

Honeywell

**ADEMCO 4110XM
SECURITY SYSTEM**

Installation Guide

RECOMMENDATIONS FOR PROPER PROTECTION

The Following Recommendations for the Location of Fire and Burglary Detection Devices Help Provide Proper Coverage for the Protected Premises.

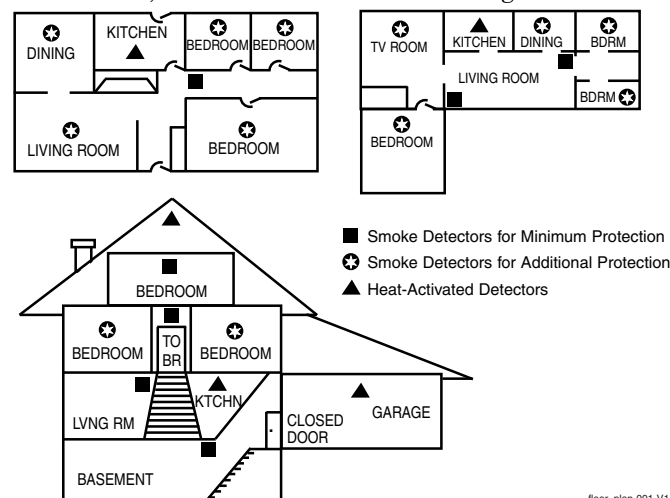
Recommendations for Smoke and Heat Detectors

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

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

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

In addition, we recommend the following:



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

Recommendations For Proper Intrusion Protection

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

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

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SECTION 1

System Features

The 4110XM is a microprocessor-based security control intended for hard-wired applications.

Zones Supported

Up to six (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).

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 keypads

Alarm Output

- Provides a 12VDC, 2A 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.

Compatible Devices

Remote Keypads (up to 4)

Model	Type
6150	Fixed English Keypad



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.

Optional Keyswitch

Model	Type
4116	Keyswitch

Smoke Detectors (4-wire only)

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

Fire Supervisory Module

Model	Type
EOLR-1	EOL Relay Module (supervises power for 4-wire fire zone).

SECTION 2

Mounting and Wiring the Control

1. Installing the Cabinet and PC Board

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

- a. Mount the control cabinet to a sturdy wall in a clean, dry area, which is not readily accessible to the general public, using fasteners or anchors (not supplied) with the four cabinet mounting holes.
- b. Remove the lock knockout from the door. Insert the key into the lock.
- c. Position the lock in the hole, making certain that the latch will make contact with the latch bracket when the door is closed. When correctly positioned, push the lock until the snap tabs hold it securely. The cabinet can be secured without a lock by using 2 screws in the cover's edge.

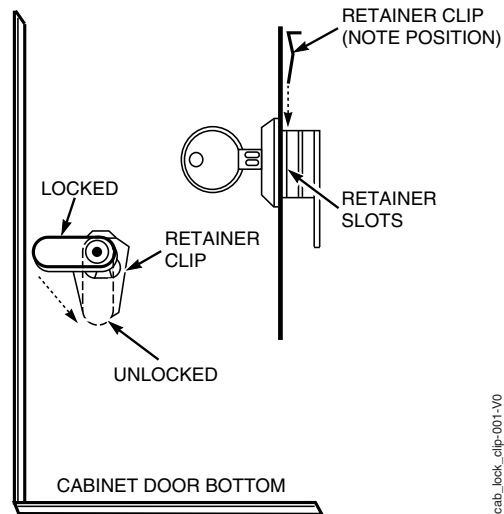


Figure 1 – Installing the Cabinet Lock

- d. Before installing the cabinet's contents, remove the metal cabinet knockouts required for wiring entry. Do not remove the knockouts after the circuit board has been installed.
 - 1) Hang two short mounting clips (provided) on the raised cabinet tabs (see Detail B).
 - 2) Insert the top of the circuit board into the slots at the top of the cabinet. Make sure that the board rests on the correct row (see Detail A).
 - 3) Swing the base of the board into the mounting clips and secure the board to the cabinet with the accompanying screws (see Detail B).

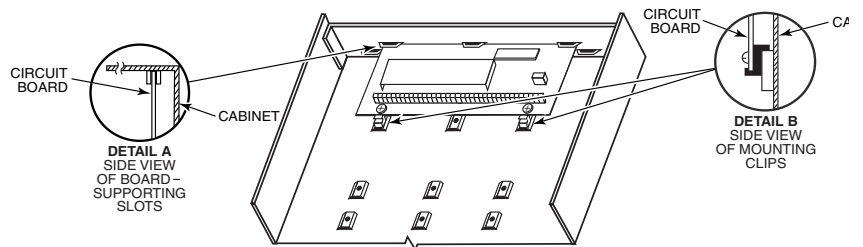


Figure 2 – Mounting the PC Board

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 Sounding Devices



Use only UL Listed sounding devices for UL installations.

5. Install the Remote Keyswitch (if used)

6. Connect the Telephone Line



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.

7. Connect the AC Transformer

Use the wiring table at the end of this section for maximum wire lengths per gauge.



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

8. Connect the Battery



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



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.

9. 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.

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 and Protection 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.



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 (15m)	# 20
50-100 feet (15-30m)	# 18
100-250 feet (30-76m)	# 16

SECTION 3

Programming Overview

About Programming

The 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.

Mechanics of Programming

Data Field Programming Procedure

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

Task	Procedure
Entering Program Mode	Use one of the following methods to enter Programming Mode: 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) Note: This method is disabled if you exit the program mode using *98 instead of *99. See "Exiting Program Mode" later in this section.
Programming a Data Field	Note: 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. Press [*] plus [Field No.] (e.g., *20), and then make the required entry. Note the following: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.
Deleting 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).
Clearing All Data Fields	*97 clears (zeros) all data fields. The Master Code will now be 0 0 0 0.



Do not press *97 if any programming has been done previously; data already programmed into the system will be deleted.

Exiting Program 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 .
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Zone Type Definitions

Zone types define the way in which the system responds to the faults in each zone.

Zone Type	Description
0 – Zone Disabled	
1 – Entry/Exit Burglary	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Provides an instant alarm when panel is armed in any arming mode.
4 – Interior, Follower	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Provides a silent alarm to Central Station whether panel is armed or disarmed.
7 – 24 Hr. Audible Alarm	<ul style="list-style-type: none"> • Provides an audible alarm at the bell output and keypad whether panel is armed or disarmed.
8 – 24-Hr. Auxiliary Alarm	<ul style="list-style-type: none"> • Provides an audible alarm at the keypad only. No bell output is provided.
9 – Fire	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Provides entry and exit delay times. • Bypassed automatically when panel is armed in the Stay or Instant mode.

Data Field Programming

About Data Field Programming

The following pages list this control's data fields in numerical order. Valid entries for each field are shown in italics. Explanations and special notes are presented below the entries.



Use the separate Programming Guide to record the data for this installation.

Data field programming involves making the appropriate entries for each of the data fields. Start Data Field programming by entering the installer code + 8 + 0 + 0.

System Options (*20 – *30)

*20 Master Security Code

Enter 4 digits, 0-9

The Installer Code can perform all system functions except it cannot disarm the system unless it was used to arm the system. Use of a "9" in the last position inhibits the "Ambush" feature.

*21 Quick Arm Enable

0 = no; 1 = yes

If enabled, a user code is not needed to arm the system. Instead, users can press the [#] followed by an arming key to arm the system. However, the user code is always needed to disarm the system.

*22 Keyswitch Enable

0 = no; 1 = yes

*23 Force Bypass Function

0 = no; 1 = yes

Allows all faulted zones to be bypassed by entering [Security Code] + [Bypass]. Zones that are bypassed by this function will be displayed after the bypass is initiated.

*24 NOT USED

(must be set to "00")

*27 Audible Exit Warning

0 = no; 1 = yes

If selected, beeping occurs during the exit time and changes from slow to rapid beeping during the final 5 seconds of the delay.

*28 Confirmation of Arming Ding

0 = no; 1 = yes

If selected, external sounder will sound for approximately 1 second at the end of the exit time or at time of kissoff of closing report (if programmed).

*29 Fire Alarm Sounder Timeout

0 = sounder timeout; 1 = no sounder timeout

Enter "0" if sounder timeout for fire zones is desired (uses time programmed in Field *30). Temporal pulse sounding for a fire alarm consists of the following: 3 pulses – pause 3 pulses – pause – 3 pulses.

*30 Alarm Sounder Timeout

0 = no sounder timeout; 1 = 4 min; 2 = 8 min; 3 = 12 min

If selected, beeping occurs during the exit time and changes from slow to rapid beeping during the final 5 seconds of the delay.

Programming Hardwire Zones

Zone Types for programming Fields *31-37

0 = DISABLED (or Undefined)	6 = 24 HR (Silent)
1 = ENTRY/EXIT (Burglary)	7 = 24 HR (Audible)
2 = NOT USED	8 = 24 HR (Auxiliary)
3 = PERIMETER (Burglary)	9 = FIRE (Fields *35 & *37 Only)
4 = INTERIOR/FOLLOWER	10 = INTERIOR W/DELAY (To Program, enter # + 10)
5 = TROUBLE BY DAY/ALARM BY NIGHT (Burglary)	

*31 Zone 1 Response Type

*32 Zone 2 Response Type

*33 Zone 3 Response Type

*34 Zone 4 Response Type

*35 Zone 5 Response Type

*36 Zone 6 Response Type

*37 Zone 7 Response Type

Console Panic: Key B or * & #. Only Zone Types 0, 6, 7, 8, 9 apply.

*38 Entry Delay

0 = 0 sec; 1 = 20 sec; 2 = 30 sec; 3 = 45 sec; 4 = 60 sec; 5 = 90 sec

Exit delay = Entry delay - 15 sec

*39 Zone 3 Response to Open

0 = 400 ms nominal; 1 = 10 ms nominal

Programming Hardwire Zones (*40-*49)

For fields *40-*42 enter digits 0-9, or # + 11 for [*], 3 + 12 for [#], # + 13 for 2 second pause. If fewer than the maximum number of digits is entered, exit the field by pressing [*] followed by the next field number to be programmed.

*40 PABX Access Code

Enter 4 digits

To clear entries press *40*.

***41 Primary Phone No.**

Enter up to 12 digits

Do not fill unused spaces. To clear entries press *41*.

***42 Secondary Phone No.**

Enter up to 12 digits

Do not fill unused spaces. To clear entries press *42*.

***43 Subscriber Account No.**

Enter 0-9, # + 11 for B; # + 12 for C; # + 13 for D; # + 14 for E; # + 15 for F; Enter * as 4th digit, if 3+1 dialer reporting will be used.

If only 3 digits are being used, exit by pressing* (and press 44, if entering next field). To clear entries press *42*.

***44 Report Format**

0 = 3+1, 4+1 ADEMCO L/S STANDARD

1 = 3+1, 4+1 RADIONICS STANDARD

2 = 4+2 ADEMCO L/S STANDARD

3 = 4+2 RADIONICS STANDARD

6 =or unidentified = 4+2 ADEMCO EXPRESS

7 = ADEMCO Contact ID® REPORTING

8 = 3+1, 4+1 ADEMCO L/S EXPANDED

9 = 3+1, 4+1 RADIONICS EXPANDED

Select format for primary/secondary phone numbers.

***45 Phone System Select †**

If Central Station IS NOT on a WATS line:

0 = Pulse Dial; 1 = Tone Dial

If Central Station IS on a WATS line:

2 = Pulse Dial; 3 = Tone Dial

Select the type of telephone service

***46 SESCOA/Radionics Select †**

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

Select 0 for all other formats.

***47 15 Second Dialer Delay (Burglary) †**

0 = no; 1 = yes

Provides delay of Burglary report to Central Station.

***48 Periodic Test Message †**

0 = none; 1 = 24 hrs; 2 = weekly (enter Test Code in field *64)

(Initial report is sent 12 hrs after exiting programming or downloading)

***49 Split/Dual Reporting**

To Primary Phone No.

0 = All

1 = Alarms, Restore, Cancel

2 = All Reports Except Open/Close, Test

3 = Alarms, Restore, Cancel

4 = All Reports Except Open/Close, Test

5 = All Reports (Dual Reporting)

To Secondary Phone No.

Backup Report Only

Other Reports

Open/Close, Test

All Reports

All Reports

All Reports

To Primary Phone No.

6 = All Reports Except Open/Close

7 = All Reports

8 = All Reports

To Pager No. †† (secondary)

Alarms, Open/Close, Troubles

Alarms, Troubles

Alarms, Open/Close, Troubles

† Entering a number other than the one specified will give unpredictable results.

†† Can only be used if primary reporting format is ADEMCO Contact ID®.

Used to select a reporting option as follows:

Enter: 0 - 5 when reporting to telephone receivers.

6 - 9 when reporting to a pager is desired.

Touch Tone codes for paging are defined as follows:

1911 = Alarm

1001 = Open

1002 = Close

1811 = Trouble

Note: Restore reports are not sent to the pager.

Programming Report Codes for Alarm System Status, Restore *50-*74

For 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 (this reports a 0 on some receivers), #+11 for B, #+12 for C, #+13 for D, #+14 for E, #+15 for F.

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

For ADEMCO Contact ID® Reporting: Enter any digit (other than "0") in the first box to enable the zone to report. This is an "enabling" code only and is not the actual code sent to the Central Station office. Entries in the second boxes are ignored. An entry of 0 in the first box disables the report.

An entry of 0 in the first box disables a report. Entering 0 in the second box advance to the next field. An entry of 0 in the second box will result in automatic advancement to the next field when programming. To send "0" as a digit you must enter # +10.



Alarm Report Codes (*50-*59)

***50 1st Digit of Zn95, Zn96 (Keypad Panics)**

0 = No Report, 1-9, B-F (as described above).

2nd Digit of each (for expanded 4+2 reporting) is the same as field *57.

Zone 95 is Console Silent Panic (Key A or 1 & *.)

Zone 96 is Console Audible Panic (Key C or 3 & #).

***51 Zone 1 Alarm Report Code**

0 = No Report, 1-9, B-F (as described above).

***52 Zone 2 Alarm Report Code**

0 = No Report, 1-9, B-F (as described above).

***53 Zone 3 Alarm Report Code**

0 = No Report, 1-9, B-F (as described above).

***54 Zone 4 Alarm Report Code**

0 = No Report, 1-9, B-F (as described above).

***55 Zone 5 Alarm Report Code**

0 = No Report, 1-9, B-F (as described above).

***56 Zone 6 Alarm Report Code**

0 = No Report, 1-9, B-F (as described above).

***57 Zone 7 Alarm Report Code**

0 = No Report, 1-9, B-F (as described above).

Console Panic: Key B or *+#

***58 Zone 8 Alarm Report Code (Duress)**

0 = No Report, 1-9, B-F (as described above).
Console Panic: Key B or *+ #

***59 NOT USED**

(must be set to "00")

***60 Trouble Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent if zone has a trouble condition.

***61 Bypass Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent when a zone is manually bypassed.

***62 AC Loss Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent at a random time delay up to 1 hour. If AC is restored before the report goes out, no report will be sent.

***63 Low Battery Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent when the system's backup battery has a low-battery condition.

***64 Test Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent periodically to test that the communicator and phone lines are operational.

***65 Open Report Code †**

0 = No Report, 1-9, B-F (as described above).
Sent upon disarming the system.

***66 Close Report Code †**

0 = No Report, 1-9, B-F (as described above).
† 2nd digit is automatically sent as the user number if expanded or 4+2 reporting is selected.
Sent upon arming the system.

***67 NOT USED**

(must be set to "00")

***68 Cancel Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent upon disarming the system after an alarm has occurred.

***69 Group Restores for Trouble and Bypass**

0 = No (Report for each restore); 1 = Yes (Report after all zones restored)

Note: "1" not applicable to Contact ID® Reporting

Restore Report Codes (*69-*75)***70 Alarm Restore Report Code**

0 = No Report, 1-9, B-F (as described above).
2nd Digit is automatically sent as the 2nd digit of the zone alarm report code programming in *50-*59, if Expanded or 4+2 reporting is selected.
Sent when an alarm zone is restored to non-faulted state.

***71 Trouble Restore Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent when a trouble in a zone is restored.

***72 Bypass Restore Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent when a zone that has been bypassed is unbypassed.

***73 AC Restore Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent when AC power has been restored following an AC power outage.

***74 Low Battery Restore Report Code**

0 = No Report, 1-9, B-F (as described above).
Sent when a system low-battery condition is restored to normal.

75 -*92 NOT USED**93 Reports per Armed Period**

0 = 10 max total alarm + alarm restores; 1 = Unlimited
Limits the number of alarm/alarm restore reports message pairs per zone sent to the Central Station in an armed period.

Download Information (*94-*97)***94 Download Phone No.**

Enter up to 12 digits. 0-9 # + 11 for *; # + 12 for #; # + 13 for 2 second pause

Enter the phone number of the downloading computer. Do not fill unused spaces. If fewer than 12 digits exit field by pressing * (and press 95, if entering next field). To clear entries press *94*.

***95 Ring Detection Count for Downloading**

0 = Disable station initiated download; 1-14 = number of rings (1-9, #+10 for 10, #+11 for 11, #+12 for 12, #+13 for 13, #+14 for 14); 15 = answering machine defeat

***96 Initialize Download ID and Subscriber Account Number**

This must be done before the first download. Once initiated, do not re-enter another subscriber account number manually. This would void the *96 command.

***97 Zeroes all Program Fields**

Resets all data fields to factory default settings.

Exit Program Mode (*98 or *99)***98 Exit Programming Mode**

Prevents re-entry by [Master Code] + [Code] key + [0]

***99 Exit Programming Mode**

Allows re-entry by [Master Code] + [Code] key + [0]

SECTION 5 System Operation

USER ACCESS CODES

Refer to the User Guide for detailed procedures on adding/deleting security codes and changing user attributes

Changing the Master Code

Master Code + [Code Key] + [1] + New Master Code + New Master Code Again

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.)

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 of 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

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.

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.

SECTION 6

TESTING & TROUBLESHOOTING

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 the Central Station 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.

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.

Troubleshooting Guide

SYMPTOM	POSSIBLE CAUSE	REMEDY
1. Low Battery message on keypad.	1. System battery is low or missing.	1. Check system battery.
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" (e.g., Perimeter). 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 programming of zone. 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.	8. Keyswitch is enabled but not connected.	8. Connect keyswitch or disable keyswitch.

SECTION 8 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, 2.0A 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



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

REGULATORY AGENCY STATEMENTS

FEDERAL COMMUNICATIONS COMMISSION STATEMENTS

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.

CLASS B DIGITAL DEVICE 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.
- Consult the dealer or an experienced radio/TV technician for help.

FCC / IC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

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 the FCC registration number and Ringer Equivalence Number (REN). You must provide this information to the telephone company when requested.

This equipment uses the following USOC jack: RJ31X

This equipment may not be used on telephone-company-provided coin service. Connection to party lines is subject to state tariffs.

This equipment is hearing-aid compatible.

Industry Canada

NOTICE: The Industry Canada Label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). 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. 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 coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company 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: Users should not attempt to make such connections themselves but should contact appropriate electric inspection authority, or electrician, as appropriate.

Ringer Equivalence Number Notice:

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

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:

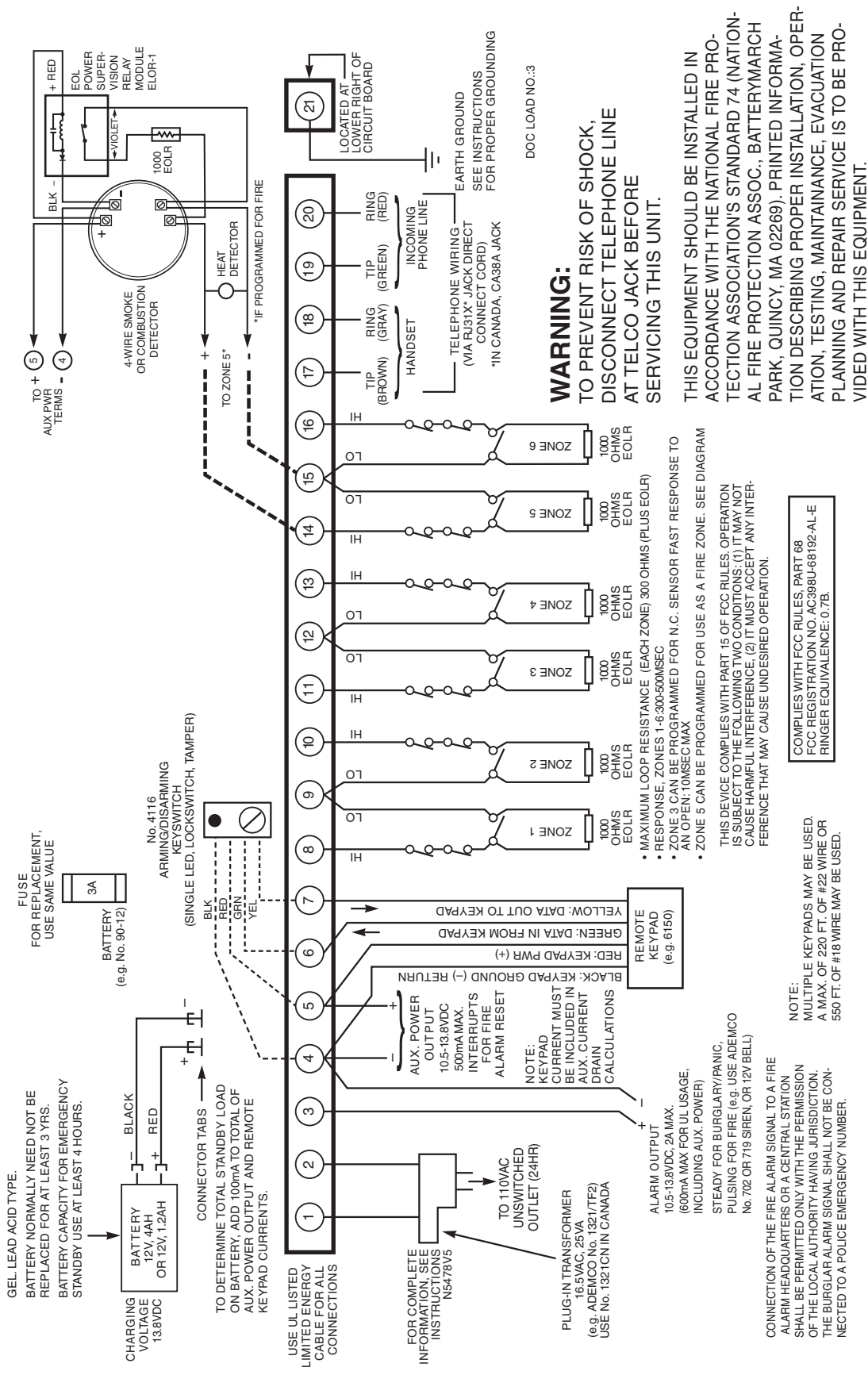
- Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
- Intrusion detectors (e.g., passive infrared detectors), smoke detectors, and many other sensing devices will not work without power. Battery-operated devices will not work without batteries, with dead batteries, or if the batteries are not put in properly. Devices powered solely by AC will not work if their AC power supply is cut off for any reason, however briefly.
- Signals sent by wireless transmitters may be blocked or reflected by metal before they reach the alarm receiver. Even if the signal path has been recently checked during a weekly test, blockage can occur if a metal object is moved into the path.
- A user may not be able to reach a panic or emergency button quickly enough.
- While smoke detectors have played a key role in reducing residential fire deaths in the United States, they may not activate or provide early warning for a variety of reasons in as many as 35% of all fires, according to data published by the Federal Emergency Management Agency. Some of the reasons smoke detectors used in conjunction with this System may not work are as follows. Smoke detectors may have been improperly installed and positioned. Smoke detectors may not sense fires that start where smoke cannot reach the detectors, such as in chimneys, in walls, or roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level of a residence or building. A second floor detector, for example, may not sense a first floor or basement fire. Finally, smoke detectors have sensing limitations. No smoke detector can sense every kind of fire every time. In general, detectors may not always warn about fires caused by carelessness and safety hazards like smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches, or arson. Depending on the nature of the fire and/or location of the smoke detectors, the detector, even if it operates as anticipated, may not provide sufficient warning to allow all occupants to escape in time to prevent injury or death.
- Passive Infrared Motion Detectors can only detect intrusion within the designed ranges as diagrammed in their installation manual. Passive Infrared Detectors do not provide volumetric area protection. They do create multiple beams of protection, and intrusion can only be detected in unobstructed areas covered by those beams. They cannot detect motion or intrusion that takes place behind walls, ceilings, floors, closed doors, glass partitions, glass doors, or windows. Mechanical tampering, masking, painting or spraying of any material on the mirrors, windows or any part of the optical system can reduce their detection ability. Passive Infrared Detectors sense changes in temperature; however, as the ambient temperature of the protected area approaches the temperature range of 90° to 105°F (32° to 40°C), the detection performance can decrease.
- Alarm warning devices such as sirens, bells or horns may not alert people or wake up sleepers if they are located on the other side of closed or partly open doors. If warning devices are located on a different level of the residence from the bedrooms, then they are less likely to waken or alert people inside the bedrooms. Even persons who are awake may not hear the warning if the alarm is muffled by noise from a stereo, radio, air conditioner or other appliance, or by passing traffic. Finally, alarm warning devices, however loud, may not warn hearing-impaired people.
- Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be out of service or temporarily out of service. Telephone lines are also subject to compromise by sophisticated intruders.
- Even if the system responds to the emergency as intended, however, occupants may have insufficient time to protect themselves from the emergency situation. In the case of a monitored alarm system, authorities may not respond appropriately.
- This equipment, like other electrical devices, is subject to component failure. Even though this equipment is designed to last as long as 10 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.



No. 4110XM SUMMARY OF CONNECTIONS

WARRANTY INFORMATION

For the latest US warranty information, please go to:
www.honeywell.com/security/hsc/resources/wa

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