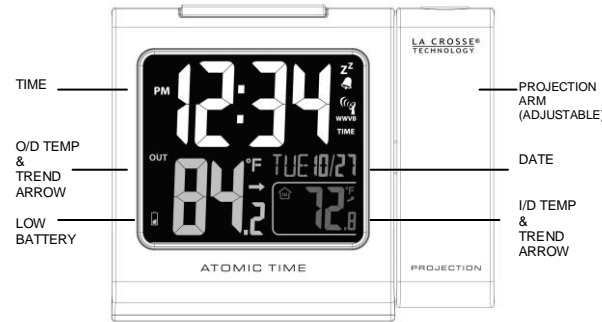# LA CROSSE®
TECHNOLOGY

Atomic Projection Alarm
Model: 616-146 | Quick Setup Guide

INTRODUCTION:
The Atomic Projection Alarm features radio-controlled time, indoor and outdoor temperature on a stylish, colorful, and easy to read display. Time and/or outdoor temperature can be projected on a wall or ceiling. Use the integrated USB charging port to charge your devices when the Projection Alarm is plugged into a power outlet.
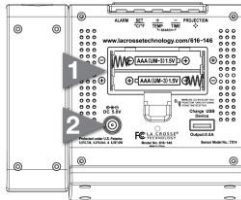
ATOMIC PROJECTION ALARM:

TIME
O/D TEMP & TREND ARROW
LOW BATTERY

PROJECTION ARM (ADJUSTABLE)
DATE
I/D TEMP & TREND ARROW

SETUP INSTRUCTIONS STEP BY STEP:

STEP 1:
• Remove battery cover from Projection Alarm, slide tab up and pull out to remove the cover.
• Insert 2 NEW AA batteries (not included) into the back of the Projection Alarm. Observe the correct polarity (see marking inside the battery compartment).
• Do NOT mix old and new batteries.
• The Projection Alarm will light up and display, indoor temperature and time (12:00).
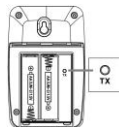

STEP 2:
• Insert the 5 volt AC power adapter into the designated area on the back of the Projection Alarm.
• Insert the power adapter plug into a wall outlet for a continuous backlight.
• **IMPORTANT:** When operating on a/c power, to avoid interference, the backlight, projection and USB charge port, will turn off while the Projection Alarm searches for the WWVB signal. The backlight, projection and USB charge port will function again after the 2-10 minute search .

STEP 3:
• Ensure that the outdoor transmitter is within 10 feet of the Projection Alarm during setup.
• Remove battery cover from transmitter: Slide the battery cover down and lift off the back.
• Insert 2 NEW AA batteries into the TX14 transmitter. Observe the correct polarity.
• Keep the Projection Alarm and the transmitter close to each other (within 10 feet).
• Within 3 minutes the Projection Alarm will beep and then display readings in the Outdoor temperature area.

TROUBLESHOOTING:
• If the Projection Alarm does not display the outdoor temperature after 3 minutes, remove the a/c power adapter and all batteries from both units and start the setup process again.

• If the outdoor temperature does not show up after a second attempt, please slide open the battery cover of the outdoor transmitter to reveal the TX button push down on the TX button for 3 seconds to send a wireless signal to the Projection Alarm.
• Hold the +/TEMP button and the Projection Alarm will search for the transmitter.
• For optimal 433 MHz reception, the outdoor transmitter should be placed within 200 feet (60 meters) from the Projection Alarm (see **positioning outdoor transmitter**).
• **Note**: Use Alkaline batteries (or Lithium for temperatures below - 20°F / -28.8°C).

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 Projection Alarm. However, due to the nature of the Earth's Ionosphere, reception is very limited during daylight hours. The Atomic Projection Alarm will search for a signal every night when reception is best.

WWVB RECEPTION ICON with full signal strength will appear on screen if the reception of WWVB signal is successful.
• The tower icon is solid when the Projection Alarm has received the WWVB signal.
• The tower icon will flash when searching for a signal.
• No tower icon displayed. The Projection Alarm was unable to receive a signal at this time.
• Reposition the Projection Alarm for better signal reception or try again at bedtime.
• Hold the -/TIME button to force a signal search at night when reception is best.
• The Projection Alarm will start searching at UTC: 07:00 and if no reception on the first attempt they will try again at 0800, 0900 and 1000.   Each attempt will be at least 2 minutes and the most will be 10 min.
• If there is no signal or too much interference the receiver will only be on for 2 minutes.
• If the signal is good it may catch a signal in ABOUT 2-3 minutes. If the signal is marginal it will try to catch a signal for up to 10 minutes.
• **IMPORTANT:** When operating on a/c power, to avoid interference, the backlight, projection and USB charge port, will turn off while the Projection Alarm searches for the WWVB signal. The backlight, projection and USB charge port will function again after the 2-10 minute search which occurs during the late night or early morning hours.
Note: In case the Atomic Projection Alarm is not able to detect the WWVB signal (disturbances, transmitting distance, etc.); the time can be manually set.
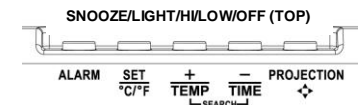
BUTTON FUNCTIONS:

Button	Press and Release Functions	Hold 2 seconds
SET/°C/°F	Move through program menu (setup) Select temperature in °C/°F	Enter program menu, Set time, date, etc. (setup)
ALARM	Once: View Alarm Twice: Activate or Deactivate Alarm	Alarm set
+/TEMP	1 step forward (setup)	Search for Transmitter Fast advance (setup)
-/TIME	1 step backward (setup)	Fast backward (setup) WWVB Search
PROJECTION	Rotate Projection 90 degrees	Change what is projected: Time/Outdoor Temp alternating (default) **Once**: Time only **Twice:** Outdoor Temp only **Third time:** Time/Outdoor Temp alternating (default)
SNOOZE/LIGHT HI/LOW/OFF	**Once**: Backlight/Projection low intensity (a/c) **Twice**: Backlight/Projection OFF (a/c) **3rd time**: Backlight/Projection ON high intensity (default, a/c) **Activate** backlight/projection 10 seconds (battery power) **Trigger** snooze (alarm active)	

PROGRAM MENU:
The SET/°C/°F button will move through the program menu. The +/TEMP or -/TIME buttons will change a value.
• **WWVB ON/OFF:** Hold the SET/°C/°F button 5 seconds and WWVB and the word ON will flash. Press and release the +/TEMP or -/TIME button to turn this to OFF if you do not wish WWVB reception. Confirm with the SET/°C/°F button and move to the next item.
• **TIME ZONE:** EST will flash. Press and release the +/TEMP or -/TIME button to select a different Time Zone: AST=Atlantic, EST= Eastern, CST= Central, MST= Mountain, PST= Pacific, AKT= Alaska, HAT=Hawaiian time zone. Confirm with the SET/°C/°F button and move to the next item.
• **DAYLIGHT SAVING TIME**: DST will flash and the word ON. Press and release the +/TEMP or -/TIME button to turn this to OFF if you do not observe DST. Confirm with the SET/°C/°F button and move to the next item.
• **12/24 HOUR TIME**: 12H will flash. Press and release the +/TEMP or -/TIME button to select 24H. Confirm with the SET/°C/°F button and move to the next item.
• **HOUR**: The hour will flash. Press and release the +/TEMP or -/TIME button to select the correct hour. Confirm with the SET/°C/°F button and move to the next item.
• **MINUTES**: The minutes will flash. Press and release the +/TEMP or -/TIME button to select the correct minutes. Confirm with the SET/°C/°F button and move to the next item.
• **YEAR**: The year will flash. Press and release the +/TEMP or -/TIME button to select the correct year. Confirm with the SET/°C/°F button and move to the next item.
• **MONTH**: The month will flash. Press and release the +/TEMP or -/TIME button to select the correct month. Confirm with the SET/°C/°F button and move to the next item.
• **DATE**: The date will flash. Press and release the +/TEMP or -/TIME button to select the correct date. Confirm with the SET/°C/°F button and exit the program menu.
• **Note**: The Day of the Week will SET automatically after the year, month and date are set.

FAHRENHEIT/CELSIUS: Press and release the SET/°C/°F button to select temperature readings in Fahrenheit or Celsius.

SNOOZE/LIGHT/HI/LOW/OFF (TOP)

ALARM   SET °C/°F   + TEMP   - TIME   PROJECTION
SEARCH

ALARM SET:
• **ALARM HOUR**: Hold the ALARM button to enter alarm time setting mode. The Alarm Hour will flash. Use the +/TEMP or -/TIME button to Set the Hour. Press and release the ALARM button.
• **ALARM MINUTE**: The Alarm Minutes will flash. Use the +/TEMP or -/TIME button to Set the Minutes. Press and release the ALARM button to exit.

ALARM ACTIVATION: ALARM ICON
• Press and release the ALARM button once to show Alarm Time.
• With the Alarm time showing, press and release the ALARM button to activate the alarm. The alarm icon appears when alarm is activated.
• With the Alarm time showing, press and release the ALARM button to deactivate the alarm. The alarm icon will disappear when alarm is activated.

SNOOZE:
• When the alarm sounds, press the SNOOZE button to trigger snooze alarm for 9 minutes. The snooze icon **Zz** will flash when the snooze feature is active.
• To stop alarm for one day, press AL button, while in snooze mode. The alarm icon will remain solid.

BACKLIGHT AND PROJECTION INTENSITY: Press and release the SNOOZE/LIGHT button to adjust the brightness of the backlight and projection (together):

• **ON High intensity:** The backlight and projection are defaulted to HI when the Adapter is in use.
• **ON Low intensity:** Press and release SNOOZE/LIGHT button once
• **OFF**: Press and release SNOOZE/LIGHT button
• **ON High intensity (default)**: Press and release SNOOZE/LIGHT button
• **Note:** When the Adapter is NOT in use, the High/Low/On/Off features are not available.

PROJECTION:

Battery Power: Press and release the SNOOZE/LIGHT button to show the projection for 10 seconds.
Note: Projection will not display constantly when operating on battery power.

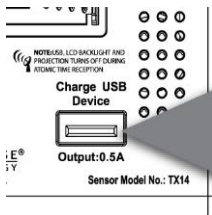**A/C Power**: Projection is displayed constantly unless turned off.
Note: can be turned off see "**Backlight and Projection Intensity**"

- **Rotate Projection:** Press and release the PROJECTION button to rotate projection image 90 degrees. Press and release the PROJECTION button again to rotate another 90 degrees.

- **Change Projection Mode:** Hold, then release the PROJECTION button to switch projection modes. Watch the projection image to view the changes.

  o **Time and Outdoor Temperature:** alternate every 5 seconds (default)
  o **Time**: Hold and release PROJECTION button
  o **Outdoor Temperature**: Hold and release PROJECT button again

USB CHARGE PORT:
The integrated USB charging port (on back) will charge devices when the Projection Alarm is plugged into a power outlet.
Note: This is a power output (charging) port only. This port will not supply power to the Projection Alarm.

- Connect your existing USB charging cord for your external device to the USB charging port on the back of the Projection Alarm to begin to charge. Charging times will vary.
- **Note: Check that your device will charge with the USB cord it came with.** *Many USB cords are for data transfer only, and cannot be used for charging.*
- **Output**: 0.5A maximum current USB.
- Do NOT overload USB port.

IMPORTANT: When operating on a/c power, the backlight, projection and USB charging port will turn off while the Projection Alarm searches for the WWVB signal, to avoid interference. The backlight and projection will return after the 2-10 minute search (which occurs during the late night or early morning hours). Then the USB charging port will resume working.

TEMPERATURE TREND ICONS:
The indoor and outdoor temperature trend indicators are updated every 30 minutes. These trends represent temperature changes over the past three hours.

Temperature rising more than 2°F /1°C in the past three hours
Temperature has **not changed** more than 2°F /1°C in the past three hours
Temperature falling more than 2°F /1°C in the past three hours

The temperature trend indicators are shown next to the indoor temperature and outdoor temperature readings.

POSITIONING OUTDOOR TRANSMITTER:
Once the Projection Alarm displays the outdoor temperature, place it and the transmitter in the desired locations and wait approximately 1-hour before permanently mounting the transmitter to ensure that there is proper reception. The transmitter should be mounted vertically, in a shaded, protected area, at least 6 feet from the ground to avoid damage and ensure accurate readings. The transmitter is water resistant, not waterproof and should not be placed anywhere it will become submerged in water or subject to standing water or snow.

WALL MOUNT

- Choose a shaded location (under an overhang) for the transmitter that is within the confirmed wireless reception range of the Projection Alarm for accuracy.
- Install one mounting screw (not included) into a wall leaving approximately ½ of an inch (12.7mm) extended.
- Place the hanging hole (on the back of the transmitter) onto the mounting screw and gently slide the transmitter down onto the mounting screw to secure it into place.

IMPORTANT: For true temperature readings, mount the transmitter out of direct sunlight on a North-facing wall or in any other well shaded area like under an eave or deck rail. The maximum transmitting range in open air is over 200-feet (60 meters). Obstacles such as walls, windows, stucco, concrete, and large metal objects can reduce the range. Place the transmitter at least 6 feet in the air to improve signal transmission.

LOW BATTERY:

- When this icon appears in the indoor (IN) reading section, replace the batteries in the Projection Alarm.
- When this icon appears in the outdoor (OUT) readings section, replace the batteries in the outdoor transmitter.

CARE AND MAINTENANCE:
- **Do Not Mix Old and New Batteries**
- **Do Not Mix Alkaline, Standard, Lithium or Rechargeable Batteries**
- Do not expose the Projection Alarm to extreme temperatures, vibration or shock.
- Keep Projection Alarm dry.
- Clean the Projection Alarm with a soft damp cloth. Do not use solvents or scouring agents.
- The Projection Alarm is not a toy. Keep it out of reach of children.
- The Projection Alarm 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 Projection Alarm does not work properly, change the batteries and/or check the a/c cord connection.

SPECIFICATIONS:
Indoor:
Temperature Range: +32°F to +122°F (0°C to 50°C)
Accuracy: +/- 2 degrees Fahrenheit
Interval: About every 30 seconds

Outdoor:
Temperature Range: -40°F to 140°F (-40°C to 60°C)

Alkaline Batteries: -20°F to 140°F (-28.8°C to 60°C)
Lithium Batteries: -40°F to 140°F (-40°C to 60°C)

Temperatures below - 20°F (-28.8°C) require Lithium batteries in the outdoor transmitter.

Distance: Over 200 ft. (60 meters) RF 433MHz (open air)
Interval: About every 30 seconds
Power:
Projection Alarm: 5-volt a/c power adapter (included)
  Optional 2-AAA, IEC, LR3 batteries (not included)
TX14 Transmitter: 2-AA, IEC, LR6 batteries (not included)

Battery Life:
TX14 Transmitter Battery Life:
  Battery life is over 24 months when using reputable battery brands for both Alkaline and Lithium batteries

Projection Alarm Battery Backup:
  Battery life is over 24 months when using the AC adapter for primary power
USB:
Output: 0.5 Amp maximum current

Dimensions:
Projection Alarm: 5.23" L x 1.96" W x 4.33" H (133 x 50 x 110 mm)
TX14 Transmitter: 2.5" L x 1.42" W x 3.98" H (64 x 36 x 101 mm)

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 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/616-146

Contact Support: 1-608-782-1610
Product Registration:
www.lacrossetechnology.com/support/register

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