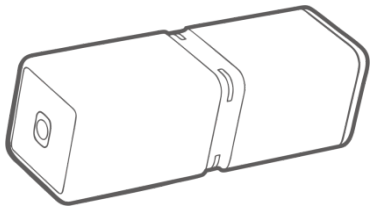
WIRELESS WATER DETECTOR (WWD)



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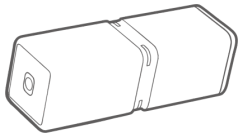


1 FIREBOT WWD

Firebot Wireless Water Detector "WWD" is an innovative water leak detector that boasts unparalleled functionality and convenience. It is the only one on the market that can work in all orientations, ensuring you never have to worry about misorientation or flipping.

With its compact sub-lipstick size, you can deploy in any location prone to water leaks. Its special design makes it incredibly easy to fit into any corner or edge. Plus, it has an impressive battery life of one decade, so you can rest assured that it will provide you with reliable protection for years to come.

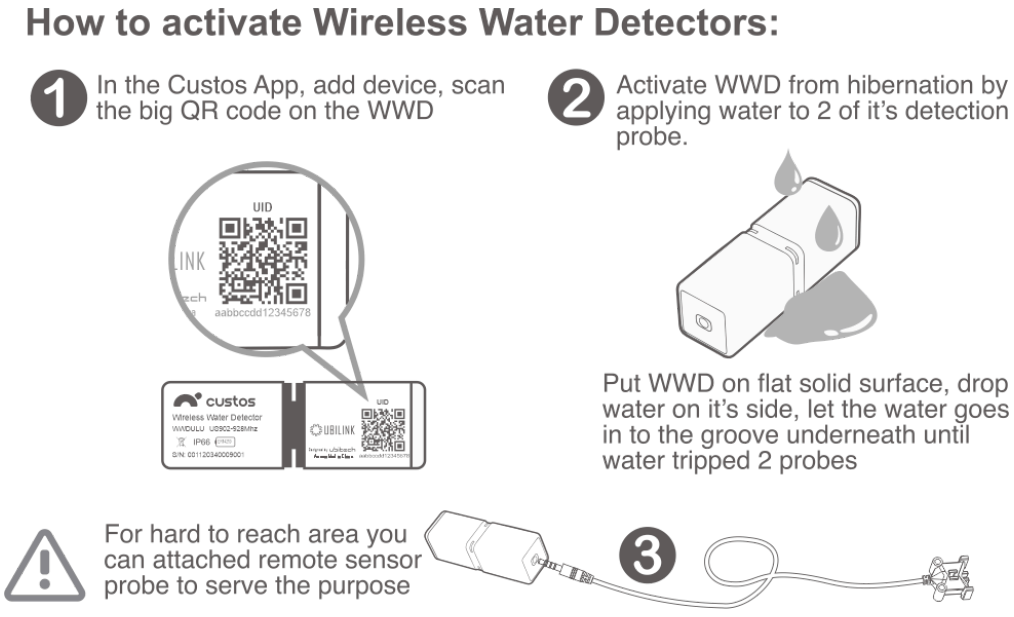
Firebot WWD also features a secondary detection port that allows for wired remote detection probe, enabling dual area coverage or detection in hard-to-reach areas. Additionally, it has temperature detection capabilities that trigger an automatic alert for rapid temperature changes. And with a tamper alert, you'll be notified immediately if the detector is moved.

2 SETUP WITH FIREBOT SYSTEM

2.1 Pair with Firebot System

-Firebot WWD can support pairing as below:

i. Wake up WWD from hibernation (for shipping and storage);
ii. Register WWD information with "Firebot Home" APP;
iii. Follow the instruction of APP to finish the relevant (Pairing) operations



3 EVENT REPORTS

3.1 Heartbeat Report

WWD will send Heartbeat Report to Firebot Gateway in 1 hour interval, the Heartbeat Report will also carry battery level and temperature data.

3.2 Water Detection Report

Once the Water Leak Sensor Probe is tripped by water, the Firebot WWD sends to Firebot gateway immediately, by default the gateway will send down link command to BVS to shut off the water main in order to stop potential damages, but this can be override in advanced setting, users will be notified by APP for this event.

3.3 Tamper Report

In case WWD detects vibration, it will wake up and send Tamper report to Gateway and Firebot App will send notification to user.

3.4 Unpair from Firebot System

There are couple reasons you may need to unpair WWD from a FireBot Network (1) the WWD is lost or faulty (2) move it to another FireBot Network:

i. Remove device from "Firebot Home" APP;
ii. If the WWD is available and working, perform “Factory Default Reset”, refer to item 2.7.3;

4 ACTION SENSOR & INDICATORS BEHAVIOR

Built-in 3-Axis Accelerometer for gesture recognition by detecting a series of movements, Once the 3-Axis Action Sensor is activated, you also can see below Visual and Sound Indicators response with the 3-Axis Action Sensor.
-3 Colors LED: GREEN, YELLOW & RED
-ON Event: ON, quick blinking and slow blinking.
-Buzzer: Long & short beep sound.

5 LEAK SENSORS

Firebot WWD supports two points of water detection:

Primary detection point (for normal horizontal placement on ground)
WWD has patented design with primary detection probes on all 4 corners of the recessed stripe located in the middle of body, thanks to capillary effect it can actively induce water run through it to trigger water detection no matter water approached from which side.

Secondary remote detection point
You may install remote water detection probe (included) for second point of water detection or to reach out hard to reach area, in order to ensure the sensor probe works reliably, plug the male jack to the WWD tightly without any gap exposed between the 3.5mm jack and WWD.

6 WORKING MODE

6.1 Shipping Mode

By default, Firebot WWD is set in Shipping Mode to keep it in hibernation to stop battery consumption during transportation & storage, in this mode all functions will be disabled until unlocked it from Shipping Mode to Active Mode.

6.2 Switch WWD from Shipping Mode to Active Mode

Trip water detection probe by water or wet fingers (more infos provided in App).

6.3 Active Mode

WWD is running normally ready to be paired with Firebot Gateway or paired

7 CHANGE WWD BATTERY

FireBot Sensors are fit with a battery that has a lifespan of 10 years. If the battery should be changed at the end of the 10 years follow the following steps:

1. Remove the screws of battery cover;
2. Replace new ER14250 battery;
3. Make sure the gasket is installed between the cover and body for waterproof;
4. Put the battery cover and align with two battery metal contacts then tighten the screws

8 REST SENSOR

8.1 Switch WWD from Active Mode to Shipping Mode

Refer to 2.7.3 Procedure for Factory Reset

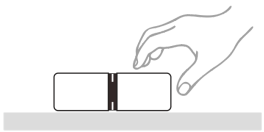
8.2 Factory Reset (For firmware version 0.6 and later)

Purpose: Remove all the registered setup information, unpair with registered gateway, return to factory state and go to hibernation mode for storage or shipping.

Step One: Trigger Active Standby State to get into Gesture Command mode

Action 1 : Shake the WWD, until you hear a beep sound and green light flashing, this will give you 10 seconds window of Active Standby Mode
Action 2: Within this 10 second Active Standby window, lay the WWD on level surface, WWD will engage in Gesture Command mode, this mode will give 10 seconds window to receive gesture command sequence.

Action 1: Shake it to Active Standby



Action 2: Lay down horizontally for Gesture Command Mode

Remark: Double RED flash and beep indicates termination of this process due to time out or wrong gesture sequence

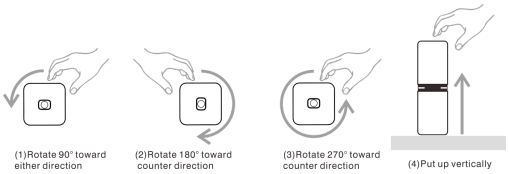
Step Two: Enter Gesture Command:
Action: within 10 seconds Gesture Command Window,
(1) Rotate the WWD horizontally 90° to either direction, a double beep will be generated to indicate

current gesture command is recognised and waiting next gesture within 10 seconds windows (all subsequent gestures are same)

(2) Rotate the WWD toward counter direction for 180°,

(3) Then rotate to counter direction again for 270°,

(4) Put up WWD vertically



Success: Green light will show up for about 10 seconds while it's cleaning up internal data and transmit unpair request to gateway, then WWD will be hibernated

Fail: Double RED flash and beep then sleep

9 FEATURES & SPECIFICATIONS

9.1 Physical Features

Model No.	WWDULU(US)/ WWDULE(EU)
Dimensions	2.1*2.1*6.7cm
Weight	WWD Unit: 52g
Body Color	White
Water Detection Method	Conduction
Waterproof & Dustproof	IPX5
Operation Temperature	14~122°F (-10~+50℃)
Relative Humidity	8%~80%

9.2 Hardware Specifications

RF Modulation	Chirp Spread Spectrum
RF Working Distance	40m (Indoor) / 120m (Outdoor) “Life of sight"
Region Frequency	923.3Mhz
Water Leak Sensor	Dual Water Detection Probes “Built-in & Remote"
Temperature Sensor	Temperature Sensor Range from -40°C to +125°C / (-40°F to +257°F)
Action Sensor	3-Axis Accelerometer Sensor
LED Indicator	3 colors LED. (Green, Yellow & Red)
Power Supply	ER14250 - Battery 3.6V 1200mAH
Battery Life	Standby: ~3.uA over 10 Years

9.3 Software Specifications

RF Wireless Protocol	Ubilink
Firmware Update	By Over-The-Air
Alarm Report	Water Detection, Temperature, Tamper
Heartbeat Report	1 hour interval