Addition of new 5800 series transmitters with this control panel is prohibited, other than for repair of existing installations. Non-permitted use voids U.S. warranty.

Ademco vista 30

Security System

Installation Instructions

®ADEMCO

N6667 4/93

CONGRATULATIONS !
on your purchase of the *Ademco via30* System

The purpose of these Installation Instructions is to give you a brief overview of the system, and provide instructions for installing a basic system.

As always, ADEMCO is there for YOU! Our SALES and TECHNICAL SUPPORT staff are eager to assist you in any way they can, so don't hesitate to call, for any reason!

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*

PLEASE,

Before you call Technical Support, be sure you have:

- Checked all wiring connections and fuses.
- Determined that the power supply and backup battery are supplying proper voltages.
- Verified your programming information where applicable.
- Noted the proper model number of this product, and the version level (if known) along with any documentation that came with the product.
- Your Ademco customer number and/or company name.

Having this information handy will make it easier for us to serve you quickly and effectively.

Again, CONGRATULATIONS, and WELCOME ABOARD!

The ***Ademco via30*** System
Can Support 2 EOLR Wired Zones
and
(when used with appropriate wireless receiver and/or wired expansion unit)
Up to a Total of 30 Expansion Zones
(Including up to: 30 Wireless, and/or 8 Additional Wired)
and
(when used with appropriate output relay unit)
2 or 4 Output Relays

FOR YOUR CONVENIENCE,
an easily removable Programming Form
has been included at the center of this manual.

This system is not California State Fire Marshall approved
and, as such, should not be used for fire protection in California
(or other areas requiring such acceptance).

TABLE OF CONTENTS

Section 1. GENERAL INFORMATION

Introduction

System	The ***Ademco via30*** is a microprocessor-based state-of-the-art security control intended for wireless applications.
Zones Supported	Supports up to 32 zones, in the following configuration: • 2 hard wired EOLR "basic" zones. • Up to 30 expansion zones (wireless and/or additional wired zones) by using an appropriate RF receiver(4281 or 5881 type) or wired expansion unit (No. 4219 or 4229). Refer to the Zone Characteristics tabulation on the next page for detailed zone information. ***Note:*** The *single* 4281/5881 type RF receiver that the ***Ademco via30*** accommodates, features Spatial Diversity (dual antennas), which virtually eliminates the possibility of "Nulls" and "Dead Spots" within the coverage area.
Relay Outputs	2 or 4 output relays can be added, to perform programmable actions in response to zone activity or manual entries, by using a No. 4229 Wired Expansion/Relay Unit (8 wired zones and 2 output relays) or No. 4204 Relay Unit (4 output relays).
Programming	**A No.5137 or 6139 Alpha Console is required for programming zones and relay operation,** but it need not remain in the system. These consoles have digital keypads and 2-line 32 character alphanumeric LCDs (Liquid Crystal Displays). Programmed options to establish specific alarm and reporting features are stored in electrically erasable, non-volatile EEROM memory. This means that the unit can be reprogrammed many times (unlike units equipped with PROMs) and that information which has been programmed will not be lost in the event of a complete loss of power. In addition, the system can be uploaded, downloaded, or controlled via a computer and Hayes modem (see *REMOTE PROGRAMMING AND CONTROL* on page 34).
Remote Consoles	After programming, the system may use one or more 4127, 4137, 5137, 6127 or 6139 Consoles. The 4127, 4137, and 6127 have digital keypads and fixed English status LCDs. ***Note:*** 4137AD and 5137AD (Addressable) Consoles may be used, provided they are set to their non-addressable mode (device ID 31...all DIP switch positions UP). When wireless is in use, the system may also be armed and disarmed with a wireless keypad (No. 5727/5827) or other 5800 RF system units (e.g., Nos. 5801, 5802, 5803).
User Codes	Up to 3 secondary user codes can be assigned by the system's Master code.
Communication	The system provides communication capability (central station reporting, etc.) over existing telephone lines.

Alarm Output Advisory

This system includes an alarm output rated at 2 amps. **Throughout the manual, wherever reference is made to Alarm Output Ratings, they assume a fully charged battery is connected, unless the UL rating is stated.** The battery is periodically tested automatically (approximately every four hours), and if it cannot sustain a load, a low battery message is displayed and can be reported to the central station.

Zone Characteristics

Zones 1-4	*not present*
Zones 5,6	**Wired Programmable Zones.** EOLR supervised, N.O. or N.C. sensors, 300-500 msec normal response.
Zones 7, 95, 96	**Console Panics** (Wired & Wireless). 24hr zones, programmable for silent, audible, auxiliary, or fire.
Zone 8	**Duress** (see User's Manual).
Zone 9	**Tamper.** Reports faults in the expansion units (e.g., 4219, 4229, 4281), tampers on 5800 System RF units (5881), and trouble-by-day/alarm-by-night zones. For all report formats (except Contact ID, which provides more explicit reporting) a trouble code is reported when the system is not armed, and Zone 9 report code is sent for an alarm.
Additional Wired Programmable Zones	**Up to 8 loops can be added,** with a 4219 Wired Expansion Unit or No. 4229 Wired Expansion/Relay Unit. Loops are EOLR supervised, for N.O. or N.C. sensors, 300-500 msec normal response, with optional fast (10-15 msec) response on loop A (first expansion zone). Zone numbers **10-17** should be assigned when using a 4219 or 4229 for zone expansion.
Wireless Zones	**Up to 30 wireless (RF) zones can be added** by using an Ademco 4281(5700 System) or 5881 (5800 System) Type RF Receiver. Specifically: **Model** — **Number of Zones** 4281L — Up to 4 4281M/5881L — Up to 8 5881M — Up to 16 4281H/5881H — Up to 30 Zone number assignments (which are also transmitter ID assignments for 5700 RF system transmitters) can be in the **10-63** range (**18-63** when a 4219 or 4229 is also used). A variety of RF system transmitters can be used to make up the wireless zones. This includes window/door units, smoke detectors, PIRs, and panic keys. ***Note:*** *For brevity, subsequent references herein to the RF Receiver will be indicated by "4281/5881" unless a specific model is named.*

If (4219/4229) wired expansion zones *and* (4281/5881) wireless expansion zones are to be added, they can comprise up to 8 (4219/4229) wired zones, plus wireless zones up to the number permitted by the type of 4281/5881 RF receiver used, *as long as the total does not exceed the 30 expansion zones accommodated by the control.*

For example: When all 8 loops of a 4219 or 4229 are to be used, a 4281H or 5881H can add only 22 zones, so as not to exceed a total of 30 expansion zones for this control.

Section 2. SYSTEM CONFIGURATIONS

ZONE TYPE DEFINITIONS

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

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

01 - Entry/Exit 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.

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.

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 and Maximum modes. **This zone type is bypassed automatically when the panel is armed in the Stay or Instant modes**. This zone type is usually assigned to a zone covering an area such as a foyer, lobby, or hallway through which one must pass upon entry (After faulting the entry/exit zone to reach the console to disarm the system.) Since this zone type is designed to provide an instant alarm if the enty/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.

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 console (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.

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

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

08 - 24-hour Auxiliary Alarm — This zone type sends a report to Central Station and provides a rapid beeping sound at the console. **(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.

09 - Supervised Fire — This zone type provides a fire alarm on short circuit and a trouble condition on open circuit. The bell output will pulse when this zone type is faulted. This zone type is always active and cannot be bypassed. **This zone type can be assigned to control panel wired zone 5, any zone in a wired zone expansion module, or certain wireless zones.**

10 - Interior w/Delay — This zone type gives entry/exit delay (using the programmed entry/exit time), if tripped when the panel is armed in the Away or Maximum modes. **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.

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.

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.

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.

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).

By using a 4281/5881 RF Receiver and the appropriate 5700/5800 series transmitters, all of the above zone types are available for the wireless portion of the system.

HARD-WIRED ZONES

Basic Control's Zones The ***Ademco via30*** supports 2 hard-wired zones, which are connected as zones 5 & 6. These zones must be EOLR supervised, and can use N.O. and/or N.C. sensors.

Zone Response Type	Any zone response can be assigned to devices on these zones.
Response Time	300–500 msec.
Max. Zone Resistance	300 ohms, excluding EOLR
EOLR Supervised	• Supports both open circuit and closed circuit devices. • Connect open circuit devices in parallel across the loop. The 1,000 ohm EOLR must be connected across the loop wires **at the last device.** ***Important:*** If the EOLR is not at the end of the loop, the zone is not properly supervised. The system may not respond to an open circuit within the zone. • Connect closed circuit devices in series with the loop.
EOLR Fire Zone 5	• Only zone 5 can be used for fire. • Supports as many 4-wire smoke detectors as can be powered. • The zones must be configured for EOLR supervision. • The detectors must be wired in parallel, with the EOLR at the last detector for full supervision. • To supervise power, a supervisory module (e.g., System Sensor No. BK-A7771601 EOL Relay Module) is required.

WIRED ZONE EXPANSION

Nos. 4219 and 4229 Expansion Units

If a No. 4219 Wired Expansion Unit, or 4229 Wired Expansion/Relay Unit is used, 8 wired EOLR zones can be added to the basic control's 2 zones, for a total of 10.

Location	Can be mounted within or outside of the ***Ademco via30*** cabinet (see page 14).
Connections	Connects to the control's remote console terminals for signaling.
Supervision	• Supervised against removal. • Has tamper protection for security when mounted outside of the cabinet.
Zone Information	• Eight wired expansion loops (designated A to H) should be assigned zone numbers 10-17, and any or all can be programmed individually (in field *56). • If RF will be used in addition to one of these units (see *WIRELESS EXPANSION* sections), any zone numbers in the range of 18-63 (*not* 10-17) should be chosen for the RF zones, *even if some of the unit's wired expansion loops are not being used.* ***For example:*** If only four of the wired expansion loops are being used, a 4281H or 5881H RF Receiver could add 26 RF zones (using any zone numbers in the range of 18-63) to the system, for a combined total of 30 expansion zones. If a 4219 or 4229 is *not* being used, however, the same receiver could add 30 RF expansion zones to the system, assigned *any* zone numbers within a 10-63 range.
Settings	**The 4219's or 4229's DIP switch must be set for a device address of "1"**, as described in their instructions (bottom 3 switches to the RIGHT..."on", and the next switch above to the LEFT..."off").

For additional information, see the instructions that accompany the 4219 and 4229.

WIRELESS EXPANSION — 5700 RF SYSTEM —

General

In addition to its basic 2 wired zones, the control, in conjunction with a 4281RF Receiver, can provide wireless zones [4281L: up to 4 zones, 4281M: up to 8, 4281H (in this application): up to 30]. A wireless keypad (5727) also can be used with the system.

The receiver can be mounted within the control's cabinet (see page 15) or installed remotely, in its own housing.

The 4281 recognizes alarms, status messages and keypad control messages from 5700 Series Wireless Transmitters operating at 345Mhz (315Mhz for Canadian version). These messages are processed and relayed to the control panel via a 4 wire connection to the control's remote console terminals. The 4281's RED, BLACK, YELLOW, and GREEN wires are connected in parallel with console wiring.

The 4281 can receive signals from wireless transmitters (listed below) within a nominal range (installed) of 200 feet.

The 4281's DIP switch must be set for a device address of "0", as described in the 4281's instructions (all switches to the RIGHT..."off").

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 each transmitter within a 12 hour period, the "missing" transmitter number(s) and "CHECK" will be displayed on the console.

Each transmitter (including 5701) is also supervised for low battery conditions and will transmit a low battery signal to the 4281, with the battery having at least 30 days of life remaining. If the 5727 transmits and has a low battery, it also will be indicated (as Zone 00 on a fixed English console).

Note: After a low or dead battery is replaced, activate the transmitter and then enter the security code + OFF to clear the system's memory of the "Low Battery" signal.

The 4281 itself is supervised. If communication with the receiver is interrupted, or valid RF signals from at least one supervised wireless transmitter are not received within 12 hours, a tamper report (Zone 9) will be generated.

House Identification

The 4281 responds only to transmitters set to the same House ID (01-31, see the DIP switch tables on page 46) as programmed in the control (see field *24). This prevents interference from transmitters in other nearby systems. To make sure that a House ID is chosen that is not in use nearby, conduct the Sniffer Mode test described under *TESTING THE SYSTEM.*

Transmitter Identification

Each transmitter's assigned zone number is DIP switch programmable in the unit as its transmitter ID (except wireless keypads, which are fixed at ID 00). Whenever a transmission takes place, whether for an alarm, fault, check-in, or low battery, the ID number is sent along with the message to the 4281 which, in turn, relays this information to the control, which displays the condition and zone number on the console.

WIRELESS TRANSMITTERS for the 4281 are described on page 41.
DIP SWITCH SETTING TABLES are shown on page 46.

Transmitters set for IDs of 48-55 (FIRE) have high signal priority and will transmit once every 12 seconds while the zone is faulted.

Transmitter IDs of 62 and 63 are unsupervised to allow removal of the 5701 off-premises. Signal priority is higher than burglary.

Transmitters set for IDs of 56-63 will transmit once every 3 seconds while faulted.

Transmitters set for IDs of 32-47 will have a 3 minute lock-out between transmissions to conserve battery life (normally PIR units).

Note: To conserve battery life, transmitters protecting *frequently used* doors and windows should be set for IDs in the 32-47 range.

5700 RF System Installation Advisories

1. If the 4281 Receiver is to be mounted remotely (not in the control's cabinet), place it in a high, centrally located area for best reception.
2. Do not locate receiver or transmitters on or near metal objects. This will decrease range and/or block transmissions.
3. Before mounting transmitters permanently, conduct Go/No Go Tests to verify adequate signal strength (see *TESTING THE SYSTEM*) and reorient or relocate transmitters if necessary.

WIRELESS EXPANSION — 5800 RF SYSTEM —

General

In addition to its basic 2 wired zones, the control, in conjunction with a 5881 RF Receiver, can provide wireless zones [5881L: up to 8 zones, 5881M: up to 16, 5881H (in this application): up to 30]. Wireless keypads (5827) also can be used with the system.

The receiver can be mounted within the control's cabinet (see page 15) or installed remotely, in its own housing.

The 5881 recognizes alarms, status messages and keypad control messages from 5800 Series Wireless Transmitters operating at 345Mhz. These messages are processed and relayed to the control panel via a 4 wire connection to the control's remote console terminals. The 5881's RED, BLACK, YELLOW, and GREEN wires are connected in parallel with console wiring.

The 5881 can receive signals from wireless transmitters (listed below) within a nominal range (installed) of 200 feet.

The 5881's DIP switch must be set for a device address of "0", as described in the 5881's instructions (all switches to the RIGHT..."off").

Supervision

Each transmitter (except 5802, 5802CP, 5803, and 5827) 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 transmitter within 12 hours, the "missing" transmitter number(s) and "CHECK" will be displayed on the console. The supervision for a particular transmitter may be turned off by learning it as a "UR" (unsupervised RF) type.

Each transmitter is also supervised for low battery conditions and will transmit a low battery signal to the 5881, with the battery having at least 30 days of life remaining. If the 5802, 5802CP, 5803, or 5827 transmits and has a low battery, it will also be indicated.

Note: After a low or dead battery is replaced, activate the transmitter and then enter the security code + OFF to clear the system's memory of the "Low Battery" signal.

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 new identification code(s) learned by the control...see *Transmitter Identification* below].

The 5881 itself is supervised. If communication with the receiver is interrupted, or valid RF signals from at least one supervised wireless transmitter are not received within 12 hours, a tamper report (Zone 9) will be generated.

House Identification

If a 5827 Wireless Keypad is used with the system, it must have its DIP switch set to the same House ID (01-31) as programmed in the control for the RF receiver (see programming field *24) to establish proper communication. *DIP switch setting information for the 5827 is given on page 46.*

Transmitter Identification

Each transmitter *input* has a different ID (identification) code, part of which includes a unique serial number permanently assigned to the device during manufacture. Many transmitters have more than one input, hence ID code (e.g., 5801 has 4, 5803 has 3, etc.).

It is not necessary to assign a transmitter's ID(s) during installation. Instead, the control must learn or be programmed for each transmitter's ID code(s) during programming, in conjunction with assigned zone number(s) and other data. Whenever a transmission takes place, whether for an alarm, fault, check-in, or low battery, the ID code is sent as part of the message to the 5881. In turn, the information is relayed to the control, which displays the condition and associated zone number on the console.

WIRELESS TRANSMITTERS for the 5881 are described on page 42.

Transmitter System Installation Options

To install the particular transmitters in the system, one of two optional methods can be used. Option 1, whose procedure is described in general below, and in detail in *PROGRAMMING THE SYSTEM* on page 21, involves having the system learn each transmitter to be used in the system. Option 2 (to be available soon), described below, involves the downloader, where the IDs can be entered manually at the office and then downloaded to an operating system.

OPTION 1

Learning and Assigning ID Codes at the Control

Each transmitter sends its unique serial number with each transmission, but since some devices have more than one sensor point (input), and the sensor point is part of the ID, each ID must be learned and assigned separately.

As part of the programming of each zone, the device type is entered, and following that, the display of "Learn S/N?" comes up. If the control is to be taught the IDs now, pressing [1] will get the display "Transmit Now".

The control program is now at a zone number to be assigned to a given transmitter input (multi-point contact, single-point motion detector, single-point smoke detector, multi-point emergency transmitter, etc.). A transmitter will either be already installed, or one of a group of transmitters to be installed at a given site. The corresponding transmitter point (input) is then activated to generate a complete event transmission (e.g., opening and closing a contact, closing and opening a contact, pressing and releasing a button, causing alarm and restore, etc.). The resulting transmission will contain an ID code identifying the device by serial number and its activated point.

If the ID code of this first transmission event has not been previously learned, the assignment of zone number and ID code (device serial number and sensor point) is stored in the control memory, Concurrent with this first event, the console emits a single, short sound to acknowledge this fact and to request a duplicate transmission event to verify the assignment. Upon completion of a second identical transmission event (within a pre-determined time limit), the control compares this second (verify) event with the first (learn) event. If the two events match, the control keeps the assignment in EEPROM memory and the console emits a double, short acknowledge sound.

If the ID of the first transmission event was previously learned, a single, long error sound is emitted. If the second (verify) transmission event does not match the first (learn) transmission event, the ID of the first transmission event is erased and the assignment is discarded.

In this mode, the selected zone number for that transmitter sensor point together with other system attributes associated with that particular zone are concurrently assigned to the "learned" ID code.

5800 RF System Installation Advisories

1. If the 5881 Receiver is to be mounted remotely (not in the control's cabinet), place it in a high, centrally located area for best reception.
2. Do not locate receiver or transmitters on or near metal objects. This will decrease range and/or block transmissions.
3. Before mounting transmitters permanently, conduct Go/No Go Tests to verify adequate signal strength (see *TESTING THE SYSTEM*) and reorient or relocate transmitters if necessary.

OPTION 2

Manual ID Code Assignment Method

(TO BE AVAILABLE SOON)

Supplements *REMOTE PROGRAMMING AND CONTROL (DOWNLOADING)* section on page 34.

At the downloader computer location, the downloader for the **Ademco via30** is brought up.

The identification code numbers can be entered at the screens where the zone characteristics and communicator reporting codes are entered. If the 5800 RF system has been properly selected (RF expander type 5881) on a previous screen, the type of transmitter and identification code (which includes input loop data) can be entered on the same line as the other items for each zone. The factory pre-recorded serial number is read from the non-removable portion of the transmitter case in a 7-decimal digit (telephone number) format.

Mark the transmitters to be used in the installation (multi-point contact, single-point motion detector, single point smoke detector, multi-point emergency sensor, etc.) and enter their ID codes when programming other data for the system. When the data that defines the system is downloaded, the identification codes will be downloaded also and stored in EEPROM memory.

RELAY OUTPUTS

Nos. 4204 and 4229 Output Relay Modules

The ***Ademco via30*** can support relay outputs via the use of either a 4204 (4 outputs) or a 4229 (2 outputs). These modules provide form C (normally open and normally closed) dry contacts on relays that can be programmed to activate or deactivate to perform some action in response to a predetermined event such as turning on lights and/or closing a fire door in the event of a fire alarm condition. There are many different uses for these relays, some of which are suggested in the table on page 44.

The unit can be located inside the control's cabinet or remotely (see *MOUNTING THE CONTROL, LOCK, & PC BOARD* section and the instructions that accompany the unit).

4204 Setup

The 4204 Relay Unit has 4 Form C relays. Each relay can be used independently for different functions. The following steps should be taken to properly set up the 4204:

1. **Connect the 4204 to the control's remote console terminals** (4-7), using standard 4-conductor twisted cable (for long wiring runs) or the connector supplied with the 4204 (as shown in the *Summary of Connections* diagram).
2. **Set the 4204's DIP switch for a device address of "1"** (switch 2 "OFF" and switches 3, 4, 5 "ON"). Switch 1 determines the unit's cover tamper response ("ON" = disabled, "OFF" = enabled).

   Note: Some "early" units have only a 4-position DIP switch. Set 1 to "OFF" and 2, 3, 4 to "ON".
3. **During programming** (summarized here, but see the detailed procedure in the *PROGRAMMING THE SECURITY CONTROL* section):
   a. Program a "3" in field *25.
   b. Program fields *80 (Output Relays) and *81 (Zone Lists) for the desired relay responses.
4. **Connect the desired field wiring** to the unit's relay contact terminals.

4229 Setup

The 4229 Wired Expansion/Relay Unit has 8 hard-wired zones and 2 Form C relays. Each relay can be used independently for different functions. The following steps should be taken to properly set up the 4229:

1. **Connect the 4229 to the control's remote console terminals** (4-7), using standard 4-conductor twisted cable (for long wiring runs) or the connector supplied with the 4229 (as shown in the *Summary of Connections* diagram).
2. **Set the 4229's DIP switch for a device address of "1"** (switch 2 "OFF" and switches 3, 4, 5 "ON"). Switch 1 determines zone A's response time ("ON" = normal response, "OFF" = fast response).
3. **During programming** (summarized here, but see the detailed procedure in the *PROGRAMMING THE SECURITY CONTROL* section):
   a. Program a "2" in field *25.
   b. Program fields *80 (Output Relays) and *81 (Zone Lists) for the desired relay responses.
   c. In field *56 (zone programming), assign zone numbers 10-17 to the 4229's wired expansion zones.
4. **Connect the desired field wiring** to the unit's relay contact terminals.

Relay Basics

Relays can be used to perform many different functions and actions. In this system, each relay must be programmed as to how to act (ACTION), when to activate (START), and when to deactivate (STOP). Each of these is summarized briefly below, but described later in detail in the programming procedure for fields *80 and *81.

1. **ACTION:** The "ACTION" of the relay is how the relay will respond when it is activated by the "START" programming. There are 4 different choices of actions:
   - CLOSE for 2 SECONDS and then reset.
   - CLOSE and remain activated until deactivated by "STOP" programming.
   - PULSE ON and OFF until deactivated by "STOP" programming.
   - NO RESPONSE is chosen when the relay is not used.
2. **START:** The "START" programming instructs the relay when and under what conditions to activate. There are 3 parts to be programmed:
   - EVENT instructs the relay what condition must occur to the zone(s) programmed into the "ZONE LIST" in order to activate the relay. The "EVENT" and "ZONE LIST" work together. The 4 different choices for "EVENT" are listed in the *PROGRAMMING* section for field *80.
   - ZONE LIST is a list of zones selected by the installer in field *81.When an event occurs as assigned by "EVENT" on any zone within that list, the relay will activate as selected in "ACTION". In this way, many zones can be assigned very easily to a single event. ***For example:*** *You may wish a relay to activate (perhaps to activate a strobe for a visual indication) whenever any zone in a group of zones is faulted.*
   - ZONE TYPE/SYSTEM OPERATION. Instead of using a "ZONE LIST" and "EVENT", a specific zone (response) type or system operation action can be selected to activate the relay.

     If a specific "ZONE TYPE" is chosen, any zone of that response type going into alarm, trouble, or fault will cause the relay to activate as selected in "ACTION". Any zone of that type that restores will deactivate the relay.

     If a "SYSTEM OPERATION" is chosen, that operation will cause the relay to activate as selected in "ACTION".

     The different choices for "ZONE TYPE" and "SYSTEM OPERATION" are listed in the PROGRAMMING section for field *80.
3. **STOP:** The "STOP" programming instructs the relay when and under what conditions to deactivate. The 2 parts to be programmed are:
   - RESTORE ZONE LIST. If a "RESTORE ZONE LIST" is used, the relay will deactivate when all the zones in that list restore from a previous fault of alarm condition. This will occur regardless of what is programmed to "START" the relay; therefore, a "RESTORE ZONE LIST" would normally only be used when a "ZONE LIST" is used to start the relay.
   - ZONE TYPE/SYSTEM OPERATION. Instead of using a "RESTORE ZONE LIST", a specific zone (response) type or system operation action can be selected to deactivate the relay.

     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 relay to deactivate.

     If a "SYSTEM OPERATION" is chosen, that operation will cause the relay to deactivate.

     The different choices for "ZONE TYPE" and "SYSTEM OPERATION" are listed in the PROGRAMMING section for field *80.

Output Relay Advisory

If a relay is energized before a wired smoke detector is reset, the relay will be stopped by the interruption of Aux. Power that resets the smoke detector. If this is not desired, the power to the relay unit should be supplied from another 12V power source (e.g., the same source that is powering external equipment through the relay contacts).

Section 3. MOUNTING THE CONTROL, LOCK, & PC BOARD

Mounting the Cabinet

The ***Ademco via30*** is supplied with a 12-1/2" (318mm) wide x 14-1/2" (368mm) high x 3" (76mm) deep cabinet suitable for use in residential installations.

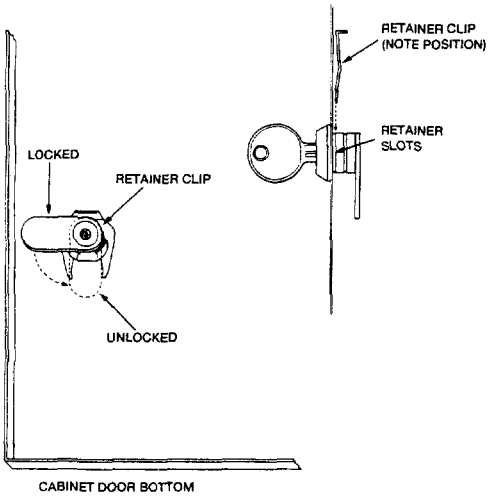
Mount the control cabinet to a sturdy wall using fasteners or anchors (not supplied) in a clean, dry area which is not readily accessible to the general public. 4 mounting holes are provided at the back of the cabinet.

Installing the Lock (if Used)

The cabinet can be closed and secured *without* a lock by using 2 screws in the cover's edge.

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

1. Remove the cabinet cover. *It is easily removable for servicing and is easily reinstalled.*
2. Remove the lock knockout from 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.
3. While holding the lock steady, insert the retainer clip into the retainer slots. Position clip as illustrated to facilitate easy removal.



Installing the Control's Circuit Board Alone, or (if used),with a 4219, 4229, or 4204

IMPORTANT!

Before installing the cabinet's contents, be sure to remove the appropriate metal cabinet knockouts.

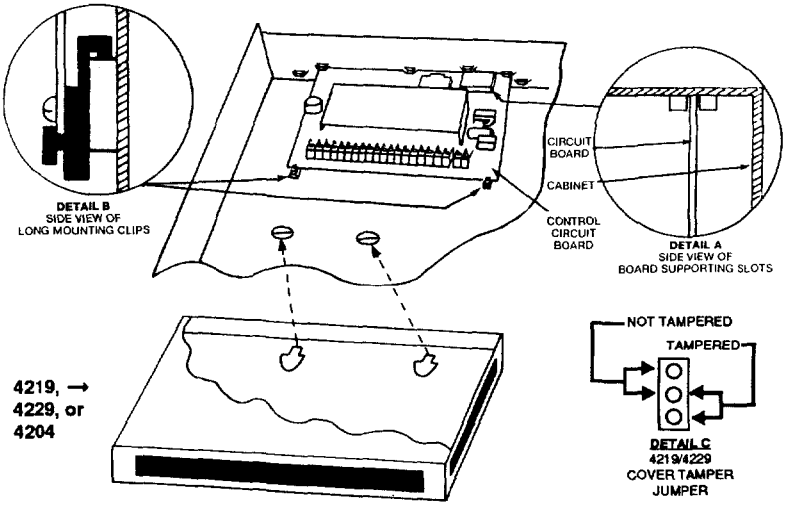
DO NOT ATTEMPT TO REMOVE THE KNOCKOUTS AFTER THE CIRCUIT BOARD HAS BEEN INSTALLED.

Control's Circuit Board

1. Hang two *long* mounting clips (provided) on the raised cabinet tabs (see Detail B below).
2. Insert the top of the circuit board into the slots at the top of the cabinet. Make sure that the board rests on the correct row (see Detail A).
3. Swing the base of the board into the mounting clips and secure the board to the cabinet with the accompanying screws (see Detail B).

4219, 4229 or 4204

1. Insert self-tapping screws (provided) in two adjacent raised cabinet tabs. Leave the heads projecting 1/8".
2. Hang the unit on the screw heads via two of the slotted holes at the rear of its housing, as shown.
3. The 4219's or 4229's cover can be left off if the cover tamper jumper is placed in its upper (not tampered) position (see Detail C). The tampered cover is necessary for installations outside of the control's cabinet.



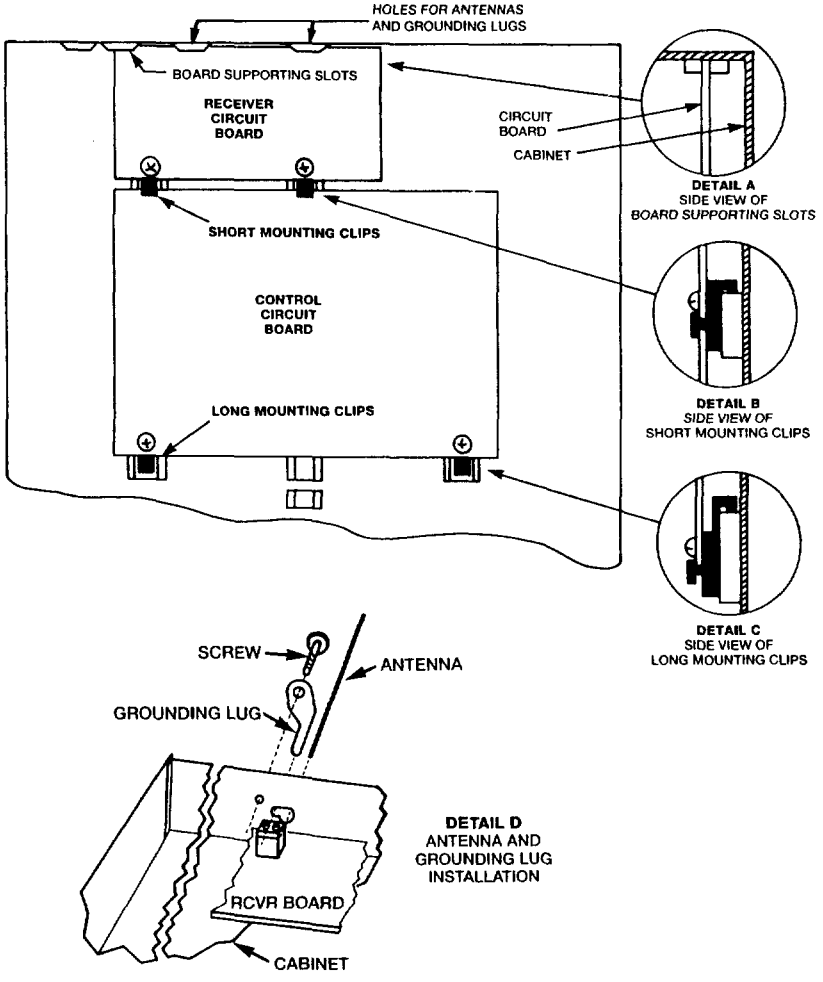
Installing Control and RF Receiver Circuit Boards Together, In the Same Cabinet

IMPORTANT!

Before installing the cabinet's contents, be sure to remove the appropriate metal cabinet knockouts.

DO NOT ATTEMPT TO REMOVE THE KNOCKOUTS AFTER THE CIRCUIT BOARDS HAVE BEEN INSTALLED.

1. Hang two *short* (black) mounting clips (provided with receiver) on the raised cabinet tabs, as shown in Detail B below.
2. Insert the top of the receiver board (removed from its own case as described in *its* instructions) into the slots at the top of the cabinet (see Detail A). Make sure that the board rests on the correct row of tabs.
3. Swing the base of the board into the mounting clips and secure it to the cabinet with the accompanying screws (see Detail B).
4. Insert the top of the control's board into the slot in the clips and position two *long* (red) clips at the lower edge of the board (see Detail C).
5. Swing this board into place and secure it with two additional screws.
6. Insert grounding lugs (supplied with the receiver) through the top of the cabinet into the *left-hand* terminals of the antenna blocks (at the upper edge of the receiver board) and secure them to the cabinet top with the screws provided, as shown in Detail D.
7. Insert the receiver's antennas into the block's *right-hand* terminals and tighten the screws.



Section 4. WIRING & POWERING THE SYSTEM

(See Summary of Connections Diagram on Page 47)

IMPORTANT: Do not connect the battery, or plug in the AC transformer, until all other wiring connections have been completed.

Grounding the System

Terminal 21 is the earth ground connection point. In order for the protective devices in this product to be effective, the designated terminal must be terminated in a good earth ground. The following are examples of good earth grounds available at most installations:

Metal cold water pipe: Use a non-corrosive metal strap firmly secured to the pipe to which the lead is electrically connected and secured.

AC power outlet ground: Available from 3-prong, 120 VAC power outlets only. To test the integrity of the ground terminal, use a 3-wire circuit tester with neon lamp indicators, such as the UL Listed Ideal Model 61-035, or equivalent, available at most electrical supply stores.

Terminals and Connections

1 & 2: AC Input (16.5VAC, 25VA) from No. 1321/TF2 plug-in transformer (in U.S.A.).
Note: For Canadian installations, a No. 1321CN transformer must be used.

3: Alarm relay output(+), 12VDC, 2.0A maximum
(600mA max Alarm plus Aux Power for UL usage).

4: Alarm Output/Auxiliary Power/Wired Fire/Console(s)/ Optional 4281, 5881, 4219, 4229, or 4204 (BLACK lead). Ground (–) Return†.

5: Auxiliary/Wired Fire/Console(s)/Optional 4281, 5881, 4219, 4229, or 4204 (RED lead) Power:

+12VDC at 500mA max †.

6: Data In from Console(s)/Optional 4281, 5881, 4219, 4229, or 4204 (GREEN)†.

7: Data Out to Console(s)/Optional 4281, 5881, 4219, 4229, or 4204 (YELLOW)†.

8–13: *not used*

14: Zone 5. (When Zones 5 and/or 6 are used, a 1,000 Ohm EOLR should be wired between the farthest sensor connected to the zone terminal and the low side of the zone.)

15: Zones 5 and 6 Return.

16: Zone 6

17: Handset (TIP).

18: Handset (RING).

19: Incoming Phone Line (TIP).

20: Incoming Phone Line (RING).

21: EARTH GROUND (a proper earth ground must be provided to protect the system from lightning and electrostatic discharge damage).

Warning: *To prevent the risk of electrical shock, disconnect the telephone line at the Telco jack before servicing the unit.*

RED LEAD: Battery (+). When AC is present, 13.8VDC is being developed to recharge a gel lead acid battery and when AC is absent, 12VDC current is drawn from the battery. Battery lead reversal will blow the battery fuse.

BLACK LEAD: Battery (-).

† Up to 4 consoles may be used (check total auxiliary current, per *SPECIFICATIONS*). Consoles need not necessarily be on individual home runs, but no more than 220' of #22 wire or 550' of #18 wire should be used for each run.

Addressable consoles (e.g., 4137AD and 5137AD) may be used, if they are set to their non-addressable mode (device ID 31...all DIP switch positions UP).

Power-up Procedure

1. Make sure that the total current to be drawn from the Alarm Output terminals (3 & 4) and Auxiliary Power Output terminals (4 & 5) does not exceed the values indicated in the *SPECIFICATIONS* section and on the *SUMMARY OF CONNECTIONS* diagram.
2. Wire the transformer to the panel (before connecting the battery) as shown on the *SUMMARY OF CONNECTIONS* diagram. **Do not plug in at this time.**
3. Connect all loops, devices, consoles, etc. to the panel.
4. Plug the transformer into a 24 hour, uninterrupted AC outlet. After some initial displays (see page 22) and approximately one minute, the green POWER or READY LED on the console(s) should be lit and the consoles should display "READY" (Fixed Word consoles) or "DISARMED READY TO ARM" (Alpha consoles).
5. Connect the battery as shown in the SUMMARY OF CONNECTIONS diagram.

Section 5. SYSTEM OPERATION

SECURITY CODES

Master Code

The installer programs the 4-digit Master Code initially as part of the programming procedure (see *PROGRAMMING THE SYSTEM*). The factory default Master code is "4111".

The Master code can permit re-entry into the programming mode and also, in normal operation mode, is used to enter the user codes, which also allow access to the normal functions of the system.

See the *PROGRAMMING* section for information on exiting the programming mode via fields *98 or *99.

User Codes

In normal operation mode, the Master security code can be used to assign up to three secondary security codes. It can also be used to remove secondary codes from the system (individually).

To assign (or change) a Secondary security code, enter:

Master Code + [CODE key] + User # (2 or 3 or 4) + desired Secondary Code

The system will emit a single beep when each secondary code has been successfully entered.

To delete a Secondary security code, enter:

Master Code + [CODE key] + User # (2 or 3 or 4)

Notes:

- All Master and Secondary security codes permit access to the system for arming, disarming, etc.
- If a secondary code is inadvertently repeated for different users, or one user's code is another's duress code (4th digit increased by 1), the lower user number will take priority.
- Opening and closing reports are sent for the Master code as No. 1. User codes are sent as Nos. 2, 3, and 4 respectively.

KEYPAD FUNCTIONS

General Information

Note that if QUICK ARM is enabled (field *21), the [#] key can be pressed instead of entering the security code, for any of the arming procedures (Away, Stay, Instant, Maximum, etc.).The security code is *always* required, however, when disarming the system.

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

When an alarm occurs, console sounding and external sounding will occur, and the zone(s) in alarm will be displayed on the console. Pressing any key will silence the console sounder for 10 seconds. Disarming the system will silence both console 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) *twice*.

The consoles also feature chime annunciation, and 3 panic key pairs (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.

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

Arming Away — Enter code + AWAY [2].

Arming Stay — Enter code + STAY [3].

Arming Instant — Enter code + INSTANT [7].

Arming Maximum — Enter code + MAXIMUM [4].

Disarming — Enter code + OFF [1].

Bypassing Zones — Enter code + BYPASS [6] + zone number(s).

Forced (Quick) Bypass — *(If enabled)* To automatically bypass all faulted zones, use "Quick Bypass" method:
Enter code + BYPASS (then stop).

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

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

Panic Keys

There are three panic key pairs and (on some consoles) lettered keys(shown below) that, if programmed, can be used to manually initiate alarms and send a report to the central station. Each can be individually programmed for 24 Hour Silent, Audible, Personal or Fire Emergency responses. The panic function is activated when both keys of the appropriate key pair is pressed at the same time, or the appropriate lettered key is pressed for at least 2 seconds.

The panic functions are identified by the system as follows:

KEYS	Displayed as Zone
[1] & [*], or [A]	95
[*] & [#], or [B]	07
[3] & [#], or [C]	96

Notes: • Keys [A], [B], [C] are not on all consoles.
• Key [D], if present, is not active here.

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

TROUBLE CONDITIONS

General Information

The word "CHECK" on the Console's display, accompanied by a rapid "beeping" at the Console, 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" and "Battery" Displays

- **A display of "CHECK" and one or more zone numbers** indicates that a problem exists with the displayed zone(s) and requires attention.

  When the problem has been corrected, the display can be cleared by entering the OFF sequence (code plus OFF key) twice.
- **If there are wireless sensors in the system,** the CHECK condition may also be caused by some change in the environment that prevents the receiver from hearing a particular sensor.
- **A display of "BAT" with no zone number** indicates that the system's main standby battery is weak.
- **A display of "BAT" with a zone number and a once per minute "beeping" at the console** indicates that a low battery condition exists in the wireless sensor displayed (zone "00" indicates a wireless keypad). If the battery is not replaced within 30 days, a CHECK display may occur.

  Note: Some wireless sensors contain a non-replaceable long-life battery which requires replacement of the entire unit at the end of battery life (e.g., Nos. 5802, 5802CP, 5803).

Power Failure

- **If there is no console display at all, and the POWER indicator (if present) is not lit,** operating power for the system has stopped and the system is inoperative.
- **If the message "AC LOSS" or "NO AC" is displayed, and the POWER indicator (if present) is off,** the console is operating on battery power only.

Other Displays (Fixed Word Consoles)

dI If this remains displayed for more than 1 minute, the system is disabled.

CC The system is in communication with the central station for change of function or status verification.

FC A communication failure has occurred.

OC The console is not receiving signals from the control panel and sees an open circuit.

Section 6. PROGRAMMING THE SYSTEM

General Information

Installer options are stored in non-removable, electrically erasable, non-volatile EEROM memory. These options must be programmed for the particular installation to establish its specific alarm and reporting features.

Note: It is possible to program the system at any time, even at the installer's premises prior to the actual installation. Simply apply power temporarily to the control and then program the unit as desired.

THE SECURITY CONTROL IS PROGRAMMED VIA A 5137 OR 6139 CONSOLE (which need not necessarily remain in the system after programming).

Note: A 5137AD (Addressable) Console may be used, provided it is set to its non-addressable mode (device ID 31...all DIP switch positions UP).

The initial sequence of entries should follow the order on the programming sheet.

Certain programming fields, such as those used to select the expansion devices (fields *22 and *25) *must be programmed before expansion zones can be programmed.* If an expansion unit type is changed, the expansion zones should be reprogrammed.

When programming, the field number will be displayed on the LCD display; also, each entry is displayed as it is keyed in. After programming, values that have been entered in each field can be reviewed and, if necessary, modified.

When programming from the console, note the following:

1. Enter the Programming mode by simultaneously depressing the **[*]** and **[#]** keys **within 50 seconds after power is applied to the Control,** or subsequently by keying the code **4 + 1 + 1 + 1** followed by depression of **CODE + 0** keys. If a different Master code is subsequently programmed, use it instead of 4111 to gain access to the Programming mode. *If the Programming mode was exited previously using a *98, it will prevent entry into the Programming mode by the use of the Master Code + CODE + 0.*
2. Immediately following entry into the program mode, field *20 will be displayed. Following the above display, the system is ready to accept entries for field *20.
3. To program a data field, key **[*]** plus **Field No.** (for example, *21), then make the required entry.

Some entries require sequential pressings of [*] to actually enter the data. This is true in the Zone and Relay fields *56, *80, and *81 and the prompts will indicate this. Entry of [#] will generally back up one entry position for review.

4. To simply review a data field, key **[#]** plus **Field No.**. Data will either be automatically sequentially displayed or can be displayed by successively pressing [#]. No changes will be accepted in this mode.
5. When a data field has been completely programmed, the console will normally "beep" three times and then automatically proceed to, and display, the next data field number to be programmed (if not, key **[*]** plus the **Field No.** of the next field to be programmed).
6. If the number of digits that you enter in the data field is less than the maximum permitted (for example, phone number), then the console will display the last data entered. To proceed, the next data field number to be programmed must then be entered (for example, ***42**).
7. If a field is improperly entered, the console will display **EE**. Simply re-enter [*] or [#] plus the field number.

Summary of Programming Commands

FUNCTION	PROCEDURE
ENTER PROGRAMMING MODE	1. POWER UP, then depress **[✳] and [#]** both at once, within 50sec of powering up. **OR** 2. Initially, key: **4 +1 + 1 +1** plus **CODE key + 0.** **OR** 3. If different Master Code is programmed, key : **MASTER CODE + CODE KEY + 0.** (if *98 was used to exit previously, method 1 above must be used to enter the program mode again)
EXIT PROGRAMMING MODE	***99** allows re-entry to programming mode via type 2 or 3 entry method above. ***98** inhibits re-entry to programming mode via type 2 or 3 entry method.
ADVANCE TO FIELD	**[✳] + Field No.** (e.g., 21, 38, 56, etc.)
PROGRAM FIELD	**[✳] + Field No.,** followed by data entries. Some fields require sequential pressings of [✳] to enter data (e.g., fields 56, 80,81).
ERASE FIELDS	**[✳] + Field No. +** [✳] (only applies to fields 40 thru 44 and 94).
READ FIELD	**[#] + Field No.** Data will either be automatically sequentially displayed or can be displayed by successively pressing [#].

Special Messages

OC = OPEN CIRCUIT (no communication between Console and Control).

EE = ERROR (program entry mistake). Re-enter the field number or data).

After powering up, **AC, dl** (disabled) or **System Busy** and **NOT READY** will be displayed after approximately 4 seconds. This will revert to **READY** in appx. 1 minute, which allows PIRS, etc. to stabilize. To bypass this delay, press: [#] + [0].

If **E4** or **E8** appears, more zones than the expansion units can handle have been programmed. Correct the program and then completely de-power and re-power the control to clear this indication and remove the disable indication.

PROGRAMMING DATA FIELDS

THE CENTERFOLD PROGRAMMING FORM CAN BE USED TO RECORD THE DATA FOR THIS INSTALLATION

SYSTEM ARMING (*20–*25)

***20 MASTER CODE**
Enter 4 digits, 0–9 (entry of all 4 is mandatory).
Use of a "9" in the last position inhibits the Ambush feature.

***21 QUICK ARM ENABLE**
If enabled, [#] key can be used instead of security code when arming the system.
Enter 0 for disabled or 1 for enabled.

***22 RF SYSTEM TYPE**
Select the RF system (receiver) type being used.
0 = none; 1 = 5700 (4281); 2 = 5800 (5881)

***23 FORCED BYPASS FUNCTION**
All zones that are bypassed by this function will be displayed after the bypass is initiated.
0 = No forced bypass.
1 = Allows automatic bypass of all open zones.

***24 RF RECEIVER HOUSE ID CODE**
MUST enter for 5700 system's 4281 type receiver, or 5800 system's 5827 keypad.
Enter 01-31 House ID.

***25 WIRED EXPANSION/OUTPUT RELAY USED**
Select expansion/relay unit being used.
0 = none; 1 = 4219; 2 = 4229; 3 = 4204

ZONE SOUNDS AND TIMING (28–38)

***28 SINGLE ALARM SOUNDING PER ZONE** (per armed period)
Enter 0 for no or 1 for yes

***29 FIRE SOUNDER TIMEOUT DISABLE**
Enter 0 to enable the sounder timeout for fire or 1 to disable it.

***30 ALARM BELL TIMEOUT**
External sounder will shut off after time allotted. Enter 1 digit.
0 = No timeout 2 = 8 minutes
1 = 4 minutes 3 = 12 minutes

***38 ENTRY DELAY**
System will wait the time allotted before sounding alarm upon entering. (EXIT delay = Entry delay plus 15 seconds)
0 = 0 seconds 2 = 30 seconds
1 = 20 seconds 3 = 45 seconds

DIALER PROGRAMMING (40–50)

***40 PABX ACCESS CODE**
Enter 4 digits, 0–9, for each PABX digit needed to access an outside line. To skip this field, enter *. If * is entered, no PABX number will be dialed and nothing will appear in this field. End field by entering *41 if not filled. To clear entries from field, press *40*.

***41 PRIMARY PHONE No.**
Enter up to 12 digits, 0-9. Do not fill unused spaces. End field by entering *42 if not filled. To clear entries from field, press *41*.
Note: Back-up reporting (8 calls are made to the secondary phone number if no kiss-off is received after 8 attempts to the primary number) is automatic only if there is a secondary phone number.

***42 SECONDARY PHONE No.**
See field *41 entry info. and Note. End field by entering *43 if not filled. To clear entries from field, press *42*.

***43 SUBSCRIBER ACCOUNT. No.**
Enter digits 0–9; #+11=B; #+12=C; #+13=D; #+14=E; or #+15=F. Enter * as the fourth digit if a 3 digit acct no. (for 3+1 dialer reporting format) is used. Enter 0 as the first digit of a 4-digit acct no. for nos. 0000–0999. End field by pressing * (and press next field) if only 3 digits are used. To clear entries from field, press *43*.

***45 PHONE SYSTEM SELECT**

Enter 1 digit.

If Central Station Rcvr *is not* on WATS line:
0 = Pulse Dial 1 = Tone Dial

If Central Station Rcvr *is* on WATS line:
2 = Pulse Dial 3 = Tone Dial

***46 REPORT FORMAT**

Determine which format is to be used to report to the central station.
Enter 1 digit.

0 = 3+1; 4+1 ADEMCO L/S Standard
1 = 3+1; 4+1 Radionics Standard
2 = 4+2 ADEMCO Lo Speed Standard
3 = 4+2 Radionics Standard
6 = 4+2 ADEMCO Express
7 = ADEMCO Contact ID Reporting
8 = 3+1; 4+1 ADEMCO Lo Speed Expanded
9 = 3+1; 4+1 Radionics Expanded

(Enter * as the 4th digit of *43, if 3+1 dialer reporting is to be used.)

For explanation of these formats, see page 33.

Note: The maximum number of communicator reports during one armed period is 10.

***47 SPLIT/DUAL REPORTING**

Enter 0 to disable (Backup report only)

	TO PRIMARY	TO SECONDARY
1 =	Alarms, Restore, Cancel	Others
2 =	All except Open/Close, Test	Open/Close, Test
3 =	Alarms, Restore, Cancel	All
4 =	All except Open/Close, Test	All
5 =	All	All

***48 15 SECOND DIALER DELAY (BURGLARY)**

Allows time for subscriber to avoid a false alarm transmission.

Enter 0 for no or 1 for yes

***49 PERIODIC TEST MESSAGE**

Select the desired test report interval.

0 = none; 1 = 24 hours; 2 = weekly

Test Report Code entered in field *64 is sent.

***50 SESCOA/RADIONICS SELECT**

0 = Radionics (0-9, B-F reporting)
1 = SESCOA (0-9 only reporting)

***51 CONFIRMATION OF ARMING DING**

Enter 0 for no or 1 for yes.

If selected, ding is external sounder only and will occur at time of kissoff of closing report. If closing report is not programmed, ding will occur at end of exit time.

*56 ZONE ASSIGNMENT/ALARM REPORT CODES (and RF Input ID Learning for 5800 System)

REFER TO THE ZONE ASSIGNMENT TABLE FOR THIS FIELD I N THE PROGRAMMING FORM

(See Centerfold)

This field is used to program zone numbers, zone types, alarm and report codes, and to identify the type of loop input device. This field can also be used for "learning" 5800 series transmitter ID codes and for entering alpha descriptors for zones.

Zone Number (Zn)

Upon entering field *56, enter the zone number that you wish to program (or [0][0] to leave zone programming).

Press [*]. A summary display will come up, showing the status of that zone's program.

If it is programmed satisfactorily, press [#] to back up one step and enter another zone number, if desired.

If the zone is not programmed, or you want to change it, press [*]. A prompt for Zone Type will appear.

Zone Type (ZT)

Enter the zone type code (or change it, if necessary). Default values for zones 05 to 07 are:

Zone No.(Zn):	05	06	07
(ZT) Default:	[09]	[07]	[06]

When the display shows the zone type you want, press [*] to advance to...

Report Code (RC)

The report code consists of 2 hexadecimal digits, each in turn consisting of 2 numerical digits. For example, for a report code of "3C", enter [0][3] for "3" and [1][2] for "C". Enter the numbers and press [*] to advance to...

Input Device (In)

For the hard wired zones of the ***Ademco via30*** (HW), the auxiliary wired expansion zones on a 4219 or 4229 (AW), and the zones for a 5700 system's transmitters (RF), the Input Device types are automatically displayed (Panic, Duress, and Tamper inputs are not applicable). For a 5800 system's transmitters, "RF" is initially displayed, but should be changed to "UR" (Unsupervised RF, enter 4) for units that can be carried off-premises, or to "BR" (Button type RF, enter 5) for small transmitters that cannot be supervised. Check the instructions that come with the transmitter for the proper input. When all is okay, press [*] to advance to...

Learned RF Input (L)

Note: Where a "Yes–No" is asked by the console, pressing the [*] or [0] for No is equivalent.

Applicable to a 5800 system only

This request will be to learn the transmitter input's ID code. (The ID codes can be learned here or via field *83.)

If "yes" is selected, open and close (or close and open), or press and release the particular input to the transmitter twice. After the first time, a single short beep will occur. After the second time, two short beeps will mean that the control has accepted that transmitter into the system. Because of the characteristics of the receiver, allow about 8 seconds between transmissions from button units. If a long beep occurs, it means that the particular transmitter input has previously been registered in the system.

Mark the zone number on the transmitter.

If all is okay, press [*].

Custom Alpha Editing

For all zone types, the next request is to enter alpha descriptors for the zones. The entry may be done now or may be done at a later time via field *82.

See the ALPHA DESCRIPTION ENTRIES section on page 30.

When all entries to be made for the zone at this time are complete, the next zone number can be entered for programming, or zone programming can be ended by entering [0][0] as the next "zone number".

Notes:

- *When using a 5801,* the Function "4" button should always be used and learned by the system.
- *In field *56, at the summary line for each zone, the entered values can be checked.* If it is desired to change anything, press [#] to move to the previous entry. Press [#] a number of times to move to earlier entries. Press [*] to move to later entries again.
- *Zone entries can be reviewed* by pressing [#][5][6]. Changes cannot be made here, so this is safer for review. Enter the first zone number to be viewed and press [#]. To view each zone, press [#] and the zone number will advance to the next programmed zone. When the end of the list is reached, press [0][0] to exit. This method of exiting may also be done at any time during the review.
- *To either temporarily or permanently remove a zone from the system,* go into programming mode and press [*][5][6]. Enter the zone number and press [*]. At the Zone Type prompt, enter [0][0] and [*]. This sets the type of the zone to Not Used. The next prompt will be "Delete Zone?". "Yes" will permanently remove the zone from the system while "No" will disable it but retain all data except the original zone type.You can then go back to this zone later and put back an active Zone Type to re-enable it.
- *An ID code that has been learned for a 5800 system will not be deleted* if the zone is disabled as described above. *If only the physical transmitter is to be removed or changed (i.e., its ID code deleted), it can be done in field *56 or *83.* In programming mode, press [*][5][6], enter the zone number, and press [*] multiple times until the cursor is under the Learned RF Input (L) position. This is the specific loop or button on the transmitter that has been learned for that zone. If a [0] is entered at this point, a prompt "Delete S/N?" will appear. If "Yes" is entered, this specific ID code will be deleted from the system.

(continued on page 27)

TO PROGRAM SYSTEM STATUS & RESTORE REPORT CODES (*60–*75)

With a 3+1 or 4+1 Standard Format: Enter a code in the *first* box: 1-9, 0, B, C, D, E, or F. Enter "#+10" for 0, "#+11" for B, "#+12" for C, "#+13" for D, "#+14" for E, "#+15" for F.

A "0" (*not* "#+10") in the *first* box will disable a report.

A "0" (*not* "#+10") in the *second* box will result in automatic advance to the next field when programming.

With an Expanded or 4+2 Format: Enter codes in *both* boxes (1st and 2nd digits) for 1-9, 0, or B-F, as described above.

A "0" (*not* "#+10") in the *second* box will eliminate the expanded message for that report.

A "0" (*not* "#+10") in *both* boxes will disable the report.

With Ademco Contact ID Reporting: Enter any digit (other than "0") in the *first* box, to enable zone to report This is an "enabling" code only and is disregarded in the actual reporting to the central office. Entries in the *second* boxes will be ignored.

A "0" (*not* "#+10") in the *first* box will disable the report.

See examples on programming form.

SYSTEM STATUS REPORT CODES (*60–*68)

***60 TROUBLE REPORT CODE**
See box above.

***61 BYPASS REPORT CODE**
See box above.

***62 AC LOSS REPORT CODE**
See box above.

***63 LOW BAT REPORT CODE**
See box above.

***64 TEST REPORT CODE**
See box above.

***65 OPEN REPORT CODE**
See box above.
2nd digit = User #, if expanded or 4+2 reporting is selected.

***66 CLOSE REPORT CODE**
See box above.
2nd digit = User #, if expanded or 4+2 reporting is selected.
Report also sent for Arming STAY, if contact ID format is used.

***67 RF XMTR. LOW BATTERY REPORT CODE**
See box above.

***68 CANCEL REPORT CODE**
See box above.

RESTORE REPORT CODES (*69–*75)

***69 GROUP RESTORES FOR TROUBLE, RF LOW BATTERY, BYPASS**
Enter 0 for no (report for each restore)
or 1 for yes (report after all zones restored).
Note: "1" not applicable to Contact ID reporting.

***70 ALARM RESTORE REPORT CODE, 1ST DIGIT**
2nd digit is automatically sent as the 2nd digit of the zone alarm report code programmed in field *56, if expanded or 4+2 reporting is selected.

***71 TROUBLE RESTORE REPORT CODE**
See box above. Trouble restore is reported only if all troubles in the system are restored, if field *69 is enabled.

***72 BYPASS RESTORE REPORT CODE**
See box above.

***73 AC RESTORE REPORT CODE**
See box above.

***74 LOW BAT RESTORE REPORT CODE**
See box above.

***75 RF XMTR. LOW BATTERY RESTORE CODE**
See box above.

(continued from page 26)

OUTPUT RELAYS AND ZONE LISTS (*80, *81)

Output Relay Displays

↓

*80 OUTPUT RELAYS

*Applicable only if field *25 is programmed for a 4229 or 4204...otherwise skip this field.*

REFER TO THE OUTPUT RELAY TABLE FOR THIS FIELD IN THE PROGRAMMING FORM.

Enter Relay No.
(00 = Quit) 01

Upon entering field *80, this screen will appear. Enter the Relay Number 01 or 02 for a 4229, or 01, 02, 03, or 04 for a 4204 (or 00 to end these entries). Press the [*] key to advance.

The data is keyed in and entered for this and the following screens by pressing [*]. To back up to check an entry, press [#] for each position. Press [*] to go forward again.

02 A EV ZL ZT
STT 0 0 0 00

This screen displays a summary of the current relay START programming (for this example, relay 02 has been selected). Press the [*] key to advance.

02 A EV ZL ZT
STP – – 0 00

This screen displays a summary of the current relay STOP programming. Press the [*] key to advance.

02 Relay Action
No Response 0

Action (A): Enter the desired relay action. Press the [*] key to advance.

0 = Not Used **2 = Close and Stay Closed**
1 = Close for 2 seconds **3 = ContinualPulses (1 sec).On and Off**

02 Start Event
Not Used 0

Event (EV): Enter the event to START the relay. Press the [*] key to advance.

0 = Not used **2 = Fault**
1 = Alarm **3 = Trouble**

02 Start: Zn List
No List 0

Zone List (ZL): If a zone list will be used to START the relay action, enter the zone list number (to be programmed in field *81): 1, 2, or 3. If not used, enter 0. Press the [*] key to advance.

02 Start: Zn Typ
Zone Disabled 00

Zone Type/System Operation (ZT): If a zone type or system operation will be used to START the relay action, enter the appropriate two digit code. If not, enter 00. Press the [*] key to advance.

CHOICES FOR ZONE TYPES

00 = No Response (Not Used)		
01 = Entry/Exit	05 = Trouble Day/Alarm Night	08 = 24 Hr Aux
03 = Perimeter	06 = 24 Hr Silent	09 = Fire
04 = Interior Follower	07 = 24 Hr Audible	10 = Interior w/Delay

CHOICES FOR SYSTEM OPERATION

20 = Arming–Stay	33 = Any Burglary Alarm	38 = Chime
21 = Arming–Away	34 = Code + # + 7 Key Entry	39 = Any Fire Alarm
22 = Disarming (Code + OFF)	35 = Code + # + 8 Key Entry	40 = Bypassing
31 = End of Exit Time	36 = At Bell Timeout**	41 = AC Power Failure
32 = Start of Entry Time	37 = 2 times Bell Timeout**	42 = System Battery Low

**Or at Disarming, whichever occurs earlier.

02 Stop: Zn List
No List 0

***Restore Of* Zone List (ZL):** If a zone list will be used to STOP the relay action, enter the zone list number (to be programmed in field *81): 1, 2, or 3. If not used, enter 0. Press the [*] key to advance.

02 Stop: Zn Typ
Zone Disabled 00

Zone Type/System Operation (ZT): If a zone type or system operation will be used to STOP the relay action, enter the appropriate two digit code (see the "ZT" choices listed above). If not, enter 00. Press the [*] key to advance.

02 A EV ZL ZT
STT 0 0 0 00

This screen again displays a summary of the current relay START programming . Press the [*] key to advance.

02 A EV ZL ZT
STP – – 0 00

This screen again displays a summary of the current relay STOP programming. Press the [*] key to return again to the first screen so that the next relay number to be programmed can be entered, or enter [0][0] to end relay programming.

Note: *Previously entered data can be reviewed* by pressing [#] [8] [0]. After the relay number is chosen, press [#] to go to the next screens. *This is a review mode only, and data cannot be changed.*

Example of Output Relay Programming

FOR OTHER EXAMPLES SEE THE TABLE ON PAGE 44

Let us light an indicator when any one of 3 specific zones are faulted or when any 24 hour aux. zone is disturbed. We want to turn off the indicator manually without affecting the arming status of the system.

In field *80 we choose Output Relay 01 and program the Action (A) to be "2" (Close and stay closed). The Event we are looking for to *start* the relay action is a fault, so we will program "2" in (EV). We will use Zone List 1 for the 3 specific zones, so will program "1" in (ZL), (and will program these 3 zones in field *81's Zone List 1).

The second condition for turning on the indicator is triggering a 24 hour aux. zone (Zone Type 08), so we will program (ZT) as "08".

To *stop* the relay action and turn off the indicator, we do not want to use a restore of any zone, so we will program a "0" for the *Restore of* Zone List (ZL). We will choose a manual entry of User Code + [#] + [7] to turn it off, so will program (ZT) as "34".

If no other relay is to be programmed we go to field *81 and program the 3 specific zones in Zone List 1.

*81 ZONE LISTS FOR OUTPUT RELAYS

*Applicable only if field *25 is programmed for a 4229 or 4204...otherwise skip this field.*

Zone List Displays

Zone List No.
(00 = Quit) 01

Upon entering field *81, this screen will appear. Enter the Zone List Number 01, 02, or 03 to program (or 00 to end these entries). Press the [*] key to advance.

In the following displays, zone list 03 has been selected for programming.

03 Enter Zn Num.
(00 = Quit) 00

Enter each zone number to add to the zone list by first entering the zone number, then the [*] key (ex., 01*, 02*, 03*). After all zones desired are entered, enter 00 to advance.

03 Del Zn List?
0 = No 1 = Yes 0

To delete the zone list, enter 1 (Yes). All zones in the zone list will be deleted automatically. and programming will return to the first screen.

To save the zone list, enter 0 (No) to advance.

03 Delete Zone?
0 = No 1 = Yes 0

To save the entire zone list, enter 0 (No) and programming will return to the first screen.

To delete a zone or zones in a zone list enter 1 (Yes) to advance.

03 Zn to Delete?
(00 = Quit) 00

Enter each zone to be deleted from the list, followed by the [*] key. After all zones to be deleted are entered, enter 00 to return to the first screen so that another list can be programmed, if desired. .

Notes:
- Any list may include any or all of the system's zone numbers.
- A zone list can be assigned to more than one output relay.
- *If you only want to review what has been programmed previously,* enter [#][8][1]. The review can be advanced by using the [#] key. When finished, enter [0][0] to quit. No programmed values can be disturbed in this mode.

*82 CUSTOM ALPHA EDITING

(Also entered from field *56)

See ALPHA DESCRIPTION ENTRIES section on page 30.

*83 ADD/DELETE 5800 RF INPUT IDs

See procedure in last paragraph of field *56.

DOWNLOAD INFORMATION (*94, *95)

*94 DOWNLOAD PHONE NUMBER

Enter up to 12 digits; 0-9. Do not fill unused spaces.
End field by entering *. To clear entries from field, press *94*.

*95 RING DETECTION COUNT FOR DOWNLOADING

Enter number of rings before control picks up phone line (or 0 or 15).

0 = disable station initiated download
1-14 = # of rings
15 = answering machine defeat

***96 INITIALIZE DOWNLOAD ID AND SUBSCRIBER ACCT. No. FOR DOWNLOADING**
(No data entry required, loads defaults)

***97 SET ALL PROGRAM FIELDS TO DEFAULT VALUES**
(No data entry required)

TO EXIT PROGRAMMING MODE (*98 Or *99)

Press *98 or *99 if exiting programming, or next Field No. if continuing.

***98 EXITS PROGRAMMING MODE**
and *prevents* re-entry by :
Master Code + CODE + 0

***99 EXITS PROGRAMMING MODE**
and *allows* re-entry by:
Master Code + CODE + 0
or by:
Power-up + "*" + "#".

ALPHA DESCRIPTION ENTRIES

See the ALPHA FIXED DICTIONARY and CHARACTER CHART on page 32.

Assigning Zone Descriptors

The 5137 Console used with the ***Ademco via30*** can have a user-friendly English language description/location of all protection zones, keypad panics, and RF receiver supervision faults programmed into the system. Each description can be composed of a combination of words (up to a maximum of 3) selected from a vocabulary of 244 words stored in memory (see page 32). In addition, up to 5 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 that zone's location will be displayed at the console.

Note: Alpha Descriptor entry can be done locally at the 5137 Console or remotely using a 4130PC Downloader. The 5137 procedure is described below.

Entering Zone Descriptors

1. The descriptor can be entered when the zone is being defined in field *56 c it can be entered later, in field *82.

   The console 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.

   [6] Toggles between alphabet and actual word list; used to accept entries.

   [8] Saves the zone description in the system's memory.

2. Key [*][0][1] to begin entering the description for zone 1 (key [*][0][2] for zone 2, [*][0][3] for zone 3, etc.). *If nothing was entered previously*, 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. *If there already is a description for the zone*, the description will appear (with no cursor, since this is a display mode). *If it is desired to enter or change a description*, key in [*] + Zone Number again. A flashing cursor will now appear.

3. **One of two methods of entering the words can now be used** *(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 on page 32** (e.g., [0][1][3] for BACK). Press [6] in order to save the word and proceed, **or...**

   b) **Select the first letter of the desired description** (note that "A" is already displayed). Press key [3] repeatedly to advance through the alphabet (e.g., to "B"), or key [1] to go backward. Then press [6] to display the first available word beginning with the desired letter (e.g., BABY). Next, press [3] repeatedly to move forward, or [1] to move backward, until the desired word is displayed (e.g., BACK). Then press [6] to accept the word and toggle back to the alphabet list.

4. For selection of the next word (e.g., DOOR), repeat steps 3a or 3b. For 3b, press key [3] until the first letter of the next word appears (e.g., "D"). Then press [6] to display the first available word beginning with that letter (e.g. DAUGHTERS). Press [3] repeatedly until the desired word (e.g., DOOR) appears. To accept the word, press [6], which toggles back to the alphabet list.
5. When all desired words have been entered, press [8] to store the description in memory.
6. *In field *56*, the next zone number in sequence will now be displayed for *complete* zone information entry.

   *In field *82*, enter [*][N][N], where NN is the next zone that you want to review or for which you want to program a descriptor. To modify the descriptor, enter [*][N][N] again. To exit this mode, press [*][0][0].

Adding Custom Words

Up to five installer-defined words can be added to the built-in vocabulary. Each of the five "words" can actually consist of a "word string" of *several* words, but no more than *ten* characters can be used for each word or word string.

1. Select CUSTOM WORD mode when the question arises.

   The console keys perform the following functions:

   [3] Advances through alphabet in ascending order.

   [1] Moves through alphabet in descending order.

   [6] Selects desired letter; moves cursor one space to right.

   [4] Moves cursor one space to left.

   [7] Inserts a space at the cursor location, erasing any character located there.

   [8] Saves the new word in the system's memory.
2. Key the number ([1]–[5]) of the custom word or word string to be created (for example, if you are creating the *first* custom word or word-string, enter [1], for the *second*, enter [2], etc.). A cursor will now appear at the beginning of the second line.
3. **One of two methods of entering the custom word's characters can now be used** *(refer to the CHARACTER LIST of letters, numbers, and symbols on the next page)*:

   Important: Custom words must begin with an *alphabetic* character. If a number or symbol is used as the first character, the word will not be saved.

   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"), **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.
4. When you have reached the desired character, press [6] to select it. The cursor will then move to the right, in position for the next character.
5. Repeat steps 3 and 4 to creat the desired word(s). Note that the [4] key can be used to move the cursor to the left, if necessary, and that key [7] can be used to enter a blank (or erase an existing character). Remember, no word or word-string can exceed 10 characters.
6. Press the [8] key to save the custom word(s) and return to the "CUSTOM ?" display. Repeat steps 2-5 for other custom words to be entered. To change a custom word, just overwrite it. If no more are to be entered now, press [0] to return to the Descriptor entry. The custom word(s) will be automatically added to the built-in vocabulary.

When zone descriptors are being entered as described in step 3a of the *Entering Zone Descriptors* section, the custom word numbers are 250 to 254 for words 1 to 5 respectively. When being entered as described in step 3b of that section, each word will be found at the end of the group of words that begin with the same letter as it does.

ALPHA FIXED DICTIONARY

(For Entering Zone Descriptors)

000	*(Word Space)*	054	DISCRIMINATOR	105	KITCHEN	155	RADIO	209	VALVE
001	AIR	055	DISPLAY			156	REAR	210	VAULT
002	ALARM	056	DOCK	106	LAUNDRY	157	RECREATION	211	VIBRATION
003	ALCOVE	057	DOOR	107	LEFT	158	REFRIG	212	VOLTAGE
004	ALLEY	058	DORMER	108	LEVEL	159	REFRIGERATION		
005	AMBUSH	059	DOWN	109	LIBRARY	160	RF	213	WALL
006	AREA	060	DOWNSTAIRS	110	LIGHT	161	RIGHT	214	WAREHOUSE
007	APARTMENT	061	DRAWER	111	LINE	162	ROOM	215	WASH
008	ART	062	DRIVEWAY	112	LIQUOR	163	ROOF	216	WEST
009	ATTIC	063	DRUG	113	LIVING			217	WINDOW
010	AUDIO	064	DUCT	114	LOADING	164	SAFE	218	WINE
011	AUXILIARY			115	LOCK	165	SCREEN	219	WING
		065	EAST	116	LOOP	166	SENSOR	220	WIRELESS
012	BABY	066	ELECTRIC	117	LOW	167	SERVICE	221	WORK
013	BACK	067	EMERGENCY	118	LOWER	168	SHED		
014	BAR	068	ENTRY			169	SHOCK	222	XMITTER
015	BARN	069	EQUIPMENT	119	MACHINE	170	SHOP		
016	BASEMENT	070	EXECUTIVE	120	MAGNETIC	171	SHORT	223	YARD
017	BATHROOM	071	EXIT	121	MAIDS	172	SHOW		
018	BED	072	EXTERIOR	122	MAIN	173	SIDE	224	ZONE (No.)
019	BEDROOM			123	MASTER	174	SKYLIGHT	225	ZONE
020	BELL	073	FACTORY	124	MAT	175	SLIDING		
021	BLOWER	074	FAILURE	125	MEDICAL	176	SMOKE	226	0
022	BOILER	075	FAMILY	126	MEDICINE	177	SONIC	227	1
023	BOTTOM	076	FATHERS	127	MICROWAVE	178	SONS	228	1ST
024	BOX	077	FENCE	128	MONEY	179	SOUTH	229	2
025	BREAK	078	FILE	129	MONITOR	180	SPRINKLER	230	2ND
026	BUILDING	079	FIRE	130	MOTHERS	181	STAMP	231	3
027	BURNER	080	FLOOR	131	MOTION	182	STATION	232	3RD
		081	FLOW	132	MOTOR	183	STEREO	233	4
028	CABINET	082	FOIL	133	MUD	184	STORE	234	4TH
029	CALL	083	FOYER			185	STORAGE	235	5
030	CAMERA	084	FREEZER	134	NORTH	186	STORY	236	5TH
031	CAR	085	FRONT	135	NURSERY	187	STRESS	237	6
032	CASE	086	FUR			188	STRIKE	238	6TH
033	CASH	087	FURNACE	136	OFFICE	189	SUMP	239	7
034	CCTV			137	OIL	190	SUPERVISED	240	7TH
035	CEILING	088	GALLERY	138	OPEN	191	SUPERVISION	241	8
036	CELLAR	089	GARAGE	139	OPENING	192	SWIMMING	242	8TH
037	CENTRAL	090	GAS	140	OUTSIDE	193	SWITCH	243	9
038	CIRCUIT	091	GATE	141	OVERFLOW			244	9TH
039	CLIP	092	GLASS	142	OVERHEAD	194	TAMPER		
040	CLOSED	093	GUEST			195	TAPE		
041	COIN	094	GUN	143	PAINTING	196	TELCO	250	Custom Word #1
042	COLD			144	PANIC	197	TELEPHONE		_____
043	COATROOM	095	HALL	145	PASSIVE	198	TELLER		
044	COLLECTION	096	HEAT	146	PATIO	199	TEMPERATURE	251	Custom Word #2
045	COMBUSTION	097	HIGH	147	PERIMETER	200	THERMOSTAT		_____
046	COMPUTER	098	HOLDUP	148	PHONE	201	TOOL		
047	CONTACT	099	HOUSE	149	PHOTO	202	TRANSMITTER	252	Custom Word #3
				150	POINT	203	TRAP		_____
048	DAUGHTERS	100	INFRARED	151	POLICE				
049	DELAYED	101	INSIDE	152	POOL	204	ULTRA	253	Custom Word #4
050	DEN	102	INTERIOR	153	POWER	205	UP		_____
051	DESK	103	INTRUSION			206	UPPER		
052	DETECTOR			154	QUAD	207	UPSTAIRS	254	Custom Word #5
053	DINING	104	JEWELRY			208	UTILITY		_____

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		

Section 7. SYSTEM COMMUNICATION

Report Code Formats

The Report Codes for Alarm, System Status, and Restore for Zones shown in fields *56-*75 above can be selected in field *46 to report to the central station in any of the following formats:

The 3+1 and 4+1 Standard formats comprise a 3 (or 4) digit subscriber number and a single digit report code (e.g. Alarm, Trouble, Restore, Open, Close).

The 3+1 and 4+1 Expanded formats comprise a 3 (or 4) digit subscriber number, and a single digit report code, followed by a second line where the report code is repeated 3 (or 4) times and followed by another number (normally the zone number) or user ID related to that report.

The 4+2 formats comprise either a 4 digit subscriber number and two digit report code, or a 4 digit subscriber number and single digit report code, immediately followed by the zone number (normally) or user ID.

The Ademco Contact ID Reporting format comprises a 4 digit subscriber number, 1 digit event qualifier ("new" or "restore"), 3 digit event code, 2 digit "00", and 3 digit zone, contact ID, user, or system status number (see next page).

Report	3+1/4+1 Standard	3+1/4+1 Expanded	4+2 Expanded
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 $R_AR_AR_A(R_A)A_C$	SSSSR_A A_C
LoBat Res.	SSS(S) R_L	SSS(S) R_L	SSSS R_LL_B $RRR(R_L)L_B$
Trouble Res.	SSS(S) R_T	SSS(S) R_T $R_TR_TR_T$ $(R_T)t$	SSSS R_Tt
Bypass Res.	SSS(S) R_B	SSS(S) R_B $R_BR_BR_B$ $(R_B)b$	SSSS R_Bb

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: [*] & [#] = 7, [1] + [*] = 95, Duress = 8, [3] + [#] = 96, Tamper = 9

Ademco Contact ID Reporting takes the following format:

CCCC Q EEE GG ZZZ

where: CCCC = Customer (subscriber) ID
Q = Event qualifier, where:
E = new event, and R = restore
EEE = Event code (3 hexadecimal digits)
Note: For a complete list of event codes, refer to the central office receiver manual.
GG = Always 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.

Section 8. REMOTE PROGRAMMING AND CONTROL (DOWNLOADING)

General Information

The ***Ademco via30*** can be remotely programmed from an IBM compatible Personal Computer (PC), a Hayes Modem, and Ademco's V-LINK® Software (as specified below).

Programming the control from a remote location is protected against compromise by someone attempting to defeat the system, using multi-levels of security protection:

1. **Security Code Handshake:** An 8-digit download ID code must be matched between the control and the downloader.
2. **Site Initiated Remote Programming:** The installer or subscriber initiates the callback from the subscriber premises (by pressing MASTER CODE + # + 1) while disarmed. All parameters can then be downloaded via the phone lines using a personal computer.
3. **Station Initiated Remote Programming:** The operator calls the site from your office to initiate the download call. The control hangs up and then calls back the PC via the preprogrammed telephone number. The unit can then be uploaded, downloaded, or controlled from your office.
4. **Data Encryption:** Data passed between the PC and the control is encrypted for security so that it is very difficult for a foreign device tapped into the phone line to take over communication and substitute system compromising information.

Equipment Required

At the premises:

- ***Ademco via30*** and console.

At the installer's office/home:

- An IBM PC compatible computer.
- *Either* a Hayes brand Smartmodem 1200 [Level 1.2 or higher external or Level 1.1 or higher (with 4 position DIP switch) internal style],
  or a Hayes brand Optima 24 Plus FAX96 Modem.
- A No. 4130PC Downloading Software Diskette (Rev. 2.2, or higher).
- Appropriate interconnecting cables.

Programming

The downloading system can perform many functions when in communication with the control unit. Besides uploading and downloading, the status of the system can be observed and various commands can be initiated, as follows:

- 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 account takeover).
- Command the System to Upload a Copy of its Resident Program to the office.
- Read: Arming Status, AC Power Status, Lists of Faulted Zones, Bypassed Zones, Zones Currently in Alarm, Zones Currently in Trouble, and RF Sensors with Low Battery Conditions.

Notes: *After the control and the PC have established valid communication, each* console on the system will become inactive and will display "CC" or "MODEM COMM.". The control, however, will still be scanning its zones and looking for alarms. If an alarm does occur, after communication is broken off, alarms are sounded and the proper dialer reports are sent to the central station. The consoles will become active after the download communication is terminated. The detailed operation of the download functions is covered in the installation instructions for the 4130PC Downloading Software Diskette.

Remote Programming Advisory Notes

- Alarm and trouble reporting may be delayed during the time that the system and the Downloader are linked to each other following a valid exchange of codes, but the proper message will get through to the Central Station after the link is broken.
- Keypad entries are ignored during the time interval stated above.
- A copy of the program downloaded may be produced from the IBM PC compatible computer, using the product's internal report generator, when an optional printer is connected (consult your PC manual for proper printer and connections).
- Program Upload Time—One minute fifteen seconds for a complete program.
- Program Download Time—Depends on changes. Average time, one minute.

Section 9. TESTING THE SYSTEM

Procedure

After installation is completed, the Security System should be carefully tested.

1. With the System in the disarmed state, check that all zones are intact. If **NOT READY** is displayed, press the **[*]** key to display the faulted zone(s). Restore faulted zone(s) if necessary, so that **READY** is displayed. Fault and restore every sensor individually to assure that it is being monitored by the system.
2. Enter the **security code** and press the **TEST** key. The outside sounder will sound for 1 second. The console should sound 3 beeps each time a contact is faulted. A test report should be transmitted (if programmed) to the Central Station immediately. If the backup battery is discharged or missing, the sounder may not turn on and a LOW BATTERY report will be transmitted with a TEST report. The console will beep once per minute as a reminder that the system is in the Test Mode. To turn off the test mode enter the **security code** and press the **OFF** key.

   Note: For 5800 systems, triggering a zone set to Arm Away, Arm Stay, or Disarm will take the system out of TEST and cause that action.

   Alarm messages will be sent to the central station during the following tests 3 and 4. Notify them *in advance* that tests will be in progress.
3. Arm the system and fault one or more zones. After 15 seconds (if optional dialer delay is selected), silence alarm sounder(s) by entering the **code** and pressing **OFF.** Check Entry/Exit delay zones.
4. Check the keypad-initiated alarms that are in the system by pressing the Panic key pairs. If the system has been programmed for audible emergency, the console will emit a steady alarm sound, and **ALARM and zone number** will be displayed. Silence the alarm by entering the **security code** and pressing **OFF.**

   If the system has been programmed for silent emergency, there will be no audible alarms or displays, but a report will be sent to the central station.
5. If output Relay Units have been installed, test their programmed action.
6. Notify the central station when all tests are finished, and verify results with them.
7. To test the wireless part of the system and the RF Receiver, 3 additional test modes are available:
   a. **HOUSE ID SNIFFER MODE** (*not applicable to, or necessary with, 5800 RF system*)**:** By pressing **Master code + # + 2**, a house code "sniffer" mode is enabled. The console will display the house code of any RF transmission it receives. In this way, you can check that you are not using the same house code as any nearby system (suggested test period: approx. 2 hrs). This mode can be exited by keying the **Master code + OFF.**
   b. **TRANSMITTER SNIFFER MODE:** Pressing **Master code + # + 3** initiates a procedure to check that all transmitters have been properly programmed. The console will display all zone numbers of wireless units programmed into the system. As the system receives a signal from each of the transmitters, the zone number of that transmitter will disappear from the display. The transmitter codes may be checked upon installation, or in an installed system. All the wireless addresses should disappear after about 1-1/2 hours. This mode can be exited by keying **Master code + OFF.** (***Note:*** With a 5800 RF system, a transmitter not learned will not turn off its zone number.)
   c. **GO/NO GO TEST MODE:** By pressing **Master code + # + 4**, a mode similar to the user test mode (code + TEST) is entered, but the wireless receiver gain is reduced. Checking in this mode assists in determining good mounting locations for the transmitters when the system is being installed and verifies that the RF transmission has sufficient signal amplitude margin for the installed system. Exit the mode by entering **Master code + OFF.**

Note: If the battery standby capacity is exceeded during an AC power failure, the control will automatically shut itself off.

TROUBLESHOOTING GUIDE

S Y S T E M		
SYMPTOM	**POSSIBLE CAUSE**	**REMEDY**
1. Transmitted signal not received at 4281/5881.	1a. Transmitter or 4281/5881 not properly powered.	1a Check or change transmitter's battery. Check ***Ademco via30's*** AC power.
	1b. Transmitter and 4281 not set to same house code.	1b. Check code switches inside transmitter. Must match with RF House Code programmed in ***Ademco via30***.
	1c. 5827 not being received by 5881.	1c. House code for 5827 must be programmed into ***Ademco via30***.
	1d. Transmitter located too for from 4281/5881.	1d. Move transmitter or 4281/5881.
	1e. Metal shielding between transmitter and 4281/5881.	1e. Check for large metal obstructions, then relocate transmitter if necessary.
	1f. Transmitter malfunctioning.	1f. Verify by activating 4281/5881 with another, similar transmitter. If O.K.now, return defective transmitter.
	1g. 4281/5881 malfunctioning.	1g. Verify by making sure other transmitters cannot activate 4281/5881. If defective, replace and return original 4281/5881.
	1h. Transmitter number (zone) not programmed.	1h. Verify programming.
2. Transmitter zone number appears during Transmitter Sniffer mode, but does not clear.	2a. Transmitter zone type (ZT) is set to 00 (Not Used).	2a. Set ZT to a valid active zone type in field *56.
	2b. Transmitter battery not installed.	2b. Install proper battery.
	2c. 5700 System transmitter's DIP switch not set properly (house ID and transmitter ID).	2c. Check and set the DIP switch.
	2d. 5800 System transmitter not "learned" in system.	2d. "Learn" unit in field *56 or *83.
	2e. With 5700 System, no response at all to *any* transmitter.	2e. Check 4281 receiver. It must be Rev. D or later and have "N5334V1" marked on the large integrated circuit near the connector.
3. Low Battery message on console.	3a. "Bat" alone.	3a. System battery is low or missing.
	3b. "Bat" + "00".	3b. Remote RF keypad battery is low.
	3c. "Bat" + "nn".	3c. Transmitter for zone nn has a low battery.
4. Periodic beep(s) from console.	4a. System is in TEST mode.	4a. Enter "Code" + OFF to exit TEST mode.
	4b. A transmitter low battery has occurred and is displayed.	4b. Enter "Code" + OFF and replace the battery.
	4c. A supervision CHECK has occurred.	4c. Check the transmitter indicated. Restore communication to the receiver to cancel the condition.
5. With 5800 System, no response to a transmitter in normal operation, although zone number clears during Transmitter Sniffer mode.	Put control in TEST mode. If zone does not respond, try operating the tamper switch or another input to the transmitter.	
	5a. If another input causes the zone to be displayed, the wrong input was "learned" when programming.	5a. Delete input's serial number (not the zone), and learn the proper input (see field *56).
	5b. If no response at all from this transmitter, this physical transmitter has not been learned by the system. Transmitter Sniffer display is being cleared by another unit programmed for this zone.	5b. Determine which transmitter is programmed for this zone and reprogram as necessary.
6. Nuisance or phantom alarm.	6a. Sensors not properly installed, wired, or monitored.	6a. Check installation to see if in accordance with established procedure.
	6b. Nearby neighbor has 5700 system (4281) with same house code.	6b. Check with central monitoring station for neighbors with systems. Range can be 300 feet. Change house code if necessary.
	6c. Universal transmitter (5715/5817) programmed wrong.	6c. Check programming switches on transmitter.

(continued)

TROUBLESHOOTING GUIDE (continued)

SYSTEM (continued)		
SYMPTOM	**POSSIBLE CAUSE**	**REMEDY**
7. Intrusion alarm for no apparent reason.	7a. Protected door or window opened while system armed.	7a. Check with all occupants of protected home.
	7b. Improper user operation of exit/entry delays.	7b. Check setting of entry delay . Exit delay is 15 seconds longer than the entry delay time. Remind user of same.
	7c. Magnets located too far from switches, and/or doors and windows not properly aligned.	7c. Check all openings for proper switch and magnet orientation.
	7d. Magnetic contacts improperly connected or wire broken.	7d. Check wiring connections. Be sure wires are properly stripped and tightly fastened to screw terminals.
	7e. Entry door programmed as "instant".	7e. Check and revise program. Reprogram transmitter number.
	7f. Loose fitting door or window being rattled by wind or vibrations.	7f. Mount magnet closer to contact.
8. Repeated low battery signal.	8a. Transmitter located where temperature drops below 32° F.	8a. Change location. Use magnetic contacts to protect opening.
	8b. Poor quality or unspecified battery in transmitter.	8b. Check battery. Use only 9V Duracell MN1604 or equivalent for 5700 System. Use only 3V lithium for 5800 System.
	8c. Transmitter malfunctioning.	8c. Replace faulty transmitter.

CONTROL		
SYMPTOM	**POSSIBLE CAUSE**	**REMEDY**
1. "AC POWER" light off.	1a. Interrupted AC power supply.	1a. Check transformer connection and power line circuit breaker.
2. Digital communicator message not being received.	2a. ***Ademco via30*** in TEST mode.	2a. Remove from TEST mode.
	2b. Telephone connection not secure.	2b. Check all connections.
	2c. Digital communicator malfunctioning.	2c. Check with a different ***Ademco via30***.
	2d. Telephone number in program needs prefix or access code.	2d. Program prefix or access code into ***Ademco via30***.
	2e. Telephone call to central monitoring station requires operator assistance.	2e. ***Ademco via30*** system cannot work in this situation.
3. Does not arm properly.	3a. Ready light not on.	3a. Try Bypass arming.
4. *Ademco via30* doesn't respond to keystrokes on console.	4a. "CC" or "MODEM COMM" displayed.	4a. System is in communication with downloader at central station. Wait until download session is finished.
	4b. "d1" or "System Busy" displayed.	4b. System has just been powered and is in its one minute initialization. To bypass this time, press '#' + '0'.
	4c. "E4" or "E8" displayed.	4c. More zones have been programmed than the zone expansion modules can handle. Delete some zones or use a higher capability RF receiver.

SMOKE DETECTOR		
SYMPTOM	**POSSIBLE CAUSE**	**REMEDY**
1. Detector alarms, no apparent reason.	1a. Dust, dirt in sensing chamber.	1a. Clean unit's sensing chamber with vacuum cleaner per unit's instructions.
	1b. Improper location.	1b. See unit's instructions for locations to avoid. Relocate as necessary.
	1c. Unit malfunctioning.	1c. Replace detector.
2. Detector's siren sounds.	2a. Unit not receiving required power.	2a. Check for proper installation of battery. Try new battery.
	2b. Unit malfunctioning.	2b. Replace detector.

Section 10. SPECIFICATIONS AND ACCESSORIES

SPECIFICATIONS

***Ademco via30* SECURITY CONTROL**

1. **Physical:** 12-1/2" W x 14-1/2" H x 3" D (318mm x 368mm x 76mm)

2. **Electrical:**

VOLTAGE INPUT: 16.5VAC from plug-in 25VA transformer, Ademco No. 1321/TF2 (in U.S.A.)

Note: For Canadian installations, a No. 1321CN transformer must be used.

RECHARGEABLE BACK-UP BATTERY: 12VDC, 4AH (Gel type). Charging Voltage: 13.8VDC.

ALARM SOUNDER: 12V, 2.0Amp output can drive 12V BELLS or can drive one or two 702 (**series** connected) self-contained 20-watt sirens. Do **not** connect two 702s in parallel.

AUXILIARY POWER OUTPUT: 12VDC, 500mA max. Interrupts for smoke detector reset.

Note: *For UL installations, Alarm Sounder plus Auxiliary Power currents should not exceed 600mA total.*

STANDBY TIME: 5 HRS with Auxiliary load of 500mA (using 4AH battery).To determine total standby battery load, add 100mA to total Aux. power output and remote console currents.

FUSES: Battery (3A) No. 90-12
Sounder (2A) No. 90-2

3. **Communication:**

FORMATS SUPPORTED:

Ademco Express,
10 characters/sec, DTMF (TouchTone) Data Tones, 1400/2300Hz ACK, 1400Hz KISSOFF.

Ademco Contact ID Reporting,
10 characters/sec., DTMF (TouchTone) Data Tones, 1400/2300Hz ACK, 1400Hz KISSOFF.

Ademco Low Speed, 10 pulses/sec, 1900Hz Data Tone, 1400Hz ACK/KISSOFF.

Radionics/SESCOA, 20 pulses/sec,1800HzData Tone, 2300Hz ACK/KISSOFF.

Can report 0-9, B-F

Line Seize: Double Pole

Ringer Equivalence: 0.7B

FCC Registration No.: AC 398U-68192-AL-E

4127 REMOTE CONSOLE

1. **Physical:** 5-5/8" W x 4-11/16" H x 7/8" D (143mm x 119mm x 22mm)

2. **Electrical:** Voltage Input: 12VDC
Current Drain: 20mA

3. **Interface Wiring:**

RED:	12VDC input (+) aux pwr
GREEN:	Data Out to Control
YELLOW:	Data In from Control
BLACK:	Ground

4137 & 5137 REMOTE CONSOLES

1. **Physical:** 8-2/5" W x 4-3/4" H x 1-1/10" D (213mm x 121mm x 28mm)

2. **Electrical:** Voltage Input: 12VDC
Current Drain: 60mA (4137)
90mA (5137)

3. Interface Wiring:

RED: 12VDC input (+) aux pwr
BLUE: 18VDC input from optional No 1350 or 1360 Power Pack (not usable for UL installations)
GREEN: Data Out to Control
YELLOW: Data In from Control
BLACK: Ground and (–) connection from optional No. 1350 or 1360 Power Pack

4281L, 4281M, 4281H RF RECEIVERS (5700 System) and 5881L, 5881M, 5881H RF RECEIVERS (5800 System)

1. Physical: 7-3/8" (188mm)W
4-3/8" (112mm) H
10-7/8" (277mm) H ←with antenna
1-7/16" (37mm) D

2. Electrical: Voltage Input: 12VDC (from control's remote console connection points)
Current Drain: 35mA

3. Interface Wiring:

RED: 12VDC input (+) aux pwr
GREEN: Data Out to Control
YELLOW: Data In from Control
BLACK: Ground

4. Range: 200ft (60m) nominal indoors from wireless transmitters (the actual range to be determined with system in TEST mode).

5. Zones: With the ***Ademco via30***:

4281L: accepts up to 4 transmitters
4281M /5881L: accepts up to 8 transmitters
5881M: accepts up to 16 transmitters
4281H/5881H: accepts up to 30 transmitters

4219 WIRED EXPANSION UNIT

1. Physical: 6-1/2" W x 4-1/4" H x 1-1/4" D (169mm x 108mm x 32mm)

2. Electrical: Voltage Input: 12VDC (from control's remote console connection points)
Current Drain: 35mA

3. Interface Wiring:

RED: 12VDC input (+) aux pwr
GREEN: Data Out to Control
YELLOW: Data In from Control
BLACK: Ground

4. 8 EOLR Loops (A-H): Loop A can be set for fast (10-15msec) response to an open.

4204 RELAY UNIT

1. Physical: 6-1/2" W x 4-1/4" H x 1-1/4" D (169mm x 108mm x 32mm)

2. Electrical: Voltage Input: 12VDC (from control's remote console connection points)
Current Drain: 15mA (Relays off)
180mA (Relays on)

3. Interface Wiring:

RED: 12VDC input (+) aux pwr
GREEN: Data Out to Control
YELLOW: Data In from Control
BLACK: Ground

4. Four Output Relays: SPDT Contacts,
Rating: 2A max at 28VDC/AC (120VAC for non-UL installations)

4229 WIRED EXPANSION/ RELAY UNIT

1. **Physical:** 6-1/2" W x 4-1/4" H x 1-1/4" D (169mm x 108mm x 32mm)
2. **Electrical:** Voltage Input: 12VDC (from control's remote console connection points)
   Current Drain: 35mA (Relays off)
   100mA (Relays on)
3. **Interface Wiring:**
   RED: 12VDC input (+) aux pwr
   GREEN: Data Out to Control
   YELLOW: Data In from Control
   BLACK: Ground
4. **8 EOLR Loops (A-H):** Loop A can be set for fast (10-15msec) response to an open.
5. **Two Output Relays:** SPDT Contacts,
   Rating: 2A max at 28VDC/AC
   (120VAC for non-UL installations)

ACCESSORIES (COMPATIBLE DEVICES)

Accessories

No. 1321/TF2	16.5VAC, 25VA Plug-In Transformer (in U.S.A.)
No. 1321CN	16.5VAC, 25VA Plug-in Transformer (in Canada)
No. 702	Self-contained 20 watt Siren (indoor or outdoor).
No. 740	Extremely loud Piezoelectric Alarm Sounder, 122dB output (indoor or outdoor).
No. 5716BR	Brown Cases and Mounting Brackets (3) for 5716, 5716WM.
No. 5799	Pkg. of 8 Magnets for 5716

System Sensor:

PA400B	Piezoelectric Alarm Sounder, 90dB output (mounts in single-gang box).
1412	4-wire Ionization Products of Combustion Detector
2412	4-wire Photoelectric Smoke Detector
2412TH	4-wire Photoelectric Smoke Detector w/135°F (57°C) Heat Detector

5700 RF System Wireless Transmitters for 4281

5701 Panic Transmitter

Programmable for either silent or audible 24 hour alarm (can be DIP switch programmed for zones 62 or 63.

5706 & 5707 Wireless Photoelectric Smoke Detectors

One piece smoke detectors with built-in transmitter (DIP switch programmable for zones 48-55). Built-in UL Listed 85 dB piezoelectric alarm sounder and audible low battery warning.

5711 Slimline Door/Window Transmitter

Can be used with any closed circuit sensor.

5711WM Slimline Door/Window Transmitter w/Reed Switch

Magnet included for built-in reed switch. Can also be used with any closed circuit sensor.

5715WH (White) or 5715BR (Brown) Universal Transmitter

DIP switch selectable for fast response, open or closed sensor usage, and has a tamper protected cover. Use in applications where open circuit heat detectors are needed or where fast response devices are employed.

5716 Small Door/Window Transmitter
5716WM Small Door/Window Xmtr w/Magnet

Can be used with any open or closed circuit sensor (DIP switch selectable). Features a built-in reed switch.

5742 Audio Discriminator/Transmitter

For use in unoccupied areas to detect the sound of shattering glass when a window is broken. Built-in 5716 type transmitter.

5743 Dual Technology Glass Break Detector/Transmitter

Detects the sound *and* shock vibrations of breaking glass and requires the presence of *both* to initiate an alarm condition transmission. Built-in 5716 type transmitter.

5775 PIR Detector/Transmitter

Dual element passive infrared detector/transmitter with built-in selectable pulse count. DIP switch programmable for zones 32-47. *Note*: There is a 3 minute lockout between transmissions to conserve battery life.

5727 Wireless Keypad

Can be used to turn the burglary protection on and off, and features the same built-in panic functions as wired consoles for either silent or audible 24 hour alarm. An LED indication lights each time a key is pressed, to verify transmission.The keypad is identified (as zone "00" on fixed English consoles) when it transmits with a low battery .

5800 RF System Wireless Transmitters for 5881

5801 Wireless Panic Transmitter

Has four pushbuttons, each with a unique input code. The control unit's response to each of the buttons is programmable (e.g., Panic, Arm–Stay, Arm–Away, Disarm, etc. *See note below 5803.*

5802 Pendant & 5802CP Belt Clip (Personal Emergency) Transmitters

Their single pushbuttons should usually be programmed for control unit response of 24 Hr Audible or 24 Hr Silent. Other zone responses are possible. Each contains a non-replaceable battery. At end of its life, the entire unit should be replaced. *See note below 5803.*

5803 Wireless Key Transmitter

Has three pushbuttons, each with a unique input code. The control unit's response to each of the buttons is programmable (e.g., Arm–Stay, Arm–Away, Disarm, etc.). Contains a non-replaceable battery. At end of its life, the entire unit should be replaced.

Note: The 5801, 5802, 5802CP, and 5803 should usually be programmed as unsupervised (no periodic check-in signal) so that they may be carried off-premises: UR" (unsupervised RF) type for 5801, "BR" (button RF) type for 5802, 5802CP, and 5803. See each unit's instructions for complete information.

5806 & 5807 Wireless Photoelectric Smoke Detectors

One piece smoke detectors with built-in transmitter. Built-in UL Listed 85 dB piezoelectric alarm sounder and audible low battery warning. Should be learned as "RF" (supervised RF) type.

5816 Door/Window Transmitter

Has two unique input codes: one for a wired closed circuit contact loop, and the other for a built-in reed switch (used in conjunction with a magnet). Should be learned as "RF" (supervised RF) type.

5817 Multi-Point Universal Transmitter

Has three unique input codes: one for a DIP switch settable "Primary" contact loop, and the others for two "Auxiliary" closed circuit contact loops. The "Primary" loop may be set for: a) Repeating or Single Transmission, b) Normally Open or Normally Closed Circuit, c) Slow or Fast Response, and d) 3 Minute or No Transmission Inhibit. Should be learned as "RF" (supervised RF) type.

5827 Wireless Keypad

Can be used to turn the burglary protection on and off, and features the same built-in panic functions as wired consoles for either silent or audible 24 hour alarm. An LED indication lights each time a key is pressed, to verify transmission.The keypad is identified (as zone "00" on fixed English consoles) when it transmits with a low battery .

5849 Glass Break Detector/Transmitter

When sound and shock of breaking glass are detected by this unit at the same time, a wireless alarm will be transmited via the unit's unique identification code. Separate alarm and cover tamper signals permit 24 hour monitoring. Should be learned as "RF" (supervised RF) type.

5890 PIR Detector/Transmitter

Has unique input code for its dual element passive infrared detector/transmitter with built-in selectable pulse count. ***Note***: There is a 3 minute lock-out between transmissions to conserve battery life. Should be learned as "RF" (supervised RF) type.

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.

OUTPUT RELAY EXAMPLES TABLE

ACTION DESIRED	RELAY ACTION	START			STOP	
	A	EV	ZL	ZT	ZL	ZT
Zones in zone list (x) close relay for 2 seconds on alarms.	1	1	x	00	0	00
Zones in zone list (x) close relay for 2 seconds on troubles.	1	3	x	00	0	00
Zones in zone list (x) close relay for 2 seconds on faults*.	1	2	x	00	0	00
**Will activate relay for any zone type plus panics on 5801 whether control is armed or disarmed. (Console panics will not activate a relay with the configurations above.)*						
Zones in zone list (x) close relay on alarms and reset at bell timeout or when disarmed.	2	1	x	00	0	36
Zones in zone list (x) pulse relay on alarms and reset at bell timeout or when disarmed.	3	1	x	00	0	36
Zones in zone list (x) close relay on alarms and reset when zone is restored.*	2	1	x	00	x	00
Zones in zone list (x) pulse relay on alarms and reset when zone is restored.*	3	1	x	00	x	00
**Console panics will not activate a relay with these configurations. The relay can also be activated by troubles or faults by changing the EV (event) accordingly.*						
Zones in zone list (x) close relay on alarms and reset when disarmed. (Latching relay for strobes.)*	2	1	x	00	0	22
Zones in zone list (x) pulse a relay on alarms and reset when disarmed.*	3	1	x	00	0	22
**Relay will activate for burglary, fire, and panic alarms if programmed into zone list.*						
Close relay after any burglary alarm and reset when disarmed.*	2	0	0	33	0	22
Close relay after any burglary alarm and reset at bell timeout or when disarmed.*	2	0	0	33	0	36
**Response types 06,08, and 09 will not activate relay. If PULSE relay is desired, enter a 3 in A (action).*						
Close relay when ARMED-AWAY, reset when DISARMED.*	2	0	0	21	0	22
Close relay when ARMED-STAY, reset when DISARMED.*	2	0	0	20	0	22
**If PULSED relay is desired, enter a 3 in A (action).*						
Close relay for 2 seconds at end of exit delay time after system is armed (Confirmation ding).	1	0	0	31	0	00
Pulse relay at start of entry time and reset when system is disarmed (entry warning).	3	0	0	32	0	22
Close relay for 2 seconds during chime. (Chime mode must be turned on at control.)	1	0	0	38	0	00

(continued) **OUTPUT RELAY EXAMPLES TABLE**

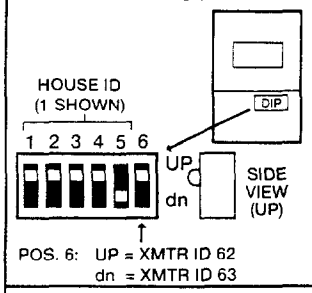
ACTION DESIRED	RELAY ACTION	START			STOP	
	A	EV	ZL	ZT	ZL	ZT
Close relay at start of entry time and reset with key entry of security code + # + 7. *	2	0	0	32	0	34
**Can be used to turn on a light when entry door is opened.*						
Close relay after any burglary alarm and reset with key entry of security code + # + 8.*	2	0	0	33	0	35
**Can be used to turn on lights in the event of a burglary alarm...(NOTE: Response types 06, 08, and 09 will not activate relay).*						
Zones in zone list (x) close relay on alarms and reset with key entry of security code + # + 7. (Possible use with strobe light)	2	1	x	00	0	34
Zones in zone list (x) pulse relay on alarms and reset with key entry of security code + # + 7.	3	1	x	00	0	34
A system low battery detection causes relay to close for 2 seconds.*	1	0	0	42	0	00
An AC loss detection causes relay to close for 2 seconds.*	1	0	0	41	0	00
**The relay will not reset on restoral of low battery or AC power. For this reason, using "close for 2 seconds" in A(action) is recommended.*						
Bypassing a zone will cause relay to close for 2 seconds.	1	0	0	40	0	00
Bypassing a zone causes relay to close and will reset with a disarm sequence (code + off.)	2	0	0	40	0	22
Any FIRE alarm causes relay to pulse on and off and will reset with an entry of a disarm sequence (code + off.)	3	0	0	39	0	22
An alarm or trouble condition on any FIRE zone causes relay to close and will reset when condition clears.	1	0	0	09	0	09

DIP SWITCH TABLES FOR 5700 RF SYSTEM WIRELESS DEVICES

House ID Switch Setting for All Devices Except 5716

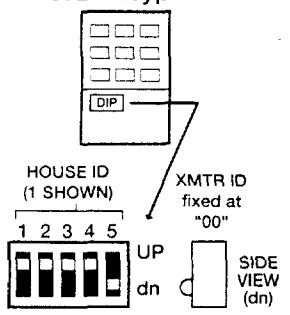
HOUSE ID	DIP SWITCH SETTINGS 1	2	3	4	5
1	UP	UP	UP	UP	dn
2	UP	UP	UP	dn	UP
3	UP	UP	UP	dn	dn
4	UP	UP	dn	UP	UP
5	UP	UP	dn	UP	dn
6	UP	UP	dn	dn	UP
7	UP	UP	dn	dn	dn
8	UP	dn	UP	UP	UP
9	UP	dn	UP	UP	dn
10	UP	dn	UP	dn	UP
11	UP	dn	UP	dn	dn
12	UP	dn	dn	UP	UP
13	UP	dn	dn	UP	dn
14	UP	dn	dn	dn	UP
15	UP	dn	dn	dn	dn
16	dn	UP	UP	UP	UP
17	dn	UP	UP	UP	dn
18	dn	UP	UP	dn	UP
19	dn	UP	UP	dn	dn
20	dn	UP	dn	UP	UP
21	dn	UP	dn	UP	dn
22	dn	UP	dn	dn	UP
23	dn	UP	dn	dn	dn
24	dn	dn	UP	UP	UP
25	dn	dn	UP	UP	dn
26	dn	dn	UP	dn	UP
27	dn	dn	UP	dn	dn
28	dn	dn	dn	UP	UP
29	dn	dn	dn	UP	dn
30	dn	dn	dn	dn	UP
31	dn	dn	dn	dn	dn
BIT VALUE:	16	8	4	2	1

5701 Panic Xmtr.

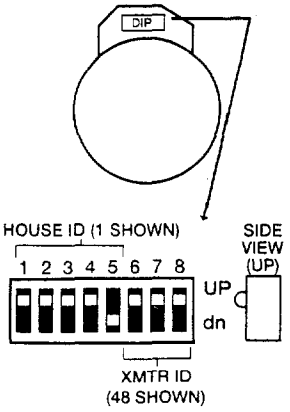


POS. 6: UP = XMTR ID 62
dn = XMTR ID 63

5727 Keypad

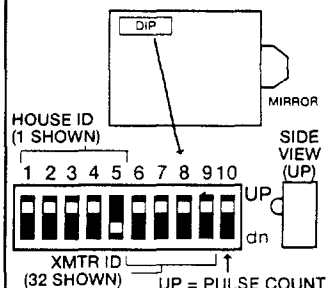


5706/5707 Smoke Detector Transmitter



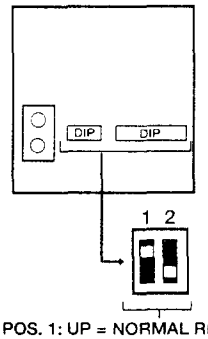
XMTR ID	DIP SWITCH SETTINGS 6	7	8
48	UP	UP	UP
49	UP	UP	dn
50	UP	dn	UP
51	UP	dn	dn
52	dn	UP	UP
53	dn	UP	dn
54	dn	dn	UP
55	dn	dn	dn

5775 PIR Detector/Transmitter



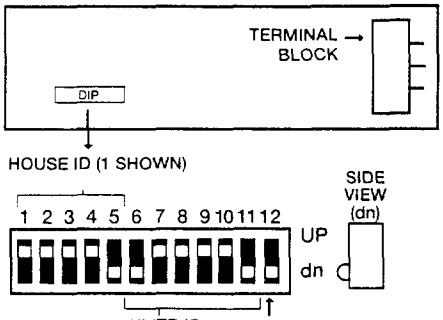
XMTR ID	DIP SWITCH SETTINGS 6	7	8	9
32	UP	UP	UP	UP
33	UP	UP	UP	dn
34	UP	UP	dn	UP
35	UP	UP	dn	dn
36	UP	dn	UP	UP
37	UP	dn	UP	dn
38	UP	dn	dn	UP
39	UP	dn	dn	dn
40	dn	UP	UP	UP
41	dn	UP	UP	dn
42	dn	UP	dn	UP
43	dn	UP	dn	dn
44	dn	dn	UP	UP
45	dn	dn	UP	dn
46	dn	dn	dn	UP
47	dn	dn	dn	dn

5715 Universal Xmtr.



POS. 1: UP = NORMAL RESPONSE
dn = FAST RESPONSE
POS. 2: UP = NO COVER TAMPER
dn = COVER TAMPER (use N.C. setting)

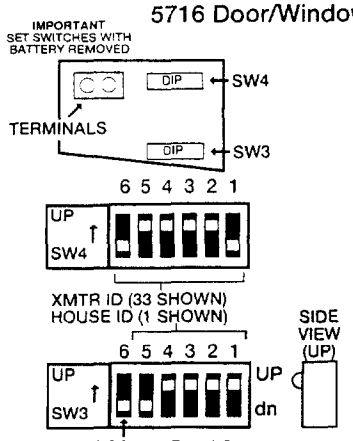
5711/5711WM Door/Window Transmitter



XMTR ID	DIP SWITCH SETTINGS 6	7	8	9	10	11
1	UP	UP	UP	UP	UP	dn
2	UP	UP	UP	UP	dn	UP
3	UP	UP	UP	UP	dn	dn
4	UP	UP	UP	dn	UP	UP
5	UP	UP	UP	dn	UP	dn
6	UP	UP	UP	dn	dn	UP
7	UP	UP	UP	dn	dn	dn
8	UP	UP	dn	UP	UP	UP
9	UP	UP	dn	UP	UP	dn
10	UP	UP	dn	UP	dn	UP
11	UP	UP	dn	UP	dn	dn
12	UP	UP	dn	dn	UP	UP
13	UP	UP	dn	dn	UP	dn
14	UP	UP	dn	dn	dn	UP
15	UP	UP	dn	dn	dn	dn
16	UP	dn	UP	UP	UP	UP
17	UP	dn	UP	UP	UP	dn
18	UP	dn	UP	UP	dn	UP
19	UP	dn	UP	UP	dn	dn
20	UP	dn	UP	dn	UP	UP
21	UP	dn	UP	dn	UP	dn
22	UP	dn	UP	dn	dn	UP
23	UP	dn	UP	dn	dn	dn
24	UP	dn	dn	UP	UP	UP
25	UP	dn	dn	UP	UP	dn
26	UP	dn	dn	UP	dn	UP
27	UP	dn	dn	UP	dn	dn
28	UP	dn	dn	dn	UP	UP
29	UP	dn	dn	dn	UP	dn
30	UP	dn	dn	dn	dn	UP
31	UP	dn	dn	dn	dn	dn
32	dn	UP	UP	UP	UP	UP
BIT VALUE:	32	16	8	4	2	1

XMTR ID	DIP SWITCH SETTINGS 6	7	8	9	10	11
33	dn	UP	UP	UP	UP	dn
34	dn	UP	UP	UP	dn	UP
35	dn	UP	UP	UP	dn	dn
36	dn	UP	UP	dn	UP	UP
37	dn	UP	UP	dn	UP	dn
38	dn	UP	UP	dn	dn	UP
39	dn	UP	UP	dn	dn	dn
40	dn	UP	dn	UP	UP	UP
41	dn	UP	dn	UP	UP	dn
42	dn	UP	dn	UP	dn	UP
43	dn	UP	dn	UP	dn	dn
44	dn	UP	dn	dn	UP	UP
45	dn	UP	dn	dn	UP	dn
46	dn	UP	dn	dn	dn	UP
47	dn	UP	dn	dn	dn	dn
48	dn	dn	UP	UP	UP	UP
49	dn	dn	UP	UP	UP	dn
50	dn	dn	UP	UP	dn	UP
51	dn	dn	UP	UP	dn	dn
52	dn	dn	UP	dn	UP	UP
53	dn	dn	UP	dn	UP	dn
54	dn	dn	UP	dn	dn	UP
55	dn	dn	UP	dn	dn	dn
56	dn	dn	dn	UP	UP	UP
57	dn	dn	dn	UP	UP	dn
58	dn	dn	dn	UP	dn	UP
59	dn	dn	dn	UP	dn	dn
60	dn	dn	dn	dn	UP	UP
61	dn	dn	dn	dn	UP	dn
62	dn	dn	dn	dn	dn	UP
63	dn	dn	dn	dn	dn	dn
BIT VALUE:	32	16	8	4	2	1

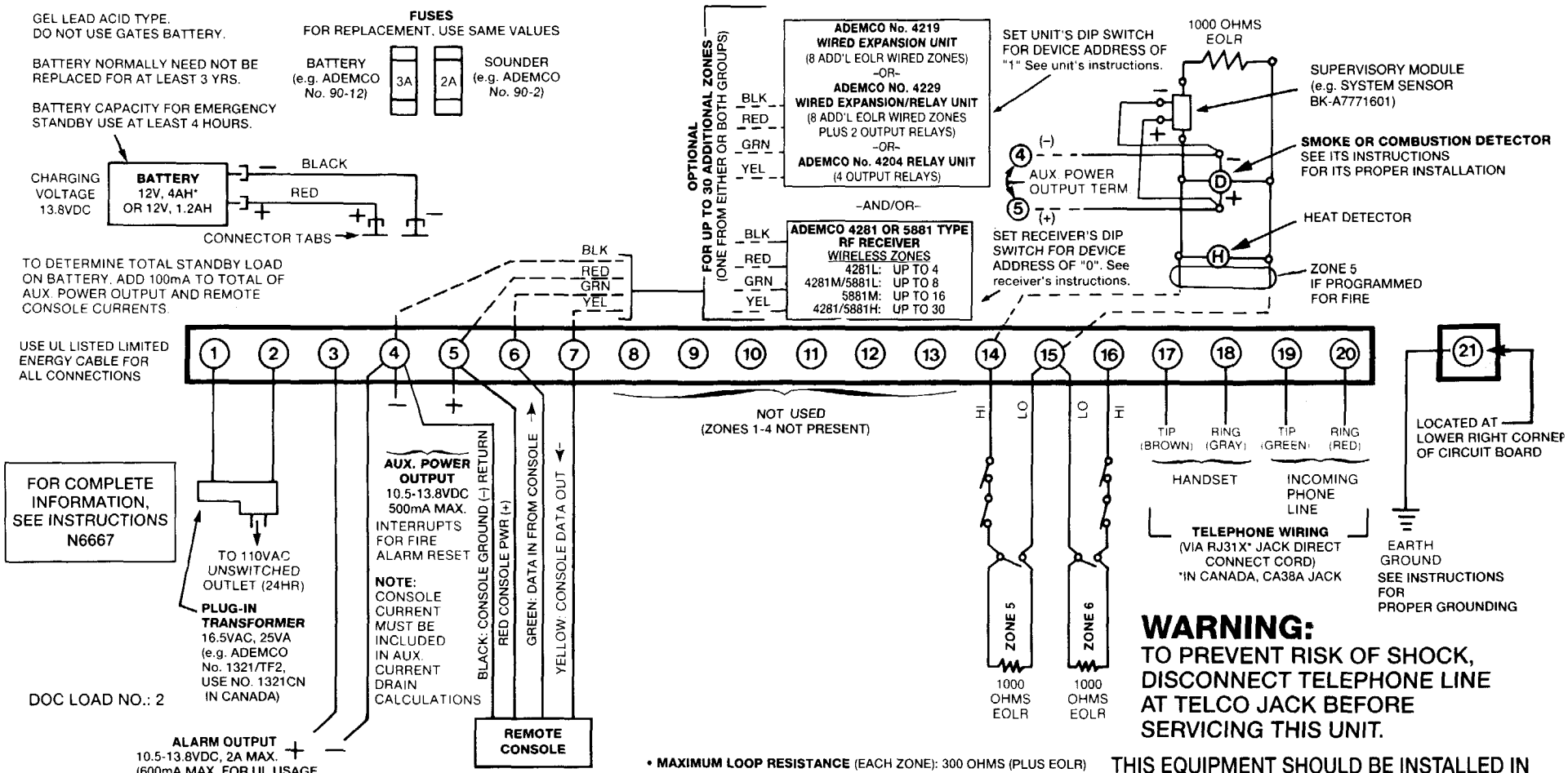
5716 Door/Window Transmitter



HOUSE ID	DIP SWITCH SETTINGS 5	4	3	2	1
1	dn	UP	UP	UP	UP
2	UP	dn	UP	UP	UP
3	dn	dn	UP	UP	UP
4	UP	UP	dn	UP	UP
5	dn	UP	dn	UP	UP
6	UP	dn	dn	UP	UP
7	dn	dn	dn	UP	UP
8	UP	UP	UP	dn	UP
9	dn	UP	UP	dn	UP
10	UP	dn	UP	dn	UP
11	dn	dn	UP	dn	UP
12	UP	UP	dn	dn	UP
13	dn	UP	dn	dn	UP
14	UP	dn	dn	dn	UP
15	dn	dn	dn	dn	UP
16	UP	UP	UP	UP	dn
17	dn	UP	UP	UP	dn
18	UP	dn	UP	UP	dn
19	dn	dn	UP	UP	dn
20	UP	UP	dn	UP	dn
21	dn	UP	dn	UP	dn
22	UP	dn	dn	UP	dn
23	dn	dn	dn	UP	dn
24	UP	UP	UP	dn	dn
25	dn	UP	UP	dn	dn
26	UP	dn	UP	dn	dn
27	dn	dn	UP	dn	dn
28	UP	UP	dn	dn	dn
29	dn	UP	dn	dn	dn
30	UP	dn	dn	dn	dn
31	dn	dn	dn	dn	dn
BIT VALUE:	1	2	4	8	16

TRANSMITTER ID	DIP SWITCH SETTINGS 6	5	4	3	2	1
1	dn	UP	UP	UP	UP	UP
2	UP	dn	UP	UP	UP	UP
3	dn	dn	UP	UP	UP	UP
4	UP	UP	dn	UP	UP	UP
5	dn	UP	dn	UP	UP	UP
6	UP	dn	dn	UP	UP	UP
7	dn	dn	dn	UP	UP	UP
8	UP	UP	UP	dn	UP	UP
9	dn	UP	UP	dn	UP	UP
10	UP	dn	UP	dn	UP	UP
11	dn	dn	UP	dn	UP	UP
12	UP	UP	dn	dn	UP	UP
13	dn	UP	dn	dn	UP	UP
14	UP	dn	dn	dn	UP	UP
15	dn	dn	dn	dn	UP	UP
16	UP	UP	UP	UP	dn	UP
17	dn	UP	UP	UP	dn	UP
18	UP	dn	UP	UP	dn	UP
19	dn	dn	UP	UP	dn	UP
20	UP	UP	dn	UP	dn	UP
21	dn	UP	dn	UP	dn	UP
22	UP	dn	dn	UP	dn	UP
23	dn	dn	dn	UP	dn	UP
24	UP	UP	UP	dn	dn	UP
25	dn	UP	UP	dn	dn	UP
26	UP	dn	UP	dn	dn	UP
27	dn	dn	UP	dn	dn	UP
28	UP	UP	dn	dn	dn	UP
29	dn	UP	dn	dn	dn	UP
30	UP	dn	dn	dn	dn	UP
31	dn	dn	dn	dn	dn	UP
32	UP	UP	UP	UP	UP	dn
33	dn	UP	UP	UP	UP	dn
34	UP	dn	UP	UP	UP	dn
35	dn	dn	UP	UP	UP	dn
36	UP	UP	dn	UP	UP	dn
37	dn	UP	dn	UP	UP	dn
38	UP	dn	dn	UP	UP	dn
39	dn	dn	dn	UP	UP	dn
40	UP	UP	UP	dn	UP	dn
41	dn	UP	UP	dn	UP	dn
42	UP	dn	UP	dn	UP	dn
43	dn	dn	UP	dn	UP	dn
44	UP	UP	dn	dn	UP	dn
45	dn	UP	dn	dn	UP	dn
46	UP	dn	dn	dn	UP	dn
47	dn	dn	dn	dn	UP	dn
48	UP	UP	UP	UP	dn	dn
49	dn	UP	UP	UP	dn	dn
50	UP	dn	UP	UP	dn	dn
51	dn	dn	UP	UP	dn	dn
52	UP	UP	dn	UP	dn	dn
53	dn	UP	dn	UP	dn	dn
54	UP	dn	dn	UP	dn	dn
55	dn	dn	dn	UP	dn	dn
56	UP	UP	UP	dn	dn	dn
57	dn	UP	UP	dn	dn	dn
58	UP	dn	UP	dn	dn	dn
59	dn	dn	UP	dn	dn	dn
60	UP	UP	dn	dn	dn	dn
61	dn	UP	dn	dn	dn	dn
62	UP	dn	dn	dn	dn	dn
63	dn	dn	dn	dn	dn	dn
BIT VALUE:	1	2	4	8	16	32

Note: **For a 5827 (5800 System) Wireless Keypad House ID settings are *opposite* to those for a 5727 (i.e., "UP" is "dn" and "dn" is "UP").**



CONNECTION OF THE FIRE ALARM SIGNAL TO A FIRE ALARM HEADQUARTERS OR A CENTRAL STATION SHALL BE PERMITTED ONLY WITH THE PERMISSION OF THE LOCAL AUTHORITY HAVING JURISDICTION. THE BURGLAR ALARM SIGNAL SHALL NOT BE CONNECTED TO A POLICE EMERGENCY NUMBER.

REMOTE CONSOLES

SYSTEM *MUST* BE PROGRAMMED WITH A No. 5137 OR 6139. IT NEED NOT REMAIN IN SYSTEM.

AFTER PROGRAMMING, THE SYSTEM CAN USE A No. 4127 (20mA), 4137 (60mA), 5137 (90mA), 6127 (20mA), OR 6139 (100mA).

MULTIPLE CONSOLES MAY BE USED, BUT USE MAX. OF 220 FT. OF #22 WIRE OR 550 FT. OF #18.

- **MAXIMUM LOOP RESISTANCE** (EACH ZONE): 300 OHMS (PLUS EOLR)
- **RESPONSE, ZONES 5, 6:** 300 - 500MSEC
- **ZONE 5 CAN BE PROGRAMMED FOR USE AS A FIRE ZONE.** SEE DIAGRAM.

THIS DEVICE COMPLIES WITH PART 15 OF FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) IT MAY NOT CAUSE HARMFUL INTERFERENCE, (2) IT MUST ACCEPT ANY INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

COMPLIES WITH FCC RULES, PART 68
FCC REGISTRATION NO. AC398U-68192-AL-E
RINGER EQUIVALENCE: 0.7B.

WARNING:
TO PREVENT RISK OF SHOCK, DISCONNECT TELEPHONE LINE AT TELCO JACK BEFORE SERVICING THIS UNIT.

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION'S STANDARD 74 (NATIONAL FIRE PROTECTION ASSOC., BATTERYMARCH PARK, QUINCY, MA 02269). PRINTED INFORMATION DESCRIBING PROPER INSTALLATION, OPERATION, TESTING, MAINTENANCE, EVACUATION PLANNING AND REPAIR SERVICE IS TO BE PROVIDED WITH THIS EQUIPMENT.

WEEKLY TESTING IS REQUIRED TO ENSURE PROPER OPERATION OF THIS SYSTEM.

Ademco via30
SUMMARY OF CONNECTIONS

UL NOTICE: This is a "Grade A" system.

FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 15 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 radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.

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

FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 68 STATEMENT

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

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

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

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

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

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

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

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

This equipment is hearing-aid compatible.

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

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'abonne 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 precis prévus par les tarifs particuliers de ces entreprises.

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

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

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

L'indice de charge (IC) assigné à chaque dispositif terminal pour éviter toute surcharge indique le pourcentage de la charge totale qui peut être raccordé à un circuit téléphonique fermé utilisé par ce dispositif. La terminaison du circuit fermé 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.

WARNING
THE LIMITATIONS OF THIS ALARM SYSTEM

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

- 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.

ADEMCO LIMITED WARRANTY

Alarm Device Manufacturing Company, a Division of Pittway Corporation, and its divisions, subsidiaries and affiliates ("Seller"), 165 Eileen Way, Syosset, New York 11791, warrants its products to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 18 months from the date stamp control on the product or, for products not having an Ademco date stamp, for 12 months from date of original purchase unless the installation instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any product which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Ademco factory service. For warranty service, return product transportation prepaid, to Ademco Factory Service, 165 Eileen Way, Syosset, New York 11791.

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

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