



# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for LA CROSSE TECHNOLOGY WS-8147U-IT. You'll find the answers to all your questions on the LA CROSSE TECHNOLOGY WS-8147U-IT in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

**User manual LA CROSSE TECHNOLOGY WS-8147U-IT**  
**User guide LA CROSSE TECHNOLOGY WS-8147U-IT**  
**Operating instructions LA CROSSE TECHNOLOGY WS-8147U-IT**  
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**Instruction manual LA CROSSE TECHNOLOGY WS-8147U-IT**

**WS-8147U-IT**  
**RADIO-CONTROLLED CLOCK WITH OUTDOOR WIRELESS**  
**TEMPERATURE AND MOON PHASE**  
**INSTRUCTION MANUAL**

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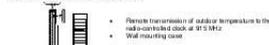
This product offers **INSTANT TRANSMISSION** is the state-of-the-art new wireless transmission technology, specially designed and developed by LA CROSSE TECHNOLOGY. **INSTANT TRANSMISSION** offers you an immediate alarm (every 4 seconds) of all your outdoor data (retrieved from the base unit) - follow your climatic variations in real-time!

**FEATURES:**  
**RADIO-CONTROLLED CLOCK:**



- WWWS Radio controlled time with manual time setting
- Time display hour, minute, second
- 12 or 24 time display
- Alarmable clock
- Outdoor display (month, day, weekday, year)
- Time zone
- Daylight saving time ON/OFF option (DST)
- Indoor and outdoor temperature display
- Temperature display in °F/°C
- Moon phase display
- Indoor humidity display in RH%
- Wireless transmission at 433MHz
- Signal reception intervals of 4 seconds
- Low battery indicator
- Wall mount or freestanding

**OUTDOOR TEMPERATURE TRANSMITTER:**



ALKALINE BATTERIES ARE RECOMMENDED FOR USE IN BOTH UNITS. AVOID USING RECHARGEABLE BATTERIES.

**TO INSTALL OR REPLACE BATTERIES IN TEMPERATURE TRANSMITTER**

- INSTALL BATTERIES IN TRANSMITTER BEFORE INSTALLING BATTERIES IN RADIO-CONTROLLED CLOCK.
- The transmitter uses 2 x AA 1.5V batteries. To install or replace the batteries, please follow the steps below:
1. Remove the battery cover by pulling down towards bottom of transmitter and sliding cover out.
  2. Insert the batteries, observing the correct polarity (see marking inside battery compartment).
  3. Replace the battery cover on the unit.

**TO INSTALL OR REPLACE BATTERIES IN THE RADIO-CONTROLLED CLOCK**

- The radio-controlled clock uses 2 x AA 1.5V batteries. To install and replace the batteries, please follow the steps below:
1. Insert 1 finger in the hole (slit) in the space at the bottom corner of the battery compartment and lift up to remove the cover.
  2. Insert batteries observing the correct polarity (see marking inside battery compartment).
  3. Replace the compartment cover.

**DO NOT SET THE CLOCK.**



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**Manual abstract:**

2. Insert the batteries, observing the correct polarity (see marking inside battery compartment). 3. Replace the battery cover on the unit. **TO INSTALL OR REPLACE BATTERIES IN THE RADIO-CONTROLLED CLOCK** The radio-controlled clock uses 2 x AA, 1.5V batteries. @ Insert finger or other solid object in the space at the bottom center of the battery compartment and lift up to remove the cover. 2. Insert batteries observing the correct polarity (see marking inside battery compartment). 3.

Replace compartment cover. **DO NOT SET THE CLOCK.** 3 4 **BATTERY REPLACEMENT:** For best performance, batteries should be replaced at least once a year to maintain the best running accuracy. Ensure that the batteries used are new and the correct size. Please help in the preservation of the environment and return used batteries to an authorized depot.

physicists have created an international standard, measuring a second as 9,192,631,770 vibrations of a Cesium 133 atom in a vacuum. This atomic clock regulates the WWVB transmitter. After 15 minutes the WWVB tower icon in the clock display will start flashing in the top center of the LCD. This indicates the clock has detected a radio signal and is trying to receive it. When the time code is received, the WWVB tower becomes permanently lit and the time will be displayed.

If the tower icon flashes, but does not set the time or the WWVB tower does not appear at all, then please take note of the following: Recommended distance from any interfering sources like computer monitors or TV sets is a minimum of 6 feet (2 meters). Within ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened. In extreme cases, please place the unit close to a window and/ or point its front or back towards the Fort Collins, Colorado, transmitter. During nighttime, the atmospheric disturbances are usually less severe and reception is possible in most cases. A single daily reception is adequate to keep the accuracy deviation below 1 second. Note: In case the atomic clock is not able to detect the WWVB-signal (disturbances, transmitting distance, etc.), the time can be manually set (please refer to notes on Manual time setting). **SETUP:** Alkaline batteries are recommended for use in both units. **NOTE:** Do not set the clock until the outdoor temperature is displayed. 1.

2. Place batteries in the outdoor transmitter first, then into the radio-controlled clock. **DO NOT PRESS ANY BUTTONS FOR 30 MINUTES.** After 15 minutes both the Indoor and Outdoor areas on your clock should have a temperature showing. If not, remove both sets of batteries, wait 15 minutes and repeat step one. After 15 minutes have elapsed, the WWVB time code reception will automatically start. This reception typically takes 10 minutes in good conditions. If after 10 minutes the WWVB time has not been received, use the "SET" key to enter the set-up mode to manually set the Time, Time Zone and Date (see manual settings below). The clock will continue to search for WWVB each hour between 12am and 6am When the clock has successfully connected with WWVB, it will override the manually set time and date. 3.

Note: When changing batteries, ensure that the batteries do not spring free from the contacts. Press any button 20 times with the batteries removed. Always wait at least 10 minutes after removing batteries before reinserting, otherwise start up and transmission problems may occur. **FUNCTION KEYS** The radio-controlled clock has four easy to use keys: SET key : To enter into the set mode for the following functions: time zone, DST ON/OFF (daylight saving time), hour, minute, year, month, date, weekday, 12/24 hour time format, and °C/°F temperature + key : To toggle between the seconds, indoor, and outdoor display

To change any values in manual set mode ALM key : To enter into the alarm set mode To activate/deactivate the alarm SNZ key : To activate the snooze function during alarm To exit manual setting modes **WWVB RADIO CONTROLLED TIME** The NIST radio station, WWVB, is located in Ft. Collins, Colorado and transmits the exact time signal continuously throughout the United States at 60 kHz.

The signal can be received up to 2,000 miles away through the internal antenna in the atomic clock. However, due to the nature of the Earth's Ionosphere, reception is very limited during daylight hours. The atomic clock will search for a signal every night when reception is best. The WWVB radio station derives its signal from the NIST atomic clock in Boulder, Colorado. A team of atomic physicists continually measures every second of every day to an accuracy of ten billionths of a second a day.

These 5 6 **LCD SCREEN DESCRIPTIONS** The radio-controlled clock's LCD is divided into 2 sections and once the batteries are inserted, all the segments will light up briefly before displaying the information for time, date, indoor and outdoor temperatures. Radio reception icon WWVB time Low battery indicator (atomic clock) Alarm icon Indoor temperature Indoor humidity Date Outdoor temperature Low battery indicator (transmitter) Weekday Sensor signal reception icon\* Moon phase Time zone DST ON/OFF Time Year Month Date Weekday 12/24h time °C or °F **TIME ZONE** The time zone can be set between the 0 to 12 hour or Greenwich Mean Time (GMT) range in LCD2. To do this: 1.The time zone (LCD2) will start flashing (Default setting "-5"). Select the desired time zone by pressing and releasing the + key. 2.Time zone setting: -12, -11, HAW, ALA, PST, MST, CST, EST, -4, -3, -2, -1, 0, +1, +2...+12.

(Default: EST) Press and release the SET key to enter the "DST Setting". **DST (DAYLIGHT SAVING TIME)** 1. The ON digit will start flashing on LCD1. Set the DST ON or OFF by pressing the + key. 2. Press and release the SET key to enter the "Manual Time Setting". Note: The DST default is "ON", meaning that the WWVB will automatically change the time according to Daylight Saving Time in the spring and fall. For areas that do not recognize DST changes (Arizona and parts of Indiana) turn the DST "OFF". **TIME** In case the radio-controlled clock is not able to detect the WWVB-signal (disturbances, transmitting distance, etc.); the time can be manually set.

The clock will then work as a normal Quartz clock. \* When the signal is successfully received by the Weather 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). If the signal reception is not successful on the first frequency (915MHz) for 30 seconds, the frequency is changed to 920MHz and the learning is tried another 30 seconds.

If still not successful the reception is tried for 30 seconds on 910MHz.

This will also be done for resynchronization. **MANUAL SETTINGS** Note: If the radio-controlled clock has already successfully received the WWVB time signal and displays the correct time and date, then the Manual settings can be skipped.



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After completion of the above described procedures in "Setting-up" the manual setting modes can be entered by pressing and holding the SET key for 3 seconds. The following settings can now be programmed: 7 8 Note: the time will be displayed with an additional "PM" for the time from 12:00 noon until 11:59. 1.

The hour digits will start flashing on LCD1. 2. Set the desired hours by pressing and releasing the + key followed by pressing the SET key. 3. Now the minute digits will start flashing. 4. Set the desired minutes by pressing and releasing the + key. If the + key is held, the units will increase by 5. 5. Press and release the SET key to move to the "Year Setting".

Note: The unit will still try to receive the signal every day despite it being manually set. When it does receive the signal, it will change the manually set time into the received time. During reception attempts the WWVB tower icon will flash. @@@@The year will only appear in the manual setting mode. 1. The year digits will start flashing on LCD2. Select the desired year by use of the + key. 2. @@@@MONTH 1. The month digits on LCD2 will start flashing.

Set the desired month by use of the + key. 2. @@@@Set the desired date by use of the + key. @@@@2. Press and release the SET key to move to "Weekday setting".

WEEKDAY 1. @@Set the desired weekday by use of the + key. 2. @@12/24 HOUR TIME 1. @@Select the desired time display mode by use of the + key. 2. @@°C/°F 1. @@@@2. @@If no keys are pressed for at least 15 seconds in setting mode, the raure data within 4 seconds. @@@@2. @@@3. Using other electrical products such as headphones or speakers operating on the same signal frequency (915MHz) may prevent correct signal transmission and reception.

4. Neighbors using electrical devices operating on the 915MHz signal frequency can also cause interference. Note: When the 915 MHz signal is received correctly, do not re-open the battery cover of either the outdoor temperature transmitter or radio-controlled clock, as the batteries may spring free from the contacts and force a false reset.

Should this happen accidentally then reset all units (see Setting-up above) otherwise transmission problems may occur. The maximum transmission range is 330 feet (100 meters) from the outdoor temperature transmitter to the radio-controlled clock (in open space). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see Setting-up). Note: In case the radio-controlled clock is not able to detect the WWVB-signal (disturbances, transmitting distance, etc.), the time can be manually set (please refer to notes on Manual time setting). MOUNTING THE RADIO-CONTROLLED CLOCK: There are two possible ways to mount the radio-controlled clock: use of the foldout table stands wall mounting FOLDOUT TABLE STAND The foldout table stands legs are located on the backside. Unfold the stands out, below the battery compartment. Once the foldout table stands are extended, place the radio-controlled clock in an appropriate location. WALL MOUNTING 1)

Using a straightedge, horizontally space at 3.

93" (100 mm) three screw positions on a wall. 13 14 Install three mounting screws (not included) into a wall within transmission range--leaving approximately 3/16 of an inch (5mm) extended from the wall. Place the radio-controlled clock onto the screws, using the hanging holes on the backside. Gently pull the radio-controlled clock down to lock the screws into place. Note: Always ensure that the radio-controlled clock locks onto the screws before releasing.

3) 2) Problem: Solution: MOUNTING THE OUTDOOR TEMPERATURE TRANSMITTER The outdoor temperature transmitter can be mounted with the use of screws: MOUNTING WITH SCREWS 1) Remove the mounting bracket from the outdoor temperature transmitter. 2) Place the mounting bracket over the desired location. Through the two screw holes of the bracket, mark the mounting surface with a pencil. 3) Where marked, start the screw holes into mounting surface. 4) Screw mounting bracket onto the mounting surface.

Ensure that the screws are flush with the bracket. Problem: Solution: surrounding temperature. Current surrounding temperatures are outside measuring range. 2) Replace Batteries. "--" appears in the outdoor temperature section of the LCD. 1) Remove the batteries of both units for ten minutes, Press any button 20 times with battery(s) out then reinsert them again. Make sure the batteries are new and fresh. 2) Move the radio-controlled clock closer to the transmitter or place the transmitter closer to the radio-controlled clock. Make sure the clock is at a receivable range from the transmitter.

3) Move the units to another location. Interferences from other electrical devices operating on the same signal frequency (915MHz) may prevent correct signal transmission and reception. "OF" appears in the outdoor temperature section of the LCD. 1) Wait until the current surrounding temperature cools down or increases. Current temperature is outside of the measuring range of the transmitter. The outdoor temperature will be displayed again once the current surrounding temperature is within the range of the transmitter. 2) Replace Batteries TROUBLESHOOTING: Problem: Solution: Problem: Solution: The LCD is faint. 1) Replace the batteries. No reception of WWVB signal 1) It may help reception to face the front of the radio-controlled clock in the general direction of Ft. Collins, Colorado.

2) Wait overnight for signal. 3) Be sure the radio-controlled clock is at least 6 feet (2 meters) from any electrical devices, i.e. TV sets, computers, or other radio controlled clocks. 4) Remove batteries for five minutes, reinsert and leave the unit alone overnight without pressing any keys.

Hour is incorrect (minute and date are correct). 1) Be sure the correct time zone and daylight saving time is selected. "OF" appears in the indoor temperature section of the LCD 1) Move the radio-controlled clock to an area with warmer or cooler CARE AND MAINTENANCE: Avoid placing the units in areas prone to vibration and shock as these may cause damage. @@@@When cleaning the LCD and casing, use a soft damp cloth only. Do not use solvents or scouring agents.

Do not submerge the units into water. @@Replace only with new batteries of the recommended size. Do not make any repairs to the units. Please return it to the original point of purchase. @@TX Low battery indicator is displayed on the LCD when the transmitter batteries require changing. 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.



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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 of 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.

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. Indoor humidity: Temperature checking interval: Indoor: Every 8 or 16 seconds Outdoor: Every 4 seconds Humidity: Every 65 seconds Transmission distance: Maximum 330 feet (100 meters) in open field, depending upon surrounding structures, mounting location and possible interfering sources. Power consumption (Alkaline batteries recommended) Radio-controlled clock: 2 x AA, 1.5V batteries Transmitter: 2 x AA, 1.5V batteries Battery life: Approximately 24 months Dimensions (L x W x H) Radio-controlled clock: 12.20" x 1.16" x 8.03"

/ 310 x 29.

5 x 204 mm Transmitter: 1.50" x 0.83" x 5.05" / 38.2 x 21.

2 x 128.3 mm 17 18 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.

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