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You can read the recommendations in the user guide, the technical guide or the installation guide for LA CROSSE TECHNOLOGY WS-9047TWC-IT. You'll find the answers to all your questions on the LA CROSSE TECHNOLOGY WS-9047TWC-IT in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

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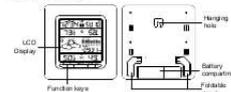
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- INVENTORY OF CONTENTS**
1. Wireless Weather Station
 2. Thermohygro transmitter (T1050UD-TH-IT)
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FEATURES: The Weather Station



- WWVB Radio controlled time with manual setting option
- Time reception ON/OFF (user selectable)
- LCD hour time display
- Time zone option + 02 hours
- Daylight saving time (DST/DayOff)

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Manual abstract:

Thermo/hygro transmitter (TX29UD-TH-IT) 3. @@(Mount in a sheltered place. @@First, insert the batteries in the transmitter (see "How to install and replace batteries in the Thermo-hygro outdoor transmitter" on page 11). 2. Within 2 minutes of powering up the transmitter, insert the batteries in the Weather Station (see "How to install and replace batteries 5 6 3. 4. in the Weather Station" on pages 11-12). Once the batteries are in place, all segments of the LCD will light up briefly and a short signal tone will sound. Following the indoor temperature/humidity and the time, as 12:00 will be displayed. If this information is not displayed on the 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. After the batteries are inserted, the Weather station will start receiving data signal from the transmitter. The outdoor temperature and humidity data should then be displayed on the Weather station. If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1. The distance between the Weather Station and the transmitter should not be more than 300 feet to ensure sufficient 915 MHz transmission.

(see notes on "Positioning" and "915 MHz Reception"). Note: In the event of changing batteries of the units, ensure the batteries do not spring free from the contacts. Always wait at least 1 minute after removing the batteries before reinserting, otherwise start up and transmission problems may occur. WHEN MORE THAN ONE TRANSMITTER IS USED 1. User shall remove all the batteries from the Weather Station and transmitters, and wait 60 seconds.

2. Insert the batteries in the first transmitter. 3. Within 2 minutes of powering up the first transmitter, insert the batteries in the Weather Station. Once the batteries are in place, all segments of the LCD will light up briefly and a short signal tone will sound. Following the indoor temperature/humidity and the time as 12:00 will be displayed. If this information is not displayed on the LCD after 60 seconds, remove the batteries from both units and wait for at least 60 seconds before reinserting them. 4. The outdoor temperature and humidity data from the first transmitter (channel 1) and the signal reception icon should be displayed on the Weather Station. If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1.

5. Insert the batteries in the second transmitter as soon as the signal reception icon and outdoor data are displayed on the Weather Station. Then within 2 minutes, the channel 2 outdoor data from the second transmitter and the "channel 2" icon should be displayed on the Weather Station. If this does not happen after 2 minutes, the 7 8 6. 7. batteries will need to be removed from all the units and reset from step 1. Note : User shall insert the batteries into the second transmitter within 45 seconds after the Weather Station displays the information of the first transmitter. Insert the batteries in the third transmitter as soon as the "channel 2" icon and outdoor data are displayed on the Weather Station. Then within 2 minutes, the channel 3 outdoor data from the third transmitter will be displayed and the channel icon will shift back to "1" once the third transmitter is successfully received. If this is not happen, user shall restart the setting up from step 1.

Note : User shall insert the batteries into the third transmitter within 45 seconds after the Weather Station displays the information of the first transmitter. Or immediately after reception of the second transmitter is finished. The distance between the Weather Station and the transmitter should not be more than 300 feet to ensure sufficient 915 MHz transmission. (see notes on "Positioning" and "915 MHz Reception"). IMPORTANT: Transmission problems will arise if the setting for additional 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. Note: x x If the signal reception is not successful on the first frequency of 915MHz for 45 seconds, the frequency is changed to 920MHz and the learning is tried for another 45 seconds. If it is still not successful the reception is tried for 45 seconds on 910MHz. This will also be done during re-synchronization. When the weather station is receiving the WWVB time signal, the outdoor transmitter data signal will temporarily not be received by the weather station.

During this short period of time, the outdoor readings shown on the weather station will not be renewed until the WWVB time signal is successfully received. 9 10 TO INSTALL AND REPLACE BATTERIES IN THE THERMOHYGRO TRANSMITTER The Thermo-Hygro Transmitter uses 2 x AA, IEC, LR6, 1.5V batteries. To install and replace the batteries, please follow the steps below: 1. Remove the cover. 2. Insert the batteries, observing the correct polarity (see marking). 3. Replace the battery cover. Note: In the event of changing batteries in any of the units, all units need to be reset by following the setting up procedures.

This is due to a random security code assigned by the transmitter at start-up. This code must be received and stored by the Weather Station in the first 3 minutes of power being supplied to the transmitter. 1. 2. 3. Insert finger or other solid object in the space at the bottom center of the battery compartment and lift up to remove the cover. Insert batteries observing the correct polarity (see marking). Replace compartment cover. TO INSTALL AND REPLACE BATTERIES IN THE WEATHER STATION The Weather Station uses 2 x C, IEC LR14, 1.5V batteries.

To install and replace the batteries, please follow the steps below: BATTERY CHANGE: It is recommended to replace the batteries in all units on an annual basis to ensure optimum accuracy of these units. 11 12 Please participate in the preservation of the environment. Return used batteries to an authorized depot. However, due to the nature of the Earth's Ionosphere, reception is very limited during daylight hours. The wireless weather station will search for a signal every night when reception is best.

The WWVB radio station receives the time data from the NIST Atomic clock in Boulder, Colorado. A team of atomic physicists is continually measuring every second, of every day, to an accuracy of ten billionths of a second per day. These physicists have created an international standard, measuring a second as 9,192,631,770 vibrations of a Cesium133 atom in a vacuum. For more detail, visit <http://www.boulder.nist.gov/timefreq.htm>. To listen to the NIST time, call (303)499-7111. This number will connect you to an automated time, announced at the top of the minute in "Coordinated Universal Time", which is also known as Greenwich Mean Time (GMT).



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This time does not follow Daylight Saving Time changes. After the top of the minute, a tone will sound for every second. It is possible that your wireless weather station may not be exactly on the second due to the variance in the quartz. However, the clock will adjust the quartz timing over the course of several days to be very accurate; under 0.10 seconds per day.

RESETTING The Weather Station and the Thermo-hygro transmitter need to be reset when one of the following conditions occur: x Unsuccessful 915 MHz signal reception. x Malfunction on the units. x Batteries replacement. For resetting, remove all batteries from the units. Wait at least for 1 minute before powering up the Weather station again. Proceed from step 1 in "Setting Up". **ABOUT WWVB RADIO CONTROLLED TIME** The NIST (National Institute of Standards and Technology--Time and Frequency Division) WWVB radio station 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 weather projection station. **13 14 FUNCTION KEYS:** Weather Station: The Weather Station has 5 easy to use function keys: SET key IN key ALM/DATE key SNOOZE/CH key OUT/+ key x Stop the alarm during alarm ringing Stop snooze mode ALM/DATE key x Press and hold key for 3 seconds to enter the alarm setting mode x Active/de-active the alarm time x Stop the alarm during alarm ringing x Stop snooze mode x Display date IN key x Press to toggle between MAX/MIN and current indoor temperature/humidity data x Press to set the alarm hour (inside alarm setting mode) x Decrease relative pressure value (within manual set mode) x Stop the alarm during alarm ringing x Stop snooze mode OUT/+ key x Press shortly to toggle between MAX/MIN and current outdoor temperature/humidity data SET key x Press and hold the key to enter manual setting modes: LCD contrast, time zone, DST ON/OFF, time reception ON/OFF, 12/24 hour display, manual time setting, calendar, temperature °F/°C, pressure hPa/inHg, relative pressure value, and weather icon sensitivity setting x Reset all MIN/MAX records 15 16 x x x x Increase, change, toggle all values in manual set mode Press to set the alarm minute (inside alarm setting mode) Stop the alarm during alarm ringing Stop snooze mode Time reception icon (for WWVB time) Moon phase icon Alarm icon Calendar or alarm time Indoor relative humidity in RH% Comfort indicator icon Relative air pressure history Relative air pressure in hPa / inHg Outdoor relative humidity in RH% SNOOZE/CH key x Active snooze function during alarm ringing x Exit the manual set mode and alarm setting mode x Switch among display of channels (if more than 1 transmitter is used) Time Low battery indicator Indoor temperature in °F/°C Weather tendency indicator Weather forecast icon Outdoor temperature in °F/°C LCD SCREEN The ry day, even if the time was set manually.

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. If reception has been unsuccessful, then the WWVB tower icon will not appear but reception will still be attempted the following hour. Hour flashing Minutes flashing **CALENDAR SETTING:** Year 23 24 Note: When set to 24-hour time, the calendar setting mode will display the date to the left of the month. The date default of the Weather station is 1.

1. 2006. Once the radiocontrolled time signals are received, the date is automatically updated. If the signals are not received, the date can also be set manually. 1. The year starts flashing. 2. Use the OUT/+ key to set the year (between year 2003-2029). 3. Press the SET key again to confirm and to enter the month setting. The month starts flashing. 4. Use the OUT/+ key to set the month. 5. Press the SET key again to confirm and to enter the date setting mode.

The date starts flashing. 6. Use the OUT/+ key to set the date. 7. Confirm all calendar settings with the SET key and enter the Temperature unit setting. Note: The Day of the Week will set automatically when the year, month and date are set. Month and date (12hr time format) Date and month (24hr time format) °C/°F **TEMPERATURE SETTING:** Flashing The temperature display can be selected to show temperature data in °C or °F (Default °F). 1. Use the OUT/+ key to toggle between "°C" or "°F". 2.

Confirm with the SET key and enter the Air pressure unit setting. **AIR PRESSURE UNIT SETTING (hPa / inHg):** The pressure display can be selected to show relative air pressure in hPa or inHg (default is "inHg"). Flashing 1. 2. Use the OUT/+ key to toggle between "hPa" or "inHg" unit Confirm with the SET key and enter the Relative air pressure value setting.

25 26 Note: Units of weather icon sensitivity and air pressure history are not affected. They are always expressed in hPa. **WEATHER FORECASTING ICON SENSITIVITY SETTING:** For locations with rapid changes of weather conditions, the weather icons sensitivity can be set to a different level for faster display of weather conditions. **RELATIVE AIR PRESSURE VALUE SETTING** The default relative pressure value is 29.92 inHg (1013 hPa).

This can be manually set to another value within the range of 28.35 30.72 inHg (960 1040 hPa) for a better reference. Flashing 1. 2. Flashing 1. 2. 3. The current relative pressure value will start flashing Use the OUT/+ key to increment and IN key to decrement the value. Holding the key allows the value to advance faster.

Confirm with the SET key and enter the Weather forecast icon sensitivity setting. 3. The current sensitivity value will start flashing. Use the OUT/+ key to set the weather sensitivity level. There are 3 levels of setting: 2, 3 and 4. The value corresponds to the change of air pressure in hPa before the weather icon will switch to another state. Level 2 is the most sensitive setting (coastline); level 4 is the slowest (desert) recording setting (default setting is "3"). Confirm with the SET key and exit the Manual settings. 27 28 **TO EXIT THE MANUAL SETTING MODE** To exit the manual setting mode anytime during the manual setting, press the SNOOZE/CH key or wait for automatic timeout. @@@@1.

Press and hold the ALM/DATE key to enter the alarm set mode. The alarm digits flash. 2. Use the IN key to set the alarm hour. 3. Use the OUT/+ key to set the alarm minute. 4. Confirm with SNOOZE/CH key and exit the Alarm setting. The icon () will be displayed along with the set alarm time. @@@@1. By doing this, the Weather Station will not mistake the new location as being a possible change in air-pressure when really it is due to the slight change of altitude.

Note: Once the weather tendency indicator has registered a change in air pressure, it will remain permanently displayed on the LCD.



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AIR PRESSURE HISTORY (ELECTRONIC BAROMETER WITH BAROMETRIC PRESSURE TREND) The third section of the LCD also shows the relative air pressure value and the air pressure history. **WEATHER TENDENCY INDICATOR** Working together with the weather icons are the weather tendency indicators (located on the left and right sides of the weather icons). When the indicator points upwards, it means that the air-pressure is increasing and the weather is expected to improve. When the indicator points downwards, the air-pressure is dropping and the weather is expected to become worse. Taking this into account, one can see how the weather has changed and is expected to change. For example, if the indicator is pointing downwards together with cloud and sun icons, then the last noticeable change in the weather was when it was sunny (the sun icon only). Therefore, the next change in the weather will be cloud with rain icons since the indicator is pointing downwards. Air pressure over the last 24 hours The bar chart indicates the air pressure history trend over the last 24 hours in 7 steps, 0h, -3h, -6h, -9h, -12h, -18h, and -24h. The "0h" represents the current full hour air pressure recording.

The columns represent the "hPa" (0, ± 2 , ± 4 , ± 6) at specific time. The "0" in the middle of this scale is equal to the current pressure and each change (± 2 , ± 4 , ± 6) represents how high or low in "hPa" the past pressure was compared to the current pressure. If the bars are rising it means that the weather is getting better due to the increase of air pressure. If the bars go down, it means the air pressure has dropped and the weather is expected to get worse from the present time "0h". Note: For accurate barometric pressure trends, the Weather Station should operate at the same altitude. For example, it should not be moved from the ground to the second floor of the house. Should the unit be moved to a new location, discard readings for the next 48-60 hours. **TOGGLING AND RESETTING THE OUTDOOR DATA** To toggle between the current outdoor and the MAX/MIN outdoor temperature and humidity data and the times (for temperature data only) they were recorded press the OUT/+ key: Once to show the MAX outdoor temperature and humidity data with the recorded time and date. Twice to show the MIN outdoor temperature and humidity data with the recorded time and date. Three times to return to the current displayed values.

2. Once the MIN or MAX data is displayed, press and hold the SET key for 3 seconds to reset the respective MIN or MAX record to current temperature and humidity data, and current time, date display. Note: The MIN or MAX data needs to be reset individually. **1. OUTDOOR TEMPERATURE AND HUMIDITY DATA** The fourth LCD section shows the outdoor temperature and humidity, the reception indicator, the transmitter identification number and the MIN/MAX outdoor data.

Outdoor transmitter MIN icon Outdoor temperature in $^{\circ}\text{C}/^{\circ}\text{F}$ identification number Outdoor relative humidity in RH% **TO VIEW THE MIN/MAX DATA FROM DIFFERENT TRANSMITTERS** When more than 1 transmitter used: 1. To toggle between transmitters, press the SNOOZE/CH key: Once to show transmitter 2 Twice to show transmitter 3 37 38 Three times to return to transmitter 1 Use OUT/+ key to view the MIN/MAX temperature and humidity data for the selected transmitter. 3. To reset the minimum and maximum temperature and humidity data, and the times at which they were recorded, press the SET key continuously for about 3 seconds. This will reset the MIN/MAX data recorded to the current time, date, temperature and humidity.

The current time taken is the normal displayed time and does not regard the time zone set for the unit. Note: The MIN/MAX data for each transmitter needs to be reset separately. 2. Battery power may be reduced for the Thermo-hygro transmitter at cold temperatures. **CHECKING FOR 915MHZ RECEPTION** If the outdoor temperature and humidity data are not being received within three minutes after setting up (or outdoor display always show "-. -" in the outdoor section of the Weather station during normal operation), please check the following points: 1. The distance of the Weather station or transmitters should be at least 5 to 6.5 feet (1.5 to 2 meters) away from any interfering sources such as computer monitors or TV sets. 2.

Avoid placing the transmitters onto or in the immediate proximity of metal window frames. 3. Using other electrical products such as headphones or speakers operating on the 915MHz-signal frequency may prevent correct signal transmission or reception. Neighbors using electrical devices operating on the 915MHz-signal frequency can also cause interference. **LOW BATTERY INDICATOR** Low battery indicator is displayed on the LCD when the batteries in the weather station require changing. **ABOUT THE OUTDOOR TRANSMITTER** The range of the Thermo-hygro transmitter may be affected by the temperature. At cold temperatures, the transmitting distance may be decreased. Please keep this in mind when positioning the transmitters. 39 40 Note: When the 915MHz signal is received correctly, do not re-open the battery cover of either the transmitter or Weather station, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally, reset all units (see "Setting up" above), or transmission problems may occur.

The transmission range is around 300 feet from the Thermo-hygro transmitter to the Weather station (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" above). 2. Place the weather station onto the screw, using the hanging hole on the backside.

Gently pull the weather station down to lock the screw into place. **FOLDOUT TABLE STANDS:** The foldout table stands legs are located on the backside. Simply unfold the stands on the back. Once the foldout table stands are extended, place the weather station in an appropriate location. **POSITIONING THE**

WEATHER STATION The Weather station provides the option of table standing or wall mounting the unit.

Before wall mounting, please check that the outdoor data can be received from the desired locations. **TO WALL MOUNT:** 1. Fix a screw (not supplied) into the desired wall, leaving the head extended out by about 0.2" (5mm). **POSITIONING THE THERMO/HYGRO TRANSMITTER:** The remote thermo/hygro transmitter can be placed onto any flat surface or wall mounted using the bracket which doubles as a stand or wall mount base. 41 42 **TO WALL MOUNT:** 1.

Secure the bracket onto a desired wall using the screws and plastic anchors. 2. Clip the remote temperature transmitter onto the bracket. x x x Note: The mounting surface can affect the transmission range.

If, for instance, the unit is attached to a piece of metal, it may then either reduce or increase the transmitting range.



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For this reason, we recommend not to place the unit on any metal surfaces or in any position where a large metal or highly polished surface is in the immediate vicinity (garage doors, double glazing, etc.). Before securing in place, please ensure that the Temperature Station can receive the 915MHz signal from the temperature transmitter at the positions that you wish to place them. x x 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 units in water. Furthermore, fix all parts in place where the units are adequately protected against moisture and rain. @@Replace only with new batteries of the recommended type. Do not make any repair attempts to the unit.

@@Opening and tampering with the unit may invalidate their guarantee. @@@@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 45 46 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.

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