

WT-5220U-IT FAQs

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Batteries

- The Power cord is the best power source for the projection alarm clock.
- **If you choose to use batteries:**
- Half of all warranty issues can be resolved with fresh batteries of the appropriate voltage.
- We suggest name brand alkaline batteries for indoor displays such as clocks.
- 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.

Clock Factory Restart

1. Remove all power from outdoor sensor and alarm clock. Press one of the buttons on the alarm clock at least 20 times to clear all memory.
 2. Verify that the alarm clock is blank before proceeding (there may be lines painted on the screen).
 3. Leave both units without power for 15 minutes (very important).
 4. Insert fresh batteries into the outdoor sensor.
 5. Insert power cord and fresh batteries into the alarm clock.
 6. Keep the outdoor sensor 5-10 feet from the alarm clock.
 7. When connection is established, the temperature will appear on the clock. Allow the outdoor sensor and alarm clock to sit together for 15 minutes to establish a strong connection before returning the sensor outside.
- For optimum 915MHz transmission, the outdoor transmitter should be no more than 330 feet (100 meters, open air) from the Alarm clock.
 - See the section on [mounting](#) and [distance/resistance/interference](#) for details on mounting the outdoor transmitter.

Outdoor Temperature Transmitter

Compatible Outdoor Transmitters

- A TX37U-IT outdoor transmitter comes packaged with this clock.
- The TX37U-IT and TX45U-IT (915MHz) transmitters are compatible with this clock.

Fahrenheit/Celsius

- Use the [program menu](#) to select Fahrenheit or Celsius temperature display.

Flashing Outdoor Temperature

- The outdoor Temperature reading will flash when the connection is first lost or intermittent between the clock and the outdoor transmitter.
- [Distance/Resistance](#) is generally the cause of intermittent connection or loss of connection between the transmitter and the clock.
- Check the [position](#) of the clock. Turn the clock 90 degrees towards the outdoor transmitter for better reception.
- Try the [quick connect](#) or [factory restart](#).
- [Batteries](#) often resolve the connection issue.

Dashes shown for Outdoor Temperature

- Dashes means the connection is lost between the clock and the outdoor transmitter.
- [Batteries](#) often resolve the connection.
- [Distance/Resistance](#) can cause loss of connection between the transmitter and the clock.
- Reorientation of the clock 90 degrees towards the outdoor transmitter may provide better reception.
- Try the [quick connect](#) or [factory restart](#).

Inaccurate Outdoor Temperature Reading

- The outdoor transmitter reads the environment. When mounted in the home it will read inside temperature.
- When the transmitter reads high during the day but not at night it is a [positioning](#) problem.
- **Side-by-side test:** Bring the outdoor transmitter in the house and place it next to the clock for 2 hours.
- Compare indoor and outdoor temperature. The temperatures should be within 4 degrees to be within tolerance. See the section on [accuracy](#) for details.
- If the transmitter reads correctly when next to the clock, 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 transmitter signal is lost, please wait 2-4 hours for the signal to reconnect on its own.
- Move the outdoor transmitter to a closer location.
- **Freezer test:** Confirm the clock is reading the correct outdoor transmitter. Place the transmitter in the freezer for an hour and watch the temperature drop on the clock.
- **Indoor distance test:** Please complete the [restart](#) with transmitter and clock 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 transmitter to another room with one wall between the transmitter and the clock. Observe to see if the Temperature remains on consistently for 1-hour.
- If the temperature remains on while in the house, then it is likely a [distance/resistance](#) issue. Move the transmitter to different locations outside to find a location where the temperature reading will hold.
- [Distance/Resistance](#) can cause loss of transmitter signal.
- Check [Batteries](#).

Outdoor Temperature Is Stuck or OFL

- The last outdoor reading may remain (not change) for several hours when connection is lost.
- The outdoor temperature reading will flash when the connection is first lost or intermittent between the clock and the outdoor transmitter.
- Check [batteries](#). Overpowered or underpowered batteries can cause this reading.
- Replace outdoor transmitter.

Outdoor Transmitter Fell and No Longer Works

- If there is no physical damage to the outdoor transmitter, the fall may not have caused internal damage.
- An outdoor transmitter that has fallen into a puddle or other standing water or snow may have water damage.
- Transmitters are water resistant, not waterproof.
- A fall can shock the transmitter or the batteries in the transmitter.
- 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.

Outdoor Transmitter 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 transmitter and clock. Transmitters 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 transmitter.
- Battery life is over 24 months when using reputable battery brands for both Alkaline and Lithium batteries.

Mounting/Positioning Outdoor Transmitter

- Mount outdoor temperature transmitters vertically and under a bit of an overhang.
- Protect the outdoor transmitter 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 transmitter if you do not have an overhang. Please be sure the box is vented.
- Mount the transmitter on the North side to prevent sun from causing incorrect readings.
- Mount at least 6 feet in the air for a strong signal.
- Outdoor transmitters are water resistant but not waterproof.
- Avoid more than one wall between the transmitter and the Clock.
- 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 transmitter and the Clock in the desired shaded locations and wait approximately 1-hour before permanently mounting the transmitter to ensure that there is proper reception.
- Do not mount the transmitter on a metal fence. This significantly reduces the effective range.

MOUNT

- Choose a location for the transmitter that is within range of the clock and under an overhang for accuracy.
- Install one mounting screw into a wall leaving approximately ½ inch (12.7mm) extended.
- Place the transmitter onto the screw, using the hanging hole on the backside.
- Gently pull the transmitter down to lock the screw into place.

Note: Always ensure that the transmitter locks onto the screw before releasing.

Position Clock

- Place your clock near an exterior wall with the front or back facing toward Ft. Collins Colorado for best WWVB reception.
- The clock should be six feet from other electronics or wireless devices to best receive the outdoor temperature transmitter signal.

Distance/Resistance/Interference

Distance:

- The maximum transmitting range in **open air** is over 330-feet (100 meters) between the outdoor transmitter and the clock.
- Consider what is in the signal path between the clock and the transmitter.

- Consider the distance the clock 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 transmitter and the clock (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 transmitter on a metal fence. This significantly reduces the effective range.

Interference:

- Consider items in the signal path between the transmitter and the clock.
- Sometime a simple relocation of the transmitter or the clock will correct the interference issue.
- Windows can reflect the radio signal.
- Metal will absorb the RF (radio frequency) signal.
- Stucco is held to the wall by a metal mesh.
- 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: Trying to receive a signal through a hill is difficult.

Projection Alarm Clock

How tall are the Time Numbers?

- The time numbers are 0.59 inches tall.

12-Hour or 24-Hour Time Format

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

Power Requirements

- This clock is powered by a power cord
- Alternatively, optional 3-AA alkaline [batteries](#)

Inaccurate Indoor Temperature Reading

- Look for heat sources such as sunlight, door or window frames, or reflected heat of cold.

Set Time Alarm

1. Press and hold the AL/HOUR button for five seconds. The Alarm Time begins to flash.
2. Use the MODE/MIN button to set the Minute and the AL/HOUR button to set the Hour.
3. Press SNOOZE and you are done.

Activate/Deactivate Time Alarm

- Press, briefly hold, and then release the AL/HOUR button to turn alarm On or Off.
- When the alarm is ON, you will see an alarm icon ((●)) next to the word outdoor.
- The icon will not show when the alarm is off.

Snooze Alarm

When alarm is sounding, press SNOOZE button to silence the alarm for 5 minutes.

- Press any button except SNOOZE to silence the alarm for 24 hours.
- This is a crescendo alarm. It will sound for 2 minutes then shut off if no buttons are pressed.

Time is off by hours

- Check to see if the [WWVB](#) Tower icon appears on the clock. If not, the clock has not received a WWVB time signal in the past 24-hours.
- Reposition the clock with the front or back facing Colorado.
- 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](#).
- Large buildings, metal roofed buildings and buildings or rooms full of electrical and/or radio equipment make it difficult to receive the WWVB time signal.

Daylight Saving Time

- Dependent on your location, position of the clock in your home, and atmospheric interference, it may take up to 5 nights for the change from Daylight Savings Time to Standard Time and vice-versa to occur.
- Check for a [WWVB](#) Tower Icon showing on your Clock. The tower icon indicates you have received the WWVB signal from Ft Collins CO in the past 24-hours.
- Check that the clock is in the correct [Time Zone](#).
- Check whether the DST indicator is ON or OFF. If the indicator is OFF the clock will not change.
- Check for fresh [batteries](#). Without proper batteries, the antenna will have a harder time picking up the signal.
- Position the Clock in a window (with the front or back) facing Ft. Collins, Colorado and leave for up to five nights. If you do not have a window facing this direction, locate the Clock near an outside wall and point the unit in this general direction.

Manually Set Time/Calendar/Alarm: Program Menu

TIP: Press only one button at a time while setting the clock.

There are five function buttons: AL/HOUR, Sun Icon (sun) Directional Icon (four arrows) MODE/MIN with SNOOZE above the time display.

1. **TIME ZONE:** Press and hold the MODE/MIN button until the display flashes. The Time Zone will flash, showing a number following by the letter h. North American Time Zones are negative numbers.

- -4h Atlantic
- -5h Eastern
- -6h Central
- -7h Mountain
- -8h Pacific
- -9h Alaskan
- -10h Hawaiian

Use the MODE/MIN to change the Time Zone. Press and release the SNOOZE button once.

2. **TIME:** The Time will flash. Use the MODE/MIN button to set the **Minute** and the AL/HOUR button to set the **Hour**. If using 12-hour Time Mode, be sure to set the hour for am or pm. Press and release the SNOOZE button once.
3. **YEAR:** The Year will flash. Use the MODE/MIN button to set the year. Press and release the SNOOZE button once.
4. **DATE:** The Date will flash. Use the MODE/MIN to set the **Date** and the AL/Hour button to set the **Month**. Press and release the SNOOZE button once.
5. **12/24-HOUR TIME MODE:** 12h or 24h will flash on the display. Use MODE/MIN button to change from 12-hour to 24-hour time. Press and release the SNOOZE button once.
Note: When in 24-hour time the date will be displayed as Day first then Month.
6. **F/C: FAHRENHEIT** will flash. Press and release MODE/MIN button to select between Fahrenheit and Celsius. Press and release the SNOOZE button once.
7. **DAYLIGHT SAVING TIME:** DST will show with either 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 MODE/MIN button to turn it OFF. Press and release the SNOOZE button once.

Display Modes

There are four possible display modes to view the day, seconds, and temperature (remote temperature is constantly displayed).

Default is indoor temperature

To change the display:

- Press and release the MODE/MIN button. The display will show seconds
- Press and release the MODE/MIN button again. The display will show alarm time.
- Press and release the MODE/+button again. The display will show month, date.

Projection

Change projection orientation

- **Arrow button:** The button has an icon that is a set of four arrows pointing up, down, left, and right.
- Each press of this button will change the direction of the numbers projecting onto the ceiling by a quarter turn.

Project temperature only

- This clock is designed to continually alternate between time and outdoor temperature. This cannot be adjusted.

Projected temperature is dashes

- **Temperature projection:** This unit will only project the temperature when the sensor is connected to the clock. If the temperature does not show on the clock, complete a restart.

Projection is dim

- The projection feature works best in dark room.
- Press the button that looks like a SUN twice. This clock has a projection intensity feature that will choose intensity levels or turn the projection off.
- Check for proper power cord. The clock requires a power cord to operate properly.
- If on batteries only operation, the batteries may be weak.

Projection does not show

- Check for proper power cord. The clock requires a power cord to operate properly.
- Press the button that looks like a SUN twice. This clock has a projection intensity feature that will choose 3 intensity levels or turn the projection off.
- Check that power cord is plugged in correctly.
- Press snooze button to see if projection shows. If it shows when you press the snooze button but not at other times, double check the power cord connection and remove the batteries. If the display goes blank, the power cord is not plugged in correctly.

Clock Has Missing Segments

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

Clock Is Dim

- Most clocks have a gray background. Place the clock at eye level. Is it still dim?
- Clocks that sit in the sunlight can develop a cloudy film over time.
- This is generally a power related issue. Check that the Power cord is plugged in correctly.
- Batteries may be overpowered or underpowered. Remove batteries and Power cord from clock.
- Press any button 20 times. Leave the clock unpowered for 1-2 hours.
- Install Power cord and/or fresh alkaline batteries with correct polarity.

Clock Has Distorted Display

- On a brand new clock check for thin plastic films of printed scratch guard that may be on the screen of the clock. This thin piece of plastic has printed numbers for store displays.
- This film will be easy to peel off the LCD.
- With all power removed the clock should be blank.
- If numbers still appear, please check for scratch guard.
- This is generally a power related issue. Check that the Power cord is plugged in correctly.
- Batteries may be overpowered or underpowered. Remove batteries and Power cord from clock.
- Press any button 20 times. Leave the clock unpowered for 1-2 hours.
- Install Power cord and/or fresh alkaline batteries with correct polarity.

Clocks Blank: No Letters, Numbers or Dashed Lines

- This is generally a power related issue. Check that the Power cord is plugged in correctly.
- Batteries may be overpowered or underpowered. Remove batteries and Power cord from clock.
- Press any button 20 times. Leave the clock unpowered for 1-2 hours.
- Install Power cord and/or fresh alkaline batteries with correct polarity.