.
5827BD	Wireless Bi-directional Keypad	House ID	Used with 5800TM Module. Can operate the system similarly to wired keypads and can indicate system status via its 3 LEDs and sounder. Includes 3 panic keys for 24 hour silent or audible alarm. Requires a 5800TM Transmitter Module, to operate in conjunction with system's 4281 receiver. Key programmed, *has no DIP switch*. The keypad is identified as zone "00" (on wired keypads) when it transmits with a low battery.

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Press ***94** to enter the second page of data fields.
   Program the following data fields:
   - 1*28 RF TX LOW BATTERY ANNUN (**1**=immediate; **0**=when disarmed)
   - 1*29 RF TX LOW BATTERY REPORT ENABLE (**1**=yes; **0**=no)
   - 1*31 RF TRANSMITTER CHECK-IN INTERVAL (**02-15** times 2)
   - 1*44 WIRELESS KEYPAD TAMPER DETECT (if using a keypad)
   - 1*48 WIRELESS KEYPAD ASSIGNMENT (if using keypad)
   - 1*49 SUPPRESS TX SUPERVISION SOUNDING (**1**=yes; **0**=no)
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.

ZONE PROG? 1=Yes 0=No	Press **1** to enter ZONE PROGRAMMING mode. The following screens will appear. Press [✳] to display the next screen. Press [#] to display a previous screen.
Enter Zn No. 00=QUIT 20	Enter the zone number to be programmed (01-63, Press [✳] to accept entry.
Zn ZT P RC In:L 20 00 1 00 RF:N	A summary screen for that zone will appear. The "RF" indicates the input type of device, and the "N" after the "RF:" indicates the device's loop number to which the sensor is connected.
20 Zone Type Zone disabled 00	Each zone in a system must be assigned to a zone type, which defines the way in which the system responds to faults in that zone. Refer to the ZONE TYPE DEFINITIONS section for definitions of each zone type. Enter the zone response type for each zone. The screen will automatically display the zone type for the number entered. Press [✳] to accept entry. If a different zone response type is desired, enter a different number and press [✳]
20 Partition	Enter the partition number (**1-8**) in which this zone is located.
20 Report Code	Enter the report code for this zone.

00	for unused zones
01	Entry/Exit #1, burglary
02	Entry/exit #2
03	Perimeter, burglary
04	Interior, follower, burg
05	Trouble by day/Alarm by night, burglary
06	24 hour silent alarm
07	24 hour audible alarm
08	24 hour auxiliary
09	Fire
10	Interior, delay, burglary
11	24 hour burglary
23	No alarm response (ex. relay action)

20 Input Type RF Trans. RF:

When using 5700 series transmitters, always set the input type to type 3. The zone number of the transmitter identifies whether or not supervision is required (ex. 5700 wireless zone number 63 is not supervised).

Enter the input device type as type **3**=supervised RF transmitter (RF type)
After completing this entry, the summary display appears. The display will then repeat with the zone number question for programming the other zones in the system. Enter **00** to exit back to normal programming mode.

2. When all transmitters have been installed, use transmitter sniffer mode to test that they have all been programmed properly.
   Enter master code + **# 3**.

5800 SERIES WIRELESS ZONES

(For use with 5881 Series Receivers; zones 1-86)

5881 RF Receivers

UL NOTE: Wireless may not be used in UL Commercial Burglary installations.

Receiver	Zones
5881L	up to 8
5881M	up to 16
5881H	up to 86

NOTE: In Canada, 5800 systems must use 5882 series receivers:
5882L/5882H.
Information in this manual relative to the 5881 receivers applies as well to the 5882 receivers.
5881 and 5882 receivers can all use the same transmitters.

Receivers

- The receiver responds to status and alarm signals from wireless transmitters (@345MHz) within a nominal range of 200 feet, and relays this information to the control via the keypad data lines.
- Two of the same type of receivers can be used to provide either a greater area of coverage, or to provide redundant protection.
- Receiver Supervision: The control checks the receiver connections about once every 45 seconds. If the connection is broken between the receiver and the control panel, a "CHECK" message will be displayed for zones 89 (2nd receiver) or 91 (1st receiver) (if type 05 is assigned). In addition, all zones associated with the receiver will report a trouble condition.

  If, within a programmed interval of time, the receiver does not hear from *any* of its transmitters, a CHECK message will appear for zones 88 or 90 (if type 05 is assigned).

Fault Annunciation

- Since the RF receiver(s) are shared among the 8 partitions, the scheme for announcing their failure is as follows:
- Respective faults (for zones 88-91) will report as trouble conditions only, and as such, should be assigned either zone type 00 if no annunciation is desired, or zone type 05 if annunciation as trouble condition is desired.
- If the RF link fails, the corresponding zone number will display a trouble condition for each partition that uses the device that failed. In addition, all zones associated with that device will indicate a check condition.
- The trouble condition will not interfere with the ability to arm the partition, but the faults must first be bypassed.

Advisories

1. Place the receiver in a high, centrally located area for best reception. Do not place receiver on or near metal objects.
2. For maximum range, the RF receiver must be at least 10 feet from the Control panel or any remote keypads to avoid interference from their microprocessor.
3. If dual receivers are used:
   A. Both must be at least 10 feet from each other, as well as from the Control panel and remote keypads.
   B. The house IDs must be the same.
   C. Using two Receivers *does not* increase the number of transmitters the system can support (86 transmitters, plus a wireless keypad).

Installing the 5881 Receiver

Receivers must be mounted externally to the control.

NOTE: The receiver can detect signals from transmitters within a nominal range of 200 feet. Take this into consideration when mounting the receiver.

1. Set receiver's device address using its DIP switches. Lower numbered address is primary receiver (supervisory fault ID 90, 91). Higher numbered address is secondary receiver (receiver fault ID 88, 89).
2. Connect the receiver's wire harness to the control's keypad terminals.
3. Refer to the installation instructions provided with the receiver for further installation procedures regarding antenna mounting, etc.

House ID Sniffer Mode

- When using 5800 series transmitters, house ID is necessary only if using a 5827 or 5827BD wireless keypad. House ID is not necessary for other 5800 series transmitters.

1. Enter your "Installer Code" + [#] [2].
2. The receiver will now "sniff" out any House IDs in the area and display them. Keep the receiver in this mode for about 2 hours to give a good indication of the House IDs being used. Use a house ID that is **not displayed**.

   To exit the Sniffer Mode, simply key your installer code + [1] (OFF).

   Important: Since Sniffer Mode effectively disables RF point reception, Sniffer Mode **cannot** be entered while any partition is armed.

UL NOTE: For UL Household Fire/Burglary applications, use of 1 or 2 RF RCVRs requires enabling their respective faults (88-91) as applicable (type 5).

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   a. Set data field 1*32 to 2.
   b. Set data field 1*30 RF RCVR CHECK-IN INTERVAL (**02-15** times 2).
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
   Press **0** (NO) repeatedly until the "DEVICE PROG?" prompt appears Follow the instructions below.

DEVICE PROG? 1=yes 0=no	Press **1** to enter DEVICE PROGRAMMING mode.
DEVICE ADDRESS 01-31, 00=QUIT	The device address identifies the device to the control. Enter the 2-digit device address number as set by the receiver's DIP switches (**01-31**). Press [*] to accept entry.
DEVICE TYPE	Enter device type 03 = RF receiver. Press [*] to accept entry.
RF EXPANDER HOUSE ID XX	Enter the 2-digit house ID (00-31) as determined by sniffer mode (use an address not displayed during sniffer mode). House ID is required only if using 5827 or 5827BD wireless keypads.
	The screen will display the next device number to be programmed.

4. Press **00** to exit Menu Mode.

5800 Series Transmitter Setup

NOTE: After replacing a low or dead battery, activate the transmitter and enter the security code + OFF to clear its memory of the "Low Battery" signal.

General Information

- 5800 series transmitters have built-in serial numbers that must be "learned" by the system using #93 Menu Mode–Zone Programming or Serial Number Learn Menus. These transmitters (except 5827 described separately) do not have DIP switches.
- Each transmitter's zone number is programmed into the system using #93 Menu Mode–Zone Programming Menus. Some transmitters, such as the 5816, 5817, can support more than one "zone" (referred to as loops or inputs). On the 5816 for example, the wire connection terminal block is loop 1, the reed contact is loop 2. Each loop can be assigned any zone number from 1-86.
- For button transmitters (RF "keys"), such as the 5803 and 5801, each individual button used on a transmitter must be assigned a unique zone number via #93 Menu Mode–Zone Programming Menus. Each button on the transmitter also has a pre-designated loop or input number, which is automatically displayed.
- 5827 Wireless Keypads require the corresponding receiver's House ID to be set using the keypad's DIP switches. 5827 keypads also need to be assigned to a particular partition (field 1*48). **5827 keypads can be used in only one partition in the system.** 5827 reports low battery status as zone "00."

Transmitter Supervision

- Each transmitter (except 5801, 5802, 5802CP & 5803) is supervised by a check-in signal that is sent to the receiver at 70-90 minute intervals. If at least one Check-in is not received from a transmitter within a programmed interval (field 1*31), the keypad displays the zone number and "CHECK."
- Each transmitter (including 5801, 5802, 5802CP & 5803) is also supervised for low battery conditions, and will transmit a low battery signal to the receiver when the battery has approximately 30 days of life remaining. The keypad will display the transmitter number and "LO BAT".
- 5800 series transmitters have built-in tamper protection and will annunciate as a "CHECK" condition unless field *24 is disabled.

Transmitter Input Types

- Each transmitter is also assigned an input type during #93 Menu Mode–Zone Programming as follows:

RF-type 3 (supervised RF):	Used for transmitters requiring supervision and which send periodic check-in signals, faults, restores and low battery signals.
UR-type 4 (unsupervised RF):	Used for transmitters which do not send periodic check-in signals, but do send faults, restores and low battery signals.
BR-Type 5 (button RF)	Used for button type transmitters which only send fault signals. They do not send low battery, restore or check-in signals.

Important Battery Notice

- Batteries in the wireless transmitters may last from 4-7 years, depending on the environment, usage, and the specific wireless device being used. External factors such as humidity, high or low temperatures, as well as large swings in temperature may all reduce the actual battery life in a given installation. The wireless system can identify a true low battery situation, thus allowing the dealer or user of the system time to arrange a change of battery and maintain protection for that given point within the system.
- Button type transmitters should be periodically tested by the installer for battery life (ex. 5801, 5802, 5802CP & 5803).

IMPORTANT: RF Keys must also be assigned to a user's code.

- 5800 series RF keys can be used to arm and disarm the system. These transmitters include the 5801, 5803, and any other 5800 series transmitter, except wireless keypads, if programmed for one of zone type responses 20-22.
- These transmitters are tied to a user in order to provide a record of who armed or disarmed the system.

  Because of this, an RF button will not arm or disarm a system unless it has been assigned to a user, which is done during the "add a user" function (see Add A User Code section). In addition, when the user is deleted from the system, the key is deactivated.
- To test whether the keys are assigned to zones or not, use the test mode. When the appropriate button is pressed, the corresponding zone will be displayed on the keypad and will remain there until test mode is terminated.

Installing the Transmitters

- A variety of RF system transmitters can be used to make up the wireless zones. This includes window/door units, smoke detectors, PIRs, and panic keys.

1. Install each transmitter in accordance with the instructions provided with the transmitter.
2. To be sure reception of the transmitter's signal at the proposed mounting location is adequate, perform a Go/No Go test, which is described later in this section.
3. Refer to the PROGRAMMING 5800 SERIES WIRELESS ZONES section for programming the transmitters.

Go/No Go Test Mode

- Before mounting transmitters permanently, conduct Go/No Go tests by entering Test Mode to verify adequate signal strength and reorient or relocate transmitters if necessary.

  Test mode reduces the wireless receiver gain. Checking in this mode assists in determining good mounting locations for the transmitters and verifies that the RF transmission has sufficient signal amplitude margin for the installed system.

1. Enter security code and press [5] (TEST).

   For multi-partition systems, make sure all partitions are disarmed before entering this mode.
2. Once transmitters are placed in their desired locations and the approximate length of wire to be run to sensors is connected to the transmitter's screw terminals, fault each transmitter. *Do not conduct this test with your hand wrapped around the transmitter as this will cause inaccurate results.*
   - If a single receiver is used, the keypad will beep three times to indicate signal reception. If two receivers are used, the keypad will beep once if the first receiver received the signal, twice if the second receiver received the signal and three times if both receivers heard the signal (which is desirable for redundant configurations).
   - If the keypad does not beep, reorient or move the transmitter to another location. Usually a few inches in either direction is all that is required.
3. Mount the transmitter according to the instructions provided with the transmitter.
4. Exit the mode by entering Master code + [1] (OFF).

Compatible 5800 Series Transmitters

UL NOTE:
The 5816 and 5817 do not supervise their loop wiring. Therefore, for UL Household Burglary installations, the loop wiring may not exceed 3 feet.

Model	Product	Learn As	Description
5801	Wireless Panic Transmitter	UR or RF	Has four pushbuttons, each with a unique input (loop) code. The control unit's response to each of the buttons is programmable (e.g., Panic, Arm–Stay, Arm–Away, Disarm, etc. If using for arming/disarming, you must assign button to a user code when "adding a user".
5802 5802CP	Pendant Belt Clip (Personal Emergency) Transmitters	BR Only	Their single pushbuttons should usually be programmed for control unit response of 24 Hr Audible or 24 Hr Silent. Other zone responses are possible. Learn as BR only. Each contains a non-replaceable battery. At the end of the battery's life, the entire unit must be replaced. If using for arming/disarming, you must assign button to a user code when "adding a user".
5802MN	Miniature (Personal Emergency) Transmitter	UR or RF	Its single pushbutton should usually be programmed for control unit response of 24 Hr Audible or 24 Hr Silent. Other zone responses are possible. If using for arming/disarming, you must assign button to a user code when "adding a user".
5803	Wireless Key Transmitter	BR Only	Has three pushbuttons, each with a unique input (loop) code. The control unit's response to each of the buttons is programmable (e.g., Arm–Stay, Arm–Away, Disarm, etc.). Contains a non-replaceable battery. At the end of the battery's life, the entire unit must be replaced. If using for arming/disarming, you must assign button to a user code when "adding a user".
5806 5807	Wireless Photoelectric Smoke Detectors	RF	One piece smoke detectors with built-in transmitter. Built-in UL Listed 85 dB piezoelectric alarm sounder and audible low battery warning.
5816	Door/Window Transmitter	RF	Has two unique input (loop) codes: one for a wired closed circuit contact loop, and the other for a built-in reed switch (used in conjunction with a magnet).
5817	Multi-Point Universal Transmitter	RF	Has three unique input (loop) codes: one for a DIP switch settable "Primary" contact loop, and the others for two "Auxiliary" closed circuit contact loops. The "Primary" loop may be set for: a) Repeating or Single Transmission, b) Normally Open or Normally Closed Circuit, c) Slow or Fast Response, and d) 3 Minute or No Transmission Inhibit.
5818	Recessed Transmitter	RF	A reed switch magnetic contact sensor that is easily concealed in the frame and edge of a door or window. Has a single unique input (loop) code.
5827	Wireless Keypad	House ID	Can be used to turn the burglary protection on and off, and features the same built-in panic functions as wired keypads for either silent or audible 24 hour alarm. An LED indication lights each time a key is pressed, to verify transmission. The keypad is identified as zone "00" on wired keypads when it transmits with a low battery .

Model	Product	Learn As	Description
5827BD	**Wireless Bi-directional Keypad**	**House ID**	**(used with 5800TM Module)** Can operate the system similarly to wired keypads and can indicate system status via its 3 LEDs and sounder. Includes 3 panic keys for 24 hour silent or audible alarm. Key programmed, *has no DIP switch.* The keypad is identified as zone "00" on wired keypads when it transmits with a low battery. Set house code. Requires a 5800TM Transmitter Module, to operate in conjunction with system's 5881 receiver. This module can be set to address 28, 29 or 30 (using its jumpers). If used, you must also use #93 Menu Mode -Device Programming to do the following: Select device as an alpha keypad (01). Select the module's home partition. In data filed programming, set field 1*48 KEYSWITCH ASSIGNMENT to the module's home partition.
5849	**Glass Break Detector**	**RF**	When sound and shock of breaking glass are detected by this unit at the same time, a wireless alarm will be transmitted via the unit's unique input code. Separate alarm and cover tamper signals permit 24 hour monitoring.
5890	**PIR Detector**	**RF**	Has unique input code for its dual element passive infrared detector/transmitter with built-in selectable pulse count. *Note*:: There is a 3 minute lock-out between fault transmissions to conserve battery life.

- Zone number assignments can be from 1-86.

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Press ***94** to enter the second page of data fields.
   Program the following data fields:
   1*28 RF TX LOW BATTERY ANNUN(**1**=immediate; **0**=when disarmed)
   1*29 RF TX LOW BATTERY REPORT ENABLE (**1**=yes; **0**=no)
   1*31 RF TRANSMITTER CHECK-IN INTERVAL (**02-15** times 2)
   1*44 WIRELESS KEYPAD TAMPER DETECT (if using a keypad)
   1*48 WIRELESS KEYPAD ASSIGNMENT (if using keypad)
   1*49 SUPPRESS TX SUPERVISION SOUNDING (**1**=yes; **0**=no)
   If using an RF button (5801, 5803, etc.), also program the following fields:
   1*57 5800RF BUTTON GLOBAL ARM (**1**=yes; **0**=no)
   1*58 5800 RF BUTTON FORCE BYPASS (**1**=yes; **0**=no)
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.

ZONE PROG? 1=Yes 0=No	Press **1** to enter ZONE PROGRAMMING mode. The following screens will appear. Press [*] to display the next screen. Press [#] to display a previous screen.
Enter Zn No. 00=QUIT 20	Enter the zone number to be programmed (01-86, 88-91, 92 (duress), 95, 96, 97 or 99). Press [*] to accept entry.
Zn ZT P RC In:L 20 00 1 00 RF:N	A summary screen for that zone will appear. The "RF" indicates the input type of device, and the "N" after the "RF:" indicates the device's loop number to which the sensor is connected (some devices can support more than one zone by means of individual loops (ex. 5801, 5803, 5816, 5817, etc.)
20 Zone Type Zone disabled 00	Each zone in a system must be assigned to a zone type, which defines the way in which the system responds to faults in that zone. Refer to the ZONE TYPE DEFINITIONS section for definitions of each zone type. Enter the zone response type for each zone. The screen will automatically display the zone type for the number entered. Press [*] to accept entry. If a different zone response type is desired, enter a different number and press [*].
00 for unused zones 01 Entry/Exit #1, burglary 02 Entry/exit #2 03 Perimeter, burglary 04 Interior, follower, burg 05 Trouble by day/Alarm by night, burglary 06 24 hour silent alarm 07 24 hour audible alarm 08 24 hour auxiliary 09 Fire 10 Interior, delay, burglary 11 24 hour burglary 20 Arm-STAY 21 Arm-AWAY 22 Disarm 23 No alarm response (ex. relay action)	For UL Household Listed applications, use of 1 or 2 RF RCVRs requires enabling their respective faults (88-91) as applicable (type 5).
20 Partition	Enter the partition number (**1-8**) in which this zone is located.
20 Report Code	Enter the report code for this zone.

20 Input Type RF Trans. RF: Note that input types 4 & 5 are valid for certain 5800 series transmitters only (ex. 5801, 5802, 5802CP & 5803).	Enter the input device type as follows: **0** = not used; **3**=supervised RF transmitter (RF type); **4**=unsupervised RF transmitter (UR type); **5**=RF button type transmitter (BR type);
20 LOOP NUMBER OR	If this is a previously "learned" sensor, the loop number for this zone will appear. Press [*] to continue.
20 LEARN S/N ? 1=YES 0=NO	If the sensor's serial number has not been "learned," the serial number can be learned now by entering 1, or it can be learned later by using the SERIAL NUMBER LEARN menu (see next section). Enter 0 if serial number will be learned later. The summary screen will then appear (see summary screen description above).
20 INPUT S/N :L A000-0000:1	If learning the serial number now (entering 1 at the last prompt), this prompt appears. Fault the transmitter two times. Faulting the transmitter can be done by pressing the appropriate button for button type transmitters, or by opening and closing zone sensors for other transmitters. The keypad will beep twice when it hears each transmission. When the serial number has been successfully learned, its number appears in the display. A typical display is shown below: 20 PROG AS RF:1 A001-3078:1 Press [*] to continue. The summary screen will then appear (see summary screen description above).

2. When all transmitters have been installed, use transmitter sniffer mode to test that they have all been programmed properly.
   Enter master code + # 3.

4204 RELAY MODULE & POWER LINE CARRIER DEVICES

4204 Relay Module & Power Line Carrier Setup

UL NOTE: Power line carrier devices and the 4300 are not UL Listed for fire or burglary functions and are intended for home automation.

These relay output actions are performed **in response** to a programmed condition. The system can also activate relays to **initiate** an action at programmed times by using the #80 Scheduling Menu Mode–Time Driven Events function.

General Information

- The Control supports up to 16 relay outputs. These outputs may consist of relay outputs from the 4204 output relay module (4 relay outputs per module) or power line carrier device outputs (which requires the use of the 4300 transformer). Outputs can be activated and deactivated by predetermined events such as turning on lights in the event of an alarm condition and/or closing a fire door in the event of a fire alarm condition. Other uses for relays are shown at the end of this section.

4204 Relay Module

- Up to 4 modules can be installed.
- The 4204 Relay Module has 4 form C (normally open and normally closed contacts) relays. Each of these relays can be used independently for different functions.

1. Set the 4204's DIP switch for a device address 01-15 (the 4204 is limited to these addresses only, even though the system supports up to 30 addressable devices).
2. Connect the 4204 to the control's keypad terminals 6-9. Use the flying lead cable supplied with the 4204 when mounting the 4204 in control's cabinet. Use standard 4-conductor twisted cable when mounting the 4204 outside the cabinet.
3. Home run each 4204 back to the panel. The maximum wire run length from the panel to the 4204 must not exceed:

Wire Gauge	Maximum Length
#22	125 feet
#20	200 feet
#18	300 feet
#16	500 feet

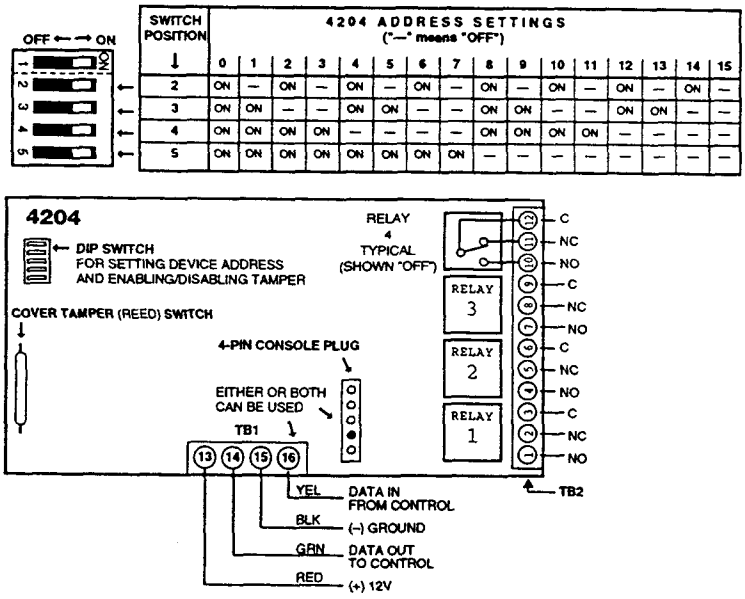


Figure 10. 4204 Module

Power Line Carrier Devices and 4300 Transformer

- Power line carrier devices plug into standard AC outlets and can be used to perform various functions. When using power line carrier components (ex. X-10, ACT, Leviton), you must use **the 4300 transformer** instead of the 1361 transformer shown on the Summary of Connections diagram. The 4300 provides AC power to the panel and relays signals from the panel through the premises AC wiring to power line carrier devices.

1. Run a 6-conductor cable between the 4300 interface and the panel. Splice this cable to a 4142TR cable as shown in the diagram below. Note that the white and yellow wires of the 4142TR **must be spliced** together.
2. Set the proper house and unit IDs for each device following the instructions provided with each device.

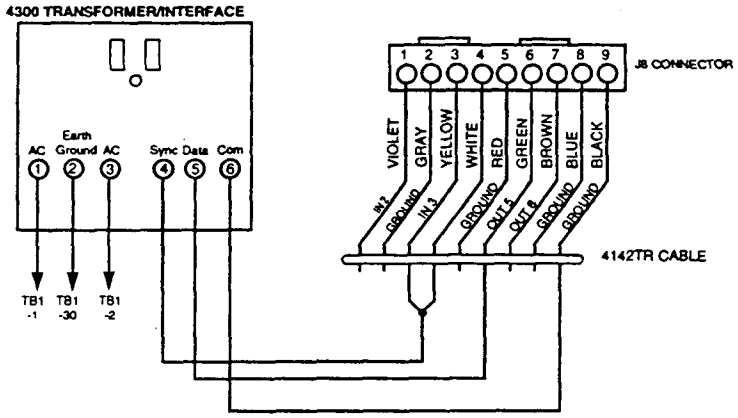


Figure 11. 4300 Transformer Connections

Programming Overview

Each relay must be programmed to begin one of four types of ACTIONS at a designated START event and end that ACTION at a designated STOP event.

ACTION (A): The "ACTION" of a relay is the way in which the relay will respond when activated by the "START" event. There are 4 types of actions:

- **CLOSE for 2 Secs.:** The relay will activate for 2 seconds then reset. Because the relay resets on its own, "STOP" programming is not necessary for this type of action.
- **CLOSE:** The relay will activate and remain activated until it is deactivated by the "STOP" programming.
- **PULSE ON and OFF:** The relay will pulse (intermittent activation) until it is deactivated by the "STOP" programming.
- **No Response:** Relay is not used.

START The "START" programming determines when and under what conditions the relay will activate. There are 3 parts that must be programmed: Event, Zone List, and Zone type/System Operation.

- **EVENT (EV)** The "EVENT" instructs the relay what condition must occur to the zone(s) programmed into the "ZONE LIST" in order to activate the relay. The "EVENT" and "ZONE LIST" work together. The types of events are as follows:
  - **ALARM:** An alarm condition occurring on any zone in the zone list will activate the relay.
  - **FAULT:** A fault condition (whether control is armed or disarmed) on any zone in the zone list will activate the relay.
  - **TROUBLE:** A trouble condition occurring on any zone in the zone list will activate the relay.
    (A trouble condition can only occur on fire and day/night zones).
  - **RESTORE:** Restore of faulted zones in the zone list activates the relay.
  - **NOT USED:** Use when an "EVENT" is not needed, as when a "ZONE TYPE/SYSTEM OPERATION" is used.
- **ZONE LIST (ZL)** A "ZONE LIST" is a list of zones selected by the installer via menu selection after relay programming is completed. When an event occurs as assigned by "EVENT" on any zone within that list, the relay will activate as selected in "ACTION". In this way many zones can be assigned to a single event very easily. For example: you may want a relay to activate (ex. a strobe to get a visual indication) whenever one zone of a group of zones is faulted.
- **ZONE TYPE/SYSTEM OPERATION (ZT)** Instead of using a "ZONE LIST" and "EVENT", a specific zone response type or action can be selected to activate the relay. If a specific zone response type is chosen, any zone of that type going into alarm, trouble, or fault will cause the relay to activate as selected in "ACTION". Any zone of that type that restores will deactivate the relay. If a "SYSTEM OPERATION" is chosen, that operation will cause the relay to activate as selected in "ACTION". Choices for zone types and system operation are listed below the START ZN TYPE prompt later in this section.

STOP The "STOP" programming determines when and under what conditions the relay will deactivate. The following must be programmed: Restore Zone List and Zone type/System Operation. Each part is described below.

- **RESTORE ZONE LIST (ZL)** If a "RESTORE ZONE LIST" is used, the relay action will deactivate when all the zones in that list restore from a previous fault or alarm condition. This will occur regardless of what is programmed to start the relay, therefore, a "RESTORE ZONE LIST" would normally only be used when a "ZONE LIST" is used to start the relay.
- **ZONE TYPE/SYSTEM OPERATION (ZT)** Instead of using a "RESTORE ZONE LIST", a specific zone response type or action can be selected to deactivate the relay. If a specific zone response type is chosen, any zone of that type that restores from a previous alarm, trouble, or fault condition will cause the relay to deactivate. If a "SYSTEM OPERATION" is chosen, that operation will cause the relay to deactivate.

Relay Programming

1. With at least one alpha keypad (FA550KP) wired, power up the system.
   Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   If using the time driven event relay commands, program data fields 1*74 and 1*75 for the respective relay timeouts for minutes and seconds.
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
4. Press **0** (NO) until the "RELAY PROGRAM?" prompt is displayed. Press **1** (YES).

While in this mode, press [*] to advance to next screen. Press [#] to backup to previous screen.

Enter Relay No. (00=Quit) 01	Enter the relay (output device) identification number **01-16**. This is a reference number only, for identification purposes. The actual module address and relay number on the module is programmed in the last two prompts.
02 A EV ZL ZT P STT 0 0 0 00	The keypad will display a summary START screen.
02 A EV ZL ZT P STOP 0 0 0 00	The keypad displays a summary STOP screen.
02 Relay Action No Response	Relay action is the way in which the relay will respond when activated by the "start" event. Enter the desired relay action for this relay number as follows: **0**=not used; **1**=closed for 2 secs.; **2**=stay closed; **3**=pulse on/off
02 Start Event Not used	This is the system event that initiates the relay action. Enter the event code as follows: **0**=not used; **1**=alarm; **2**=fault; **3**=trouble; **4**=restore
02 Start: Zn LIST No list	A zone list is a set of zones that can be used to initiate the start or stop relay action. If a zone list is being used to start this relay action, enter the zone list number **1-8**. If a zone list is not being used, enter **0**.
02 Start: Zn Typ	Zone types can be used to initiate a start or stop relay action instead of a zone list or event. If a zone type/system operation is being used to start the relay action, enter the 2-digit code as listed below.

Choices For Start/Stop Zone Types:

00 = No Response (Not Used)
01 = Entry/Exit #1
02 = Entry/exit #2
03 = Perimeter
04 = Interior Follower
05 = Trouble Day/Alarm Night
06 = 24 Hr Silent
07 = 24 Hr Audible
08 = 24 Hr Aux
09 = Fire Alarm or Trouble
10 = Interior w/Delay
11 = 24 Hour Burglary
23 = No alarm response
(for output relay activation, such as for access control purposes)

Choices For Start/Stop System Operation:

20 = Arming-Stay
21 = Arming-Away
22 = Disarming (Code+Off)
31 = End of Exit Time
32 = Start of Entry Time
33 = Any Burglary Alarm
34 = Code + # + 71 Key Entry
35 = Code + # + 72 Key Entry
36 = At Bell Timeout **
37 = 2 Times Bell Timeout**
38 = Chime
39 = Fire Alarm
40 = Bypassing
41 = AC Power Fail
42 = System Battery Low
43 = Communication failure
44 = RF low battery
45 = polling loop failure
47 = Keypad failure
51 = RF receiver failure
52 = kissoff
54 = fire zone reset
55 = disarm + 1 minute
56 = XX minutes (enter XX in field 1*74; stop condition only)
57 = YY seconds (enter YY in field 1*75; stop condition only)
58 = Duress
60 = Audio Alarm Verification (AAV)
** Or at Disarming, whichever occurs earlier

02 Start Part	This is the partition in which the start event will occur. Enter **0** for any partition. Enter **1-8** for specific partition number.
02 Stop: Zn LIST No list	If a zone list is being used to stop this relay action, enter the zone list number **1-8**. If a zone list is not being used, enter **0**.
02 Stop: Zn Typ	If a zone type/system operation is being used to stop the relay action, enter the 2-digit code as listed in the start Zone Type/System Operation prompt paragraph.
02 Stop Part	This is the partition in which the stop condition will occur. Enter **0** for any partition. Enter **1-8** for specific partition number.
Relay Group	Relays may be grouped for common activation by time driven events (commands **06-10**). Enter **0** (no group) or **1-8** for specific partition number.
Restriction 1=yes 0=no	The system may have some devices which are not intended to be under end user control, such as relays activating fire doors or machinery. Enter **1** if the end user will be restricted from accessing this relay group.
Relay Type	Enter **1** for 4204 relay outputs. Enter **2** for power line carrier devices.
House Code	For power line carrier devices, enter the letter house code. A=00 E=04 I=08 M=12 B=01 F=05 J=09 N=13 C=02 G=06 K=10 O=14 D=03 H=07 L=11 P=15
Unit code	For power line carrier devices, enter the numerical unit code (**01-15**)
ECP ADDRESS	For relay module (4204) outputs, enter the actual relay module's address set by its DIP switch 01-15 (4204 is limited to addresses 01-15, though the system supports up to 30 addressable devices). Up to 4 modules can be installed in a system.
MODULE RELAY #	For relay module (4204) outputs, enter the specific relay number on that module (**1-4**). The keypad displays the two summary screens again.

5. Enter **00** to exit relay programming.

Zone List Programming

After entering all relay menu items, program up to eight (8) zone lists by entering **00** at the ENTER RELAY No. prompt.

Enter Zone LIST 00=QUIT 00	Enter the zone list number **1-8**.
01 Enter Zn Num. 00=QUIT 00	Using 2-digit entries, enter each zone to be included in this zone list. Press [*] after each zone number. When all zones have been entered, enter 00, then press [*].
01 Del Zn LIST? —	Enter **0** to save the zone list entered. Enter **1** to delete that zone list.
01 Delete Zone? 0=No 1=Yes	Enter **1** to delete one or more zones in that zone list. Enter **0** if no changes are necessary. If 1 is entered, the following screen will appear, otherwise the zone list no. prompt will reappear.
01 Zn to Delete? 00=QUIT 00	Enter each zone number to be deleted from the zone list, pressing [*] after each number.
View Zn LIST 00=QUIT 00	This will appear if **00** is pressed at the ENTER ZONE LIST prompt. Enter the zone list number that you wish to view.
XX ASSIGNED ZONE 00=QUIT 00	Press [*] to scroll through all zones in that list. Enter **00** to quit.

Relay Voice Descriptors

Voice descriptors can be programmed for each of the 16 relays/X-10 modules used in the system. These descriptors will be announced by the voice module when performing the #70 relay commands via telephone.

Each voice descriptor can consist of up to 3 words selected from the relay voice descriptor vocabulary list found later in this section.

Important: The index numbers from this vocabulary list are to be used for relay voice descriptors only. For normal system voice annunciation (eg. alarms, troubles, status), use the highlighted words in the alpha vocabulary list found in the alpha programming section.

To enter relay voice descriptors:

1. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
2. Press **0** (NO) until the "RLY VOICE DESCR?" prompt is displayed. Follow the instructions below. While in this mode, press [*] to advance to next screen. Press [#] to backup to previous screen.

RLY VOICE DESCR? 0=no 1=yes	Press **1** to program voice descriptors for relays.
ENTER RELAY NO. 00=QUIT 01	Enter the 2-digit relay/X-10 module number (**01-16**) for the relay desired, or enter **00** to quit relay voice descriptor programming mode. Press [*].
01 ENTER DESC d1	From the relay voice descriptor vocabulary list, enter the 3-digit index number for the first word of the relay descriptor phrase. Press [*] to accept entry.
01 ENTER DESC d2	From the relay voice descriptor vocabulary list, enter the 3-digit index number for the second word of the relay descriptor phrase. If second word is not desired, press **000**. Press [*] to accept entry.
01 ENTER DESC d3	From the relay voice descriptor vocabulary list, enter the 3-digit index number for the third word of the relay descriptor phrase. If third word is not desired, press **000**. Press [*] to accept entry.

The ENTER RELAY NO. prompt will appear. Enter the next relay number to be programmed, or enter **00** to quit.

Relay Voice Descriptors and Custom Word Substitutes Vocabulary

Word	Index
Air	116
Alarm	255
And	067
Apartment	117
Appliances	161
Area	118
Attic	119
Baby	120
Back	121
Bar	122
Basement	021
Bathroom	051
Battery	053
Bed	092
Bedroom	015
Blower	123
Boiler	124
Bright	162
Building	125
Burglary	039
Call	009
Central	089
Chime	054
Closed	126
Computer	127
Console	066
Daughter's	208
Den	052
Detector	128
Device	060
Dim	163
Dining	031
Door	016
Down	008
Downstairs	184
Driveway	130
Duct	131
East	132
Eight	077
Eighth	221
Equipment	133
Exit	004
Factory	134
Father's	211
Fence	135
Fifth	218
Fire	040
First	136
Five	074
Floor	029
Four	073
Fourth	217
Foyer	137
Front	087
Garage	023
Gas	138
Glass	139
Hall	050
Heat	010
Inside	209
Kitchen	022
Laundry	140
Left	027
Library	141
Light	019
Living	030
Loading	142
Lower	094
Machine	143
Master	144
Medical	014
Mother's	212
Motion	145
Nine	078
Ninth	222
No	165
North	146
Not	012
Off	011
Office	147
On	058
One	070
Open	148
Outside	210
Panic	013
Partition	090
Patio	149
Phone	061
Power	063
Pump	166
Rear	088
Right	028
Room	018
's	007
Second	056
Service	150
Seven	076
Seventh	220
Shed	151
Shop	152
Side	153
Six	075
Sixth	219
Smoke	024
Son's	223
South	155
Stairs	006
Station	156
Storage	157
Sun	154
System	062
Temperature	158
Third	159
Three	072
Tool	213
Two	071
Up	025
Upper	187
Upstairs	183
Utility	185
West	215
Window	017
Wing	216
Zero	069
Zone	002

FA4285 Voice Module Setup

UL NOTE: The FA4285 Voice Module is not permissible for UL installations.

General Information

- The FA4285 Voice Module is an add-on accessory that permits the user to access the security system via a Touch-tone phone (either on premises or off-premises when away).
- **Only one Voice Module can be used in a security system and partition assignment is done via #93 Menu Mode–Device Programming.**
- Voice Module reports troubles as zone 87.
- The FA4285 Voice Module enables the user to do the following via a Touch-tone telephone:
  * Receive synthesized voice messages over the phone regarding the status of the security system.
  * Arm and disarm the security system and perform most other commands using the telephone keypad. This usage provides voice annunciation over the phone to confirm any command that is entered.
- The Voice Module can announce many of the same words that would normally be displayed on an Alpha keypad under the same system conditions. Refer to the words in bold in the Alpha Vocabulary list found in the #93 Menu Mode Programming section.
- Detailed operating instructions for phone access to the security system are provided with the Voice Module. In addition, a ***Phone Access User's Guide*** is supplied with the Voice Module for the user of the system.

NOTE: To turn off remote access to the voice module (#91 function; see voice module instruction manual), you must use the master or installer code only.

Mounting

- The Voice Module may be mounted in the control cabinet if space is available or, if this is not possible, on the side of the cabinet or adjacent to it. Pry off the Voice Module's cover prior to wiring.

1. When the Voice Module is mounted inside the control cabinet, attach it to the cabinet's interior surface with 2-faced adhesive tape.

   IMPORTANT: *Do not mount on the cabinet door or attempt to attach it to the PC board.*

   You may leave the Module's cover off if it is mounted within the cabinet.
2. When the Module is to be mounted outside the cabinet, use the screw holes at the rear to mount horizontally or vertically (2-faced adhesive tape may be used, if preferred). You can bring wires out from the side or back (a round breakout is also available on the back). When you complete the Module's mounting and wiring, you should install the module's cover (with label affixed, as indicated next).
3. Affix the FA4285 connections label (supplied separately) to the inside of the Voice Module's cover if the cover is used. Otherwise, affix the label to the inside of the *control cabinet's* door.

Wiring

- The FA4285 is wired between the control panel and the premises handset(s). It listens for touch tones on the phone line and reports them to the control panel. During on-premises phone access, it powers the premises phones; during off-premises phone access, it seizes the line from the premises phones and any answering machines.

1. Make 12V (+) and (–) and data in and data out connections from the Voice Module to the control*, using the connector cable supplied with the Voice Module.
   * These are the same connections as for remote keypads.
2. Insert the keyed connector at the other end into the mating header on the Voice Module.
3. Connect terminals 1 through 5 on the Voice Module as shown.
   Note: Use an RJ31X jack with a direct-connect cord and make all connections exactly as shown. If the leads on the direct-connect cord are too short to reach their assigned terminals, splice additional wires to them, as required.

Terminal Block Connections

FA4285 Terminal	Connects to:
1. Phone In (Tip)	Terminal (26) on control.
2. Phone In (Ring)	Terminal (27) on control.
3. Phone Out (Tip)	BROWN lead from direct-connect cord.
4. Phone Out (Ring)	GRAY lead from direct-connect cord.
5. Ground	Earth ground terminal (30) on control. (Required)
6. Audio Out 1	Future use
7. Audio Out 1	Future use

WIRING NOTES:

1. Wire the FA4285 Voice Module exactly as shown, using a direct-connect cord and RJ31X jack.
2. If Touch-tones are not present following phone access to the security system *via an on-premises phone*, try reversing the pair of wires connected to terminals 3 & 4 on the FA4285, **and** the pair of wires connected to terminals 26 & 27 on the control.
3. Connection to the incoming Telco line via a RJ31X jack and direct-connect cord, as shown in this diagram, is essential, even if the system is not connected to a central station. **The FA4285 will not function if this is not done.**

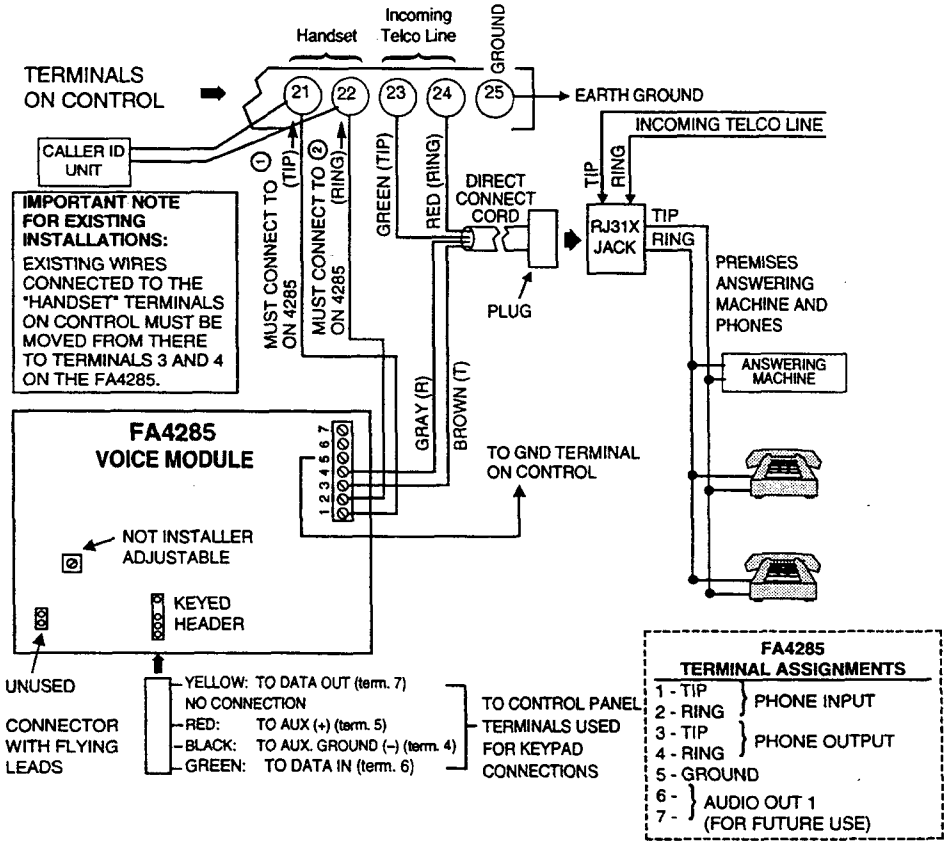


Figure 12. FA4285 Voice Module Connections

Programming FA4285 Voice Module Options

1. With at least one alpha keypad (FA550KP) wired, power up the system. See POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data fields:
   *20 VOICE MODULE PHONE CODE
   *44 RING DETECTION COUNT (cannot be set to 0)
   *74/*75 ALARM REPORT CODE for voice module faults (zone 87)
   1*09 ZONE RESPONSE TYPE for voice module (zone 87, type 05)
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt. Press **0** (NO) until "DEVICE PROG?" prompt is displayed.

DEVICE PROG? 1=yes 0=no	Press **1** to enter DEVICE PROGRAMMING mode.
DEVICE ADDRESS 01-31, 00=QUIT	The device address identifies the device to the control. The voice module is factory set to address 04. Enter **04**. Press [*] to accept entry.
DEVICE TYPE	Enter device type **05** = voice module Press [*] to accept entry.
MODULE PART.	Enter the partition number **1-8** in which the voice module is located. Press [*] to accept entry. The screen will display the next device number to be programmed.

5. Press **00** to return to the main menu. Press **0** until ALPHA DESCRIPTORS prompt appears. Press **1** (YES).
6. Program alpha zone descriptors according to the procedure explained in the PROGRAMMING ALPHA DESCRIPTORS section. Alpha descriptors must be programmed regardless of the type of keypads in use. If this is not done, the Voice Module will be unable to annunciate a description of the zone(s) in alarm, trouble, etc. (the Voice Module will annunciate zone numbers only).
   If you are using output relays, you can program relay voice descriptors. Refer to the RELAY OUTPUTS section.

Substitute Voice Module Custom Words

A substitute voice module word can be programmed for each of the 20 custom alpha display words This substitute word will be announced by the voice module in place of the custom word that is displayed on the alpha keypad. For example, an alarm display for "John's bedroom" could be announced as, "son's bedroom," since there is no annunciation for the custom word "John." Note that if a substitute word is not assigned, the voice module will be silent for that part of the announcement for which a custom alpha word exists.

To enter custom words substitutes:

1. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
2. Press **0** (NO) until the "CUSTOM INDEX #?" prompt is displayed.

CUSTOM INDEX #? 0=no 1=yes	Enter **1** at this prompt.
CUSTOM WORD NO. 00=QUIT	Enter the custom word number (**01--20**) for which a voice substitute is desired. Enter **00** to quit this programming mode. Press [*] to accept entry.
01 ENTER INDEX #	Enter the 3-digit substitute word index number from the relay voice descriptor and custom word substitutes vocabulary list found in the Relay Voice Descriptors section. Press [*] to accept entry. The "CUSTOM WORD NO." prompt appears. Enter the next custom word number or enter **00** to quit.

Audio Alarm Verification (AAV)

General Information

An Audio Alarm Verification (AAV) module, such as the Eagle 1241, is an add-on accessory that permits voice dialog between an operator at a central station and a person at the alarm installation, for the purpose of alarm verification. This feature is supported only if alarm reports are programmed to be sent to the primary phone number.

After all messages have been sent during a reporting session to the primary phone number, the control will trigger the AAV if at least one of the messages was an alarm report. If Contact ID format is selected for the primary phone number, and the cancel report field *81 is programmed as non-zero, the control will send a "listen-in to follow" message (event code 606), which signals the 685(rev. 4.6 or higher) to hold the phone connection for 1 minute.

Once triggering occurs, the control will give-up the phone line to the AAV module, without breaking connection with the central station. During the time the AAV is active, all sirens and all continuos keypad sounds in all partitions will be shut off if field 1*60 is enabled. When the AAV indicates that the audio alarm verification session is completed, all keypad sounds will be restored. Sirens will be restored if the alarm timeout period has not expired.

The AAV module connects from module terminals 7 & 8 to the control's zone 5 terminals 16 & 17. The purpose of this connection is for triggering the silencing and restoring of the sounders at the premises. Note that zone 5 is then no longer available as a protection zone. When using the AAV, zone 5 must be assigned a zone response type (e.g. response type 10), and option 1*60 must be selected as 1 to silence sounders on the premises. If 1*60 is not enabled, conversation with the premises will be difficult (too much noise on the premises).

As part of its fail-safe software, the control will limit all audio alarm verification sessions to 15 minutes (this is because once the session begins, the AAV module controls the duration). If a new fire alarm should occur during a session, the control will break phone connection and send the new fire alarm report, then re-trigger AAV mode. All other dialer messages triggered during on-going conversation will be held until either the AAV module signals that it is inactive, or the 15 minute timeout occurs.

One way to trigger the AAV module is by selecting option 3 in field 1*46 and make connections as shown in the VOLTAGE TRIGGER diagram. Field 1*46 can be used to set ground start, keyswitch or long range radio open/close trigger. If any one of these functions are absolutely necessary in a given installation, the alternative AAV trigger method is via the use of a 4204 relay as shown in the RELAY TRIGGER diagram. If this method is selected, the start and stop conditions for that relay must be set to choice 60 = "Audio Alarm Verification" during relay programming, via #93 menu mode.

Some AAV modules allow remote triggering by ring detection at the alarm installation. Please be advised that if this option is selected, it may defeat modem download and FA4285 voice module remote access capability. The DIP switch settings shown on the triggering diagrams disable remote AAV module trigger option. The control also requires that the AAV module trigger type is falling edge, which is set in DIP switch settings shown.

Notes:
- Cancel report field *81 must be programmed as non-zero to enable sending a "listen-in to follow" message.
- 685 Receiver software must be rev. 4.6 or higher. Earlier versions will not hold the phone line connection.
- Contact ID code for "listen-in to follow" is "606."
- Zone 5 must be assigned a response type (type 10).
- Field 1*60 must be set for "1" to silence sounders.
- * Field 1*46 Aux Output Trigger must be set for "3" AAV trigger.
- Contact ID is the only reporting format that will send a "listen-in to follow" message.

Audio Alarm Verification Module Connections

Connect the Audio Alarm Verification module's falling edge trigger input (terminal 5 on Eagle model 1241) to J7 connector trigger output as shown in Figure 13.

Programming Audio Alarm Verification Module Options

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to **Powering The System** section for temporary power-up procedure.
2. Enter data field programming mode: **Installer code + 800.**
   Program the following data fields:
   1*46 Auxiliary Output Enable, set for 3.
   1*60 Zone 5/Audio Alarm Verification, set for 1.
   *81 Cancel Report, set for non-zero digit.
   *45 Primary Dialer Format, set for 1 (Contact ID).
3. Zone 5 must be programmed for response type 10 and **the EOLR must be removed.** Zone 5 is no longer available as a protection zone.
4. Exit program mode: press *99.

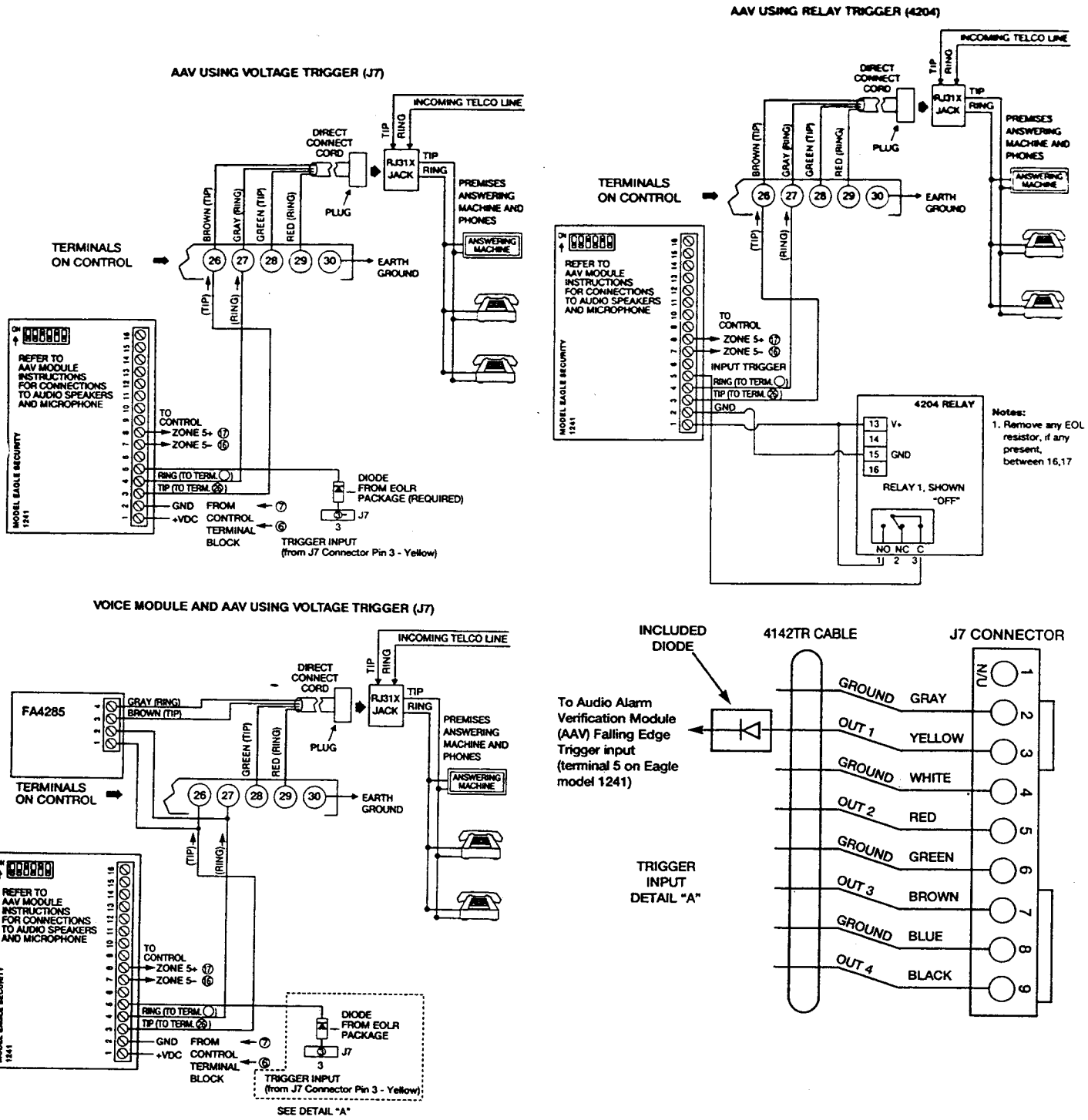


Figure 13. Audio Alarm Verification Module Connections

VOLTAGE TRIGGERS (Connector J7)

(Ground Start Module, Keyswitch, Remote Keypad Sounder, Subscriber Radio)

Voltage Triggers

General Information

- Connector J7, located on the right hand side of the main PCB, provides 4 trigger outputs for operating the 675 Ground Start Module, the 4146 Keyswitch, Audio Alarm Verification module (AAV), remote keypad sounding piezo, and for triggering auxiliary alarm signaling equipment (such as the 7720 and 7920SE LORRA Subscriber Radios). Note that these output triggers can be enabled by partition via programming field 2*20.
- The pin assignments of this connector are shown below. Use only the 4142TR 9-wire cable (available as an option) for making connections to this connector.

Output 1 Operates, by default, as a trigger for the 675 ground start module. This output may optionally be programmed to operate as an open/close trigger or as a remote keypad sounder output (data field 1*46). Only one of these options may be used at any time.

Output 1 Rating: When Activated: 10 - 13.8 VDC through 4K ohms

When De-activated: 100 ohms to ground

Outputs 2 & 4 Operates, by default, as Fire and Silent Panic/Duress triggers respectively. These triggers may optionally be programmed to act as Arm and Ready status indicators when it is desired to use the 4146 keyswitch (data field *15).

Output 2 & 4 Rating: When Activated: 10 - 13.8 VDC through 5K ohms

When De-activated: 1k ohms to ground

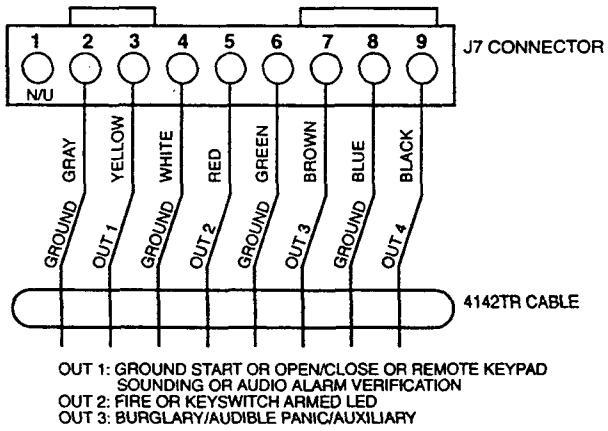


Figure 14. J7 Connector For Voltage Triggers

Ground Start Module

UL NOTE:
Not intended for use in UL Listed applications.

General Information

- You can use an optional 675 Ground Start module for installations having telephone lines which require ground start instead of loop start operation to obtain dial tone from the telco central office.
- When the panel has a message to transmit to the central station, it will seize the line, go off hook, and then trigger the 675 module to connect the "RING" side of the telephone line to earth ground. The panel will cause the module to break the connection between "RING" and earth ground when it obtains a dial tone.

Ground Start Module Connections

1. Connect the 675 Ground Start Module to the panel's J7 connector trigger output 1, to auxiliary power, and to the "RING" side of the telephone line as shown in the diagram below.
2. Use the following procedure to determine which side of the telephone line is the "RING" side:
   a. Connect the "+" lead of a DC voltmeter to earth ground, and the "-" lead to one side of the telephone line.
   b. The wire which reads +50VDC is the "RING" side.

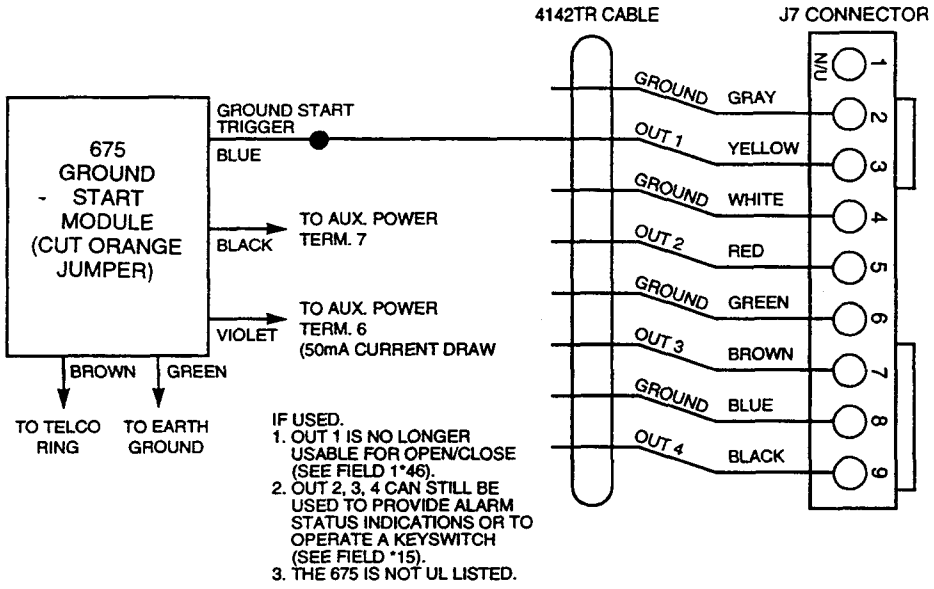


Figure 15. Ground Start Module Connections

Programming For The Ground Start Module

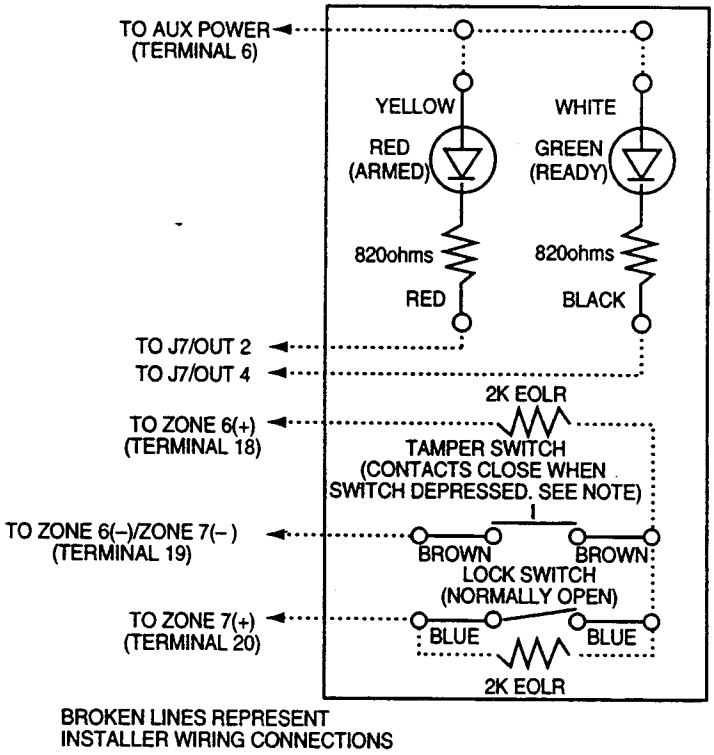
1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data field:
   1*46 AUXILIARY OUTPUT ENABLE must be set to "0" (factory default)
3. Exit program mode: Press ***99**.

General Information

- You can use an optional Remote Keyswitch for remote arming and disarming of the system.
- **Note that a keyswitch may be used in one partition only.**
- The keyswitch is automatically assigned to zone 7, which is then no longer available as a protection zone. A momentary short across this zone will arm the partition in the "AWAY" mode. If the short is held for more than 3 seconds, the partition will arm in the "STAY" mode. After the partition has been armed, the next time zone 7 is shorted, the partition will disarm.

Remote Keyswitch Connections

1. Connect the 4146 keyswitch's normally open momentary switch and LEDs to Zone 7 and to the J7 connector trigger outputs respectively.
   NOTES:
   - When the keyswitch option is selected, the alarm trigger outputs are disabled.
   - Only one keyswitch with LEDs can be supported by the system's power supply.
2. Connect a 2k EOL resistor across the switch regardless of whether or not zones 2-8 are selected to use EOL resistors. See diagram below.



NOTE:
The tamper switch need not be used for UL Household Fire or Burglary installations. The tamper switch must be connected to an EOLR supervised zone programmed for trouble by day/alarm by night (type 05) response as shown for UL Commercial Burglary installations. When the keyswitch is removed from the wall, the tamper switch will open causing a fault (trouble or alarm) on zone 6 and causing the panel to disable keyswitch operation until the partition is disarmed from a console.

Figure 16. Remote Keyswitch Wiring

Programming For The Remote Keyswitch

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data fields:
   *15 KEYSWITCH ASSIGNMENT for the partition in which the keyswitch is used.
   *40 OPEN/CLOSE REPORTING FOR KEYSWITCH as desired. The keyswitch reports as user "0."
   Note that the system automatically assigns zone type 10 to zone 7 if keyswitch is used.
3. Exit program mode: Press ***99**.

LED indications are defined as follows:

Green	Red	Meaning
Off	Off	Disarmed & Not Ready
On	Off	Disarmed & Ready
Off	On Steady	Armed Away
Off	Slow Flash	Armed Stay
Off	Rapid Flash	Alarm Memory

General Information

- You can use an optional Amseco PAL 328N for installations where you want to remotely send the sounds produced by the keypad's built-in piezo sounder for one partition. The panel will send all sounds remotely (i.e. alarm, trouble, chime, entry/exit, etc.) produced by the keypad's built-in sounder except for the short clicks associated with keypad key depression. One application of this feature might be to produce chime sounds in a location which is distant from the panel's keypads. You can also accomplish this by using relay outputs (see Output Relay section).

Remote Keypad Sounder Connections

- Connect the Amseco piezo between the panel's auxiliary power and the J7 connector trigger output as shown below.

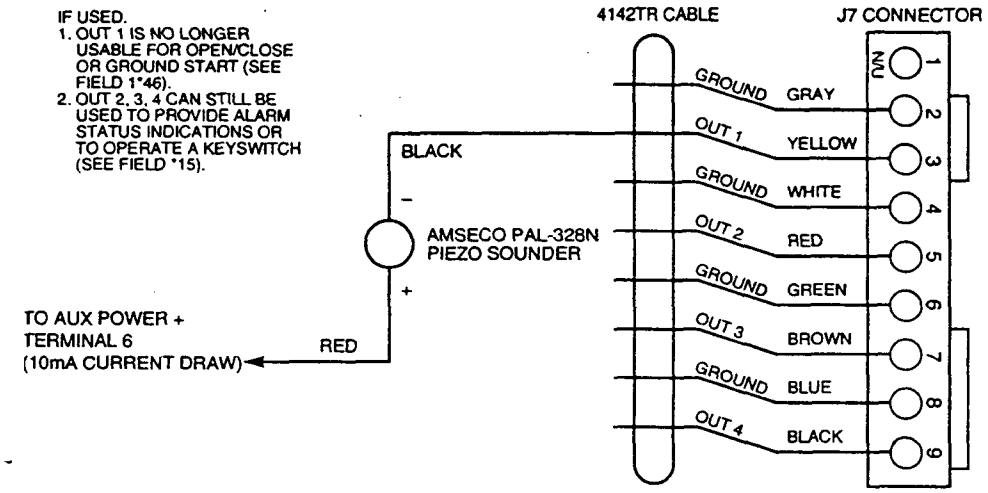


Figure 17. Remote Keypad Sounding Connections

Programming Remote Keypad Sounding Options

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data fields:
   1*46 AUXILIARY OUTPUT ENABLE, set for **2**.
   *15 KEYSWITCH ASSIGNMENT, set the partition whose keypad sounds are to trigger the sounder.
3. Zone 7 **must** be assigned to be a keyswitch zone (even if keyswitch is not used). Zone 7 is no longer available as a protection zone, but instead can be used as a keyswitch input for the selected partition.
   Note that the system automatically assigns zone type 10 to zone 7 if keyswitch is used.
4. Exit program mode: Press ***99**.

Audio Alarm Verification

If using an Audio Alarm Verification module and the voltage triggers will be used to activate the module, refer to the Audio Alarm Verification section earlier in this manual.

The J7 header provides triggers for fire alarm, burglary/audible panic alarm, silent/duress alarm and open/close status. These triggers may be used to trip auxiliary alarm signaling equipment such as Ademco's 7720 and 7920SE Long Range Radios.

NOTE: The triggers for fire and burglary/audible panic alarms are used to operate keyswitch armed and ready LEDs when field *15 is non-zero. The trigger for open/close status is enabled by setting field 1*46 to "1".

The open/close trigger is low when the system is armed, and high when disarmed. The remaining triggers are normally low, and go high when the corresponding alarm condition occurs. These triggers remain high until the security code + OFF is entered at the keypad. The diagrams that follow show how to make connections to the 7720 and 7920SE. Refer to the UL Installation Requirements found in the REGULATORY AGENCY REQUIREMENTS section for a description of the specific connections and programming options required for each of the various UL Listings.

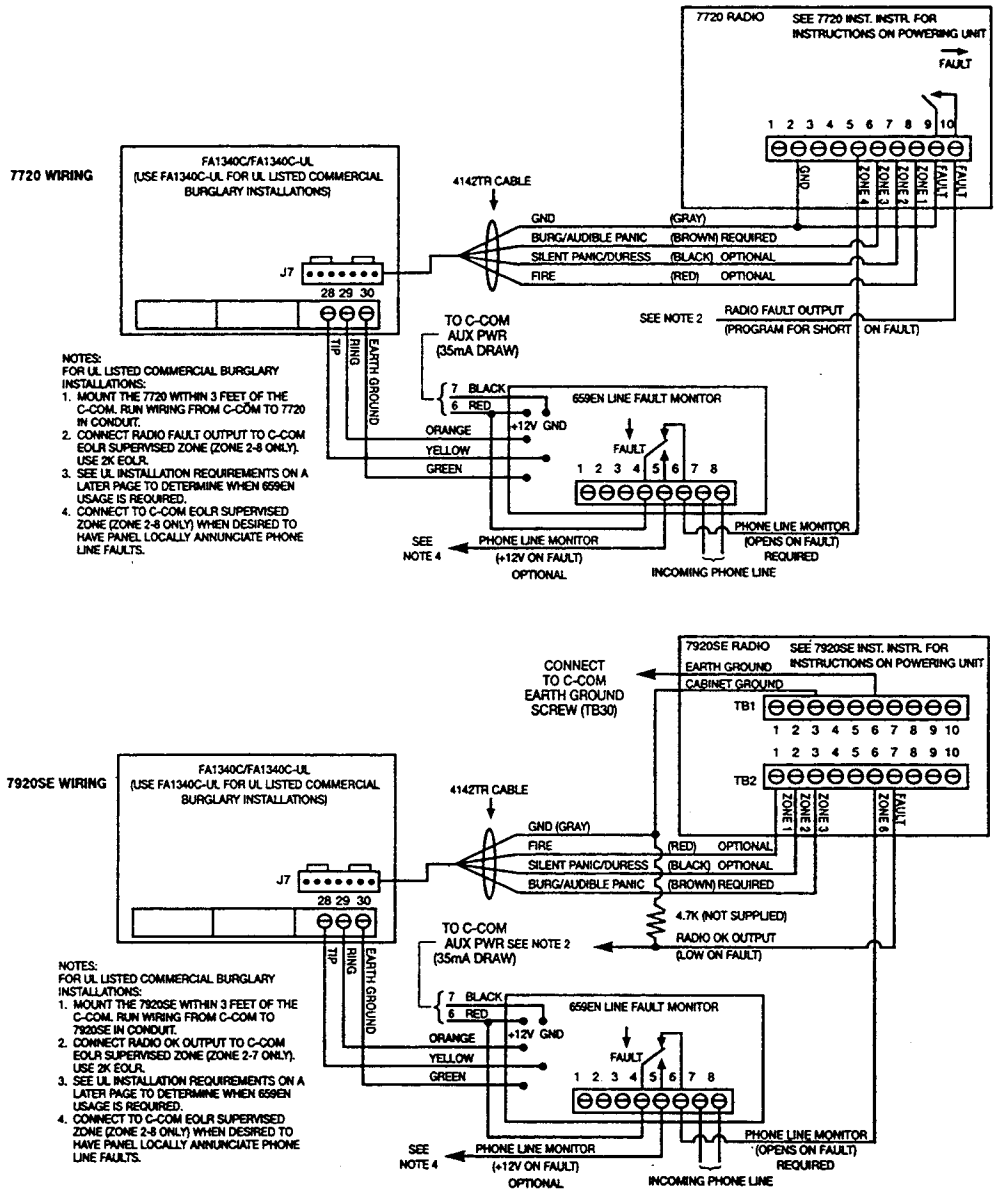


Figure 18. Auxiliary Alarm Signaling Equipment

EVENT LOGGING PRINTER CONNECTIONS

UL NOTE:
A UL Listed EDP printer must be used for UL installations.

General Information

- Connector J8, located above connector J7 on the right side of the main PC board, is intended to be connected to a local **serial printer** via the 4100SM serial interface module, in applications where you want to print the event log on a local printer.
- Mount the 4100SM using its clip bracket to attach it to the side wall of the control cabinet. Make connections between J8, the 4100SM module and the serial printer as shown below. Refer to the event logging commands paragraph for a description of the commands which initiate event log printing.

NOTES

1. Printer must be configured as follows (check printer manual for configuration specifications):
   - 8 data bits, no parity, 1 stop bit
   - 300 or 1200 baud (1200 preferred)
   - Hardware handshaking using DTR signal
2. The 4100SM module package includes a 10 foot RS232 cable. You can use a longer cable or an extension cable if the Control and serial printer are separated by more than 10 feet. The total cable length should be less than 50 feet.
3. Most printers either ignore the CTS, DSR and CD signals, or require them to be high (i.e. 3-15VDC as measured on RS232 DB25 connector pins 5, 6 & 8 respectively with respect to ground pin 7). The 4100SM module sets these pins high. If the printer being used will not operate with these pins high, then clip the blue (CTS), white (DSR) or red (CD) jumpers on the 4100SM module to set the corresponding signal floating. Important pins on the RS232C cable are pin 3 (data out), pin 7 (ground) and pin 20 (DTR - ready).
4. The DTR signal, as measured at 4100SM TB1, should be high (9.5-14VDC) when the printer is powered, properly connected, on-line and ready to print. This signal will be low (0-1.5VDC) when the printer is not powered, not properly connected, off-line or out of paper. The Control will not send printing data to the printer unless the DTR signal is high.

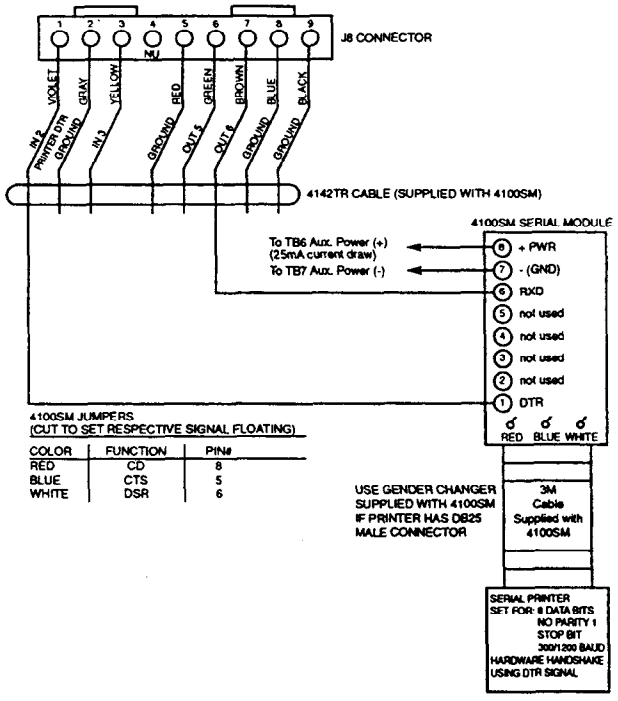


Figure 19. Event Logging Printer Connections

Programming Event Log Options

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data fields:
   1*70 EVENT LOG TYPES (**1**=enable; **0**=disable for each type)
   1*71 12/24 HOUR TIME STAMP FORMAT (**0**=12hr; **1**=24hr)
   1*72 EVENT LOG PRINTER ON-LINE (**0**=disable; **1**=enable)
   1*73 PRINTER BAUD RATE (**1**=300; **0**=1200)
   1*40 and 1*41 REPORT CODES FOR EVENT LOG
3. Exit program mode: Press ***99**.

Event Logging Procedures

IMPORTANT: In order for time and date stamping to occur, the system's real-time clock must be set. Refer to the SETTING THE REAL TIME CLOCK section.

General Information

- The system has the ability to record various events in a history log (224 event capacity) wherein each event is recorded in one of five categories (alarm, check, bypass, open & system), with the time and date of its occurrence (if real-time clock is set). The log may be viewed (Display Mode) using an alpha keypad, or can be printed (Print Mode) on a serial printer (connected to the system via a 4100SM Serial Module).

Commands	
Display Mode:	installer or master code + [#] + [6] + [0]
Print Mode:	installer or master code + [#] + [6] + [1]
Clear Event Log:	installer or master code+ [#] + [6] + [2]
To EXIT Event Log:	Press [*] at any time.

Display/Printing: After entering event log mode, the following will be displayed:

```
ENTER 0 = RECENT
1 = COMPLETE
```

The Event Log holds up to 224 events, and can display or print all events in a category (complete), or only those events in a category occurring since the last Clear Event Log command (recent). Note that once the Event Log is full, the oldest event will be erased upon the logging of any new event. Press the desired display mode key, 0 or 1.

```
SCAN LOG BY PART
0=NO  1-8=PART #
```

The system allows viewing of any partition's event log. Enter the partition number for the partition whose events are to be displayed. Entering 0 (NO) will display all events that occurred in the system regardless of partition.

For display and printing purposes, events are stored on a partition by partition basis (except system events), and are grouped into five categories as follows.

Use the [3] & [1] keys to scroll to the next or previous screens respectively:

ALARM EVENT LOG TYPECCC UUU	Displays time/date for zones that have either caused an alarm or have been restored in selected partition.
CHECK EVENT LOG TYPECCC UUU	Displays time/date for zones that have caused a trouble or supervisory condition in selected partition.
BYPASS EVENT LOG TYPECCC UUU	Displays time/date for zones that have been bypassed in selected partition.
OP/CL EVENT LOG TYPECCC UUU	Displays time, date and user number for each arming and disarming of the system for the partition selected. Displays only those users enabled for open/close reporting by installer during "Add a User" procedure.
SYSTEM EVENT LOG TYPE CCC UUU	Displays time/date for system problems, such as AC Loss, communication failure, etc., regardless of partition.
ALL EVENT LOG TYPECCC UUU	Displays all categories of events in chronological order, from most recent to oldest.

To display the events in a particular category, press [8] at the desired category screen.

If in Display Mode, the most recent event is displayed. Press [1] to display older events, press [3] to go forward in time.

If in Print Mode, the first press of [8] will cause the printer to print all events in that category, with each event automatically scrolled on the display keypad. The following is a typical display:

P8 01/01 12:02AM BURGLARY C03	Shows burglary alarm occurred in zone 3 of partition 8, at 12:02AM on January 1.

After the last event in the selected category has been displayed (using either the [1] or [3] keys), the following will appear for a few seconds:

END OF EVENT LOG TYPECCC UUU

The system will automatically return to the RECENT/COMPLETE selection screen described earlier.

To clear the Event Log, enter installer or master code + [#] + [6] + [2]

CLEAR EVENT LOG 0=NO 1=YES	Press [1] if Event Log is to be cleared from memory. All events in the log will still be displayed if the COMPLETE option is selected. Only those events occurring from the time of the CLEAR command will be displayed if RECENT display option is selected. Press [0] if event log is **not** to be cleared at this time. If [1] is pressed, the following will appear:
ARE YOU SURE? 0=NO 1=YES	Press [1] if it is desired to clear the event log. Press [0] if event log is not to be cleared.

SCREEN DEFINITIONS

RECENT	Events since last CLEAR
COMPLETE	Displays all events
TYPE	Type of event (Burg., Fire, etc.)
CCC	Zone (contact) number
UUU	User number

Connections

1. Connect the incoming phone line and handset wiring to the main terminal block as follows:
   - TB1-26: Local Handset (TIP)
   - TB1-27: Local Handset (RING)
   - TB1-28: Incoming Phone Line (TIP)
   - TB1-29: Incoming Phone Line (RING)
2. If you want to connect the panel to phone lines that require ground start capability, then a 675 Ground Start Module must be used. This module is triggered by one of the outputs on the connector labeled J7 (see VOLTAGE TRIGGERS section).

Warning

- To prevent the risk of shock, disconnect phone lines at telco jack before servicing the panel.

PABX

- If the communicator is connected to a telephone line inside a PABX, be sure the PABX has a back-up power supply that can support the PABX for 24 hours. Many PABXs **are not** power backed up and connection to such a PABX will result in a communication failure if power is lost.

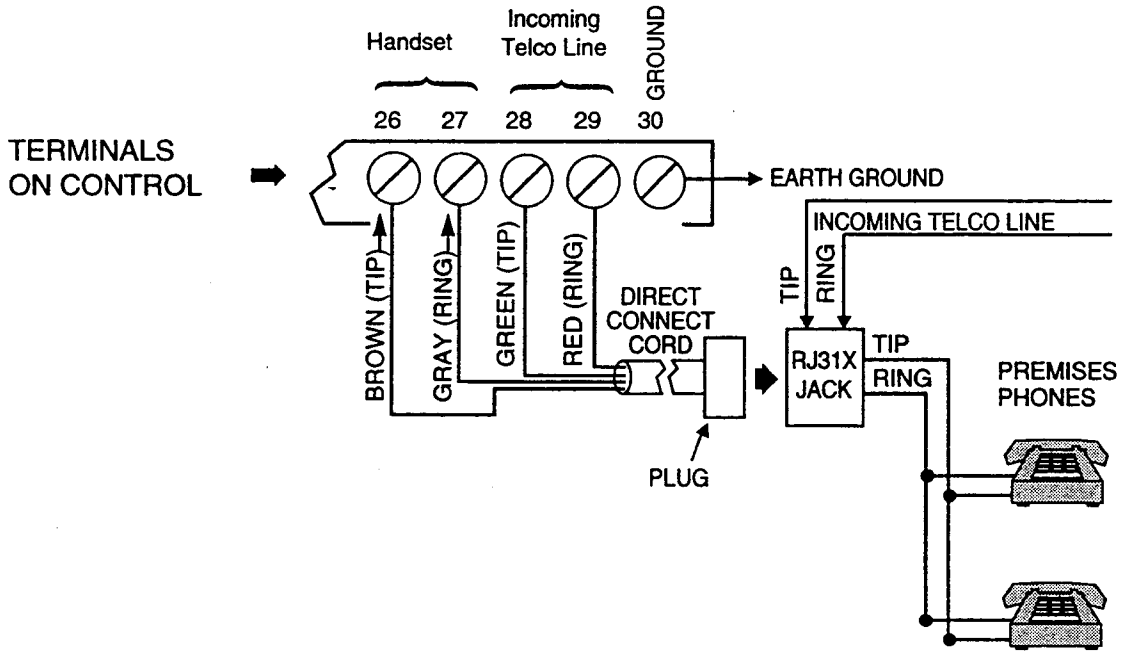


Figure 20. Telephone Line Connections

EXTERNAL SOUNDERS

External Sounder Setup

IMPORTANT:
Going beyond the prescribed limits will overload the power supply or may possibly trip the bell output circuit protector.

General Information

- The Control provides a bell relay output which is used to power external alarm sounders.

Wiring

1. Make connections to terminals 4 (positive output) and 5 (negative return).

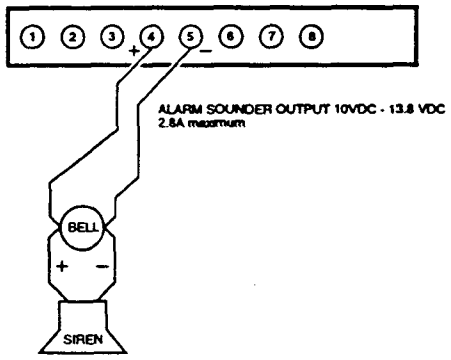


Figure 21. External Sounder Connections

UL985 Household Fire Installations

- For installations which must provide UL Listed protection, the total current drawn from this output and the auxiliary power output, combined, must not exceed 750mA in order to comply with the battery independence requirements in UL985. If two System Sensor PA400 piezo alarm sounders, wired in parallel, are used (24mA total), then (750mA – 24mA=) 726mA is available for auxiliary output use.

UL1023 Household UL609 Commercial Burglary Installations

- For installations which must provide only UL Listed burglary protection, the total current drawn from this output must not exceed 2.8 amps. A battery must be installed since current in excess of 750mA is supplied by the battery. Use any UL Listed sounding device for UL Household Burglary installations. Use the Ademco AB12 Grade A bell in box for UL Commercial Burglary installations. The AB12 bell should be wired as shown below.

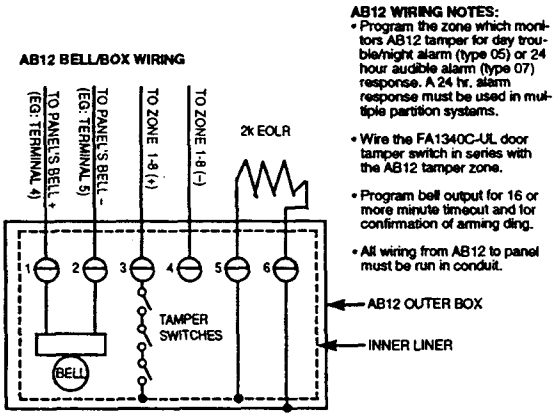


Figure 22. AB12 Bell Box Wiring

Non-UL Installations

- For non-UL installations, the total current drawn from this output can be up to 2.8 amps. A battery must be installed since current in excess of 750mA is supplied by the battery. Up to two 702 sirens can be used, wired in series. Up to two 719 sirens can be used wired in parallel.

Programming External Sounders

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
   Program the following data fields:
   - *13 ALARM SOUNDER DURATION (partition-specific; can vary between partitions)
   - *16 CONFIRMATION OF ARMING DING (partition-specific)
   - *17 AC LOSS KEYPAD SOUNDING (**1**=yes; **0**=no)
   - *18 UL AC LOSS SIREN (**1**=yes; **0**=no)
   - *21 PREVENT FIRE TIMEOUT (**1**=no timeout; **0**=fire timeout)
   - *23 MULTIPLE ALARMS (partition-specific)
   - *87 ENTRY WARNING (partition-specific)
   - 1*45 EXIT DELAY SOUNDING (partition-specific)
   - 1*47 CHIME ON EXTERNAL SIREN (partition-specific)
3. Exit program mode: Press ***99**.

Compatible Sounders

UL NOTE:
Use only UL Listed sounding devices for UL installations.

702	**Outdoor Siren (not UL Listed)**	Self-contained siren (driver built-in) and weatherproof for outdoor use. Can be wired for either a steady or yelp sound and is rated at 120 dB @ 10 feet. This siren can also be tamper protected, or can be mounted in a metal cabinet (716), which can be tamper protected.
719	**Compact Outdoor Siren (not UL Listed)**	Compact, self-contained siren (driver built-in), and weatherproof for outdoor use. Can be wired for either a steady or yelp sound, and is rated at 90 dB @ 10 feet. A 708BE cabinet is available, which can be tamper protected if necessary.
740	**High Intensity Sounder**	Compact high intensity sounder rated at 123 dB @ 10 feet. This sounder emits an "ear piercing", high frequency sound. This sounder can be mounted indoors (bracket included) or outdoors (in 708BE cabinet).
747	**Indoor Siren**	Attractive, self-contained indoor siren (driver built-in), provides steady or warble tones and is rated at 95dB @ 10 feet.
ABB1031	**Motor Bell & Box**	AMSECO motor bell & box, rated at 81 dB @ 10 feet.
PA400B (beige) **PA400R (red)**	**Indoor Piezo Sounder**	System Sensor indoor piezo sounder (red or beige), rated at 90 dB @ 10 feet.
AB12	**Grade A Bell**	For UL Commercial Burglary installations.

PROGRAMMING THE DATA FIELDS

Using Data Field Program Mode

NOTE:
A programming form has been included at the centerfold of this manual.

System and Communication Defaults

- The system is shipped with a set of pre-programmed default values that are designed to meet the needs of many installations. These can be changed by the installer to suit specific needs if desired.
- There are four sets of pre-programmed communication defaults available, including Low Speed, 4+2 Express, Ademco High Speed, and Ademco Contact ID. Loading one of these defaults automatically programs industry standard codes that will suit most of your needs.
- These defaults can be changed directly from the alpha keypad (FA550KP), or they can be changed by using *First Alert's* V-LINK® Downloading Software (be sure that the software version used includes an FA!340C with scheduling menu selection). Downloading can be performed either remotely from an IBM compatible computer (using an approved modem) or at the job site (direct-wire download using the 4100SM Serial Module)

NOTE: The factory loaded defaults (*97) enable keypad addresses 00-03 only. A keypad set to one of these addresses must be used to program the system.

Entering Data Field Programming Mode

NOTE: The downloading software can lock-out local keypad programming. In this case, programming can only be accomplished via the downloading software.

1. If keypad programming is permitted, enter program mode using method A or B:
   A) Press both the [*] and [#] keys at the same time within 30 seconds after power is applied to the Control.
   B) Enter the installer code + [8] + [0] + [0] keys. The factory installer code can be changed once in the program mode (field *00).
2. After entry into the program mode, the following will be displayed:

Program Mode
* Fill # View - 00

3. Following this display, enter the first field number to be programmed.

Enter programming mode
(installer code + 8 + 0 + 0)

Enter the first field number (ex. *00, installer's code)
to move to first page

First Page of fields (*00-*90)

press *99 or *98 to exit program mode

press *94 to move to 2nd page **press *99 to move back to 1st page**

second page of fields (1*01-1*76)

press *94 to move to 3rd page **press *99 to move back to 2nd page**

third page of fields (2*00-2*21)

Data Field Groups or "Pages"

- The system-wide or global (i.e. non partition-specific) programming fields are grouped into three sets (referred to as "pages"), as represented in the diagram below. The first page is accessed as soon as programming mode is entered.
- The second and third pages of data fields are indicated at the keypad by a "1" or "2" respectively in front of the 2-digit field address. The words, ALT PROGRAM MODE, will also be displayed.

1. To access the other pages of fields, press *94.

   Note that the alpha keypads display the words along with a "1" or "2", depending on which page of programming fields are accessed, to indicate the higher page of fields.
2. To return to the previous page of fields, press *99.

Viewing Data Fields

- To view the contents of a data field, press [#] plus the 2-digit field address. The field's entries will be displayed, but no changes can be made.

Entry Errors

- If an address is improperly entered, the keypad will display FC.
- If a program entry is improperly entered (for example, a larger number than that which is permitted), the keypad display will go blank.
- In either of the above cases, simply re-enter the correct number.

SUMMARY OF DATA FIELD PROGRAMMING COMMANDS	
*94	Next page of fields
*99	Previous page of fields or exit programming mode with no installer lockout
*91	Select partition for programming partition-specific fields
*98	Exit programming mode with installer lock-out

1. Enter Program Mode: Installer code + **8 0 0**.
2. When the program screen is displayed, press ***00** to begin programming the installer code data field.

   When you have completed the entry, the keypad sounds three beeps and automatically displays the next program field in sequential order.
3. To program specific data fields out of sequence, press [*] plus the 2-digit field address of the field number you want to program, then make the required entry.

   If the number of digits that you enter in a data field is less than the maximum permitted (ex. phone number), the keypad displays the last entry and waits. To proceed, enter the next data field to be programmed manually (ex. press *05).

   Partition-Specific programming fields are skipped (refer to PARTITIONING PROGRAMMING paragraph).
4. To change to the next page of fields, press ***94**.

   To return to the previous page of fields, press ***99**.

The following is a table of all data fields provided by this control. If you have followed earlier instructions during the installation of the various devices, many of these fields will already have been programmed.

*00	**Installer Code** The Installer's Code is a 4-digit code reserved for installation company use, but can be used by the customer if needed. This is the only code that can be used to enter the Program mode from the keypad. This code cannot be used to disarm the system if not used to arm, or if Quick Arm was used to arm system. This code cannot reenter programming mode if exited by the *98 command.
*02- *05	**Zone Response Types for Zones 1-27, 95-99** These fields are programmed using #93 Menu Mode–Zone Programming.
*14	**Zone 9 Response Time** • Enter **1** to set fast response mode (10msec) for appropriate devices wired to zone 9. • Enter **0** for normal response, 350msec. • Must be **0** for UL.
*15	**Keyswitch Assignment** • Enter the partition number **1-8** in which the keyswitch is being used; otherwise, enter **0.** • Requires the use of zone 7 wired loop (zone 7 no longer available as protection zone when used for keyswitch operation). If the keyswitch is used, the fire and panic alarm voltage triggers automatically become ARMING and READY status outputs for support of the Keyswitch LEDs. NOTE: • Zone type 10 is automatically assigned to zone 7 if a keyswitch is used. Reports openings/closing by user "0" if reporting is enabled in field *40.
*17	**AC Loss Keypad Sounding** • Enter **1** to enable sounding at the keypad (rapid beeping) when AC power is lost (sounding occurs about 2 minutes after actual AC loss). • Enter **0** if no AC power loss keypad sounding is desired.
*18	**AC Loss Siren** • Enter **1** to enable the external alarm sound after AC power has been out for 4 hours; • Otherwise enter **0** (no alarm).
*19	**Randomize AC Loss Report** • Selecting this option helps prevent an overload of AC loss messages at the central station during a community blackout. • Enter **1** to randomize AC loss reporting between 10-40 min. after an actual AC loss. • Enter **0** for normal AC loss reporting (about 2 minutes after actual AC loss).

*20	**Voice Module Phone Code** • If a FA4285 voice module is being used, enter the 2-digit phone code used to access the system. • Enter 01-09 for first digit, and enter 11 (for ✳) or 12 (for #) for second digit. • To disable the voice module, enter 00 for the 1st digit and enter 11 for the 2nd digit of the code (disable code = 00,11).
*21	**Prevent Fire Time-Out** • Enter **1** to disable (no timeout) the alarm sounder duration for any zone designated as a fire zone, regardless of partition, so that fire sounding continues until the system is reset. • Enter **0** if the normal burglary alarm sounder duration (programmed in partition-specific field *13) should apply to fire alarms.
*24	**Expansion Zone Tamper** • Only applicable to certain polling loop sensors with tamper switches or if 5800 series transmitters are used. This option is used to disable this module's tamper detection. • Enter **1** to disable. • Enter **0** if tamper detection is desired.
*25	**Burg. Trigger For Response Type 8** • Allows optional triggering of the voltage output on pin 7 of the J7 header for zone response type 8 (24hr. auxiliary). • The **0** disable selection is useful if J7 header pin 7 is used for a panic trigger, and non-panic devices are used for all zones assigned to zone response type 8 (e.g. water sensor, temp. sensor). If disabled, only burglary or audible panic alarms (zone type 7) will trigger pin 7. Otherwise, enter **1**.
*26	**Intelligent Test Reporting** • Enter **1** if it is desired that no test report be sent if any other type of report was sent since the last test report. • Enter **0** if test reports are to be sent at the set intervals, regardless of other reports having been sent. Must be **0** for UL applications.
*27	**Test Report Interval** • Enter the test reporting interval in hours, **001-199.** • Enter **000** if no test reporting is desired. If a test report is desired, enter a test -code in fields *81 & *82, location 7. • Set first test report time in field *83. • Max. 024 for UL.
*28	**Power Up In Previous State** • Enter **1** if it is desired that upon power-up, the system will assume the system status prior to power down. • Enter **0** if it is desired that the system will always power up in a disarmed state. When the system powers up armed, an alarm will occur 3 minutes after arming if a zone is faulted. When so armed, reports closing as User #0 if open/close reporting for installer was enabled in field *39. Note that if the previous state was armed AWAY or STAY, the system may not respond to sensor changes for a small period of time (1-3 min.), which allows sensors such as PIRs to stabilize. • Must be **1** for UL applications. Note that authority levels 0 or 5 cannot be used to disarm the system if control powers up armed.
*30	**Touch-Tone Or Rotary Dial** • Enter **1** if TouchTone service is being used. • Enter **0** if rotary phone service is used. • **IMPORTANT!:** Do not select a dialing method that is not legally permitted by the telephone company for the particular subscriber. If selecting touch-tone, make sure the subscriber has requested and is paying for touch-tone service. Note that whether or not touch-tone dialing for call placement is permitted, communication by the use of DTMF signaling (Ademco High Speed) will still take place. See field 1*33 for Touch-Tone w/Rotary backup.

*31	**PABX Access Code** • This field is used to enter up to four 2-digit numbers 00-09; B-F (11-15). If not required, enter nothing and proceed to next address; otherwise, enter prefix needed to obtain an outside Telco line. This field may be used alternatively to enter a prefix that can suppress the Telco's call waiting feature from interfering with outgoing transmissions. This prefix is only useful if the Telco option to suppress call waiting has been obtained by your customer. The prefix to be used is 01010700 if rotary dialing is being used or 110700 if touch-tone dialing is being used. Each entry is a 2-digit entry so as to allow use of hexadecimal digits (B-F). Do not use hexadecimal digit **A.** Only enter digits required. Do not fill unused spaces.
*33	**Primary Phone Number** • This field is used to enter the primary phone number, up to 12 digits, **0-9**. This is the phone number the control will use to transmit alarm and status messages to the central station. Do not fill unused spaces. Note that back-up reporting (8 calls are made to the secondary phone number if no acknowledgment is received after 8 attempts to the primary number) is automatic only if a secondary phone number is entered.
*34	**Secondary Phone Number** • This field is used to enter the secondary phone number, use if communication on the primary number is unsuccessful. Do not fill unused spaces. If this field is programmed, a secondary subscriber account number (field *90) *must* also be programmed (can be the same as the primary account number).
*35	**Download Phone No.** • This field is applicable only if downloading will be utilized. • Enter the downloading phone number, up to 12 digits (0-9). Do not fill unused spaces.
*36	**Download ID No.** • Enter 00-09; A-F (10-15). Only applicable if downloading will be utilized. Make entries as 2-digit numbers as follows: 00=0 02=2 04=4 06=6 08=8 10=A 12=C 14=E 01=1 03=3 05=5 07=7 09=9 11=B 13=D 15=F
*37	**Download Command Enables** • Each of the various remote (from the central station) functions can either be enabled or disabled. Disabling a function means that the central station will not be able to perform that function with respect to this system. Enter **1** to enable a function, and **0** to disable a function. See field 1*53 for Callback disable option. For UL installations, all entries must be **0**.
*40	**Open/Close Reporting For Keyswitch** • Enter **1** to enable open/close reporting for the keyswitch. • Enter **0** if reporting is not desired.
*41	**Normally Closed or EOLR (Zones 2-8)** • Enter **0** if end-of-line resistors are to be used. • Enter **1** if end-of-line resistors are not to be used (normally closed loops that detect only an open and do not require end-of-line resistors). • Must be **0** for UL.
*42	**Dial Tone Pause** • This field sets the delay time for the Dial Tone Detect option, if true dial tone is not selected in that field. • Enter the desired wait time for dial tone detection as follows: Enter single digit, **0** = 5 seconds; **1** = 11 seconds; or **2** = 30 seconds. Must be **0** for UL.
*43	**Dial Tone Detection** • Determines whether the control will wait for a true dial tone before dialing, or if it will wait for a predetermined delay before dialing (delay is programmed in Dial Tone Pause field *42). The latter may be necessary in high-noise environment Telco networks where noise can be confused with dial tone, resulting in premature dialing. • Enter **1** for true dial tone wait. If no dial tone is detected, will dial at end of pause programmed in field *42. • Enter **0** to pause for seconds entered in field *42, then dial.

*44	**Ring Detection Count** • Only applicable if central station initiated downloading will be used. • Enter **00** to disable ring detection. • Enter **01-14** for ring counts of 1-14. • Enter **15** to select answering machine mode that allows the system to receive calls even when a telephone answering machine is connected to the same phone line. In the answering machine mode, the download caller should let the phone ring once, then hang up, then call again within 30 seconds. The system, upon hearing one ring followed by nothing, will not answer that call, but will ready itself to pick up on the first ring of the next incoming call that is received within 30 seconds (the downloader calling again).
*45	**Primary Format** • This field selects the reporting format for use on the primary telephone line. • Enter the appropriate number for the primary format as follows: 0=Low Speed; 1=Contact ID; 2=Ademco High Speed; 3=Ademco Express
*46	**Low Speed Format (Primary)** • Enter the appropriate value: **0**=Ademco Low Speed; **1**=Sescoa/Radionics
*47	**Secondary Format** • This field selects the reporting format for the secondary telephone line. • Enter the appropriate number for the secondary format as follows: 0=Low [illegible] High Speed; 3=Ademco Express
*48	**Low Speed Format (Sec.)** • Enter the appropriate value: **0**=Ademco Low Speed; **1**=Sescoa/Radionics
*49	**Checksum Verification** • Enter **1** for either or both primary/secondary formats to send a verification digit to validate the message at the receiver without having to send two message rounds. Selection is valid for 3+1, 4+2, and Ademco High Speed reports. • Enter **0** if not desired.
*50	**Sescoa/Radionics Select** • Enter **0** if Radionics format is to be used with hexadecimal 0-9, B-F reporting. • Enter **1** if SESCOA format is to be used with only numeric reporting (0-9). Note that selection applies to both primary and secondary phone numbers.
*51	**Dual Reporting** • This field allows all reports to be sent to both primary and secondary phone numbers. • Enter **1** if it is desired that all reports are sent to both primary and secondary phone numbers. If used with Split Reporting option **1** (1*34), alarms go to both primary & secondary numbers, while all other reports go to secondary only. If used with Split Reporting option **2**, alarms go to both lines, open/close and test messages go to secondary only, while all other reports go to primary.
*52	**Standard/Expanded Report Primary** • Enter **0** for standard or **1** for expanded reporting for the primary phone line. • Note: Expanded overrides 4+2 format.
*53	**Standard/Expanded Report Secondary** • Enter **0** for standard or **1** for expanded reporting for the secondary phone line. • Note: Expanded overrides 4+2 format.
*54- *78	**Report Codes For Zones** • Enter the report codes for each zone used in the system.
*79	**Zone Type Restores For Zone Types 1-8** • Enter **1** to enable restore reporting for individual zone types. • Enter **0** if no restore report is desired for a zone type.
*80	**Zone Type Restores For Types 9-11** • Enter **1** to enable restore reporting for individual zone types. • Enter **0** if no restore report is desired for a zone type.

*81- *82	**Non-Alarm Report Codes** • Enter the appropriate report codes as indicated on the programming form.
*83	**First Test Report Time** • Enter the day (**00-07**) and time (**00-23 hours/00-59 min.**) that the first test report shall be transmitted. • **00** entry in all locations signifies immediately upon exiting. • 00 entry in the day location will cause the report to be sent at the next occurrence of the time that is set. • Note that day 01=Monday. See fields *81 & *82 for assigning the Test Report code.

4208 Zone #s available when:	
*86=1	*86=0
10-17 Precludes use of any other polling loop expansion.	10-16 17-32 33-40 41-48 49-56 57-64
Note: When *86=1, 4208 DIPs must be set to:	
with word "OFF"	with word "ON"
sw 2= ON	sw 2= OFF
sw 3= ON	sw 3= OFF
sw 4= ON	sw 4= OFF
sw 5= OFF	sw 5= ON

*86	**4208 Module Zone Assignment** • Entering **1** allows a single 4208 to be set to zone numbers 10-17 (see table), but precludes the use of any other polling loop expansion. Enter **1** only when the total polling loop expansion consists of a single 4208 module programmed for zones 10-17. No other polling loop expansion is supported with this setting. • Enter **0** for all other configurations, such as no 4208, more than one 4208 or other polling loop expansion present. Note: The addresses must match the table to the left.
*89	**Restore Report Timing** • Enter **0** for instant restore report as zone restores. • Enter **1** for reporting after bell timeout if zone restored. Enter **2** for restore report when system is subsequently disarmed
1*01- 1*09	**Response Types for Zones 28-91** **These fields are programmed via #93 Menu Mode–Zone Programming.**
1*26	**First 4280 Receiver Select** • Enter **1** if first 4280 Receiver is installed. • Enter **0** if no 4280 Receiver is installed.
1*27	**Second 4280 Receiver Select** • Enter **1** if second 4280 Receiver is installed. • Enter **0** if only one or no 4280 Receiver is installed. If second Receiver is installed, be sure to identify it as such at the receiver (cut Blue jumper on 2nd 4280).
1*28	**RF TX Low Battery Sound** • Enter **0** if audible beep and display annunciation upon RF transmitter low battery condition is desired only in disarmed state. • Enter **1** if audible beep and display is desired in both armed and disarmed states. • Must be **1** for UL.
1*29	**RF TX Low Battery Report Enable** • Enter **1** if a trouble message for RF transmitter low battery conditions is to be sent to the central station. • Enter **0** if no report for transmitter low battery is desired. Note that a trouble message will be sent for a transmitter supervision failure independent of this selection. • Must be **1** for UL.
1*30	**RF Rcvr Supervision Check-In Interval** • Enter the check-in monitoring interval in 2-hour increments. • Enter **02-15** times 2 hours (4-30 hours). Failure of a receiver to receive any RF signal within the time entered will result in activation of the response type programmed for zone 90 for the first receiver and zone 88 for the second receiver and their related communication reports. • Enter **00** to disable receiver supervision. • Max. "6" (12 hr) for UL.

1*31	**RF Transmitter Check-In Interval** • Enter the check-in monitoring interval in 2-hour increments; • Enter **02-15** times 2 hours (4-30 hours). Failure of an individual transmitter to send a supervision signal within the time entered will result in a trouble response and related communication report. Entry **00** disables transmitter supervision. • Max. "6" (12 hr) for UL.
1*32	**Receiver Type** • Enter **0** if using 4280 series Receivers. • Enter **1** if using 4281 series receivers. • Enter **2** if using 5881 series receivers. • Important: the 4281 microprocessor must have part number N5334Vx, where x is any number.
1*33	**Touch-Tone W/Rotary Backup** • Enter **1** to enable Rotary back-up dialing if communicator is not successful on dialing using touch-tone DTMF on first attempt. • Enter **0** if this option is not be to be used.
1*34	**Comm. Split Report Selection** • This field allows certain reports to be directed to either the primary or secondary phone number. • Enter **0, 1,** or **2,** in accordance with the following: **0** = split reporting disabled; **1** = alarm, alarm restore & cancel reports sent to primary Telco number, all others to secondary Telco number; **2** = open/close & test reports sent to secondary Telco number and all other reports to primary. See *51 for split/dual reporting comments.
1*35- **1*39**	**Report Codes For Zones 65-80** • Enter the appropriate codes as shown on the programming form.
1*40- **1*41**	**Event Logging Report Codes** • Enter the appropriate code as shown on the programming form.
1*44	**Wireless Keypad Tamper Detect** • Enter **1** to enable tamper detection on wireless keypad. • Enter **0** if tamper detection is not desired. If this feature is enabled, any attempt to tamper by means of many trial entries at a wireless keypad will be blocked by the control panel. If more than 40 key depressions are received without a valid sequence (arm, disarm, etc.), the Control panel will disable the wireless keypad. The inhibit is removed once a valid key sequence is received from a wired keypad.
1*46	**Auxiliary Output Enable** • Enter **0** if ground start output is required; • Enter **1** if the auxiliary output will be used to produce an open/close trigger (produced only if **all** partitions are armed); • Enter **2** if the auxiliary output will be used to produce keypad-like sounding at an auxiliary sounder (ex. 706-12) This option applies only to the partition set in field *15. NOTE: Only one of the above options can be active within a system. • Enter **3** if using as trigger for audio alarm verification (AAV)
1*48	**Wireless Keypad Assignment** • Enter the partition in which RF keypad is used, **1-8.** • Enter **0** if no RF keypad is used.
1*49	**Suppress TX Supervision Sound** • Enter **1** to disable trouble sounding for transmitter check-in failure. • Enter **0** if audible trouble sounding is desired. • Must be "0" for UL.
1*53	**Download Callback** • Enter **1** if callback is not required when downloading. • Enter **0** if callback is required. • Must be **0** for UL installations.

1*57	**Enable 5800 RF Button Global Arm** • Enter **1** to have the system arm/disarm in accordance with the button's user's global arming settings. • Enter **0** if the button is not to be used to global arm the system (however, home partition arming will still occur).
1*58	**Enable 5800 RF Button Force Bypass** • Enter **1** to allow the RF Button user to force bypass all faulted zones. When attempting to arm the system, the keypad will beep once after pressing the button, if any faulted zones are present. If this feature is enabled, the user should then press the button again within 4 seconds to force bypass those zones and arm the system.
1*60	**Zone 5/Audio Alarm Verification** • Enter **1** if two-way audio (AAV) is desired. If selected, zone 5 is no longer available as a protection zone. Enter **0** if two-way audio is not being used.
1*62	**Silent Burg. Alarm Audible Upon:** • Enter **1** if the silent alarm (selected in partition-specific field 1*61) will become audible upon alarm sounder timeout. Enter **0** if it will become audible upon communication failure.
1*63	**Zone 1-9 Response Time** • This field defines the response time for zones 1-9. Enter **0** if the desired zone response time for zones 1-9 is 360mS. Enter **1** for 720mS response time. Note that setting field *14 Fast/Slow Response for Zone 9 for fast response supersedes this selection for zone 9 (i.e. zones 1-8 will have defined response times, zone 9 will have fast response).
1*65	**Program Mode at Power Up** • Enter **1** to prohibit entry into programming mode from the keypad using the [*] + [#] keys within 30 seconds of power up method. If selected, entry to program mode can be gained by entering the installer's code + 8+0+0, provided that exit from program mode is via *99. **Important:** If exit from program mode is via *98, and this option is selected, the only way to access program mode is via the downloader.
1*70	**Event Log Types** • Enter **1** for each of the types of events for which event logging is desired, as shown on the programming form. • Otherwise enter **0**.
1*71	**12/24 Hour Time Stamp Format** • Select the type of time stamping desired: • 0=standard 12 hour; 1= 24 hour format.
1*72	**Event Log Printer On-Line** • Enter **1** to have the printer print events as they occur • Enter **0** to enable the printer such that the logs are only printed upon request.
1*73	**Printer Baud Rate** • Enter **0** if printer is set for 1200 baud (preferred). • Enter **1** if printer is set for 300 baud.
1*74	**Relay Timeout XX Minutes** • Enter the relay timeout, **0-127** in multiples of 2 minutes, desired for #80 Menu Mode time driven event relay command numbers "04/09" and #93 Menu Mode Relay Programming output command "56" (refer to #93 and #80 Menu Mode sections in this manual).
1*75	**Relay Timeout YY Seconds** • Enter the relay timeout, **0-127** seconds, desired for #80 Menu Mode time driven event relay command numbers "05/10" and #93 Menu Mode Relay Programming command "57" (refer to #93 and #80 Menu Mode sections in this manual).

2*00	**Number Of Partitions** • Enter the number of partitions 1-8 to be used in the system.
2*01	**Daylight Savings Time Start/End Month** • Enter the months **00-12** in which daylight savings time starts and ends. • Enter **00, 00** if daylight savings time does not apply to the user's region. Standard setting for U.S. is 04,10.
2*02	**Daylight Savings Time Start/End Weekend** • Enter the start and end weekends for daylight savings time as follows: **1**=first; **2**=second; **3**=third; **4**=fourth; **5**=last; **6**=next to last; **7**=third from last. Standard setting for U.S. is 01,05.
2*11	**Allow Disarm Outside Window If Alarm Occurs** • Used only if field 2*10 (partition-specific field) is set to **1**. • Enter 1 if it is desired that the system can be disarmed outside the programmed disarm window if an alarm has occurred. Enter **0** if it is desired that disarming can only be done during the disarm window, regardless of system status. If field 2*10 is set to **0** for a partition, this field (2*11) has no effect for that partition.
2*13-2*14	**Scheduling Related Dialer Reports** • Enter the report codes for the scheduling related events as shown on the programming form.
2*17	**Number Of User Codes Per Partition** • Enter **01-99** for each partition used in the system. • Enter 01 for unused partitions. Total number of user codes in the system must be less than or equal to 128. Note that one user number is automatically assigned to each partition, regardless of whether that partition has been enabled.
2*19	**Use Partition Descriptors** • Enter **1** if partition descriptors will be programmed. If enabled, the normal keypad display will include a partition number and the partition descriptor (if programmed in #93 Menu Mode. • Entering **0** causes the keypads to display a non-partitioned system type of display (no partition number will appear).
2*21	**Supervision Pulses For LORRA Trigger Outputs** • Used for supervised connection to 7920SE. • Enter **1** to enable pulses for each type of LORRA triggers. This option causes the control to send periodic short pulses on the J7 radio triggers These pulses are used by the 7920SE to determine that its connection to the control is still intact. Enter **0** if not desired.

Programming Partition-Specific Data Fields

General Information

- Values for some programming fields are system wide (global), and some can be different for each partition (partition-specific). Note that the partition-specific programming fields are automatically skipped when programming the global fields. The table below lists the partition-specific fields that can be defined for each partition.

To access partition-specific fields,

1. Press ***91**, which will prompt you for the partition number desired.
2. Enter a partition-specific field number (ex. *09) to begin programming. When the first field's entry is completed, the next partition-specific field will automatically be displayed. When all partition-specific fields are programmed, the system returns to the global programming fields (page 1 fields). To return to the global program fields before finishing all fields, enter any global field number.
3. Repeat this procedure for each partition in the installation.

PROGRAMMING PARTITION-SPECIFIC FIELDS
Press *91 to select a partition

Enter a Partition-Specific Field Number

Selected Partition Set of Fields

Exits to global page 1 program fields
Press *91 to select next partition.
Enter any global field number to return to the global fields at any time.

The following table lists the Partition Specific fields

*09	**Entry Delay #1** • Entry delay defines the delay time which allows users to reenter the premises through a door that has been programmed as an entry delay door and disarm the system without sounding an alarm. The system must be disarmed within this period or an alarm will occur. Enter the entry delay time (01-15 times 15 seconds or 00 for no delay), up to a maximum delay of 225 seconds (entry **15** times 15 seconds), for the zone assigned to Entry Delay #1.
*10	**Exit Delay #1** • Exit delay defines the delay period that allows users to leave the premises through a door that has been programmed as an entry/exit delay door after arming the system without setting off the alarm. Enter the exit delay time (01-15 times 15 seconds or 00 for no delay), up to a maximum delay of 225 seconds, for the zone assigned to Exit Delay #1.
*11	**Entry Delay #2** • Entry Delay 2 is used for the zone assigned to Entry Delay #2 zone type. Note that this delay must be longer than Entry Delay #1.
*12	**Exit Delay #2** • Exit delay 2 is used for the zone assigned to Exit Delay #2. Note that this delay must be longer than Exit Delay #1.
*13	**Alarm Sounder Duration** • Defines the length of time an external sounder and the keypad's sounder will sound for all audible alarms (multiply entry 01-15 by 2 minutes for actual duration). This duration can be overridden by the Fire Timeout Disable option (field *21) for fire alarms. Minimum 4 minutes for UL installations.
*16	**Confirmation Of Arming Ding** • Enter **1** to enable 1/2 second external alarm sounding ("ding") at the end of exit delay #1. Otherwise enter **0**.
*22	**Keypad Panic Enables** • Enter **1** to enable the appropriate keypad panics used in this partition. Otherwise enter **0**.
*23	**Multiple Alarms** • Determines whether or not more than one alarm can be sounded in a given zone during an armed period. Note that multiple alarm soundings will not occur more frequently than allowed by the programmed alarm sounder duration. This selection applies to local sounding and has no impact on the number of communication messages transmitted. Refer to Swinger Suppression for limiting communication messages. Enter **1** if this feature is desired. Enter **0** if not desired.
*29	**Quick Arm** • Enter **1** to enable arming of the burglary system in AWAY, STAY, INSTANT or MAXIMUM modes by using the # key instead of the security code. When armed, reports closing as User 0 if open/close reporting for User #2 (typically a master level user) was enabled for a given partition. Enter **0** if Quick Arm is not desired. (The security code must always be used to disarm the system.) Note that if quick arm is used, the installer code and authority level 5 code cannot disarm the system.
*32	**Primary Subscriber Acct #** • Enter a 3 or 4 digit (depending on report format) primary subscriber account number 00-09; B-F (11-15). Each number requires a 2-digit entry so as to allow entry of hexadecimal digits (B-F). If a 3 digit account number is to be used, only enter data in the first 3 locations, leaving the last one unfilled, by entering a *.
*38	**Prevent Zone XX Bypass** • Entering a zone number (01-86) prevents that zone from being bypassed by the user. Enter 00 if this feature is not desired (all zones can be bypassed). This selection does not affect fire zones, which the system prevents from being bypassed.

*39	**Enable Open/Close Report For Installer Code** • Enter **1** if open/close reporting for the installer is desired. Otherwise enter **0**.
*84	**Swinger Suppression** • This option limits the number of messages (Alarms or Troubles) sent for a specific channel in an armed period (Swinger Suppression). Enter **01-15**. If **00** is selected, all Alarm or Trouble codes are reported. Must be **00** (disabled) for UL installations.
*85	**Enable Dialer Reports For Panics & Duress** • Enter **1** for each panic/duress for which reporting is desired.
*87	**Entry Warning** • Enter **0** for 3 short beeps, or **1** for slow beeps that continue for the entire entry delay period.
*88	**Burg. Alarm Comm. Delay** • Enter **0** for no delay on burglary alarm communication. Enter 1 for 16-second delay (no delay on 24-hour reports).
*90	**Secondary Subscriber Acct #** • Enter the 3 or 4 digit number (depending on report format) for the secondary subscriber account, 00-09; B-F (11-15). Each number requires a 2-digit entry so as to allow entry of hexadecimal digits (B-F). If a 3-digit number is to be used, only enter data in the first 6 locations, leaving the last two unfilled. Default=15 15 15 15. Erase the field by entering *90*. NOTE: This field *must* be programmed if a secondary phone number is used (field *34). This account number can be the same as the primary account number.
1*43	**Permanent Keypad Display Backlighting** • Enter **1** if it is desired that backlighting for the keypad display remain on at all times. Enter **0** if the display should remain unlit unless a key is pressed. The backlighting then turns off again after a period of keypad inactivity. Note that when a key is pressed, display backlighting turns on for **all** keypads in that partition.
1*45	**Exit Delay Sounding** • Enter **1** if beeps from the keypads during exit delay is desired. Enter **0** for no keypad sound during exit delay.
1*47	**Chime On External Siren** • Enter **1** for chime annunciation using the external alarm sounder. If not desired, enter **0**.
1*52	**Send Cancel If Alarm + OFF** • Enter **1** if no report restriction is desired. Enter **0** if cancel reports are to be sent within Bell Timeout period only.
1*61	**Silent Burglary Alarm** • Enter **1** for silent alarms in this partition. Enter **0** for external sounding.
1*64	**Delayed External Sounder** • Enter **1** for 16 seoncd delay before sounding alarms (helps prevent user-caused false alarms). Enter **0** for instant sounding of alarms.
1*76	**Access Control Relay** • The system can be programmed to provide user activated access control. If enabled, the assigned relay will pulse for 2 seconds when the user enters his code and presses "0". Enter the relay number (**00-16**) for the relay that will be used for access control. Enter **00** if not used in this partition.

2*05	**Auto-Arm Delay** • Enter the time between the end of the arming window and the start of auto arm warning time in values of **01-14** times 4 minutes. Enter **00** if no delay is desired. Enter **15** if auto arming is not desired.
2*06	**Auto-Arm Warning Period** • Enter the time **01-15** in one minute increments during which the user is warned (ex. turn lights on/off, bell sounds, etc.) to exit the premises prior to auto arming of the system.
2*07	**Auto-Disarm Delay** • Enter the time between the end of the disarming window and the start of auto disarming of the system in values of **01-14** times 4 minutes. Enter **00** if no delay is desired. Enter **15** if auto disarming is not desired.
2*08	**Enable Force Arm For Auto-Arm** • Enter **1** if the system should automatically bypass any faulted zone when it attempts to auto arm. Otherwise enter **0**.
2*09	**Enable Open/Close Reports By Exception** • Enter **1** if it is desired that open/close reports be sent **only if** the open/close occurs **outside** the arm and disarm windows. Open reports will also be suppressed during the closing window in order to prevent false alarms if the user arms the system, then reenters the premises to retrieve a forgotten item. Note that openings and closings are still recorded in the event log though. Enter **0** if exception reporting is not desired. Note: This field **must** be set to 1 if late/early to open and late/early to close reports are to be sent.
2*10	**Restrict Disarming Only During Arm/Disarm Windows** • Enter **1** if disarming of the system should be allowed only during the arming/disarming windows, or if the system is in alarm (if 2*11 is set to "1"). Note that this applies **only** to operator level users. Installer, Master and manager level users can disarm the system at any time. Enter **0** if disarming can occur at any time.
2*18	**Enable GOTO For This Partition** • Enter **1** if this partition is to be accessed by a GOTO command. Otherwise enter **0**.
2*20	**Enable J7 Triggers By Partition** • **0**=disable for displayed partition; 1=enable for displayed partition

PROGRAMMING WITH #93 MENU MODE

General Information

NOTE: The following fields should be programmed before beginning: 1*26 First RF Expander; 1*27 Second RF Expander; 2*00 Number of Partitions; 1*32 receiver type. In addition, receivers should be programmed via Device programming.

After programming all system related programming fields in the usual way, press #93 while still in programming mode to display the first choice of the menu driven programming functions, which are as follows:

ZONE PROG? 0=No 1=Yes	For programming the following: • Zone Number • Zone Response Type • RF Zone? • Right Loop Zone? • Partition Number for Zone • Dialer report code for zone
SERIAL PROG? 0=no 1=yes	For entering 5800 transmitter & serial number polling loop device serial numbers into the system.
ALPHA PROG? 0=no 1=yes	For entering alpha descriptors for the following: • Zone Descriptors • Installer's Message • Custom Words • Partition Descriptors • Relay Descriptors
DEVICE PROG? 0=no 1=yes	For defining the following device characteristics for addressable devices, including keypads, RF receivers (4281/5881) and 4204 output relay modules: • Device Address • Device Type • Device's Home Partition • Keypad Options • Voice Module
RELAY PROG? 0=no 1=yes	For defining output relay functions. This prompt is fully explained in the 4204 RELAY MODULE section.
RLY VOICE DESCR? 0=no 1=yes	For entering voice descriptors to be used with voice module functions. This prompt is fully explained in the 4204 RELAY MODULE section.
CUSTOM INDEX #? 0=no 1=yes	For creating custom word substitutes for voice module annunciation. This prompt is fully explained in the 4204 RELAY MODULE section.
QUIT MENU MODE? 0=no 1=yes	Enter 1 to return to data field programming mode. Enter 0 to display the next menu selection.

Press 0 (NO) or 1 (YES) in response to the displayed menu selection. Pressing 0 will display the next choice in sequence. The following is a list of commands used while in the menu mode.

#93 Menu Mode Key Commands

#93	Enters Menu mode
[*]	Serves as ENTER key. Press to have keypad accept entry.
[#]	Backs up to previous screen.
0	Press to answer NO
1	Press to answer YES
01-09	All entries are 2-digit entries.
00	Returns to the QUIT MENU MODE? prompt.

Important!: Note that before programming zone characteristics, fields 1*26 & 1*27 (RF Expander Selects) and field 2*00 (number of partitions) and field 1*32 must be programmed. This identifies the use of RF Receivers and the number of partitions being used in the system.

Enter Programming mode, then press #93 to display "ZONE PROG?".

ZONE PROG? 1=Yes 0=No

Press 1 to enter ZONE PROGRAMMING mode. The following screens will appear. Press [*] to display the next screen. Press # to display a previous screen.

Enter Zn No. 00=QUIT 20

Enter the zone number to be programmed (01-86, 88-91, 92 (duress), 95, 96, 97 or 99). Press [*] to accept entry.

Zn ZT P RC In:L 20 00 1 00 RF:N

A summary screen for that zone will appear. The "RF" indicates the input type of device, and the "N" after the "RF:" indicates the device's loop number to which the sensor is connected (some devices can support more than one zone by means of individual loops (ex. 5801, 5803, 5816, 5817, etc.)

20 Zone Type Zone disabled 00

Each zone in a system must be assigned to a zone type, which defines the way in which the system responds to faults in that zone. Refer to the ZONE TYPE DEFINITIONS later in this section for detailed definitions of each zone type. Enter the zone response type for each zone. The screen will automatically display the zone type for the number entered. Press [*] to accept entry. If a different zone response type is desired, enter a different number and press [*].

For UL applications, use of 1 or 2 RF RCVRs requires enabling their respective faults (88-91) as applicable (type 5). Zone Types are as follows:

- 00 Assign for unused zones
- 01 Entry/Exit #1, burglary
- 02 Entry/exit #2,
- 03 Perimeter, burglary
- 04 Interior, follower, burglary
- 05 Trouble by day/Alarm by night, burglary
- 06 24 hour silent alarm
- 07 24 hour audible alarm
- 08 24 hour auxiliary
- 09 Fire
- 10 Interior, delay, burglary
- 11 24 hour burglary
- 20 Arm-stay (not for 5700 transmitters)
- 21 Arm-away (not for 5700 transmitters)
- 22 Disarm (not for 5700 transmitters)
- 23 No alarm response (ex. relay action)

20 Partition

Enter the partition number (1-8) that this zone is located in.

20 Report Code

Enter the report code for this zone.

20 Input Type RF Trans. RF:

Note that input types 4 & 5 are valid for certain 5800 series transmitters only (ex. 5801, 5802, 5802CP & 5803). When using 5700 series transmitters, always set the input type to type 3. The zone number of the transmitter identifies whether or not supervision is required (ex. 5700 wireless zone number 63 is not supervised).

Enter the input device type as follows: 0 = not used; 1=hardwired; 3=supervised RF transmitter (RF type); 4=unsupervised RF transmitter (UR type); 5=RF button type transmitter (BR type); 6=serial number polling loop device (SL type); 7=DIP switch type polling loop device; 8=right loop of DIP switch type device.

Right loops refer to the use of the right loop on a 4190WH zone expander module and/or 4278 PIR, which allow hard-wired devices to be monitored by the polling loop.

After completing this entry, the summary display appears. The display will then repeat with the zone number question for programming the other zones in the system. Enter **00** to exit back to normal programming mode.

20 LOOP NUMBER

OR

20 LEARN S/N ? 1=YES 0=NO

If this is a previously "learned" sensor, the loop number for this zone will appear. Press [*] to continue.

If the sensor's serial number has not been "learned," the serial number can be learned now by entering 1, or it can be learned later by using the SERIAL NUMBER LEARN menu (see next section). Enter 0 if serial number will be learned later. The summary screen will then appear (see summary screen description above).

20 INPUT S/N :L A000-0000:1

If learning the serial number now (entering 1 at the last prompt), this prompt appears. Fault the transmitter two times. The keypad will beep twice when it hears each transmission. When the serial number has been successfully learned, its number appears in the display. A typical display is shown below:

20 PROG AS RF:1 A001-3078:1

Press [*] to continue. The summary screen will then appear (see summary screen description above).

Zone Type Definitions

The system supports up to 86 zones of hard-wire, polling loop and/or wireless protection, distributed among up to 8 partitions. The following table lists the zone numbers and the types of sensors that can be used with each in this system:

Zone	Sensors
1	2-wire smoke detectors (if used)
7	keyswitch (if used)
8	latching type glass break detectors (if used)
1-9	traditional hard-wired zones
1-63	5700 series wireless devices
1-86	5800 series wireless devices
10-86	polling loop devices
95	*/1 panic
96	#/3 panic
99	*/# panic

Each zone must be assigned to a zone type, which defines the way in which the system responds to faults in that zone. In addition, there are three keypad activated zones (PANIC keys, see note) for each partition, a polling loop supervision zone, and four RF supervisory zones, two for each RF Receiver installed. Zone types are defined below.

Type 00: Zone Not Used
Program a zone with this zone type if the zone is not used.

Type 01: Entry/Exit #1 Burglary.
This zone type provides entry delay whenever the zone is faulted if the control is armed in the Away or Stay modes. When the panel is armed in the Instant or Maximum modes, no entry delay is provided. Exit delay begins whenever the control is armed, regardless of the arming mode selected. These delays are programmable. This zone type is usually assigned to sensors or contacts on doors through which primary entry and exit will take place.

Type 02: Entry/Exit #2 Burglary.
This zone type provides a secondary entry delay whenever the zone is faulted if the panel is armed in the Away and Stay modes. When the panel is armed in the Instant or Maximum modes, no entry delay is provided. Secondary exit delay begins whenever the control is armed, regardless of the arming mode selected. These delays are programmable. This zone type is usually assigned to sensors or contacts on doors through which secondary entry and exit will take place, and where more time might be needed to get to and from the keypad. Delay time must be greater than Zone type 1. (Ex.: a garage, loading dock, or basement door)

Type 03: Perimeter Burglary.
This zone type gives an instant alarm if the zone is faulted when the panel is armed in the Away, Stay, Instant or Maximum modes. This zone type is usually assigned to all sensors or contacts on exterior doors and windows.

Type 04: Interior, Follower.
This zone type gives a delayed alarm (using the programmed Entry/exit time) if the Entry/Exit zone is faulted first. Otherwise this zone type gives an instant alarm. This zone type is active when the panel is armed in the Away or maximum modes. Maximum mode eliminates the delay though. **This zone type is bypassed automatically when the panel is armed in the Stay or Instant modes.** This zone type is usually assigned to a zone covering an area such as a foyer, lobby, or hallway through which one must pass upon entry (After faulting the entry/exit zone to reach the keypad to disarm the system.) Since this zone type is designed to provide an instant alarm if the entry/exit zone is not violated first, it will protect an area in the event an intruder hides on the premises prior to the system being armed, or gains access to the premises through an unprotected area.

Type 05: Trouble by Day/Alarm by Night.
This zone type will give an instant alarm if faulted when armed in the Away, Stay, Instant or Maximum (night) modes. During the disarmed state (day), the system will provide a latched trouble sounding from the keypad (and a central station report, if desired). This zone type is usually assigned to a zone which contains a foil-protected door or window (such as in a store), or to a zone covering a "sensitive" area such as a stock room, drug supply room, etc. This zone type can also be used on a sensor or contact in an area where immediate notification of an entry is desired.

Type 06: 24-hour Silent Alarm.
This zone type sends a report to the Central Station but provides no keypad display or sounding. This zone type is usually assigned to a zone containing an Emergency button.

Type 07: 24-hour Audible Alarm.
This zone type sends a report to the Central Station, and provides an alarm sound at the keypad, and an audible external alarm. This zone type is usually assigned to a zone that has an Emergency button.

Type 08: 24-hour Auxiliary Alarm.
This zone type sends a report to Central Station and provides an alarm sound at the keypad. **(No bell output is provided).** This zone type is usually assigned to a zone containing a button for use in personal emergencies, or to a zone containing monitoring devices such as water sensors, temperature sensors, etc.

Type 09: Supervised Fire. (No Verification)
This zone type provides a fire alarm on short circuit and a trouble condition on open circuit. The bell output will pulse when this zone type is faulted. This zone type is always active and cannot be bypassed. **This zone type can be assigned to any wired zone except zone 9, and can be assigned to certain wireless systems zones.**

Type 10 : Interior w/Delay.
This zone type gives entry delay (using the programmed entry time), if tripped when the panel is armed in the Away mode. This zone type is also active during maximum mode, but no delay is provided (alarms occur immediately if zone is tripped). **This zone type is bypassed when the panel is armed in the Stay or Instant modes.** Delay begins whenever sensors in this zone are violated, regardless of whether or not an entry/exit delay zone was tripped first.

Type 11: 24-Hour High Security Burglary
Assigned to zones protecting high security areas (ex. safe, jewelry box, gun rack, liquor cabinet, etc.) where an audible burglary alarm is desired upon violation of the zone, regardless of whether the system is armed or disarmed. Access to the protected area is allowed only by bypassing the zone (whether the system is armed or disarmed). To restore zone protection, repeat the bypassing key sequence for that zone. Note that only master or manager users can bypass/unbypass zones assigned to type 11.
NOTE: Zones assigned this zone type are not affected by the Silent Burglary option (field 1*61). Alarms occurring in these zones always produce audible alarm sounding.

Type 20: Arm-Stay*
This is a special purpose zone type used with 5800 series wireless pushbutton or contact closure or opening, and which will result in arming the system in the STAY mode when the zone is activated.

Type 21: Arm-Away*
This is a special purpose zone type used with 5800 series wireless pushbutton or contact closure or opening, and which will result in arming the system in the AWAY mode when the zone is activated.

Type 22: Disarm*
This is a special purpose zone type used with 5800 series wireless pushbutton or contact closure or opening, and which will result in disarming the system when the zone is activated.

Type 23: No Alarm Response
This zone type can be used on a zone when an output relay action is desired, but with no accompanying alarm (ex. lobby door access).

* These zone types **are not for use** by 5700 series devices.

NOTE FOR PANIC KEYS: Keypad panic zones share the same zone response type for all 8 partitions, but panics may be individually enabled for each partition.

IMPORTANT! FAULT ANNUNCIATION
Polling loop and RF faults (zones 88-91 & 97) will report as trouble conditions only, and as such, should be assigned either zone type 00 if no annunciation is desired, or zone type 05 if annunciation as trouble condition is desired. See FAULT ANNUNCIATION notes in POLLING LOOP and WIRELESS EXPANSION sections for more information.

"Learning" Serial Numbers

- Usually, serial numbers are learned during zone programming. But if not, use #93 menu mode to learn serial numbers (for example, if all other programming was done via downloading).

1. With at least one alpha keypad (FA550KP) wired, power up the system. Refer to the POWERING THE SYSTEM section for temporary power-up procedure.
2. Enter data field programming mode: installer code + **8 0 0**.
3. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
4. Press **0** (NO) repeatedly until the "SERIAL # PROG?" prompt appears.

SERIAL # PROG?
0=no 1=yes
	To learn or delete a device's serial number, enter **1** (yes). Enter **0** to move to the **Alpha Programming** menu.

Enter zone no. 00=QUIT	Enter the zone number of the device to be learned or deleted. Press [*] to move to the next prompt. Enter **00** to quit Serial Number programming. If the device for that zone number was not programmed as a serial number input device in the **Zone Programming** menus, a prompt indicating such will appear. Press [*] to return to the Enter Zone No. prompt.
10 PROG AS RF:2 A000-5372:2	If a serial number has already been learned for that device, a summary prompt will appear displaying the type of device and its serial number. Press [*] to continue to the Delete S/N prompt.
DELETE S/N? 0=No, 1=Yes	Enter **1** to delete the displayed serial numbered device. Enter **0** if this device should not be deleted.
Input type Input = 0 or 3-6	If a serial number for that device has not been learned yet, and if the device assigned to that zone number has been programmed as a serial number input device in the **Zone Programming** menus, this prompt will appear. Enter the device input type as follows: **0**=none, **3**= supervised RF transmitter (RF type), **4**= unsupervised RF transmitter (UR), **5**= RF button type (BR type), **6**= serial polling loop device (SL type). Press [*] to move to the next prompt.
Learn S/N? 0=No, 1=Yes	If adding a new serial number device to the system, this prompt will appear after entering the input type.. Enter **1** to have the system learn the device's serial number. To learn the serial number at a later time but retain the zone programming information, enter **0**. If 0 is entered, a zone summary screen appears (described later). Press [*] to return to the Enter Zone No. prompt to learn another device's serial number or to exit learn menus.

Input S/N:L Axxx - xxxx:L	If 1 was entered at the Learn S/N? prompt, this screen will appear. The device's serial number can be manually entered, or it can be automatically learned by faulting the device at least twice (causing 2 transmissions). Two transmissions must be received. The keypad will beep with each transmission received. Press [*] to continue.
10 PROG AS RF:2 A000-5372:2	A summary screen will appear if the serial number was successfully learned. Press [*] to continue.
XX ZT P RC IN:L	A summary screen for the zone programming will appear showing the zone number, zone type (ZT), partition assignment (P), report code (RC), and input device type (IN:L). Press [*] to continue. The Enter Zone No. prompt will appear again.

Programming Alpha Descriptors

General Information

- If using an FA550KP alpha keypad in the system, you can program a user friendly English language description/location of all protection zones, partitions' keypad panics, polling loop short and RF receiver supervision faults.
- Each description can be composed of a combination of words (up to a maximum of 3) that are selected from a vocabulary of 244 words stored in memory, and any word can have an "s" or " 's " added to it.
- In addition, up to 20 installer-defined words can be added to those already in memory. Thus, when an alarm or trouble occurs in a zone, an appropriate description for the location of that zone will be displayed at the keypad.
- You can also program an installer's message for each partition which will be displayed when the system is "Ready" (ex. THE PETERSON's).

1. To program alpha descriptors, enter Programming mode, then press #93 to display "ZONE PROG?".
2. Press 0 (NO) twice to display "ALPHA PROG?".
3. Press 1 to enter ALPHA PROGRAMMING mode.
   There are 6 sub-menu selections that will be displayed one at a time.
   Press 1 to select the mode desired.
   Press 0 to display the next mode available. The alpha menu selections are:

ZONE DESCRIP.?	for entering zone descriptors.
DEFAULT SCREEN?	for creating custom message; displayed when system ready.
CUSTOM WORD?	for creating custom words for use in descriptors.
PART DESCRIP?	for creating 4-character partition names.
RELAY DESCRIP?	for creating relay descriptors
EXIT EDIT MODE?	Press 1 to exit back to #93 Menu Mode.

4. Refer to the sections that follow for procedures for adding alpha descriptors.

Zone Descriptors

1. Select ZONE DESCRIPTOR mode.
   The keypad keys perform the following functions:
   [3] Scrolls both alphabet and actual words in ascending alphabetical order.
   [1] Scrolls both alphabet and actual words in descending alphabetical order.
   [2] Adds or removes an "s" or " 's " to a vocabulary word.
   [6] Toggles between alphabet and actual word list; used to accept entries.
   [8] Saves the zone description in the system's memory.
   [#] # plus zone number will display the description for that zone.

2. Enter the zone number to which you want to assign a descriptor.
   Ex.. Key *01 to begin entering the description for zone 1, (key *02 for zone 2, *03 for zone 3 etc.). The following will be displayed: * ZN 01 A
   Note that the first letter of the alphabet appears after the zone number, and that the zone number is automatically included with the description.

3. Enter the descriptor for that zone, using one of two methods as follows:
   (assume, for example that the desired description for zone 1 is BACK DOOR)
   a) Press [#] followed by the 3 digit number of the first word from the fixed dictionary shown later in this section (e.g., [0][1][3] for BACK).
      Press [6] in order to enter the word and proceed or press [8] to store the word and exit, **or...**
   b) Select the first letter of the desired description (note that "A" is already displayed). Use key [3] to advance through the alphabet and key [1] to go backward.
      Press key [3] repeatedly until "B" appears, then press key [6] to display the first available word beginning with B.
      Repeatedly press key [3] to advance through the available words until the word BACK is displayed.
      Press key [1] to move backward through the word list..

4. Add "s" or " 's " if you need to.
   - To add an "s" or " 's ", press the [2] key.
   The first depression adds an "s", the second depression adds an " 's ", the third depression displays no character (to erase the character), the fourth depression adds an "s", etc.
   To accept the word, press the [6] key, which toggles back to alphabet list or press [8] to store descriptor and exit.

4. Select the next word.
   For selection of the next word (DOOR), repeat step 3A (word #057) or 3B, but selecting the word "DOOR".
   To accept the word, press the [6] key, which again toggles back to alphabet list.

5. Store the descriptor.
   When all desired words have been entered, press key [8] to store the description in memory.

6. To review the zone descriptions, key [#] plus zone number (e.g., #01).
   To edit zone descriptions, key [*] plus zone number (e.g., *01)

7. Exit zone description mode: enter 00.

NOTE: Alpha descriptor entry can be entered locally at the alpha keypad or remotely using V-LINK Downloading.

Custom Words

- Up to 20 installer-defined words can be added to the built-in vocabulary. Each of the 20 "words" can actually consist of several words, but bear in mind that a maximum of 10 characters can be used for each word string.

1. Select CUSTOM WORD mode. The keys perform the following functions:
   [3] Advances through alphabet in ascending order.
   [1] Advances through alphabet in descending order.
   [6] Selects desired letter; moves the cursor 1 space right.
   [4] Moves the cursor one space to the left.
   [7] Inserts a space at the cursor location, erasing any character at that location.
   [8] Saves the new word in the system's memory.
   [*] Returns to description entry mode.

2. Enter the custom word number 01-20 you want to create.
   For example, if you are creating the first word (or word string), enter 01; when creating the second word, enter 02, and so on. A cursor will now appear at the beginning of the second line.

3. Type the word using one of two methods as follows:
   a) Press the [#] key, followed by the two digit entry for the first letter you would like to display (e.g., [6][5] for "A"),
      When the desired character appears, press the [6] key to select it. The cursor will then move to the right, in position for the next character. Press [#] plus the two digit entry for the next letter of the word.
      OR...
   b) Use the [3] key to advance through the list of symbols, numbers, and letters. Use the [1] key to move back through the list.
      When you have reached the desired character, press the [6] key to select it. The cursor will then move to the right, in position for the next character.

5. Repeat step 3 to create the desired custom word (or words).
   Use the [4] key to move the cursor to the left if necessary,
   Use the [7] key to enter a blank (or to erase an existing character).
   Each word or word string cannot exceed 10 characters.

6. Save the word by pressing the [8] key.
   This will return you to the CUSTOM WORD? display. The custom word (or string of words) will be automatically added to the built-in vocabulary at the end of the group of words beginning with the same letter.
   When zone descriptors are entered using method 3A, the custom words will be stored as word numbers 250 to 269 for words 1 to 20 respectively.
   When words are entered using method 3B, each word will be stored at the end of the group of words that begin with the same letter as it does.

7. Repeat steps 2 through 6 to create up to 19 additional custom words (or word strings).

8. Exit Custom Word Mode by entering 00 at the custom word prompt.

Partition Descriptors

1. Select "Part DESCRIPT." mode. The system will ask for the partition number desired. Enter the number as a single key entry 1-8.

2. Follow the same procedure as for CUSTOM WORDS, except that partition descriptors are limited to four (4) characters (ex. WHSE for warehouse).

Custom Message Display (Installer's Message)

- Normally, when the system is in the disarmed state, the following display is present on the Keypad.

****DISARMED****

READY TO ARM

Part or all of the above message can be modified to create a custom installer message for each partition. For example, ****DISARMED**** on the first line or READY TO ARM on the second line could be replaced by the installation company name or phone number for service. Note that there are only 16 character spaces on each of the two lines. To create a custom display message, proceed as follows:

1. Select DEFAULT SCREEN mode. The keypad will ask for the partition number for this message. Enter the partition number. Press [*] to accept entry.

   The following will appear:

****DISARMED****

READY TO ARM

   A cursor will be present at the extreme left of the first line (over the first "star"). The [6] key is used to move the cursor to the right and the [4] key to move the cursor to the left. Key [7] may be used to insert spaces or erase existing characters.

2. Create the message.

   For example, to replace READY TO ARM with the message SERVICE: 424-0177, proceed as follows:

   Press the [6] key to move the cursor to the right, and continue until the cursor is positioned over the first location on the second line.

   Press the [3] key to advance through the alphabet to the first desired character (in this case, "S"). Use the [1] key to go backward, when necessary. When the desired character is reached, press [6].

   The cursor will then move to the next position, ready for entry of the next character (in this example, "E"). When the cursor reaches a position over an existing character, pressing the [3] or [1] key will advance or back up from that character in the alphabet.

   Proceed in this manner until all characters in the message have been entered.

3. Save the message.

   Store the new display message in memory by pressing the [8] key.

4. The system will ask for a new partition number.
   Enter 00 to quit or 1-8 for a new partition number.

Relay Descriptors

1. Select relay descript mode.
   The system will ask for the relay number desired. Enter 01-16 (00 to quit).

2. Follow the same procedure as for CUSTOM WORDS. Relay descriptors may have up to 10 characters.

Alpha Descriptor Vocabulary

(For Entering Alpha Descriptors. To select a word, press [#] followed by the word's 3-digit number.)

NOTE: This vocabulary is not to be used for relay voice descriptors.
See the vocabulary listed in the RELAY VOICE DESCRIPTORS section when programming relay voice descriptors.

000 *(Word Space)*
• **001 AIR**
• **002 ALARM**
003 ALCOVE
004 ALLEY
005 AMBUSH
• **006 AREA**
• **007 APARTMENT**
008 ART
• **009 ATTIC**
010 AUDIO
011 AUXILIARY
• **012 BABY**
• **013 BACK**
• **014 BAR**
015 BARN
• **016 BASEMENT**
• **017 BATHROOM**
• **018 BED**
• **019 BEDROOM**
020 BELL
• **021 BLOWER**
• **022 BOILER**
023 BOTTOM
024 BOX
025 BREAK
• **026 BUILDING**
027 BURNER
028 CABINET
• **029 CALL**
030 CAMERA
031 CAR
032 CASE
033 CASH
034 CCTV
035 CEILING
036 CELLAR
• **037 CENTRAL**
038 CIRCUIT
039 CLIP
• **040 CLOSED**
041 COIN
042 COLD
043 COATROOM
044 COLLECTION
045 COMBUSTION
• **046 COMPUTER**
047 CONTACT
• **048 DAUGHTERS**
049 DELAYED
• **050 DEN**
051 DESK
• **052 DETECTOR**
• **053 DINING**
054 DISCRIMINATOR
055 DISPLAY
056 DOCK
• **057 DOOR**
058 DORMER
• **059 DOWN**
• **060 DOWNSTAIRS**
061 DRAWER
• **062 DRIVEWAY**
063 DRUG
• **064 DUCT**
• **065 EAST**
066 ELECTRIC
067 EMERGENCY
068 ENTRY
• **069 EQUIPMENT**
070 EXECUTIVE
• **071 EXIT**
072 EXTERIOR
• **073 FACTORY**
074 FAILURE
075 FAMILY
• **076 FATHERS**
• **077 FENCE**
078 FILE
• **079 FIRE**
• **080 FLOOR**
081 FLOW
082 FOIL
• **083 FOYER**
084 FREEZER
• **085 FRONT**
086 FUR
087 FURNACE
088 GALLERY
• **089 GARAGE**
• **090 GAS**
091 GATE
• **092 GLASS**
093 GUEST
094 GUN
• **095 HALL**
• **096 HEAT**
097 HIGH
098 HOLDUP
099 HOUSE
100 INFRARED
• **101 INSIDE**
102 INTERIOR
103 INTRUSION
104 JEWELRY
• **105 KITCHEN**
• **106 LAUNDRY**
• **107 LEFT**
108 LEVEL
• **109 LIBRARY**
• **110 LIGHT**
111 LINE
112 LIQUOR
• **113 LIVING**
• **114 LOADING**
115 LOCK
116 LOOP
117 LOW
• **118 LOWER**
• **119 MACHINE**
120 MAGNETIC
121 MAIDS
122 MAIN
• **123 MASTER**
124 MAT
• **125 MEDICAL**
126 MEDICINE
127 MICROWAVE
128 MONEY
129 MONITOR
• **130 MOTHERS**
• **131 MOTION**
132 MOTOR
133 MUD
• **134 NORTH**
135 NURSERY
• **136 OFFICE**
137 OIL
• **138 OPEN**
139 OPENING
• **140 OUTSIDE**
141 OVERFLOW
142 OVERHEAD
143 PAINTING
• **144 PANIC**
145 PASSIVE
• **146 PATIO**
147 PERIMETER
• **148 PHONE**
149 PHOTO
150 POINT
151 POLICE
152 POOL
• **153 POWER**
154 QUAD
155 RADIO
• **156 REAR**
157 RECREATION
158 REFRIG
159 REFRIGERATION
160 RF
• **161 RIGHT**
• **162 ROOM**
163 ROOF
164 SAFE
165 SCREEN
166 SENSOR
• **167 SERVICE**
• **168 SHED**
169 SHOCK
• **170 SHOP**
171 SHORT
172 SHOW
• **173 SIDE**
174 SKYLIGHT
175 SLIDING
• **176 SMOKE**
177 SONIC
• **178 SONS**
• **179 SOUTH**
180 SPRINKLER
181 STAMP
• **182 STATION**
183 STEREO
184 STORE
• **185 STORAGE**
186 STORY
187 STRESS
188 STRIKE
189 SUMP
190 SUPERVISED
191 SUPERVISION
192 SWIMMING
193 SWITCH
194 TAMPER
195 TAPE
196 TELCO
197 TELEPHONE
198 TELLER
• **199 TEMPERATURE**
200 THERMOSTAT
• **201 TOOL**
202 TRANSMITTER
203 TRAP
204 ULTRA
• **205 UP**
• **206 UPPER**
• **207 UPSTAIRS**
• **208 UTILITY**
209 VALVE
210 VAULT
211 VIBRATION
212 VOLTAGE
213 WALL
214 WAREHOUSE
215 WASH
• **216 WEST**
• **217 WINDOW**
218 WINE
• **219 WING**
220 WIRELESS
221 WORK
222 XMITTER
223 YARD
224 ZONE (No.)
• **225 ZONE**
226 0
227 1
228 1ST
229 2
230 2ND
231 3
232 3RD
233 4
234 4TH
235 5
236 5TH
237 6
238 6TH
239 7
240 7TH
241 8
242 8TH
243 9
244 9TH
250 Custom Word 1
to
269 Custom Word 20

CHARACTER (ASCII) CHART

(For Adding Custom Words)

32	(space)	42	*	52	4	62	>	72	H	82	R
33	!	43	+	53	5	63	?	73	I	83	S
34	"	44	,	54	6	64	@	74	J	84	T
35	#	45	-	55	7	65	A	75	K	85	U
36	$	46	.	56	8	66	B	76	L	86	V
37	%	47	/	57	9	67	C	77	M	87	W
38	&	48	0	58	:	68	D	78	N	88	X
39	'	49	1	59	;	69	E	79	O	89	Y
40	(	50	2	60	<	70	F	80	P	90	Z
41	)	51	3	61	=	71	G	81	Q		

***Notes:** This factory-provided vocabulary of words is subject to change.

Bulleted words in **bold face type** are those that are also available for use by the FA4285 voice module. If using a voice module, and words other than these are selected for alpha descriptors, the voice module will not provide annunciation of those words.

***Note:** This factory-provided vocabulary of words is subject to change.

Device Programming

This menu is used to program keypads, receivers and relay modules.
From Data Field Programming mode, press **#93** to display "ZONE PROG?".
Press **0** repeatedly to display "DEVICE PROG?".

DEVICE PROG? 1=YES 0=NO	Press **1** to enter DEVICE PROGRAMMING mode.
DEVICE ADDRESS 01-31, 00=QUIT	The device address identifies the device to the control. Enter the 2-digit device address number as set by the device's DIP switches (01-31). Press [*] to accept entry.
DEVICE TYPE	Select the type of addressable device as follows: 00 = device not used 01 = alpha keypad (FA550KP) 02 = fixed word keypad (FA210KP/FA250KP) 03 = RF receiver (4281/5881) 04 = output relay module (4204/X-10) 05 = voice module (FA4285) Press [*] to accept entry.
RF EXPANDER HOUSE ID _ XX	If device type 3 is selected, this prompt will appear. Enter the 2-digit house ID (**00-31**)
CONSOLE PART.	If device type 01 or 02 was selected this prompt will appear. Enter the addressable device's default partition number (01 to maximum number of partitions programmed for system in field 2*00). This is the primary partition for which the device is intended to be used. Press [*] to accept entry.
MODULE PART.	If device type 05, voice module, was selected, enter the partition number 1-8 in which the voice module is located. Press [*] to accept entry.
SOUND OPTION	Addressable keypads can be individually programmed to suppress arm/disarm beeps, entry/exit beeps and chime mode beeps. This helps prevent unwanted sounds from disturbing users in other areas of the premises. Enter a number **00-03** for the keypad sounding suppression options desired for the keypad as follows: **00** = no suppression. **01** = suppress arm/disarm & entry/exit beeps. **02** =suppress chime mode beeps only. **03** = suppress arm/disarm, entry/exit **and** chime mode beeps. The screen will display the next device number to be programmed. Press **00** to exit Menu Mode.

Note: keypad address **00** will always be set to an alpha keypad with no sounder suppression options.

DOWNLOADING

What Is Downloading?

Downloading allows the operator to remotely access, program, and control the security system over normal telephone lines. Anything that can be done directly from the keypad can be done remotely, using DOWNLOADING.

UL NOTE: Downloading is not permissible for UL installations.

To Download, the following is required:

1. An IBM PC, or compatible computer with MS DOS 3.1 or higher, to run the DOWNLOADING program. MS DOS stands for: Microsoft Disk Operating System.
2. A HAYES 1200 SMARTMODEM (external: level 1.2 or higher; internal: level 1.1 or higher). If these levels cannot be found locally, an external modem can be purchased from ADEMCO, or contact HAYES for a free update; or HAYES OPTIMA 24 PLUS FAX96 MODEM can be used. *Other brands are not compatible, even if claimed to be 100% compatible.*
3. *First Alert's* V-Link® Downloading Software. This software is available in both 3-1/2" and 5-1/4" diskettes, and includes a complete User's Manual.

How Does Downloading Work?

At the protected premises, the Control panel must be connected to the existing telephone line (refer to the PHONE LINE CONNECTIONS section). No programming of the panel is required before downloading to an initial installation.

To download, do the following:

1. Enter the installer code + [#] + [5]. The panel temporarily enables a ring count of 5 and sets the Download Callback option to "1" (callback not required).
2. Call the panel using the downloader software set to "FIRST COMMUNICATION" mode.
3. The downloader will establish a session with no callback. The panel information can then be downloaded.

In order to remotely access, control, or program the alarm panel, a "link" must be established between the computer and the control panel, as follows:

1. The computer calls up the Control panel. (The phone number for each customer is entered into the customer's account file on the computer).
2. The Control panel "answers" at the pre-programmed ring count and executes a handshake with the computer.
3. The computer sends a request for call-back to the Control, unless call-back is not required.
4. The panel acknowledges the request and hangs up. During the next few seconds, the Control will process the request making sure certain encrypted information, received from the computer, matches its own memory.
5. Upon a successful match, the Control panel will seize the phone line and call the computer back, unless call-back is not required.
6. The computer answers, usually by the second ring, and executes a handshake with the panel.
7. The panel then sends other default information to the computer. If this information matches the computer's information, a successful link is established. This is known as being "ON-LINE".

What Can Be Done Once Panel Is "On-Line"?

- Arm the System in the Away Mode; Disarm the System
- Bypass a Zone
- Force the System to Accept a New Program Download
- Shut Down Communication (dialer) Functions (non-payment of monitoring fees in an owned system)
- Shut Down all Security System Functions (non-payment for a leased system)
- Inhibit Local Keypad Programming (prevents takeover of your accounts)
- Leave a message for customer (alpha keypads)
- Command the System to Upload a Copy of its Resident Program to the office
- Read: Arming Status, AC Power Status, List of Faulted Zones, List of Bypassed Zones, 224 Event Log, List of Zones Currently in Alarm, List of Zones Currently in Trouble, List of RF sensors with low battery conditions
- Set the Real-Time clock.

How Secure Is Downloading?

Accessing the Control from a remote location is protected against compromise by the use of 4 levels of protection:

1. Security Code Handshake: The subscriber's account number as well as an 8-digit ID number (known only to the office) must be matched between the Control and computer.
2. Hang-Up and Call-Back: The Control panel will "hang-up" and call the computer back at the pre-programmed number only if the security codes match.
3. Data Encryption: All data that is exchanged between the computer and Control is encrypted to reduce the possibility of anyone "tapping" the line and corrupting data.
4. Operator Access Levels: Up to 15 operators can have access to the DOWNLOADER, each having their own log-on code. However, each operator can be assigned one of three levels of access in both FILE and COMMAND functions, as follows:

FILE ACCESS:

Read Only: able only to look at the database; cannot change any information, and cannot see the customer's access codes.

Part Read/Write: able to look at and change all information except the customer's access codes.

Full Read/Write: able to look at and change any and all information in the database.

CONTROL/COMM ACCESS:

Read Only: able only to Upload and arm the system. Not able to DISARM, BYPASS, or change any information.

Part Read/Write: able to ARM, BYPASS, UPLOAD, DOWNLOAD but cannot shutdown the system.

Full Read/Write: able to perform all control and status commands, as well as shutdown all or part of the system.

ADVISORIES:

1. Alarm and trouble responses and reports are disabled during on-line time. Should an event occur during this time, the response will take place and the report will go through as soon as the remote access sequence is completed. Alarm and trouble conditions are not ignored, they are simply delayed.
2. The keypads are inactive during downloading communication, and resume normal functions after hang up. All keypad entries are ignored during on-line time.

NOTES:

1. Each time the Control panel is accessed (whether successful or unsuccessful), a PROGRAM TAMPER report (*81 and *82) is sent to central station, if programmed.
2. When downloading, the keypad will display "MODEM COMM".
3. Whenever a download or a save is performed, an automatic time stamp is done in downloading software, indicating the date and time of the last download (or save) and the operator ID number.
4. The average time for a complete download, including initial call-up, hang-up and call-back is under 4 minutes.
5. A complete hard copy of each individual account can be obtained by connecting a printer to the computer. Refer to your computer owner's manual or contact your dealer for printer recommendations.

Direct Wire Downloading

The Control can be downloaded without using a modem or telephone line by using V-Link Downloading Software and a 4100SM Serial Module. The direct wire downloading connection is to be temporary, and is not part of the permanent installation. Direct wire downloading is meant as a tool for the installer during the installation process.

IMPORTANT: The connections between the Control and the 4100SM are different than those shown in the 4100SM Installation Instructions. See diagram below for correct connections. In addition, when the "green" wire is referred to in step 2 of the IN CASE OF DIFFICULTY section of the 4100SM Instructions, **use the "violet" wire.**

Connector J8, located above connector J7 on the right hand side of the main PC board, is intended to be interfaced to either a local serial printer (see EVENT LOGGING CONNECTIONS) or a computer. Make connections to a computer as shown below. **Note that the violet wire connection for a computer differs from that used when connecting a serial printer.**

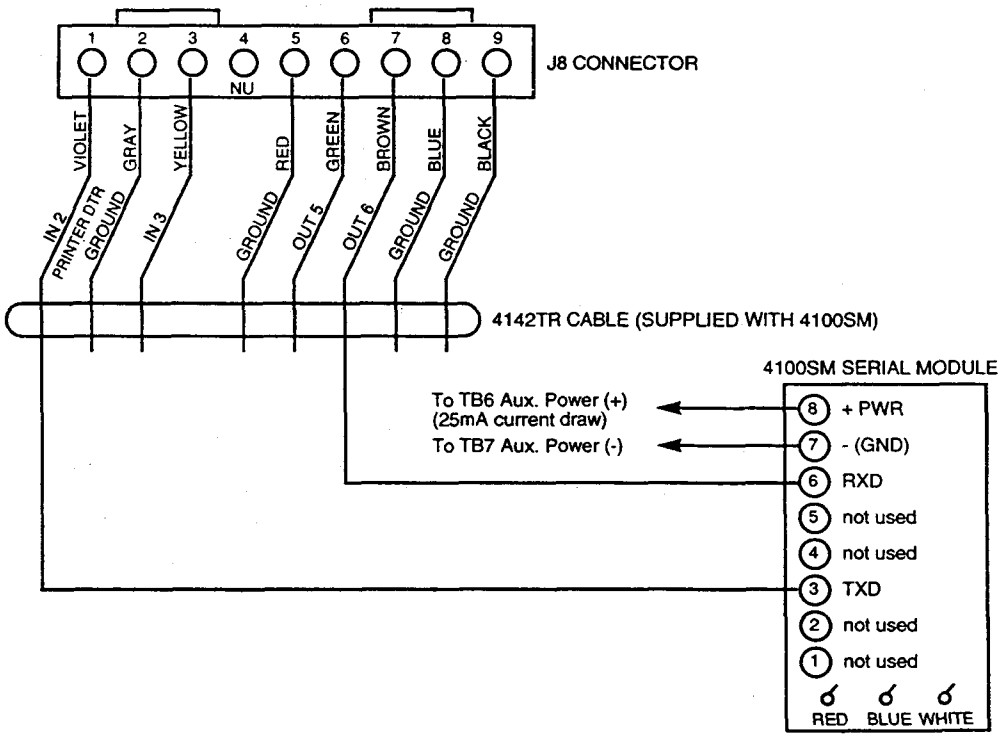


Figure 23. Direct Wire Downloading Connections

SETTING THE REAL-TIME CLOCK

NOTE: Use an FA550KP alpha keypad to set the real-time clock, or set the clock via the Downloader software. Only users with installer or master authority level can set the real-time clock.

To Set the Time and Date

1. Enter installer or master code + # 63. Typical display shows:

TIME/DATE - THU
12:01 AM 01/01/90

2. The day of the week is automatically calculated based on the date entered. Time and date entries are made by simply entering the appropriate hour, minute, month, day and year.

   Press the [*] key to accept the entered value. The cursor then moves to the right.

   Press the [*] key to move the cursor to the left of the display, to the previous position.

   Enter the correct hour then press [*] to move to the minutes and make the correct entry.

   Press [*] again, then press any key 0-9 to set AM/PM. Press any key again to change AM to PM, or PM to AM.

   Press [*] to move cursor to the month position and enter the correct month using a 2-digit entry.

   Press [*] and enter the correct date.

   Press [*] and enter the correct year.

3. Exit clock mode by pressing the [*] key after the cursor is in the year position.

Using Test Mode

General Information

- After the installation is completed, thoroughly test the Security System on a partition by partition basis as follows:

1. With the System in the disarmed state, check that all zones are intact. If DISARMED - Press * to show faults is displayed, press the [*] key to display the descriptors of the faulted zone(s). Restore faulted zone(s) if necessary, so that ****DISARMED*** READY TO ARM is displayed.
2. Enter the security code and press the TEST key. The external sounder (if used) should sound for 3 seconds and then turn off (the system is operating on the back-up battery only at this time).

   NOTE 1. If the sounder does not sound, this may be an indication that the backup battery is discharged or missing.

   NOTE 2. As a reminder that the system is in the Test mode, the Keypad will sound a single beep at 15-second intervals.

   NOTE 3. In the Test mode, no alarm reports will be sent to the central station. Also, the external sounder (if used) will not be activated.

Doors and Windows

- Open and close each protected door and window in turn. Each action should produce three beeps from the Keypad. The descriptor for each protection zone will appear on the Keypad display.

Motion Detectors

- Walk in front of any interior motion detectors. Listen for three beeps when the detector senses movement. While it is activated, its descriptor will remain displayed on the Keypad. Note that wireless PIRs will have a 3 minute lockout between transmissions to conserve battery life (remove cover for walk test to override the 3-minute lock-out).

Smoke Detectors

- Follow the test procedure provided by the manufacturer of each smoke detector to ensure that all detectors are operational and are functioning properly.
  NOTE: A 2-wire smoke detector display will not clear until the Test mode is exited.

Turning Off TEST mode

- Enter the security code and press the [1] (OFF) key.

Armed System Test

IMPORTANT: A message will be sent to the central station during the following tests. Notify the central station that a test will be in progress.

NOTE: A display of "COMM. FAILURE" indicates a failure to communicate (no Kissoff by the receiver at the central station after the maximum number of transmission attempts is tried). If this occurs, verify that the phone line is connected, the correct report format is programmed, etc.

1. Arm the system and fault one or more zones. Silence alarm sounder(s) each time by entering the code and pressing OFF. Check that Entry/Exit delay zones provide the assigned delay times.
2. Check the keypad-initiated alarms, if programmed in field *05, by pressing the Panic key pairs ([*] + [1], [#] + [3], [*] + [#]). If the system has been programmed for audible emergency, the keypad will emit a loud, steady alarm sound. The word ALARM and a descriptor "99" will be displayed for [*] + [#]. (if [*] + [1] is pressed, a "95" will be displayed; if [#] + [3] is pressed, a "96" will be displayed). Silence the alarm by entering the security code and pressing OFF. If the system has been programmed for silent panic, there will be no audible alarms or displays. A report will be sent to the central station, however.
3. Notify the central station that all tests are finished and verify results with them.

Turning The System Over To The User

1. Fully explain the operation of the system to the user by going over each of its functions as well as the User's Manual supplied.
2. In particular, explain the operation of each zone (entry/exit, perimeter, interior, fire, etc.). Be sure the user understands how to operate any emergency feature(s) programmed into the system.

   IMPORTANT: In the spaces provided in the User's Manual, record the Entry and Exit Delay times, and those functions that have been programmed into the available pairs of PANIC key pairs ([*] + [1], [#] + [3], [*] + [#]).
3. Make sure the user understands the importance of testing the system at least weekly, following the procedure provided in the User's Manual.

To The Installer

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system.

The installer should assume the responsibility of developing and offering a regular maintenance program to the user as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing (at least weekly) to insure the system's proper operation at all times.

SCHEDULING PROGRAMMING

Introduction To Scheduling

This section describes the scheduling features and programming of the Control.

UL Note for Auto-Arming: Program bypass reports and fields 2*13 & 2*14 auto-arm fail report for UL installations.

UL Note for Auto-Disarming: Auto-disarming not for use in UL installations.

General	• Scheduling allows the system to automate some of its operation, such as auto arming, disarming or activating other time driven events, including activating relay outputs (using power line carrier devices or 4204 module). • The system can use normal schedules, holiday schedules and user defined temporary schedules. Scheduled events are programmed using user friendly menu modes of programming (#80, #81 & #83 modes), explained in detail in this section. These menus take you step by step through the options.
Auto Arming	• The system can automatically arm (AWAY mode) itself at the end of a pre-determined time window, if the system has not been armed manually. Auto arming can be delayed three ways: by use of the auto arm delay, the auto arm warning, or by manually extending the arming time window with a keypad command. The system can also automatically bypass any open zones when auto arming.
Auto-Arm Delay	• Auto-arm delay provides a delay (grace period) before auto arming. It starts at the end of the closing window. The delay is set in 4 minute increments, up to 56 minutes in partition-specific program field 2*05. The expiration of this delay causes the auto-arm warning to start.
Auto-Arm Warning	• The auto-arm warning causes the keypad sounder to warn the user of an impending auto-arm. The warning can be set to start 0 seconds to 15 minutes prior to arming in partition-specific program field 2*06. During this period the keypad will beep every 15 seconds and display "AUTO ARM ALERT" ("AA" on non-alpha keypads). The beeps may be silenced by hitting any key on a keypad. When the remaining time drops below 60 seconds, the keypads will begin to beep every 5 seconds. The panel will arm at the conclusion of the auto-arm warning period.
Extend Closing Window	• A user can manually extend the arm (closing) time window by up to 2 hours. This is done by entering a keypad command (security code + #82), which then prompts the user to enter the desired extension time of 1 or 2 hours (refer to the SYSTEM OPERATION section of the Installation Instructions). This feature is useful if a user must stay on the premises later than usual.
Auto-Bypass	• The Auto-bypass option (enable force arm) causes the panel to attempt to bypass any faulted zones prior to auto-arming (panel will perform a force-arm). This option is set in partition-specific program field 2*08.
Auto Disarming	• The system can automatically disarm at the end of a pre-determined time window, if the system has not been disarmed manually. The disarming time can be delayed by using the auto disarm delay feature. In addition, the system can restrict disarming to a pre-determined time.
Disarm Delay	• Auto-disarm delay provides a delay before Auto disarming. This delay is added to the end of the disarm window. The delay is set in 4 minute increments, up to 56 minutes, in partition-specific program field 2*07.
Restrict Disarming	• This option, set in partition-specific field 2*10, allows disarming by operator level users only during the disarm time window, the arming window (in case user needs to reenter premises after arming) or when the system is in alarm.

Exception Report	• Scheduling also provides a means of reporting openings and closings by exception (only sent if event **does not** occur within the proper time window). • The system sends open/close reports only if arming or disarming **does not** occur during the pre-determined time window. • The system sends early opening/closing reports if done earlier than the window • The system sends late opening/closing reports if done later than the window • The system sends missed open/close reports if window is missed.
Time Driven Events	• **Scheduling can automatically perform relay driven actions** (4204 relay outputs or X-10 devices) at predetermined times: • Can turn lights or other devices on/off at specific times, using the Time Driven Events programming options. • The system can perform one shot actions of lights or other devices (i.e. turn on the porch light this Wednesday at 8:00pm). • Power line carrier device control for the automation of lights and appliances. • The system also provides up to 20 "timers" available to the end user for the purpose of activating output devices at preset times and on preset days. • The typical uses for this feature could be control of lights or appliances , typically via X-10 modules.
Restricted Access	• **A user's access can be limited to a certain time period,** during which he can perform system functions. Outside this time though, that user's code will be inactive. The system provides up to 8 Access Schedules, each of which consists of two Time Windows (one for opening, one for closing) for each day of the week and two time windows for holidays. The access schedules are programmed via #80 Menu Mode, and enabled for a given user when that user is added to the system.

Time Windows Definition

Time Windows

- Scheduled events are based on time windows, which are simply periods of time during which an event may take place. Time windows are defined by a start time and stop time. The system supports up to 20 Time Windows. The windows are shared by the 8 partitions, and the windows are used for open/close schedules as well as for time driven event control.

Example

- To understand time windows and scheduling, take for example a store that has the following hours:

Monday to Thursday:	9am to 6pm
Friday	9am to 9pm
Saturday	10am to 4pm
Sunday	Closed
Holidays	Closed

Assume the owner desires the following time windows to allow time for employees to arm or disarm the system:

Monday to Thursday:	Open (disarm)	8am to 9am
Close (arm)		6pm to 6:30pm
Friday	Open (disarm)	8am to 9am
Close (arm)		9pm to 9:30pm
Saturday	Open (disarm)	9am to 10am
Close (arm)		4pm to 4:30pm
Sunday & Holidays		Closed

- To provide these schedules, the following five time windows need to be programmed:

Window	Start	Stop	Purpose
1	8am	9am	Monday-Friday open window
2	9am	10am	Saturday open window
3	4pm	4:30pm	Saturday close window
4	6pm	6:30pm	Monday-Thurs. close window
5	9pm	9:30pm	Friday close window

- Using the #80 Menu Mode (described in a later section), the installer can program open/close schedules by assigning each time window to a day of the week (windows are entered as 2-digit entries):

Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hol
Op/Cl	Op/Cl	Op/Cl	Op/Cl	Op/Cl	Op/Cl	Op/Cl	Op/Cl
01/04	01/04	01/04	01/04	01/05	02/03	00/00	00/00

Note: 00 is entered for those days on which the store is closed. When programmed, employees can arm and disarm the system within the open and close time windows respectively without causing a report to be sent to the central station (reporting by exception). At the end of these windows, the system can be programmed to automatically arm/disarm if an employee fails to arm/disarm manually (auto arm/auto disarm).

Time Driven Events

- Time windows can also be used to program time driven relay output or X-10 device events. Time driven events can be activated at different times within a window as follows:
- At the beginning of a time window
- At the end of a time window
- During a time window active period only (On at beginning of window, off at end)
- At both the beginning and end of the time window (Ex: to sound a buzzer at the beginning and end of a coffee break)
- These schedules will be in effect regardless of whether or not a temporary schedule is in effect. Note that if a window overlaps another window, both windows must close before the panel will take any action related to the expiration of a window.

Important

- Since the time windows are shared among all partitions, it is important to make sure that changing a time window does not adversely affect desired actions in other partitions.

Open/Close Schedules Definitions

General	• The Open/Close scheduling is controlled by one of three individual schedules. Each schedule consists of one time window for openings and one time window for closings. There are three types of schedules available: Temporary, Holiday and Daily.
Temporary schedule	• The temporary schedule provides a method for the end user to override the daily and holiday schedules. It consists of one opening window and one closing window for each day of the week. The schedule automatically takes effect for up to one week, after which it is deactivated. This schedule is programmed using the #81 Temporary Schedule Menu Mode. Refer to that section for procedures.
Holiday schedule	• A holiday schedule will override the regular daily schedule on selected holidays throughout the year.
Daily schedule	• Each partition can have one daily schedule consisting of one opening window and one closing window per day.
Additional Schedules	• Additional opening and closing schedules can be programmed using the **time-driven event** programming options. For example, a schedule for normal store opening/closing can be programmed with open/close schedules, and another open/close schedule for beginning and ending lunch hour can be programmed using the time driven event schedule programming. Refer to the Time Driven Events paragraph later in this section for detailed information.
Open/Close Reports by Exception	• The system can help reduce communication traffic to the central station by using the exception reporting feature, set in partition-specific program field 2*09. The Open/Close by exception option suppresses these reports from being sent to central station if an arm or disarm is done within the expected time window. Reports are only sent if the open/close does not occur within the assigned time window. The system keeps a record of **all** openings/closings in its event log, however. • In the event an opening occurs immediately following a closing (a person who arms the system forgets something and has to reenter), the opening report (although outside of the opening window), will not be sent. (note that the reentering must occur within the closing window, otherwise a report **will** be sent). This feature is designed to prevent false alarms to central station. • The following diagram gives an example of how the open/close by exception reporting works.

Example of Open/Close Exception Reporting & Scheduling

6:01PM 5:59AM	6AM 9AM	9:01AM 3:59PM	4PM 6PM	6:01PM 5:59AM
"Early opening" reports will be sent if system is disarmed before opening window begins.	Opening Window No reports sent if system disarmed during this time window.	Auto-disarm delay begins . Auto-disarm occurs after delay. (if auto-disarm is enabled) "Missed opening" reports will be sent if user disarming has not occurred at expiration of opening window. "Late opening" reports will be sent if disarm occurs after the opening window expires "Early closing" reports will be sent if user arming occurs before the closing window begins.	Closing Window No reports sent if system armed* during this time window. * or disarmed if user reenters premises.	Auto-arm delay begins Auto-arm warning begins. Auto-arm occurs after warning expires. (if auto arm is enabled) "Missed closing" reports will be sent if user arming has not occurred at expiration of closing window. "Late closing" reports will be sent if system is armed after the closing window expires.

#80 Scheduling Menu Mode

General Information

The #80 Scheduling Menu Mode is used to program most of the scheduling and timed event options.

To enter this mode, the system must first be in normal operating mode. Enter installer code + # + 80.

The following can be programmed while in this mode:

- Define time windows
- Assign open/close schedules to each partition
- Assign holiday schedules
- Program time driven relay activated events
- Assign access control schedules

Some scheduling features are programmed in data field programming mode (installer code +800). The general programming mode scheduling fields are listed below.

System Wide Fields:	1*74 -1*75	Relay timeout values
	2*01-2*02	Daylight savings time options
	2*11	Allow Disarming outside window if alarm occurs
	2*13 -2*14	Scheduling related report codes
Partition specific fields:	1*76	Access control relay partition assignment
	2*05	Auto-arm delay value
	2*06	Auto-arm warning time
	2*07	Auto-disarm delay value
	2*08	Force arm enable
	2*09	Open/close reporting by exception
	2*10	Restrict disarm only during windows

Event driven relay activation options are programmed using the #93 Menu Mode, Device Programming. These actions are in **response** to a programmed action. However, relay activation can also be time driven, and thus be used to **initiate** a desired action. Time driven relay activation options are programmed using the #80 Scheduling Menu Mode. Refer to the Timed Event Programming section for procedures.

Steps To Programming Scheduling Options

To use #80 Scheduling Menu Mode, do the following:

Using the worksheets:

Define time windows (up to 20)
Define the daily open/close schedules (one schedule per day, per partition)
Define the holidays to be used by the system (up to 16)
Define the holiday schedules (up to 8, one per partition)
Define temporary schedules
Define limitation of access times (up to 8 schedules)
Define the time driven events (up to 20)

Using #80 Scheduling Menu Mode:

Program the time windows
Program the open/close schedules
Program the time driven events
Program the access schedules

Basic Scheduling Menu Structure

To enter scheduling program mode, enter the installer code + # + 80.

To program schedules,

There are 5 sets of scheduling menus as shown below. Entering "1" at a displayed main menu prompt will select that menu set. Prompts for programming that scheduling feature will then appear. Enter "0" to skip a menu screen and display the next menu.

Time Window ? 1 Yes 0 = No 0	Upon entering Schedule Menu Mode, this prompt will appear. Enter 1 to program time windows. Refer to the Programming Time Windows section for detailed procedures. Enter 0 to move to the Open/Close Schedules prompt.
O/C Schedules ? 1 Yes 0 = No 0	Enter 1 to program opening and closing schedules. Refer to the Programming Open/Close Schedules section for detailed procedures. Enter 0 to move to the Holidays prompt.
Holidays ? 1 Yes 0 = No 0	Enter 1 to program holiday schedules. Refer to the Holiday Programming section for detailed procedures. Enter 0 to move to the Timed Events prompt.
Timed Events ? 1 Yes 0 = No 0	Enter 1 to program timed events for relay outputs, power line carrier devices, additional schedules or other system functions. Refer to the Programming Timed Events section for detailed procedures. Enter 0 to move to the Access Schedule prompt.
Access Sched. ? 1 Yes 0 = No 0	Enter 1 to program access schedules. Refer to the Programming Access Schedules section for detailed procedures. Enter 0 to move to the Quit prompt.
Quit ? 1 Yes 0 = No 0	Enter 1 to quit #80 Scheduling Menu Mode and return to normal operating mode. Enter 0 to make any changes or review the scheduling programming options. If 0 is pressed, the TIME WINDOW menus are displayed.

Time Windows Definitions Worksheet

The system provides 20 time windows that are defined with start and stop times. These windows are used for open/close schedules, as well as for output controls, and are the basis of the scheduling system. These windows are shared among all 8 partitions. The following worksheets will help you define time windows and scheduling aspects of this system before programming the time window definitions for this installation. Note that time windows **can** span midnight.

Time Window Number	Start Time (HH:MM)	Stop Time (HH:MM)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

(Keep this worksheet handy, as you will be asked for a given time window number later in this section)

Time windows are defined by a start and a stop time using the Time Windows programming menu.

Programming Time Windows

Enter Scheduling Mode by entering the installer code + # + 80. The keypad will display the Time Window programming prompt.

Time Window ?
1 Yes 0 = No 0

Enter 1 at this main menu prompt to program time windows.

Time Window # ?
01-20, 00 = Quit 01

Enter the 2-digit time window number to be programmed. Press * to accept the entry.

Enter 00 then * at the "TIME WINDOW #" prompt to quit Time Window programming and display the Quit ? prompt.

Enter 0 at the Quit ? prompt to return to the main menu choices and continue programming. Enter 1 to quit Scheduling Menu Mode.

Quit ?
1 = YES 0 = NO 0

01 TIME WINDOW
00:00AM 00:00AM

If a time window number was entered, the cursor will be positioned on the tens of hours digit of the start of window entry. Enter the desired start of window hour and press *. The cursor moves to the minutes. Enter the desired minutes and press *. Toggle the AM/PM indication by pressing any key 0-9 while the cursor is under the letter A/P position. Repeat for the end of window time entry .

When the entry is completed, the "TIME WINDOW #" prompt is displayed again. Enter the next time window number to be programmed and repeat the procedure.

Note: If a time window is not used, enter 00:00AM for the start and stop times.

When all time windows have been programmed, enter 00 at the TIME WINDOW # prompt to quit Time Window menus.

Daily Open/Close Worksheet

Write in the open & close time window numbers for each partition.

Part	Monday		Tuesday		Wed.		Thursday		Friday		Saturday		Sunday		Holiday	
	Op	Cl	Op	Cl	Op	Cl	Op	Cl	Op	Cl	Op	Cl	Op	Cl	Op	Cl
1																
2																
3																
4																
5																
6																
7																
8																

Programming Open/Close Schedules

Each partition can be assigned one daily open/close schedule, plus a holiday open/close schedule. Temporary schedules are programmed separately, using the #81 Temporary Schedule Menu Mode. To program additional open/close schedules, see the Time Driven Events section.

After entering Scheduling Menu Mode, press 0 until the O/C Schedules prompt appears.

```
O/C Schedules ?
1 Yes  0 = No   0
```

Enter 1 to program opening and closing schedules.

```
Partition # ?
01-08, 00 = Quit 01
```

Enter the appropriate partition number to which the following open/close schedules will apply.

Enter 00 then * at the "PARTITION #" prompt to quit O/C Schedules programming and display the Quit ? prompt.

Enter 0 at the Quit ? prompt to return to the main menu choices and continue programming. Enter 1 to quit Scheduling Menu Mode.

```
Quit ?
1 = YES  0 = NO  0
```

```
Mon P1 OP WIND.?
00:00  00:00   00
```

For each day in which an opening or closing schedule is desired, beginning with Monday, enter a time window number (01-20) for the displayed day's opening schedule. Enter 00 if no schedule is desired for a particular day. As the number is keyed in, the actual time that has been stored for that window will be displayed as a programming aid. Press the * key to accept the entry.

```
Mon P1 CL WIND.?
00:00 00:00    00
```

Enter the time window number for the displayed day's closing schedule. As the number is keyed in, the actual time that has been stored for the window will be displayed. Press the * key to accept the entry.

```
Tue  P1 OP WIND.?
00:00  00:00   00
```

The keypad will now prompt for Tuesday's open/close schedule, etc. Follow the procedure for Mondays prompts. When the last day of the week has been programmed, the holiday opening and closing window prompts are displayed.

```
Hol P1 OP WIND.?
00:00 00:00    00
```

Enter the holiday opening time window number. Press the * key to accept the entry.

```
Hol P1 CL WIND.?
00:00 00:00 00
```

Enter the holiday closing time window number. Press the * key to accept the entry.

When the entries are completed, the PARTITION # prompt is displayed again. Repeat this procedure for each partition in the system.

When all partitions have been programmed, enter 00 at the PARTITION # prompt to quit open/close schedules menus.

Holiday Definitions & Schedule Worksheet

The system provides up to 16 holidays that can be assigned for the system. Each holiday can be assigned to any combination of partitions. List the desired holidays on the following worksheet. Check the partitions for which these holidays apply.

Hol.	Partition								
	Mon/Day	1	2	3	4	5	6	7	8
1	/								
2	/								
3	/								
4	/								
5	/								
6	/								
7	/								
8	/								
9	/								
10	/								
11	/								
12	/								
13	/								
14	/								
15	/								
16	/								

Holiday Programming

Up to 16 holidays can be defined for the system. After entering Scheduling Menu Mode, press 0 until the Holidays ? prompt appears.

```
Holidays ?
1 Yes  0 = No   0
```

Enter 1 to program holiday schedules.

```
HOLIDAY NUMBER ?
01-16, 00=Quit 01
```

Enter the 2-digit holiday number to be programmed and press * to accept entry.

Enter 00 then * at the Holiday Number prompt to quit the Holiday menus and display the Quit ? prompt.

Enter 0 at the Quit ? prompt to return to the main menu choices and continue programming. Enter 1 to quit Scheduling Menu Mode.

```
Quit ?
1 = YES  0 = NO  0
```

```
01 ENTER DATE
     00/00
```

The cursor will be positioned on the tens of months digit. Enter the appropriate month, then press * to proceed to the day field. Enter the appropriate day for the holiday and press * to accept the entry.

```
Part ? 12345678
Hit 0-8  x  x
```

Holidays can be set for any partition as follows. Press 0 to turn all partitions on or off, or else use keys 1-8 to toggle the letter x under the partition to which this holiday will apply. Press the * key when all desired partitions have been assigned.

The Holiday Number prompt will be displayed again. Repeat the procedure for each holiday to be programmed.

When all holidays have been programmed, enter 00 at the HOLIDAY NUMBER prompt to quit the holiday menus.

Time-Driven Event Worksheet

These are the schedules used to activate outputs, bypass zones, etc. based on a time schedule. There are 20 of these events that may be programmed for the system, with each event governed by the previously defined time windows.

The actions that can be programmed to automatically activate at set times are relay commands, arm/disarm and zone bypassing commands, and open/close access conditions.

To fill out the worksheet:

1) **First enter the schedule number (1-20) and time window number (1-20),** and note the day of the week the action is desired.

2) **Enter the code for the desired action and action specifier.** The action codes are the events that are to take place when the scheduled time is reached. Each action also requires an action specifier, which defines the action code. The action specifier varies, depending on the type of action selected.

   The following is a list of the "Action" codes (i.e. desired action) used when programming time driven events. Note that these codes are independent of the "relay codes" programmed during the #93 Menu Mode–Relay Programming mode.

Relay commands

Action Code		Action Specifier
01	Relay On	Relay #
02	Relay Off	Relay #
03	Relay Pulse	Relay #
04	Relay Pulse XX minutes (set in field 1*74)	Relay #
05	Relay Pulse YY seconds (set in field 1*75)	Relay #
06	Relay Group On	Relay Group #
07	Relay Group Off	Relay Group #
08	Relay Group Pulse	Relay Group #
09	Relay Group Pulse XX minutes (set in field 1*74)	Relay Group #
10	Relay Group Pulse YY seconds (set in field 1*75)	Relay Group #

Arm/Disarm commands

NOTE: Activation times 1 (Begin), 2 (End), 3 (During) are the only valid choices for these commands.

"During" can be used to arm or disarm the control for specific time only. For example, if "during" is selected with arm-stay, the system will arm-stay at the beginning of the window and disarm at the end of the window.

Action Code		Action Specifier
20	Arm-Stay	Partition(s)
21	Arm Away	Partition(s)
22	Disarm	Partition(s)
23	Force Arm Stay (Auto-bypass faulted zns)	Partition(s)
24	Force Arm Away (Auto-bypass faulted zns)	Partition(s)

Bypass commands

NOTE: Activation times 1 (Begin), 2 (End), 3 (During) are the only valid choices for these commands. Note the following: if "3-During activation time" is selected, auto bypass will bypass the zone(s) at the beginning of the window and unbypass the zone(s) at the end of the window. Auto unbypass will remove the bypass of the zone(s) at the beginning of the window and will restore the bypass of the zone(s) at the end of the window.

Action Code		Action Specifier
30	Auto bypass - Zone list	Zone list #
31	Auto unbypass - Zone list	Zone list #

Open/close / Access

NOTE: Activation time 3 (During) is the only valid choice for these commands.

Action Code		Action Specifier
40	Enable Opening Window by partition	Partition(s)
41	Enable Closing Window by partition	Partition(s)
42	Enable Access Window for Access group(s)	Group(s)

3) **Enter the desired Activation time,** which refers to when the action is to take place relative to the time window. Select from:

Activation Time	Description
1	Beginning of time window
2	End of time window
3	During time window active period only (On at beginning of window, off at end). This can be used in conjunction with the arm, disarm or bypass commands to control a part of the system during the window. For example, if bypass is selected to activate during the window, the zones in the zone list will be bypassed at the beginning of the window and unbypassed at the end of the window.
4	Beginning and end of time window (ex. -Coffee break buzzer). In this example, if relay pulse was selected, the relay would pulse for 2 seconds at the beginning of the window, signaling the beginning of the coffee break. At the end of the window it would pulse again, signaling the end of coffee break.

Time Driven Events Worksheet

Sched. Num.	Time Window	Day(s) M	T	W	T	F	S	S	H	Action Desired	Action Specifier	Activation Time
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Time-Driven Event Programming

The following schedules can be used to activate outputs, bypass zones, arm/disarm the system, etc. based on a time schedule. Up to 20 events can be programmed for the system.

Note that the following menu items must be programmed using #93 Menu Mode - Relay Programming:

- [Enter Relay No.] (reference identification number)
- [Relay Group] (if applicable)
- [Restriction]
- [Relay Type] (4204 or X-10)
- [House code] and [Unit code] if X-10 devices
- [ECP address] and specific [Relay No.] if 4204 relays

After entering Scheduling Menu Mode, press **0** until the Timed Events ? prompt appears.

Timed Events ?
1 Yes 0 = No 0

Enter **1** to program timed events using relay outputs or X-10 devices.

TIMED EVENT # ?
01-20, 00=Quit 01

Enter the timed event number to be programmed (01-20) and press the [*] key. The system will then prompt the user to enter the desired action to be taken.

Enter **00** at the TIMED EVENT prompt to quit the timed event menus and display the Quit ? prompt.

Enter **0** at the Quit ? prompt to return to the main menu choices and continue programming. Enter **1** to quit Scheduling Menu Mode.

Quit ?
1 = YES 0 = NO 0

01 ACTION ?
none 00

Enter the action code for the desired action for this event number from the list at the left. This could be an output command, an arming command, or any other time-driven event. Press [*] to accept the entry and display the appropriate action specifier prompt as follows on the next page.

Action Codes:
01=relay on
02=Relay Off
03=Relay Pulse
04=Relay Pulse XX minutes
05=Relay Pulse YY seconds

06=Relay Group On
07=Relay Group Off
08=Relay Group Pulse
09=Relay Group Pulse XX minutes
10=Relay Group Pulse YY seconds

20=Arm-Stay
21=Arm Away
22=Disarm
23=Force Arm Stay
24=Force Arm Away
40=Enable Open Window by part
41=Enable Close Window by part

30=Auto bypass - Zone list
31=Auto unbypass - Zone list

42=Enable Access Window for Access group(s)

Actions 01-05
Enter the relay number and press [*] to accept entry. The Time Window ? prompt appears.

```
01 RELAY # ?
              00
```

Actions 06-10
Enter the relay group number and press [*] to accept entry. The Time Window ? prompt appears.

```
01 RELAY GRP # ?
              00
```

Actions 21-24 and 40-41
Enter the partition to which the action applies. Enter 0 to select all partitions. Enter a partition number again to deselect it. Press [*] accept entry. The Time Window ? prompt appears.

```
PART? 12345678
HIT 0-8   X X
```

Actions 30-31
Enter the zone list number which contains the zones to be bypassed or unbypassed. Press [*] to accept entry. The Time Window ? prompt appears.

```
01 ZONE LIST ?
ENTER 1-8     1
```

Action 42
Enter the group number to which the time window will apply. Press [*] to accept entry. The Time Window ? prompt appears.

```
GROUP ? 12345678
HIT 0-8   X
```

```
01 Time Window ?
00:00 00:00  01
```

Enter the time window number (**01-20**) for which this timed event is to occur. As the number is keyed in, the actual time that has been stored for the window will be displayed. Press the [*] to continue.

```
01 Active time ?
              0
```

Enter the activation code number from **01-04** (listed below). As the number is keyed in, the activation time will be displayed. The choices are:

1: Trigger at the start of the window
2: Trigger at the end of the window
3: Take effect only for the duration of the window
4: Trigger at both the start and the end of the window. Example - coffee break buzzer

Press the [*] key when the desired choice is showing.

```
Days ? MTWTFSSH
Hit 0-8 x  x
```

The system will then ask for which days the event is to be activated. Press **0** to toggle all days on or off or else press keys **1-8** to toggle the letter x under the day on or off (Monday = 1, Holiday = H = 8).

When all entries have been made, the TIMED EVENT # prompt is displayed again. Repeat the procedure for each timed event required by the installation.

When all timed events have been programmed, enter **00** at the TIMED EVENT prompt to quit this set of menus.

Limitation of Access by Time Worksheet

Limitation of access determines the times a particular user code is active in the system. The system provides 8 Access Schedules, each of which consists of two time windows for each day of the week and two time windows for holidays. If access schedules have been assigned, when a user is assigned, that user's access to the system can be limited by specifying an Access Schedule number in the range of 1-8. If no limitations apply, enter 0.

Enter the appropriate time window numbers for each partition.

Acc Sch	Monday W1	Monday W2	Tuesday W1	Tuesday W2	Wed. W1	Wed. W2	Thursday W1	Thursday W2	Friday W1	Friday W2	Saturday W1	Saturday W2	Sunday W1	Sunday W2	Holiday W1	Holiday W2
1																
2																
3																
4																
5																
6																
7																
8																

Access Control Schedules

Access Control schedules are the schedules used to govern whether a given user may arm or disarm a system during a particular time window. Up to 8 schedules can be programmed, and up to 2 access control windows per day can be programmed (typically one for an opening time and the second for a closing time window). After entering Scheduling Menu Mode, press 0 until the Access Sched. ? prompt appears.

```
Access Sched. ?
1 Yes  0 = No   0
```

Enter 1 to program access schedules.

```
ACCESS SCHED # ?
01-08, 00 = Quit  01
```

Enter the access control schedule number between 01 and 08. Press * to accept entry.

Enter 00 at the Access Sched # prompt to quit the Access control menus and display the Quit ? prompt.

Enter 0 at the Quit ? prompt to return to the main menu choices and continue programming. Enter 1 to quit Scheduling Menu Mode.

```
Quit ?
1 = YES  0 = NO  0
```

```
MON A1 Window 1?
00:00 00:00    00
```

Enter the first time window number from 01-20 for which this access schedule applies for the displayed day. As the number is keyed in, the actual time that has been stored for the window will be displayed. Press * to continue.

```
MON  A1  Window 2 ?
00:00 00:00    00
```

Enter the second time window number from 01-20 for which this access schedule applies for the displayed day. As the number is keyed in, the actual time that has been stored for the window will be displayed. Press * to continue.

```
TUE A1 Window 1?
00:00 00:00    00
```

Repeat the procedure for the other days of the week. When the last day of the week has been programmed, the holiday opening and closing windows may be entered.

```
Hol  A1  Window 1 ?
00:00 00:00 00
```

Enter the first time window number for holidays for which this access schedule applies. As the number is keyed in, the actual time that has been stored for the window will be displayed. Press * to continue.

```
Hol  A1  Window 2 ?
00:00 00:00 00
```

Enter the second time window number for holidays for which this access schedule applies. As the number is keyed in, the actual time that has been stored for the window will be displayed. Press * to continue.

When all access control schedules have been programmed, enter 00 at the Access Sched # prompt to quit this set of menus.

#81 Temporary Schedule Menu Mode

Temporary schedule Worksheet

To enter this mode, enter the security code and press # + 81.

Each partition can be assigned a temporary schedule which will override the regular schedule (and the holiday schedule) for up to one week. This schedule takes effect as soon as it is programmed and remains active for up to one week.

Partition/Windows		Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							
2	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							
3	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							
4	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							
5	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							
6	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							
7	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							
8	**Disarm Window**							
	Start Time HH:MM							
	Stop Time HH:MM							
	Arm Window							
	Start Time HH:MM							
	Stop Time HH:MM							

Programming Temporary Schedules

Temporary schedules override normal schedules.
Enter user code + # + 81 to enter this mode. Note that only users with authority level of manager or higher can program temporary schedules.
Temporary schedules only affect the partition from which it is entered.

Temporary schedules can also be reused at later dates simply by scrolling (by pressing #) to the DAYS? prompt (described below) and activating the appropriate days. This should be considered when defining daily time windows.

Mon DISARM WIND. 00:00AM 00:00AM

This prompt asks for the start and end time of disarm (opening) window. Upon entry of this mode, the cursor will be positioned on the tens of hours digit of the start time for Monday's disarm window. Enter the desired hour. Press * to move to the minutes field. The minutes are entered in the same manner. The AM/PM indication is toggled by hitting any key in the 0-9 range while the cursor is under the letter A/P position. Repeat for the stop time entry. Press the * key to move to the arming window for Monday.
Press # if no changes are desired.

Mon ARM WINDOW 00:00AM 00:00AM

This prompt asks for the start and end time of arm (closing) window. The cursor will be positioned on the tens of hours digit of the start time for the arm window. Enter the desired hour. Press * to move to the minutes field. The minutes are entered in the same manner. The AM/PM indication is toggled by hitting any key in the 0-9 range while the cursor is under the letter A/P position. Repeat for the stop time entry.
After the windows for that day have been completed, the system will prompt for disarm and arm time windows for the next day.
Press # if no changes are desired.

Tue DISARM WIND. 00:00AM 00:00AM

Repeat the procedure described above for all days of the week.

When all of the days have been completed, the system will ask which days are to be activated.

Days ? MTWTFSS Hit 0-7 x x

This is the prompt that actually activates the temporary schedule, and allows the temporary schedule to be customized to a particular week's needs. To select the days which are to be activated, enter 1-7 (Monday = 1). An "X" will appear under that day, indicating the schedule for that day is active. Entering a day's number again will deactivate that day. Pressing 0 will toggle all days on/off.

The temporary schedule will only be in effect for the days which have the letter x underneath them. As the week progresses, the selected days are reset to the inactive state.

When completed, press * or # to exit the temporary schedule entry mode.

#83 User Scheduling Menu Mode

General Information

The system provides up to 20 "timers" which will be available to the end user for the purpose of controlling output devices (4204 or X-10 type modules). These timers are analogous to the individual appliance timers that might be purchased at a department store. The typical uses for this feature could be control of lights or appliances , typically via X-10 modules (Power Line Carrier devices). These modules are programmed into the system by the installer during #93 Menu Mode–Device Programming. The end user needs only to know the output device number and its alpha descriptor.

The installer may set certain relays to be "Restricted" during # 93 Menu Mode-Relay Programming. These relays may not be controlled by the end user. (Prevents end- user from controlling doors, pumps, etc.

To enter this mode, the User enters CODE + # + 83

Output Timer # ? 01-20, 00=Quit 01	Enter the output timer number to be programmed (1-20). Press * to accept entry and move to the next prompt. Enter 00 to quit and return to normal mode.
06 07:00P 11:45P PORCH LITE 04	If that timer number has already been programmed, a summary screen will appear. In this example: 06 = Timer # 04 = Output Device # affected by this timer PORCH LITE = Output Descriptor for Device # 4 07:00PM = Start Time 11:45PM = Stop Time Press * to continue.
06 ENTER OUTPUT# PORCH LITE 04	Enter the desired output number (1-16) As the number is entered, the descriptor changes to indicate which output device is being affected. **Note:** 00 entered as the output # deletes the timer (Timer 06 in this example) and displays an output descriptor of "None". Devices are programmed via #93 Menu Mode.
06 ON TIME ? - 07:00 PM	Enter the ON time in 00:01 - 11:59 format. When the display shows the desired time, press the * key to move to the AM/PM field. In this field, any of the keys 0-9 may be used to toggle the AM/PM indication. Enter 00:00 to skip. **Note:** Could use 2 commands to perform an ON one day and an OFF another day
06 OFF TIME ? 11:45 PM	Enter the OFF time in 00:01 - 11:59 format. When the display shows the desired time, press the * key to move to the AM/PM field. In this field, any of the keys 0-9 may be used to toggle the AM/PM indication. Enter 00:00 to skip. **Note:** Could use 2 commands to perform an ON one day and an OFF another day
06 Days? MTWTFSS Hit 0-7 x x	To select the days which are to be activated, enter 1-7 (Monday = 1). An "X" will appear under that day, indicating the output for that day is active. Entering a day's number again will inactivate that day. Pressing 0 will toggle all days on/off. The outputs will only be in effect for the days which have the letter x underneath them. As the week progresses, the selected days are reset to the inactive state, unless the permanent option is selected (next screen prompt). When completed, press * to continue.
06 Permanent ? 0 = NO,1 = YES 0	Permanent means continue executing these commands on a continuous basis. An answer of 0 means execute each day's output only once. The letter "x" under the day will then be cleared. Press * to accept entry. The system will quit scheduling mode and return to normal mode.

Security Access Codes

General Information

The System allows up to a total of 128 security access codes to be allocated (maximum 99 in a given partition), each identified by a user ID number.

Note that each partition to which a code (user) is assigned is considered a unique code allocation, and thereby reduces the total number of users available from 128. (i.e. If a user is given access to 8 partitions, that in effect reduces the total number of codes available by 8.)

The Quick Arm feature can also be programmed (partition-specific program field *29), which enables the [#] key to be pressed instead of entering the security code when arming the system. The code must always be entered when disarming the system, however. Note that Open/Close reporting of Quick Arm is enabled if User 2 is enabled for Open/Close reporting, and that Quick Arm reports as User 0.

User Codes & Levels Of Authority

Auth	Title
0	Installer
1	Master
2	Manager
3	Operator level A
4	Operator level B
5	Operator level C
6	Duress
7	Limited Use User

Each user of the system can be assigned a level of authority (tells system what system functions that user is authorized to do), and can have different levels of authority within different partitions. In general, users can perform most system functions, including Test and Chime modes, but certain authority levels restrict disarming, bypassing or the assigning of other user codes. These restrictions are noted in the descriptions below.

Use the "View Capabilities" keypad function to view the partitions and authority levels for which a particular user is authorized. In highest to lowest ranking, these levels are described below.

Level 0: Installer (User 1)

- The Installer code is programmed in field *00 (default=4-1-4-0). Installer open/close reporting is selected in field *39.
- He can perform all system functions (arm, disarm, bypass, etc.), but **cannot disarm** if armed by a code other than Installer's code (including Quick Arm).
- This code can add, delete, or change all other authority level codes, and can select open/close reports for any user.
- This is the only code that allows entry to program mode, but even this can be prevented if you exit program mode by pressing *98. The only way to access Programming mode once this feature is activated, is by powering down the system and powering up again, and then pressing both the * and # keys at the same time within 30 seconds of power up.
- **The installer must program** at least one master code during initial installation. Master codes are codes intended for use by the primary users of the system.

Open/Close Reporting Note: When adding a user, the system will only prompt for Open/Close report capability if the user is being added by the Installer. When a Master or Manager adds a new user, the new user's Open/Close reporting enable will be the same as that of the Master or Manager adding the user. If Open/Close reports are required to be selectable by the Master or Manager, the Installer should assign two Master or Manager user codes: one with Open/Close reporting enabled, and one without Open/Close reporting.

Level 1: Master Codes

- The Master Code is the code intended for use by the primary users of the system and can perform normal system functions, and can be changed by the Master User.
- As shipped from the factory, there are no master or manager codes pre-programmed. The installer must program at least one master code during installation.
- The master codes can be used to assign up to 99 lower level codes, which can be used by other users of the system who don't have a need to know the master code.
- Master cannot assign anybody a level of 0 or 1.
- Can add, delete, change manager or operator codes. Each user's code can be individually eliminated or changed at any time.
- Open/close reporting of added users are **same** as that of the master or manager adding the new user.
- Can bypass 24 hour burglary (Zone Type 11) zones.

Level 2: Manager Codes

- Can perform all system functions (Arm, Disarm, Bypass, etc.) programmed by Master.
- May add, delete or change other users of the system below this level (Manager cannot assign anybody a level of 0, 1, or 2).
- May change his own code.
- Open/close reporting of added users will be same as his own (enabled or disabled as assigned by installer or master).
- Can bypass 24 hour burglary (Zone Type 11) zones.

Levels 3-5: Operator Codes

- Operator level users can arm and disarm the system to the authority assigned, but cannot add or modify any user code.
- May operate a partition with one of the three OPERATOR authority levels A through C listed below.

Level	Title	Functions Permitted
-3	Operator A	Arm, Disarm, Bypass
4	Operator B	Arm, Disarm
5	Operator C	Arm, Disarm only if armed with same code

- Operator C (sometimes known as Baby-sitter code), cannot disarm the system **unless** the system was armed with that code. This code is usually assigned to persons who may have the need to arm and disarm the system at specific times only (ex. a baby-sitter needs to control the system only when baby-sitting).

Level 6: Duress

- The duress code is a means of sending a silent alarm to a central monitoring station if the user is being forced to disarm (or arm) the system under threat. This feature is only useful if the system is connected to a central station.
- When the system's Auxiliary Voltage Triggers are connected to another communication's media (Derived Channel/Long Range Radio), note that duress is signaled on the same trigger that signals silent panic (whereas duress has its own unique report when digitally communicated).
- The duress code is assigned on a partition by partition basis and can be any code desired.
- When used, the system will disarm (or arm), but will also send a silent alarm to the central station (if service is connected). There will be no indication at the keypad that an alarm was sent..
- Duress Reporting Note: The Duress report triggering logic activates on the 5th key depression (such as OFF), not the 4th key depression (last digit of code). Duress reports will not be triggered if the 5th key is a [*], such as when performing a GOTO or viewing the capabilities of a user.

Level 7: Limited Use User

- If desired, you can program user codes to be valid for only up to 15 times. After the programmed number, the code is automatically deleted.
- This is useful if a particular user needs access to the protected area a limited number of times, and thereafter will not be permitted use of the code.
- The actual usage counter is set by entering **#84** and answering the keypad prompt (see KEYPAD PROCEDURES section).
- Users with this authority level can only arm and disarm the system.
- **IMPORTANT:** The usage counter is by partition. However, anytime a limited use user in a given partition performs a command, the total number of uses available for all users in that partition is reduced.

General Rules on Authority Levels and changes

The following rules apply to users when making modifications within the system based on the user code authority levels:

- Master Codes and all lower level codes can be used interchangeably when performing system functions within a partition (a system armed with a user's temporary code can be disarmed with the Master Code or another user's temporary code), except the Operator Level C Code described above.
- A user may not delete or change the user code of the SAME or HIGHER authority than which he is assigned.
- A user (levels 0, 1 & 2 only) may only ADD users to a LOWER authority level.
- A user may assign other users access to only those partitions to which he himself has access.
- A user can only be DELETED or CHANGED from within the partition he is assigned.
- User numbers must be entered as 2-digit entries. Single digit user numbers must, therefore, always be preceded by a "0" (example, 03, 04, 05, etc.). Make sure the end user understands this requirement. Temporary codes are entered as 4-digit numbers.

Important!: Unless Ademco Contact ID reporting is used, only user codes #1 - #15 can uniquely report to the central station using the communication formats provided. Users #16 - #99 will report as User #15, if enabled for open/close reporting, for the other reporting formats.

Multiple Partition Access Examples

Each user is programmed for a primary (home) partition. A user can also be given access to operate one or more partitions. In addition, within each partition, each user may be programmed to have different levels of authority. For example, User #3, the V.P. of Engineering, could be assigned to work within the Engineering Department (Partition 1) of ABC Manufacturing. Since he needs the full capabilities in his area, he is assigned as a MASTER with Level 1 authority. This means he may Arm, Disarm, Bypass, Add or Modify users in partition 1. It is also a requirement that he be able to gain access to the manufacturing area (partition 2) on an emergency basis. You can set this up easily with the partitioned system by now requesting that he also be assigned to partition 2, with a level of authority set lower, such as Level 4 (OPERATOR Level B) which allows him to Arm and Disarm, but nothing else. The control will automatically assign him the next available user number within partition 2 and does not require reprogramming of his already existing 4 digit security code.

EXAMPLE OF MULTIPLE PARTITION ACCESS

Part 1	Part 2	Part 3	Part 4	Part 5	Part 6	Part 7	Part 8
User 3	User 5						
Level 1	Level 4						
Master	Oper B						

In the above example, User 3 has MASTER authority in partition 1 and OPERATOR B authority in partition 2. His user number in partition 2 is User 5 and his 4 digit code is the same for both partitions. Note that if a user number is already being used in a partition, the system will automatically assign an unused User number. Also notice that no access is allowed for this user into partitions 3 - 8. Attempts to access these partitions would be denied automatically.

Installer must program at least one Master code.

To ADD a Master, Manager or Operator code

Important!: During user code entry, normal key depressions at other keypads in a partition will be ignored. However, panic key depression will cause an alarm and terminate user entry.

Enter Installer Code† + [8] + new User # (00-99) + new User's code

†Or Master or Manager code, but must be code with higher level of authority than the code being changed. (i.e. Master code can add a Manager or Operator level code, but cannot add another Master code; a Manager code can add an Operator level code, but cannot add a Master or another Manager code).

Keypad will prompt for the Authority Level for this user.

User Number = 03 Enter Auth. Level	Enter the level number as follows: 1 = Master (Arm, Disarm, Bypass, add or modify lower level users) 2 = Manager (Arm, Disarm, Bypass, add or modify lower level users) 3 = Operator Level A (Arm, Disarm, Bypass) 4 = Operator Level B (Arm, Disarm) 5 = Operator Level C (Arm, Disarm only if system armed with this code) 6 = Duress (Arm, Disarm, triggers silent panic alarm) 7 = Limited Use User Keypad will then prompt for Open/Close reporting option for this user.
Open/Close Rep.? 0 = NO , 1 = YES	Press 0 (NO) or 1 (YES), depending on whether or not arming/disarming by this user will trigger opening & closing reports. This prompt appears only if the installer code is used to add a user.
Access Group? Enter 0-8	If access schedules have been programmed, this prompt appears. Enter the user's access group number (1-8) if this user should have limited access to the system. Enter 0 if no access group should be assigned.
RF Button ? 0=NO , 1=YES	If a 5800 series button transmitter has been enabled, and not assigned to a user, this prompt will appear.
Enter Button ZN # (01-86)	If yes was given as the answer to the RF button question, the zone number for the button will be requested. Enter any one of the zone numbers assigned to the button transmitter as AWAY, STAY or DISARM. The system will then assign **all** programmed STAY, AWAY or DISARM buttons of the transmitter to this user number.
Multi-Access ? 0 = NO , 1 = YES	Press 0 (NO) or 1 (YES). If NO, the program exits this mode. If yes, the Keypad prompts for the Global Arm option for this user.
Global Arm ? 0 = NO , 1 = YES	Press 0 (NO) or 1 (YES), depending on whether or not this user will be allowed to arm more than one partition via Global Arm prompts (described in the KEYPAD FUNCTIONS section). The keypad now prompts for the user's access to the next partition.

Part. 2 – SHOP ? 0 = NO , 1 = YES

Press 0 (NO) or 1 (YES), depending on whether or not this user will have access to the displayed partition number. If NO, the keypad displays this prompt for the next partition number in sequence.

If YES, the keypad prompts for the following:

- User's authority level in the displayed partition (see Authority Level prompt above). Note that the user number in the displayed partition is automatically assigned.
- Open/Close option for this user in the displayed partition (see Open/Close prompt above).
- Global Arm option for this user in the displayed partition.

When all partitions have been displayed, the keypad will scroll through all partitions to which access has been assigned, and will display the user number, authority level, open/close and global arm options that were programmed for each partition the user was granted access. For example:

Part. 1 ✳ WHSE User 03 Auth=3G.

Note that the "G" following the authority level indicates that the global arm feature is enabled for this user in the displayed partition, and that the period at the end of the second line indicates open/close reporting is enabled for this user in the displayed partition. The "✳" indicates the partition from which the user may be changed or deleted.

To CHANGE a Master, Manager or Operator code

Enter Installer code* + [8] + User number (00-99) + new code for that user.

* Or Master or Manager code, but must be code with higher level of authority than the code being changed. (i.e. Master code can change a Manager or Operator level code, but cannot change another Master code; a Manager code can change an Operator level code, but cannot change a Master or another Manager code).

User Number = 03 NEW USER?

The system detects that the user number is already assigned and will prompt if this is a new user. Press 0 (NO).

The system will then confirm that the change is allowed based on authorization level. If the user number is the same as the Installer's, the system will prompt for the new code to be reentered. This prevents accidentally changing a high level code.

Adding An RF Key To An Existing User

To add an RF key to an existing user, or to change a user's global arm option, first delete that user's code, then re-add the user code as described in the Add A User paragraph.

To Delete a Master, Manager or Operator code
Enter your code* + [8] + User number (00-99) + your code again

* Installer, Master or Manager code, but must be code with higher level of authority than the code being deleted. (i.e. Master code can delete a Manager or Operator level code, but cannot delete another Master code; a Manager code can delete an Operator level code, but cannot delete a Master or another Manager code).

User Number = 03 DELETE USER?

The system will prompt if this code should be deleted. Press 0 (NO) or 1 (YES).

If yes, that user's code will be removed from all partitions to which it had been assigned, and all authorization levels and other information about that user will be deleted. Note that a user can only be deleted from the partition in which it was first assigned, and can only be deleted by a user with a higher authority level. A user cannot delete himself.

To EXIT The User Code Entry Mode
Press either [*] or [#], or don't press any key for 10 seconds.

Keypad Functions

Note that user related scheduling functions and programming is described in the SCHEDULING PROGRAMMING section of this manual (setting temporary schedules, programming timed events, etc.)

General Information

The keypad allows the user to arm and disarm the system, and perform other system functions, such as bypassing zones, view messages from the central station and display zone descriptors. Zone and system conditions (alarm, trouble, bypass) are displayed in the Display Window.

When an alarm occurs, keypad sounding and external sounding will occur, and the zone(s) in alarm will be displayed on the keypad. Pressing any key will silence the keypad sounder for 10 seconds. Disarming the system will silence both keypad and external sounders. When the system is disarmed, any zones that were in an alarm condition during the armed period will be displayed (memory of alarm). To clear this display, simply repeat the disarm sequence (enter the security code and press the OFF key).

The keypads also feature chime annunciation, and 3 panic keys (for silent, audible, fire or personal emergency alarms) which can notify the central station of an alarm condition, if that service is connected.

Voice Module

Refer to the separate instructions supplied with the Voice Module for information concerning its operating procedures.

Important: The Voice Module **cannot** be used to add user codes in this system. User codes must be added by using an alpha keypad only.

Arming Functions

The following is a brief list of system commands. For detailed information concerning system functions, refer to the User's Manual.

Disarmed Not Ready Before arming, the system must be in the READY condition (all zones must be intact). If the "NOT READY" message appears, press the READY [*] key to display faulted zones.

Arming Away Enter code + [2] (AWAY).

Arming Stay Enter code + [3] (STAY). (i.e. all zones designated as zone types 4 or 10 will be automatically bypassed)

Arming Instant Enter code + [7] (INSTANT).

Arming Maximum Enter code + [4] (MAXIMUM).

Disarming Enter code + [1] (OFF).

Bypassing Zones Enter code + [6] (BYPASS) + zone number. To automatically bypass all faulted zones, use "Quick Bypass" method: Enter code + BYPASS + [#].

Chime Mode Enter code + [9] (CHIME). To turn chime mode off, enter code + CHIME again.

Quick Arming: Note that if QUICK ARM is enabled (field *29), the [#] key can be pressed instead of entering the security code, for any of the arming procedures (Away, Stay, Instant, Maximum, etc.).

SUMMARY OF ARMING MODES

Mode	Features For Each Arming Mode			
	Exit Delay	Entry Delay	Perimeter Armed	Interior Armed
AWAY	Yes	Yes	Yes	Yes
STAY	Yes	Yes	Yes	No
INSTANT	Yes	No	Yes	No
MAXIMUM	Yes	No	Yes	Yes

Global Arming

If enabled for the user, the keypad will display the following:

ARM ALL ?
0 = NO , 1 = YES

If NO, the keypad prompts for arming each partition individually. If YES, the system attempts to arm all partitions allowed by this user. If there are any faults (open doors, windows, etc.) the keypad will display them. See notes below. These faults must be corrected or the zone bypassed before arming will occur. When faults are corrected, repeat the arming procedure.

1. When using the Global Arm feature, if there are faults in any of the selected partitions, the system will enter a summary mode in which the faulted zones of all of the selected partitions will be displayed. These faults must be corrected or bypassed (code + BYPASS + [#] will attempt to bypass the faults in all of the selected partitions). This summary mode will end in approx. 120 seconds if no keys are pressed.
2. If, when disarming the system using a Global Disarm, any of the selected partitions has a condition which would cause the keypad to beep (such as alarm memory or a trouble condition), the system will cause the keypad to beep and will enter a summary mode in which the alarm memory or trouble conditions of all of the selected partitions will be displayed. This mode will continue until either approx. 120 seconds elapses or a second disarm occurs which clears the beeping
3. Global arming cannot be performed from a wireless keypad or a non-alpha display keypad.

Access Control

If programmed, one relay may be used for access control in each partition. The relay is programmed in data field 1*76. To activate this relay, the user enters his user code + [0]. The relay will pulse for 2 seconds.

Delay Closing Time

If open/close schedules are used, end users can manually extend the closing window by up to 2 hours. This is useful if a user must stay on the premises later than usual. User must have authority level of manager or higher.

To extend the closing window, enter user code + # +82.

Closing Delay ?
Hit 0-2 Hours

Enter the number hours, **1** or **2**, by which the end of the closing window should be delayed. Note that the delay is from the scheduled closing time, not from the current time. Press [*] to accept entry and exit this mode. Press # to exit this mode without changes.

The system will send a "Schedule Changed" message to the central station when the closing window is delayed.

IMPORTANT: The delay cannot be reduced once it is set. A 1 hour delay can be increased to 2 hours though. This is to prevent the user from deleting the delay after the normal window expires, thereby missing the end of the window.

Partition "GOTO" Commands

Each keypad is assigned a default partition for display purposes, and will show only that partition's information. To see information for another partition, or perform system functions in another partition, use the GOTO command (code + [*] +partition number 0-8). The keypad will remain in the new partition until directed to go to another partition, or until 120 seconds has elapsed with no keypad activity. To return to your home partition, enter partition number **0**.

NOTE: You must program data field 2*18 to enable the GOTO function.

View Capabilities Of A User

The keypad will display the partitions that user is authorized for, the user number, and the authority level for all partitions authorized. Enter code + [*] + [*]. The user's capabilities in each authorized partition will typically be displayed:

```
Part. 1   WHSE
User 01 Auth.=1.
```

The user's Open/Close report capability is shown by the dot following the authority level. If Open/Close is not enabled for a user, the dot will not appear.

Viewing Downloaded Messages

Users may occasionally receive messages on the keypad display from their installation company. When this occurs, the keypad will display "Message. Press 0 for 5 secs.". Instruct the user to press and hold the 0 key to display the central station's message. Note that the system must be in the READY state to view these messages.

Limited Use User (#84 Command)

To set the usage count for users with authority level 7, enter a master or manager code + #84. The following prompt will appear.

```
CODE USE LIMIT
01-15  00 = QUIT
```

Enter the number of times these users will have access to the system. These codes are automatically disabled (but the codes are not deleted) after this number of uses. To reactivate the codes, simply enter a master or manager code + #84 and set a new use limit.

Using The Built-In User's Manual

An abbreviated User's Manual is stored in the system's memory, and can be particularly useful to the end user if the printed User's Manual is not conveniently accessible when the user needs to perform a seldom used and unfamiliar system procedure. The Built-in User's Guide is displayed by simply pressing any of the function keys (e.g., OFF, AWAY, STAY, MAXIMUM, BYPASS, INSTANT, CODE, TEST, READY, #, and CHIME) for approximately 5 seconds and then releasing it. Abbreviated instructions relative to the key that has been pressed will then be displayed (2 lines of text are displayed at a time). This function operates in either the armed or the disarmed state.

Displaying Descriptors

The Alpha Keypads can display all programmed descriptors, which is useful to the installer when checking entries, and can be helpful to the user when there is a need to identify zones. To display descriptors, the system must be disarmed and ready to arm. Press and hold the READY key until the built-in instructions for that key appear, then release the key. The zone descriptors will appear one at a time, for about 2-3 seconds each. For faster viewing, press the READY key to display the next descriptor in numerical order and so on. When all descriptors have been displayed, the Control will exit display mode. To exit display mode, enter the security code and press the OFF key.

Panic Keys

There are three panic key pairs (shown below) that, if programmed, can be used to manually initiate alarms and send a report to the central station. Each key pair can be individually programmed for 24 Hour Silent, Audible or Auxiliary (Emergency) responses. The panic function is activated when the appropriate key pair is pressed at the same time.

The panic functions are identified by the system as follows:

PANIC			Displayed as Zone
[A] or	*	1	95
[C] or	#	3	96
[B] or	*	#	99

For alpha keypads, these panic keys can also be programmed with an alpha descriptor.

IMPORTANT: For the Panic functions to be of practical value, the system must be connected to a central station.

Trouble Conditions

The word "CHECK" on the Keypad's display, accompanied by a rapid "beeping" at the Keypad, indicates that there is a trouble condition in the system. The audible warning sound can be silenced by pressing any key. Instruct users to call for service immediately upon seeing any of the following messages.

"Check" Messages

- "CHECK" accompanied by a display of one or more zone descriptor(s)
  Indicates that a problem exists with those zone(s). First, determine if the zone(s) displayed are intact and make them so if they are not. If the problem has been corrected, key an OFF sequence (Code plus OFF) to clear the display.
- "CHECK" accompanied by a numeric display of "97"
  Indicates that a short exists on the Polling Loop and may eliminate some of the protection. Fault "97" can be assigned an alpha descriptor when using the alpha keypad.
- "CHECK" accompanied by a numeric display of "88", "89", "90", or "91"
  Indicates a Receiver problem. Faults "88", "89" "90" & "91" can be assigned alpha descriptors.

Other Trouble Conditions

- "COMM. FAILURE" (alpha) or "FC" (fixed-word) at the Keypad
  Indicates that a failure occurred in the telephone communication portion of your system.
- "LO BAT" (alpha) or "BAT" (fixed-word) and a zone descriptor, accompanied by a once per minute beep at the Keypad
  Indicates that a low battery condition exists in the wireless transmitter displayed. The audible warning sound may be silenced by pressing any key. A display of "SYSTEM LO BAT" (alpha) or "BAT" with no zone number (fixed-word) indicates that a low battery condition exists with the system's backup battery.
- "RCVR SET UP ERROR" (alpha) or "E8" (fixed-word) at the keypad
  Indicates that the system has more RF zones programmed than the RF receiver can support. If this is not corrected, none of the zones in the system will be protected. If additional RF zones are desired, use an appropriate Receiver.
- "MODEM COMM" (alpha) or "CC" (fixed-word)
  Indicates that the control is on-line with the remote computer and the control is not operating. Panel's response to alarm and trouble conditions will be delayed until on-line session is completed.

Power Failure

If the POWER indicator is off, and the message "AC LOSS" (alpha) or "NO AC" (fixed-word) is displayed, the Keypad is operating on battery power only. Check to see that your system's plug-in transformer has not been accidentally pulled out. Instruct the user to call a service representative immediately if AC power cannot be restored.

Speed Key [D] (Macros)

The "D" key can be used to activate a string of up to 16 keystrokes. These keystrokes are known as a macro and are stored in the system's memory . Typical Speed Key functions include:

- Arming sequences that involve first bypassing certain zones before arming.
- Seldom used but repeatable sequences.
- Relay activation sequences.

To program a macro, enter your user code + [#] + [D]. The following appears:

ENTER SPEEDKEY "D"
existing sequence displayed

Enter up to 16 keystrokes. A speed key sequence can include different commands. Press the "D" key to separate different commands. For example, you may want to perform the following sequence.

Desired function	Keystrokes
GOTO partition 2	Enter *2
Bypass zones 10 & 11	Press bypass [6], then the zone numbers 10 & 11
Arm in maximum mode	Press maximum [4] key
Return to partition 1	Enter *1

To program that speed key sequence, type the following :

*2[D]61011[D]4[D]*1[D][D]

Note that the "D" key is pressed after the "2," the last "1" and the "4," separating the different commands. Press "D" twice to complete the entry and exit.

To execute a speed key sequence, press the "D" key. The following appears:

ENTER USER CODE
****

Enter your user code. The programmed speedkey sequence will begin automatically.

NOTES: When defining speedkey sequences, do not use the [#] key to represent Quick Arming. The system uses the code entered in response to the prompt to initiate commands in a speedkey sequence, so the quick arm key is unnecessary. The system interprets the use of the [#] key in a speedkey sequence as its designated function only (e.g. #2 is not interpreted as arm in away mode, but rather as enter house ID sniffer mode).

End User Relay Command Mode (#70 Mode)

The system allows users to manually activate relays/X-10 modules by keypad command using either the keypad or a telephone keypad (if voice module is used). The user will be prompted (either by keypad alpha display or telephone voice module)

To activate relays from a keypad, enter 4-digit security code + [#] +**70.**

To activate relays using a telephone and voice module, first dial the 2-digit phone access code. When the system acknowledges the access, enter 4-digit security code + [#] + **70**. The following prompts/voice responses will begin.

ENTER DEVICE NO. 00=QUIT 01	**Voice:** "ENTER DEVICE CODE NOW"

Enter the 2-digit number of the relay/X-10 module to be activated.

nn DEVICE IS OFF HIT 0=OFF , 1=ON	**Voice:** "*voice descriptor* DEVICE nn ON/OFF. FOR *voice descriptor* ON ENTER 1, FOR *voice descriptor* OFF ENTER 0"

Press **0** or **1** to turn the device off or on respectively.

"nn" represents the 2-digit relay/X-10 module number and *voice descriptor* is the relay voice descriptor programmed by the installer (see relay descriptor programming section).

nn DEVICE IS OFF HIT THE "*" KEY	**Voice:** "*voice descriptor* DEVICE nn ON/OFF. TO EXIT ENTER 00 NOW"

From a keypad, press [T] to continue. The ENTER DEVICE NO. prompt will appear.

From a telephone keypad, enter **00** to exit, or enter the next relay number to be programmed. The current on/off state of that relay will be annunciated as described above. Alternatively, if 6 seconds elapses with no key depression, the voice module will annunciate the "ENTER DEVICE CODE NOW" message.

Split/Dual Reporting

Dual reporting (*51) sends **all** reports to both primary and secondary phone numbers. Split reporting allows reports to be divided between the phone numbers according to the field's (1*34) selections. Split/Dual reporting can be selected by enabling dual reporting **and** enabling one of the split reporting options in field 1*34. If option [1] is selected, all alarms, alarm restores and cancel reports will go to both phone numbers, while all other reports will go to the secondary phone number. If [2] is selected, open/close and test messages will go to both phone numbers, while all other reports will go to the primary phone number. Following are the Split/Dual Reporting options:

Reporting Format	Field Number *51	1*34	Phone #	Reports
Dual	1	0	--------	All reports to both numbers
Split	0	1	Primary Secondary	alarms, restores, cancel open/close, test, troubles
	0	2	Primary Secondary	alarms, restores, troubles open/close, test
Split/Dual	1	1	Primary Secondary	alarm, restores & cancel alarms, restores, troubles, open/close, test
	1	2	Primary Secondary	alarms, restores, troubles alarms, restores, open/close, test

Ademco Low Speed

ADEMCO LOW SPEED is a pulsed format which responds to a 1400 Hz handshake and kiss-off, and transmits data with 1900Hz pulse tones @ 10 pulses per second (pps). A typical message consists of two rounds which must be verified by the receiver. A complete standard report consists of either a 3 or 4-digit account number followed by a 1-digit alarm code. Though 2 rounds are sent, only the valid report is displayed.

In expanded reporting, two messages are sent, two rounds per message, the first being the account number and alarm code, the second being the zone ID code to which the alarm was assigned. A complete expanded report consists of a 3 or 4-digit account number followed by a 1-digit alarm code, then the alarm code is repeated, followed by the channel number.

EX. Standard: CCCC E where: CCCC = account number
Expanded: CCCC E E = event code
EEEE Z Z = zone ID code

Sescoa/Radionics

Standard and expanded reporting in the SESCOA/RADIONICS format is virtually the same as ADEMCO Low Speed except for the following:

1. The handshake and kiss-off frequency is 2300 Hz.
2. The data is transmitted with 1800 Hz pulse tones.
3. The rate of transmission is 20 pps.

4+2 Reporting

A 4+2 report consists of a 4-digit account number and a 2-digit alarm code, or event code. 4+2 reports can be accomplished either in ADEMCO Low Speed (10 pps), or SESCOA/RADIONICS (20 pps) format.

In 4+2 reporting a unique 2-digit code for each zone is reported. A 4-digit account number followed by a 2-digit code is sent, where the first digit is the actual event, such as in ALARM, RESTORE, or TROUBLE, etc., and the second digit of the code represents the "zone" where the event occurred. (but not necessarily the actual zone number). Each code in itself is unique to a specific zone. If desired, the actual zone number can be reported by entering the corresponding 2-digit zone number (ex. zone 1= [0] [1]; zone 63= [6] [3]). A report might appear as:

1 2 3 4 5 9 ("5 9" might be a unique "TROUBLE RESTORE, ZONE 25).

4+2 Express

ADEMCO's Express format provides the same information as the 4+2 format, but with three differences:

1. The data is transmitted in DTMF (Dual Tone Multi-Frequency, known as "TouchTone", at the rate of 10 characters per second). This greatly decreases the time it takes a report to go through to central station. An average 4+2 Low Speed report might take as long as 20 seconds to complete its report, but 4+2 Express takes under 3 secs.
2. Two message rounds are eliminated by the use of a checksum digit. Instead of the communicator sending 2 rounds per report, it sends only 1 round with a checksum digit at the end. Doing this also helps in decreasing the time it takes for a report to be sent.
3. The handshake frequency is 1400 Hz followed by 2300 Hz, and the kissoff frequency is 1400 Hz.

Ademco High Speed Reporting

ADEMCO's High Speed format transmits data in DTMF at a rate of 10 characters per second. The handshake frequency is 1400 Hz followed by 2300 Hz, and the kissoff frequency is 1400 Hz. The message contains 13 digits as follows: A 4-digit account number + eight channels of zone information (1-8 or duress plus 9-15) + one status channel, which identifies the type of events being reported in the eight zone locations. A typical High Speed report will be kissed off in under 5 seconds.

Channels 1 through 8 could have one of the following conditions:

1 = NEW EVENT
2 = OPENING (Status Channel Always = 2)*
3 = RESTORE
4 = CLOSING (Status Channel Always = 4)*
5 = NORMAL, NO EVENT TO REPORT
6 = PREVIOUSLY REPORTED, NOT YET RESTORED

*NOTE: Channel 1 will contain the user ID 1-9, B-F if Open/Close reporting is enabled. User 10 will report as user "0", which is also used for auto-arm/auto-disarm and quick arming.

The status channel might have one of the following conditions:

1 = DURESS (For Duress Plus Channels 9-15 Only)
2 = OPENING
3 = BYPASS (For Channels 1-8 Only)
4 = CLOSING
5 = TROUBLE (For Channels 1-8 Only)
6 = SYSTEM STATUS:
- AC LOSS in Channel 1
- LOW BATTERY in Channel 2
- PROGRAM TAMPER in Channel 3
- POWER ON RESET in Channel 4

7 = NORMAL ALARM STATUS (Chnls 1-8 Only)
9 = TEST REPORT

A typical high speed report may look as follows:
1234 5115 5555 7 (Acct #1234 with alarms on channels 2 and 3)

High Speed Format Limitations

1. When using Ademco high speed, remember there are only 15 channels available, plus a duress channel. If more than 15 zones are being used, they will have to share channels.
2. With Ademco High Speed reporting, channels 9-15 cannot report troubles or bypasses. Use these channels for zones that will not report these conditions.

Contact ID Reporting

This is the only format that can identify all 86 protection zones by their unique zone (Contact) ID numbers, and provides a 1-digit event qualifier and 3-digit, specifically defined event code which quickly identifies the condition being reported.

Contact ID reports in DTMF (Dual Tone Multi-Frequency @ 10 characters per second) and responds to a 1400 Hz followed by 2300 Hz handshake, and a 1400 Hz kissoff. This format also uses checksum instead of two message verification. A complete report takes under 3 seconds.

Contact ID Reporting takes the format: CCCC Q EEE GG ZZZ where:

CCCC = Customer (subscriber) number.
Q = Event qualifier, where: E=new event (1) and R= restore (3)
EEE = Event code (3 hexadecimal digits), defined in the table below.
GG = Partition number.
ZZZ = Zone/contact ID number reporting the alarm (001-099), or user number (001-099) for open/close reports. System status messages (AC Loss, Walk Test, etc.) contain zeroes in the ZZZ location.

TABLE OF CONTACT ID EVENT CODES

Code	Definition
110	Fire Alarm
121	Duress
122	Silent Panic
123	Audible Panic
131	Perimeter Burglary
132	Interior Burglary
133	24 Hour Burglary (zone type 11, if supported)
134	Entry/Exit Burglary
135	Day/Night Burglary
150	24 Hour Auxiliary
301	AC Loss
302	Low System Battery
305	System Reset
306	Program Tamper
309	Battery Test Fail
332	Poll Loop Short-Trouble
333	RF Receiver Failure-Trouble
373	Fire Loop Trouble
380	Trouble (global)
381	Loss of Supervision - RF
382	Loss of RPM Supervision
383	RPM Sensor Tamper
384	RF Transmitter Low Battery
401	O/C By User
403	Power-Up Armed

Code	Definition
406	Cancel by User
407	Remote Arm/Disarm (Download)
408	Quick Arm
409	Keyswitch O/C
411	Call back Requested
441	Armed STAY
451	Early open/close
452	late open/close
453	Fail to open
454	Fail to close
455	Auto-arm fail
570	Bypass
602	Periodic Test
606	Audio Alarm Verification to follow (AAV "listen-in")
607	Walk Test Mode
621	Event Log Reset
622	Event Log 50% Full
623	Event Log 90% Full
624	Event Log Overflow
625	Time/Date Reset
626	Time/date inaccurate
631	Exception schedule change
632	Access schedule change

ADVISORY: Ademco's new Contact ID reporting is capable of uniquely reporting all 86 zones of information, as well as openings and closings for all 128 users, to central stations equipped with the Ademco 685 receiver using software level 4.4 or higher. Must be level 4.6 or higher to fully support all new FA1340C report codes. 685 software levels below 4.4 cannot support Contact ID reporting. For information regarding updating the 685 receiver, contact the Premier Gold Technical Support group at 1-800-538-5585 (8am-6pm EST) or after 6pm EST: 1-800-421-5557.

Communication Default Programming

General Information

To help expedite the installation, the system provides 4 different communication defaults (Low Speed, Ademco Express, Ademco High Speed & Ademco's new Contact ID). These defaults automatically program industry-standard code assignments for zones, keypad panics, non-alarm and supervisory conditions, and can be loaded at any time without affecting non-communication program fields.

Loading Communication Defaults

NOTE: Default communication commands are in second set of programming fields (fields 1*80, 1*81, 1*82 & 1*83).

To load a communication default set, do the following:

While in programming mode, first change to the 1*xx set of fields (press *94), then enter one of the following field numbers to load the communication default set desired.

TABLE OF DEFAULT PROGRAMMING COMMANDS

PRESS	TO LOAD THIS DEFAULT PROGRAMMING SET
*80	Low Speed communication defaults
*81	Ademco Express communication defaults
*82	Ademco High Speed communication defaults
*83	Contact ID communication defaults

These defaults load industry standard codes that will suit most of your needs. Program fields *54-*82 make up the communications portion of the programming, and can be changed as needed to suit special applications. A complete list of these default values is provided at the end of this section.

Making Changes To Communication Fields

If programming communication fields manually to change default values, simply enter whatever code (3+1, 4+1, 4+2 or Ademco Express) is to be sent for each zone (including panics, non-alarm codes and supervisory codes). NOTE: Enter "10" to transmit an "A", which appears as "0" at the receiver.

Report code entries for all zones are grouped into 8 zones per pair of program fields, with common restore, trouble and bypass codes for every 2 groups (16 zones). Refer to the programming form for clarification.

For 3+1, 4+1, 4+2 and Ademco Express, the first entry is the alarm code and swinger suppression channel for a standard report. The second entry is the ID digit for an expanded 3+1 or 4+1 report, or for a 4+2 or Ademco Express report. If the second digit is 0, only 3+1 or 4+1 (or 4+1 express) non-expanded messages will be sent.

For Ademco High Speed format, the first digit entry is the channel assignment for that zone, and the second digit is ignored, if entered. For Contact ID reporting, the first digit entry (any non zero entry) enables reporting for that zone and assigns the swinger suppression channel–, and the second digit is ignored.

NOTE: Restoral reports for an event **will not** be sent if the event itself is not enabled, even if a restore code is programmed for that event.

Swinger Suppression

This feature limits the number of alarm and trouble messages sent on a given channel during an armed period. Each channel has a separate counter for each message type (alarm, alarm restore, trouble, trouble restore). When the programmed swinger suppression value has been exceeded for a particular message, further messages of that type sent on that channel will be inhibited. This feature is intended to reduce "swinger" alarms/troubles from clogging the central station. To disable swinger suppression, enter 00 in field *84 (must be 00 for UL installations), which allows all alarm and trouble messages to be reported.

Enabling Of Dialer Reporting By Partition

In order to enable dialer reports for a partition, an account number (fields *32 & *90) must be programmed for that partition. The Control is shipped with an account number set for partition 1 only (set to FFFF). Partitions 2-8 have no account numbers pre-programmed.

In addition, in case of phone line failure, the "COMM. FAIL" message will not be displayed in partitions which do not have a primary account number programmed.

COMMUNICATION PROGRAMMING GUIDE

Field #	Low Speed	Contact ID	High Speed	Express
*46, *48	Choose transmission speed and frequency	No effect	No effect	No effect
*52, *53	Send as either 4+2 or expanded	No effect	No effect	No effect
*79, *80	Enables alarm restores	Enables alarm restores	Enables alarm restores	Enables alarm restores
*49	Add checksum digit	No effect	Add checksum digit	No effect
*81, *82	Define codes and selects 4+1 or 4+2	1st digit enables report if it is non-zero	1st digit enables report if it is non-zero	Define codes and selects 4+1 or 4+2
*54, *56, *59, *61, *64, *66, *69, *71, *74, *76	Defines alarm event code	Enables reports	Assigns reporting chnl for all reports from this zone. Enables alarm reporting	Defines alarm event code
*55, *57, *60 *62, *65, *67, *70, *72, *75, *77	Defines code and selects 4+1 or 4+2	No effect	No effect	Defines code and selects 4+1 or 4+2
*58, *63, *68, *73, *78	Enables report and selects code. Note: No restores if event not sent.	Enables report	Enables report Note: Alarm channel must be programmed. (01-15)	Enables report and selects 1st digit of. the 2-digit event code. NOTE: No restores if event not sent.
*50	Sescoa/Radionics; Selects fixed digit time instead of fixed interdigit.	No effect	No effect	No effect
NOTES	Note: Low Speed will not send 3+2 messages. Zone ID digit is suppressed.			

Summary Of Default Consequences

Loading communication defaults results in the following:

Low Speed (*94*80)

- Selects low speed, standard format with no checksum, for both phone numbers.
- Assigns the following report codes:
  - 03 for zones 2-47
  - 01 for zones 1 & 48-55 (fire zones)
  - 02 for zones 62,63 (panic trans), & 95, 96, 99 (keypad panics)
  - 09 for all alarm restores
- Enables all zone type restores.

ADEMCO Express (*94*81)

- Selects Ademco express reporting format, with checksum, for both phone numbers.
- Report codes for zones 1-86, 4280s and keypad panics are sent as their respective zone ID numbers (01-86, 88-91, 95-99), Duress is sent as "DD". Alarm restore is "E" + 2nd digit.
- Enables all zone type restores.

ADEMCO High Speed (*94*82)

- Selects Ademco High Speed format, with no checksum, for both phone numbers.
- Reporting is assigned to the following channels:
  - Channel 1 for zones 1 & 48-55 (Fire zones)
  - Channel 2 for zones 2-8
  - Channel 3 for zones 9-16
  - Channel 4 for zones 17-31
  - Channel 5 for zones 32-47 (RF interior zones)
  - Channel 6 for zones 56-61 & 87
  - Channel 9 for zones 62 & 63 (panic transmitter)
  - Channel 7 for 2nd 4280 (88 & 89) & polling loop short (97)
  - Channel 8 for first 4280 (90 & 91)
  - Channels 10, 11 & 12 for keypad panics 95, 96 & 99 respectively
- Enables all zone type restores.
- Enables Duress to be sent.

ADEMCO's Contact ID (*94*83)

- Selects Contact ID format for both phone numbers.
- Reporting is enabled for all zones.
- Enables all zone type restores.
- Refer to the SYSTEM COMMUNICATION section for event code definitions.

COMMUNICATION DEFAULTS for LOW SPEED FORMAT (*94*80)

*45 PRIMARY FORMAT [0] Ademco Low Speed

*46 LOW SPEED FORMAT (Primary) [0] Ademco Low Speed

*47 SECONDARY FORMAT [0] Ademco Low Speed

*48 LOW SPEED FORMAT (Sec.) [0] Ademco Low Speed

*49 CHECKSUM VERIFICATION [0] [0]
No checksum Primary Secondary

*50 SESCOA/RADIONICS SELECT [0] Radionics

*51 DUAL REPORTING [0] no

*52 STANDARD/EXPANDED REPORT FOR PRIMARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

*53 STANDARD/EXPANDED REPORT FOR SECONDARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

ALARM REPORT CODE & ID DIGITS FOR ZONES 1-32 & SUPERVISORY & RESTORE CODES

	*54 CODE	*55 ID	*56 CODE	*57 ID	*58		*59 CODE	*60 ID	*61 CODE	*62 ID	*63	
1	011	010	9	013	010	019 Alarm Rst.	17 013	010	25 013	010	019	Alarm Rst.
2	013	010	10	013	010	010 Trouble	18 013	010	26 013	010	010	Trouble
3	013	010	11	013	010	010 Trble Rst.	19 013	010	27 013	010	010	Trble Rst.
4	013	010	12	013	010	010 Bypass	20 013	010	28 013	010	010	Bypass
5	013	010	13	013	010	010 Bypss Rst.	21 013	010	29 013	010	010	Bypss Rst.
6	013	010	14	013	010		22 013	010	30 013	010		
7	013	010	15	013	010		23 013	010	31 013	010		
8	013	010	16	013	010		24 03	010	32 013	010		

ALARM REPORT CODE & ID DIGITS FOR ZONES 33-64 & SUPERVISORY & RESTORE CODES

	*64 CODE	*65 ID	*66 CODE	*67 ID	*68		*69 CODE	*70 ID	*71 CODE	*72 ID	*73	
33	013	010	41	013	010	019 Alarm Rst.	49 011	010	57 013	010	019	Alarm Rst.
34	013	010	42	013	010	010 Trouble	50 011	010	58 013	010	010	Trouble
35	013	010	43	013	010	010 Trble Rst.	51 011	010	59 013	010	010	Trble Rst.
36	013	010	44	013	010	010 Bypass	52 011	010	60 013	010	010	Bypass
37	013	010	45	013	010	010 Bypss Rst.	53 011	010	61 013	010	010	Bypss Rst.
38	013	010	46	013	010		54 011	010	62 012	010		
39	013	010	47	013	010		55 011	010	63 012	010		
40	013	010	48	011	010		56 013	010	64 013	010		

ALARM REPORT CODE & ID DIGITS FOR RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

	*74 CODE	*75 ID	*76 CODE	*77 ID	*78	
NU	010	010	89	017	010	019 Alarm Rst.
NU	010	010	90	017	010	010 Trouble
NU	010	010	91	017	010	010 Trble Rst.
NU	010	010	Dures	012	010	010 Bypass
NU	010	010	97	017	010	010 Bypss Rst.
NU	010	010	95	012	010	(1 + ✱)
NU	010	010	96	012	010	(3 + #)
88	017	010	99	012	010	(✱ + #)

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

SYSTEM NON ALARM CODES

	*81 First Digit	*82 Second Digit
Close	010	010
Open	010	010
Low Battery	010	010
Low Bat Res.	010	010
AC Loss	010	010
AC Restore	010	010
Test	010	010
Power	010	010
Cancel	010	010
Prog. Tamper	010	010

Second digit of each code applies only to 4+2 or expanded (fields *52 & *53) formats.

ZONE TYPE RESTORE ENABLES

*79 ZONE TYPES 1-8 All enabled

[1] [1] [1] [1] [1] [1] [1] [1]
1 2 3 4 5 6 7 8

*80 ZONE TYPES 9 - 11 All enabled [1] [1] [1]
9 10 11

COMMUNICATION DEFAULTS for ADEMCO EXPRESS FORMAT (*94*81)

*45 PRIMARY FORMAT [3] Ademco Express

*46 LOW SPEED FORMAT (Primary) [0]

*47 SECONDARY FORMAT [3] Ademco Express

*48 LOW SPEED FORMAT (Sec.) [0]

*49 CHECKSUM VERIFICATION [0] [0]
No checksum Primary Secondary

*50 SESCOA/RADIONICS SELECT [0] Radionics

*51 DUAL REPORTING [0] no

*52 STANDARD/EXPANDED REPORT FOR PRIMARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

*53 STANDARD/EXPANDED REPORT FOR SECONDARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

ALARM REPORT CODE & ID DIGITS FOR ZONES 1-32 & SUPERVISORY & RESTORE CODES

	*54 CODE	*55 ID		*56 CODE	*57 ID		*58	
1	110	011	9	110	019		114	Alarm Rst.
2	110	012	10	011	110		010	Trouble
3	110	013	11	011	011		010	Trble Rst.
4	110	014	12	011	012		010	Bypass
5	110	015	13	011	013		010	Bypss Rst.
6	110	016	14	011	014			
7	110	017	15	011	015			
8	110	018	16	011	016			

	*59 CODE	*60 ID	*61 CODE	*62 ID	*63	
17	011	017	25	012	015	114 Alarm Rst.
18	011	018	26	012	016	010 Trouble
19	011	019	27	012	017	010 Trble Rst.
20	012	110	28	012	018	010 Bypass
21	012	011	29	012	019	010 Bypss Rst.
22	012	012	30	013	110	
23	012	013	31	013	011	
24	012	014	32	013	012	

ALARM REPORT CODE & ID DIGITS FOR ZONES 33-64 & SUPERVISORY & RESTORE CODES

	*64 CODE	*65 ID		*66 CODE	*67 ID		*68	
33	013	013	41	014	011		114	Alarm Rst.
34	013	014	42	014	012		010	Trouble
35	013	015	43	014	013		010	Trble Rst.
36	013	016	44	014	014		010	Bypass
37	013	017	45	014	015		010	Bypss Rst.
38	013	018	46	014	016			
39	013	019	47	014	017			
40	014	110	48	014	018			

	*69 CODE	*70 ID	*71 CODE	*72 ID	*73	
49	014	019	57	015	017	114 Alarm Rst.
50	015	110	58	015	018	010 Trouble
51	015	011	59	015	019	010 Trble Rst.
52	015	012	60	016	110	010 Bypass
53	015	013	61	016	011	010 Bypss Rst.
54	015	014	62	016	012	
55	015	015	63	016	013	
56	015	016	64	016	014	

ALARM REPORT CODE & ID DIGITS FOR RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

	*74 CODE	*75 ID		*76 CODE	*77 ID		*78	
NU	010	010	89	018	019		114	Alarm Rst.
NU	010	010	90	019	110		010	Trouble
NU	010	010	91	019	011		010	Trble Rst.
NU	010	010	Dures	113	113		010	Bypass
NU	010	010	97	019	017		010	Bypss Rst.
NU	010	010	95	019	015	(1 + *)		
NU	010	010	96	019	016	(3 + #)		
88	018	018	99	019	019	(* + #)		

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

SYSTEM NON ALARM CODES

	*81 First Digit	*82 Second Digit
Close	010	010
Open	010	010
Low Battery	010	010
Low Bat Res.	010	010
AC Loss	010	010
AC Restore	010	010
Test	010	010
Power	010	010
Cancel	010	010
Prog. Tamper	010	010

Second digit of each code applies only to 4+2 or expanded (fields *52 & *53) formats.

ZONE TYPE RESTORE ENABLES

*79 ZONE TYPES 1-8 All enabled

[1] [1] [1] [1] [1] [1] [1] [1]
1 2 3 4 5 6 7 8

*80 ZONE TYPES 9 - 11 [1] [1] [1]
All enabled 9 10 11

COMMUNICATION DEFAULTS for ADEMCO HIGH SPEED FORMAT (*94*82)

*45 PRIMARY FORMAT [2] Ademco High Speed

*46 LOW SPEED FORMAT (Primary) [0]

*47 SECONDARY FORMAT [2] Ademco High Speed

*48 LOW SPEED FORMAT (Sec.) [0]

*49 CHECKSUM VERIFICATION [0] [0]
No checksum Primary Secondary

*50 SESCOA/RADIONICS SELECT [0] Radionics

*51 DUAL REPORTING [0] no

*52 STANDARD/EXPANDED REPORT FOR PRIMARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

*53 STANDARD/EXPANDED REPORT FOR SECONDARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

ALARM REPORT CODE & ID DIGITS FOR ZONES 1-32 & SUPERVISORY & RESTORE CODES

	*54 CODE	*55 ID		*56 CODE	*57 ID		*58		*59 CODE	*60 ID		*61 CODE	*62 ID		*63	
1	011	010	9	013	010		011	Alarm Rst.	17 014	010	25	014	010		011	Alarm Rst.
2	012	010	10	013	010		010	Trouble	18 014	010	26	014	010		010	Trouble
3	012	010	11	013	010		010	Trble Rst.	19 014	010	27	014	010		010	Trble Rst.
4	012	010	12	013	010		010	Bypass	20 014	010	28	014	010		010	Bypass
5	012	010	13	013	010		010	Bypss Rst.	21 014	010	29	014	010		010	Bypss Rst.
6	012	010	14	013	010				22 014	010	30	014	010			
7	012	010	15	013	010				23 014	010	31	014	010			
8	012	010	16	013	010				24 014	010	32	015	010			

ALARM REPORT CODE & ID DIGITS FOR ZONES 33-64 & SUPERVISORY & RESTORE CODES

	*64 CODE	*65 ID		*66 CODE	*67 ID		*68		*69 CODE	*70 ID		*71 CODE	*72 ID		*73	
33	015	010	41	015	010		011	Alarm Rst.	49 011	010	57	016	010		011	Alarm Rst.
34	015	010	42	015	010		010	Trouble	50 011	010	58	016	010		010	Trouble
35	015	010	43	015	010		010	Trble Rst.	51 011	010	59	016	010		010	Trble Rst.
36	015	010	44	015	010		010	Bypass	52 011	010	60	016	010		010	Bypass
37	015	010	45	015	010		010	Bypss Rst.	53 011	010	61	016	010		010	Bypss Rst.
38	015	010	46	015	010				54 011	010	62	019	010			
39	015	010	47	015	010				55 011	010	63	019	010			
40	015	010	48	011	010				56 016	010	64	016	010			

ALARM REPORT CODE & ID DIGITS FOR RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

	*74 CODE	*75 ID		*76 CODE	*77 ID		*78	
NU	010	010	89	017	010		011	Alarm Rst.
NU	010	010	90	018	010		010	Trouble
NU	010	010	91	018	010		010	Trble Rst.
NU	010	010	Dures	011	010		010	Bypass
NU	010	010	97	017	010		010	Bypss Rst.
NU	010	010	95	110	010	(1 + *)		
NU	010	010	96	111	010	(3 + #)		
88	017	010	99	112	010	(* + #)		

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

SYSTEM NON ALARM CODES

	*81 First Digit	*82 Second Digit
Close	010	010
Open	010	010
Low Battery	010	010
Low Bat Res.	010	010
AC Loss	010	010
AC Restore	010	010
Test	010	010
Power	010	010
Cancel	010	010
Prog. Tamper	010	010

Second digit of each code applies only to 4+2 or expanded (fields *52 & *53) formats.

ZONE TYPE RESTORE ENABLES

*79 ZONE TYPES 1-8 All enabled
[1] [1] [1] [1] [1] [1] [1] [1]
1 2 3 4 5 6 7 8

*80 ZONE TYPES 9 - 11 [1] [1] [1]
All enabled 9 10 11

COMMUNICATION DEFAULTS for ADEMCO's CONTACT ID FORMAT (*94*83)

*45 PRIMARY FORMAT [1] Ademco Contact ID

*46 LOW SPEED FORMAT (Primary) [0]

*47 SECONDARY FORMAT [1] Ademco Contact ID

*48 LOW SPEED FORMAT (Sec.) [0]

*49 CHECKSUM VERIFICATION [0] [0]
No checksum Primary Secondary

*50 SESCOA/RADIONICS SELECT [0] Radionics

*51 DUAL REPORTING [0] no

*52 STANDARD/EXPANDED REPORT FOR PRIMARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

*53 STANDARD/EXPANDED REPORT FOR SECONDARY
[0] [0] [0] [0] [0] [0] standard
Alarm Rstr Bypass Trbl Opn/Cls Low Bat

ALARM REPORT CODE & ID DIGITS FOR ZONES 1-32 & SUPERVISORY & RESTORE CODES

	*54 CODE	*55 ID		*56 CODE	*57 ID	_ *58		*59 CODE	*60 ID		*61 CODE	*62 ID	*63	
1	011	010	9	019	010	011	Alarm Rst.	17 012	010	25	110	010	011	Alarm Rst.
2	012	010	10	110	010	010	Trouble	18 013	010	26	111	010	010	Trouble
3	013	010	11	111	010	010	Trble Rst.	19 014	010	27	112	010	010	Trble Rst.
4	014	010	12	112	010	010	Bypass	20 015	010	28	113	010	010	Bypass
5	015	010	13	113	010	010	Bypss Rst.	21 016	010	29	114	010	010	Bypss Rst.
6	016	010	14	114	010			22 017	010	30	115	010		
7	017	010	15	115	010			23 018	010	31	011	010		
8	018	010	16	011	010			24 019	010	32	012	010		

ALARM REPORT CODE & ID DIGITS FOR ZONES 33-64 & SUPERVISORY & RESTORE CODES

	*64 CODE	*65 ID		*66 CODE	*67 ID	*68		*69 CODE	*70 ID		*71 CODE	*72 ID	*73	
33	01	010	41	111	010	011	Alarm Rst.	49 014	010	57	112	010	011	Alarm Rst.
34	01	010	42	112	010	010	Trouble	50 015	010	58	113	010	010	Trouble
35	01	010	43	113	010	010	Trble Rst.	51 016	010	59	114	010	010	Trble Rst.
36	01	010	44	114	010	010	Bypass	52 017	010	60	115	010	010	Bypass
37	01	010	45	115	010	010	Bypss Rst.	53 018	010	61	011	010	010	Bypss Rst.
38	01	010	46	011	010			54 019	010	62	012	010		
39	01	010	47	012	010			55 110	010	63	013	010		
40	10	010	48	013	010			56 111	010	64	014	010		

ALARM REPORT CODE & ID DIGITS FOR RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

	*74 CODE	*75 ID		*76 CODE	*77 ID	*78	
NU	010	010	89	114	010	011	Alarm Rst.
NU	010	010	90	115	010	010	Trouble
NU	010	010	91	011	010	010	Trble Rst.
NU	010	010	Dures	012	010	010	Bypass
NU	010	010	97	013	010	010	Bypss Rst.
NU	010	010	95	014	010	(1 + *)	
NU	010	010	96	015	010	(3 + #)	
88	113	010	99	016	010	(* + #)	

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

SYSTEM NON ALARM CODES

	*81 First Digit	*82 Second Digit
Close	010	010
Open	010	010
Low Battery	010	010
Low Bat Res.	010	010
AC Loss	010	010
AC Restore	010	010
Test	010	010
Power	010	010
Cancel	010	010
Prog. Tamper	010	010

Second digit of each code applies only to 4+2 or expanded (fields *52 & *53) formats.

ZONE TYPE RESTORE ENABLES

*79 ZONE TYPES 1-8 All enabled
[1] [1] [1] [1] [1] [1] [1] [1]
1 2 3 4 5 6 7 8

*80 ZONE TYPES 9 - 11 All enabled [1] [1] [1]
9 10 11

REGULATORY AGENCY STATEMENTS

UL INSTALLATION REQUIREMENTS

The following requirements apply to both UL Residential and UL Commercial Burglary installations:

1. All partitions must be owned and managed by the same person(s).
2. All partitions must be part of one building at one street address.
3. The audible alarm device(s) must be placed where it/they can be heard by all partitions.
4. The Control cabinet must be protected from unauthorized access. This can be done by installing a tamper switch on the cabinet door (not supplied with FA1340C; supplied with FA1340C-UL) or by installing a UL Listed passive infrared detector positioned to detect cabinet access. Wire the selected device to any EOLR supervised zone (zone 1-8). Program this zone for day trouble/night alarm (type 05) or 24 hour audible alarm (type 07) response. The 24 hour alarm response must be used for multiple partitioned systems.
5. Remote Downloading and auto-disarming are not UL Listed features.

UL609 GRADE A LOCAL MERCANTILE PREMISES/LOCAL MERCANTILE SAFE & VAULT

1. Use the FA1340C-UL.
2. All zones must be configured for EOLR supervision. Wireless sensors may not be used. If 4190WH RPMs are used, set field *24 to "0" to enable tamper detection.
3. Attach a door tamper switch (supplied) to the FA1340C-UL cabinet backbox. For safe and vault installations, a shock sensor (not supplied) must also be attached to the backbox. (Also see MOUNTING THE CABINET section)
4. Wire an Ademco AB12 Grade A Bell/Box to the bell output. Bell wires must be run in conduit. Program the bell output for 16 or more minute timeout and for confirmation of arming ding. (Also see EXTERNAL SOUNDERS section)
5. Wire the FA1340C-UL tamper switch and AB12 Bell/Box tamper switches to any EOLR supervised zone (zones 1-8). Program this zone for day trouble/night alarm (type 05) or 24 hour audible alarm (type 07) response. The 24 hour alarm response must be used for multiple partitioned systems.
6. Entry delays must not exceed 45 seconds and exit delays must not exceed 60 seconds.

UL365 POLICE STATION CONNECTED BURGLAR ALARM

Follow the instructions for UL609 local instructions.

For Grade A Service:

- You may use the FA1340C-UL dialer alone, or the 7720 Long Range Radio alone.
- When using the dialer, program it to send burglary alarm, low battery and communicator test reports. Field *27 must be set to "024" (or less) so that test reports are sent at least once every 24 hours.
- When using the 7720, connect it to the FA1340C-UL burglary/audible panic alarm panic alarm trigger.

For Grade AA Service:

- You must use a 7920SE Long Range Radio.
- Connect the 7920SE to the FA1340C-UL burglary/audible panic alarm panic alarm trigger.

UL611/UL1610 CENTRAL STATION BURGLARY ALARM

1. Follow the instructions for UL609 Local installations given above.

For Grade A Service:

- You must use the FA1340C-UL's dialer with a 7720 Long Range Radio.
- Connect the Control's burglary/audible panic alarm trigger (on J7 header) and the 659EN's phone line monitor output to the 7720. The 7720 will send a report to the central station when a telephone line fault condition is detected.
- Also connect the 7720's radio fault output to one of the FA1340C-UL's EOLR supervised zones (i.e., 1-8). Program this zone for a trouble by day/alarm by night (type 05) or a 24-hour alarm (type 07, 08) response to radio faults.
- Program the Control's dialer to send burglary alarm, trouble, opening/closing., and low battery reports.

For Grade AA Service:

- Follow the instructions for Grade A service except use the 7920SE in place of the 7720.

CALIFORNIA STATE FIRE MARSHAL (CSFM) REQUIREMENTS

24 hour battery back-up: The California State Fire Marshal has published new regulations which require that all residential fire alarm control panels installed after June 30, 1993 must be provided with a back-up battery which has sufficient capacity to operate the panel and its attached peripheral devices for 24 hours in the intended standby condition, followed by at least 4 minutes in the intended fire alarm signaling condition.

The FA1340C can meet this requirement without using a supplemental power supply, provided that the panel's outputs (including the current drawn from the auxiliary power output terminals) are limited as shown below:

- Output current is limited to 750mA maximum total auxiliary power, polling loop and bell output current.
- Maximum auxiliary current is 240mA (including polling loop current)
- Use 14AH battery (Yuasa model NP7-12 recommended, use two connected in parallel. A dual battery harness is provided with Ademco No. 4100EOLR Resistor kit (kit also contains EOL resistors having spade lug/heat shrink tubing construction which has been approved by UL and CSFM for fire zone usage). Both batteries will fit inside the panel's cabinet.

"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 type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in 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 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 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 or installer 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 control panel by removing the plug from the RJ31X (CA38A in Canada) wall jack. We recommend that you demonstrate disconnecting the phones on installation of the system. Do not disconnect the phone connection inside the Control Panel. Doing so will result in the loss of your phone lines. If the regular phone works correctly after the Control Panel has been disconnected from the phone lines, the Control Panel has a problem and should be returned for repair. If upon disconnection of the Control Panel, there is still a problem on the line, notify the telephone company that 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 to the system. It must be returned to the factory or an authorized service agency for all repairs.

FCC PART 68 NOTICE

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.

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'empêchet 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 precis 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.

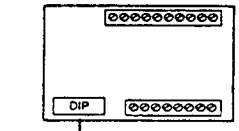
Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise en terre de la source d'énergie électrique, des lignes téléphoniques de réseau de conduites d'eau s'il y en a, soient raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

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.

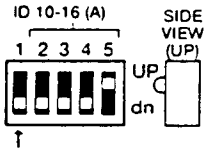
L'indice de charge (IC) assigné à chaque dispositif terminal pour éviter toute surcharge indique le pourcentage de la charge totale qui peut être raccordé à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison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

DIP SWITCH TABLES FOR POLLING LOOP DEVICES

4208 Zone Expander



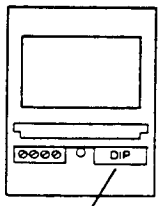
SHOWN SET FOR ID 10-16 (A)



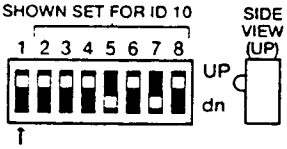
POS. 1: LOOPS 1 & 2 RESPONSE TIME:

W/TABLE	FAST	SLOW
A	UP	dn
B	dn	UP

4196 PIR

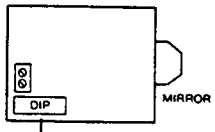


SHOWN SET FOR ID 10

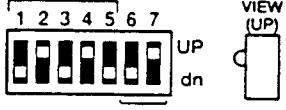


POS.1: MUST BE UP

4275 PIR



SHOWN SET FOR ID 10 (A)



POS 6: UP (A), dn (B) = INST. MODE
dn (A), UP (B) = PULSE COUNT

POS. 7: UP (A), dn (B) = WALK TEST
dn (A), UP (B) = W/T DISABLE

THIS TABLE FOR DIPS WITH WORD "OFF" A

DEVICE ID	DIP SWITCH POSITION			
	2	3	4	5
10-16	dn	dn	dn	UP
17-24	dn	dn	UP	dn
25-32	dn	dn	UP	UP
33-40	dn	UP	dn	dn
41-48	dn	UP	dn	UP
49-56	dn	UP	UP	dn
57-64	dn	UP	UP	UP
65-72	UP	dn	dn	dn
73-80	UP	dn	dn	UP
81-88	UP	dn	UP	dn

THIS TABLE FOR DIPS WITH WORD "ON" B

DEVICE ID	DIP SWITCH POSITION			
	2	3	4	5
10-16	UP	UP	UP	dn
17-24	UP	UP	dn	UP
25-32	UP	UP	dn	dn
33-40	UP	dn	UP	UP
41-48	UP	dn	UP	dn
49-56	UP	dn	dn	UP
57-64	UP	dn	dn	dn
65-72	dn	UP	UP	UP
73-80	dn	UP	UP	dn
81-88	dn	UP	dn	UP

DEVICE ID	DIP SWITCH POSITION							
	2	3	4	5	6	7	8	
10	UP	UP	UP	dn	UP	dn	UP	
11	UP	UP	UP	dn	UP	dn	dn	
12	UP	UP	UP	dn	dn	UP	UP	
13	UP	UP	UP	dn	dn	UP	dn	
14	UP	UP	UP	dn	dn	dn	UP	
15	UP	UP	UP	dn	dn	dn	dn	
16	UP	UP	dn	UP	UP	UP	UP	
17	UP	UP	dn	UP	UP	UP	dn	
18	UP	UP	dn	UP	UP	dn	UP	
19	UP	UP	dn	UP	UP	dn	dn	
20	UP	UP	dn	UP	dn	UP	UP	
21	UP	UP	dn	UP	dn	UP	dn	
22	UP	UP	dn	UP	dn	dn	UP	
23	UP	UP	dn	UP	dn	dn	dn	
24	UP	UP	dn	dn	UP	UP	UP	
25	UP	UP	dn	dn	UP	UP	dn	
26	UP	UP	dn	dn	UP	dn	UP	
27	UP	UP	dn	dn	UP	dn	dn	
28	UP	UP	dn	dn	dn	UP	UP	
29	UP	UP	dn	dn	dn	UP	dn	
30	UP	UP	dn	dn	dn	dn	UP	
31	UP	UP	dn	dn	dn	dn	dn	
32	UP	dn	UP	UP	UP	UP	UP	
33	UP	dn	UP	UP	UP	UP	dn	
34	UP	dn	UP	UP	UP	dn	UP	
35	UP	dn	UP	UP	UP	dn	dn	
36	UP	dn	UP	UP	dn	UP	UP	
37	UP	dn	UP	UP	dn	UP	dn	
38	UP	dn	UP	UP	dn	dn	UP	
39	UP	dn	UP	UP	dn	dn	dn	
40	UP	dn	UP	dn	UP	UP	UP	
41	UP	dn	UP	dn	UP	UP	dn	
42	UP	dn	UP	dn	UP	dn	UP	
43	UP	dn	UP	dn	UP	dn	dn	
44	UP	dn	UP	dn	dn	UP	UP	
45	UP	dn	UP	dn	dn	UP	dn	
46	UP	dn	UP	dn	dn	dn	UP	
47	UP	dn	UP	dn	dn	dn	dn	
48	UP	dn	dn	UP	UP	UP	UP	
49	UP	dn	dn	UP	UP	UP	dn	
50	UP	dn	dn	UP	UP	dn	UP	
51	UP	dn	dn	UP	UP	dn	dn	
52	UP	dn	dn	UP	dn	UP	UP	
53	UP	dn	dn	UP	dn	UP	dn	
54	UP	dn	dn	UP	dn	dn	UP	
55	UP	dn	dn	UP	dn	dn	dn	
56	UP	dn	dn	dn	UP	UP	UP	
57	UP	dn	dn	dn	UP	UP	dn	
58	UP	dn	dn	dn	UP	dn	UP	
59	UP	dn	dn	dn	UP	dn	dn	
60	UP	dn	dn	dn	dn	UP	UP	
61	UP	dn	dn	dn	dn	UP	dn	
62	UP	dn	dn	dn	dn	dn	UP	
63	UP	dn	dn	dn	dn	dn	dn	
64	dn	UP	UP	UP	UP	UP	UP	
65	dn	UP	UP	UP	UP	UP	dn	
66	dn	UP	UP	UP	UP	dn	UP	
67	dn	UP	UP	UP	UP	dn	dn	
68	dn	UP	UP	UP	dn	UP	UP	
69	dn	UP	UP	UP	dn	UP	dn	
70	dn	UP	UP	UP	dn	dn	UP	
71	dn	UP	UP	UP	dn	dn	dn	
72	dn	UP	UP	dn	UP	UP	UP	
73	dn	UP	UP	dn	UP	UP	dn	
74	dn	UP	UP	dn	UP	dn	UP	
75	dn	UP	UP	dn	UP	dn	dn	
76	dn	UP	UP	dn	dn	UP	UP	
77	dn	UP	UP	dn	dn	UP	dn	
78	dn	UP	UP	dn	dn	dn	UP	
79	dn	UP	UP	dn	dn	dn	dn	
80	dn	UP	dn	UP	UP	UP	UP	
81	dn	UP	dn	UP	UP	UP	dn	
82	dn	UP	dn	UP	UP	dn	UP	
83	dn	UP	dn	UP	UP	dn	dn	
84	dn	UP	dn	UP	dn	UP	UP	
85	dn	UP	dn	UP	dn	UP	dn	
86	dn	UP	dn	UP	dn	dn	UP	
87	dn	UP	dn	UP	dn	dn	dn	
88	dn	UP	dn	dn	UP	UP	UP	
89	dn	UP	dn	dn	UP	UP	dn	
BIT VALUE:	64	32	16	8	4	2	1	

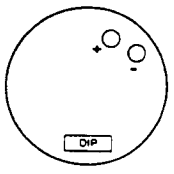
THIS TABLE FOR DIPS WITH WORD "OFF" A

DEVICE ID	DIP SWITCH POSITION				
	1	2	3	4	5
10	dn	UP	dn	UP	dn
11	dn	UP	dn	UP	UP
12	dn	UP	UP	dn	dn
13	dn	UP	UP	dn	UP
14	dn	UP	UP	UP	dn
15	dn	UP	UP	UP	UP
16	UP	dn	dn	dn	dn
17	UP	dn	dn	dn	UP
18	UP	dn	dn	UP	dn
19	UP	dn	dn	UP	UP
20	UP	dn	UP	dn	dn
21	UP	dn	UP	dn	UP
22	UP	dn	UP	UP	dn
23	UP	dn	UP	UP	UP
24	UP	UP	dn	dn	dn
25	UP	UP	dn	dn	UP
26	UP	UP	dn	UP	dn
27	UP	UP	dn	UP	UP
28	UP	UP	UP	dn	dn
29	UP	UP	UP	dn	UP
30	UP	UP	UP	UP	dn
31	UP	UP	UP	UP	UP

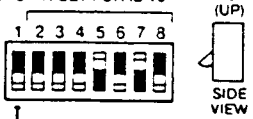
THIS TABLE FOR DIPS WITH WORD "ON" B

DEVICE ID	DIP SWITCH POSITION				
	1	2	3	4	5
10	UP	dn	UP	dn	UP
11	UP	dn	UP	dn	dn
12	UP	dn	dn	UP	UP
13	UP	dn	dn	UP	dn
14	UP	dn	dn	dn	UP
15	UP	dn	dn	dn	dn
16	dn	UP	UP	UP	UP
17	dn	UP	UP	UP	dn
18	dn	UP	UP	dn	UP
19	dn	UP	UP	dn	dn
20	dn	UP	dn	UP	UP
21	dn	UP	dn	UP	dn
22	dn	UP	dn	dn	UP
23	dn	UP	dn	dn	dn
24	dn	dn	UP	UP	UP
25	dn	dn	UP	UP	dn
26	dn	dn	UP	dn	UP
27	dn	dn	UP	dn	dn
28	dn	dn	dn	UP	UP
29	dn	dn	dn	UP	dn
30	dn	dn	dn	dn	UP
31	dn	dn	dn	dn	dn
BIT VALUE:	16	8	4	2	1

4192SD/4192SDT/ 4192CP Smoke Detectors

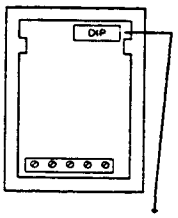


APPLIES TO TABLE A ONLY
SHOWN SET FOR ID 10

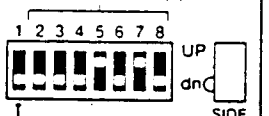


POS. 1: MUST BE dn

4190WH Zone Expander

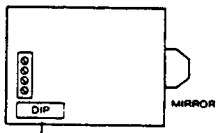


APPLIES TO TABLES A & B
SHOWN SET FOR ID 10(A)

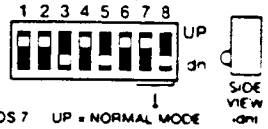


WITH TABLE: A B
POS. 1 MUST BE dn UP

4278 PIR



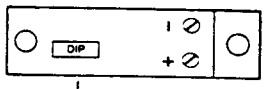
SHOWN SET FOR ID 10



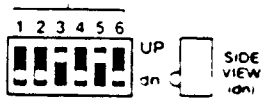
POS 7 UP = NORMAL MODE
dn = INSTANT MODE

POS. 8: UP = W/T DISABLE
dn = WALK TEST

4194 Reed Contact (Surface Mount)



SHOWN SET FOR ID 10



THIS TABLE FOR DIPS WITH WORD "OFF" — A

DEVICE ID	DIP SWITCH POSITION 2	3	4	5	6	7	8
10	dn	dn	dn	UP	dn	UP	dn
11	dn	dn	dn	UP	dn	UP	UP
12	dn	dn	dn	UP	UP	dn	dn
13	dn	dn	dn	UP	UP	dn	UP
14	dn	dn	dn	UP	UP	UP	dn
15	dn	dn	dn	UP	UP	UP	UP
16	dn	dn	UP	dn	dn	dn	dn
17	dn	dn	UP	dn	dn	dn	UP
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19	dn	dn	UP	dn	dn	UP	UP
20	dn	dn	UP	dn	UP	dn	dn
21	dn	dn	UP	dn	UP	dn	UP
22	dn	dn	UP	dn	UP	UP	dn
23	dn	dn	UP	dn	UP	UP	UP
24	dn	dn	UP	UP	dn	dn	dn
25	dn	dn	UP	UP	dn	dn	UP
26	dn	dn	UP	UP	dn	UP	dn
27	dn	dn	UP	UP	dn	UP	UP
28	dn	dn	UP	UP	UP	dn	dn
29	dn	dn	UP	UP	UP	dn	UP
30	dn	dn	UP	UP	UP	UP	dn
31	dn	dn	UP	UP	UP	UP	UP
32	dn	UP	dn	dn	dn	dn	dn
33	dn	UP	dn	dn	dn	dn	UP
34	dn	UP	dn	dn	dn	UP	dn
35	dn	UP	dn	dn	dn	UP	UP
36	dn	UP	dn	dn	UP	dn	dn
37	dn	UP	dn	dn	UP	dn	UP
38	dn	UP	dn	dn	UP	UP	dn
39	dn	UP	dn	dn	UP	UP	UP
40	dn	UP	dn	UP	dn	dn	dn
41	dn	UP	dn	UP	dn	dn	UP
42	dn	UP	dn	UP	dn	UP	dn
43	dn	UP	dn	UP	dn	UP	UP
44	dn	UP	dn	UP	UP	dn	dn
45	dn	UP	dn	UP	UP	dn	UP
46	dn	UP	dn	UP	UP	UP	dn
47	dn	UP	dn	UP	UP	UP	UP
48	dn	UP	UP	dn	dn	dn	dn
49	dn	UP	UP	dn	dn	dn	UP
50	dn	UP	UP	dn	dn	UP	dn
51	dn	UP	UP	dn	dn	UP	UP
52	dn	UP	UP	dn	UP	dn	dn
53	dn	UP	UP	dn	UP	dn	UP
54	dn	UP	UP	dn	UP	UP	dn
55	dn	UP	UP	dn	UP	UP	UP
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59	dn	UP	UP	UP	dn	UP	UP
60	dn	UP	UP	UP	UP	dn	dn
61	dn	UP	UP	UP	UP	dn	UP
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65	UP	dn	dn	dn	dn	dn	UP
66	UP	dn	dn	dn	dn	UP	dn
67	UP	dn	dn	dn	dn	UP	UP
68	UP	dn	dn	dn	UP	dn	dn
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70	UP	dn	dn	dn	UP	UP	dn
71	UP	dn	dn	dn	UP	UP	UP
72	UP	dn	dn	UP	dn	dn	dn
73	UP	dn	dn	UP	dn	dn	UP
74	UP	dn	dn	UP	dn	UP	dn
75	UP	dn	dn	UP	dn	UP	UP
76	UP	dn	dn	UP	UP	dn	dn
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78	UP	dn	dn	UP	UP	UP	dn
79	UP	dn	dn	UP	UP	UP	UP
80	UP	dn	UP	dn	dn	dn	dn
81	UP	dn	UP	dn	dn	dn	UP
82	UP	dn	UP	dn	dn	UP	dn
83	UP	dn	UP	dn	dn	UP	UP
84	UP	dn	UP	dn	UP	dn	dn
85	UP	dn	UP	dn	UP	dn	UP
86	UP	dn	UP	dn	UP	UP	dn
87	UP	dn	UP	dn	UP	UP	UP
88	UP	dn	UP	UP	dn	dn	dn
89	UP	dn	UP	UP	dn	dn	UP
BIT VALUE:	64	32	16	8	4	2	1

THIS TABLE FOR DIPS WITH WORD "ON" — B

DEVICE ID	DIP SWITCH POSITION 2	3	4	5	6	7	8
10	UP	UP	UP	dn	UP	dn	UP
11	UP	UP	UP	dn	UP	dn	dn
12	UP	UP	UP	dn	dn	UP	UP
13	UP	UP	UP	dn	dn	UP	dn
14	UP	UP	UP	dn	dn	dn	UP
15	UP	UP	UP	dn	dn	dn	dn
16	UP	UP	dn	UP	UP	UP	UP
17	UP	UP	dn	UP	UP	UP	dn
18	UP	UP	dn	UP	UP	dn	UP
19	UP	UP	dn	UP	UP	dn	dn
20	UP	UP	dn	UP	dn	UP	UP
21	UP	UP	dn	UP	dn	UP	dn
22	UP	UP	dn	UP	dn	dn	UP
23	UP	UP	dn	UP	dn	dn	dn
24	UP	UP	dn	dn	UP	UP	UP
25	UP	UP	dn	dn	UP	UP	dn
26	UP	UP	dn	dn	UP	dn	UP
27	UP	UP	dn	dn	UP	dn	dn
28	UP	dn	UP	UP	UP	UP	UP
29	UP	dn	UP	UP	UP	UP	dn
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31	UP	dn	UP	UP	UP	dn	dn
32	UP	dn	UP	UP	dn	UP	UP
33	UP	dn	UP	UP	dn	UP	dn
34	UP	dn	UP	UP	dn	dn	UP
35	UP	dn	UP	UP	dn	dn	dn
36	UP	dn	UP	dn	UP	UP	UP
37	UP	dn	UP	dn	UP	UP	dn
38	UP	dn	UP	dn	UP	dn	UP
39	UP	dn	UP	dn	UP	dn	dn
40	UP	dn	UP	dn	dn	UP	UP
41	UP	dn	UP	dn	dn	UP	dn
42	UP	dn	UP	dn	dn	dn	UP
43	UP	dn	UP	dn	dn	dn	dn
44	UP	dn	dn	UP	UP	UP	UP
45	UP	dn	dn	UP	UP	UP	dn
46	UP	dn	dn	UP	UP	dn	UP
47	UP	dn	dn	UP	UP	dn	dn
48	UP	dn	dn	UP	dn	UP	UP
49	UP	dn	dn	UP	dn	UP	dn
50	UP	dn	dn	UP	dn	dn	UP
51	UP	dn	dn	UP	dn	dn	dn
52	UP	dn	dn	dn	UP	UP	UP
53	UP	dn	dn	dn	UP	UP	dn
54	UP	dn	dn	dn	UP	dn	UP
55	UP	dn	dn	dn	UP	dn	dn
56	UP	dn	dn	dn	dn	UP	UP
57	UP	dn	dn	dn	dn	UP	dn
58	UP	dn	dn	dn	dn	dn	UP
59	UP	dn	dn	dn	dn	dn	dn
60	UP	dn	dn	dn	dn	UP	UP
61	UP	dn	dn	dn	UP	UP	dn
62	UP	dn	dn	dn	UP	dn	UP
63	UP	dn	dn	dn	UP	dn	dn
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65	dn	UP	UP	UP	UP	UP	dn
66	dn	UP	UP	UP	UP	dn	UP
67	dn	UP	UP	UP	UP	dn	dn
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69	dn	UP	UP	UP	dn	UP	dn
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71	dn	UP	UP	UP	dn	dn	dn
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74	dn	UP	UP	dn	UP	dn	UP
75	dn	UP	UP	dn	UP	dn	dn
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82	dn	UP	dn	UP	UP	dn	UP
83	dn	UP	dn	UP	UP	dn	dn
84	dn	UP	dn	UP	dn	UP	UP
85	dn	UP	dn	UP	dn	UP	dn
86	dn	UP	dn	UP	dn	dn	UP
87	dn	UP	dn	UP	dn	dn	dn
88	dn	UP	dn	dn	UP	UP	UP
89	dn	UP	dn	dn	UP	UP	dn
BIT VALUE:	64	32	16	8	4	2	1

DEVICE ID	DIP SWITCH POSITION 1	2	3	4	5	6
10	UP	UP	dn	UP	dn	UP
11	UP	UP	dn	UP	dn	dn
12	UP	UP	dn	dn	UP	UP
13	UP	UP	dn	dn	UP	dn
14	UP	UP	dn	dn	dn	UP
15	UP	UP	dn	dn	dn	dn
16	UP	dn	UP	UP	UP	UP
17	UP	dn	UP	UP	UP	dn
18	UP	dn	UP	UP	dn	UP
19	UP	dn	UP	UP	dn	dn
20	UP	dn	UP	dn	UP	UP
21	UP	dn	UP	dn	UP	dn
22	UP	dn	UP	dn	dn	UP
23	UP	dn	UP	dn	dn	dn
24	UP	dn	dn	UP	UP	UP
25	UP	dn	dn	UP	UP	dn
26	UP	dn	dn	UP	dn	UP
27	UP	dn	dn	UP	dn	dn
28	UP	dn	dn	dn	UP	UP
29	UP	dn	dn	dn	UP	dn
30	UP	dn	dn	dn	dn	UP
31	UP	dn	dn	dn	dn	dn
32	dn	UP	UP	UP	UP	UP
33	dn	UP	UP	UP	UP	dn
34	dn	UP	UP	UP	dn	UP
35	dn	UP	UP	UP	dn	dn
36	dn	UP	UP	dn	UP	UP
37	dn	UP	UP	dn	UP	dn
38	dn	UP	UP	dn	dn	UP
39	dn	UP	UP	dn	dn	dn
40	dn	UP	dn	UP	UP	UP
41	dn	UP	dn	UP	UP	dn
42	dn	UP	dn	UP	dn	UP
43	dn	UP	dn	UP	dn	dn
44	dn	UP	dn	dn	UP	UP
45	dn	UP	dn	dn	UP	dn
46	dn	UP	dn	dn	dn	UP
47	dn	UP	dn	dn	dn	dn
48	dn	dn	UP	UP	UP	UP
49	dn	dn	UP	UP	dn	UP
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52	dn	dn	UP	dn	UP	dn
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54	dn	dn	UP	dn	UP	dn
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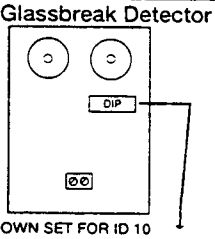
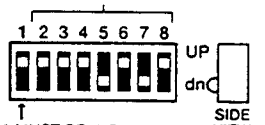
57	dn	dn	dn	UP	UP	dn
58	dn	dn	dn	UP	dn	UP
59	dn	dn	dn	UP	dn	dn
60	dn	dn	dn	dn	UP	UP
61	dn	dn	dn	dn	UP	dn
62	dn	dn	dn	dn	dn	UP
63	dn	dn	dn	dn	dn	dn
BIT VALUE:	32	16	8	4	2	1

DEVICE ID	DIP SWITCH POSITION 1	2	3	4	5	6
10	dn	dn	UP	dn	UP	dn
11	dn	dn	UP	dn	UP	UP
12	dn	dn	UP	UP	dn	dn
13	dn	dn	UP	UP	dn	UP
14	dn	dn	UP	UP	UP	dn
15	dn	dn	UP	UP	UP	UP
16	dn	UP	dn	dn	dn	dn
17	dn	UP	dn	dn	dn	UP
18	dn	UP	dn	dn	UP	dn
19	dn	UP	dn	dn	UP	UP
20	dn	UP	dn	UP	dn	dn
21	dn	UP	dn	UP	dn	UP
22	dn	UP	dn	UP	UP	dn
23	dn	UP	dn	UP	UP	UP
24	dn	UP	UP	dn	dn	dn
25	dn	UP	UP	dn	dn	UP
26	dn	UP	UP	dn	UP	dn
27	dn	UP	UP	dn	UP	UP
28	dn	UP	UP	UP	dn	dn
29	dn	UP	UP	UP	dn	UP
30	dn	UP	UP	UP	UP	dn
31	dn	UP	UP	UP	UP	UP
32	UP	dn	dn	dn	dn	dn
33	UP	dn	dn	dn	dn	UP
34	UP	dn	dn	dn	UP	dn
35	UP	dn	dn	dn	UP	UP
36	UP	dn	dn	UP	dn	dn
37	UP	dn	dn	UP	dn	UP
38	UP	dn	dn	UP	UP	dn
39	UP	dn	dn	UP	UP	UP
40	UP	dn	UP	dn	dn	dn
41	UP	dn	UP	dn	dn	UP
42	UP	dn	UP	dn	UP	dn
43	UP	dn	UP	dn	UP	UP
44	UP	dn	UP	UP	dn	dn
45	UP	dn	UP	UP	dn	UP
46	UP	dn	UP	UP	UP	dn
47	UP	dn	UP	UP	UP	UP
48	UP	UP	dn	dn	dn	dn
49	UP	UP	dn	dn	dn	UP
50	UP	UP	dn	dn	UP	dn
51	UP	UP	dn	dn	UP	UP
52	UP	UP	dn	UP	dn	dn
53	UP	UP	dn	UP	dn	UP
54	UP	UP	dn	UP	UP	dn
55	UP	UP	dn	UP	UP	UP
56	UP	UP	UP	dn	dn	dn
57	UP	UP	UP	dn	dn	UP
58	UP	UP	UP	dn	UP	dn
59	UP	UP	UP	dn	UP	UP
60	UP	UP	UP	UP	dn	dn
61	UP	UP	UP	UP	dn	UP
62	UP	UP	UP	UP	UP	dn
63	UP	UP	UP	UP	UP	UP
BIT VALUE:	32	16	8	4	2	1

9500 Glassbreak Detector

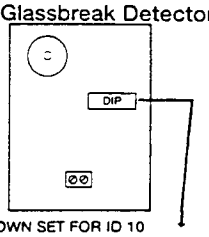


SHOWN SET FOR ID 10

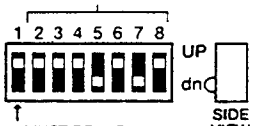


POS. 1 MUST BE: UP

7500 Glassbreak Detector



SHOWN SET FOR ID 10



POS. 1 MUST BE: UP

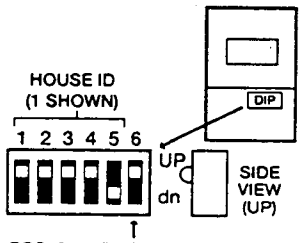
FOR DIP SWITCH SETTINGS, USE TABLE B ABOVE LEFT

DIP SWITCH TABLES FOR WIRELESS DEVICES

House ID Switch Setting for All Devices Except 5716

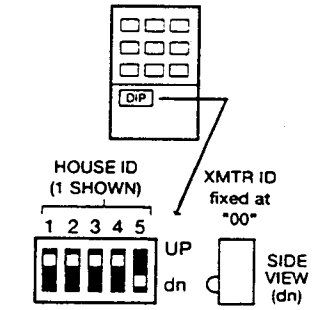
HOUSE ID	DIP SWITCH SETTINGS 1	2	3	4	5
1	UP	UP	UP	UP	dn
2	UP	UP	UP	dn	UP
3	UP	UP	UP	dn	dn
4	UP	UP	dn	UP	UP
5	UP	UP	dn	UP	dn
6	UP	UP	dn	dn	UP
7	UP	UP	dn	dn	dn
8	UP	dn	UP	UP	UP
9	UP	dn	UP	UP	dn
10	UP	dn	UP	dn	UP
11	UP	dn	UP	dn	dn
12	UP	dn	dn	UP	UP
13	UP	dn	dn	UP	dn
14	UP	dn	dn	dn	UP
15	UP	dn	dn	dn	dn
16	dn	UP	UP	UP	UP
17	dn	UP	UP	UP	dn
18	dn	UP	UP	dn	UP
19	dn	UP	UP	dn	dn
20	dn	UP	dn	UP	UP
21	dn	UP	dn	UP	dn
22	dn	UP	dn	dn	UP
23	dn	UP	dn	dn	dn
24	dn	dn	UP	UP	UP
25	dn	dn	UP	UP	dn
26	dn	dn	UP	dn	UP
27	dn	dn	UP	dn	dn
28	dn	dn	dn	UP	UP
29	dn	dn	dn	UP	dn
30	dn	dn	dn	dn	UP
31	dn	dn	dn	dn	dn
BIT VALUE:	16	8	4	2	1

5701 Panic Xmtr.

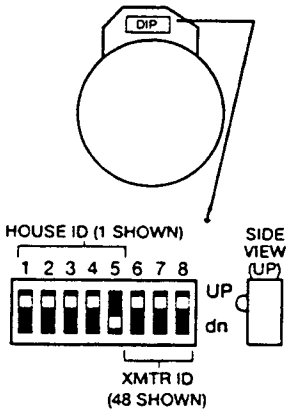


POS. 6: UP = XMTR ID 62
dn = XMTR ID 63

5727 Keypad

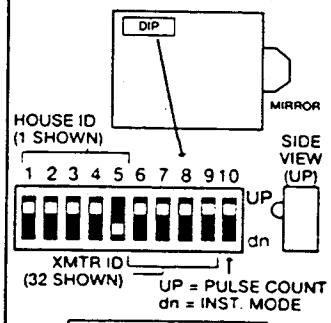


5706/5707 Smoke Detector Transmitter



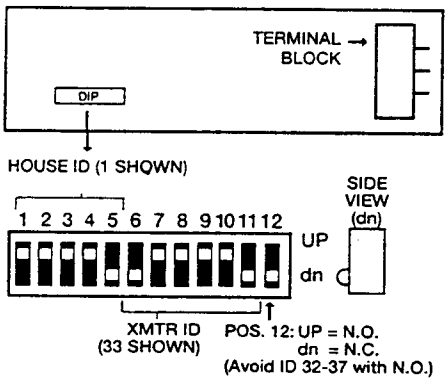
XMTR ID	DIP SWITCH SETTINGS 6	7	8
48	UP	UP	UP
49	UP	UP	dn
50	UP	dn	UP
51	UP	dn	dn
52	dn	UP	UP
53	dn	UP	dn
54	dn	dn	UP
55	dn	dn	dn

5775 PIR Detector/Transmitter



XMTR ID	DIP SWITCH SETTINGS 6	7	8	9
32	UP	UP	UP	UP
33	UP	UP	UP	dn
34	UP	UP	dn	UP
35	UP	UP	dn	dn
36	UP	dn	UP	UP
37	UP	dn	UP	dn
38	UP	dn	dn	UP
39	UP	dn	dn	dn
40	dn	UP	UP	UP
41	dn	UP	UP	dn
42	dn	UP	dn	UP
43	dn	UP	dn	dn
44	dn	dn	UP	UP
45	dn	dn	UP	dn
46	dn	dn	dn	UP
47	dn	dn	dn	dn

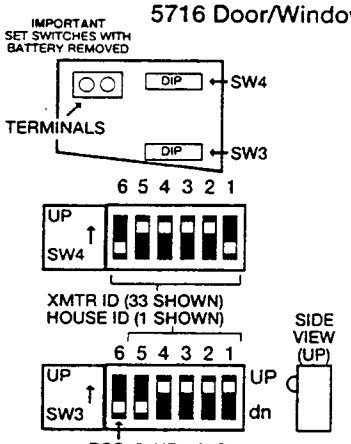
5711/5711WM Door/Window Transmitter



XMTR ID	DIP SWITCH SETTINGS 6	7	8	9	10	11
1	UP	UP	UP	UP	UP	dn
2	UP	UP	UP	UP	dn	UP
3	UP	UP	UP	UP	dn	dn
4	UP	UP	UP	dn	UP	UP
5	UP	UP	UP	dn	UP	dn
6	UP	UP	UP	dn	dn	UP
7	UP	UP	UP	dn	dn	dn
8	UP	UP	dn	UP	UP	UP
9	UP	UP	dn	UP	UP	dn
10	UP	UP	dn	UP	dn	UP
11	UP	UP	dn	UP	dn	dn
12	UP	UP	dn	dn	UP	UP
13	UP	UP	dn	dn	UP	dn
14	UP	UP	dn	dn	dn	UP
15	UP	UP	dn	dn	dn	dn
16	UP	dn	UP	UP	UP	UP
17	UP	dn	UP	UP	UP	dn
18	UP	dn	UP	UP	dn	UP
19	UP	dn	UP	UP	dn	dn
20	UP	dn	UP	dn	UP	UP
21	UP	dn	UP	dn	UP	dn
22	UP	dn	UP	dn	dn	UP
23	UP	dn	UP	dn	dn	dn
24	UP	dn	dn	UP	UP	UP
25	UP	dn	dn	UP	UP	dn
26	UP	dn	dn	UP	dn	UP
27	UP	dn	dn	UP	dn	dn
28	UP	dn	dn	dn	UP	UP
29	UP	dn	dn	dn	UP	dn
30	UP	dn	dn	dn	dn	UP
31	UP	dn	dn	dn	dn	dn
32	dn	UP	UP	UP	UP	UP
BIT VALUE:	32	16	8	4	2	1

XMTR ID	DIP SWITCH SETTINGS 6	7	8	9	10	11
33	dn	UP	UP	UP	UP	dn
34	dn	UP	UP	UP	dn	UP
35	dn	UP	UP	UP	dn	dn
36	dn	UP	UP	dn	UP	UP
37	dn	UP	UP	dn	UP	dn
38	dn	UP	UP	dn	dn	UP
39	dn	UP	UP	dn	dn	dn
40	dn	UP	dn	UP	UP	UP
41	dn	UP	dn	UP	UP	dn
42	dn	UP	dn	UP	dn	UP
43	dn	UP	dn	UP	dn	dn
44	dn	UP	dn	dn	UP	UP
45	dn	UP	dn	dn	UP	dn
46	dn	UP	dn	dn	dn	UP
47	dn	UP	dn	dn	dn	dn
48	dn	dn	UP	UP	UP	UP
49	dn	dn	UP	UP	UP	dn
50	dn	dn	UP	UP	dn	UP
51	dn	dn	UP	UP	dn	dn
52	dn	dn	UP	dn	UP	UP
53	dn	dn	UP	dn	UP	dn
54	dn	dn	UP	dn	dn	UP
55	dn	dn	UP	dn	dn	dn
56	dn	dn	dn	UP	UP	UP
57	dn	dn	dn	UP	UP	dn
58	dn	dn	dn	UP	dn	UP
59	dn	dn	dn	UP	dn	dn
60	dn	dn	dn	dn	UP	UP
61	dn	dn	dn	dn	UP	dn
62	dn	dn	dn	dn	dn	UP
63	dn	dn	dn	dn	dn	dn
BIT VALUE:	32	16	8	4	2	1

5716 Door/Window Transmitter



HOUSE ID	DIP SWITCH SETTINGS 5	4	3	2	1
1	dn	UP	UP	UP	UP
2	UP	dn	UP	UP	UP
3	dn	dn	UP	UP	UP
4	UP	UP	dn	UP	UP
5	dn	UP	dn	UP	UP
6	UP	dn	dn	UP	UP
7	dn	dn	dn	UP	UP
8	UP	UP	UP	dn	UP
9	dn	UP	UP	dn	UP
10	UP	dn	UP	dn	UP
11	dn	dn	UP	dn	UP
12	UP	UP	dn	dn	UP
13	dn	UP	dn	dn	UP
14	UP	dn	dn	dn	UP
15	dn	dn	dn	dn	UP
16	UP	UP	UP	UP	dn
17	dn	UP	UP	UP	dn
18	UP	dn	UP	UP	dn
19	dn	dn	UP	UP	dn
20	UP	UP	dn	UP	dn
21	dn	UP	dn	UP	dn
22	UP	dn	dn	UP	dn
23	dn	dn	dn	UP	dn
24	UP	UP	UP	dn	dn
25	dn	UP	UP	dn	dn
26	UP	dn	UP	dn	dn
27	dn	dn	UP	dn	dn
28	UP	UP	dn	dn	dn
29	dn	UP	dn	dn	dn
30	UP	dn	dn	dn	dn
31	dn	dn	dn	dn	dn
BIT VALUE:	1	2	4	8	16

TRANSMITTER ID	DIP SWITCH SETTINGS 6	5	4	3	2	1
1	dn	UP	UP	UP	UP	UP
2	UP	dn	UP	UP	UP	UP
3	dn	dn	UP	UP	UP	UP
4	UP	UP	dn	UP	UP	UP
5	dn	UP	dn	UP	UP	UP
6	UP	dn	dn	UP	UP	UP
7	dn	dn	dn	UP	UP	UP
8	UP	UP	UP	dn	UP	UP
9	dn	UP	UP	dn	UP	UP
10	UP	dn	UP	dn	UP	UP
11	dn	dn	UP	dn	UP	UP
12	UP	UP	dn	dn	UP	UP
13	dn	UP	dn	dn	UP	UP
14	UP	dn	dn	dn	UP	UP
15	dn	dn	dn	dn	UP	UP
16	UP	UP	UP	UP	dn	UP
17	dn	UP	UP	UP	dn	UP
18	UP	dn	UP	UP	dn	UP
19	dn	dn	UP	UP	dn	UP
20	UP	UP	dn	UP	dn	UP
21	dn	UP	dn	UP	dn	UP
22	UP	dn	dn	UP	dn	UP
23	dn	dn	dn	UP	dn	UP
24	UP	UP	UP	dn	dn	UP
25	dn	UP	UP	dn	dn	UP
26	UP	dn	UP	dn	dn	UP
27	dn	dn	UP	dn	dn	UP
28	UP	UP	dn	dn	dn	UP
29	dn	UP	dn	dn	dn	UP
30	UP	dn	dn	dn	dn	UP
31	dn	dn	dn	dn	dn	UP
32	UP	UP	UP	UP	UP	dn
33	dn	UP	UP	UP	UP	dn
34	UP	dn	UP	UP	UP	dn
35	dn	dn	UP	UP	UP	dn
36	UP	UP	dn	UP	UP	dn
37	dn	UP	dn	UP	UP	dn
38	UP	dn	dn	UP	UP	dn
39	dn	dn	dn	UP	UP	dn
40	UP	UP	UP	dn	UP	dn
41	dn	UP	UP	dn	UP	dn
42	UP	dn	UP	dn	UP	dn
43	dn	dn	UP	dn	UP	dn
44	UP	UP	dn	dn	UP	dn
45	dn	UP	dn	dn	UP	dn
46	UP	dn	dn	dn	UP	dn
47	dn	dn	dn	dn	UP	dn
48	UP	UP	UP	UP	dn	dn
49	dn	UP	UP	UP	dn	dn
50	UP	dn	UP	UP	dn	dn
51	dn	dn	UP	UP	dn	dn
52	UP	UP	dn	UP	dn	dn
53	dn	UP	dn	UP	dn	dn
54	UP	dn	dn	UP	dn	dn
55	dn	dn	dn	UP	dn	dn
56	UP	UP	UP	dn	dn	dn
57	dn	UP	UP	dn	dn	dn
58	UP	dn	UP	dn	dn	dn
59	dn	dn	UP	dn	dn	dn
60	UP	UP	dn	dn	dn	dn
61	dn	UP	dn	dn	dn	dn
62	UP	dn	dn	dn	dn	dn
63	dn	dn	dn	dn	dn	dn
BIT VALUE:	1	2	4	8	16	32

SUMMARY OF SYSTEM COMMANDS

Event Logging Commands

Event Log Display = Code + [#] + 60
Event Log Print = Code + [#] +61 (Installer Only)
Clear Event Log = Code + # + 62 (Installer Only)

Wireless System Commands

House Id Sniffer Mode = Code + [#] + 2 (Installer Only)
Transmitter ID Test = Code + [#] + 3 (Installer Only)
Go/No Go Test = Code + 5 (Test Key)

User Code Commands

Add A User Code = User Code + 8 + New User Number + New User's Code
Change A Code = User Code + 8 + User Number + New User's Code
Delete A User's Code = Your User Code + 8 + User Number To Be Deleted + Your Code Again
View User Capability = User's Code + * + *
View/Set Real-Time Clock (Installer, Master Only) = Code + # +63

Arming Functions

Arming Away	Enter Code + Away [2].
Arming Stay	Enter Code + Stay [3].
Arming Instant	Enter Code + Instant [7].
Arming Maximum	Enter Code + Maximum [4].
Quick Arm	Use # key instead of user code followed by any of the above arming mode keys.
Global Arming	If enabled for the user, the keypad will display a prompt. Answer the prompted questions
Disarming	Enter Code + Off [1].
Bypassing Zones	Enter Code + Bypass [6] + Zone Number. To automatically bypass all faulted zones, use
Quick Bypass	"Quick Bypass" method: Enter Code + Bypass + [#].
Chime Mode	Enter Code + Chime [9]. To turn Chime Mode off, enter Code + Chime again.

Partition Goto = User Code + * + Partition Number 0-8
GOTO Home Partition = User Code + * + 0

Panics	* + 1	Zone 95 (A Key)
	* + #	Zone 99 (B Key)
	# + 3	Zone 96 (C Key)

View Downloaded Messages = Press 0 For 5 Seconds
Display All Zone Descriptors = Press * For 5 Seconds
Display User Self Help = Hold Any Key For 5 Seconds

Programming Commands

Site Initiated Download = User Code + # + 1
Direct Wire Download Enable = User Code + # + 5
Enter Program Mode = Installer Code + 800
Exit Program Mode = *99 Or *98

Scheduling Commands

Installer Programmed Schedule Events = Installer Code + # + 80
Temporary Schedule Editing=User Code + # + 81 (Installer, Master, Manager Only)
Extend Closing Window = User Code + # + 82 (Installer, Master, Manager Only)
End User Output Device Programming = User Code + # + 83

Device Control (X-10 Or Relay)

Activate Output Device As Programmed = User Code + # + 71
Activate Output Device As Programmed = User Code + # + 72
Activate Access Relay For Current Partition = User Code + 0

SPECIFICATIONS

FA1340C/FA1340C-UL CONTROLS

Physical:

FA1340C: 12.5"W X 14.5"H X 3"D

FA1340C-UL 14.5"W X 18"H X 4.3"D

Electrical:

VOLTAGE INPUT: From Ademco No. 1361 Plug-In Transformer (use 1361CN in Canada) or 4300 transformer (for X-10 installations) rated 16.5VAC, 40 VA.

ALARM SOUNDER OUTPUT: 10VDC-13.8VDC, 2.8 amps max., (UL1023, UL609 installations); 750mA less aux. current draw (UL985 installations).

AUXILIARY POWER OUTPUT: 9.6VDC-13.8VDC, 750mA max. For UL installations, the accessories connected to the output must be UL Listed, and rated to operate in the above voltage range.

BACK-UP BATTERY: 12VDC, 4AH or 7AH gel cell. YUASA NP4-12 (12V, 4AH) or NP7-12 (12V, 7AH) recommended.

STANDBY: 4 hours min. with 750 mA aux. load using 7 AH battery.

CIRCUIT PROTECTORS: PTC circuit breakers are used on battery input to protect against reverse battery connections and on alarm sounder output to protect against wiring faults (Shorts).
A solid state circuit breaker is used on auxiliary power output to protect against wiring faults (shorts).

DIGITAL COMMUNICATOR

FORMATS SUPPORTED:
ADEMCO HIGH SPEED
ADEMCO 4+2 EXPRESS
ADEMCO LOW SPEED
ADEMCO CONTACT ID
SESCOA
RADIONICS LOW SPEED

LINE SEIZE: Double Pole
RINGER EQUIVALENCE: 0.7B
FCC REGISTRATION No.: AC398U-68192-AL-E

FA210KP Remote Keypad

Physical:

Width: 5.75"
Height: 4.75"
Depth: 1"

Electrical: Voltage Input: 12VDC;
Current Drain: 30mA

Interface Wiring:

RED: 12VDC input (+) aux pwr
GREEN: Data Out to Control
YELLOW: Data In from Control
BLACK: Ground

FA250KP/FA550KP Remote Keypad

Physical:

Width: 6.25 inches
Height: 4.75 inches
Depth: 1.25 inches (FA250KP = 1 inch)

Electrical: Voltage Input: 12VDC
Current Drain: 100 mA (FA550KP), 85mA (FA250KP)

Interface Wiring:

RED: 12VDC input (+) auxiliary power
BLUE: Not Used
GREEN: Data to control panel
YELLOW: Data from control panel
BLACK: Ground and (-) connection from supplemental power supply.

CONTACTING TECHNICAL SUPPORT

PLEASE,

Before you call Technical Support, be sure you:

- **READ THE INSTRUCTIONS!**
- **Check all wiring connections.**
- **Determine that the power supply and/or backup battery are supplying proper voltages.**
- **Verify your programming information where applicable.**
- **Note the proper model number of this product, and the version level (if known) along with any documentation that came with the product.**
- **Note your First Alert customer number and/or company name.**

Having this information handy will make it easier for us to serve you quickly and effectively.

You may contact Technical Support via Toll Free Fax. Please include your return fax number. You will receive a reply within 24 hours. You may also contact Technical Support via modem to ATLIS-BBS, Tech Support's Electronic Bulletin Board System. Replies are posted within 24 hours.

Premier Gold Technical Support: 800-538-5585 (8 a.m.-6 p.m. E.S.T.)
After 6pm E.S.T.: 800-421-5557

Please be sure to have your PIN number ready before calling.

Technical Support Fax Number: 1-800-447-5086

ATLIS-BBS Electronic Bulletin Board System: 1-516-496-3980
(1200 - 9600 Baud, 8 Data Bits, 1 Start/Stop Bit, No Parity)

ATLIS FAX: Phone 186457592 Press 1 then 6 (8am - 6pm Mon. - Fri. EST)
Select document # 900 for an index of available documents

– INDEX –

WARNING!
THE LIMITATIONS OF THIS ALARM SYSTEM

While this System is an advanced wireless 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 also 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. Finally, 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 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 those beams. They cannot detect motion or intrusion that takes place behind walls, ceilings, floors, closed doors, glass partitions, glass doors, or windows. Mechanical tampering, masking, painting or spraying of any material on the mirrors, windows or any part of the optical system can reduce their detection ability. Passive Infrared Detectors sense changes in temperature; however, as the ambient temperature of the protected area approaches the temperature range of 90° to 105°F (32° to 40°C), the detection performance can decrease.
- Alarm warning devices such as sirens, bells or horns may not alert people or wake up sleepers if they are located on the other side of closed or partly open doors. If warning devices are located 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 appliance, or by passing traffic. Finally, alarm warning devices, however loud, may not warn hearing-impaired people.
- 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 20 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 and transmitters are working properly. The security console (and remote keypad) should be tested as well.

Wireless transmitters (used in some systems) are designed to provide long battery life under normal operating conditions. Longevity of batteries may be as much as 4 to 7 years, depending on the environment, usage, and the specific wireless device being used. External factors such as humidity, high or low temperatures, as well as large swings in temperature, may all reduce the actual battery life in a given installation. This wireless system, however, can identify a true low battery situation, thus allowing time to arrange a change of battery to maintain protection for that given point within the system.

Installing an alarm system may make the owner eligible for a lower insurance rate, 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.

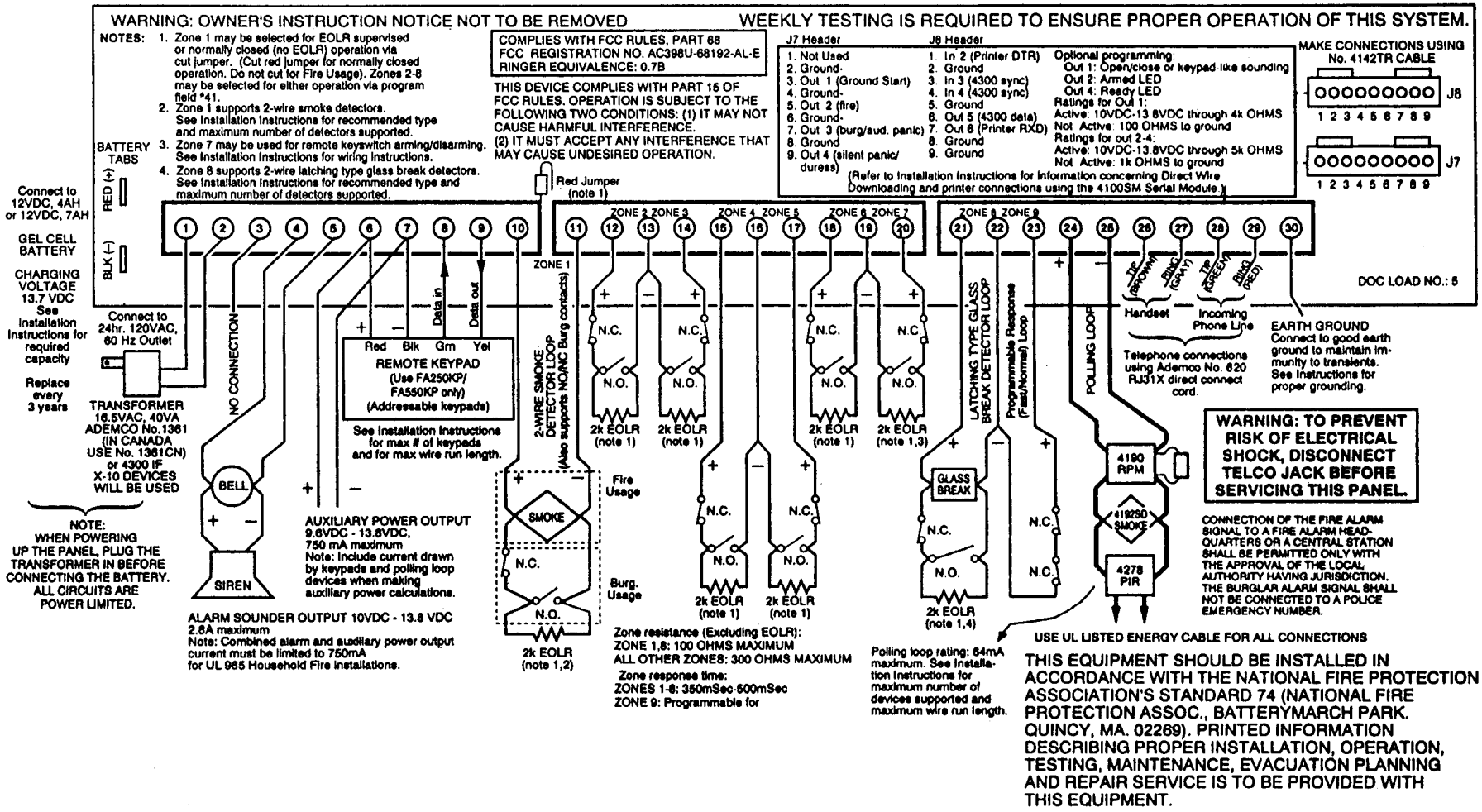


Figure 24. FA1340C/FA1340C-UL Summary of Connections

LIMITED WARRANTY

Pittway Corporation, and its divisions, subsidiaries and affiliates ("Seller"), 165 Eileen Way, Syosset, New York 11791, warrants its First Alert 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 factory service. For warranty service, return product transportation prepaid, to First Alert 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.

First Alert
PROFESSIONAL SECURITY SYSTEMS

172 Michael Drive
Syosset, New York 11791

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