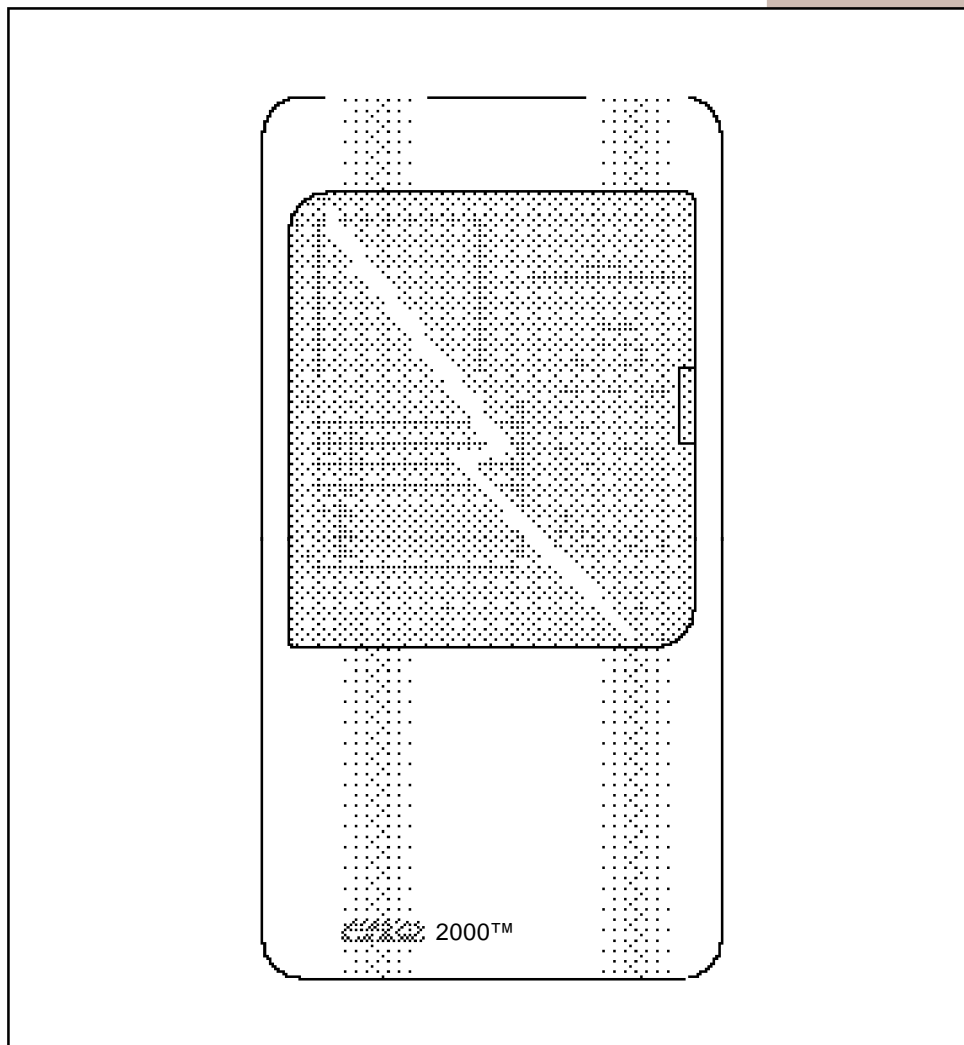




# Monitored Security System Installer's Guide



Monitored Security System, Model Pro 2000™

## READ THIS FIRST

This equipment generates and uses radio frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturers instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for remote control security devices in accordance with the specifications in Sub-Parts B and C of Part 15 of *FCC Rules*, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by unplugging the equipment, try to correct the interference by one or more of the following measures.

- Reorient the antenna of the radio/TV experiencing the interference.
- Relocate the console with respect to the radio/TV.
- Move the console away from the radio/TV.
- Plug the console into an outlet on a different electrical circuit from the radio/TV experiencing the interference.

If necessary, consult X-10 Pro Technical Support for additional suggestions.

The security console's telephone dialer is designed to conform to federal regulations, and it can be connected to most telephone lines. However, each telephone or telephone device that is connected to the telephone line draws power from the telephone line. This is referred to as the device's ringer equivalence number, or REN.

If more than one telephone or other device is connected to the same line, add up all the RENs. If the total is more than five, the

telephones might not ring. In rural areas, a total REN of three might impair ringer operation. If ringer operation is impaired, remove one of the devices from the line.

**Note:** The console must not be connected to:

- Coin-operated systems
- Party-line systems
- Most electronic key telephone systems

The console's telephone dialer complies with Part 68 of *FCC Rules*. You must, upon request, provide the FCC registration number and the REN to the local telephone company. Both numbers are shown on the bottom of the console.

The telephone portion of the security console has been tested and found to comply with all applicable UL and FCC standards.

In the unlikely event that the console causes problems on the telephone line, the telephone company can disconnect service. The telephone company attempts to notify you in advance. If advance notice is not practical, the telephone company notifies you as soon as possible and advises you of your right to file a complaint with the FCC.

Also, the telephone company can make changes to its lines, equipment, operations, or procedures that could affect the operation of this console. The telephone company notifies the owner of these changes in advance, so the necessary steps can be taken to prevent interruption of telephone service.

**Note:** The security functions of this system have not been tested by Underwriters Laboratories.

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## Introduction

The X-10 PRO2000™ Monitored Security System is built around a Security Console with a digital communicator that connects to a professional digital monitoring station in the event of a break in. Battery powered RF Door/Window Sensors and Motion Detectors are used to trigger the alarm, with RF handheld and keychain remote controls for arming and disarming. All sensors and remotes incorporate random digital security coding.

The system may be configured with any combination of the following items:

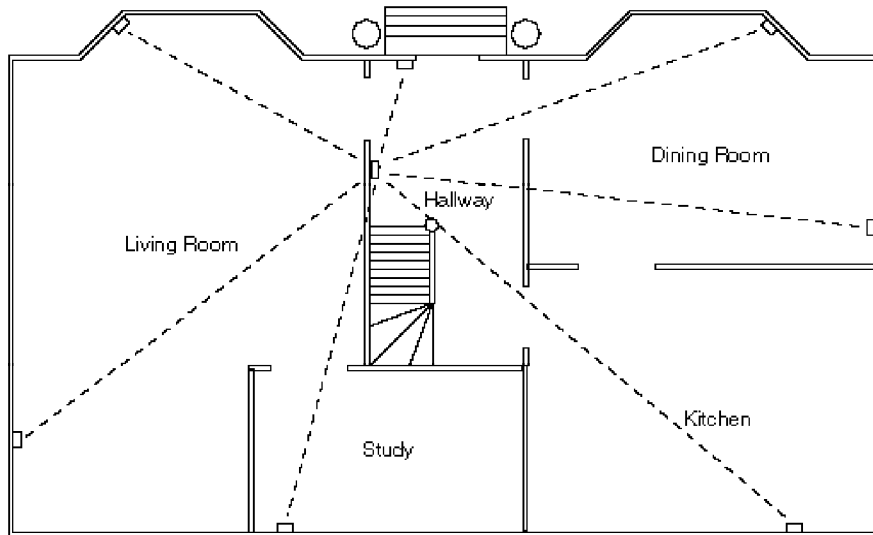
- Up to 16\* Keychain Remotes with arm/disarm/panic and security light functions.
- Up to 16\* Handheld Security Remote with arm/disarm and panic functions, and buttons to control the security light and up to four additional X-10 Pro Home Automation modules to operate lights and appliances around the home.
- Up to 16\* magnetic switch operated wireless Door/Window Sensors.
- Up to 16\* wireless PIR Motion Detectors.
- Plug-in Power Horn™ remote sirens.
- Additional X-10 Pro Home Automation modules such as plug-in lamp and appliance modules and wired-in replacement wall switches.

This manual describes the installation process for the security elements of the system, and does not cover the additional X-10 PRO Home Automation modules which are supplied with their own installation instructions.

**\*Note:** Remotes may be added in any combination up to a total of 16. Door/Window Sensors and Motion Detectors may be added in any combination up to a total of 16.

## Installation

### Locating Security System components



#### Locating the Security Console

Choose a location for the Security Console which is as central as possible in the house, while providing access to a modular telephone jack and an AC outlet. Fix the console to the wall using the mounting bracket and screws provided.

For concealed installations the security console may be installed inside a wooden or plastic cabinet.

**Note:** Do not install the console inside a metal cabinet since this will block the RF signals from sensors and remotes and prevent the system from working.

The installer can configure the console (via downloading) to dial out without activating the built-in siren to prevent an intruder from locating the console by sound. Plug-in Power Horn sirens elsewhere in the house will continue to operate.

#### Locating Door/Window Sensors and Motion Detectors

Plan the location of the Door/Window Sensors and Motion Detectors so that the RF path which runs in a straight line from sensor to console is not obstructed by large metal objects such as a refrigerators or freezers, and passes through as few walls as possible.

Door/Window Sensors may be hidden behind drapes for a more discreet installation.

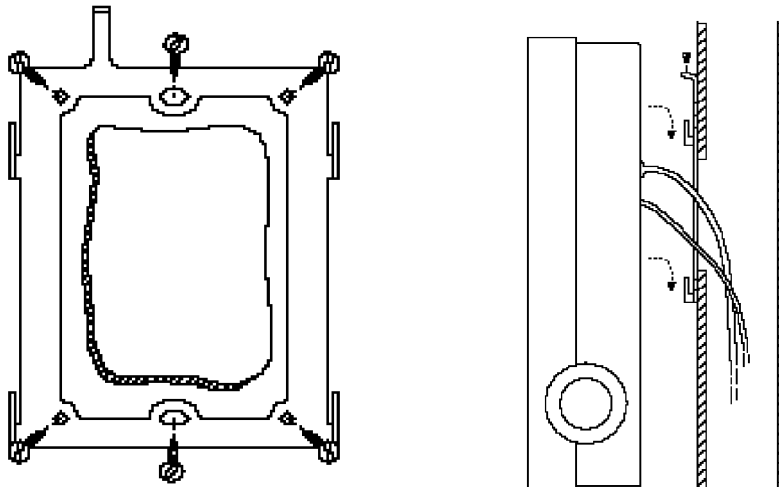
## Installation

### Security Console

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#### Mounting the console

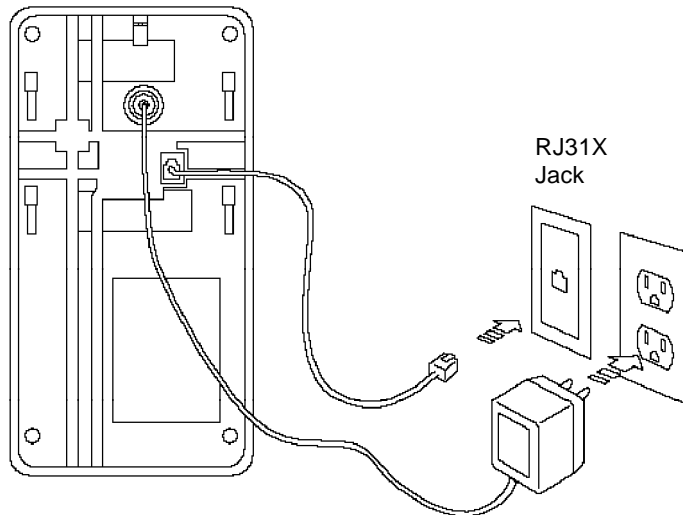
The Security Console is designed to be installed on a hollow section wall or mounting panel. A hole is cut into the wall to allow the telephone and power cables to run out behind the console. A metal bracket is provided which is screwed to the panel. Hooks on the bracket locate in slots at the back of the console. A small machine screw is provided which may be used to prevent the unit from being lifted off the hooks.



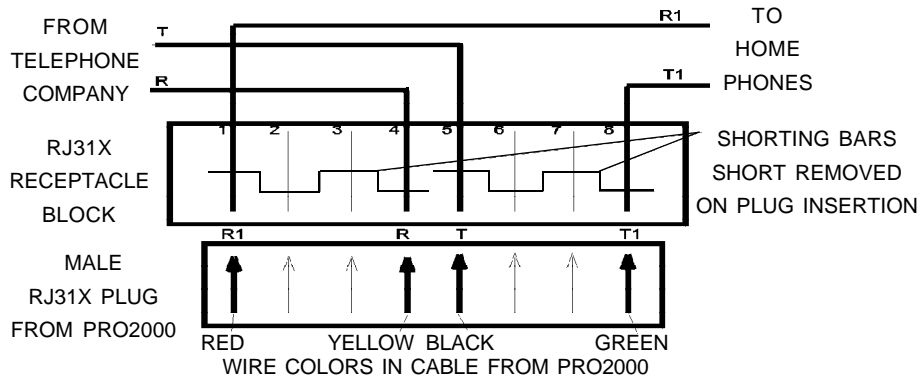
# Installation

## Attaching cables/RJ31X Jack Installation

A telephone cord terminated with an RJ31X connector is provided for telephone connection. This ensures that the Console will ALWAYS dial out when tripped, even if the phone line is busy at the time. Note the RJ31X jack to which you connect the Console might have to be installed by the phone company.



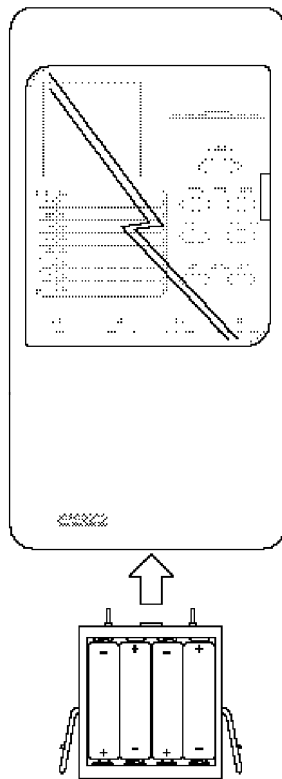
The wiring diagram for an RJ31X connector is shown below. The connections labeled R and T should be connected to the Tip & Ring connections coming into the house from the telephone company. You then connect the red and green that goes to all the phones in the house to T1 and R1. When the RJ31X plug is removed, the shorting bars connects T1 to R and R1 to T. When the RJ31X plug is inserted it opens this path, but the PRO2000 panel closes this connection again. When an alarm occurs the PRO2000 opens this connection (to disconnect all phones in the house) and dials out on the yellow and black wires which are connected to T and R.



## Installation

### Fitting backup batteries

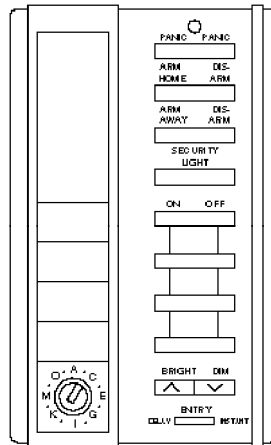
Slide out the battery drawer from the bottom of the console and insert four AA Alkaline batteries. Refit the drawer making sure it is fully home in the cabinet. When AC power is applied the battery LED on the front panel will go out. It is not necessary to disconnect power to the console when fitting or replacing batteries.





## Installation

### Security Remote



#### Registering the Security Remote with the Security Console

- Set the code dial on the Security Remote to the same House Code as the programmed in the Security Console.

**Note:** The House Code for the Security System is downloadable. The default setting is House Code A.

- Fit four AAA Alkaline batteries in the battery compartment in the back of the remote.
- Set the slide switch on the Security Console to INSTALL.
- Press ARM on the Security Remote. The console chimes once to confirm that the keychain has been registered.
- Return the console slide switch to the RUN1 or RUN2 position.

**Note:** If the remote did not register, remove the label on the front and use a pencil or other pointed object to press the small CODE button to generate a new random code. Press ARM again to install the remote.

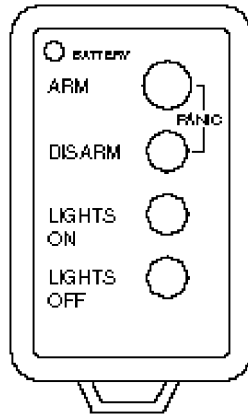
#### Testing the Security Remote

- Set the slide switch on the security console to RUN1 or RUN2.
- Press ARM AWAY on the remote. The console chimes once to confirm and the ARM indicator lights up. Press DISARM.
- Press SECURITY LIGHT ON and OFF to control a light connected to a lamp module with code dials set to A13 (or other code downloaded during installation).

## Installation

### Keychain Remote

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#### Registering the Keychain Remote with the Security Console

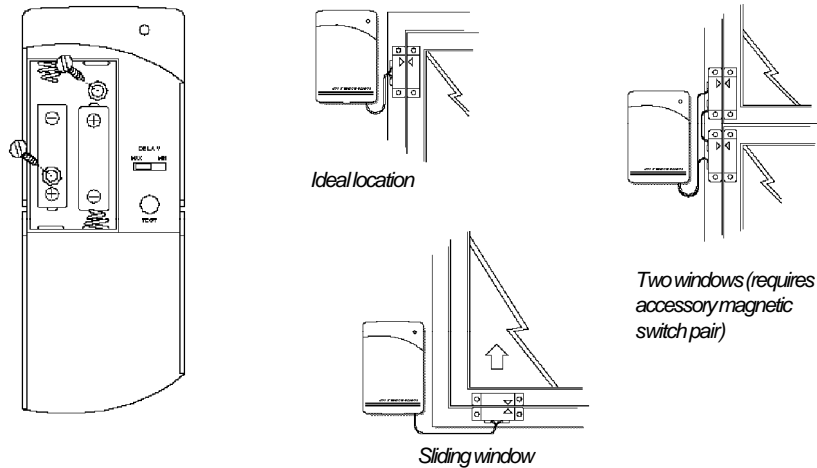
- Fit two AAA Alkaline batteries in the battery compartment in the back of the Keychain Remote.
- Press and hold the ARM button for about a second. The LED indicator flashes twice when you release it. This confirms the Keychain Remote has generated a new security code.
- Set the slide switch on the Security Console to INSTALL.
- Press ARM. The console chimes once to confirm that the Keychain Remote has been registered.
- Return the console slide switch to the RUN1 or RUN2 position.

#### Testing the Keychain Remote

- Set the slide switch on the Security Console to RUN1 or RUN2.
  - Press ARM on the Keychain Remote. The console chimes once to confirm and the ARM indicator lights. Press DISARM.
- Note:** *The Keychain Remote always arms the system instantly - there is no exit or entry delay.*
- Press LIGHTS ON and LIGHTS OFF to turn on and off a light connected to a lamp module with code dials set to A13 (or other code downloaded during installation).
  - Press ARM and DISARM together to trip the panic alarm. Press DISARM to stop the alarm.

## Installation

### Door/Window Sensor



#### Installing the Door/Window Sensor

- Attach the Door/Window Sensor to the wall using the mounting screws provided.
- Fit the Door/Window Sensor as high as possible at the top of the door/window.
- Make sure the arrows on the magnetic switch halves are facing each other and that they separate cleanly when the door or window is opened.
- Set the DELAY slide switch to MIN to always trigger the alarm instantly (for windows), or to MAX to trigger the alarm after a preset entry delay when the system is armed in DELAY mode (for doors).

#### Registering the Door/Window Sensor with the Security Console

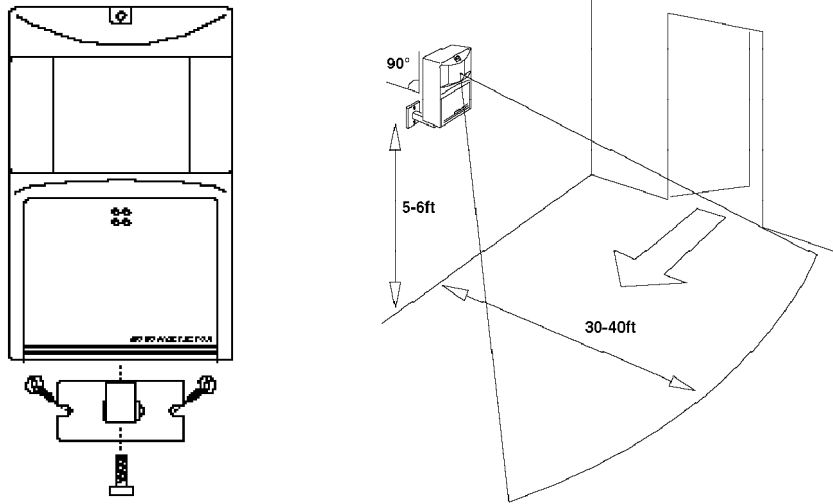
- Fit two AA Alkaline batteries in the battery compartment.
- Press and hold the TEST button for about a second. The LED flashes twice when you release it. This confirms it has generated a new security code.
- Set the slide switch on the Security Console to INSTALL.
- Press the TEST button on the Door/Window Sensor. The console chimes once to confirm and the next available zone LED lights.
- Return the console slide switch to the RUN1 or RUN2 position.

#### Testing the Door/Window Sensor

- Set the slide switch on the security console to RUN2.
- Open the door or window with the sensor attached. The console chimes to acknowledge and the zone LED lights.

## Installation

### Motion Detector



#### Installing the Motion Detector

- Attach the Motion Detector to a wall at a height of 5 to 6ft using the mounting bracket and screws provided.

**Note:** The Motion Detector has a special lens that 'looks' downwards. It must therefore be mounted to face outwards horizontally, i.e. do not 'aim' the sensor downwards.

- Set the slide switch to position 1 for instant triggering for maximum sensitivity or position 2 to trigger only after two movements have been sensed.

#### Registering the Motion Detector with the Security Console

- Fit four AA Alkaline batteries in the battery compartment.
- Press the CODE button using a pencil or other pointed object to generate a new security code.
- Set the slide switch on the Security Console to INSTALL.
- Press the TEST button on the Motion Detector. The console chimes once to confirm and the next available zone LED lights.

**Note:** If the Motion Detector senses movement before you press the TEST button it may register itself automatically. You may want to keep the batteries out of the Motion Detector until you are ready to install the zone, or install the Motion Detectors last.

## Installation

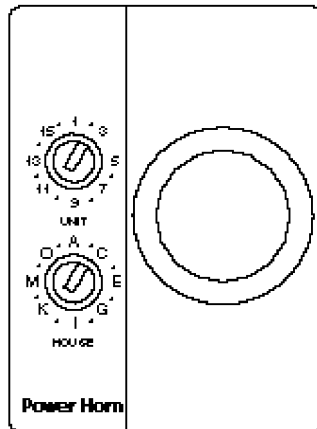
### Testing the Motion Detector

- Set the slide switch on the Motion Detector to position 1.
- Press and hold the TEST button for about a second. The LED flashes twice when you release it.
- Wait 20 seconds for the sensor to settle.
- Walk in front of the Motion Detector. The indicator LED lights each time it senses movement. Check the coverage area and reposition the sensor as required.
- Press the TEST button to return to normal operating mode.

**Note:** *The Motion Detector will automatically return to normal operating mode after about 2 minutes.*

## Installation

### Power Horn™ Remote Siren



#### Installing the Power Horn

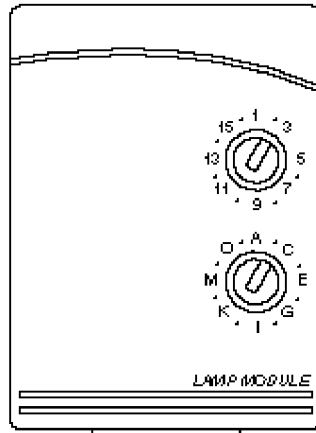
- Set the House Code dial to the same House Code as the Security System  
**Note:** The House Code for the Security System is downloaded during installation. The default setting is House Code A.
- Set the Unit Code dial to the same code as the security light. (default is 13.)  
**Note:** If the owner does not wish the Power Horn to be triggered when the security light is switched on, the installer can re-configure the console to issue a sequence of All Lights On/All Units Off commands during an alarm instead of flashing just the security light. The Unit Code for the Power Horn can then be adjusted to any other (unused) setting, and so will not be triggered when the security light is turned on.
- Plug the Power Horn into a convenient AC outlet, preferably an unswitched one to ensure that the Power Horn cannot be turned off accidentally.

#### Testing the Power Horn

- Press the ON button followed by the OFF button, followed again by the ON button, on any X-10 controller or remote which is set to the same House Code and Unit Code as the Power Horn. The siren will activate and will continue for 4 seconds, or until two OFF commands are received in succession.
- Trigger the security system by pressing the PANIC button on the console or on a remote. The Power Horn will be activated automatically in the next 4 seconds after the alarm has been triggered and will continue for around 4 seconds after the system is disarmed.

## Installation

### Lamp Module



#### Installing the Lamp Module to control the security light

- Set the House Code and Unit Code dials to match the security light code downloaded by the installing security firm. This allows it to be controlled from the security light buttons on the remotes, and to be flashed by the console during an alarm. The default code for the security light is A13.
- Plug a lamp into the Lamp Module and plug the Lamp Module into a convenient AC outlet, preferably an unswitched one to ensure that the lamp will always operate when the alarm is triggered.

#### Installing the Lamp Module to control other lights

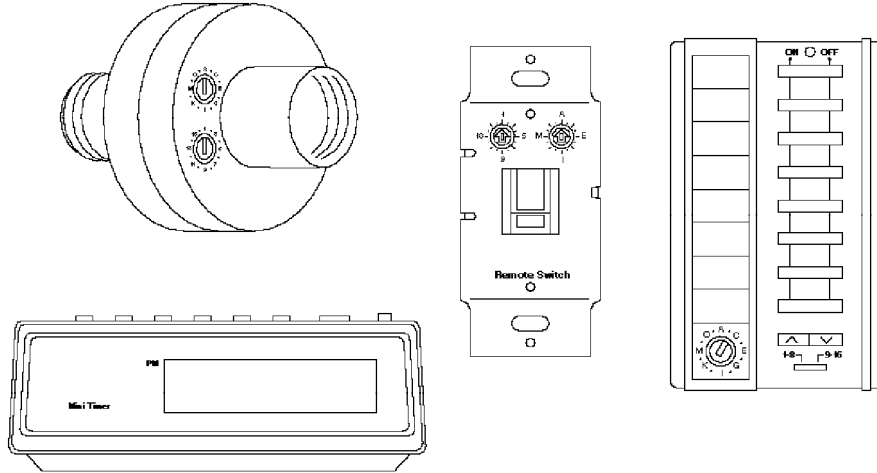
- Set the House Code dial to match the security lamp code downloaded by the installing security firm. The default House Code is A.
- Set the Unit Code dial to an unused code which can be controlled from the Security Remote (switches 1-4 control Unit Codes 1-4) or from any other remote or plug-in controller as required.
- Plug a lamp into the Lamp Module and plug the Lamp Module into a convenient AC outlet, preferably an unswitched one to ensure that the lamp will always operate when the alarm is triggered. The lamp's switch must be left on, the Lamp Module will control whether or not the lamp is switched on or off.

#### Local control

The Lamp Module includes circuitry to sense the lamp's own on/off switch to turn the lamp on locally. To switch a lamp on, turn the lamp's own switch off then on again.

## Installation

### Other X-10 PRO products



#### Modules

A wide range of switch and control modules are available from X-10 Pro, all of which can be controlled from the same remote controls which are used to operate the security system. Modules available include replacement wall switches, X-10 controlled AC outlets, screw-in lamp modules, plug-in appliance modules and many others.

#### Remotes

As well as being able to add up to 16 security remotes to the system, it is also possible to add any number of Home Automation wireless remotes such as the handheld Sixteen Plus™ remote which controls up to 16 modules around the house.

#### Controls

A range of plug-in controls are available including the Mini Timer which can control up to four modules with two on/off times each day, the Telephone Responder which allows the owner to use any touch tone 'phone to call home and control X-10 Pro modules, and products which allow any Windows™ or DOS PC to control X-10 functions.

#### Special products

For special installation requirements a range of accessory products are available including powerline filters for multiple installations in close proximity, RF and powerline repeaters for larger installations and interface modules to tie-in X-10 control with third party security products.



## Monitoring Service Setup

### Introduction

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#### Digital monitoring

The X-10 PRO2000 Security System incorporates professional digital communicator technology. Features supported include account number downloading and verification, remote configuration and alarm type confirmation, and line seizure.

When one of the sensors is activated while the system is armed, the built-in siren will sound. If the alarm is not disarmed within the next few seconds using one of the security coded remote controls, the security system console will automatically dial the monitoring station and send a digitally coded message allowing the station operator to identify the owner's address, telephone number and the type of alarm that occurred.

#### Automatic lighting control

When the X-10 PRO2000 Security System is armed in the away mode, an automatic timer can be activated to turn lights, stereos, TVs, etc. on and off at random times to make the home look lived in.

Part of the information downloaded to the console includes three Unit Codes for X-10 modules which are used to control lamps and appliances chosen to make the home look lived-in.

When armed in the AWAY mode, the console turns the three modules on and off randomly between dusk and the Security Light OFF time. These modules are typically used for inside lights and a radio or stereo to give the impression that the home is occupied.

A code is downloaded to give the location (longitude and latitude) of the home, which is used by the console to calculate the time of dusk. An additional time is downloaded to specify when lights should all turn off. Daylight savings time is also taken into account.

In addition to the three modules described above, the designated security light is turned on at dusk and turns off at the security light off-time (this is the same light that is flashed during an alarm and can be controlled by the Keychain and Security/Home Automation remotes). This could be used to control an outside security light for example.

Any X-10 controlled modules may be used for the automatic lighting control function, including wall switches, controlled outlets and plug-in modules. These modules can also be controlled using any X-10 remote control.

### Options downloaded by the security installation firm

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The options listed on the following pages are downloaded by the installing security firm when the system is first set up. These options should therefore be agreed with the customer prior to setting up the system.

Any of these options can, be changed by the installer at a later date upon request.

## Monitoring Service Setup

**Pro2000 Receiver Configuration** [Min] [Max] [Close]

**Modem Setup** | **Download** | **New Account** | **Save Config** | **About** | **Exit**

Status: **Modem initialized.**

<b>Account Number</b> <input type="text" value="0001"/>	<b>First Monitor Phone Number</b> <input type="text" value="18003163158"/>	<b>Service Station Phone Number</b> <input type="text" value="18003163167"/>
<b>Second Monitor Phone Number</b> <input type="text" value="18003163165"/>	<b>Customer Service Phone Number</b> <input type="text" value="18003163132"/>	

<b>Exit Delay (secs)</b> <input type="text" value="30"/>	<b>Dial Delay (secs)</b> <input type="text" value="40"/>	<b>Mid-Summer Dusk Time</b> <input type="text" value="10:00 pm"/>	<b>Mid-Winter Dusk Time</b> <input type="text" value="04:00 pm"/>
<b>Entry Delay (secs)</b> <input type="text" value="30"/>	<b>Test Freq. (days)</b> <input type="text" value="10"/>	<b>Security Light Off Time</b> <input type="text" value="11:30 pm"/>	<b>Daylight Saving Date</b> <input type="text" value="30-Mar-97"/>

					<b>Unit 5</b>	
<b>House Code</b>	<b>Unit Code 1</b>	<b>Unit Code 2</b>	<b>Unit Code 3</b>	<b>Unit Code 4</b>	<b>House Code</b>	<b>Unit Code</b>
<input type="text" value="A"/>	<input type="text" value="13"/>	<input type="text" value="14"/>	<input type="text" value="15"/>	<input type="text" value="16"/>	<input type="text" value="B"/>	<input type="text" value="12"/>

<input type="checkbox"/> Pulse dialing	<input type="checkbox"/> Chirp sound on ALERT	<input checked="" type="checkbox"/> Daylight saving active
<input checked="" type="checkbox"/> X-10 flashing during alarm	<input checked="" type="checkbox"/> PANIC always dials	<input type="checkbox"/> Disable daylight saving
<input checked="" type="checkbox"/> Dialing enabled	<input type="checkbox"/> MONITOR ALERT set	<input checked="" type="checkbox"/> All lights flash
<input type="checkbox"/> No console siren during alarm	<input type="checkbox"/> 50 Hertz operation	<input checked="" type="checkbox"/> Enable Entry Light
<input type="checkbox"/> Enable Unit Code 5		

The above screen shows the options that can be downloaded to the Console.

1. **Account number-** The customer's 4 digit account number.
2. **1st Monitoring Station Number-** The 1st number the console will dial to call the monitoring station.
3. **2nd Monitoring Station Number-** Back-up phone number for the monitoring station in case the first number doesn't respond.
4. **Service Station Number-** Number for the service station, for reporting in periodically (if desired). Note separate software (Call-in Logger from setup disk) and a stand alone computer are required to log these calls. If not used, enter "1".
5. **Customer Service Number-** This is the number called when the Monitor button is pressed. It is normally set up during initial download to call a number that has been designated for customer service. This acts like a speed-dial button for the customer.
6. **Exit delay-** The amount of time after leaving the house before the console is armed. (0-1000 seconds). The default is 60 seconds.
7. **Entry delay-** The amount of time allowed to enter the home and disarm the console before the alarm is triggered. (0-1000 seconds). The default is 30 seconds.
8. **Delay before dialing-** The amount of time the console will wait after it has been triggered before calling the monitoring station (to give the owner time to disarm the system before it dials in case of a false alarm). The default is 40 seconds.

## Monitoring Service Setup

9. **Test Dial Frequency-** How many days between each time the console calls the Service Station (Call-in Logger Software) to check-in. Default is 10 days. Note: If not used, enter "0".
10. **Daylight parameters-** Sets dusk times for midsummer and midwinter to activate lived-in look lighting control (see option 15). Dusk times for the rest of the year are calculated automatically. Defaults are 10pm in midsummer and 4pm in midwinter.
11. **Security Light off time-** Time for the security lights (Unit Code 1, from the software page, has a default Unit Code of 13) to turn off after they have been turned on automatically at dusk. Note: This functions in both armed or not armed states.
12. **Daylight Savings Date-** Date for daylight savings time (leave as default for automatic calculation).
13. **Housecode-** Housecode setting for all controlled modules. Default setting is A. The selected House Code will allow the panel to receive wireless Light /Appliance commands from an X-10 handheld RF transmitter and insert them on the powerlines
14. **Unit Code 1(Security Light) to flash lights and turn on at dusk-** The default setting is code 13.
15. **Unit Codes 2, 3, 4 for Lived-in look-** To control lights and appliances and make the home look lived-in (active only if the console is armed in the away mode). The default settings are 14, 15, and 16.
16. **Unit Code 5 -** Turns on when the system is armed in the away mode and and turns off when the system is disarmed. This lets you set back heating/air conditioning while you're away, as an example. Default setting is B12.
17. **Tone or Pulse dialing-** To change the dialer to touchtone or pulse dialing. The default is tone dialing. Check the box for pulse dialing.
18. **X-10 flashing during alarm-** If this option is turned off, the lights will not flash when the alarm is triggered, although the console will still dial out. The default is flashing.
19. **Dialing enabled-** If this option is turned off the console will NEVER dial out. This option is turned off at the factory and should be turned on by the installer during setup, by checking this box before downloading.
20. **No Console Siren during alarm-** If this box is checked, the siren will not sound when the alarm is triggered (silent alarm), although the console will still dial out. The default is (un-checked) Siren Enabled.
21. **Enable Unit Code 5-**If this box is checked the module set to this code (default B13) turns on when the system is armed in the away mode and and turns off when the system is disarmed. Can be set to any code A-P and 1-16 before download.
22. **Chirp sound on alert-** If chirp is ON, the console will chirp once per minute when it needs programming. The default is OFF. This warns the customer of a failed communication to the monitoring station.
23. **Panic always dials-** If this option is set to ON, the console will dial out whenever **PANIC** is pressed. If this option is set to OFF, the console will only dial out when **PANIC** is pressed *and* the system is armed. Default is always dials.

## Monitoring Service Setup

24. **Monitor alert set-** Set at the factory to cause the Console's monitor light to flash to alert the user to contact the installer for setup. This warns the customer of a failed communication to the monitoring station. Should be set to off by the installer during setup, before downloading.
25. **50 Hz Operation-** Default is 60 Hz (for USA) .
26. **Daylight savings active-** Check or uncheck before downloading depending on time of year.
27. **Disable Daylight savings** - Check if daylight savings is not observed in your State.
28. **All Lights Flash-** Check to flash All lights connected to X-10 PRO Lamp and Wall Switch Modules (set to the same Housecode as downloaded) when the alarm trips. Uncheck to only flash lights connected to Modules set to the Security Light Unit Code 1, (default Unit Code A13).
29. **Enable Entry Light-** Check this to have the security light (default A 13) turn on during the entry delay. (Always turns on during exit delay, or for one second if armed in Instant mode).

### Setting up for Monitoring Service.

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There are three ways you can set up the Console for monitoring service:

1. Program it from the computer at your office then take it to the customer's location. All phone numbers and options are permanently stored in the Console in EEROM (Electrically Erasable Read Only Memory) until you change them by downloading again. You should however install the back-up batteries so that the clock in the unit is kept at the correct time during relocation.
2. Program it on-site using a laptop computer.
3. Remotely program it over the phone line at the customer's location from the computer at your office. Someone needs to be at the receiver site to push the Monitor Button upon call in from installer.

#### For options 1 and 2 (direct modem connection):

Connect the console directly to your computer's modem using a standard RJ11 phone cord. Run the PROware2000 software. A screen as shown on page 18 will appear. Click on Modem Setup and select the COM port that you connected the Console to.

Select which options, phone numbers etc. are required (consult with the user regarding what options are desired).

Set the Console to RUN mode and press the MONITOR button (under the small flip-up lid, called Set-up, under the main cover).

Wait approx 5 seconds. Then click on Download. The Status line will show a series of options being downloaded to the Console and the Console will chime twice after a successful download.

Make sure the customer fills out and signs the monitoring agreement.

## Monitoring Service Setup

If the modem does not initialize you might not have the correct initialization string set for your type of modem. The default setting is for a US Robotics modem, and is as follows.

AT&F1 &N1 S9=1 S10=250 S27=1 Where:

&F1            \*restores the factory profile 1 (hardware flow control).  
&N1            \*forces connection rate of 300 baud  
S9=1            \*gives a 0.1 second carrier detect response time.  
S10=250        \*allows a loss of carrier for 25 seconds before hanging up.  
S27=1            \*Enables ITU-T V.21 modulation at 300 bps

Modem hang-up string: This defaults to the standard ~~~+++~~~ATH0

Modem answer string: This defaults to the standard ATA

***\*The above are the parameters required by the downloading program. Each brand and type of modem uses a different Initialization String to represent the required parameters.***

***Consult the owner's manual for your modem to find out what commands your modem requires to set it as above.*** For example: For a Zoom modem the initialization string is:

AT&F &C1 B0 S7=59 S9=1 S10=250 S37=1 N0. Where:

&F            restores the factory profile.  
&C1            makes the Data Carrier Detect follow the state of the remote carrier.  
B0            selects ITU-T protocol.  
S7=59        allows a wait of up to 59 seconds for receipt of the remote carrier.  
S9=1            gives a 0.1 second carrier detect response time.  
S10=250        allows a loss of carrier for 25 seconds before hanging up.  
S37=1        instructs the modem to connect at 300 baud.  
N0            fixes the handshake at the S37 value.

### **For option 3 (downloading from a remote computer):**

Have the customer call you from the same phone line that the Console is connected to (or call them). Ask the customer to set the Console to Run and then press the MONITOR button (under the small flip-up lid (Set-up) under the main cover). Immediately after pressing MONITOR the customer should hang up. When the customer hangs up, you click on Download. After a successful download the Console chimes twice.

Note; the data format downloaded to the Console is a proprietary format and requires the downloading software supplied by X-10PRO. However when the alarm trips the format transmitted to the monitoring station complies with industry standard 4 + 2 format. The Console can **optionally** be set to call a stand alone computer (**Service Station from the software screen**) on a periodic basis. When it does this it reports its information in "modem-speak." **Proprietary software ( Call-in Logger from PROware Software)** is required in order to receive this data and hence use this option. **This does not take the place of a monitoring station!**

## Battery Information

### General

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X-10 PRO Door/Window Sensors, Motion Detectors and Security, Keychain remotes are designed to operate for approximately two years when fitted with alkaline batteries. However, since environmental and operating conditions vary from installation to installation it is recommended that all batteries are replaced once a year.

### Security Console

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#### Battery backup

The batteries in the Security Console are used as a backup when there has been a power failure. The batteries provide approx. 48 hours of backup time provided the alarm has not been triggered.

While on battery backup, the console will continue to operate, and will sound the siren (if enabled) and dial out if the alarm is triggered. It will not, of course, flash the house lights or trigger Power Horn sirens.

If both the AC supply and batteries fail, the console will no longer dial out or sound the siren, but it will retain all configuration data (telephone numbers, entry/exit delays etc.) as well as the security codes for the remotes and sensors. However, the time and date will be lost and will need to be redownloaded from the installing security firm.

#### Battery Replacement

Batteries can be replaced at any time, even while the unit is powered up - there is no need to disconnect the AC adapter. There is no special procedure for battery replacement.

### Security and Keychain Remotes

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#### Battery Replacement

Providing the batteries have not already failed, they may be replaced with fresh batteries without the need to re-install the remote. After removing the old batteries fresh batteries must be fitted within 30 seconds to ensure that the security code is retained. Once the batteries have been replaced, confirm that the remote is still logged in by arming the system. If it does not arm, the code has been lost and you will need to proceed as described below.

If the batteries have failed completely, the security code will have been lost. To ensure proper system integrity it is recommended that the console is cleared and all sensors and remotes re-installed following the procedures in the *Installation* chapter.

## Battery Information

### Door/Window Sensors and Motion Detectors

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#### Battery Replacement

If any of the Console's zone indicators flash slowly, the Motion Detector or Door/Window Sensor for that zone has not reported in during the last four hours. This is most likely caused by a dead battery.

As with the remotes, as long as the batteries have not completely failed they may be replaced with fresh batteries without the need to re-install the sensor. After removing the old batteries fresh batteries must be fitted within 30 seconds to ensure that the security code is retained.

#### Testing the Door/Window Sensor

Once the batteries have been replaced, the Door/Window Sensor should be tested as follows:

- Set the slide switch on the security console to RUN2.
- Open the door or window with the sensor attached. The console chimes to acknowledge and the zone LED lights.

#### Testing the Motion Sensor

To test the Motion Detector:

- Set the slide switch on the security console to RUN2.
- Press the TEST button on the back of the Motion Detector. The console chimes to acknowledge.

### Clearing remotes & sensors from the console

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If you suspect that a neighboring system is causing false alarms, or if you need to re-install remotes, Door/Window Sensors and Motion Detectors for any other reason, you can clear all sensors and remotes from the console's memory as follows:

- Set the console to INSTALL.
- Press PANIC, ARM HOME and ARM AWAY at the same time.
- Set the slide switch back to RUN1 or RUN2

**Note:** Telephone numbers and configuration data downloaded by the installing security firm (such as entry and exit delays etc.) cannot be erased, and can only be changed by the installer on request.

## Troubleshooting

PROBLEM	SOLUTION
If the system does not arm.	<ul style="list-style-type: none"> <li>• Check that the slide switch under the SET UP flip door is set to <b>RUN1</b> or <b>RUN2</b>.</li> <li>• Check that the battery indicator on the Remote Control turns on when you press <b>ARM</b>. Replace the battery and reinstall the Remote if necessary.</li> <li>• Make sure all zones are closed and the Motion Detector is not triggered.</li> </ul>
If a zone indicator flashes slowly.	<p>One of the sensors/motion detectors has not reported in, in the last 4 hours.</p> <p>Check that the battery in the sensor/motion detector is good.</p> <p>If you need to arm the system and want to ignore a sensor/motion detector which is not functioning:</p> <ol style="list-style-type: none"> <li>1. Press <b>ARM</b> on the Remote control. You hear a repetitive trouble alarm to alert you that there is a problem.</li> <li>2. While the trouble alarm is sounding, press <b>BYPASS</b> on the Console. The zone indicator flashes rapidly.</li> </ol> <p>Then press <b>ARM</b> on the Remote Control. The problem zone will be Bypassed but all other zones are armed.</p> <p><b>Note:</b> if you bypass an open window and arm the system (as described above) and later close the window, that zone will now arm and its zone light will stop flashing.</p>
If a zone indicator flashes rapidly.	<p>The <b>BYPASS</b> button was pressed to arm the system while a sensor/motion detector was reporting a problem.</p>



## Troubleshooting

PROBLEM	SOLUTION
<p>If you hear a repetitive trouble alarm when you try to arm the system, and it does not arm.</p>	<p>Check the zone indicators. If a door or window is open, its zone indicator is on. If there is a problem with a Sensor or Motion Detector, its zone indicator flashes slowly. Either:</p> <ul style="list-style-type: none"> <li>• Press <b>DISARM</b>. Check each Door/Window Sensor is working properly and that no doors or windows are open. Then arm the system.</li> </ul> <p>Or:</p> <ul style="list-style-type: none"> <li>• While the trouble alarm is sounding, press <b>BYPASS</b> to override the problem zone (its zone indicator then flashes rapidly). Then arm the system again.</li> </ul>
<p>If the alarm trips when you enter the house before you have time to disarm it.</p>	<p>Arm the system in the delay mode.</p> <p>To do this: Set the <b>MIN/MAX</b> switch on the entrance Door/Window Sensor to <b>MAX</b> and the Remote Control to <b>MAX</b> (on the Hand held Security Remote) and then press <b>ARM</b>.</p>
<p>Lights will not turn on or off from the <b>LIGHT ON</b> or <b>LIGHT OFF</b> buttons on the Remote Control.</p>	<ul style="list-style-type: none"> <li>• Be sure you set House and Unit Codes on the module(s) to the same letter and number as downloaded to the Console Security Light (default is A-13).</li> <li>• Be sure the light you are trying to control has its on/off switch in the on position.</li> <li>• Be sure its bulb is good.</li> <li>• Plug the module into another outlet near the Console.</li> <li>• Check that the battery indicator on the Remote Control comes on when you press a button. Replace battery and re-install remote if necessary.</li> <li>• Make sure Panel Power Supply is plugged in, not running on battery.</li> </ul>

## Troubleshooting

PROBLEM	SOLUTION
<p>You open a door or window and the alarm does not trip.</p>	<ul style="list-style-type: none"> <li>• Check that the system is armed.</li> <li>• Be sure the slide switch under the SET UP flip door is in the <b>RUN1</b> or <b>RUN2</b> position.</li> <li>• Make sure the arrows on magnetic contacts are facing each other.</li> <li>• Check to see if the alarm trips when you press <b>TEST</b> on the Door/Window Sensor.</li> <li>• If the alarm does not trip when you press <b>TEST</b>, check that the indicator on the sensor comes on when you press <b>TEST</b>.</li> </ul> <p>If the indicator does not come on, replace the battery and re-install the sensor if necessary.</p>
<p>If appliances turn off during an alarm.</p>	<p>The system flashes lights by repetitively transmitting on/off commands for a specific code Security Light (default A13), or optionally by flashing all lights on/all units off.</p> <p>If the console has been set to transmit all lights on/all units off, any appliance module set to the same House Code as the console will turn off.</p>
<p>If you do not hear a chime from the Console when you press <b>ARM</b> to install a Remote Control.</p>	<p>Check to see if you can arm the system when the Console is in the <b>RUN</b> mode. If you can, the Remote Control is already installed and no further action is necessary. If not:</p> <ol style="list-style-type: none"> <li>1. Check that the console is set to the <b>INSTALL</b> mode.</li> <li>2. Re-initialize the remote (see page 8 &amp; 9).</li> </ol>

## Troubleshooting

PROBLEM	SOLUTION
<p>If you do not hear a chime from the Console when you press <b>TEST</b> to install a Door/Window Sensor or Motion Detector.</p>	<p>With the Console in the RUN 2 mode, check that it chimes when you press <b>TEST</b> on the sensor/motion detector. If it does, then the sensor/motion detector is already installed and no further action is necessary. If not:</p> <ol style="list-style-type: none"> <li>1. Check that the Console is set to the <b>INSTALL</b> mode.</li> <li>2. Change the code on the sensor/motion detector (see Setting Up Door/Window Sensors and Setting Up Motion Detectors on page 11).</li> </ol>
<p>If the battery indicator on the Console is on.</p>	<p>Replace the console's battery. 4 AA 1.5V alkaline batteries provide approximately 48 hours of back-up. Replace battery at least once a year.</p>
<p>If you lose your remote control.</p>	<p>Re-install your complete system to prevent someone else from using the lost remote control.</p>
<p>If the system Arms or Disarms by itself</p>	<p>A neighbor may have a compatible system. Re-install the complete system so that it chooses different RF codes.</p>
<p>If the red light on the Security Remote Control stays on during installation.</p>	<p>Press <b>CODE</b> (under the clear plastic liner in front of the remote) then press <b>ARM</b>. If it still stays on, remove the battery, wait a few seconds, then replace the battery. Press <b>CODE</b> then press <b>ARM</b> again and install.</p>

## Troubleshooting

PROBLEM	SOLUTION
If the armed indicator is flashing.	This indicates that there has been an intrusion. Also, if a zone indicator is on, this indicates which zone was violated. To turn the zone indicator off, and stop the armed indicator from flashing press <b>ARM</b> then <b>DISARM</b> on the remote control. If a zone indicator is not lit, the violated zone may have been one of the second eight zones. Press <b>BYPASS</b> to see which zone was tripped.
If the <i>POWERHORN</i> does not trip when the alarm trips.	<ul style="list-style-type: none"> <li>• Be sure you set the dials on the <i>POWERHORN</i> to the same House Code and Unit Code as the Security Light downloaded to the Console (default A13).</li> <li>• Plug the <i>POWERHORN</i> into another outlet near the Console.</li> </ul>
The Motion Detector causes false alarms.	<ul style="list-style-type: none"> <li>• All brands of motion detectors sense motion by detecting a change in temperature, therefore do not place the detector near any sources of heat such as over an air conditioner or heating vent.</li> <li>• Do not place in a direct source of bright light, such as sunlight. Do not point directly toward a window.</li> <li>• Do not place near cellular 'phones or microwave ovens.</li> </ul>
The MONITOR light is flashing.	This means that you need to call the installing security firm to set up of the console. After installation, this could be caused by a failure to communicate with the monitoring station over the phone lines. Check for proper RJ31X installation: see page 7.

## Troubleshooting

### Special Notes

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#### Intercom Systems

Intercom systems which send voice signals over existing electrical wiring may interfere with the ability to control modules from your X-10 PRO Security System with the intercom in use. If the intercom system has its own separate wiring it will not cause a problem.

#### Arming

The ARM button on the Console arms the system in the delay mode only. Use a Remote Control if you want to arm the system in the instant (min) mode.

#### Outdoor infrared Motion Detector

The Outdoor Motion Detector will not trigger the X-10 PRO Security System. It can, however, control the same lights that the security system controls.

#### RF Interference

As with any Radio Transmitter/Receiver, you may experience areas within your installation that have heavy interference caused by electrical fields radiated from nearby electronic devices such as: TV's, stereos, computers, etc. Try to locate the Sensors further from these types of devices. Also, mounting the sensors on metal door/window frames or on walls with metal studs could cause RF Interference and/or reflection.

Centrally mounting the Console, with as few walls as possible between it's sensors, will give you the best possible opportunity of receiving clear signals. However, if you continue to have a troubled RF area, you can use an X-10 PRO PSX01 Smart Repeater (located half way between the Console and the Sensor) to repeat the signals to and from the troubled area. Only one PSX01 may be used per PRO2000 installation.

## Notes

### Installation Notes and Set-up Sheets

Use the following notes to keep a record of the installation information.

Customer's Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone Number \_\_\_\_\_

Monitoring Station \_\_\_\_\_

Customer Service Phone Number \_\_\_\_\_

### PRO2000 Download Information

1. **Account number-** \_\_\_\_\_

2. **1st Monitoring Station Number-** \_\_\_\_\_

3. **2nd Monitoring Station Number-** \_\_\_\_\_

4. **Service Station Number-** \_\_\_\_\_

5. **Customer Service Number-** \_\_\_\_\_

6. **Exit delay-** \_\_\_\_\_

7. **Entry delay-** \_\_\_\_\_

8. **Delay before dialing-** \_\_\_\_\_

9. **Test Dial Frequency-** \_\_\_\_\_

10. **Daylight parameters-** \_\_\_\_\_

11. **Security Light off time-** \_\_\_\_\_

12. **Daylight Savings Date-** \_\_\_\_\_

13. **Housecode-** \_\_\_\_\_

14. **Unit Code 1(Security Light) to flash lights and turn on at dusk-** \_\_\_\_\_

15. **Unit Codes 2, 3, 4 for Lived-in look-** \_\_\_\_\_

16. **Unit Code 5 -** \_\_\_\_\_

17. **Tone or Pulse dialing-** \_\_\_\_\_

18. **X-10 flashing during alarm-** \_\_\_\_\_

19. **Dialing enabled-** \_\_\_\_\_

20. **No Console Siren during alarm-** \_\_\_\_\_

21. **Enable Unit Code 5-** \_\_\_\_\_

22. **Chirp sound on alert-** \_\_\_\_\_

23. **Panic always dials-** \_\_\_\_\_

## Notes

24. Monitor alert set-

25. 50 Hz Operation-

26. Daylight savings active-

27. Disable Daylight savings -

28. All Lights Flash-

29. Enable Entry Light-

### PRO2000 Zone and Remote Set-up

Zone #	Type (Door/Window/Motion)	Name (front door, etc.)	Delay/Instant (D/I)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

Number of HandHeld Remotes \_\_\_\_\_

Number of Keychain Remotes \_\_\_\_\_

Number of Optional Medical Alert Pendants \_\_\_\_\_

MAX. COMBINATION 16

