INSTALLATION INSTRUCTIONS

FA150C Security System

First Alert

PROFESSIONAL SECURITY SYSTEMS

2-Partitioned Security System

Can Support 6 EOLR wired zones

and

(when used with appropriate wireless receiver and/or wired expansion unit)

Up to a total of 30 expansion zones

(30 wireless, or 22 wireless plus 8 additional wired)

and

(when used with appropriate output relay unit)

2 or 4 output relays

CONGRATULATIONS !
on your purchase of the First Alert FA150C

The purpose of these Installation Instructions is to give you a brief overview of the FA150C system, and provide instructions for installing a basic system.

As always, First Alert 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!

Premier Gold Technical Support: 800-538-5585 (8 a.m.-6 p.m. E.S.T.)

After 6 p.m. E.S.T.: 800-421-5557

Technical Support Fax Number: 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 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!

```
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

GENERAL INFORMATION

The FA150C is a microprocessor-based, 2-partitioned security control. This *partitioned* control provides an economical means of supplying *two* separate users with individual security systems that function as if each system had its own separate control. For example, the owner of a two family house can have an alarm system for his family (living upstairs) and also one for the separate living quarters of another (e.g., a tenant, living downstairs, with a separate entrance).

The control itself provides 6 wired EOLR protection zones.

Up to 30 expansion zones can be added (wireless and/or additional wired zones) by using an appropriate RF receiver (4281 or 5881 type) or wired expansion unit (No. 4219 or 4229). See ZONE CHARACTERISTICS below. *Note:* The *single* 4281/5881 type RF receiver that the FA150C accommodates, features Spatial Diversity (dual antennas), which virtually eliminates the possibility of "Nulls" and "Dead Spots" within the coverage area.

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).

Note: The system provides a programmable *Audio Alarm Verification* (AAV) option, in conjunction with one of these output relays, which can (after an alarm is reported to the central station) silence sounders and trigger an appropriately installed AAV unit (by others) at the protected premises, to enable the central station to "hear" what is happening at the premises during an alarm.

The resulting zones and output relays can be apportioned as desired, between the control's two partitions or assigned to respond to both partitions.

The security control is housed in a wall-mounted metal cabinet measuring 12-1/2" (318mm) wide x 14-1/2" (368mm) high x 3" (76mm) deep.

An FA510KP Alpha Console connected to Partition 1 is required for programming BOTH partitions' zones and relay operation, via its digital keypad and 2-line 32-character alphanumeric Liquid Crystal Display (LCD) (but it need not remain in the system). After programming, either partition may use one or more FA200KP, FA310KP or FA510KP Consoles. The FA200KP and FA310KP have digital keypads and fixed English status LCDs.

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).

Connections to the security control are made via a 21-terminal connector block which is used to interface to the wired loops, plug-in transformer, telephone line, remote console(s) for Partition 1, all wireless and wired expansion devices, external alarm sounder(s) (shared by both partitions), etc. Consoles for Partition 2 are connected to a 4-pin male connector near terminal 5 on the connector block.

The security control is programmed for *both* partitions from an FA510KP Console connected to Partition 1. 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.

The system provides communication capability (central station reporting, etc.) over existing telephone lines. In addition, it can be uploaded, downloaded, or controlled via a computer and Hayes modem.

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 1-6: Wired Programmable Zones.
EOLR supervised, N.O. or N.C. sensors, 300-500 msec normal response. Optional fast (10-15msec) response programmable for zone 3. Zones are assignable individually to either partition.

Zones 7, 95, 96: Console Panics (Wired & Wireless). 24hr zones, programmable for silent, audible, auxiliary, or fire. Reported separately by partition.

Zone 8: Duress (see User's Manual). Reported separately by partition.

Zone 9: Tamper. Reports with appropriate Partition 1 and/or 2 Subscriber No.: Faults in the expansion units, tampers on 5800 System RF units, 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: EOLR supervised, 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 (individually to either partition).

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

When all 8 loops of a 4219 or 4229 are ALSO used, a 4281H/5881H can add only 22 RF zones.

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). Appropriate RF system transmitters can be used to make up the wireless zones. This includes window/door units, smoke detectors, PIRs, and panic keys. Each zone is assignable to either partition.

Note: For brevity, subsequent references herein to the RF Receiver will be indicated by "4281/5881" unless a specific model is named.

ZONE TYPES AVAILABLE FOR SELECTION

For each zone *number* used, one of the following zone *types* must be selected:

0 0 Zone Not Used

0 1 Entry/Exit Burglary. Assigned to sensors on doors through which entry and exit will normally take place when the system is armed.

0 2 *not used*

0 3 Perimeter Burglary. Normally assigned to all sensors on exterior doors and windows requiring instant alarm.

0 4 Interior, Follower. Delayed alarm only if the Entry/Exit zone is faulted first; otherwise, produces an instant alarm. Assigned to zone covering an area such as a foyer or lobby through which one must pass upon entry to reach the keypad to disarm the system. Designed to provide instant intrusion alarm 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.

0 5 Trouble by Day/Alarm by Night. Can be 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., or other controlled access area where immediate notification of an entry is desired. During the disarmed state (day), the system will provide latched Console annunciation (and central station report, if desired) of openings or troubles (such as sensor malfunctions or foil breaks). During the armed state (night), violations will initiate an alarm.

0 6 24-hour Silent Alarm. This type generally assigned to a zone containing an Emergency button that is designed to initiate an alarm report to the Central Station, but which produces no local displays or alarm sounds.

0 7 24-hour Audible Alarm. This type also assigned to a zone containing an Emergency button, but which will initiate an audible alarm in addition to an alarm report to the Central Station.

0 8 24-hour Auxiliary Alarm (Console sounder only).This type 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. Designed to initiate an alarm report to the Central Station and only provides Console warning sounds and alarm displays.

0 9 Supervised Fire (alarm on short/trouble on open) Fire zone may not be bypassed. **Only usable on Zone 5 in the control, on Console Panic, on any zone in a wired expansion unit, or on certain wireless system zones.**

1 0 Interior w/Delay. Similar to type 04, except that entry delay begins whenever sensors in this zone are violated, regardless of whether or not an entry/exit delay zone was faulted first.

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.

2 0 Arm–Stay **2 1 Arm–Away** **2 2 Disarm** **2 3 No Alarm Response**	Special-purpose zones which will result in the indicated system action when the zone is activated by a 5800 Series RF pushbutton, or a contact closure or opening. Zone Type 23 can be used on any RF or wired zone when an output relay action is desired with no accompanying alarm.

WIRED ZONE EXPANSION

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 6 zones, for a total of 14.

The unit can be mounted within or outside of the FA150C's cabinet (see page 8). It connects to the control's Partition 1 remote console terminals for signaling and is supervised against removal. It has tamper protection for security when mounted outside of the cabinet.

Its eight wired expansion loops, designated A to H (zone numbers 10-17), can be programmed individually (in field *56) for Partition 1 or 2.

If RF will be used in addition to one of these units (see next two pages), any zone numbers in the range of 18-63 (*not* 10-17) should be chosen for the RF zones, *even if all eight 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.

> *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").*

WIRELESS EXPANSION
—5700 RF SYSTEM—

General

In addition to its basic 6 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, for Partition 1.

The receiver can be mounted within the control's cabinet (see page 8) 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 Partition 1's 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 22) 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.

The various transmitters are described on page 22.

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 lockout 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.

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 devices for the 4281
> are described in
> *ACCESSORIES (COMPATIBLE DEVICES)*
> on page 22

WIRELESS EXPANSION
—5800 RF SYSTEM—

General

In addition to its basic 6 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, for both partitions.

The receiver can be mounted within the control's cabinet (see page 8) 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 Partition 1's 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 condi-

tions 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 on Partition 1, 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. A 5827 used on Partition 2 must have its DIP switch set for that House ID plus 1. *DIP switch setting information accompanies the 5827.*

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 unit must learn or be told 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.

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 INSTRUCTIONS* on pages 13 and 14, involves teaching the system each transmitter to be used in the system. Option 2, 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.

OPTION 2
Manual ID Code Assignment Method
(TO BE AVAILABLE SOON)
Supplements REMOTE PROGRAMMING AND CONTROL (DOWNLOADING) section on page 11.

At the downloader computer location, the downloader for the FA150C 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.

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.

> Wireless devices for the 5881
> are described in
> *ACCESSORIES (COMPATIBLE DEVICES)*
> on page 22

OUTPUT RELAYS

Output relays can be added to the system by connecting a No 4229 Wired Expansion/Relay Unit or a No. 4204 Relay Unit to the FA150C's Partition 1 console connection terminals. Two relays are provided on the 4229 and four on the 4204.

The relays can each be programmed (in field *80) to perform some *Action* in response to a *Start* command and in response to a *Stop* command, in conjunction with either or both of the partitions.

Both normally open and normally closed contacts are available on each relay, so an external circuit may be energized (e.g., turn on a light) or interrupted (e.g., close a fire door) by a similar set of commands. The basic action of the relay can be programmed to close for just 2 seconds, close and stay closed, or close and open continuously.

> *The 4229's or 4204'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 up to the LEFT..."off").*

The desired ACTION of the relay must first be determined and then a specific relay chosen to be programmed for the action.

To START the action, either one or the other of 2 programmable items must occur (both can be programmed):

   a. An *event* (alarm, fault, trouble, or restore) must occur on at least one zone of a *list of zone num-*

bers that is programmed (the zones do not have to be the same type, or related in any way), or...

   b. *Any zone* of a specific *type* (e.g., Entry/Exit) must be faulted. A *system operation* (e.g., System Battery Low), or a *specific key entry* on the console (e.g., Security Code + [#] + [7 key]) can also start the action.

To STOP the action, either one or the other of 2 programmable items must occur (both can be programmed):

   a. A *restore* must occur of *every* zone on a *list of zone numbers* that is programmed (need not be the same list as for Start), or...

   b. *Any zone* of a specific *type* (e.g., Entry/Exit) must restore. A *system operation* (e.g., System Battery Low), or a *specific key entry* on the console (e.g., Security Code + [#] + [7 key]) can also stop the action.

See field *80 in the PROGRAMMING INSTRUCTIONS section for an example and additional information.

Note: 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).

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 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.

RETAINER CLIP (NOTE POSITION)

LOCKED

RETAINER SLOTS

RETAINER CLIP

UNLOCKED

CABINET DOOR BOTTOM
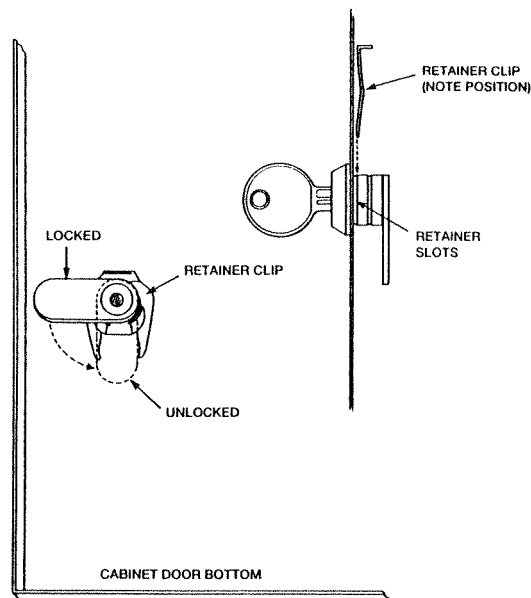
Note: **BEFORE MOUNTING THE CIRCUIT BOARD(S)** be sure to remove the appropriate metal knockouts from the cabinet. DO NOT ATTEMPT TO REMOVE THE KNOCKOUTS AFTER THE CIRCUIT BOARD(S) HAVE BEEN INSTALLED.

INSTALLING THE CONTROL'S CIRCUIT BOARD ALONE
or (if used) with a 4219, 4229, or 4204

Control's Circuit Board

1. Hang two *long* mounting clips (provided) on the raised cabinet tabs (see Detail B at right).

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 as illustrated in Detail B.

4219, 4229 or 4204

1. Insert self-tapping screws (provided) in two adjacent raised cabinet tabs. Leave the heads projecting 1/8".

DETAIL B
SIDE VIEW OF
LONG MOUNTING CLIPS

CIRCUIT BOARD
CABINET
CONTROL CIRCUIT BOARD

DETAIL A
SIDE VIEW OF
BOARD SUPPORTING SLOTS

4219, 4229, or 4204

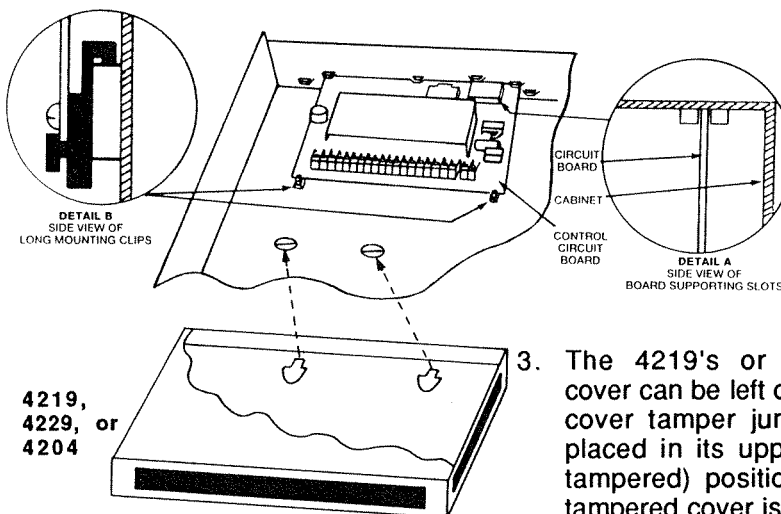2. Hang the unit on the screw heads via two of the slotted holes at the rear of its housing, as shown.

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. 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

1. Hang two *short* (black) mounting clips (provided with receiver) on the raised cabinet tabs, as shown in Detail B at right.

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 through the top of the cabinet, into the blocks' *right-hand* terminals, and tighten the screws.

HOLES FOR ANTENNAS AND GROUNDING LUGS

BOARD SUPPORTING SLOTS
RECEIVER CIRCUIT BOARD
CIRCUIT BOARD
CABINET

DETAIL A
SIDE VIEW OF
BOARD SUPPORTING SLOTS

SHORT MOUNTING CLIPS

CONTROL CIRCUIT BOARD

DETAIL B
SIDE VIEW OF
SHORT MOUNTING CLIPS

LONG MOUNTING CLIPS

DETAIL C
SIDE VIEW OF
LONG MOUNTING CLIPS

SCREW
ANTENNA
GROUNDING LUG

DETAIL D
ANTENNA AND
GROUNDING LUG
INSTALLATION

RCVR BOARD
CABINET

WIRING CONNECTIONS

(See Summary of Connections Diagram on Page 23)

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

1 & 2: AC Input from No. 1321/TF2 plug-in transformer (16.5VAC, 25VA).

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

4: Alarm Output/Auxiliary Power/Wired Fire/Part'n 1 Console(s)/Optional 4281, 5881, 4219, 4229, or 4204 (BLACK lead). Ground (–) Return†.

5: Auxiliary/Wired Fire/Part'n 1 Console(s)/Optional 4281, 5881, 4219, 4229, or 4204 (RED lead) Power:

+12VDC at 500mA max †.

6: Data In from Part'n 1Console(s)/Optional 4281, 5881, 4219, 4229, or 4204 (GREEN)†.

7: Data Out to Part'n 1 Console(s)/Optional 4281, 5881, 4219, 4229, or 4204 (YELLOW)†.

8: Zone 1. (When Zones 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.)

9: Zones 1 and 2 Return.

10: Zone 2

11: Zone 3

12: Zones 3 and 4 Return.

13: Zone 4

14: Zone 5

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 (-).

FOUR PIN CONNECTOR for Partition 2 Console(s)†
(near terminal 5)
RED: 12VDC output (+) aux pwr
GREEN Data in from console
YELLOW Data out to console
BLACK Console ground (–) return

† Up to 4 consoles may be used per partition (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.

FA310KP and FA510KP Consoles must be set to their non-addressable mode (device ID 31...all DIP switch positions UP).

PROGRAMMING THE SECURITY CONTROL

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 an FA510KP Console *connected to Partition 1* (which need not necessarily remain in the system after programming).
>
> **Note:** FA510KP Consoles (and FA310KP Consoles, if used later) must be set to their 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 Installer 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 Installer 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.

The following is a summary of commands necessary for programming:

> The FA150C can only be put into the Programming Mode via Partition 1 consoles and only while both partitions are disarmed.

FUNCTION	PROCEDURE
ENTER PROGRAMMING MODE	1. POWER UP, then depress [*] and [#] simultaneously, within 50 seconds of powering up.**
	OR
	2. Initially, Key: **4 + 1 + 1 + 1** plus **CODE key + 0.**
	OR
	3. If different Installer Code is programmed, key: **Installer Code + CODE key + 0.** (If *98 was used to exit previously, method 1 above must be used to enter the program mode again.)**
EXIT GRAMMING MODE	*99 (allows re-entry to pro-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 the Console and the 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.

> **Note:** If Local Lockout is selected in field *91, then using *98 to exit Programming Mode will *permit* re-entry to Programming Mode *only* by entry of Installer Code + CODE + 0 (*not* by Power-up + [*] + [#]).

4-DIGIT SECURITY CODES

Installer Code

The installer programs the 4-digit Installer Code initially as part of the programming procedure (see "Programming the Security Control"). The Installer code can permit re-entry into the programming mode and also, in normal operation mode, is used to enter the Master code for each partition, which allow access to the normal functions of the system.

[ ][ ][ ][ ] Installer Code assigned during programming (the factory default installer code is "4111").

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

Master Codes

In normal operation mode, the Installer code is used to enter the 4-digit Master security code for each partition:

To enter the Master code for Partition 1, enter:

Installer Code + [CODE key] + [1] + desired Master code for Partition 1: [ ][ ][ ][ ]

To enter the Master code for Partition 2, enter:

Installer Code + [CODE key] + [2] + desired Master code for Partition 2: [ ][ ][ ][ ]

If the Master code is the same in both partitions, then Master Code + [AWAY] + [2] can be used to arm both partitions "Away", but only if both are Ready to Arm. Two beeps will be heard and both partitions arm. This is not applicable to Disarm or any other function.

If the local partition (at which arming is attempted) is not Ready to Arm, a single beep will be heard after [AWAY] is entered and neither partition will arm.

If the remote (other) partition is not Ready to Arm, two beeps will be heard after [AWAY] (as the local partition "arms") and a single beep after [2] (as the local partition "disarms"). If opening and closing reports are programmed, a closing report and then an opening report will be sent in this case.

Secondary User Codes

In normal operation mode, each partition's Master security code can be used (via the partition's console) to assign up to two secondary security codes for that partition. It can also be used to remove secondary codes from the system (individually).

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

Partition's Master Code + [CODE key] + User # (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:

Partition's Master Code + [CODE key] + User # (3 or 4)

Notes: All Master and Secondary security codes permit access to the system for arming, disarming, etc.

The Installer code can disarm the system only if it was used to arm it.

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 Installer code as No. 1, with the appropriate subscriber number. Each Master code and set of Secondary user codes are sent as Nos. 2, 3, and 4 respectively, with the appropriate subscriber number.

Each Master code can be used to reprogram itself. The procedure is described in the User's Manual.

REMOTE PROGRAMMING AND CONTROL (DOWNLOADING)

The FA150C can be remotely programmed from an IBM compatible Personal Computer (PC), a Hayes Modem, and First Alert's FADL Software.

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 INSTALLER CODE + # + 1) while both partitions are 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:

- FA150C and console.

At the installer's office/home:

- An IBM PC compatible computer, a Hayes brand Smartmodem 1200 (Level 1.2 or higher external or Level 1.1 or higher internal style),or Hayes brand Optima 24 Plus FAX96 Modem, FADL Downloading Software Diskette (Rev. 2.1FA, or higher), and 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 FADL 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.

PROGRAMMING INSTRUCTIONS

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

SYSTEM ARMING (*20-*25)

*20 INSTALLER 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
Enter 0 for disabled or 1 for enabled
for each partition.

*22 RF SYSTEM TYPE
0 = none; 1 = 5700 (4281); 2 = 5800 (5881)

*23 FORCED BYPASS FUNCTION
0 = No forced bypass.
1 = Bypass all open zones.
2 = Bypass all open zones as well as zones
17, 30, 31, 46, and 47 (whichever are in the
system).
All zones that are bypassed by this function will be
displayed after the bypass is initiated.

*24 RF RECEIVER HOUSE ID CODE
Enter 01-31 House ID.
MUST enter for 5700 system;
Enter for 5827 keypad on 5800 System
[Partition 2 House ID = Entered Partition 1 ID + 1]

*25 WIRED EXPANSION IN USE
0 = none; 1 = 4219; 2 = 4229; 3 = 4204

ZONE SOUNDS AND TIMING *28-*39

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

*29 FIRE 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. Enter 1 digit for each Partition
(EXIT delay = Entry delay plus 15 seconds)
0 = 0 Seconds   2 = 30 Seconds
1 = 20 Seconds   3 = 45 Seconds

*39 ZONE 3 RESPONSE TIME TO OPEN
0 = 400 ms nominal
1 = 10 ms nominal

DIALER PROGRAMMING (*40-48)

*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 enter-
ing *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 auto-
matic only if there is a secondary phone number.

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

*43 PARTITION 1 SUBSCRIBER ACCT. No.
See field *44

*44 PARTITION 2 SUBSCRIBER ACCT. No.
For Fields 43 and 44:
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* or *44*.

*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
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 and *44 if 3+1 dialer
reporting is to be used.)

For explanation of these formats, see next page.

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 (BURG)
Enter 0 for no or 1 for yes

*49 PERIODIC TEST MESSAGE
0 = none; 1 = 24 hours; 2 = weekly
Test Report Code entered in field *64 is sent.
Reports with Partition 1 Subscriber No.

*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 for each partition.
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.

REPORT CODE FORMATS

The Report Codes for Alarm, System Status, and Restore for Zones shown in fields *56-*75 in the following sections may be designated to report to the central station in any of the formats shown in field *46.

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 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 partition number, and 3 digit zone, contact ID, user, or system status number.

Report	3+1/4+1 Standard	3+1/4+1 Expanded	4+2
Alarm	SSS(S) A	SSS(S) A AAA(A) Z	SSSS AZ
Trouble	SSS(S) T	SSS(S) T TTT(T) t	SSSS Tt
Bypass	SSS(S) B	SSS(S) B BBB(B) b	SSSS Bb
AC Loss	SSS(S) E	SSS(S) E EEE(E) A_C	SSSS EA_C
Low Batt	SSS(S) L	SSS(S) L LLL(L) L_B	SSSS LL_B
Open	SSS(S) O	SSS(S) O OOO(O) U	SSSS OU
Close	SSS(S) C	SSS(S) C CCC(C) U	SSSS CU
Test	SSS(S) G	SSS(S) G GGG(G)g	SSSS Gg
Restore Alarm	SSS(S) R	SSS(S) R RRR(R) Z	SSSS RZ
AC Restore	SSS(S) R_A	SSS(S) R_A $R_A R_A R_A (R_A) A_C$	SSSS$R_A A_C$
LoBat Res.	SSS(S) R_L	SSS(S) R_L $R_L R_L R_L (R_L) L_B$	SSSS $R_L L_B$
Trouble Res.	SSS(S) R_T	SSS(S) R_T $R_T R_T R_T (R_T) t$	SSSS $R_T t$
Bypass Res.	SSS(S) R_B	SSS(S) R_B $R_B R_B R_B (R_B) b$	SSSS $R_B b$

Where:

SSS or SSSS = Subscriber ID
A = Alarm Code-1st digit
Z = Typically Zone Number*-2nd digit
Tt = Trouble Code (1st & 2nd digits)
Bb = Bypass Code (1st & 2nd digits)
EA_C = AC Loss Code (1st & 2nd digits)
LL_B = Low Battery Code(1st & 2nd digits)
O = Open Code-1st Digit
C = Close Code-1st Digit
U = User Number (1st & 2nd digits)
Gg = Test Code (1st & 2nd digits)
R = Restore Code (Alarm)1st & 2nd digits
$R_T t$ = Restore Code (Trbl)1st & 2nd digits
$R_B b$ = Restore Code (Byps)1st & 2nd digits
$R_A A_C$ = Restore Code (AC)1st & 2nd digits
$R_L L_B$ = 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 = Partition Number (system messages show 00)
ZZZ = Zone/contact ID number reporting the alarm, or user number for open/close reports. System status messages (AC Loss, Walk Test, etc.) contain zeroes in the ZZZ location.

---

*56   ZONE ASSIGNMENT/ALARM REPORT CODES (and RF Serial No. Learning for 5800 System)

REFER TO THE ZONE ASSIGNMENT TABLE FOR THIS FIELD IN THE PROGRAMMING FORM (See Centerfold)

Zone No. (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 01 to 07 are:

Zone No.(Zn):	01	02	03	04	05	06	07
(ZT) Default:	[01]	[04]	[03]	[03]	[09]	[07]	[06]

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

Partition No. (P) (Default = [1], zones 01-06)

Enter "1"or "2" and 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 FA150C (HW), the auxiliary wired expansion zones on a 4219 or 4229 (AW), and the zones on 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) for units that can be carried off-premises, or to "BR" (Button type RF) 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...

RF Sub Zone (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 16.

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 Sub Zone (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.

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 RPT CODE
See box above.

*61   BYPASS RPT CODE
See box above.

*62   AC LOSS RPT CODE
See box above. Reports with Part'n 1 Sub. No.

*63   LOW BAT RPT CODE
See box above. Reports with Part'n 1 Sub. No.

*64   TEST RPT CODE
See box above. Reports with Part'n 1 Sub. No.

*65   OPEN RPT CODE
Enter for each partition. See box above.
2nd digit = User #, if expanded or 4+2 reporting is selected.

*66   CLOSE RPT CODE
Enter for each partition. 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 TRANS. LOW BAT REPORT   CODE
See box above.

*68   CANCEL RPT CODE
See box above.

RESTORE REPORT CODES (*69–*75)

*69   GROUP RESTORES FOR TROUBLE, RF LOW BAT, 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 RPT 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 RPT 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 RPT CODE
See box above.

*73   AC RESTORE RPT CODE
See box above. Reports with Part'n 1 Sub. No.

*74   LOW BAT RESTORE RPT CODE
See box above. Reports with Part'n 1 Sub. No.

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

*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.

Output Relay Number

> *If an AAV option is selected in field *91, do not program Output Relay 01 here.*

Upon entering this field, a prompt will appear on the console asking for the relay number. Enter the number; 01 or 02 for a 4229, or 01, 02, 03, or 04 for a 4204, (or [0][0] to end these entries). Then press [*] and a summary line of data programmed for START will appear. Pressing [*] again will bring up the STOP data. Press [*] again and a prompt for Action will appear.

Action (A)

Enter the code for the desired relay action and press [*] to advance to the beginning of the START data entries.

Event (EV)

Enter the event code and press [*] to advance to...

Zone List (ZL)

Enter (if applicable) the number of the zone list (to be programmed in field *81) that will contain the zones *any* one of which, upon alarm, fault or trouble, will *start* the relay action. Then press [*] to advance to...

Zone Type/System Operation (ZT)

Enter the 2 digit code that can start the relay action, and press [*] to advance to...

Partition No. (P)

Enter (if applicable) the partition number 1 or 2 (or 0 for either) and press [*] to advance to the begin ning of the STOP data entries.

***Restore of* Zone List (ZL)**

Enter the number of the zone list (to be pro grammed in field *81) that will contain the zones *every* one of which must restore to *stop* the relay action. Then press [*] to advance to...

Zone Type/System Operation (ZT)

Enter the 2 digit code that can stop the relay action and press [*] to advance to...

Partition No. (P)

Enter (if applicable) the partition number 1 or 2 (or 0 for any)

Pressing [*] will result in the summary line for START again being displayed. Another press of [*] will display the summary line for STOP.

When all entries to be made now for the relay are complete, the next relay number can be entered for pro gramming, or relay programming can be ended by entering [0][0].

Notes: *The data is keyed in and entered in each field by pressing [*]. If you want to back up to check an entry, press [#] for each position. Press [*] to go forward again.*

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.

*81 ZONE LISTS FOR OUTPUT RELAYS

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

Upon entering this field, a prompt will appear on the console asking for the Zone List Number. Enter the number (or [0][0] to end these entries) plus [*]. An additional prompt will appear that will enable you to add zones to the list, or, by just pressing [*] review the list.

Entering [0][0] ends this first part and goes to fields where you may delete the whole list, or delete selected zones from the list. Another Zone

List can then be entered or you can leave this programming field.

If you only want to review what has been programmed previously, enter [#][8][1]. The review can be advanced by using the [#] key. [0][0] is used to leave each field. No programmed values can be disturbed in this mode.

> **Example of Output Relay Programming**
>
> Let us light an indicator when any one of 3 specific zones are faulted or when any 24 hour zone in Partition 2 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 1 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) in Partition 2, so we will program (ZT) as "08" and (P) as "2".
>
> 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" and (P) as "2".
>
> If no other relay is to be programmed we go to field *81 and program the 3 specific zones in Zone List 1.

*82 CUSTOM ALPHA EDITING

(Also entered from field *56)

> *See ALPHA DESCRIPTION ENTRIES on page 16.*

*83 ADD/DELETE 5800 SERIAL Nos.

See procedure in last paragraph of field *56.

*91 CUSTOM OPTION SELECTION

Select one:
0 = *None selected.*
1 = Local lockout.
2 = Sounder delay.
3 = Local lockout + Sounder delay.
4 = AAV
5 = Local lockout + AAV.
6 = Sounder Delay + AAV.
7 = Local lockout + Sounder Delay + AAV.

Local lockout: Exiting by *98 will allow re-entry into programming mode at the console *only* by:
Installer Code + CODE + 0
(not by: Power-up + [*]+ [#])

Sounder delay: Delays the external sounder by 15 seconds for Fire and Burglary. Internal sounder is immediate on alarm. Communicator (dialer) delay is still set by field *48.

AAV (Audio Alarm Verification): Cuts off internal and external sounders for that alarm at termination of communicator report of alarm and causes Output Relay 01 to energize for 2 seconds to trigger AAV Unit.

DOWNLOAD INFORMATION (*94-*97)

*94 DOWNLOAD PHONE NUMBR

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

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

*96 INITIALIZE DOWNLOAD ID AND SUBSCRIBER ACCT. No. FOR DOWNLOADING

(No data entry required)

*97   SET ALL PGM FLDS TO DEFAULT VALUES
(No data entry required)

TO EXIT PROGRAM 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 (or, if Local lockout has been chosen in field *91, *allows* re-entry *only* by):
Installer Code + CODE + 0

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

ALPHA DESCRIPTION ENTRIES

| See the ALPHA FIXED DICTIONARY and CHARACTER CHART on the next page. |

Assigning Zone Descriptors

The FA510KP Console used with the FA150C 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) that are selected from a vocabulary of 244 words stored in memory (see next page). 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 the location of that zone will be displayed at the console.

Note: Alpha Descriptor entry can be done locally at the FA510KP Console or remotely using an FADL Downloader. The FA510KP procedure is described below.

Entering Zone Descriptors

1. The descriptor can be entered at the time the zone is being defined in field *56 or 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 the next page (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, or key [1] to go backward, (e.g., to "B").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 bear in mind that no more than *ten* characters can be used for each word or word string.

1. Select CUSTOM WORD mode when the question comes up.

   The console keys perform the following functions:

   [3]   Advances through alphabet in ascending alphabetical order.

   [1]   Moves through alphabet in descending alphabetical 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 at that location.

   [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 (or words). 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 any 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	FF	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		

TESTING THE SYSTEM

After installation is completed, *each* partition of 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, their programmed action should be tested.

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 SNIFFER MODE** (*not applicable to, or necessary with, 5800 RF system*): By pressing **Installer code + # + 2** from Partition 1, 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 **installer code + OFF**.

   b. **TRANSMITTER SNIFFER MODE:** By pressing **Installer code + # + 3** from Partition 1, 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 **installer 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 **installer code + # + 4**, a mode similar to the user test mode (code + TEST) is entered, but the wireless receiver gain is reduced. Checking transmitters in this mode enables verifying that the RF transmission has sufficient signal amplitude margin for the installed system. Exit the mode by entering **installer code + OFF**.

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

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.

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 FA150C'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 FA150C.
	1c. 5827 not being received by 5881.	1c. House code for 5827 must be programmed into FA150C for Partition 1 or 2.
	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.

TROUBLESHOOTING GUIDE (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.

C O N T R O L

SYMPTOM	POSSIBLE CAUSE	REMEDY
1. **"AC POWER" light off.**	1a. Faulty power supply.	1a. Check 12V power and power line circuit breaker.
2. **Digital communicator message not being received.**	2a. FA150C 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 FA150C.
	2d. Telephone number in program needs prefix or access code.	2d. Program prefix or access code into FA150C.
	2e. Telephone call to central monitoring station requires operator assistance.	2e. FA150C system cannot work in this situation.
3. **Does not arm properly.**	3a. Ready light not on.	3a. Try Bypass arming.
4. **FA150C 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.

S M O K E   D E T E C T O R

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.

SPECIFICATIONS

FA150C 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

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,1800Hz Data 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

FA200KP 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

FA310KP & FA510KP 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 (FA310KP)
90mA (FA510KP)

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 and (5700 System)
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 FA150C:
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.
BRK PA400B Piezoelectric Alarm Sounder, 90dB output (mounts in single-gang box).
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
BRK 1412 4-wire Ionization Products of Combustion Detector
BRK 2412 4-wire Photoelectric Smoke Detector
BRK 2412TH 4-wire Photoelectric Smoke Detector w/135° F (57°C) Heat Detector

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 lock-out between transmissions to conserve battery life.

5727 Wireless Keypad
(Use for Partition 1 only)
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 .

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.

GEL LEAD ACID TYPE. DO NOT USE GATES BATTERY.

BATTERY NORMALLY NEED NOT BE REPLACED FOR AT LEAST 3 YRS.

BATTERY CAPACITY FOR EMERGENCY STANDBY USE AT LEAST 4 HOURS.

FUSES

FOR REPLACEMENT, USE SAME VALUES

BATTERY (e.g. ADEMCO No. 90-12)

SOUNDER (e.g. ADEMCO No. 90-2)

2A

3A

CHARGING VOLTAGE 13.8VDC

BATTERY 12V, 4AH* OR 12V, 1.2AH

TO DETERMINE TOTAL STANDBY LOAD ON BATTERY, ADD 100mA TO TOTAL OF AUX. POWER OUTPUT AND REMOTE CONSOLE CURRENTS.

USE UL LISTED LIMITED ENERGY CABLE FOR ALL CONNECTIONS.

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.

CONNECTOR TABS

BLACK

RED

PLUG-IN TRANSFORMER 16.5VAC, 25VA (e.g. ADEMCO No. 1321/TF2, USE NO. 1321CN IN CANADA)

TO 110VAC UNSWITCHED OUTLET (24HR)

ALARM OUTPUT 10.5-13.8VDC, 2A MAX. (600mA MAX. FOR UL USAGE, INCLUDING AUX. POWER)

STEADY FOR BURGLARY/PANIC. PULSING FOR FIRE (e.g. USE ADEMCO No. 740 SOUNDER, No. 702 OR 719 SIREN, OR 12V BELL.

FOR COMPLETE INFORMATION, SEE INSTRUCTIONS

DOC LOAD NO.: 2

CONNECTOR FOR PARTITION 2 CONSOLE(S)

REMOTE CONSOLE PARTITION 2

BLK
RED
GRN
YEL

FOR UP TO 30 ADDITIONAL ZONES (ONE FROM EITHER OR BOTH GROUPS)

OPTIONAL

ADEMCO No. 4219 WIRED EXPANSION UNIT (8 ADD'L EOLR WIRED ZONES)
-OR-
ADEMCO NO. 4229 WIRED EXPANSION/RELAY UNIT (8 ADD'L EOLR WIRED ZONES PLUS 2 OUTPUT RELAYS)
-OR-
ADEMCO No. 4204 RELAY UNIT (4 OUTPUT RELAYS)

BLK
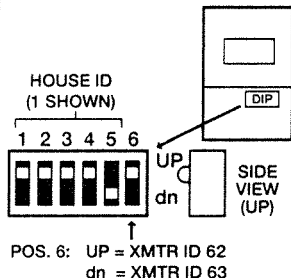RED
GRN
YEL

-AND/OR-

ADEMCO 4281 OR 5881 TYPE RF RECEIVER

WIRELESS ZONES	
4281L	UP TO 4
4281M, 5881L	UP TO 8
5881M	UP TO 16
4281H, 5881H	UP TO 30

SET RECEIVERS' DIP SWITCH FOR DEVICE ADDRESS OF "0". See receiver's instructions.

SET UNIT'S DIP SWITCH FOR DEVICE ADDRESS OF "1". See unit's instructions.

Not presently UL Listed

1000 OHMS EOLR

SUPERVISORY MODULE (e.g. SYSTEM SENSOR A7771601)

SMOKE OR COMBUSTION DETECTOR SEE ITS INSTRUCTIONS FOR ITS PROPER INSTALLATION

HEAT DETECTOR

ZONE 5 IF PROGRAMMED FOR FIRE

AUX. POWER OUTPUT TERM

(−) (+)

LOCATED AT LOWER RIGHT CORNER OF CIRCUIT BOARD

EARTH GROUND SEE INSTRUCTIONS FOR PROPER GROUNDING

REMOTE CONSOLE PARTITION 1

YELLOW: CONSOLE DATA OUT
GREEN: DATA IN FROM CONSOLE
RED CONSOLE PWR (+)
BLACK: CONSOLE GROUND (−) RETURN

AUX. POWER OUTPUT 10.5-13.8VDC 500mA MAX.

INTERRUPTS FOR FIRE ALARM RESET

NOTE: CONSOLE CURRENT MUST BE INCLUDED IN AUX. CURRENT DRAIN CALCULATIONS

REMOTE CONSOLES

PROGRAM SYSTEM WITH AN FA510KP CONNECTED TO PARTITION 1. IT NEED NOT REMAIN IN SYSTEM.

AFTER PROGRAMMING, EACH PARTITION CAN USE FA200KP (20mA), FA310KP (60mA), OR FA510KP (90mA). MULTIPLE CONSOLES MAY BE USED ON EITHER PARTITION, BUT USE MAX. OF 220 FT. OR #22 WIRE OR 550 FT. OF #18 WIRE.

BLK
RED
GRN
YEL

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5
ZONE 6

1000 OHMS EOLR

HI LO

TIP (BROWN) RING (GRAY) TIP (GREEN) RING (RED)

HANDSET INCOMING PHONE LINE

TELEPHONE WIRING (VIA RJ31X JACK DIRECT CONNECT CORD) *IN CANADA, CA38A JACK

• **MAXIMUM LOOP RESISTANCE** (EACH ZONE) 300 OHMS (PLUS EOLR)
• **RESPONSE, ZONES 1-6:** 300 - 500MSEC
• ZONE 3 CAN BE PROGRAMMED FOR N.C. SENSOR FAST RESPONSE TO AN OPEN: 10MSEC MAX
• 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.

FA150C
SUMMARY OF CONNECTIONS

DIP SWITCH TABLES FOR 5700 RF SYSTEM WIRELESS DEVICES

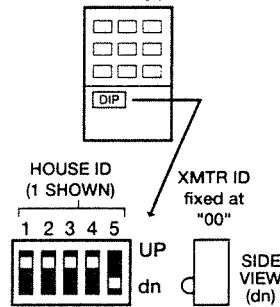## House ID Switch Setting for All Devices Except 5716

HOUSE ID	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.

HOUSE ID (1 SHOWN)
1 2 3 4 5 6

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

5727 Keypad

HOUSE ID (1 SHOWN)
1 2 3 4 5

XMTR ID fixed at "00"

SIDE VIEW (dn)

5706/5707 Smoke Detector Transmitter

HOUSE ID (1 SHOWN)
1 2 3 4 5 6 7 8

XMTR ID (48 SHOWN)
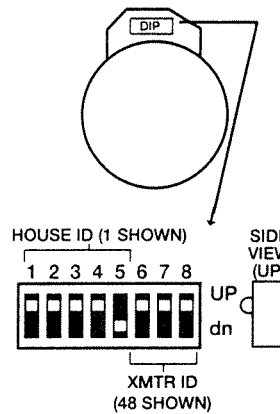
XMTR ID	6	7	8
48	UP	UP	UP
49	UP	UP	dn
50	UP	dn	UP
51	UP	dn	dn
52	dn	UP	UP
53	dn	UP	dn
54	dn	dn	UP
55	dn	dn	dn

5775 PIR Detector/Transmitter

HOUSE ID (1 SHOWN)
1 2 3 4 5 6 7 8 9 10

XMTR ID (32 SHOWN)

UP = PULSE COUNT
dn = INST. MODE
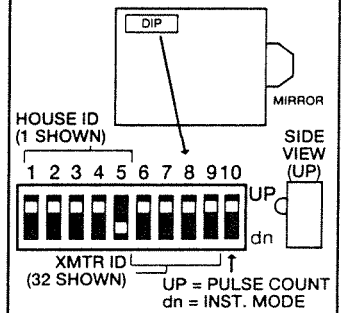
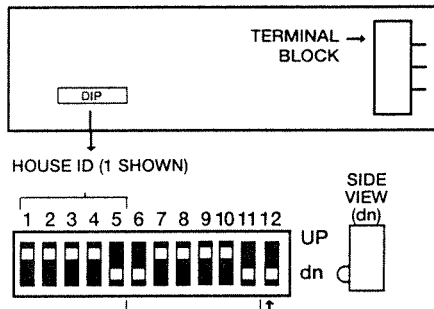| XMTR ID	6	7	8	9
32	UP	UP	UP	UP
33	UP	UP	UP	dn
34	UP	UP	dn	UP
35	UP	UP	dn	dn
36	UP	dn	UP	UP
37	UP	dn	UP	dn
38	UP	dn	dn	UP
39	UP	dn	dn	dn
40	dn	UP	UP	UP
41	dn	UP	UP	dn
42	dn	UP	dn	UP
43	dn	UP	dn	dn
44	dn	dn	UP	UP
45	dn	dn	UP	dn
46	dn	dn	dn	UP
47	dn	dn	dn	dn

5715 Universal Xmtr.

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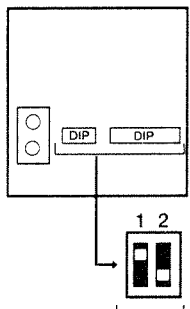
POS. 1: UP = NORMAL RESPONSE
dn = FAST RESPONSE
POS. 2: UP = NO COVER TAMPER
dn = COVER TAMPER (use N.C. setting)

XMTR ID	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

5711/5711WM Door/Window Transmitter

TERMINAL BLOCK

HOUSE ID (1 SHOWN)
1 2 3 4 5 6 7 8 9 10 11 12

XMTR ID (33 SHOWN)

POS. 12: UP = N.O.
dn = N.C.
(Avoid ID 32-37 with N.O.)

XMTR ID	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

IMPORTANT: SET SWITCHES WITH BATTERY REMOVED

TERMINALS

SW4
SW3

6 5 4 3 2 1

UP SW4

XMTR ID (33 SHOWN)
HOUSE ID (1 SHOWN)

6 5 4 3 2 1

UP SW3

POS. 6: UP = N.O.
dn = N.C.
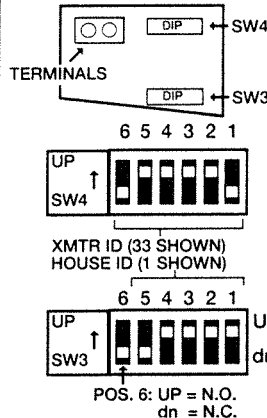
HOUSE ID	5	4	3	2	1
1	dn	UP	UP	UP	UP
2	UP	dn	UP	UP	UP
3	dn	dn	UP	UP	UP
4	UP	UP	dn	UP	UP
5	dn	UP	dn	UP	UP
6	UP	dn	dn	UP	UP
7	dn	dn	dn	UP	UP
8	UP	UP	UP	dn	UP
9	dn	UP	UP	dn	UP
10	UP	dn	UP	dn	UP
11	dn	dn	UP	dn	UP
12	UP	UP	dn	dn	UP
13	dn	UP	dn	dn	UP
14	UP	dn	dn	dn	UP
15	dn	dn	dn	dn	UP
16	UP	UP	UP	UP	dn
17	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	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	UP	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").**

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 ministrère 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 télécommunication. Le matériel doit également être installé en suivant une méthod acceptée de raccordement. Dans certains cas, les fils intérieurs de l'entreprise utilisés pour un service individuel a 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'empêchent pas la dégradation du service par certaines situations. Actuellement, les enterprises de télécommunication ne permettent pas que l'on raccorde leur matériel aux jacks d'abonnés, sauf dans les cas precis prévus par les tarrifs particuliers de ces entreprises.

Les réparations de matériel homologué doivent être effectuées pas un centre d'entretien canadien authorisé 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 à la terre de la source d'energie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont 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 électrician, 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 raccordeé à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100.

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.

LIMITED WARRANTY

First Alert
PROFESSIONAL SECURITY SYSTEMS

N6616-1V1 5/93

A DIVSION OF PITTWAY CORP.
172 Michael Drive
Syosset, New York 11791