D-302893

English

NEXT CAM PG2, NEXT CAM K9-85 PG2

PowerG, Wireless, [Pet-tolerant] PIR Motion detector with Integrated Camera

Visonic

Installation Instructions

1. INTRODUCTION

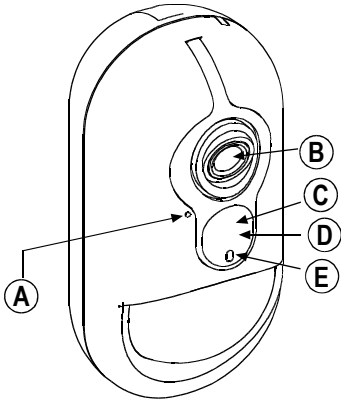
The Next CAM PG2 / Next CAM K9-85 PG2 is a 2-way, microprocessor-controlled, wireless digital PIR detector with integrated camera and microphone for alarm verification. Activated upon PIR detection or upon demand, the Next CAM PG2 / Next CAM K9-85 PG2 sends clear images with optional audio to the Monitoring Station. It thus enables accurate status assessment of the premises.

The PIR detector's features are as follows:

- For use with all PowerMaster® control panels (version 15 and higher).
- Up to 12 meters (40 ft).
- 90° angle camera overlaps PIR field of view
- 10 meter (33 ft) range in complete darkness overlaps PIR range
- Wall creep zone protection.
- For pet tolerant version - Target Specific Imaging™ (TSI) technology is used for distinction between human beings and pets weighing up to 38 kg (85lb).
- Includes a fully supervised PowerG transceiver.
- True Motion Recognition™ algorithm.
- In Next CAM PG2, 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.
- Temperature compensation.
- Sealed chamber protects the optical system from insects.
- Front cover and back tamper, for improved tamper protection.
- White light protection.

The camera's features are as follows:

- Up to 10 cameras
- Optional audio with images for listen -in
- Images multiplexed from all cameras
- Color and back & white images
- Auto-setup (brightness, contrast)
- Camera tuning by simple walk-test



A. Microphone
B. Camera lens
C. IR LED
D. Light sensor
E. LEDs

Fig. 1. External View

- Day and night CMOS camera, with IR illumination. This allows taking pictures in full darkness without letting the intruder know.
- Instant capture: guarantees capture of fast moving intruder.
- Camera operation modes:
  - Post alarm – pictures are taken after detection by detector.
  - On demand – pictures are taken after a command from the monitoring station.
- An event records 2 images per second. 10-15 images total (can be customized by request)
- Works with repeaters for extended range

Notes:

1. *The camera and the listen-in feature are not to be enabled in UL listed product.*
2. *The pet immunity feature was not evaluated by UL.*
3. *The microphone is not to be enabled in a UL listed product.*
4. *The pet immunity feature is not evaluated and certified by Applica Test & Certification AS.*

2. INSTALLATION

2.1 General Guidance (see Fig. 2)

1. Keep away from heat sources.	7. Mount on solid stable surface.
2. Do not expose to air drafts.	8. Installed in accordance with NEC, NFPA 70.
3. Do not install outdoors.	9. Installed in accordance with UL 681, Standard for Installations and Classifications of burglar and Holdup Alarm Systems.
4. Avoid direct sunshine.	10. Installed in accordance with C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations.
5. Keep wiring away from power cables.	
6. Do not install behind partitions.	

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*

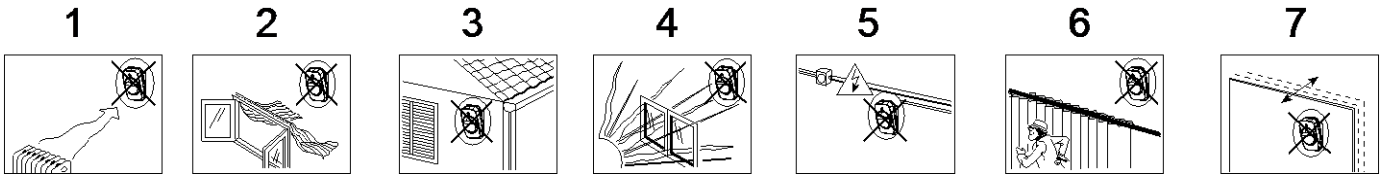


Figure 2. General Guidelines

	Important! The Next CAM K9-85 PG2 detector is tolerant to 38 kg (85 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 tolerant to 19 kg (42 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.

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.

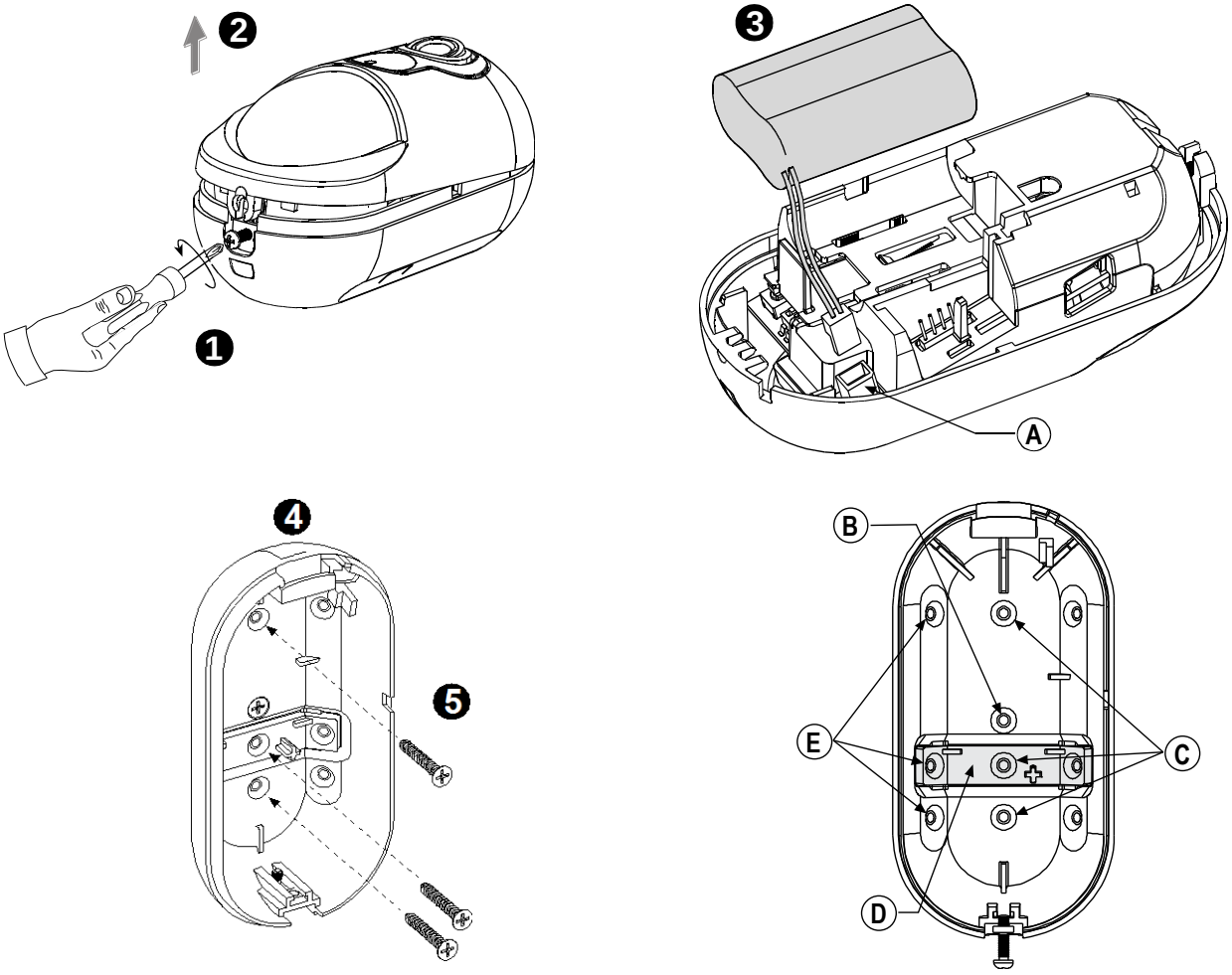


Figure 3a. Mounting on Wall

1. Release screw

2. Remove cover from base

3. Position the battery in the battery holder and insert the battery connector terminal into the battery connector

4. Press the base against the wall at the selected mounting position and mark the drilling points through the mounting holes.

5. Drill 2 holes or 3 holes (for back tamper) and attach the base to the wall using the screws.

A. Battery connector.

B. BR-1 Knockout

C. Mounting knockouts (for surface mounting)

D. Break-away base segment (shaded)

***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.*

***Note:** Back Tamper must be enabled for UL installations.*

E. Mounting knockouts (3 of 6 – for corner mounting).

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

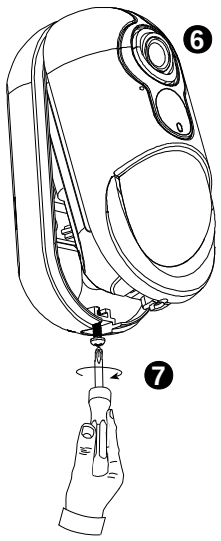


Figure 3b. Final Closure

6. Align the cover with the base.
7. Secure with screw.

2.3. Enrollment

Refer to the PowerMaster 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
02.ZONES/DEVICES ⇨	ADD NEW DEVICES ⇣ MODIFY DEVICES ⇨	ENROLL NOW or ENTR ID:XXX-XXXX ⇨	Z10:Motion Camra ID No. 140-XXXX ⇨	Z10.LOCATION Z10.ZONE TYPE Z10.SET CHIME Z10.DEV SETTINGS	**See Note [2]**
⇨ means scroll ▶▶ and select OK					

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 Next CAM PG2 / Next CAM K9-85 PG2 PIR detector as described in the following table.

Option	Configuration Instructions
Alarm LED	Here you determine whether or not the alarm LED indication will be activated. Optional settings: LED ON (default) and LED OFF.
Event Counter	Here you determine 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	Here you determine 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.
AC POWER Connect	***Note: Not applicable in this version. Do not change this setting!*** Here you determine whether or not to report power failure and restore. Optional settings: NOT connected (default) and Connected to AC.
Image Color	Here you determine whether the image will be in black & white or color. Optional settings: Black & White (default) and Color.

Option	Configuration Instructions
Image Resolution	Here you set the pixel quality of the image. Select 160 x 120 for lower quality or 320 x 240 for higher quality..
	Optional settings: 320 x 240 (default) and 160 x 120**.**
Image Brightness	Here you set the brightness of the image.
	Optional settings: Normal (default), -3, -2, -1, +1, +2 and +3.
Image Contrast	Here you set the contrast of the image.
	Optional settings: Normal (default), -3, -2, -1, +1, +2 and +3.
Mic. setttings	Here you determine whether or not to activate the microphone.
	Optional settings: Disable (default) and Enable.

3. VIDEO VERIFICATION

After enrolling the Next CAM PG2 / Next CAM K9-85 PG2 in the PowerMaster control panel (see section 2.3 "Enrollment") and after performing the required camera configurations through the control panel menus (see PowerMaster Installer Guide, "Configuring Motion Cameras for Video Alarm Verification") the Next CAM PG2 / Next CAM K9-85 PG2 will capture burglary image clips to be sent to the Monitoring Station for Burglary verification once the system is armed and upon occurrence of a burglary alarm.

The camera can also capture images upon occurrence of non-burglary alarms (i.e. Fire, Duress, Emergency and Panic) - see PowerMaster Installer Guide, "Configuring Motion Cameras for Video Alarm Verification".

4. 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. 4).

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 NEXT CAM will enter a 2 min. stability period. During this time the red LED blinks.

D. Walk-test the coverage area - see Fig. 5. 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.

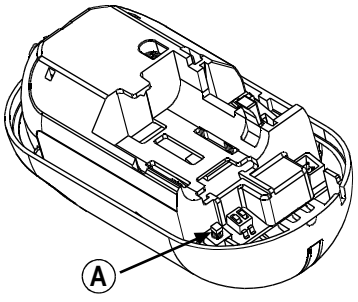
The following table indicates received signal strength indication.

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".*



A. Enroll button

Figure 4. Device enroll button

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

Compliance with Standards

Europe: EN 300 220, EN 301489, EN 50130-4, EN 60950-1, EN 50131-1 Grade 2 Class II. EN 50131-2-2, EN 50131-6.
Hereby, Visonic Ltd. declares that the radio equipment type Next Cam/Next Cam K9 85 is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address: http://www.visonic.com/download-center.
Certified by Norwegian accredited certification body Applica Test & Certification AS in accordance with EN 50131-2-2, EN 50131-6, EN 50131-5-3, EN 50130-4, and EN 50130-5.
Applica T&C has certified only the 868 MHz variant of this product.
USA: FCC Part 15. UL 639
UK: This product is suitable for use in systems installed to conform to PD6662 at Grade 2 and environmental class 2. BS8243.
Canada: RSS 210, ULC-S306-03.
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.

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

EN 50131-1 Environmental Class Class II

Visonic Ltd.
M/N: RFD
FCC ID: WP3RFD
IC: 1467-RFD

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

W.E.E.E. Product Recycling Declaration
For information regarding the recycling of this product you must contact the company from which you orignially 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 Dual element low-noise pyroelectric sensor

Lens Data

No. of Curtain Beams / curtains:
Next CAM PG2: 18 far, 18 mid, 10 close.
Next CAM K9-85 PG2: 18 far, 18 mid, 18 close.
Note: *Lens – Reflex II PIR, Fresnel type lens With Optical attenuation in the lower part of the lens. Lens material is High Density Polyethylene (HDPE). Part of Enclosure Cover (Item 1) and snapped to the Enclosure Base (Item 2) by two tabs and one screw.*

Max. Coverage 12 x 12 m, (40 x 40 ft) / 90°

A. HORIZONTAL VIEW

B. VERTICAL VIEW

C. Next CAM PG2: 0.5-4m, Next CAM K9-85 PG2: 2-4m

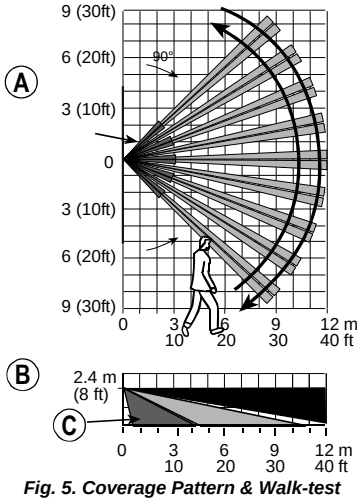


Fig. 5. Coverage Pattern & Walk-test

Pet Immunity (Next CAM K9-85 PG2 only) Up to 38 kg (85 lb)

ELECTRICAL	
Internal Battery	6V Lithium battery (two CR-123A 3V batteries or two CR17450 3V batteries, in series) or equivalent. ***Notes:*** *1. Use only the above battery type.* *2. For UL installations use Gold Peak (GP) CR123A only.*
Nominal Battery Capacity	6V 1450 mA/h (2xCR123A), 2200 mA/h (2xCR17450)
Low Battery Threshold	4.5 V
Battery Life (for typical use)	4 to 5 years (CR123A) / 8 years (CR17450)
Optional MAINS supply	Additional to batteries, 7.5 V DC
Power Supply	Type C
FUNCTIONAL	
True Motion Event Verification	2 remote selections - 1 (OFF) or 2 (ON) motion events
IR Illumination	10 m (33 ft)
Picture Resolution	320x240 pixels QVGA
Frame Rate	up to 2 fps (for user)
Alarm Period	2 seconds
WIRELESS	
Frequency Band (MHz)	**Europe and rest of world:** 433-434, 868-869 **USA:** 912-919
Maximum Tx Power	10dBm @ 433MHz, 14dBm @ 868MHz
Communication Protocol	PowerG
Supervision	Signaling at 4-min. intervals
Tamper Alert	Reported when a tamper event occurs and in any subsequent message, until the tamper switch is restored
MOUNTING	
Height	1.8 - 2.4 m (6 - 8 ft). For Next CAM K9-85 PG2, the recommended height is up to 2.1 m (7 ft)
Installation Options	Surface or corner
ACCESSORIES	**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 ***Note:*** *UL did not evaluate the product with the use of the BR brackets*
ENVIRONMENTAL	
RFI Protection	>20 V/m up to 2000 MHz, excluding inband frequencies
Operating Temperatures	-10°C to 50°C (14°F to 122°F) indoor ***Note:*** *UL tested 0°C to 49°C*
Storage Temperatures	-20°C to 60°C (-4°F to 140°F)
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)	125 x 63 x 60 mm (4-15/16 x 2-1/2 x 2-3/8”).
Weight (with battery)	200 g (7 oz).
Color	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 were 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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