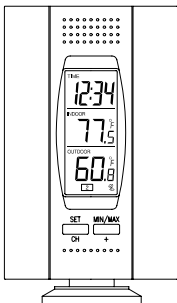


**WS-7013U-IT**  
Wireless 915 MHz  
Temperature Station

*Instruction Manual*



Tomorrow's Weather Today™

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**This product offers:**



***INSTANT TRANSMISSION*** is the state-of-the-art new wireless transmission technology, exclusively designed and developed by LA CROSSE TECHNOLOGY. ***INSTANT TRANSMISSION*** offers you an immediate update (every 4 seconds!) of all your outdoor data measured from the sensors: follow your climatic variations in real-time!

## ***INVENTORY OF CONTENTS***

1. The indoor temperature station (Figure 1)
2. The remote temperature sensor (TX29U-IT) and mounting bracket. (Figure 2)
3. 3 each, 1/2" Philips screws.
4. One strip of double sided adhesive tape.
5. Instruction Manual and Warranty Card.

Figure 1

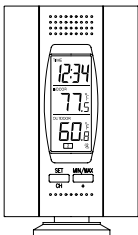
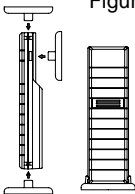


Figure 2



## **ADDITIONAL EQUIPMENT**

(not included)

1. 1 Philips screwdriver.
2. 2 Fresh AAA 1.5V batteries.
3. 2 Fresh AA 1.5V batteries

## ***QUICK SETUP***

**Hint: Use good quality Alkaline Batteries and avoid rechargeable batteries.**

1. Have the indoor temperature station and remote temperature sensor 3 to 5 feet apart.
2. Batteries should be out of both units for 10 minutes.

3. Place the batteries into the **remote temperature sensor** first then into the indoor temperature station.

(All remote temperature sensors must be started before the indoor temperature station)

4. **DO NOT PRESS ANY BUTTONS FOR 15 MINUTES.**

In this time the indoor temperature station and remote temperature sensor will start to talk to each other and the display will show both the indoor temperature and an outdoor temperature. If the indoor temperature station does not display both temperatures after the 15 minutes please retry the set up as stated above. After both indoor and outdoor temperatures are displayed for 15 minutes you can place your remote temperature sensor outdoors and set your time.

The remote temperature sensor should be placed in a dry, shaded area. The thermo-hygro sensor has a range of 330 feet. Keep in mind that the 330 feet is in open air with no obstructions and that radio waves **DO NOT** curve around objects. Actual transmission range will vary depending on what is in the path of the signal. Each obstruction (roof,

walls, floors, ceilings, thick trees, etc.) will effectively cut signal range in half.

**Example:** A wireless weather station with a 330 feet range is mounted on an interior wall, so that the signal has to pass through one interior wall, one exterior wall, and across the 10 feet width of the room between the 2 walls. The first wall will reduce the range to 165 feet, and the second wall will reduce the range to 87 feet. Factoring in the 10 foot room, this leaves a maximum of 77 feet 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.

To complete the set up of your indoor temperature station after the 15 minutes have passed please follow the steps below.

1. Press and hold the “*SET/CH*” button for 5 seconds.  
**Note:** A “12h” or “24h” will appear on the top line. (“12h” for AM/PM, “24h” for military time)
2. To change between “12h” and “24h” press and release the “*MIN/MAX*” button.
3. When you have your choice shown on the display press and release the “*SET/CH*” button once.

**Note:** if “12h” is selected, the temperature is displayed in degree Fahrenheit. If “24h” is selected, the temperature is displayed in degree Celsius

4. An hour will now be flashing.
5. Press and release the “*MIN/MAX*” button until the correct hour is shown.  
**Note:** When in the 12h mode there is “PM” displayed under the word TIME when in the PM hours. During the AM hours this area will be blank.

6. When the correct hour is shown, press and release the "SET" button once.

**Press and release the SET button once more and you are done.**

## ***DETAILED SETUP GUIDE***

### **BATTERY INSTALLATION - When one Temperature sensor is being used**

1. First, insert the batteries to the Temperature sensor (see "**A. Temperature sensor**" below).
2. Within 2 minutes of powering up the sensor, insert the batteries to the Temperature Station (see "**B. Indoor Temperature station**" below). Once the batteries are in place, all segments of the LCD will light up briefly. Following the indoor temperature and the time as 12:00 will be displayed. If they are not shown in LCD after 60 seconds, remove the batteries and wait for at least 60 seconds before reinserting them. Once the indoor data is displayed user may proceed to the next step.
3. After the batteries are inserted, the Temperature Station will start receiving

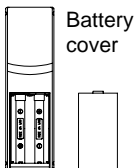


data signal from the sensor. The outdoor temperature and humidity should then be displayed on the Temperature Station. If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1 and the signal reception icon is no longer shown.

#### A. REMOTE TEMPERATURE SENSOR

Remove the mounting bracket.

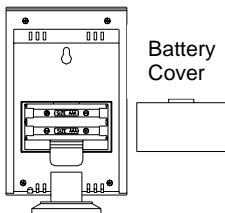
- a. Remove battery cover
- b. Observing the correct polarity, install 2 AA batteries—make sure they do not spring free, or start-up problems may occur. Replace cover.



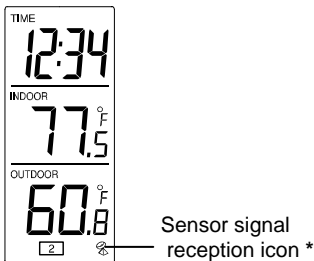
#### B. INDOOR TEMPERATURE STATION

**Note:** After the batteries are installed, **DO NOT** press any buttons. This may interfere with the signals, causing temperatures to register incorrectly.

- a. Remove the battery cover on the backside. To do this, push up and pull out.



- b. Observing the correct polarity, install 2 AAA batteries.
- c. Replace battery cover.
- d. Wait 15 minutes to allow both the indoor and outdoor temperatures are shown on the indoor temperature station.

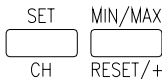


- \* When the signal is successfully received by the Temperature Station, the icon will be switched on. (If not successful, the icon will not be shown in LCD) So the user can easily see whether the last reception was successful (icon on) or not (icon off). On the other hand, the short blinking of the icon shows that a reception is being done now.
- If the signal reception is not successful on the first frequency (915MHz) for 45 seconds, the frequency is changed to 920MHz and the learning is tried another 45 seconds. If still not successful the reception is tried for 45 seconds on

910MHz. This will also be done for re-synchronization.

## SETTING THE TIME

1. Press and hold the “*SET/CH*” button for 5 second, “12h” will appear in the TIME LCD.



2. Press and release the “*MIN/MAX*” button to select either 12h time (am/pm) or 24h time
3. Press and release the “*SET/CH*” button 2 times, the hour will flash in the upper left corner.
4. Press and release the “*MIN/MAX*” button to set the hours
5. Press and release the “*SET/CH*” button to move to the minute setting
6. Press and release the “*MIN/MAX*” button to set the minutes.
7. Press and release the “*SET/CH*” button to activate the clock.

**Note:** When in 12h mode, there is only a “PM” display, which appears under “TIME.” If there is no display here it is AM. Make sure you set the time accordingly.

**Note:** if “12h” is selected, the temperature is displayed in degree Fahrenheit. If “24h” is selected, the temperature is displayed in degree Celsius

## ***FEATURES***

### **MINIMUM & MAXIMUM TEMPERATURES**

1. Press and release the “*MIN/MAX*” button, “MIN” appears in the temperature LCD’s and the recorded minimum temperatures are displayed.
2. Press and release the “*MIN/MAX*” button to toggle to the maximum temperatures.

### **RESETTING THE MINIMUM & MAXIMUM TEMPERATURES**

To reset both the minimum and maximum temperatures—press and hold the “*RESET/+*” button for 4 seconds.

### **ADDING ADDITIONAL REMOTE SENSORS (OPTIONAL)**

The WS-7013U-IT is able to receive signals from 2 additional temperature sensors. The following are instructions for the set-up of

temperature sensor units with the WS-7013U-IT. These extra sensors can be purchased through the same dealer as this unit.

1. Remove all the batteries from the receiver and sensor(s) and wait 60 seconds. During these 60 seconds, press any button 20 times to discharge any excess power.
2. Insert the batteries to the first temperature sensor.
3. Within 2 minutes of powering up the first sensor, insert the batteries to the Temperature Station. Once the batteries are in place, all segments of the LCD will light up briefly. Following the indoor temperature and the time as 12:00 will be displayed. If they are not shown in LCD after 60 seconds, remove the batteries and wait for at least 60 seconds before reinserting them.
4. The outdoor temperature from the first sensor (channel 1) should then be displayed on the Temperature station. If this does not happen and the signal reception icon is not shown, after 2 minutes, the batteries will need to be removed from both units and reset from step 1.

5. Insert the batteries to the second sensor as soon as the outdoor temperature readings from the first sensor are displayed on the Temperature station.  
**NOTE: You must insert the batteries into the second sensor within 45 seconds of reception of the first sensor.**
6. The outdoor temperature from the second sensor and the "channel 2" icon should then be displayed on the Temperature station. If this does not happen after 2 minute, the batteries will need to be removed from all the units and reset from step 1.
7. Insert the batteries to the third sensor as soon as the "channel 2" icon and outdoor data are displayed on the Temperature station. Then within 2 minutes, the channel 3 outdoor data from the third sensor will be displayed and the channel icon will shift back to "1" once the third sensor is successfully received. If this is not happen, user shall restart the setting up from step 1.

**NOTE:** You must insert the batteries into the third sensor within 45 seconds of reception of the second sensor.

**IMPORTANT:** Transmission problems will arise if the setting for multiple sensors is not followed as described above. Should transmission problems occur, it is necessary to remove the batteries from all units and start again the set-up from step 1.

## **VIEWING AND OPERATING WITH MULTIPLE REMOTE TEMPERATURE SENSOR UNITS**

1. To view the temperature of a different remote temperature sensor unit, press and release the “*SET/CH*” button. A shift from one “boxed” number to the next should be observed in the OUTDOOR LCD.
2. To view the Minimum/Maximum temperature: first select from which remote temperature sensor to read data (indicated by the “boxed” number). Pressing and releasing the “*MIN/MAX*” button will toggle through the minimum and maximum indoor temperature, and the minimum and maximum outdoor temperature.

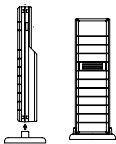


- To reset the Minimum/Maximum readings, press and hold the “MIN/MAX” button for four seconds.

## ***MOUNTING***

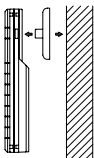
**Note:** To achieve a true temperature reading, avoid mounting in direct sunlight. We recommend that you mount the remote temperature sensor on an outside North-facing wall. The sending range is 330ft; obstacles such as walls, concrete, and large metal objects will reduce the range. Place both units in their desired location before permanently mounting.

### **1. REMOTE TEMPERATURE SENSOR**



#### **Free standing:**

Simply attached the stand to the bottom of the unit and place onto a flat surface.



#### **To wall mount:**

- Remove the mounting bracket from the temperature sensor.

- b. Mount using either screws or adhesive tape.
- c. Reattach the temperature sensor to the mounting bracket.

## 2. THE TEMPERATURE STATION

- e. The indoor temperature station comes with the table stand already mounted. If you wish to use the table-stand, all that is required is to place the indoor temperature station in an appropriate location.
- f. To wall mount, remove the table stand. To do this, pull down on the stand from the rear and rotate forward. Fix a screw (not included) into the desired wall, and place the indoor temperature station onto the screw using the hanging hole on the backside. Gently pull the indoor temperature station down to lock the screw into place.

### **TROUBLESHOOTING**

**NOTE:** For problems not solved, please contact La Crosse Technology via e-mail or phone, or visit our website, [www.lacrossetechnology.com](http://www.lacrossetechnology.com)

**Problem:** The LCD is faint

**Solution:** Replace batteries

**Problem:** No outdoor temperature is displayed.

**Solution:**

- 1) Remove all batteries, reinsert into remote temperature sensor first, and then into the indoor temperature station.
- 2) Place remote temperature sensor closer to the indoor temperature station.
- 3) Be sure all batteries are fresh.
- 4) Place remote temperature sensor and indoor temperature station in position so the straight-line signal is not passing through more than two or three walls.

**Problem:** Temperatures do not match if units are placed next to each other.

**Solution:** Each temperature sensor is manufactured to be accurate to within 1 degree plus or minus and under normal conditions; so two temperature sensors could be as much as 2 degrees different. However, the difference can be exaggerated further because the temperature sensors are designed for different working environments.

The indoor sensor is less responsive to ambient air currents because of the shielding effect of the display's case. In addition, the case can act as a heat sink to absorb and store heat from external sources (i.e. handling of the case or radiant heat). In addition, the much greater range of the outdoor temperature sensor requires a different calibration curve than the indoor range. Error is usually greater at the extreme ends of a range, making it harder to compare different ranges with different curves. Under non-laboratory conditions, it is difficult to compensate for the above factors and obtain an accurate comparison.

## ***MAINTENANCE AND CARE***

- ✓ Extreme temperatures, vibration, and shock should be avoided to prevent damage to the units.
- ✓ Clean displays and units with a soft, damp cloth. Do not use solvents or scouring agents; they may mark the displays and casings.
- ✓ Do not submerge in water.
- ✓ Do not subject the units to unnecessary heat or cold by placing them in the oven or freezer.

- ✓ Opening the casings invalidates the warranty. Do not try to repair the unit. Contact La Crosse Technology for repairs.

## ***SPECIFICATIONS***

Transmitting Frequency	915MHz
<b>Measuring Temperatures</b>	
Indoor Temperature Station: Indoor	14.1°F to 139.8.2°F with 0.2°F resolution. (-9.9°C to 59.8°C with 0.1°C resolution)
Indoor Temperature Station: Outdoor	-39.8 °F to 139.8°F with 0.2°F resolution. (-39.8°C to 59.8°C with 0.1°C resolution)
Transmitting range	Up to 330 feet open space
<b>Temperature check</b>	
Indoor	Every 15 seconds
Outdoor	Every 4 seconds
<b>Batteries—(Alkaline recommended)</b>	
Remote Temperature Sensor	2 x AA, 1.5V

Indoor Temperature Station	2 x AAA, 1.5V
<b>Dimensions: (H x W x D)</b>	
Indoor Temperature Station	4.3 x 2.75 x .92 in. (excluding table stand) (110 x 90 x 23.6 x mm)
Remote Temperature Sensor	5.05 x 1.50 x 0.83 in. (128.3 x 38.2 x 21.2 mm)
Battery life	Approximately 24 months

### ***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 contact

La Crosse Technology  
2809 Losey Blvd. S.  
La Crosse, WI 54601  
Phone: 608.782.1610

Fax: 608.796.1020

e-mail:

[support@lacrossetechnology.com](mailto:support@lacrossetechnology.com)  
(warranty work)

[sales@lacrossetechnology.com](mailto:sales@lacrossetechnology.com)  
(information on other products)

web:

[www.lacrossetechnology.com](http://www.lacrossetechnology.com)

Questions? Instructions? Please visit:  
[www.lacrossetechnology.com/7013](http://www.lacrossetechnology.com/7013)

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All trademarks and patents are acknowledged.

**FCC ID: OMOTX29U (sensor)****RF Exposure mobile:**

The internal / external antennas used for this mobile sensor must provide a separation distance of at least 20 cm (8 inches) from all persons and must not be co-located or operating in conjunction with any other antenna or sensor."

**Statement according to FCC part 15.19:**

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Statement according to FCC part 15.21:**

Modifications not expressly approved by this company could void the user's authority to operate the equipment.

**Statement according to FCC part 15.105:**

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful

interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

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