

# WR-200, WR-200/2B, WR-200/4B

Wireless Receivers



## Installation Instructions

### 1. INTRODUCTION

WR-200 series receivers are designed to operate with all standard transmitters and wireless Passive Infrared Detectors manufactured by Visonic Ltd.

The various models provide from one to four outputs (according to receiver model). Each output is activated by the corresponding channel, selected at the transmitter(s).

Models WR-200/2B (Fig. 3) and WR-200/4B (Fig. 4) also provide an electronic output to activate a buzzer for 'low battery' supervision. The buzzer output (BUZ) monitors the battery condition in the remote transmitter(s), signaling with a beep when a 'low battery' signal is transmitted. When used with alarm control panels, the multiple outputs allow flexible zoning of the remote transmitters - Instant, Delayed, Fire, Silent Alarm, etc.

An eight-key dip switch makes it possible to select 256 different digital codes (Fig. 8).

A unique DETECTOR LED indicates the level of the radio frequency (RF) energy detected by the receiver and enables the user to determine the best locations for transmitter(s) and receiver - assuring reliable operation.

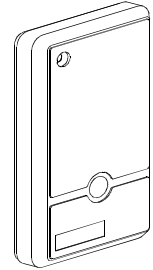


Figure 1. General View

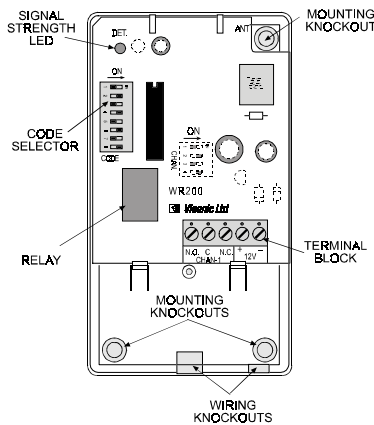


Figure 2. WR-200

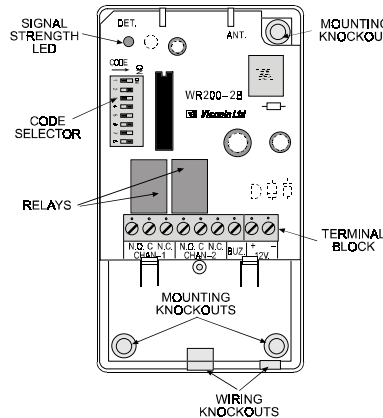


Figure 3. WR-200/2B

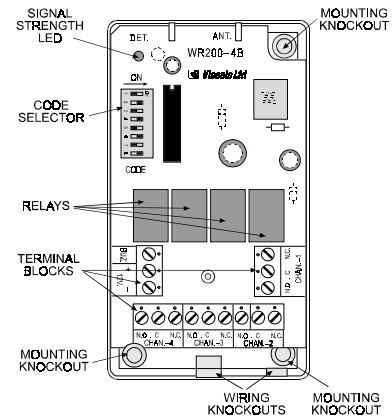


Figure 4. WR-200/4B

### 2. SPECIFICATIONS

**Encoding:** 8-bit digital word, 256 combinations. Pulse width modulation.

**Frequency (MHz):** 315, 224.7, 304, 404, 418, 433.92, or other frequencies according to local requirements.

**Models:** WR-200 - One channel  
WR-200/2B, 4B - 2 or 4 channel with low battery alert.

**Power Input:** 12 VDC±15%

**Channel Output(s):** N.C. and N.O. (form 1C) relay contacts.

**Contact Rating:** 1 A / 24 Volt AC/DC.

**Operating Temperature:** 0°C to 49°C (32°F to 120°F)

**Current Consumption (12 VDC):**

Model No.	Standby	Max.	Low Battery Alert
WR-200	6 mA	40 mA	No
WR-200/2B	6 mA	70 mA	Yes
WR-200/4B	6 mA	120 mA	Yes

### 3. INSTALLATION

#### 3.1 Power Supply

Connect 12 VDC to the receiver terminal block, routing the wires through a wiring knockout in the case. Observe correct polarity. The WR-200 receivers operate on 12 VDC±15% supply.

The power source must be able of supplying the required current to the receiver (see Section 2)

#### 3.2 Code Selection

A. The code selector consists of an eight-key dip switch marked from 1 to 8. Each key can be set to either ON or OFF position to create a unique digital system code combination (256 possibilities).

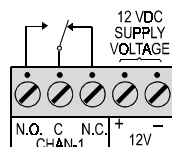


Figure 5. WR-200 Wiring

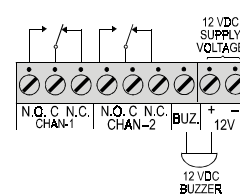


Figure 6. WR-200/2B Wiring

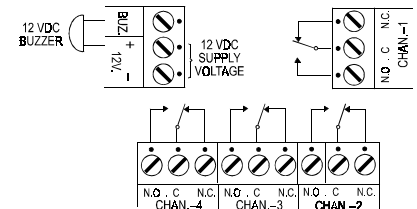


Figure 7. WR-200/4B Wiring



Figure 8. Code Selector

- B. Select the digital system code by switching the keys either ON or OFF. This combination must match the code selected on the companion transmitters. All wireless PIR detectors transmitters and the receiver in the system must be set to the same digital code.

**CAUTION:** The code combination 2, 4, 5, 6, 7, **ON / 1, 3, 8 OFF** is a factory test code that must not be used. Also avoid codes such as all keys ON, all keys OFF or alternating ON-OFF setting.

### 3.3 Detector LED

As previously described, the WR-200 receiver Series has a special DETECTOR LED which monitors the RF energy detected by the receiver (Signal Strength indicator). The LED lights when the RF signal detected by the receiver is above the minimum reception level. **Optimum reception condition is indicated when the LED lights continuously during transmission, without flickering.**

If the LED does not light continuously during transmission, try to improve reception by changing the location of the receiver and/or transmitters.

### 3.4 Channel Outputs

All channel outputs are provided via c/o relay contacts (type 1C, NO and NC), with a rating of 1 A/24 Volt DC-AC.

Each relay is activated by a corresponding channel (1, 2, 3 or 4) as set at the transmitters and wireless PIRs.

When activated, the relay remains ON as long as the channel signal is transmitted.

### 3.5 Buzzer Output (BUZ) (Buzzer supplied)

This is a transistor output, activated by the 'low battery' signals, which are automatically transmitted, by Visonic Ltd transmitters and Wireless PIR Detectors, when battery voltage drops below 7.0 Volts. When a 'low battery' signal is transmitted the buzzer at the receiver begins sounding short beeps at around 60 second intervals, until the transmitter is identified and the battery is replaced.

When activated, this output connects power supply (-) at the 'BUZ' terminal. The 'low battery' alert buzzer (12 Volt DC/25 mA type) should be connected between the 'BUZ' terminal (-) and the +12 Volt supply terminal (+).

**NOTES:**

1. The buzzer output may also be activated by turning all four transmitter channels OFF. However, this selection will not activate any of the relay outputs, only the buzzer output will be activated.

2. For some applications, it may be necessary to have a contact closure in addition to, or instead of the buzzer operation. In such case, the 'BUZ' output may be used to activate a reed relay which can be connected in parallel to, or instead of the buzzer. The reed relay should be a 12 VDC type, with coil resistance greater than 1000Ω.
3. When two receivers are used in the same location, position the receivers at least 3 m (10 ft) apart.
4. It is preferred not to install the receiver on or inside a metal enclosure. In cases where the receiver must be installed within a metal enclosure, bring the antenna wire out of the metal enclosure and test the system operation very carefully.

### 3.6 Testing

- A. Carefully position the front cover hole over the LED. Secure the front cover with the screw and screw cover (Fig. 9).
- B. Refer to the operating instructions for the transmitter(s) being used and test the receiver with each transmitter in the system for range and operation (see also DETECTOR LED).
- C. Verify operation of the appropriate channel output relay(s) at the receiver (see CHANNEL OUTPUTS).
- D. If you should have a problem with signal reception, change the location of the transmitter(s) and/or receiver to improve signal strength (see DETECTOR LED).

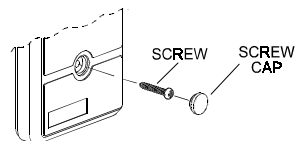


Figure 9. Cover Assembly

### 3.7 Miscellaneous Notes

Visonic Ltd's wireless systems are very reliable and are tested to high standards. However, due to their low transmitting power and limited range (required by FCC regulations) there are some limitations to be considered.

- A. Receivers may be blocked by radio signals occurring on or near to their operating frequencies, regardless of the code selected.
- B. A receiver responds to one transmitter signal at a time.
- C. Wireless equipment should be tested regularly to determine if there are sources of interference and to protect against fault.

**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.

### 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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