



Tomorrow's Weather Today™

WT-3143H

## Radio Controlled Analog Clock

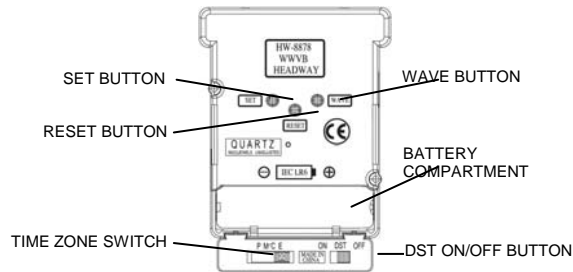
### Quick Setup Instructions

*Welcome to the world of atomic timekeeping technology. We hope you will enjoy the convenience of never having to set your clock again and the confidence of knowing exactly what time it is.*

- A locking pin may be placed into the movement at the factory to prevent shifting of the hands during shipment. Remove the locking pin directly below the Reset button. This will unlock the hands and enable the clock to set itself after receiving the signal.
- Set the clock to your **time zone** by moving the indicator arrow to appropriate zone: P (UTC-8 Pacific Time), M (UTC-7 Mountain Time), C (UTC-6 Central Time), E (UTC-5 Eastern Time)
- Enable the Daylight Savings Time Auto Adjust feature by moving the DST switch to "ON". If you are in a time zone that does not follow DST, make sure you set the DST mode to "OFF". The Daylight Savings Time feature is disabled when the switch is set to "OFF".
- Insert 1 new AA, LR6 1.5 volt ALKALINE battery in the analog clock battery compartment according to the polarity marked on the case.
- Once the battery is installed, the radio reception mode is activated and the second, minute and hour hands will automatically reset to the 12:00 position. Once the hands are in the 12:00 position, the movement will start searching for the radio signal. The search procedure takes approximately 3 to 10 minutes after all hands have set to the 12:00 position. If a signal is found within the first 3 to 10 minutes, the clock will set to the correct time. If the clock does not receive a radio signal soon after activated, the clock will start running from the 12:00 position and will continue to run. In this case, do not attempt to reset the hands manually even though the time displayed on the clock is incorrect. The clock is synchronizing to the WWVB signal and once the radio signal is decoded, the hands will automatically adjust to the correct time.
- The **WAVE** button can be used to attempt an enforced signal receipt. To activate, hold the WAVE button down for 3+ seconds. Once the WAVE feature is activated, the hands will automatically reset to the 12:00 position, and the movement will attempt to enforce a signal receipt from Fort Collins, CO. If the movement successfully receives the signal, the clock will reset automatically to the correct time. Generally, the signal enforced receipt takes approximately 3-8 minutes. If the clock still fails to receive the signal while in the WAVE mode, the clock will automatically leave the WAVE mode. In this case, set the clock manually according to instructions below and the time keeping function will be controlled by the movement's micro-CPU.
- **Manual Set:** On rare occasions in certain areas, the clock may not be able to utilize the radio-controlled function because of either the strength of the signal or the geographic location. In this case, the clock can be set manually and used as a regular quartz wall clock.

If it is necessary to set the clock manually, press and hold the SET button for 3+ seconds to activate the manual mode. Once the clock is in manual mode, there are two ways to move the minute hand forward. Hold the SET button down to move the minute hand forward consistently. Or, press the SET button rapidly (more than once per second) to move the minute hand forward step by step (in minute increments). Use these features to move the minute hand forward until the correct time is set. The clock will automatically leave manual mode after the SET button is not pressed for 6+ seconds.

- **Reset:** If the clock does not respond to the various function modes, you can reset the clock by pressing the RESET button on the movement case.
- **Internal Synchronization:** Once the clock has been set correctly by the radio signal, the clock's CPU operates continuously. To ensure accuracy, the clock synchronizes the position of the second and minute hands to the time calculated by the CPU every day. Second hand synchronization occurs at 1:30 a.m. and 9:30 a.m. and minute hand synchronization occurs between 1:50 and 2:01 am every day.
- **Signal Interference:** In some cases, the signal can be affected by weather conditions and electrical interferences, or the location of the clock itself may result in poor reception. If the clock has not synchronized to the correct time within a few days of activation, you may wish to move the clock to a different location. Try to place it near an outside wall closest to the direction of Colorado. Avoid placing the clock near electrical items such as TVs, microwave ovens and computers.



### NOTHING IS MORE PRECISELY MEASURED THAN TIME!

Since the beginning of time, man has been fascinated with the measurement of time and has devised more accurate machines to trap and measure time. Today, time is precisely measured in the United States by the most accurate clock in North America, the Atomic Clock of the US National Institute of Standards and Technology, Time and Frequency Division in Boulder, Colorado. A team of atomic physicists continually measures 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 Cesium 133 atom in a vacuum. This atomic clock regulates the WWVB radio transmitter located in Fort Collins, Colorado, where the exact time signal is continuously broadcast throughout the United States at 60 kHz to take advantage of stable long wave radio paths found in that frequency range. Radio waves at these low frequencies use the earth and the ionosphere as a wave-guide and follow the curvature of the earth for long distances.

The built in antenna system will receive the WWVB signal anywhere in North America within 2000 miles of Fort Collins where long-wave radio

reception is undisturbed. A microprocessor activates the receiver and processes the time signal from Fort Collins overnight.

Through the radio signals, La Crosse Technology atomic clocks always keep precise time. The changeover from standard time to daylight saving time, and vice versa, takes place automatically with the same precision.

The La Crosse Technology atomic clock is designed for indoor use. For indoor locations, select a location to place your radio controlled clock where it will be at least six feet away from a TV, computer, air conditioner or other household electrical appliances. The optimal location is near a window. Windows facing Colorado provide the best signal.

#### Notes:

- Do not submerge clock in water.
- Extreme temperatures, vibration, and shock should be avoided to prevent damage to the clock.

The WWVB time signal will easily penetrate masonry and wood framed buildings. The WWVB signal will penetrate almost every residential building and most steel buildings if they have adequate windows. It is not possible, however, for the WWVB signal to penetrate most indoor shopping malls and rooms in the center of large office buildings that do not have windows. In buildings that WWVB cannot penetrate you may set the time using the manual time set button. When the clock receives the WWVB signal it will automatically set the hands to the exact time.

**La Crosse Technology atomic clocks do not receive or process radio controlled time signals from Germany's DCF 77, Japan's JGAS, or England's MSFs atomically regulated transmitters. La Crosse Technology atomic clocks can be manually set and used anywhere. Please Note:** WWVB time will over ride a manual setting.

**For more information on the NIST and radio controlled time, see [www.boulder.nist.gov/timefreq/](http://www.boulder.nist.gov/timefreq/)**

### DAYLIGHT SAVING TIME

The National Institute of Standards and Technology and WWVB encode a special DST "bit" in the WWVB transmission for DST. Your La Crosse Technology clock will read this information and automatically advance the hands one hour in the spring and eleven hours in the fall.

### WARRANTY

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, Ltd  
2817 Losey Blvd. S.  
La Crosse, WI 54601

The complete instruction manual is available at:  
[www.lacrossetechnology.com/3143h](http://www.lacrossetechnology.com/3143h)

Le manuel d'instruction complet est disponible sur:  
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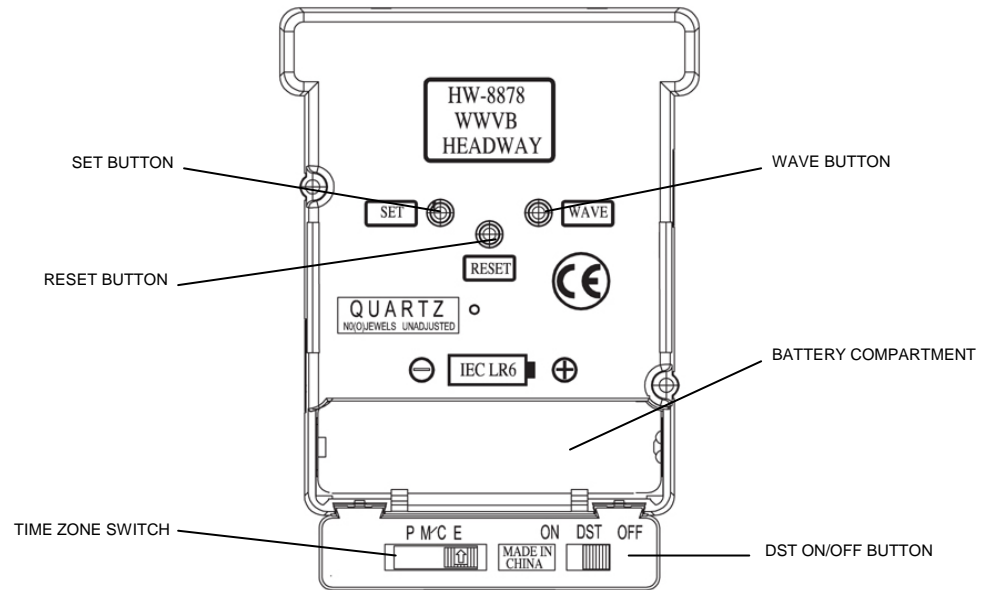
El manual de instrucciones completo está disponible en:  
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