



PARTS LIST

() R1 100K RES (BRN BLK YEL)	() U1 LM555 TIMER IC
() C1 .01uF CER or MONO CAP - MAY BE MARKED 103 or .01	() PC BOARD 080-00381
() C2 47uF ELECT CAP	() 2 SENSORS
() SP1 SPEAKER 4 to 45 OHMS	() 2 4-40 BOLTS
() 9 VOLT BATTERY CONNECTOR	() 2 4-40 NUTS
() U1S 8 PIN IC SOCKET	() 2 Solder Lugs
	() WIRES

ASSEMBLY AND TEST INSTRUCTIONS

1. INSERT AND SOLDER R1 AND C1
2. INSERT AND SOLDER U1S 8 PIN IC SOCKET **WATCH ORIENTATION**
3. INSERT U1 THE LM555 IC - **WATCH ORIENTATION**
4. INSERT AND SOLDER C1 - **WATCH ORIENTATION**
5. INSERT AND SOLDER 9 VOLT BATTERY CONNECTOR **NOTE WIRE COLOR PLACEMENT**
6. INSTALL THE WIRES ONTO THE SPEAKER AND CONNECT THEM ONTO THE PC BOARD AS SHOWN
7. SOLDER WIRES TO THE SENSORS PC BOARD. THE LENGTH IS NOT AT ALL CRITICAL. THIS CAN BE A FEW HUNDRED FEET IF NECESSARY.
8. CONNECT THESE WIRES TO THE COMPLETED PC BOARD.
9. VERY CAREFULLY CHECK ALL OF YOUR CONNECTIONS BEFORE CONNECTING A BATTERY TO THE COMPLETED KIT.
10. BE SURE THE SENSOR BOARD IS COMPLETELY DRY. CONNECT A BATTERY TO YOUR COMPLETED WATER LEVEL ALARM. YOU SHOULD NOT HEAR ANY SOUND FROM THE ALARM SPEAKER UNTIL YOUR SPEAKER PC BOARD IS WET.

THEORY OF OPERATION

YOUR WD-3 KIT USES AN LM555 TIMER IC TO GENERATE A TONE. THE 555 IS CONFIGURED IN THE A-STABLE MODE, WITH ONE DIFFERENCE. THE SENSOR PC BOARD REPLACES ONE OF THE RESISTORS.

WHEN ANY MOISTURE IS PRESENT ON THE SENSOR PC BOARD, THIS MOISTURE IS CONDUCTIVE AND CAUSES THE CIRCUIT TO OSCILLATE. THE LOWER THE RESISTANCE OF THE MOISTURE THE HIGHER THE FREQUENCY (PITCH) OF OSCILLATION.



WD-3 10-21-2011
LIQUID DETECTOR
 Rainbowkits.com LLC
 2238 West US Highway 36
 Danville, IN 46122
 317-745-5602
 FAX 317-745-5604
 www.rainbowkits.com

