

328-1415 FAQs

We are weather enthusiasts like you and know proper running equipment is important. These FAQs provide valuable information on your station's setup, positioning, and troubleshooting. We recommend Adobe Reader version 10 or greater available at: <http://get.adobe.com/reader>

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GENERAL INFORMATION HARDWARE: SENSORS AND STATION

Your 328-1415 station comes with:

TX145WSDR (Cyclone) Sensor with Wind Speed, Wind Direction, and Rain

TX141TH-Bv4 Temperature/Humidity Sensor

Both sensors transmit at 433MHz.

WHAT ARE THE POWER REQUIREMENTS FOR THIS STATION?

TX145WSDR (Cyclone): 3 “AA” batteries

TX141TH-Bv4: 2 “AA” batteries.

328-1415: 5-volt power cord (required) and CR2032 batteries for backup of your time and date. Battery operation only will not update sensor or Wi-Fi data. A power cord is required.

SETUP AND MOUNTING INSTALLING WIND CUPS IF NEEDED

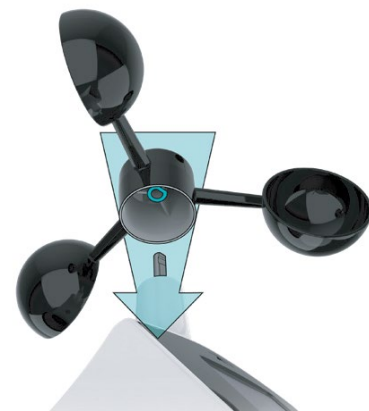
Depending on how your station is packaged, you may need to install your Wind Cups onto your Cyclone sensor.



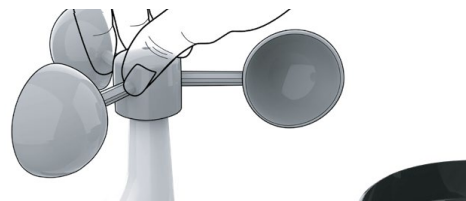
2. Remove the Cyclone Sensor, Wind Cups, and Mini Screwdriver from the package. Take note of the flat edges located on the head of the Cyclone Sensor and underside of the Wind Cups.



3. Carefully tighten the screw on the side of the cups using the Mini Screwdriver. The screw should tighten into the flat edge of the post.



1. Align the flat edges and place the Wind Cups on top of the Cyclone Sensor.



4. When the screw is tight, gently pull up on the cups to ensure they are secure. If they pull off, start again with step two.

SETUP: HOW DO I SET UP MY STATION?

Thermo-Hygro Sensor: Install 2 fresh “AA” batteries according to polarity and replace the battery cover. The red LED light will flash when transmitting.

Cyclone Sensor: Install 3 fresh “AA” batteries according to polarity and replace the battery cover.

Weather Station: Insert the 5V Power Adapter into an outlet, and then plug it into the Power Jack on the back of the station. Next, remove the Insulation Tab from the Station's Battery Compartment. About 30 seconds after powering the station on, it will automatically enter the Settings Menu.

Note: It may take up to 10 minutes for the sensor data to appear on your station's screen.

MOUNTING: WHERE DO I MOUNT/POSITION MY SENSORS?



TX145WSDR (Cyclone):

- Use the built-in Bubble Level to ensure the Cyclone Sensor (especially the rain gauge) is mounted level.
- Ensure the Solar Panel is facing the South. This helps optimize battery life and transmit correct wind direction data.
- Ideally, the Cyclone Sensor should be mounted on the tallest object in your area. Avoid positioning the sensor parallel or below eaves, roof lines, trees, or other objects that may obstruct wind and rain readings.
- Make sure all the screws on the Mounting Bracket, Wind Cups, Wind Vane, and Battery Compartment are securely fastened.
- The Cyclone Sensor should be mounted with the Wind Cups on the top.
- Place away from trees. Wind passing through trees moves slower than wind in open areas.
- The maximum transmission distance from your multi-sensor to your station, in the open air, is 330 feet (100 meters).
- Use the included mounting bracket or your mounting pole (no more than 1-inch outer diameter to fit). Secure the sensor with the screws provided. Tighten the screws to snug (do not over-tighten).
- Solar panel must face South to provide correct Wind Direction.
- General Wind Sensor mounting video: http://bit.ly/wind_sensor_mounting

Basic Mounting:



1. Mount the Mast to a flat surface with the four provided screws.



2. Place the Cyclone Sensor on top of the Mast. Ensure the Solar Panel is facing south.



4. Check the Bubble Level to ensure the sensor is level.



3. Secure the Cyclone Sensor to the Mast by tightening the screws on the side. Double check the Bubble Level to be sure the sensor remains level.

Flexible Installation



2. Install the Hand Screw to the bracket, then Secure the Cyclone Sensor to the Mast by tightening the screws on the side.



1. This configuration allows you to attach the sensor to angled locations and easily adjust ensure the Mast and Sensor are level.

Advanced Installation

Advanced installation options include tripods, wall mounts, chimney mounts, and many others. Any of these can be combined with U-bolts for attachment onto a tall cylindrical conduit using our Adjustable Base. These options will require additional equipment and professional help for the best results.



Freestanding Pole Setup
1" Maximum Outside Pole Diameter



Tripod Setup Example
1" Maximum Outside Pole Diameter

TX141TH-Bv4:

- Insert a mounting screw through the hole at the top to securely mount the sensor. It can also hang from the back using a nail.
- Mount the sensor vertically in a protected well-shaded area. Keeping it out of direct weather elements such as sunlight, rain, snow, etc. will help avoid inaccurate readings.
- For additional protection against weather elements, a Sensor Weather Shield: <https://bit.ly/weather-shield> can be purchased separately.
- The maximum wireless transmission range to the station is up to 330ft (100m) in open air. This does not include walls, floors, or other large obstructions.
- For online video instruction visit: bit.ly/th_sensor_mounting.



WHERE DO I PLACE MY STATION?

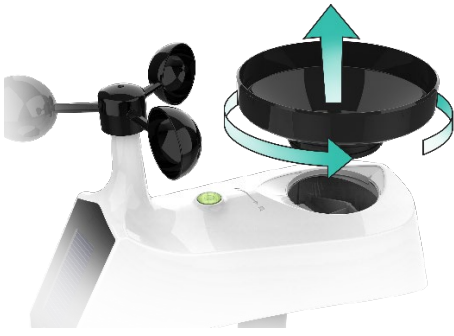
Your station is designed for flexible placement on a desk or countertop, or to position on the wall. When the stand is closed, it provides wall mounting holes.

- Position within reach of an outlet that is always active. Some of the outlets in living rooms and bedrooms may only be active when the light switch is on.
- This station must operate with a 5-volt power cord for a constant backlight.
- The best sensor reception occurs when only one wall is between your station and each sensor outside.
- Position your station six feet from other electronics and wireless devices. If you suspect RF (radio frequency) interference, simply move your weather station a few feet in any direction.
- The Atomic Time Signal originates in Ft. Collins Colorado and has a range of 2000 miles. In some cases, the signal is affected by weather conditions, geographic location, dwelling construction materials or electrical interferences. The position of the station in the home may result in poor reception. If the station has not synchronized to the correct time within a few days of activation, you may need to move the station to a different location. It is best to position the station near an exterior wall that faces toward Colorado.

HOW DO I CLEAN MY CYCLONE SENSOR?

Tip: To avoid erroneous rain readings while cleaning, you may choose to remove the batteries. This will cause a loss of Wind and Rain readings during the cleaning process. After cleaning insert the batteries again and hold the Wind, then the Rain buttons on your station to reconnect.

1. Remove the Rain Funnel by firmly twisting counterclockwise to unlock it. Then lift off.
2. Clear debris from the Rain Tipper inside the sensor. Clear any leaves, dirt, or insects that may prevent the Rain Tipper from moving freely.
3. After cleaning, re-install the Rain Funnel. Place the Funnel into the sensor and twist clockwise to attach.
4. Lock the Rain funnel in place. Ensure one of the Arrows on the Rain Funnel aligns with the Lock Symbol located on the top of the sensor.



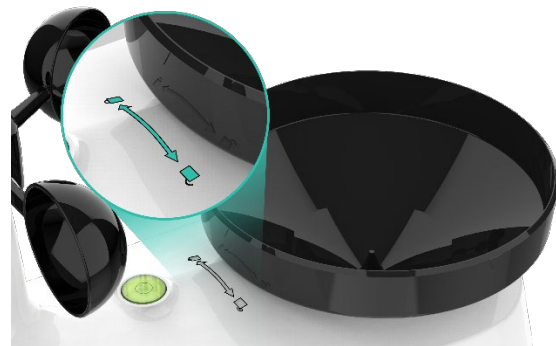
2. Remove the Rain Funnel by firmly twisting the funnel counterclockwise and lifting.



1. Clear any leaves, insects, or other debris to allow the Rain Tipper to rock freely. Check that the drain vents on the bottom are clear.



4. After cleaning, re-install the Rain Funnel by placing it back into the sensor and twisting clockwise until secure.



3. You should feel the funnel lock into place when one of the arrows lines up with the center of the Lock/Unlock Line.

WHAT IS DISTANCE | RESISTANCE | INTERFERENCE?

Distance:

- The maximum transmitting range in the open air is over 330 feet (100 meters) between each sensor and your station.
- Consider the signal path from your station to each sensor as a straight line.
- Consider the distance the station is from other electronics in the home.

Resistance:

- Each obstacle: walls, windows, vegetation, stucco, concrete, and large metal objects will reduce the effective signal range by about one-half.
- Mounting your sensors on a metal fence can significantly reduce the effective signal range.

Interference:

- Consider electronics in the signal path between the sensors and your station.
- Simple relocation of the sensors or the station may correct an interference issue.
- Windows can reflect the radio signal.
- Metal will absorb the RF (radio frequency) signal.
- Stucco held to the wall by a metal mesh will cause interference.
- Transmitting antennas from ham radios, emergency dispatch centers, airports, military bases, etc. may cause interference.
- Electrical wires, utilities, cables, etc. may create interference if too close.

WIND SPEED, DIRECTION, RAIN HOW DO I INTERPRET THE CURRENT WIND READINGS?

Wind Speed Readings:

- **WIND SPEED:** 31 second **highest** wind speed. Within 31s cycle time, there are 10 sample data (3s for each). The largest among these 10 samples will be sent as the current wind speed.
- **Top (1 HR):** Top Wind Speed in the past 60-minute period, from last record (10 minutes a timestamp, total 6 records) (default record no timestamp).

Wind Direction:

- The Current and Prevailing Wind Direction are displayed in letters.
- In the settings section, you can choose the direction to display in degrees.
EX: NNE would read as 30°.

HELP ME UNDERSTAND THE WIND HISTORY READINGS.

1. Press and release the WIND button to view the maximum Wind Records values (Top Speed).
 2. When viewing MONTH, use the PLUS button to toggle through the current month and the past 11 months' top speed.
Note: All other readings will disappear for 5 seconds.
- **24-hour:** Past 24-hour period, from last record Top speed in past 24 hours with time/date stamp
 - **7 Days:** Past 7-day period, from last record Top speed in past 7 days with time/date stamp
 - **Month:** Top speed for a month with time/date stamp
 - Current Month: First day to current day.
 - Previous 11 months. Defined by Calendar Month i.e., January 1 - January 31
 - **Year:** Current Year. Defined by Calendar Year i.e., January 1 - December 31 Top speed for the year with time/date stamp.

HOW DO I RESET THE WIND HISTORY READINGS?

Reset Wind Speed Records:

1. Press the WIND button to view individual wind speed readings.
2. Hold the MINUS button for five seconds to reset the individual value.
3. Wind speed reading will reset to the current wind speed, time, and date.

HOW OFTEN DOES MY WIND SENSOR UPDATE?

- Within 31s cycle time, there are 10 sample data (3s for each). The largest among these 10 samples will be sent as the current wind speed.
- Any change of 0.8km Wind Speed will cause the sensor to send the top speed for those 31 seconds.
- If there is no change in wind speed, the sensor will transmit every 3 minutes to preserve battery life.

HOW DO I READ THE WIND DIRECTION?

Compass Rose:

- The Compass Rose displays the cardinal directions with visual indicators.
- The large diamond on the rose indicates the wind direction.
- The smaller triangles should be displayed next to the big triangle to create more emphasis on the direction and let the user know that the direction varies constantly.



Prevailing Wind Direction:

- The Prevailing Wind Direction reading will be the most common wind direction reading from the past hour. This will be shown graphically inside the compass rose by one triangle that will blink once every 3 seconds. It will be shown in letters or degrees in the lower right of the wind area.
- If the prevailing wind direction arrow happens to fall in the same range as the current wind speed arrows this is fine, it will just blink within the three current indicators.

Current Wind Direction: Updates about every 31 seconds. Found in the lower left side of the wind area and can be read in letters or degrees.

HOW DO I VIEW MY RAIN READINGS?

1. Press and release the RAIN button to view different rain readings or auto-scroll through them all. The Auto-scroll Icon will show when active and each rain reading will show for 5 seconds. When Auto-scroll is off, press RAIN to cycle through all readings individually.

2. When viewing MONTH, use the PLUS button to toggle through the current month and past 11 months' rainfall.

Note: All other readings will disappear for 5 seconds. Rainfall readings will stay on user selection.

- **1 HOUR:** Last one-hour rainfall (12 consecutive 5 minutes rainfall accumulated total). Example: current time is 6:49, 1HR rain is accumulated total between 5:50 and 6:49.
- **24 HOURS:** Based on the past 24 hours' accumulated rain total. At each full hour, 1HR is recorded. This is a running total.
- **7 DAYS:** Accumulated last 7 consecutive 24HR rain. On each day at 0:00, 24HR rain is recorded. Not a subject to the calendar. Be sure the time is set.
- **1 MONTH:** Defined by Calendar Month i.e., January 1 - January 31
Example: January 1-January 31. On the first-month calendar day 0:00, the month of rain is reset to 0. Accumulated rain from 1st of xx (month) to current day xx (month). The current month will be shown in the date area.
- **1 YEAR: Current month plus past 11 months total.**
Example: current date is Nov. 10, 2023. Year rain is Jan 1, 2021 –Oct 31, 2022, month totals, plus the current month (Nov 1-10) rain. The current Year will show in the time display.
- **TOTAL:** Total rainfall since powered on or reset.

Note: As time passes without rain, the 1-hour, 24-hour, and 7-day rain totals will count down to zero. **Example:** Station recorded 0.4 inches of rain between noon and 1:00 pm on the previous day.

- It continued to rain until the 24-hour rain reading from 11:00 am today, back to noon the previous day was 1.2 inches.
- Then the 24-hour reading from noon today, back to 1:00 pm the previous day shows 0.8 inches. The 0.4 inches of rain from noon-1:00 pm on the previous day has dropped off the 24-hour total.

HOW DO I RESET RAIN READINGS?

Reset Rainfall Readings (each reset individually):

- Press the RAIN button to view individual rain readings.
- Hold the MINUS button for five seconds to reset the individual value.
- Rainfall reading will reset to 0.00.

WHAT ARE THE DAYS SINCE THE LAST RAIN?

It does not rain every day in all locations. You may go days without rainfall. Your station is designed to let you know when the last rain occurred.

- After 24 hours of no rainfall, the station will start counting days without rain. Rainfall readings can be viewed by pressing the RAIN button.
- When rain starts it will automatically switch back to the last rainfall reading unit.

HOW OFTEN DOES MY RAIN SENSOR UPDATE?

The Rain signal is sent at the same time as the Wind signal.

- Your Rain Sensor checks for any change in rainfall every 31 seconds.
- Any change of 0.2mm of rain will cause the sensor to send a reading.
- If there is no change in rainfall, the sensor will transmit every 3 minutes to preserve battery life.

WHAT DOES THE RAIN CYLINDER GRAPH SHOW?

The rain cylinder will have 10 segments that change with the rainfall total. The cylinder will show two rain amount numbers next to the cylinder. These numbers will change with increased rainfall amount.

- Each segment indicates 0.1 inch- up to 1 inch of rain. The graph will represent 1 inch. Over 1 inch the graph will represent 2 inches.
- Each segment indicates 0.4 inches- from 1 inch to 70 inches of rain. So, the graph will represent 2 inches at a time.
- The cylinder graph will read up to 70 inches of rain. Over 70 inches of rain, the graph will show full.
- **When in mm;** Display 2 digits with decimal, or 3 digits (no decimal) at the halfway mark up to 999 mm.
- After 999 mm only show the top number on the graph when in mm.

TEMPERATURE & HUMIDITY

HOW DO I VIEW MY HI AND LO TEMPERATURE/HUMIDITY READINGS?

Your high and low temperature and humidity readings are recorded with time and date of occurrence. Each time a new high or low reading is recorded, that reading with time and date of occurrence will show. To view your HI | LO records, simply press and release the TEMP button.

Viewing order:

- Outdoor HI Temperature
- Outdoor LO Temperature
- Outdoor HI Humidity
- Outdoor LO Humidity

- Indoor HI Temperature
- Indoor LO Temperature
- Indoor HI Humidity
- Indoor LO Humidity

HOW DO I RESET THE TEMPERATURE/HUMIDITY READINGS?

Your temperature and humidity readings are reset individually.

1. Press and release the TEMP button to view the reading you wish to reset.
2. Hold the MINUS (-) button for 5 seconds to reset individual temperature or humidity value to current temperature, humidity, time, and date.
3. Press and release the LIGHT button to exit.

WHAT IS FEELS LIKE AND DEW POINT TEMPERATURE?

Feels Like temperature indicates both Wind Chill and Heat index on stations with wind speed.

- **Feels Like Temperature shows Wind Chill:** When the temperature is *below 50°F*, and a 5 mph sustained wind speed, the Feels Like Temperature is showing Wind Chill.
- **Feels Like temperature shows Heat Index:** When the temperature is *above 80°F*, the Feels Like temperature shows the Heat Index.
- **Feels Like temperature shows Current Temperature:** When the temperature is between 51°F and 80°F, the Feels Like temperature will *remain the same* as the outdoor temperature regardless of humidity or wind speed.

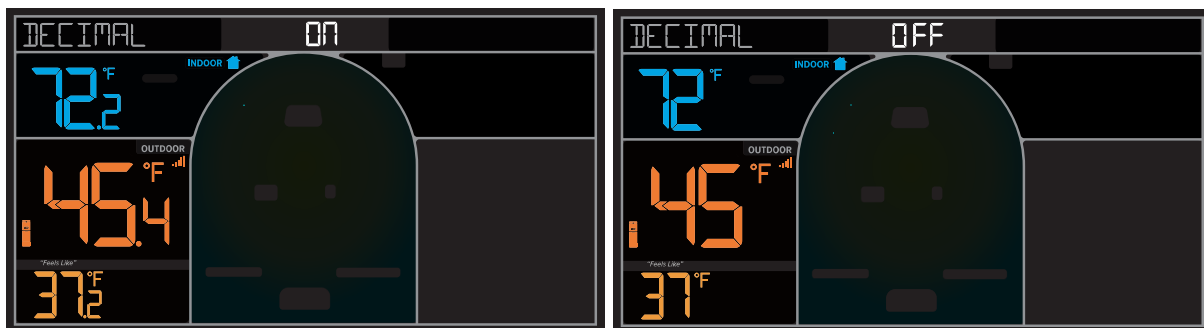
Press and release the FEELS LIKE button to view:

- Feels Like HI
- Feels Like LO
- Dew Point

Note: Dew Point does not have a time/date of occurrence.

CAN I TURN THE TEMPERATURE DECIMAL OFF OR ON?

Press and release the **DECIMAL ON/OFF** button on the side of the station to turn the temperature decimals ON or OFF. This can also be set within the station's Settings Menu.



DOES THIS STATION HAVE ALERTS?

You may set Wind, Rain, Temperature, and Humidity alerts on your station.

- Alerts default to be OFF.
- The alerts menu is in the order listed below.
- When an alert is ON, the alert value flashes to be set. No additional button press is required.
- Leave an alert OFF (disarmed) press the ALERT button to skip setting that alert value.
- The HI or LO alert icon will show when the alert is active.
- When the armed alert value is reached, the station will beep five times each minute, until out of alert range. The flashing Alert Value and Icon will indicate it is a LO or HI alert.
- Press any button to stop the alert sound. The alert icon will flash while the value is in the alert range.

Alert Setting Order:

- High Wind Speed
- 24 Hour Rainfall
- Outdoor HI Temperature
- Outdoor LO Temperature
- Outdoor HI Humidity
- Outdoor LO Humidity
- Indoor HI Temperature
- Indoor LO Temperature
- Indoor HI Humidity
- Indoor LO Humidity

Set Alerts:

1. Hold the ALERTS button to enter the Alert Settings Menu.
2. Use the +/- buttons to activate/deactivate individual alerts or press the ALERTS button to skip to the next option.
3. Once activated, use the +/- buttons to adjust the values. Press the ALERTS button to confirm and move forward.

Alert Triggered:

1. When the armed alert value is reached, the station will beep five times each minute, until out of alert range. (1-second beep once, sound for 5 seconds, wait 55 seconds, and then repeat begins to ring for 5 seconds.)
2. The flashing Alert Icon and Alert Value will indicate if it is a LO or HI alert.
3. Press any button to stop the alert sound. The alert icon will flash while the value is in the alert range.


Deactivate Alerts:

Hold the ALERTS button to enter alert settings. Press and release the +/- buttons to deactivate or activate alerts.

TROUBLESHOOTING THE SENSORS WHAT DOES A READING OF “HI” OR “LO” MEAN?

- If your outdoor temperature reading shows “HI” or “LO,” check that your [batteries](#) are good.
- Overpowered or underpowered batteries can cause this reading.
- If the batteries are good, replace the outdoor sensor.
- If your temperature is fine but your humidity is reading “HI” or “LO” or dashes, your humidity may be below 10% Relative Humidity. Your sensor does not read below 10% humidity.

WHY DO I SEE “NO” FOR A SENSOR READING?

- If a sensor loses connection to the station for any reason, the station will show **NO** after 30 minutes.
- The station will search for 3 minutes every hour to reconnect with the sensor.
- Hold the **TEMP** button for 2 seconds to search for the Outdoor Sensor
- Hold the **WIND** or **RAIN** button to search for the Cyclone Sensor
- Icon will flash while searching for the sensor. The sensor area will show dashes during the search. When the sensor is received the icon will  be solid.
- If no sensor is received, the icon would disappear after 3 minutes of searching if the sensor is not found. **NO** will again show in the outdoor sensor area.

“NO” indicates the connection is lost between your station and the sensor.

- My first thought is always to check that my [batteries](#) are good. If it has been working and now is not, low batteries are the most common connection problem.
- Next, check your [distance, resistance, and interference](#). If everything was working previously at the same location, this is not the issue. However, sometimes there is new growth on trees or bushes that causes another barrier. Radio Frequency (RF) signal does not travel well through foliage due to the moisture content.
- Occasionally adding a new wireless electronic device to the home will cross the signal path for the sensor. If this occurs, try moving your station a few feet or turning the station 90 degrees for a better angle to receive the sensor signal.

WHY ARE MY WIND CUPS NOT SPINNING?

- Check for debris or ice preventing cups from moving.
- Check mounting location. Look for obstructions that prevent the wind from reaching the sensor.

- In most cases, the wind sensor needs to be 4-6ft above the highest point on the roof to clear nearby obstructions and read accurately.
- A 50-foot clearance in all directions is best.
- Push down firmly on the center of the cups to reseal them.
- Cups are replaceable.

WIND READING 0.00: WHY DO I ONLY SEE 0.00 FOR WIND SPEED?

The 0.00 means your wind sensor is connected to your station.

- Check that the cups spin freely. Something may be preventing movement.
- Are your wind cups unbroken? After a storm, it is good to check this.

WHY DO MY SENSOR READINGS COME AND GO?

- RF (radio frequency) communication may come and go occasionally. This can be normal in some environments (e.g., moist climates).
- If a sensor goes out, please wait 2-4 hours for it to reconnect on its own. Please be patient – these stations can reconnect, after many hours out.
- RF (radio frequency) communication is not always 100% on. Certain temporary conditions can cause it to go out for a time (e.g., 100% humidity).
- Check that your sensor is receiving full sun on the solar panel.

If a miss happens:

- If your wind sensor loses connection to the station for any reason, the station will show dashes after 30 minutes.
- The station will search for 5 minutes every hour to reconnect with the wind sensor.

Try this:

- Bring your wind sensor within ten feet of your station and make sure it is connected to the station.
- After 15 minutes move the wind sensor into the next room with a wall between the sensor and the station for 1 hour.
- If there is no loss of signal in that hour, move the wind sensor just outside.
- Continue moving the wind sensor back to its original location.
- If you lose connection, look for sources of [interference](#).

WIND ACCURACY: WHY IS MY WIND SPEED INACCURATE?


- What are you comparing your wind speed to? Your local reporting station is miles from your location and should not be used for comparison.
- Check the unit of measure (MPH, or KMH).
- Check to see if your station receives the same repetitive wind speed recording from the sensor multiple times.
- Check that the cups turn freely.

- Check for obstructions that prevent clear wind flow to the cups.
- Check mounting. In most cases, the wind sensor needs to be six feet or more above the highest point on the roof to clear nearby obstructions and read accurately. A 50-foot clearance in all directions is best.
- It is helpful to send pictures of the sensor mounting if you need to contact customer support.

WHY DOES MY RAIN READING SHOW “DAYS SINCE LAST RAIN” WHEN IT IS RAINING?

When new rainfall is counted your DAYS WITHOUT RAIN will immediately switch to the last rainfall unit (1 hour, 24 hours, etc.) that you previously selected. If this does not happen, you have lost connection to your Rain sensor.

Your Rain Sensor will show NO when it loses connection. 24 hours after it loses connection to the station, you will see DAYS WITHOUT RAIN appear.

- Check that your Rain Sensor Reception Icon is present. 
- If it is not Hold the Rain button to search for your rain sensor.
- Check that your Batteries are good and that, Distance, Resistance, and Interference are not causing signal loss.

RAIN LOW: WHY IS MY RAINFALL READING LOW?

- Low rain readings indicate the rain sensor and station are connected.
- Check that the rocker tips freely.
- Check the funnel and the inside of the rain sensor for insect nests or debris that may cause loss of rocker motion.
- Be sure to mount the rain sensor level.

Complete a Tip Test:

Write down the Total Rain reading or reset the Rain Total to 0.00. With the rain sensor mounted slowly pour water into the funnel to tip the rocker of the rain sensor ten times. Wait at least 2 minutes for all the rain to collect. Repeat three times.

- Compare these tests. If they are the same, then your rain is reading correctly. If the rain readings are different, repeat the test three times to avoid human error. Then look for causes such as mounting too tight or debris clogging the funnel.

RAIN HIGH: WHY IS MY RAINFALL READING HIGH?

- Check for sources of RF (radio frequency) interference such as other wireless rain sensors, ham radios, or electric transformers.
- Keep the station six feet from cordless phones or wireless routers etc.

Complete a Tip Test:

Write down the Total Rain reading or reset the Rain Total to 0.00. With the rain sensor mounted slowly pour water into the funnel to tip the rocker of the rain sensor ten times. Wait at least 2 minutes for all the rain to collect. Repeat three times. Compare these tests. If they still read high then contact support.

WHAT CAN I DO WITH MY RAIN SENSOR IN THE WINTER?

- Since your Rain sensor is connected to your Wind sensor, you do not need to do anything.
- It is self-emptying, and it is unlikely to freeze up.
- Your Rain sensor will not give an accurate account of snowfall. If you prefer not to have melting snow count as rain, cover the Rain Funnel with plastic for the winter.

BUTTON FUNCTIONS.

There are 12 buttons on the station.

Top: ALERTS | WIND | TEMP | - (MINUS) | SET | + (PLUS) | ATOMIC | RAIN | LIGHT

Side: DECIMAL ON/OFF | HEAT/DEW

Back: RESET

1. ALERTS button

Normal Time Display-

- Hold to enter Alerts Settings

Alerts Mode-

- Press + or – to arm or disarm alert.
- Press and release ALERTS to move to the next setting

2. WIND button

Normal Display-

- Press and release to view top wind speed with time and date stamp.
- Hold to search for Cyclone sensor (Wind and Rain)

Wind Records Mode-

- Hold the - MINUS button for 5 seconds to delete individual wind Records readings.

3. TEMP button

Normal Time Display-

- Press to view HI/LO Records
- Hold to search for TH sensor from any source.

Temp Mode-

- Hold the MINUS button for 5 seconds to reset individual temp/humidity readings.

4. **- (MINUS) Button:**

Settings-

- Press to decrease values during setting.
- Hold 2 seconds to quickly adjust values.

Wind, Rain, Temp, History Mode-

- Hold 5 seconds to delete individual records.

Alerts Mode-

- Press to arm or disarm alert.

5. **SET button:**

Normal Time Display-

- Hold for 2 seconds to enter a setting mode for a time, date, etc.

Settings Mode-

- Press and release to move to the next item

6. **+ (PLUS) Button:**

Setting Mode-

- Press to increase the values by one.
- Hold 2 seconds to quickly adjust values.

Alerts Mode-

- Press to arm or disarm alert.

7. **ATOMIC Button:**

Normal Time Display-

- Hold 2 seconds to search for Atomic Tone Signal

8. **RAIN button**

Normal Time Display-

- Press to view Rain History (24 hours, 1 hour, 7 days, Current Month, Current Year, Total) or Pressure reading. The station can auto-scroll through all readings or stay on selection.
- Hold to search for Cyclone Sensor (Wind and Rain).

When Rain is displayed:

- Hold the MINUS button for 5 seconds to reset individual rain readings.

9. **LIGHT button**

Normal Time Display-

- Press to change the LCD backlight brightness (5 levels)
- Hold to set Auto Dim start/stop time.

Setting Modes-

- Press to exit any setting mode.

10. **DECIMAL button**

Normal Time Display-

- Press and release to turn Temperature Decimal ON or OFF.

11. **FEELS LIKE button**

Normal Time Display-

- Press to view Feels Like HI/LO Records and current Outdoor Dew Point.

12. **RESET button**

Normal Time Display-

- Hold 5 seconds to Restart Station to factory defaults.

TIME: DOES THIS STATION HAVE ATOMIC TIME?

- The station will only search for the atomic signal at UTC 7:00, 8:00, 9:00, 10:00, and 11:00.
- If there is no WWVB reception, the station will search for the atomic time signal every 2 hours until the WWVB time is received.
- The Atomic Time Signal Icon (Tower) will flash while searching. The tower icon will be solid when it has connected.
- From the normal time display, press and release the ATOMIC button to manually search for the WWVB time signal.
- The entire atomic icon will flash when searching.

EXPLAIN THE DAYLIGHT SAVING TIME SETTINGS.

AUTOMATIC DST: Changes Spring and Fall

ALL YEAR DST: Does not change to standard time in Fall.

NO DST: Does not change to DST in the Spring.

HOW DO I MANUALLY SET THE TIME?

1. Hold the **SET** button for 2 seconds to enter settings mode.
2. Press the + or - button to adjust the flashing values.
3. Hold the + or - button to adjust quickly.
4. Press the **SET** button to confirm adjustments and move to the next item.
5. Press the **LIGHT** button at any time to exit.

Settings Order:

- Greeting HELLO
- Language (English, Spanish, French, & German)
- Beep ON/OFF

- Atomic ON/OFF
- DST: Automatic, All Year, NO
- Time Zone
- 12HR/24HR
- Hour
- Minute
- Year
- Month
- Date
- Month/Date or Date/Month
- Fahrenheit/Celsius
- Decimal ON/OFF
- Pressure Units INHG or HPA
- Pressure Number
- Rainfall Inches or Millimeters
- Wind Speed MPH or KMH
- Wind Direction Letters or Degrees

TIME ZONES:
 ATLANTIC
 EASTERN
 CENTRAL
 MOUNTAIN
 PACIFIC
 ALASKA
 HAWAII

NOTE: When in 24 hour time format the seconds will show in place of AM/PM.

Settings Menu

1. On startup or if you hold the SET button for 2 seconds to enter setting mode. HELLO, will show for two seconds, then automatically move to language. **ENGLISH** will show. Press the + or - button to change to another language (Español, Français, or Deutsch). Press the SET button to select Beep ON/OFF.
2. **BEEP OFF** will show. Press the MODE | + or – button to turn the beep sound OFF. Press the SET button to move to 12/24 hour time.
3. **ATOMIC ON** will show. Press the MODE | + or – button to turn Atomic Time OFF. Press the SET button to move to the DST selection.
4. **AUTOMATIC DST** will show. Press the MODE | + or – button to select ALL YEAR DST or NO DST. Press the SET button to move to the Time Zone.
5. **EASTERN** will show. Press the MODE | + or – button to select a different Time Zone. Press the SET button to move to 12/24 hour time.
6. **12/24 FORMAT** will show. 12HR flashes. Press the + or - button to turn to select the 24-hour time format.
7. Press SET to confirm and move to the hour. **HOUR** will show. The hour flashes. Press the + or - button to choose the hour.
8. Press SET to confirm and move to the minutes. **MINUTES** will show. Minutes flash. Press the + or - button to choose the minutes.
9. Press SET to confirm and move to the year. The **YEAR 2023** will show. The year will flash. Press the + or - button to change the year.
10. Press SET to confirm and move to the month. The **MONTH** will show. The Month will flash. Press the + or - button to change the month.

11. Press SET to confirm and move to the date. The **DATE** will show. The date will flash. Press the + or - button to change the date.
 12. Press SET to confirm and select Month/Date or Date/Month display. The **MONTH/DATE** will show. Press the + or - button to select DATE/MONTH.
 13. Press SET to confirm and move to the temperature unit. **FAHRENHEIT °F** will show. °F will flash. Press the + or - button if you prefer °C (Celsius).
 14. Press SET to confirm and move to the temperature Decimal Choice. **DECIMAL ON** will show. Press the + or - button if you prefer DECIMAL OFF.
 15. Press SET to confirm and move to pressure units. **PRESSURE** will show. **INHG** will flash. Press the + or - button to select HPA.
 16. Press SET to confirm and move to adjust the pressure number. **PRESSURE SET** will show. **The pressure number** will flash. Press the + or - button to adjust the pressure number.
 17. Press SET to confirm and move to the rain units. **RAIN** will show. **INCHES** will flash. Press the + or - button to select MILLIMETERS.
 18. Press SET to confirm and move to wind units. **WIND SPEED** will show. **MPH** will flash. Press the + or - button to select KMH.
 19. Press SET to confirm and move to the wind direction. **WIND DIR LETTERS** will show. **NNE** will flash. Press the + or - button to select DEGREES.
 20. Press SET to confirm. **THANK YOU** shows for 2 seconds, then exit the setting menu.
- Note:** After 10 seconds with no button press, the station returns to normal time display.

BACKLIGHT: DOES THIS STATION HAVE A BACKLIGHT?

Yes, your station has a backlight with five levels of intensity.

- Press and release the LIGHT button to adjust the backlight intensity or to turn it off.
- Intensity levels: 0% (OFF) | 1.5% | 20% | 50% | 100%

WHAT IS AUTO DIM?

You can set your backlight to automatically dim to level 1 at a set hour for sleeping, then automatically return to full brightness when you wake.

Set Auto Dim (Hour only):

1. Hold the LIGHT button for 2 seconds to enter dimmer set mode. AUTO DIM OFF will show.
2. Press the + or – buttons to turn dimmer (ON). AUTO DIM ON will show.
3. Press the LIGHT button to select the start time (Hour) for the dimmer. AUTO DIM START TIME and the hour will flash.
4. Press the + or – buttons to change the hour for the dimmer to be low light level.
5. Press the LIGHT button to select the start time for the dimmer to be on High light level. AUTO DIM STOP TIME and the hour will flash.
6. Press the + or – buttons to change the hour for the dimmer to be high light level.
7. Press the LIGHT button to confirm exit.

Note: Hold the LIGHT button at any time to exit dimmer settings.

BATTERY: WHAT DO THE BATTERY ICONS MEAN?

- Low battery by Outdoor Temperature, replace batteries in the TH sensor.
- Low battery by Wind or Rain, replace batteries in the Cyclone Wind/Rain sensor.
- Low Battery by Time, replace batteries in station.

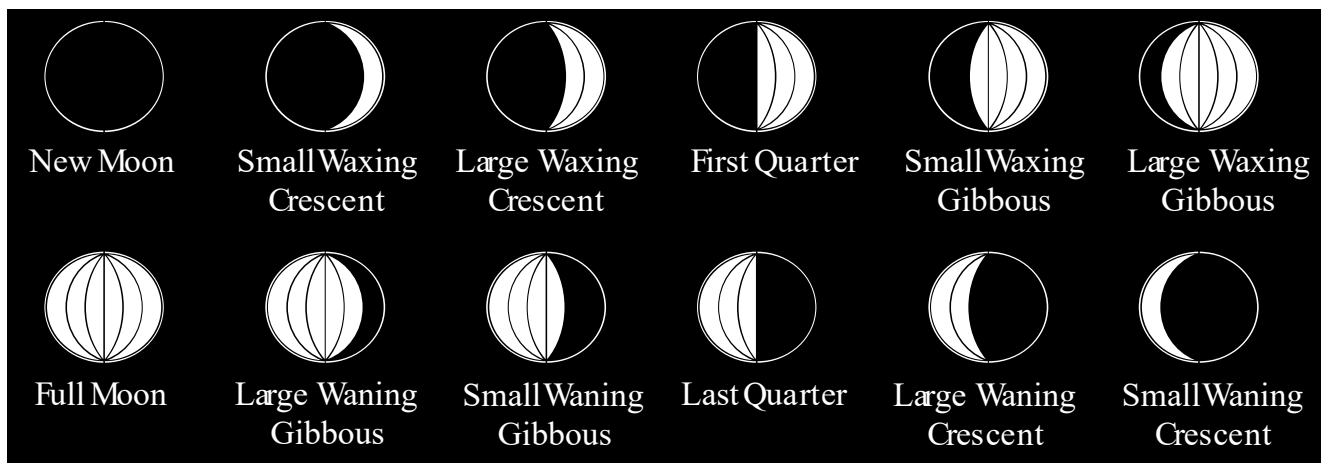


DOES THIS STATION HAVE 12-HOUR AND 24-HOUR TIME OPTIONS?

- Yes, you can select 12 hours or 24-hour time format in the [program menu](#).

WHY DOES THE MOON PHASE SHOW WHEN IT IS STORMING?

The station will show Moon Phase in the forecast area from 7:00 pm to 6:59 am. The Moon Phase will during all Forecast options.



The Sun Icon will show between 7:00 am and 6:59 pm only when Sunny or Partly Sunny is forecasted.

The forecast icons predict weather conditions over the next 12 hours based on the change in atmospheric pressure with about 70-75% accuracy. As weather conditions cannot be 100% correctly forecasted, we are not responsible for any loss caused by an incorrect forecast.

Forecast Icons for the station:

- Sunny
- Partly Sunny
- Cloudy
- Rain
- T-Storm
- Snow

Note: The “snow” icon appears when the temperature is below 32°F (0°C) and the forecast is rainy or stormy.

- Your station calibrates barometric pressure based on its location over time to generate an accurate, personal forecast. Please allow 7-10 days for barometer calibration.

Note: As the Station builds memory, it will compare the current average pressure to the past forty-day average pressure for increased accuracy. The longer the Station operates in one location the more accurate the forecast icons will be.

FACTORY RESET: HOW DO I FACTORY RESET MY STATION?

- This is a terrific way to return your station to “out of the box” condition.
- This is more effective than removing all power for clearing out the station.
- All history records will be removed, so write down anything you want to keep.

To factory reset your station:

1. Hold the RESET button on the back of your station for 5 seconds.
2. When your station resets it will look for all sensors. Allow at least ten minutes to reacquire the sensors.