®ADEMCO

SECURITY SYSTEM

4110XM

SEE INSIDE COVER FOR IMPORTANT NEW FEATURES AND INFORMATION!

Installation Instructions • Installation Instructions • Installation Instructions

Please Read

INFORMATION CONCERNING NEW FEATURES

Controls with microprocessor part number N7185V3 or higher contain the following new features. These controls can be identified via the downloader as Rev. 06.

1. This control complies with National Fire Protection Association (NFPA) requirements for temporal pulse sounding of fire notification appliances. Fire alarms now sound as interrupted pulses consisting of three pulses and a brief pause (i.e. ring, ring, ring, pause - ring, ring, ring, pause, etc.)

2. Capability has been added for the control to call a pager on the secondary telephone number. This can only be used if the primary reporting format is Ademco Contact ID. The following entries have been added to program field *49 (Split/Dual Reporting) for the purpose of paging messages:

Primary	Secondary (Paging number)
6 = All reports except Open/Close	Alarms/ Open/Close, Troubles
7 = All reports	Alarms, Troubles
8 = All reports	Alarms, Open/Close, Troubles

    Touch-tone codes sent to the pager are:
    1911 = Alarm
    1001 = Open
    1002 = Close
    1811 = Trouble

    No restore reports are sent to the pager.

3. Three additional user codes have been added (identified as Users 5, 6, and 7).

4. Duress is now User 8 (no longer User code + 1).

5. AC Loss report is now sent at a random time delay up to 1 hour. If AC is restored before the report goes out, no report will be sent.

6. Telephone number entries can now contain ∗, #, and a 2-second pause.
    Enter # + 11 for "∗"
    Enter # + 12 for "#"
    Enter # + 13 for 2-sec. pause

7. Audible Exit Warning option has been added (field *27: 0 = no; 1 = yes [default = 1]). If enabled, beeping will occur during exit time and will change from slow to rapid beeping during last 5 seconds of exit delay.

8. Master code is now able to change itself in normal operating mode. To change, enter:
    [Master code] + [8] + [1] + [new Master code] + [new Master code] again.

9. New Telco Hand-off feature allows the technician at the site to call the downloading facility from the control panel phone line, initiate a site download (Master Code + # +1), and the control will immediately be on-line with the modem at the downloading facility.

10. If all power is lost at the control, upon power up, the armed status will be the same as it was before the power loss. Bypasses, however, are not retained.

11. The control checks for the physical battery connection every two minutes. If connection is lost, a visual and audible trouble is indicated, and a communicator report will be sent (if programmed). The actual condition of the battery is still checked once every four hours. To clear the low battery message after the low battery condition is restored, enter Test mode: [User code] + [5]; otherwise it will clear itself the next time the system checks the battery's condition.

RECOMMENDATIONS FOR PROPER PROTECTION

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

## Recommendations For Smoke And Heat Detectors

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

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

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

In addition, we recommend the following:

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

■ Smoke Detectors for Minimum Protection
✪ Smoke Detectors for Additional Protection
▲ Heat-Activated Detectors
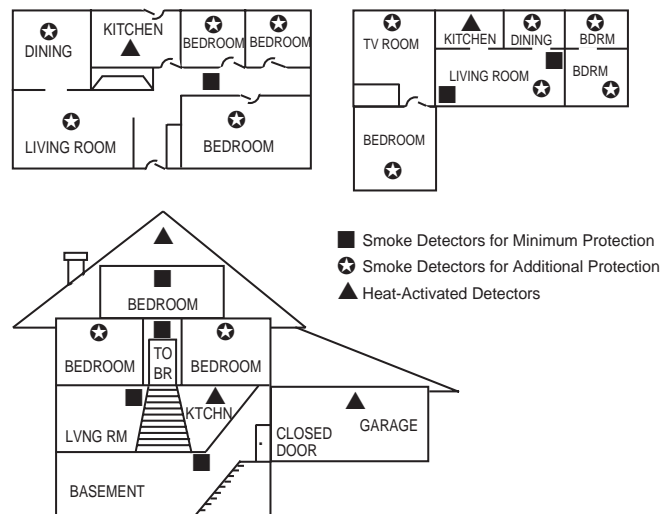
Recommendations For Proper Intrusion Protection

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

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

Section 1. GENERAL DESCRIPTION

The 4110XM is a microprocessor-based state-of-the-art security control intended for wired and wireless applications. The Control Panel supports up to 14 zones, using basic hard-wired, and/or wireless.

–––––––––––––––––––––––––––––––– **FEATURES** ––––––––––––––––––––––––––––––––

Zones Supported
- 6 hardwire zones, having the following characteristics:
  - ◊ EOLR supervision supporting N.O. or N.C. sensors.
  - ◊ 300-500 msec normal response.
  - ◊ Zone 3 programmable for Fast Response to open (10mS).

- Up to 8 wireless zones:
  - ◊ Requires the use of a 4281 (5700 System) type RF receiver as indicated below.

Receiver Model	No. of Zones
4281L	up to 4
4281M	up to 8
4281H	up to 8

  - ◊ Requires the use of 5700 series wireless transmitters.
  - ◊ Detects signals within a nominal range of 200 feet.

Security Codes
- 1 master code for entire system (user 1)
- 6 secondary user codes (users 2-7)
- Duress code assigned as user 8

Keypad Panic Keys
- Provides programmable panic key functions
- Activated by wired & wireless keypads

Alarm Output
- Provides a 12VDC, 2 AMP output (assumes a fully charged 4AH battery is connected)
- Steady output for Burglary/Panic, or pulsing output for Fire
- Output is current limited

Communication Formats
- **Ademco Low Speed (Standard or Expanded):** 1400Hz ACK/KISSOFF.
- **Sescoa/Radionics (Standard or Expanded):** 2300Hz ACK/KISSOFF.
- **Ademco Express:** DTMF, 1400/2300Hz ACK, 1400Hz KISSOFF.
- **Ademco Contact ID:** DTMF 1400/2300Hz ACK, 1400Hz KISSOFF.

–––––––––––––––––––––––––––– **SPECIFICATIONS** ––––––––––––––––––––––––––––

4110XM SECURITY CONTROL

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

2. **Electrical:**

   Voltage Input: ....16.5VAC from plug-in 25VA transformer, Ademco No. 1321/TF2 (in U.S.A.), 1321CN (in Canada)

   Rechargeable Back-Up Battery: ...12VDC, 4AH (Gel type).

   Charging Voltage: ....13.8VDC.

   Alarm Sounder: ....12V, 2.0 Amp output

   Auxiliary Power Output: ....12VDC, 500mA max. Interrupts for 4-wire smoke detector reset.

   Maximum Zone Resistance: .....Zones 1-6 = 300 ohms excluding EOLR

   Fuse: ....battery (3A) No. 90-12

   Line Seize: ....Double Pole

3. **Regulatory Information**

   Ringer Equivalence: 0.7B

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

   UL File No. ....S1632, Guide UXOU

UL *In UL installations, maximum current draw from the Auxiliary Output and the Alarm Output combined must not exceed 600mA total.*

Remote Keypads (up to 4)

Model	Type
4127, 6127	Fixed English
4137AD, 6137, 6128	Fixed English Addressable
5330 (Select for Vista)	Alpha

IMPORTANT	*Addressable keypads must be used in the non-addressable mode (Device Address 31), which is pre-set at the factory. Do not set these keypads to any other addresses.*

Smoke Detectors (4-wire only)

Model	Type
1412	Ionization Products of Combustion Detector
2412	Photoelectric Smoke Detector
2412TH	Photoelectric Smoke Detector)w/135º F (57º C) Heat Detector)

Fire Supervisory Module

A77-71601 EOL Relay Module (supervises power for 4-wire fire zone).

5700 Series Transmitters

Model	Description	Zone Num.
5701	Panic Transmitter	62 or 63
5706	Photoelectric Smoke	48-55
5707	Detectors	
5711	Slimline Door/ Window Transmitter	1-63
5715WH	Universal Transmitter	1-63
5716	Door/Window	1-63
5716WM	Transmitter	
5742	Audio Discriminator	1-63
5743	Dual Technology Glassbreak Detector	1-63
5775	PIR Detector	32-47
5727	Wireless Keypad	House ID
5827BD	Wireless Bi-directional Keypad	House ID
5799	Magnets	

UL	*The 5711, 5715, and 5716 do not supervise their loop wiring. Therefore, their loop wiring may not exceed three feet.*

Optional Keyswitch

4116 Keyswitch

Zone Response Type	Characteristics
0 – Zone Disabled	
1 – Entry/Exit Burglary	• Provides exit delay time when panel is armed in any arming mode. • Provides entry delay when panel is armed in Away and Stay modes only.
3 – Perimeter Burglary	• Provides an instant alarm when panel is armed in any arming mode.
4 – Interior, Follower	• Provides exit delay time when panel is armed in any mode. • Will only provide entry delay if an Entry/Exit zone is faulted first upon entry. Otherwise, alarm will be instant. • Bypassed automatically when panel is armed in the Stay or Instant mode.
5 – Trouble by Day/Alarm by Night	• Provides a trouble response if panel is not armed when zone is faulted. • Provides an instant alarm if panel is armed in any mode.
6 – 24-Hr. Silent Alarm	• Provides a silent alarm to Central Station whether panel is armed or disarmed.
7 – 24 Hr. Audible Alarm	• Provides an audible alarm at the bell output and keypad whether panel is armed or disarmed.
8 – 24-Hr. Auxiliary Alarm	• Provides an audible alarm at the keypad only. **No bell output is provided.**
9 – Fire	• Provides a fire alarm when zone is shorted. Causes bell output to pulse. • Provides a trouble response when zone is open.
10 – Interior w/Delay	• Provides entry and exit delay times. • Bypassed automatically when panel is armed in the Stay or Instant mode.

Section 2.
SYSTEM INSTALLATION AND WIRING

––––––––––––––––––––– **INSTALLING THE SYSTEM** –––––––––––––––––

Refer to the Summary of Connections diagram on the inside back cover of this manual for terminal connections when following these procedures.

1. Install the Control Cabinet

- Mount the cabinet.

- Install the cabinet lock as follows:
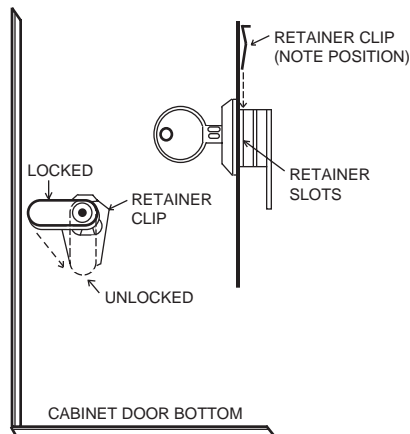
Figure 1. Installing The Cabinet Lock

- Mount the PC board either alone, or with the wireless receiver in the same cabinet (see Figures 2 and 3 to follow).
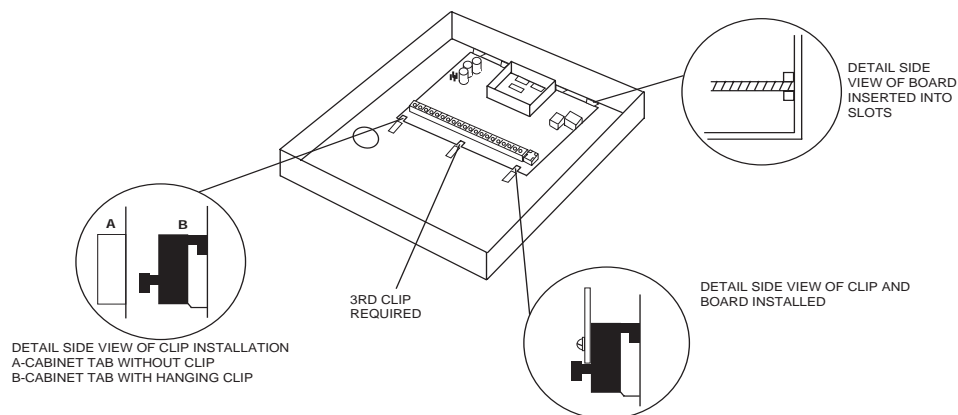
Figure 2. Mounting The PC Board Alone
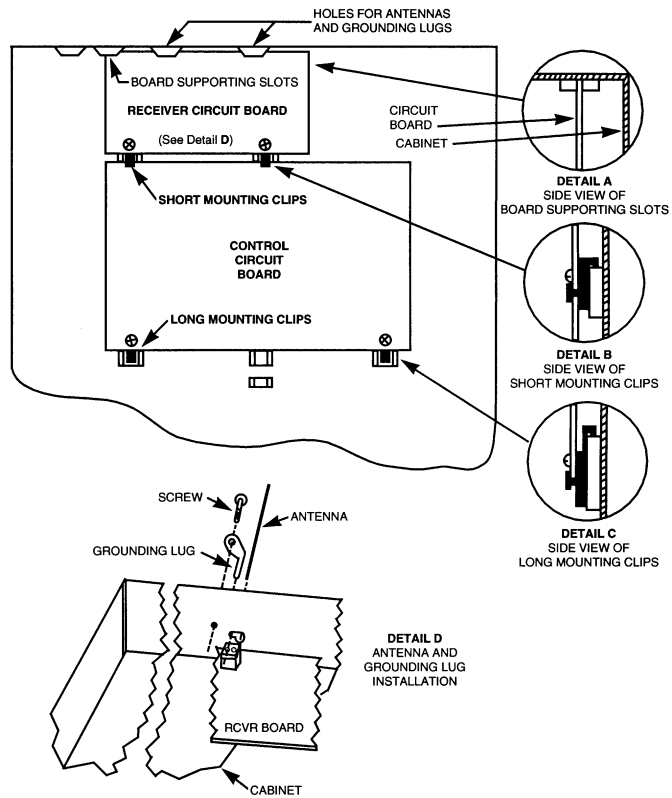
Figure 3. Mounting The PC Board And RF Receiver Together In The Cabinet

> ⚠ **WARNING**
>
> ***BE SURE TO USE THE PLASTIC MOUNTING CLIPS (SUPPLIED) TO ISOLATE THE CIRCUIT BOARDS FROM THE CABINET. FAILURE TO DO SO MAY RESULT IN DAMAGE TO THE TRANSFORMER AND/OR THE CIRCUIT BOARDS.***

2. Install Remote Keypads
• Determine wire gauge by referring to the wiring length/gauge chart at the end of this section.

3. Install Hardwired Zones

4. Install the 4281 RF Receiver
• With the antennas in the upright position , make sure all DIP switches are pushed to the right (OFF – this equals address 0), as shown in Figure 4.
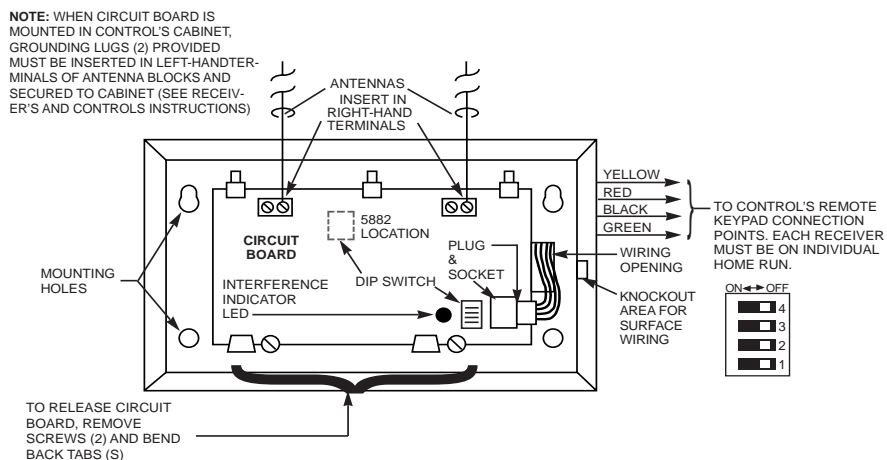
Figure 4: 4281 Wireless Receiver Showing DIP Switch Setting of "0."

- Use the House ID Sniffer mode to select a House ID that is not being used in a nearby system as follows:
  a. Enter the **[Master Code]** + **[#]** +**[2].**
     While in this mode, the keypad will display the House ID transmitted by any wireless devices in the area. It may take some time for all wireless devices in the area to send a signal, so it is recommended that you leave the system in this mode for approximately 2 hours. If any House ID numbers are displayed, select another number for this system.

IMPORTANT	***Remove all batteries from transmitters before going into the House ID Sniffer Mode.***

  b. Exit this mode by entering the **[Master Code]** + **[1] OFF**.

5. **Install Sounding Devices**

UL	***Use only UL Listed sounding devices for UL installations.***

6. **Install the Remote Keyswitch**

IMPORTANT	***When using a keyswitch, the system cannot support wireless.***

7. **Connect the Telephone Line**

IMPORTANT	***Make sure telephones on the premises are connected only through the alarm control panel (disconnect from the incoming phone line at the telephone jack). This is necessary to have true line seizure.***

8. **Connect the AC Transformer**
   - Use the wiring table at the end of this section for maximum wire lengths per gauge.

! WARNING	***DO NOT PLUG THE TRANSFORMER INTO THE AC OUTLET UNTIL ALL OTHER WIRING TO THE CONTROL IS COMPLETE.***

9. **Connect the Battery**

IMPORTANT	***Do not attach the connector cable to the battery's terminals until after you have plugged the AC transformer into an uninterrupted 120VAC outlet.***

UL	1. ***In UL installations, maximum current draw from the Auxiliary Output and the Alarm Output combined must not exceed 600mA.*** 2. ***Use a 3A battery or larger for UL installations.***

10. **Connect Earth Ground**
    - Connect Terminal 21 to a good earth ground (Metal Cold Water Pipe, or AC Power Outlet Ground from a 3 prong, 120VAC outlet. This is necessary for the lightning protection devices in this control to work properly.

11. **Install Wireless Transmitters**

- Select a House ID (all transmitters must be set to the same House ID as you will program into the system). To determine a House ID that is not being used in a nearby system, use the House ID Sniffer Mode (*see Section 5: TESTING THE SYSTEM* for further instructions on using House ID Sniffer Mode).

- Determine what zone response type each transmitter will represent.

- Select each transmitter's zone number according to its zone response type (use the chart below).

ZONE NUMBER (RF XMTR ID)	ZONE TYPE	RF XMTR ID	ZONE TYPE
10-13	ENTRY/EXIT, Burg.	48-55	FIRE
14-29	PERIMETER, Burg.	56-61	TROUBLE BY DAY/
30-43	INT/FOLLOWER, Burg.		ALARM BY NITE, Burg.
44, 45	INT w/DELAY, Burg.	62	24 hr. (audible)
46, 47	PERIMETER, Burg.	63	Programmed by field *92

- Set DIP switches on transmitters (according to each transmitter's instructions) for the zone numbers and House ID selected (see *DIP Switch Settings for Wireless Devices* on page 17 of this manual. *Do not* set two transmitters for the same zone number.

- Mark each transmitter's zone number so you can identify it easily when mounting.

- Program House ID and transmitter zone numbers into the system (see program fields *24 and *76 thru *92).

Do not permanently mount transmitters until transmission from each location has been verified (see *Section 5: TESTING THE SYSTEM* for instructions on performing the Go/No Go Test Mode.

–––––––––––––––––– WIRING GUIDELINES ––––––––––––––––

Aux Power Wire Run Chart				
	TOTAL CURRENT DRAWN BY ALL DEVICES* CONNECTED TO A SINGLE WIRE RUN			
Wire Size	50 mA or less	51 - 100 mA	101- 300 mA	301 - 500 mA
#22	500 ft (152m)	250 ft (76m)	80 ft (24m)	50 ft (15m)
#20	750 ft (228.6m)	380 ft (116m)	130 ft (39.6m)	80 ft (24m)
#18	1300 ft (396m)	650 ft (198m)	220 ft (67m)	130 ft (39.6m)
#16	1500 ft (457m)	1000 ft (305m)	330 ft (100.5m)	200 ft (70m)

* Includes Keypads, RF Receiver, and alarm devices requiring separate power.

Example: If you have two motion detectors that draw a total of 44 mA, and you are using #20 AWG wire, the distance from the control panel Aux + and - terminals to the last device can be up to 750 ft.

IMPORTANT

The combined length of all wire runs for devices connected to the keypad data lines must not exceed 1500 feet (457m) when unshielded quad conductor cable is used (750 feet if shielded cable is used). This restriction is due to the capacitive effect on the data lines when quad cable is used.

Transformer Wiring Table	
Distance of Transformer From the Control Panel	Wire Gauge To Use
Up to 50 feet	# 20
50–100 feet	# 18
100–250 feet	# 16

Section 3. PROGRAMMING THE SYSTEM

For actual program fields, a programming form is included at the center of this manual.

Entering Program Mode

Use one of the following methods:
- Press both the [*] and [#] keys at the same time within 50 seconds after power is applied to the Control.
  or
- After power-up, enter the [Master Code] + 8 + 0 (default Master Code is 4110)

  This method is disabled if you exit the program mode using *98 instead of *99. See "Exiting Program Mode" later in this section.

Following entry into program mode, data field *20 will be displayed (this is the first field in the system). The system will now accept entries for field *20.

Programming a Data Field

↓ **Field Number**

```
┌─────────────────────┐
│ 20                  │
└─────────────────────┘
```

Press [*] plus [Field No.] (e.g., *20), and then make the required entry. Note the following:
- The keypad beeps three times when the data field has been completely programmed
- The next Field No. is displayed. If you do not want to program this field, press [*] + the Field No. you want to program.
- If the number of digits that you need to enter in a data field is less than the maximum digits available (e.g., the phone number field), enter the desired data, then press [*] + the next Field No. to be programmed.
- If you try to enter a non-existent field, the keypad will display **EE or Entry Error**. Simply re-enter [*] plus a valid Field No.

Reviewing a Data Field

Press [#] plus [Field No.]. Note the following:
- Data will be displayed for that field number, entry by entry (a beep will be heard between entries and three beeps after the last).
- No changes will be accepted in this mode.
- If you try to enter a non-existent field, the keypad will display **EE or Entry Error.** Simply re-enter [#] plus a valid field number.

Erasing an Entry in a Data Field

Applies only to fields *40-*43, and *94.
Press [*] plus Field No. plus [*].

Downloading

*96 resets the Subscriber Account number and CSID in preparation for an initial download. If *97 was entered previously, *96 *must* be entered last. The control can either be initiated from the control panel (site) by entering [Master Code] + # + 1, or from the downloading computer (station).

A new Telco hand-off feature allows a technician or user at the site to call the downloading facility from the control panel phone line and initiate a site download. By entering the Master Code + [#] + [1] while on the line, the control will immediately be on-line with the modem at the downloading facility, where the operator can begin downloading.

Clearing All Data Fields

*97 clears (zeros) all data fields. The Master Code will now be 0 0 0 0.

> ⚠ **WARNING** *DO NOT PRESS *97 IF ANY PROGRAMMING HAS BEEN DONE PREVIOUSLY; DATA ALREADY PROGRAMMED INTO THE SYSTEM WILL BE DELETED.*

Exiting the Programming Mode

*98 inhibits re-entry into the programming mode with the use of the Master Code.

*99 allows re-entry into the program mode using **Master Code + 8 + 0**.

Section 4: SYSTEM OPERATION

Adding a Secondary User Code

MASTER CODE + [CODE KEY] + USER # (2-7) + DESIRED 4-DIGIT ACCESS CODE.
(The system will emit a single beep when a secondary code has been successfully entered.)

Changing the Master Code

MASTER CODE + [CODE KEY] + [1] + NEW MASTER CODE + NEW MASTER CODE AGAIN

Deleting a Secondary User Code
MASTER CODE + [CODE KEY] + USER # (2-7)

Notes:
- All Master and Secondary security codes permit access to the system for arming, disarming, etc.
- If a secondary code is inadvertently repeated for different users, the lower user number will take priority.
- Opening and closing reports are sent for the Master as user number 1. User codes are sent as numbers 2-7, respectively.

————————————— KEYPAD FUNCTIONS —————————————

System Commands

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

SUMMARY OF SYSTEM COMMANDS

MODE	HOW TO PERFORM	EXIT DELAY	ENTRY DELAY	PERIMETER ARMED	INTERIOR ARMED
AWAY	Security Code + [2]	Yes	Yes	Yes	Yes
STAY	Security Code + [3]	Yes	Yes	Yes	No
INSTANT	Security Code + [7]	Yes	No	Yes	No
MAXIMUM	Security Code + [4]	Yes	No	Yes	Yes
DISARM	Security Code + [1]				
BYPASS	Security Code + [6] + Zone #(s)				
QUICK BYPASS (if enabled)	Security Code + [6]				
CHIME MODE	Security Code + [9] (toggles on and off)				
SITE-INITIATED DOWNLOAD*	Master Code + [#] + [1]				

* Initiates phone call to the downloading facility.

Panic Keys

A panic function is activated when:

- Both keys of the appropriate key pair are pressed at the same time, or

- The appropriate lettered key is pressed for at least 2 seconds.

The panic functions are identified by the system as follows:

Keys	Displayed as Zone	Zone Type
[1] & [∗], or [A]	95	24-Hr. Silent
[∗] & [#], or [B]	7	Programmable (24-Hr. Silent, Audible, Auxiliary, or Fire
[3] & [#], or [C]	96	24-Hr. Audible

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

Keyswitch LED Indications

RED	MEANING
OFF	DISARMED & NOT READY
SLOW FLASH	ARMED READY
RAPID FLASH	ARMED

Keyswitch Operation

- To arm AWAY, turn key and release within a 1/2 second.
- To arm STAY, turn and hold key for longer than 2 seconds.
- To disarm, turn key and immediately release.

Section 5.   TESTING THE SYSTEM

After installation is completed, the Security System should be carefully tested as follows:

Test Mode
1. With the system disarmed, check that all zones are intact. If a **NOT READY** message displays, press the **[∗]** key to display the faulted zone(s). Restore faulted zone(s) if necessary.
2. Enter the **[Security Code]** + **[5] TEST**. The following will occur:
   - A test report will be transmitted (if programmed) to the Central Station immediately. (If the backup battery is discharged or missing, a LOW BATTERY report will be transmitted with a TEST report.)
3. Fault and restore each zone.
   - The keypad will emit 3 beeps each time a contact is faulted.
   - The keypad will beep once per minute as a reminder that the system is in the Test Mode.
4. Exit this mode by entering the **[Security Code]** + **[1] OFF**.

Armed System Test
Alarm messages will be sent to the central station during the following tests. Notify them *in advance* that tests will be in progress.
1. Arm the system and fault one or more zones.
2. After 15 seconds (if optional dialer delay is selected), silence alarm sounder(s) by entering the **[Security Code]** + **[1] OFF.** Check Entry/Exit delay zones.
3. Check the keypad-panic alarms that are in the system by pressing the Panic key (key pairs on some keypads).
   - If the system has been programmed for audible emergency, the keypad 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.
4. Notify the central station when all tests are finished, and verify results with them.

Transmitter ID Sniffer Mode
1. Enter **[Master Code]** + **[#]** + **[3].** The following will occur:
   - The keypad will display all zone numbers of wireless units programmed into the system.
2. Fault and restore each transmitter.
   - As the system receives a signal from each of the transmitters, the zone number of that transmitter will disappear from the display.
   - After all wireless zones have transmitted a signal, none of the wireless zones should remain on the display. If any are still displayed, re-check DIP switch settings and locations of the transmitters.
3. Exit this mode by entering the **[Master Code]** + **[1] OFF.**

IMPORTANT	*If the communicator is in the process of sending a report to the central station, the system will not go into the Sniffer mode. If so, wait a few minutes, and try again.*

Go/No Go Test Mode
This test should be conducted to determine good mounting locations for transmitter. It verifies that the RF transmission has sufficient signal amplitude margin for the installed system. It is similar to the regular Test mode (Code + [5] TEST), but the wireless receiver gain is reduced.
1. Enter the **[Master code]** + **[#]** + **[4]**.
2. Follow steps 3 and 4 of the **Test Mode** instructions described previously.
3. Exit this mode by entering the **[Master Code]** + **[1] OFF.**

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

Section 6: TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSE	REMEDY
1. **Low Battery message on keypad.**	1a. System battery is low or missing. 1b. Low battery on transmitter (Low batt + zone number will be displayed). 1c. Low battery on wireless keypad (Low batt + 00 will be displayed).	1a. Check system battery. 1b. Check battery in transmitter. 1c. Check battery in wireless keypad.
2. **Periodic beep(s) from keypad.**	2. System is in TEST mode.	2. Enter "Code" + OFF to exit TEST mode.
3. **False alarms.**	3a. Sensors not properly installed, wired, or monitored. 3b. Protected door or window opened while system armed. 3c. Improper user operation of exit/entry delays. 3d. Magnets located too far from switches, and/or doors and windows not properly aligned. 3e. Magnetic contacts improperly connected or wire broken. 3f. Entry door programmed as "instant". 3g. Loose fitting door or window being rattled by wind or vibrations. 3h. Dust, dirt in sensing chamber of smoke detector. 3i. Improper location of smoke detector. 3j. Unit malfunctioning.	3a. Check installation to see if in accordance with established procedure. 3b. Check with all occupants of protected home. 3c. Check setting of entry delay . Exit delay is 15 seconds longer than the entry delay time. Remind user of same. 3d. Check all openings for proper switch and magnet orientation. 3e. Check wiring connections. Be sure wires are properly stripped and tightly fastened to screw terminals. 3f. Check and revise program. Reprogram transmitter number. 3g. Mount magnet closer to contact. 3h. Clean unit's sensing chamber with vacuum cleaner per unit's instructions. 3i. See unit's instructions for locations to avoid. Relocate as necessary. 3j. Replace detector.
4. **"AC POWER" light off or "NO AC" displayed.**	4a. Interrupted AC power supply. 4b. Wire run from transformer to control is too long.	4a. Check transformer connection and power line circuit breaker. 4b. Make sure wiring run is not longer than the recommended length-per-gauge (see pg.10)
5. **Digital communicator message not being received.**	5a. System in TEST mode. 5b. Telephone connection not secure. 5c. Digital communicator malfunctioning. 5d. Telephone number in program needs prefix or access code. 5e. Telephone call to central monitoring station requires operator assistance.	5a. Remove from TEST mode. 5b. Check all connections. 5c. Check with a different 4110. 5d. Program prefix or access code into 4110. 5e. 4110 system cannot work in this situation.
6. **Does not arm.**	6. System not ready (zones faulted)..	6. Bypass faulted zones, then arm.
7. **Control doesn't respond to keystrokes on keypad.**	7a. "CC" displayed. 7b. "dl" displayed. 7c. "OC" displayed.	7a. System is in communication with downloader at central station. Wait until download session is finished. 7b. System has just been powered and is in its one minute initialization. To bypass this time, press '#' + '0'. 7c. No communication between keypad and control. Check proper keypad connections.
8. **"Check 09" is displayed.**	8a. No communication between wireless receiver and control. 8b. Wireless receiver has not heard transmission for 12 hours. 8c. Keyswitch is enabled but not connected.	8a. Check for broken connection or miswiring of receiver to control. Check that DIP switches on receiver are all "OFF" (to the right). 8b. Receiver is not operating properly. If system was working and nothing was changed, replace receiver. 8c. Connect keyswitch or disable keyswitch.

Special Messages:

OC: Open Circuit (No communication between control and keypad).

EE: Program Entry Error (Invalid entry while in program mode).

dl: System busy, please wait.

E4:   More than 4 transmitters are programmed, but only a 4-zone wireless receiver is being used.

REGULATORY AGENCY STATEMENTS
UL NOTICE: This is a "Grade A" residential system.

FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 15 STATEMENT

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

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

• If using an indoor antenna, have a quality outdoor antenna installed.

• Reorient the receiving antenna until interference is reduced or eliminated.

• Move the radio or television receiver away from the receiver/control.

• Move the antenna leads away from any wire runs to the receiver/control.

• Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user or master may find the following booklet prepared by the Federal Communications Commission helpful:

"Interference Handbook"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 68 STATEMENT

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

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

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

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

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

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

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

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

This equipment is hearing-aid compatible.

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

CANADIAN DEPARTMENT OF COMMUNICATIONS
(DOC) STATEMENT

NOTICE

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

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

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

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

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

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

AVIS

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

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

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

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

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

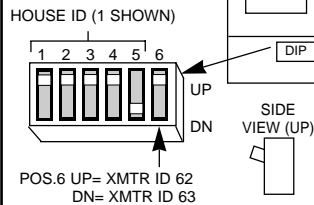L'indice de charge (IC) assigné à chaque dispositif terminal pour éviter toute surcharge indique le pourcentage de la charge totale qui peut être raccordé à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison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

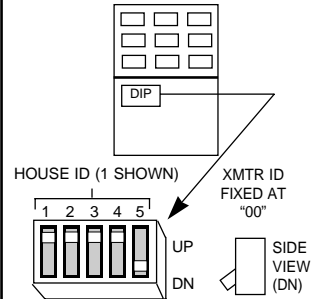# DIP SWITCH TABLES FOR 5700 RF SYSTEM WIRELESS DEVICES

HOUSE ID SWITCH SETTING FOR ALL DEVICES EXCEPT 5716

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

5701 PANIC TRANSMITTER

HOUSE ID (1 SHOWN) — positions 1 2 3 4 5 6, UP/DN, SIDE VIEW (UP)

POS.6 UP= XMTR ID 62
DN= XMTR ID 63

5727 KEYPAD

HOUSE ID (1 SHOWN) — positions 1 2 3 4 5, UP/DN, SIDE VIEW (DN)

XMTR ID FIXED AT "00"

5706/5707 SMOKE DETECTOR TRANSMITTER

HOUSE ID (1 SHOWN) — positions 1 2 3 4 5 6 7 8, UP/DN, SIDE VIEW (UP)

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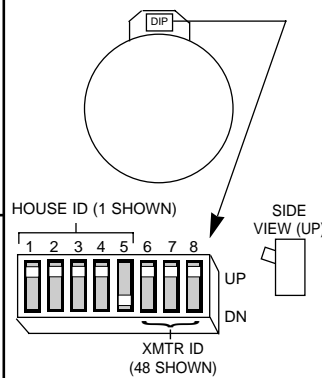
XMTR ID	6	7	8
48	UP	UP	UP
49	UP	UP	—
50	UP	—	UP
51	UP	—	—
52	—	UP	UP
53	—	UP	—
54	—	—	UP
55	—	—	—

5775 PIR DETECTOR/TRANSMITTER

DIP / MIRROR / SIDE VIEW (UP)

HOUSE ID (1 SHOWN) — positions 1 2 3 4 5 6 7 8 9 10, UP/DN

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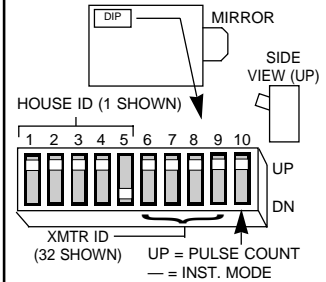
XMTR ID	6	7	8	9
32	UP	UP	UP	UP
33	UP	UP	UP	—
34	UP	UP	—	UP
35	UP	UP	—	—
36	UP	—	UP	UP
37	UP	—	UP	—
38	UP	—	—	UP
39	UP	—	—	—
40	—	UP	UP	UP
41	—	UP	UP	—
42	—	UP	—	UP
43	—	UP	—	—
44	—	—	UP	UP
45	—	—	UP	—
46	—	—	—	UP
47	—	—	—	—

5715 UNIVERSAL TRANSMITTER
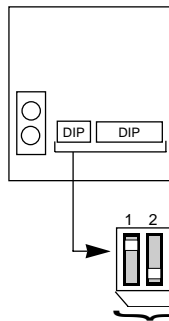
Positions 1 2 (DIP)
POS.1: UP = NORMAL RESPONSE / DN = FAST RESPONSE
POS. 2: UP = NO COVER TAMPER / DN = COVER TAMPER (use N.C. setting)

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

5711/5711WM DOOR/WINDOW TRANSMITTER

TERMINAL BLOCK / DIP / SIDE VIEW (DN)

HOUSE ID (1 SHOWN) — positions 1 2 3 4 5 6 7 8 9 10 11 12, UP/DN

XMTR ID (33 SHOWN)

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

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

5716 DOOR/WINDOW TRANSMITTER

IMPORTANT SET SWITCHES WITH BATTERY REMOVED

TERMINALS / DIP — SW4 / DIP — SW3

SW4: positions 6 5 4 3 2 1, UP/DN
SW3: positions 6 5 4 3 2 1, UP/DN

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

SIDE VIEW (UP)

POS. 6: UP = N.O. / DN = N.C.

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

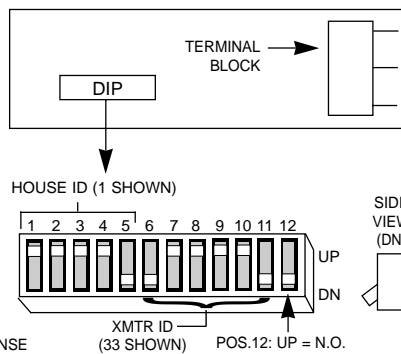| TRANSMITTER ID	6	5	4	3	2	1
1	—	UP	UP	UP	UP	UP
2	UP	—	UP	UP	UP	UP
3	—	—	UP	UP	UP	UP
4	UP	UP	—	UP	UP	UP
5	—	UP	—	UP	UP	UP
6	UP	—	—	UP	UP	UP
7	—	—	—	UP	UP	UP
8	UP	UP	UP	—	UP	UP
9	—	UP	UP	—	UP	UP
10	UP	—	UP	—	UP	UP
11	—	—	UP	—	UP	UP
12	UP	UP	—	—	UP	UP
13	—	UP	—	—	UP	UP
14	UP	—	—	—	UP	UP
15	—	—	—	—	UP	UP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

For 5700 series transmitters not shown in this table, refer to the instructions accompanying each transmitter.

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 keypad (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.

GEL LEAD ACID TYPE.

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

BATTERY CAPACITY FOR EMERGENCY STANDBY USE AT LEAST 4 HOURS.

CHARGING VOLTAGE 13.8VDC

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

– BLACK
+ RED

CONNECTOR TABS → + –

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

FUSE FOR REPLACEMENT, USE SAME VALUE

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

3A

SET RECEIVER'S DIP SWITCH FOR DEVICE ADDRESS OF "0" SEE RECEIVER'S INSTRUCTIONS

OPTIONAL

No. 4116 ARMING/DISARMING KEYSWITCH (SINGLE LED, LOCKSWITCH, TAMPER) — OR — No. 4281L or 4281M RF RECEIVER WIRELESS ZONES 4281L: UP TO 4 4281M: UP TO 8

AUX PWR OUTPUT TERMS + 5
– 4

BLK –   + RED

EOL POWER SUPER-VISION RELAY MODULE A77-716B

◄VIOLET►

4-WIRE SMOKE OR COMBUSTION DETECTOR

1000 OHMS EOLR

ZONE 5*

HEAT DETECTOR

*IF PROGRAMMED FOR FIRE

USE UL LISTED LIMITED ENERGY CABLE FOR ALL CONNECTIONS

BLK
RED
GRN
YEL

BLK
RED
GRN
YEL

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20)   (21)

– +

HI LO LO HI HI LO HI LO LO HI

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

LOCATED AT LOWER RIGHT OF CIRCUIT BOARD

FOR COMPLETE INFORMATION, SEE INSTRUCTIONS N5478V4

TO 110VAC UNSWITCHED OUTLET (24HR)

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

AUX. POWER OUTPUT 10.5-13.8VDC 500mA MAX. INTERRUPTS FOR FIRE ALARM RESET

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

BLACK: KEYPAD GROUND (–) RETURN
RED: KEYPAD PWR (+)
GREEN: DATA IN FROM KEYPAD
YELLOW: DATA OUT TO KEYPAD

REMOTE KEYPAD

No. 4127:   20mA
No. 4137AD: 60mA
No. 6127:   20mA
No. 6128:   30mA
No. 6137:   85mA
   OR
No. 5330:   105mA

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

1000 OHMS EOLR (×6)

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. 702 OR 719 SIREN, OR 12V BELL)

+ –

• **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 INTER-FERENCE THAT MAY CAUSE UNDESIRED OPERATION.

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

HANDSET   INCOMING PHONE LINE

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

EARTH GROUND SEE INSTRUCTIONS FOR PROPER GROUNDING

DOC LOAD NO.: 3

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 PRO-TECTION ASSOCIATION'S STANDARD 74 (NATION-AL FIRE PROTECTION ASSOC., BATTERYMARCH PARK, QUINCY, MA 02269). PRINTED INFORMA-TION DESCRIBING PROPER INSTALLATION, OPERATION, TESTING, MAINTENANCE, EVACUA-TION PLANNING AND REPAIR SERVICE IS TO BE PROVIDED WITH THIS EQUIPMENT.

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 CON-NECTED TO A POLICE EMERGENCY NUMBER.

NOTE: MULTIPLE KEYPADS MAY BE USED, BUT EACH 5330 KEYPAD MUST BE ON AN INDIVIDUAL HOME RUN. USE MAX. OF 220FT. OF #22 WIRE OR 550 FT. OF #18 WIRE.

WARNING:

OWNER'S INSTRUCTION NOTICE NOT TO BE REMOVED. WEEKLY TESTING IS REQUIRED TO ENSURE PROPER OPERATION OF THIS SYSTEM.

ADEMCO LIMITED WARRANTY

Alarm Device Manufacturing Company, a Division of Pittway Corporation, and its divisions, subsidiaries and affiliates ("Seller"), 165 Eileen Way, Syosset, New York 11791, warrants its products to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 24 months from the date stamp control on the product or, for products not having an Ademco date stamp, for 12 months from date of original purchase unless the installation instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any product which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Ademco factory service. For warranty service, return product transportation prepaid, to Ademco Factory Service, 165 Eileen Way, Syosset, New York 11791.

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