

# TOWER 20-AM MCW

Outdoor Wireless Octa-QUAD™ Mirror Detector with Anti-Mask



Visonic®

Installation Instructions

## 1. INTRODUCTION

### Detector's Features

- Patented 8 independent quad PIR detectors (Octa-QUAD™) operating in true Quad configuration with true motion recognition (TMR) processing for each of the 8 PIR detectors and central motion processing - can distinguish between a moving intruder and moving trees and bushes.
- Advanced Obsidian Black Mirror™ optics (patent pending).
- Smart protection against snow, rain, dust, wind and direct sunlight.
- Tamper protection prevents opening and removal from wall.
- Alarm LED is visible in sunlight.

- Day & night or night only settings.
- Robust housing with recessed window.
- Smart anti masking can distinguish between masking spray and rain.
- Immunity to pets weighing up to 18 Kg (40lb), not pet alley.
- Built in swivel bracket.

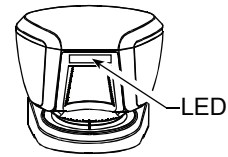


Figure 1 – TOWER-20 AM MCW

## 2. SPECIFICATIONS

### OPTICAL

**Black Mirror Max. Coverage:** At least 12 meters (40 ft) / 90°

**Detector Technology:** 8 independent quad PIR detectors operating in true Quad configuration.

**Pet-Immune:** Up to 18Kg (40lb.)

### ELECTRICAL

**Input Power:** Two 3V CR123A Lithium batteries.

**Caution!** Risk of explosion if battery is replaced by an incorrect type. Dispose of used battery according to the manufacturer's instructions.

**Battery Life:** 3 years (for typical use).

### WIRELESS

**Frequency (MHz):** 315, 433.92, 868.95.

**Communication Protocol:**

PowerCode

### MOUNTING

**Mounting Type:** Wall mounting

**Mounting Height:** 1.5 - 3.0 meters (5 - 10 ft)

**Horizontal Adjustment:** -45° to +45°, in 5° steps

**Vertical Adjustment:** 0° to -10°, in 2.5° steps

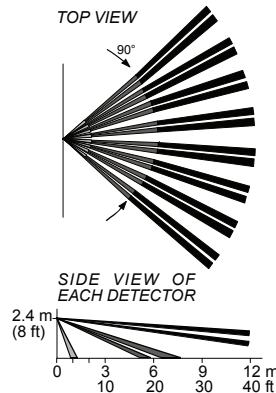


Fig. 2 - Coverage pattern

### ENVIRONMENTAL

**Operating Temperature:** -35°C to 60°C (-31°F to 140°F)

**Storage Temperature:** -35°C to 60°C (-31°F to 140°F)

**Humidity:** 95% max.

**White Light Immunity:** Above 25000 lux

### PHYSICAL

**Dimensions** (height x length x width: 157x147x124mm (6-3/16 x 5-13/16 x 4-7/8").

**Weight:** 600g (21 oz)

**Color:** white or gray

### STANDARDS COMPLIANCE

**Europe 868.95, 433.92 MHz:** EN 50130-4, EN 60950, EN 300220, EN 301489, EN 50130-5. Environmental class IV. IP 55.

**US Patents:** 7250605, 6818881, 5693943. Other patents pending.

**USA 315 MHz:** CFR 47 part 15.

**Canada:** RSS-210

This device complies with Part 15 of the FCC Rules and RSS-210 of Industry and Science Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with the essential requirements and provisions of Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio and telecommunications terminal equipment.

## 3. INSTALLATION

### 3.1 DIP Switches Setup

Remove the 2 detector's bottom covers (see Figure 3, steps 1-5) to gain access to the DIP switches. Set the DIP switches according to Table 1:

Table 1 – DIP Switch Setup

DIP SW #	Function	Description	Default
1	Alarm LED OFF/ON	<b>OFF:</b> Motion and masking alarm LED is disabled (OFF). <b>ON:</b> Motion and masking alarm LED is enabled (ON).	ON
2	False alarm immunity	<b>ON:</b> Highest false alarm protection. Recommended for harsh environment. <b>OFF:</b> Fast response.	ON
3	AM ON /OFF	<b>ON:</b> AM enabled <b>OFF:</b> AM disabled	ON
4	Masking event reported as Tamper	<b>OFF:</b> Masking event reported to panel as MASKING <b>ON:</b> Masking event reported to panel as TAMPER and MASKING*	OFF

\* Use ON when using "old" PowerMax control panels or when using MCR-308 if you desire masking to pass as a TAMPER event at the control panel.

### 3.2 Battery Insertion (Figure 3)

It is recommended to perform the first batteries insertion on a desk. Upon battery insertion, the LED will flash for 60 seconds and then the detector will enter into 15 minutes walk-test mode.

### 3.3 Enrolling

Enroll the detectors into the alarm system's memory as described in the alarm system installer guide – ENROLLING section. When you are instructed to initiate transmission from the detector. Activate the

tamper switch, i.e. open the detector bottom cover (see Fig. 3, steps 1 - 3) and then close it.

### 3.4 Installation

**A.** Bracket installation (see figure 4) – firmly fix the bracket on a stable wall or pillar. The orientation of the fixed bracket should be as parallel as possible to the surveyed ground surface.

**B.** Adjust detector's horizontal and vertical angles (see Fig. 5), according to the surveyed ground surface. The vertical angle indicator position for various installation height and coverage distance combinations is detailed in Table 2 (the information refers to a relatively flat surveyed area. however, in any case the vertical adjustment should be verified by walk-test).

**C.** Fasten the detector to the bracket (see Fig. 4 step 4).

Table 2 - Vertical Adjustment Reference

Mounting Height	Coverage Distance					
	2m / 6.7ft	4m / 13ft	6m / 20ft	8m / 26ft	10m / 33 ft	12m / 39 ft
3.0m / 10 ft	-	1	2	2	3	3
2.5m / 8 ft	1	1	2	3	4	4
2.0m / 7 ft	1	2	3	4	5	5
1.5m / 5 ft	2	3	4	5	-	-

### 3.5 Test

**A.** Set the detector in Walk-Test mode, as follows:

Open the detector bottom cover (see Fig. 3, steps 1 - 3) and then press and release the tamper switch. The LED will flash for 60 seconds and then the detector will enter into 15 minutes walk-test mode.

**Note:** The detector automatically enters into 15 minutes walk-test mode after battery installation or Tamper switch recovery.

**B.** Adjust the detector in the horizontal plane to cover the required protected area.

C. Walk into the detectors field of view. Adjust the vertical adjustment to receive the maximum number of detections when crossing the entire 90° pattern. Verify that each time your motion is detected the LED blinks after you cross one Quad PIR and the LED will then light steadily for 2 seconds as you cross the next adjacent Quad PIR. The LED will light according to the manner of walk. For example, walking rapidly across the detector's entire field of view will cause the LED to light constantly.

The LED blink, described above, is operative only in Walk-Test mode. Upon each full detection (LED lights steadily for 2 seconds) the control panel receives the alarm. If required, perform the detector's horizontal / vertical adjustments (see section 3.4 and Figure 5).

**Important!** Instruct the user to perform walk test at least once a week, to verify proper operation of the detector.

D. Place a piece of cardboard on the detector's front side, to deliberately mask the optical window. After 2 minutes, the LED should flash (see Table 3 below) and the alarm control panel should receive the masking alarm.

E. Remove the masking from the detector's front side. The LED should extinguish or flash after about 30 sec (see Table 3).

**Table 3 - LED operation**

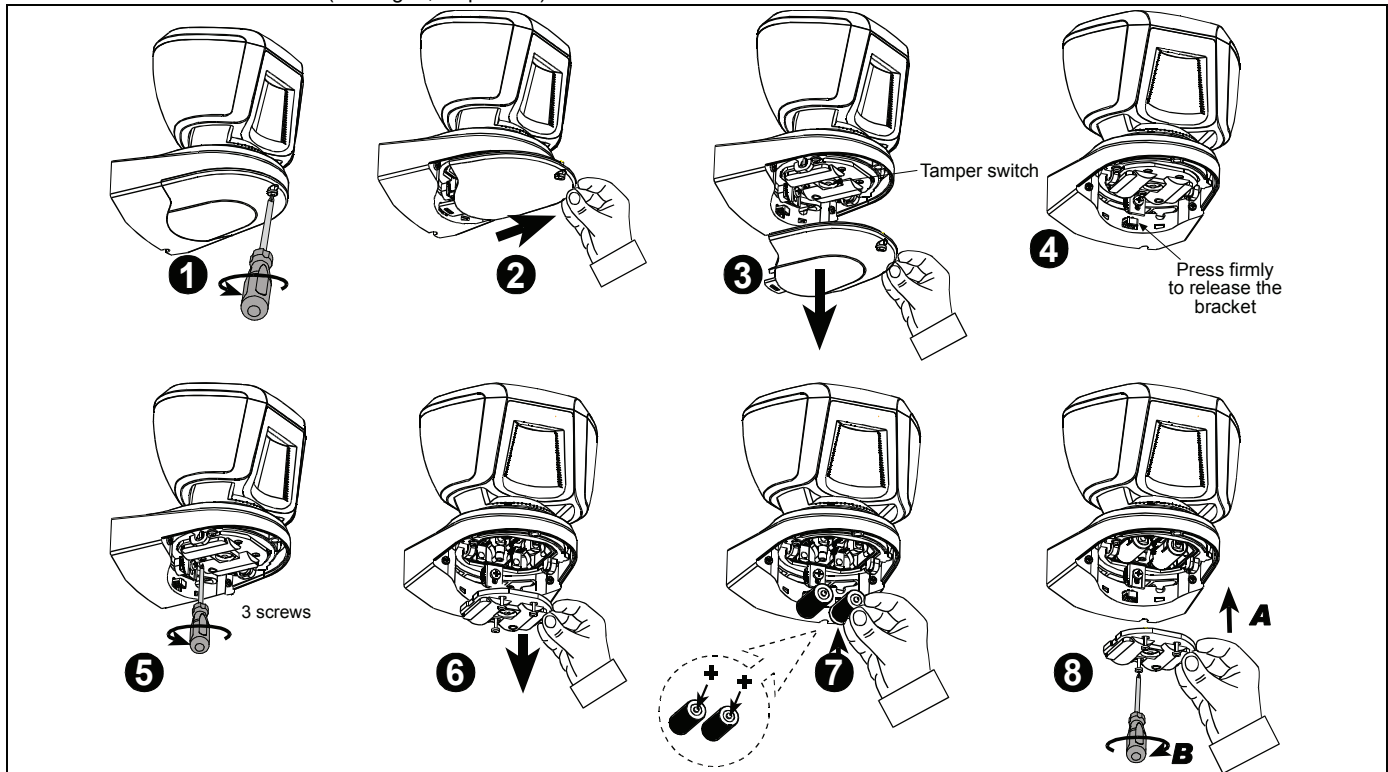
Event	LED Operation	
	Test mode (15 min.)	Normal mode (*)
First 60 sec after battery insertion, or closing the detector cover	fast flashing	
Mask detection	fast flashing	fast flashing 5 sec.
Mask remove	OFF	fast flashing 5 sec.
PIR detection	2 sec. ON	2 sec. ON after first detection(**)

**Notes:**

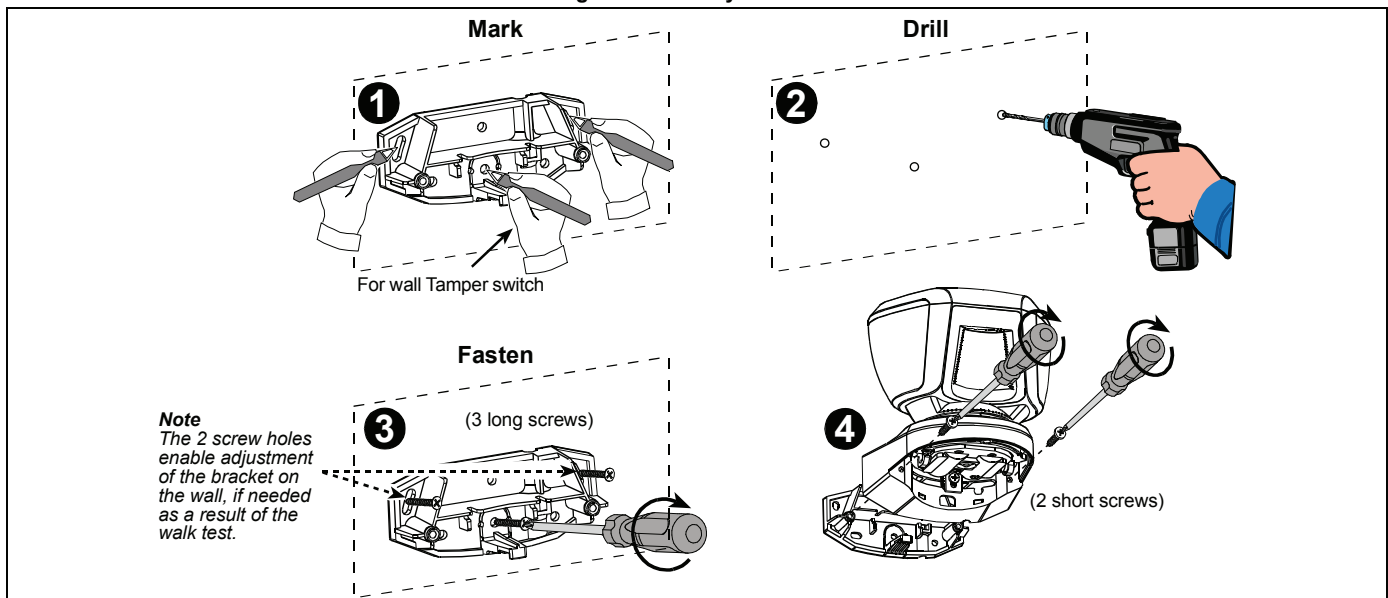
\* LED ON/OFF control by DIP switch #1 (see par. 3.1).

\*\* After detection, the detector disables itself to save battery power. It reverts to the ready state if there is no subsequent detection throughout the following 2-minute period.

**3.6 Cover Closure** (see Fig. 5, steps 7-10)



**Figure 3 - Battery Insertion**

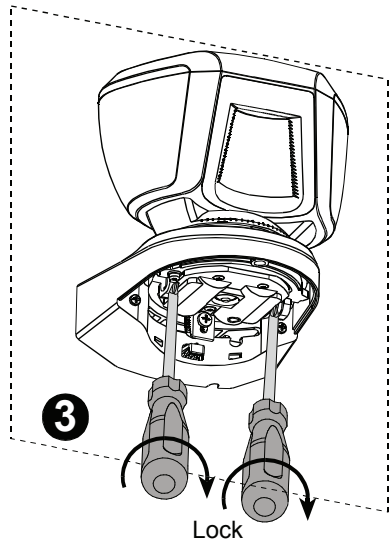
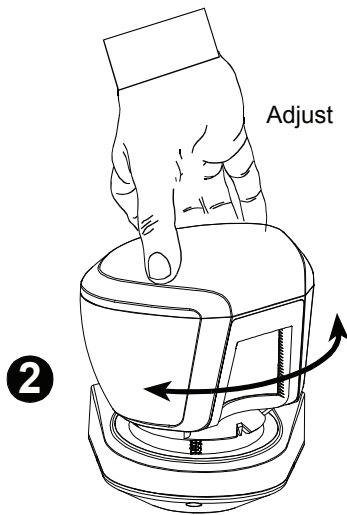
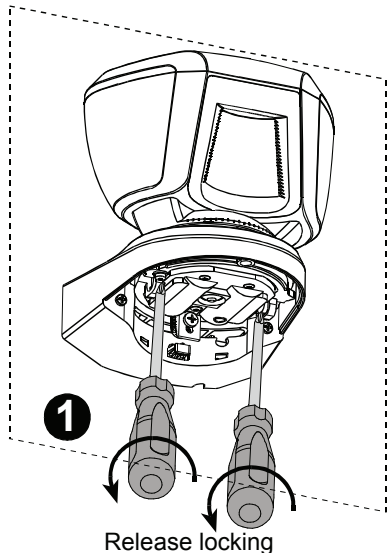


**Note**  
The 2 screw holes enable adjustment of the bracket on the wall, if needed as a result of the walk test.

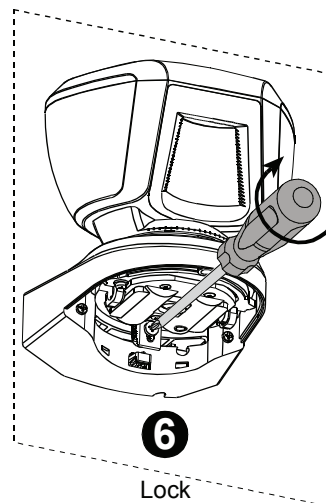
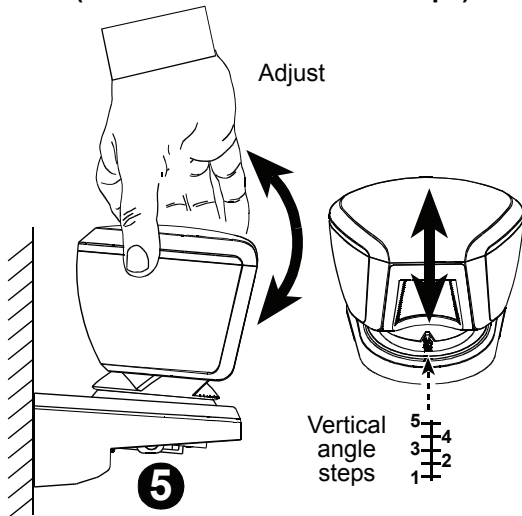
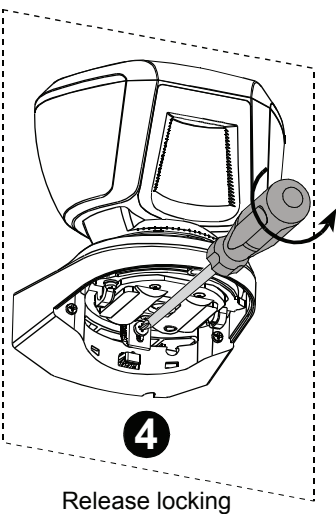
**Figure 4 - Installation**

### HORIZONTAL ADJUSTMENT

(-45° to +45°)



### VERTICAL ADJUSTMENT (0° to -10° in 2.5° clicks / steps)



### COVER CLOSURE

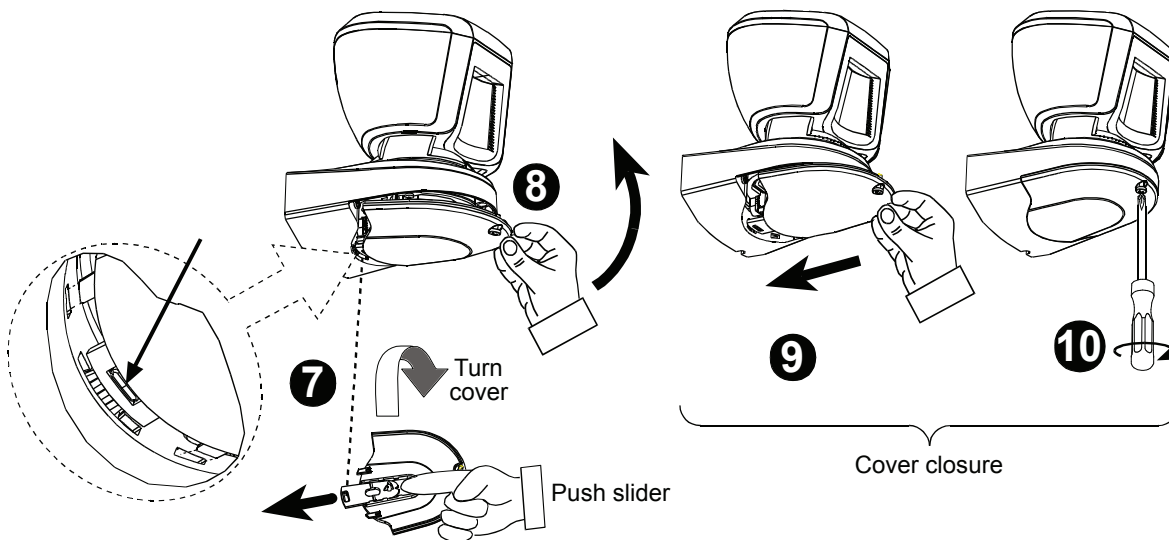


Figure 5 - Adjustment and Cover Closure

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

## 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.

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### 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.

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. Telephone number: 0870 7300800, Fax number: 0870 7300801



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