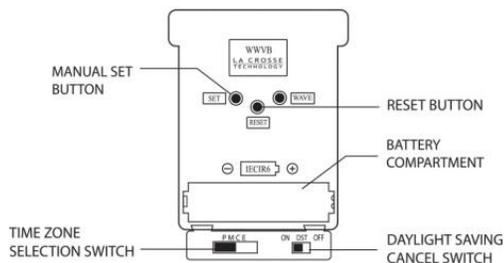


# LA CROSSE<sup>®</sup> TECHNOLOGY

Welcome to the world of radio controlled 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.

## Radio Controlled Analog Wall Clock



### INITIAL SETUP:

- Slide the switch to select a time zone.
- Insert 1 fresh AA, LR6 1.5 volt ALKALINE battery according to the polarity marked on the case.

**THAT'S IT! During the night your clock will automatically set itself.**

### DETAILED SETUP:

- Set Time Zone & Daylight Saving Time (DST):
  - Set the clock to your time zone by moving the indicator 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 Saving Time Auto Adjust feature by moving the DST switch to "ON". If you are in a time zone that does not follow DST, set the DST mode to "OFF". The Daylight Saving Time feature is then disabled.
- Battery:** Insert one AA alkaline battery into the battery compartment. This will activate the radio reception mode 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 within the first 10 minutes, 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. This may take up to 5 nights.
- Signal Reception:** The clock movement includes a radio receiver that is pre-tuned to the WWVB time signal (at 60 kHz) broadcast by the U.S. government from Fort Collins, Colorado. Because this is a low frequency (LF) signal it may take a day or more for the clock movement to receive and decode the signal. The signal is strongest at night and easier to receive once the sun goes down.
- 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. The synchronization occurs automatically at every 1, 3, 6, and 10 o'clock.
- 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 need 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.

- Wave (Enforced Signal Receipt):** This is best done at night when the signal is strongest. 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 enforced signal 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 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. Allow up to five nights for the clock to receive the WWVB signal before manually setting the time. 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.

**NOTE: We recommend that you change the battery once a year to maintain accuracy. Remove the battery when the clock will not be in use for an extended period.**

### 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 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.

### Troubleshooting

The wonderful advantage of owning a radio controlled clock is that it is virtually trouble free. If the clock receives a clear signal it will set itself perfectly. If it does not receive a signal consider the following:

**Battery** – The clock must have a fresh battery to receive and process the time signal.  
**Location** – Try a different location, ideally near a window. It should be at least six feet from computers, TVs, air conditioners, other Radio-Controlled clocks and other electrical appliances that cause interference.  
**Weather** – Electrical storms between you and Colorado during the night will interfere with the WWVB signal.

### Daylight Saving Time

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

### Arizona

If you live in an area that does not recognize DST you must slide the DST switch OFF. To reactivate the DST program simply slide the switch to the ON position.

### Frequently Asked Questions

**Q. How long will the battery last?**

**A.** A good AA alkaline battery will last over one year. If your clock is located in an area with little interference where it can quickly receive a signal the battery will last much longer than one year.

**Q: Can the La Crosse Technology® atomic clock be wired to control timing circuits?**

**A:** No. The clock is not designed to work on a timing circuit. Opening the clock or movement voids the warranty.

**Q: Is there a booster antenna to receive the WWVB signal in a difficult location?**

**A:** No. The clock is not designed to work with a booster antenna. Opening the clock or movement voids the warranty.

**Q: Can I shut off the WWVB signal?**

**A:** No. If you manually set the time, when the clock receives a WWVB signal, that signal will override the manual set.

**Q: Is there a version of analog clock with more than the four continental US times zones?**

**A:** La Crosse Technology® does not make an analog clock with more than four time zones. These time zones are: P (Pacific Time), M (Mountain Time), C (Central Time), E (Eastern Time).

### 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 the 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. The 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 the 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 the 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/support](http://www.lacrossetechnology.com/support)



Contact Support: 1-608-782-1610  
Product Registration:  
[www.lacrossetechnology.com/support/register](http://www.lacrossetechnology.com/support/register)