

**ADDITIONAL WATER DETECTION PRODUCTS:**

**WaterBug 200**

Run as many as 6 sensor probes up to 100' away  
 Hardwire powered  
 Includes one standard unsupervised sensor

**WaterBug 350**

Run as many as 6 sensor probes up to 100' away  
 9V battery powered with low battery alarm and integrated buzzer  
 Includes one standard unsupervised sensor

**EnviroAlert EA200**

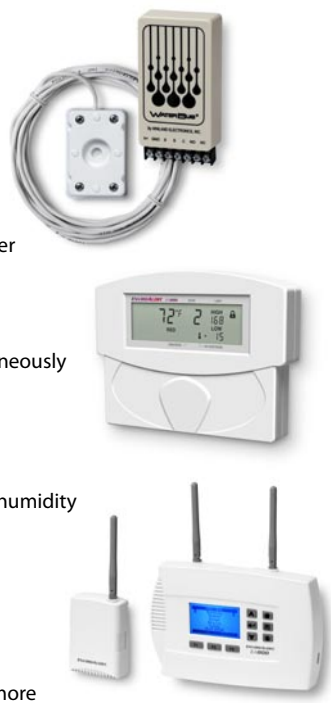
Utilize a supervised WaterBug sensor and monitor temp simultaneously  
 Eight event alarm memory with date and time  
 Auxiliary output relay for local audible alarm

**EnviroAlert EA400**

Simultaneously monitor 4 zones for water, temperature, and/or humidity  
 Eight event alarm memory with date and time  
 Auxiliary output relay for local audible alarm

**EnviroAlert EA800**

Simultaneously monitor 8 zones: 4 wireless and 4 hardwired  
 Complete downloadable data logging via USB stick  
 Monitor for water, temperature, humidity, contact closure, and more



# WATERBUG™



**DETECT WATER BEFORE  
 ADVERSE CONDITIONS ARISE**

**8 ZONE WATERBUG  
 Model: WB-800  
 Installation/Operation  
 Instructions**



D-011-0008 Rev E (Sep 2009)

**SYSTEM OVERVIEW**

The WB800 is a completely electronic water detector which is designed to detect only nonflammable conductive liquids (distilled water cannot be detected). The WB800 is designed with the control console mounted on the wall and the remote sensors placed in locations where water seepage is most probable.

The unit includes four (4) supervised sensors (PN W-S-S). In addition to detecting water with this sensor, an the unit will alarm when the supervised sensor line becomes disconnected.

A film of moisture forming a bridge between the two metallic contacts on any remote sensor is all that is needed for the unit to signal an alarm condition (Figure 1). The relay output is non-latching, but will remain closed until the moisture bridge between the two contacts is broken. As sensitive as the WaterBug is, it will not alarm due to high humidity or condensation. The WaterBug is ideal for use around homes, office buildings, computer rooms, boats, etc. Additional features include:

- Accepts 12V, 24V AC/DC power input
- Eight alarm LED indicators to identify the sensor zone in alarm.
- Supervised sensor line option. Unit will alarm on open sensor condition and an indicator will light. Up to 8 supervised sensors per console. Sensor lines up to 500ft.
- One "Form C" SPDT Relay for alarm output.
- Built in audible alarm and remote buzzer output with silence feature (adjustable 3 sec. to 150 min.)

**MOUNTING CONSIDERATIONS**

**Select A Site For The Console**

Sensor cable lengths & power source locations should be considered. Maximum cable length for the water sensors is 500 ft.

**Option #1 Surface Mounting Without Mounting Box**

It is possible to install the console on a soft wall (sheet rock, panel, etc.) without the use of a mounting box. This is the fastest mounting method and it gives the control console a nice looking low profile. In selecting a site to mount the console keep in mind that it must be placed in a secure, dry location with an ambient temperature of +32° to +130°F (0° to +54°C). For this option, drill a ½" diameter hole(s) in the wall which will be opposite the wiring terminal strip on the console. This hole will provide access for all wiring. Next, carefully mark the location of the four corner screw holes on the console. Then drive four wall anchors into the proper locations and complete by attaching the console to the wall.

**Option # 2 Surface Mounting**

In areas where no hollow interior walls are available, the surface mounting box (PN MB-3M) can be used. The surface mounting box (3 gang electric box) can be secured to any wall. The installed profile of the WB800 with this option is about 2½" out from the wall.

SPECIFICATIONS		ADDITIONAL SENSORS AND ACCESSORIES		ADDITIONAL INFORMATION
Dimensions	6.55" X 4.7" X 1.0" (166 cm X 119 cm X 25cm)	W-S-S	WB Sensor Supervised Standard (Up to 8 per WB800 console)	1. The WB800 is included with four (4) standard supervised sensors (PN W-S-S). 2. A backbox is included with the WB800. If desired, the other mounting methods as described in the Installation/Operation Instruction Guide may be used. Screw packets are also provided to mount the backbox to the wall and also to mount the WB800 console to the backbox. Both a standard slotted and phillips screwdriver are necessary for installation. 3. You will need a slotted screwdriver to install the enclosed backbox. Using the backbox as a template, mark the position of the screw holes on the vertical surface you wish to mount to. Drive the screws (using anchors if required) in your mounting surface, allowing approximately 1/16" between the screw head and the mounting surface. Engage key slots on the backbox with the screw heads and press down. 4. After completion of wiring, the enclosed four phillips screws can be used to mount the WB800 console to the backbox.
Weight	1 lb (0.45kg)	W-UC-S	WB Undercarpet Supervised Standard Sensor (Up to 8 per WB800 console)	
Mounting	Can be flush mounted directly to the wall or mounted to a 2348-3 Wiremold surface mount box (PN MB-3M)	W-S-U	WB Sensor Unsupervised (Up to 16 per console)	
Input Voltage (including alarm conditions)	12 VDC/24 VDC ≤ 100 mA 12VAC/24VAC RMS ≤ 200 ms	W-UC-U	WB Undercarpet Unsupervised Sensor (Up to 16 per console)	
Max number of sensors	8 (1 per zone, supervised mode) 16 (2 per zone, unsupervised mode)	MB-3P	Mounting Box 3 Gang (Plastic)	
Console Temp. Range	+32° to +130°F (0° to +54°C)	12VDCT	12VDC Wall Mount Power Supply	
Sensor Temp. Range	+32° to +130°F (0° to +54°C)	BZ-1	Optional Remote Annunciator	
Alarm Relay Output (1)	SPDT Relays (1 Amp @ 30 VDC/AC)	TSW	Additional Temp Sensor Wire (22 AWG, twisted pair, solid) specify length	
Remote Buzzer Output	Current Draw- 25 mA (Max.)	<b>Note:</b>	Supervised sensors are recommended for new WB800 installations.	
Warranty	1 Year Limited			

**ONE YEAR LIMITED WARRANTY**

Winland Electronics, Inc. warrants that each product of its manufacture is free from defects in material and factory workmanship, when properly installed and operated under normal conditions according to the manufacturer's instructions.

Manufacturer's obligation under this warranty is limited to correcting, without charge, at its factory any part of parts thereof which shall be returned to the factory, by the original retail purchaser, transportation charges prepaid, within one year after purchase and which upon examination shall disclose to the manufacturer's satisfaction to have been originally defective. Correction of such defects by repair to, or supplying of replacements for defective parts shall constitute fulfillment of all obligations to purchaser. Repair service performed by the manufacturer after one year from date of purchase will be for a reasonable service charge.

This warranty shall not apply to any of the manufacturer's products which have been subject to misuse, negligence or accident of which shall have been repaired or altered outside of the manufacturer's factory.

Manufacturer shall not be liable for loss, damage, or expense directly or indirectly from the use of its product or from any other cause.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE EXCLUDED, AS ARE ALL OTHER REPRESENTATIONS TO THE USER-PURCHASER, AND ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES, ON THE PART OF THE MANUFACTURER OR THE SELLER.

No person, agent or dealer is authorized to give any warranties on behalf of the manufacturer nor to assume for the manufacturer any other liability in connection with any of its products.

**CONTENTS**

This package contains:

- 1 WaterBug WB800 Console
- 4 Standard Supervised Water Sensors (PN W-S-S)
- 1 Mounting Box 3 Gang Metal (PN MB-3M)
- 4 Phillips screws for mounting
- 1 Installation/Operating Instructions Guide

## INSTALLATION - POWER AND SENSOR CONNECTIONS

### Step 1 - Power Connections

The WB800 will operate on 12V, 24V AC/DC. Refer to Figure 2 for proper connections.

**Note:** Before making wire connections, set jumper "JP3" to either 12V or 24V depending on your power supply output.

Connect your power input to two of the three positions on the terminal block. Regardless of your voltage input, connect the negative side to "V-". If your supply is 12V AC/DC or 24VAC, connect the positive side to the position marked "12VAC/DC, 24VDC". If using 24VAC input, connect to the 24VAC input.

When the power is applied, the green **On** power indicator should be on.

**Note:** If the built-in buzzer sounds, it can be disabled by moving jumper "JP2" to the **Off** position. If desired, toward the end of installation, it can be reactivated.

### Step 2 - Sensor Connections

#### Option 1 - Supervised Sensor Mode

The unit includes four standard supervised sensors (PN W-S-S). Additional sensors may be ordered separately.

With no sensors attached to unit and with the 8 position DIP switch settings (SW1) in the down position, zone alarm indicators 1-8 and the sensor line alarm indicator should be on. When the sensor line alarm indicator is on, it shows that there is an open sensor line. When the zone alarm indicator is on, it shows that a specific zone is in alarm (either water detect or open sensor line).

For zones that are not planned to be used, the supervised mode can be disabled (i.e. open sensor line alarm turned off) by pushing the DIP switches up for the corresponding zones.

The WB800 has two terminal blocks (TB1 and TB2) that are the locations for connecting the sensor inputs. There is no polarity to the sensors. The sensors are included with 15 feet of cable. The sensor lines can be increased to 500' (152.4 m) with additional cable (22 AWG twisted pair is recommended). Be sure that any splices are moisture proof.

**Note:** For mounting of sensors, see the sensor mounting sheet included with the sensor.

**Caution:** If a supervised sensor is used, and the zone DIP switch is left in the "up" position (supervised mode disabled) the sensor will still be operational to detect water, however, the open sensor line alarm will not be operational, verify that the DIP switch is in the "down" position for zones being used.

**Important:** It is recommended on completion of installation the sensor line be disconnected from the terminal block for each zone being used to verify that the sensor line and zone indicators light (supervised sensors only). The unit should go in alarm within approximately 3 seconds.

#### Option 2 - Unsupervised Sensor Mode

The WB800 can also be used with the unsupervised sensors (PN W-S-U) and the unsupervised under carpet sensors (PN W-UC-U). These sensors are used with Winland models WB200 and WB350. With this type of sensor, up to two sensors can be connected per zone. However the sensor lines are not supervised (i.e. break in sensor lines will not cause an alarm). To use this type of sensor the DIP switch zones must be pushed to the "up" position to disable the supervised sensor mode.

**Caution:** Above method is only advised if the WB800 is used to replace an existing model such as the WB200 where the existing sensors are planned to be used or more than eight sensors are required to be connected to a console. To take maximum advantage of the WB800, supervised sensors are recommended.

### Monitoring the absence of water:

It is not recommended that the WB800 be used for this application. The WB200 is recommended for this type of application.

### Step 3 - Alarm Relay Connections

The WB800 includes one Form C (SPDT) Relay. This relay is activated when power is applied and the unit is not in water detect or open sensor mode. This feature provides power-on supervision in case of power loss.

**Note:** When power is applied and unit is not in alarm, a short exists between "NC" and "C", and an open exists between "NO" and "C".

### Step 4 - Installation- Audible Alarm and Silence Features

The WB800 has a built-in audible alarm which will sound on an alarm condition. An audible silence feature is included that will disable the buzzer for a time period that can be set from 3 seconds to 150 minutes. This feature is important in installations where a constantly sounding alarm might disrupt business. It allows the audible alarm to be suspended while you wait for the water to be cleared from the affected sensor. Note: During this time, the alarm indicators and the relay outputs will remain in alarm condition as long as unit is still in an alarm condition.

**Note:** Jumper "JP2" can be set to enable or disable the built-in buzzer.

### Step 5 - Optional Remote Buzzer Connection

The WB800 is capable of driving an external 12VDC buzzer (PN BZ-1). The buzzer is connected to the terminal block as per Figure 2. As with the built-in buzzer, the remote buzzer can be temporarily disabled by the audible silence feature.

**Caution:** Use only the BZ-1 buzzer due to the units extremely low current draw. Using another buzzer may affect the performance of the WB800.

### Step 6 - Setting the Audible Silence Timer

The built-in audible silence timer provides an external means of silencing the audible alarm for a user selectable period (3 seconds to 150 minutes). Set jumper "JP1" to seconds or minutes. Adjust "P1" to the number of seconds or minutes desired.

**Note:** If a great amount of accuracy is required in setting the number of minutes, the jumper should first be placed in the seconds mode and then force the unit to alarm, the number of seconds that the audible alarm was silenced corresponds to the number of minutes. When satisfied with setting, place JP1 back to minutes position.

To insure proper operation, test unit weekly.

Insulate all sensors mounted on concrete.

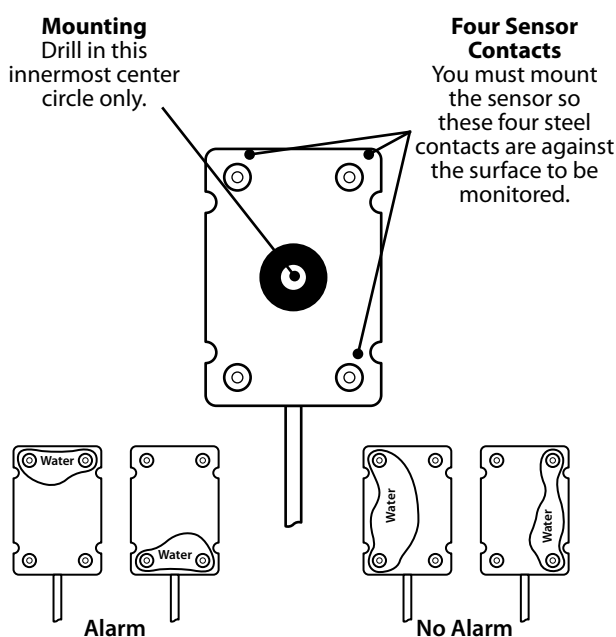


FIGURE 1

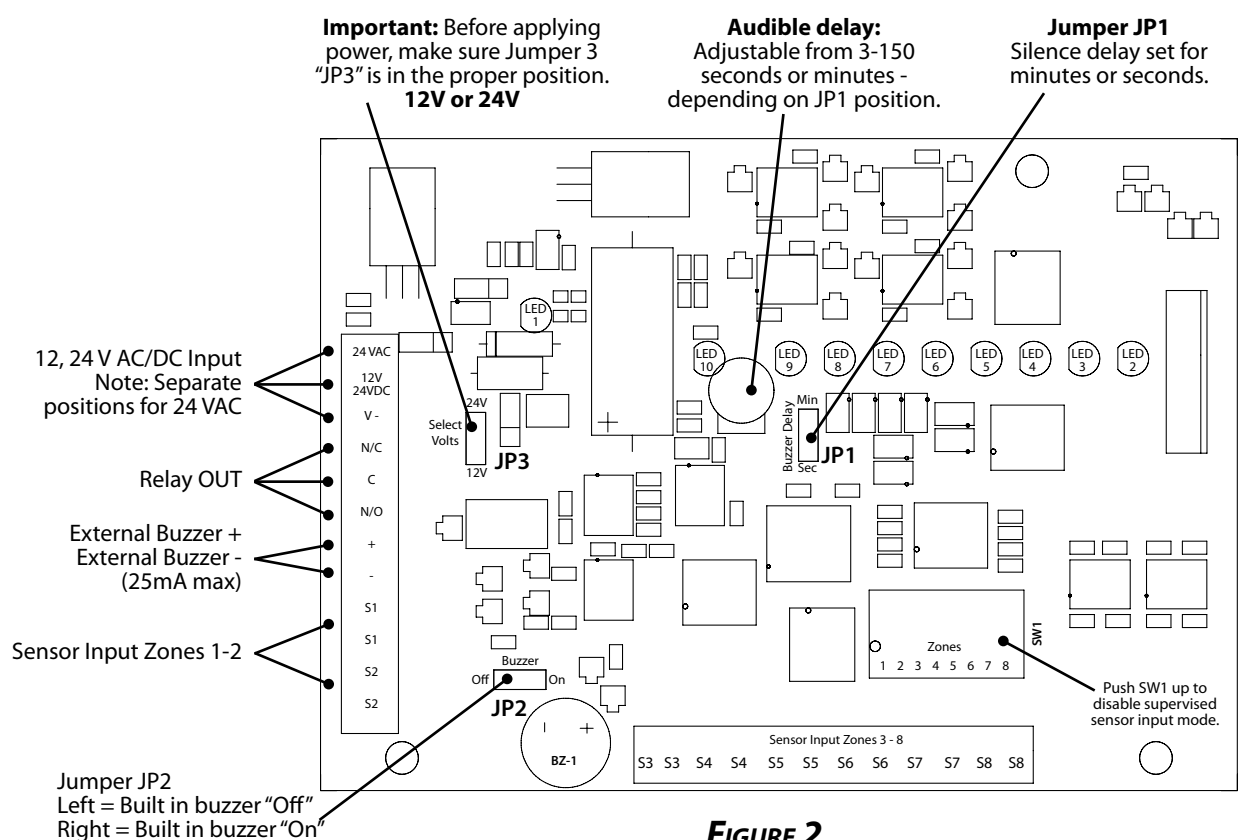


FIGURE 2