



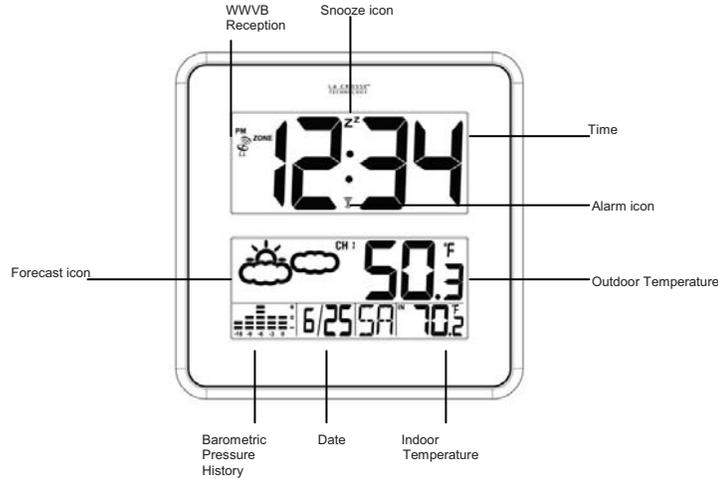
Tomorrow's Weather Today™

# 512A-811 and 512B-811 Atomic Digital Clock with Weather Forecast

## Manual

### Introduction

The Atomic Digital Clock with Weather Forecast offers radio-controlled time, pressure history, weather forecast, and indoor and outdoor temperature on one easy to read display.



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### FEATURES:

- Four digit time display (3 inches high)
- Atomic time and date with manual set option
- Automatically updates for Daylight Saving Time (on/off option)
- Choose from 5 languages (English, German, French, Dutch, Spanish).
- Choose from 4 Time Zones (Eastern, Central, Mountain, Pacific).
- 12-hour or 24-hour selectable time
- 18-hour pressure history graph.
- Forecast icons: sunny, partly cloudy, cloudy, rainy and stormy.
- Daily Alarm
- Perpetual calendar.
- Indoor temperature (°F or °C)
- Outdoor temperature (°F or °C)
- Can read up to 3 outdoor transmitters
- Wall hanging or free standing
- Low battery indicator for receiver and transmitter
- 100 foot wireless transmission range (open air)

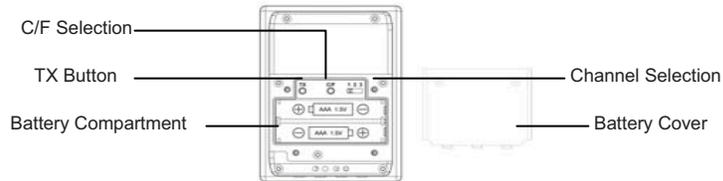
### SET UP:

- Remove the screws and the battery cover from the back of the transmitter with a small screwdriver. **(see install batteries in transmitter).**
- Set the transmitter to Channel 1.
- **NOTE:** if you have additional transmitters set them to channel 2 and channel 3 respectively.
- Insert fresh alkaline batteries into the transmitter, observing the correct polarity (see marking inside battery compartment). Keep the transmitter 5-10 feet from the atomic clock.
- Select Fahrenheit or Celsius for the transmitter display.
- Insert batteries into the atomic clock, observing the correct polarity **(see install batteries into the atomic clock)**. Once the batteries are in place, all segments of the LCD will light up briefly. The time will be displayed, as 12:00 and the outdoor temperature area will flash, searching for the temperature transmitter(s).
- After the batteries are inserted in the clock, press the TX button on the back of the transmitter to send a signal to the clock.
- Within 3 minutes the outdoor temperature should be displayed on the atomic clock. If temperature does not show after 3 minutes, remove the batteries from both units for 60 seconds and start again from the beginning.

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### INSTALL BATTERIES IN THE TRANSMITTER:

- Remove the screws and the battery cover from the back of the transmitter with a small screwdriver.
- Select the channel to transmit the outdoor temperature.
- **NOTE:** if using more than one transmitter, set each transmitter to a different channel to be displayed on the atomic clock.
- Insert two fresh AAA alkaline batteries into the transmitter, observing the correct polarity (see marking inside battery compartment).
- Keep transmitter 5-10 feet from the atomic clock.
- Select Fahrenheit or Celsius for the transmitter display.
- After the batteries are inserted, press the TX button on the back of the transmitter to send a signal to the clock.
- In order to ensure sufficient 434 MHz transmission, the outdoor transmitter should be placed a distance of no more than 100 feet (30 meters, open air) from the Atomic clock.

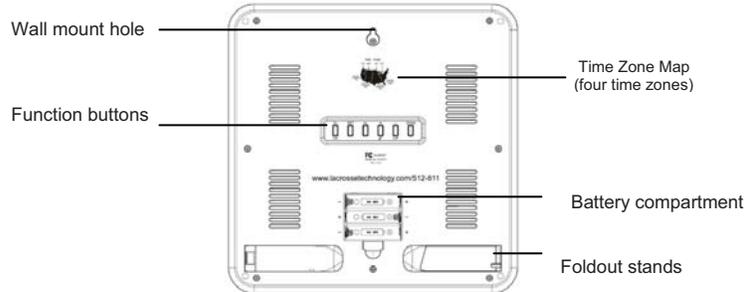


### INSTALL BATTERIES IN THE ATOMIC CLOCK:

- Remove the battery cover from the atomic clock:
  - Insert a finger in the rounded depression at the bottom of the battery cover.
  - Lift up and pull out to remove battery cover.
- Install three fresh AA alkaline batteries according to the polarity markings.
- Replace battery cover.
- Once the batteries are in place, all segments of the LCD will light up briefly. The time will be

displayed, as 12:00 and the outdoor temperature area will flash, searching for the temperature transmitter(s).

- After the batteries are inserted in the clock, press the TX button on the back of the transmitter to send a signal to the clock.
- Within 3 minutes the outdoor temperature should be displayed on the atomic clock. If temperature does not show after 3 minutes, remove the batteries from both units for 60 seconds and start again from the beginning.



### 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 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.

Once the outdoor temperature is displayed on the atomic clock, the WWVB tower icon in the atomic clock display will start flashing in the top center of the LCD. This indicates that the atomic 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 to 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.

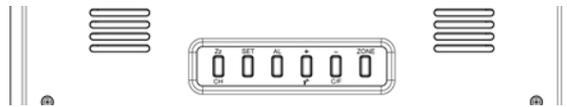
**NOTE:**

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 SET TIME).



**WWVB RECEPTION** icon with full signal strength will appear on screen if the reception of atomic time is successful. The atomic clock will have a daily synchronization at 02:03 and 03:03 everyday. Each reception cycle is minimum 2.5 minutes and maximum 10 minutes.

**FUNCTION BUTTONS**



	<u>Press and Release Functions</u>	<u>Hold 3-5 seconds</u>
<b>Zz</b>	Activates snooze when alarm sounds	
<b>CH</b>	Select CH 1, 2, 3 or auto scroll	Search for transmitter
<b>SET</b>		Set Clock
<b>AL</b>	View alarm time.	Set Alarm
<b>+</b>	<b>+</b> = Advance 1 in program mode	<b>+</b> = Fast advance
	<b>+</b> = Alarm on/off in AL mode	WWVB Search
<b>-</b>	<b>-</b> = Back 1 in program mode	<b>-</b> = Fast backward
<b>C/F</b>	<b>-</b> = Alarm on/off in AL mode	Switch Fahrenheit/Celsius
<b>ZONE</b>	Select Time Zone PST>MST>CST>EST	

**SET TIME:** The Program menu involves several sections controlled by different buttons.

Buttons are: Zz/CH, SET, AL, , , C/F, ZONE.

- **LANGUAGE:** Hold the SET button until the Language will flash. Press and release the PLUS button to set the Language (**EN** English, **GE** German, **FR** French, **SP** Spanish, **DU** Dutch.). Press the SET button once to continue.
- **YEAR:** Hold the SET button until the Year will flash. Press and release the PLUS button to set the Year. Press the SET button once to continue.
- **MONTH:** The Month will flash. Press and release the PLUS button to set the Month. Press the SET button once to continue.
- **DATE:** The Date will flash. Press and release the PLUS button to set the Date. Press the SET button once to continue.
- **NOTE:** Day of week will set automatically.
- **HOURL:** The Hour will flash. Press and release the PLUS button to set the Hour. Press the SET button once to continue.

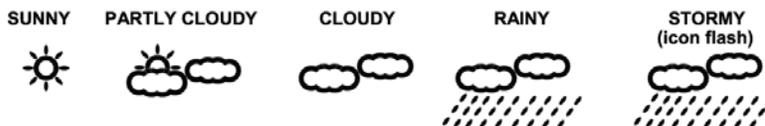
- **MINUTES:** The Minutes will flash. Press and release the PLUS button to set the Minutes. Press the SET button once to continue.
- **12/24-HOUR TIME:** 12hr or 24hr will flash. Press and release the PLUS button to select 12-hour or 24-hour time mode. Press the SET button once to continue.
- **WEATHER FORECAST ICON:** The forecast icon will flash. Press and release the PLUS button to select the forecast icon that represents your current local weather. Press and release the SET button to exit.
- **NOTE:** If possible, it is best to select the **RAINY ICON** when it is raining outside. This allows for the most accurate future forecasts based on barometric pressure changes.
- **DST:** dSt on or dSt of will flash. Press and release the PLUS button to turn the DST feature ON or OFF. Press and release the SET button to continue.

**SET TIME ZONE:**

- **TIME ZONE:** Press and release ZONE button to select four U.S. Time Zones: (**ES** Eastern, **CS** Central, **MS** Mountain, **PS** Pacific)  
**NOTE:** This station will only support these 4 Time Zones.

**WEATHER FORECAST ICONS:**

The unit predicts weather condition of the next 12 – 24 hours based on the change of atmospheric pressure. The weather forecast is based on atmospheric pressure change and is about 70-75% correct. As weather conditions cannot be 100% correctly forecasted, we cannot be responsible for any loss caused by an incorrect forecast.



**SET ALARM:**

- **ALARM HOUR:** Press and hold AL button to enter alarm time setting mode. The Alarm Hour will flash. Use the PLUS or MINUS button to set the Hour. Please note AM or PM. Press and release the AL button.

- **ALARM MINUTE:** The Alarm Minutes will flash. Use the PLUS or MINUS button to set the Minutes. Press and release the AL button.

**ALARM ACTIVATION:**

- Press and release the AL button to show Alarm Time.
- When in Alarm Mode press and release the PLUS or MINUS button to activate or deactivate the Alarm.
- The alarm icon  appears when alarm is activated.
- To stop alarm for one day, press AL button, when the alarm sounds. The alarm icon  will show solid.

**SNOOZE:**

- Press the Zz/CH button when the alarm sounds, to trigger the snooze alarm for 5 minutes. The snooze icon **Zz** will flash.
- To stop alarm for one day, press AL button, while in snooze mode. The alarm icon  will show and the snooze icon **Zz** will disappear.

**FAHRENHEIT/CELSIUS:**

**Transmitter:** Remove the battery cover then press and release the **C/F** button on the transmitter to select Fahrenheit or Celsius.

**Atomic clock:** Hold the **-/CF** button for 3-5 seconds to switch from Fahrenheit to Celsius.

- **Channels:** If more than one transmitter is used, set each transmitter to a different channel. To view: press the CH button to select Ch1, Ch2, Ch3 and auto-channel: scrolling all channels.
- **Auto-channel** will show a circling arrow  above the channel number and will rotate through each channel approximately every 8-10 seconds

### 18-HOUR BAROMETRIC PRESSURE HISTORY GRAPH:

The bar chart indicates the air pressure history trend over the last 18 hours in 5 steps, 0h, -3h, -6h, -9h, & -18h. The columns represent the "hPa" at specific times. The "0" in the middle of this scale is equal to the current pressure and each change (0, -3, -6, -9, -18) 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".

### POSITIONING THE ATOMIC CLOCK:

There are two possible ways to mount the atomic clock:  
Foldout leg stands or wall mount.



#### FOLDOUT LEG STAND

The two foldout leg stands are located on the back of the atomic clock. Pull the leg stands out from the back of the atomic clock. Once the foldout leg stands are extended, place the atomic clock in an appropriate location.



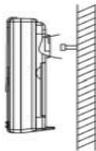
#### WALL MOUNT

- Install one mounting screw (not included) into a wall within transmission range of the transmitter, leaving approximately 3/16 of an inch (5mm) extended from the wall.
- Place the atomic clock onto the screw, using the hanging hole on the backside.
- Gently pull the atomic clock down to lock the screw into place.

**NOTE:** Always ensure that the atomic clock locks onto the screw before releasing.

### POSITIONING THE OUTDOOR TEMPERATURE TRANSMITTER

The remote temperature transmitter should be mounted vertically to avoid damage.



#### WALL MOUNT

- Install one mounting screw (not included) into a wall within transmission range of the atomic clock, leaving approximately 3/16 of an inch (5mm) extended from the wall.
- Place the transmitter onto the screw, using the hanging hole on the backside.
- Gently pull the transmitter down to lock the screw into place.

**NOTE:** Always ensure that the transmitter locks onto the screw before releasing.



#### TABLE STAND

Set the transmitter upright on a table or desk.

**NOTE:** This is not recommended as the transmitter may blow over and be damaged.

To achieve a true temperature reading, avoid mounting the outdoor transmitter where direct sunlight can reach it. It is recommended to mount the outdoor temperature transmitter on a North-facing wall or in any well shaded area. The maximum transmitting range in open air is 100-feet (30 meters) obstacles such as walls, concrete, and large metal objects can reduce the range.

Place both units in their desired location, and wait approximately 10 minutes before permanently mounting to ensure that there is proper reception. The outdoor temperature transmitter is not waterproof and should not be placed anywhere it will become submerged in water or subject to standing water or snow.

#### **LOW BATTERY:**

It is recommended to replace the batteries in all units every 12 months to ensure optimum accuracy of these units. A low battery icon will display next to the outdoor temperature when the transmitter batteries are low and next to the indoor temperature then the batteries in the atomic clock are low.

#### **MAINTENANCE**

- Do not expose the display to extreme temperatures, vibration or shock. Keep dry.
- Clean it with a soft damp cloth. Do not use solvents or scouring agents.
- The product is not a toy. Keep it out of reach of children.
- The product is not to be used for medical purpose or for public information, but is determined for home use only.
- The specifications of this product may change without prior notice.
- Improper use or unauthorized opening of housing will void the warranty.
- If the unit does not work properly, change the batteries.

#### **SPECIFICATIONS:**

##### **Indoor Temperature:**

Range: 32° F to 122° F (0° C to + 50° C)  
Resolution: 0.1° F

##### **Outdoor Temperature:**

Range: -4° F to 140° F (-20° C to + 60° C)  
Resolution: 0.1° F  
Distance: 100 ft (30 meters) RF 434MHz (open air)  
Interval: Above 0.3 degrees = every 31 seconds  
Below 0.3 degrees = every 2.5 minutes

##### **Power:**

Receiver: 3-AA, IEC, LR6 alkaline batteries (not included).  
Transmitter: 2-AAA, IEC, LR3 alkaline batteries (not included).

##### **Dimensions:**

Receiver: 11.45" W x 1.24" D x 11.4" H in  
Transmitter: 4.49" W x .86" D x 3.54" H

#### **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. 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 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

**Product Info and Support for 512A-811:**



[www.lacrossetechnology.com/512A-811](http://www.lacrossetechnology.com/512A-811)

**Product Registration:**



[www.lacrossetechnology.com/support/register](http://www.lacrossetechnology.com/support/register)

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**Product Registration:**



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The complete instruction manual is available at:

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