

Model: WT-3144S Instruction Manual

**DC**: 031115

# 14" Atomic Wall Clock





- Manual Time Setting Button
- B Time Zone Selection Buttons
- Daylight Saving
  Time Button

## **Get Started**

- **Step 1:** Slide the switch to select a time zone.
- **Step 2:** Insert 1 fresh AA, LR6 1.5 volt ALKALINE battery according to the polarity marked on the case.
- **Step 3:** For the best reception, please place clock on a wall that faces Ft. Collins, Colorado. During the night, your clock will automatically set itself.

**Note:** The hands will move to the 12:00 position and search for the radio signal. If the radio signal is not received in the first 10 minutes, **the clock will start running from the 12:00 position** and will continue to run. Do not attempt to reset the hands manually even though the time 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 if there is atmospheric interference.

## **Position Clock**

- For the best reception, please place clock on a wall that faces Ft. Collins, Colorado
- Signal reception is at its peak when there is only one wall or window between the clock and the outside.
- The antenna is best positioned for signal reception when the front or back of the clock faces Colorado.
- Choose a location 6 feet or more from electronics such as cordless phones, wireless gaming systems, televisions, microwaves, routers, baby monitors, etc., which can prevent signal reception.
- Large office buildings, schools, or hospitals may not receive the WWVB time signal in every room.
- Building with a metal roof may interfere with reception.

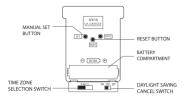
**Reset:** If the clock does not respond to the various function modes, press the RESET button on the movement case.

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**Note:** We recommend that you change the battery every 24 months to maintain accuracy. Remove the battery when the clock will not be in use for an extended period.

#### **Manual Set Time**

On rare occasions in certain areas, the clock may not be able to utilize the radio controlled function because of 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.



**Note:** Allow up to five nights for the clock to receive the WWVB signal **before** manually setting the time.

## 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.
  - Alternatively, 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.

## **Troubleshooting**

The wonderful advantage of owning a radio-controlled clock is that it is virtually trouble free. If the clock receives a clear time signal, it will set itself perfectly. If it does not receive a time 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. Your clock should be at least six feet from computers, TVs, air conditioners, other radiocontrolled 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.

# Manual WWVB Time Signal Search

For information about WWVB, visit: www.nist.gov/pml/div688/grp40/wwvb.cfm

# Manual Signal Search:

The WWVB signal is strongest at night.

- Hold the WAVE button down for 3+ seconds.
- The hands will automatically reset to the 12:00 position, and the movement will search for the WWVB time signal from Fort Collins, CO.
- If the movement successfully receives the signal, the clock will reset automatically to the correct time. The signal search takes approximately 3-8 minutes.
- Set the clock manually, and the movement's micro-CPU will control the time keeping function.

## Internal Synchronization:

Once the clock has 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 is 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.

## **Frequently Asked Questions**

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

A. A good AA alkaline battery will last over 24 months.

# Q: Can I wire a control timing circuit to the La Crosse Technology® atomic clock?

**A:** The clock cannot work on a timing circuit. Opening the clock voids the warranty.

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

**A:** The clock cannot 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. The WAVE button will temporarily stop a WWVB search, but will not permanent stop the clock from receiving a WWVB time signal.

# 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), and E (Eastern Time).

## Q: Why do the hands spin?

**A:** When the hands spin about the same time every day the clock is auto-correcting the time. The hour hand should not spin more than twice around the clock.

**A:** Hands may spin if the battery is under powered or over powered. Use only Alkaline batteries in the clock.

### **Care and Maintenance**

- Do not mix old and new batteries
- Do not mix Alkaline, Standard, Lithium or Rechargeable Batteries
- Always purchase the correct size and grade of battery most suitable for intended use.
- Replace all batteries of a set at the same time.
- Clean the battery contacts and also those of the device prior to battery installation.
- Ensure the batteries are installed with correct polarity (+and -).
- Remove batteries from equipment which is not to be used for an extended period of time.
- Remove expired batteries promptly.

# **Warranty and Support Information**

La Crosse Technology, Ltd. provides a 1-year limited time warranty (from date of purchase) on this product relating to manufacturing defects in materials & workmanship.

Before returning a product, please contact our friendly customer support with questions or visit our online help (manuals and FAQS):

**Phone:** 1-608-782-1610

Online Product Support: www.lacrossetechnology.com/support

#### **Product Registration:**

www.lacrossetechnology.com/support/register

#### View full warranty details online at:

www.lacrossetechnology.com/warranty\_info.pdf

# **Warranty Address:**

La Crosse Technology, Ltd 2830 S. 26<sup>th</sup> St. La Crosse, WI 54601





