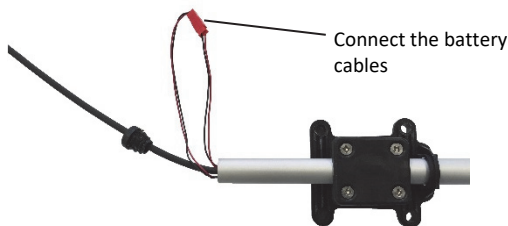


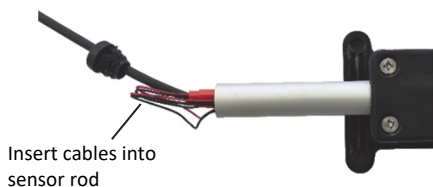
## Connecting the Sensor Battery

**Important:** We recommend that you connect the battery only when you are ready to deploy the sensor because it requires regular, direct sunlight to remain charged. Once the battery is connected, it loses its charge after 10 days if it does not receive any sunlight. **In addition, you must place the sensor under a light source for at least one minute after the battery is connected to activate the sensor.**

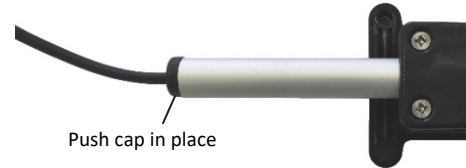
1. Connect the two battery cables.



2. Insert the connected battery cables into the sensor rod tube and then push and twist the cap into place at the end of the sensor rod.



3. Push and twist the cap into place so that it is fully seated in the sensor rod without any gaps as shown below. If there is a gap, remove the cap and push the battery cables further in the sensor rod to make more room for the cap.



4. Slide the sensor rod up so that the bottom is flush with the bottom of the sensor base. Loosely tighten the four screws to keep the sensor rod in place.



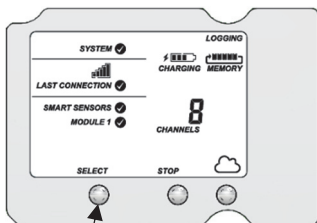
5. Place the solar panel on the top of the sensor under a light source (a bright lamp or direct sunlight) for at least one minute to activate the sensor.

## Adding a Sensor Node to the HOBOnet® Wireless Sensor Network

**Important:** Keep the sensor node near the station while completing these steps.

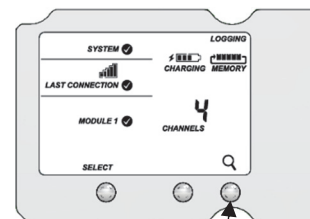
If you are setting up a new station, follow the instructions in the station quick start guide before setting up this sensor node (go to [www.onsetcomp.com/resources/documentation/24380-man-rx2105-rx2106-qsg](http://www.onsetcomp.com/resources/documentation/24380-man-rx2105-rx2106-qsg) for RX2105 and RX2106 stations or [www.onsetcomp.com/resources/documentation/18254-man-qsg-rx3000](http://www.onsetcomp.com/resources/documentation/18254-man-qsg-rx3000) for RX3000 stations).

1



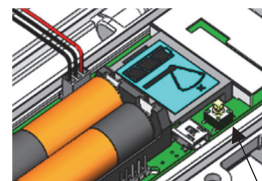
Press the Select button on the station to switch to the module with the manager (module 2 on RX2105 or RX2106 stations).

2



Press the Search button. The magnifying glass icon blinks while the station is in search mode waiting for sensor nodes to join the network.

3



Open the sensor node door and install the rechargeable batteries. Press this button on the sensor node for 3

**4** Watch the sensor node LCD while it joins the network:



This signal strength icon blinks while searching for a network.



Once a network is found, the icon stops blinking and the bars cycle from left to right.

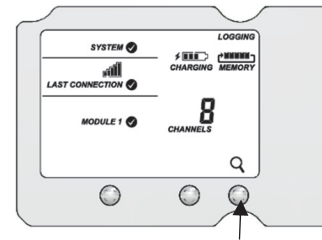


This network connection "x" icon blinks while the sensor node completes the registration process, which may take up to five minutes.



Once the sensor node has finished joining the network, the "x" icon is no longer displayed and the channel count on the station LCD increases by four (three for wind speed, wind direction, and gust speed, and one for the sensor node battery).

**5**



Press the Search button on the station again to stop the search for sensor nodes.

**6**

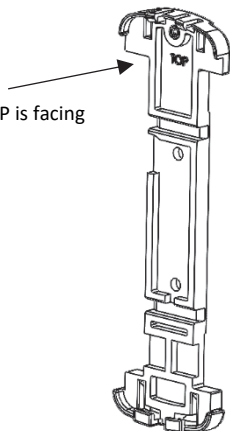


Go to [www.hobolink.com](http://www.hobolink.com) to monitor sensor node status and health. See the HOBOLink Help for details.

## Installing the Bracket and Sensor Node

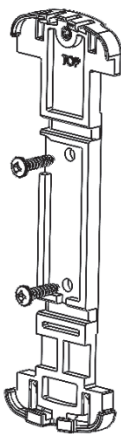
1

Orient the bracket so the text TOP is facing upwards.



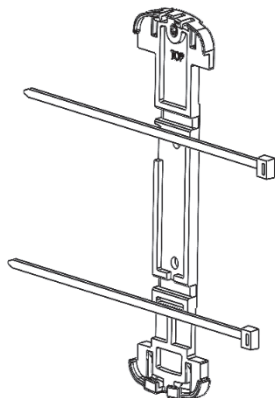
2

To install the bracket onto a wall, use the two long screws included in the package. Screw the bracket to a wall using the two holes on the mid-section of the bracket.



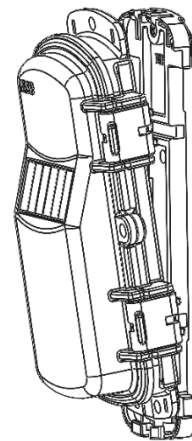
3

To install the bracket onto a pole, slip a cable tie through each of the channels on the bracket and fasten the tie around the pole.



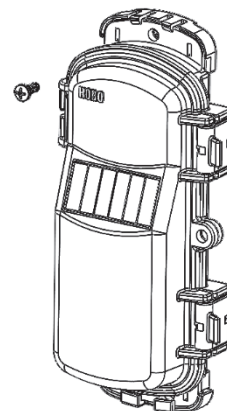
4

Insert the bottom of the sensor node into the retaining clips on the bottom of the bracket then press the top of the sensor node into the clips at the top of the bracket.



5

Use the short screw included in the package to fasten the sensor node to the bracket.



6

Close the sensor node and use a padlock to keep it secure. **Note:** Ensure that the node seal is clean from foreign debris.

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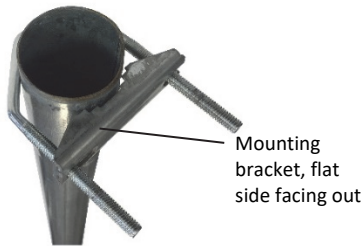
## Mounting and Positioning the Sensor Node

- Position the sensor node 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 sensor node 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 sensor node 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 sensor node since certain types of metal could decrease the signal strength.
- Place the sensor node so there is full line of sight with the next sensor node. Use a repeater if there is an obstruction between sensor nodes.
- There should not be more than five sensor nodes in any direction from a repeater or the manager. Data from sensor nodes travels or “hops” across the network and may not reach the station if the sensor node is more than five hops away.

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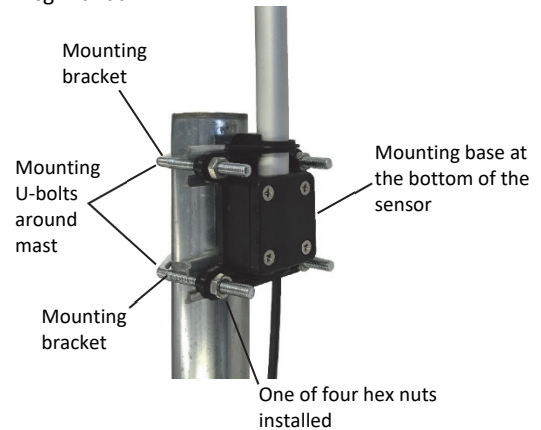
## Mounting the Sensor on a Mast

1. Place the mounting U-bolt around the mast and slide the bracket over the threaded U-bolt ends as shown in this example. Make sure the flat part of the bracket is facing out.



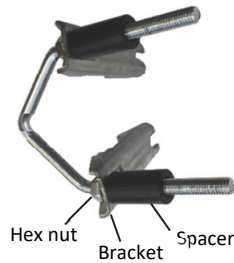
2. Repeat step 1 with the other U-bolt and bracket.
3. Insert the ends of the U-bolts through the four holes in the square sensor base at the bottom of the sensor rod. Loosely install the hex nuts on the four bolt ends with a 10 mm wrench.
4. Raise the sensor to the desired height on the mast.

5. Use the wrench to tighten the hex nuts until the sensor is firmly fastened on the mast.
6. Use the alignment tool to align the sensor to true north. For details on north alignment, see the sensor manual at [www.onsetcomp.com/resources/documentation/23964-rxw-wcg-manual](http://www.onsetcomp.com/resources/documentation/23964-rxw-wcg-manual).



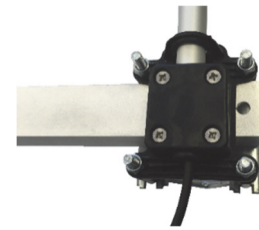
## Mounting the Sensor on a Cross Arm

1. Attach the cross arm to the mast before installing the sensor.
2. Use a 10 mm wrench to install two hex nuts at the base of the threaded end of the U-bolts as shown. Tighten the hex nuts all the way down to the end of the threads. Repeat with the other U-bolt.
3. Insert the threaded bolt end through the hole in the bracket so that the bracket rests on top of the hex nut with the flat end facing out. Place a spacer on top of the bracket. Repeat for the other threaded bolt end and for both ends of the other U-bolt.
4. Insert both bolt assemblies through the bottom of the mounting base and secure with finger-tightened lock nuts.
5. Slide the assembly above over the end of the cross



Make sure hole in cross arm is oriented as shown

arm as shown below. Make sure the hole in the cross arm is centered on the sensor mounting base as shown.



6. Make sure the cross arm is positioned as shown at right. Tighten the locknuts with a wrench.
7. Use the alignment tool to align the sensor to true north as described in the next section.



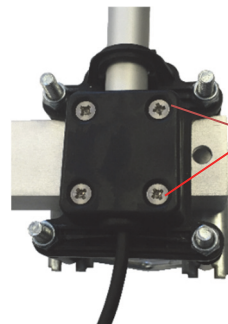
## North Alignment

The sensor must be oriented to true north to obtain meaningful wind direction data.

Tools required:

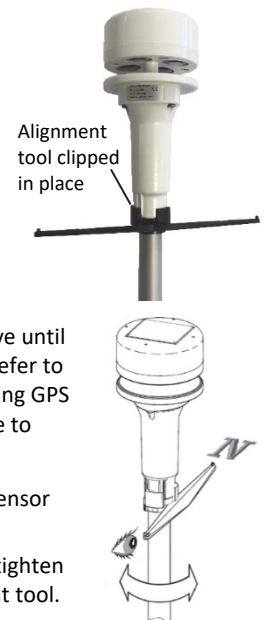
- Alignment tool (included)
- GPS or compass
- Flag, cone, or other temporary marker
- Phillips-head screwdriver

1. Use a Phillips-head screwdriver to slightly loosen the four screws on the sensor rod mounting base so that the sensor rod can be adjusted. (If the rod already moves freely, you do not need to loosen the screws any further.)



Loosen the four screws on the mounting base (shown on cross arm in this example)

2. Clip the alignment tool on the sensor tube and slide it so that it snaps into the dedicated slots. Do not tamper with the slots. The tool must gently find its place.
3. Using your GPS or a magnetic compass, go to a point that is directly north of the station and at least 100 m (328 ft) away from the station. To determine this point, move until the station is directly south of you. Refer to the product manual for details on using GPS or a compass and using a flag or cone to establish a waypoint.
4. Use the alignment tool to align the sensor so it is pointing north.
5. Once the sensor is aligned to north, tighten the screws and remove the alignment tool.



## Sensor Deployment Guidelines

- Mount the sensor in the sunlight within 10 days of connecting the battery to prevent it from losing all charge.
- Mount the sensor in a location that receives direct sunlight for several hours a day to ensure the built-in solar panel is charged regularly. Make sure the sensor is positioned in the sun and not under the forest canopy or obstructions.



For additional deployment guidelines, specifications, and other details about this sensor node, refer to the full product manual. Scan the code at the left or go to [www.onsetcomp.com/resources/documentation/23964-rxw-wcg-manual](http://www.onsetcomp.com/resources/documentation/23964-rxw-wcg-manual).