

TOWER-30AM PG2 / TOWER-30AM K9-90 PG2

Wireless PowerG High-security Mirror Detector with Anti-
masking



Visonic

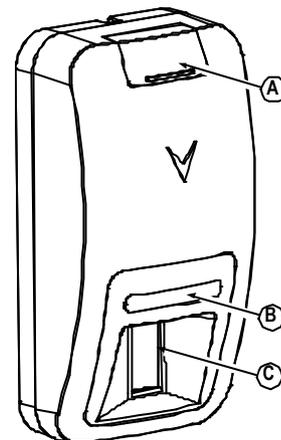
Installation Instructions

1. INTRODUCTION

The TOWER-30AM PG2 and TOWER-30AM K9-90 PG2 (pet-immune) are 2-way, microprocessor-controlled, wireless digital mirror PIR detectors which include the following features:

- For use with all PowerMaster® control panels (version 13 and higher).
- Adaptive Active Infra-Red Anti-Masking technology providing the most advanced reliable protection against intentional masking attempts (patent pending)
- Includes a fully supervised PowerG transceiver.
- Incorporates patent pending black mirrors for extremely high white light immunity.
- Advanced elliptical / parabolic mirror technology (patented)
- V-slot® optic technology (patented) for improved robustness, anti-vandalism and for very high reliability.
- Creep zone protection
- TOWER-30AM K9-90 PG2 can distinguish between human beings and pets weighing up to 40 kg (90 lb).
- The advanced True Motion Recognition™ algorithm (patented) allows distinguishing between the true motion of an intruder and any other disturbances which may cause false alarms.
- Built-in link quality indicators; no need for the installer to physically approach the control panel thus making installation faster and easier.
- No vertical adjustment is needed.
- Motion event counter determines whether 1 or 2 consecutive motion events will trigger an alarm.
- Automatic termination of walk-test after 15 minutes.
- Microprocessor-controlled temperature compensation.
- Sealed chamber protects the optical system.
- Front and back tamper protection.
- Self-test

Notes: 1. The pet immunity and creep zone protection were not evaluated by UL.
2. For CE installations, the pet immunity was not evaluated by DNV.



- A. Screw cover
B. LED
C. PIR optical window

Figure 1. General View

2. INSTALLATION

2.1 General Guidance (see Fig. 2)

1. Keep away from heat sources.
2. Do not expose to air drafts.
3. Do not install outdoors.
4. Avoid direct sunshine.
5. Keep wiring away from power cables.
6. Do not install behind partitions.
7. Mount on solid stable surface.

- Installed in accordance with NEC, NFPA 70.
- Installed in accordance with UL 681, Standard for Installations and Classifications of burglar and Holdup Alarm Systems.
- Installed in accordance with C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations

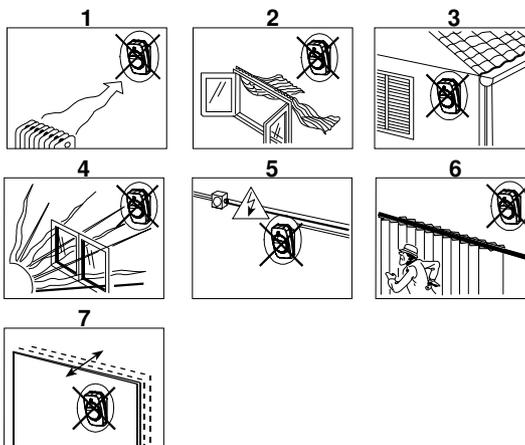


Figure 2. General Guidelines



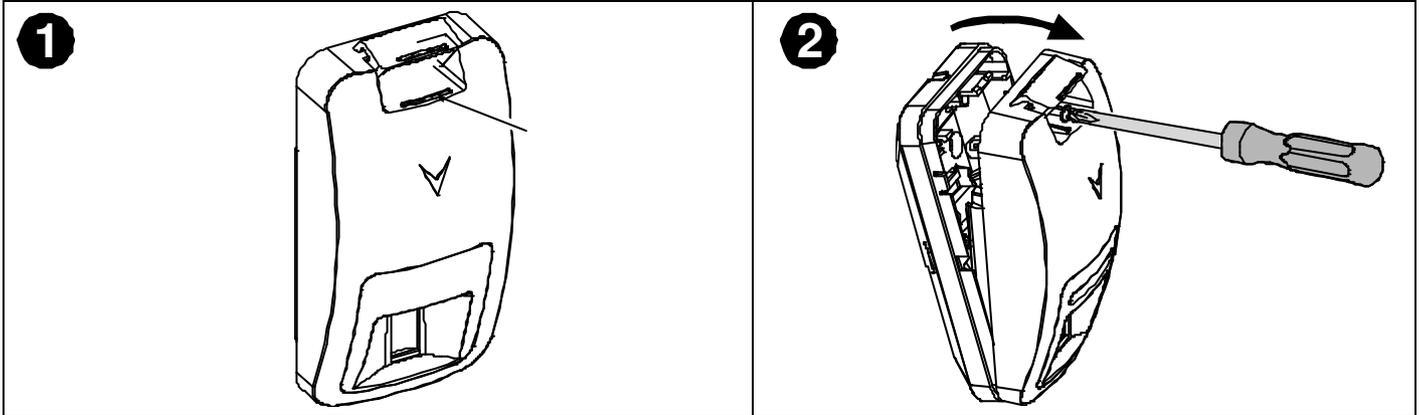
Important! The detector is immune to 40 kg (90 lb) animals moving on the floor or climbing on furniture as long as the activity takes place below 1 m (3 ft). Above the 1 m (3 ft) height limit, the detector is immune to 9 kg (20 lb) pets, but the pet immunity will decrease as the pet gets closer to the detector. It is therefore recommended to select a mounting location that minimizes potential close proximity of animals.

WARNING! To comply with FCC and IC RF exposure compliance requirements, the PIR detector should be located at a distance of at least 20 cm from all persons during normal operation. The antennas used for this product must not be co-located or operated in conjunction with any other antenna or transmitter

2.2 Mounting

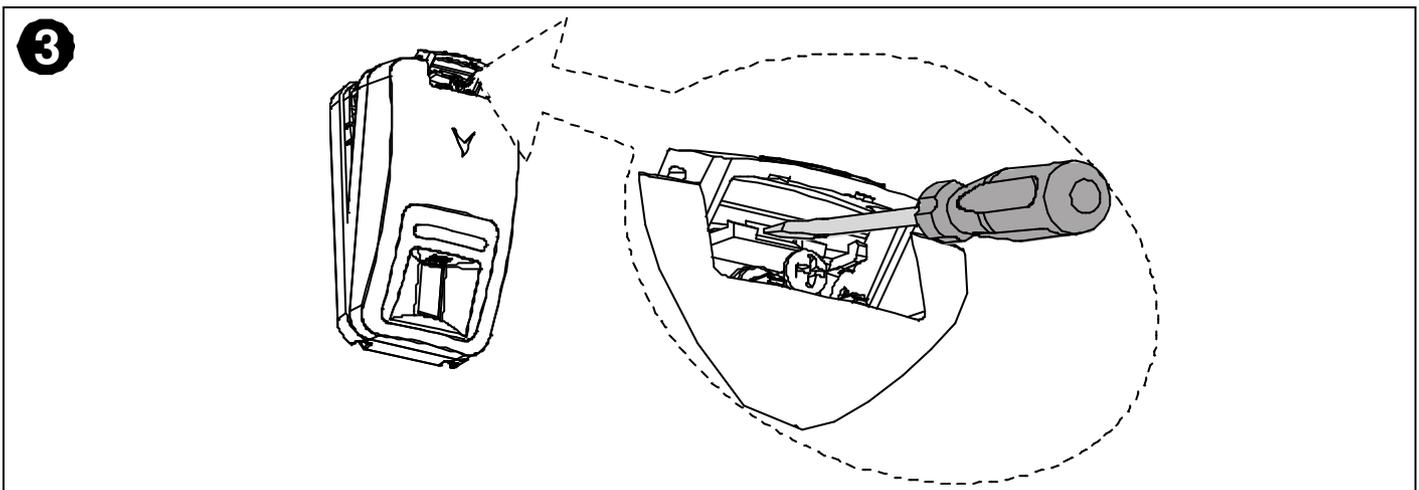
Notes:

1. Mount the detector so that its orientation is perpendicular to the expected intrusion path.
2. For installations of detector at 2m high, Dead zone is 2ft at 0m high and 0.5ft at 1.5m high.



1. On the indicated location, lift the screw cover upward using your thumb.

2. Release the screw and open the cover in the direction shown by the arrow.



3. Insert a screwdriver into the slot and then push inward to separate the base from the cover.

Note: For the desired detector's range and height, use mounting holes (a) or (b), as specified in the table.

(A)						(B)
ft	m					
10	3.0	b	b	b	b	<div style="display: flex; justify-content: space-around;"> 15 30 45 60 ft </div> <div style="display: flex; justify-content: space-around;"> 6 9 12 15 m </div>
9	2.7	b	b	b	a	
8	2.4	b	b	a	a	
7	2.1	b	b	a	a	
6	1.8	b	a	a	a	

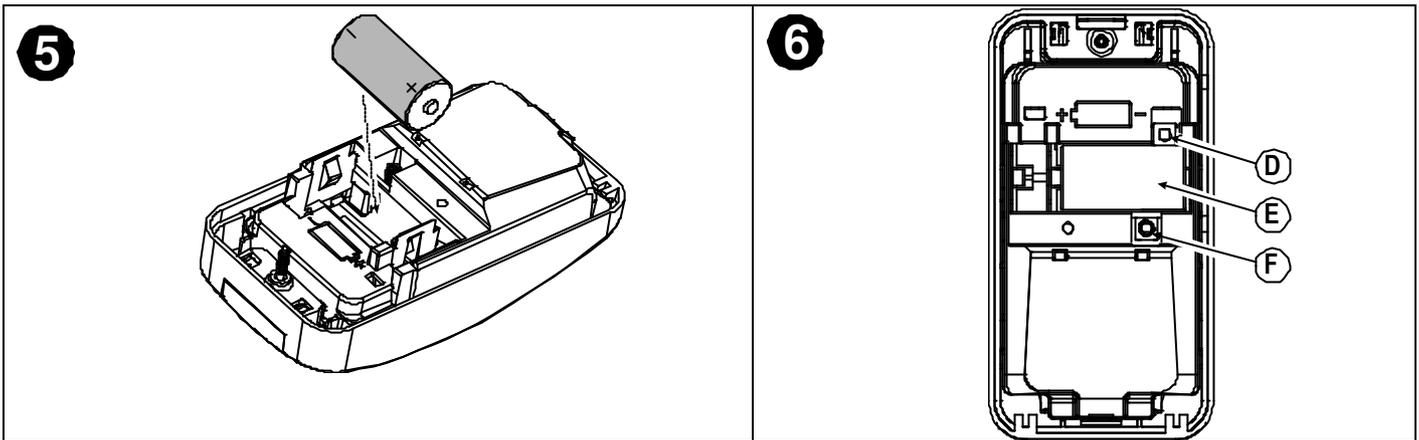
a – upper surface (without downward tilt)
 b – lower surface (with downward tilt)

c – Break-away base segment (shaded)

4. Set the desired detector range.

- A. Mounting height
 B. Coverage range

C. Break-away base segment (shaded)



5. Insert battery while observing polarity.
 D. Enroll button (use a screwdriver to press the recessed button)

E. Battery
 F. Tamper switch

CAUTION! THE BACK TAMPER SWITCH WILL NOT PROTECT THE UNIT UNLESS THE BREAK-AWAY BASE SEGMENT IS SECURED TO THE WALL WITH AT LEAST ONE SCREW.

CAUTION! RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERY ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

Note: Back Tamper must be enabled for UL installations.

Figure 3. Mounting

2.3. Enrollment

Refer to the PowerMaster control panel's Installer Guide and follow the procedure under the "02:ZONES/DEVICES" option of the Installer Menu. A general description of the procedure is provided in the following flow chart.

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Enter the Installer menu and select "02:ZONES/DEVICES"	Select "ADD NEW DEVICE" Option See Note [1]	Enroll the device or Enter the device ID	Select the desired Zone Number	Configure Location, Zone Type & Chime Parameters	Configure the Detector
					See Note [2]

Notes:

[1] If the detector is already enrolled you can configure the detector parameters via the "Modify Devices" option – see Step 2.

[2] Select the "Device Settings" option and refer to section 2.4 to configure the detector parameters.

2.4. Configuring the Detector Parameters

Enter the **DEVICE SETTINGS** menu and follow the configuration instructions for the TOWER-30AM PG2 PIR detector as described in the following table.

Option	Configuration Instructions
Alarm LED	Define whether or not the alarm LED indication will be activated. Optional settings: LED ON (default) and LED OFF.
Event Counter	Define whether an alarm will be activated upon continued motion (low sensitivity) or upon a single alarm event (high sensitivity). Optional settings: LOW sensitive (default) and HIGH sensitive.
DISARM Activity	Define whether or not to set the activity time during disarm. Optional settings: NOT Active (default), YES - no delay, YES + 5s delay, YES + 15s delay, YES + 30s delay, YES + 1m delay, YES + 2m delay, YES + 5m delay, YES + 10m delay, YES + 20m delay and YES + 60m delay.
ANTI MASKING-AM	Define the activity and the sensitivity level of the anti-masking. Optional settings: LOW sensitive (default), HIGH sensitive and disabled.

3. LOCAL DIAGNOSTICS TEST

NOTE: Run a diagnostic test at least once a year to ensure that the detector is working correctly.

- A. Separate the base from the cover (see Fig. 3).
- B. Put back the cover to return the tamper switch to its normal (undisturbed) position, and then secure the front cover to the base with the case closure screw.
- C. The TOWER-30AM PG2 will enter a 2 min. stability period. During this time the red LED blinks.
- D. Walk-test the coverage area - see Figure 4. Walk across the far end of coverage pattern in both directions; the red LED lights each time your motion is detected followed by 3 LED blinks.

The following table indicates the received signal strength indication.

LED response	Reception
Green LED blinks	Strong
Orange LED blinks	Good
Red LED blinks	Poor
No blinks	No communication

IMPORTANT! Reliable reception must be assured. Therefore, "poor" signal strength is not acceptable. If you receive a "poor" signal from the detector, re-locate it and re-test until a "good" or "strong" signal strength is received (in regions requiring UL-compliant installation, only "strong" signal strength is permitted).

1. For detailed Diagnostics Test instructions refer to the control panel Installer Guide.

2. For UL/CUL installations, the test result must be "Strong".

4. EVENT INDICATIONS

LED Indications	Event
Red LED blinks	Stabilization (warm-up 120 sec)
Red LED ON 0.2 sec.	Tamper open / close
Red on 2 sec.	Intruder alarm
Yellow LED on	AM detection – diagnostic mode
Yellow LED blinks slowly (0.2 sec. ON, 30 sec. OFF)	AM detection – Normal mode
Yellow and red LED blink simultaneously (0.2 sec. ON [both], 0.2 sec. OFF)	Self-test failure – Diagnostic mode
Yellow and red LED blink simultaneously slowly (0.2 sec. ON [both], 30 sec. OFF)	Self-test failure – Normal mode

5. SPECIAL COMMENTS

Even the most sophisticated detectors can sometimes be defeated or may fail to warn due to: DC power failure / improper connection, malicious masking of the lens, tampering with the optical system, decreased sensitivity in ambient temperatures close to that of the human body and unexpected failure of a component part.

The above list includes the most common reasons for failure to detect intrusion, but is by no means comprehensive. It is therefore recommended that the detector and the entire alarm system be checked weekly, to ensure proper performance.

An alarm system should not be regarded as a substitute for insurance. Home and property owners or renters should be prudent enough to continue insuring their lives and property, even though they are protected by an alarm system.

6. COMPLIANCE WITH STANDARDS



Europe (CE): EN 50131-1, EN 300220, EN 301489, EN 60950, EN 50130-4, EN 50130-5, EN 50131-2-2 Grade 3 Class II, EN 50131-6

The TOWER-30 AM PG2 and TOWER-30 AM K9-90 PG2 are compatible with the RTTE requirements - Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999.

Certified by the Dutch testing and certification body *Telefication BV* to the following standards : EN 50131-2-2, EN 50131-6, EN 50131-5-3, EN 50130-4, and EN 50130-5.

Telefication BV has certified only the 868 MHz variant of this product.

UK: This product is suitable for use in systems installed to conform to PD6662:2010 in accordance with EN 50131-2-2 security Grade 3 and environmental Class 2. DD243 and BS8243

USA: CFR 47 Part 15 (FCC)

Canada: RSS 210

The Power G peripheral devices have two- way communication functionality, providing additional benefits as described in the technical brochure. This functionality has not been tested to comply with the respective technical requirements and should therefore be considered outside the scope of the product's certification.

According to EN 50131-1:2006 and A1:2009, this equipment can be applied in installed systems up to and including Security Grade 2.

Class II

EN 50131-1 Security Grade

EN 50131-1 Environmental Class

FCC Compliance Statement

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 that supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

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.

This device complies with FCC Rules Part 15 and with Industry Canada license-exempt RSS standard(s). Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The technical documentation as required by the European Conformity Assessment procedure is kept at:
UNIT 6 MADINGLEY COURT CHIPPENHAM DRIVE KINGSTON MILTON KEYNES MK10 0BZ. TEL.: +44(0)845 0755800 FAX: +44(0)845 0755801



W.E.E.E. Product Recycling Declaration

For information regarding the recycling of this product you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. This product is not to be thrown away with everyday waste.
Directive 2002/96/EC Waste Electrical and Electronic Equipment.

APPENDIX: SPECIFICATIONS

GENERAL

Detector Type
Mirror Data

Dual element low-noise pyroelectric sensor

No. of Beam Elements:

18x3=54 far parabolic mirror segments

Note: Window material is High Density Polyethylene (HDPE). The window is part of the Enclosure Cover (Item 1).

15 m (49 ft) / 90°

Max. Coverage

- A. Horizontal view
- B. Vertical view

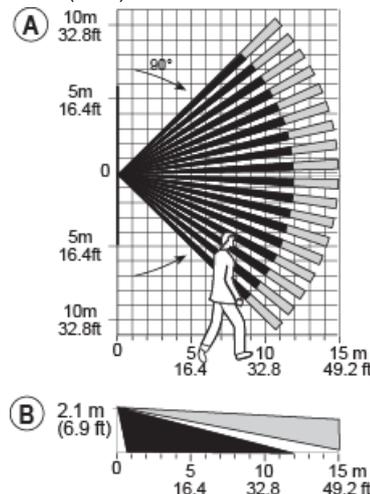


Figure 4. Coverage Pattern & Walk-test

Up to 40 kg (90 lb)

Pet Immunity (only)

ELECTRICAL

Power Supply
Internal Battery

Type C

3V Lithium battery, type CR-123A or equivalent (**optionally can be used type CR17450**)

Notes:

1. Use only the above battery type.
2. For UL installations use Gold Peak (GP) CR123A only.

Nominal Battery Capacity
Low Battery Threshold
Battery Life (for typical use)

1450 mA/h (**2400mA/h for optional CR17450**)
2.45 V
6.5 years

FUNCTIONAL

True Motion Event Verification
Alarm Period

2 remote selections - 1 (OFF) or 2 (ON) motion events
2 seconds

WIRELESS
Frequency Band (MHz)
Communication Protocol
Supervision
Tamper Alert

Europe and rest of world: 433-434, 868-869 **USA:** 912-919
PowerG
Signaling at 4-min. intervals
Reported when a tamper event occurs and in any subsequent message, until the tamper switch is restored

MOUNTING
Height
Installation Options
ACCESSORIES

1.8 – 3.0 m (6 - 10 ft).
Surface or corner
BR-1: Surface mounted swivel bracket, adjustable 30° down and 45° left/45° right.
BR-2: BR-1 with a corner adapter
BR-3: BR-1 with a ceiling adapter

Notes:

1. *UL did not evaluate the product with the use of the BR brackets.*
2. *The mounting bracket was not tested and not certified according to Belgium TO14A requirements.*

ENVIRONMENTAL
RFI Protection
Operating Temperatures

>20 V/m up to 2000 MHz, excluding inband frequencies
-10°C to 50°C (14°F to 122°F) indoor

Note: *UL tested 0°C to 49°C*
-20°C to 60°C (-4°F to 140°F)

Storage Temperatures
Humidity

Average relative humidity of up to approximately 75% non-condensing. For 30 days per year the relative humidity may vary between 85% and 95% non-condensing
Note: *For UL installations, relative humidity is 85%.*

PHYSICAL
Size (H x W x D)
Weight (with battery)
Color

115 x 60 x 48 mm (4-1/2 x 2-5/16 x 1-15/16")
90 g (3 oz).
White

PATENTS

U.S. Patents 5,693,943 • 6,211,522 • D445,709 (another patent pending)

WARRANTY

Visonic Limited (the "Manufacturer") warrants this product only (the "Product") to the original purchaser only (the "Purchaser") against defective workmanship and materials under normal use of the Product for a period of twelve (12) months from the date of shipment by the Manufacturer.

This Warranty is absolutely conditional upon the Product having been properly installed, maintained and operated under conditions of normal use in accordance with the Manufacturers recommended installation and operation instructions. Products which have become defective for any other reason, according to the Manufacturers discretion, such as improper installation, failure to follow recommended installation and operational instructions, neglect, willful damage, misuse or vandalism, accidental damage, alteration or tampering, or repair by anyone other than the manufacturer, are not covered by this Warranty.

The Manufacturer does not represent that this Product may not be compromised and/or circumvented or that the Product will prevent any death and/or personal 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. The Product, properly installed and maintained, only reduces the risk of such events without warning and it is not a guarantee or insurance that such events will not occur.

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.

THE MANUFACTURER SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OR FOR LOSS, DAMAGE, OR EXPENSE, INCLUDING LOSS OF USE, PROFITS, REVENUE, OR GOODWILL, DIRECTLY OR INDIRECTLY ARISING FROM PURCHASER'S USE OR INABILITY TO USE THE PRODUCT, OR FOR LOSS OR DESTRUCTION OF OTHER PROPERTY OR FROM ANY OTHER CAUSE, EVEN IF MANUFACTURER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

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, **THE MANUFACTURER'S MAXIMUM LIABILITY (IF ANY) 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.

When accepting the delivery of the Product, the Purchaser agrees to the said conditions of sale and warranty and he recognizes having been informed of.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so these limitations may not apply under certain circumstances.

The Manufacturer shall be under no liability whatsoever arising out of the corruption and/or malfunctioning of any telecommunication or electronic equipment or any programs.

The Manufacturers obligations under this Warranty are limited solely to repair and/or replace at the Manufacturer's discretion any Product or part thereof that may prove defective. Any repair and/or replacement shall not extend the original Warranty period. The Manufacturer shall not be responsible for dismantling and/or reinstallation costs. To exercise this Warranty the Product must be returned to the Manufacturer freight pre-paid and insured. All freight and insurance costs are the responsibility of the Purchaser and are not included in this Warranty.

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. This Warranty is exclusive to the original Purchaser and is not assignable.

This Warranty is in addition to and does not affect your legal rights. Any provision in this warranty which is contrary to the Law in the state or country where the Product is supplied shall not apply.

Warning: The user must follow the Manufacturer's installation and operational instructions including testing the Product and its whole system at least once a week and to take all necessary precautions for his/her safety and the protection of his/her property.

1/08



EMAIL: info@visonic.com
INTERNET: www.visonic.com

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