

WS-9077U-IT FAQs

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Batteries

- ✓ Half of all warranty issues can be resolved with fresh batteries of the appropriate voltage.
- ✓ We suggest name brand alkaline batteries for indoor forecast stations.
- ✓ 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 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.
- ✓ **Outdoor Sensors:** Use Alkaline batteries (or Lithium for temperatures below - 20°F/-28.8°C)
- ✓ **Forecast station:** Use alkaline batteries. Overpowered or underpowered batteries may cause loss of indoor readings, missing segments, dim forecast station etc.

Forecast Station Factory Restart

FACTORY RESTART:

For best results, please bring the outdoor sensor in the house and place 5 feet from the forecast station.

1. Remove batteries from the sensor and batteries from the forecast station.
 2. With the power removed, press one of the buttons on the forecast station at least 20 times to clear all memory. Please do this even if the forecast station is blank to remove any random electricity. Verify the forecast station is blank.
 3. **Note:** Failure to allow a forecast station to rest for 15 minutes can result in failure to connect with the outdoor sensor or missing segment on the forecast station. The instruction manual describes a setup for a new unit that has not had time to build up residual electricity.
 4. Please be sure you are using fresh batteries testing to a minimum of 1.48, on a voltmeter that reads in numbers.
 5. Place batteries into the outdoor sensor first. Install according to the diagrams in the battery compartment.
 6. Install batteries into the forecast station according to the diagram in the battery compartment.
 7. Allow the sensor and forecast station to remain 5 feet apart for 15 minutes to establish a strong connection. Do not press buttons at this time. You should see a reading on the outdoor temperature area in the first minute.
- ✓ See the section on [mounting](#) and [distance/resistance/interference](#) for details on mounting the outdoor sensor.

Outdoor Temperature Sensor

Compatible Outdoor Sensors

- ✓ A TX29U-IT outdoor sensor is compatible with this forecast station.

Power Requirements

- ✓ 2-AA [batteries](#) power the outdoor sensor.
- ✓ We recommend alkaline batteries for the sensor.

Dashes shown for Outdoor Temperature

- ✓ Dashes means the connection is lost between the forecast station and the outdoor sensor.
- ✓ [Batteries](#) often resolve the connection.
- ✓ [Distance/Resistance](#) can cause loss of connection between the sensor and the forecast station.
- ✓ [Reorientation](#) of the forecast station 90 degrees towards the outdoor sensor may provide better reception.
- ✓ Complete a [factory restart](#).

Outdoor Temperature Changes Constantly

- ✓ The forecast station can read up to three outdoor sensors.
- ✓ Check the channel indicator. If it switches between 1, 2 or 3, your forecast station is reading additional sensors.
- ✓ **Note:** When first powered up it is natural for the forecast station to search across all three channels for up to 15 minutes for outdoor sensors.
- ✓ You may have an additional [compatible](#) outdoor sensor within range.
- ✓ Occasionally a neighbor will have a compatible outdoor sensor that is within [range](#).

Inaccurate Outdoor Temperature Reading

- ✓ The outdoor sensor reads the environment. When mounted in the home it will read inside temperature.
- ✓ When the sensor reads high during the day but not at night it is a [positioning](#) problem.
- ✓ **Side-by-side test:** Bring the outdoor sensor in the house and place it next to the forecast station for 2 hours.
- ✓ Compare indoor and outdoor temperature. The temperatures should be within 4 degrees to be within tolerance.
- ✓ If the sensor reads correctly when next to the forecast station then try a different location outside.
- ✓ Look for heat sources such as sunlight, door or window frames, or reflected heat.

Intermittent Outdoor Temperature

- ✓ RF (radio frequency) communication may come and go occasionally. This can be normal in some environments (e.g. moister climates). If sensor signal is lost, please wait 2-4 hours for the signal to reconnect on its own.
- ✓ Move the outdoor sensor to a closer location.
- ✓ **Check Channels:** Confirm that the channel selected on the outdoor sensor matches the channel shown on the forecast station.
- ✓ **Freezer test:** Confirm the forecast station is reading the correct outdoor sensor. Place the sensor in the freezer for an hour and watch the temperature drop on the forecast station.
- ✓ **Indoor distance test:** Please complete the [restart](#) with sensor and forecast station 5-10 feet apart and inside to establish a strong connection.
- ✓ After 15 minutes if there is a reading in the outdoor temperature area, move the sensor to another room with one wall between the sensor and the forecast station. Observe to see if the temperature remains on consistently for 1-hour.
- ✓ If the temperature remains while in the house then it is likely a [distance/resistance](#) issue. Move the sensor to different locations outside to find a location where the temperature reading will hold.
- ✓ [Distance/Resistance](#) can cause loss of sensor signal.
- ✓ Check [Batteries](#).

Outdoor sensor fell. Now it does not work.

- ✓ If there is no physical damage to the outdoor sensor, the fall may not have caused internal damage.
- ✓ An outdoor sensor that has fallen into a puddle or other standing water or snow may have water damage.
- ✓ Sensors are water resistant, not waterproof.
- ✓ A fall can shock the sensor or the [batteries](#) in the sensor.

- ✓ Batteries that have fallen on a hard surface may be damaged and unable to function properly.
- ✓ Complete a [Restart](#) with fresh 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.

Outdoor Temperature Shows OFL

- ✓ OFL stands for Outside Factory Limits.
- ✓ The outdoor sensor is sending a signal and the forecast station is receiving the signal.
- ✓ Check [Batteries](#). Overpowered or underpowered batteries can cause this reading.
- ✓ Replace outdoor sensor.

Outdoor 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 forecast 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.
- ✓ Battery life is over 24 months when using reputable battery brands for both Alkaline and Lithium batteries.

Fahrenheit/Celsius

- ✓ Enter the [program menu](#) to change the temperature reading from Fahrenheit to Celsius.

MIN/MAX Temperature Readings

- ✓ **View Indoor MIN/MAX:** Press and release the IN button to advance through the Minimum, Maximum and Current Indoor Temperatures records. The Time and Date will flash to show when the Minimum or Maximum Temperature occurred.
Note: The indoor Humidity is not time and date stamped.
- ✓ **Reset Indoor MIN/MAX:** Hold the IN button for five seconds. The record resets to the current day's reading.
- ✓ **View Outdoor MIN/MAX:** Press and release the OUT button to advance through the Minimum, Maximum, and Current Outdoor Temperature records.
- ✓ **Reset Outdoor MIN/MAX:** Hold the OUT button for five seconds. The record resets to the current day's reading.

TIP: When using [multiple sensors](#), use the CH button to view MIN or MAX temperature on the other channels.

Channels

The forecast station will accommodate up to three remote outdoor sensors (TX29U-IT). The channel (CH) button on the forecast station allows you to see the temperature in various locations: outdoors, baby's room, greenhouse, basement, etc.

- ✓ Press and release the CH button to view channel 1, 2 or 3 on the forecast station when multiple sensors are used.

Note: You cannot change channels if only one sensor is connected.

Multiple Outdoor Sensors

To connect multiple remote sensors to the forecast station:

- ✓ Remove the battery cover from all the sensors and the forecast station.
- ✓ Leave unpowered for at least 15 minutes.

- ✓ Install 2-AA [batteries](#) into the first outdoor sensor.
- ✓ Install 2-AA batteries into the forecast station.
- ✓ When you see a reading on channel 1 in the outdoor temperature area, install 2-AA batteries into the second outdoor sensor.
- ✓ When you see a reading on channel 2 in the outdoor temperature area, install 2-AA batteries into the third outdoor sensor.
- ✓ When RF (radio frequency) connection is established, the temperatures of the selected channels will appear on the main unit.
- ✓ Allow the sensors and the forecast station to stay 5-10 feet apart for 15 minutes to establish a solid connection.
- Note:** Start all sensors within 2 minutes of installing batteries in the forecast station.
- ✓ After 15 minutes, place the remote sensors in appropriate locations within range of the forecast station.
- ✓ Press and release the CH button to view channel 1, 2 or 3 on the forecast station when multiple sensors are used.

Mounting/Positioning Outdoor Sensor

- ✓ Mount outdoor temperature sensors vertically and under a bit of an overhang.
- ✓ Protect the outdoor sensor from standing rain or snow, and from the overhead sun, which can cause it to read incorrectly. Generally, mounting under an eave or deck rail works well.
- ✓ Construct a small roof or box for the sensor if you do not have an overhang. Please be sure the box has vents.
- ✓ Mount the sensor on the North side to prevent sun from causing incorrect readings.
- ✓ Mount at least 6 feet in the air for a strong signal.
- ✓ Outdoor sensors are water resistant but not water proof.
- ✓ Avoid more than one wall between the sensor and the forecast station.
- ✓ Do not mount near electrical wires, transmitting antennas or other items that will interfere with the signal.
- ✓ RF (radio frequency) signals do not travel well through moisture or dirt.
- ✓ Place the outdoor sensor and the forecast station in the desired shaded locations, and wait approximately 1-hour before permanently mounting the sensor to ensure that there is proper reception.
- ✓ Do not mount the sensor on a metal fence. This significantly reduces the effective range.

MOUNT

- ✓ Remove the mounting bracket from the remote temperature sensor.
- ✓ Place the mounting bracket over the desired location (wall or table).
- ✓ Through the three screw holes of the bracket, mark the mounting surface with a pencil.
- ✓ Screw mounting bracket onto the mounting surface. Ensure that the screws are flush with the bracket.
- ✓ Insert the remote temperature sensor into the bracket.

Note: Mounting with adhesive tape is not recommended as a permanent mounting solution. Only use the adhesive tape during set-up process.

Position Forecast Station

- ✓ The forecast station has a wide base to sit on a desk or table.
- ✓ Choose a location 6 feet or more from electronics such as cordless phones, gaming systems, televisions, microwaves, routers, baby monitors, etc., which can prevent signal reception.
- ✓ Place within range of the outdoor sensor.
- ✓ Be aware of electrical wires and plumbing within a wall. This will interfere with signal reception.
- ✓ The maximum transmitting range in open air is 330-feet (100 meters).
- ✓ Obstacles such as walls, windows, stucco, concrete, and large metal objects can reduce the range.
- ✓ For best WWVB reception, orientate the forecast station with the front of the back facing Ft. Collins Colorado.

Distance/Resistance/Interference

Distance:

- ✓ The maximum transmitting range in open air is over 330-feet (100 meters) between the outdoor sensor and the forecast station.
- ✓ Consider what is in the signal path between the forecast station and the sensor.
- ✓ Consider the distance the forecast station is located away from other electronic 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 forecast station (330 feet 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 sensor on a metal fence. This significantly reduces the effective range.

Interference:

- ✓ Consider items in the signal path between the sensor and the forecast station.
- ✓ Sometimes a simple relocation of the sensor or the forecast station will correct the interference issue.
- ✓ Windows can reflect the radio signal.
- ✓ Metal will absorb the RF (radio frequency) signal.
- ✓ Stucco is held up by a metal mesh that can absorb the signal.
- ✓ Transmitting antennas (ham radio, emergency dispatch center, airports, military base etc.)
- ✓ Electrical wires (utilities, cable etc.)
- ✓ Vegetation is full of moisture and reduces signal.
- ✓ Dirt: RF (radio frequency) signal does not travel through dirt.

Forecast Station

12-Hour or 24-Hour Time Format

- ✓ Displays the time in 12-hour or 24-hour format
- ✓ Default is 12-hour time.
- ✓ Use the [Program Menu](#) to switch time formats.

Power Requirements

- ✓ 2-AA alkaline [batteries](#) power this forecast station.

Dashes, OFL or Stuck Indoor Temperature/Humidity

- ✓ This is generally a power related issue.
- ✓ [Batteries](#) may be overpowered or underpowered. Remove batteries from forecast station.
- ✓ Press any button 20 times. Leave the forecast station unpowered for 1-2 hours.
- ✓ Install fresh alkaline batteries with correct polarity.
- ✓ If the indoor temperature is still dashes or OFL, the forecast station may need replacement.

Inaccurate Indoor Temperature Reading

- ✓ **Side-by-side test:** Bring the outdoor sensor in the house and place it next to the forecast station for 2 hours.
- ✓ Compare indoor and outdoor temperature. The temperature should be within 4 degrees to be within tolerance.
- ✓ Look for heat sources such as sunlight, door or window frames, or reflected heat of cold.

Time is off by hours

- ✓ Check to see if the [WWVB](#) Tower icon appears on the forecast station. If not, the forecast station has not received a WWVB time signal in the past 24-hours.
- ✓ Reposition the forecast station with the front or back facing Colorado.
- ✓ Enter the [Program Menu](#) and check that the RCC setting is ON.
- ✓ Check that the Time Zone selected correctly reflects your location. Adjust the time zone in the [Program Menu](#).

- ✓ Check that the DST indicator is correct for your location (most areas observe DST so this should be ON). Adjust the DST indicator in the [Program Menu](#).

Weather Forecast icons inaccurate

The weather forecasting feature is estimated to be 75% accurate. The weather forecast is based solely upon the change of air pressure over time.

Three possible weather icons will show in the LCD:

- ✓ **Sunny:** Air pressure is rising; weather will improve (not that the weather will be sunny).
- ✓ **Sun with Clouds:** Air pressure is stable.
- ✓ **Clouds with Rain:** Air pressure is falling; weather will degrade (not that the weather will be rainy).

The weather icons change when the unit detects a change in air pressure. The icons change in order, from “sunny” to “partly sunny” to “cloudy” or the reverse. If the symbols do not change then the weather has not changed, or the change has been slow and gradual.

Manually Set Time/Date: Program Menu

1. Hold the **SET** button to enter time set mode.
 2. To adjust values press the **IN** or the **OUT** button.
 3. Press the **SET** button to confirm adjustments and move to the next item.
- ✓ **CONTRAST:** Hold the SET button for five seconds. LCD and a number from 0-7 will flash. Use the IN button to increase or decrease the contrast of the LCD forecast station. Press and release the SET button once to confirm and move to the next item.
 - ✓ **TIME ZONE:** The Time Zone will flash, showing a number following by the letter **h**. Use the IN to change the Time Zone.
Note: American Time Zones are negative numbers:
-5h Eastern, -6h Central, -7h Mountain, -8h Pacific, -9h Alaskan and -10h Hawaiian.
Press and release the SET button once to confirm and move to the next item.
 - ✓ **DAYLIGHT SAVING TIME:** DST will show with ON or OFF flashing. Most states use DST, so this should be set to ON. However if your location does not use DST, use the IN button to turn it OFF. Press and release the SET button once to confirm and move to the next item.
 - ✓ **RADIO-CONTROLLED TIME:** RCC will show with ON or OFF flashing. Use the IN button to set the RCC signal. Press and release the SET button once to confirm and move to the next item.
 - ✓ **12/24-HOUR TIME MODE:** 12h will flash. Use the IN button to change from 12-hour to 24-hour time. Press and release the SET button once to confirm and move to the next item.
 - ✓ **TIME:** The Time will flash. Use the **IN** button to advance the **Hour**. If using 12-hour Time Mode, be sure to set the Hour for am or pm. Use the **OUT** button to advance the **Minutes**. Press and release the SET button once to confirm and move to the next item.
 - ✓ **YEAR:** The Year will flash. Use the IN button to set the year. Press and release the SET button once to confirm and move to the next item.
 - ✓ **MONTH AND DATE:** The Month and Day will flash. Use the **IN** button to advance the **Month**. Use the **OUT** button to advance the **Date**. Press and release the SET button once to confirm and move to the next item.
 - ✓ **FAHRENHEIT OR CELSIUS:** A degree symbol will flash, followed by F or C. Use the IN button to select your preference. Press and release the SET button once to confirm and move to the next item.
 - ✓ **FORECAST SENSITIVITY:** Two pressure tendency arrows will appear and a number will flash under the forecast icon. Press and release the IN button to select the desired forecast sensitivity setting.
Note: Use the lowest number near the coastline. Use the highest number for the desert, and middle number is for everywhere else. Press and release the SET button once to confirm and exit.

No WWVB Tower Icon

- ✓ The forecast station has not received a WWVB time signal in the past 24-hours.
- ✓ Enter the [Program Menu](#) and check that the RCC setting is ON.
- ✓ Position the forecast station for better reception.
- ✓ Be sure you have good batteries in the forecast station.

- ✓ Allow up to 5 nights to receive the time signal.

Forecast station has missing segments

- ✓ This is generally a power related issue.
- ✓ **Batteries** may be overpowered or underpowered. Remove batteries from forecast station.
- ✓ Press any button 20 times. Leave the forecast station unpowered for 1-2 hours.
- ✓ Install fresh alkaline batteries with correct polarity.

Smiling/Frowning face

The Comfort Level Indicator (smiling or frowning face) is located between the indoor temperature/humidity.

- ✓ The indicator will forecast station a happy face icon when the temperature is between 68°F and 78.6°F (20°C and 25.9°C), and the humidity is between 45% and 65%.
- ✓ A sad face icon will forecast station when the temperature and humidity are outside the mentioned ranges.

Forecast station is dim

Explanation: Most forecast stations have a gray background. Place the forecast station at eye level, to determine if it is dim. Forecast stations that sit in the sunlight can develop a cloudy film over time.

- ✓ This is generally a power related issue.
- ✓ **Batteries** may be overpowered or underpowered. Remove batteries from forecast station.
- ✓ Press any button 20 times. Leave the forecast station unpowered for 1-2 hours.
- ✓ Install fresh alkaline batteries with correct polarity.

Forecast station has distorted or frozen display

Explanation: On a brand new forecast station, check for thin plastic film of **printed scratch guard** that may be on the screen of the forecast station. This thin piece of plastic has printed numbers for store displays. When batteries are installed, the “real” numbers show behind the printed scratch guard and create distortion.

- ✓ With all power removed, the forecast station should be blank.
- ✓ If numbers still appear, please check for scratch guard.

Power:

- ✓ Check that the batteries are installed correctly.
- ✓ This is generally a power related issue.
- ✓ **Batteries** may be overpowered or underpowered.
- ✓ Remove batteries from forecast station.
- ✓ Press any button 20 times. Leave the batteries out of the forecast station for 2 hours.
- ✓ Insert batteries into the forecast station.

Forecast station is blank: No letters, numbers or dashed lines

- ✓ Check that the batteries are installed correctly.
- ✓ **Batteries** may be overpowered or underpowered.
- ✓ Remove batteries from forecast station.
- ✓ Press any button 20 times. Leave the batteries out of the forecast station for 2 hours.
- ✓ Insert batteries into the forecast station.

Forecast station 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 for leaking batteries, which may damage the forecast station.
- ✓ Battery life is over 12 months when using reputable battery brands.

Forecast station has missing segments

Explanation: When parts of numbers, letters, or pictures are missing on the forecast station, it is often power related.

- ✓ Batteries may be overpowered or underpowered. Remove batteries from forecast station.
- ✓ Press any button 20 times. Leave the forecast station unpowered for 1-2 hours.
- ✓ Install fresh alkaline batteries with correct polarity.