

# POWERMAX+

Fully Supervised Wireless Alarm Control System



# Visonic

## Installation Instructions

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### 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 of 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 3.7 and 3.8 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 options available for each parameter. Factory defaults are marked with a dark box to their right, and other options (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 setting the correct time and date is one of the user tasks, we recommend that you set the time and date in the course of programming. Access to the "User Settings" for the installer is possible through item 10 on the installer's menu or through the user menu (see User's manual section 7).

After programming, proceed to install the system as detailed in the Installation Instructions, from paragraph 3.4 onward.

**WARNING! Zone type "emergency" can not be used for medical applications in UL-listed systems.**

The installer should verify line seizure. Be aware of other phone line services such as DSL.

# 1. INTRODUCTION

The PowerMax+ is a user and installer-friendly, 30-zone fully-supervised wireless control system. 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 and X-10 controller. Terminal block for telephone line & set.
- 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 are 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.

## QUICK PROGRAMMING

- Multiple-choice selection of options for each parameter.
- Unequivocal visual prompts and audible signals.
- Installer 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

**Zones Number:** 28 wireless, 2 hardwired (zones 29 & 30).

**Hardwired Zone Requirements:** 2.2 k $\Omega$  E.O.L. resistance (max. resistance of wires 220  $\Omega$ ).

**Zone Types:** Interior follower, perimeter, perimeter follower, delay 1, delay 2, 24h silent, 24h audible, fire, non-alarm, emergency, gas and flood.

**User Codes:** 8 codes, 4 digits each

### Control Facilities:

- Integral keypad
- PowerCode / Code-Secure™ hand-held transmitters
- Wireless commander, MCM-140+
- 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, BYPASS.

**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 (bell) Timeout:** Programmable (4 min. by default)

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

**Supervision:** Signaling at 60 minutes interval (U.S. version), 15 minute interval (UK version) or according to local standards

### Special Functions:

- Speech and sound control
- Powerline Carrier Device Control (up to fifteen 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
- Message center (recording and playback)
- 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 U.S. Standards:

Meets FCC Part 15 and Part 68 requirements.  
UL1023 - Household Burglar Alarm System Unit - Grade A.  
UL985 - Household fire warning System.  
UL1635 - Digital Alarm Communicator System Units.

### Compliance with European Standards:

**EMC Emission:** EN 50081-1 1992, EN300220-3

**RFI:** EN55022 1998

**EMC Immunity:** EN 50082-1 1997, EN301489-3

**EMC Immunity to Conducted RF:** EN6100-4-6 1996

**Telephony:** TBR21 1998

**Safety:** EN60950+ Am1(93), Am2(93), Am3(95), Am4(97)

According to the European standard EN5013-1, the PowerMax+ security grading is 2 - "low to medium risk" and environmental classification is II - "indoor general".

The PowerMax+ is compatible with the RTTE requirements - Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999.

## 2.2 RF Section

**Operating Frequencies:** 315 MHz (in USA & Canada) 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

**Antenna Type:** Spatial diversity

**Coding:** PowerCode and/or CodeSecure™

## 2.3 Electrical Data

**Power Supply:** Plug-in transformer.

120 VAC, 60 Hz / 9 VAC, 1A (in the U.S.A.)

230 VAC, 50 Hz / 9 VAC, 1A

**Note:** It is possible to use 700 mA transformer if the used siren current consumption is less than 300 mA.

**UL installation:** Use transformer type OH-41111AT, manufactured by Oriental Hero Electrical Factory.

**In Europe and elsewhere:** Use only Safety National Approved AC adapter, mains-to-9 VAC, 0.7A or 1A.

**Current Drain:** Approx. 65 mA standby, 800 mA at full load and in alarm.

**Site External Siren Current (EXT):** 550\* mA max.

**Site Internal Siren Current (INT):** 550\* mA max.

**PGM Output Current:** 100\* mA max.

**Detector 1 & 2 Total (Sum) Current:** 100\* mA max.

**High Current / Short Circuit Protection:** All outputs are protected (current limited).

\* Total PowerMax+ output current (of INT & EXT sirens, PGM output and detectors) cannot exceed 600 mA. Total INT & EXT sirens current consumption cannot exceed 550 mA. **For UL installations, total output current cannot exceed 550 mA.**

**Backup Battery** (provides power for at least 24 hours), according to the purchase option:

**Option 1** (applicable for **UL** installations): 7.2V 2100 mAh, rechargeable NiMH battery, p/n GP211ATH6XM2, manufactured by GP, trickle charge 80 mA approx.

**Option 2:** 9.6V Nickel Cadmium or Nickel Metal rechargeable battery pack, 650 to 1800 mAh.

*Note:* To use a non-Visonic battery pack, its battery snap should have proper polarity!

**Battery Test:** Once every 10 seconds.

## 2.4 Communication

**Built-in Modem:** 300 baud, Bell 103 protocol

**Data Transfer to Local Computer:** Via RS232 serial port

**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, Scancom.

**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.

## 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:** 85% 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:** 880g (1.94 pounds) without batteries

**Color:** Ivory and charcoal gray

## 3. INSTALLATION

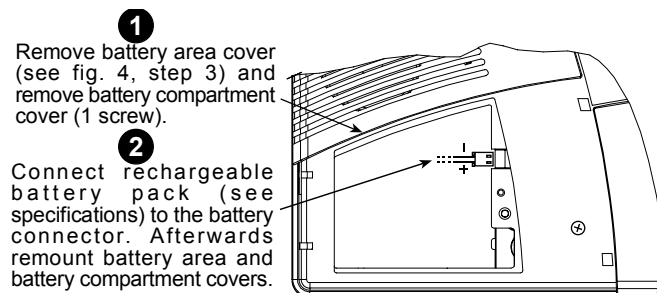
### 3.1 Unpacking the Equipment

Open the cardboard packing box and check whether all items have been included. 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' ID codes in the PowerMax+ memory will be easier if carried out before actual installation, with all detectors and the control panel on a work bench. It is therefore necessary to power up the PowerMax+ temporarily from the external power transformer (see figure 3). Alternatively, you may power up from the backup battery, as shown in figure 1.

**Disregard any "trouble" indications that may appear** (due to lack of battery or lack of telephone line connection).



**Figure 1 - Backup Battery Insertion**

### 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.

**Program the system now as instructed in the PowerMax+ Programming Guide.**

### 3.4 Mounting

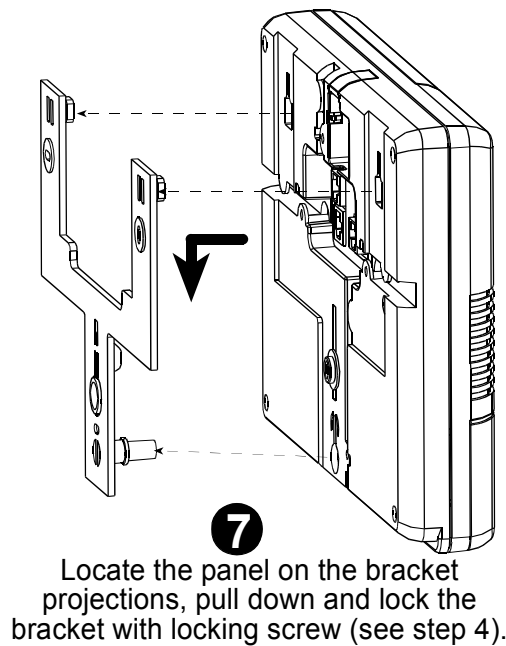
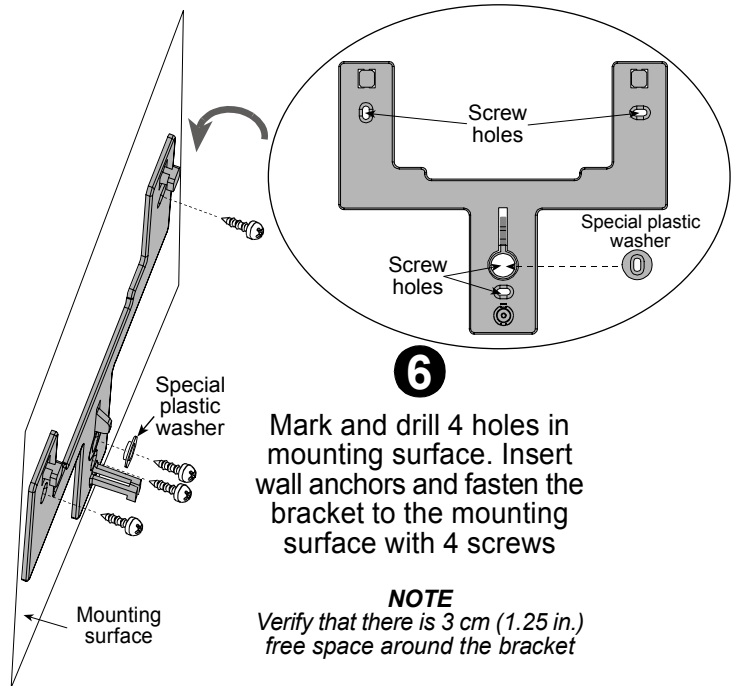
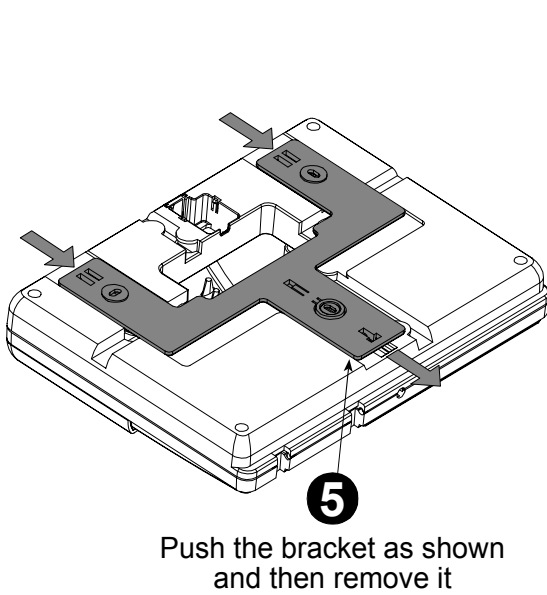
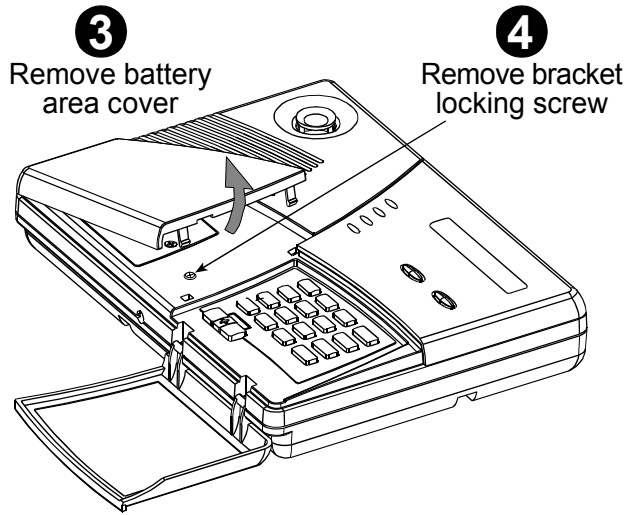
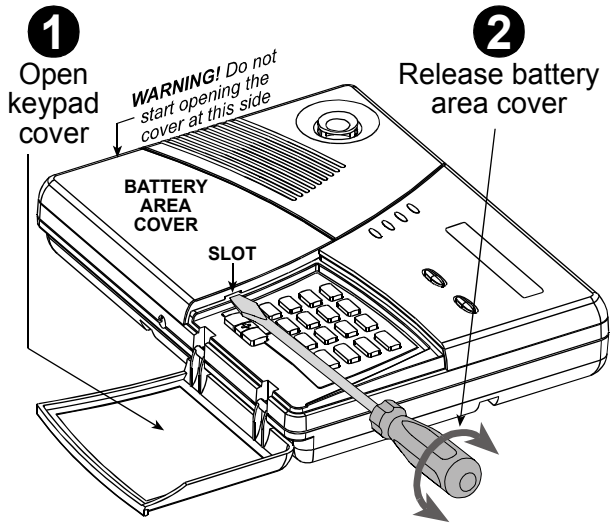
PowerMax+ mounting process is shown in figure 2.

### 3.5 Wiring

PowerMax+ wiring is shown in figure 3.

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

You will need 6-lead RJ-11 cord(s) for telephone line or telephone line and telephone set.



**Figure 2 - Mounting**

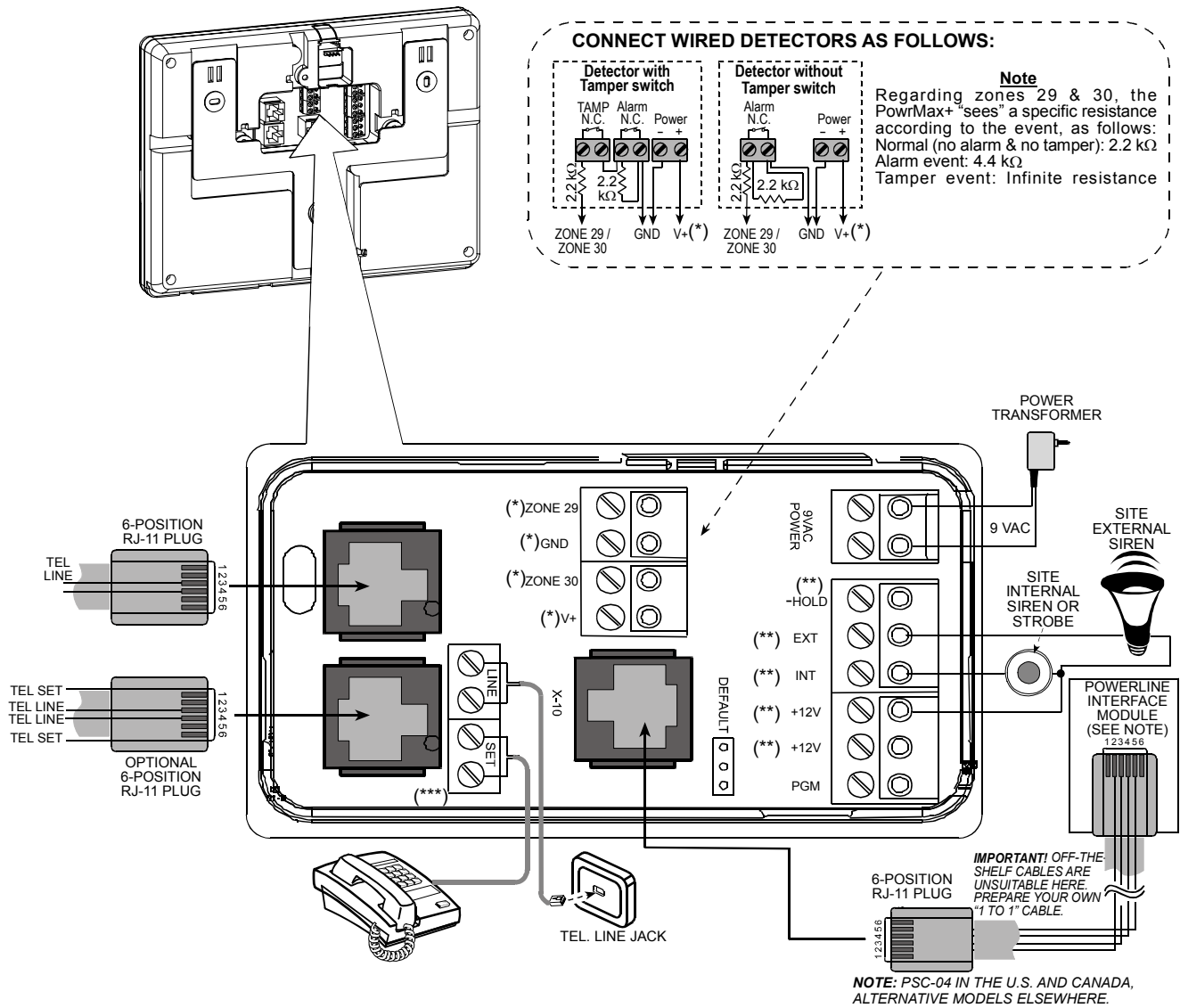


Figure 3 - Wiring Diagram

**Notes regarding figure 3:**

- \* Zone 29/GND and Zone 30/GND terminals can be connected to a normally closed contact of a detector, switch (for example a Tamper switch of any device), or a pushbutton, via a 2.2 KΩ resistor. Such a resistor is connected at the factory across both Zone 29/GND and Zone 30/GND terminals. The resistors should remain there if the terminals are not used. **The V+ terminal can be used to supply 12V (up to 100mA) to a detector (if necessary).**
- \*\* Both +12V terminals are identical (shorted together). The +12V and "-Hold" terminals can be connected to a siren (for constant DC power supply) and the INT or EXT terminal can be used to trigger such a siren. The INT terminal can be programmed to "internal siren" or "strobe" (see DEFINE OUTPUTS - DEFINE AUX in chap. 6 in the PowerMax+ prog. guide).
- \*\*\* Removable LINE SET terminals or connector (RJ-11), according to the purchase option.

**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!

**IMPORTANT!** The terminals for internal and external sirens are DC outputs intended for 12V sirens. Connecting a loudspeaker to any of these outputs will cause a short circuit and will damage the unit.

**Notes for UL installations**

- a. The site INTERNAL SIREN and EXTERNAL SIREN are suitable for burglar alarm application only. They are not suitable for fire alarm signaling.
- b. A device that is connected to PGM terminal should not be programmed to be activated during standby.
- c. "V+" and "-HOLD" terminals shall not be used for UL installations.
- d. The system shall be installed in accordance with Chapter 2 of the National Fire Alarm Code, ANSI/NFPA 70.
- e. All wiring should be acceptable for class 1 systems as defined by the National Electrical Code, ANSI/NFPA 70. No. 26 AWG or larger telecommunication line cord shall be used.
- f. The system shall be installed in accordance with CSA C22.1 Canadian Electrical Code, Part 1.
- g. A minimum spacing of 1/4 inch shall be maintained between the telephone wiring and the low voltage wiring (zones, bell circuit, etc). Do not route the LINE and SET wires in the same wiring channel with other wires.

### 3.6 Connecting the AC Transformer

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

- A. **U.S.A. only:** 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. **U.S.A. only:** Use the screw removed in Step A above to secure the transformer to the AC outlet. Tighten the screw well.
- D. The distance of the transformer from the system should not exceed 150 ft using 18 AWG conductors.

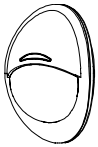
**For UL installations, do not connect to a receptacle controlled by a switch.**

### 3.7 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

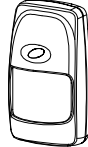
The wireless passive infrared (PIR) motion detectors used in the system are of the PowerCode type. The PowerMax+ is capable of "learning" each detector's identification code and linking it to a specific zone (see Section 3 in the Programming Guide). Some units are shown below:



**Figure 4**  
**NEX T<sup>®</sup> K9-85 MCW**



**Figure 5**  
**MCPIR-3000 or K-940 MCW**



**Figure 6**  
**DISCOVERY K9-80/MCW**

**MCPIR-3000 is not UL-listed!**

**Note:** K-940 MCW, Discovery K9-80/MCW and NEX T<sup>®</sup> K9-85 MCW are pet immune units.

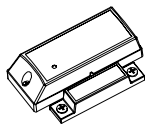
In addition to its unique 24-bit identification code, each detector transmits a message, containing status information:

- 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

MCT-302 (figure 7) is a PowerCode 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 remains closed.

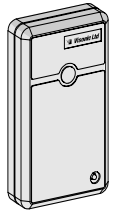


**Figure 7**  
**MCT-302**

The unit has an extra alarm input that acts as if it were a separate wireless transmitter. It 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 control panel's display, whether the door or window is open or closed.

#### C. MCT-100 Wireless Adapter for Wired Detectors

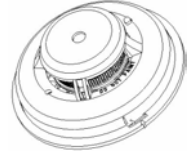
(not UL-Listed) MCT-100 (fig. 8) is a PowerCode device used mainly as a wireless adapter for 2 regular magnetic switches installed on 2 windows in the same room. It has two inputs, behaving as separate wireless transmitters with different PowerCode IDs. Each input sends (or does not send) a "restored" message to the alarm system, depending on the setting of an on-board "DIP" switch.



**Figure 8**  
**MCT-100**

#### D. Wireless Smoke Detector MCT-430 (UL-listed).

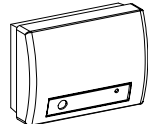
A photoelectric smoke detector equipped with a PowerCode-type transmitter. If enrolled to a fire zone, it initiates a fire alarm upon detection of smoke.



**Figure 9. MCT-430**

#### E. Glass Break Detector MCT-501

(not UL-Listed). An acoustic detector (fig. 10) equipped with a PowerCode-type transmitter. Since it restores automatically after detection, this unit does not send a restoral message to the control panel.



**Figure 10**  
**MCT-501**

### 3.8 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.

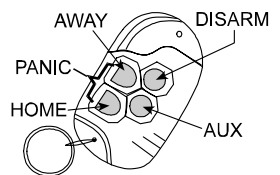
Multi-button PowerCode transmitters transmit the same code each time the same button is pressed. They can be used for emergency signaling, for activating the PGM output or for controlling appliances via X-10 units. **They can not be used for arming / disarming.**

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 11):

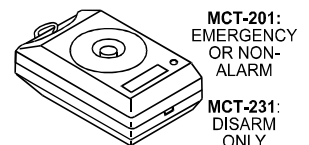
'Keyfob' transmitter - one unit is supplied with PowerMax+. You can program the AUX (auxiliary) button to perform various tasks, in accordance with the user's needs.



**Figure 11. MCT-234**

#### B. MCT-231 / 201\* (Fig. 12):

(N.A. in North America) Single-button pendant units. The MCT-231 (CodeSecure) and the MCT-201 (PowerCode) can be enrolled to perform functions as shown. Both units look alike.

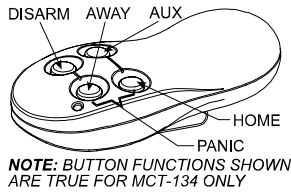


**Figure 12. MCT-231 / 201**

\* Not UL listed.

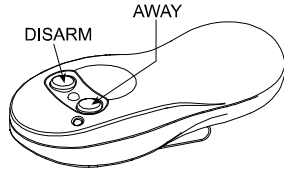


**C. MCT-134 / 104\*** (Fig. 13): (N.A. in North America) 4-button hand-held units. MCT-134 (CodeSecure) can replace the MCT-234 keyfob. MCT-104 (PowerCode) can perform emergency and non-alarm functions. Both units look alike.



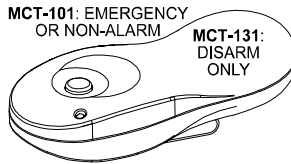
**Figure 13. MCT-134 / 104**

**D. MCT-132 / 102\*** (Fig. 14): (N.A. in North America) 2-button units. MCT-132 (CodeSecure) can perform functions as shown. MCT-102 (PowerCode) can perform emergency and non-alarm tasks. Both units look alike.



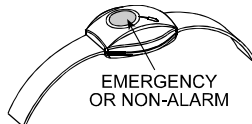
**Figure 14. MCT-132 / 102**

**E. MCT-131 / 101\*** (Fig. 15): (N.A. in North America) Single-button units. The MCT-131 (CodeSecure) and the MCT-101 (PowerCode) can be enrolled to perform functions as shown. Both units look alike.



**Figure 15. MCT-131 / 101**

**F. MCT-211\*** (Fig. 16) Waterproof, wrist-worn PowerCode transmitter. Can be enrolled to perform emergency or non-alarm functions.

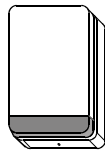


**Figure 16. MCT-211**

\* **Not UL-listed - not to be used in UL-listed systems**

### 3.9 PowerMax+ Compatible WL Siren

The MCS-700 (\*) wireless siren (fig. 17) can be integrated with the PowerMax+ in areas in which wiring action is difficult or impossible. The MCS-700 is a fully supervised, 2-way communication device (it includes a receiver, to receive activation commands from the alarm system, and a transmitter to periodically transmit its status signal to the alarm system).



**Figure 17  
Wireless  
Siren**

When an identifiable activation command is received from the PowerMax+, the siren activates its sounder and the flash light (strobe light every 1.5 seconds).

\* **Not UL-listed - not to be used in UL-listed systems**

### 3.10 Installing an Optional X-10 Siren

(Not to be used in UL-listed systems)

If you need a "wireless" external siren, you may install an X-10 siren module which is triggered by a signal transmitted

via the built-in electrical wiring of the protected site. This siren can replace the regular external siren or complement it without laying out additional wires. Of course, such a siren can be used only in conjunction with an optional power-line interface module.

The X-10 siren is ready to function upon connection to an electrical power outlet, without re-programming the PowerMax+. You only have to set the HOUSE CODE and the UNIT CODE selectors on the X-10 siren as follows:

**House Code:** Set this selector to the letter that follows, by alphabetical order, the letter that you programmed as a house code for the protected premises. For example, if the programmed house code is "J", set the siren house code selector to "K".

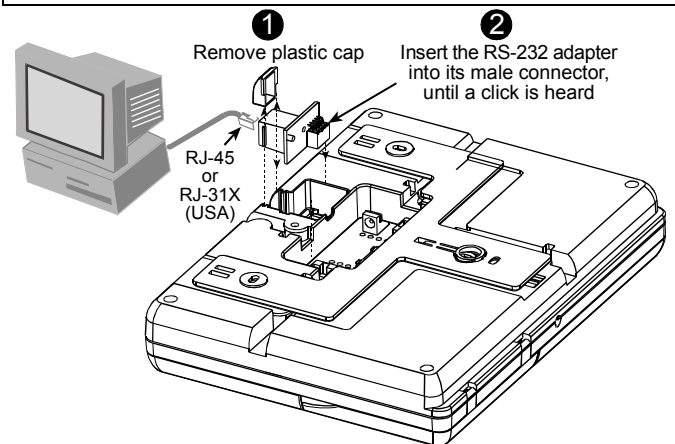
**Note:** If the programmed house code letter is "P" (which is the last programmable letter), select "A" for the siren.

**Unit Code:** The siren will function only if you set the unit code selector to "1".

### 3.11 Connecting PowerMax+ to a Computer

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

**Attention:** For data download from a local computer, the PowerMax+ must be set to the installer mode.



**Figure 18 - Connecting the PowerMax+ to a Computer**

### 3.12 Connecting PowerMax+ to GSM Modem

The GSM unit enables the PowerMax+ system to operate over cellular network. For details regarding the GSM modem features and connections, refer to the GSM Modem installation instructions.

## 4. TESTING PROCEDURES

### 4.1 Preparations

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

READY HH : MM

If the display 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, refer to figure 9 in 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.

The display should respond as follows:

ARMING AWAY



PLEASE EXIT NOW

The exit delay beeps will begin.

Press the keyfob unit's DISARM (⏏) key. The ARM indicator should extinguish, the announcement "Disarm, ready to arm" should be heard 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 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 (\*) 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 (\*) 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 of this manual is very useful for this test.

Go over the table in **Appendix B** column by column. If, for instance, the "BY ARM AWAY" column has "X"s marked in the rows pertaining to units 1, 5 and 15 - then arm AWAY 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 "BY TIMER" and "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 for test timed activation is to select the ninth item in the installer's menu ("10. 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                    EMERGENCY

↶ (alternating) ↷

VIOLATED

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 the test, to prevent false alarms.

## 5. MAINTENANCE

### 5.1 Dismounting the Control Panel

- A. Release the PowerMax+ unit from its bracket, as shown in figure 2, step 1-5.
- B. Separate the PowerMax+ unit from its bracket.

### 5.2 Replacing the Backup Battery

Replacement and first-time insertion of battery pack is similar (see figure 1).

With fresh battery pack, correct insertion and tightened battery compartment lid, 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 internal fuses that have automatic reset. Therefore, there is no need to replace fuses.

When overcurrent condition occurs, the fuse cuts off the circuit current. Upon fault current being removed, the fuse is automatically reset and allows current flow through the circuit again.

### 5.4 Replacing/Relocating Detectors

Whenever the maintenance work involves replacement or re-location of detectors, you must keep in mind the requirement to provide a 6 dB safety margin for signal reception. **It is therefore mandatory to perform a full diagnostic test according to Section 9 of the Programming Guide.**

**Remember!** A "poor" signal is not acceptable, as stated at the end of the test procedure.



# 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 follower \* 2 = Perimeter \* 3 = Perimeter follower \* 4 = Delay 1 \* 5 = Delay 2 \* 6 = 24 h silent \* 7 = 24 h audible \* 8 = Fire \* 9 = Non-alarm \* 10 = Emergency \* 11 = Gas \* 12 = Flood.

**Zone Locations:** Note down the intended location for each detector. When programming, you may select one of 26 available zone names (plus 5 custom zone names that you can add - see Figure 3 in the Programming Guide - Define Zones).

\* Zones 29 & 30 only are hardwired zones.

## A2. Keyfob Transmitter List

Transmitter Data			AUX button Assignments		
No.	Type	Holder	Status or Arming "instant"	PGM Control	X-10 Unit Control
1			Indicate the desired function (if any) – see par. 4.17 (Aux button) in the programming guide.  System status <input type="checkbox"/> Arming "instant" <input type="checkbox"/>	Indicate whether this output will be activated or not – see Section 7 in the programming guide  Yes <input type="checkbox"/> No <input type="checkbox"/>	Mark the boxes of the X-10 units to be activated - see Section 7 in the programming guide.  1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/>
2					
3					
4					
5					
6					
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 and PGM Output Assignments

Unit No.	Controlled Appliance	ON by arm HOME	ON by arm AWAY	ON by disarm	ON by Memory	ON by Delay	ON by Keyfob	ON by Timer		ON by Zone No.			ON by line fail
								ON Time	OFF Time	a	b	c	
1													-
2													-
3													-
4													-
5													-
6													-
7													-
8													-
9													-
10													-
11													-
12													-
13													-
14													-
15													-
PGM													

# Federal Communications Commission (FCC) Statements

## FCC PART 15 STATEMENT

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

**WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

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.

Alarm dialing equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialing equipment must be connected to a properly installed RJ31X jack that is electrically in series with and ahead of all other equipment attached to the same telephone line. If you have any questions concerning these instructions, you should consult your telephone company or a qualified installer about installing the RJ31X jack and alarm dialing equipment for you.

## Supplier Declaration of Conformity (SdoC)

Visonic, located at 30, 24 Habarzel street, Tel Aviv 69710, Israel, hereby certifies that the Wireless Alarm Control Panel model "PowerMax+", bearing the labeling identification number US:VSOAL03BPOWERMAX+ complies with the Federal Communication Commission's ("FCC") Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments ("ACTA") adopted technical criteria: TIA/EIA/IS-968, Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network, July 2001.

09/10/2002

Yaacov Kotlicki

Chairman

## Declaration of Conformity

In Accordance with R & TTE Directive of 1999/5/EC

We, the undersigned,

Company: <b>Visonic Ltd</b>
Address: <b>24, Habarzel Street. , Tel-Aviv 61220</b>
Country: <b>Israel</b>
Telephone number: <b>+972 3 6456789</b>
Fax number: <b>+972 3 6456788</b>

certify and declare under our sole responsibility that the following equipment:

Type	Product description / Supplementary info
PowerMax +	30 zones fully -supervised Wireless Control Panel (Burglar/Intrusion and smoke Alarm )

is tested and conforms with the following standards:

Standard
EMC ETSI EN 301 489-3 V1.4.1 , Electromagnetic Compatibility and Radio Spectrum Matters (ERM) ; Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz EN 50130-4 (1996)+ A1(1998), Immunity requirements for components of fire, intruder and social alarm systems. Radio EN 300 220-3, V 1.1.1 (2000) RES; Electromagnetic compatibility and Radio Spectrum Matters (ERM); Short range devices (SRD); Radio equipment to be used in the 25 MHz to 1000 Mhz frequency range with powerlevels ranging up to 5000mW. Part 3 : harmonized EN covering essential requirements under article 3.2 of the R&TTE directive. EN 60950+ Am1(93), Am2(93), Am3(95), Am4(97). Safety of Information technology equipment including electrical business equipment pr EN 50131-5-3 (2003) Alarm systems-Intrusion systems Part 5-3 : Requirements for interconnections equipment using radio frequency techniques

and therefore complies with the essential requirements and provisions of the **Directive 1999/5/EC** of the European Parliament and of the council of 9 march 1999 on Radio equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity and Annex III (Conformity Assessment procedure referred to in article 10(4)).

The following Notified Bodies and/or independent laboratories have been consulted in the Conformity Assessment procedure:

Notified Body number/Lab	Name and address
	Hermon Labs, Rakevet Ind. Zone , PoBox 23 Binyamina 30550 Israel

The technical documentation as required by the Conformity Assessment procedure is kept at the following address:

Company: <b>Visonic Ltd.</b>
Address: <b>Fraser Road</b>
<b>Priory Business Park</b>
<b>Bedford. MK44 3WH</b>
Country: <b>UK</b>
Telephone number: <b>0870 7300800</b>
Fax number: <b>0870 7300801</b>

### 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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ISRAEL