Simon™ Security System

Installation Instructions Document No. 466-1303

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Table of Contents

Special Installation Requirements 3

Requirements for UL-Listed Installations 3

Canada Listings 3

California State Fire Marshall Listing 3

Introduction 4

System Components 4

Planning Sensor Types & Locations 6

Planning Control Locations 9

Planning Lamp, Appliance, Wallswitch & Universal/Garage Module Control 9

Planning System Access Codes 10

Planning System Options 11

Wiring the Control Panel 15

Connecting Hardwire Interior Sirens 15

Connecting a Hardwire Exterior Siren 16

Connecting Hardwire Sensors 16

Connecting the Universal/Garage Door Module 16

Connecting the Power Transformer 16

Connecting the Backup Battery 17

Connecting the Phone Line to the Control Panel 17

Programming Overview 18

Programming Sensors 19

Programming House Code & Unit Numbers 19

Programming Light and Appliance Controls 20

Programming Options 21

Programming System Access Codes 22

Installing the System 22

Control Panel 22

Door/Window Sensor 24

Indoor Motion Sensor 25

Outdoor Motion Sensor 29

Smoke Sensor 29

KeyChain Touchpad 29

Remote Handheld Touchpad 30

Door/Window, Indoor/Outdoor Motion Sensor, KeyChain Touchpad, and Remote Handheld Touchpad FCC NOTICE 31

Testing the System 31

Testing Sensors 31

If a Sensor Fails the Sensor Test 32

Testing Phone Communication 33

Testing Central Station Communication 33

Testing X-10 Lamp Modules 33

Troubleshooting Guide 34

Notices 36

Duplicate Planning Sheets 38

List of Tables

Sensor/Device Location Planning 7 & 38

Recommended Sensor Types 7 & 38

Sensor Type Characteristics 8 & 39

Home Control Planning 10 & 40

System Access Codes 10

Programmable Options 14 & 40

Option 12: Phone Mod 1 12

Option 13: Phone Mod 2 12

Option 27: Ring/Hang/Ring 13

Option 31: Day of Week 14

Device Program Buttons 19

List of Figures

Typical Security System Components 4

Exterior Siren Panel Connections 16

Wire Hardwire Sensors Normally Closed 16

Power Transformer Panel Connections 16

Control Panel Backup Battery 17
RJ-31X Wiring Diagram 17
Control Panel Programming Decal 18
Light, Clock, Access Code, Sensor or
Phone Test Decal 18
Sensor & Magnet Positions 24
Aligning the Door/Window Sensor &
Magnet 24
Mounting Hole Locations (Bottom View) 24
Overhead (Bird's Eye View) Detection Path 26
Top & Side Views Using PIR Lens 26
Side Views Mounting at Various Heights 27
Wall Mount Options 27
PIR Mounting Plate Knockouts 27
Sensitivity Pins Locations 28
PIR Components, Battery Locations, &
Tamper Switch 29

Special Installation Requirements

This security system can be used as a fire warning system, an intrusion alarm system, an emergency notification system, or any combination of the three.

Some installations may require certain configurations dictated by city codes, state codes, or insurance requirements. The following information indicates the components of various listings.

Requirements for UL-Listed Installations

This section describes the minimum system configurations for UL-listed, Grade A (supervised) systems.

Basic System

All UL-listed systems require the following basic components. The basic system does not require sensors and can use the Remote Handheld Touchpad as a controlling device.

- Control Panel (60-693-95R)
- Class II Line Carrier Power Transformer (22-091)
- 9-Volt, 1.2 Ah Lithium Backup Battery (34-037)
- Hardwire Siren (13-046) or Slimline Siren (60-483-01) or "Mouse" Siren (13-373)

Residential Burglary Alarm System Unit (UL 1023)

Basic system above, plus:

- Door/Window Sensor (60-670-95R) suitable for installation on non-ferrous surfaces only

Residential Fire Alarm System Unit (UL 985)

Basic system above, plus:

- System Sensor Smoke Sensor (60-506-95)

Canada Listings (pending)

Residential Burglary Alarm System Unit (ULC-S309)

Basic system as described for UL-listed installations, plus:

- Door/Window Sensor (60-670-95R)

Note: The KeyChain Touchpad #60-659 is UL Listed as a miscellaneous signalling device and is for supplementary use only.

CSA Certified Accessories

Residential Fire Warning System Control Unit (ULC-S545-M89)

Basic system as described for UL-listed installations, plus:

- Wireless Smoke Sensor (60-506-95)
- SUPSYNC (Supervisory Synchronization) set to 2 (hours)

California State Fire Marshall Listing

The California State Fire Marshall listing is pending.

Introduction

This ITI Security System is easy to install if you plan ahead and do everything in the following order.

1. Plan where to locate the hardwire sirens, sensors and Control Panel. Use the tear out planning sheets at back of this manual.
2. Wire the Class II transformer, hardwire sirens, and phone.
3. Decide how the sensors, lights, and system options will operate.
4. Program the sensors, lights and appliances, and system options.
5. Install sensors and Lighting Modules.
6. Test system.

Note: Program the sensors before installing them because the Control Panel and sensors must be in the same place for programming. After you've programmed each sensor, you can install them where you planned.

System Components

The system can monitor up to 17 sensors using any combination of the following sensors:

- Door/Window Sensor (60-670-95R)
- KeyChain Touchpad (60-659-95R)
- Remote Handheld Touchpad (60-671-95R)
- Indoor Motion Sensor (60-639-95R)
- Outdoor Motion Sensor (60-639-95R-OD)
- ITI 319.5 Sensors (including Smoke Sensors)

Note: CO Detectors are not currently compatible with this security system.

Note: You may use any of these modules:

- X-10 Lamp Modules (13-403)
- X-10 Appliance Modules (13-402)
- X-10 Powerhorn/Remote Siren Modules (13-398)
- X-10 Universal/Garage Door Modules (13-399)
- X-10 Wall Switch Modules (13-397)

Note: Use of the above X-10 modules has not been investigated by UL.

Figure 1. shows the Control Panel, control touchpads, and some compatible sensors and modules.

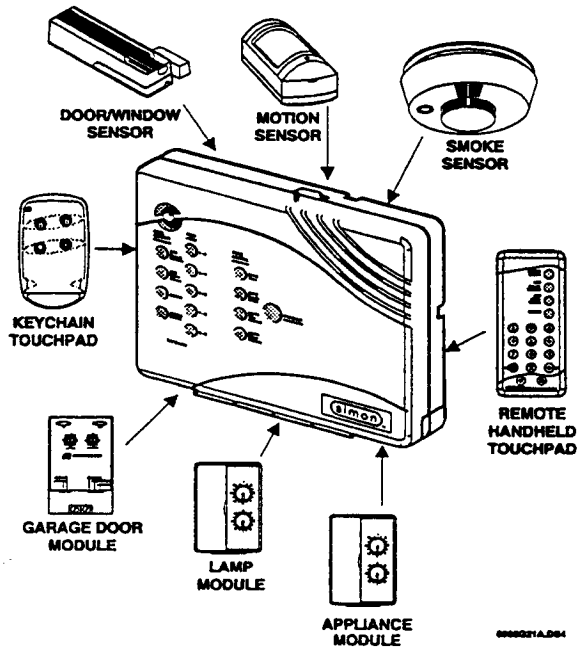


Figure 1. Typical Security System Components

Security System

The security system has three types of components: the Control Panel, devices that report to the Control Panel, and devices that respond to the Control Panel.

Control Panel

The Control Panel is the main processing unit for all security functions. It receives signals from and responds to wireless sensors and wireless touchpads throughout the premises. The buttons operate the security system. When using the Control Panel with the cover open, the buttons program the security system.

Door/Window Sensor

For intrusion protection, install Door/Window sensors on all ground-floor doors and windows. At a minimum, install them in the following locations:

- All easily accessible exterior doors and windows.
- Interior doors leading into the garage.
- Doors to areas containing valuables such as cabinets and closets.

KeyChain Touchpad

The KeyChain Touchpad enables you to turn the system on and off before entering the home or to turn on

the siren and to call the central monitoring station if there is an emergency. If you have Lamp Modules, you can use the KeyChain Touchpad to turn all lights on and off.

Remote Handheld Touchpad

The Remote Handheld Touchpad enables you to turn the system on and off while in the home, turn lights controlled by the system on and off (all or individual lights), or turn on a system siren and call the central monitoring station if there is a non-medical emergency. The Remote Handheld Touchpad will report an alarm type specific to its sensor type (see Table 3 for sensor and siren types).

Indoor Motion Sensor

Indoor Motion Sensors are ideal whenever it is not practical to install Door/Window sensors on every opening. Identify areas where an intruder is likely to walk. Large areas in an open floor plan, downstairs family rooms, and hallways are candidates for Indoor Motion Sensors. Indoor Motion Sensors are not suitable for rooms where pets can enter. Indoor motion sensors can also be used to sound chimes, but cannot be used for intrusion protection and as a chime sensor simultaneously.

Outdoor Motion Sensor

Use Outdoor Motion Sensors to identify motion in a protected outdoor area. Detected motion in this protected area can sound chimes or turn on outside lights. Do not use Outdoor Motion Sensors for intrusion protection.

Smoke Sensor

Smoke Sensors can provide fire alert protection by causing the alarm to sound throughout the house. You can add sensors near sleeping areas and other floors of the house. Avoid attics, kitchens, above fireplaces, dusty locations, and areas with temperature extremes. See the instructions packaged with the Smoke Sensor for complete placement information.

Refer to the diagram on the next page for specific placement of Smoke Sensors.

ITI ToolBox

The ITI ToolBox is a Windows®-based program that saves you time by simplifying Control Panel programming. Using only a PC, a modem, and a standard telephone line, ToolBox makes creating new customer accounts and updating the panel settings of existing customers simple and quick. See the ITI ToolBox manual and ToolBox's on-line help for instructions to use ToolBox for programming this Control Panel.

ITI CS-4000 Receiver

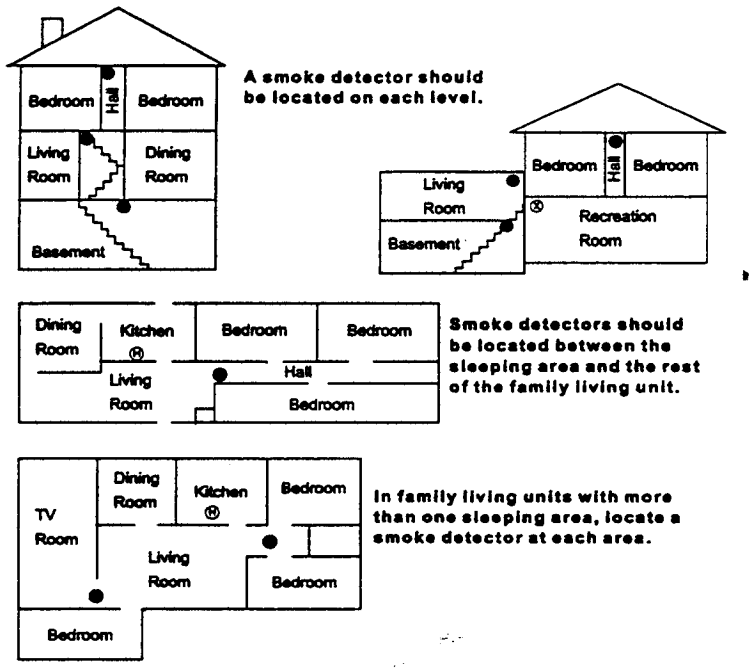
The CS-4000 Receiver is used to monitor this security system.

Central Station Code - Central Station Locking

The central station code defaults to 12345. The security code can be changed from the central station using the CSLOCK command. It can also be changed using the ITI ToolBox. The security code prevents any central station which does not have the proper security code from establishing communications with the Control Panel.

ITI HomeLink Transceiver (IHT)

The ITI HomeLink Transceiver is a radio transmitter/receiver designed to receive signals from the Prince Universal Transmitter (HomeLink®), then retransmit the signals to a security system panel, allowing the HomeLink® to control the arming, disarming, and light functions of the security system. The IHT also enables the user to control the garage door opener from the HomeLink®



NOTE: Ceiling-mounted smoke detectors should be located in the center of the room or hall, or not less than 4 inches from the wall. When the detector is mounted on the wall, the top of the detector should be 4 to 12 inches from the ceiling.

NOTE: Do not install smoke detectors where normal ambient temperatures are above 100°F or below 40°F. Also, do not locate detectors in front of AC/ Heat registers or other locations where normal air circulation will keep smoke from entering the detector.

NOTE: Additional information on household fire warning is available at nominal cost from: The National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. Request Standard No. NFPA74.

● Required smoke detector

Ⓗ Heat detector

Ⓢ Indicates smoke detector is optional if door is not provided between basement and recreation rooms.

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Emergency Planning Floor Plan

Use the following guidelines when drawing an emergency planning floor plan for the homeowner:

- Show all building levels.
- Show exits from each room (2 exits per room are recommended).
- Show the locations of all security system components.
- Show the locations of any fire extinguishers.

Planning Sensor Types & Locations

The first step to an easy and successful installation is to decide what areas or items to protect which lights or appliances to operate, and the best location for the Control Panel, sensors or sirens. Use the previous information and Table 1, Device Location Planning, to note your requirements.

Use Table 2 and Table 3 to determine the appropriate Sensor Type for the sensors you will be adding. You'll need to understand the application for each sensor. For example, KeyChain Touchpads are typically programmed as sensor type 01 (Portable panic), used to send an intrusion alarm to a central monitoring station. This sensor type is instant intrusion, it does not require restoral or supervisory communication with the Control Panel and it is active in all 4 arming levels (disarm, arm doors & windows, arm motion sensors, and arm doors/windows and motions sensors).

Table 1 Sensor/Device Location Planning Table

Locations in order as communicated by Control Panel when changing sensors, except that Remote Locations are not used by the Control Panel, but only used here for planning purposes. (This table is duplicated at the end of this manual)

Sensor No.	Sensor/Device Name (use Table 2 & Table 3 to determine sensor type numbers) The following are examples only.	Sensor Type	Remote Locations	Front Door	Back Door	Garage Door	Bedroom	Guest Room	Child's Room	Utility Room	Living Room	Dining Room	Bathroom	Laundry Room	Kitchen	Office	Den	Garage	Special Chime	Basement	Upstairs	Downstairs	Hallway	Medicine Cabinet	Closet	Attic
ALL →	KeyChain Touchpad	01	X																							
	Door/Window	13		X																						
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										

Table 2 Recommended Sensor Types

Device	Recommended Sensor Type
KeyChain Touchpad	01, 03, 06, 07
Remote Handheld Touchpad	01, 03, 06, 07
Indoor Motion Sensor	17 (intrusion), 25 (chime)
Outdoor Motion Sensor	25
Smoke Sensor	26
Exterior Door	10
Interior Door	14
Window Sensor	13

Table 3 Sensor Type Characteristics (This table is duplicated at the end of this manual)

Type	Name/Application	Siren Type	Delay	Restoral	Supervisory	Active in Levels
00	Fixed Panic: 24 hour audible fixed emergency button	Intrusion	I	No	Yes	1234
01	Portable Panic: 24 hour audible portable emergency buttons	Intrusion	I	No	No	1234
02	Fixed Panic: 24 hour silent fixed emergency buttons	Silent	I	No	Yes	1234
03	Portable Panic: 24 hour silent portable emergency buttons	Silent	I	No	No	1234
04	Fixed auxiliary: 24 hour auxiliary sensor, such as Pendant Panic	Emergency	I	No	Yes	1234
05	Fixed Auxiliary: 24 hour emergency button. Siren shut off confirms CS report	Emergency	I	No	Yes	1234
06	Portable Auxiliary: 24 hour portable auxiliary alert button	Emergency	I	No	No	1234
07	Portable Auxiliary: 24 hour portable auxiliary button. Siren shut off confirms CS report	Emergency	I	No	No	1234
08	Special Intrusion: such as gun cabinets and wall safes.	Intrusion	I	Yes	Yes	1234
09	Special Intrusion: such as gun cabinets and wall safes.	Intrusion	S	Yes	Yes	1234
10	Entry/Exit Delay: Entry/Exit Delay that require a standard delay time. Chime	Intrusion	S	Yes	Yes	24
13	Instant perimeter: Exterior doors and windows. Chime	Intrusion	I	Yes	Yes	24
14	Instant Interior: Interior doors	Intrusion	F	Yes	Yes	234
15	Instant Interior: Interior PIR motion sensors*	Intrusion	F	No	Yes	234
16	Instant Interior: Interior doors	Intrusion	F	Yes	Yes	34
17	Instant Interior: PIR motion sensors*	Intrusion	F	No	Yes	34
19	Delayed Interior: interior doors that initiate a delay before going into alarm*	Intrusion	S	Yes	Yes	34
20	Delayed Interior: PIR motion sensors that initiate a delay before going into alarm*	Intrusion	S	No	Yes	34
21	Local Instant Interior: 24 hour local alarm zone protecting anything that opens and closes. No Report	Intrusion	I	Yes	Yes	1234
22	Local delayed interior: same as group 21, plus activation initiates a delay before going into alarm. No report.*	Intrusion	S	Yes	Yes	1234
23	Local instant Auxiliary: 24 hour local alarm zone protecting anything that opens and closes.‡ No report	Emergency	I	Yes	Yes	1234
24	Local Instant Auxiliary: 24 hour local alarm zone protecting anything that opens and closes. Sirens shut off at restoral. No report.*	Emergency	I	Yes	Yes	1234
25	Local Special Chime: Notify the user when a door is opened. Sounds emit from a local annunciator.* No report	Two beeps	I	No	Yes	1234
26	Fire: 24 hour fire, rate-of-rise heat, and smoke sensors§.	Fire	I	Yes	Yes	1234
27	Lamp control or other customer feature.‡ No report	Silent	I	Yes	Yes	1234
28	PIR motion sensor, sound sensor, or pressure mat.‡ No report	Silent	I	No	Yes	1234
29	Auxiliary: freeze sensor	Emergency	I	Yes	Yes	1234
32	PIR motion sensor or sound sensor‡ No report	Silent	I	No	No	1234

*This type is not certified as a primary protection circuit for UL-listed systems and is for supplementary use only.

§This type is required for UL-listed residential fire alarm applications.

‡This type has not been investigated by UL.

The arming levels are:

1 = Disarm
2 = Arm Doors & Windows
3 = Arm Motion Sensors
4 = Arm Doors/Windows & Motion Sensors

Delays:

I = Instant Delay (no delay, immediate alarm)

S = Standard Delay (alarm sounds after programmed entry delay time)

F = Follower Delay (alarm sounds immediately if entry/exit delay is not active, otherwise alarm sounds after programmed entry delay time)

Planning Control Locations

Control Panel

Locate the Control Panel so that the alarm sounds can be heard and it will be convenient to operate. It must be near an electrical outlet and telephone receptacle.

Remote Handheld Touchpad

Locate Remote Handheld Touchpads where they will be convenient and offer quick response in emergencies.

KeyChain Touchpad

KeyChain Touchpads attach to the owner's key ring or can be conveniently carried.

Planning for Lamp, Appliance, Wallswitch, and Universal/Garage Door Module Control

As you program the modules, the Control Panel asks you to choose the house code, unit number and activation method. Fill out Table 4, Home Control Planning Table, before you begin programming.

The system can control 8 individual unit numbers on Lamp, Wallswitch, Appliance, and Universal/Garage Door Modules.

Setting the House Code and Unit Number

Each device controlled by the Control Panel must have an identification setting. The modules use two dials to set identification codes: one with letters A through P and one with numbers 1 through 16.

The lettered dial sets the house code. The house code enables the system to differentiate this home from other homes in the area. Set all modules (except the remote siren) and the Control Panel to the same house code.

The numbered dial sets the unit number. The unit number tells the system which device you want to control. Each unit number should be different (unless you want specific lights or appliances to be activated together). The Control Panel recognizes up to 8 unit numbers for sensor-activated, time-activated and entry/exit delay lights. When unit numbers 9-16 are used for lamp modules, they can only be controlled by an all on or all off command.

A lamp will flash to the arming level if its unit number is set to 10. A lamp set to unit number 10 will flash once if the Control Panel is disarmed, twice if doors & windows are armed, etc.

The remote siren can be set to any unit number to hear alarm sounds. Set it to unit number 9 to hear arming level beeps, status beeps, and trouble beeps.

To Fill Out the Lamp Control Planning Table:

Note: Do not use a light module to control appliances, use an appliance module, since the wattage rating on Lamp Modules is less than on Appliance Modules.

1. Set the house code on all the Modules, except the remote siren to the same letter.
   Set the Remote Siren house code to the *next* alphabetical letter. For example, if the house code is B, set the remote siren's house code to C.

Note: The house code instructions which come with the Powerhorn Siren won't work with this Control Panel. Follow the instructions given here.

2. Set the Module unit numbers.

Note: If you are using a Universal Module to operate a garage door, make sure to assign a unique unit number to this Module choosing from 1-8.

3. List the location of the lamp or appliance in the Location column of Table 4.
4. Write the location of each Lamp Module on an adhesive note and label the module.
5. Decide if the device should be activated by sensors, entry/exit delay, time, or a combination. An example of sensor activation is using a motion sensor to turn on a light. Record the information in the appropriate columns.

Table 4 Home Control Planning Table (This table is duplicated at the end of this manual)

Module			Activated by		Time Activated	
Unit #	Type	Location	Sensor	Entry/Exit	Start Time	Stop Time
Example	Lamp	Hall lamp	Motion	Yes	8 p.m.	10:30 p.m.
1						
2						
3						
4						
5						
6						
7						
8						

Planning System Access Codes

Use the following to plan system Access Codes. Fill out Table 5 to use when programming these codes.

Utility Access Code 1

This access code is used during installation. The default utility access code is 4321. This code can be used for all programming.

Utility Access Code 2

The default access code is 4321. This access code is used during for all programming except for changing utility access code 1 and changing options 4, 5, 6, 8, 9, 12, and 13.

Master Access Code

The default Master Access Code is 1234. This user code is needed to: disarm the Control Panel, program options 1 through 3, program light control, set the system clock, program access codes 1-5, and perform a sensor or phone test. The use of the Master Access Code should be limited since it can delete and add the secondary access codes.

Access Codes (1 - 5)

The Control Panel can have up to 5 secondary user access codes. These could be used by children, a baby sitter, or a service person. These codes have the same programming privileges as the master access code except they cannot program access codes 1 - 5.

Table 5 System Access Codes

Type	Default	Installer Settings
Utility Access Code 1	4321	
Utility Access Code 2	4321	
Master Access Code	1234	
Access Code 1	None	
Access Code 2	None	
Access Code 3	None	
Access Code 4	None	
Access Code 5	None	

Planning System Options

Use the following to plan system Options. See Table 10 for a complete listing of all system options and their characteristics. Fill out the last column of this table to use when programming.

Option 01: Panel Beeps

Add turns on panel beeps that sound when an access code is entered or when the arming level is changed.

Delete turns off panel beeps.

Option 02: Panel Voice

Add enables the panel's voice.

Delete disables the panel's voice.

Note that the panel voice is always on for status messages, open sensor responses, and when in program mode.

Option 03: Latchkey (Reports as 99)

Add programs the Latchkey time. If Latchkey is enabled, when the Control Panel is armed and the Control Panel is not disarmed by the preprogrammed time, the Control Panel will call in a Latchkey alarm at the programmed time.

Delete removes the Latchkey time. Latchkey cannot be enabled when the Control Panel is armed.

Option 04: Primary Phone Number

Add programs the primary phone number to be called when there is an alarm. The phone number will call the central station.

Delete removes the primary phone number.

Option 05: Secondary Phone Number

Add and *Delete* function the same as they do for the primary phone number. This number can be to a numeric pager or a central station. When using it to call a numeric pager, program this phone number with 2 pauses (press the test button to program a pause) at the end of the number. Set Phone Mod 2 (option 13) to 8 or 9. The Control Panel will call a numeric pager twice for each report. Pagers that require the Control Panel to dial more than 18 digits will not work. Silent alarms report to a pager as an intrusion alarm. See the Owner's Manual for more reporting information.

Option 06: Downloader Phone Number

Programs the ITI ToolBox Downloader telephone number.

Add and *Delete* function the same as they do for the primary phone number.

Option 07: Account Number

Add programs the account number.

Delete resets it to 00-000.

Option 08: Phone Lock

Add enables phone lock so that a different central station cannot change the central station code.

Delete disables phone lock.

Option 09: DL Code (Downloader Code)

Add programs the downloader access code. The Downloader Code is used during Control Panel programming with the ITI ToolBox. The Control Panel's downloader code must match the downloader access code in the ITI ToolBox account in order to program the Control Panel using the ITI ToolBox.

Delete resets it to 12345.

Option 10: Entry Delay

Add programs the entry delay. Enter time in seconds. The range is 005-120 seconds (3 digits must be entered).

Delete sets the delay to 5 seconds.

For UL listed systems, the entry delay should not exceed 45 seconds.

Option 11: Exit Delay

Add programs the exit delay. Enter time in seconds. The range is 005-120 seconds (3 digits must be entered).

Delete sets the delay to 5 seconds.

For UL listed systems, the exit delay should not exceed 45 seconds.

Option 12: Phone Mod 1

Add sets the report content and format which the primary phone number uses. The range is 0-3.

Delete sets the phone mod to 0.

Table 6 Phone Mod 1

Enter #	Reports	Format
0	All	ITI
1	All	4/2
2	Alarms	ITI
3	Alarms	4/2

Alarms include: Fire, Intrusion, Emergency, and Silent.

Non-Alarms include: Latchkey, No Activity, Alarm Cancel, Opening, Closing, Force Armed, AC Power Failure, CPU Low Battery, and Trouble Restorals.

All includes: Alarms and Non-Alarms.

UL has only verified compatibility with the ITI CS4000 Digital Alarm Communicator Receiver.

Option 13: Phone Mod 2

Add sets the report content and format that the secondary phone number uses. Range is 0-9.

Delete sets the phone mod to 0.

Table 7 Phone Mod 2

Enter #	Reports	For mat
0	All	ITI
1	All	4/2
2	Alarms	ITI
3	Alarms	4/2
4	Non-Alarms	ITI
5	Non-Alarms	4/2
6	Phone 1 failure	ITI
7	Phone 1 failure	4/2
8	Latchkey/No Activity/ Phone Test	Pager
9	Alarms/Latchkey/No Activity/Phone Test	Pager

Option 14: DTMF Dialing

Add enables DTMF dialing.

Delete enables pulse dialing.

Option 15: No Activity (Upper Sensor 79)

Add enables the no activity time-out. Program the no activity time-out in hours. The range is 02-24 hours (2 digits must be entered).

Delete disables the no activity time-out.

Option 16: Auto Phone Test (Upper Sensor 93)

Add enables the auto phone test. Program the auto phone test frequency in days. The range is 001 - 254 days (3 digits must be entered).

Delete disables auto phone test.

Option 17: Dialer Delay

Add enables the dialer delay. Program the delay in seconds. The range is 005-120 seconds (3 digits must be entered).

Delete disables the dialer delay.

For UL installations, dialer delay time cannot be greater than 45 seconds.

Note: The Control Panel will not wait the programmed dialer delay to call in an alarm if the Control Panel is disarmed before the dialer delay expires and opening reports are on. Both the alarm and opening report will be called in immediately.

Option 18: Alarm Cancel

Add enables alarm cancel. Program the time in minutes. If the Control Panel is disarmed from an alarm state within the programmed time, the Control Panel will send an alarm cancel message. The range is 01-30 minutes (2 digits must be entered).

Delete disables the alarm cancel.

Option 19: Supervisory Time (SUPSYNC)

Add sets the supervisory time. Program the time in hours. The range is 02-24 hours (2 digits must be entered).

Delete resets SUPSYNC to 2 hours.

For UL listed systems, the SUPSYNC shall not exceed 4 hours.

Option 20: Manual Phone Test (Upper Sensor 83)

Add allows the user to perform a manual phone test.

Delete disables manual phone test.

Option 21: Opening Reports (Upper Sensor 84)

Add enables opening reports. Opening reports will be sent to the central station if the Control Panel is disarmed from a higher arming level. Also, if the Control Panel is armed to level 4 from level 2 or 3, an opening report will be sent to the CS.

Delete disables opening reports.

Option 22: Closing Reports (Upper Sensor 85)

Add enables closing reports. Closing reports will be sent to the central station if the Control Panel is armed to level 2, 3, or 4.

Delete disables closing reports.

Option 23: Force Armed (Upper Sensor 87)

Add enables force armed report. A force armed report will be sent to the central station.

Delete disables force armed reports.

Option 24: AC Power Failure (Upper Sensor 90)

Add enables AC power failure reports. An AC power failure report will be sent to the central station if the Control Panel has lost power for 15 minutes. The Control Panel will report AC power restoral when power returns to the Control Panel.

Delete disables AC power failure and restoral reports.

Option 25: CPU Low Battery (Upper Sensor 91)

Add enables CPU low battery reports. A low battery report will be sent to the central station when the Control Panel's battery voltage drops below 7.65 volts.

Delete disables CPU low battery reports.

Option 26: Fail to Communicate (Upper Sensor 96)

Add enables fail to communicate. If the Control Panel is not able to connect to the CS when it's trying to report an alarm, the Control Panel will indicate this with trouble beeps and in the status message.

Delete disables fail to communicate.

Option 27: Ring/Hang/Ring (Feature 01)

Add enables ring/hang/ring to use with ToolBox. This feature is useful when programming a Control Panel in a home with an answering machine. Program ring/hang/ring by number.

Table 8 Ring/Hang/Ring Program Numbers

Program #	Control Panel will answer after:
1	ring/hang/ring or 10 rings
2	ring/hang/ring/hang/ring or 10 rings
3	ring/hang/ring/hang/ring/hang/ring or 10 rings
4	10 rings

If ring/hang/ring is programmed as:

Program # 1 -

1. Call the Control Panel and let the phone ring twice then hang up.
2. Wait 10-40 seconds and call the Control Panel again.
3. The Control Panel should answer on the first ring.

Program # 2 - Repeat steps 1 & 2 before the Control Panel will answer.

Program # 3 - Repeat steps 1 & 2 twice before the Control Panel will answer.

Delete disables ring/hang/ring. The Control Panel will not answer.

Option 28: No Delay from KeyChain Touchpad (Feature 32)

Add arms with no entry delay when using the KeyChain Touchpad.

Delete arms with an entry delay when using the KeyChain Touchpad.

Option 29: Control Panel Alarms

Add enables the Control Panel's piezo. Alarms will sound from the Control Panel.

Delete disables the Control Panel's piezo. Alarms will not sound from the Control Panel.

For UL listed systems, at least one listed external audible signal device shall be used if the external piezo is disabled.

Option 30: Panic Alarms

Add enables panic alarms initiated from the Control Panel or Handheld Touchpad.

Delete disables panic alarms.

Option 31: Day of Week

Add will program the day of week based on a programmed number. The day of week will be used during an event buffer dump to ToolBox.

Delete sets day of week to 0.

Table 9 Day of Week by Number

0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

Option 32: 300 Baud

Add enables 300 baud communication. Enable this option for faster communication

Delete enables 110 baud communications.

Table 10 Programmable Options (This table is duplicated at the end of this manual)

Option #	Upper Sensor/ Feature Number	Function	Default	Range	Who Can Change: U1 - Utility Access Code 1; U2 - Utility Access Code 2; M - Master; A - Access Codes	Installer Settings
01		Panel Beeps	On	On/Off	U1 U2 M A	
02		Panel Voice	On	On/Off	U1 U2 M A	
03	Reports as 99	Latchkey Option	Off	12:00 a.m. - 11:59 p.m.	U1 U2 M A	
04		Primary Phone Number	None	18 digits	U1	
05		Secondary Phone Number	None	18 digits	U1	
06		Downloader Phone Number	None	18 digits	U1	
07		Account Number	00000	00000-99999	U1 U2	
08		Phone Lock	Off	On/Off	U1	
09		Downloader Code	12345	00000-99999	U1	
10		Entry Delay - 15	30 sec	005-120 sec	U1 U2	
11		Exit Delay - 45	30 sec	005-120 sec	U1 U2	
12		Phone Mod 1	0 - 1	0-3	U1	
13		Phone Mod 2	0 - 8	0-9	U1	
14		DTMF	On	On/Off	U1 U2	
15	79	No Activity	Off	02-24 hrs	U1 U2	

Table 10 Programmable Options (This table is duplicated at the end of this manual)

Option #	Upper Sensor/ Feature Number	Function	Default	Range	Who Can Change: U1 - Utility Access Code 1; U2 - Utility Access Code 2; M - Master; A - Access Codes	Installer Settings
16	93	Auto Phone Test Option (Must be enabled for UL Listed systems)	Off	001-254 days	U1 U2	
17		Dialer Delay	Off	001-120 sec	U1 U2	
18		Alarm Cancel	Off- ON	01-30 min	U1 U2	
19		Supervisory Time (SUPSYNC)	12 hrs	02-24 hrs	U1 U2	
20	83	Manual Phone Test	On	On/Off	U1 U2	
21	84	Opening Reports	Off	On/Off	U1 U2	
22	85	Closing Reports	Off	On/Off	U1 U2	
23	87	Forced Arm	Off	On/Off	U1 U2	
24	90	AC Power Failure (Must be enabled for UL Listed systems)	Off	On/Off	U1 U2	
25	91	CPU Low Battery (Must be enabled for UL Listed systems)	On	On/Off	U1 U2	
26	96	Fail to Communicate (Must be enabled for UL Listed systems)	On	On/Off	U1 U2	
27	Feature 01	Ring/Hang/Ring	Off ON	1-4	U1 U2	
28	Feature 32	No Delay from KeyChain Touchpad	Off	On/Off	U1 U2	
29		High Level Siren	On	On/Off	U1 U2	
30		Panic Alarms	On	On/Off	U1 U2	
31		Day of Week (2) SET =>	0 -2	0-6	U1 U2	
32		300 Baud Central Station Communications	Off	On/Off	U1 U2	

Wiring the Control Panel

This section describes how to:

- connect hardwire interior and exterior sirens (if being installed)
- connect hardwire sensors
- connect the power transformer
- connect the backup battery

Connecting Hardwire Interior Sirens

The following ITI sirens may be used with this Control Panel:

- Slimline Siren (60-483-01)
- LD105 Siren (13-374)

Follow the siren installation instructions included with the siren to connect a hardwire interior siren to the Control Panel.

Connecting a Hardwire Exterior Siren

Use only the model 13-046 Hardwire Exterior Siren as shown in Figure 2.

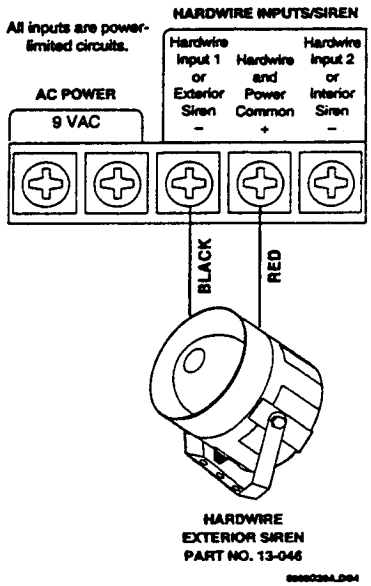

Figure 2. Exterior Siren Control Panel Connections

Connecting Hardwire Sensors

This section shows how to wire hardwire sensors to the Control Panel. For more detailed information on installing hardwire devices, see the installation instructions that accompany each device. Wire sensors to be supervised by using a 47k Ohm resistor (included with the Control Panel).

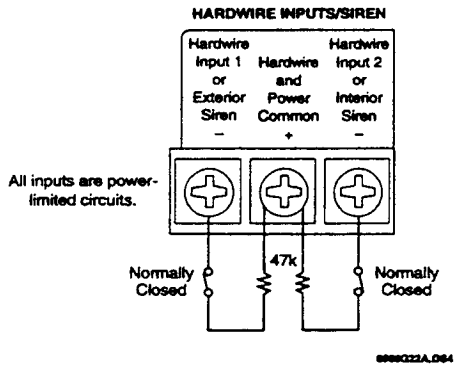

Figure 3. Wire Hardwire Sensors Normally Closed

Connecting the Universal/Garage Door Opener Module

Use the following to connect a universal module to be used to open a garage door:

1. **Set the unit code** of the universal module to a unique unit number between 1 and 8.
2. **Set the house code** to the house code for the installation.
3. **Set the module's switches** to momentary and relay only.
4. **Connect the terminals on the universal module** to the button terminals on the garage door opener.
5. **Plug the universal module into a wall outlet.**

Note: See the Programming Light and Appliance Controls section to program a KeyChain Touchpad to open a garage door.

Connecting the Power Transformer

Connect the power transformer as shown in Figure 4. Plug the transformer into an unswitched outlet.

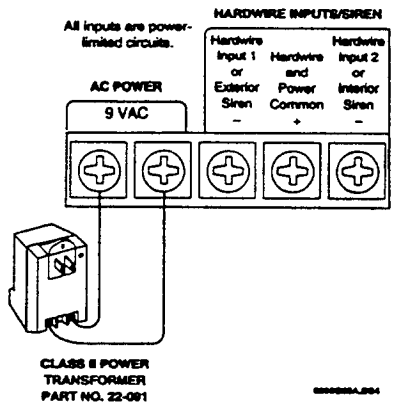

Figure 4. Power Transformer Control Panel Connections

Connecting the Backup Battery

Connect a 9-Volt lithium battery (ITI #34-037) to the battery clips (see Figure 5.).

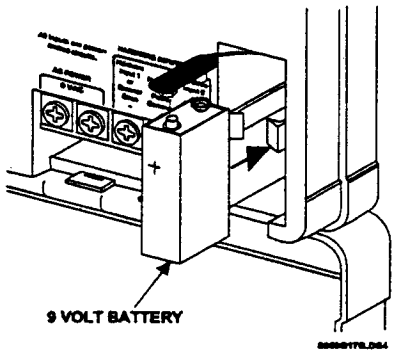

Figure 5. Control Panel Battery Installation

Note: The Control Panel wil initially indicate a low battery by lighting the SYSTEM STATUS button. If this button is pressed the Control Panel will announce, *System low battery.*

The Control Panel does a battery test every 4 hours and will clear the status message if the battery is good.

Perform a sensor test, see the Testing Sensors section, to perform an immediate battery test.

Connecting the Phone Line to the Control Panel

If the system will be monitored by a central monitoring station, you must install an RJ-31X jack between the telephone company (TELCO) block and the Control Panel. The jack must be located within 5 feet of the Control Panel.

Installing an RJ-31X Jack

Install and wire the RJ-31X jack as shown in Figure 6.

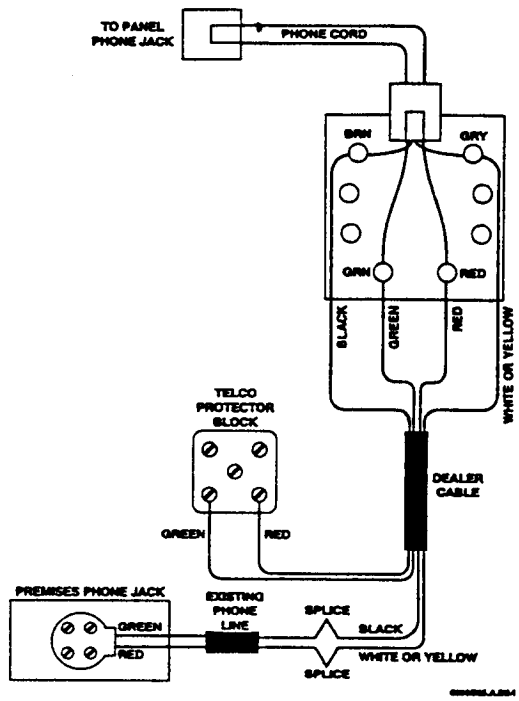

Figure 6. RJ-31X Wiring Diagram

Connecting the Phone Line to the Control Panel

1. Plug one end of the phone cord (included with the Control Panel) into the RJ-31X jack.
2. Plug the other end of the phone cord into the Control Panel phone jack.
3. When looking at the back of the Control Panel, the top block is used to connect the phone to the Control Panel and the bottom block is used to connect the Control Panel to the wall phone jack.

Programming Overview

These instructions tell you how to set up for programming and to put the Control Panel in program mode.

1. **Arrange the sensors, modules, Control Panel, and user controls** on a table.
2. **Open the Control Panel cover.**
3. **Enter Utility Access Code 1** (default is 4321) using red numbered keys.

The default for utility access codes 1 and 2 is 4321.

The default master access code is 1234.

You are now in program mode.

Programming is easy if you understand the flow from left to right when using the programming buttons. Follow the programming arrows or use the flow diagrams to the right of the programming buttons. The Control Panel will voice prompt you through programming.

To get you started:

1. Press **Add or Delete** from the Start Menu.
2. Press **Option #, Sensor/Remote, Access Code or Light Control** from the Main Menu.

The system response at this point depends upon what button you just pressed. Follow the voice prompts and programming arrows to continue.

Program the Control Panel in this order:

1. Sensors
2. House Code
3. Light & Appliance Control
   - Entry/Exit activated lights
   - Sensor activated lights
   - Time activated lights
4. Options
5. Access Codes

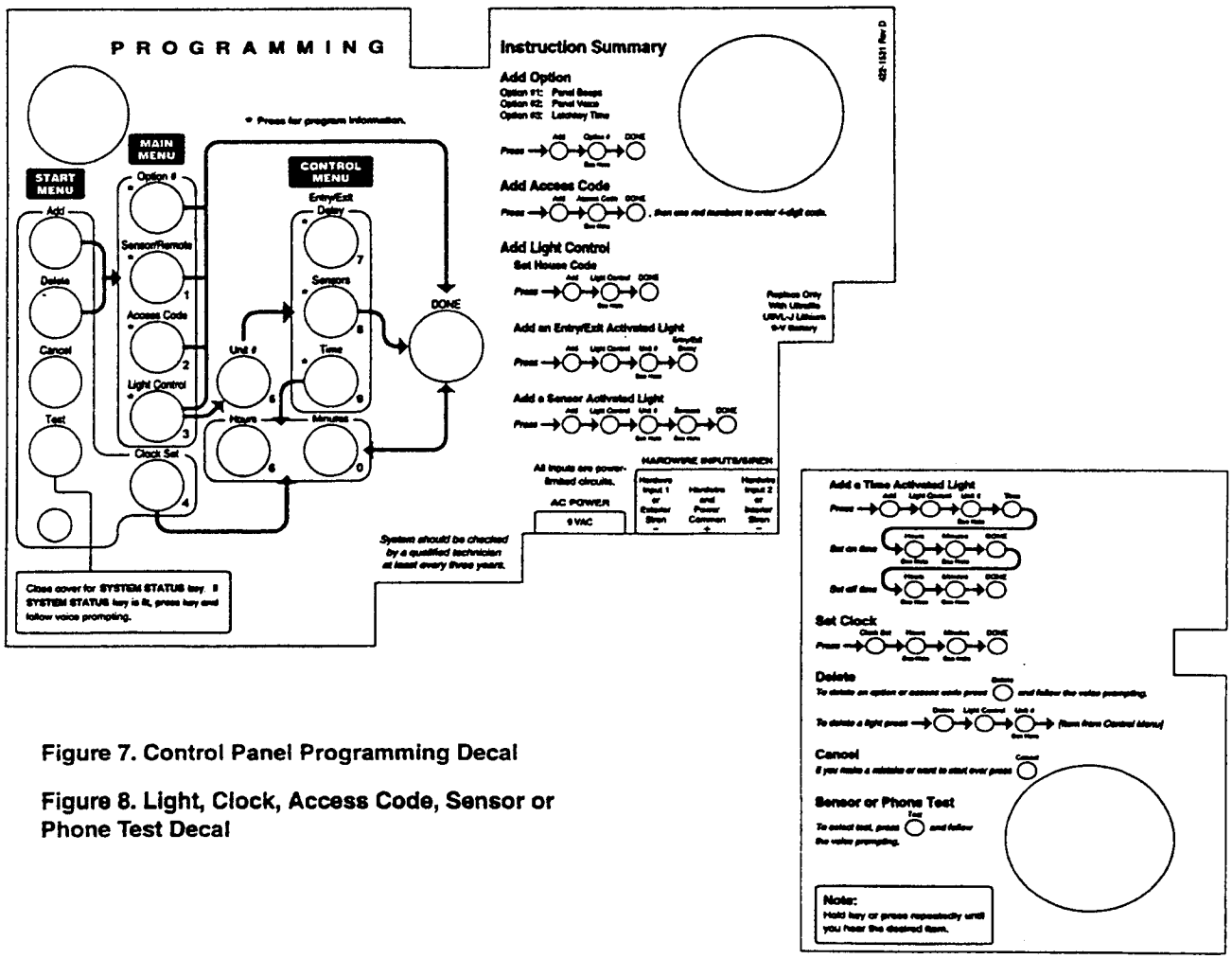

Figure 7. Control Panel Programming Decal

Figure 8. Light, Clock, Access Code, Sensor or Phone Test Decal

Programming Sensors

These instructions show you how to program sensors, touchpads and other system devices into the Control Panel.

Program sensors and devices before you install them. The Control Panel recognizes a sensor when you press the sensor's program button or tamper switch.

Table 11 describes the programming button location for each device.

Table 11 Device Program Buttons

Device	Program Button Location
Door/Window Sensor	On top of sensor (cover removed)
Motion Sensor	On back of sensor (mounting plate removed)
KeyChain Touchpad	Lock & Unlock buttons
Remote Handheld Touchpad	EMERGENCY buttons (to be used for non-medical emergencies)
Hardwire Sensors	See individual sensor installation instructions

Note: Sensor installation instructions included in this manual are for SAW devices only. This security system has a SAW receiver. When installing crystal sensors (non-SAW devices), use the installation instructions included in their packing boxes.

The Control Panel uses an ascending numbering sequence (beginning with 1) when adding (learning) sensors. You may override the system suggested sensor number by using the red numbered keys.

Use Table 1, which was filled out during the system planning, to help program sensors.

To add a hardwire or RF sensor or remote control:

1. Press **Add** from the Start menu.
2. Press the **Sensor/Remote** button from the Main menu until you hear the room name or item you want to add. The order of names the Control Panel uses are: keychain remote, touchpad remote, front door, back door, garage door, bedroom, guest room, child's room, utility room, living room, dining room, bathroom, laundry room, kitchen, office, den, garage, special chime, basement, upstairs, downstairs, hallway, medicine cabinet, closet, attic. Each name may be used more than once.
3. Press **DONE** when you hear the name you wish to add.

Note: When adding sensors, if you wish to use a more descriptive location you may press the option button to use the compass directions (north, north east, east, south east, south, south west, west, north west).

4. **Enter the 2 digit sensor type** using Table 1, with the red numbered keys.

Note: If you wish to use a sensor number other than the next available, enter a 2 digit sensor number with the red numbered keys immediately after entering the sensor type.

5. **Press the sensor's program button** or tamper button. Open the switch of hardwired sensors. The Control Panel verbally confirms your programming.

To delete sensors:

1. Press **Delete** from the Start menu.
2. Press **Sensor/Remote** from the Main menu until you hear the name you want to delete.
3. Press **DONE**. The system confirms the item you removed.

Programming the House Code and Unit Numbers

Lamp Modules, Appliance Modules, and Remote Sirens use the existing electrical wiring in the home to receive signals from the Control Panel. Since there are no direct wire connections required, any number of modules can be plugged into available outlets and installed in the system. All Lamp Modules and Appliance Modules have a common house code that allows modules to be identified by eight different control addresses.

The house code allows adjacent homes that have a common power source to co-exist. The available house code choices are from A to O.

To program the house code:

1. Press **Add** from the Start menu.
2. Press **Light Control** from the Main menu until you hear the house code letter you want.
3. Press **DONE.**
4. **Set the house code on each lamp and appliance module** using a screwdriver.
5. **Set house code on the remote siren** to the next alphabetical letter greater than the house code.

All Lamp Modules with the same house code will turn on or flash as a group on alarm or when operating the "Light" button on a KeyChain Touchpad. The units must be identified with a unique unit number, from 1-8, to individually operate lights and appliances from a Remote Handheld Touchpad or to selectively program lights to go on during the entry/exit delay, to be operated by a sensor or at scheduled times.

To assign a unit number:

1. See Table 4 for your planning information.
2. **Set the Unit number switch** on each module.

Programming Light and Appliance Controls

Use Table 4, which was filled out during the system planning, to help program control modules.

To add an entry/exit activated light:

1. Press **Add** from the Start menu.
2. Press **Light Control** from the Main menu.
3. Press **Unit #** until you hear the number you chose on the module.
4. Press **Entry/Exit Delay** from the Control menu. The Control Panel confirms your programming.

To add a sensor-activated light:

1. Press **Add** from the Start menu
2. Press **Light Control** from the Main menu.
3. Press **Unit #** until you hear the number you chose on the module.
4. Press **Sensors** from the Control menu until you hear the sensor you want to control the light.
5. Press **DONE.** The Control Panel confirms your programming.

Note: A KeyChain Touchpad can be programmed to a unit number. Press the star button to activate a light or open/close a garage door using the Universal Module.

To add a time-activated light:

1. Press **Add** from the Start menu.
2. Press **Light Control** from the Main menu.
3. Press **Unit #** until you hear the unit number you chose on the module.
4. Press **Time** from the Control menu.
5. Press **Hours** and **Minutes** to set the beginning of the schedule.
6. Press **DONE.**
7. Press **Hours** and **Minutes** to set the end of the schedule.
8. Press **DONE.** The system confirms your programming.

To delete an Entry/Exit-activated light:

1. Press **Delete** from the Start menu.
2. Press **Light Control** from the Main menu.
3. Press **Unit #** until you hear the unit number you want to delete.
4. Press **Entry/Exit Delay.** The system confirms your programming.

To delete a sensor-activated light:

1. Press **Delete** from the Start menu.
2. Press **Light Control** from the Main menu.
3. Press **Unit #** until you hear the unit number you want to delete.
4. Press **Sensors** from the control menu until you hear the one you want to delete.
5. Press **DONE.** The system confirms your programming.

To delete a time-activated light:

1. Press **Delete** from the Start menu.
2. Press **Light Control** from the Main menu.
3. Press **Unit #** until you hear the unit number you want to delete.
4. Press **Time** from the control menu.

Programming Options

Use Table 10, which was filled out during the system planning, to help program options.

There are two ways to enter options. They are as follows:

- Press **Add** and press **the Option # button** until you hear the option to be changed.

or--

- Press **Add** and **enter the option number** you want to program with the red numbered keys.

The following instructions use the second method.

To set system options 01 and 02:
1. Press **Add** from the Start menu.
2. Press **Option #** and **01 or 02** with the red numbered keys.
3. Press **DONE.**

To set system option 03:
1. Press **Add** from the Start menu.
2. Press **Option # 03.**
3. Press **Hours** and **Minutes** to set the time.
4. Press **DONE.**

To set system options 04, 05, and 06:
1. Press **Add** from the Start menu.
2. Press **Option #** and **04, 05, or 06.**
3. **Enter a phone number** with the red numbered keys. Press **Test** to enter a pause in the phone number.

Note: The phone number is automatically stored after you've pressed 18 digits. You will not have to press DONE to store the number. If the number is less than 18 digits, then DONE must be pressed.

To set system option 07:
1. Press **Add** from the Start menu.
2. Press **Option # 07.**
3. **Enter the account number.**
4. Press **DONE.**

To set system option 08:
1. Press **Add** from the Start menu.
2. Press **Option # 08.**
3. Press **DONE.**

To set system options 09:
1. Press **Add** from the Start menu.
2. Press **Option # 09.**
3. **Enter the downloader code.**
4. Press **DONE.**

To set system options 10 & 11:
1. Press **Add** from the Start menu.
2. Press **Option # 10 or 11.**
3. **Enter the delay times** in seconds (3 digits must be entered).

To set system options 12 & 13:
1. Press **Add** from the Start menu.
2. Press **Option #** and **12 or 13.**
3. **Enter phone mod number.**

To set system option 14:
1. Press **Add** from the Start menu.
2. Press **Option # 14.**
3. Press **DONE.**

To set system option 15 (Upper Sensor 79):
1. Press **Add** from the Start menu.
2. Press **Option # 15.**
3. **Enter the no activity time out** (2 digits must be entered).

To set system option 16 (Upper Sensor 93):
1. Press **Add** from the Start menu.
2. Press **Option # 16.**
3. **Enter the number of days** between each auto phone test (3 digits must be entered).

To set system option 17:
1. Press **Add** from the Start menu.
2. Press **Option # 17.**
3. **Enter the dialer delay** in seconds (3 digits must be entered).

To set system option 18:
1. Press **Add** from the Start menu.
2. Press **Option # 18.**
3. **Enter the alarm cancel time** in minutes (2 digits must be entered).

To set system option 19:
1. Press **Add** from the Start menu.
2. Press **Option # 19.**
3. **Enter the supervisory time** in hours (2 digits must be entered).

To set system options 20 - 26, 28 - 30, and 32:

1. Press **Add** from the Start menu.
2. Press **Option # XX.**
3. Press **DONE.**

To set system option 27:

1. Press **Add** from the Start menu.
2. Press **Option # 27.**
3. **Enter the ring/hang/ring number.**

To set system option 31:

1. Press **Add** from the Start menu.
2. Press **Option # 31.**
3. **Enter the day of week number.**

To delete options:

1. Press **Delete** from the Start menu.
2. Press **Option** from the Main menu until you hear the name you want to delete.
3. Press **DONE.** The system confirms the item you removed.

Programming System Access Codes

Use Table 5, which was filled out during the system planning, to program system Access Codes.

To add a code:

1. Press **Add** from the Start menu.
2. **Enter the access code** as prompted by the panel voice by using the red numbered keys.
3. Press the **Add** button.
4. Press the **Access Code** button. Continue pressing the Access Code button until you hear the access code to be changed.
5. Press **DONE.**
6. **Enter the new access code** by using the red numbered keys.

The Control Panel says, *code name is XXXX* (the new 4 digit access code).

To delete a code:

1. Press **Delete** from the Start menu..
2. Press the **Access Code** button. Continue pressing the Access Code button until you hear the access code to be deleted.
3. Press **DONE.**

The Control Panel says, *code name is deleted.*

Installing the System

Control Panel

General Information

Do not install the Control Panel near a window or door where it can be reached easily by an intruder.

Control Panels should be installed in locations where they are most likely to be heard.

Metal objects, mirrors, and metallic wallpaper can block signals sent by the wireless sensors. Make sure there are no metal objects in the way when installing the system.

The system will prompt you through programming steps with beeps and voice messages. If you need more time before proceeding, simply close the Control Panel cover until you are ready to continue.

When the cover is closed, the Control Panel is in the operating mode. Each time you close the Control Panel cover, a series of beeps will indicate the system status:

- One beep indicates the system is disarmed.
- Two beeps verify that Door/Window sensors are armed.
- Three beeps verify that Motion Sensors are armed.
- Four beeps verify that both Door/Window and Motion sensors are armed.

The system cannot work without power. If the electrical power fails and the Control Panel battery is weak or dead, the system will not work.

Control Panel Specifications

Power Requirements: 9 VAC, 700 mA

Backup Battery: 9 VDC 1.2 AH UltraLife Lithium

Radio Frequency: 319.5 MHz + or - 140 kHz

Nominal Range: 500 feet, open-air receiving range

Operating Temperature Range: 32°-122 ° F (0°-50° C)

Maximum Humidity: 85% relative humidity, non-condensing

Auxiliary Power Output: Regulated & unregulated, fused 12 VDC at 250 mA (maximum)

Installation Guidelines

Use the following procedure to mount the Control Panel to the wall or wall studs, using the supplied mounting hardware and the panel mounting holes.

Materials Needed

- Pencil
- Hammer
- Screwdriver

To mount the panel:

1. Choose a spot within a few feet of an electrical outlet (the outlet should not be controlled by a wall switch) and also within reach of a telephone jack. The Control Panel can be placed on a desk, tabletop, or it can be wall mounted.
2. Open the Control Panel cover and position on the wall.
3. Mark the screw hole locations with a pencil.
4. Start holes with the tip of the screwdriver or a nail.
5. Tap the wall anchors provided into the holes.
6. Insert the screws and partially tighten with the screwdriver.
7. Hang the Control Panel on the screws and tighten securely.
8. Remove the center screw from the outlet cover plate.
9. Position the transformer so that its screw hole is aligned with the screw hole on the outlet cover plate. Then plug the transformer into the outlet.
10. Replace the screw, and use it to secure the transformer to the outlet cover plate. Tighten the screw firmly with your screwdriver.

Testing the Control Panel

Test the Control Panel by pressing the buttons as described below:

- ARM Doors & Windows-The Control Panel arms Doors & Windows. Press twice to eliminate the preprogrammed entry delay. The button will blink when No Entry Delay is on.
- ARM Motion Sensors-The Control Panel will arm Motion Sensors. Press twice to turn Latchkey on. The button blinks when Latchkey is on.
- DISARM -The Control Panel will disarm Doors, Windows, and Motion Sensors when also entering the appropriate access code.
- SYSTEM STATUS-Press to determine system status and system time.
- CHIME Doors-Press to enable Control Panel beeps which will sound when a protected door or window, that is programmed as sensor type 10 or 13, is opened.
- CHIME Special Motion- Press to enable Control Panel beeps which will sound when a Motion Sensor, that is programmed as sensor type 25, is activated.
- LIGHTS Time Activated-Press to enable system controlled lights to turn on/off at a scheduled time.
- LIGHTS Sensor Activated-Press to enable system controlled lights to turn on for 4 minutes when a specific sensor is tripped.
- EMERGENCY-Press and hold or press twice quickly to activate a non-medical emergency alarm.

General Information

Door/Window Sensors can be installed on doors, windows, or many other objects that open and close. The sensors transmit signals to the Control Panel when a magnet mounted near the sensor is moved away from or closer to the sensor.

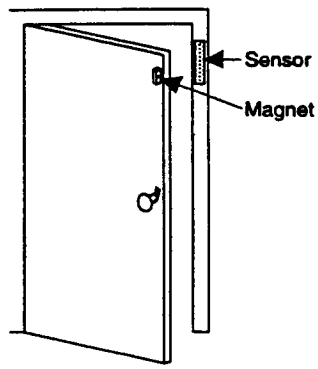

Figure 9. Sensor and Magnet Positions

Specifications

- Power supplied by: 2 AAA Alkaline batteries
- Dimensions: L = 4.5" X W = 1.2" H = .94"
- Typical battery life: 4-6 years
- Operating temperature range: 10° to 120° F

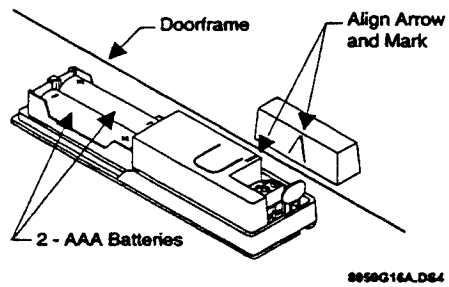

Figure 10. Aligning the Door/Window Sensor and Magnet

Installation Guidelines

Use the following guidelines for installing Door/Window sensors.

- Mount the sensor on the door frame and the magnet on the door. If the sensor is to be used on double doors, mount the sensor on the least-used door and the magnet on the other door.
- Make sure the alignment arrow on the magnet points to the alignment mark on the sensor.
- Place sensors at least 5 inches above the floor to avoid damaging them.
- Avoid mounting sensors in areas where they will be exposed to moisture or where the operating temperature (10°-120°)F will be exceeded.
- Use spacers (not included) to keep sensors and magnets away from metal or metallic surfaces such as foil wallpaper.

Materials Needed

- #6 flathead screws
- Screwdriver or brad driver

The following illustrations and procedure describe how to install the Door/Window sensor

To install Door/Window sensors:

1. Remove the sensor cover by pressing the button on the narrow end.
2. Remove the circuit board to access the mounting holes.
3. Mount the sensor base with two #6 flathead screws at the locations shown in Figure 11.

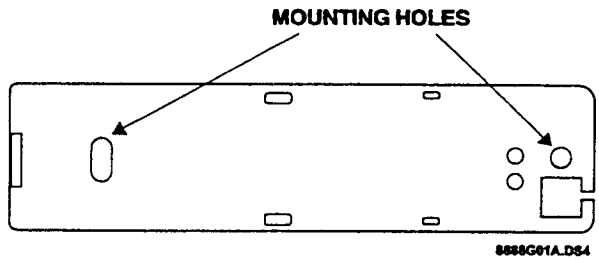

Figure 11. Mounting Hole Locations (Bottom View)

4. Remove the magnet from its base. Line up the arrow on the magnet with the mark on the sensor.
5. Mount the magnet base no more than 3/8-inch away from the sensor base. Replace the magnet cover.

6. Re-install the batteries and attach the sensor cover to the sensor base.

Note: When window or door construction does not allow the transmitter to be installed next to the magnet, use an external switch to install the Door/Window Sensor.

Connecting External Switches

External switches used with Door/Window Sensors allow you to protect doors and windows when there is inadequate room for directly mounting the sensor or when you want to locate the Door/Window Sensor in an adjacent but less visible place.

Materials Needed

- Hermetically sealed external switches (sealed reed switch) that supply a minimum 250-millisecond open or closure on alarm
- Stranded 22-gauge wire

Installation Guidelines

1. Install the magnet on the opening edge of the door or movable part of a window.
2. Position the switch on the door or window frame within one inch of the magnet.
3. Remove the cover from the Door/Window Sensor.
4. Pass the wires on the adapter through the rear opening at the bottom of the Door/Window Sensor.
5. Attach each wire to one side of the screw terminal. Press the screw terminal over the wire posts.
6. Mount the transmitter.

Testing Door/Window Sensors

The following steps describe the guidelines for testing sensors.

1. **Open the Control Panel cover.**
2. **Enter Utility Access Code 1 or 2.**
3. Press **Test.**
4. Press **DONE.**
5. **Trip the sensor** (move the magnet away from the sensor) and do not replace the magnet until the Control Panel indicates the number of RF packets received.
6. Note the number of siren beeps indicating how many RF packets the Control Panel received from the sensor. You should hear 7-8 beeps. The Control Panel will also say, *Status is X* (X = number of RF packets).

Indoor Motion Sensor

General Information

Both the indoor motion sensor and the outdoor motion sensor are Passive InfraRed (PIR) Motion Sensors. They are designed to detect movement within a specific area by sensing the infrared energy emitted from a body as it moves across the sensor's field of view causing the temperature to change in the sensor's zones. When motion is detected the unit sends an alarm signal to the Control Panel.

Use motion sensors to protect locations where door/window sensors are impractical or not needed. For example, use a motion sensor to protect large areas or open floor plans. Motion sensors also provide backup protection for door/window sensors.

The Indoor & Outdoor Motion Sensors:

- Area of coverage is 35 feet by 40 feet for Standard and Animal Alley lenses
- Masking kit provided to block portions of coverage area
- Three minute transmitter lockout time after an alarm extends battery life
- Cover-activated Tamper (optional wall-activated Tamper is included)
- The sensor transmits low battery report (trouble) to the Control Panel
- The sensor transmits supervisory signal to the Control Panel every 64 minutes
- Field-selectable sensitivity options of standard or high

Specifications

- Power supplied by: 2 AA Alkaline batteries
- Dimensions: L = 2.875" X W =2.375" X H = 1.875"

- Typical battery life: 3 - 4 years (has not been verified by U.L.)
- Operating temperature range: 32° to 120° F

Installation Guidelines

Use the following guidelines for installing *indoor* motion sensors.

1. For best coverage, mount the sensor from 5 to 8 feet high in the corner of the area you want to protect. See the Animal Alley lens guidelines for mounting the Animal Alley lens. Higher mounting provides better range (up to 35 feet), and lower mounting provides better protection close to the motion sensor. See Figure 13. and Figure 14.
2. Position the sensor to protect an area where an intruder would be most likely to walk *across* the detection pattern. See Figure 12.

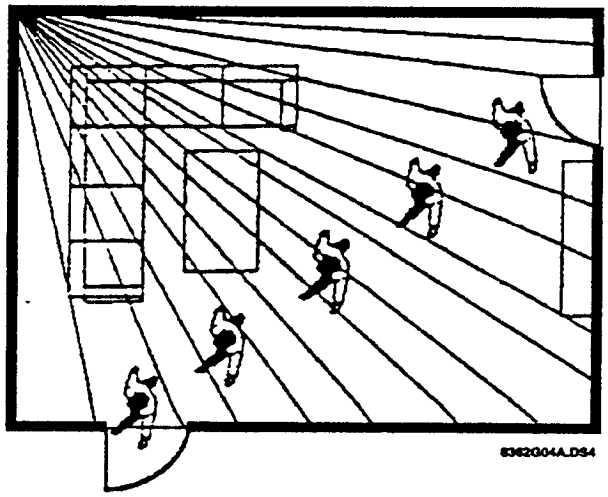

Figure 12. Overhead (Bird's Eye View) Detection Path

3. Mount the motion sensor on an insulated outside wall facing in.
4. Mount the motion sensor on a rigid surface which is free from vibrations.
5. Position the sensor so it faces a solid reference point, like a wall.
6. Do not aim the sensor at windows, fireplaces, air conditioners, area heaters, forced air heating vents, or place it in direct sunlight. Sudden changes in temperature may trigger a false alarm from these devices.
7. Do not mount the sensor near duct work or other large metallic surfaces which may affect the RF signals (see RF Testing). Actual acceptable transmitter range should be verified for each installation.
8. Mount the sensor permanently on a flat wall or in a corner. Do not set it on a shelf.
9. Windows should be closed in any area which has an armed motion sensor.
10. A pet will trigger a motion sensor. See Animal Alley lens guidelines to use a motion sensor when pets are present.

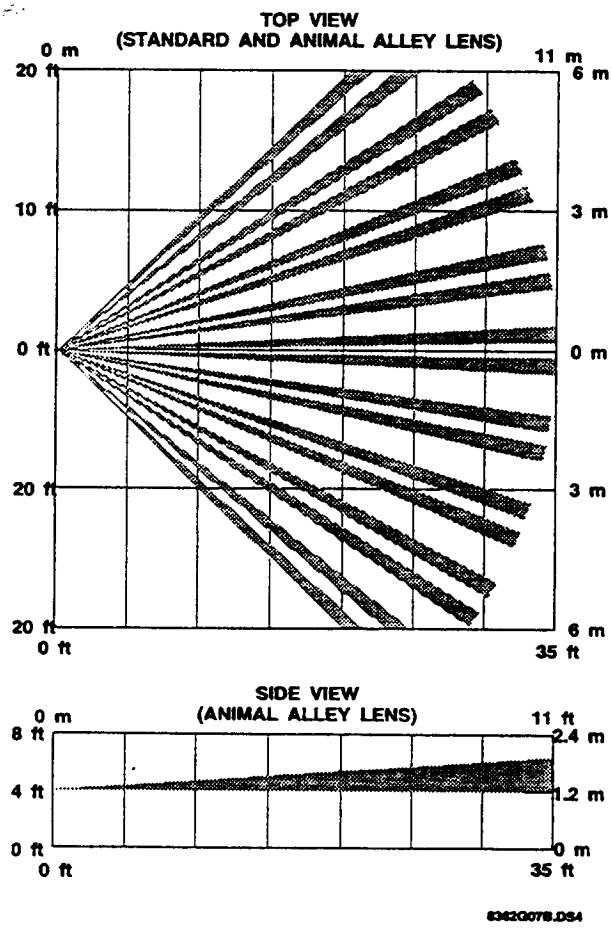

Figure 13. Top View Shows Both Standard & Animal Alley Lens Coverage Area. Side View Shows the Coverage Area Using the Animal Alley Lens

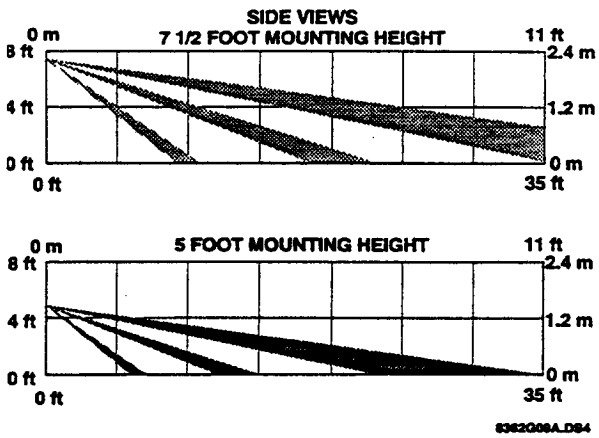

Figure 14. Side Views Show the Differences in the Coverage Area when using the standard lens mounted at Different Heights.

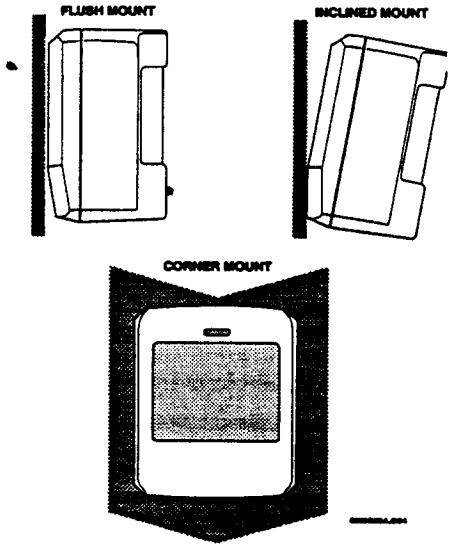

Figure 15. Wall Mount Options: use the inclined position for surface or corner mounting with the standard lens. Use the flush position for surface or corner mounting with the animal alley lens.

Mounting Procedure for Indoor Motion Sensors:

Surface, Corner, or Inclined Mounting, see Figure 14. showing these 3 mounting positions:

1. Remove the mounting plate by depressing the button on the top of the sensor body. With the opposite hand pull the mounting plate away from the body of the sensor.
2. Punch out the mounting holes that best fit your application. See Figure 15. for wall mount options. See also Figure 16. to determine which knockouts to use when mounting the motion sensor. Use the lower-side holes for corner mounting, or the lower-back holes for surface mounting with the standard lens.
3. Mark the location of the required holes on the mounting surface.
4. Use wall anchors and screws to secure into place.

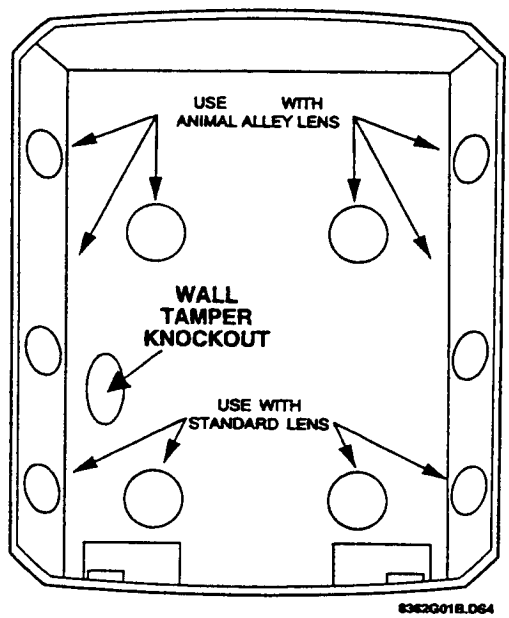

Figure 16. PIR Mounting Plate Knockouts. Use the Wall Tamper Knockout only if tampering at the wall

Note: For applications without pets, use the lower mounting holes. For applications with pets, use the upper mounting holes and the animal alley lens (ITI # 13-381).

5. If you desire wall tamper functionality, remove the wall tamper knock-out (see Figure 16.). The wall tamper switch cannot be used when the sen-

sor is swivel or corner mounted.

6. Attach the sensor to the mounting plate.

Lens Replacement:

1. To change the lens, first remove the sensor from its mounting plate by depressing the button on the top of the sensor.
2. Remove the cover by depressing the two tabs on the top and the one tab on the bottom of the sensor body and sliding the cover off (see Figure 18.).
3. Remove the installed lens by gently placing pressure on the lens from the outside of the lens.
4. Replace with the appropriate lens by aligning its notches with the appropriate tabs in the cover.
5. Install the new lens with the smooth side facing out and the grooved side facing in.
6. Replace the cover and then replace the sensor in its mounting plate.

Sensitivity Selection:

The PIR is set to standard sensitivity at the factory. This sensitivity is preferred for most applications and provides the best immunity to false alarms. High sensitivity should only be used in quiet environments where thermal transients are not expected.

1. Locate the sensitivity pins by first removing the mounting plate and the sensor cover as described in steps 1 and 2 of Lens Replacement process.

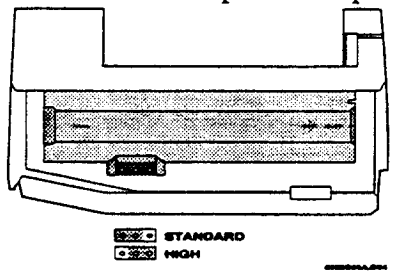

Figure 17. Sensitivity Pins Locations

2. The two sensitivity pins are located under the battery on the right side of the PIR when looking at the front of the PIR. The sensor is set to standard sensitivity at the factory. To change this to high sensitivity move the shorting jumper to the pair of pins that are closer to the top of the PIR (see Figure 17.). If the shorting jumper is not used or placed incorrectly, the sensor defaults to standard sensitivity.
3. Walk test the PIR to verify the sensitivity.

Walk Testing:

Removing the sensor body from the mounted mounting plate and then remounting the body will activate the 60 second walk test mode. During the test mode, any activity in the sensor's coverage pattern will cause alarm transmissions and LED activation. Each activation will also extend the walk test mode for an additional 60 seconds.

Walk testing should be done across the coverage pattern. The edge of the coverage pattern is determined by the first flash of the LED. This may change slightly depending upon the sensitivity setting. Walk test the unit from both directions to determine the pattern boundaries.

After the walk test mode has expired, the LED will not activate when motion is detected.

Note: Excessive use of the walk test mode may reduce battery life. Use only for initial setup and maintenance testing.

Final Testing:

Turn on all heating or air conditioning sources which would normally be active during the protection period. Stand away from the sensor and outside the coverage pattern and watch for alarms.

Note: When the walk test mode has ended, an alarm can be transmitted only after 3 minutes have passed since the previous alarm. This 3 minute lockout time reduces unnecessary RF transmissions in high traffic areas thereby extending battery life.

Maintenance:

At least once a year, the range and coverage should be verified for proper operation. The end user should be instructed to put the PIR in walk test mode and walk through the far end of the coverage pattern to verify proper detection.

Battery Installation:

The sensor is normally shipped with its batteries installed. If battery replacement is necessary observe proper polarity (as shown in the battery compartment) when installing the new battery, or the sensor may be damaged. Be sure to note that as you look at the bat-

tery compartment, on the left side the positive side is down and on the right side the positive end is up. When the battery is replaced, wait at least 3 minutes after installing the battery before activating the walk test mode. See Figure 18. for battery locations.

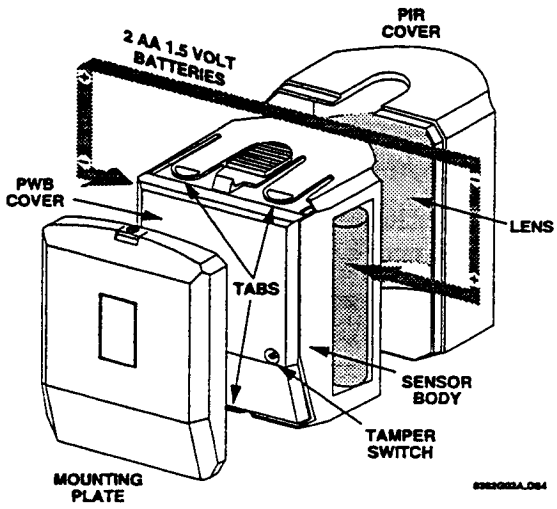

Figure 18. PIR Components, Battery Locations, & Tamper Switch

Animal Alley Lens Guidelines:

The animal alley lens provides protection in installations where pets move about freely.

- Allowed mounting height is between 3 and 5 feet.
- Position the sensor to have a clear line of sight across the protected room.
- For best results, install the sensor higher than the highest point that the pet might reach in the detection area.
- If the detection area contains furniture or other objects upon which the pet could climb or jump, either remove these objects, mount the PIR a safe distance above these objects, or mask these areas.

Coverage Masking:

The masking labels provided are cut to match the corresponding lens segments.

1. Determine which detection zone/lens segment needs a masking label.
2. Peel the desired mask label from its backing and apply to the inside of the lens segment to be blocked.

Testing Motion Sensors

The actual RF transmitter range can be determined by performing a sensor test as follows:

1. After the sensor has been mounted, **remove it from its mounting plate** to activate the walk test mode.
2. **Replace the sensor in its mounting plate.**
3. **Open the Control Panel cover.**
4. **Enter the Utility Access Code 1 or 2.**
5. Press **Test.**
6. Press **DONE.**
7. **Move across the detection pattern** until the sensor's LED turns on. STOP your motion.
8. Note the number of siren beeps indicating how many RF packets the Control Panel received from the sensor. You should hear 7-8 beeps. The Control Panel will also say, *Status is X* (X = number of RF packets). If you hear 6 or fewer beeps, relocate the sensor and retest.

Outdoor Motion Sensor

In addition to protecting your home, you can use motion detectors to sound chimes or control lights. For example, you could have an Outdoor Motion Sensor turn on lights and sound a chime whenever someone approaches your house. In an outdoor installation, be sure to select the Outdoor Motion Sensor with the weather-resistant case, and designate the sensor "Special Chime."

- Follow the indoor motion sensor Installation Guidelines section, except for numbers 3, 5, 9, and 10.
- Heat and cold extremes may affect outdoor motion sensor operation. The recommended operating temperature range is 10° to 120° F.
- The housing is water-resistant but not waterproof. Mount the sensor underneath eaves or porch coverings to prevent over exposure to rain, ice, and direct sunlight.

Caution

Do not use outdoor motion sensors for intrusion protection. Anything that walks past the motion sensor will set off an alarm. Designate outdoor sensors as sensor type 25.

Smoke Sensor

See the instructions packaged with your Smoke Sensor for complete information on Smoke Sensor installation.

KeyChain Touchpad

General Information

The KeyChain Touchpad is an alkaline battery-powered, wireless touchpad designed to fit on a keychain, in a pocket or purse. It provides users a convenient option for the following system operations:

- Arm the system (doors, windows, and motion sensors)
- Arm the system with no entry delay (Option 28 on)
- Disarm the system
- Trigger Panic alarms
- Turn system controlled lights on or off
- Open the garage door or turn outside lights on

Specifications

- Power supplied by: 12 V 33 mAh alkaline battery
- Dimensions: L = 2.30" x W = 1.45" x H =.48"
- Typical battery life: 5 - 8 years
- Operating temperature range: 10° to 120° F

Installation Guidelines

Use the following guidelines when adding Keychain Touchpads to the system:

- KeyChain Touchpads are learned into the Control Panel as sensors.
- KeyChain Touchpads are programmed as sensors in a non-supervised group 1, 3, 6 or 7.
- Each learned KeyChain Touchpad uses one of the available sensor numbers (17 total sensors/ zones can be used with this security panel).
- KeyChain Touchpads can be programmed with no entry delay (Option 28).

Testing KeyChain Touchpads

Test the KeyChain Touchpad by pressing the buttons as described below:

1. Disarm or Unlock Button -The Control Panel is disarmed. Doors, Windows, and Motion Sensors are disarmed.
2. Lock Button - With option 28 (no delay from KeyChain) on or off.
   - if pressed once, the Control Panel arms doors and windows.
   - if pressed twice, the Control Panel arms motion sensors.
   - if pressed three times, the Control Panel activates the latchkey feature when option 03 has been programmed.
3. Light Button toggles system controlled lights on/ off.
4. Star Button - If used with the Universal Module, the Control Panel will cause the garage door to open or close.
5. Lock and Unlock Buttons - If learned in as sensor type: 01-Intrusion, 03-Silent, 06 or 07-Emergency, when pressed simultaneously, will activate alarm reports to the central station. These 2 buttons are also used to test the sensor.

Remote Handheld Touchpad

General Information

The Remote Handheld Touchpad is an alkaline battery-powered, wireless touchpad designed to provide users a convenient option for the following system operations:

- Arm the system (doors, windows, and motion sensors)
- Arm the system with no entry delay

- Disarm the system
- Panic alarm
- Access System Status
- Turn system controlled lights on or off
- Open the garage door or turn outside lights on

Specifications

- Power supplied by: 2 AAA Alkaline batteries
- Dimensions: L = 4.88" x W = 2.25" x H = .88"
- Typical battery life: 1 year
- Operating temperature range: 10° to 120° F

Installation Guidelines

Use the following guidelines when adding Remote Handheld Touchpads to the system:

- Remote Handheld Touchpads are learned into the Control Panel as sensors.
- They are generally programmed as non-supervised sensors using sensor type 1, 3, 6 or 7, but may be programmed into a supervised type.
- Each learned Touchpad uses one of the available sensor numbers (17 total sensors/zones can be used with this security panel).

Testing Remote Handheld Touchpads

Test Touchpad operation by pressing the buttons as described below:

1. Numeric Buttons (0 - 9) - Used to enter an access code or turn individual lights on or off.
2. Disarm Button -The Control Panel is disarmed to level 1. Doors, Windows, and Motion Sensors are disarmed. Disarm also requires the access code to be entered.
3. ARM Doors & Windows Button - The Control Panel is armed to level 2.
4. ARM Motion Sensors Button - The Control Panel is armed to level 3. If the ARM Doors & Windows button was previously pressed, the Control Panel is armed to level 4 (Doors/Windows and Motion Sensors armed).
5. On Lights Button - Pressing this button twice quickly activates all lights controlled by the system. Or when pressed once and used with the Numeric Buttons can turn specific lights on.
6. Off Lights Button - Pressing this button twice quickly turns off all lights controlled by the system. Or when pressed once and used with the Numeric Buttons can turn specific lights off.
7. Emergency Buttons - If learned in as sensor type 01-Intrusion, 03-Silent, 06 or 07-Emergency, when pressed simultaneously, will activate alarm reports to the central station.

Door/Window, Indoor/Outdoor Motion Sensor, KeyChain Touchpad, and Remote Handheld Touchpad FCC NOTICE

These devices comply with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. These devices may not cause harmful interference.
2. These devices must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Interactive Technologies, Inc. can void the users' authority to operate the equipment.

Testing the System

This section describes how to perform the following test procedures:

- Testing sensors
- Testing phone communication
- Testing central station communications
- Testing the X-10 Lamp Modules

You should test the system after installing, after servicing, and after adding or removing devices from the system.

Testing Sensors

We recommend that you test the sensors after all programming is completed and whenever a sensor-related problem occurs.

Note: While the sensor test is a valuable installation and service tool, it only tests sensor operation for the current conditions. You should perform a sensor test after any change in environment, equipment, or programming.

1. **Place all sensors in their secured (non-alarm) state.**
2. **Open the Control Panel cover.**
3. **Enter the appropriate access code.**
4. Press **Test.**

The Control Panel responds with *Sensor test, press again to change or DONE to select.*

5. Press **DONE.**

Note: If the primary or secondary phone number (option 4 or 5) has been programmed, after pressing **Test** a second time, the Control Panel announces *Phone Test.* The phone testing procedure will be discussed later in this manual. If the DL phone number (option 6) has been programmed, after pressing **Test** a third time, the Control Panel announces *DL phone test.*

The Control Panel will prompt you to trip each sensor one at a time. You may follow the Control Panel's voice prompting or test the sensors in any order.

Interior sirens and speakers sound transmission beeps as each sensor is tripped. Each beep represents one RF packet.

6. **Count the number of transmission beeps** and refer to Table 12 for minimum requirements. After the beeps, the Control Panel announces, *Sensor Name is activated, sensor status is XX* (XX = number of RF packets). The system will continue to prompt for sensors which have not yet been tested. When all sensors have been tested the Control Panel will announce, *Sensor test complete, press DONE.*
7. Press **DONE.** The system will respond, *Sensor Test OK.*
8. If **Cancel** or **DONE** is pressed and the Control Panel has not heard from all sensors, the Control Panel will respond, *Sensor test canceled or failure.*

Note: If a sensor does not meet the minimum transmission beep requirements, refer to the If a Sensor Fails the Sensor Test section.

Table 12 Minimum Transmission Beeps

Type of Sensor	Number of Beeps
Wireless Intrusion Sensors	7–8 beeps
Wireless Smoke & Heat Sensors	7–8 beeps
Wireless Environmental/Panic Buttons	7–8 beeps
Hardwire Loops	1
Emergency Buttons*	7-8 beeps

* The Control Panel Emergency Button cannot be tested.

If a Sensor Fails the Sensor Test

If sirens do not beep when a sensor is tripped, use an ITI RF Sniffer (60-401) test tool to verify that the sensor is transmitting. Constant beeps from the RF Sniffer indicate a runaway (faulty) sensor. Replace the sensor.

If possible, locate sensors within 100 feet of the panel. While a transmitter may have a range of 500 feet or more out in the open, the environment at the installation site can have a significant effect on transmitter range. Sometimes a change in sensor location can help overcome adverse wireless conditions.

To improve sensor communication, you can

- reposition the sensor
- relocate the sensor
- if necessary, replace the sensor

To reposition a sensor:

1. Rotate the sensor and test for improved sensor communication at 90 and 180 degrees from the original position.
2. If poor communication persists, relocate the sensor as described as follows.

To relocate a sensor:

1. Test the sensor a few inches from the original position.

2. Increase the distance from the original position and retest until an acceptable location is found.
3. Mount the sensor in the new location.
4. If no location is acceptable, replace the sensor.

To replace a sensor:

1. Test a known good sensor at the same location.
2. If the transmission beeps remain below the minimum level, avoid mounting a sensor at that location.
3. If the replacement sensor functions, contact ITI for repair or replacement of the problem sensor.

Testing Phone Communication

Perform a phone test to check the phone communication between the panel and the central station.

To perform a phone test/DL phone test:

1. **Open the Control Panel cover.**
2. **Enter the appropriate access code.**
3. Press **Test twice**.
4. Press **DONE**. The Control Panel responds with, *Phone test is on*. When the phone test is complete, the Control Panel will announce *Phone Test is OK*.

If the panel announces *Phone communication failure*, proceed to the following instructions.

If the phone test fails:

1. Check that the panel is connected to the phone jack.
2. Check the phone number programmed into the panel.
3. Perform the phone test again.
4. If the phone test fails again, check the phone connection wiring.

Testing Central Station Communication

After performing sensor and phone tests, check that the system is reporting alarms successfully to the central station.

To test communication with the central station:

1. Call the central station and tell the operator that you will be testing the system.
2. Arm the system.
3. Test each of the wireless panic buttons and trip at least one sensor of each type—fire, intrusion, etc.—to verify that the appropriate alarms are working correctly.
4. When you finish testing the system, call the central station to verify that the alarms were received.

Testing the X-10 Lamp Modules

Use Table 4 to determine the full extent of module testing to be accomplished.

To test the system controlled lamp modules:

1. Press the **LIGHT** button on the KeyChain Touchpad repeatedly to turn all lights on and off. The Control Panel responds with *Lights on/off*.
2. Press the **Lights On** button and the **unit #** of the lamp module using the numeric buttons on the Remote Handheld Touchpad to test individual lamp modules, the Control Panel will respond with *Lights # on/off*.

Table 13 Troubleshooting Guide

Problem	Solution
Control Panel The system says *Function not available* when Chime Doors is pressed.	No sensors are programmed using sensor type 10 or 13.
The system says *Function not available* when Chime Special Motion is pressed.	No sensors are programmed using sensor type 25
The system says *Function not available* when LIGHTS Time Activated is pressed.	No time activated lights have been programmed.
The system says *Function not available* when LIGHTS Sensor Activated is pressed.	No sensor activated lights have been programmed.
The system says *Invalid. Sensor already programmed as Sensor Name.*	This sensor is already programmed. Delete sensor if not correctly programmed.
The system says *System time is not set.*	Set the system time.
Options (Programmable by the homeowner) The Control Panel does not beep.	Program option 1 to be on.
Latchkey does not function.	• Latchkey time (option 3) is not set. Set Latchkey time. • Latchkey is not enabled. Enable Latchkey by pressing ARM Motion Sensors twice. • The phone number is not programmed properly. Reprogram the phone number.
Sensors A sensor does not work.	• Make sure the battery is fresh and installed correctly. • Check for interference from metal objects. Move or rotate the sensor. • Move the sensor to a new location.
Door or window is closed, but the Control Panel voice says it is open.	• Be certain the arrow on the magnet and the guide line on the transmitter are aligned and are within 1/4' of each other. • The sensor may be tampered.
Motion sensors go off continuously.	Be sure the sensor is mounted on a solid surface and the viewing field is free from sources of changing temperature.
Motion sensor does not respond to motion.	• Make sure the battery is fresh and installed correctly. Wait 2 minutes after installing a new battery to test the sensor. • Adjust the sensor mounting. • Leave the area for 3 minutes, then retest. • The environment is too hot or too cold. Outdoor sensors will operate between 32° and 120°F. • Dirt or dust may be causing the problem. Wipe the sensor with a clean, damp cloth.
X-10 Modules All Lamp Modules or Siren not working.	• Be sure the Control Panel transformer is plugged directly into an outlet and that the outlet is not controlled by a wall switch. • Possibly a bad transformer.

Table 13 Troubleshooting Guide

Problem	Solution
One Lamp Module or Siren is not working.	• Unplug nearby equipment which may be causing interference (light dimmer switches, televisions, appliances with older motors). • Check that the switch on the lamp or appliance is turned on and remains on. • Make sure the lamp has a working bulb. • Make sure the lamp or appliance is plugged into the Lamp/Appliance Module, the Module is plugged into the outlet and the outlet is not controlled by a wall switch. • Make sure the House and Unit Codes are correct. • Move the Module to a different outlet that is on the same phase (branch) of the household electrical circuit as the Control Panel.
Time activated or sensor activated light not working.	• Make sure you have programmed the light to be activated by a timer or sensor. • Make sure the system clock is set. • Make sure these functions have been enabled by pressing the LIGHTS Time Activated/Sensor Activated on the Control Panel. They are enabled if the button is lit.

Notices

This manual may refer to products that are announced but are not yet available.

FCC Notices

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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:

- Install a quality radio or television outdoor antenna if the indoor antenna is not adequate.
- Reorient or relocate the Control Panel.
- Move the Control Panel away from the affected equipment.
- Move the Control Panel away from any wire runs to the affected equipment.
- Connect the affected equipment and the Control Panel to separate outlets, on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.
- Send for the FCC booklet *How to Identify and Resolve Radio-TV Interference Problems*, available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock Number: 004-000-00345-4.

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.

This equipment complies with part 68 of the FCC rules. On the FCC label affixed to this equipment is the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. If requested, provide this information to your telephone company.

The REN is used to calculate the maximum number of devices your telephone line will support with ringing service. In most areas the sum of all device RENs should not exceed 5.0. Contact your local telephone company to determine the maximum REN for your calling area.

If your telephone equipment causes harm to the telephone network, your telephone company may temporarily disconnect your service. If possible, you will be notified in advance. When advance notice is not practical, you will be notified as soon as possible. You will also be advised of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper operation of your equipment. You will be given advanced notice in order to maintain uninterrupted service.

If you experience trouble with this equipment, please contact

Interactive Technologies, Inc.
2266 Second Street North
North Saint Paul, MN 55109
1-800-777-1415

for service and repair information. The telephone company may ask you to disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

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

Canada 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 a 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.

For your protection, make sure that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together.

Caution

Do not attempt to make connections yourself. Contact the appropriate electrician or electric inspections authority.

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 LNs of all the devices does not exceed 100. Load Number: _____ Acceptability Number: _____

"AVIS: - L ´étiquette du ministère des Communications du Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme a certaines normes de protection, d ´exploitation et de sécurité des réseaux de télécommunications. Le ministère n ´assure toutefois pas que le matériel fonctionnera a 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 ´enterprise locale de télécommunication. Le matériel doit également etre installé en suivant une méthod acceptée de raccordement. Dans certains cas, les fils intérieurs de l´enterprise utilisés pour un service individuel a ligne unique peuvent etre prolongés au moyen d´un dispositif homologué de raccordement (cordon prolongateur téléphonique interne). L ´abonné ne doit pas oublier qu ´il est possible que la conformité aux conditions énoncées ci-dessus n ´empechent pas le dégradation du service dans certaines situations. Actuellement, les enterprises de télécommunication ne permettent pas que l ´on raccorde leur matériel a des jacks d ´abonné, sauf dans les cas précis prévus pas les tarrifs particuliers de ces enterprises.

Les réparations de matériel homologué doivent etre effectuées pas un centre d ´entretien canadien autorisé désigné par le fournisseur. La compagne de télécommunications peut demander a l ´utilisateur de débrancher un appareil a la suite de réparations ou de modifications effectuées par l ´utilisateur ou a cause de mauvais fonctionnement.

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

Avertissment. - L ´utilisateur ne doit pas tenter de faire ces raccordements lui-meme; il doit avoir recours a un service d ´inspection des installations électriques, ou a electricien, selon le cas".

Une note explicative sur les indices de charge (voir 1.6) et leur emploi, a l ´intention des utilisateurs du matériel terminal, doit etre incluse dans l ´information qui ac-

compagne le materiel homologué. La note pourrait etre rédigée selon le modèle suivant:

"L ´ indice de charge (IC) assigné a chaque dispositif terminal indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut etre raccordée a un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut etre constituée de n ´ import somme des indices de charge de l ´ ensemble des dispositifs ne dépasse pas 100."

L ´ Indice de charge de cet produit est _____.

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WIRELESS
Security
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Access Control

Table 14 Sensor/Device Location Planning Table Locations in order as communicated by Control Panel when changing sensors, except that Remote Locations are not used by the Control Panel, but only used here for planning purposes.

Sensor No.	Sensor/Device Name (use Table 2 & Table 3 to determine sensor type numbers) The following are examples only.	Sensor Type	Remote Locations	Front Door	Back Door	Garage Door	Bedroom	Guest Room	Child's Room	Utility Room	Living Room	Dining Room	Bathroom	Laundry Room	Kitchen	Office	Den	Garage	Special Chime	Basement	Upstairs	Downstairs	Hallway	Medicine Cabinet	Closet	Attic
	KeyChain Touchpad	01	X																							
	Door/Window	13		X																						
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										

Table 15 Recommended Sensor Types

Device	Recommended Sensor Type
KeyChain Touchpad	01, 03, 06, 07
Remote Handheld Touchpad	01, 03, 06, 07
Indoor Motion Sensor	17 (intrusion), 25 (chime)
Outdoor Motion Sensor	25
Smoke Sensor	26
Exterior Door	10
Interior Door	14
Window Sensor	13

Table 16 Sensor Type Characteristics

Type	Name/Application	Siren Type	Delay	Restoral	Supervisory	Active in Levels
00	Fixed Panic: 24 hour audible fixed emergency button	Intrusion	I	No	Yes	1234
01	Portable Panic: 24 hour audible portable emergency buttons	Intrusion	I	No	No	1234
02	Fixed Panic: 24 hour silent fixed emergency buttons	Silent	I	No	Yes	1234
03	Portable Panic: 24 hour silent portable emergency buttons	Silent	I	No	No	1234
04	Fixed auxiliary: 24 hour auxiliary sensor, such as Pendant Panic	Emergency	I	No	Yes	1234
05	Fixed Auxiliary: 24 hour emergency button. Siren shut off confirms CS report	Emergency	I	No	Yes	1234
06	Portable Auxiliary: 24 hour portable auxiliary alert button	Emergency	I	No	No	1234
07	Portable Auxiliary: 24 hour portable auxiliary button. Siren shut off confirms CS report	Emergency	I	No	No	1234
08	Special Intrusion: such as gun cabinets and wall safes.	Intrusion	I	Yes	Yes	1234
09	Special Intrusion: such as gun cabinets and wall safes.	Intrusion	S	Yes	Yes	1234
10	Entry/Exit Delay: Entry/Exit Delay that require a standard delay time. Chime	Intrusion	S	Yes	Yes	24
13	Instant perimeter: Exterior doors and windows. Chime	Intrusion	I	Yes	Yes	24
14	Instant Interior: Interior doors	Intrusion	F	Yes	Yes	234
15	Instant Interior: Interior PIR motion sensors*	Intrusion	F	No	Yes	234
16	Instant Interior: Interior doors	Intrusion	F	Yes	Yes	34
17	Instant Interior: PIR motion sensors*	Intrusion	F	No	Yes	34
19	Delayed Interior: interior doors that initiate a delay before going into alarm*	Intrusion	S	Yes	Yes	34
20	Delayed Interior: PIR motion sensors that initiate a delay before going into alarm*	Intrusion	S	No	Yes	34
21	Local Instant Interior: 24 hour local alarm zone protecting anything that opens and closes. No Report	Intrusion	I	Yes	Yes	1234
22	Local delayed interior: same as group 21, plus activation initiates a delay before going into alarm. No report.*	Intrusion	S	Yes	Yes	1234
23	Local instant Auxiliary: 24 hour local alarm zone protecting anything that opens and closes.‡ No report	Emergency	I	Yes	Yes	1234
24	Local Instant Auxiliary: 24 hour local alarm zone protecting anything that opens and closes. Sirens shut off at restoral. No report.*	Emergency	I	Yes	Yes	1234
25	Local Special Chime: Notify the user when a door is opened. Sounds emit from a local annunciator.* No report	Two beeps	I	No	Yes	1234
26	Fire: 24 hour fire, rate-of-rise heat, and smoke sensors§.	Fire	I	Yes	Yes	1234
27	Lamp control or other customer feature.‡ No report	Silent	I	Yes	Yes	1234
28	PIR motion sensor, sound sensor, or pressure mat.‡ No report	Silent	I	No	Yes	1234
29	Auxiliary: freeze sensor	Emergency	I	Yes	Yes	1234
32	PIR motion sensor or sound sensor‡ No report	Silent	I	No	No	1234

*This type is not certified as a primary protection circuit for UL-listed systems and is for supplementary use only.

§This type is required for UL-listed residential fire alarm applications.

‡This type has not been investigated by UL.

The arming levels are:

1 = Disarm
2 = Arm Doors & Windows
3 = Arm Motion Sensors
4 = Arm Doors/Windows & Motion Sensors

Delays:

I = Instant Delay (no delay, immediate alarm)

S = Standard Delay (alarm sounds after programmed entry delay time)

F = Follower Delay (alarm sounds immediately if entry/exit delay is not active, otherwise alarm sounds after programmed entry delay time)

Table 17 Home Control Planning Table

Module			Activated by		Time Activated	
Unit #	Type	Location	Sensor	Entry/Exit	Start Time	Stop Time
Example	Lamp	Hall lamp	Motion	Yes	8 p.m.	10:30 p.m.
1						
2						
3						
4						
5						
6						
7						
8						

Table 18 Programmable Options

Option #	Upper Sensor/ Feature Number	Function	Default	Range	Who Can Change: U1 - Utility Access Code 1; U2 - Utility Access Code 2; M - Master; A - Access Codes	Installer Settings
01		Panel Beeps	On	On/Off	U1 U2 M A	
02		Panel Voice	On	On/Off	U1 U2 M A	
03	Reports as 99	Latchkey Option	Off	12:00 a.m. - 11:59 p.m.	U1 U2 M A	
04		Primary Phone Number	None	18 digits	U1	
05		Secondary Phone Number	None	18 digits	U1	
06		Downloader Phone Number	None	18 digits	U1	
07		Account Number	00000	00000-99999	U1 U2	
08		Phone Lock	Off	On/Off	U1	
09		Downloader Code	12345	00000-99999	U1	
10		Entry Delay	30 sec	005-120 sec	U1 U2	
11		Exit Delay	30 sec	005-120 sec	U1 U2	
12		Phone Mod 1	0	0-3	U1	

Table 18 Programmable Options

Option #	Upper Sensor/ Feature Number	Function	Default	Range	Who Can Change: U1 - Utility Access Code 1; U2 - Utility Access Code 2; M - Master; A - Access Codes	Installer Settings
13		Phone Mod 2	0	0-9	U1	
14		DTMF	On	On/Off	U1 U2	
15	79	No Activity	Off	02-24 hrs	U1 U2	
16	93	Auto Phone Test Option (Must be enabled for UL Listed systems)	Off	001-254 days	U1 U2	
17		Dialer Delay	Off	001-120 sec	U1 U2	
18		Alarm Cancel	Off	01-30 min	U1 U2	
19		Supervisory Time (SUPSYNC)	12 hrs	02-24 hrs	U1 U2	
20	83	Manual Phone Test	On	On/Off	U1 U2	
21	84	Opening Reports	Off	On/Off	U1 U2	
22	85	Closing Reports	Off	On/Off	U1 U2	
23	87	Forced Arm	Off	On/Off	U1 U2	
24	90	AC Power Failure (Must be enabled for UL Listed systems)	Off	On/Off	U1 U2	
25	91	CPU Low Battery (Must be enabled for UL Listed systems)	On	On/Off	U1 U2	
26	96	Fail to Communicate (Must be enabled for UL Listed systems)	On	On/Off	U1 U2	
27	Feature 01	Ring/Hang/Ring	Off	1-4	U1 U2	
28	Feature 32	No Delay from KeyChain Touchpad	Off	On/Off	U1 U2	
29		High Level Siren	On	On/Off	U1 U2	
30		Panic Alarms	On	On/Off	U1 U2	
31		Day of Week	0	0-6	U1 U2	
32		300 Baud Central Station Communications	Off	On/Off	U1 U2	