English

# MCT-550

## Supervised Wireless PowerCode Flood Detector

Visonic

## Installation Instructions

## 1. INTRODUCTION

The MCT-550 is a fully supervised indoor, PowerCode flood detector, used to detect the presence of water at any desired location.

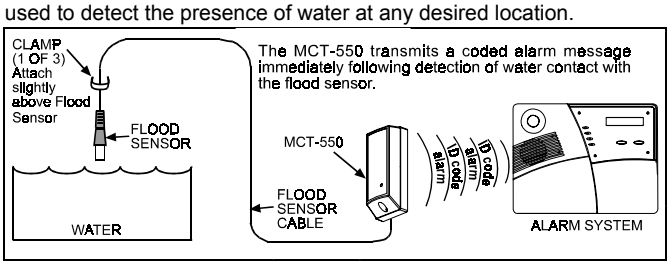



***Figure 1.*** *Using the MCT-550*

The MCT-550 is designed so that the transmitter is mounted on the wall and the flood sensor is placed in a location where water presence, such as a result of leakage or flooding, is probable.

Upon flood detection, a digital message is transmitted, composed of the detector's PowerCode ID followed by various status and other messages. Alarm and other data are thus forwarded to the alarm system.

An on-board tamper switch is opened when the cover is removed. In a tamper situation, a tamper message is transmitted.

A periodic supervision message is transmitted automatically (see specifications) to inform the alarm system at regular intervals, of the unit's active participation in the system.

An LED lights whenever alarm or tamper events are reported. The LED does not light while a supervision message is being transmitted.

Operating power is obtained from an on-board 3 V Lithium battery. A weak battery will cause a "low battery" report to be added to any message transmitted.

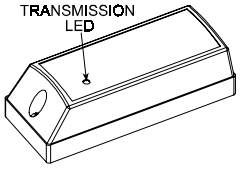



***Figure 2.*** *MCT-550*

## 2. SPECIFICATIONS

**Compatibility:** Compatible with PowerMax and PowerMax+ alarm systems, MCR-308 receiver or any other PowerCode alarm system.
**Frequency (MHz):** 315, 433.92, 868.95, 869.2625 or other frequencies according to local requirements.
**Transmitter's ID Code:** 24-bit digital word, over 16 million combinations, pulse width modulation.
**Overall Message Length:** 36 bits
**Message Repetition:** One-shot transmission (default) or once every 3 minutes (selectable).
**Supervision:** Signaling at 60-minute intervals (U.S. version) or 15 minute interval (UK version), or according to the local standards.
**Response to Tamper Event:** Tamper report every 3 minutes (until the tamper switch is restored).
**Power Source:** 3V Lithium battery, Panasonic type CR-2 or equivalent.
**Nominal Battery Capacity:** 750 mAh
**Current Drain:** 6µA STBY, 17mA average in operation (including LED).
**Battery Life with LED on:** 3 years (for typical use)

**Battery Supervision:** Automatic reporting of battery condition data as part of any transmission.
**Length of Flood Sensor Cable:** 3 meters (10 ft)
**Weight of Flood Sensor Cable:** Approx. 60 gr.
**Operating Temperature:** 0°C to 49°C (32°F to 120°F).
**Dimensions:** 81 x 22 x 23.5 mm (3-3/16 x 7/8 x 15/16 in.).
**Weight (including battery):** 45 g (1.6 oz)
**Standards:** Meets FCC Part 15, MPT1349 and Directive 1999/5/EC

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.

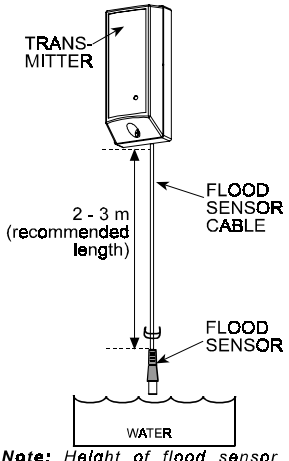
## 3. INSTALLATION

**A.** Attach the flood sensor near the floor.

**B.** Secure the flood sensor and its cable to the wall using at least one of three clamps in which one clamp is placed slightly above the flood sensor and the remaining two clamps can be used as required (Figures 1 and 3).

***Note:*** *To provide better protection against rats, it is recommended that the flood sensor cable be placed inside a metal/plastic pipe.*

**C.** Attach the transmitter to the wall. The transmitter should be placed as high up as possible on the wall to improve communication and to prevent the transmitter itself from coming into contact with water in the event of flooding.




***Note:*** *Height of flood sensor according to required flood detection. Recommended 1-5cm from floor.*

***Figure 3.*** *Correct Mounting of the Flood Detector*

**D.** Remove the case closure screw (Figure 4), then remove the unit's cover (Figure 5).

**E.** Flex out the circuit board retainer (Figure 6) and detach the circuit board from the base.

**F.** Hold the base against the mounting surface and mark the 2 drilling points through the mounting holes.

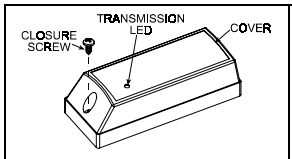



***Figure 4.*** *Removing the Case Closure Screw*

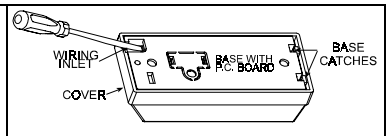



***Figure 5.*** *Separating the Cover from the Base*

**G.** Drill the holes and fix the base to the wall using the 2 screws with countersunk heads supplied in the package.

***CAUTION!*** *Screws with other type or size of head may short circuit the bottom side of the printed circuit board.*

**H.** Insert the edge of the P.C. board with the RF module into the edge supports, and press the other edge against the flexible retainer until it snaps home with a click.

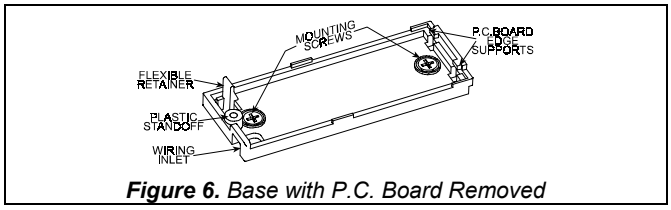



***Figure 6.*** *Base with P.C. Board Removed*

**I.** Clamp the two wires of the flood sensor cable into the auxiliary input terminals, as shown in Figure 7 (the wires can be inserted in any order).

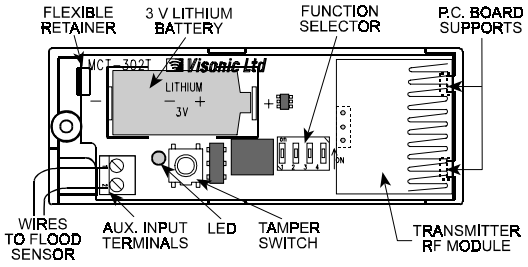



***Figure 7.*** *P.C. Board*

# 4. PREPARATION FOR USE

## 4.1 The Function Switches

### A. Switch Tasks

The MCT-550 has a 4-position DIP switch function selector (Figure 8). Switches SW3 and SW4 allow you to select one of two options**.**

### B. Setting the Switches

Set the function switches as desired prior to applying power. Use a ball point pen or other pointed object to shift the switch levers. **The ON position is indicated by the arrow on the switch body.**

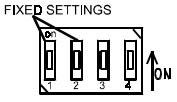



***Figure 8.*** *Function Selector*

***Table 1.*** *Getting acquainted with the function selector*

| Sw- | Function | Pos. | Selected Option | Default |
|---|---|---|---|---|
| **SW1** | - | - | SW1 should remain always in OFF position | **OFF** |
| **SW2** | - | - | SW2 should remain always in ON position | **ON** |
| **SW3** | Restore reports enable/disable | ON<br>OFF | Restore events reported<br>Restore events not reported | **OFF** |
| **SW4** | Transmit mode selector | ON<br>OFF | Alarms reported every 3 min.<br>Alarms reported only once | **OFF*** |

***** *Transmissions initiated by "tamper" events will be repeated once every 3 minutes, regardless of **SW4** setting.*

## 4.2 Testing the Unit

Before testing, set DIP switches **SW3** and **SW4** as required for the particular application (Para. 4.1).

**A.** Insert the battery between the battery clips, at the correct polarity. **For proper operation, only Lithium battery (Panasonic type CR-2 or equivalent) should be used.**

**B.** Press the tamper switch once and release it.

***Note:*** *Since the cover is removed and power is applied, a tamper situation exists. Verify that the MCT-550 transmits (the LED lights briefly) once every 3 minutes, regardless of SW4 setting.*

**C.** When you are satisfied that tamper alerts are transmitted properly, put the cover on to return the tamper switch to its normal (undisturbed) position. Wait slightly over 3 minutes to verify that tamper transmissions cease. If all went well, secure the front cover to the base with the case closure screw.

**D.** Bring the flood sensor into contact with water and verify that the transmitter LED lights, indicating that transmission is in progress. It is recommended to perform this test every month. If **SW4** is **ON**, wait 3 minutes to verify that the transmission is repeated at 3-minute intervals.

**E.** Dry the flood sensor, thus restoring it to the undisturbed state and watch the LED. If **SW3** is set to **ON**, a "restore" transmission will now take place.

**F.** Refer to the target receiver's installation instructions, and let the receiver "learn" the ID code associated with the detector.

# 5. MISCELLANEOUS COMMENTS

Visonic Ltd. wireless systems are very reliable and are tested to high standards. However, due to low transmitting power and limited range (required by FCC and other regulatory authorities), there are some limitations to be considered:

**A.** Receivers may be blocked by radio signals occurring on or near their operating frequencies, regardless of the digital code used.

**B.** A receiver responds only to one transmitted signal at a time.

**C.** Wireless devices should be tested regularly to determine whether there are sources of interference and to protect against faults.

**The user is cautioned that changes or modifications to the unit, not expressly approved by Visonic Ltd., could void the user's FCC or other authority to operate the equipment.**

## WARRANTY

*Visonic Ltd. and/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.*

***This warranty does not apply in the following cases:*** *improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.*

*This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.*

*This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.*

*The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.*

***The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function.*** *However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.*

***Warning:*** *The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.*

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