

Weather Station models 02022 / 02027



CONTENTS

Unpacking Instructions	2	Placement Guidelines	8
Package Contents	2	Using the Weather Station	9
Product Registration	2	Troubleshooting	11
Features & Benefits: Sensor	2	Care & Maintenance	12
Features & Benefits: Display	3	Calibration	12
Setup	5	Replace Intelli-Time® battery ..	13
Sensor Setup	5	Specifications	13
Display Setup	6	FCC Information	13
Intelli-Time® Clock	7	Customer Support	14
Set the Time, Date & Units	7	Warranty	14
Backlight Settings	7		

Questions? Contact Customer Support at
(877) 221-1252 or visit www.AcuRite.com.

SAVE THIS MANUAL FOR FUTURE REFERENCE.



Congratulations on your new AcuRite product. To ensure the best possible product performance, please read this manual in its entirety and retain it for future reference.

Unpacking Instructions

Remove the protective film that is applied to the LCD screen prior to using this product. Locate the tab and peel off to remove.

Package Contents

1. Display
2. Outdoor Sensor
3. Power Adapter
4. Instruction Manual

IMPORTANT

PRODUCT MUST BE REGISTERED
TO RECEIVE WARRANTY SERVICE

PRODUCT REGISTRATION

Register online to receive 1 year of warranty protection

www.AcuRite.com

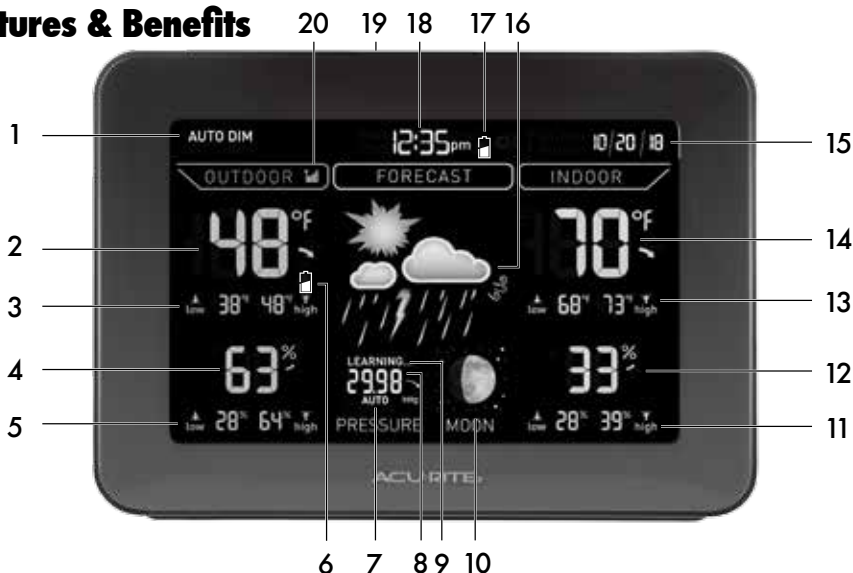
Features & Benefits



OUTDOOR SENSOR

- 1. Integrated Hanger**
For easy placement.
- 2. Wireless Signal Indicator**
Flashes when data is being sent to the display.
- 3. Battery Compartment**
- 4. A-B-C Switch**
ID code that must match display's A-B-C switch to ensure units synchronize.
- 5. Battery Compartment Cover**

Features & Benefits



DISPLAY FRONT

1. AUTO DIM Icon

Indicates display is in auto-dimming brightness mode (see page 7).

2. Current Outdoor Temperature

Arrow icon indicates the direction the temperature is trending.

3. Low/High Temperature Records

Lowest and highest outdoor temperature recorded since midnight.

4. Current Outdoor Humidity

Arrow icon indicates the direction the humidity is trending.

5. Low/High Humidity Records

Lowest and highest outdoor humidity recorded since midnight.

6. Sensor Low Battery Indicator

7. Auto or Manual Pressure Mode

Indicates pressure mode preference.

Auto Pressure Mode

Pressure will self-calibrate over a 14 day Learning Mode.

Manual Pressure Mode

Indicates raw pressure value, no adjustment for sea level (can be calibrated).

8. Barometric Pressure

Arrow icon indicates the direction the pressure is trending.

9. Learning Mode Icon

Disappears after weather forecast self-calibration is complete.

10. Moon Phase

11. Low/High Humidity Records

Lowest and highest indoor humidity recorded since midnight.

12. Current Indoor Humidity

Arrow icon indicates the direction the humidity is trending.

13. Low/High Temperature Records

Lowest and highest indoor temperature recorded since midnight.

14. Current Indoor Temperature

Arrow icon indicates the direction the temperature is trending.

15. Date

16. 12 to 24 Hour Weather Forecast

Self-Calibrating Forecasting pulls data from the outdoor sensor to generate your personal forecast.

17. Display Low Battery Indicator

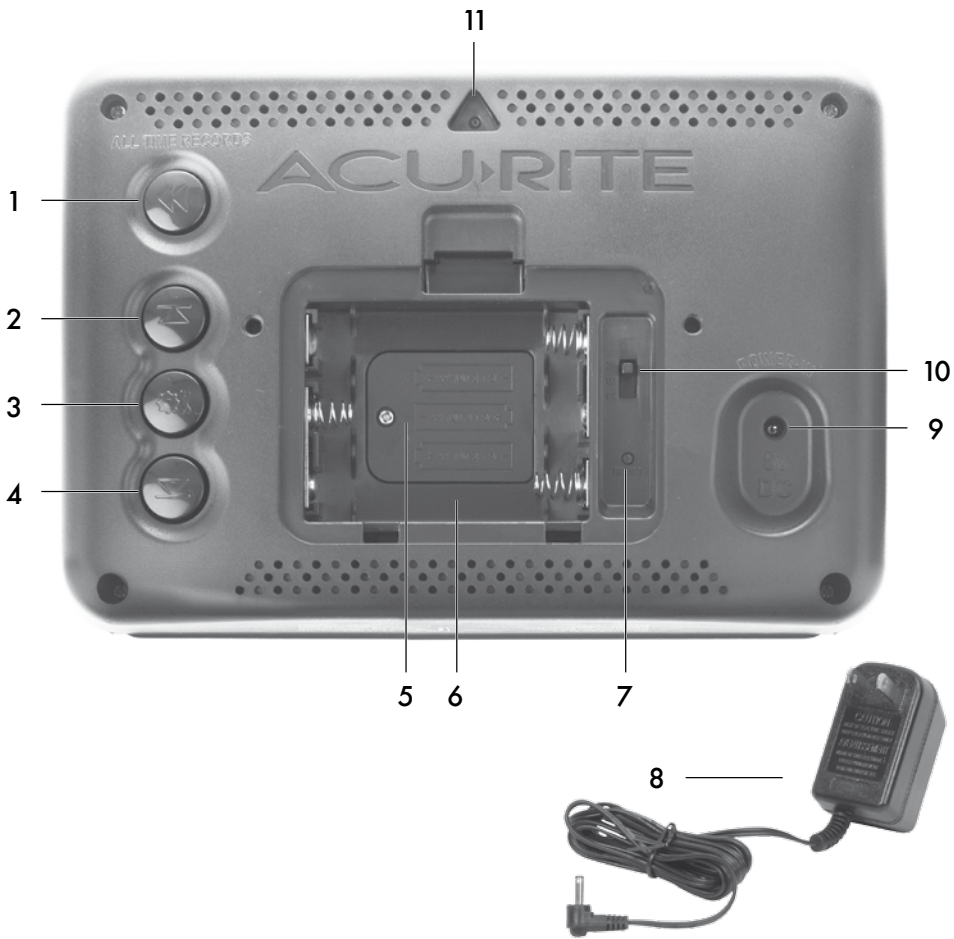
18. Intelli-Time® Clock

19. Backlight Button

For momentary backlight and dimmer settings.

20. Outdoor Sensor Signal Strength

Features & Benefits



DISPLAY BACK

- | | |
|--|--|
| <p>1. ◀ Button
Press to access all-time high and low records.</p> <p>2. ▲ Button
For setup preferences.</p> <p>3. ⚙️ Button
For setup preferences.</p> <p>4. ▼ Button
For setup preferences.</p> <p>5. Intelli-Time® Battery Compartment</p> <p>6. Battery Compartment</p> | <p>7. RESET Button
Full reset to factory defaults.</p> <p>8. Power Adapter</p> <p>9. Plug-in for Power Adapter</p> <p>10. A-B-C Switch
ID code that must match sensor's A-B-C switch to ensure units synchronize.</p> <p>11. Integrated Hang Hole
For easy wall mounting.</p> <p>12. Battery Compartment Cover
(not shown)</p> |
|--|--|

Sensor Setup

1 Set the A-B-C Switch

The A-B-C switch is located inside the battery compartment. It can be set to A, B or C. However, you must select the same letter choices for both the sensor and the display in order for the units to synchronize.

2 Install or Replace Batteries

AcuRite recommends high quality alkaline or lithium batteries for the best product performance. Heavy duty or rechargeable batteries are not recommended.

The sensor requires lithium batteries in low temperature

conditions. Cold temperatures can cause alkaline batteries to function improperly. Use lithium batteries in the sensor for temperatures below -4°F / -20°C .

1. Slide off the battery compartment cover. Take note of the A-B-C switch setting inside the battery compartment.
2. Insert 2 x AA batteries into the battery compartment, as shown. Follow the polarity (+/-) diagram in the battery compartment.
3. Replace the battery cover.



LITHIUM BATTERIES	-40°F (-40°C)	(70°C) 158°F
ALKALINE BATTERIES	-4°F (-20°C)	(70°C) 158°F

Display Setup

1 Set the A-B-C Switch

Locate the A-B-C switch inside the battery compartment. Set the A-B-C switch to A, B or C. You must select the same letter choices for both the display and the sensor in order for the units to synchronize.

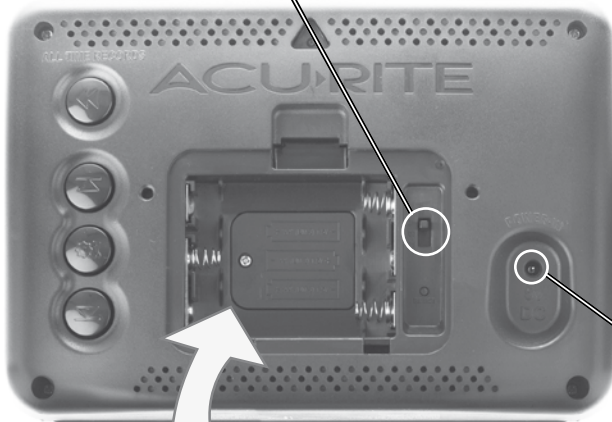
2. Insert 3 x AA alkaline batteries into the battery compartment, as shown. Follow the polarity (+/-) diagram in the battery compartment.

3. Replace the battery cover.

2 Install or Replace Batteries

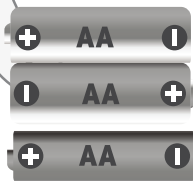
1. Remove the battery compartment cover.

1 A-B-C Switch Set to match sensor



IMPORTANT: Batteries are a backup power source to preserve records in the event of a power outage. **Power adapter is recommended as the primary power source to enjoy the full functionality of this product.**

2 Install Batteries 3 AA batteries



3 Plug in Power Adapter



PLEASE DISPOSE OF OLD OR DEFECTIVE BATTERIES IN AN ENVIRONMENTALLY SAFE WAY AND IN ACCORDANCE WITH YOUR LOCAL LAWS AND REGULATIONS.

BATTERY SAFETY: Clean the battery contacts and also those of the device prior to battery installation. Remove batteries from equipment which is not to be used for an extended period of time. Follow the polarity (+/-) diagram in the battery compartment. Promptly remove dead batteries from the device. Dispose of used batteries properly. Only batteries of the same or equivalent type as recommended are to be used. DO NOT incinerate used batteries. DO NOT dispose of batteries in fire, as batteries may explode or leak. DO NOT mix old and new batteries or types of batteries (alkaline/standard). DO NOT use rechargeable batteries. DO NOT recharge non-rechargeable batteries. DO NOT short-circuit the supply terminals.

Intelli-Time® Clock

Intelli-Time products are pre-programmed with the correct time and date. Intelli-Time technology instructs the time and date to set themselves. All you need to do is select your Time Zone and Daylight Saving Time preferences. The clock will then automatically set itself and change for Daylight Saving Time.

Set the Time, Date & Units

Press the “” button, located on the back of the display, to enter SET MODE. Once in set mode, the preference you are currently setting will blink on the display.

To adjust the currently selected (flashing) item, press and release the “” or “” buttons (press and HOLD to fast adjust).

To save your adjustments, press and release the “” button again to adjust the next preference. The preference set order is as follows:

TIME ZONE (PST MST CST EST AST HAT AKT)

DST (Daylight Saving Time ON or OFF)*

CLOCK HOUR

CLOCK MINUTE

CALENDAR MONTH

CALENDAR DATE

CALENDAR YEAR

TEMPERATURE UNITS (°F or °C)

PRESSURE UNITS (inHg or hPa)

*If you live in an area that observes DST, DST should be set to ON, even if it is not currently Daylight Saving Time.

You will automatically exit SET MODE if no buttons are pressed for 10 seconds. Enter setup mode at any time by pressing the “” button.

Display Backlight Settings

This weather station's color display features three different lighting settings: High (100%) brightness, Medium (60%) brightness and Low (30%) brightness.

When display is powered with the power adapter, backlight remains on at 100% brightness. Press the Backlight button once to dim to 60% brightness; press again to dim to 30%, press a 3rd time to enter “AUTO DIM” mode.

AUTO DIM MODE: Automatically adjusts display brightness based on time of day & year.	
MARCH 11- NOVEMBER 4	6:00 a.m. - 9:00 p.m. = 100% brightness
	9:01 p.m. - 5:59 a.m.= 30% brightness
NOVEMBER 5 - MARCH 10	7:30 a.m. - 7:00 p.m.= 100% brightness
	7:01 p.m. - 7:29 a.m. = 30% brightness

Placement for Maximum Accuracy

AcuRite sensors are sensitive to surrounding environmental conditions. Proper placement of both the display and outdoor sensor are critical to the accuracy and performance of this product.



Display Placement

Place the display in a dry area free of dirt and dust. Display stands upright for tabletop use or is wall-mountable.



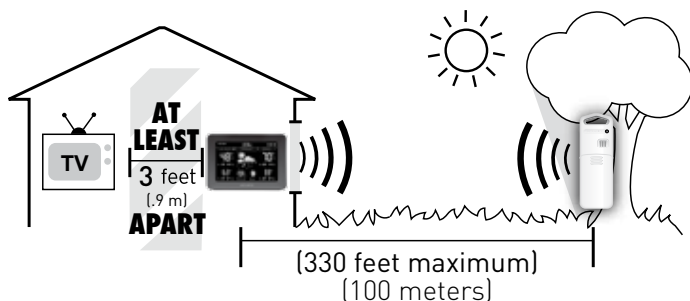
Outdoor Sensor Placement

Sensor must be placed outside to observe outdoor conditions. Sensor is water resistant and is designed for general outdoor use, however, to extend its life place the sensor in an area protected from direct weather elements.

Hang the sensor using the integrated hang holes or hanger, or by using string (not included) to hang it from a suitable location, like a well covered tree branch. The best location is 4 to 8 feet above the ground with permanent shade and plenty of fresh air to circulate around the sensor.

Important Placement Guidelines

- To ensure accurate temperature measurement, place units out of direct sunlight and away from any heat sources or vents.
- Display and outdoor sensor must be within 330 ft (100 m) of each other.
- To maximize wireless range, place units away from large metallic items, thick walls, metal surfaces, or other objects that may limit wireless communication.
- To prevent wireless interference, place both units at least 3 ft (.9 m) away from electronic devices (TV, computer, microwave, radio, etc.).



Setup is Complete

The sensor will now synchronize with the display. It may take a few minutes for synchronization to complete. Please refer to the troubleshooting section of this manual if anything appears to be functioning improperly.

Using the Weather Station

Learning Mode

Self-Calibrating Forecasting uses a unique algorithm to analyze changes in pressure over a time period (called Learning Mode) to determine your altitude. After 14 days, the Learning Mode icon disappears from the display screen. At this point, the self-calibrated pressure is tuned in to your location and the unit is ready for superior weather prediction.

Weather Forecast

AcuRite's patented Self-Calibrating Forecasting provides your personal forecast of weather conditions for the next 12 to 24 hours by collecting data from the sensor in your backyard. It generates a forecast with pinpoint accuracy - personalized for your exact location.



View the complete list of icons at www.AcuRite.com/acurite-icons

Barometric Pressure

Subtle variations in barometric pressure greatly affect the weather. This weather station displays the current pressure with an arrow icon to indicate the direction the pressure is trending (FALLING, STEADY, or RISING).

Moon Phase

Track the phases of the moon, conveyed through simple lunar phase icons:



High & Low Records

Today's high and low records are displayed for indoor and outdoor temperature and humidity. Today's records automatically clear at 12:00am midnight every day.

To manually clear all of today's LOW recorded values, press and hold the "▼" button for 2 seconds. Dashes display to confirm you have cleared the LOW records.

To manually clear all of today's HIGH recorded values, press and hold the "▲" button for 2 seconds. Dashes display to confirm you have cleared the HIGH records.

Press the "◀◀" button to cycle through the all-time high and low recorded values (one record is shown at a time) for outdoor and indoor temperature and humidity. Located in the top right corner of the screen, a date and time stamp are shown for when each value was recorded. You will automatically exit all-time records if no buttons are pressed for 5 seconds.

To manually clear an all-time LOW record, press and hold the "▼" button for 2 seconds while viewing the record you wish to clear. Dashes display to confirm you have cleared the record.

To manually clear an all-time HIGH record, press and hold the "▲" button for 2 seconds while viewing the record you wish to clear. Dashes display to confirm you have cleared the record.

Troubleshooting

No outdoor sensor reception  no bars	If the wireless signal indicator shows no bars: • Relocate the display and/or the outdoor sensor. The units must be within 330 ft (100 m) of each other. • Make sure both units are placed at least 3 feet (.9 m) away from electronics that may interfere with the wireless communication (such as TVs, microwaves, computers, etc). • Use standard alkaline batteries (or lithium batteries in sensor when temperature is below -4°F/-20°C). Do not use heavy duty or rechargeable batteries. NOTE: It may take a few minutes for display and sensor to synchronize after batteries are replaced.
Display screen not working	• Check that the power adapter is plugged into the display and an electrical outlet. • Check that the batteries are installed correctly. Batteries may need to be replaced. • Reset display by pressing the RESET button, located on the back of the display. Date and time will need to be entered after a reset.
Outdoor temperature is flashing or showing dashes	Flashing of the outdoor temperature is generally an indication of wireless interference. 1. Bring both the sensor and display indoors, side by side and remove power adapter/batteries from each. 2. Make sure the A-B-C switch on both units match. 3. Reinstall batteries in outdoor sensor. 4. Reinstall power adapter/batteries in display. 5. Let the units sit within a couple feet of each other for a few minutes to gain a strong connection.
Inaccurate forecast	• Weather Forecast icon predicts conditions for the next 12 to 24 hours, not current conditions. • Has Learning Mode icon disappeared from the display? Learning Mode must complete before forecast and pressure will be accurate. • Allow unit to run continuously for 33 days. Battery removal or resetting the display will restart Learning Mode. After 14 days, forecast should be fairly accurate, however, Learning Mode calibrates for a total of 33 days.
Inaccurate temperature or humidity	• Make sure both the display and sensor are placed out of direct sunlight and away from any heat sources or vents (see page 8). • Make sure both units are positioned away from moisture sources (see page 8).
If your AcuRite product does not operate properly after trying the troubleshooting steps, visit www.AcuRite.com or call (877) 221-1252 for assistance.	

Care & Maintenance

Display Care

Clean with a soft, damp cloth. Do not use caustic cleaners or abrasives. Keep away from dust, dirt and moisture. Clean ventilation ports regularly with a gentle puff of air.

Outdoor Sensor Care

Clean with a soft damp cloth. Do not use caustic cleaners or abrasives.

Calibration

The indoor / outdoor temperature and humidity readings, and barometric pressure can be calibrated on the display to improve accuracy. Calibration can improve accuracy when sensor placement or environmental factors impact the data accuracy.

1. To access calibration mode, press AND HOLD the "▲", "⚙️", and "▼" buttons simultaneously for at least 5 seconds.
2. To adjust the currently selected (flashing) item, press and release the "▲" or "▼" buttons to calibrate the data value higher or lower from the actual reading.
3. To save your adjustments, press and release the "⚙️" button to adjust the next preference. The "🔌" icon will remain illuminated next to calibrated values.

The preference set order is as follows:

OUTDOOR TEMPERATURE

OUTDOOR HUMIDITY

INDOOR TEMPERATURE

INDOOR HUMIDITY

BAROMETRIC PRESSURE (must be set to MANUAL mode to calibrate)*

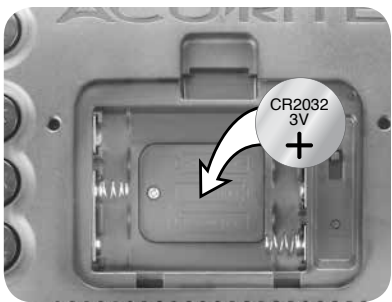
*To change from AUTO to MANUAL pressure mode and vice versa, press AND HOLD the "⚙️" button for at least 10 seconds. The display indicates the current pressure mode selected, "AUTO" or "MANUAL".

After 20 seconds of inactivity, the display will save the adjustments and exit calibration mode. Note: Calibrations will be erased if the display is reset or if batteries are removed and the power adapter is unplugged.

Replace Intelli-Time® Battery

Intelli-Time technology is powered by a pre-installed coin-cell battery that stores the time and date settings. The battery has a shelf life of several years. Time and date will need to be entered after replacing Intelli-Time battery. To replace the Intelli-Time battery:

1. Locate the coin cell battery compartment door on the back of the display unit, inside the battery compartment. Unscrew and remove the compartment cover.
2. Insert 1 x CR2032 coin cell battery into the battery compartment, as shown. Install battery with “+” positive terminal facing OUT.
3. Screw in the battery cover.



Specifications

TEMPERATURE RANGE	Outdoor: -40°F to 158°F; -40°C to 70°C
	Indoor: 32°F to 122°F; 0°C to 50°C
HUMIDITY RANGE	1% to 99% RH (relative humidity)
WIRELESS RANGE	100 m/330 ft depending on home construction materials
OPERATING FREQUENCY	433 MHz
POWER	Display: 5V, 100mA power adapter 3 x AA alkaline batteries (optional) 1 x CR2032 coin cell battery
	Sensor: 2 x AA alkaline or lithium batteries
DATA REPORTING	Outdoor: 16 second updates
	Indoor: 60 second updates

FCC Information

This device complies with part 15 of FCC rules. Operation is subject to the following two conditions:

- 1- This device may NOT cause harmful interference, and
- 2- This device must accept any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation of the device.

Customer Support

AcuRite customer support is committed to providing you with best-in-class service. **For assistance**, please have the model number of this product available and contact us in any of the following ways:



(877) 221-1252

Visit us at www.AcuRite.com

- ▶ Installation Videos
- ▶ Register your Product
- ▶ Instruction Manuals
- ▶ Support User Forum
- ▶ Replacement Parts
- ▶ Submit Feedback & Ideas

IMPORTANT

PRODUCT MUST BE REGISTERED
TO RECEIVE WARRANTY SERVICE

PRODUCT REGISTRATION

Register online to receive 1 year warranty protection

www.AcuRite.com

Limited 1-Year Warranty

AcuRite is a wholly owned subsidiary of Chaney Instrument Company. For purchases of AcuRite products, AcuRite provides the benefits and services set forth herein. For purchases of Chaney products, Chaney provides the benefits and services set forth herein.

We warrant that all products we manufacture under this warranty are of good material and workmanship and, when properly installed and operated, will be free of defects for a period of one year from the date of purchase.

Any product which, under normal use and service, is proven to breach the warranty contained herein within ONE YEAR from date of sale will, upon examination by us, and at our sole option, be repaired or replaced by us. Transportation costs and charges for returned goods shall be paid for by the purchaser. We hereby disclaim all responsibility for such transportation costs and charges. This warranty will not be breached, and we will give no credit for products which have received normal wear and tear not affecting the functionality of the product, been damaged (including by acts of nature), tampered, abused, improperly installed, or repaired or altered by others than our authorized representatives.

Remedy for breach of this warranty is limited to repair or replacement of the defective item(s). If we determine that repair or replacement is not feasible, we may, at our option, refund the amount of the original purchase price.

THE ABOVE-DESCRIBED WARRANTY IS THE SOLE WARRANTY FOR THE PRODUCTS AND IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ALL OTHER WARRANTIES OTHER THAN THE EXPRESS WARRANTY SET FORTH HEREIN ARE HEREBY EXPRESSLY DISCLAIMED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

We expressly disclaim all liability for special, consequential, or incidental damages, whether arising in tort or by contract from any breach of this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

We further disclaim liability from personal injury relating to our products to the extent permitted by law. By acceptance of any of our products, the purchaser assumes all liability for the consequences arising from their use or misuse. No person, firm or corporation is authorized to bind us to any other obligation or liability in connection with the sale of our products. Furthermore, no person, firm or corporation is authorized to modify or waive the terms of this warranty unless done in writing and signed by a duly authorized agent of ours.

In no case shall our liability for any claim relating to our products, your purchase or your use thereof, exceed the original purchase price paid for the product.

Applicability of Policy

This Return, Refund, and Warranty Policy applies only to purchases made in the United States and Canada. For purchases made in a country other than the United States or Canada, please consult the policies applicable to the country in which you made your purchase.

Additionally, this Policy applies only to the original purchaser of our products. We cannot and do not offer any return, refund, or warranty services if you buy products used or from resale sites such as eBay or Craigslist.

Governing Law

This Return, Refund, and Warranty Policy is governed by the laws of the United States and the State of Wisconsin. Any dispute relating to this Policy shall be brought exclusively in the federal or State courts having jurisdiction in Walworth County, Wisconsin; and purchaser consents to jurisdiction within the State of Wisconsin.

ACU RITE®



Weather
Stations



Temperature
& Humidity



Weather
Alert Radio



Kitchen
Thermometers
& Timers



Clocks

It's More than Accurate, it's ACU RITE®.

AcuRite offers an extensive assortment of precision instruments,
designed to provide you with information you can depend on to
Plan your day with confidence™.

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