GB-540 overview

The GB-540 is a ZigBee acoustic glass-break detector that can be used with any ZigBee Home Automation 1.2 enabled home security panel. You can mount the detector on walls or ceilings to detect the breaking of framed glass on any exterior wall. The detector senses the sound of breaking plate, tempered, laminated, wired, coated, and sealed insulated glass. The detector is pre-calibrated, requires no adjustment during the installation, and supports the measurement of ambient room temperature.

![Detector Diagram](image)

**Figure 1 GB-540**

The acoustic sensor of the GB-540 is omnidirectional and the range is measured from the sensor to the point on the glass farthest from the sensor. You can mount the detector as close as 1.5 m (5 ft) from the glass.

![Range Measurement Diagram](image)

**Figure 2 Typical range measurement**

When mounted on opposite walls, adjoining walls, or ceiling, the maximum range from the glass is 7.6 m (25 ft) for all glass types. The angle between a line vertical to the plane of the glass and the line between the glass and the detector affects the detector sensitivity. As the angle increases, the sensitivity of the detector decreases.

<table>
<thead>
<tr>
<th>Angle (degrees)</th>
<th>0</th>
<th>30</th>
<th>45</th>
<th>60</th>
<th>75</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum range m (ft)</td>
<td>7.6 (25)</td>
<td>7 (23)</td>
<td>5.5 (18)</td>
<td>4 (13)</td>
<td>2.5 (8)</td>
<td>0</td>
</tr>
</tbody>
</table>

![Angle Diagram](image)

**Figure 3 Angle between detector and window**
Installation

Optimizing detection and avoiding false alarms

For best detection avoid installing the detector in the following locations:

- Rooms with lined, insulated, or sound deadening drapes
- Rooms with closed wooden window shutters
- The same wall as the protected glass

**NOTE:** Mount the detector at least 1.8 m (6 ft) from the floor and at least 0.3 m (1 ft) from the ceiling.

For best false alarm immunity avoid the following locations:

- 24-hour loop applications (perimeter loops are suitable)
- Locations where white noise such as an air compressor is present
- Rooms smaller than 3 x 3 m (10 x 10 ft) and rooms with multiple noise sources such as small kitchens, utility rooms, bathrooms, glass booths/ vestibules, stairwells, and garages

For glass break protection in such locations, use shock sensors on windows or window frames.

**NOTE:** The Wireless GB-540 is not hermetically sealed. Do not install in rooms where humidity is high as excess moisture on the circuit board can eventually cause a short and generate a false alarm.

24-Hour Loop Applications

The GB-540 is recommended for perimeter loops and is designed to function in an occupied area. In a 24-hour loop application, the sensor is armed all day and night. In this scenario, the prevention technology is stretched to its limit as some sounds can duplicate the glass break pattern that the acoustic sensor detects.

Install the GB-540 on a perimeter loop which is armed whenever the door and window contacts are armed.

**NOTE:** GB-540 must be installed in accordance with the Standard for Installation and Classification of Burglar and Holdup Alarm Systems, UL 681.

Protecting occupied areas

The false alarm immunity is best in rooms with only moderate noise. To protect a 24-hour occupied area, use shock sensors.

Test conditions

The GB-540 is designed to detect the breaking of framed glass mounted on an outside wall. Testing the sensor with unframed glass, for example, breaking a glass bottle might not trip the sensor. The sensor typically does not trip when glass is broken in the middle of a room, such “breaks” are considered false alarms.

**NOTE:** GB-540 may not consistently detect cracks in glass or in the event where a bullet breaks through the glass. Glass-break sensors should always be backed up by interior protection.

For best false alarm immunity the sensor should be located at least 1.2 m (4 ft) away from noise sources such as televisions, speakers, sinks or doors. The sensor must always be in direct line of sight of all protected windows. It cannot consistently detect glass breaking around corners or in other rooms.

You can mount the detector on a corner or adjoining wall, see the angle between detector and windows table for the optimum distance and angle combination. Mounting the detector on the same wall as the protected glass is not recommended.

How sound travels and its implications

Since the sound of breaking glass travels directionally out from the broken window, the best location for mounting the detector is on the opposite wall. This assumes that the glass to be protected is within the sensors range and line of sight. When mounted on the opposite wall, the detector must be mounted at least 1.8 m (6 ft) from the floor, but not less than 0.3 m (1 ft) from the ceiling.

You can mount the detector on the ceiling, in this scenario mount the detector 2 - 4 m (6 - 12 ft) from the protected glass in the room.

Corner and adjoining wall mounting is possible but range versus angle limitations must be taken into considerations.

Ensure that there is no obstruction between the detector and the protected glass. Curtains, blinds, and sound absorbing materials in the room can reduce the effective range.

As with all glass-break sensors, mounting on the same wall as the protected glass is less effective and strictly not recommended - optimum detection is partially dependent on sound reflection off the opposite wall.
Inserting or Replacing the Battery

To insert or replace the battery complete the following steps:

1. Unfasten the base screw and press in the snap button to separate the cover from the base.

   ![Figure 4 Opening the unit](image)

   **Figure 4 Opening the unit**

2. Identify the battery (A), factory default button (B), and the tamper contact (C).

   ![Figure 5 Cover and base internal view](image)

   **Figure 5 Cover and base internal view**

3. Insert the battery into the battery clips. To replace the battery, remove the existing battery and replace with new battery.

   **Observe Polarity!**

   ![Figure 6 Battery insertion](image)

   **Figure 6 Battery insertion**

   **Caution!** Risk of explosion if battery is replaced by an incorrect type. Use a 3 V Lithium CR-123 battery, Panasonic or GP battery type only. Dispose of used batteries according to manufactures instructions.

4. Replace the cover on the base and fasten with screw.
Activating and Pairing the Device

To activate and pair the device with the security control panel, complete the following steps:

1. Set the control panel to pairing mode, see the control panel guide for details.
2. Pull the activation strip that protrudes from the back of the detector. See Figure 4 Activation strip (C) for details.
3. Open and close the cover to start the network search.
   
   **Result:** The red LED blinks for a brief time, followed by three green LED blinks.

   **NOTE:** The red LED blinks for 20 seconds and stops. The green LED blinks for 100 seconds or until the network search is completed.

4. Complete the pairing procedure on the control panel, see the control panel guide for details.

Mounting the Device

1. Fasten the mounting plate to the wall using the provided screws and anchors, through the mount openings (A).
   
   To enable the wall tamper secure the breakaway segment (B) also to the wall.

   Figure 7 Base internal view

   **Attention!** The back tamper switch for the GB-540 is under the Printed Circuit Board (PCB). When the PCB is seated firmly within the base, the switch is pressed against the special break away base segment that is loosely connected to the base. Be sure to fasten, using screw C, the breakaway segment to the wall. If the detector unit is forcibly removed from the wall, this segment will break away from the base, causing the tamper switch to open.

2. Replace the cover on the base and secure with screw.

   Figure 8 Closing the cover

Removing the Device from the Network

To remove the device from the network, complete the following steps:

1. Press the factory default button for 5 seconds. See Figure 5 Cover and base internal view for details.
   
   **Result:** The green LED turns on for 2 seconds, the device is unpaired and removed from the network.

2. Delete the device from the control panel, see the control panel guide for details.

Local Diagnostics Test

Before you test, separate the base from the cover. To test replace the cover to return the tamper switch to its normal position. The detector enters a stabilization or warm-up mode for 20 seconds followed by a network status indication mode. Then the final mode is the test mode for 15 minutes. See the testing procedure for details.
Network status indications

The network status indicates either the network search mode (green LED blinks three times) or received signal strength, see the following table for details.

<table>
<thead>
<tr>
<th>LED Response</th>
<th>Reception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green LED blinks</td>
<td>Strong</td>
</tr>
<tr>
<td>Orange LED blinks</td>
<td>Good</td>
</tr>
<tr>
<td>Red LED blinks</td>
<td>Poor</td>
</tr>
<tr>
<td>No blinks</td>
<td>Paired, no communication</td>
</tr>
</tbody>
</table>

**IMPORTANT!** Reliable reception must be confirmed. Therefore, “poor” signal strength is not acceptable. If you receive a “poor” signal from the device, re-locate it and re-test until a “good” or “strong” signal strength is received.

Testing Procedures

The GB-540 detects the breaking of framed glass mounted on an outside wall. Testing the detector with unframed glass or breaking a glass bottle might not trip the detector.

The detection algorithm of the GB-540 ignores most false alarms, this includes glass-break testers. In regular operating mode, the detector does not respond to commercial glass break simulators. In general, the GB-540 identifies sounds generated by these simulators as false alarms. A special test mode temporarily downgrades the GB-540 signal processing and decision making algorithms.

Switching the detector to test mode

After power-up or closing the cover, the detector automatically enters a 15 minute test mode. During this 15 minute test mode, the detector is more sensitive and will react to audio noises such as hand clapping or knocking on adjacent walls. Sounds of this type will not trigger detection after the test mode ends.

Testing

A. Basic test

For a low frequency (FLEX) test, thump the protected glass with a cushioned object. The LED will light for 2 seconds. Repeat the test if necessary.

B. Optional: Extended glass break test with simulator

This optional test activates the detector with FLEX and audio sounds that simulate the breaking sound of window glass. Take care not to shatter the glass during testing.

Procedure

To test complete the following steps:

1. Switch the detector to test mode. See “Switching the Sensor to test mode” for details.
2. Generate a flex signal and simulate a glass breaking sound by using one of the following methods:
   - **Simulator in manual mode**
     Hold the simulator close to the protected glass. Thump the glass and immediately start the simulator manually to create the sound of breaking glass. Examples of such simulators are AFT-100 or 5709C.
   - **Simulator with automatic activation**
     Hold the simulator close to the protected glass. Thump the glass, the simulator creates the sound of breaking glass automatically. Examples of automatic simulators using flex signals are FG-700/FG-701 or GT-2.
   - **Hand clap**
     Thump the glass and immediately clap hands firmly three times. This method is best used in relatively small rooms with a maximum distance up to 5 or 6 m (16 ft or 20 ft).

   **NOTE:** The instructions for some simulators instruct you to switch the glass break detector to test mode by sounding a special signal. The GB-540 detector has an inbuilt test mode therefore it is not necessary to switch to test mode. Use a glass pane with dimensions of at least 0.5 x 0.5 m (1.5 x 1.5 ft) to assure success of the simulator test and always aim the simulator at the detector being tested.

3. Repeat the test if necessary.

Result: The simulator responds by sounding a high frequency signal and the detector alarms as shown by the red LED light.

**IMPORTANT!** Room acoustics can artificially extend the range of a glass-break sensor. The specified range of the GB-540 is 1.5 m (5ft) to 7.6 m (25ft). While the sensor is likely to function at an extended range, it can miss a “minimum output” break, or the room acoustics can change at some future time, restoring the sensor coverage back to the specified range. Therefore, do not exceed the rated range of the sensor, regardless of what the tester shows.
Event Indications

LED Indications and Events

Testing event indications are followed by network status indications. See network status indications for details.

<table>
<thead>
<tr>
<th>LED Response</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red LED blinks</td>
<td>Stabilization or warm-up for 20 seconds (s)</td>
</tr>
<tr>
<td>Red LED on 0.2 s</td>
<td>Tamper open or closed</td>
</tr>
<tr>
<td>Red LED on 2 s</td>
<td>Glass break alarm</td>
</tr>
<tr>
<td>Orange LED on 2 s</td>
<td>Low frequency (FLEX) detection in Test mode</td>
</tr>
<tr>
<td>Green and red LED blink alternating</td>
<td>Self test failure in Test mode</td>
</tr>
<tr>
<td>(0.5 s Green, 0.5 s Red, 0.4 s OFF)</td>
<td></td>
</tr>
<tr>
<td>Green and red LED blink slowly alternating (0.5 s Green, 0.5 s Red, 30 s OFF)</td>
<td>Self test failure in Normal mode</td>
</tr>
</tbody>
</table>

Compliance With Standards

The GB-540 complies with the following standards:
Europe: EN 50130-4, EN 301489, EN 300328, EN 60950
This device is compatible with the RED Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014
USA: FCC - CFR 47 Part 15
Canada: IC RSS - 247
USA: UL639
Canada: ULC-S306

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). 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.
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.

To comply with FCC Section 1.1310 for human exposure to radio frequency electromagnetic fields and IC requirements, implement the following instruction:
A distance of at least 20cm. between the equipment and all persons should be maintained during the operation of the equipment.
Le dispositif doit être placé à une distance d’au moins 20 cm à partir de toutes les personnes au cours de son fonctionnement normal. Les antennes utilisées pour ce produit ne doivent pas être situés ou exploités conjointement avec une autre antenne ou transmetteur.

NOTE: This equipment 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 a residential installation. 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 communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Cet équipement a été testé et jugé conforme aux limites s’appliquant à un appareil numérique de classe B, conformément à la Partie 15 des réglementations de la FCC. Ces limites ont été élaborées pour offrir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l’énergie de fréquence radio et, s’il n’est pas installé et utilisé conformément aux instructions du fabricant, peut provoquer des interférences dangereuses pour les communications radio. Toutefois, rien ne garantit l’absence d’interférences dans une installation particulière. Si cet équipement provoque des interférences nuisibles au niveau de la réception radio ou télévision, ce qui peut être déterminé par la mise hors, puis sous tension de l’équipement, vous êtes invité à essayer de corriger les interférences en prenant les mesures suivantes:
- Réorientez ou déplacez l'antenne réceptrice.
- Augmentez la distance qui sépare l'équipement et le récepteur.
- Branchez l'équipement à une prise d'un circuit différent de celui auquel est branché le récepteur.
- Consultez le revendeur ou un technicien radio/television expérimenté pour obtenir de l'aide.

**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.

**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.

## Specifications

<table>
<thead>
<tr>
<th>POWERG TRANSMITTER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency Band</strong></td>
<td>2.405 - 2.480 GHz as per IEEE 802.15.4</td>
</tr>
<tr>
<td><strong>Communication Protocol</strong></td>
<td>ZigBee H.A 1.2</td>
</tr>
<tr>
<td><strong>Check in</strong></td>
<td>Configured by control panel, recommended interval = 27 minutes</td>
</tr>
<tr>
<td><strong>PFD</strong></td>
<td>Configured by control panel, recommended interval = 5 minutes</td>
</tr>
<tr>
<td><strong>Tamper Alert</strong></td>
<td>Reported when a tamper event occurs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POWER SUPPLY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td>3 V Lithium CR-123 1.45Ah type battery, Panasonic or GP only</td>
</tr>
<tr>
<td><strong>Nominal Battery Capacity</strong></td>
<td>1.45 Ah</td>
</tr>
<tr>
<td><strong>Battery Life Expectancy</strong></td>
<td>Over a 4 year time period for typical use</td>
</tr>
<tr>
<td><strong>Battery Supervision</strong></td>
<td>Automatic transmission of battery condition data as part of periodic status report</td>
</tr>
<tr>
<td><strong>Low Battery Treshold</strong></td>
<td>2.6 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENTAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RF Immunity</strong></td>
<td>20 V/m up to 1000 MHz, 10 V/m up to 2700 MHz, excluding in-band frequencies</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-10°C to 50°C (14°F to 120°F) indoors</td>
</tr>
<tr>
<td><strong>Storage Temperature</strong></td>
<td>-20°C to 60°C (-4°F to 140°F)</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>5% to 95% with no condensation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACOUSTIC SENSOR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Microphone</strong></td>
<td>Omni-directional</td>
</tr>
<tr>
<td><strong>Maximum Detection Range</strong></td>
<td>7.6 m (25 ft) if glass size is minimum 40 x 40 cm (15 ¾” x 15 ¾”); 6 m (20 ft) if glass size is 30 x 30 cm (12” x 12”) to 40 x 40 cm (15 ¾” x 15 ¾”)</td>
</tr>
<tr>
<td><strong>Glass Types</strong></td>
<td>Plate, tempered, wired, laminated, coated, and sealed insulated</td>
</tr>
<tr>
<td><strong>Minimum Glass Size</strong></td>
<td>30 x 30 cm (12” x 12”)</td>
</tr>
<tr>
<td><strong>Glass Thickness</strong></td>
<td>Plate: 3.2 to 6.4 mm (1/8” to ¼”), Tempered: 3.2 to 6.4 mm (1/8” to ¼”), Wired: 6.4 mm (¼”), Coated: 3.2 to 6.4 mm (1/8” to ¼”), Laminated: 6.4 mm (¼”), Sealed insulated: 3.2 to 6.4 mm (1/8” to ¼”)</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Laminated and sealed Insulating glass types are protected only if both plates of the unit are broken.</td>
</tr>
<tr>
<td><strong>Room Size</strong></td>
<td>Not larger than 12 x 12 m (40 x 40 ft); Not smaller than 3 x 3 m (10 x 10 ft)</td>
</tr>
<tr>
<td><strong>Minimum distance from protected glass</strong></td>
<td>1.5 m (5 ft)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACCESSORIES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brackets</strong></td>
<td>BR-1: Surface mounted swivel bracket, adjustable 30° down, 45° left, and 45° right</td>
</tr>
<tr>
<td><strong>optional</strong></td>
<td>BR-2: BR-1 with a corner adapter</td>
</tr>
<tr>
<td><strong>Brackets</strong></td>
<td>BR-3: BR-1 with a ceiling adapter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>88X62X30mm (3.5&quot;X2.4&quot;X1.2&quot;)</td>
</tr>
<tr>
<td><strong>Weight (minus battery)</strong></td>
<td>74g (2.6 oz)</td>
</tr>
<tr>
<td><strong>Housing color</strong></td>
<td>White</td>
</tr>
</tbody>
</table>
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.

There is absolutely no warranty on software, and all software products are sold as a user license under the terms of the software license agreement included with such Product."

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.

Conditions to Void Warranty: This warranty applies only to defects in parts and workmanship relating to normal use of the Products. It does not cover:

* damage incurred in shipping or handling;
* damage caused by disaster such as fire, flood, wind, earthquake or lightning;
* damage due to causes beyond the control of the Seller such as excessive voltage, mechanical shock or water damage;
* damage caused by unauthorized attachment, alterations, modifications or foreign objects being used with or in conjunction with the Products;
* damage caused by peripherals (unless such peripherals were supplied by the Seller);
* defects caused by failure to provide a suitable installation environment for the products;
* damage caused by use of the Products for purposes other than those for which they were designed;
* damage from improper maintenance;
* damage arising out of any other abuse, mishandling or improper application of the Products.

Items Not covered by Warranty: In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) customs fees, taxes, or VAT that may be due; (iii) Products which are not identified with the Seller's product label and lot number or serial number; (iv) Products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement under warranty will be credited or replaced at the Seller's option.

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 INVOLVED, WHICH SHALL BE LIQUIDATED DAMAGES AND NOT AS A PENALTY, AND SHALL BE THE COMPLETE AND EXCLUSIVE REMEDY AGAINST THE MANUFACTURER. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THESE LIMITATIONS MAY NOT APPLY UNDER CERTAIN CIRCUMSTANCES.

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.

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.

For sales in Israel only:

The Purchaser shall comply with the provisions of the Israeli Consumer Protection Law – 1981("Consumer Protection Law") related regulations, including the Israeli Consumer Protection Regulations (Warranty Sticker), 5772-2012) ("Regulations"), including, without limitation (i) providing its customers with at least the minimum warranty required by the Consumer Protection Law, and (ii) ensuring that a warranty certificate and a warranty sticker (as defined in the Regulations) ("Warranty Sticker") shall be attached to any sold Products and the date of the sale of the Product to the consumer or the end-user shall be added in a readable manner on the Warranty Sticker.

In no event shall the Purchaser's compliance with the Consumer Protection Law and Regulations expand any of the Manufacturer's warranty obligations under this warranty, and the Purchaser shall be responsible for any warranty that it provides with respect to the Products which exceeds or is different from 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.

**Governing Law:** This disclaimer of warranties and limited warranty are governed by the domestic laws of Israel.

**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.

* In case of a conflict, contradiction or interpretation between the English version of the warranty and other versions, the English version shall prevail.

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Email: info@visonic.com

Internet: www.visonic.com

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