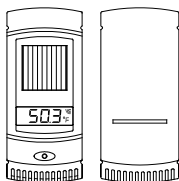


La Crosse Technology®

**WS-811561
IT915 MHz**

**Atomic Digital Clock and Temperature
Station with Wireless Solar-Powered
Outdoor Temperature Sensor**



**Wireless Weather Instruments by
La Crosse Technology®**

La Crosse Technology, Ltd.
www.lacrossetechnology.com
2809 Losey Blvd. S
La Crosse, WI 54601
Phone 608-782-1610

Table of Contents

Table of Contents	1
Inventory of Contents	2
Features and Specifications	2
Initial Set Up and Wireless Synchronization	3
TX61U-IT Sensor Power Save "STOP" Mode	4
Set the Time and Date.....	4

Setting the Time Alarm	6
Battery Replacement Information	7
Installation Notes	8
Mounting the Units.....	9
Online Resources	10
Care and Maintenance	10
Troubleshooting.....	10
Warranty Information	11

Inventory of Contents

1. A WS-811561 IT 915 MHz Temperature Station (referred to as "wireless display" in this manual)
2. A TX61U-IT 915 MHz Wireless Solar-Powered Outdoor Temperature Sensor with built-in rechargeable battery pack (referred to as TX61U-IT sensor in this manual)
3. Mounting hardware for TX61U-IT sensor
4. Instruction manual

Features and Specifications

Wireless Display:

- WWVB radio controlled time (manual setting option available)
- DST function on/off selectable (default is 'On')
- Wireless outdoor temperature (°F or °C)
- Indoor temperature (°F or °C)
- Time alarm with 10 minute snooze
- 12/24 hour time
- Calendar: Month, date, day
- Multi-language calendar: English (US), French (F), Spanish (E) or (d) German
- Time Zone setting: +/- 12 Hours from GMT
- Continuous calendar up to year 2029
- Low battery indicator
- Wall hanging or free standing
- Indoor measurement range: 14.2°F to 99.9°F (-9.9°C to 37.8°C) w/ 0.1°C resolution. "OFL" displayed if outside range
- Indoor temperature update rate: Every 16 seconds
- Batteries: 2 X "AA" size 1.5V (not included)
- Battery life: Up to 24 months
- 915 MHz Wireless range:
Up to 200 Ft. (60.96m) open air
- Dimensions: 8.9"L x 1.2"W x 7.1"H
(227 x 30.1 x 180 mm)

TX61U-IT Wireless Solar-Powered Outdoor Sensor:

- The TX61U-IT sensor sends the collected outdoor temperature to your existing wireless display by way of a 200 Ft wireless signal.
- High-efficiency modern solar panel maintains full charge with minimal light
- Stores solar power for continuous operation
- Batteries are a built-in (non-replaceable) Alkaline power cell
- Wall hanging or free standing
- Outdoor measurement range:
-39.8°F to 139.8°F (-39.9°C to 59.9°C)
with 0.1°C resolution. "OFL" displayed if outside range
- Outdoor temperature update rate:
Every 8 seconds
- 915 MHz Wireless range:
Up to 200 Ft. (60.96m) open air
- Dimensions: 1.7"L x .93"W x 3.94"H
(43 x 100 x 23.5 mm)
- Signal reception and re-synchronization:
903MHz, 915MHz and 927MHz
- Operating voltage: 2.5V or higher than 2.5V

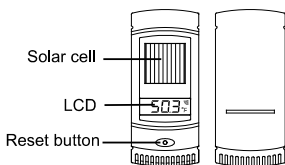
Initial Set Up and Wireless Synchronization

1. Initialize the Sensor

It is important to allow sufficient light to reach the solar panel while activating the sensor. Make sure the lights

are on in the setup room and the solar panel is facing a 60W light bulb or brighter - do not cover with hands or other objects. To begin the set up process, use the included plastic reset rod to GENTLY PUSH the reset button once in the hole on the front of the sensor with the LCD/solar panel facing a light source. All LCD segments will light up briefly. The code number and the security code (example: "20") of the model will be displayed sequentially. Next, the battery voltage will appear on the LCD. Then the current temperature will appear on the sensor's LCD and it will start to transmit the wireless temperature signal.

Note: Sensor battery voltage must be higher than 2.5V to maintain normal operation. When the voltage of the TX61U-IT sensor is lower than 2.5V, the signal transmission stops and "LO" is displayed on the LCD for approx. 2 seconds before the sensor enters the "IDLE" mode. In "IDLE" mode, the LCD turns off and the sensor charges up the internal rechargeable batteries



automatically. When the battery voltage charges to 2.5V, the LCD will turn on and the transmission of signal will start again.

2. Install Batteries into Wireless Display

Insert 2 new "AA", 1.5 volt ALKALINE batteries into the wireless display according to the polarity marked on the battery compartment. Make sure to do this within 2 minutes of performing the start up process for the TX61U-IT. (Diagram on page 3)

Once the batteries are properly installed in the wireless display, the unit will beep and all segments of its LCD will light up briefly. The indoor temp and the time (displayed as 12:00) will appear on the LCD. If it does not appear after 30 seconds, please reinstall the wireless display batteries and try again. Once the indoor data is displayed, proceed to the next step.

3. Wireless Temperature Reception

After the wireless display is powered up, it will start receiving data from the TX61U-IT sensor. If reception is successful, the outdoor temp will appear on the wireless display. If the outdoor temp does not display within 5 min, remove the batteries from the display and go back to Step 1 (make sure the batteries are fresh).

4. Distance Between Units

To ensure sufficient wireless communication, the final distance between the wireless display and the sensor should be no more than 200 ft (60.96 meters) (obstacles can reduce this distance).

TX61U-IT Sensor Power Save "STOP" Mode

If the TX61U-IT sensor is placed in a dark environment for 24 hours, it will enter into the "STOP" mode to save power. The LCD will turn off and it will stop transmitting the data. If this happens, press the reset button on the TX61U-IT sensor to wake it up. If the voltage is higher than 2.5V, the LCD will turn on again and resume the transmission of the wireless temperature signal.

If the voltage is lower than 2.5V, "LO" will appear on the LCD and the sensor will enter into "IDLE" mode. Move the sensor to a brightly lit area. In "IDLE" mode, the LCD turns off and the sensor charges up the internal rechargeable batteries automatically. When the battery voltage charges to 2.5V, the LCD will turn on and the transmission of signal will start again.

Set the Time and Date

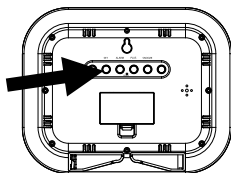
The WS-811561 Wireless Display will automatically set its time based on daily WWVB reception. The signal is

attempted at the full hour between 12:00 am to 6:00 am. For best reception, place the display with the front or back facing Colorado. After a successful reception, no more reception attempt would be made until the following day.

If the display is in an area of your home where the WWVB signal cannot be received, you can set the date and time manually.

In either case, the Time Zone must be set manually.

Note: The "SET" button is used to enter SET mode. The display will exit SET mode automatically after 15 seconds of inactivity.



(back view)

1. Set the Time Zone

Press the "SET" button and the Time Zone display will flash. Use the "PLUS" button to select the desired Time zone setting.

- -5: EST – Eastern (default setting)
- -6: CST – Central
- -7: MST - Mountain
- -8: PST - Pacific
- -9: ALA - Alaska
- -10,-11,-12,12,11,10,9,8,7,6,5,4,3,2,1: Other time zones
- 0: Greenwich Mean Time (GMT)
- -1,-2,-3 - Other time zones
- -4: ATL - Atlantic

Note: North American time zones are negative numbers.

2. Set Daylight Saving Time ON/OFF:

Press the "SET" button a second time and DST will flash. Press the "PLUS" button to toggle Daylight Saving Time on ("On") or off ("OFF").

3. Set Language:

Press the "SET" button a third time and the Language Abbreviation will flash. Press the "PLUS" button to select the display language. A three-letter abbreviation for the day of the week will display in the bottom of the LCD as the setting flashes above. Language choices include:

- US:** English (default setting)
- F:** French (Français)
- E:** Spanish (Español)
- d:** German (Deutsch)

- 4. Set Time - Hour:**
Press the "SET" button a fourth time and the Hours digits will flash. Use the "PLUS" button to select the correct hour.
- 5. Set Time - Minute:**
Press the "SET" button a fifth time and the Minutes digits will flash. Use the "PLUS" button to select the correct minute.
- 6. Set Date - Year:**
Press the "SET" button a sixth time and the Year digits will flash. Use the "PLUS" button to select the correct year.
- 7. Set Date - Month:**
Press the "SET" button a seventh time and the Month digits will flash. Use the "PLUS" button to select the correct month.
- 8. Set Date - Date:**
Press the "SET" button an eighth time and the Date digits will flash. Use the "PLUS" button to set the correct date.
- 9. Set Date - Day of Week:**
Press the "SET" button a ninth time and the Day of Week abbreviation will flash. Use the "PLUS" button to set the correct day of week.
- 10. Set 12 or 24 Hour Time Mode:**
Press the "SET" button a tenth time and the 12 or 24 Hour Time Mode digits will flash. Use the "PLUS" button to set the time mode to either a 12 or 24 hour clock.
- 11. Set Temperature Mode - °F or °C:**
Press the "SET" button again and the Temperature Mode abbreviation will flash. Use the "PLUS" button to set the temperature mode to °F or °C.

Setting the Time Alarm

- 1. To turn the alarm on:**
Press the "ALARM" button. The LCD will display the alarm icon ((●)).
- 2. To set the Alarm Time - Hour:**
Press and hold down the "ALARM" button for 2 seconds until the hours digits flash. Use the "PLUS" button to set the hour. Press the "ALARM" button to confirm your setting and move to setting the minutes.
- 3. To set the Alarm Time - Minutes:**

The Minutes digits of the Alarm Time will flash. Use the "PLUS" button to set the minutes. You can hold the "PLUS" button in to speed up the setting of minutes by using five minute increments. Press the "ALARM" button to confirm your minutes setting and to end the setting procedure.

4. To activate or deactivate the daily alarm:

Briefly press the "ALARM" button once. When the alarm is active the clock displays the alarm icon ((•)) below the word "TIME", when the alarm is deactivated, the alarm icon ((•)) will not display.

5. About the Time Alarm:

After 15 seconds without pressing any button the clock switches automatically from alarm setting mode to normal clock mode.

The alarm will sound for 85 seconds if not deactivated. You can deactivate it by pressing any button. The alarm will be repeated automatically after 24 hours.

The alarm uses 3 different patterns of tone, beginning gently and increasing in intensity, known as a "Crescendo Alarm".

Battery Replacement Information

Wireless Display

To replace the batteries in the wireless display:

1. Lift up the battery compartment cover and remove the batteries.
2. Please take note to install the batteries with the proper polarity as it relates to the battery diagram inside the battery compartment (+). The batteries will fit tightly. To avoid start-up problems please ensure that the batteries do not spring free.
3. Replace compartment cover.

Please follow the steps listed in the Setup section of this manual to ensure that the wireless data reception is successful.

The TX61U-IT Wireless Solar-Powered Sensor Does Not have replaceable batteries.

The TX61U-IT uses solar power and automatically charges the internal power cell(s). No battery replacement is needed.



Help us to keep our environment clean. Please take any used batteries to an authorized depot for recycling.

Installation Notes

Point the TX61U-IT solar panel toward the best available light source to recharge the batteries, but avoid a location in direct sun as it will cause incorrect temperature readings. We recommend facing the solar panel East to catch the early morning sun, and placing under an eave or overhang to avoid overhead sun.

The TX61U-IT sensor uses internal rechargeable batteries to store the collected solar power.

The sensor features a high-efficiency solar panel that maintains a full charge with minimal indirect light. **Do not place in direct sun, as this will cause incorrect temp readings.**

Fog and mist will not harm the sensor but direct rain must be avoided.

The TX61U-IT sensor has a wireless range of 200 feet (60.96 m). Keep in mind that the 200 ft range equates to an open air scenario with no obstructions, and that radio waves DO NOT curve around objects. The actual transmission range will vary depending on the path of the signal. Each obstruction (roof, walls, floors, ceilings, thick trees, etc.) will effectively cut the signal range in half.

Example: If the TX61U-IT sensor, with a 200 feet (60.96 m) range, is mounted on an exterior wall, the signal must then pass through one exterior wall, one interior wall, and across the 10 feet (3 m) width of the room between the 2 walls to reach the wireless display. The first wall will reduce the range to 100 feet (30.48 m), and the second wall will reduce the range to 50 feet (15.24 m). Factoring in the 10 foot room, this leaves a maximum of 40 feet (12.2 m) of remaining signal range.

This allowance is typically enough for a frame wall with non-metallic siding; however certain materials can reduce range even further. Metal siding, stucco, and some types of glass can reduce signal range by as much as $\frac{3}{4}$ or more, compared to the $\frac{1}{2}$ reduction typical of most obstructions. It is possible to receive a signal through these materials, however maximum range will be much less due to their tendency to absorb or reflect a much larger portion of the sensor's signal.

The TX61U-IT sensor measures and transmits signal about every 8 seconds when its battery voltage is higher than 2.5V.

Once the reset button is pressed on the TX-61U sensor and the batteries are inserted into the wireless display, the units will try to synchronize communication. If the wireless display fails to receive

the outdoor temp, this means that the sensor is either located too close or too far from the wireless display. Please adjust the location of the TX61U-IT sensor and try again. If it fails again, please restart the set up procedure (see below).

Mounting the Units

The TX61U-IT Sensor

The sensor can be set on a table or mounted onto a wall using the included screws.

Mounting the Sensor with Screws

1. Remove the mounting bracket from the TX61U-IT sensor.
2. Place the mounting bracket over the desired location.
3. Mark the mounting surface with a pencil through the two screw holes of the bracket.
4. Screw the mounting bracket onto the mounting surface. Ensure that the screws are tight against the bracket.
5. Insert the TX61U-IT sensor into the bracket.

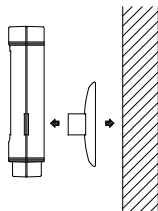
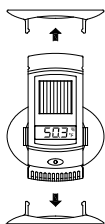


Table Standing and Other Mounting Options



With the mounting bracket installed at the bottom or on the top of the TX61U-IT sensor, the user can place it on any flat surface.

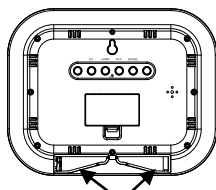
IMPORTANT NOTE: Before permanently attaching the TX61U-IT sensor base, place all units in the desired locations to check that the outdoor temperature readings are being received. In the event that the signal is not received, relocate the TX61U-IT sensor (or move them slightly) to improve the signal reception.

The Wireless Display

The wireless display can be set on a table or mounted onto a wall.

Table Standing

The two foldout table stands are located on the bottom of the back side of the wireless display. Pull the stands out from the center to fully extend them.



Wall Mounting

Select a place to mount the wireless display. Install a mounting screw (not included). Align the "Hanging Hole" to the mounting screw and ensure that the wireless display locks down into place before releasing the wireless display.

Online Resources

Visit the WS-811561 page online at:

<http://www.lacrossetechnology.com/811561>

Care and Maintenance

Extreme temperatures, vibration and shock should be avoided as these may cause damage to the unit and give inaccurate readings.

Precautions shall be taken when handling the batteries. Injuries, burns, or property damage may be resulted if the batteries are in contact with conducting materials, heat, corrosive materials or explosives. The batteries shall be taken out from the unit before the product is to be stored for a long period of time.

Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new batteries of the recommended type.

When cleaning the display and casings, use a soft damp cloth only. Do not use solvents or scouring agents as they may mark the LCD and casings.

Do not submerge the unit in water. Furthermore, fix all parts in place where the units are adequately protected against moisture and rain.

Special care shall be taken when handling a damaged LCD display. The liquid crystals can be harmful to user's health.

Do not make any repair attempts to the unit. Contact the La Crosse Technology® Warranty Department for help. Opening and tampering with the unit may invalidate their guarantee.

Never touch the exposed electronic circuit of the device as there is a danger of electric shock should it become exposed.

Do not expose the units to extreme and sudden temperature changes, as this may lead to reduce their accuracy.

Troubleshooting

For more product information, visit

<http://www.lacrossetechnology.com/811561>

Batteries:

Battery problems are the single largest cause of customer support cases. A few things to check:

- **Use fresh batteries**
Please use plain **Alkaline** batteries in the wireless display that test no less than 1.48 on a voltmeter or with an expiration date that is 7 years in the future.

- **Ensure correct polarity**
Ensure that the wireless display has fresh batteries and are installed using correct polarity as shown inside the battery compartment (+).

Sensor Location:

Before permanently fixing the TX61U-IT sensor wall bracket, temporarily place both the sensor and the wireless display in their desired locations, then check that the outdoor temperature reading is being received. In the event that the signal is not received, relocate the TX61U-IT sensor (remembering the 200 ft open air wireless range) or move both units slightly as this may help the signal reception.

TX61U-IT sensor LCD is turned "OFF":

Please read step 1 of the Initial Setup... section on page 3 or "TX61U-IT sensor Power Save "STOP" Mode" on page 4.

Warranty Information

La Crosse Technology, Ltd provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and used in North America and only to the original purchaser of this product. To receive warranty service, the purchaser must contact La Crosse Technology, Ltd for problem determination and service procedures. Warranty service can only be performed by a La Crosse Technology, Ltd authorized service center. The original dated bill of sale must be presented upon request as proof of purchase to La Crosse Technology, Ltd or La Crosse Technology, Ltd's authorized service center.

La Crosse Technology, Ltd will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of La Crosse Technology, Ltd and must be returned to La Crosse Technology, Ltd. Replacement parts and products assume the remaining original warranty, or ninety (90) days, whichever is longer. La Crosse Technology, Ltd will pay all expenses for labor and materials for all repairs covered by this warranty. If necessary repairs are not covered by this warranty, or if a product is examined which is not in need or repair, you will be charged for the repairs or examination. The owner must pay any shipping charges incurred in getting your La Crosse Technology, Ltd product to a La Crosse Technology, Ltd authorized service center. La Crosse Technology, Ltd will pay ground return shipping charges to the owner of the product to a USA address only.

Your La Crosse Technology, Ltd warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (including the lack of reasonable and necessary maintenance); (2) damage occurring during shipment (claims must be presented to the carrier); (3) damage to, or deterioration of, any accessory or decorative

surface; (4) damage resulting from failure to follow instructions contained in your owner's manual; (5) damage resulting from the performance of repairs or alterations by someone other than an authorized La Crosse Technology, Ltd authorized service center; (6) units used for other than home use (7) applications and uses that this product was not intended or (8) the products inability to receive a signal due to any source of interference.. This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

LA CROSSE TECHNOLOGY, LTD WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT. THIS PRODUCT IS NOT TO BE USED FOR MEDICAL PURPOSES OR FOR PUBLIC INFORMATION. THIS PRODUCT IS NOT A TOY. KEEP OUT OF CHILDREN'S REACH.

This warranty gives you specific legal rights. You may also have other rights specific to your State. Some States do not allow the exclusion of consequential or incidental damages therefore the above exclusion of limitation may not apply to you.

For warranty work, technical support, or information, please contact:

La Crosse Technology, Ltd
2817 Losey Blvd. S.
La Crosse, WI 54601
Phone: 608.782.1610 Fax: 608.796.1020

For online contact / support / e-mail:
www.lacrossetechnology.com/support

For information on other products visit
www.lacrossetechnology.com

FCC DISCLAIMER

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

All rights reserved. This handbook must not be reproduced in any form, even in excerpts, or duplicated or processed using electronic, mechanical or chemical procedures without written permission of the publisher.

This handbook may contain mistakes and printing errors. The information in this handbook is regularly checked and corrections made in the next issue. We accept no liability for technical mistakes or printing errors, or their consequences.

All trademarks and patents are acknowledged.