POWERMAX
Fully Supervised Wireless Alarm Control System

Visonic Ltd

Installation Instructions

TABLE OF CONTENTS

MESSAGE TO THE INSTALLER

The PowerMax control panel is supplied with 3 instruction manuals:

■ **Installation Instructions** (this manual - for your exclusive use)

■ **Programming Guide** (for your exclusive use)

■ **User's Guide** (for your use during installation only. Must be handed over to the master user after testing the system).

Appendices A and B to the installation instructions will help you prepare an installation plan. Please take time to fill out the forms - your job will become much easier and confusion will be prevented. Filling out the forms will also help you create a list of detectors and transmitters that must be obtained for the particular application. Compatible detectors and transmitters are listed and described briefly in Paragraphs 3.8 and 3.9 of this manual.

Remember - it is advisable to power up the control panel temporarily after unpacking and program it on the work bench, in accordance with the installation plan. Paragraph 3.3 of this manual refers you to the programming guide.

The programming flow charts in the programming guide show all of the options available for each parameter. Factory defaults are marked with a dark box to their right, and other options (those that can be selected instead) are marked by clear boxes. This method allows you to put a checkmark in the appropriate clear box whenever you deviate from the factory defaults.

Although time and date are considered user settings, we recommend that you set the time and date in the course of programming. Access to the "User Settings" is possible through item 9 on the installer's menu (see User's manual for exact procedure).

When you are through programming, proceed to install the system as detailed in the Installation Instructions, from paragraph 3.4 onward.

1. INTRODUCTION

The PowerMax is a user and installer-friendly, 30-zone fully-supervised wireless control panel. The system is designed to function in a way that appeals to the user but also offers features that make installers' life easier than ever before:

EASY TO INSTALL
- Plug-in terminal blocks can be wired while detached from the unit.
- Quick attach-detach TELCO sockets for telephone line, telephone set and X-10 controller.
- Special wall-mounted bracket permits installation without having to open the unit's cabinet.
- Optional plug-in RS-232 module for local computer.

EASY TO MAINTAIN
- Status, alarm memory and trouble data displayed upon request.
- Diagnostic test provides visual and audible indication of the signal level of each detector.
- Remote control and status verification from distant telephones.
- Event log stores and displays information on 100 past events.
- Upload / download from distant computer via telephone line and modem.
- Backup battery uses standard, easily obtained cells.

QUICK PROGRAMMING
- Multiple-choice selection of options for each parameter.
- Unequivocal visual prompts and audio signals
- The installer can gain access to the user menu.

A fully equipped alarm system based on the PowerMax consists of the units shown in Figure 2 of the user's guide.

2. SPECIFICATIONS

2.1 General Data

Number of Zones: 29 wireless, 1 hardwired (zone No. 30).

Hardwired Zone Requirements: 2.2 kΩ E.O.L. resistance (max. resistance of wires 220 Ω).

Zone Types: Interior, perimeter, delay 1, delay 2, 24 hours - audible, 24 hours - silent, fire, non-alarm and emergency.

User Codes: 8 codes, 4 digits each

Control Facilities:
- Integral keypad,
- PowerCode / Code-Secure™ hand-held transmitters,
- Remote telephone,
- Local or remote computer.

Display: Single line, back lighted 16-character LCD and 4 LED indicators

Arming Modes: AWAY, HOME, AWAY-INSTANT HOME-INSTANT, LATCHKEY, FORCED.

Alarm Types: Silent alarm, siren alarm or sounder (internal) alarm, in accordance with zone attributes.

Siren Signals: Continuous (intrusion / 24 hours / panic); triple pulse - pause - triple pulse... (fire).

Siren Timeout: Programmable (4 minutes by default)

Internal Sounder Output: at least 85 dBA at 10 ft (3 m)

Supervision: Programmable time frame for inactivity alert

Special Functions:
- Speech and sound control
- Powerline Carrier Device Control (up to seven X-10 brand units) by various factors, as programmed.
- Chime zones
- Diagnostic test and event log
- Remote control by telephone
- Computer control and data download/upload
- Calling for help by using an emergency transmitter
- Tracing inactivity of elderly, physically handicapped and infirm people.
- Two-way voice communication

Data Retrieval: Status, alarm memory, trouble, event log.

Real Time Clock: The control panel keeps and displays time and date.

Compliance with Standards:

UL1023 - household burglar alarm system unit - Grade A

UL1635 - digital alarm communicator system unit - Grade C

Note: FCC Statements are printed at the end of this manual.

2.2 RF Section

Operating Frequencies: 315 MHz or other UHF channels per local requirement in the country of use.

Receiver Type: Super-heterodyne, fixed frequency

Receiver Range: 600 ft (180 m) in open space

Coding: PowerCode and/or CodeSecure™

2.3 Electrical Data

Power Supply: Plug-in transformer. 120 VAC, 60 Hz / 9 VAC, 700 mA (12VA).

> *Note: For UL installation, one of the two following transformers must be used:*
> *A. Dongguan Oriental Hero Electrical - type OH-41073AT*
> *B. Good Power Electronics Ltd. - type GPA-41-3498*

Current Drain: Approx. 95 mA standby, 500 mA at full load and in alarm.

Sounder Output Current Supply Capability
   Internal: 30 mA max.
   External: 145 mA max.

PGM (auxiliary) Outputs Current Sinking: 100 mA max.

Fuse Ratings: 1A for battery protection; 0.5 A for siren / sounder circuit protection.

Backup Battery (provides power for at least 4 hours)
   Option 1 - 9V, six alkaline AA cells, 1.8 Ah
   Option 2 - 7.2 V, six Nickel Cadmium rechargeable AA cells, 650 mA/h

> *Note: For UL installation, the following cell types must be used:*
> *Alkaline Cells - Golden Power GLR6A or XIAMEN LR6/AA*
> *Rechargeable Cells - Golden Power KR650AA1*

Battery Test: Once every 24 hours, and once per hour during AC power loss.

2.4 Communication

Report Destinations: 2 central stations, 4 private telephones, 1 pager

Reporting Format Options: SIA, Pulse 4/2 1900/1400 Hz, Pulse 4/2 1800/2300 Hz, Contact ID

Pulse Rate: 10, 20, 33 and 40 pps - programmable

Message to Private Phones: Tone or voice

Message to Pager: PIN No.➔Alarm Type ➔ Zone No.

Built-in Modem: 300 baud, Bell 203 protocol

Data Transfer to Local Computer: Via RS232 serial port

2.5 Physical Properties

Operating Temp. Range: 32°F to 120°F (0°C to 49°C)

Storage Temp. Range: -4°F to 140°F (-20°C to 60°C)

Humidity: 90% relative humidity, @ 30°C (86°F)

Size: 9-13/16 x 7-1/2 x 1-3/4 in. (250 x 190 x 44 mm).

Weight: 2 pounds (905 g) less batteries

Color: Ivory and charcoal gray

3. INSTALLATION

3.1 Unpacking the Equipment

Open the cardboard packing box and check whether all the following items are included:

Item	Quantity
PowerMax Control Panel	1
120 VAC-to-9 VAC Power Transformer	1
Alkaline cells or Ni-Cd battery cells, size AA	6
Wireless PIR K-940 MCW or K-980 MCW	1
Wireless Magnetic Contact Detector MCT-302	2
4-button Keyfob Transmitter	1

If you find out that an item is missing, contact your vendor or dealer immediately.

3.2 Supplying Power to the Unit

Enrolling the transmitting devices' identification codes in the PowerMax memory is easier to carry out before actual installation, with all detectors near the control panel, preferably on a work bench. It is therefore necessary to power up the PowerMax temporarily from the original power transformer or from its backup battery.

To utilize the power transformer, use a screwdriver to connect a twisted pair between the transformer's 9 VAC screw terminals and the **9 VAC POWER** terminals of the PowerMax. The latter are located in the rectangular opening at the back of the cabinet (see Figure 10). Then plug the power transformer into a 120 VAC wall outlet.

To power up the control panel from the backup battery, proceed as follows:

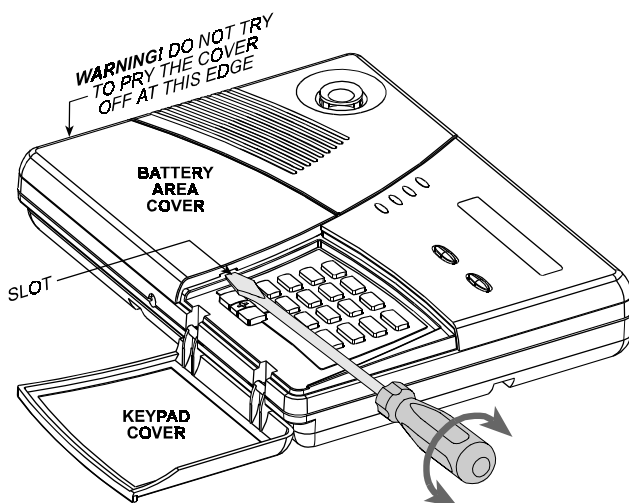**A.** Insert a screwdriver into the slot shown in Figure 1.

Figure 1. *Prying the Cover Loose*

B. Turn the handle slightly to force the right edge of the cover up. This should dislodge the two catches and release the right edge of the cover.

> **WARNING! Do not attempt to dislodge the left side of the cover first! This will inevitably break the left-side angled legs.**

C. Swing the cover up as shown in Figure 2, then pull free the angled legs at the left and put the cover away. The inner lid will now be in full view (see Figure 3).
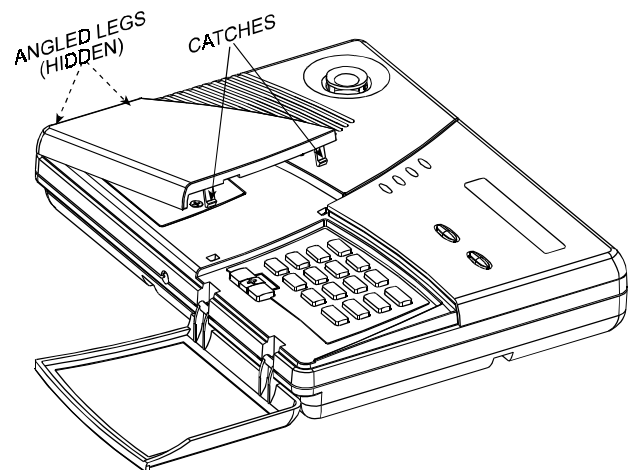

Figure 2. *Removing the Battery Area Cover*
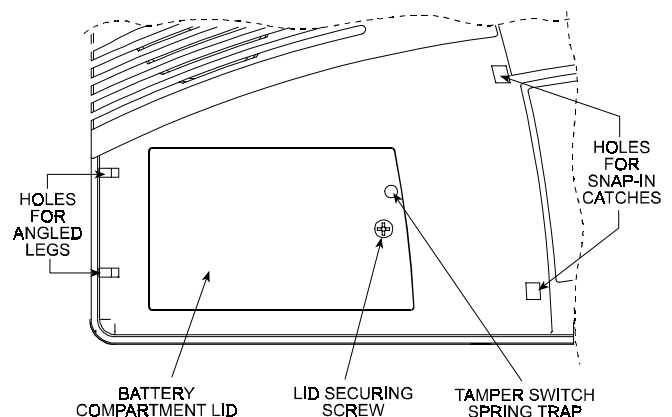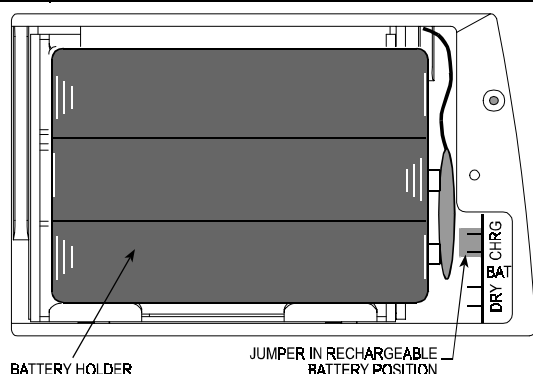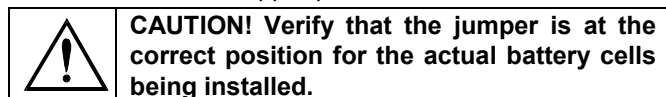

Figure 3. *Battery Area after Cover Removal*

D. Remove the screw that secures the lid (see Figure 3), swing the lid up and pull it away. You now have access to the battery holder (see Figure 4).

E. Pull out the battery holder and check that the battery type selection jumper is positioned in accordance with the type of batteries being installed (see Figure 4). For alkaline (dry) cells, the jumper should be mounted on

the two lower pins. For Nickel Cadmium (rechargeable) cells - on the two upper pins.

⚠	**CAUTION! Verify that the jumper is at the correct position for the actual battery cells being installed.**

Figure 4. Battery Type Selection Jumper

F. Insert all 6 battery cells into the holder - 3 at the top and 3 at the bottom. Make sure that the flat (negative) end of each cell is pressed against a circular spring and the capped (positive) end of each cell is pressed against a flat contact.
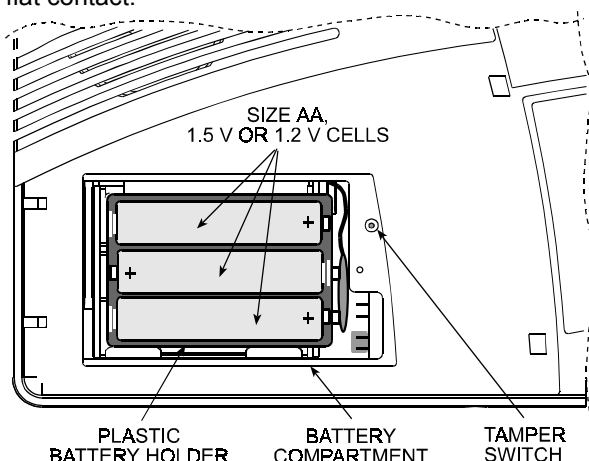
Figure 5. Battery Holder in Place with Batteries Installed

G. Put the battery holder back in, re-mount the battery compartment lid and re-attach it using the screw.

H. Put back the battery area cover - insert the angled legs at the left edge into their holes and then press the right edge of the cover against the cabinet surface until the catches click into place.

3.3 Programming

It pays off to plan ahead - use the tables in appendices A and B at the end of this guide to register the intended location of each detector, the holder and assignment of each transmitter and the control plan for the X-10 units.

Gather up all transmitters and detectors used in the system and mark each one in accordance with your deployment plan.

**For detailed programming instructions, refer to the PowerMax programming Guide (Publication DE5450P).**

3.4 Mounting the Bracket
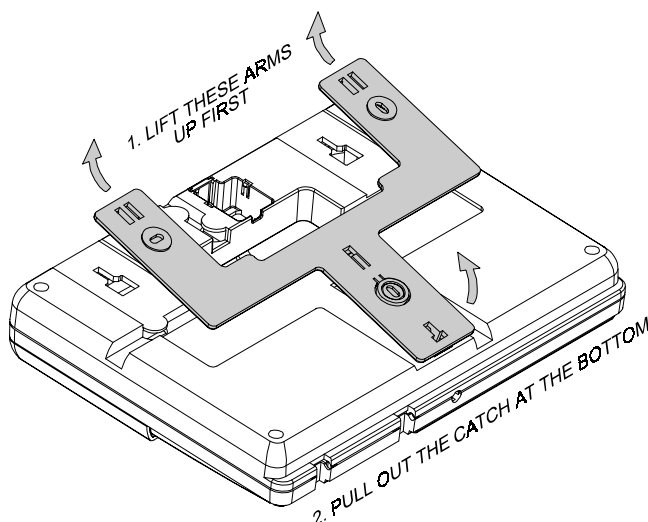### A. Detaching the Bracket from the Cabinet

A notable advantage of the PowerMax is that the unit can be mounted without having to open its cabinet. All connectors and terminals are accessible through a rectangular opening at the rear, and wiring channels are provided across the rear of the cabinet. Quick mounting of the PowerMax is possible by virtue of a special bracket and a unique mechanical system.

The control panel comes with the bracket in place at the rear. Since a catch at the lower end of the bracket is trapped (intentionally) within the cabinet, a special technique must be used to release it (see Figures 6 & 7).
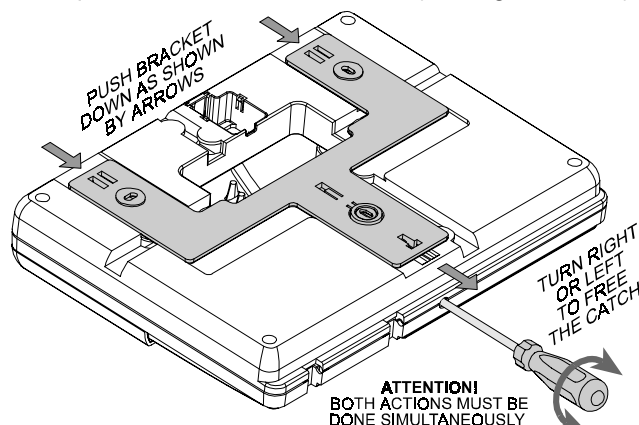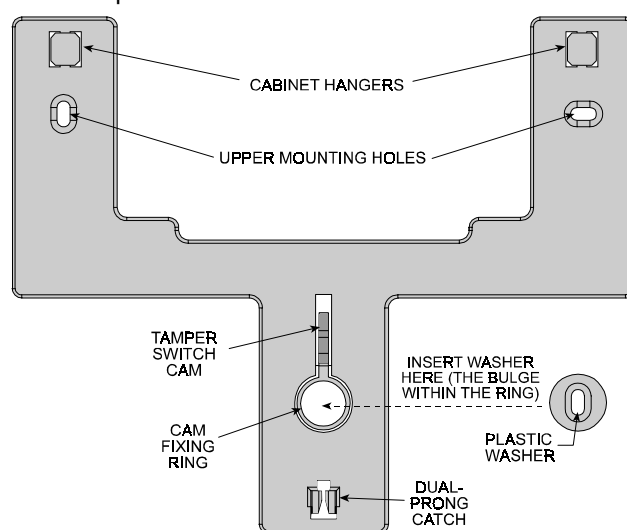

Figure 6. Releasing the Bottom Catch from the Trap

Figure 7. Detaching the Bracket

B. Getting Acquainted with the Bracket

Having detached the bracket successfully, put it on a desk and observe its design - see Figure 8 for identification of its various parts.

Figure 8. Bracket - Front View

The two upper mounting holes are intended for regular attachment to the wall with screws and anchors. The lower mounting hole, however, accommodates a combined "**ring and cam**" piece connected to the bottom leg of the bracket by 3 breakable plastic joints.

A special plastic washer supplied with the bracket must be inserted into the ring to complete the lower mounting hole. With the washer in place, a third screw can be used to secure the bottom leg of the bracket to the wall.

Once the control panel is mounted in place, the cam enters a slot in the control panel's rear part and maintains the built in tamper switch pressed. Separating the control panel from the bracket will start a tamper alarm. Forced removal of the entire assembly off the wall will also start a tamper alarm, because the joints of the **ring and cam** piece to the bracket will break off, leaving the ring and cam attached to the wall.

C. Attaching the Bracket to the Wall

Choose a concealed place, yet easily accessible to prospective users of the alarm system. Make sure that an uninterrupted AC power outlet and a telephone line socket are available near the installation spot.

Use the bracket as a template to mark the drilling points. Drill the holes and attach the bracket to the wall with 3 screw. Be sure to insert the special plastic washer into the ring in the bottom hole, as shown in Figure 8.

3.5 Wiring

All terminals and connectors are accessible within the opening at the back of the PowerMax (see Figure 9). All screw terminal blocks (except for "EARTH") can be pulled out, wired appropriately and plugged back in.

> **WARNING!** When plugging terminals back into place, be sure to align them carefully with the pins on the PCB. Misaligned or reverse insertion of terminals may damage internal PowerMax circuits!

The telephone-type connectors are also easy to deal with, because of their quick attach/detach capability.

IMPORTANT! The earth ground terminal must be connected to a good earth ground to allow effective protection against lightning transients.

Following are two examples of good earth connections:

Cold-water metal pipe: Connect the earth wire to the pipe, using a non-corrosive metal strap (preferably copper), firmly secured to the pipe.

AC Power outlet ground: This ground is available in 3-prong, 120 VAC outlets. Test the validity of the ground terminal with a 3-wire circuit tester that has neon lamp indicators (UL Listed Ideal Model 61-035 or equivalent, available from electrical supply stores).
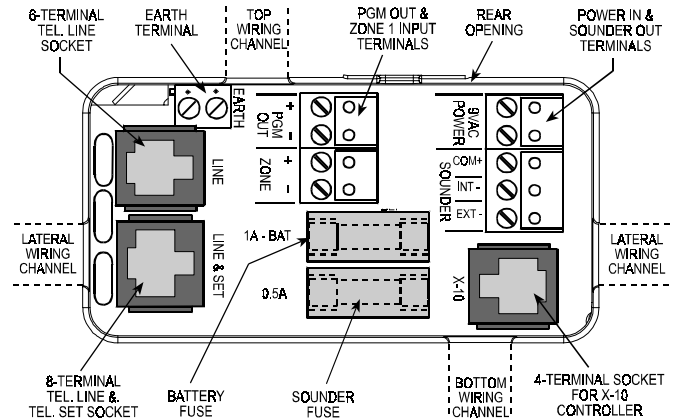

Figure 9. *Sunken Wiring Area Layout*

For telephone type connectors, you will need these items:
- A length of 6-lead, color coded modular cable.
- An length of 8-lead, color coded modular cable.
- Two 6-position RJ-11 plugs and one 8-position RJ-31X plug, to terminate the cables at the PowerMax end.
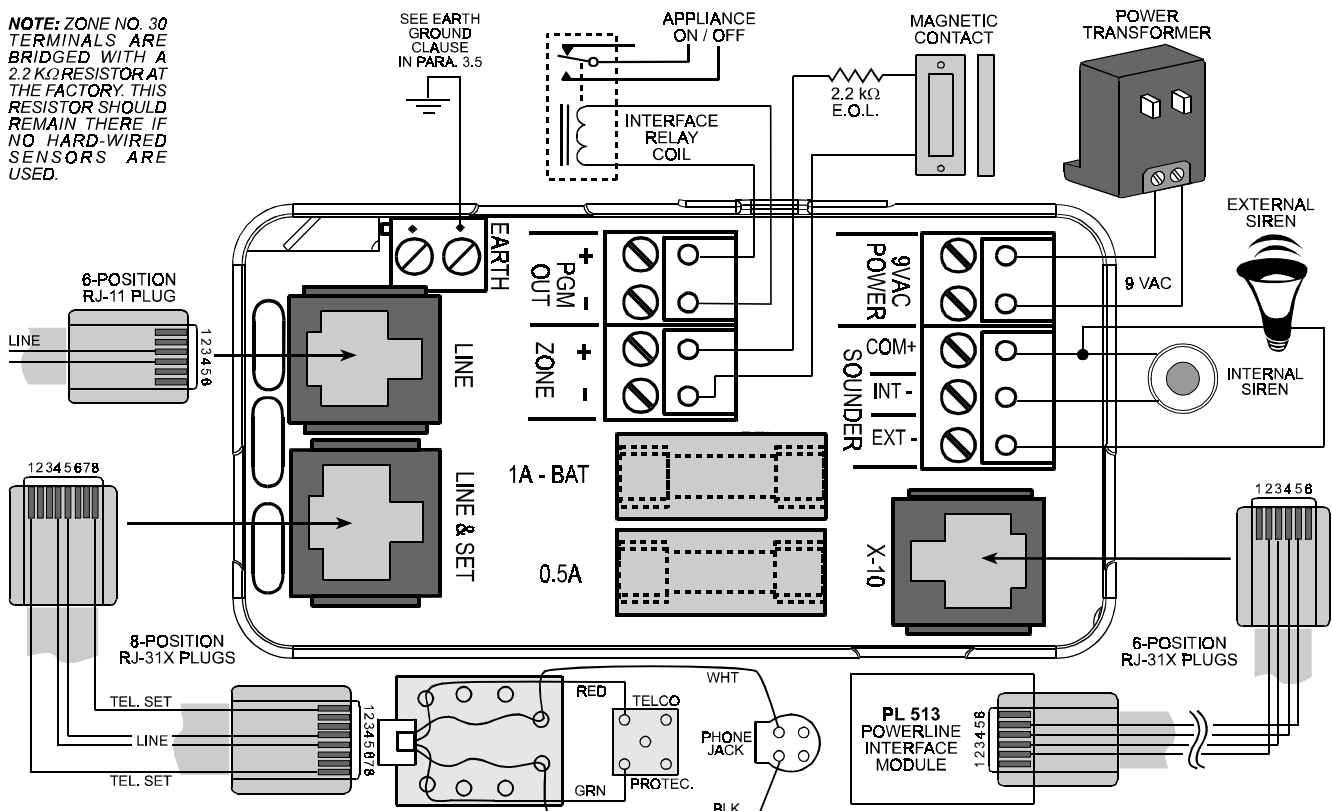- A crimping tool for RJ-11 and RJ-31X plugs.

Figure 10. *Wiring Diagram*

Refer to Figure 10 and proceed as follows:

A. Extract the screw terminal blocks one by one and make the necessary connections. When done, plug each terminal block onto its PCB mounted pins.

B. Prepare the cable assemblies that connect the:
- Powerline carrier (X-10) socket to the Powerline interface module,
- The LINE socket to the telephone line (or the LINE & SET socket to the line and local telephone set).

C. Mate the RJ-11 and RJ-31X plugs with their respective jacks. Do not confuse the X-10 plug with the LINE plug.

D. Route the wires via the wiring channels at the back. With all wires properly seated, proceed to Para. 3.6.

3.6 Cabinet-to-Bracket Attachment

Once all connections are made and the wires are seated within the channels at the rear, it is only necessary to attach the control panel to the wall-mounted bracket.

Having separated the bracket from the cabinet (see Para. 3.4.), you already have a notion of what has to be done. Nevertheless, refer to Figure 11 and proceed as follows:

A. Hold the cabinet with its top slightly slanted toward yourself and align the trap at the bottom of the cabinet with the dual-prong catch at the bottom of the bracket.
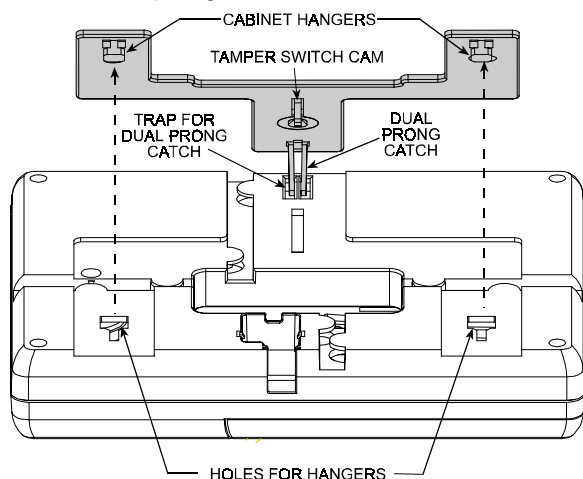

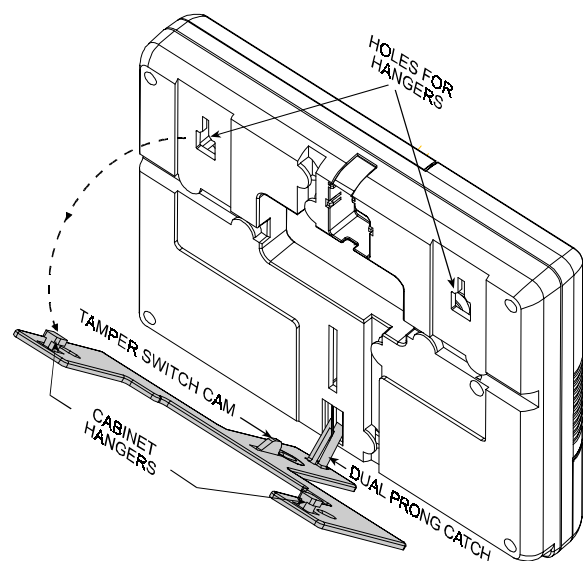*Figure 11. Cabinet-to-Bracket Assembly - Top View*

Figure 12. Cabinet-to-Bracket Assembly - Side View

B. Allow the dual prong catch to enter the trap as far as it will go while the cabinet is slanted towards your stomach.

C. Using the dual prong catch as a pivot, bring the top of the cabinet closer to the wall, allowing the two hangers to enter the two corresponding holes in the cabinet.

D. Once the cabinet is flush against the bracket, slide it down as far as the hangers will allow (about 10 mm). The dual prong catch at the bottom should snap into place with a click.

E. Test the assembly by lightly pulling the cabinet away from the wall. If correctly mounted, the cabinet will adhere to the bracket.

Note: See Para. 5.1 for dismounting procedure.

3.7 Connecting the AC Transformer

CAUTION! Do not plug the transformer into the AC outlet before completing all other wiring.

A. Remove the center screw from the AC wall outlet.

B. Plug the transformer directly in - the Power LED of the control panel should illuminate.

C. Use the screw removed in Step A above to secure the transformer to the AC outlet. Tighten the screw well.

A. The distance of the transformer from the system should not exceed 150 ft using 18 AWG conductors.

> **For UL installation, do not connect to a receptacle controlled by a switch.**

3.8 PowerMax-Compatible Detectors

Each detector compatible with the PowerMax system is packed with its own installation instructions. Read them carefully and install as indicated.

A. PIR Motion Detectors

The wireless passive infrared (PIR) motion detectors used in the system are of the PowerCode type, using a unique 24-bit identification code. The PowerMax is capable of "learning" each detector's identification code and linking it to a specific zone (see Section 3 in the Programming Manual). Some units are shown in Figures 13, 14 and 15.
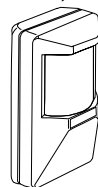

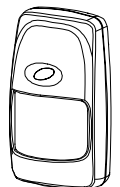*Figure 13. MC/PIR-2000*

Figure 14. MC/PIR-3000 or K-940MCW

Figure 15. K-980MCW

Note: K-940 MCW and K-980MCW are pet immune units.

In addition to its unique identification code, each detector transmits a message containing status information:
- The detector is in alarm (or not).
- The detector is being tampered with (or not).
- The battery voltage is low (or normal).
- "This is a supervisory message".

If any of these detectors detects motion, it sends out a message to the alarm control panel. If the system is in the armed state, an alarm will be triggered.

B. Magnetic Contact Transmitter

The MCT-302 (see Figure 16) is a Power-Code magnetic-contact transmitter used to detect the opening of a door or a window. The alarm contacts are closed as long as the door or window remain closed.
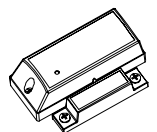

Figure 16. MCT-302

In addition, the unit has an extra alarm input that behaves as if it were a separate wireless transmitter. This type of

detector sends (or does not send) a "restored to normal" message to the alarm system, depending on the setting of an on-board "DIP" switch. The "restore" message informs you, through the alarm system's front panel indicators, whether the door or window is open or closed.

C. Wireless Adapter for Wired Detectors

MCT-100 (see Fig. 17) is a PowerCode device used mainly as a wireless adapter for 2 regular magnetic switches installed on 2 windows in the same room. The unit has two inputs, behaving as separate wireless transmitters and transmitting different PowerCode IDs. Each input sends (or does not send) a "restored" message to the alarm system, depending on the setting of an on-board "DIP" switch.
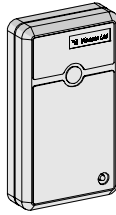
Figure 17. *MCT-100*

D. Wireless Smoke Detector

(unapproved by UL). This is a photoelectric smoke detector equipped with a PowerCode-type transmitter. When enrolled to a fire zone, it initiates a fire alarm upon detection of smoke.
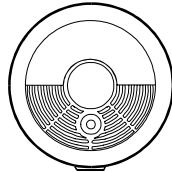
Figure 18. *MCT-423*

3.9 PowerMax-Compatible Transmitters

Note: Each transmitter is packed with its own instructions for battery installation and use. Be sure to pass these documents on to the "Master User" of the alarm system.

The PowerMax system is compatible with multi-button and single button key-ring and hand-held transmitters that use PowerCode and CodeSecure coding methods.

Multi-button PowerCode transmitters transmit the same code each time the same button is pressed. They can be used for emergency signaling, or for activating the PGM output or for controlling appliances via X-10 units. **They can not be used for arming / disarming.**

CodeSecure transmitters are of the rolling code type - they transmit a new code each time the same button is pressed. This provides a higher security level, especially in arming / disarming applications, because the code can not be copied ("grabbed") by unauthorized people.

Following are the basic details of several compatible transmitters. The possible applications for each push-button are indicated in each drawing.

A. MCT-234 (Fig 19): 'Keyfob' transmitter - one unit is supplied with the PowerMax. You can program the AUX (auxiliary) button to perform various tasks, in accordance with the user's needs.
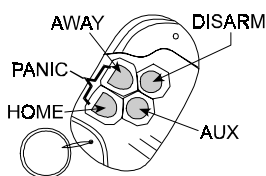
Figure 19. *MCT-234*

B. MCT-231 / MCT-201 (Fig. 20): Single-button pendant units. The MCT-231 (Code-Secure) and the MCT-201 (PowerCode) can be enrolled to perform functions as shown. Both units look alike.
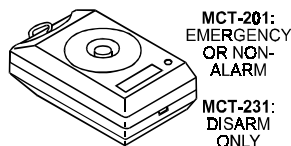
Figure 20. *MCT-231 / 201*

C. MCT-134 / MCT-104 (Fig. 21): 4-button hand-held units. MCT-134 (CodeSecure) can replace the MCT-234 keyfob. MCT-104 (PowerCode) can perform emergency and non-alarm functions. Both units look alike.
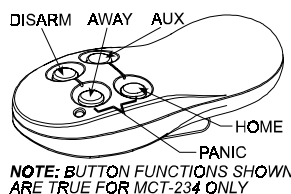
NOTE: BUTTON FUNCTIONS SHOWN ARE TRUE FOR MCT-234 ONLY
Figure 21. *MCT-134 / 104*

D. MCT-132 / MCT-102 (see Fig. 22): 2-button units. MCT-132 (CodeSecure) Can perform functions as shown. MCT-102 (PowerCode) can perform emergency and non-alarm functions. Both units look alike.
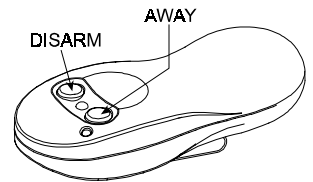
Figure 22. *MCT-132 / 102*

E. MCT-131 / MCT-101 (see Fig. 23): Single-button units. The MCT-231 (CodeSecure) and the MCT-201 (Power-Code) can be enrolled to perform functions as shown. Both units look alike.
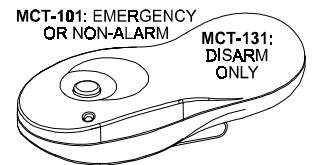
Figure 23. *MCT-131 / 101*

F. MCT-211 (see Fig. 24) This is a waterproof, wrist-worn PowerCode transmitter, that can be enrolled to perform emergency or non-alarm function.
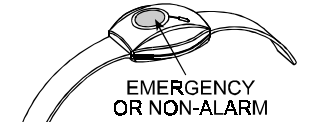
Figure 24. *MCT-211*

3.10 Mounting the RS232 Module

The control panel can be equipped with an optional RS232 module that allows serial data interchange with a local computer. If this module is not supplied, a special plastic cap blocks the cable entry to the niche designed to accommodate the module.

The following instructions are useful when adding the RS232 module to an already installed PowerMax system:

A. Detach the cabinet from the bracket (see Para. 5.1)

B. Remove the factory installed plastic cap by sliding it out along the grooves as shown in Figure 25.
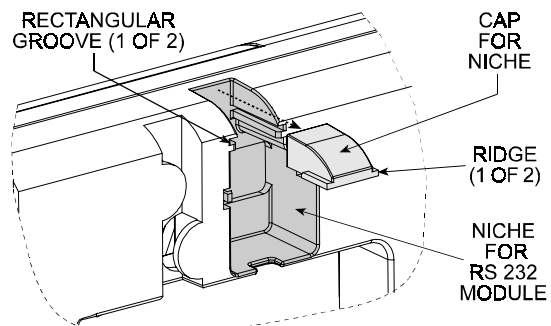
Figure 25. *Removing the Cap from the RS232 Niche*

C. Align the RS232 module with the grooves and the module catches as shown in Figure 26.

Figure 26. *Inserting the RS232 Module*

D. Push the module all the way in, making sure that the 4-pin socket mates with the 4-pin header at the bottom.

Note: When the module is properly seated, the module catches that were pushed aside during insertion spring back into place above the top edge of the module.

E. Prepare an RS-232 flat modular cable and terminate it with a 6-position RJ-11 plug at the PowerMax end.

Terminations at the computer's end may vary.

F. Mate the plug with the RJ-11 socket and bend the cable backward to pass it out via the wiring channel.

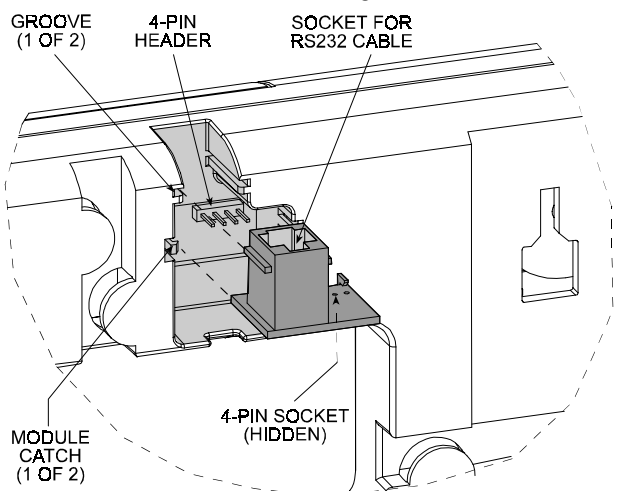**G.** Re-attach the control panel to the bracket, as instructed in Para. 3.6.

4. TESTING PROCEDURES

4.1 Preparations

Make sure all protected windows and doors are closed. If all zones are secured (undisturbed), the display should read:

```
READY         HH:MM
```

If the system is "NOT READY", query the control panel by pressing the <SHOW/OK> button repeatedly. The source(s) of the problem(s) will be displayed and read aloud. Take the necessary measures to eliminate the problem(s) before testing the system (see 4.2 below).

4.2 Diagnostic Test

To verify proper function of all detectors in the system, a comprehensive diagnostic test is required. To perform this test, you must access Item No. **8** in the installer's menu the same way as you did when you programmed the control panel:

A. Click the <**NEXT**> button until the display reads:

```
INSTALLER MODE
```

B. Click <**OK**> to select the installer's menu. The control panel will prompt you for the installer code.

C. Enter the valid installer code (**9➔9➔9➔9)** or the new installer code that you already programmed). The "Happy Tune" (- - - ──) will sound if the code is correct and the display will change to:

```
1.NEW INSTL CODE
```

D. Click <**NEXT**> or <**BACK**> until the number and name of the desired mode is displayed:

```
8.  DIAGNOSTICS
```

E. Carry on as in Section 9 of the programming guide.

4.3 Keyfob Transmitter Test

Initiate transmission from each transmitter enrolled as a keyfob unit (according to the list in Table A2, Appendix A). Use each transmitter to arm the control panel AWAY and immediately disarm it. Upon pressing the keyfob unit's AWAY key, the ARM indicator should light, and the display should respond as follows:

```
ARMING AWAY
```
↓
```
PLEASE EXIT NOW
```

and the exit delay beeps will begin.

Press the keyfob unit's DISARM (◻⌒) key. The ARM indicator should extinguish, the "Happy Tune" (- - - ──) should sound and the display should revert to:

```
READY         HH:MM
```

Test the **AUX** button in each keyfob in accordance with the information noted in Table A.2, Appendix A. Verify that the **AUX** button performs its duty as programmed.

■ If the AUX button is defined as "STATUS", system status should be displayed and announced upon pressing the AUX button.

■ If the AUX button is defined as "INSTANT", press the AWAY button and then the AUX button. The response should be:

```
ARMING INSTANT
```
  ↶ (alternating) ↷
```
PLEASE EXIT NOW
```

and the exit delay beeps will start. Press the DISARM (◻⌒) key immediately to disarm.

■ If the AUX button is programmed as "PGM / X-10" and permitted to activate one or several X-10 units, pressing the AUX button should activate the appliance controlled by the chosen X-10 unit(s).

■ If the AUX button is programmed as "PGM / X-10" and permitted to activate the PGM output, pressing AUX should activate the device wired to the PGM output.

4.4 Appliance ON/OFF Test

The "**X-10 unit assignment**" information that you noted in Appendix B to this manual is very useful for this test.

Go over the table in **Appendix B** column by column. If, for instance the "**ON by arming**" column has "X"s marked in the rows pertaining to units 1, 5 and 7 - then arm the system and verify that the appliances controlled by these units are actually activated upon arming.

Continue in the same manner in the following columns, always creating the state or event that will activate the relevant units. Verify that all appliances are activated as programmed.

IMPORTANT! Before testing "On by Timer" and "On by Zone", make sure that these forms of control are permitted - click 🔟 🔔 *repeatedly and verify that the display shows:*

```
BY TIMER ON       ▣
```
and:
```
BY SENSOR ON      ▣
```

A dark box at the extreme right means that these functions are enabled.

The easiest way to test timed activation is to select the ninth item in the installer's menu ("**9. USER SETTINGS**") and set the system clock a few minutes before the relevant "start time". Do not forget to return the clock to the correct time after completion of this test.

4.5 Emergency Transmitter Test

Initiate transmission from each transmitter enrolled to an emergency zone (according to the list in Table A3, Appendix A). For example, upon pressing the transmit button of an emergency transmitter enrolled to zone 22, the display should read:

```
┌─────────────────────────────┐
│ Z 2 2      E M E R G E N C Y │
└─────────────────────────────┘
       ↵ (alternating) ↱
┌─────────────────────────────┐
│ V I O L A T E D             │
└─────────────────────────────┘
```

It is advisable to let the central station know that you are conducting this test, or just disconnect the telephone line from the PowerMax during this test, to prevent false alarms.

5. MAINTENANCE

5.1 Dismounting the Control Panel

A. Insert a wide bladed screwdriver into the hole at the bottom of the unit (see Figure 27).
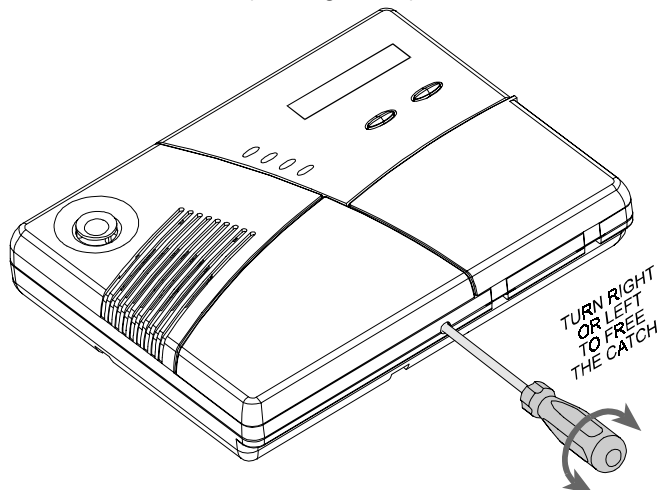
Figure 27. Releasing the Catch

B. Turn the screwdriver's handle to free the catch from the trap and at the same time slide the control panel about 10 mm up along the bracket.

C. After sliding the cabinet up, remove the screwdriver and pull the upper part of the cabinet away from the bracket, slanting it towards yourself.

D. With the cabinet free of the hangers you can pull the bottom of the cabinet away and free it from the dual prong catch at the bottom of the bracket.

5.2 Replacing the Backup Battery

> **CAUTION!** *If you replace rechargeable cells with alkaline (dry) cells, be sure to install the battery-type jumper in the "DRY" position. Failure to do so will result in rapid cell destruction and leakage (acid leakage may cause further damage).*
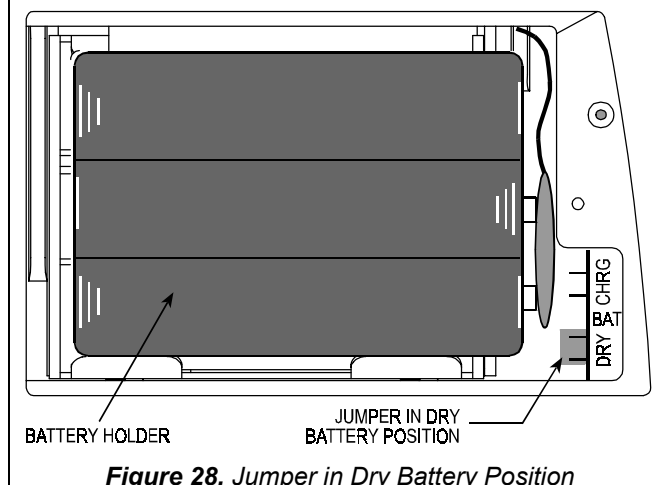
Figure 28. Jumper in Dry Battery Position

Replacement and first-time insertion of cells are similar The only difference is the necessity to remove the old cells and to inspect the battery holder contacts and springs for signs of corrosion.

If corrosion is found in the battery holder, clean it first with a piece of cloth dampened with hot water and then file the contacts clean until they shine. In extreme cases, the entire battery holder should be replaced.

With fresh battery cells and correct insertion, the TROUBLE indicator should extinguish. However, the "MEMORY" message will now blink in the display (caused by the "tamper" alarm you triggered when opening the battery compartment lid). Clear it by arming the system and immediately disarming.

5.3 Fuse Replacement

The PowerMax has two fuses which can be replaced if burnt out:

- Battery Fuse - 1 A, time delay type, UL recognized
- Sounder Fuse - 0.5 A, time delay type, UL recognized

If any one of the fuses burns out, the trouble indicator lights and TRBL is displayed (together with READY or NOT READY - as the case may be). Clicking the <**SHOW /OK**> button will display a FUSE TROUBLE message.

Two fuses are accessible through the rectangular opening at the rear of the cabinet (see figure 29). To replace a fuse, the cabinet should be temporarily dismounted (as described in Para. 5.1 above).
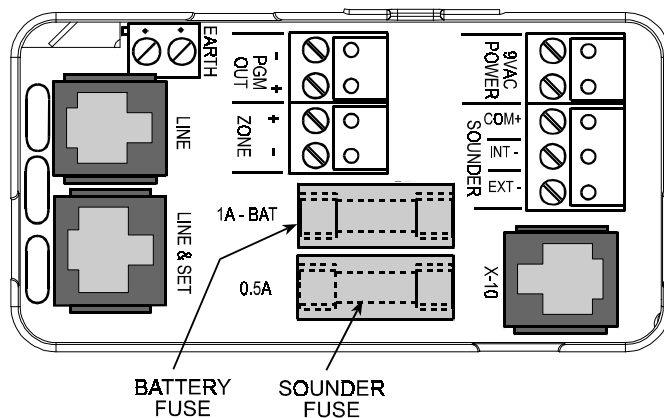
Figure 29. Fuse Locations

Extract the two fuses one by one and check them visually. In most cases, a defective fuse can be identified by the broken conductor within the glass cylinder. If in doubt, test the continuity of the fuse with an ohmmeter.

Replace a defective fuse with a new 3AG-type of the same value. The relevant trouble indications will immediately disappear.

APPENDIX A. Detector Deployment & Transmitter Assignments

A1. Detector Deployment Plan

Zone No.	Zone Type	Sensor Location or Transmitter Assignment (in non-alarm or emergency zones)	Chime (Yes / No)	Controls PGM (X = YES)	Controls X-10 Unit No.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Zone Types: *1 = Interior ✳ 2 = Perimeter ✳ 3 = Delay 1 ✳ 4 = Delay 2 ✳ 5 = 24 h silent ✳ 6 = 24 h audible ✳ 7 = Fire ✳ 8 = Non-alarm ✳ 9 = Emergency.*

Zone Locations: *Note down the intended location for each detector. When programming, you may select one of 26 available zone names (plus 3 custom zone names that you can add - see Figure 3 in the Programming Guide).*

A2. Keyfob Transmitter List

Transmitter		Name of Person	AUX Button Assignment			
No.	Type	Responsible	Status	Instant	Outputs: PGM	Outputs: X-10
1						Unit 1 ☐
2						Unit 2 ☐
3			YES ☐	YES ☐	YES ☐	Unit 3 ☐
4						Unit 4 ☐
5			NO ☐	NO ☐	NO ☐	Unit 5 ☐
6						Unit 6 ☐
7						Unit 7 ☐
8						

A3. Emergency Transmitter List

Tx #	Transmitter Type	Enrolled to Zone	Name of holder
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

A4. Non-Alarm Transmitter List

Tx #	Transmitter Type	Enrolled to Zone	Name of holder	Assignment
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

APPENDIX B. X-10 Unit Assignments

Unit No.	Controlled Appliance	ON by Arming	ON by Memory	ON by Keyfob	ON by Delay	ON by Timer		ON by Zone No.		
						ON Time	OFF Time	a	b	c
1										
2										
3										
4										
5										
6										
7										

Federal Communications Commission (FCC) Statements

The digital circuits of this device 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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

– Re-orient or re-locate the receiving antenna.

– Increase the distance between the device and the receiver.

– Connect the device to an outlet on a circuit different from the one which supplies power to the receiver.

– Consult the dealer or an experienced radio/TV technician.

FCC PART 68 STATEMENT

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

This equipment uses the following jacks: An RJ31X is used to connect this equipment to the telephone network. The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area. If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe necessary. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice that will enable you to make the necessary modifications in order to maintain uninterrupted service.

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

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

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

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

WARRANTY

Visonic Ltd. and/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.
This warranty does not apply in the following cases: *improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.*
This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.
This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.
The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function. *However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.*
Warning: *The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his /her safety and the protection of his/her property.*

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