# CA85152 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 displays such as Wireless Thermometers.
- 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.
- Wireless Thermometers: Use alkaline batteries. Overpowered or underpowered batteries may cause loss of indoor readings, missing segments, dim display etc.

# Wireless Thermometer Factory Restart

#### **FACTORY RESTART:**

- DISTANCE: Bring the transmitter and Wireless Thermometer together inside and place both 5-10 feet apart with nothing between them.
- REMOVE POWER: Remove batteries from transmitter and Wireless Thermometer.
- DISCHARGE ELECTRICITY: Press one of the buttons on the Wireless Thermometer at least 20 times to clear all memory. Verify that the Wireless Thermometer is blank before proceeding.
- UNPOWERED 10 MINUTES: Let the Wireless Thermometer and transmitter sit with power removed for at least 10 minutes.
- WIRELESS THERMOMETER: Insert fresh alkaline batteries in the Wireless Thermometer.
- TRANSMITTER: Insert fresh batteries into the transmitter, observing the correct polarity.
- PRESS TX BUTTON: Press the TX button on the back of remote Transmitter to transmit RF (radio frequency) signal. Keep the transmitter 5-10 feet from the Wireless Thermometer.
- WAIT: Wait for 5 minutes for the outdoor temperature to appear.
- CONNECTION: When RF (radio frequency) connection is established, the respective temperature will appear on the main unit. Allow the transmitter and Wireless Thermometer to sit together for 15 minutes to establish a strong connection.

- PLACE TRANSMITTER OUTSIDE: For optimum 433MHz transmission, place the outdoor transmitter a distance of no more than 200 feet (60 meters, open air) from the Wireless Thermometer.
- See the section on <u>mounting</u> and <u>distance/resistance/interference</u> for details on mounting the outdoor transmitter.

# Outdoor Temperature Transmitter Compatible Outdoor Transmitters

- A TX141-B outdoor transmitter comes packaged with this Wireless Thermometer.
- The TX141-B and TX141-A (433MHz) transmitters are compatible with this Wireless Thermometer.

# Outdoor Temperature Signal Strength

- The Wireless Thermometer will search for the outdoor temperature transmitter for 3 minutes.
- The antenna symbol will flash during reception, and temperature display will be dashes "---".
- If synchronization fails once, the antenna will lose one bar. \*...
- If synchronization fails twice, the antenna will lose two bars. \*...
- If RF (radio frequency) reception fails five times, the antenna symbol will show without bars.
- The antenna will show full display with successful RF (radio frequency) reception.

## Dashes shown for Outdoor Temperature

- Dashes mean the connection is lost between the Wireless Thermometer and the outdoor transmitter.
- Batteries often resolve the connection.
- <u>Distance/Resistance</u> can cause loss of connection between the transmitter and the Wireless Thermometer.
- Reorientation of the Wireless Thermometer 90 degrees towards the outdoor transmitter may provide better reception. This allows more antenna surface to face the transmitter signal.
- Try the <u>factory restart</u>.

# Power requirements

- 2-AA batteries power the outdoor transmitter.
- We recommend alkaline batteries for the transmitter.
- You may choose to use lithium batteries for temperatures below 20°F/-28.8°C.

## Outdoor Temperature changes constantly

- You may have an additional compatible outdoor transmitter within range.
- Occasionally a neighbor will have a compatible outdoor transmitter that is within range.

# 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 <u>positioning</u> problem.
- Side-by-side test: Bring the outdoor transmitter in the house and place it next to the Wireless Thermometer for 2 hours.
- Compare indoor and outdoor temperature. The temperatures should be within 4 degrees to be within tolerance.
- If the transmitter reads correctly when next to the Wireless Thermometer, 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 Wireless Thermometer is reading the correct outdoor transmitter. Place the transmitter in the freezer for an hour and watch the temperature drop on the Wireless Thermometer.
- Indoor distance test: Please complete the <u>Restart</u> with transmitter and Wireless Thermometer 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 Wireless Thermometer. 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 <u>distance/resistance</u> issue. Move the transmitter to different locations outside to find a location where the temperature reading will hold.
- <u>Distance/Resistance</u> can cause loss of transmitter signal.
- Check Batteries.

# Outdoor Temperature is stuck or HHH, LLL

- 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 Wireless Thermometer 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, snow, or other standing water, it 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 <u>Batteries</u> 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 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.
- Check the <u>distance</u> and <u>resistance</u> between the transmitter and Wireless Thermometer. 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.

## Temperature Trend Arrows

The indoor and outdoor temperature trend indicators will update every 30 minutes or less. These trends represent temperature changes over the past three hours.

- UP ARROW: Temperature rose more than 1°C/2°F in the past three hours.
- RIGHT ARROW: Temperature has not changed more than 1°C/ 2°F in the past three hours.
- DOWN ARROW: Temperature fell more than 1°C/ 2°F in the past three hours.

# MIN/MAX Temperature readings

The Wireless Thermometer will show the daily minimum and maximum temperatures each day starting at midnight (12:00 AM). The Wireless Thermometer automatically resets the min/max temperatures at midnight (12:00 AM).

 View MIN data: Press and release the MIN/MAX button to view the minimum Indoor and Outdoor Temperatures.

- Reset MIN data: Hold the MIN/MAX button for 5 seconds and the Indoor and Outdoor Minimum Temperatures will reset. The temperature area will show dashes briefly then return to current temperatures.
- View MAX data: Press and release the MIN/MAX button to view the maximum Indoor and Outdoor Temperatures.
- Reset MAX data: Hold the MIN/MAX button for 5 seconds and the Indoor and all Outdoor Maximum Temperatures will reset. The temperature area will show dashes briefly then return to current temperatures

## 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. 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 it is well 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 RF (radio frequency) signal.
- Outdoor transmitters are water resistant but not water proof.
- Avoid more than one wall between the transmitter and the Wireless Thermometer.
- 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 Wireless Thermometer in the desired shaded locations and wait approximately one 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 <u>range</u> of the Wireless Thermometer and under an overhang for accuracy.

## Option 1:

- Install one mounting screw (included) into a wall leaving approximately  $\frac{1}{2}$  of an 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 in place.

## Option 2:

- Insert the mounting screw through the front of the transmitter and into the wall.
- Tighten the screw to snug (do not over tighten).
- To achieve a true temperature reading, mount where direct sunlight cannot reach the outdoor transmitter.

- Mount the outdoor transmitter on a North-facing wall or in any well shaded area. Under an eave or deck rail work well.
- The maximum transmitting range in open air is over 200 feet (60 meters).
- Obstacles such as walls, windows, stucco, concrete, and large metal objects can reduce the range.
- Place the transmitter at least 6 feet in the air to improve signal transmission.

# Position Wireless Thermometer

- The Wireless Thermometer has a wide base to sit on a desk or table.
- Place within range of the outdoor transmitter.
- Choose a location 6 feet or more from electronics such as cordless phones, wireless gaming systems, televisions, microwaves, routers, baby monitors, etc., which can prevent signal reception.
- Be aware of electrical wires and plumbing within a wall. This will interfere with RF (radio frequency) signal reception.
- The maximum transmitting range in open air is 200-feet (60 meters).
- Obstacles such as walls, windows, stucco, concrete, and large metal objects can reduce the range.

# Distance/Resistance/Interference

## Distance:

- The maximum transmitting range in open air is over 200-feet (60 meters) between the outdoor transmitter and the Wireless Thermometer. This range is in open air with ideal conditions.
- Consider what is in the signal path between the Wireless Thermometer and the transmitter.
- Consider the distance the Wireless Thermometer is located away from 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 transmitter and the Wireless Thermometer (200 feet open air) cut that distance in half for each wall, window, tree, bush or other obstruction in the signal path.
- Closer is better.
- Windows reflect the RF (radio frequency) signal.
- Metal absorbs the signal and reduces the range.
- Stucco attaches to the wall with a metal mesh that absorbs the signal.
- 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 Wireless Thermometer.
- Sometime a simple relocation of the transmitter or the Wireless Thermometer will correct the interference issue.
- Windows can reflect the radio signal.
- Metal will absorb the RF (radio frequency) signal.
- Stucco is backed by a metal mesh that holds it to the wall.
- Transmitting antennas (ham radio, emergency dispatch center, airports, military bases, 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.

# Wireless Thermometer

# How tall are the time numbers?

The time numbers are 0.5 inches tall.

## Power requirements

• 2-AA alkaline batteries power the Wireless Thermometer.

# 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.

# Dashes, HH.H, LL.L or stuck Indoor Temperature

- This is generally a power related issue.
- <u>Batteries</u> may be overpowered or underpowered. Remove batteries from Wireless Thermometer.
- Press any button 20 times. Leave the Wireless Thermometer unpowered for 1-2 hours.
- Install fresh alkaline batteries with correct polarity.
- If the indoor temperature is still dashes or OFL, the Wireless Thermometer may need replacement.

# Inaccurate Indoor Temperature reading

- Side-by-side test: Bring the outdoor transmitter in the house and place it next to the Wireless Thermometer 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.

## Fahrenheit/Celsius

Wireless Thermometer: Press the SET/°F/°C button to select Fahrenheit or Celsius temperature readout.

# Time is off by hours

- This Wireless Thermometer has manual set time.
- Use the program menu to set the time.

# Manually Set Time/Date: Program Menu

The SET/°F/°C button moves through the program menu. The MIN/MAX/+ button changes the value.

- 12/24-HOUR TIME: Hold the SET/°F/°C button for 2 seconds. 12H will flash. Press and release the MIN/MAX/+ button to select 24-hour time format. Press and release the SET button once to move to the hour.
- HOUR: The Hour will flash. Press and release the MIN/MAX/+ button until the correct hour is shown. Press and release the SET button once to move to the minutes.
- MINUTES: The Minutes will flash. Press and release the MIN/MAX/+ button until the correct minutes are displayed. Press and release the SET button once more to exit the program menu.

Note: When no buttons are pressed for ten seconds, the Wireless Thermometer will save the last change and default back to normal mode.

# Wireless Thermometer has missing segments

- This is generally a power related issue.
- <u>Batteries</u> may be overpowered or underpowered. Remove batteries from Wireless Thermometer.
- Press any button 20 times. Leave the Wireless Thermometer unpowered for 1-2 hours.
- Install fresh alkaline batteries with correct polarity.

## Wireless Thermometer is dim

- Most Wireless Thermometers have a gray background. Place the Wireless Thermometer at eye level. Is it still dim?
- Wireless Thermometers that sit in the sunlight can develop a cloudy film over time.
- This is generally a power related issue.
- <u>Batteries</u> may be overpowered or underpowered. Remove batteries from Wireless Thermometer.

- Press any button 20 times. Leave the Wireless Thermometer unpowered for 1-2 hours.
- Install fresh alkaline batteries with correct polarity.

# Wireless Thermometer has distorted display

- On a brand new Wireless Thermometer, check for thin plastic films of printed scratch guard that may be on the upper and lower screen of the Wireless Thermometer. This thin piece of plastic has printed numbers for store displays.
- With all power removed, the Wireless Thermometer should be blank.
- If numbers still appear, please check for scratch guard.
- This is generally a power related issue.
- <u>Batteries</u> may be overpowered or underpowered.
- Press any button 20 times. Leave the batteries out of the display for 2 hours.
- Insert fresh batteries into the Wireless Thermometer.

# Wireless Thermometer display is frozen

- On a brand new Wireless Thermometer, check for thin plastic films of printed scratch guard that may be on the upper and lower screen of the Wireless Thermometer. This thin piece of plastic has printed numbers for store displays. This can make the Wireless Thermometer display appear "frozen".
- With all power removed, the Wireless Thermometer should be blank.
- If numbers still appear, please check for scratch guard.
- Check that the batteries are installed correctly.
- This is generally a power related issue.
- Batteries may be overpowered or underpowered.
- Remove batteries from Wireless Thermometer.
- Press any button 20 times. Leave the batteries out of the display for 2 hours.
- Insert fresh into the Wireless Thermometer.