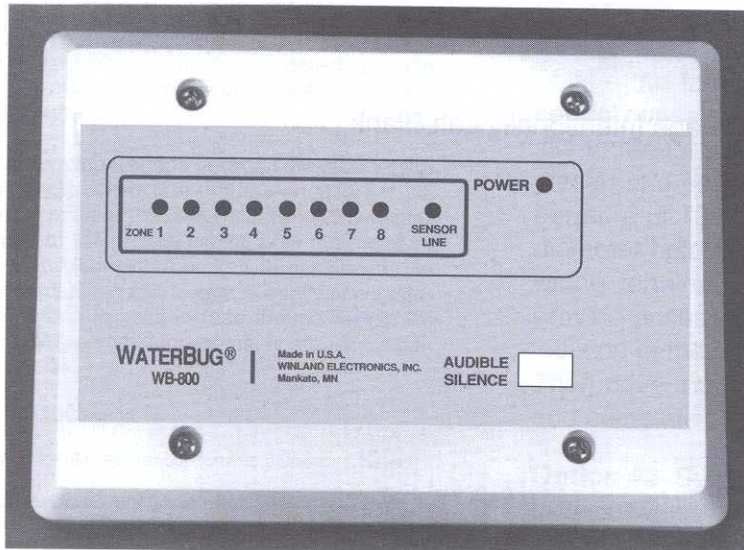


8-ZONE WATERBUG®

Model: WB-800



Installation/ Operation Instructions

Winland Electronics, Inc.
Mankato, Minnesota, U.S.A.
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SYSTEM OVERVIEW

The WB800 is a completely electronic moisture detector which is designed to detect only nonflammable conductive liquids (distilled water cannot be detected). The WB800 has been designed so that the control console mounts on the wall and the unit's remote sensors are placed in the locations where water seepage is most probable.

The unit is included with one Supervised Standard Sensor (Winland P.N. M-001-0006). In addition to detecting water with this sensor, an alarm will also be produced if the 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. The relay output and LED display are 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 residential homes, office buildings, computer rooms, boats, ect. Additional features include:

- * Accepts 12V, 24V AC/DC Inputs
- * Eight alarm lights to identify the sensor zone in alarm(water detect).
- * 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 500 ft.
- * One "Form C" SPDT Relay for alarm output.
- * Built in Audible Alarm and Remote Buzzer output with Audible silence feature (adjustable 3 sec. to 150 min.)

MOUNTING CONSIDERATIONS

STEP 1 - 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, paneling, 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. For this option, drill a 1/2" 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 (part #1110) 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 2 1/2" out from the wall.

FIGURE 2

ADJUSTABLE AUDIBLE DELAY
(3-150) SEC. OR MIN. DEPENDING
ON JP1 POSITION

JUMPER JP1
AUDIBLE SILENCE DELAY SET
FOR MINUTES OR SECONDS

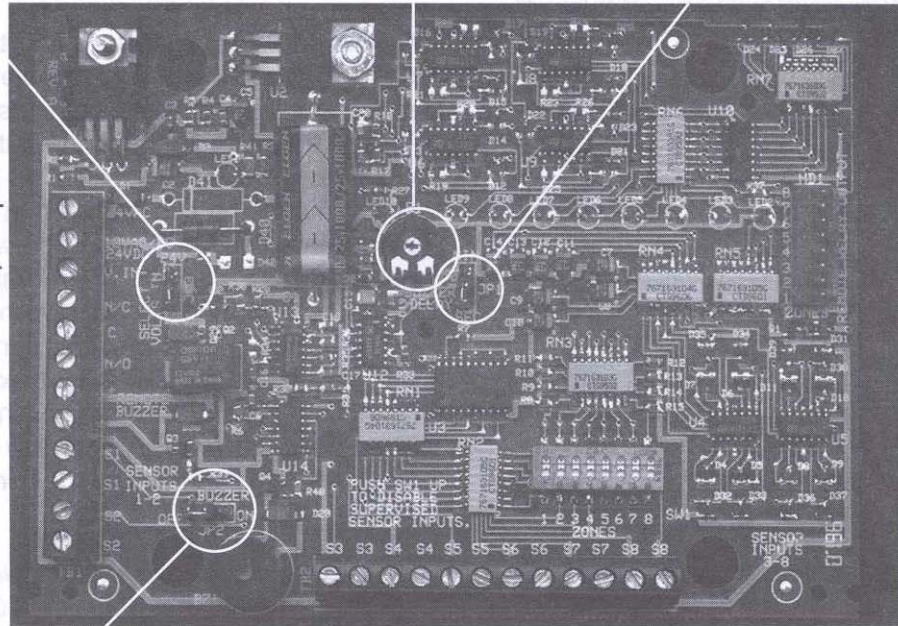
Important: Before applying power make sure Jumper JP3 is in the proper position, either 12V or 24 V.

12, 24V AC / DC Input
Note: Separate pos. for 24 AC.

Relay OUT — N.C.
 — C.
 — N.O.

Ext. Buzzer +
Ext. Buzzer -

Sensor input
Zones 1-2



JUMPER JP2
"LEFT" = BUILT-IN BUZZER "OFF"
"RIGHT" = BUILT-IN BUZZER "ON"

Sensor Zones 3-8
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INSTALLATION - POWER AND SENSOR CONNECTIONS

**STEP 2
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 24VDC, 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 Power On light 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 3
SENSOR CONNECTIONS (SUPERVISED MODE)**

The unit is provided with one supervised sensor(Winland P.N. M-001-0006). 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 light 1-8, and the sensor line alarm light should be on. When the sensor line alarm light is on, it shows that there is an open sensor line. When the zone alarm light 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.

INSTALLATION - POWER AND SENSOR CONNECTIONS (CONT.)

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 feet 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 that on completion of installation that the sensor line be disconnected from the terminal block for each zone being used to verify that the sensor line and zone indicators light. The unit should go in alarm within approximately 3 seconds.

Sensor Connections (Unsupervised mode)

The WB800 can also be used with the Winland P.N. 1040,1041 WB sensors. This is the type of sensor used with Winland models WB200, WB300, 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. breaks 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 for the absence of water:

It is not recommended that the WB800 be used for this application since only one sensor per console could be immersed in the water. The WB200 is recommended for this type of application.

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INSTALLATION - ALARM RELAY CONNECTIONS

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 light 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 (Winland Model BZ-1, Part #1175). 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.

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SPECIFICATIONS

DIMENSIONS	6.55" X 4.7" X 1.0" (166 cm X 119 cm X 25 cm)
WEIGHT	1 lb. (.45 kg.)
MOUNTING	Can be flush mounted directly to the wall or mounted to a 2348-3 Wiremold surface mount box. Winland PN #1110
INPUT VOLTAGE (including alarm conditions)	12 VDC/24 VDC \leq 100 mA 12VAC/24VAC RMS \leq 200 ma rms
MAX NUMBER OF SENSORS	8 (1 per zone, supervised mode) 16(2 per zone, unsupervised mode)
CONSOLE TEMP. RANGE	+32° TO 130° F (0° TO 54°C)
SENSOR TEMP. RANGE	+32° TO 130° F (0° TO 54° C)
ALARM RELAY OUTPUT (1)	SPDT RELAYS(1 Amp@ 30 VDC/AC)
REMOTE BUZZER OUTPUT	CURRENT DRAW - 25 mA (Max.)
WARRANTY	1 Year Limited

ADDITIONAL SENSORS AND ACCESSORIES

#M-001-0006	WB STD. Sensor, supervised, for WB800 (Up to 8 per console)
#M-001-0009	WB undercarpet sensor, supervised, for WB800 (Up to 8 per console)
#1040	WB Standard Sensor (unsupervised) (Up to 16 per console)
#1041	WB Undercarpet Sensor (unsupervised) (Up to 16 per console)
#1110	3 Gang Surface Mounting Box
#1111	12VDC Wall Transformer
#1175	BZ-1, Optional Remote Annunciator
#W1004	Additional; Sensor Extension Cable (22 AWG,twisted pair,soild) specify length

Note: Supervised sensors are recommended for new installations with WB800.

To insure proper operation test unit weekly

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 or 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 or 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.