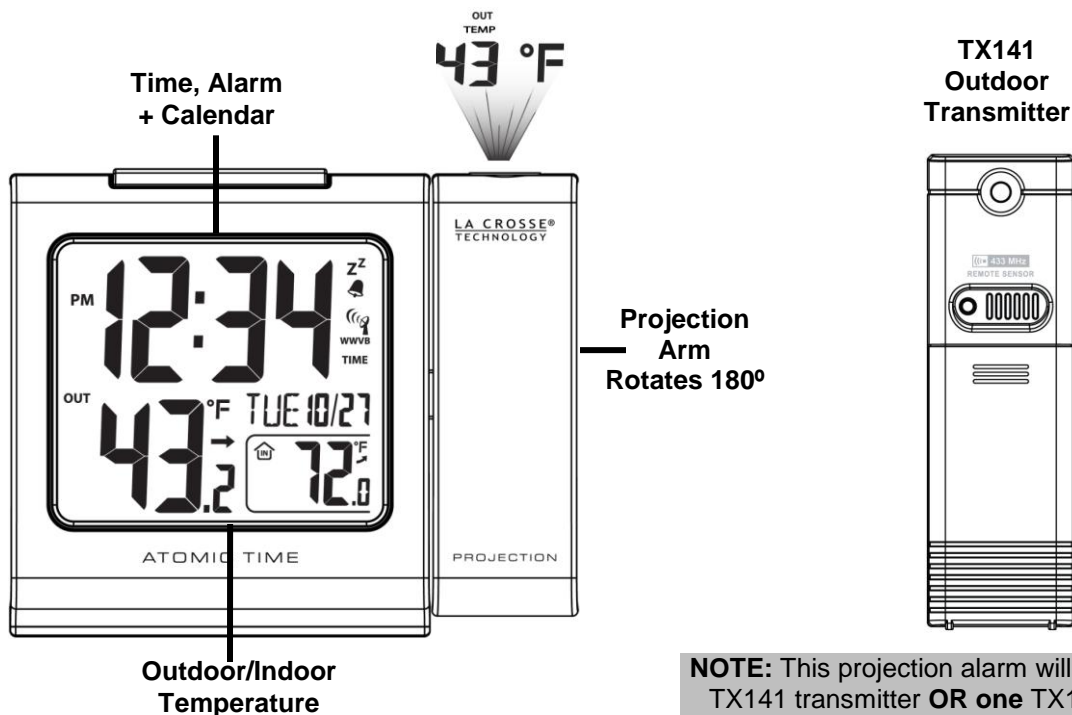


Atomic Projection Alarm with Indoor and Outdoor Temperature

This Atomic Projection Alarm with snooze alarm and backlit display projects time and outdoor temperature on your wall or ceiling in a variety of ways. It automatically sets the time and date based on your time zone, and even updates Daylight Saving Time for you. Monitor indoor and outdoor temperature, track temperature trends and charge your smartphone or other device with the USB charging port--all in one convenient device for your desktop or bedside table. It runs on AC power with battery backup, and has a wireless transmission range of over 200 ft. to the backyard temp. sensor.

Atomic Projection Alarm



Get Support: <http://www.lacrossetechnology.com/616-146>

INITIAL SETUP

Step 1: Insert the included 5-volt AC power adapter into projection alarm and then into wall outlet.

Step 2: Insert 3 new “AAA” batteries (not included) into the projection alarm. Observe the correct polarity.

Step 3: Insert 2 new “AA” batteries (not included) into the TX141 transmitter. Observe the correct polarity. The red LED will flash with transmitting.

- **Do Not Mix Old and New Batteries**
- **Do Not Mix Alkaline, Standard, Lithium or Rechargeable Batteries**

RESTART:

- If the outdoor temperature is not displayed after 3 minutes, unplug the AC adapter and remove batteries from the projection alarm & transmitter for 15 minutes.
- Return to **Step 1** above.

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Features

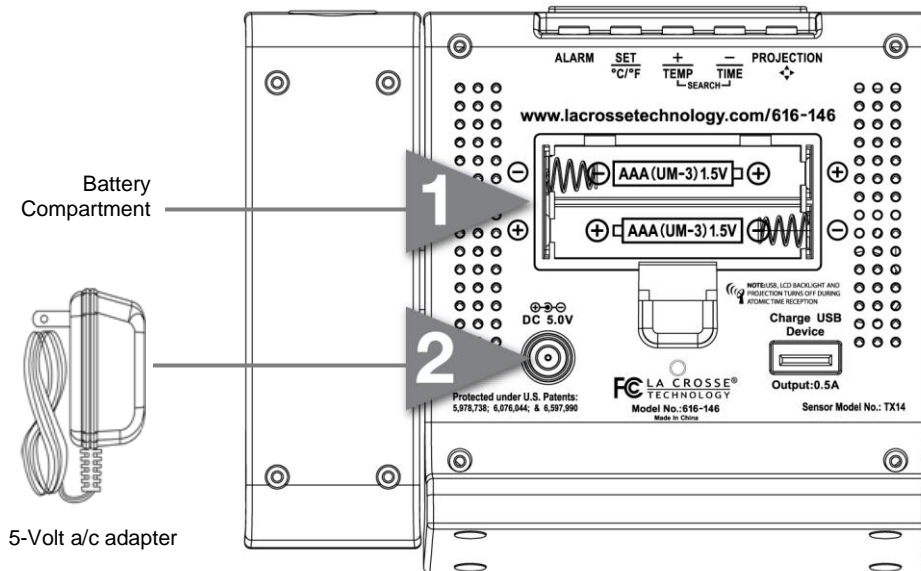
- Projects time & outdoor temp. on wall or ceiling
- Projection rotates in 90 degree increments
- Projection options: (1) Default: toggle between time and temp., (2) time only, or (3) temperature only
- Time zones: Atlantic Time (AST), Eastern Time (EST), Central Time (CST), Mountain Time (MST), Pacific Time (PST), Alaskan Time (AKT) & Hawaiian Time (HAT)
- Light up color display backlight and projection with a press of a button using battery power OR continuous light with AC adapter (ON /OFF option)
- Backlight and projection settings: High, low and off
- Atomic time and date sets itself
- 12/24 hour time with minutes
- Snooze alarm and alarm icon
- Calendar: day, date
- IN / OUT temperature (°F / °C) with trend arrow
- Low battery icon for clock & sensor
- Sits on desktop or tabletop
- USB Charging port for convenient charging of mobile devices
- 5.0V AC adapter (included) for primary power and battery backup
- Battery life is over 24 months when using the AC adapter

Power the Projection Alarm

The Projection Alarm can be powered by the 5-volt A/C adapter or by 2 AAA batteries.

A/C power adapter

- Insert enclosed 5-volt A/C power adapter into a wall outlet, then into the Projection Alarm.



Optional Battery Operation

1. Remove battery cover: Slide tab to the right and pull out to remove battery cover.
2. Install two fresh AAA batteries according to the polarity markings.
 - **Do Not Mix Old and New Batteries**
 - **Do Not Mix Alkaline, Lithium, Standard, or Rechargeable Batteries**

If the Projection Alarm does not display indoor temperature after 60 seconds, remove adapter and batteries, and wait for at least 60 seconds before repeating the setup process.

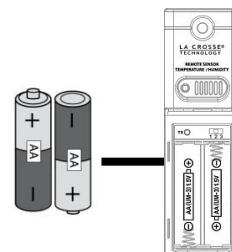
ATOMIC SIGNAL SEARCH:

The LCD backlight, projection and USB charging port will momentarily turn off while the station searches for the atomic signal. After the initial search, this station will only search for the atomic signal after midnight.

Install Batteries in the TX141 Transmitter

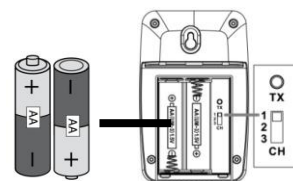
NOTE: This projection alarm will come with **one** TX141 transmitter **OR** one TX14 transmitter. Both transmitters work interchangeably.

- Slide the battery cover down, then lift off the front of the TX141 transmitter.
Note: Be careful not to break the tabs on the battery cover.
- Confirm the channel selector switch is on channel 1.
- Insert two new AA batteries into the transmitter.
Observe the correct polarity (see marking inside battery compartment).
- Keep transmitter 5-10 ft. from the forecast station during setup.
- After 15 minutes, if the outdoor temperature shows on the forecast station, move the outdoor transmitter outside to a shaded location within range of the forecast station.



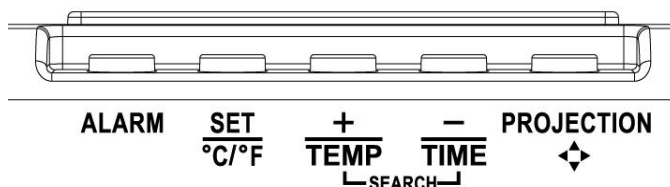
Install Batteries in the TX14 Transmitter

- Slide the battery cover down, then lift off the back of the TX14TH transmitter.
Note: Be careful not to break the tabs on the battery cover.
- Confirm the channel selector switch is on channel 1.
- Insert two new AA batteries into the transmitter.
Observe the correct polarity (see marking inside battery compartment).
- Keep transmitter 5-10 ft. from the forecast station during setup.
- After 15 minutes, if the outdoor temperature shows on the forecast station, move the outdoor transmitter outside to a shaded location within range of the forecast station.



Function Buttons

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



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 Sensor 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 and Projection low intensity (A/C)
Twice: Backlight and Projection OFF (A/C)
Third time: Backlight and projection ON high intensity (default, A/C adapter)
Battery Power: Activate backlight for 10 seconds
Trigger snooze alarm (ringing)

Program Menu

The **SET** button will moves through the items in the program menu. The +/TEMP or -/TIME buttons will change these values:

- WWVB reception ON or OFF
- Time Zone (Seven Time Zones)
- Daylight Saving Indicator
- 12/24 hour time format
- Manual time set (Hour, Minutes)
- Calendar set (Year, Month, Date)

WWVB Time Reception

The WWVB time reception defaults to ON. To turn the WWVB reception OFF:

1. Hold the SET button for 5 seconds.
2. **WWVB** and **ON** will flash.
3. Press and release the +/TEMP or -/TIME buttons to turn this OFF.
4. Confirm with the SET button and move to the **Time Zone**.



Time Zone

This station offers seven time zones listed in letter format (default is EST):

TIME ZONE	
AST	Atlantic
EST	Eastern
CST	Central
MST	Mountain
PST	Pacific
AKT	Alaska
HAT	Hawaiian



1. **EST** will flash.
2. Press and release the +/TEMP or -/TIME buttons to select a different Time Zone.
3. Confirm with the SET button and move to **Daylight Saving Indicator**.

Daylight Saving Indicator

DST will default to the ON position as most of the country observes the DST change. If you live in an area does not observe the DST change, switch this to the OFF position.

1. **DST** and **ON** will flash.
2. Press and release the +/TEMP or -/TIME buttons to turn DST to OFF.
3. Confirm with the SET button and move to **12/24 hour time format**.



12/24 Hour Time Format

The Time may be displayed in 12-hour or 24-hour format. Default is 12-hour time.
Note: When in 12-hour format AM or PM will show in front of the hour.

1. **12H** will flash.
2. Press and release the +/TEMP or -/TIME buttons to select 24-hour time.
3. Confirm with the SET button and move to **Set Time**.

12H

Set Time

To set the time manually:

1. The **hour** digit will flash.
2. Press and release the +/TEMP or -/TIME buttons to select the hour.
3. Press and release the **SET** button to set the **minutes**.
4. The **minute's** digit will flash.
5. Press and release the +/TEMP or -/TIME buttons to select the minutes.
6. Confirm with the **SET** button and move to **Set Calendar**.



Set Calendar

The date default of the Projection Alarm is 1.1.2010.

To set the calendar:

1. The **year** will flash.
2. Press and release the +/TEMP or -/TIME buttons to set the year (between year 2010-2039).
3. Press the **SET** button again to confirm and to enter the **month** setting.
4. The **month** will flash.
5. Press and release the Press and release the +/TEMP or -/TIME buttons to set the month.
6. Press the **SET** button again to confirm and enter **date** setting.
7. The **date** will flash.
8. Press and release the +/TEMP or -/TIME buttons to set the date.
9. Confirm all calendar settings with the **SET** button to confirm and **exit** the program menu.



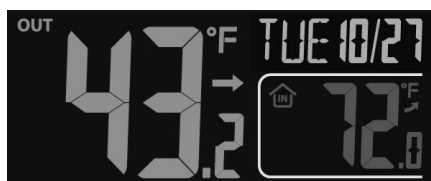
2010

1M.1D

Note: The day of the week will set automatically once the year, month and date are set.



Fahrenheit/Celsius

1. Press and release the **SET/°C/°F** button once to switch from Fahrenheit to Celsius.




Alarm Set

Hold the ALARM button for 5 seconds to enter the alarm time set mode.


1. The alarm **hour** digit will flash.
2. Press and release the +/TEMP or -/TIME buttons to select the hour.
3. Press and release the SET button to set the minutes. The **minute** digits will flash.
4. Press and release the +/TEMP or -/TIME buttons to select the minutes.
5. Press and release ALARM to confirm the alarm settings, then press and release SET button to exit.
6. The alarm icon  will show after the minutes indicating the alarm is **active**.
7. The alarm icon  will flash when the alarm is sounding.



Deactivate Alarm

1. Press and release the ALARM button once to show Alarm Time.
2. Press and release the ALARM button to **deactivate** the Alarm. The  alarm icon will disappear indicating the alarm is no longer active.

Snooze

1. When the alarm sounds, press the SNOOZE/LIGHT button to trigger snooze alarm for 10 minutes. The snooze icon **Zz** will flash when the snooze feature is active.
2. To stop alarm for one day, press ALARM button, while in snooze mode. The alarm icon  will remain solid.

Note: When the alarm sounds, it continues for 2 minutes and then shuts off completely.

Backlight and Projection Intensity

Hold two seconds, and then release the SNOOZE/LIGHT button to adjust the brightness of the backlight and projection (together):

- **High intensity:** (default setting on A/C power)
- **Low intensity:** Press and release SNOOZE/LIGHT button once
- **OFF:** Hold and release SNOOZE/LIGHT button
- **ON:** Hold and release SNOOZE/LIGHT button

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

Note: can be turned off see “**Backlight and Projection Intensity**”

Rotate Projection:

Press and release the PROJECT button to rotate projection image 90 degrees on the wall or ceiling. Press and release the PROJECT button again to rotate another 90 degrees.

Projection Arm Rotation:

The projection arm can be rotated 180 degrees to view the projection on the wall or ceiling.

Change Projection Mode:

Hold two seconds, and then release the PROJECT button to switch projection modes. You will need to watch the projection image to view the changes.

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

Note: Both Time and Outdoor Temperature will not show at the same time.



USB Charge Port

Charge a smart phone, camera or other devices when the forecast station is plugged into a power outlet with the included 5V AC adapter.

Note: This is a power-output charging port. It does not supply power to the projection alarm.

- Connect your external device's USB charging cable (not included) to the USB charging port.
- Charging times will vary.
- USB Power Output: 0.5A maximum current. Charge 0.5A devices or devices that are self-regulating.

Note: Some USB cables are for data transfer only and cannot be used for charging. Make sure that the USB cable you use will charge your device. Most USB cables included with mobile devices will work for charging.

ATOMIC SIGNAL SEARCH:

The LCD backlight, projection and USB charging port will momentarily turn off while the station searches for the atomic signal. After the initial search, this station will only search for the atomic signal after midnight.




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 rose 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 fell 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.

Outdoor Temperature Flashing

- **Low battery icon**  **present:** Change batteries in the transmitter, and then hold the CH button until the station beeps to search for the outdoor transmitter again.
- **End of Transmission Range:** Move the transmitter closer to the display. Avoid obstructions in the signal path. Keep transmitter and display away from electronics.

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 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. The WWVB radio station derives its signal from the NIST Atomic Clock in Boulder, Colorado. A team of 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.

WWVB Reception Icon

The icon with full signal strength will appear on screen in front of the date when the reception of atomic time is successful.

- The tower icon will show solid when the display has received the WWVB signal.
- No tower icon displayed. The display was unable to receive a signal at this time.




- Reposition the display for better signal reception or try again at bedtime.
- The display will start searching at UTC: 07:00 and if no reception on the first attempt they will try again at 08:00, 09:00 and 10:00. Each attempt will be at least 2 minutes and the most will be 10 minutes.
- 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.

ATOMIC SIGNAL SEARCH:

The LCD backlight, projection and USB charging port will momentarily turn off while the station searches for the atomic signal. After the initial search, this station will only search for the atomic signal after midnight.

Note: In case the Projection Alarm is not able to detect the WWVB-signal (disturbances, transmitting distance, etc.); the time may be manually set.



Manual Signal Search

In normal mode, hold the RCC button until the reception icon appears to force a search of the WWVB signal. The WWVB icon  will flash during the search. If this icon disappears after the 2 minute search, the radio time signal is not available at the moment.

- 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, etc.), 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.
- 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 Projection Alarm is not able to detect the WWVB-signal (disturbances, transmitting distance, etc.), the time and date can be manually set (see “**program menu**”).

Low Battery Icon

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

Position the Outdoor Transmitter

Once the Projection Alarm shows the outdoor temperature, place the Projection Alarm 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.

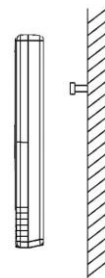
Choose a location for the transmitter that is within range of the Projection Alarm and under an overhang for accuracy. Wireless transmitting range in open air is over 200 feet (60 meters) from outdoor transmitter to Projection Alarm.

Option 1:

- Install one mounting screw (not 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 (not included) through the front of the transmitter 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.

Position the Projection Alarm

1. The Projection Alarm has a wide base to sit on a desk or table.
2. Choose a location 6 feet or more from electronics such as cordless phones, gaming systems, televisions, microwaves, routers, etc.
3. Place within range of the outdoor transmitter.
4. The maximum transmitting range in open air is 200-feet (60 meters). Obstacles such as walls, windows, stucco, concrete, and large metal objects can reduce the range.
5. For best WWVB reception orientate the Projection Alarm with the front of the back facing Ft. Collins, Colorado.

Specifications

Indoor:	
Temperature Range:	+32°F to +122°F (0°C to 50°C)
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)
NOTE:	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 50 seconds
Power:	
Projection Alarm	
Primary Power:	5-volt AC power adapter (included)
Optional/Battery Backup	Optional 2-AAA, IEC, LR3 batteries (not included)
TX141 Transmitter:	2-AA, IEC, LR6 batteries (not included)
USB	
USB Charge Port:	Output 0.5A
Battery Life:	
Projection Alarm Battery Backup:	Battery life is over 24 months when using the AC adapter for primary power
TX141 Transmitter:	Battery life is over 12 months when using reputable battery brands for both Alkaline and Lithium batteries
Dimensions:	
Projection Alarm	5.23" W x 4.33" H x 1.96" D (133 x 110 x 50mm)
TX141 Transmitter:	2.4" L x 1.3" W x 3.78" H (64 x 36 x 101mm)

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. It is 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 unit does not work properly, change the batteries and/or check the A/C cord connection.

Warranty 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.

View full warranty details online at:

www.lacrossetechnology.com/warranty_info.pdf

For warranty work, technical support or other information contact:

La Crosse Technology, Ltd
2817 Losey Blvd. S.
La Crosse, WI 54601
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



Online Product Support:

www.lacrossetechnology.com/616-146

FCC Statement

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

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