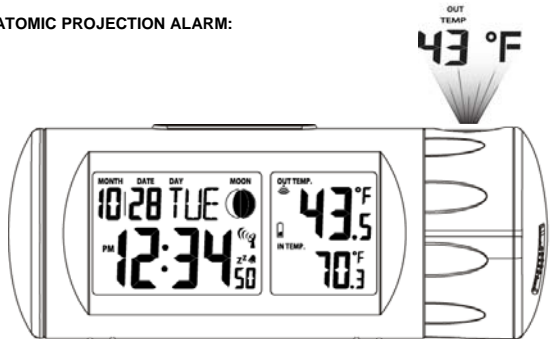# LA CROSSE®
TECHNOLOGY

Atomic Projection Alarm
with IN/OUT Temperature
Model: 616-143 | Quick Setup Guide

INTRODUCTION:
The Atomic Projection Alarm features radio-controlled time, date, indoor temperature, outdoor temperature and moon phase on a fun, round display. Time and Outdoor Temperature alternately project on a wall or ceiling in easy to read numbers. Backlight is sound activated!
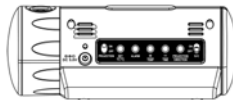
ATOMIC PROJECTION ALARM:

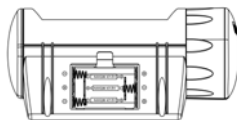**SETUP INSTRUCTIONS STEP BY STEP:**

STEP 1:
- 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 and projection.
- The Projection Alarm will light up and display indoor temperature, time (12:00) and date (1/1 FRI).

IMPORTANT: When operating on a/c power, to avoid interference, the projection will turn off while the Projection Alarm searches for the WWVB signal. The projection will return after the 2-10 minute search.

STEP 2: (optional battery operation)
- Remove battery cover from the bottom of the Projection Alarm, slide tab and pull out to remove the cover.
- Insert 3 NEW AAA batteries (not included) into the Projection Alarm. Observe the correct polarity (see marking inside the battery compartment).
- **Do NOT mix old and new batteries.**
- **Do Not Mix Alkaline, Standard, Lithium or Rechargeable Batteries**
- The Projection Alarm will light up and display indoor temperature, time (12:00) and date (1/1 FRI).

STEP 3:
- Keep the transmitter within 10 feet of the Projection Alarm during setup.
- Remove battery cover from the TX141 transmitter: Slide the battery cover down and lift off the front.
- Insert 2 NEW AA batteries into the 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 display readings in the Outdoor Temperature area.

TROUBLE SHOOTING:
- After 3 minutes, if the Projection Alarm does not display the outdoor temperature, 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**).

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 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.
- 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 08:00, 09:00 10:00 and 11:00. Each attempt will be at least 2 minutes and at most will be 10 min.
- 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.

Note: In case the 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/°F/°C	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 Sensor Fast advance (setup)
-/TIME	1 step backward (setup)	Fast backward (setup) WWVB Search
PROJECTION DIRECTION	Rotate Projection 180 degrees	
SNOOZE/LIGHT	Activate backlight/projection for 5 seconds (battery power) Trigger snooze (alarm active)	
PROJECTION ON/OFF	Slide to switch projection ON or OFF (a/c power)	
S/C ON/OFF	Slide to switch from sound controlled backlight (ON) or backlight OFF	
FOCI ADJUST	Rotate focus wheel to adjust projection focus	

PROGRAM MENU:
The SET/°F/°C button will move through the program menu.
The +/TEMP or -/TIME buttons will change a value.
- **WWVB ON/OFF:** Hold the SET/°F/°C 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/°F/°C 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/°F/°C 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/°F/°C 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/°F/°C 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/°F/°C 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/°F/°C 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/°F/°C 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/°F/°C 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/°F/°C button and exit the program menu.

Note: The Day of the Week will SET automatically after the year, month and date are set.
Note: If no buttons are pressed in a 20 second period the projection alarm will return to a live display reflecting whatever adjustments were made before it timed out.

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

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 10 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.

MOON PHASE:
Eight phases of the moon are determined by the year, month and date set on the projection alarm. With the moon shown against a white background, the phases will show opposite to a paper calendar.

| NEW MOON | WAXING CRESCENT | FIRST QUARTER | WAXING GIBBOUS | FULL MOON | WANING GIBBOUS | LAST QUARTER | WANING CRESCENT |

The segments that are highlighted will portray the part of the moon that is lit. For instance, the moon will be blank during a new moon and dark during a full moon. This is how this product is designed to best view on the display, what you will see in the sky. This cannot be changed.
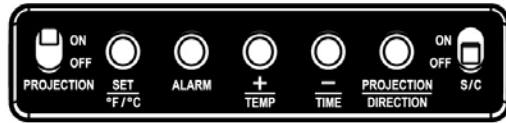
BACKLIGHT:
The LCD backlight will not show continually. When operating on a/c power you have the option of a **sound controlled** (S/C) backlight.
- **S/C ON**: The backlight will come on for 5 seconds when it hears a sound (60db). At any time you can press the SNOOZE/LIGHT button to activate the backlight for 5 seconds.
- **S/C OFF**: Press the SNOOZE/LIGHT button to activate the backlight for 5 seconds.
- **Battery Operation**: Press the SNOOZE/LIGHT button to activate the backlight for 5 seconds. Sound activation is not available.

PROJECTION:
Battery Power: Press and release the SNOOZE/LIGHT button on top of the projection alarm to show the projection for 5 seconds.
Note: Projection will not display constantly when operating on battery power.

A/C Power: Projection is displayed constantly unless turned off.

- **Projection ON/OFF:** Use the PROJECTION ON/OFF **slide switch** on the back of the clock to turn the projection off when operating on a/c power.
- **Rotate Projection:** Press and release the PROJECTION/DIRECTION button to rotate projection image 180 degrees as viewed on the wall or ceiling.
- **Focus Projection:** Use the focus wheel on the projection arm to adjust the clarity of the projection on the wall or ceiling.
- **Time/Outdoor Temperature Projection:** The projection will alternate between time and outdoor temperature every 5 seconds. **This is not adjustable**.

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

POSITIONING THE OUTDOOR TRANSMITTER:
The remote temperature transmitter should be mounted vertically to avoid damage. Place both units in the desired shaded locations, and wait approximately 1-hour before permanently mounting the transmitter to ensure that there is proper reception. The outdoor temperature 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 location for the transmitter that is within range of the Atomic Projection Alarm and under an overhang for accuracy.

Option 1:
- Install one mounting screw (included) into a wall leaving approximately ½ of an inch (12.7mm) extended.
- Place the transmitter onto the screw, using the hanging hole on the backside.
- Gently pull the transmitter down to lock the screw into place.

Option 2:
- Insert the mounting screw through the front of the sensor and into the wall.
- Tighten the screw to snug (do not over tighten).

To achieve a true temperature reading, mount where direct sunlight cannot reach the outdoor transmitter. Mount the outdoor transmitter on a North-facing wall or in any well shaded area. Under an eave or deck rail work well. 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.

POSITIONING THE PROJECTION ALARM:
The Atomic Projection Alarm should be placed near an exterior wall with the front or back facing toward Ft. Collin Colorado for best WWVB reception. The display should be six feet from other electronics or wireless devices in order to best receive the outdoor temperature transmitter signal.

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 Projection Alarm 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 sensor.
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 3-AAA, IEC, LR3 batteries (not included)
TX141 Transmitter:	2-AA, IEC, LR6 batteries (not included)

Battery Life:
TX141 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 12 months when using the AC adapter for primary power

Dimensions:

Projection Alarm:	7.09" x 3.62" x 2.87" (180 x 92 x 73mm)
TX141 Transmitter:	1.57" x 0.79" x 5.12" (40 x 20 x 130mm)

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 return ground 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/616-143

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

Protected under U.S. Patents:
5,978,738, 6,076,044, 6,597,990

FCC Disclaimer:
This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) the device must accept any interference received, including interference that may cause undesired operation.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER AUTHORITY TO OPERATE THE EQUIPMENT