
VISTA-50P ***VISTA-50PUL***

PARTITIONED SECURITY SYSTEM with SCHEDULING

INSTALLATION INSTRUCTIONS and **PROGRAMMING GUIDE**



ADDENDUM TO:

VISTA-40, VISTA-50P, VISTA-50PUL INSTALLATION INSTRUCTIONS

This Installation Instruction Addendum covers changes made to the above Ademco VISTA panels to support new UL985 and UL1023 requirements.

POWER LIMITING

All outputs are now power-limited as per UL985/UL1023. The auxiliary power and polling loop output current ratings remain unchanged. The on-board PTC circuit breaker that protects the bell output was changed to comply with the power-limiting requirement and, as a consequence, the bell current rating **must be reduced from 2.8A max to 1.7A max at 12V** to avoid false tripping of the new PTC. There are additional restrictions on bell current rating depending on the type of installation, as follows:

1. For Household Fire or Combination Household Fire/Burg Installations: The total current drawn from the auxiliary power, polling loop, and bell outputs combined must not exceed 750mA in order to comply with the battery independence requirements in UL985.
2. For UL1023 Household Burg (or VISTA-50PUL/UL609 Mercantile Burg) Only Installations: Total current drawn from the bell output may be up to 1.7A. A battery must be installed to supply combined auxiliary power, polling loop, and bell current in excess of 750mA.

TELEPHONE OVERVOLTAGE PROTECTION

The telephone tip and ring inputs now have overvoltage protection in accordance with UL1459, as specified in UL985/UL1023. On-board PTC circuit breakers were added to these inputs to protect against overvoltage.

BELL SUPERVISION

The panel now supports supervision of the bell wiring as specified in UL985. The panel will annunciate bell supervision status on system zone 98. Bell supervision is normally disabled (factory default response type for zone 98 is "00" - no response) and must be enabled for household fire or combination household fire/burg installations by assigning response type 05 to zone 98, which will provide a trouble indication regardless of whether the panel is armed or disarmed.

When supervision is enabled, the panel monitors the bell wiring for open- and short-circuit faults while the bell is inactive. The panel will provide a trouble indication when there is an open circuit in the bell wiring **that disconnects all indicating devices from the panel**, or when there is a short circuit between the Bell+ and Bell- terminal wiring (or between the Bell+ terminal wiring and earth ground, provided that the panel's earth ground Terminal 30 is connected to a proper earth ground).

When the supervision feature is used, only polarized fire-indicating devices may be wired to the panel's bell output. Non-polarized burglary-indicating devices may be used only when wired to the panel's bell output using a polarizing diode (**two 2A diodes supplied**) as shown in Diagram 1 below. Table 1 below lists some compatible indicating devices.

When the supervision feature is used, the minimum alarm load on the bell output must exceed 5mA at 12V for proper supervision operation. If using a device with a high-resistance trigger input such as a voice siren driver (e.g., 745 x 3), do not supervise the bell output. In this case, cut the blue jumper in the upper left-hand corner of the control panel PCB, and assign zone 98 a response type "00." The siren driver module must be mounted in the panel's cabinet and, for household fire installations, must independently supervise its siren speaker wiring.

On panels that support partitioning, bell supervision zone 98 is declared to exist in Partition 1 for keypad display, event logging, and dialer reporting purposes. Contact ID Code 321 will be used to report bell supervision faults.

ADDENDUM: Bell Supervision (continued)

Diagram 1: Wiring Non-Polarized Burglary Indicating Devices

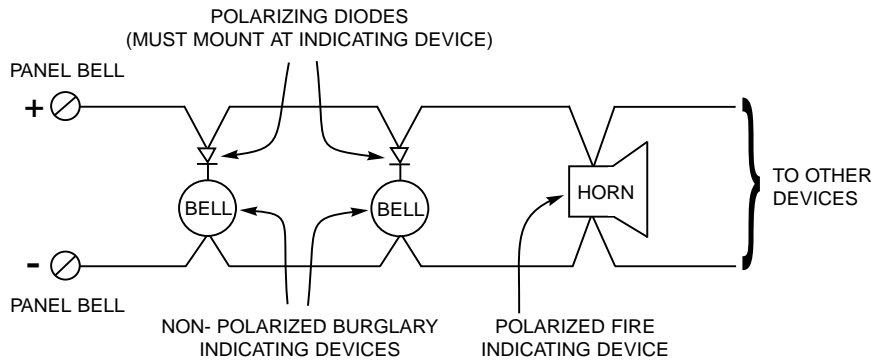


Table 1: Some Compatible Indicating Devices

Model Number	Device Type	Requires Polarizing Diode?
Ademco 719	Burglary Outdoor Siren w/Built-in Driver (not UL Listed)	Yes
Ademco 747	Burglary Indoor Siren w/Built-in Driver	Yes
Ademco AB12	Burglary Grade A Bell in Box	Yes
System Sensor MA12/24D	Fire Piezo Horn	No
System Sensor P12575	Fire Horn/Strobe	No
Wheelock AS-121575W	Fire Horn/Strobe	No

RF JAM DETECTION

The panel can now annunciate an RF jam condition as per UL985 when used in conjunction with a 5881 Series RF Receiver that supports RF jam detection (identified by microprocessor Part No. K3452-10 or higher). The RF jam annunciation feature can be enabled by assigning response type 05 to zone 90 for the first RF receiver and to zone 88 for the second RF receiver. This will be interpreted as a trouble regardless of whether the panel is armed or disarmed. The RF supervisory zones are assigned to all partitions that have RF transmitters or RF keypads for keypad display, event logging, and dialer reporting purposes. Contact ID Code 344 will be used to report RF jam faults. Refer to the Installation Instructions provided with the 5881 RF Receiver for information on installing and configuring the receiver for RF jam detection.

BATTERY TESTING

The panel now runs an extended (10-minute) battery test every 4 hours (instead of the previous 24-hour test interval) to check on the condition of the battery as per UL985. During this test, the panel PCB and external peripherals are powered from the battery, and the panel initiates a trouble indication if the battery voltage is found to be low (less than approximately 11.5V). Some panels (i.e.: VISTA-50P, VISTA-50PUL) also run a brief (5-second) battery test every 3 minutes to check if a battery is connected.

BATTERY BACKUP

Household Fire or Combination Household Fire/Burg installations require use of a backup battery that is sized to provide 24 hours of standby time followed by 4 minutes of alarm time. UL1023 Household Burg-only installations require use of a backup battery that is sized to provide 4 hours of standby time followed by 4 minutes of alarm time (4 hours of standby time followed by 15 minutes of alarm time for VISTA-50PUL/UL609 Mercantile Burg). Use Tables 2, 3, and 4 (below) to determine the required backup battery capacity and battery model number. **A dual battery harness is supplied** that allows two batteries to be wired in parallel for increased capacity.

Note: The cabinet supplied with the VISTA-40 and VISTA-50P panels can house up to 12V, 14AH batteries (two 12V, 7AH batteries wired in parallel). The VISTA-ULKT kit provides a cabinet that can house up to 12V, 17.2AH batteries and that may be used with these panels. The cabinet supplied with the VISTA-50PUL panel can house up to 12V, 17.2AH batteries. The total standby current drawn from the auxiliary power and polling loop outputs combined must be limited to 270mA when 14AH batteries are used; and to 390mA when 17.2AH batteries are used.

Table 2: Total Current Drain Table

Source of Current Drain	Total Standby Current	Total Alarm Current
Auxiliary Power Output:		
Polling Loop Output:		
Bell Output:	Not Applicable	
PCB Current:	250mA	330mA
Total Current:		

Table 3: Battery Calculation Table

Capacity	Formula	Calculated Value
Standby Capacity	<p>For 4-hour standby time, use following formula: Total standby load x 4 hours x 1.4 loading/contingency factor</p> <p>For 24-hour standby time, use following formula: Total standby load x 24 hours x 1.1 contingency factor</p>	
Alarm Capacity	<p>Total alarm load x 0.06 hours (for 4-minute alarm) x 0.25 hours (for 15-minute alarm)</p>	
Total Capacity	Add standby and alarm capacities	

Table 4: Battery Selection Table

Capacity	Recommended Battery	Comments
4AH	Yuasa NP4-12	
7AH	Yuasa NP7-12	
12AH	Yuasa NP12-12	Fits in large mercantile cabinet only
14AH	Yuasa NP7-12	Connect two in parallel
17.2AH	Yuasa NPG18-12	Fits in large mercantile cabinet only

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HOW TO USE THIS MANUAL

This manual is written to accommodate both the new and the experienced installer of Ademco products. A general description of the entire system is located at the beginning of the manual, followed by the basics of programming. The wiring and physical setup of the hardware follows.

The sections at the core of the manual include both hardware setup and programming requirements of each device to make that specific device operational in the system. A checkout procedure is included at the end of each section. We recommend this method to ensure that each device is working properly before proceeding to the next section. It must also be used if you are making a particular addition to the system of one of these devices.

Each of the sections covering the installation of peripheral devices includes the programming for that device. If you are an experienced user of Ademco products, you may choose to wire and then program the entire system at once. If so, refer to Sections 18 through 20 (for complete system programming options) after the hardware setup is complete. A blank pull-out programming form is included with this manual. Use this in addition to the #93 and #80 Menu modes for complete system programming options.




Without an understanding of the programming methodology, you will not be able to successfully perform the required programming in each of these sections. We therefore urge you to read Section 4: *THE MECHANICS OF PROGRAMMING* before any programming is performed.

This manual uses various icons to denote critical notes and technical tips to assist you with the installation of this system. These are easily seen in the lefthand column of the relevant information.

CONVENTIONS USED IN THIS MANUAL

MAIN SECTION TITLES ARE SHOWN IN REVERSE TYPE

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

	These notes include specific information which must be followed if you are installing this system for a UL Listed application.
	These notes include information that you should be aware of before continuing with the installation, and which, if not observed, could result in operational difficulties.
	This symbol indicates a critical note that could seriously affect the operation of the system, or could cause damage to the system. Please read each warning carefully. This symbol also denotes warnings about physical harm to the installer.

Enter Zn Num.

(00 = Quit)01

Many system options are programmed in an interactive mode by responding to Alpha keypad display prompts. These prompts are shown in a double-line box.

*00

When programming the system, data fields are indicated by a “star” (*) followed by the data field number.

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

RECOMMENDATIONS FOR PROPER PROTECTION

The Following Recommendations For The Location Of Fire And Burglary Detection Devices Help Provide Proper Coverage For The Protected Premises.

Recommendations For Smoke And Heat Detectors

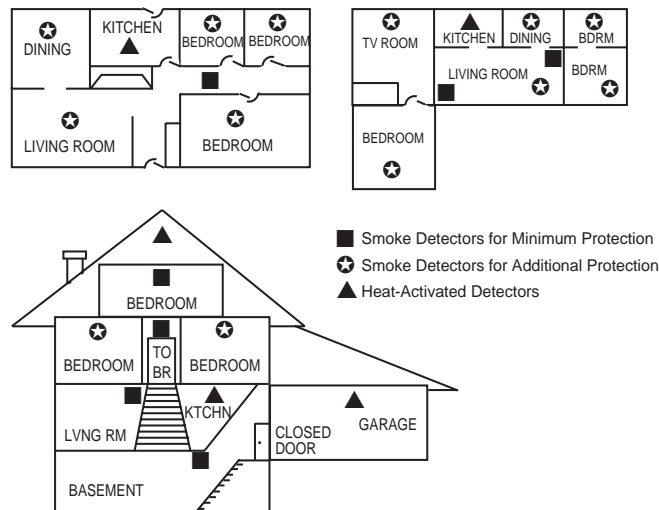
With regard to the number and placement of smoke/heat detectors, we subscribe to the recommendations contained in the National Fire Protection Association's (NFPA) Standard #72 noted below.

Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: For minimum protection a smoke detector should be installed outside of each separate sleeping area, and on each additional floor of a multi-floor family living unit, including basements. The installation of smoke detectors in kitchens, attics (finished or unfinished), or in garages is not normally recommended.

For additional protection the NFPA recommends that you install heat or smoke detectors in the living room, dining room, bedroom(s), kitchen, hallway(s), attic, furnace room, utility and storage rooms, basements and attached garages.

In addition, we recommend the following:

- Install a smoke detector inside every bedroom where a smoker sleeps.
- Install a smoke detector inside every bedroom where someone sleeps with the door partly or completely closed. Smoke could be blocked by the closed door. Also, an alarm in the hallway outside may not wake up the sleeper if the door is closed.
- Install a smoke detector inside bedrooms where electrical appliances (such as portable heaters, air conditioners or humidifiers) are used.
- Install a smoke detector at both ends of a hallway if the hallway is more than 40 feet (12 meters) long.
- Install smoke detectors in any room where an alarm control is located, or in any room where alarm control connections to an AC source or phone lines are made. If detectors are not so located, a fire within the room could prevent the control from reporting a fire or an intrusion.



Recommendations For Proper Intrusion Protection

For proper intrusion coverage, sensors should be located at every possible point of entry to a home or commercial premises. This would include any skylights that may be present, and the upper windows in a multi-level building.

In addition, we recommend that radio backup be used in a security system so that alarm signals can still be sent to the alarm monitoring station in the event that the telephone lines are out of order (alarm signals are normally sent over the phone lines, if connected to an alarm monitoring station).

Section 1: GENERAL DESCRIPTION

The VISTA-50P is an 8-Partition alarm control panel that supports up to 86 zones using basic hardwired, polling loop, and wireless zones. In addition, the control offers relay control and scheduling capabilities for automating system functions. The major system features are outlined below.

Basic Hardwired Zones

Provides 9 basic hardwire zones with the following characteristics:

- EOLR supervision (optional for zones 2-8) supporting N.O. or N.C. sensors
- Individually assignable to one of 8 partitions
- Up to 16 2-wire smoke detectors on zone 1
- 4-wire smoke or heat detectors on zones 1-8 (power to 4-wire smokes must be supervised for UL installations)
- Up to 50 2-wire latching glassbreak detectors on zone 8

Optional Expansion Zones

Polling Loop Expansion:

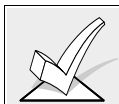
Supports up to 77 additional hardwire zones using a built-in polling (multiplex) loop interface. Current draw can total up to 64mA. Polling loop zones have the following characteristics:

- Must use RPM (Remote Point Module) devices
- Supervised by control panel
- Individually assignable to one of 8 partitions

Wireless Expansion:

Supports up to 63 wireless zones using 4281 type RF Receiver or 86 wireless zones using 5881 type RF Receiver (less if using hardwire and/or polling loop zones). Wireless zones have the following characteristics:

- Supervised by control panel for check-in signals (except certain non-supervised transmitters)
- Supervised for low battery condition
- Tamper protection for 5800 series supervised transmitters
- Individually assignable to one of 8 partitions



For specific information regarding number of wireless zones supported by each RF receiver, see the section on ***Wireless Expansion*** later in this manual.

Supervisory Zones

Provides additional zones for supervision of the following:

RF Receivers	Zones 88-91
Polling Loop	Zone 97
4285 VIP Module	Zone 87

8 Partitions

Provides the ability to control 8 separate areas independently, each functioning as if it had its own separate control. Partitioning features include:

- A "Common Lobby" partition, which arms automatically when the last partition (1-8) that shares the common lobby is armed and disarms when the first partition (1-8) that shares the common lobby is disarmed
- A Master Partition (9) to which keypads may be assigned to view the status of all 8 partitions at the same time
- Keypads assignable to one of 8 partitions or to Master Partition 9 to view system status
- Ability to assign Relays/Powerline Carrier devices to one or all 8 partitions
- Certain system options selectable for each partition, such as Entry/Exit Delay and Subscriber Account Number

User Codes

Accommodates 75 user codes, all of which can operate any or all partitions. Each user, if assigned to more than one partition, retains the same user number across all partitions, and will only utilize one user "slot" in the system. Certain characteristics must be assigned to each user code, which are as follows:

- Authority level for each partition (Master, Manager, or several other Operator levels)
- Opening/Closing central station reporting option
- What partitions the code can operate
- Global arming capability (ability to arm and disarm all partitions the code has access to in one command)
- Use of a wireless transmitter to arm and disarm the system (wireless transmitter must first be learned into the system)

Peripheral Devices

Supports up to 16 addressable devices, which can be any combination of keypads (6139, 6137, 6128, 5137AD, 4137AD), RF receivers (4281/5881), relay modules (4204), and the 4285 VIP module. Peripheral Devices have the following characteristics:

- Terminated at the Keypad Port terminals on the control panel
- Each device set to an individual address (physically) according to the device's instructions
- Each device enabled in the system using the *Device Programming Mode* (covered later in this manual)

Keypad Panic Keys

Accommodates three keypad panic keys: 1+* (A), *+# (B), and 3+# (C). Characteristics of the panic keys are:

- Designated as zones 95(1+*), 96(3+#), and 99(*+#)
- Activated by wired and wireless keypads
- Activated and reported separately by partition, distinguished by Subscriber Acct. No. (or Partition No. if Contact ID reporting is used)

Keypad Macros

Accommodates one keypad macro command per partition (each macro is a series of keypad commands), which can be assigned to the D key on each partition's keypads. This means, for example, that by pressing the "D" key, the system can be programmed to log onto another partition, bypass zones 2 and 3, and arm that partition in the AWAY mode (explained in detail later in this manual). Characteristics of keypad macros are:

- Assignable to the "D" key by partition
- Can each be 16 characters (keystrokes) in length

Optional Output Devices (4204 Relays and Powerline Carrier (i.e., X-10) Devices)

Accommodates the use of 16 output devices, which can be a combination of ADEMCO's 4204 Relay Modules or Powerline Carrier Devices (i.e., X-10, ACT, Leviton). Each 4204 module provides four "Form C" relays for general purpose use.

Powerline Carrier Devices are controlled by signals sent through the electrical wiring at the premises via a 4300 transformer. Therefore, if using Powerline Carrier Devices, a 4300 transformer must be used in place of the regular system transformer.

Output devices have the following characteristics:

- Can be programmed to activate in response to system events
- Can be programmed to activate using time intervals
- Can be activated manually using the #70 relay command mode
- Can each have an alpha descriptor assigned to it

Optional Vista Interactive Phone Module

Supports the Ademco 4285 VIP Module. This permits access to the security system to do the following:

- Obtain system status information
- Arm and disarm security system
- Control relays and/or Powerline Carrier devices

Access Control

If programmed, provides users with a command which activates a relay for two seconds to open access doors (e.g. lobby door). Each partition can be assigned one access control relay.

Optional Keyswitch

Supports the Ademco 4146 keyswitch on any one of the systems's 8 partitions. If used, zone 7 is no longer available as a protection zone.

Voltage Triggers

Provides a trigger connector whose pins change state for different conditions. Used with LORRA (Long Range Radio) equipment or other devices such as a remote keypad sounder, keyswitch Armed and Ready LEDs, or a printer to print the system's Event Log.

Event Log

Keeps a log of different event types (enabled in programming). The Event Log has the following characteristics:

- Stores a total of 224 events
- Can be viewed at the keypad or through the use of V-Link software
- Can be printed on a serial printer using a 4100SM module

Scheduling

Provides the following scheduling capabilities:

- Open/Close schedules (for control of arming/disarming, and reporting)
- Holiday schedules (allows different time windows for Open/Close schedules)
- Timed Events (for activation of relays, auto-bypassing and unbypassing,, auto-arming and disarming, etc.)
- Access schedules (for limiting system access to users by time)
- End User Output Programming mode (provides 20 timers for relay control)

Audio Alarm Verification Option

Provides a programmable Audio Alarm Verification (AAV) option which can be used in conjunction with an output relay to permit voice dialog between an operator at the central station and a person at the premises

- Requires the use of an optional AAV unit, such as Eagle model 1241
- If using, Zone 5 is no longer available as a protection zone

Cross-Zoning Capability

Helps prevent false alarms by preventing a zone from going into alarm unless its cross-zone is also faulted within five minutes.

Exit Error False Alarm Prevention Feature

- System can tell the difference between a regular alarm and an alarm caused by leaving an Entry/Exit door open. If not subsequently disarmed, faulted E/E zone(s) will be bypassed and the system will arm
- Generates an "Exit Error" report by user and by zone so the Central Station knows it was an exit alarm and who caused it

Communications Formats

Supports the following formats for the Primary and Secondary Central Station receivers:

- Ademco Low Speed (Standard or Expanded)
- Sescoa/Radionics
- Ademco Express
- Ademco High Speed
- Ademco Contact ID

Built-in User's Manual and Descriptor Review

Contains a built-in Users Manual and Descriptor Review mode (alpha keypad only).

- By depressing and holding any of the function keys on the keypad for 5 seconds, a brief explanation of that particular function scrolls across the alpha-numeric display.
- By pressing and holding the READY key for 5 seconds and then releasing it, all programmed zone descriptors can be displayed (one at a time). This serves as a check for installers to be sure all descriptors are entered properly.

Improved Downloading Speed

Uploads and downloads at 300 baud (old rate is 75 baud), making upload/download speed approximately three times faster.

Section 2: PLANNING A PARTITIONED SYSTEM

This section provides the following information:

- Theory of partitioning
- Setting up a partitioned system
- Common Lobby Logic
- Master keypad setup and operation

Theory of Partitioning

This system provides the ability to arm and disarm up to 8 different areas, each as if it had its own control. These areas are called partitions. Partitions are used when the user desires to disarm certain areas while leaving other areas armed, or to limit access to certain areas to specific individuals. Each user of the system can be assigned to operate any or all partitions, and can be given a different authority level in each.

Facts you need to know about partitioning:

First, you must determine how many partitions are required (1-8). This must be done before anything can be assigned to those partitions.

Keypads

Each keypad must be given a unique "address" and assigned to one partition (can also be assigned to Partition 9 if "Master" keypad operation is desired-- see *Master Keypad Setup and Operation* later in this section).

Zones

Each zone must be assigned to one partition.

The zones assigned to a partition will be displayed on that partition's keypad(s).

Users

Each user can be assigned to one or more partitions. If a user is to operate more than one partition and would like to arm/disarm all or some of those partitions with a single command, the user must be enabled for "Global Arming" for those partitions (when entering user codes).

A user with access to more than one partition (multiple access) can "log on" to one partition from another partition's keypad, provided that program field 2*18: ENABLE GOTO is enabled for each partition you want to log on to from another.

A partition can be selected as a "common lobby" partition, and other partitions can affect this partition by causing arming/disarming of this partition to be automated (see *Common Lobby Logic*, later in this section).

Setting Up a Partitioned System

The basic steps to setting up a partitioned system are described below. If you need more information on how to program the prescribed options, see Section 4: *THE MECHANICS OF PROGRAMMING*, as well as each corresponding section's programming procedure.

1. Determine how many partitions the system will consist of (programmed in field 2*00).
2. Assign keypads to partitions (#93 Device Programming mode).
3. Assign zones to partitions (#93 Zone Programming mode).
4. Confirm zones are displayed at the keypad(s) assigned to those partitions.
5. Assign users to partitions.
6. Enable the GOTO feature (program field 2*18) for each partition a multiple-access user can "log on" to (alpha keypad only).
7. Program Partition-Specific fields (see Section 17: *DATA FIELD DESCRIPTIONS*).

Common Lobby Logic

When an installation consists of a partition shared by users of other partitions in a building, that shared partition may be assigned as the "common lobby" partition for the system (program field 1*17). An example of this might be in a medical building where there are two doctor's offices and a common entrance area (see example that follows explanation).

This option employs logic for automatic arming and disarming of the common lobby. Two programming fields affect the way the common lobby will react relative to the status of other partitions. They are: 1*18 (Affects Lobby) and 1*19 (Arms Lobby).

1*18 Affects Lobby (must be programmed by partition)

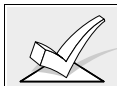
Setting this option to 1 for a specific partition causes that partition to affect the operation of the common lobby as follows:

- When the first partition that affects the lobby is disarmed, the lobby will also be disarmed.
- The common lobby cannot be armed unless every partition selected to affect the lobby is armed.
- Arming the last partition that affects the lobby **will not** automatically attempt to arm the lobby.

1*19 Arms Lobby (must be programmed by partition)

Setting this option to 1 for a specific partition causes that partition to affect the operation of the common lobby as follows:

- When the first partition that affects the lobby is disarmed, the lobby will also be disarmed.
- The common lobby cannot be armed unless every partition selected to affect the lobby is armed.
- Arming the last partition that is programmed to arm the lobby will automatically attempt to arm the lobby. If any faults exist in the lobby partition, or another partition that affects the lobby is disarmed, the lobby cannot be armed, and the message "UNABLE TO ARM LOBBY PARTITION" will be displayed.



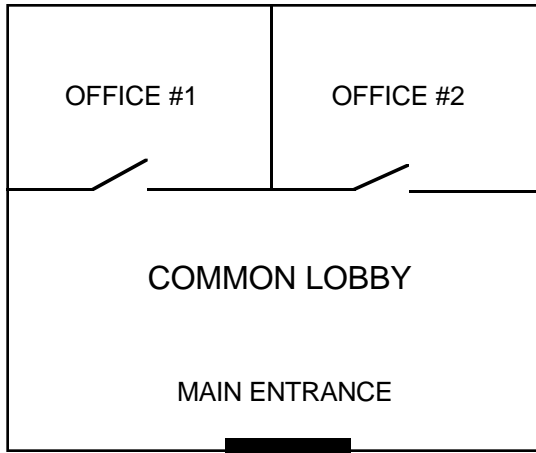
You cannot select a partition to "arm" the lobby unless it has first been selected to "affect" the lobby. Enable field 1*18 before enabling field 1*19.

The following chart sums up how the common lobby partition will operate, if different options are set for another partition in fields 1*18 and 1*19.

1*18 Affects Lobby	1*19 Arms Lobby	Disarms when partition disarms?	Attempts to arm when partition arms?	Can be armed if other partitions disarmed?
0	0	NO	NO	YES
1	0	YES	NO	NO
1	1	YES	YES	NO
0	1	---ENTRY NOT ALLOWED---		

Example

Here is an example of how the lobby would react in a typical setup.



User #1 has access to Office #1 and the Common Lobby.

User #2 has access to Office #2 and the Common Lobby.

Office #1 is set up to affect the Common Lobby, but not arm it.

Office #2 is set up to affect and arm the Common Lobby.

For the purpose of this example, the () indicate the current status of the other partition when the user takes action.

Sequence #1:

	Office 1	Office 2	Lobby Action
User #1:	Disarms	(Armed)	Disarms
User #2:	(Disarmed)	Disarms	No Change
User #1:	Arms	(Disarmed)	No change
User #2:	(Armed)	Arms	Arms

Sequence #2:

	Office 1	Office 2	Lobby Action
User #2:	(Armed)	Disarms	Disarms
User #1:	Disarms	(Disarmed)	(No change)
User #2:	(Disarmed)	Arms	No Change
User #1:	Arms	(Armed)	No Change

Notice that in sequence #1, since Office #2 was the last to arm, the lobby also armed (Office #2 is programmed to affect *and* arm the lobby). In sequence #2, the lobby could not arm when Office #2 armed, because Office #1, which affects the lobby, was still disarmed.

When Office #1 armed, the lobby still did not arm because Office #1 was not programmed to arm the lobby. User #1 would have to arm the lobby manually. Therefore, you would want to program a partition to affect *and* arm the lobby, if the users of that partition are expected to be the "last out" of the building.

How User Access Codes Affect the Common Lobby

Codes with "Global" Arming

If a code is given "global arming" when it is defined (see Section 24: *SECURITY ACCESS CODES*), the keypad will ask "Arm all?" or "Disarm all?" whenever the user tries to arm or disarm the partitions he has access to from an alpha keypad. This allows the user to pick and choose the partitions to be armed or disarmed, and so eliminates the "automatic" operation of the lobby. Keep in mind, however, that if attempting to arm all, and another "affecting" partition is disarmed, the user will not be able to arm the lobby, and the message "UNABLE TO ARM LOBBY PARTITION" will be displayed.

Codes with "Non-Global" Arming

If arming with a non-global code, or if arming with a global code from a non-alpha keypad, the lobby partition operation will be automatic, as described by fields 1*18 and 1*19.

Other Methods of Arming/Disarming

When arming or disarming a partition that affects and/or arms the common lobby in one of the following manners, lobby logic remains active:

- Quick-Arm
- Keyswitch
- Wireless Button
- Wireless Keypad

Arming/Disarming Remotely

If arming or disarming remotely (through VLINK downloading software), the lobby will not automatically follow another partition that is programmed to arm or disarm the lobby. The lobby must be armed separately, after arming all affecting partitions first.

Auto-Arming/Disarming

If scheduling is used to automatically arm and/or disarm partitions, the Lobby partition will not automatically follow another partition that is programmed to arm or disarm the lobby. The lobby must be included as a partition to be armed/disarmed.



If using auto-arming, make sure that the **Auto-arm Delay** and **Auto-arm Warning** periods (fields 2*05 and 2*06) combined are longer than that of any other partition that affects the lobby. This will cause the lobby to arm last.

Master Keypad Setup and Operation

Although this system has eight actual partitions, it provides an extra partition strictly for the purpose of assigning keypads as "Master" keypads for the system.

Any keypad assigned to Partition 9 in #93 Device Programming mode will make that keypad a "Master" keypad. A Master keypad reflects the status of the entire system (Partitions 1-8) on its display at one time. This is useful because it eliminates the need for a security officer in a building to have to "log-on" to various partitions from one partition's keypad to find out where an alarm has occurred.

The following is an example of a typical display:

S	Y	S	T	E	M	1	2	3	4	5	6	7	8
S	T	A	T	U	S	R	R	N	N	A	*	B	

Possible status indications include:

A = Armed Away	M = Armed Maximum
S = Armed Stay	I = Armed Instant
R = Ready	N = Not Ready
B = Bypassed/Ready	* = Alarm Memory/Trouble present

To obtain more information regarding a particular partition, enter * + [Partition No.] (i.e., *4). In order to affect that partition, the user must use a code that has access to that partition. Also, in order for a user of any partition to log onto Partition 9 to view the status of *all* partitions, that user must have access to all partitions. Otherwise, access will be denied.

The following is an example of what would be displayed for a fault condition on Zone 2 (Loading Dock Window) on Partition 1 (Warehouse) when logging on from a keypad on Partition 9:

WHSE DISARMED HIT * FOR FAULTS

This is the normal display that appears at Partition 1's keypad(s). Pressing* will display:

FAULT 02 LOADING DOCK WINDOW


Additional zone faults will be displayed one at a time. To display a new partition's status, press * + [Partition No.]. This will display the status of the new partition.

The "Armed" LED on a Master keypad will be lit only if *all* partitions have been armed successfully. The "Ready" LED will be lit only if *all* partitions that are disarmed are "ready to arm." Neither LED will be lit if only some partitions are armed and only some disarmed partitions are "ready."

The sounder on a Master keypad will reflect the sound of the most critical condition on all of the partitions. The priority of the sounds is as follows:

- A. Pulsing fire alarm sounds
- B. Steady burglar alarm sounds
- C. Trouble sounds (rapid beeping)

The sounder may be silenced by pressing any key on the Master keypad or a keypad on the partition where the condition exists.

	A Master keypad uses the same panics as Partition 1. Master keypad panics are sent to Partition 1, and will activate on Partitions 1. Therefore, panics must be programmed for Partition 1.
---	---

Section 3: INSTALLING THE CONTROL

This section provides installation instructions for the following:

- Mounting the control cabinet
- Installing the cabinet lock (if used)
- Installing the main circuit board
- Standard phone line connections
- Connecting the AC transformer
- Installing the backup battery in the cabinet
- Making earth ground connections

Mounting the Cabinet

- 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.
- 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.**

Installing The Cabinet Lock

Use an Ademco No. N6277 Cam Lock and No. N6277-1 Push-On Retainer Clip (supplied).

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.

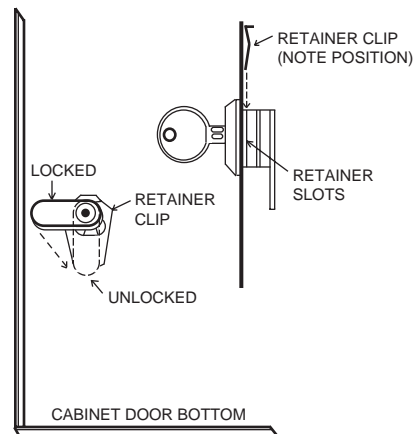


Figure 1. Installing The Lock

UL

For UL installations which are intended to provide certificated burglary service, refer to the special requirements and ATTACK RESISTANCE CONSIDERATIONS diagram to follow.

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 any EOLR supervised zone (1-8). Program this zone for Trouble by Day/Alarm by Night (type 05) or 24-hour audible alarm (type 07) response. The 24-hour alarm response must be used for multiple partitioned systems.
- Use a bell with a tamper protected housing such as the Ademco AB12. The bell housing's tamper switch and inner linings tamper must be wired 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 need 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 knockouts must be plugged using the disc plugs and carriage bolts, supplied, as indicated in the diagram below
- Fasten the cabinet door to the cabinet backbox using the 20 one inch long philips heads screws (supplied) after all wiring, programming and checkout procedures have been completed

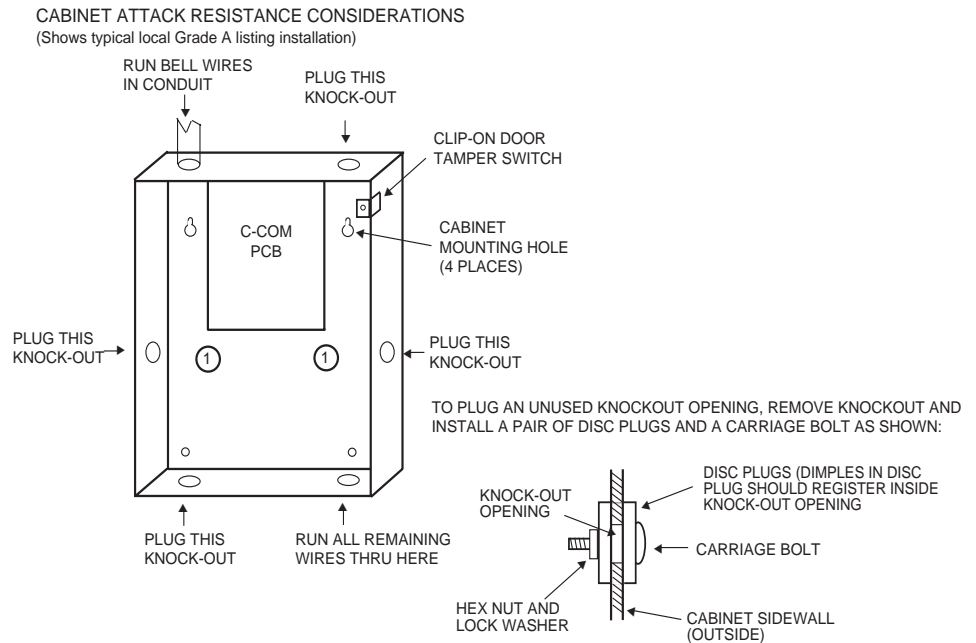


Figure 2: Cabinet Attack Resistance Considerations

Grade A Mercantile Safe and Vault Listing

- Follow the instructions given above for Mercantile Premises listing,.
- In addition, mount a shock sensor such as Sentrol No. 5402 to the panel's backbox. Follow the manufacturer's instructions for proper sensor mounting. This sensor must also be wired to the same zone that is used to supervise the panel's tamper switch.

Installing the Control's Circuit Board

Refer to the diagram below when mounting the PC board.

- 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.
- 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.
- Swing the base of the board into the mounting clips and secure the board to the cabinet with the accompanying screws (as illustrated in *Figure 3*).

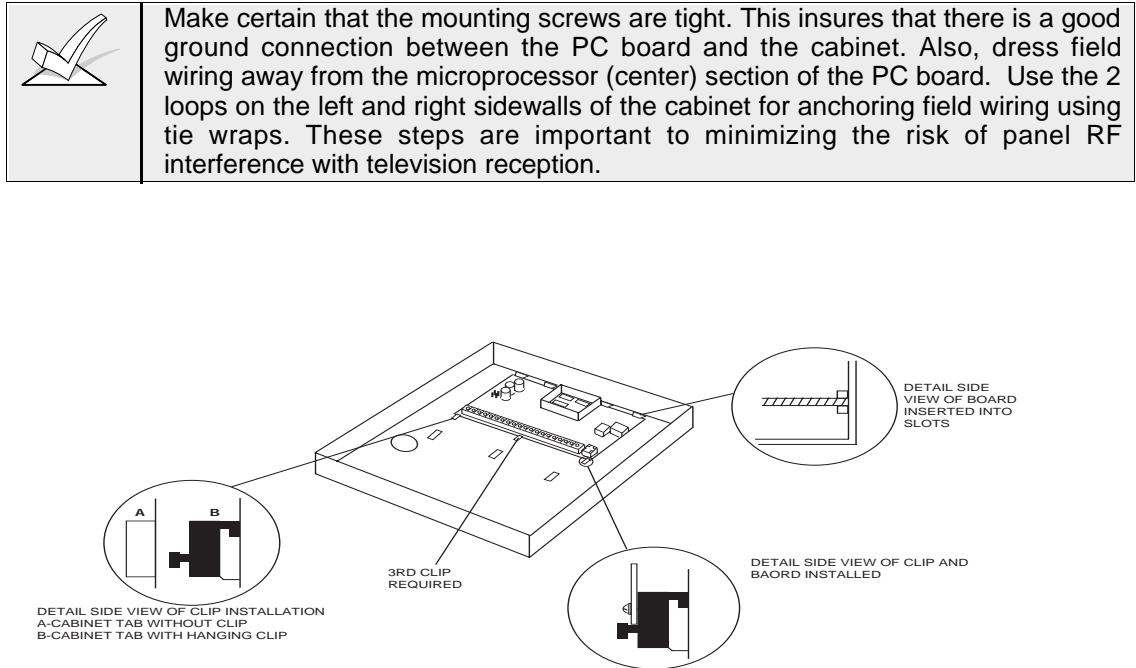


Figure 3. Mounting The PC Board

Standard Phone Line Connections

1. Connect the incoming phone line and handset wiring to the main terminal block as follows (also see *Figure 4*):
 - 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).

UL	The system must be connected to a phone line which provides loop start service. Phone lines which provide ground start service are not permitted in UL applications.
-----------	--

	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.

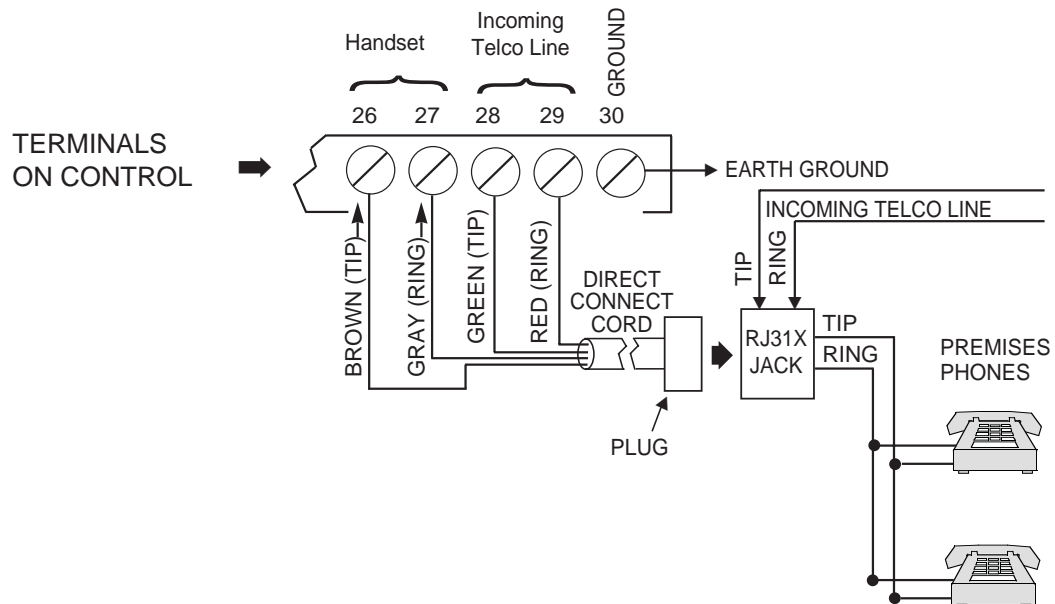


Figure 4. Standard Telephone Line Connections

Connecting the AC Transformer

1361:

1. Wire the 1361 transformer (1361CN in Canada) to terminals 1 and 2 on the control panel (before connecting the battery) as shown *Figure 5*. See wiring table below for wire guage to use.

	Do not plug the transformer into the AC outlet until you are instructed to do so.
--	---

PRIMARY POWER

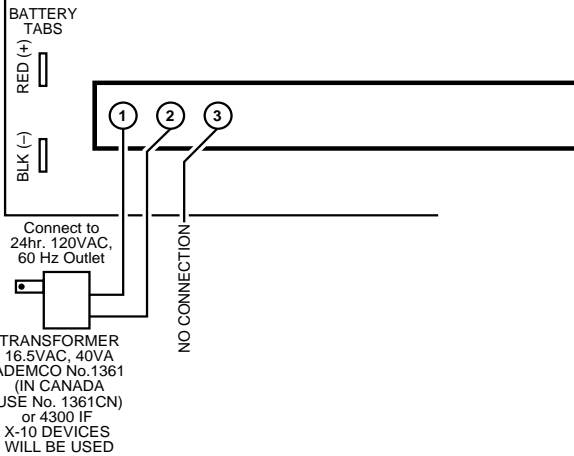
Supplied by 1361*
Plug-in
Transformer which
is rated at
16.5VAC, 40VA.
Caution must be
taken when wiring
this transformer to
the panel to guard
against blowing the
fuse inside the
transformer (non-
replaceable).

Connect to
12VDC, 4AH
or 12VDC, 7AH

GEL CELL
BATTERY

CHARGING
VOLTAGE
13.7 VDC

Replace
every
3 years



NOTE:
WHEN POWERING UP
THE PANEL, PLUG THE
TRANSFORMER IN BEFORE
CONNECTING THE BATTERY.

Figure 5: AC Power And Battery Connections

4300

If using Powerline Carrier devices, the 4300 transformer interface must be used **instead** of the regular 1361 transformer. The 4300 supplies the control panel with AC, and also acts to send control pulses through the premises electrical system to control the Powerline Carrier devices. Connect the 4300 as follows:

1. Connect terminals 1 and 3 (AC) and terminal 2 (Ground) of the 4300 transformer interface to control panel terminals 1, 2, and 30, respectively.
2. Run a 6-conductor cable between the 4300 and the panel. Splice this cable to a 4142TR cable as shown in *Figure 6*. Note that the white and yellow wires of the 4142TR **must be spliced** together.

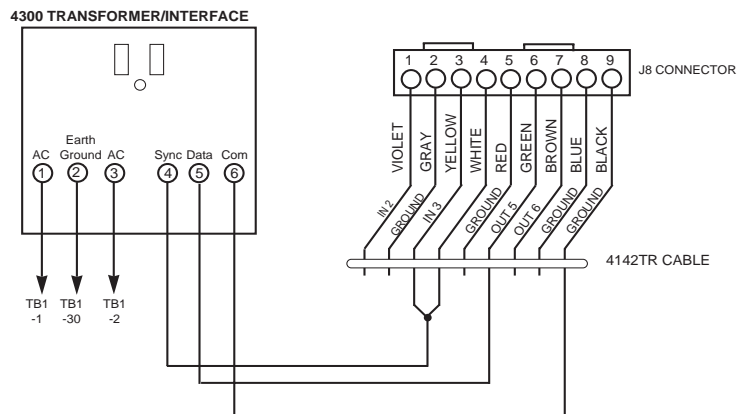


Figure 6: 4300 Transformer Connections



Do not plug the transformer into the AC outlet until you are instructed to do so later in the manual.

The complete wiring for the 4300 transformer is also covered in Section 9: *RELAY OUTPUTS & POWERLINE CARRIER DEVICES*.

Installing The Back-Up Battery

If necessary, refer to Section 15: *FINAL POWER-UP PROCEDURE* for information regarding battery size to use, etc.



Do not attach the connector cable to the battery terminals until you are instructed to do so later in the manual.

1. Place the 12-volt back-up battery in the control cabinet.
2. Attach Red and Black wires on the battery connector cable as follows:
 - a. Red to the positive (+) battery terminal **on the control board** (see *Figure 4* or the Summary of Connections Diagram for location, if necessary).
 - b. Black to the negative (–) battery terminal **on the control board**.

UL

Use a 4AH battery or larger for UL installations.

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. Recommended wire gauge for the ground connection is #16 AWG run no further than 30 feet. 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.

Section 4: THE MECHANICS OF PROGRAMMING

This section provides the following information:

- Using Data Field Program Mode
- System and communication defaults
- Entering Data Field Program Mode
- Moving from one level (page) of program fields to another
- Entering and viewing data fields
- Programming partition-specific data fields
- #93 Menu Mode Programming

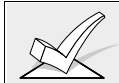
Using Data Field Program Mode

Data Field program mode is the program mode through which many system options are programmed. The field numbers on the program form show the number of entries required for each field. When an entry is completed, the keypad "beeps" three times and advanced to the next field. At this point, you can either make the required entry in the new field, or press * + the next field number you want to program.

There are several "question and answer" modes, which we call "Menu" modes that can be accessed once Data Field program mode has been entered. These modes prompt the user for information, and for this reason, a 2-line alpha keypad (5137AD, 6139) is required.

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 (5137AD or 6139), or they can be changed by using V-LINK downloading software (be sure that the software version used includes a VISTA 50 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)



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

1. Enter program mode using either 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).



Local keypad programming can be disabled through VLink downloading software. If this is done, programming can only be accomplished via the downloading software.

- After entry into the program mode, the following will be displayed:

Program Mode *Fill # View -00

- Following this display, enter * and the first field number to be programmed.

Enter the first field number to be programmed (ex. *00, installer's code) and make the desired entry. When the field is complete, the keypad will normally "beep" three times and will advance to the next field. If you do not desire to change the next field, press * and the next field number to be programmed.

First Page of fields (*00-*90)

press *99 or *98 to exit program mode

Moving from One Page of Programming to Another

- The data fields are grouped into three levels (referred to as "pages"). 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" along with a "100" or "200", depending on which page of program fields is accessed, to indicate the higher page of fields.
- To access the next level of fields, press *94.
 - Then press * + [XX], where XX=the last two digits of the program field, and make the desired entry.
 - To return to the previous page of fields, press *99.

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)

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 field 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

Programming System-Wide Data Fields

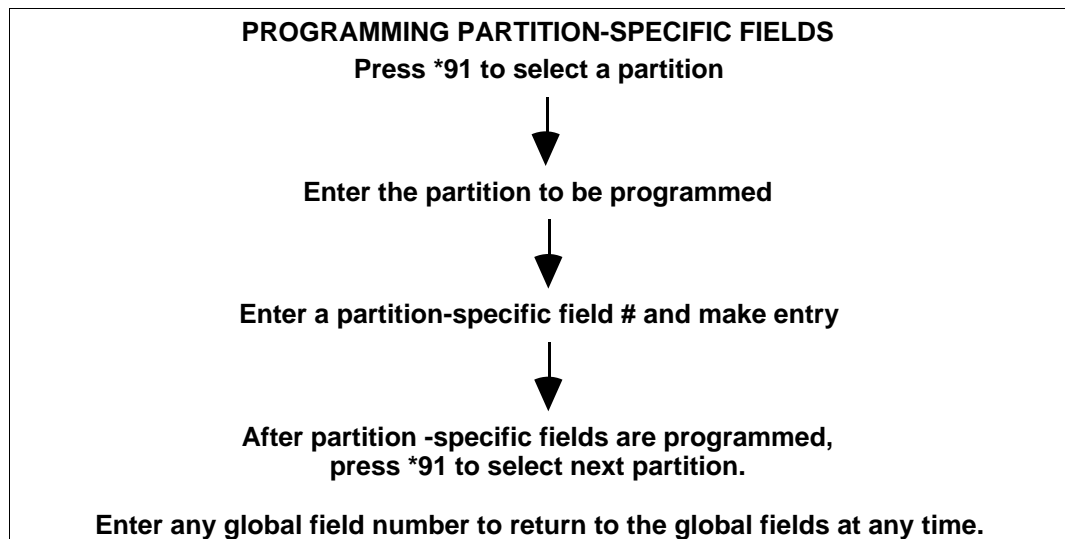
Values for some programming fields are system-wide (global), and some can be different for each partition (partition-specific). Note that the partition-specific programming fields are automatically skipped when programming the global fields. If the system has only 1 partition, the partition-specific fields *will not* be automatically skipped. To program system-wide data fields, do the following:

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 you wish to program (ex. press ***05**).
Partition-Specific programming fields are skipped.
4. To change to the next page of fields, press ***94**.
To return to the previous page of fields, press ***99**.

Programming Partition-Specific Data Fields

To program partition-specific data fields once in program mode, do the following:

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.



#93 Menu Mode Programming

The #93 Menu Mode is a mode through which much of the system's programming is done. It offers main menu selections for the following:

- Zone Programming
- Serial Number Programming
- Alpha Programming
- Device Programming
- Relay Programming
- Relay Voice Descriptors
- Custom Index Programming (VIP Module substitute words)

Press 0 (NO) or 1 (YES) in response to the displayed menu selection. Pressing 0 will display the next choice in sequence. The keypad will then prompt you with questions regarding the programming of a particular zone or device. (Refer to the individual sections to program each option shown.)

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
00+[*]	Escapes from menu mode, back into data field programming mode, if entered at the first prompt of each main menu option.

Section 5: INSTALLING THE KEYPADS

This section provides the following information:

- A list of wired keypads that may be used
- Instructions for wiring and mounting the keypads
- Instructions for addressing the keypads
- A preliminary check-out procedure to ensure that the keypads are functioning properly in the system

Keypads That May Be Used

- Two Line Alpha Display: 6139, 5137AD
- Fixed-Word Display: 6137, 6128, 4137AD
- Up to 16 addressable devices, including keypads, may be used in the system, as long as the auxiliary current is available (you may need to use an auxiliary power supply if the 750mA auxiliary output is exceeded)

Wiring To The Keypads

1. Determine wire gauge by referring to the wiring length/gauge chart below.
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 single keypad which is home-run back to the control must not exceed the lengths listed in the table.

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



1. 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.)
2. 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).

For keypads connected to a single 4-wire run, determine the current drawn by all units connected to the single wire run, then refer to the Wiring Run chart to determine the maximum wire length that can be safely used for each wire size. Current draw for all devices can be found in the *SPECIFICATIONS AND ACCESSORIES* section.

3. Run field wiring from the control to the keypads (using standard 4-conductor twisted wire cable using the wire gauge determined in step 1).

4. Connect keypads to the Keypad Port terminals 6, 7, 8, and 9 on the control board, as shown in Figure 4.

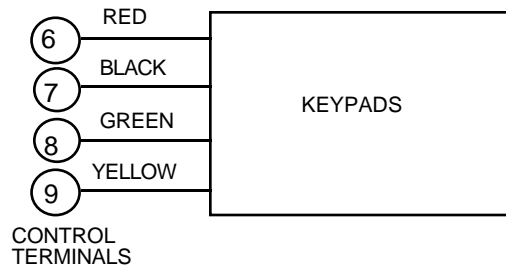


Figure 7. Keypad Connections To the Keypad Port terminals.

Using a Supplementary Power Supply to Power Additional Keypads

The control provides 750mA of auxiliary standby power for powering keypads and other devices from the auxiliary power output. Aside from this, the control can support up to 16 peripheral devices (keypads, RF receivers, relay modules, etc.). The backup battery will supply power to these devices in the event that AC power is lost.

When the control's auxiliary power load for all devices exceeds 750mA, you can power additional keypads from a regulated, 12VDC power supply (e.g., 487-12 supplies 12V, 250mA; 488-12 supplies 12V, 500mA). Use a UL Listed, battery-backed supply for UL installations.

The 487-12/488-12 power supplies have a backup battery which can power these keypads in the event of AC power loss.

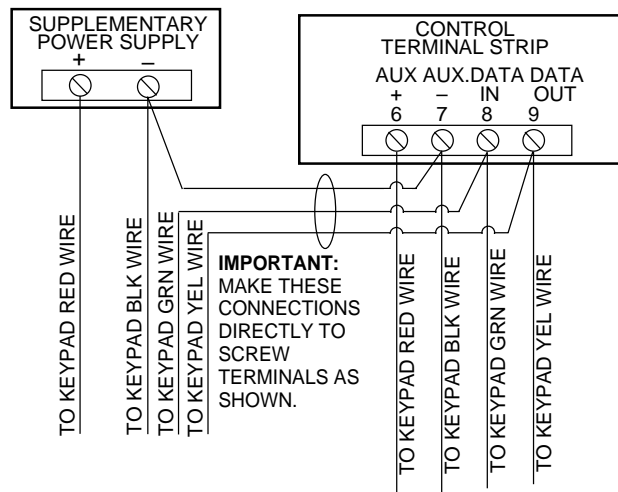


Keypads powered from supplies which do not have a backup battery **will not function** when AC power is lost. Therefore, be sure to power at least one keypad from the Control's auxiliary power output.

Connect the additional keypads as shown in *Figure 8*, using the keypad wire colors shown. Be sure to observe the current ratings for the power supply used.



1. Make connections directly to the screw terminals as shown in Figure 5. Make no connection to the keypad blue wire (if present).
2. Be sure to connect the negative (–) terminal on the Power Supply unit to terminal 7 (AUX –) on the control.



IMPORTANT:

Make connections directly to screw terminals. Make no connection to the keypad **blue** wire (if present).

Figure 8: Using A Supplementary Power Supply For Keypads

Mounting the Keypads

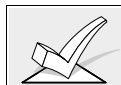
1. **Mount the keypads** at a height that is convenient for the user. Refer to the instructions provided with the keypad for mounting procedure.

You can either surface mount or flush mount keypads (using an appropriate Trim Ring Kit: 5137TRK or 6139TRK). Refer to the mounting instructions and template included with the keypad and/or trim ring kit for specific information.

Addressing the Keypads/Preliminary Check-out Procedure

If you want to check that the system is working before connecting field wiring from zones and devices, do the following:

1. Temporarily connect a 2000 ohm end-of-line resistor across each of the basic hard-wire zones 1–8, as shown in the Summary of Connections diagram. Connect a jumper across the zone 9 terminals. Without actual zone wiring or EOL resistors connected, the keypads will not display the “Ready” message.
2. Power up the system temporarily by plugging the AC transformer (previously wired to the control) into a 120VAC outlet.



The keypads will not operate until they are physically addressed and enabled in the system's Device Programming Mode.

3. Set each keypad to an individual address (00-30) according to the keypad's instructions. Set one alpha keypad for address "00" and other keypads for higher addresses (01, 02, and 03 are enabled in the system's default program). Any keypads set for address 04 and above will appear blank until they are enabled in the system's program.



Keypads set to the non-addressable mode (address 31) may interfere with other keypads (as well as other devices) connected to the keypad terminals.

4. After addresses are set, the green "READY" LED (or "POWER" LED on some types of keypads) should light, and the word READY (Fixed-word keypads), or DISARMED...READY TO ARM (Alpha keypads) should be displayed on keypads set to addresses 00, 01, 02, and 03.

If the "Ready" display does not appear on any of the keypads in the system (in either of the partitions), or a "Not Ready" message is displayed, check the keypad wiring connections, and make sure each of the 8 basic hard-wired zones has a 2000-ohm resistor connected across its terminals.

5. When the proper "Ready" message is displayed on the keypad(s) addressed at 00, 01, 02, and 03 the system is functioning properly at this point.

Do not remove the EOL resistors until you are ready to make connections to the hard-wired zones, to allow for testing later in the manual.



If an OC or OPEN CIRCUIT is present on the keypad, data from the control is not reaching the keypad. Please check your wiring.

Programming Remote Keypads

Each keypad's corresponding address must be enabled in the system's *Device Programming Mode* in order to become operational. To accomplish this, do the following:

With at least one two-line alpha keypad connected to the system and addressed as described previously:

1. Enter data field programming mode (Installer Code + **8 0 0**).
2. Program field **2*00** (Number of Partitions)



Refer to Section 4: THE *MECHANICS OF PROGRAMMING* if you need information about how to move around in program mode).

3. From Data Field Programming mode, press **#93**.
4. Press **0** (NO) to each menu option 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 (**01-30**). Press to continue.

DEVICE TYPE

Select the type of addressable keypad as follows:

- 00** = device not used
- 01** = alpha keypad (5137AD/6139)
- 02** = fixed word keypad (4137AD/6137/6128)

Press to continue.

CONSOLE PART.

Enter the partition number to which you are assigning this keypad (**01** to maximum number of partitions programmed for the system in field 2*00). This is the primary partition for which the keypad is intended to be used. Enter **09** if the keypad is to be used as a *master* keypad to view the status of all other partitions (see *Master Keypad Setup and Operation* in Section 3: *PLANNING A PARTITION SYSTEM*). Press to continue.

SOUND OPTION

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.

Press to continue. The screen will prompt for the next keypad address to be programmed.

4. Repeat the procedure above for each keypad used in the system.
5. When all keypads have been programmed, press **00** at this prompt to exit Menu mode programming.

The following fields are general keypad options you may want to program now. These fields do not include Response Types or Report Codes for panic keys, which must be programmed separately.

*29 QUICK ARM

1*43 PERM. KEYPAD DISPLAY "BACKLIGHT"

6. Enter ***99** to exit data field programming mode.
7. Unplug the AC transformer and move on to the next section.



Keypad address **00** is reserved for an alpha keypad with no sounder suppression options.

Section 6: BASIC HARDWIRED ZONES 1-9

This section provides the following information:

- Common characteristics of hardwired zones
- Wiring burglary and panic devices to zones 1-8
- Wiring 2-wire smoke detectors to zone 1
- Wiring 4-wire smoke detectors to zones 1-8
- Compatible smoke detectors (2- and 4-wire)
- Wiring 2-wire glassbreak detectors to zone 8
- Zone 9 applications
- Check-out procedure for hardwired zones

Common Characteristics of Hardwired Zones 1-8

- EOLR supervision (optional for zones 2-8) supporting N.O. or N.C. sensors
- Individually assignable to one of 8 partitions
- Up to 16 2-wire smoke detectors on zone 1.
- 4-wire smoke or heat detectors on zones 1-8 (power to 4-wire smokes must be supervised for UL installations)
- Up to 50 2-wire latching glassbreak detectors on zone 8.

Wiring Burglary and Panic Devices to Zones 1-8

1. Connect sensors/contacts to the hardwire zone terminals (10 through 22).
 - Connect N.C. devices **in series** with the high (+) side of the loop. The 2K EOL resistor must be connected in series with the devices, following the last device.
 - Connect N.O. devices **in parallel (across)** the loop. Observe polarity when wiring smoke detectors. The 2K EOL resistor must be connected across the loop wires at the last device.

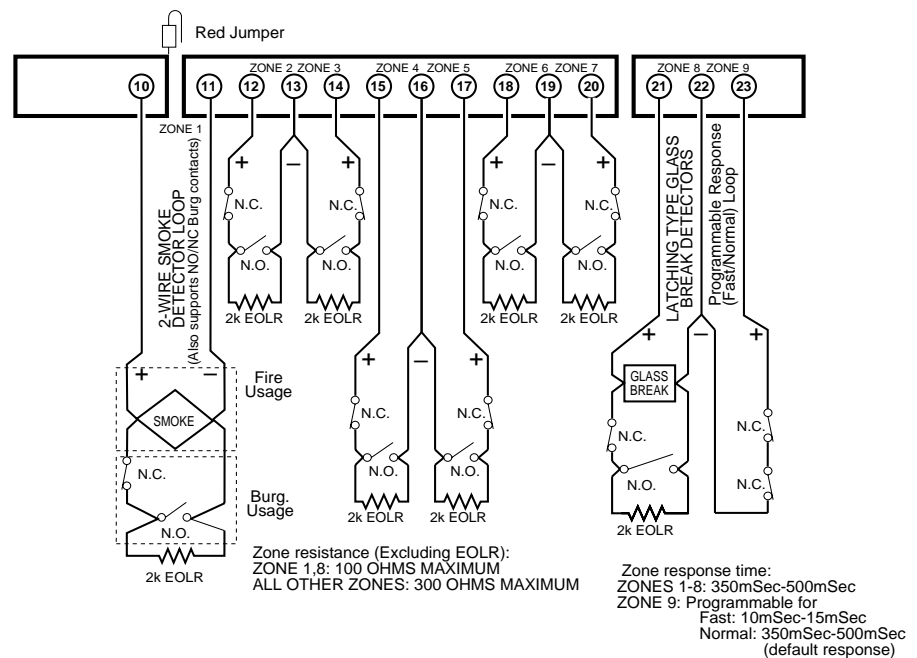


Figure 9: Zones 1-9 Wiring Connections



The maximum zone resistance is 100 ohms for zones 1 and 8, and 300 ohms for all other zones (excluding the 2K EOL resistor).

UL

1. A zone must be EOLR supervised when used for fire or burglary in UL Listed Commercial Burglary installations.
2. Zone 9 is unsupervised and may not be used in UL Commercial Burglary installations
3. A closed-circuit, unsupervised zone may be used for burglary in UL Residential Burglary installations, provided that interconnecting wires are no longer than three feet with no intervening walls or barriers.

Wiring 2-Wire Smoke Detectors to Zone 1

Zone 1 has the added capability of supporting 2-wire smoke detectors. This zone provides enough standby current (2 mA) to power up to sixteen of the smoke detectors listed on the following page. Each zone provides only enough alarm current (20 mA) to power one smoke detector in the alarmed state. When assigned zone type 9, the second entry of a Security Code + OFF sequence at a keypad will interrupt power to this zone to allow detectors to be reset following an alarm.

1. Connect 2-wire smoke detectors across zone 1 terminals (10 & 11) as shown in *Figure 10*. Observe proper polarity when connecting the detectors.
2. If an EOL resistor is presently connected across zone 1 terminals, remove it. **The EOL resistors must be connected across the loop wires of each zone at the last detector.**
3. See “Programming Hard-Wired Zones” later in this section for a detailed programming procedure.



The alarm current provided by zone 1 will support only one smoke detector in the alarmed state.

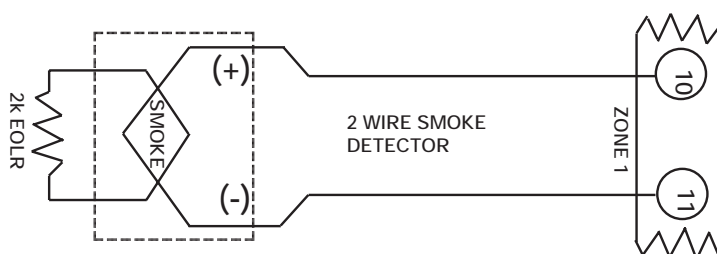


Figure 10: 2-Wire Smoke Detector Connected to Zone 1

Compatible 2-Wire Smoke Detectors

You may use up to sixteen 2-wire smoke detectors each on zone 1 listed in the table below.

DETECTOR TYPE	DEVICE MODEL #
Photoelectric w/heat sensor, direct wire	System Sensor 2300T
Photoelectric, direct wire	System Sensor 2400
Photoelectric w/heat sensor, direct wire	System Sensor 2400TH
Photoelectric w/B401B base	System Sensor 2451
Photoelectric w/heat sensor and B401B base	System Sensor 2451TH
Ionization, direct wire	System Sensor 1400
Ionization w/B401B base	System Sensor 1451
Photoelectric duct detect. w/DH400 base	System Sensor 2451
Ionization duct detector w/DH400 base	System Sensor 1451DH
Ionization, direct wire	System Sensor 1100
Ionization w/B110LP base	System Sensor 1151
Photoelectric, direct wire,	System Sensor 2100
Photoelectric w/heat sensor, direct wire	System Sensor 2100T
Photoelectric w/B110LP base	System Sensor 2151

NOTE: These smoke detectors are Listed for use with the Vista-50P and are the **only** 2-wire smoke detectors that may be used in UL applications.

Unsupervised Usage of Zone 1

Zone 1 can also be used for normally closed, unsupervised devices by doing the following:

1. Cut the red jumper on the PC board located above Zone 1 (see *Figure 9*).
2. Connect closed circuit devices in series with terminals 10 and 11.

Wiring 4-Wire Smoke Detectors to Zones 1-8

When programmed for fire warning usage, all zones can monitor 4-wire smoke detectors or N.O. fire alarm initiating devices. You may use as many 4-wire smoke detectors as can be powered from the panel's auxiliary power output without exceeding the output's rating (see Section 15: *FINAL POWER UP PROCEDURE* for auxiliary power ratings).



Auxiliary power to 4-wire smoke detectors is not automatically reset after an alarm and therefore must be momentarily interrupted using either a normally-closed momentary switch wired in series with one side of the aux. power to the smokes, or using a 4204 relay as described below.

Using a 4204 relay allows the detectors to be reset via the second entry of a Security Code + OFF sequence. The 4204 relay must be programmed to activate on Zone Type/System Operation 54 (Fire Zone Reset). See Section 9: *RELAY OUTPUTS & POWERLINE CARRIER DEVICES* for more information.

1. Connect 12 volt power for the detectors from Auxiliary Power terminals 6 and 7 as follows:: Wire the [+] side of Auxiliary Power (Terminal 6) to the N.C. contact of the 4204 relay. Wire the Pole of the Relay to the [+] Power side of the smoke detector. Connect the [-] side of the smoke detector to [-] Aux. Power (Terminal 7). Observe proper polarity when connecting detectors (see *Figure 11*).

Power to 4-wire smoke detectors must be supervised (use a System Sensor A77-716-01 EOL relay module connected as shown).

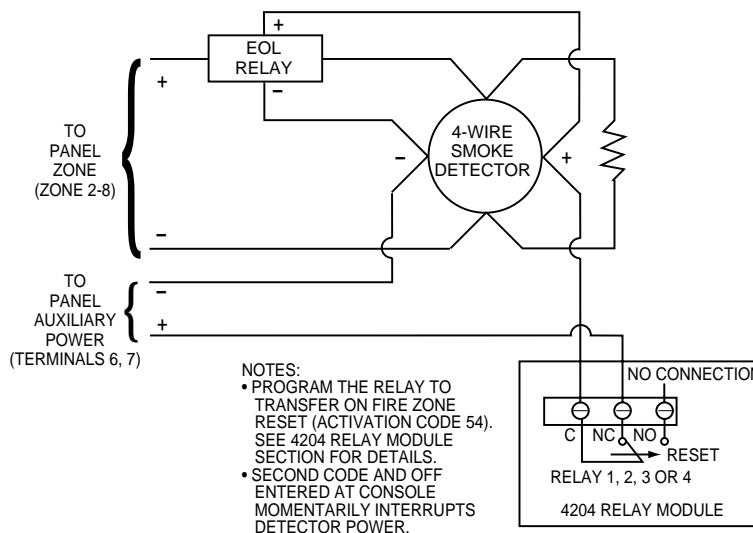


Figure 11: 4-Wire Smoke Detector Power Reset Using 4204 Relay Module

- Connect detectors (including heat detectors, if used) across terminals of the zone selected. All detectors must be wired in parallel. Remove the 2000 ohm EOL resistor if connected across the selected zone terminals.
You must connect the EOL resistor across the loop wires at the last detector.

Compatible 4-Wire Smoke Detectors

Use any UL listed 4-wire smoke detector which is rated for 10-14VDC operation and which has alarm reset time not exceeding 6 seconds. Some compatible 4-wire smoke detectors are listed below.

Photoelectric, direct wire	System Sensor 2412
Photoelectric w/heat sensor, direct wire	System Sensor 2412TH
Ionization, direct wire	System Sensor 1412

Configuring Zone 7 for Alternate Keyswitch Function


Zone 7 may be programmed to serve as a keyswitch input. If using a keyswitch, it can be assigned to only one partition. To enable the keyswitch, do the following:

1. Enter the partition number to which the keyswitch is assigned in program field *15.
2. Zone 7 is automatically assigned a response type 10 (Interior w/Delay).
3. Wire the keyswitch to zone 7. Connect the EOL resistor across the zone. If using keyswitch LEDs, wire as shown in the *VOLTAGE TRIGGERS* section.

Wiring 2-Wire Latching Glass Break Detectors To Zone 8

Use zone 8 for connection of compatible 2-wire latching-type glass break detectors. Wire as follows (also see *Figure 12*):

1. Connect all detectors in parallel across zone 8 (terminals **21** and **22**).

	Remove the 2000 ohm EOL resistor if connected across the selected zone terminals. You must connect the EOL resistor across the loop wires at the last detector.
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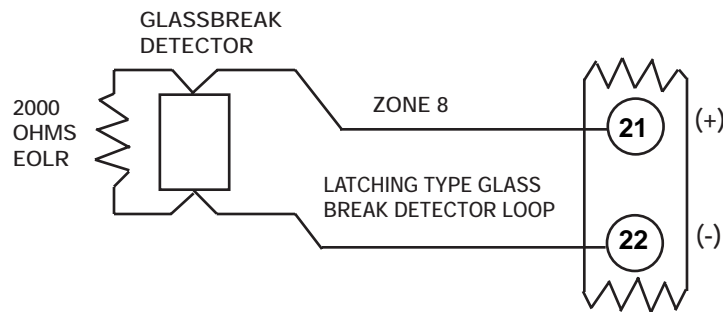


Figure 12: Wiring Latching Glassbreak Detectors to Zone 8.

After an alarm, the first code + OFF turns off the siren and disarms the system; the second code + OFF clears the memory of alarm and resets the glassbreak detector.

Compatible Glass Break Detectors

Use detectors that meet the following 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 found to be compatible with these ratings. You can use up to fifty IEI 735L detectors connected in parallel.



The alarm current provided by zone 8 will support only one Glass Break detector in the alarmed state.

You can use detectors which exceed 1.1k ohms in alarm, provided they maintain a voltage drop in alarm of less than 3.8 volts.



1. Do not use other N.O. or N.C. contacts when using glass break detectors on zone 8. Other contacts may prevent proper glass break detector operation.
2. If latching type devices are installed on both zones 1 and 8, both zones should be assigned to the same partition. If they are not, and both devices are in alarm at the same time, the resetting of one could cause a loss of alarm memory in the other.

Zone 9 Applications:

This zone is unsupervised and is suitable for monitoring fast acting glass break sensors or vibration sensors. When using zone 9, keep the following in mind:

- Use only closed circuit devices connected in series with one another.
- Program zone 9 as any response type **except** fire (type 09) or panic (types 6,7 or 8)
- Program fast (10 msec) or normal (350 msec-500 msec) response in data field *14.



Avoid using mechanical magnetic or relay type contacts on zone 9 when programmed for fast response.

Programming Hardwired Zones

1. With at least one two-line alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: [Installer Code] + **8 0 0** and program the following data fields:
*14 ZONE 9 FAST/NORMAL RESPONSE (1=fast; 0=normal)
*41 NORMALLY CLOSED OR EOLR (Zones 2-8) (1=N.C. loops; 0=EOLR)
2*00 NUMBER OF PARTITIONS (1-8) if you haven't already done this in previous :
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 the previous screen.

ENTER ZN NO.
00=QUIT 02

Enter the zone number to be programmed 01-09. Press to continue.

02 ZT P RC In:L
00 1 00 HW:N

A summary screen for that zone will appear. ZT = zone type; P=partition to which zone is assigned; RC = report code for that zone; In = input type of zone; L = Loop number (applies only to 5800 series RF zones).

Press to continue.

02 Zone Type
Zone disabled 00

Each zone in a system must be assigned 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. If a different zone response type is desired, enter a different number and press to continue.

Zones 1-9 can be assigned any response type (except zone 9, which cannot be assigned as a fire zone).

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

Zone Types for hardwired zones are as follows:

00 Assign For Unused Zones	06 24 Hour Silent Alarm
01 Entry/Exit #1, Burglary	07 24 Hour Audible Alarm
02 Entry/Exit #2, Burglary	08 24 Hour Auxiliary
03 Perimeter, Burglary	09 Fire
04 Interior Follower, Burglary	10 Interior Delay, Burglary
05 Trouble By Day/Alarm By Night	23 No Alarm Response (Used for Relay Activation)

02 Partition

Enter the partition number (**1-8**) you are assigning this zone to. Press to continue.

02 Report Code

Enter the report code for this zone. (Enter the first digit and press . Enter the second digit and press again. A summary of both digits. will be displayed). Press to continue.

02 Input Type
Hardwired 1:1:

Enter the input device type as follows:

0 = not used; **1**=hardwired

Press to continue.

The summary screen is displayed.

Press to display the "ENTER ZN NO?" prompt for programming the next hardwired zone.

After all zones have been programmed, enter **00** at this prompt and press . The system will prompt "Quit Menu Mode?" Press 1 to quit. This will return you to normal (data field) programming mode.

Press *99 to exit program mode.

Enter the [Installer Code] + OFF to cancel the system's settling delay.

Check-Out Procedure For Hard-Wired Zones

After installation of all hard-wired zones is complete, *each* partition of the security system should be checked as follows:

1. Make certain that all devices and sensors connected to the hard-wired zones are not in a faulted state. Doors and windows with contacts should be closed, PIRs should be covered (use a cloth to mask them temporarily if necessary).
2. With all hard-wired zones intact, the Alpha keypads connected to the system should display:

<p>DISARMED READY TO ARM.</p>

If the following is displayed,

<p>DISARMED Press * to show faults</p>
--

press the key to display the faulted zone(s). Restore any faulted zone(s) as necessary (also make sure that you have connected a 2000 ohm EOL resistor across the terminals of unused zones). When the DISARMED...READY TO ARM message is displayed, you can proceed to the next step.

4. Fault and then restore every contact or sensor on each zone individually to ensure that it is being monitored by the system. Each time a zone is faulted, the keypads in the partition to which the zone is assigned should display the number of the faulted zone. When each zone is restored, the READY TO ARM message should appear again.



If a zone or zones are not displayed at the correct partition's keypad(s), check both keypad and zone programming to verify the correct partition assignment.

5. When you get the proper displays on the keypad(s), the hard-wired zones in the system are functioning properly.
6. Unplug the AC transformer and continue to the next section.

Section 7: 2-WIRE POLLING LOOP ZONES 10 - 86

This section provides the following information:

- Polling loop overview
- Common characteristics of polling loop zones
- Wiring RPM devices to the polling loop
- Addressing RPM devices
- Polling loop limitations
- Programming polling loop zones
- Checkout procedure for polling loop zones

Polling Loop Overview

You can expand the system from the basic 9 zones to up to 86 zones using the built-in 2-wire polling loop. Each device that is connected to the polling loop has the ability to communicate with the panel about its status. These devices are called RPMs (Remote Point Modules). The polling loop provides both power and data to the RPM zones, and is constantly monitoring the status of all zones enabled on the loop. The maximum current draw of all devices on the polling loop cannot total more than 64mA (unless using a 4197 Polling Loop Extender Module).



Refer to the list of compatible devices at the end of this section.

Common Characteristics of Polling Loop Zones

Polling loop zones have the following characteristics:

- Must use RPM (Remote Point Module) devices
- Supervised by control panel
- Individually assignable to one of 8 partitions

Wiring/Addressing RPM Devices

All devices on the polling loop must be wired in parallel to the [+] and [-] Polling Loop terminals of the control panel (24 and 25, respectively). You can wire from device to device, or have multiple branches connected directly to the control panel in a star configuration. Be sure to observe proper polarity.

Although each polling loop device is wired in parallel, each device has its own unique zone number (or group of zones if it is an 8- zone expander). On some devices, this is determined by the setting of DIP switches. Other devices have a built-in unique serial number which must be "learned" into the control as the zone number desired. Set up the polling loop as follows:

1. Run wires to each device on the polling loop using the guidelines in the following table for maximum wire runs per wire gauge. Twisted pair wire is recommended for all wire runs.

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

Maximum total wire runs combined must not exceed 4000 ft regardless of wire gauge (2000 ft. if shielded wire is used).



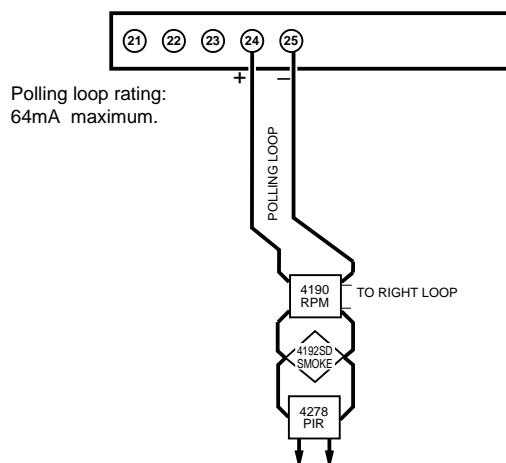
When running polling loop wires, they must be at least 6" away from A.C. voltage, telephone, or intercom wiring. Since the polling loop is carrying data between the control panel and the devices, interference on this loop can cause an interruption of this communication. The polling loop can also cause outgoing interference on the intercom or phone lines. If this spacing cannot be achieved, shielded wire must be used. (Note that the maximum total wire length supported is cut in half when shielded wire is used.)

2. Wire each device to the polling loop, making sure to use correct polarity when making connections (refer to the device's instructions).
3. Note the polling loop devices that have DIP switches on them. Set each device's DIP switches for the zone number you are assigning it. Refer to the device's instructions or the DIP Switch Tables found at the end of this manual when setting addresses.

Certain polling loop devices, such as the 4139SN and 4191SN, do not have DIP switches. Instead, they have embedded serial numbers which must be "enrolled" by the control during #93 Menu Mode Zone Programming.



Certain polling loop devices can be set for either dip switch mode or serial number mode. When used with the Vista-50P, these devices **MUST** be set for the serial number mode of operation.



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 13. Polling Loop Connections

Polling Loop Limitations

The built-in polling loop has the following limitations that must be observed:

- The maximum allowable current draw from the polling loop is 64mA. (Refer to the POLLING LOOP CURRENT DRAW WORKSHEET (found in Section 15: *FINAL POWER-UP PROCEDURE* for current draws of various polling loop devices.) If devices total more than 64 mA, a 4197 Polling Loop Extender Module is required.
- 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 zone expanders which accommodate more than one zone per RPM device (4190WH (2 zones) or 4208 (8 zones)). If more devices are needed, a 4197 Polling Loop Extender Module must be used.

The 4197 Polling Loop Extender Module may be used to provide additional polling loop current, to extend the polling loop wire run, and/or to provide individual, electrically isolated polling loops (see *Figure 14*).



Be sure to include the total current drawn on the polling loop when figuring the total auxiliary load on the panel's power supply (use the AUXILIARY CURRENT DRAW WORKSHEET in Section 15: *FINAL POWER UP PROCEDURE*).

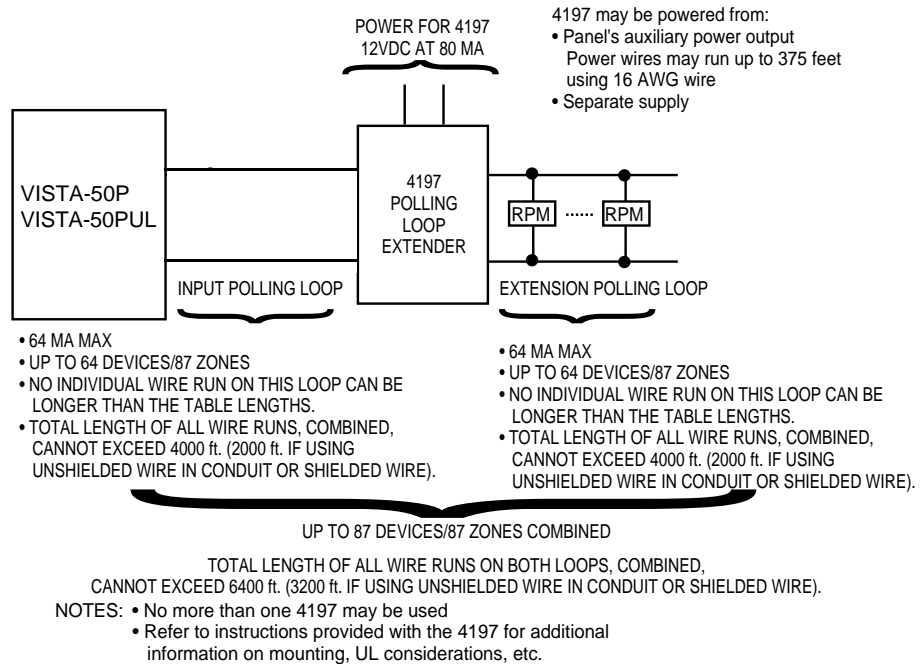



Figure 14. Polling Loop Extender Module Wiring

Polling Loop Supervision

A short on the polling loop is indicated by a trouble on its supervisory zone (97) and reports as a trouble condition only, even if the system is armed. As such, it should be assigned zone type 05 if annunciation is desired.

If a device on the polling loop fails (the panel cannot "see" that device), the partition (or partitions) that use that device will display a trouble condition for all zones associated with that device. If the panel is armed when a device fails, the zones associated with that device will cause an alarm on the corresponding partition(s).



A trouble on Zone 97 will not prevent a partition from being armed, as long as all polling loop zones on that partition are bypassed.

Programming Polling Loop Zones

1. With at least one two-line alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: [Installer Code] + **8 0 0**.
3. Program data field *24: IGNORE EXPANSION ZONE TAMPER
(0=Enable Tamper; 1=Ignore Tamper)
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 the previous screen.

Enter Zn No.
00=QUIT 10

Enter the zone number to be programmed (09 to 87). Press to accept entry.

10 ZT P RC In: L
00 1 00 --:N

A summary screen for that zone will appear. 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.

10 Zone Type
Zone disabled 00

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

Each zone in a system must be assigned 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	06 24 Hour Silent Alarm
01 Entry/Exit #1, Burglary	07 24 Hour Audible Alarm
02 Entry/Exit #2, Burglary	08 24 Hour Auxiliary
03 Perimeter, Burglary	09 Fire
04 Interior Follower, Burglary	10 Interior Delay, Burglary
05 Trouble By Day/Alarm By Night	23 No Alarm Response (Used for Relay Activation)

10 Partition

Enter the partition number (1-8) you are assigning this zone to. Press to continue.

10 Report Code

Enter the report code for this zone. (Enter the first digit and press . Enter the second digit and press again. A summary of both digits. will be displayed). Press to continue.

10 Input Type

Enter the input device type as follows:
6=serial number polling loop device (SL type); **7**=DIP switch type (left loop) polling loop device (DP type); **8**=right loop of DIP switch type device (PS type).



Right loops refer to the use of the right (or secondary) loop on a 4190WH zone expander module and/or 4278 PIR. This loop allows standard contacts to be monitored by the polling loop (N.C. non-supervised devices only--CANNOT be used in UL installations).

10 LOOP NUMBER

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

OR

10 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 above).

10 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. Alternatively, if the serial number is printed on the device, it can be entered in manually. Once entered, press (*) to display the next screen.

10 PROG AS SL:1
A001-3078:1

Press to continue. The summary screen will then appear as it did when first entering the zone number to be programmed (see summary screen description above).

Press to display the "ENTER ZN NO?" prompt and program the next zone.

After all zones have been programmed, enter **00** at this prompt and press . The system will prompt "Quit Menu Mode?" Press 1 to quit. This will return you to normal (data field) programming mode.

Press ***99** to exit program mode.

Enter the [Installer Code] + OFF to cancel the system's settling delay.

Check-Out Procedure For Polling Loop Zones

After installation of all polling loop zones is complete, *each* partition of the security system should be checked as follows:

1. Make certain that all devices and sensors connected to the polling loop are not in a faulted state. Doors and windows with contacts should be closed, PIRs should be covered (use a cloth to mask them temporarily if necessary).
2. With all hard-wired and polling loop zones intact, the Alpha keypads connected to the system should display:

**DISARMED
READY TO ARM.**

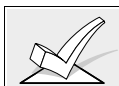
If the keypad(s) begins beeping and the word "CHECK" is displayed, along with a zone or zone numbers, the system either **does not see** the displayed zone(s) or the tamper switches on 4190WH units are tripped. Please check your DIP switch settings for the zone(s), your connections, and/or that the covers for the 4190WH units are in place. Once the situation has been corrected, enter the [Security Code] + [OFF] sequence twice to clear the trouble.

If the following is displayed,

**DISARMED Press *
to show faults**

press the [*] key to display the faulted zone(s). Restore any faulted zone(s) as necessary. When the DISARMED...READY TO ARM message is displayed, you can proceed to the next step.

4. Fault and then restore every contact or sensor on each zone individually to ensure that it is being monitored by the system. Each time a zone is faulted, the keypads in the partition to which the zone is assigned should display the number of the faulted zone. When each zone is restored, the READY TO ARM message should appear again.



If a zone or zones are not displayed at the correct partition's keypad(s), check both keypad and zone programming to verify the correct partition assignment.

5. When you get the proper displays on the keypad(s), the polling loop zones in the system are functioning properly.
6. Unplug the AC transformer and continue to the next section.

UL

1. The 4208 must either be mounted inside the VISTA-50P cabinet or in a separate enclosure which has a tamper supervised cover.
2. The 4190WH right loop must not be used, and the left loop must be EOLR supervised.
3. The 4278 auxiliary sensor loop cannot be used.
4. The 4194 is not UL Listed.
5. The 4197 must be powered from the VISTA-50PUL auxiliary power output or from a UL listed supplementary power supply.

Compatible Polling Loop Devices

4208	8-Zone Expander	<ul style="list-style-type: none"> • Accommodates up to 8 zones via the polling loop. • DIP switch programmable. • 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	2 -Zone Expander	<ul style="list-style-type: none"> • Accommodates up to 2 zones via the polling loop. • DIP switch programmable. • The left zone can be EOLR supervised (required in UL installations), 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 (cannot be used in UL installations)..
4278	Quad PIR	<ul style="list-style-type: none"> • Quad element PIR with built-in RPM (connects directly to the polling loop). • DIP switch programmable. • Includes mirrors for both wide angle and curtain/long range applications. • Features an auxiliary sensor loop that is non-supervised and can accept closed circuit sensors only (cannot be used in UL installations).
4275	Dual PIR	<ul style="list-style-type: none"> • Dual element PIR with built-in RPM (connects directly to the polling loop). • 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)	<ul style="list-style-type: none"> • Wide gap surface mounted reed contact with built-in RPM (connects directly to the polling loop). • DIP switch programmable. with built-in RPM (connects directly to the polling loop). • DIP switch programmable.

Compatible Polling Loop Devices

4197	Extender Module	<ul style="list-style-type: none"> Used to increase the polling loop current (64mA), to extend the polling loop wire run length, and/or to provide individual, electrically isolated loops. Connects to the polling loop and is powered from panel's auxiliary power or by a separate power supply with battery backup.
4192SD	Photoelectric Smoke Detector	<ul style="list-style-type: none"> One piece photoelectric smoke detector with built-in RPM. DIP switch programmable.
4192SDT	Photoelectric Smoke Detector w/Heat Detector	<ul style="list-style-type: none"> One piece photoelectric smoke detector with 135°F (57°C) heat detector, and built-in RPM. DIP switch programmable.
4192CP	Ionization Smoke Detector	<ul style="list-style-type: none"> One piece products of combustion ionization detector with built-in RPM. DIP switch programmable.
4139SN	Serial Number Surface Mount Reed Contact	<ul style="list-style-type: none"> Compact surface mount magnetic reed contact with built-in RPM. Serial number ID "learned" by control panel.
4191SN	Serial Number Recessed Reed Contact	<ul style="list-style-type: none"> Recessed (1/2" dia.) magnetic reed contact with built-in RPM. Serial number ID "learned" by control panel.
4939SN	Surface Mount Magnatic Reed Contact	<ul style="list-style-type: none"> Surface mount magnetic reed contact with built-in RPM. 5 ft. jacketed cable. Serial Number ID "learned" by control panel.
4959SN	Aluminum Overhead Door Contact	<ul style="list-style-type: none"> Aluminum overhead door contact 24-inch armored cable Serial number ID "learned" by control.
7500	Single Technology Glass Break Detector	<ul style="list-style-type: none"> Glass break detector with built-in RPM. DIP switch programable.
9500	Dual Technology Glass Break Detector	<ul style="list-style-type: none"> Dual technology glass-break detector with built-in RPM. DIP switch programmable.

Section 8: WIRELESS (RF) ZONE EXPANSION

This section provides the following information:

- Common characteristics of wireless zones
- Wireless systems available
- Installing the wireless receiver (4281/5881)
- Installing the 5800TM Module
- Programming the wireless receiver (4281/5881)
- Installing the wireless transmitters (5700/5800 series)
- Programming the wireless transmitters (5700/5800 series)
- Checkout Procedure for wireless zones (test modes)

Common Characteristics of Wireless Zones

- Supervised by control panel for check-in signals (except certain non-supervised transmitters)
- Individually assignable to one of 8 partitions

UL

Wireless may not be used in UL Commercial Burglary installations.

Wireless Systems Available

The VISTA-50P supports wireless zones which may be used exclusively or in addition to hardwire and/or polling loop zones. The system supports two different wireless systems which have many similarities, but notable differences in the programming of the transmitters for each system.

The following receivers may be used with this system and each supports the number of zones shown below:

5700 Series

Recvr	Zones
-------	-------

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

5800 Series

Recvr	Zones
-------	-------

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



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.

Wireless System Operation and Supervision

- The receiver responds to status and alarm signals from wireless transmitters (@ 345MHz USA; 315MHz (5700 series) and 345 MHz (5800 series) Canada) within a nominal range of 200 feet, and relays this information to the control.
- Each supervised transmitter sends a supervisory signal to the receiver every 70-90 minutes. If, after a programmed interval of time (i.e., 12 hrs), the receiver does not hear from a *particular* transmitter, the word CHECK will appear at the corresponding partition's keypad(s) accompanied by the zone number in question. The trouble will not prevent you from arming the panel, as long as the zone is first bypassed.
- If, within a programmed interval of time (i.e., 12 hrs), the receiver does not hear from *any* of its transmitters, a CHECK message will appear for zones 88 (2nd receiver) or 90 (1st receiver) if zone type 05 is assigned to these supervisory zones. This may be an indication that the wireless receiver is not able to "hear" signals.
- The control checks the receiver connections about every 45 seconds. If the panel has lost communication with the receiver, a CHECK message will appear for zones 89 (2nd receiver) or 91 (1st receiver) if type 05 is assigned to these supervisory zones. This may be an indication that the wiring to the receiver is incorrect, or that the DIP switches are not set for the same address the receiver was assigned to in the panel's Device Programming mode.
- Two identical 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. Any zone from 1-86 can be used as a 5800 series wireless zone, with the exception of zone 64 (reserved for a wireless keypad).

Wireless System Installation Advisories

1. Place the receiver in a high, centrally located area for best reception. Do not place receiver on or near metal objects. This will decrease the range and/or block transmissions. Do not mount receivers or transmitters in an attic, where extreme temperatures could prevent proper operation.
2. For maximum range, install the wireless receiver at least 10 feet from the Control panel or any keypads to avoid interference from the microprocessors in these units.
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. Each receiver must be set to a different Device Address (01-07). The receiver set to the lower address is considered the 1st wireless receiver for supervisory purposes.
 - C. The house IDs must be the same (applies only to 5700 series or if using a 5827/5827BD wireless keypad).
 - D. Using two Receivers *does not* increase the number of transmitters the system can support (63 zones using 4281H; 86 zones using the 5881H) plus a wireless keypad).



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.

Installation and Setup of the 4281/5881 Wireless Receivers

1. Mount the receiver(s). Receivers must be mounted externally to the control and can detect signals from transmitters within a nominal range of 200 feet. Take this into consideration when determining mounting location.
2. Connect the receiver's wire harness to the control's keypad terminals (6, 7, 8, and 9). Plug the connector at the other end of the harness into the receiver (see Figure 15).
3. Refer to the installation instructions provided with the receiver for further installation procedures regarding antenna mounting, etc.

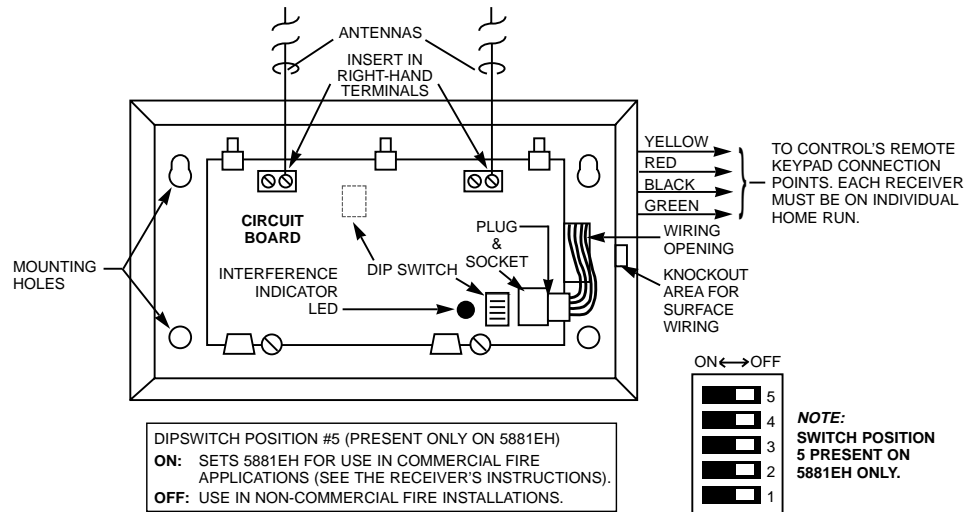


Figure 15: 5881 Wireless Receiver (cover removed)

4. Set the receiver's DIP switches for an address (01-07) which is not being used by another device (i.e., keypads, relay modules, etc.).



Take note of the address you select for the wireless receiver as this address must be enabled in the system's *Device Programming* mode (described later in this section).

Installing the 5800TM Module

Installation of this module is necessary only if you are using one or more 5827BD Wireless Bi-directional keypads.

The 5800TM must be located between one and two feet from the 4281 or 5881 receiver's antennas. The 5800TM must not be installed within the control cabinet. Mount the unit using its accompanying mounting bracket.

5800TM Wiring Connections

Connect the 5800TM to the control panel's keypad connection terminals, using the supplied connector with flying leads, as follows:

WIRE	TERMINAL ON CONTROL
RED (+12VDC)	Terminal 6
BLACK (Ground)	Terminal 7
GREEN (Data to Control)	Terminal 8
YELLOW (Data from Control)	Terminal 9
BLUE: Not Used	

Cut the red jumper for address setting 28; cut the white jumper for address 29; cut both jumpers for address 30.



This address must be enabled as an alpha keypad in the control's *Device Programming* mode and then assigned to a partition, as described later in this section.

For additional information, refer to the 5800TM's instructions.

Programming The Wireless Receiver

1. With at least one two-line alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: Installer Code + **8 0 0** .
 - a. If using a 4281: set data field 1*32 to **1**
If using a 5881: set data field 1*32 to **2**
 - b. Set data field 1*30 RF RCVR CHECK-IN INTERVAL (**02-15** times 2 hrs.).
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

Enter the 2-digit device address number as set by the receiver's DIP switches (01-07). Press * to continue.


DEVICE TYPE

Enter device type **03** = RF Expander.
Press * to continue.


RF EXPANDER
HOUSE ID XX

Enter the 2-digit house ID (00-31) as determined by sniffer mode (use an ID not displayed during sniffer mode, as explained later in this section). Applies only to 5700 series systems or if using a wireless keypad (5827/5827BD) with 5800 series systems.
Press * to continue.

The system will now prompt for the next device address to be programmed.

	<p>The system <i>House ID</i> and the <i>Device Address</i> of the receiver are two different things. The House ID allows the system to identify transmitters with a matching House ID. If using 5700 series wireless systems, the DIP switches on the transmitters must match the system <i>House ID</i> programmed into the control. If using a 5827BD wireless keypad, the House ID also applies. Other 5800 series devices do not communicate by House ID, but by transmitting a unique serial number to the control. In this case, programming a House ID would not be necessary.</p> <p>The Device Address allows the system to identify the receiver as opposed to other devices connected to its keypad terminals. Therefore, the DIP switches on the RF Receiver must match the <i>Device Address</i>.</p>
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- At the "DEVICE ADD?" prompt, press **00** ***** to exit Menu Mode programming and return to Data Field programming. Press ***99** to exit programming mode or proceed to the next section.

	<p>If using a 5800 TM module, it must be programmed for Device Address 28, 29, or 30 (depending on which jumper(s) is cut) as either Device Type 1 or 2.</p>
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UL	<p>For UL Household Fire/Burglary applications, use of 1 or 2 RF RCVRs requires enabling their respective faults (88-91) as applicable (type 5).</p>
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House ID Sniffer Mode

This mode applies only to 5700 series systems, or if you are using a wireless keypad (5827/5827BD) in a 5800 series system.

5700 series receivers respond only to transmitters set to the same House ID (01 - 31) that is programmed into the control panel. This prevents system interference from transmitters in other nearby systems. Use the House ID Sniffer Mode to make sure you do not choose a House ID that is in use in a nearby system. To enter this mode, proceed as follows:

- Enter your "Installer Code" + **#** + **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 enter your Installer Code + OFF.

	<p>Since Sniffer Mode effectively disables wireless point reception, Sniffer Mode cannot be entered while any partition is armed.</p>
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5700 Series Transmitter Setup

Each 5700 series transmitter has DIP switches to set both the transmitter's zone number (Transmitter ID) and the system House ID. The House ID will be the same for all transmitters and must match the House ID programmed into the system (via Device Programming) for the wireless receiver. This can be likened to a family in which everyone has the same last name (House ID), but each person has a different first name (Transmitter ID). The zone number must then be programmed into the system using #93 Menu Mode–Zone Programming Menus.

5700 Series 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 certain period of time (Programmed in field 1*31), the keypad will display the zone number and "CHECK."
- Each transmitter (including 5701 and 5727) is also supervised for a low battery condition, 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," (or "00" and LO BAT for a wireless keypad).

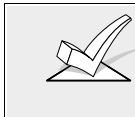
5700 Series Transmitter Battery Life

- Batteries in the wireless transmitters may last about 2 years for 5700 series transmitters, 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 user for battery life (ex. 5701).
- 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.

Installing 5700 Series Transmitters

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

1. Set the DIP switches on each 5700 series transmitter to the appropriate zone number and House ID. Refer to the Compatible Transmitters Table later in this section for zone numbers and programming information for each particular transmitter.
2. Install each transmitter in accordance with the instructions provided with the transmitter.



Before permanently mounting the transmitters, make sure reception of each transmitter's signal at the proposed mounting location is adequate. To do this, perform a Go/No Go test, which is described later in this section.

3. Program the transmitters using the #93 Menu mode Zone Programming option. Refer to *PROGRAMMING WIRELESS ZONES* later in this section for specific instructions.

Wireless Zone Assignments for 5700 Series Transmitters

Each wireless zone can be assigned any zone response type, such as Entry/Exit, Interior Follower, Perimeter, etc. (see the ZONE TYPES section for explanations of each zone type). For 5700 series transmitters, each response type uses a certain range of zone numbers. Each range of zone numbers is indicated below:

Zone Type	Trans/Zone #
Entry/Exit Burg	1 through 47 *
Perimeter 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:

1. 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.
2. 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.

Compatible 5700 Series Transmitters

Model	Product	Zone Num.	Description
5701	Panic Transmitter	62 or 63	<ul style="list-style-type: none"> Programmable for either silent or audible 24 hour alarm.
5706	Photoelectric Smoke Detector	48-55 low battery	<ul style="list-style-type: none"> One piece smoke detector with built in transmitter. Built-in UL Listed 85 dB piezo electric alarm sounder and audible warning.
5711	Slimline Door/Window Transmitter	1-63	<ul style="list-style-type: none"> Can be used with any closed or open circuit sensor.
5715WH	Universal Transmitter	1-63	<ul style="list-style-type: none"> DIP switch selectable for fast response, and open or closed sensor usage. Has a tamper protected cover.
5716 5716WM	Door/Window Transmitter	1-63	<ul style="list-style-type: none"> Can be used with any open or closed circuit sensor. Features a built-in reed switch. 5716WM includes magnet.
5742	Audio Discriminator	1-63	<ul style="list-style-type: none"> For use in unoccupied areas to detect the sound of shattering glass when a window is broken.
5743	Dual Technology Glassbreak Detector	1-63	<ul style="list-style-type: none"> Detects the sound <i>and</i> shock of breaking glass and requires the presence of <i>both</i> to initiate an alarm condition.
5775	PIR Detector	32-47	<ul style="list-style-type: none"> Dual element passive infrared detector with built-in selectable pulse count. <p><i>Note:</i> There is a 3 minute lock-out between fault transmissions to conserve battery life.</p>
5727	Wireless Keypad	House ID	<ul style="list-style-type: none"> Can be used to turn the burglary protection on and off Features the same built-in panic functions as wired keypads. Must be assigned to a partition. Identified as zone "00" (on wired keypads) when it transmits with a low battery.
5827BD	Wireless Keypad	House ID	<ul style="list-style-type: none"> Same features as above plus: Requires use of 5800TM Module (must be enabled in Device Programming. Can indicate system status via its 3 LEDs and sounder. House ID must be set.
5799	Magnets		<ul style="list-style-type: none"> Package of 8 magnets for use with 5716 transmitters

UL

The 5711, 5715, and 5716 do not supervise their loop wiring. Therefore, the loop wiring may not exceed 3 feet.

5800 Series Transmitter Setup

5800 series transmitters have built-in serial numbers that must be "learned" by the system using the # 93 Menu mode programming, or input to the control via the downloader. 5800 series transmitters (except 5827 described separately) do not have DIP switches.

Each transmitter's zone number is programmed into the system in # 93 mode. Some transmitters, such as the 5816 and 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 must be assigned a different zone number and learned separately.

For button transmitters (wireless "keys"), such as the 5803 and 5801, you must assign a unique zone number to each individual button used on the transmitter. Each button on the transmitter also has a pre-designated loop or input number, which is automatically displayed when learned.

5800 Series Transmitter Supervision

Except for some transmitters that may be carried off-premises (5802, 5802CP, 5803, 5827, and 5827BD), each transmitter 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 each *supervised* transmitter within a programmed time period (i.e., 12 hrs.), the "missing" transmitter number(s) and "CHECK" will be displayed.

The supervision for a particular transmitter that may be carried off the premises (5801, 5802MN) may be turned off by learning it as a "UR" (Unsupervised RF) type, as described later.

5800 series transmitters have built-in tamper protection and will cause a "CHECK" condition to be annunciated if covers are removed, provided that program field *24 (Disable Expansion Zone Tamper) is set for "0."

5800 Series Transmitter Input Types

All of the transmitters described have one or more unique factory assigned loop inputs. *Each of the inputs requires its own programming zone* (e.g., a 5803's three button inputs require three programming zones).


Transmitters can be learned as one of the following types:

Type	Description
"RF" (Supervised RF) must remain within the receiver's range.	Sends periodic check-in signals, as well as fault, restore, and low battery signals. The transmitter
"UR" (Unsupervised RF)	Sends all the signals that the "RF" type does, but the control does not supervise the check-in signals. The transmitter may therefore be carried off-premises.
"BR" (Unsupervised Button RF)	These send only fault signals. They do not send low battery signals until they are activated. The transmitter may be carried off-premises.

5800 Series Transmitter Battery Life

- 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.
- Some transmitters (e.g., 5802, 5802CP, and 5803) contain long-life but non-replaceable batteries. At the end of their life, the complete unit must be replaced (and a new serial number learned by the control).

- Button type transmitters (ex. 5801, 5802, 5802CP & 5803) should be periodically tested by the user for battery life.

	Do not install batteries in wireless transmitters until ready to learn, as will be indicated under <i>Programming the Wireless Transmitters</i> later in this section. Though it is not critical to remove batteries after learning, it is recommended in order to avoid interference while learning additional transmitters.
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Compatible 5800 Series Transmitters

Model	Product	Learn As Input Type	Description
5801	Wireless Panic Transmitter	UR or RF	<ul style="list-style-type: none"> • Has four pushbuttons, each with a unique input (loop) code. • Programmable responses (e.g., Panic, Arm–Stay, Arm–Away, Disarm, etc. • For arming/disarming functions, button must be assigned to a user code when "adding a user."
5802 5802CP	Pendant (Personal Emergency Transmitter) Belt Clip (Personal Emergency Transmitter)	BR Only	<ul style="list-style-type: none"> • Has single pushbutton. • Usually be programmed for response type of 24Hr. Audible or 24 Hr. Silent (other zone responses are possible). • Contains a non-replaceable battery. At the end of the battery's life, the entire unit must be replaced. • If using for arming/disarming, the button must be assigned to a user code when "adding a user."
5802MN	Miniature (Personal Emergency Transmitter)	UR or RF	<ul style="list-style-type: none"> • Has single pushbutton. • Usually programmed for a response type of 24 Hr. Audible or 24 Hr. Silent (other zone responses are possible). • If using for arming/disarming, the button must be assigned to a user code when "adding a user".
5803	Wireless Key Transmitter	BR Only	<ul style="list-style-type: none"> • Has three pushbuttons, each with a unique input (loop) code. • Programmable responses (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, the button must be assigned to a user code when "adding a user."
5806 5807	Wireless Photoelectric Smoke Detectors	RF	<ul style="list-style-type: none"> • One piece smoke detectors with built in transmitter.

Model	Product	Learn As Input Type	Description
5816	Door/Window Transmitter :	RF	<ul style="list-style-type: none"> Has two unique input (loop) codes: one for a wired closed circuit contact loop; the other for a built-in reed switch (used in conjunction with a magnet).
5816 TEMP	Low Temperature Sensor	RF	<ul style="list-style-type: none"> Transmits a fault condition when temperature drops below 45 degrees. Learned into the system by the internal reed switch using a magnet.
5817	Multi-Point Universal Transmitter	RF	<ul style="list-style-type: none"> Has three unique input (loop) codes: one for a "Primary" contact loop with programmable options; the others for two "Auxiliary" closed circuit contact loops.
5818	Recessed Transmitter	RF	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Can be used to turn the burglary protection on and off Features the same built-in panic functions as wired keypads The keypad is identified as zone "00" on wired keypads when it transmits with a low battery .
5827BD	Wireless Bi-directional Keypad	House ID	<p>(used with 5800TM Module)</p> <ul style="list-style-type: none"> Operates the system similarly to wired keypads Can indicate system status via its 3 LEDs and sounder. Includes 3 panic keys. House ID must be set. Requires 5800TM Transmitter Module (must be enabled in #93 Menu Mode –Device Programming and assigned to a partition in 1*48
5849	Glass Break Detector	RF	<ul style="list-style-type: none"> Requires both sound and shock of breaking glass to cause alarm to be transmitted. Has unique input code.
5890	PIR Detector	RF	<ul style="list-style-type: none"> Dual element passive infrared detector/transmitter with built-in selectable pulse count. Has unique input code <p>Note: There is a 3 minute lock-out between fault transmissions to conserve battery life.</p>
5899	Magnets		Package of 4 magnets for use with 5816 and 5817 transmitters.



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

Programming Wireless Transmitters

Zone number assignments can be from 01-63 for 5700 series transmitters, and 01-86 for 5800 series transmitters, except for zone 64, which is reserved for a wireless keypad.

1. With at least one alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: Installer Code + **8 0 0** .
3. Press ***94** to enter the second page of data fields and program the following data fields:
 - 1*28** RF TX LOW BATTERY ANNUN (1=immediate; 0=when disarmed)--must be "1" for UL installations.
 - 1*29** RF TX LOW BATTERY REPORT ENABLE (1=yes; 0=no)
--must be "1" for UL installations.
 - 1*31** RF TRANSMITTER CHECK-IN INTERVAL (**02-15** times 2 hrs)--max. of "6" for UL installations
 - 1*44** WIRELESS KEYPAD TAMPER DETECT (1=yes; 0=no)
 - 1*48** WIRELESS KEYPAD ASSIGNMENT (
 - 1*49** SUPPRESS TX SUPERVISION SOUNDING (1=yes; 0=no)
--must be "0" for UL installations.

If using a wireless 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)

4. Press ***99** to return to the first page of data fields.
5. 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 the previous screen.

Enter Zn No. 00=QUIT 10

Enter the zone number to be programmed (01-86). Press to accept entry.

10 ZT P RC In:L 00 1 00 RF:N

A summary screen for that zone will appear. ZT = zone type; P=partition to which zone is assigned; RC = report code for that zone; In: = input type of zone; L=learned RF input.

Press to continue.

10 Zone Type
Zone disabled 00

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

Each zone in a system must be assigned 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	08 24 Hour Auxiliary
01 Entry/Exit #1, Burglary	09 Fire
02 Entry/Exit #2, Burglary	10 Interior Delay, Burglary
03 Perimeter, Burglary	20 Arm-Stay (5800 RF only)
04 Interior Follower, Burglary	21 Arm-Away (5800 RF only)
05 Trouble By Day/Alarm By Night	22 Disarm (5800 RF only)
06 24 Hour Silent Alarm	23 No Alarm Response (Used for
07 24 Hour Audible Alarm	Relay Activation)

10 Partition

Enter the partition number (1-8) you are assigning this zone to. Press to continue.

10 Report Code

Enter the report code for this zone. (Enter the first digit and press . Enter the second digit and press again. A summary of both digits will be displayed). Press to continue.

10 Input Type
RF Trans. RF:

Enter the Input Device Type as follows:

0 = not used;
3=RF (supervised RF transmitter)
4=UR (unsupervised RF transmitter)
5=BR (button type RF transmitter-unsupervised)

Press to continue.



For 5700 series systems, always enter "RF" type. The Summary screen will then be displayed. Press to display the "ENTER ZN NO?" prompt for programming the next zone.

For 5800 series transmitters, see the [Compatible 5800 Series Wireless Transmitter](#) chart earlier in this section for the correct input type entry for each transmitter model. Then continue on to the next prompt.

10 LOOP NUMBER

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

OR

10 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 mode).

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

If learning the serial number now (entering 1 at the last prompt), this prompt appears. Fault the and restore the transmitter (faulting is accomplished by pressing the appropriate button for button type transmitters, or by opening and closing zone sensors for other transmitters. The keypad will beep twice after the first transmission is received.

Fault and restore the transmitter again. The keypad will beep three times to confirm the second transmission and acceptance into the system. The serial number will then be displayed on the keypad. Alternatively, if the serial number is printed on the device, you may enter it through the keypad (see each device's Installation Instructions for the desired "Loop" input for this zone. Then press *. The next screen will be displayed.

10 PROG AS RF:1
A001-3078:1

Press * to continue. The summary screen will then appear as it did when first entering the zone number to be programmed (see summary screen description above).

Press * to display the "ENTER ZN NO?" prompt for programming the next zone.

After all zones have been programmed, enter **00** at this prompt and press *. The system will prompt "Quit Menu Mode?" Press 1 to quit. This will return you to normal (data field) programming mode.

Press *99 to exit program mode.

Enter the [Installer Code] + OFF to cancel the system's settling delay.

Check-Out Procedure for Wireless Zones

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.

During this mode, wireless receiver gain is reduced by 50%. Testing 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 the Installer Code and press **5** (TEST).

For multi-partition systems, all partitions must be disarmed in order for the RF signal gain to be reduced.

The alpha keypad will display "Burg Walk Test, Reduced RF Sens."

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 Installer Code + **1** (OFF).

Transmitter ID Sniffer Mode

When all transmitters have been installed, use the Transmitter Sniffer Mode to test that they have all been properly programmed.

1. Enter Installer Code + **# 3**. The keypad will display all zone numbers of wireless units programmed into the system.
2. Fault each wireless zone, causing each device to transmit. As the system receives a signal from each of the transmitters, the zone number of that transmitter will **disappear** from the display.



A transmitter not "learned" (5800 series) or dipswitched correctly (5700 series) will not turn off its zone number.

3. To exit the Transmitter Sniffer mode, enter the Installer Code + **1** (OFF).

Section 9: RELAY OUTPUTS & POWER LINE CARRIER (X-10) DEVICES

This section provides the following information:

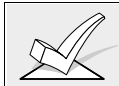
- Output Device Basics
- Wiring the 4204 relay module
- Wiring the 4300 transformer
- Programming the 4204 relay module
- Programming output devices
- Programming relay voice descriptors

Output Device Basics

Relays and Powerline Carrier devices (i.e., X-10 brand devices) are programmable switches that can be used to perform many different functions. They can be used to turn lights on and off, control sounders, or for status indications. In this system, each device must be programmed as to how to act (ACTION), when to activate (START), and when to deactivate (STOP). Each of these is described in *Programming Options Defined*, later in this section and in the programming procedure (#93 Relay Programming mode) provided at the end of this section.

The system supports a total of 16 relays (provided by 4204 Relay modules) and/or Powerline Carrier devices. Each 4204 module provides 4 relays with Form C (normally open and normally closed) contacts.

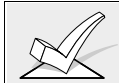
Powerline Carrier devices are controlled by signals sent through the electrical wiring at the premises via a 4300 transformer. Therefore, if using Powerline Carrier devices, a 4300 transformer *must* be used in place of the regular system transformer.



This section is used to program output devices to activate in response to a programmed **condition**. The system can also be programmed to activate these devices at specific **times** by using the #80 Scheduling Menu Mode—*Time Driven Events* function.

Wiring the 4204 Relay Module

1. Set the 4204 DIP switches for a device address between 01-15 that is not being used by another device (keypads, RF receivers, etc.). If using more than one module, each module must be set to a different address.



The relay module will not operate until the device address you have chosen is enabled in the control's Device Programming mode.

2. Connect the 4204 module(s) to the control's keypad terminals (6, 7, 8, and 9). Use the flying lead cable supplied with the relay module when mounting it in the 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:

<u>Wire Gauge</u>	<u>Maximum Length</u>
#22	125 feet
#20	200 feet
#18	300 feet
#16	500 feet

4204 RELAY MODULE

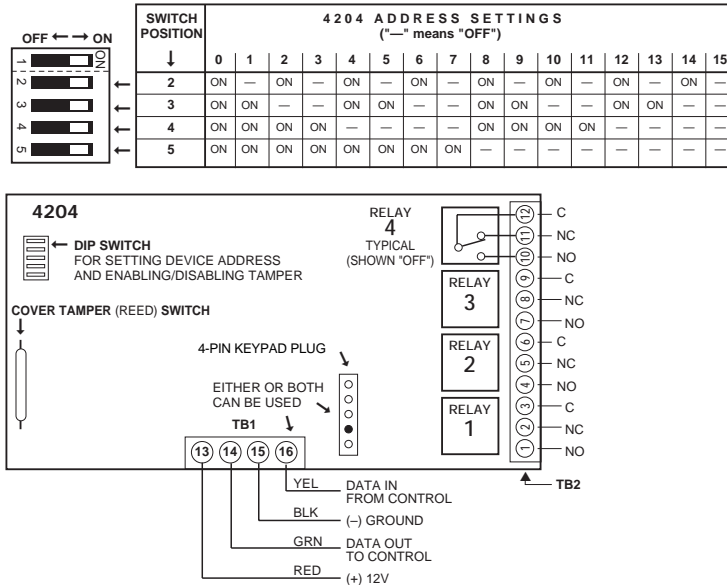


Figure 16: 4204 Relay Module

Wiring the 4300 Transformer

Powerline Carrier devices (such as X-10, ACT, Leviton) are either plugged into standard AC outlets or wired into the AC electrical system by a licensed electrician, depending on the type of device used. They respond to "on" and "off" commands sent from the panel, through the 4300 transformer, to the receiving devices. Connect the 4300 transformer as follows:

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 Codes for each device following the instructions provided with each device. Note each device's setup, as these codes will be used to program the devices later.

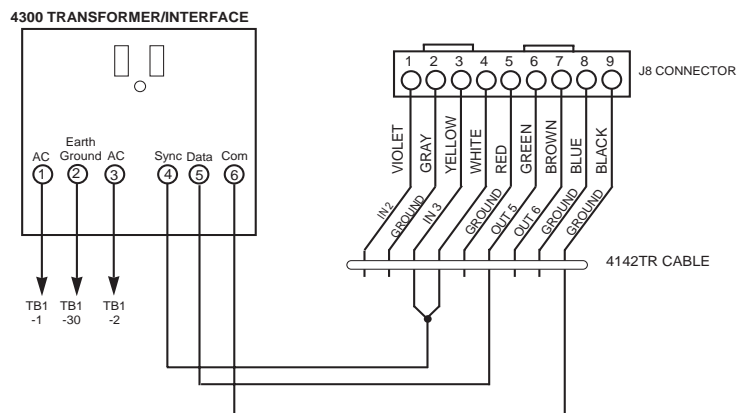


Figure 17. 4300 Transformer Connections

Programming the Relay Module

1. With at least one alpha keypad (5137AD/6139 wired and set to a proper address, temporarily power up the system by plugging the transformer into a 120VAC outlet.
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) to each menu option 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 module to the control. Enter the 2-digit address number as set at the module's DIP switches (**01-15**). Press * to continue.

DEVICE TYPE

Select the (relay) output device as follows:

00 =device not used

04= output device

Press * to continue. The system will prompt for the next Device Address to be programmed.

4. Repeat the procedure above for each relay module used in the system.
5. When all modules have been programmed, press **00** * at this prompt to exit menu mode programming.
6. Do not exit out of programming at this time, but continue to the next section.

Output Programming Options Defined

The following will help you understand the programming of OUTPUT DEVICES when using the #93 Relay Programming mode. The options used to start and stop these devices are described below, followed by the actual screen prompts and available entries.

The letter(s) in parentheses after each function described below, such as (A) after ACTION, are those that appear in the various summary displays of programmed data during programming.

ACTION (A)

The "ACTION" of the device is how the device will respond when it is activated by the "START" programming. You may want the device to activate momentarily, to pulse on and off continuously, or to remain activated until some other event occurs to stop it. There are four different choices of actions:

- ACTIVATE for 2 SECONDS and then reset.
- ACTIVATE and REMAIN ACTIVATED until stopped by some other event.
- PULSE ON and OFF until stopped by some other event.
- NO RESPONSE when the device is not used.


START (STT)

The "START" programming determines when and under what conditions the device will be activated. The following START options are available:

- 1) a. **EVENT (EV)** is the condition (Alarm, Fault, Trouble) that must occur to a zone or group of zones (zone list) in order to activate the device. These conditions apply **only** when a zone list is used. The different choices for "EVENT" are listed below and in "Programming Relays & Powerline Carrier devices" in the section that follows.
 - **ALARM** Relay action begins upon any alarm in an assigned zone in the zone list.
 - **FAULT** Relay action begins upon any opening (or short) of an assigned zone in the zone list.
 - **TROUBLE** Relay action begins upon any trouble condition on an assigned zone in the zone list.
 - **NO RESPONSE** Relay action is not dependent upon one of the above events.
- b. **ZONE LIST (ZL)** is a group of zones to which the "EVENT" applies in order to activate a particular device. Note that there are a total of 8 zone lists that can be programmed. When the selected EVENT (Alarm, Fault or Trouble) occurs in **any** zone in the selected "Start" ZONE LIST (1-8), activation of the selected device will START.
- 2) a. **ZONE TYPE/SYSTEM OPERATION (ZT).** This option may be used instead of using a "ZONE LIST" and "EVENT" to activate the device.

If a specific "ZONE TYPE" is chosen, any zone of that response type going into alarm, trouble, or fault will cause the device to activate as selected in "ACTION." If the same "ZONE TYPE" is also chosen for the STOP programming, any zone of that type that *restores* will de-activate the device.

If a System Operation, such as "DISARMING" or "ANY FIRE ALARM," is to activate the device, the appropriate choice would also be entered under the "ZONE TYPE" option. The selected operation will cause the device to activate as selected in "ACTION." The different choices for "ZONE TYPE" and "SYSTEM OPERATION" are listed in "Programming Relays & Powerline Carrier devices" later in this section, and in the Programming Form.

	The "ZONE TYPE" option functions independently of the "EVENT/ZONE LIST" combination.
---	--

- b. **PARTITION No. (P).** The device's "Start" ZONE TYPE/SYSTEM OPERATION may be limited to an occurrence on either one partition (1-8) or any partition (0).

STOP (STP): The "STOP" programming determines when and under what conditions the device will be de-activated. The following options are available:

- 1) a. **RESTORE ZONE LIST (ZL).** If a "ZONE LIST" is used as the "Stop" event, the device will de-activate when **all** the zones in that list restore from a previous fault, trouble, or alarm condition. This will occur regardless of what is programmed to "START" the device; therefore, a "RESTORE ZONE LIST" would normally only be used when a "ZONE LIST" is used to start the device.
- 2) a. **ZONE TYPE/SYSTEM OPERATION (ZT).** Instead of using a "RESTORE ZONE LIST", a specific zone (response) type or system operation action can be selected to de-activate the device.

 If a specific "ZONE TYPE" is chosen, any zone of that response type that restores from a previous alarm, trouble, or fault condition will cause the device to de-activate.

 If a "SYSTEM OPERATION" is chosen, that operation will cause the device to de-activate. The different choices for "ZONE TYPE" and "SYSTEM OPERATION" are listed in "Programming Relays & Powerline Carrier devices" later in this section, and in the Programming Form.
- b. **PARTITION No. (P).** The device's "Stop" Zone Type/System Operation may be limited to an occurrence on either one partition (1-8) or any partition (0).

Programming Output Devices

1. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
2. Press **0** (NO) to each menu option until the "RELAY PROG?" prompt appears. Press **1** (YES).

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

Enter Relay No. (00=Quit) 01

Enter the relay (output device) identification number **01-16**. This is a reference number only, used for identification purposes. The actual module address and relay number on the module is programmed in the last two prompts. Press to continue.

01 A EV ZL ZT P STT 0 0 0 00

The keypad will display a summary START screen. Press to continue.

01 A EV ZL ZT P STOP 0 0 0 00

The keypad will display a summary STOP screen. Press to continue.

01 Relay Action No Response

The Relay Action is the way in which the relay will respond when activated by the "start" event. Enter the desired action for this relay as follows:

0=not used; **1**=closed for 2 secs.; **2**=stay closed; **3**=pulse on/off

01 Start Event
Not used

A relay may be activated either by an Event used in conjunction with a Zone List, **or** by a Zone Type/System Operation. If using an Event/Zone List combination, enter the event code as follows:

0=not used; **1**=alarm; **2**=fault; **3**=trouble; **4**=restore

If not using a Zone List to activate the relay, enter **0**. Press to continue.

01 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**. Press to continue.

01 Start: Zn Typ

A Zone Type/System Operation can be used **instead** of an Event/Zone List combination to start the relay action. If a Zone Type/System Operation is being used, enter the 2-digit code as listed below. Press to continue.

Choices For Start/Stop Zone Types:

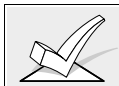
00 = No Response (Not Used)
01 = Entry/Exit #1
02 = Entry/exit #2
03 = Perimeter
04 = Interior Follower
05 = Trouble Day/Alarm Night
06 = 24 Hr Silent
07 = 24 Hr Audible
08 = 24 Hr Aux
09 = Fire Alarm or Trouble
10 = Interior w/Delay
23 = No alarm response
(for output relay activation, such
as for access 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
51 = RF receiver failure
52 = kiss-off
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 (**must be
selected for both START and STOP
operation**)

** Or at Disarming, whichever occurs earlier



If using options 56 and/or 57 (usually as the STOP Zone Type), data fields 1*74 and 1*75 for the respective relay timeouts for minutes and seconds must be programmed.

01 Start Part

If the starting event will be limited to occurring on a specific partition, enter the partition number (**1-8**) in which the start event will occur. Enter **0** for any partition. Press to continue.

01 Stop: Zn LIST
No list

If a zone list is being used to stop this relay action, enter the zone list number **1-8**. The **restore** of all zone s on the Zone List will stop the relay. If a zone list is not being used, enter **0**. Press to continue.

01 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. Press to continue.

01 Stop Part

This is the partition to which the stop condition will be limited. Enter **0** for any partition. Enter **1-8** for specific partition number. Press to continue.

Relay Group

Relays may be grouped for common activation by time driven events (commands **06-10**--see Section 20: *SCHEDULING OPTIONS* for more information). Enter **0** (no group) or **1-8** for a specific group number. Press to continue.

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. Press to continue.

Relay Type

Enter **1** for 4204 relay outputs. Enter **2** for Powerline Carrier devices. Press to continue.

ECP ADDRESS

For relay module (4204) outputs, enter the actual relay module's address (01-15) as set by its DIP switches.

MODULE RELAY #

For 4204 relay outputs, enter the specific relay number on that module (**1-4**). Press to continue.

House Code

For Powerline Carrier devices, enter the numerical equivalent of the House Code of the device as follows:

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

Enter the numerical unit code of the Powerline Carrier device (00-15). Press to continue.

The keypad will display the Start and Stop summary screens again. Press to continue.

- When all relays have been programmed, enter **00** at the "ENTER RELAY NO." prompt.
- If defining a Zone List, continue to the next procedure in this section. If not, enter **00 +** at the next two prompts. Then enter *99 to exit programming completely. After exiting, enter the [Installer Code] + OFF to cancel the system's settling delay.

Zone List Programming

After all relays have been programmed, upon entering **00** at the "ENTER RELAY NO." prompt, you will be asked to enter a Zone List. If a Zone List number was used to start or stop a relay, you must define the zones belonging to that list as follows:

Enter Zone LIST
00=QUIT 00

Enter the zone list number **01-08**. Enter **00** to quit.

01 Enter Zn Num.
00=QUIT 00

Using two-digit entries, enter each zone to be included in this zone list. Press * after each zone number is entered.

When all zones have been entered, enter 00, then press *.

01 Del Zn LIST?
0=No 1=Yes

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 next screen will appear, otherwise the "Enter Zone List" 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. Press * to continue.

XX ASSIGNED ZONE
00=QUIT 00

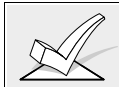
Press * to scroll through all zones in that list. Enter **00** + * to quit.

Press *99 to exit program mode or continue to the next procedure in this section to program Relay Voice Descriptors. Upon exiting program mode, enter the [Installer Code] + OFF to cancel the system's settling delay.

Relay Voice Descriptors

If using the 4285 VIP Module, voice descriptors can be programmed for each of the 16 relays/Powerline Carrier devices used in the system. These descriptors will be announced by the voice module when accessing the relays via the # 70 relay access mode 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).



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, do the following:

1. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
2. Press **0** (NO) to each menu option 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. When all output devices have been programmed, enter **00** to quit.

Enter *99 to exit program mode.

Enter the [Installer Code] + OFF to cancel the system's settling delay.

Relay Voice Descriptors and Custom Word Substitutes Vocabulary

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

Section 10: 4285 VISTA INTERACTIVE PHONE (VIP) MODULE

This section provides the following information:

- General information about the 4285 VIP module
- Mounting and wiring the 4285 VIP module
- Programming the control for 4285 VIP module access
- Checkout procedure for the 4285 VIP module

UL

The 4285 VIP Module is not approved for UL installations.

General Information

The 4285 VIP Module is an add-on accessory that permits the user to access the security system via a touchtone phone (either from on-premises or by calling the premises from a remote location).



Only one VIP Module can be used in a security system and partition assignment is done via #93 Menu Mode—Device Programming.

The 4285 VIP Module enables the user to do the following via a Touch-tone telephone:

- A. Receive synthesized voice messages over the phone regarding the status of the security system.
- B. 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.
- C. Control 4204 relays and/or Powerline Carrier devices using the #70 relay access mode.

Facts You Need to Know

- The VIP Module can announce many of the same words that would normally be displayed on an Alpha keypad under the same system conditions (see the words in **bold** in the Alpha Vocabulary list found in Section 19: #93 *MENU MODE PROGRAMMING*). If the VIP module cannot annunciate a word in a zone descriptor, it will not annunciate the descriptor at all, but will still annunciate the zone number.
- Remote access to the VIP Module can be toggled on and off by using the [Security Code] + # 91 command (see VIP Module instruction manual). You must use the master or installer code only.
- The VIP Module reports trouble as zone 87 if data communication with the control is lost.
- Detailed operating instructions for phone access to the security system are provided with the VIP Module. In addition, a **Phone Access User's Guide** is supplied with the VIP Module for the user of the system.

Mounting the 4285 VIP Module

The VIP 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 VIP Module's cover prior to wiring.

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



Do not mount the VIP Module on the cabinet door or attempt to attach it to the PC board.

2. When mounting the VIP Module 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).
3. Affix the 4285 connections label (supplied separately) to the inside of the VIP Module's cover if the cover is used. Otherwise, affix the label to the inside of the *control cabinet's* door.

Wiring the 4285 VIP Module

The 4285 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. Wire as follows:

1. Make 12V (+) and (–) and data in and data out connections from the VIP Module to the control*, using the connector cable supplied with the VIP Module (see below).

RED	6 (AUX +)
BLACK	7 (AUX -)
GREEN	8 (DATA IN)
YELLOW	9 (DATA OUT)

* These are the same connections as for remote keypads.

2. Insert the keyed connector at the other end into the mating header on the VIP Module.
3. Connect terminals 1 through 5 on the VIP Module as shown in *Figure 18*.



You must 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

4285 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.
6. Audio Out 1	Future use
7. Audio Out 1	Future use

4285 WIRING NOTES:

1. Wire the 4285 VIP 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 4285, **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 4285 will not function if this is not done.**
4. The house phone lines must be connected to the VIP Module terminals **only** ! If they are connected directly to the control panel or to the incoming line, an error tone will be heard when trying to access the VIP Module from an on-premises phone.
5. If the telephone system on the premises includes a Caller ID unit, connect the unit directly to the "Handset" terminals (26 and 27) on the control.

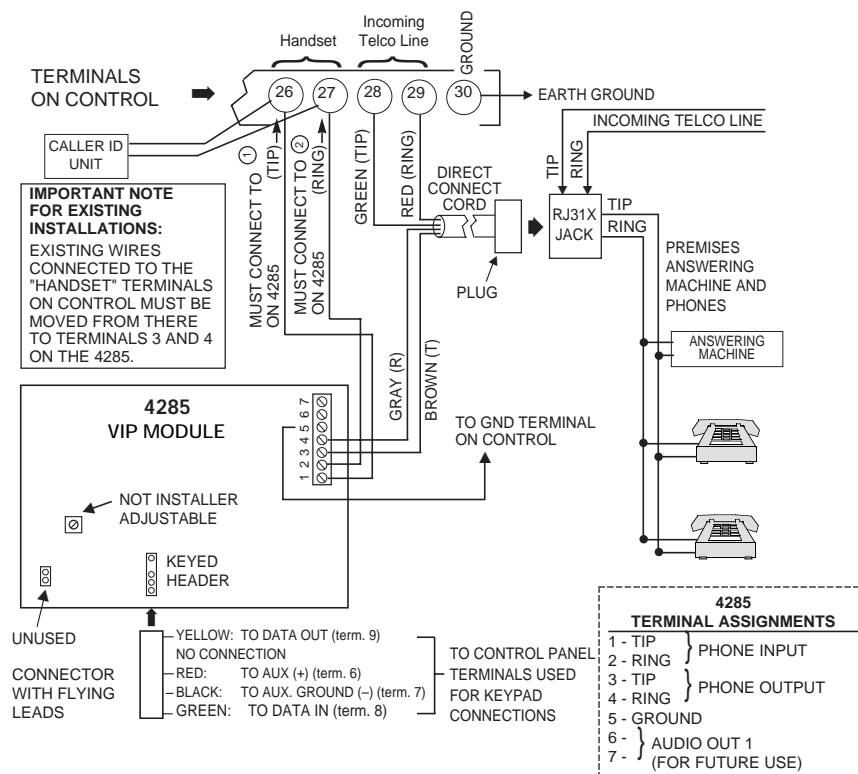


Figure 18. 4285 VIP Module Connections

Programming 4285 VIP Module Options

1. With at least one alpha keypad (5137AD/6139) wired and set to a proper address, temporarily power up the system by plugging the transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: [Installer Code] + **8 0 0** and program the following fields:
 - *20** VIP MODULE PHONE CODE
 - *44** RING DETECTION COUNT (cannot be set to 0)
 - *74/*75** ALARM REPORT CODE for VIP module faults (zone 87)
 - 1*09** ZONE RESPONSE TYPE for VIP module (zone 87, type 05)

- From data field programming mode, press **#93** to display the "ZONE PROG?" prompt. Press **0** to each menu option 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 VIP module is factory set to address 04. Enter **04**. Press to continue.

DEVICE TYPE

Enter device type **05** = voice module
Press to continue.

MODULE PART.

Enter the partition number **1-8** in which the voice module is located. Press to continue. The screen will prompt for the next device number to be programmed.

- Press **00** at this prompt to return to the main menu. Press **0** until ALPHA DESCRIPTORS prompt appears. Press **1** (YES).
- Program alpha zone descriptors according to the procedure explained in Section 19: *#93 MENU MODE PROGRAMMING*. Alpha descriptors must be programmed if you want the VIP Module to annunciate a description of the zone(s) in alarm, trouble, etc. If not, the VIP Module will annunciate zone numbers only.

If you are using output relays, you can program relay voice descriptors. Refer to Section 9x : *RELAY OUTPUTS AND POWERLINE CARRIER DEVICES*.

Custom Word Substitutes for VIP Module Annunciation

A substitute word can be programmed for each of the 20 custom words used in your alpha zone descriptions. This substitute word will be announced by the VIP module in place of the custom word that is displayed on the alpha keypad. For example, an alarm display of "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 VIP module will not annunciate the zone descriptor at all, but will only annunciate the zone number.

To enter custom words substitutes, do the following:

- From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
- Press **0** (NO) to each menu option 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 will be displayed. Enter the next custom word number to be substituted or enter **00** to quit.

Section 11.

AUDIO ALARM VERIFICATION (AAV) UNIT

This section provides the following information:

- General information about the AAV option
- AAV operation
- Connecting an Eagle AAV Module
- AAV programming requirements

General Information

An Audio Alarm Verification (AAV) module (also known as two-way voice), 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.

The AAV module connects from module terminals 7 & 8 to the control's zone 5 terminals 16 & 17. The purpose of this connection is to silence and restore the sounders at the premises. It is also used to postpone non-critical dialer reports while the AAV session is in progress. 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).

AAV Module Operation

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 continuous 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.

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, remote console sounding, 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 4285 VIP 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.



1. 685 Receiver software must be rev. 4.6 or higher. Earlier versions will not hold the phone line connection.
2. Contact ID code for "listen-in to follow" is "606." Contact ID is the only reporting format that will send a "listen-in-to-follow."

Audio Alarm Verification Module Connections

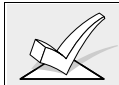
Connect the Audio Alarm Verification module's falling edge trigger input (terminal 5 on Eagle model 1241) to J7 connector trigger output, *or* to a 4204 relay module, as shown in the various diagrams in *Figure 19*.



If also using a 4285 VIP Module, be sure to follow the corresponding diagram when making connections.

Programming Audio Alarm Verification Module Options

1. With at least one two-line alpha keypad wired and set to a proper address, temporarily power up the system by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: [Installer Code] + **8 0 0**.
Program the following data fields:
 - 1*46** AUXILIARY OUTPUT ENABLE: Set for 3 (unless using 4204 relay module).
 - 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).



If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.

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. If using a 4204 relay instead of the J7 trigger, program the relay to trip on Zone Type/Sys. Op. 60--Audio Alarm Verification (see SECTION 7: *RELAY OUTPUTS AND POWERLINE CARRIER DEVICES*).
5. Press *99 to exit program mode.
6. Enter [Installer Code] + OFF to cancel the system's settling delay.

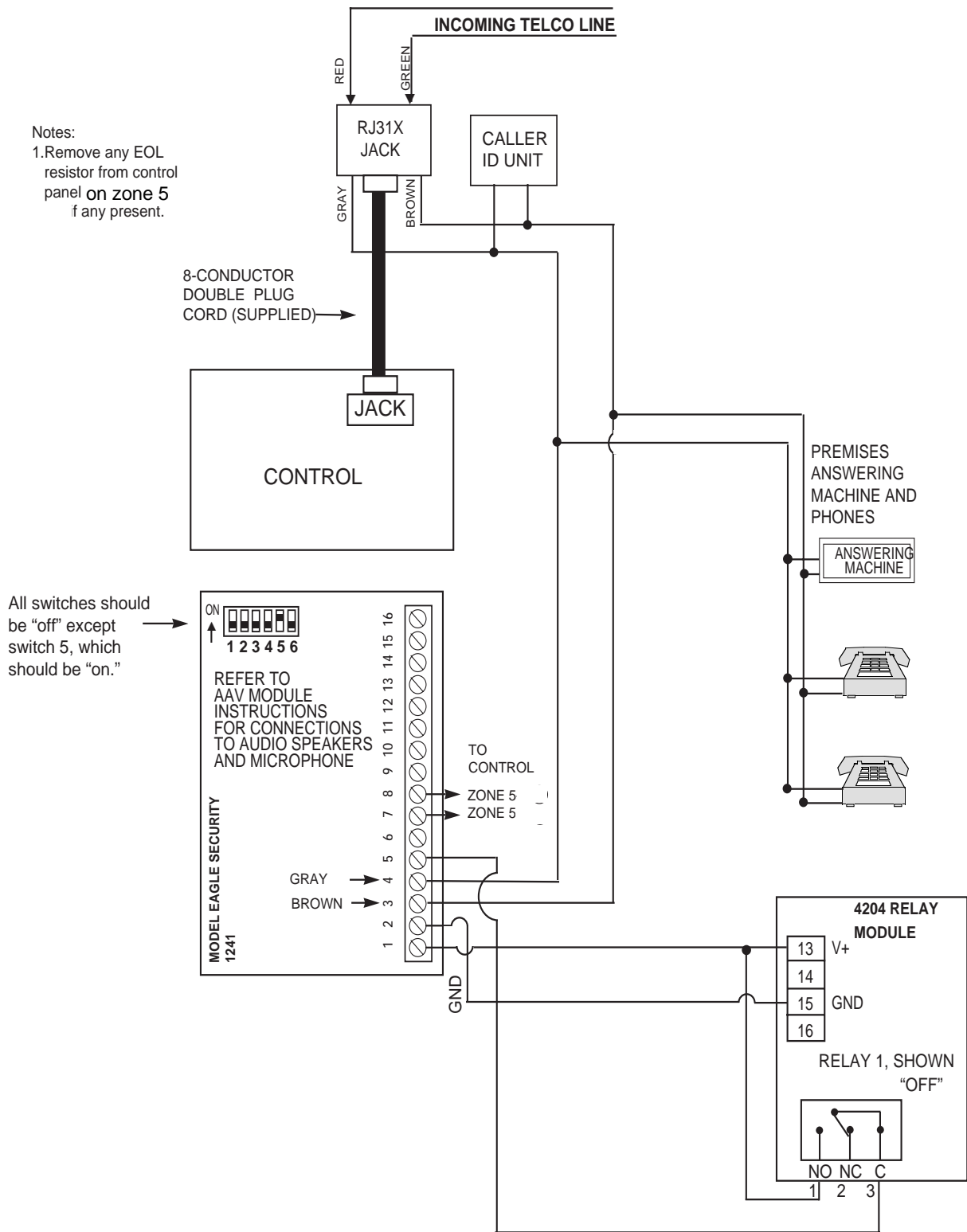


Figure 19: Audio Alarm Verification Module Connections

Section 12: VOLTAGE TRIGGERS (Connector J7)

This section provides the following information:

- General information about the voltage triggers
- Ground Start trigger setup
- Open/Close trigger setup
- Keyswitch setup
- Remote keypad sounder setup
- Long Range Radio setup

General Information

Connector J7, located on the right hand side of the main PCB, provides 4 trigger outputs. These outputs may be configured in a number of ways, depending upon the requirements of the installation. They may be used for:

- Operating the 675 Ground Start Module
- Operating the 4146 Keyswitch LEDs
- Operating a remote piezo sounder that imitates the keypad sounder
- Triggering auxiliary alarm signaling equipment (such as the 7720 and 7920SE LORRA Subscriber Radios)
- Operating an Audio Alarm Verification (AAV) module (see previous section on *AUDIO ALARM VERIFICATION*).



These output triggers can be enabled by partition via programming field **2*20**.

The pin assignments of this connector are shown in *Figure 20*. 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, a remote keypad sounder output, or an AAV module output (programmed in data field **1*46**). Only one of these options may be used at a 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 (programmed in data field ***15**).

Output 2 & 4 Rating: When Activated: 10 - 13.8 VDC through 5K ohms
When De-activated: 1k ohms to ground

Output 3:

Operates as a Burglary/Audible Panic trigger. There are no other options for this output.

Output 3 Rating: When Activated: 10-13VDC through 5K ohms
When De-activated: 1k ohms to ground

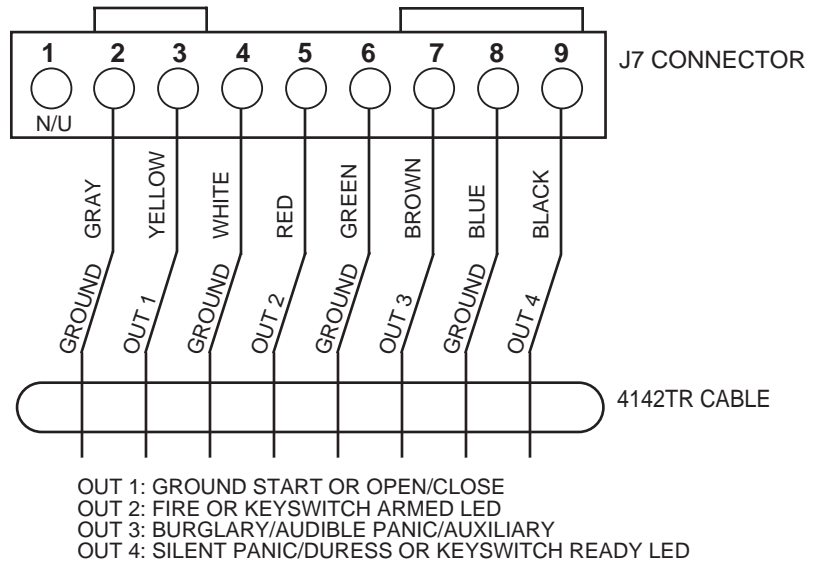


Figure 20: J7 Connector For Voltage Triggers

Ground Start Trigger Setup

UL

Not intended for use in UL Listed applications.

Output 1 may be used to trigger 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.

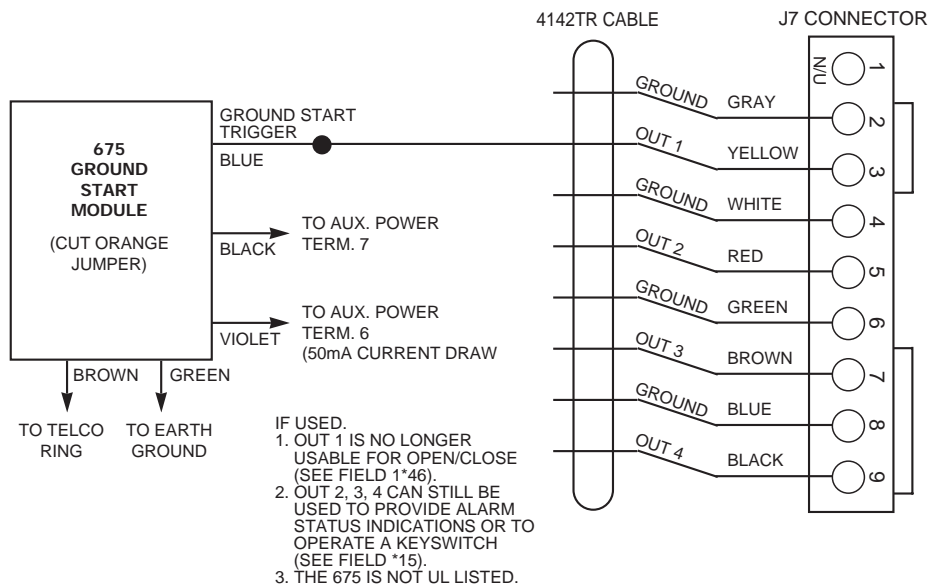


Figure 21. Ground Start Module Connections

Programming For The Ground Start Module

1. With at least one two-line alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: [Installer Code] + **8 0 0**.
Program the following data field:
1*46 AUXILIARY OUTPUT ENABLE: Set to "0" (factory default)
3. Press ***99** to exit program mode.



1. If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.
2. You cannot use Output 1 for an Ground Start if using it for a Remote Keypad Sounder, Open/Close trigger, or an AAV module.


Open/Close Trigger Setup

Output 1 may alternately be programmed to change states when the system is armed in the away mode and then disarmed. If field **1*46** is set to **1**, the output will be set high when the system is in the "disarmed" state, and will switch to "0" volts when the system is armed in the "away" mode. This trigger will not change state unless *all* partitions are armed, and will change state again as soon as one partition is disarmed.

Programming the Open/Close Trigger

1. With at least one two-line alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
2. Enter data field programming mode: [Installer Code] + **8 0 0**.
Program the following data field:

1*46 AUXILIARY OUTPUT ENABLE: Set for 1.

- 
 1. If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.
 2. You cannot use Output 1 for an Open/Close trigger if using it for a Remote Keypad Sounder, Ground Start module, or AAV module.

Remote Keypad Sounder

Output 1 may alternately be programmed for a remote keypad sounder. You may use an Amseco PAL 328N for installations where you want the sounds produced by the keypad's built-in piezo sounder to be duplicated in another location for one partition. The panel will send all sounds remotely (i.e. alarm, trouble, chime, entry/exit, etc.) 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 SECTION 7: *RELAY OUTPUTS AND POWERLINE CARRIER DEVICES*).

Remote Keypad Sounder Connections

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

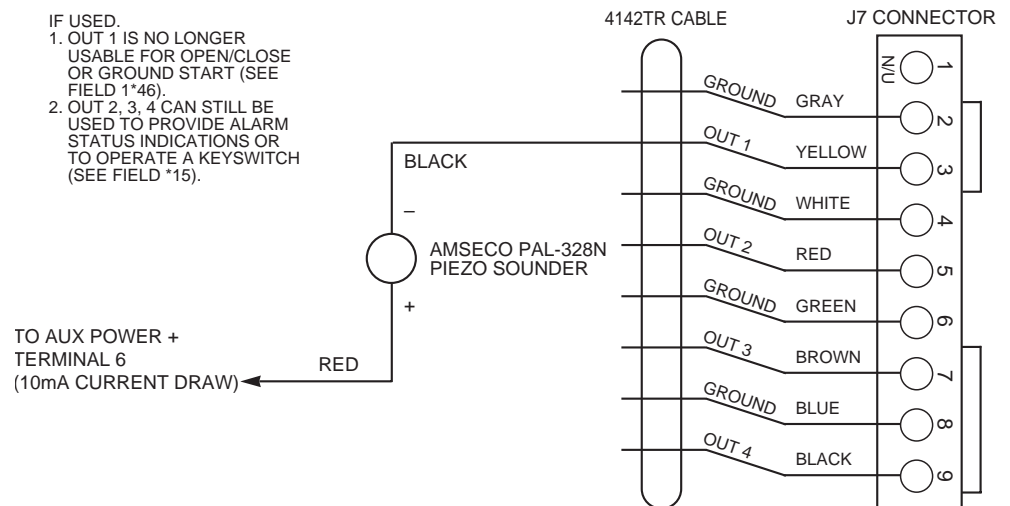



Figure 22. Remote Keypad Sounding Connections

Programming Remote Keypad Sounding Options


1. With at least one two-line alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
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,: Enter the partition whose keypad sounds are to be duplicated at the remote sounder.
3. Press ***99** to exit program mode.

The system automatically assigns Zone Type 10 to Zone 7, whether or not a keyswitch is actually used. Therefore, Zone 7 is no longer available as a protection zone, but is assigned as a keyswitch zone.

	<ol style="list-style-type: none">1. If you need more information about actual programming procedures, see Section 4: <i>THE MECHANICS OF PROGRAMMING</i>.2. You cannot use Output 1 for a Remote Keypad Sounder if using it for an Open/Close trigger, Ground Start module, or AAV module.
---	--

Keyswitch Setup

If using an optional Remote Keyswitch for remote arming and disarming of the system, its switch must be connected to Zone 7 and its Ready and Armed status LEDs must be connected to the trigger outputs and programmed in order to become operational.

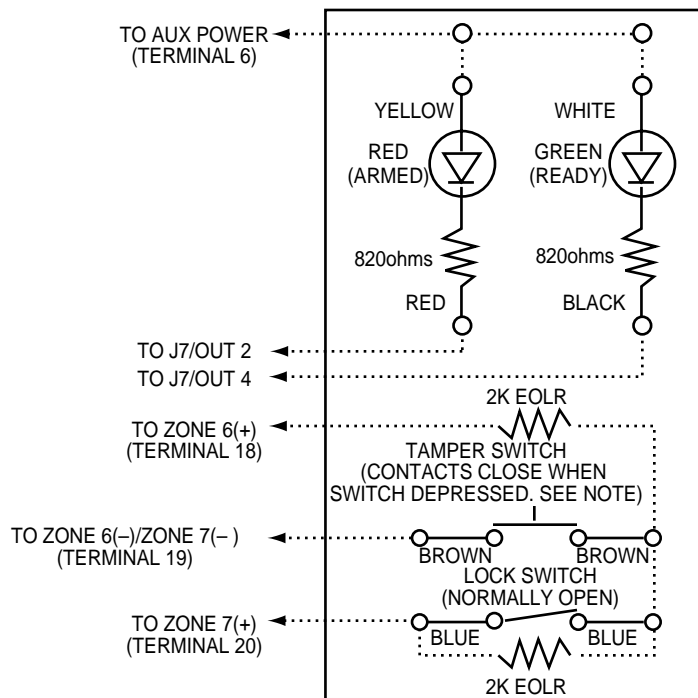
	Note that a keyswitch may be used in one partition only.
--	--

Keyswitch Operation

The keyswitch must be connected 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.

Keyswitch Connections

1. Connect the 4146 keyswitch's normally open momentary switch to Zone 7
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.

BROKEN LINES REPRESENT
INSTALLER WIRING CONNECTIONS

Figure 23. Remote Keyswitch Wiring

3. Connect the keyswitch Armed and Ready LEDs to the trigger connector as shown in *Figure 23*.

Programming The Remote Keyswitch

1. With at least one two-line alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
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."



The system automatically assigns Zone Type 10 to Zone 7 if a keyswitch is enabled.

3. Press ***99** to exit program mode..



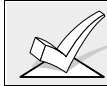
If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.

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

Auxiliary Alarm Signaling Equipment (Long Range Radio)

The J7 header provides triggers for fire alarm, burglary/audible panic alarm, silent/duress alarm.. These triggers are programmed as the defaults for Outputs, 2, 3, and 4. These may be used to trip auxiliary alarm signaling equipment such as Ademco's 7720 and 7920SE Long Range Radios.



The triggers for Fire (Output 2) and Silent Panic/Duress (Output 4) may be used to operate keyswitch armed and ready LEDs *instead* when field *15 is enabled.

When used as alarm triggers, these outputs 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, with the exception of the Silent Panic/Duress trigger, which is a 2-second pulse. The diagrams that follow show how to make connections to the 7720 and 7920SE radios. 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.

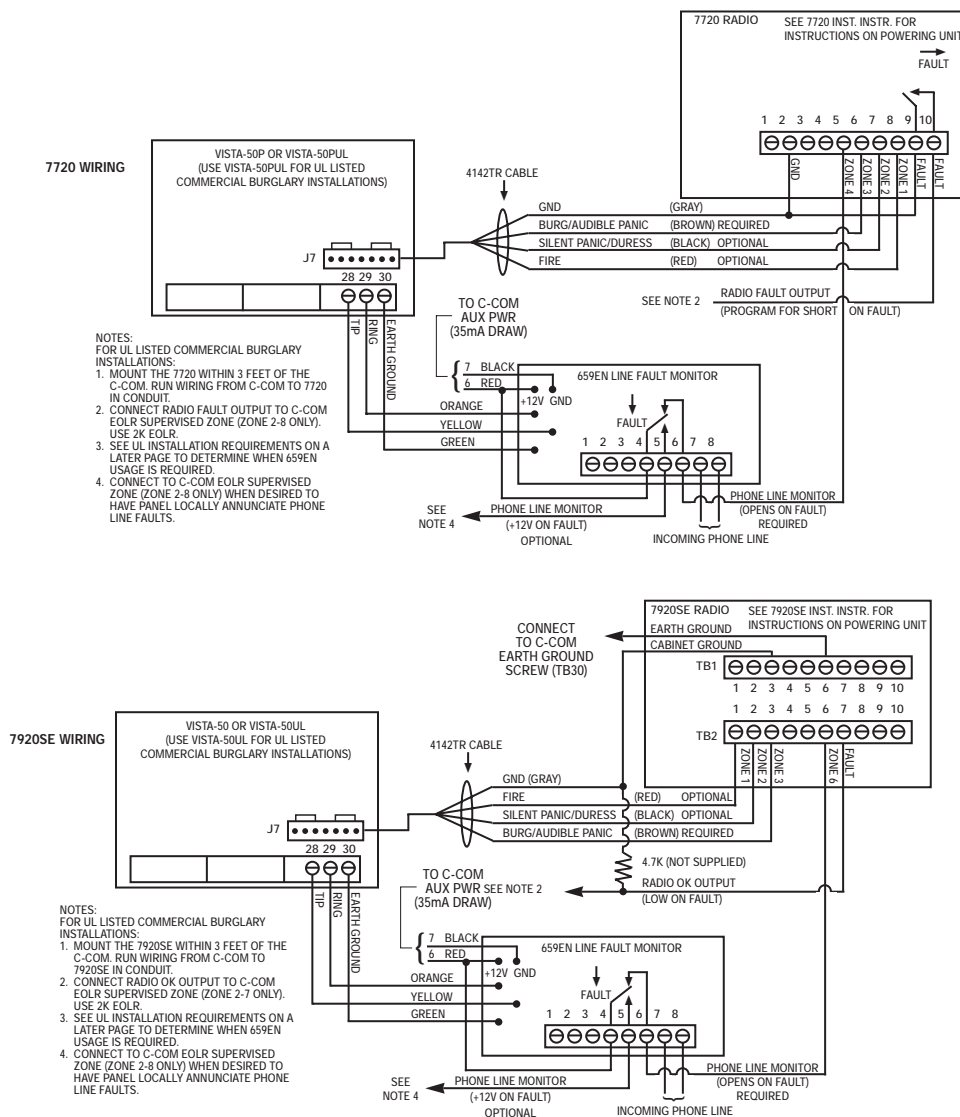


Figure 24: Auxiliary Alarm Signalling Equipment

Section 13. EXTERNAL SOUNDERS

This section provides the following information:

- General information about external sounders
- Connecting external sounders for UL and non-UL applications
- Programming options for external sounders
- Compatible sounders

General Information

The Control provides one bell relay output used to power external alarm sounders. This output is rated at 10-13.8VDC, 2.8A maximum (including auxiliary current draw).



Exceeding the prescribed current limits will overload the power supply or may possibly trip the bell output circuit protector.

Wiring

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

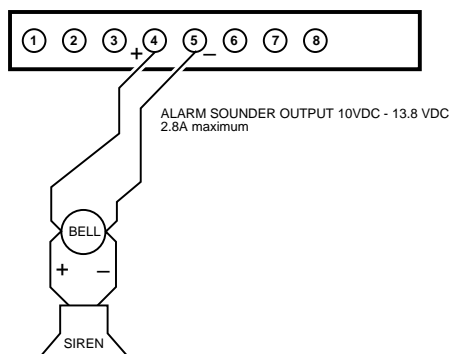


Figure 25. External Sounder Connections

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 in *Figure 26*.

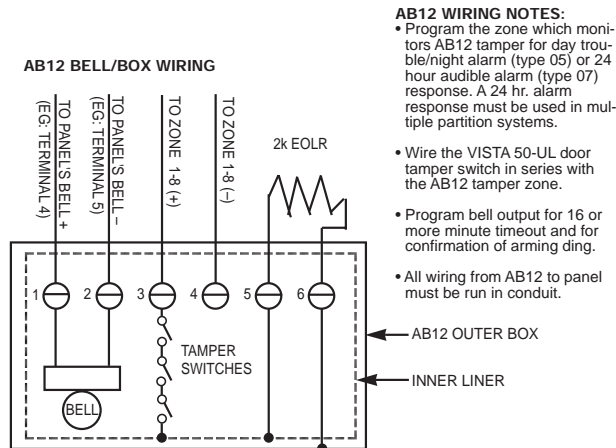


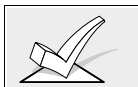
Figure 26: AB12 Bell Box Wiring

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 two-line alpha keypad (5137AD/6139) wired and set to a proper address, temporarily power up the system by plugging the AC transformer into a 120VAC outlet..
2. Enter data field programming mode: [Installer Code] + **8 0 0**.
Program the following data fields:
 - *13** ALARM SOUNDER DURATION (partition-specific; can vary from one partition to another)
 - *18** UL AC LOSS SIREN (**1**=yes; **0**=no)
 - *21** PREVENT FIRE TIMEOUT (**1**=no timeout; **0**=fire timeout)
 - *23** MULTIPLE ALARMS (partition-specific)
 - 1*47** CHIME ON EXTERNAL SIREN (partition-specific)
3. Press ***99** to exit program mode. Then enter the [Installer Code] + OFF to cancel the system's settling delay.



If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.

Compatible Sounders

UL	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)	Indoor Piezo Sounder	System Sensor indoor piezo sounder.
PA400R (red)		(red or beige), rated at 90 dB @ 10 feet.
AB12	Grade A Bell	For UL Commercial Burglary installations.

Section 14: EVENT LOG OPTIONS

This section provides the following information:

- General information about the Event Log
- Event Log printer connections
- Programming Event Log options
- Displaying/Printing the Event Log

General Information

This system has the ability to record up to 224 events of various types in a history log (224 event capacity). Each event is recorded in one of five categories with the time and date of its occurrence (if real-time clock is set). These categories are:

- Alarm
- Supervisory/check
- Bypass
- Open/close
- System conditions

The log may be viewed (Display Mode) on an alpha keypad, or can be printed (Print Mode) on a serial printer (connected to the system via a 4100SM serial interface module).

Event Log Printer Connections

- 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.

UL

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

- 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 in *Figure 27*. Refer to the event logging commands paragraph for a description of the commands which initiate event log printing.

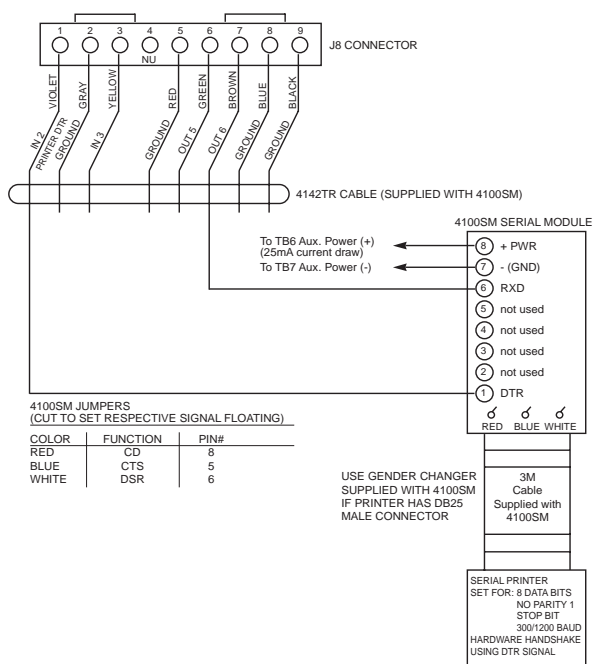


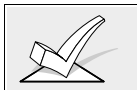
Figure 27. Event Log Printer Connections

NOTES

1. Printer must be configured as follows:
 - 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 data to the printer unless the DTR signal is high.

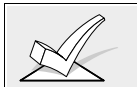
Programming Event Log Options

1. With at least one alpha keypad (5137AD/6139) wired and set to a proper address, power up the system temporarily by plugging the AC transformer into a 120VAC outlet (previously wired to the control).
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 by pressing ***99**.



If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.

Event Logging Procedures



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

If you have selected the printer to be "on-line" (field 1*72), events will print automatically, as they occur. To display or print on demand, the following commands apply:

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 <input type="checkbox"/> * at any time.

Display/Printing: After entering either the Display or Print 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. Events are displayed in chronological order, from most recent to oldest.

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 and previous screens respectively:

ALARM EVENT LOG TYPE CCC UUU

Displays time/date for zones that have either caused an alarm or have been restored in selected partition.

CHECK EVENT LOG TYPE CCC UUU

Displays time/date for zones that have caused a trouble or supervisory condition in selected partition.

BYPASS EVENT LOG TYPE CCC UUU

Displays time/date for zones that have been bypassed in selected partition.

OP/CL EVENT LOG TYPE CCC UUU

Displays time, date and user number for each arming and disarming of the system for the partition selected.

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 TYPE CCC 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 TYPE CCC UUU

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

Section 15: FINAL POWER-UP PROCEDURE

This section provides the following information:

- Earth ground considerations
- Connecting the AC transformer
- Connecting the backup battery
- Programming power and AC options
- Auxiliary and Polling Loop Current Draw Worksheets

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.

UL

Use 1361CN Transformer in Canadian installations.

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. We recommend using #16 AWG copper wire run at a maximum length of 25 ft. 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

1. Use the Polling Loop Current Draw and Auxiliary Device Current Draw Worksheets found later in this section to make sure that the currents drawn from the devices connected to the system do not exceed the system's respective ratings.



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 *Figure 28*, or wire the 4300 transformer as shown in *Figure 29* (if using Powerline Carrier devices).
4. Plug the transformer into a 24 hour, uninterrupted, 120VAC, 60Hz outlet. After a few seconds, the keypad display will appear.

PRIMARY POWER

Supplied by 1361*
Plug-in

Transformer which
is rated at
16.5VAC, 40VA.
Caution must be
taken when wiring
this transformer to
the panel to guard
against blowing the
fuse inside the
transformer (non-
replaceable).

Connect to
12VDC, 4AH
or 12VDC, 7AH

GEL CELL
BATTERY

CHARGING
VOLTAGE
13.7 VDC

Replace
every
3 years

BATTERY
TABS

RED (+)

BLK (-)

Connect to
24hr. 120VAC,
60 Hz Outlet

TRANSFORMER
16.5VAC, 40VA
ADEMCO No.1361
(IN CANADA
USE No. 1361CN)
or 4300 IF
X-10 DEVICES
WILL BE USED

NO CONNECTION

NOTE:
WHEN POWERING UP
THE PANEL, PLUG THE
TRANSFORMER IN BEFORE
CONNECTING THE BATTERY.

Figure 28. 1321 Transformer and Battery Connections

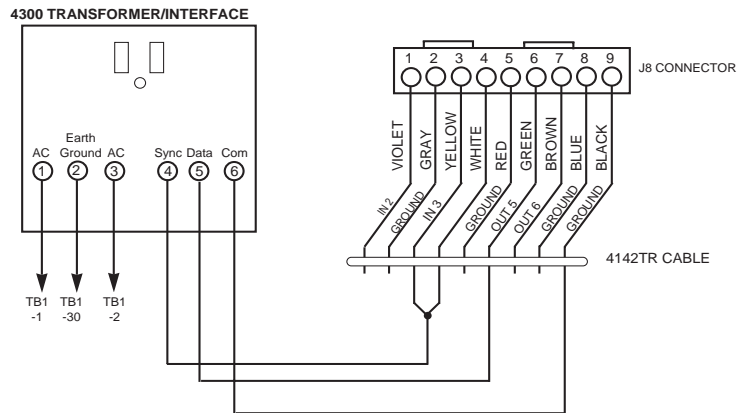


Figure 29: 4300 Transformer Connections

Programming Power and AC Options

1. With at least one alpha keypad (5137AD/6139) wired and properly addressed, power up the system.
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.



If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.

Polling Loop Current Draw Worksheet

DEVICE	CURRENT	# UNITS	TOTAL CURRENT	
			STANDBY	ALARM
4194 Contact	1 mA			
4191SN	1mA			
4193SN	1.5mA			
4939SN	1mA			
4959SN	1mA			
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			
		TOTAL **		

** If the total current draw exceeds 64 mA, a 4197 Loop Extender module must be used.

Auxiliary Device Current Draw Worksheet

DEVICE	CURRENT	# UNITS	TOTAL CURRENT	
			STANDBY	ALARM
4137AD Keypad	60mA			
5137AD Keypad	90 mA			
6128 Keypad	30 mA			
6137 Keypad	85mA			
6139 Keypad	100mA			
675 Ground Start Module	50 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		

* If using hard-wire devices such as PIRs, refer to the specifications for that particular unit's current draw.

Alarm Output Current Draw Worksheet

DEVICE	CURRENT	# UNITS	TOTAL ALARM CURRENT
		TOTAL **	

Combined Auxiliary Power, Alarm Output and Polling Loop

Total Current		
	Standby	Alarm
Auxiliary Power		
Alarm Output		
Polling Loop		
TOTAL		

Battery Calculation Worksheet

Capacity	Formula	Calculated Value
Standby Capacity	total standby load X 24 or 60 hours X 1.1 contingency factor (use total standby load from previous worksheet)	
Alarm Capacity	total alarm load X 0.067 hours (4 minutes) (use total alarm load from previous worksheet)	
Total Capacity	Add standby and alarm capacities	

BATTERY SELECTION TABLE

4 AH	Yuasa NP4-12
7 AH	Yuasa NP7-12
12 AH	Yuasa NP12-12

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.

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 type (sealed) lead acid battery. YUASA NP4-12 (12V, 4AH) and NP7-12 (12V, 7AH) batteries are recommended.



DO NOT use Gates batteries (sealed lead-acid type). These batteries require a different charging voltage than is supplied by the panel.

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.

UL

The VISTA-50UL must operate for at least 4 hours following an AC power loss in certificated burglary installations. Select 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 in *Figure 28*. **Do not connect the battery until all devices have been wired to the control.**

Section 16: FALSE ALARM REDUCTION FEATURES

This section provides the following information:

- General information about false alarms
- Exit Error Logic and related reports
- Exit Delay Reset
- Cross-Zoning
- Call Waiting Defeat

General Information

This control supports features which help minimize false alarms from occurring. Most false alarms occur either upon exiting the premises, or because of a zone which tends to go into alarm either due to environmental factors, or because the zone's resistance to the control may be on the edge of acceptability. We call this condition a "swinger."

Features which prevent false alarms due to these circumstances are:

- Exit Error Logic and related reports
- Exit Delay Reset
- Cross-Zoning

Exit Error Logic

This feature is intended to reduce the incidence of false alarms due to exit doors that are left open after the exit delay has expired. If this feature is enabled in program field 1*20, the following will occur:

At the end of the exit delay, if the door is left open, the system will sound the bell(s), siren(s) and the console sounder(s) for 10 seconds. It will then start the entry delay period. This gives the user time to re-enter the premises and disarm the system before an alarm occurs.

If the user does not re-enter the premises and disarm the system, the system will bypass the faulted entry/exit zone(s). The rest of the system will be armed. In addition, the following dialer reports will be sent to the central station if programmed:

- Exit Error by User
- Exit Error by Zone
- Bypass reports

Another report, designed to notify the central station that an alarm has occurred within five minutes of arming, is called the **Recent Close** report. This report, as well as the Exit Error reports, are programmed in data fields 1*40 and 1*41.

Exit Delay Reset

This feature is designed to allow an operator to re-exit the premises to retrieve a forgotten item without triggering an alarm. This feature is enabled in program field 1*21, and works in the following way:

When the panel is armed, the normal exit delay begins. After the user exits, and the door closes, the exit delay time is reset to 60 seconds. If, within this 60 second period, the entry door is re-opened, the panel will restart the exit delay sequence again using the programmed exit delay time. This feature will only be activated once after arming.

Cross-Zoning

The Cross-Zoning feature is designed so that a combination of two zones must be faulted within a five minute period to cause an alarm on either zone. This prevents momentary faults from causing an alarm condition. You can select four "sets" of cross zones, keeping in mind the following:

- Both must protect the same area
- Both must be in the same partition
- A Fire zone must only be crossed to another fire zone protecting the same physical area (see note below)

The four sets of cross-zones are programmed in data fields 1*22, 1*23, 1*24, and 1*25.



DO NOT cross-zone a fire zone with a burglary zone under any circumstance. A fire zone must only be crossed to another fire zone and BOTH must be protecting the same physical area (no walls or partitions separating them). Consult NFPA 72 standard for exact spacing requirements. As a guideline, we recommend that spacing between fire cross-zones be no further than 30 ft.

Conditions That Affect Cross-Zone Operation

1. In the event of a continuous fault on one of the paired zones that lasts longer than five minutes, a fault on the second zone will cause an alarm immediately.
2. If one of the zones in a pair is bypassed or has a zone response type set to 0, the cross-zoning feature will not apply,
3. If an Entry/Exit zone is paired with an Interior Follower zone, be sure to enter the Entry/Exit zone as the first zone of the pair. This will ensure that the entry delay time is started before the follower zone is processed.
- 4
 - a. If a relay is programmed to activate on a fault of one of the zones, the relay will activate without the other zone being faulted.
 - b. If a relay is programmed to activate on either an alarm or trouble, both zones must trip before the relay will activate, and both zones must restore for the relay to deactivate (if relay is programmed to deactivate on a Zone List Restore).

Call Waiting Defeat Logic

Although this option does not directly prevent false alarms, it may prevent the central station from taking action on a potential false alarm. After the panel's initial call to report the alarm, if the panel attempts to make an additional call, perhaps for a cancel or a zone restoral, an operator at the central station attempting to contact the premises to verify whether or not the alarm is valid will hear the phone ringing indefinitely and will have to dispatch on the call.

This option, enabled in program field 1*42, will attempt to defeat call waiting on the first out-going call attempt to both the primary and secondary numbers. It does this by dialing a special sequence preceding the phone number (but after the PABX number). The panel will dial *70 if using touchtone and 1170 if using rotary.



The panel does not attempt to defeat call waiting on each call attempt, since the phone company may not complete the call if the sequence is dialed on a phone line that does not have call waiting.

Section 17: ZONE TYPE DEFINITIONS

This section provides the following information:

- Zone number designations
- Zone Type Definitions

The VISTA 50 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 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 more time is needed to get to and from the keypad. Delay times for this zone type must be greater than Zone Type 01. (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 entry delay. **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 or exit (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 shorted. 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 and exit delays (using the programmed entry/exit time), if tripped when the panel is armed in the Away mode. This zone type is also active during Maximum mode, but no entry 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 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).

* Note that these zone types are for use by 5800 series devices *only!*

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 troubles (zones 88-91 & 97) will report as trouble conditions only, and as such, should be assigned zone type 05 if annunciation is desired. See SUPERVISION notes in POLLING LOOP and WIRELESS EXPANSION sections for more information.

Section 18: DATA FIELD DESCRIPTIONS

The following is a description 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.

If you need more information about actual programming procedures, see Section 4: *THE MECHANICS OF PROGRAMMING*.

***00 INSTALLER CODE**

--	--	--	--

The Installer's Code is a 4-digit code reserved for installation company use. 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 the 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.

***09 ENTRY DELAY #1 (partition-specific)**

--

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 zones assigned to Zone Type 01.

***10 EXIT DELAY #1 (partition-specific)**

--

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 zones assigned to Zone Type 01.

***11 ENTRY DELAY #2 (partition-specific)**

--

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 (partition-specific)**

--

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 (partition-specific)**

--

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.

***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.

***16 CONFIRMATION OF ARMING DING** (partition-specific)

☐

Enter **1** to enable 1/2 second external alarm sounding ("ding") at the end of exit delay (or after kisooff from the central station, if sending closing reports.) Otherwise enter **0**.

***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). (Must be "1" for UL)

***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 VIP MODULE PHONE CODE**

☐

If a 4285 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.

***22 KEYPAD PANIC ENABLES** (partition-specific)

☐

Enter 1 to enable the appropriate keypad panics used in this partition. Otherwise enter **0**.

***23 MULTIPLE ALARMS** (partition-specific) ☐

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.

***24 IGNORE EXPANSION ZONE TAMPER** ☐

Only applicable to certain polling loop sensors with tamper switches or 5800 series transmitters. This option is used to disable tamper detection on these devices.

Enter **1** to disable (ignore) tamper.

Enter **0** if tamper detection is desired.

***25 BURG. TRIGGER FOR RESPONSE TYPE 8** ☐

Enter **1** to allow optional triggering of the voltage output on pin 7 of the J7 header to include zone response type 8 (24hr. auxiliary).

Enter **0** if only burglary and audible panic alarms (zone type 7) will trigger pin 7.

***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 whether or not other reports have been sent. Must be **0** for UL applications.

***27 TEST REPORT INTERVAL**

Enter the test reporting interval in hours, **001-999**.

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 upon power-up, after a prolonged power loss which caused the system's battery to discharge, the system will assume the system status prior to the power loss.

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.

***29 QUICK ARM** (partition-specific)

☐

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.

***30 TOUCH-TONE OR ROTARY DIAL**

☐

Enter **1** if TouchTone service is being used.

Enter **0** if rotary phone service is used.



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.

***32 PRIMARY SUBSCRIBER ACCT #**

(partition-specific)

Enter 00-09; B-F (11-15)

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 *.

***33 PRIMARY PHONE NUMBER**

This field is used to enter the primary central station phone number, up to 17 digits, **0-9; enter #11 for *, #12 for #, and #13 for a 2 sec. pause.** 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 is automatic only if a secondary phone number is entered (8 calls are made to the secondary phone number if no acknowledgment is received after 8 attempts to the primary number).

***34 SECONDARY PHONE NUMBER**

This field is used to enter the secondary phone number, up to 17 digits, **0-9; enter #11 for *, #12 for #, and #13 for a 2 sec. pause. This number.** It is used if communication on the primary number is unsuccessful, or if split/dual reporting is desired. 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**; **enter #11 for ***, **#12 for #**, and **#13 for a 2 sec. pause**. Do not fill unused spaces.

***36 DOWNLOAD ID NO.**

Enter eight digits, 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**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dialer Shutdwn	System Shutdwn	Not Used	Remote Bypass	Remote Disarm	Remote Arm	Upload Program	Download Program

Each of the various remote functions can either be enabled or disabled through VLink or Compass downloading software. Disabling a function means that you 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 to disable the download callback option. For UL installations, all entries must be **0**.

***38 PREVENT ZONE XX BYPASS** (partition-specific)

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**

(partition-specific)

Enter **1** if open/close reporting for the installer is desired.
Otherwise enter **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, in which case only **normally closed** devices must be used.

Must be **0** for UL.

***42 DIAL TONE PAUSE**

This field sets the time the system will wait for dial tone before dialing. Applies if true dial tone is not selected in field *43.

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 using a 4285 VIP Module and/or if 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 defeat mode, which 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 caller should let the phone ring once, then hang up, and call again within 30 seconds. The system, upon hearing one ring followed by nothing, will not answer the first 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 number.

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 number

Enter the appropriate number for the secondary format as follows: 0=Low Speed; 1=Contact ID; 2=Ademco High Speed; 3=Ademco Express

***48 LOW SPEED FORMAT (SECONDARY)** ☐

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+1, and 4+2 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 all reports are to be 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 number

Note: Expanded overrides 4+2 format.

***53 STANDARD/EXPANDED REPORT SECONDARY** ☐

Enter **0** for standard or **1** for expanded reporting for the secondary phone number.

Note: Expanded overrides 4+2 format.

***54- 78 REPORT CODES FOR ZONES 01-64, 81-91, 95-99)**

Enter the report codes for each zone used in the system. Each digit is a two-digit entry to allow for hex codes. Enter 01-09; A-F (10-15). Can also be entered using the #93 Zone Programming mode.

***79 ZONE TYPE RESTORES FOR ZONE TYPES 1-8**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

1 2 3 4 5 6 7 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 9/10** ☐ ☐

9 10

Enter **1** to enable restore reporting for individual zone types.

Enter **0** if no restore report is desired for a zone type.

***81- NON-ALARM REPORT CODES (FIRST DIGIT)**

Enter the first digit of each report code for the conditions indicated on the programming form.

***82 NON-ALARM REPORT CODES (SECOND DIGIT)**

Enter the second digit of each report code for the conditions 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.

***84 SWINGER SUPPRESSION** (partition-specific)

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 (partition-specific)

95

96

99

Duress

Enter **1** for each panic/duress for which reporting is desired.

***87 ENTRY WARNING** (partition-specific)

Enter **0** for 3 short beeps, or **1** for slow beeps that continue for the entire entry delay period.

***88 BURG. ALARM COMM. DELAY** (partition-specific)

Enter **0** for no delay on burglary alarm communication. Enter **1** for 16-second delay (no delay on 24-hour reports).

***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

***90 SECONDARY SUBSCRIBER ACCT #**

(partition-specific)

Enter 00-09; B-F (11-15)

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*01- RESPONSE TYPES FOR ZONES 28-91

1*09 These fields are programmed via #93 Menu Mode–Zone Programming.

1*17 LOBBY PARTITION

Enter the common lobby partition (**1-8**).

Enter **0** if none.

1*18 AFFECTS LOBBY (partition-specific)

Enter **1** if this partition affects the common lobby. Will cause lobby to disarm when this partition disarms.

Enter **0** if it does not.

1*19 ARMS LOBBY (partition-specific) ☐

Enter **1** if arming this partition causes the system to attempt to arm the common lobby partition automatically. Can only arm lobby if all other affecting partitions are armed. To enable this field, field 1*18 must also be enabled. (partition-specific)

Enter **0** if arming this partition will not attempt to arm the common lobby partition.

1*20 EXIT ERROR LOGIC ☐

Enter **1** to enable Exit Error Logic (entry/exit doors will be bypassed if left open).

Enter **0** if Exit Error Logic is not desired.

1*21 EXIT DELAY RESET ☐

Enter **1** to reset Exit Delay to 60 seconds after door is closed.

Enter **0** if Exit Delay not to be reset.

1*22 CROSS ZONING PAIR ONE

Enter the first pair of zones which must both be faulted within a five minute period to cause an alarm.

Enter 00,00 to disable.

1*23 CROSS ZONING PAIR TWO

Enter the second pair of zones which must both be faulted within a five minute period to cause an alarm.

Enter 00,00 to disable.

1*24 CROSS ZONING PAIR THREE

Enter the third pair of zones which must both be faulted within a five minute period to cause an alarm.

Enter 00,00 to disable.

1*25 CROSS ZONING PAIR FOUR

Enter the fourth pair of zones which must both be faulted within a five minute period to cause an alarm.

Enter 00,00 to disable.

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 **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 desired.

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- REPORT CODES FOR ZONES 65-80

1*39 Enter the report codes for each zone used in the system. Each digit is a two-digit entry to allow for hex codes. Enter 01-09; A-F (10-15). Can also be entered using the #93 Zone Programming mode.

1*40 EVENT LOGGING REPORT CODES

1*41 Enter the appropriate code as shown on the programming form.

1*42 CALL WAITING DEFEAT

☐

Enter **1** for the panel to defeat call waiting on the first attempt (DO NOT enable unless call waiting is being used).

Otherwise, enter **0**.

1*43 PERMANENT KEYPAD DISPLAY BACKLIGHTING

☐

(partition-specific)

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*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*45 EXIT DELAY SOUNDING (partition-specific)

☐

Enter **1** if beeps from the keypads during exit delay is desired. Enter **0** for no keypad sound during exit delay.

1*46 AUXILIARY OUTPUT MODE

☐

Enter **0** if ground start output is required (not for UL applications);

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 AAV module is being used.

1*47 CHIME ON EXTERNAL SIREN (partition-specific)

☐

Enter **1** for chime annunciation using the external alarm sounder. If not desired, enter **0**.

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*52 SEND CANCEL IF ALARM + OFF (partition-specific)

☐

Enter **1** if cancel reports to be sent when the system is disarmed after an alarm, regardless of how much time has gone by. Enter **0** if cancel reports are to be sent within Bell Timeout period only.

1*53 DISABLE DOWNLOAD CALLBACK

☐

Enter **1** to disable the callback requirement for downloading.

Enter **0** to require a callback.

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.

Enter **0** if RF button forced bypassing is not desired.

1*60 ZONE 5 AUDIO ALARM VERIFICATION

☐

Enter **1** if 2-Way Audio (AAV) is being used.

Enter **0** if AAV is not being used.

1*70 EVENT LOG TYPES

☐☐☐☐☐

Alm Chck Byps O/C Systm

Enter **1** for each type of event for which event logging is desired.

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, **000-127** 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, **000-127** 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).

1*76 ACCESS CONTROL RELAY (partition-specific)

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*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:
01=first; 02=second; 03=third; 04=fourth; 05=last; 06=next to last;
07=third from last. Standard setting for U.S. is 01,05.
- 2*05 AUTO-ARM DELAY** (partition-specific)
- 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** (partition-specific)
- Enter the time **01-15** in one minute increments during which the user is warned by a keypad sounding and display to exit the premises prior to auto arming of the system.
- 2*07 AUTO-DISARM DELAY** (partition-specific)
- 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**
- (partition-specific)
- Enter **1** if the system should automatically bypass any faulted zones when it attempts to auto arm. Otherwise enter **0**.
- 2*09 OPEN/CLOSE REPORTS BY EXCEPTION**
- (partition-specific)
- Enter **1** if it is desired that open/close reports be sent **only if** the openings/closings occur **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. Enter **0** if exception reporting is not desired. Note: This field **must** be set to 1 if late/early opening, late/early closing, and no opening/closing reports are to be sent (2*13, 2*14).
- 2*10 ALLOW DISARMING ONLY DURING ARM/DISARM**
- WINDOWS** (partition-specific)
- 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.
- 0**=disable for displayed partition; **1**=enable for displayed partition

**2*11 ALLOW DISARM OUTSIDE WINDOW IF
ALARM OCCURS**

☐

Used only if field 2*10 (partition-specific field) is set to 1.

Enter **1** to allow the system to be disarmed outside the programmed disarm (opening) window if an alarm has occurred. Enter **0** to allow disarming only 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- SCHEDULING RELATED DIALER REPORTS

2*14 Enter the report codes for the scheduling related events as shown on the programming form.

2*18 ENABLE GOTO FOR THIS PARTITION

☐

(partition-specific)

Enter **1** if this partition is to be accessed from another partition's keypad using the GOTO command. Otherwise enter **0**.

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 four-digit descriptor).

Enter **0** to cause the keypads to display a non-partitioned system type of display (no partition number will appear).

2*20 ENABLE J7 TRIGGERS BY PARTITION

☐

(partition-specific)

**2*21 SUPERVISION PULSES FOR LORRA
TRIGGER OUTPUTS**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	B	S

Used for supervised connection to 7920SE.

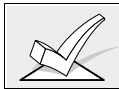
Enter **1** to enable pulses for each type of LORRA trigger (burglary, fire, silent panic). This option causes the control to send periodic short pulses on the J7 radio triggers. These pulses are used by the 7920SE to determine that its connection to the control is still intact. Enter **0** if not desired.

Section 19: #93 MENU MODE PROGRAMMING

This section provides the following information:

- #93 Menu Mode main menu options
- Zone Programming
- Serial Number Programming
- Alpha Programming
- Device Programming
- Relay Programming
- Relay Voice Descriptors
- Custom Index Programming (VIP Module substitute words)

#93 Main Menu Options



The following fields should be programmed before beginning: 2*00: Number of Partitions; 1*32: RF receiver type.

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 options, which are as follows:

ZONE PROG?

0=No 1=Yes

For programming the following:

- Zone Number
- Zone Response Type
- Partition Number for Zone
- Dialer report code for zone
- Input Device Type for zone (whether RF, polling loop, etc.)
- Learning serial numbers of 5800 series transmitters & serial polling loop devices into the system (all other zone characteristics must be pre-programmed).

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), 4204 output relay modules, and 4285 VIP Module:

- Device Address
- Device Type
- Keypad Options (incl. partition assignment)
- RF House ID

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 for relays/Power Line Carrier devices to be used with the 4285 VIP Module. This prompt is fully explained in the RELAY OUTPUTS/POWER LINE CARRIER DEVICES section.

CUSTOM INDEX #?

0=no 1=yes

For creating custom word substitutes for VIP Module annunciation. This prompt is fully explained in the 4285 VIP MODULE section.

Press 0 (NO) or 1 (YES) in response to the displayed menu selection. Pressing 0 will display the next choice in sequence. Refer to the *ZONE PROGRAMMING* section for instructions on how to program zone characteristics, the *DEVICE PROGRAMMING* section for instructions on how to program addressable devices, and the *ALPHA PROGRAMMING* section for programming alpha descriptors.

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
00	Escapes from menu mode, back into data field programming mode, if entered at the first prompt of each main menu option.

Zone Programming

Enter Programming mode [Installer Code] + 8 0 0. The following fields should be programmed before beginning:

2*00: Number of Partitions;

1*32: RF Receiver Type.

Also, before programming wireless zones, the RF receiver must be enabled in Device Programming Mode (later in Device Programming section).

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.

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

A summary screen for that zone will appear. ZT=Zone Type, P=Partition, RC=Report Code, In:=the input type of device, and L=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 a zone type, which defines the way in which the system responds to faults in that zone. Refer to Section 17: *ZONE TYPE DEFINITIONS* for detailed definitions of each zone type. Enter the zone response type for this zone. The screen will automatically display the zone type for the number entered. Press [*] to accept entry.

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
- 20 Arm-stay (for 5800 RF only)
- 21 Arm-away (for 5800 RF only)
- 22 Disarm (for 5800 RF only)
- 23 No alarm response (ex. relay action)

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

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 3 (RF). 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.

If hardwired, dipswitch polling loop, or 5700 series devices are being programmed, after completing this entry, the summary display appears. Press to continue. The display will now return to the "Enter Zone Number" prompt for programming the next zone into the system. If all zones are programmed, enter **00** and press (*) to exit back to normal programming mode.

If either 5800 series RF or polling loop serial number devices are being programmed, continue to the next prompt.

20 LOOP NUMBER

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

OR

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 mode (see next section).

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

If learning the serial number now (entering 1 at the last prompt), this prompt appears. Fault and restore the transmitter or polling loop device twice. The keypad will beep twice when it hears the first transmission, and three times when it hears the second. If the serial number is printed on the wireless device, it may be entered manually rather than learned. The loop number you want to use for this zone must also be entered.

20 PROG AS RF:1
A001-3078:1

A summary screen will appear if the serial number was successfully learned. Press to continue.

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

Press to return to the "Enter Zone Number" prompt for programming the next zone into the system. When all zones are programmed, enter **00** and press (*). The system will prompt "Quit?" Enter 1 to exit back to normal programming mode. Enter 0 to stay in menu mode.

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. Enter data field programming mode: installer code + **8 0 0**.
2. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
3. 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 that zone number was programmed as a non-applicable input type (i.e., Hardwired) in the **Zone Programming** mode, 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 continue.

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 learn the device's serial number into the system. Press to continue.

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 automatically learned by faulting the device at least twice (two consecutive transmissions must be received by the panel). The keypad will beep twice after the first transmission, and three times after the second.

If the serial number is printed on the wireless device, it may be entered manually rather than learned. The loop number you want to use for this zone must also be entered.

10 PROG AS RF:2
A000-5372:2

A summary screen will appear if the serial number was successfully learned. Press to continue.

ZN ZT P RC IN:L
10 03 1 3 1 RF:2

A summary screen for the zone 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 a 5137AD or 6139 alpha keypad in the system, you can program a user friendly English language description/location for all protection zones, relays, keypad panics, polling loop short, and RF receiver supervision troubles.
- 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.
- A custom installer's message can be programmed 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 descriptors for relays.
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] Switches between alphabet and actual word list; used to accept entries.
- [8] Saves the zone description in the system's memory.
- [#] # plus zone number displays 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

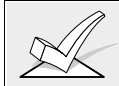
Note that the first letter of the alphabet appears after the zone number, and that the zone number is automatically included with the description.

3. **Enter the descriptor for that zone.**

Use 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 accept the word and proceed, or press [8] to store the complete descriptor and exit, **or...**
- b) Select the first letter of the desired description (note that "A" is already displayed). Use the [3] key to advance through the alphabet and the [1] key to go backward.
Press the [3] key repeatedly until "B" appears (press [1] to go backwards if you happen to pass it), then press key [6] to display the first available word beginning with B.
Press the [3] key repeatedly to advance through the available words until the word BACK is displayed.



To add an "s" or " 's," if you need to, 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.

4. Accept the word.

To accept the word, press the [6] key, which switches back to alphabet list for the next word, or press [8] to store the complete descriptor and exit.

5. 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 switches back to alphabet list.

6. Store the descriptor.

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

7. To review the zone descriptors, key [#] plus zone number (e.g., #01).

To edit zone descriptors, key [*] plus zone number (e.g., *01)

8. Exit zone description mode: enter 00.

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.
Custom words are retrieved as word numbers 250 to 269 for words 1 to 20 respectively, when using method 3a to enter alpha descriptors.
When using method 3b to enter alpha descriptors, each word will be found 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).

Relay Descriptors

The descriptor for each relay is limited to a maximum of ten (10) characters. The keys perform the same functions as in the CUSTOM WORD entry.

- 1. Select "RELAY DESCRIPT." mode. The system will ask for the relay number desired. Enter the number as a double key entry 01-16. A cursor will now appear at the beginning of the second line.
- 2. Type the word using the following method:
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.
- 3. Repeat step 2 to create the desired word (or words).
- 4. Save the word by pressing the [8] key.
This will return you to the RELAY DESCRIPT ? display.
- 5. Repeat steps 1 through 4 for each relay.
- 6. Exit Relay Descriptor Mode by entering 00 at the RELAY DESCRIPT ? prompt.

NOTE: Relay descriptors will appear on an alpha keypad when turning a relay on or off using the Code + # 70 Relay Menu mode.

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 0 to quit or 1-8 for a new partition number.

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 RELAY VOICE DESCRIPTORS section when programming relay voice descriptors.

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

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 4285 VIP module. If using a VIP module, and words other than these are selected for alpha descriptors, the voice module will not provide annunciation of those words.

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 to match the device's physical address setting (01-30).
Press * to accept entry.

Note: Device Address 04 must be used for the 4285 Voice Module, if one is utilized. If not, it can be used for another device type.

DEVICE TYPE

Select the type of addressable device as follows:

- 00 = device not used
- 01 = alpha keypad (5137AD/6139)
- 02 = fixed word keypad (4137AD/6137/6128)
- 03 = RF receiver (4281/5881)
- 04 = output relay module (4204)
- 05 = voice (VIP) module (4285)

Press * to accept entry.

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. Enter "9" to make this keypad a "Master" keypad for the system. Press * to accept entry.

RF EXPANDER
HOUSE ID XX

If device type 03 is selected, this prompt will appear. Enter the 2-digit House ID (**00-31**). This is required for 5700 series systems only, or if using a wireless keypad (5827/5827BD) with a 5800 series system.

MODULE PART.

If device type 05, voice (VIP) 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.

Press *99 to exit program mode.

Enter the [Installer Code] + OFF to cancel the system's settling delay.



Device Address **00** is always set as an alpha keypad assigned to Partition 1 with no sounder suppression options.

Relay Voice Descriptors

If using the 4285 VIP Module, voice descriptors can be programmed for each of the 16 relays/Powerline Carrier devices used in the system. These descriptors will be announced by the voice module when accessing the relays via the # 70 relay access mode 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).



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, do the following:

1. From data field programming mode, press **#93** to display the "ZONE PROG?" prompt.
2. Press **0** (NO) to each menu option 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

01 ENTER DESC d2

01 ENTER DESC d3

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.

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.

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. When all output devices have been programmed, enter **00** to quit.

Enter *99 to exit program mode.

Enter the [Installer Code] + OFF to cancel the system's settling delay.

Relay Voice Descriptors and Custom Word Substitutes Vocabulary

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

Custom Word Substitutes for VIP Module Annunciation

A substitute word can be programmed for each of the 20 custom words used in your alpha zone descriptions. This substitute word will be announced by the VIP module in place of the custom word that is displayed on the alpha keypad. For example, an alarm display of "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 VIP module will not annunciate the zone descriptor at all, but will only annunciate the zone number.

To enter custom words substitutes, do the following:

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

CUSTOM INDEX ?
0=no 1=yes

Enter **1** at this prompt.

CUSTOMWORD 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 will be displayed. Enter the next custom word number to be substituted or enter **00** to quit.

Section 20: SCHEDULING OPTIONS

This section provides the following information:

- Main features of scheduling
- Time Window Definitions
- Open/Close Schedule Definitions
- Programming in the #80 Scheduling menu mode
- Programming:
 - Time Windows
 - Open/Close Schedules
 - Holiday Schedules
 - Time Driven Events
 - Access Schedules

Introduction To Scheduling

This section describes the scheduling features provided with this control panel.

UL	<ol style="list-style-type: none"> 1. You must program bypass and auto-arm fail reports (fields 2*13 & 2*14) for UL installations. 2. Auto-disarming is not for use in UL installations.
-----------	--

General	<ul style="list-style-type: none"> • The scheduling features of this control allow certain operations to be automated, such as auto-arming, auto-disarming, auto-bypassing and un-bypassing of zones, and activating relay outputs (using powerline carrier devices or 4204 modules). • The system uses time windows for defining open/close schedules, holiday schedules and user defined temporary schedules. Scheduled events are programmed by 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	<ul style="list-style-type: none"> • The system can automatically arm (AWAY mode) itself at the end of a pre-determined closing (arming) 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 closing (arming) time window with a keypad command. The system can also automatically bypass any open zones when auto arming.
Auto-Arm Delay	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • The auto-arm warning causes the keypad sounder to warn the user of an impending auto-arm. The warning can be set to start 01 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	<ul style="list-style-type: none"> A user can manually extend the arm (closing) time window by 1 or 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.
Force Arm	<ul style="list-style-type: none"> The Enable Force Arm option 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Reports	<ul style="list-style-type: none"> This option allows a means of reporting openings and closings by exception (sent only if event occurs outside of the predetermined opening/closing time windows). The system sends early opening/closing reports if done earlier than the corresponding window The system sends late opening/closing reports if done later than the corresponding window The system sends missed open/close reports if no opening/closing occurs by the end of the corresponding window.
Time Driven Events	<ul style="list-style-type: none"> By using time windows, the system can automatically activate and de-activate relays and/or power line carrier (X-10) devices at pre-determined times to turn lights or other devices on and off.: The system can perform the same actions on a daily basis, or can be made to perform an action only once (i.e., turn on the porch light this Wednesday at 8:00pm). 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.
Limitation of Access By Time	<ul style="list-style-type: none"> A user's access can be limited to a certain time period, during which he can perform system functions. Outside this time, that user's code will be inactive. The system provides up to 8 Access Schedules, each consisting 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. If a user tries to operate the system outside of the schedule, the alpha keypad will display "Access Denied."

Time Windows Definitions

Time Windows	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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 ClosedTo provide these schedules, the following five time windows need to be programmed:<table><tr><th>Window</th><th>Start</th><th>Stop</th><th>Purpose</th></tr><tr><td>1</td><td>8am</td><td>9am</td><td>Monday-Friday open window</td></tr><tr><td>2</td><td>9am</td><td>10am</td><td>Saturday open window</td></tr><tr><td>3</td><td>4pm</td><td>4:30pm</td><td>Saturday close window</td></tr><tr><td>4</td><td>6pm</td><td>6:30pm</td><td>Monday-Thurs. close window</td></tr><tr><td>5</td><td>9pm</td><td>9:30pm</td><td>Friday close window</td></tr></table>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):<table><tr><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th><th>Sun</th><th>Hol</th></tr><tr><td>Op/Cl</td><td>Op/Cl</td><td>Op/Cl</td><td>Op/Cl</td><td>Op/Cl</td><td>Op/Cl</td><td>Op/Cl</td><td>Op/Cl</td></tr><tr><td>01/04</td><td>01/04</td><td>01/04</td><td>01/04</td><td>01/05</td><td>02/03</td><td>00/00</td><td>00/00</td></tr></table><p>Note: 00 is entered for those days on which the store is closed.</p><p>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).</p><p>Time driven events can be activated at different times using a window as follows:</p><ul style="list-style-type: none">At the beginning of a time windowAt the end of a time windowDuring 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)	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	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
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																																														
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																																										

Open/Close Schedule Definitions

General	<ul style="list-style-type: none"> 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: Daily, Holiday, and Temporary.
Daily schedule	<ul style="list-style-type: none"> Each partition can have one daily schedule consisting of one opening window and one closing window per day.
Holiday schedule	<ul style="list-style-type: none"> A holiday schedule will override the regular daily schedule on selected holidays throughout the year.
Temporary schedule	<ul style="list-style-type: none"> 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.
Additional Schedules	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 occurs outside the assigned time window. The system keeps a record of all openings/closings in its event log. In the event an opening occurs immediately following a closing during the closing window (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. (as long as the reentering occurs 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		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		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.					
				No reports sent if system disarmed during this time window.								No reports sent if system armed* during this time window. * or disarmed if user reenters premises.							

Programming with #80 Scheduling Menu Mode

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 events (for system functions and relay activation)
- 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 for this partition
	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, Relay 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 Time Driven 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 program schedules, enter Scheduling program mode:
[Installer Code] + # + 80.

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 option.

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 various open/close and access 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.

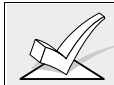
Quit ?
1 = YES 0 = NO 0

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.

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



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.

Daily Open/Close Worksheet

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

Part	Monday		Tuesday		Wednesday		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 Monday's 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.

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	/								

Programming Holiday Schedules

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 (01-20) and time window number (01-20),** 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 what the action will affect (relay, relay group, partition, zone list, user group). The action specifier varies, depending on the type of action selected.

The following is a list of the "Action" codes (desired actions) 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

Activation times 1 (Beginning), 2 (End), 3 (During) are the only valid choices for automatic arming and disarming functions.

"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)



The auto-arm warning and auto-arm/disarm delay times (fields 2*05 - 2*07) apply.

Bypass commands

Activation times 1 (Beginning), 2 (End), 3 (During) are the only valid choices for bypass commands. If 3 (During) is selected for auto-bypassing, the system will bypass the zone(s) specified on a particular Zone List at the beginning of the window and unbypass the zone(s) at the end of the window. If it is selected for auto unbypassing, the system 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 Windows

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	Access Group

- 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)										Action Desired	Action Specifier	Activation Time
		M	T	W	T	F	S	S	H					
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. Time windows must first be defined in order to be used to trigger events.

If using Time Driven Events to control relays and/or Powerline Carrier devices, the following menu items must first 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

Actions 01-05

Enter the relay number and press **T** 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 ***** to accept entry. The Time Window ? prompt appears.

PART? 12345678
HIT 0-8 X X

30=Auto bypass - Zone list
31=Auto unby pass - Zone list

42=Enable Access Window for Access
group(s)

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 **1-4** (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 is a means by which a user's access code is limited to working during a certain period of time.. 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 (typically one for an opening time window and the second for a closing time window). If an Access Schedule has been programmed, a user required to follow that schedule would be assigned to an Access Group of the same number (1-8) when that user is added to the system. If no limitations apply, enter 0.

Enter the appropriate time window numbers for each partition.

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

Access Control Schedules

To program Access Schedules, do the following:

Enter Scheduling Menu Mode [Installer Code] + # 80. 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

Each partition can be assigned a Temporary Schedule which will override the regular open/close schedule (and the holiday schedule). 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

Enter [Security 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

The system provides up to 20 "timers" which will be available to the end user for the purpose of controlling output devices (4204 relays or Powerline Carrier devices (e.g., X-10). These timers are analogous to the individual appliance timers that might be purchased at a department store. The output devices themselves are programmed into the system by the installer during #93 Menu Mode-Relay 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 [Security Code] + # + 83.

Output Timer # ?
01-20, 00=Quit 01

Enter the output timer number to be programmed (01-20). 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 = Descriptor for Output Device # 4

07:00PM = Start Time

11:45PM = Stop Time

Press * to continue.

06 ENTER OUTPUT#
PORCH LITE 04

Enter the desired output number (01-16)

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: May use two 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.

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 deactivate 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

Selecting "Permanent" means that this schedule will be in effect on a continuous basis. An answer of 0 means means that this schedule will be in effect for one week only. The letter "x" under the day will then be cleared.

Press * to accept entry. The system will quit User Scheduling mode and return to normal mode.

Section 21: SYSTEM COMMUNICATION

This section provides the following information:

- The process of a successful transmission
- An explanation of reporting formats for this system
- Loading communication defaults
- Contact ID report codes

A Successful Transmission

When a control panel calls the central station receiver, it waits to hear a “handshake” frequency from the receiver to confirm that the receiver is on-line and ready to receive its message. Once the panel hears the handshake it is programmed to listen for, it sends its message. The panel then waits for a “kissoff” frequency from the receiver acknowledging that the message was received and understood.

If the handshake frequency is not given or is not understood by the panel, the panel will not send its message. Once the handshake frequency is received and understood by the panel, the panel will send its message. If there is an error in the transmission (the receiver does not receive a “valid” message), the kiss off frequency will not be given by the central station receiver.

The panel will make a total of eight attempts to the primary telephone number and eight attempts to the secondary telephone number (if programmed) to get a valid message through. If the panel is not successful after its numerous attempts, the keypad will display “Communication Failure” (Alpha keypad) or “FC” (Fixed-word keypad).

Reporting Formats

The following chart defines the three sets of (handshake/kissoff) frequencies that the panel supports and the different formats that can be sent for each.

FORMAT	HANDSHAKE	TRANSMITS DATA	KISSOFF	TRANSMIT TIME
Low Speed 3+1 4+1 4+2	1400Hz	1900Hz (10PPS)	1400Hz	Under 15 secs. (Standard report)
Sescoa/Rad 3+1 4+1 4+2	2300Hz	1800Hz (20PPS)	2300Hz	Under 10 secs. (Standard report)
Express 4+2	1400–2300Hz	DTMF (10 cps)	1400Hz	Under 3 secs.
High Speed	1400–2300Hz	DTMF (10 cps)	1400Hz	Under 5 secs.
Contact ID	1400–2300Hz	DTMF (10 cps)	1400Hz	Under 3 secs.

ADVISORY: Ademco's Contact ID reporting is capable of uniquely reporting all 86 zones of information, as well as openings and closings for all 75 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 VISTA 50 report codes. 685 software levels below 4.4 cannot support Contact ID reporting. For information regarding updating the 685 receiver, contact the Technical Support group at 1-800-645-7492 (NY) or 1-800-458-9469 (CA).

The following describes each format in greater detail.

3+1 and 4+1 Standard Formats	Comprised of a 3- (or 4-) digit subscriber number and a single digit report code (e.g. Alarm, Trouble, Restore, Open, Close, etc).
3+1 and 4+1 Expanded Formats	Comprised of a 3- (or 4-) digit subscriber number, and a two-digit report code. The first digit is displayed on the first line, followed by a second line where the first digit is repeated 3 (or 4) times and followed by the second digit. This is the "expanded" digit.
4+2 Format	Comprised of a 4-digit subscriber number and 2-digit report code.
Ademco Contact ID Reporting Format	Comprised of a 4-digit subscriber number, 1-digit event qualifier ("new" or "restore"), 3-digit event code, 2-digit Partition No., and 3-digit zone number, user number, or system status number.
Ademco High Speed	Comprised of 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.

Report	3+1/4+1 Standard	3+1/4+1 Expanded	4+2 Low Spd or Express
Alarm	SSS(S) A	SSS(S) A AAA(A) Z	SSSS AZ
Trouble	SSS(S) T	SSS(S) T TTT(T) t	SSSS Tt
Bypass	SSS(S) B	SSS(S) B BBB(B) b	SSSS Bb
AC Loss	SSS(S) E	SSS(S) E EEE(E) A _C	SSSS EA _C
Low Batt	SSS(S) L	SSS(S) L LLL(L) L _B	SSSS LL _B
Open	SSS(S) O	SSS(S) O OOO(O) U	SSSS OU
Close	SSS(S) C	SSS(S) C CCC(C) U	SSSS CU
Test	SSS(S) G	SSS(S) G GGG(G)g	SSSS Gg
Restore Alarm	SSS(S) R	SSS(S) R RRR(R) Z	SSSS RZ
AC Restore	SSS(S) R _A	SSS(S) R _A R _A R _A R _A (R _A)A _C	SSSSR _A A _C
LoBat Res.	SSS(S) R _L	SSS(S) R _L R _L R _L R _L (R _L)L _B	SSSS R _L L _B
Trouble Res.	SSS(S) R _T	SSS(S) R _T R _T R _T R _T (R _T)t	SSSS R _T t
Bypass Res.	SSS(S) R _B	SSS(S) R _B R _B R _B R _B (R _B)b	SSSS R _B b

Where:

SSS or

SSSS = Subscriber ID

A = Alarm Code-1st digit

Z = Typically Zone Number*-2nd digit

Tt = Trouble Code (1st & 2nd digits)

Bb = Bypass Code (1st & 2nd digits)

EA_C = AC Loss Code (1st & 2nd digits)

LL_B = Low Battery Code(1st & 2nd digits)

O = Open Code-1st Digit

C = Close Code-1st Digit

U = User Number (1st & 2nd digits)

Gg = Test Code (1st & 2nd digits)

R = Restore Code (Alarm)1st & 2nd digits

R_Tt = Restore Code (Trbl)1st & 2nd digits

R_Bb = Restore Code (Byps)1st & 2nd digits

R_AA_C = Restore Code (AC)1st & 2nd digits

R_LL_B = Restore Code (Bat)1st & 2nd digits

Zone numbers for: [] + [#], or [B] = 99; [3] + [#], or [C] = 96;
[1] + [*], or [A] = 95; Duress = 92

Ademco Contact ID Reporting takes the following format:

CCCC QEEE GG ZZZ

where: CCCC = Customer (subscriber) ID

Q = Event qualifier, where:

E = new event , and R = restore

EEE = Event code (3 hexadecimal digits)

GG = Partition Number (system messages show "00")

ZZZ = Zone/contact ID number reporting the alarm, or user number for open/close reports. System status messages (AC Loss, Walk Test, etc.) contain zeroes in the ZZZ location.

Ademco High Speed Reporting events by channel:

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, A-F if Open/Close reporting is enabled.

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 = SUPERVISORY/TROUBLE (For Channels 1-8 Only)

6 = SYSTEM STATUS:

- AC LOSS in Channel 1
- LOW BATTERY in Channel 2
- TIME SET in Channel 3
- LOG CLEAR in Channel 3
- LOG 50% FULL in Channel 3
- LOG 90% FULL in Channel 3
- LOG OVERFLOW in Channel 3
- POWER ON RESET in Channel 4
- WALK TEST START, END in Channel 8

7 = NORMAL ALARM STATUS (Channels 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)

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.
3. Only user numbers 1-15 can be uniquely reported with open/close reports in Ademco High Speed.

Loading Communication Defaults

To help expedite the installation, the system provides 4 different communication defaults (Low Speed, Ademco Express, Ademco High Speed & Ademco's 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.

You may load communications defaults at any time. However, it is recommended that the panel be defaulted first (*97) **only if no other programming has been done**. If other programming has already been done, there is no need to default the panel.

To load communication defaults, do the following:

Enter program mode [Installer Code] + 8 0 0. Once the Programming mode is entered, first press ***94** and then enter one of the following field numbers:

TABLE OF DEFAULT PROGRAMMING COMMANDS

PRESS	TO LOAD THIS DEFAULT PROGRAM SET
*80	Low Speed communication defaults
*81	Ademco 4 + 2 Express communication defaults
*82	Ademco High Speed communication defaults
*83	Contact ID communication defaults

TABLE OF CONTACT ID EVENT CODES

Code	Definition	Code	Definition
110	Fire Alarm	401	O/C By User
121	Duress	403	Power-Up Armed
122	Silent Panic	406	Cancel by User
123	Audible Panic	407	Remote Arm/Disarm (Download)
131	Perimeter Burglary	408	Quick Arm
132	Interior Burglary	409	Keyswitch O/C
133	24 Hour Burglary (zone type 11, if supported)	411	Call back Requested
134	Entry/Exit Burglary	441	Armed STAY
135	Day/Night Burglary	451	Early open/close
150	24 Hour Auxiliary	452	late open/close
301	AC Loss	453	Fail to open
302	Low System Battery	454	Fail to close
305	System Reset	455	Auto-arm fail
306	Program Tamper	457	Exit Error by User
309	Battery Test Fail	459	Recent Close
332	Poll Loop Short-Trouble	570	Bypass
333	RF Receiver Failure-Trouble	602	Periodic Test
373	Fire Loop Trouble	607	Walk Test Mode
374	Exit Error by Zone	621	Event Log Reset
380	Trouble (global)	622	Event Log 50% Full
381	Loss of Supervision - RF	623	Event Log 90% Full
382	Loss of RPM Supervision	624	Event Log Overflow
383	RPM Sensor Tamper	625	Time/Date Reset
384	RF Transmitter Low Battery	626	Time/date inaccurate
		631	Exception schedule change
		632	Access schedule change

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.			

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.

For 4+2 reporting, enter 2nd digits in the "ID" fields of each report code. For "expanded" reporting, enable fields *52 and *53.

ADEMCO Express (*94*81)

- Selects Ademco express reporting format, with checksum, for both phone numbers.
- Report codes for zones 1-86, RF receiver, 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 second RF receiver (88 & 89) & polling loop short (97)
 - Channel 8 for first RF receiver (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	<input type="text" value="0"/>	Ademco Low Speed	*51 DUAL REPORTING	<input type="text" value="0"/>	no
*46 LOW SPEED FORMAT (Primary) Speed	<input type="text" value="0"/>	Ademco Low	*52 STANDARD/EXPANDED REPORT FOR PRIMARY	<input type="text" value="0"/>	<input type="text" value="0"/>
*47 SECONDARY FORMAT	<input type="text" value="0"/>	Ademco Low Speed	Alarm	<input type="text" value="0"/>	<input type="text" value="0"/>
*48 LOW SPEED FORMAT (Sec.)	<input type="text" value="0"/>	Ademco Low Speed	Rstr	<input type="text" value="0"/>	<input type="text" value="0"/>
*49 CHECKSUM VERIFICATION	<input type="text" value="0"/>	<input type="text" value="0"/>	Bypass	<input type="text" value="0"/>	<input type="text" value="0"/>
No checksum	Primary	Secondary	Trbl	<input type="text" value="0"/>	<input type="text" value="0"/>
*50 SESCOA/RADIONICS SELECT	<input type="text" value="0"/>	Radionics	Opn/Cls	<input type="text" value="0"/>	<input type="text" value="0"/>
			Low Bat		standard
					standard

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 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	9 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="9"/> Alarm Rst.	17 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	25 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="9"/> Alarm Rst.
2 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	10 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trouble	18 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	26 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trouble
3 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	11 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trble Rst.	19 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	27 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trble Rst.
4 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	12 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypass	20 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	28 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypass
5 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	13 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypss Rst.	21 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	29 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypss Rst.
6 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	14 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>		22 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	30 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
7 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	15 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>		23 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	31 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
8 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	16 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>		24 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	32 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	

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 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	41 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="9"/> Alarm Rst.	49 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	57 <input type="text" value="0"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="9"/> Alarm Rst.
34 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	42 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trouble	50 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	58 <input type="text" value="0"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trouble
35 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	43 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trble Rst.	51 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	59 <input type="text" value="0"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trble Rst.
36 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	44 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypass	52 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	60 <input type="text" value="0"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypass
37 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	45 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypss Rst.	53 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	61 <input type="text" value="0"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypss Rst.
38 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	46 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>		54 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	62 <input type="text" value="0"/> <input type="text" value="9"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
39 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	47 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>		55 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>	63 <input type="text" value="0"/> <input type="text" value="9"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
40 <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="0"/> <input type="text" value="0"/>	48 <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text" value="0"/> <input type="text" value="0"/>		56 <input type="text" value="0"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="0"/>	64 <input type="text" value="0"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="0"/>	

ALARM REPORT CODE & ID DIGITS FOR ZONES 81-87, 65-80, RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

*74 CODE	*75 ID	*76 CODE	*77 ID	*78	1*35 CODE	1*36 ID	1*37 CODE	1*38 ID	1*39
81 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	89 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="9"/> Alarm Rst.	65 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	73 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="9"/> Alarm Rst.
82 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	90 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trouble	66 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	74 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trouble
83 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	91 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trble Rst.	67 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	75 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Trble Rst.
84 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	Dures <input type="text" value="0"/> <input type="text" value="2"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypass	68 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	76 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypass
85 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	97 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypss Rst.	69 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	77 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/> Bypss Rst.
86 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	95 <input type="text" value="0"/> <input type="text" value="2"/>	<input type="text" value="0"/> <input type="text" value="0"/> (1 + *)		70 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	78 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
87 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/>	96 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/> (3 + #)		71 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	79 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
88 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/>	99 <input type="text" value="0"/> <input type="text" value="7"/>	<input type="text" value="0"/> <input type="text" value="0"/> (* + #)		72 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	80 <input type="text" value="0"/> <input type="text" value="3"/>	<input type="text" value="0"/> <input type="text" value="0"/>	

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

ZONE TYPE RESTORE ENABLES

*79 ZONE TYPES 1-8 All enabled

<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
1	2	3	4	5	6	7	8

*80 ZONE TYPES 9 & 10 All enabled

<input type="text" value="1"/>	<input type="text" value="1"/>
9	10

SYSTEM NON ALARM CODES

*81 First Digit	*82 Second Digit	
Close <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	Second digit of each
Open <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	code applies only to 4+2
Low Battery <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	or expanded formats
Low Bat Res. <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	(fields *52 & *53)
AC Loss <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
AC Restore <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
Test <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
Power <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
Cancel <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	
Prog. Tamper <input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	

COMMUNICATION DEFAULTS for ADEMCO EXPRESS FORMAT (*94*81)

*45	PRIMARY FORMAT	<div>3</div>	Ademco Express	*51	DUAL REPORTING	<div>0</div>	no				
*46	LOW SPEED FORMAT (Primary)	<div>0</div>		*52	STANDARD/EXPANDED REPORT FOR PRIMARY						
*47	SECONDARY FORMAT	<div>3</div>	Ademco Express		<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	standard
*48	LOW SPEED FORMAT (Sec.)	<div>0</div>			Alarm	Rstr	Bypass	Trbl	Opn/Cls	Low Bat	
*49	CHECKSUM VERIFICATION	<div>0</div>	<div>0</div>	*53	STANDARD/EXPANDED REPORT FOR SECONDARY						
	No checksum		Primary Secondary		<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	standard
*50	SESCO/RADIONICS SELECT	<div>0</div>	Radionics		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	<div>1 0</div>	<div>0 1</div>	9	<div>1 0</div>	<div>0 9</div>	<div>1 4</div> Alarm Rst.	17	<div>0 1</div>	<div>0 7</div>	25	<div>0 2</div>	<div>0 5</div>	<div>1 4</div> Alarm Rst.
2	<div>1 0</div>	<div>0 2</div>	10	<div>0 1</div>	<div>1 0</div>	<div>0 0</div> Trouble	18	<div>0 1</div>	<div>0 8</div>	26	<div>0 2</div>	<div>0 6</div>	<div>0 0</div> Trouble
3	<div>1 0</div>	<div>0 3</div>	11	<div>0 1</div>	<div>0 1</div>	<div>0 0</div> Trble Rst.	19	<div>0 1</div>	<div>0 9</div>	27	<div>0 2</div>	<div>0 7</div>	<div>0 0</div> Trble Rst.
4	<div>1 0</div>	<div>0 4</div>	12	<div>0 1</div>	<div>0 2</div>	<div>0 0</div> Bypass	20	<div>0 2</div>	<div>1 0</div>	28	<div>0 2</div>	<div>0 8</div>	<div>0 0</div> Bypass
5	<div>1 0</div>	<div>0 5</div>	13	<div>0 1</div>	<div>0 3</div>	<div>0 0</div> Bypss Rst.	21	<div>0 2</div>	<div>0 1</div>	29	<div>0 2</div>	<div>0 9</div>	<div>0 0</div> Bypss Rst.
6	<div>1 0</div>	<div>0 6</div>	14	<div>0 1</div>	<div>0 4</div>		22	<div>0 2</div>	<div>0 2</div>	30	<div>0 3</div>	<div>1 0</div>	
7	<div>1 0</div>	<div>0 7</div>	15	<div>0 1</div>	<div>0 5</div>		23	<div>0 2</div>	<div>0 3</div>	31	<div>0 3</div>	<div>0 1</div>	
8	<div>1 0</div>	<div>0 8</div>	16	<div>0 1</div>	<div>0 6</div>		24	<div>0 2</div>	<div>0 4</div>	32	<div>0 3</div>	<div>0 2</div>	

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	<div>0 3</div>	<div>0 3</div>	41	<div>0 4</div>	<div>0 1</div>	<div>1 4</div> Alarm Rst.	49	<div>0 4</div>	<div>0 0</div>	57	<div>0 5</div>	<div>0 0</div>	<div>1 4</div> Alarm Rst.
34	<div>0 3</div>	<div>0 4</div>	42	<div>0 4</div>	<div>0 2</div>	<div>0 0</div> Trouble	50	<div>0 5</div>	<div>0 0</div>	58	<div>0 5</div>	<div>0 0</div>	<div>0 0</div> Trouble
35	<div>0 3</div>	<div>0 5</div>	43	<div>0 4</div>	<div>0 3</div>	<div>0 0</div> Trble Rst.	51	<div>0 5</div>	<div>0 0</div>	59	<div>0 5</div>	<div>0 0</div>	<div>0 0</div> Trble Rst.
36	<div>0 3</div>	<div>0 6</div>	44	<div>0 4</div>	<div>0 4</div>	<div>0 0</div> Bypass	52	<div>0 5</div>	<div>0 0</div>	60	<div>0 6</div>	<div>0 0</div>	<div>0 0</div> Bypass
37	<div>0 3</div>	<div>0 7</div>	45	<div>0 4</div>	<div>0 5</div>	<div>0 0</div> Bypss Rst.	53	<div>0 5</div>	<div>0 0</div>	61	<div>0 6</div>	<div>0 0</div>	<div>0 0</div> Bypss Rst.
38	<div>0 3</div>	<div>0 8</div>	46	<div>0 4</div>	<div>0 6</div>		54	<div>0 5</div>	<div>0 0</div>	62	<div>0 6</div>	<div>0 0</div>	
39	<div>0 3</div>	<div>0 9</div>	47	<div>0 4</div>	<div>0 7</div>		55	<div>0 5</div>	<div>0 0</div>	63	<div>0 6</div>	<div>0 0</div>	
40	<div>0 3</div>	<div>1 0</div>	48	<div>0 4</div>	<div>0 8</div>		56	<div>0 5</div>	<div>0 0</div>	64	<div>0 6</div>	<div>0 0</div>	

ALARM REPORT CODE & ID DIGITS FOR ZONES 81-87, 65-80, RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

*74 CODE	*75 ID	*76 CODE	*77 ID	*78	65	0 6	0 5	73	0 7	0 3	1 4	Alarm Rst.			
81	0 8	0 1	89	0 8	0 9	1 4	Alarm Rst.	66	0 6	0 6	74	0 7	0 4	0 0	Trouble
82	0 8	0 2	90	0 9	1 0	0 0	Trouble	67	0 6	0 7	75	0 7	0 5	0 0	Trble Rst.
83	0 8	0 3	91	0 9	0 1	0 0	Trble Rst.	68	0 6	0 8	76	0 7	0 6	0 0	Bypass
84	0 8	0 4	Dures	1 3	1 3	0 0	Bypass	69	0 6	0 9	77	0 7	0 7	0 0	Bypss Rst
85	0 8	0 5	97	0 9	0 7	0 0	Bypss Rst.	70	0 7	1 0	78	0 7	0 8		
86	0 8	0 6	95	0 9	0 5	(1 + *)		71	0 7	0 1	79	0 7	0 9		
87	0 8	0 7	96	0 9	0 6	(3 + #)		72	0 7	0 2	80	0 8	1 0		
88	0 8	0 8	99	0 9	0 9	(* + #)		SYSTEM NON ALARM CODES							

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

ZONE TYPE RESTORE ENABLES

*79	ZONE TYPES 1-8 All enabled	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	8
		1	2	3	4	5	6	7		
*80	ZONE TYPES 9 & 10 All enabled	<input type="text" value="1"/>	<input type="text" value="1"/>							
		9	10							

SYSTEM NON ALARM CODES

*81 First Digit	*82 Second Digit	
Close	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Open	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Low Battery	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Low Bat Res.	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
AC Loss	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
AC Restore	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Test	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Power	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Cancel	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Prog. Tamper	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>

COMMUNICATION DEFAULTS for ADEMCO HIGH SPEED FORMAT (*94*82)

*45	PRIMARY FORMAT	<div>2</div>	Ademco High Speed	*51	DUAL REPORTING	<div>0</div>	no				
*46	LOW SPEED FORMAT (Primary)	<div>0</div>		*52	STANDARD/EXPANDED REPORT FOR PRIMARY						
*47	SECONDARY FORMAT	<div>2</div>	Ademco High Speed		<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	standard
*48	LOW SPEED FORMAT (Sec.)	<div>0</div>			Alarm	Rstr	Bypass	Trbl	Opn/Cls	Low Bat	
*49	CHECKSUM VERIFICATION	<div>0</div>	<div>0</div>	*53	STANDARD/EXPANDED REPORT FOR SECONDARY						
	No checksum		Primary Secondary		<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	<div>0</div>	standard
*50	SESCO/RADIONICS SELECT	<div>0</div>	Radionics		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	<div>0 1</div>	<div>0 0</div>	9	<div>0 3</div>	<div>0 0</div>	<div>0 1</div> Alarm Rst.	17	<div>0 4</div>	<div>0 0</div>	25	<div>0 4</div>	<div>0 0</div>	<div>0 1</div> Alarm Rst.
2	<div>0 2</div>	<div>0 0</div>	10	<div>0 3</div>	<div>0 0</div>	<div>0 0</div> Trouble	18	<div>0 4</div>	<div>0 0</div>	26	<div>0 4</div>	<div>0 0</div>	<div>0 0</div> Trouble
3	<div>0 2</div>	<div>0 0</div>	11	<div>0 3</div>	<div>0 0</div>	<div>0 0</div> Trble Rst.	19	<div>0 4</div>	<div>0 0</div>	27	<div>0 4</div>	<div>0 0</div>	<div>0 0</div> Trble Rst.
4	<div>0 2</div>	<div>0 0</div>	12	<div>0 3</div>	<div>0 0</div>	<div>0 0</div> Bypass	20	<div>0 4</div>	<div>0 0</div>	28	<div>0 4</div>	<div>0 0</div>	<div>0 0</div> Bypass
5	<div>0 2</div>	<div>0 0</div>	13	<div>0 3</div>	<div>0 0</div>	<div>0 0</div> Bypss Rst.	21	<div>0 4</div>	<div>0 0</div>	29	<div>0 4</div>	<div>0 0</div>	<div>0 0</div> Bypss Rst.
6	<div>0 2</div>	<div>0 0</div>	14	<div>0 3</div>	<div>0 0</div>		22	<div>0 4</div>	<div>0 0</div>	30	<div>0 4</div>	<div>0 0</div>	
7	<div>0 2</div>	<div>0 0</div>	15	<div>0 3</div>	<div>0 0</div>		23	<div>0 4</div>	<div>0 0</div>	31	<div>0 4</div>	<div>0 0</div>	
8	<div>0 2</div>	<div>0 0</div>	16	<div>0 3</div>	<div>0 0</div>		24	<div>0 4</div>	<div>0 0</div>	32	<div>0 5</div>	<div>0 0</div>	

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	<div>0 5</div>	<div>0 0</div>	41	<div>0 5</div>	<div>0 0</div>	<div>0 1</div> Alarm Rst.	49	<div>0 1</div>	<div>0 0</div>	57	<div>0 6</div>	<div>0 0</div>	<div>0 1</div> Alarm Rst.
34	<div>0 5</div>	<div>0 0</div>	42	<div>0 5</div>	<div>0 0</div>	<div>0 0</div> Trouble	50	<div>0 1</div>	<div>0 0</div>	58	<div>0 6</div>	<div>0 0</div>	<div>0 0</div> Trouble
35	<div>0 5</div>	<div>0 0</div>	43	<div>0 5</div>	<div>0 0</div>	<div>0 0</div> Trble Rst.	51	<div>0 1</div>	<div>0 0</div>	59	<div>0 6</div>	<div>0 0</div>	<div>0 0</div> Trble Rst.
36	<div>0 5</div>	<div>0 0</div>	44	<div>0 5</div>	<div>0 0</div>	<div>0 0</div> Bypass	52	<div>0 1</div>	<div>0 0</div>	60	<div>0 6</div>	<div>0 0</div>	<div>0 0</div> Bypass
37	<div>0 5</div>	<div>0 0</div>	45	<div>0 5</div>	<div>0 0</div>	<div>0 0</div> Bypss Rst.	53	<div>0 1</div>	<div>0 0</div>	61	<div>0 6</div>	<div>0 0</div>	<div>0 0</div> Bypss Rst.
38	<div>0 5</div>	<div>0 0</div>	46	<div>0 5</div>	<div>0 0</div>		54	<div>0 1</div>	<div>0 0</div>	62	<div>0 9</div>	<div>0 0</div>	
39	<div>0 5</div>	<div>0 0</div>	47	<div>0 5</div>	<div>0 0</div>		55	<div>0 1</div>	<div>0 0</div>	63	<div>0 9</div>	<div>0 0</div>	
40	<div>0 5</div>	<div>0 0</div>	48	<div>0 1</div>	<div>0 0</div>		56	<div>0 6</div>	<div>0 0</div>	64	<div>0 6</div>	<div>0 0</div>	

ALARM REPORT CODE & ID DIGITS FOR ZONES 81-87, 65-80, RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

*74 CODE	*75 ID	*76 CODE	*77 ID	*78	65	1 4	0 0	73	1 5	0 0	0 1	Alarm Rst.			
81	1 3	0 0	89	0 7	0 0	0 1	Alarm Rst.	66	1 4	0 0	74	1 5	0 0	0 0	Trouble
82	1 3	0 0	90	0 8	0 0	0 0	Trouble	67	1 4	0 0	75	1 5	0 0	0 0	Trble Rst.
83	1 3	0 0	91	0 8	0 0	0 0	Trble Rst.	68	1 4	0 0	76	1 5	0 0	0 0	Bypass
84	1 3	0 0	Dures	0 1	0 0	0 0	Bypass	69	1 4	0 0	77	1 5	0 0	0 0	Bypss Rst
85	1 3	0 0	97	0 7	0 0	0 0	Bypss Rst.	70	1 4	0 0	78	1 5	0 0		
86	1 3	0 0	95	1 0	0 0	(1 + *)		71	1 4	0 0	79	1 5	0 0		
87	0 7	0 0	96	1 1	0 0	(3 + #)		72	1 4	0 0	80	1 5	0 0		
88	0 7	0 0	99	1 2	0 0	(* + #)		SYSTEM NON ALARM CODES							

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

ZONE TYPE RESTORE ENABLES

*79	ZONE TYPES 1-8 All enabled	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	8
		1	2	3	4	5	6	7		
*80	ZONE TYPES 9 & 10 All enabled	<input type="text" value="1"/>	<input type="text" value="1"/>							
		9	10							

SYSTEM NON ALARM CODES

*81 First Digit	*82 Second Digit	
Close	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Open	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Low Battery	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Low Bat Res.	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
AC Loss	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
AC Restore	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Test	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Power	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Cancel	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>
Prog. Tamper	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>

Second digit of each code applies only to 4+2 or expanded formats (fields *52 & *53)

COMMUNICATION DEFAULTS for ADEMCO's CONTACT ID FORMAT (*94*83)

*45	PRIMARY FORMAT	<input type="text" value="1"/>	Ademco Contact ID	*51	DUAL REPORTING	<input type="text" value="0"/>	no
*46	LOW SPEED FORMAT (Primary)	<input type="text" value="0"/>		*52	STANDARD/EXPANDED REPORT FOR PRIMARY	<input type="text" value="0"/>	<input type="text" value="0"/>
*47	SECONDARY FORMAT	<input type="text" value="1"/>	Ademco Contact ID			<input type="text" value="0"/>	<input type="text" value="0"/>
*48	LOW SPEED FORMAT (Sec.)	<input type="text" value="0"/>				<input type="text" value="0"/>	<input type="text" value="0"/>
*49	CHECKSUM VERIFICATION	<input type="text" value="0"/>	<input type="text" value="0"/>	No checksum		<input type="text" value="0"/>	<input type="text" value="0"/>
		Primary	Secondary			Alarm	Rstr
*50	SESCO/RADIONICS SELECT	<input type="text" value="0"/>	Radionics			Bypass	Trbl
						Opn/Cls	Low Bat
				*53	STANDARD/EXPANDED REPORT FOR SECONDARY	<input type="text" value="0"/>	<input type="text" value="0"/>
						<input type="text" value="0"/>	<input type="text" value="0"/>
						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	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	9	<input type="text" value="0 9"/>	<input type="text" value="0 0"/>	<input type="text" value="0 1"/>	Alarm Rst.	17	<input type="text" value="0 2"/>
						<input type="text" value="0 0"/>	Trouble	18	<input type="text" value="0 3"/>
2	<input type="text" value="0 2"/>	<input type="text" value="0 0"/>	10	<input type="text" value="1 0"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	Trble Rst.	19	<input type="text" value="0 4"/>
						<input type="text" value="0 0"/>	Bypass	20	<input type="text" value="0 5"/>
3	<input type="text" value="0 3"/>	<input type="text" value="0 0"/>	11	<input type="text" value="1 1"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	Bypss Rst.	21	<input type="text" value="0 6"/>
						<input type="text" value="0 0"/>		22	<input type="text" value="0 7"/>
4	<input type="text" value="0 4"/>	<input type="text" value="0 0"/>	12	<input type="text" value="1 2"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>		23	<input type="text" value="0 8"/>
						<input type="text" value="0 0"/>		24	<input type="text" value="0 9"/>
5	<input type="text" value="0 5"/>	<input type="text" value="0 0"/>	13	<input type="text" value="1 3"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
6	<input type="text" value="0 6"/>	<input type="text" value="0 0"/>	14	<input type="text" value="1 4"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
7	<input type="text" value="0 7"/>	<input type="text" value="0 0"/>	15	<input type="text" value="1 5"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
8	<input type="text" value="0 8"/>	<input type="text" value="0 0"/>	16	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>

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	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	41	<input type="text" value="1 1"/>	<input type="text" value="0 0"/>	<input type="text" value="0 1"/>	Alarm Rst.	49	<input type="text" value="0 4"/>
						<input type="text" value="0 0"/>	Trouble	50	<input type="text" value="0 5"/>
34	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	42	<input type="text" value="1 2"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	Trble Rst.	51	<input type="text" value="0 6"/>
						<input type="text" value="0 0"/>	Bypass	52	<input type="text" value="0 7"/>
35	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	43	<input type="text" value="1 3"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	Bypss Rst.	53	<input type="text" value="0 8"/>
						<input type="text" value="0 0"/>		54	<input type="text" value="0 9"/>
36	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	44	<input type="text" value="1 4"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>		55	<input type="text" value="1 0"/>
						<input type="text" value="0 0"/>		56	<input type="text" value="1 1"/>
37	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	45	<input type="text" value="1 5"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
38	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	46	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
39	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	47	<input type="text" value="0 2"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
40	<input type="text" value="1 0"/>	<input type="text" value="0 0"/>	48	<input type="text" value="0 3"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>			<input type="text" value="0 0"/>

ALARM REPORT CODE & ID DIGITS FOR ZONES 81-87, 65-80, RF RCVRs & PANICS, & THEIR SUPV. & RESTORE CODES

*74 CODE	*75 ID	*76 CODE	*77 ID	*78	1*35 CODE	1*36 ID	1*37 CODE	1*38 ID	1*39
81	<input type="text" value="0 6"/>	<input type="text" value="0 0"/>	89	<input type="text" value="1 4"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	73	<input type="text" value="1 3"/>	<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>	74	<input type="text" value="1 4"/>	<input type="text" value="0 0"/>
82	<input type="text" value="0 7"/>	<input type="text" value="0 0"/>	90	<input type="text" value="1 5"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	75	<input type="text" value="1 5"/>	<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>	76	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>
83	<input type="text" value="0 8"/>	<input type="text" value="0 0"/>	91	<input type="text" value="0 1"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	77	<input type="text" value="0 2"/>	<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>	78	<input type="text" value="0 3"/>	<input type="text" value="0 0"/>
84	<input type="text" value="0 9"/>	<input type="text" value="0 0"/>	Dures	<input type="text" value="0 2"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>	79	<input type="text" value="0 4"/>	<input type="text" value="0 0"/>
						<input type="text" value="0 0"/>	80	<input type="text" value="0 5"/>	<input type="text" value="0 0"/>
85	<input type="text" value="1 0"/>	<input type="text" value="0 0"/>	97	<input type="text" value="0 3"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			
						<input type="text" value="0 0"/>			
86	<input type="text" value="1 1"/>	<input type="text" value="0 0"/>	95	<input type="text" value="0 4"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			
						<input type="text" value="0 0"/>			
87	<input type="text" value="1 2"/>	<input type="text" value="0 0"/>	96	<input type="text" value="0 5"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			
						<input type="text" value="0 0"/>			
88	<input type="text" value="1 3"/>	<input type="text" value="0 0"/>	99	<input type="text" value="0 6"/>	<input type="text" value="0 0"/>	<input type="text" value="0 0"/>			
						<input type="text" value="0 0"/>			

NOTES: 97= Poll Loop Short; 88 & 90 = RCVR not receiving transmitter signals. 89 & 91 = RCVR not responding, bad conn. to panel.

ZONE TYPE RESTORE ENABLES

*79 ZONE TYPES 1-8 All enabled

<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
1	2	3	4	5	6	7	8

*80 ZONE TYPES 9 & 10 All enabled

<input type="text" value="1"/>	<input type="text" value="1"/>
9	10

SYSTEM NON ALARM CODES

*81 First Digit	*82 Second Digit	
Close	<input type="text" value="0 0"/>	Second digit of each
Open	<input type="text" value="0 0"/>	code applies only to 4+2
Low Battery	<input type="text" value="0 0"/>	or expanded formats
Low Bat Res.	<input type="text" value="0 0"/>	(fields *52 & *53)
AC Loss	<input type="text" value="0 0"/>	
AC Restore	<input type="text" value="0 0"/>	
Test	<input type="text" value="0 0"/>	
Power	<input type="text" value="0 0"/>	
Cancel	<input type="text" value="0 0"/>	
Prog. Tamper	<input type="text" value="0 0"/>	

Section 22: DOWNLOADING PRIMER

(Remote Downloading is not a UL Listed feature)

This section provides the following information:

- General information about downloading
- Getting on-line with a control panel
- Advisories
- Access security
- Connecting the 4100SM module for direct wire downloading

General Information

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 ADEMCO's VLINK[®] downloading software. To communicate with the control panel, the following is required:

1. An IBM PC compatible 286, 386, or 486 computer with at least 1MB RAM, a hard disk with 12MB available disk space, running MS DOS 3.1 or higher operating system.
2. A HAYES 1200 SMARTMODEM (external: level 1.2 or higher; internal: level 1.1 or higher), or a Hayes Optima 24 + Fax 96. *Other brands are not compatible, even if claimed to be 100% compatible.*



Internal modems must have 4 position DIP switch. Modems with 6 position DIP switch will not work.

3. Alternately, you may use a 4100SM interface module to "direct wire" the control panel to your computer at the site (see Figure .
4. V-LINK[®] DOWNLOADING software, from ADEMCO. This software is available on both 3-1/2" and 5-1/4" diskettes, and includes a complete User's Manual.

Getting On-Line with a Control Panel


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".

	<ol style="list-style-type: none"> 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.
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On-Line Control Functions

The following functions can be performed while on-line with a control panel:

- 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
- 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
- Set the Real-Time clock.

Access Security

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. Additionally, all account files are encrypted to prevent them from being opened on another installer's VLink® downloading software package.
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.

NOTES:

1. Each time the Control panel is accessed successfully, a PROGRAM TAMPER report (*81) is sent to central station, if programmed.
2. When downloading, the keypad displays "MODEM COMM."
3. Whenever a download or a save is done, an automatic time stamp is done, 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.

Connecting a 4100SM Module for Direct Wire Downloading

The Control can be downloaded without using a modem or telephone line by using VLink® 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.



The connections between the Control and the 4100SM are different than those shown in the 4100SM Installation Instructions. See the 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 (see the *Summary of Connections* diagram on the inside back cover of this manual), is intended to be interfaced to either a local serial printer (see *EVENT LOG PRINTER 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.**

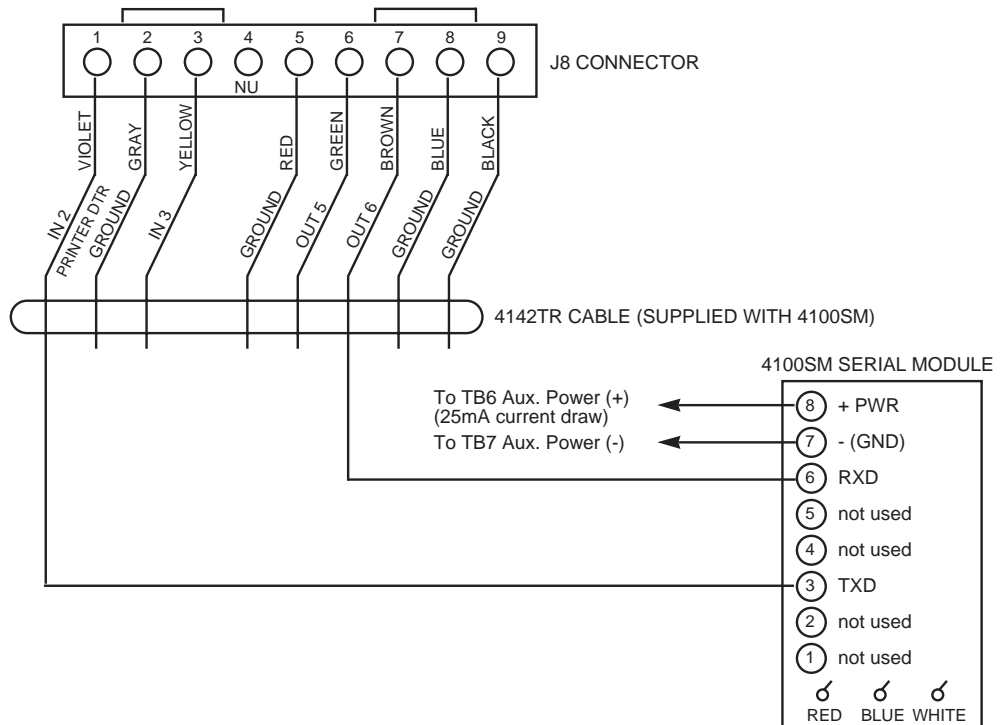


Figure 30: Direct Wire Downloading Connections

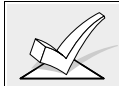
Section 23: SETTING THE REAL-TIME CLOCK

This section provides the following information:

- General information about the real-time clock
- Setting the time and date

General Information

This system provides a real-time clock, which must be set in order for the system's event log to keep track of events by time and date. It must also be set in order to execute scheduling programs (time-driven events).



Use a 5137AD or 6139 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.

Setting 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.

Section 24: SECURITY ACCESS CODES

This section provides the following information:

- General information about security access codes
- Definition of user authority levels
- How to add a user access code
- How to change a user access code
- How to delete a user access code

General Information

This system allows a total of 75 security access codes to be allocated, each identified by a user ID number.

Note that regardless of the number of partitions each code has access to, it occupies only one user slot in the system. If a particular code is not used in all partitions, that user ID number cannot be used again.

The Quick Arm feature can also be programmed (partition-specific program field *29), which allows the [#] key to be pressed instead of entering the security code when arming the system. The security code must always be entered to disarm the system.



User #2 must be programmed for the Quick Arm feature to function.

User Codes & Levels Of Authority

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.

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

Level 0: Installer (User 1)

- Programmed in field *00 (default=4-1-4-0). Installer open/close reporting is selected in field *39.
- Can perform all system functions (arm, disarm, bypass, etc.), but **cannot disarm** if armed by another code (or by Quick Arm).
- Can add, delete, or change all other authority level codes, and can select open/close reports for any user.
- Is the only code that can enter program mode, but even this can be prevented by exiting program mode using *98. (The only way to access Programming mode if this done is by powering down the system, powering up again, and then pressing both the * and # keys at the same time within 30 seconds of power up.)
- Must program at least one master code during initial installation. Master codes are codes intended for use by the primary user(s) of the system.

Open/Close Reporting Note: When adding a user, the system will only prompt for Open/Close reporting 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.

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. In order for Quick Arm reports to be sent for all partitions, User #02 must have authority and Open/Close enabled for all partitions. If a code with access to all partitions is not desired, it is suggested that user #02 be assigned authority level 5 in all partitions, and that the code be kept secret. Authority level 5 cannot disarm the system unless armed by that user.

Level 1: Master Codes

- Can perform all normal system functions
- Can be used to assign up to 73 lower level codes, which can be used by other users of the system.
- Cannot assign anybody a level of 0 or 1.
- May change his own code.
- 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.

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).

Levels 3-5: Operator Codes

- 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

- Sends a silent alarm to a central monitoring station if the user is being forced to disarm (or arm) the system under threat (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).
- Assigned on a partition by partition basis and can be any code or codes desired.
- Will disarm (or arm) the system, 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.

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.



Ademco Contact ID format is capable of reporting Users 01-75 uniquely. If any other report format is used, only user numbers #1 - #15 can uniquely report to the central station. Users #16 - #75 will report as User #15.

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 same 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 3						
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 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.

To ADD a Master , Manager or Operator Code



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 # (02-75) + 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)

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 for arming/disarming functions, and is not assigned to a user, this prompt will appear. Press 0 (NO) or 1 (YES).

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** buttons of the transmitter to this user number.

Multi-Access ?
0 = NO , 1 = YES

Press 0 (NO) if the user is to have access to this partition only. Press 1 (YES) if the user is to have access to more than one partition. 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).
- 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 A0 * 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 (02-75) + 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 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.

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 (02-75) + 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).

OK TO DELETE 03? 0=NO 1=YES

The system will prompt to confirm that you want to delete this user. 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 by a user with a higher authority level. A user cannot delete himself.



A user code can only be deleted from the partition through which it was entered. If trying to delete from another partition, the message "User [XX] Not Deleted" will be displayed.

To EXIT The User Edit Mode

Press either [*] or [#], or don't press any key for 10 seconds.

Section 25: KEYPAD FUNCTIONS

This section provides the following information:

- General information about keypad usage
- Basic keypad functions
- Global arming
- Access control
- Delaying closing time
- Executing the "Go To" command
- Viewing:
 - A user's capabilities
 - Zone descriptors
 - Downloaded messages
 - Built-in user's guide
- Speed key macro commands
- Executing #70 Manual Relay Activation mode

General Information

The keypad allows the user to arm and disarm the system, and perform other system functions, such as bypassing zones, viewing messages from the central station, and displaying zone descriptors. Zone and system conditions (alarm, trouble, bypass) are shown 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.

Arming Functions

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

Display Faulted Zones	Before arming, the system must be in the READY condition (all zones must be intact). If the "NOT READY" message appears, press the READY <input type="checkbox"/> * key to display faulted zones.
Arming Away	Enter code + <input type="checkbox"/> 2 (AWAY).
Arming Stay	Enter code + <input type="checkbox"/> 3 (STAY). (all zones designated as zone types 4 and 10 will be automatically bypassed)
Arming Instant	Enter code + <input type="checkbox"/> 7 (INSTANT) (same as STAY without entry delay).
Arming Maximum	Enter code + <input type="checkbox"/> 4 (MAXIMUM) (same as AWAY without entry delay).
Disarming	Enter code + <input type="checkbox"/> 1 (OFF).
Bypassing Zones	Enter code + <input type="checkbox"/> 6 (BYPASS) + zone number. To automatically bypass all faulted zones, use "Quick Bypass" method: Enter code + BYPASS + <input type="checkbox"/> #.
Chime Mode	Enter code + <input type="checkbox"/> 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.).



User #02 must be programmed into the system in order for the Quick Arm feature to work.

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

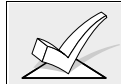
Global Arming

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



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 + . The relay will pulse for 2 seconds.

Delaying Closing Time

If Open/Close schedules are used, end users can manually delay closing time by extending the closing window by 1 or 2 hours. This is useful if a user must stay on the premises later than usual. The user must have authority level of manager or higher.

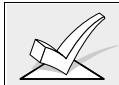
To extend the closing window, enter user code + **#+82**.

Closing Delay ?
Hit 0-2 Hours

Enter the number hours, **1** or **2**, by which the end of the closing window should be extended. 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.

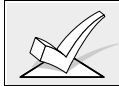
The system will send an "Access Schedule Change" message to the central station when the closing window is extended (if programmed in fields 2*13 and 2*14.



An extension of the closing window cannot be reduced once it is set. However, a 1 hour delay can be increased to 2 hours. 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**.



You must program data field 2*18 to enable the GOTO function. This is a partition-specific field that must be set for each partition the user wants to access from another partition's keypad

Viewing Capabilities Of A User

The keypad will display the partitions that a 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 as follows:

Part. 1 A0 * WHSE
User 01 Auth.=1G.

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 Zone 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 before all descriptors have been displayed, enter the security code and press the OFF key.

Viewing Downloaded Messages

Users may occasionally receive a message from their installation company displayed on an alpha keypad. 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.

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 only on an alpha keypad 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.

Panic Keys

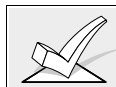
There are three panic key pairs (shown below) that, if programmed, can be used to manually initiate alarms and send a report to the central station. Each key pair can be individually programmed for 24 Hour Silent, Audible or Auxiliary (Emergency) responses, as well as Fire. The panic function is activated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

*	1	95
#	3	96
*	#	99

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



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

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. Each partition may have its own macro. 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 :

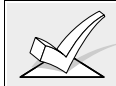
*2 D 61011 D 4 D *1 D D

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.



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).

Manual Relay Activation 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 VIP 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 VIP 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 * 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.

Section 26: TESTING THE SYSTEM

This section provides the following information:

- Using Test Mode
- Turning the system over to the user
- Trouble conditions

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 T 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 for the partition being tested. Also, the external sounder (if used) will not be activated.

NOTE 4: Test mode is active only for the partition at which Test mode is entered. Other partitions are still operative and will cause the external sounder and communicator to activate if an alarm condition occurs.

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 on 5700 series units, move jumper inside 5800 series units to "Test" position (put back to "Normal" position when test is complete)).

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 (OFF) key.

Armed System Test



1. A message will be sent to the central station during the following tests. Notify the central station that a test will be in progress.
2. A display of "COMM. FAILURE" (FC on fixed work keypads) 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, but a report will be sent to the central station, if programmed to do so.
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.

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). Zone trouble may be caused by one of the following conditions:
 - A hardwired fire zone is open (broken wire)
 - A Day/Night zone (Zone Type 5) is faulted
 - A polling loop zone is not seen by the control panel
 - A polling loop zone has been tampered (cover removed on a 4190)
 - A wireless zone has not checked in during the time programmed in field 1*31
 - A 5800 series transmitter has been tampered (cover removed)
- "CHECK" accompanied by a numeric display of "87"
Indicates the 4285 VIP Module is not communicating with the control panel.
- "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 wireless receiver problem. These faults indicate the following:
 - 88: The 2nd receiver has not heard from any supervised RF transmitters for the period of time programmed in field 1*30.
 - 89: The 2nd receiver is not communicating with the control panel.
 - 90: The 1st receiver has not heard from any supervised RF transmitters for the period of time programmed in field 1*30.
 - 91: The 1st receiver is not communicating with the control panel.



If the problem has been corrected, key an OFF sequence (Security Code plus OFF) twice to clear the display.

Other System Messages

- "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.
- "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 wireless zones programmed than the wireless receiver can support. If this is not corrected, none of the zones in the system will be protected. If additional wireless 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.

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 VISTA 50P; supplied with VISTA 50PUL) 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 VISTA 50PUL.
2. All zones must be configured for EOLR supervision (*41=0). 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 VISTA 50PUL 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 VISTA 50PUL 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 VISTA-50PUL 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 VISTA-50PUL burglary/audible panic alarm panic alarm trigger.

For Grade AA Service:

- You must use a 7920SE Long Range Radio.
- Connect the 7920SE to the VISTA-50PUL 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 VISTA-50PUL'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 VISTA-50PUL'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) AND UL RESIDENTIAL FIRE 24 HOUR BATTERY BACKUP REQUIREMENTS.

The California State Fire Marshal and UL have regulations which require that all residential fire alarm control panels must be provided with backup battery which has sufficient capacity to operate the panel and its attached peripherals devices for 24 hours in the intended standby condition, followed by at least 4 minutes in the intended fire alarm signaling condition.

The VISTA 50P 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 300mA (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'empêche pas la dégradation du service dans certaines situations. Actuellement, les entreprises de télécommunications ne permettent pas que l'on raccorde leur matériel aux prises d'abonnés, sauf dans les cas précis prévus par les tarifs particuliers de ces entreprises.

Les réparations du matériel homologué doivent être effectuées par 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.

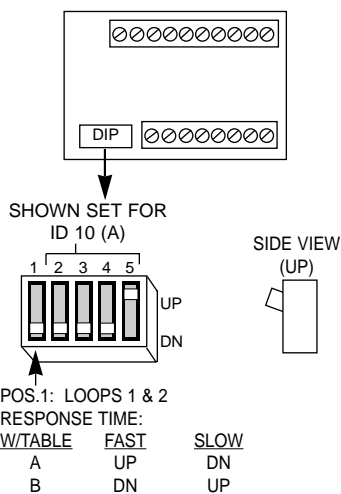
Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

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.

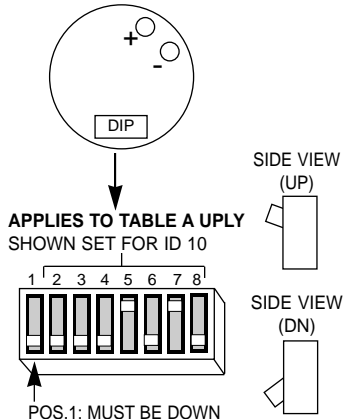
DIP SWITCH TABLES

DIP SWITCH TABLES FOR ADDRESSABLE POLLING LOOP DEVICES

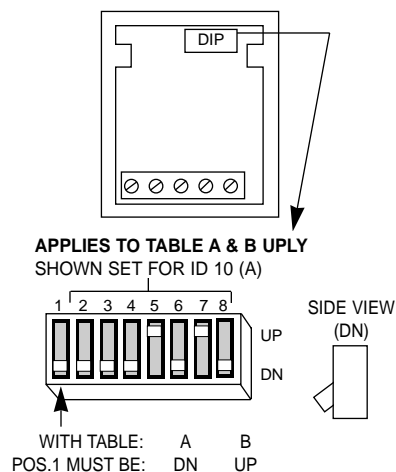
4208 ZONE EXPANDER



4192D/4192SDT/4192CP SMOKE DETECTORS



4190WH ZONE EXPANDER



THIS TABLE FOR DIPS
WITH WORD "DN"
("—" = DN)

DEVICE ID	DIP SWITCH POSITION			
	2	3	4	5
10-16	—	—	—	UP
17-24	—	—	UP	—
25-32	—	—	UP	UP
33-40	—	UP	—	—
41-48	—	UP	—	UP
49-56	—	UP	UP	—
57-64	—	UP	UP	UP

THIS TABLE FOR DIPS
WITH WORD "UP"
("—" = DN)

DEVICE ID	DIP SWITCH POSITION			
	2	3	4	5
10-16	UP	UP	UP	—
17-24	UP	UP	—	UP
25-32	UP	UP	—	—
33-40	UP	—	UP	UP
41-48	UP	—	UP	—
49-56	UP	—	—	UP
57-64	UP	—	—	—

THIS TABLE FOR DIPS WITH
WORD "DN"
("—" = DN)

DEVICE ID	DIP SWITCH POSITION							
	2	3	4	5	6	7	8	
10	—	—	—	UP	—	UP	—	
11	—	—	—	UP	—	UP	UP	
12	—	—	—	UP	UP	—	—	
13	—	—	—	UP	UP	—	UP	
14	—	—	—	UP	UP	UP	—	
15	—	—	—	UP	UP	UP	UP	
16	—	—	—	UP	—	—	—	
17	—	—	—	UP	—	—	UP	
18	—	—	—	UP	—	—	UP	
19	—	—	—	UP	—	—	UP	
20	—	—	—	UP	UP	—	—	
21	—	—	—	UP	UP	—	UP	
22	—	—	—	UP	UP	UP	—	
23	—	—	—	UP	UP	UP	UP	
24	—	—	—	UP	UP	—	—	
25	—	—	—	UP	UP	—	UP	
26	—	—	—	UP	UP	UP	—	
27	—	—	—	UP	UP	UP	UP	
28	—	—	—	UP	UP	UP	—	
29	—	—	—	UP	UP	UP	UP	
30	—	—	—	UP	UP	UP	UP	
31	—	—	—	UP	UP	UP	UP	
32	—	UP	—	—	—	—	—	
33	—	UP	—	—	—	—	UP	
34	—	UP	—	—	—	UP	—	
35	—	UP	—	—	—	UP	UP	
36	—	UP	—	—	UP	—	—	
37	—	UP	—	—	UP	—	UP	
38	—	UP	—	—	UP	UP	—	
39	—	UP	—	—	UP	UP	—	
40	—	UP	—	UP	—	—	—	
41	—	UP	—	UP	—	—	UP	
42	—	UP	—	UP	—	UP	—	
43	—	UP	—	UP	—	UP	UP	
44	—	UP	—	UP	UP	—	—	
45	—	UP	—	UP	UP	—	UP	
46	—	UP	—	UP	UP	UP	—	
47	—	UP	—	UP	UP	UP	UP	
48	—	UP	—	UP	—	—	—	
49	—	UP	—	UP	—	—	UP	
50	—	UP	—	UP	—	UP	—	
51	—	UP	—	UP	—	UP	UP	
52	—	UP	—	UP	UP	—	—	
53	—	UP	—	UP	UP	—	UP	
54	—	UP	—	UP	UP	UP	—	
55	—	UP	—	UP	UP	UP	UP	
56	—	UP	UP	UP	—	—	—	
57	—	UP	UP	UP	—	—	UP	
58	—	UP	UP	UP	—	UP	—	
59	—	UP	UP	UP	UP	UP	UP	
60	—	UP	UP	UP	UP	—	—	
61	—	UP	UP	UP	UP	—	UP	
62	—	UP	UP	UP	UP	UP	—	
63	—	UP	UP	UP	UP	UP	UP	
64	UP	—	—	—	—	—	—	
65	UP	—	—	—	—	—	UP	
66	UP	—	—	—	—	UP	—	
67	UP	—	—	—	—	UP	UP	
68	UP	—	—	—	UP	—	—	
69	UP	—	—	—	UP	—	UP	
70	UP	—	—	—	UP	UP	—	
71	UP	—	—	—	UP	UP	UP	
72	UP	—	—	—	UP	—	—	
73	UP	—	—	—	UP	—	UP	
74	UP	—	—	UP	—	—	—	
75	UP	—	—	UP	UP	—	—	
76	UP	—	—	UP	UP	UP	—	
77	UP	—	—	UP	UP	UP	UP	
78	UP	—	—	UP	UP	UP	—	
79	UP	—	—	UP	UP	UP	UP	
80	UP	—	UP	—	—	—	—	
81	UP	—	UP	—	—	—	UP	
82	UP	—	UP	—	—	UP	—	
83	UP	—	UP	—	UP	UP	UP	
84	UP	—	UP	—	UP	—	—	
85	UP	—	UP	—	UP	—	UP	
86	UP	—	UP	—	UP	UP	—	
87	UP	—	UP	—	UP	UP	—	
88	UP	—	UP	—	UP	UP	UP	
89	UP	—	UP	—	UP	UP	UP	
BIT VALUE:	64	32	16	8	4	2	1	

THIS TABLE FOR DIPS WITH
WORD "UP"
("—" = DN)

DEVICE ID	DIP SWITCH POSITION							
	2	3	4	5	6	7	8	
10	UP	UP	UP	—	UP	—	—	
11	UP	UP	UP	—	UP	—	—	
12	UP	UP	UP	—	—	UP	UP	
13	UP	UP	UP	—	—	UP	—	
14	UP	UP	UP	—	—	—	UP	
15	UP	UP	UP	—	—	—	UP	
16	UP	UP	—	UP	UP	UP	UP	
17	UP	UP	—	UP	UP	UP	UP	
18	UP	UP	—	UP	UP	—	UP	
19	UP	UP	—	UP	UP	—	—	
20	UP	UP	—	—	UP	—	UP	
21	UP	UP	—	UP	—	UP	—	
22	UP	UP	—	UP	—	—	UP	
23	UP	UP	—	UP	—	—	—	
24	UP	UP	—	—	UP	UP	UP	
25	UP	UP	—	—	UP	UP	—	
26	UP	UP	—	—	UP	—	UP	
27	UP	UP	—	—	UP	—	UP	
28	UP	UP	—	—	—	UP	UP	
29	UP	UP	—	—	—	UP	UP	
30	UP	UP	—	—	—	—	UP	
31	UP	UP	—	—	—	—	—	
32	UP	—	UP	UP	UP	UP	UP	
33	UP	—	UP	UP	UP	UP	UP	
34	UP	—	UP	UP	UP	UP	—	
35	UP	—	UP	UP	UP	UP	—	
36	UP	—	UP	UP	—	UP	UP	
37	UP	—	UP	UP	—	UP	—	
38	UP	—	UP	UP	—	—	UP	
39	UP	—	UP	UP	—	—	UP	
40	UP	—	UP	—	UP	UP	UP	
41	UP	—	UP	—	UP	UP	UP	
42	UP	—	UP	—	UP	—	UP	
43	UP	—	UP	—	UP	—	—	
44	UP	—	UP	—	—	UP	UP	
45	UP	—	UP	—	—	UP	—	
46	UP	—	UP	—	—	—	UP	
47	UP	—	UP	—	—	—	—	
48	UP	—	—	UP	UP	UP	UP	
49	UP	—	—	UP	UP	UP	—	
50	UP	—	—	UP	UP	—	UP	
51	UP	—	—	UP	UP	—	—	
52	UP	—	—	UP	—	UP	UP	
53	UP	—	—	UP	—	UP	—	
54	UP	—	—	UP	—	—	UP	
55	UP	—	—	UP	—	—	—	
56	UP	—	—	—	UP	UP	UP	
57	UP	—	—	—	UP	UP	UP	
58	UP	—	—	—	UP	UP	UP	
59	UP	—	—	—	UP	—	UP	
60	UP	—	—	—	—	UP	UP	
61	UP	—	—	—	—	UP	—	
62	UP	—	—	—	—	—	UP	
63	UP	—	—	—	—	—	—	
64	—	UP	UP	UP	UP	UP	UP	
65	—	UP	UP	UP	UP	UP	—	
66	—	UP	UP	UP	UP	—	UP	
67	—	UP	UP	UP	UP	—	—	
68	—	UP	UP	UP	—	UP	UP	
69	—	UP	UP	UP	—	UP	—	
70	—	UP	UP	UP	—	—	UP	
71	—	UP	UP	UP	—	—	—	
72	—	UP	UP	—	UP	UP	UP	
73	—	UP	UP	—	UP	UP	—	
74	—	UP	UP	—	UP	—	UP	
75	—	UP	UP	—	—	UP	UP	
76	—	UP	UP	—	—	UP	—	
77	—	UP	UP	—	—	—	UP	
78	—	UP	UP	—	—	—	—	
79	—	UP	UP	—	—	—	—	
80	—	UP	—	UP	UP	UP	UP	
81	—	UP	—	UP	UP	UP	UP	
82	—	UP	—	UP	UP	UP	UP	
83	—	UP	—	UP	UP	—	UP	
84	—	UP	—	UP	—	UP	UP	
85	—	UP	—	UP	—	UP	—	
86	—	UP	—	UP	—	—	UP	
87	—	UP	—	UP	—	—	—	
88	—	UP	—	—	UP	UP	UP	
89	—	UP	—	—	UP	UP	—	
BIT VALUE:	64	32	16	8	4	2	1	

DIP SWITCH TABLES FOR POLLING LOOP DEVICES

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

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 "DN"

A

DEVICE ID	DIP SWITCH POSITION				
	1	2	3	4	5
10	—	UP	—	UP	—
11	—	UP	—	UP	UP
12	—	UP	UP	—	—
13	—	UP	UP	—	UP
14	—	UP	UP	UP	—
15	—	UP	UP	UP	UP
16	UP	—	—	—	—
17	UP	—	—	—	UP
18	UP	—	—	UP	—
19	UP	—	—	UP	UP
20	UP	—	UP	—	—
21	UP	—	UP	—	UP
22	UP	—	UP	UP	—
23	UP	—	UP	UP	UP
24	UP	UP	—	—	—
25	UP	UP	—	—	UP
26	UP	UP	—	UP	—
27	UP	UP	—	UP	UP
28	UP	UP	UP	—	—
29	UP	UP	UP	—	UP
30	UP	UP	UP	UP	—
31	UP	UP	UP	UP	UP

THIS TABLE FOR DIPS
WITH WORD "UP"

B

DEVICE ID	DIP SWITCH POSITION				
	1	2	3	4	5
10	UP	—	UP	—	UP
11	UP	—	UP	—	—
12	UP	—	—	UP	UP
13	UP	—	—	UP	—
14	UP	—	—	—	UP
15	UP	—	—	—	—
16	—	UP	UP	UP	UP
17	—	UP	UP	UP	—
18	—	UP	UP	—	UP
19	—	UP	UP	—	—
20	—	UP	—	UP	UP
21	—	UP	—	UP	—
22	—	UP	—	—	UP
23	—	UP	—	—	—
24	—	—	UP	UP	UP
25	—	—	UP	UP	—
26	—	—	UP	—	UP
27	—	—	UP	—	—
28	—	—	—	UP	UP
29	—	—	—	UP	—
30	—	—	—	—	UP
31	—	—	—	—	—

BIT
VALUE: 16 8 4 2 1

DEVICE ID	DIP SWITCH POSITION					
	1	2	3	4	5	6
10	UP	UP	—	UP	—	UP
11	UP	UP	—	UP	—	—
12	UP	UP	—	—	UP	UP
13	UP	UP	—	—	UP	—
14	UP	UP	—	—	—	UP
15	UP	UP	—	—	—	—
16	UP	—	UP	UP	UP	UP
17	UP	—	UP	UP	UP	—
18	UP	—	UP	UP	—	UP
19	UP	—	UP	UP	—	—
20	UP	—	UP	—	UP	UP
21	UP	—	UP	—	UP	—
22	UP	—	UP	—	—	UP
23	UP	—	UP	—	—	—
24	UP	—	—	UP	UP	UP
25	UP	—	—	UP	UP	—
26	UP	—	—	UP	—	UP
27	UP	—	—	UP	—	—
28	UP	—	—	—	UP	UP
29	UP	—	—	—	UP	—
30	UP	—	—	—	—	UP
31	UP	—	—	—	—	—
32	—	UP	UP	UP	UP	UP
33	—	UP	UP	UP	UP	—
34	—	UP	UP	UP	—	UP
35	—	UP	UP	UP	—	—
36	—	UP	UP	—	UP	UP
37	—	UP	UP	—	UP	—
38	—	UP	UP	—	—	UP
39	—	UP	UP	—	—	—
40	—	UP	—	UP	UP	UP
41	—	UP	—	UP	UP	—
42	—	UP	—	UP	—	UP
43	—	UP	—	UP	—	—
44	—	UP	—	—	UP	UP
45	—	UP	—	—	UP	—
46	—	UP	—	—	—	UP
47	—	UP	—	—	—	—
48	—	—	UP	UP	UP	UP
49	—	—	UP	UP	UP	—
50	—	—	UP	UP	—	UP
51	—	—	UP	UP	—	—
52	—	—	UP	—	UP	UP
53	—	—	UP	—	UP	—
54	—	—	UP	—	—	UP
55	—	—	—	UP	—	—
56	—	—	—	UP	UP	UP
57	—	—	—	UP	UP	—
58	—	—	—	UP	—	UP
59	—	—	—	UP	—	—
60	—	—	—	—	UP	UP
61	—	—	—	—	UP	—
62	—	—	—	—	—	UP
63	—	—	—	—	—	—

BIT
VALUE: 32 16 8 4 2 1

DEVICE ID	DIP SWITCH POSITION					
	1	2	3	4	5	6
10	—	—	UP	—	UP	—
11	—	—	UP	—	UP	UP
12	—	—	UP	UP	—	—
13	—	—	UP	UP	—	UP
14	—	—	UP	UP	UP	—
15	—	—	UP	UP	UP	UP
16	—	UP	—	—	—	—
17	—	UP	—	—	—	UP
18	—	UP	—	—	UP	—
19	—	UP	—	—	UP	UP
20	—	UP	—	UP	—	—
21	—	UP	—	UP	—	UP
22	—	UP	—	UP	UP	—
23	—	UP	—	UP	UP	UP
24	—	UP	UP	—	—	—
25	—	UP	UP	—	—	UP
26	—	UP	UP	—	UP	—
27	—	UP	UP	—	UP	UP
28	—	UP	UP	UP	—	—
29	—	UP	UP	UP	—	UP
30	—	UP	UP	UP	UP	—
31	—	UP	UP	UP	UP	UP
32	UP	—	—	—	—	—
33	UP	—	—	—	—	UP
34	UP	—	—	—	UP	—
35	UP	—	—	—	UP	UP
36	UP	—	—	UP	—	—
37	UP	—	—	UP	—	UP
38	UP	—	—	UP	UP	—
39	UP	—	—	UP	UP	UP
40	UP	—	UP	—	—	—
41	UP	—	UP	—	—	UP
42	UP	—	UP	—	UP	—
43	UP	—	UP	—	UP	UP
44	UP	—	UP	UP	—	—
45	UP	—	UP	UP	—	UP
46	UP	—	UP	UP	UP	—
47	UP	—	UP	UP	UP	UP
48	UP	UP	—	—	—	—
49	UP	UP	—	—	—	UP
50	UP	UP	—	—	UP	—
51	UP	UP	—	—	UP	UP
52	UP	UP	—	UP	—	—
53	UP	UP	—	UP	—	UP
54	UP	UP	—	UP	UP	—
55	UP	UP	—	UP	UP	UP
56	UP	UP	UP	—	—	—
57	UP	UP	UP	—	—	UP
58	UP	UP	UP	—	UP	—
59	UP	UP	UP	—	UP	UP
60	UP	UP	UP	UP	—	—
61	UP	UP	UP	UP	—	UP
62	UP	UP	UP	UP	UP	—
63	UP	UP	UP	UP	UP	UP

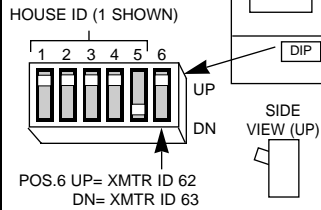
BIT
VALUE: 32 16 8 4 2 1

DIP SWITCH TABLES FOR 5700 RF SYSTEM WIRELESS DEVICES

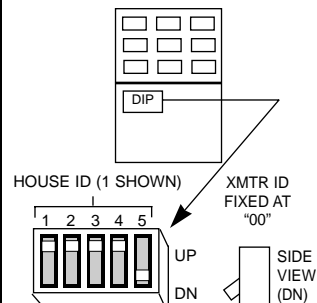
HOUSE ID SWITCH SETTING FOR ALL DEVICES EXCEPT 5716

DEVICE ID	DIP SWITCH POSITION				
1	2	3	4	5	
1	UP	UP	UP	UP	—
2	UP	UP	UP	—	UP
3	UP	UP	UP	—	—
4	UP	UP	—	UP	UP
5	UP	UP	—	UP	—
6	UP	UP	—	—	UP
7	UP	UP	—	—	—
8	UP	—	UP	UP	UP
9	UP	—	UP	UP	—
10	UP	—	UP	—	UP
11	UP	—	UP	—	—
12	UP	—	—	UP	UP
13	UP	—	—	UP	—
14	UP	—	—	—	UP
15	UP	—	—	—	—
16	—	UP	UP	UP	UP
17	—	UP	UP	UP	—
18	—	UP	UP	—	UP
19	—	UP	UP	—	—
20	—	UP	UP	UP	UP
21	—	UP	—	UP	—
22	—	UP	—	—	UP
23	—	UP	—	—	—
24	—	—	UP	UP	UP
25	—	—	UP	UP	—
26	—	—	UP	—	UP
27	—	—	UP	—	—
28	—	—	—	UP	UP
29	—	—	—	UP	—
30	—	—	—	—	UP
31	—	—	—	—	—
BIT VALUE:	16	8	4	2	1

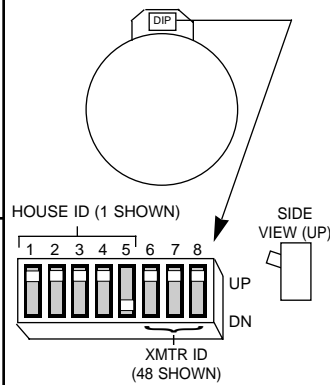
5701 PANIC TRANSMITTER



5727 KEYPAD

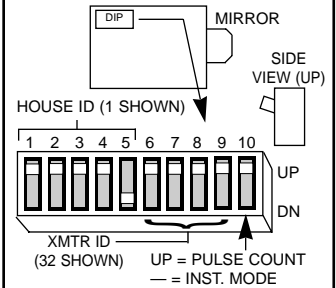


5706/5707 SMOKE DETECTOR/TRANSMITTER



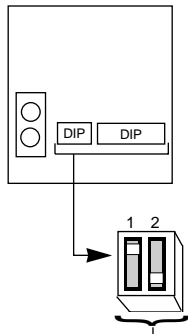
XMTR ID	DIP SWITCH POSITION		
	6	7	8
48	UP	UP	UP
49	UP	UP	—
50	UP	—	UP
51	UP	—	—
52	—	UP	UP
53	—	UP	—
54	—	—	UP
55	—	—	—

5775 PIR DETECTOR/TRANSMITTER



XMTR ID	DIP SWITCH POSITION			
	6	7	8	9
32	UP	UP	UP	UP
33	UP	UP	UP	—
34	UP	UP	—	UP
35	UP	UP	—	—
36	UP	—	UP	UP
37	UP	—	UP	—
38	UP	—	—	UP
39	UP	—	—	—
40	—	UP	UP	UP
41	—	UP	UP	—
42	—	UP	—	UP
43	—	UP	—	—
44	—	—	UP	UP
45	—	—	UP	—
46	—	—	—	UP
47	—	—	—	—

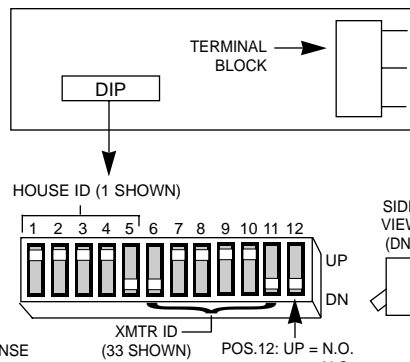
5715 UNIVERSAL TRANSMITTER



POS.1: UP = NORMAL RESPONSE
DN = FAST RESPONSE
POS. 2: UP = NO COVER TAMPER
DN = COVER TAMPER (use N.C. setting)

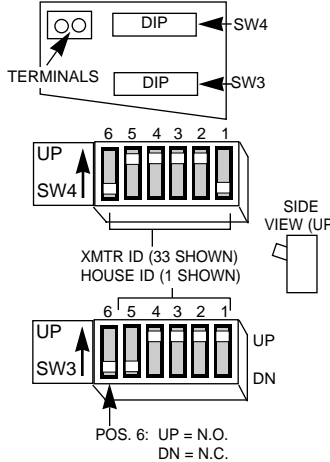
XMTR ID	DIP SWITCH POSITION					
	6	7	8	9	10	11
1	UP	UP	UP	UP	UP	—
2	UP	UP	UP	UP	—	UP
3	UP	UP	UP	UP	—	—
4	UP	UP	UP	—	UP	UP
5	UP	UP	UP	—	UP	—
6	UP	UP	UP	—	—	UP
7	UP	UP	UP	—	—	—
8	UP	UP	—	UP	UP	UP
9	UP	UP	—	UP	UP	—
10	UP	UP	—	UP	—	UP
11	UP	UP	—	—	UP	—
12	UP	UP	—	—	UP	UP
13	UP	UP	—	—	UP	—
14	UP	UP	—	—	—	UP
15	UP	UP	—	—	—	—
16	UP	—	UP	UP	UP	UP
17	UP	—	UP	UP	UP	—
18	UP	—	UP	UP	—	UP
19	UP	—	UP	UP	—	—
20	UP	—	UP	—	UP	UP
21	UP	—	UP	—	UP	—
22	UP	—	UP	—	—	UP
23	UP	—	UP	—	—	—
24	UP	—	—	UP	UP	UP
25	UP	—	—	UP	UP	—
26	UP	—	—	UP	—	UP
27	UP	—	—	UP	—	—
28	UP	—	—	—	UP	UP
29	UP	—	—	—	UP	—
30	UP	—	—	—	—	UP
31	UP	—	—	—	—	—
32	—	UP	UP	UP	UP	UP
BIT VALUE:	32	16	8	4	2	1

5711/5711WM DOOR/WINDOW TRANSMITTER



XMTR ID	DIP SWITCH POSITION					
	6	7	8	9	10	11
33	—	UP	UP	UP	UP	—
34	—	UP	UP	UP	—	UP
35	—	UP	UP	UP	—	—
36	—	UP	UP	—	UP	UP
37	—	UP	UP	—	UP	—
38	—	UP	UP	—	—	UP
39	—	UP	UP	—	—	—
40	—	UP	—	UP	UP	UP
41	—	UP	—	UP	UP	—
42	—	UP	—	UP	—	UP
43	—	UP	—	UP	—	—
44	—	UP	—	—	UP	UP
45	—	UP	—	—	UP	—
46	—	UP	—	—	—	UP
47	—	UP	—	—	—	—
48	—	—	UP	UP	UP	UP
49	—	—	UP	UP	UP	—
50	—	—	UP	UP	—	UP
51	—	—	UP	UP	—	—
52	—	—	UP	—	UP	UP
53	—	—	UP	—	UP	—
54	—	—	UP	—	—	UP
55	—	—	UP	—	—	—
56	—	—	—	UP	UP	UP
57	—	—	—	UP	UP	—
58	—	—	—	UP	—	UP
59	—	—	—	UP	—	—
60	—	—	—	—	UP	UP
61	—	—	—	—	UP	—
62	—	—	—	—	—	UP
63	—	—	—	—	—	—
BIT VALUE:	32	16	8	4	2	1

5716 DOOR/WINDOW TRANSMITTER



HOUSE ID	DIP SWITCH POSITION			
	5	4	3	2
1	UP	UP	UP	UP
2	UP	UP	UP	UP
3	UP	UP	UP	UP
4	UP	UP	UP	UP
5	UP	UP	UP	UP
6	UP	UP	UP	UP
7	UP	UP	UP	UP
8	UP	UP	UP	UP
9	UP	UP	UP	UP
10	UP	UP	UP	UP
11	UP	UP	UP	UP
12	UP	UP	UP	UP
13	UP	UP	UP	UP
14	UP	UP	UP	UP
15	UP	UP	UP	UP
16	UP	UP	UP	UP
17	UP	UP	UP	UP
18	UP	UP	UP	UP
19	UP	UP	UP	UP
20	UP	UP	UP	UP
21	UP	UP	UP	UP
22	UP	UP	UP	UP
23	UP	UP	UP	UP
24	UP	UP	UP	UP
25	UP	UP	UP	UP
26	UP	UP	UP	UP
27	UP	UP	UP	UP
28	UP	UP	UP	UP
29	UP	UP	UP	UP
30	UP	UP	UP	UP
31	UP	UP	UP	UP
BIT VALUE:	1	2	4	8

TRANSMITTER ID	DIP SWITCH POSITION					
	6	5	4	3	2	1
1	—	UP	UP	UP	UP	UP
2	—	UP	UP	UP	UP	UP
3	—	UP	UP	UP	UP	UP
4	UP	UP	—	UP	UP	UP
5	—	UP	—	UP	UP	UP
6	UP	—	—	UP	UP	UP
7	—	—	—	UP	UP	UP
8	UP	UP	UP	—	UP	UP
9	—	UP	UP	—	UP	UP
10	UP	—	UP	—	UP	UP
11	—	UP	—	—	UP	UP
12	UP	UP	—	—	UP	UP
13	—	UP	—	—	UP	UP
14	UP	—	—	—	UP	UP
15	—	—	—	—	UP	UP
16	UP	UP	UP	UP	—	UP
17	—	UP	UP	UP	—	UP
18	UP	—	UP	UP	—	UP
19	—	UP	UP	UP	—	UP
20	UP	UP	—	UP	—	UP
21	—	UP	—	UP	—	UP
22	UP	—	—	UP	—	UP
23	—	UP	—	UP	—	UP
24	UP	UP	UP	—	—	UP
25	—	UP	UP	—	—	UP
26	UP	—	UP	—	—	UP
27	—	UP	UP	—	—	UP
28	UP	UP	UP	—	—	UP
29	UP	UP	UP	—	—	UP
30	UP	UP	UP	—	—	UP
31	UP	UP	UP	—	—	UP
32	UP	UP	UP	UP	UP	—
33	UP	UP	UP	UP	UP	—
34	UP	UP	UP	UP	UP	—
35	—	UP	UP	UP	UP	—
36	UP	UP	—	UP	UP	—
37	—	UP	—	UP	UP	—
38	UP	—	—	UP	UP	—
39	—	—	—	UP	UP	—
40	UP	UP	UP	—	UP	—
41	—	UP	UP	—	UP	—
42	UP	—	UP	—	UP	—
43	—	UP	—	—	UP	—
44	UP	UP	—	—	UP	—
45	UP	—	—	—	UP	—
46	UP	—	—	—	UP	—
47	—	—	—	—	UP	—
48	UP	UP	UP	UP	—	—
49	—	UP	UP	UP	—	—
50	UP	—	UP	UP	—	—
51	—	UP	UP	UP	—	—
52	UP	UP	—	UP	—	—
53	UP	UP	—	UP	—	—
54	UP	UP	—	UP	—	—
55	—	—	—	UP	—	—
56	UP	UP	UP	—	—	—
57	—	UP	UP	—	—	—
58	UP	—	UP	—	—	—
59	—	UP	UP	—	—	—
60	UP	UP	—	—	—	—
61	UP	UP	—	—	—	—
62	UP	—	—	—	—	—
63	—	—	—	—	—	—
BIT VALUE:	1	2	4	8	16	32

For 5700 series transmitters not shown in this table, refer to the instructions accompanying each transmitter.

SUMMARY OF SYSTEM COMMANDS

Event Logging Commands (Alpha keypad only)	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 (Alpha keypad only)	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 + * + *	
	Set Real-Time Clock (Installer, Master Only)=Code + # +63	
Arming Functions (Alpha keypad only)	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 (Alpha keypad only)	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 (Alpha keypad only)	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 (Alpha keypad only)	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	
Output Device Control (Alpha keypad only)	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	
	Activate Output Device Manually=User Code + #70.	

SPECIFICATIONS

VISTA 50P/VISTA 50PUL CONTROLS

Physical:	12-1/2"W X 14-1/2"H X 3"D (VISTA 50P) 14-1/2"W X 18"H X 4.3"D (VISTA 50PUL)
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

4137AD/5137AD REMOTE KEYPADS

Physical:

Width: 8.4 inches

Height: 4.75 inches

Depth: 1.1 inches

Electrical:

Voltage Input: 12VDC

Current Drain: 60 mA (4137AD)

90 mA (5137AD)

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.

6137/6139 Remote Keypad

Physical:

Width: 6.25 inches

Height: 4.75 inches

Depth: 1.25 inches (6137 = 1 inch)

Electrical:

Voltage Input: 12VDC

Current Drain: 100 mA (6139)/ 85mA (6137)

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.**
- **Be sure all keypads and devices are addressed properly.**
- **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 ADEMCO 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.

East Coast Technical Support: 1-800-645-7492 (8 a.m.-6 p.m. E.S.T.)

West Coast Technical Support: 1-800-458-9469 (8 a.m.-5 p.m. P.S.T.)

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)

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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:

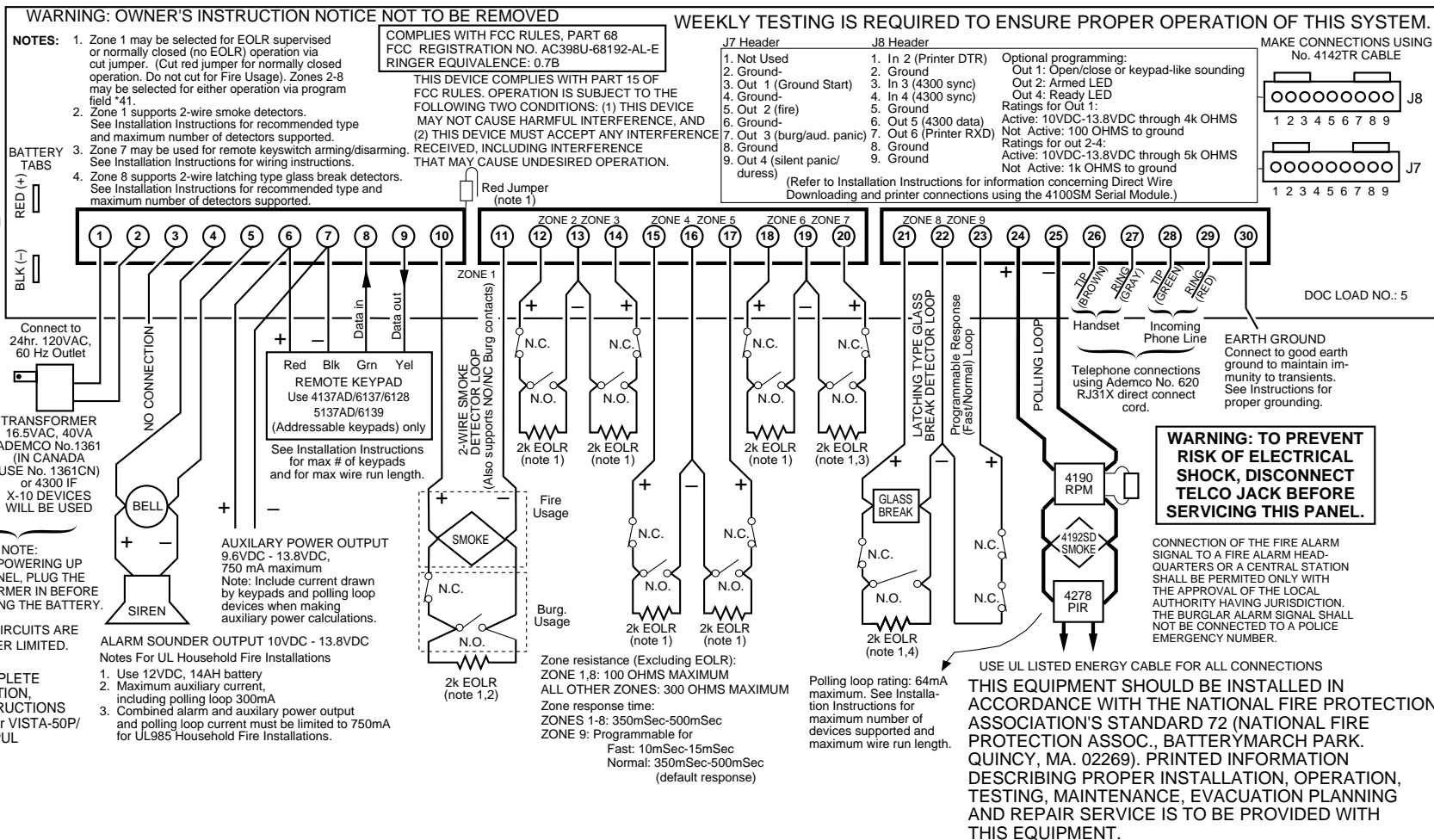
- Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
- Intrusion detectors (e.g., passive infrared detectors), smoke detectors, and many other sensing devices will not work without power. Battery-operated 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.



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