

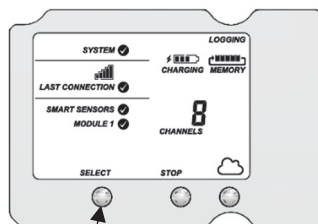
RXW Leaf Wetness Sensor (RXW-LWA-xxx) Quick Start

Adding a Mote to the HOBOnet® Wireless Sensor Network

Important: Keep the mote near the RX3000 station while completing these steps.

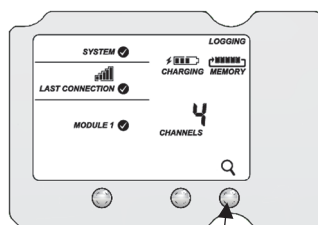
If you have not configured the RX3000 station with the RXW Manager, follow the instructions in the *HOBOnet RX3000 Remote Monitoring Station Quick Start* before continuing (go to www.onsetcomp.com/manuals/rx3000-qsg).

1



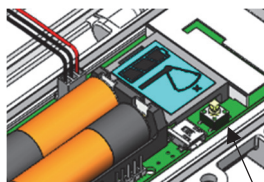
Press the Select button on the RX3000 station to switch to the module where the RXW Manager is installed (Module 1 or Module 2).

2



Press the Search button. The magnifying glass icon will blink while the RX3000 is in search mode waiting for motes to join the network.

3



Install the rechargeable batteries. Press this button on the mote for 3 seconds.

4

Watch the mote LCD during the process of joining the network:

a.



This signal strength icon blinks while searching for a network.

b.



Once a network is found, the icon will stop flashing and the bars will cycle from left to right.

c.



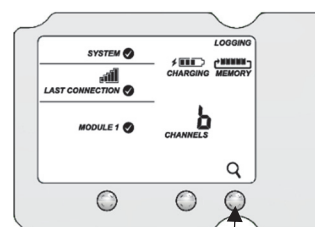
This network connection "x" icon blinks while the mote completes the registration process, which may take up to five minutes.

d.



Once the mote has finished joining the network, the "x" icon is removed and the channel count on the station LCD increases by two (one for leaf wetness and one for the mote battery).

5



Press the Search button on the RX3000 station again to stop the search for motes.

6



Go to www.hobolink.com to monitor mote status and health. See the HOBOLink Help for details.

Mounting and Positioning the Mote

- Close the mote and use a padlock to keep it secure.
- Mount the mote vertically using cable ties or screws.
- Position the mote towards the sun, making sure the solar panel is oriented so that it receives optimal sunlight throughout each season. It may be necessary to periodically adjust the mote position as the path of the sunlight changes throughout the year or if tree and leaf growth alters the amount of sunlight reaching the solar panel.
- Make sure the mote is mounted a minimum of 1.8 m (6 feet) from the ground or vegetation to help maximize distance and signal strength.
- Consider using plastic poles such as PVC to mount the mote as certain types of metal could decrease the signal strength.
- Place the mote so there is full line of sight with the next mote. Use a repeater if there is an obstruction between motes.
- There should not be more than five motes in any direction from a repeater or the RXW Manager. Data from sensor motes travels or "hops" across the network and may not reach the RX3000 station if the mote is more than five hops away from a repeater or RXW Manager.

Sensor Mounting Guidelines

1. Use the U-bolt to secure the bracket to any mast with a diameter of 2.5 to 4 cm (1 to 1.6 inch).
2. Use two cable ties to secure the sensor to the bracket. Do not fully tighten the cable ties.
3. One side of the sensor surface has a visible grid. The grid side should be facing upwards. Typically the sensor is mounted at an angle of 15 to 45 degrees from horizontal.
4. Once the desired angle has been set, pull the cable ties tight and cut off the tag ends.
5. Secure the sensor cable with cable ties.



Deployment Guidelines

- **Important:** DO NOT PAINT OR COAT THE SENSOR. It is ready to use and should not be coated.
- In most applications, the sensor should be mounted in whichever direction will prolong wetness the longest. For example, in the Northern hemisphere, orienting the sensor to face northwest will minimize exposure to solar radiation in the morning and maximize morning dew exposure.
- The leaf wetness sensor can be tilted to any angle. As the angle becomes steeper, water will run off the sensor more easily, reducing the amount of time the sensor stays wet. The exact angle used is a function of the type of vegetation of interest. Use an angle of more than 15 degrees from horizontal to prevent puddles from forming on the sensor.
- Be sure to secure the sensor cable with cable ties to protect the cable from damage. Wires should be bound tightly to the mast to help protect them from getting damaged in severe weather.
- Do not mount the sensor within two feet of the station case.



For specifications, complete mounting guidelines, and other details about this mote, refer to the full product manual. Scan the code at left or go to www.onsetcomp.com/support/manuals/23962-rxw-lwa-manual.