

327-1414WV2 FAQs

The links below will work in most PDF viewers and link to the topic area by clicking the link. We recommend Adobe Reader version 10 or greater available at: <http://get.adobe.com/reader>

TABLE OF CONTENTS

327-1414Wv2 FAQs	1
Batteries	2
Weather Station Factory Restart	2
Battery Change	2
Power requirements	2
Compatible Sensors	2
Add-on Sensors	3
Wind Thermo-hygro Sensor	3
Dashes shown for outdoor temperature/humidity/Windspeed	3
Inaccurate outdoor temperature/humidity	3
Outdoor Readings are stuck or OFL.....	4
Intermittent Sensor Readings.....	4
sensor drains batteries quickly.....	4
Humidity shows OFL but temperature works	4
Fahrenheit/Celsius	5
MIN MAX Temperature/Humidity Records	5
Feels Like Heat Index Dew Point.....	5
Wind Cups spinning slow or not spinning	5
Replace wind cups	5
Wind speed is 0.00	6
Wind speed is inaccurate	6
Understanding wind readings.....	6
Sensor area is blank (no dashes or numbers).....	7
Alerts: Wind, Temp, humidity.....	7
Mounting/Positioning	7
Distance/Resistance/Interference.....	8
Weather Station	9
12-Hour time format	9
Power requirements	9
Manually set time: Program Menu.....	9

WWVB Atomic time Signal	10
For information about WWVB visit:	11
Backlight	11
Forecast Icons inaccurate	11
Weather station is blank: No letters, numbers or dashed lines	12

BATTERIES

- ✓ Half of all warranty issues can be resolved with fresh batteries of the appropriate voltage.
- ✓ We suggest name brand alkaline batteries.
- ✓ Use batteries dated at least six years in advance of the current year. Batteries dated earlier than six years from now may still work, but may be unstable in performance.
- ✓ Alkaline batteries manufactured this year will have an expiration date 10 years in the future. Battery technology has improved and batteries will maintain voltage longer in storage. However, the environment the batteries reside in for the 10 years can deplete the power.
- ✓ Good name brand Alkaline batteries make less noise, which reduces the chance of RF (radio frequency) interference from the battery compartment. A minimum voltage of 1.48V for each battery is necessary for proper performance.

WEATHER STATION FACTORY RESTART

The factory reset will return the Professional weather station to its default settings. This will clear all previous recorded history, so you may want to write down data before taking this step.

1. Remove batteries from the sensor, batteries, and AC adapter from the weather station.
2. Press any button 20 times. Leave unpowered for 15 minutes.
3. After 15 minutes insert batteries into the sensor, then insert batteries (optional in the weather station) and plug AC adapter into the weather station.
4. Wait 15 minutes to establish a strong connection. Place sensor outside.

BATTERY CHANGE

- ✓ After changing batteries in the sensor, hold the DOWN ARROW button for 5 seconds to search for the sensor.
- ✓ If this fails to connect the sensor to the station, bring the sensor about 5 feet from the station and complete a [Factory Restart](#).

POWER REQUIREMENTS

- ✓ 2-C batteries power the wind/thermohygro sensor
- ✓ 3-AAA Alkaline batteries for the Professional weather station

COMPATIBLE SENSORS

- ✓ TX1414Wv2 Wind Speed and Thermo-hygro
- ✓ TX141TH-BCH can be added on channel 2 or channel 3 for additional temperature/humidity readings.
- ✓ The above 433MHz sensors will read to this professional weather station.

ADD-ON SENSORS

You can add up to two TX141TH-BCH sensors for extra temp/humidity readings on channels 2 or 3. (Wind Sensor uses channel 1).

1. Remove the battery cover from all the sensors (leave battery covers off until all sensors are received by the wind station).
2. Set the first additional sensor to Channel 2 and insert 2 AA batteries.
3. Set the second additional sensor to Channel 3 and insert 2 AA batteries.
4. Hold the DOWN arrow button on the wind station for 5 seconds to search for sensors.
5. Press the TX button on each sensor.
6. When connection is established, the temperature & humidity for each of the selected channels will appear.
7. Install the battery covers on each sensor.
8. Keep sensors and the wind station 5-10 feet apart for 15 minutes to establish a solid connection.
9. After 15 minutes, place the remote sensors in appropriate shaded locations.
10. Press and release the DOWN arrow button to view channels 1, 2 or 3 on the wind station when multiple sensors are used.

WIND | THERMO-HYGRO SENSOR

DASHES SHOWN FOR OUTDOOR TEMPERATURE/HUMIDITY/WINDSPEED

- ✓ Dashes means the unit have lost connection between the display and the outdoor sensor.
- ✓ Batteries are the most common problem.
- ✓ Distance/Resistance can cause loss of sensor signal. Avoid having more than 1 wall, window, tree etc., between the display and the sensor. UV coated windows may actually reflect the signal. Stucco walls will absorb the signal.
- ✓ It may be helpful to orient the weather 90 degrees towards the sensor for better reception.
- ✓ Sensors operate best when elevated at least 6 feet.
- ✓ Remove the batteries from the sensor for 2 minutes. Replace the batteries in the Thermohygro sensor and after 5 minutes press and hold the DOWN ARROW button for 5 seconds. Wait 10 minutes. If the unit does not receive a reading from all the sensors please try the factory reset.

INACCURATE OUTDOOR TEMPERATURE/HUMIDITY

- ✓ The thermo-hygro sensor reads the environment. When the sensor reads high during the day but not at night it is a mounting problem.
- ✓ **Side-by-side test:** Bring the thermo-hygro sensor in the house and place it next to the Professional weather station for 2 hours.

- ✓ Compare indoor and outdoor temperature. The temperatures should be within 4 degrees to be within tolerance. The humidity should be within 14% to be within tolerance.
- ✓ If the sensor reads correctly when next to the Professional weather station then try a different location outside.
- ✓ Look for heat sources such as sunlight, door or window frames, or reflected heat.

OUTDOOR READINGS ARE STUCK OR OFL

- ✓ Check batteries. Overpowered or underpowered batteries can cause this reading.
- ✓ Replace sensor.

INTERMITTENT SENSOR READINGS

- ✓ RF (radio frequency) communication may come and go occasionally. This can be normal in some environments (e.g. moister climates).
- ✓ If a sensor goes out, please wait 2-4 hours for it to reconnect on its own. Please be patience – these stations can reconnect on, 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).

If a miss happens:

- ✓ Hold the **DOWN ARROW** button for 5 seconds to search for sensor.
- ✓ The units try for 20 minutes to reconnect. After 20 minutes, the sensor stops trying for an hour (to preserve battery life). After the 1-hour break, the sensor will start another 20-minute re-connect cycle.
- ✓ Distance/Resistance can cause loss of sensor signal. Avoid having more than 1 wall, window, tree etc., between the display and the sensor. UV coated windows may actually reflect the signal. Stucco walls will absorb the signal.
- ✓ Check batteries. This is our primary warranty issue.

SENSOR DRAINS BATTERIES QUICKLY

- ✓ Test a new set of Alkaline batteries. Write down the date of installation and the voltage of the batteries.
- ✓ When the batteries fail, please note the date and voltage again. This is helpful in determining the problem.
- ✓ Check the distance and resistance between the sensor and Professional weather station. Sensors at the end of the range may work while batteries are fresh but not after they drain a bit.
- ✓ Check for leaking batteries, which may damage the sensor.

HUMIDITY SHOWS OFL BUT TEMPERATURE WORKS

- ✓ The humidity low range is 10% RH. If your local humidity is below 10% you will see this reading.
- ✓ Complete a restart with fresh batteries.
- ✓ Replace the sensor.

FAHRENHEIT/CELSIUS

- ✓ Enter the program menu to select in Fahrenheit (°F) or Celsius (°C).

MIN | MAX TEMPERATURE/HUMIDITY RECORDS

The station automatically resets MAX and MIN values daily at midnight (12:00 AM).

- ✓ Press the UP arrow button once to view MAX indoor/outdoor temperatures.
- ✓ Then, hold the UP arrow button to manually reset MAX temperatures to current values.
- ✓ Press the UP arrow button again to view the MIN indoor/outdoor temperatures.
- ✓ Then, hold the UP arrow button to manually reset MIN temperatures to current values.

FEELS LIKE | HEAT INDEX | DEW POINT

Press the HEAT/DEW button repeatedly to toggle between:

- Feels Like temperature
- Heat Index (outdoor)
- Dew Point (outdoor)

Note: Feels Like Temperature is the perceived outdoor temperature.

- ✓ Temperatures below 50°F, will measure the effect of wind speed on cooling of the human body.
- ✓ Temperatures above 70°F, will measure the effect of humidity on the perception of temperature.
- ✓ Between 51 °F and 69°F, the feels like temperature will be the same as the outdoor temperature on channel 1.

WIND CUPS SPINNING SLOW OR NOT SPINNING

- ✓ Check for debris or ice in cups.
- ✓ 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 in order 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 reset them.
- ✓ Cups are replaceable.

REPLACE WIND CUPS

Replace wind cups:

1. Loosen the screw on side of cups
2. Remove cups
3. Install new cups
4. Tighten screw

Note: The screw in the wind cups will fit on the flat side of the metal stem on the sensor.

WIND SPEED IS 0.00

- ✓ Check that the wind cups attach to the sensor. Occasionally they can come off.
- ✓ Check that the cups seat properly by pushing on the center of the cups.
- ✓ Check that the cups spin freely.

WIND SPEED IS INACCURATE

- ✓ Check the unit of measure (MPH, KM/H or M/S).
- ✓ Check to see if the Professional weather station receives the same repetitive wind speed recording from the sensor multiple times.
- ✓ Confirm the direction is working correctly.
- ✓ 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 6 feet or more above the highest point on the roof in order 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.
- ✓ Check that your batteries are fresh in the thermo-hygro sensor and the Professional weather station.

UNDERSTANDING WIND READINGS

Current Wind Speed:

The current wind speed which represents a 30 second average of wind speed samples taken. This should correspond to the wind graph above.

Top Wind Speed:

- ✓ Highest instantaneous wind speed recorded in the past 60 minutes.
- ✓ Updates when a higher wind speed has occurred.
- ✓ Last number will remain if there is no wind for 60 minutes.

Color Wind Speed Graph:

- ✓ The wind speed graph with color sections is based on current wind speed.
- ✓ One segment will flash indicating current wind speed.

Wind Speed History:

Press and release the HISTORY button to view the past top wind speeds with time and date of occurrence. The 1-hour top speed is the default reading shown on the display.

- **24-hour:** Past 24-hour period, from last record.
- **Week:** Past 7-day period, from last record.
- **Month:** Defined by Calendar Month i.e. January 1 - January 31.
- **Year:** Defined by Calendar Year i.e. January 1 - December 31.

SENSOR AREA IS BLANK (NO DASHES OR NUMBERS)

- ✓ Check that other areas of the Professional weather station read properly. There may be a problem with the Professional weather station.

ALERTS: WIND, TEMP, HUMIDITY

Setting alert value and arming individual alerts are separate functions.

Set alert value:

1. Hold the ALERTS button for 3 seconds to enter alert set mode.
2. The high wind speed alert value will blink in set mode.
3. Press the ARROW buttons to adjust the values.
4. Press the ALERTS button to confirm and move to the next alert.

The alert setting order:

- ✓ High Wind Speed (channel 1 only)
- ✓ Outdoor Humidity HI
- ✓ Outdoor Humidity LOW
- ✓ Outdoor Temperature HI
- ✓ Outdoor Temperature LOW
- ✓ Indoor Humidity HI
- ✓ Indoor Humidity LOW
- ✓ Indoor Temperature HI
- ✓ Indoor Temperature LOW

Arm/Disarm Alerts

1. Press and release the ALERTS button to select an alert. HI and LO will flash.
2. Press the UP arrow button to arm the alert.
3. Press the DOWN arrow button to disarm the alert.
4. The HI or LO alert icon appears when armed.

Active Alert: Beeps once per minute with flashing alert icon.

MOUNTING/POSITIONING

First, set everything up in the house to be sure it works before mounting the sensors outside. For best performance, mount the Rain and the Wind

Speed/Thermo-hygro sensors together. Do not lengthen or shorten the sensor cords.

TX1414Wv2 sensor:

- ✓ For most accurate wind speed, mount the sensor in an open area clear for 50 feet in all directions.
- ✓ The maximum wireless transmission range to the station is over 300 feet (91 meters) in open air, not including walls or trees.
- ✓ Mount sensor vertically.
- ✓ Cups should be on the top of the sensor.
- ✓ Attach to mounting surface with screws through the mounting bracket.
- ✓ The sensor can be mounted from the bottom or from the side.

Use your own mounting pole:

- ✓ Insert your own mounting pole into the sensor.
- ✓ Tighten screws

DISTANCE/RESISTANCE/INTERFERENCE

Distance:

- ✓ The maximum transmitting range in open air is over 300 feet (91 meters) between the sensors and the Professional weather station.
- ✓ Consider what is in the signal path between the Professional weather station and the sensors.
- ✓ Consider the distance the Professional weather station is from other electronics in the home.

Resistance:

- ✓ Obstacles such as walls, windows, stucco, concrete, and large metal objects can reduce the range.
- ✓ When considering the distance between the sensor and the Professional weather station (300 feet, 91 meters open air) cut that distance in half for each wall, window, tree, bush or other obstruction in the signal path.
- ✓ Closer is better.
- ✓ Do not mount the sensors on a metal fence. This significantly reduces the effective range.

Interference:

- ✓ Consider items in the signal path between the sensors and the Professional weather station.
- ✓ Simple relocation of the sensors or the Professional weather 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.
- ✓ Vegetation is full of moisture and reduces signal.
- ✓ Dirt: Receiving a signal through a hill is difficult.

WEATHER STATION 12-HOUR TIME FORMAT

- ✓ Time display: 12-hour or 24-hour format.
- ✓ Default is 12-hour time.
- ✓ Use the Program Menu to switch time formats.

POWER REQUIREMENTS

- ✓ 3-AAA Alkaline batteries power the Professional weather station.

MANUALLY SET TIME: PROGRAM MENU

- ✓ The **TIME SET** button will move through the program menu.
- ✓ The ▲/▼ buttons will adjust values.
- ✓ Press the **LIGHT** button at any time to exit.

Program Menu:

- Beep On/Off
- Atomic time signal (On/Off)
- Time Zone
- DST (Daylight Saving Time On/Off)
- 12/24 Hour time format
- Hour
- Minutes
- Year
- Month
- Date
- Mph/Kph
- Fahrenheit/Celsius

The **TIME SET** button will move through the program menu. To change a value use the ▲/▼ buttons.

1. Hold the TIME SET button five seconds so that BEEP and the word ON will flash. Press and release the ▲/▼ buttons to turn this to OFF to avoid beep sounds when pressing a button. Confirm with the TIME SET button and move to atomic time (WWVB ON/OFF).
2. WWVB and the word ON will flash. Press and release the ▲/▼ buttons to turn this to OFF if you do not wish WWVB time reception. Confirm with the TIME SET button and move to time zone.

Note: If OFF is selected, you will skip #3 & #4 and move next to 12/24 hour time format.

3. EST will flash. Press and release the ▲/▼ buttons to select a different Time Zone: AST=Atlantic, EST= Eastern, CST= Central, MST= Mountain, PST= Pacific, AKT= Alaska, HAT=Hawaiian time zone. Confirm with the TIME SET button and move to DST.
4. DST will flash and the word ON. Press and release the ▲/▼ buttons to turn this to OFF if you do not observe DST. Confirm with the TIME SET button and move to the 12/24 hour time.
5. 12HR will flash. Press and release the ▲/▼ buttons to select the correct hour. Confirm with the TIME SET button and move to the hour

6. The hour will flash. Press and release the ▲/▼ buttons to select the correct hour. Confirm with the TIME SET button and move to the minutes.
7. The minutes will flash. Press and release the ▲/▼ buttons to adjust the minutes. Confirm with the TIME SET button and move to the year.
8. The year will flash. Press and release the ▲/▼ buttons to select the correct year. Confirm with the TIME SET button and move to the month.
9. The month will flash. Press and release the ▲/▼ buttons to select the correct month. Confirm with the TIME SET button and move to the date.
10. The date will flash. Press and release the ▲/▼ buttons to select the correct date. Confirm with the TIME SET button and move to F/C.
11. The Day of the Week will set automatically when the year, month and date are set.
12. MPH will flash. Press and release the ▲/▼ buttons to select KPH. Confirm with the TIME SET button and select Fahrenheit or Celsius temperature display.
13. °F will flash. Press and release the ▲/▼ buttons to select Fahrenheit or Celsius. Confirm with the TIME SET button and exit.

WWVB ATOMIC TIME SIGNAL

- ✓ The weather station receives the Atomic Time Signal (WWVB) from Fort Collins, Colorado.
- ✓ The station will search for WWVB signal up to 5 minutes, then return to receiving the outdoor sensor.
- ✓ The first search is 2 hours after startup.
- ✓ The atomic time search initiates every six hours until successful reception.
- ✓ The tower icon shows when sensor have received the signal.

- ✓ The WWVB time signal can be received up to 2,000 miles away from Boulder Colorado. However, due to the nature of the Earth's Ionosphere, reception is very limited during daylight hours. The Radio-controlled display will search for a signal every night when reception is best.

- ✓ Allow up to 5 nights for the change from Daylight Savings Time to Standard Time and vice-versa to occur, depending on your location and atmospheric conditions.

For best signal reception, follow these steps:

1. Check for a **Tower Icon** showing on the display near the time and on the TH sensor. The tower icon indicates successful reception of the WWVB signal in the past 24-hours.
2. Check that the Weather Station is in the correct **Time Zone**.
3. This station offers seven time zones listed in letter format (default is EST):
 - AST Atlantic Time
 - EST Eastern Time
 - CST Central Time
 - MST Mountain Time
 - PST Pacific Time
 - AKT Alaskan Time
 - HAT Hawaiian Time
4. Check that **WWVB** is **ON**. This must be ON to receive a WWVB signal.

5. Check that the **DST** indicator is **ON** or OFF. If the indicator is OFF the Weather Station will not change into or out of Daylight Saving Time.
6. Batteries dated earlier than 6 years from now may still work, but may be unstable in performance.
Note: Without proper batteries, the antenna will have a harder time picking up the signal.

For information about WWVB visit:

www.nist.gov/pml/div688/grp40/wwvb.cfm

BACKLIGHT

A/C adapter: The backlight is on continuously when operating the Forecast Station with the 5-volt a/c adapter.

Note: When the Adapter is NOT in use, the Hi/Low/Off light feature is not available.

Try this exercise in a dim room. The Professional weather station has a bright, dim and OFF setting for the backlight. Wait 15 seconds after pressing the LIGHT button to see if backlight stays on. This will assure it is not in OFF mode.

1. Be sure the AC cord is plugged in correctly to the Professional weather station and the outlet.
2. Remove the batteries.
3. Press the LIGHT button. If the backlight comes on and the display is active your AC cord works.
4. Wait 15 seconds to see if the back light stays on.
5. If the backlight goes out after 15 seconds, repeat #3.

FORECAST ICONS INACCURATE

The Professional weather station predicts weather condition of the next 12-hours based on the change of atmospheric pressure with 70-75% accuracy.

Note: As weather conditions cannot be 100% correctly forecasted we are not responsible for any loss caused by an incorrect forecast.

Animated Forecast Icons:

- ✓ 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.

- ✓ The Professional weather station calibrates barometric pressure based on its location over a period of time to generate an accurate, personal forecast. Please allow 7-10 days for barometer calibration.
- ✓ The forecast station samples the barometric pressure every twelve minutes. These samples are averaged hourly and daily then stored in nonvolatile

memory. The three hour pressure icon change is based off of the last four average hourly readings.

- ✓ **IMPORTANT:** As the Professional weather station builds memory, it will compare the current average pressure to the past forty day average pressure for increased accuracy. The longer the Professional weather station operates in one location the more accurate the forecast icons will be.
- ✓ Install fresh alkaline batteries with correct polarity.

WEATHER STATION IS BLANK: NO LETTERS, NUMBERS OR DASHED LINES

- ✓ Check that the batteries connect correctly.
- ✓ Batteries may be overpowered or underpowered.
- ✓ Remove batteries from Professional weather station.
- ✓ Press any button 20 times. Leave the batteries out of the Professional weather station for 2 hours.