

**Meade Instruments Corp
Personal Weather Station
With Atomic Clock**

(RCW33W)
USER MANUAL

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INTRODUCTION

Thank you for selecting the Meade Atomic Wall Clock. This device combines precise time keeping with monitoring and displaying the weather conditions from one remote location.

In this package you will find:

- One main unit (receiver)
- One remote sensor (transmitter) TS13C
- One User Manual

Please keep this manual handy as you use your new item. It contains practical step-by-step instructions, as well as technical specifications and precautions you should know.

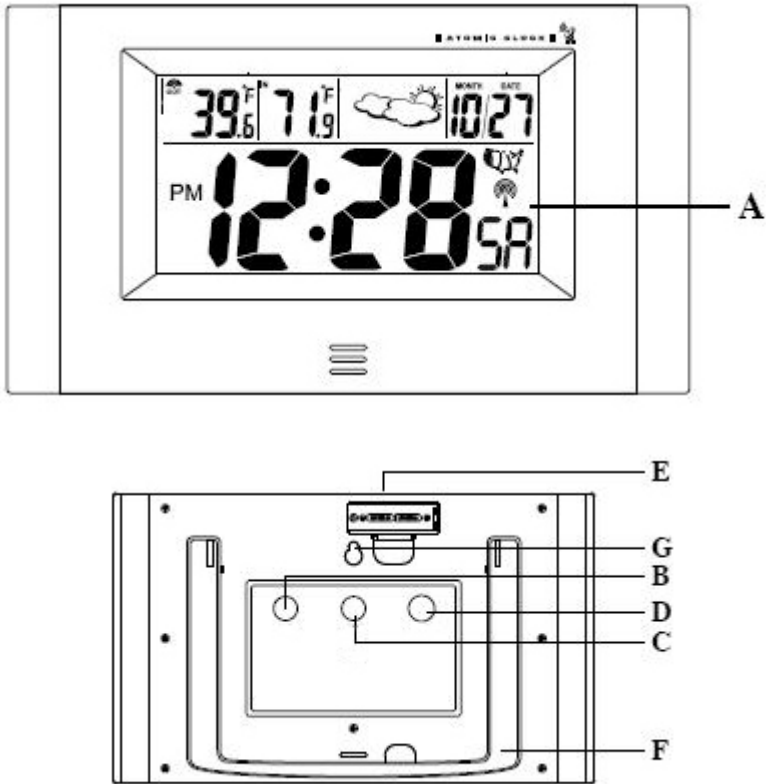
PRODUCT OVERVIEW

MAIN UNIT

FEATURES

- Time automatically sets to the US Atomic Clock
- 12 or 24 hours Time Format
- Jumbo time digits
- Day of the week displayed in English, Spanish, French, German and Italian
- Weather Forecast in Sunny, Partly Cloudy, Cloudy, Rainy and Heavy Rain icons
- Wireless Reception of the Temperature from the Remote Sensor to the Main Unit from up to 100 feet (30 meters) away
- Indoor and Remote Temperature display
- Low Battery Indicators

FRONT/REAR VIEW



A. WEATHER AND TIME IN EASY-TO READ DIGITS

B. MODE button

- Toggles between time modes - time with seconds and time with the day of the week
- Activates clock's manual programming mode

C. UP (▲) button

- Increases the parameters
- Activates US Time Zone selection mode
- Activates manual search for atomic time signal

D. DOWN (▼) button

- Decreases the parameters
- Activates manual remote channel search

E. BATTERY COMPARTMENT

- Accommodates 2 (two) UM-3 or AA 1.5V alkaline batteries

F. UNFOLDING TABLE STAND

- Holds unit in upright position on a flat surface

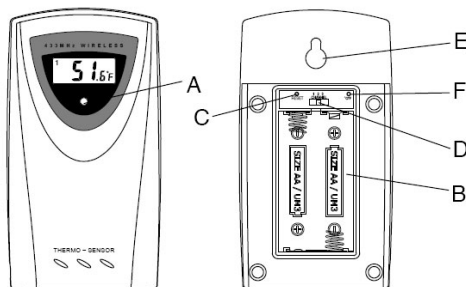
G. WALL- MOUNT RECESSED OPENING

- Keeps the unit on the wall

REMOTE SENSOR

FEATURES

- Remote temperature transmission to the main unit via 433 MHz frequency
- Case can be wall mounted using built-in hanger
- Selection of the temperature display in Celsius or Fahrenheit
- Three channel selection
- LCD displays temperature, and channel



A. LED INDICATOR

- Flashes once when the remote sensor transmits a reading to the main unit.

- Flashes twice when battery power is low.

B. BATTERY COMPARTMENT

- Holds two AA-size batteries

C. RESET

- Resets all previous settings

D. CHANNEL SWITCH

- Selects the desired channel -1, 2 or 3

E. WALL-MOUNT RECESSED OPENING

- Keeps the remote sensor on the wall

F. °C/ °F SWITCH

- Selects the temperature display in Celsius or Fahrenheit

BEFORE YOU BEGIN

- We recommend using alkaline batteries for the remote sensor and main unit when temperatures are above 32°F (0°C). We recommend using lithium batteries for the remote sensor when temperatures are below 32°F (0°C).
- Avoid using rechargeable batteries. (Rechargeable batteries cannot maintain correct power requirements).
- **ALWAYS** install batteries in the **remote** sensor *before* the main unit.
- Insert batteries before first use, matching the polarity in the battery compartment
- Press **RESET** after each battery change with a paper clip or similar tool.
- Remove protective plastic screen from LCD display (if any).
- During an initial setup, place the main unit close to the remote sensor.
- After reception is established (the remote temperature will appear on the main unit's display), position the remote sensor and the main unit

within the effective transmission range of 100 feet (30 meters).

- The remote sensor can be placed **indoors or outdoors, depending on the area where the temperature is intended to be measured**. If you intend measuring outdoor elements, place remote sensor outdoors
- The main unit must be placed indoors.

NOTE:

1. Avoid pressing any buttons on the main unit ***before the remote readings are displayed.***
2. The effective operating range may be influenced by the surrounding building materials and how the receiver and transmitter are positioned.
3. Place the remote sensor so that it faces the main unit (receiver), minimizing obstructions such as doors, walls, and furniture.
4. Though the remote sensors are weather-resistant, they should be placed away from direct sunlight, rain or snow. The best suggested location for the remote sensor for outdoors is under the eave on the north side of the building.

NOTE: When the temperature falls below freezing, the batteries in the outdoor remote sensor may have reduced voltage supply and a shorter effective range. We recommend using lithium batteries at temperatures of 32°F (0°C) and below.

BATTERY INSTALLATION

REMOTE SENSOR

NOTE: Install the batteries; select the channel and temperature in °C or °F before mounting the remote sensor.

- Remove the screws from the battery compartment with a small Phillips screwdriver.
- Set the channel. The switch is located in the battery compartment. Channel 1 is typically selected if only one remote sensor


is being used.

- Install 2 “AA” size alkaline batteries (not included) matching the polarities shown in the battery compartment.
- Replace the battery compartment door and secure the screws.
- Secure the remote sensor in the desired location.

MAIN UNIT

- Remove the battery compartment door.
- Install 2 batteries (UM-3 or “AA” size 1.5V) matching the polarity as shown in the battery compartment.
- Replace the battery compartment door.

LOW BATTERY WARNING

A low-battery indicator [] will appear next to the indoor or remote data reading line of the main unit warning that the corresponding batteries need replacement.

GETTING STARTED

WEATHER DISPLAY

After batteries are installed; remote sensor will transmit temperature data at 45 second intervals. The main unit may take up to two minutes to receive the initial readings. Upon successful reception, remote temperature will appear next to the **OUT** abbreviation on the main unit's display (The main unit will automatically update readings at 45-second intervals)

After communication between the main unit and remote sensor has been established, secure the remote sensor in the desired location.

If no signal is received from the remote sensor within two minutes, dashes [- - -] will be displayed. Press and hold the **DOWN (▼)** button on the main unit for

two seconds to initiate another signal search.

PLACEMENT OF THE UNITS



The main unit can be placed on the wall or any flat surface **indoors**. The remote sensor can be placed **indoors** or **outdoors**, on a flat surface or mounted on the wall.

REMOTE AND INDOOR TEMPERATURE

The remote temperature information line is located next to the indoor temperature line of the main unit's display.

The wave icon is located above the **OUT** abbreviation indicates the reception status from the remote sensor.






There are three following types of the reception status may be displayed:

The unit is in a searching mode.	
Temperature reading is securely registered.	
No signals detected.	- - -

NOTE: If the indoor or remote temperature goes above or below operating range stated in specifications, the main unit's display (weather) will show dashes " - - - " on the corresponding line.

WEATHER FORECAST

This unit is capable of detecting the atmospheric pressure changes. Based on collected weather data, it forecasts the weather for the next 12 to 24 hours.

When the display shows...					
Forecast is...	Sunny	Partly Cloudy	Cloudy	Light Rain	Heavy Rain

NOTE: The weather forecast accuracy is approximately 70%.

The main unit display shows forecasted (predicted) not current conditions. The **SUNNY** icon indicates clear weather, even when displayed during the night-time.

LOST COMMUNICATION

If the main unit display line for the remote sensor reading goes blank, press and hold **DOWN (▼)** button for 2 seconds to begin a new signal search. If the signal still isn't received, please make sure that:

- The remote sensor is in its proper location.
- The distance between main unit and remote sensor is not over 100 feet (30 meters)
- The path between units is clear of obstacles. Shorten the distance if necessary.
- Fresh batteries are installed correctly in both remote sensor and main unit.

If there is no reception, please perform the following steps:

- Bring the main unit and remote sensor close together.
- Remove four (4) small screws from the back of the remote sensor with small Phillips screwdriver, and open the battery compartment.

- Remove the batteries from the battery compartment and reinstall them in the same manner. Remote sensor LED indicator will flash showing transmission of the signal.
- Remove the batteries from the main unit and reinstall them in the same manner.

TRANSMISSION COLLISION

Signals from the other household devices such as wireless doorbells, home security systems, and entry control, may interfere with this product or cause temporary reception interruption. This is normal and will not affect the general performance of the product. The transmission and reception of the temperature readings will resume once the interference subsides.

WWVB RADIO CONTROLLED TIME

The NIST (National Institute of Standards and Technology) radio station (WWVB) is located in Ft. Collins, Colorado. It transmits an exact time signal continuously throughout the most of the continental United States at 60 KHz frequency. The Atomic Wall Clock can receive this WWVB signal through the internal antenna from up to 2,000 miles away. Due to the nature of the Earth's ionosphere, reception can be limited during the daylight hours. The radio controlled clock will search for an alternate station that receives the atomic time signal from the NIST Atomic clock in Boulder, Colorado.

The WWVB tower icon on the unit's display will flash indicating a radio signal reception from the WWVB station. If the tower icon is not fully lit, or if the time and date are not set automatically, please consider the following:

- During night-time hours, atmospheric disturbances are typically less severe and radio signal reception may improve. A single daily reception


is sufficient enough to keep the clock accuracy within 1 second.

- Make sure the unit is positioned at 8 feet (2 meters) distance from any interference source such as a TV, computer monitor, microwave, etc.
- Within concrete wall rooms such as basements or office buildings, the received signal may be weakened. Always place the Atomic Wall Clock near the window for better reception.

ATOMIC CLOCK

Immediately after establishing communication between the main unit and remote sensor, the atomic time signal receiver will open and start to search for the atomic time signal. The search usually takes between 5-8 minutes.

NOTE: Do not press any buttons on the main unit during auto search as it may interrupt product's operation, and you will need to start set up procedure again.

Once the atomic time signal is received, the date and time will be set automatically, and the  icon will appear.

NOTE: It is necessary to set your Time Zone, having in mind that the default zone is a US Pacific Standard Time (PST). (Refer to **MANUAL SETTINGS** section)

If the time signal has not been received in 8 minutes, you may use the **MODE** button to set the time and date manually. (Refer to the **MANUAL SETTINGS** section).

After the clock is set manually, place the Atomic Wall Clock by the window for the better reception. The atomic clock receiver is programmed that it will continue to search for the atomic time signal daily for every hour between 1:00 am and 4:30 am.

Once the time signal has been successfully received, the time and date will be updated automatically.

TIME AND CALENDAR DISPLAY MODES

The Atomic Wall Clock displays current time in two display modes – in hour-minutes-seconds format and in hour-minutes-day.

The date is displayed in month-date format.

MANUAL SETTINGS

It is necessary to set the desired **US TIME ZONE**.

TIME ZONE

- Press **MODE** button **once** so that the **Day of the Week** abbreviation is displayed to the right of the time; for example: **pm 2:37tu**
- Select the Time Zone by pressing and holding **UP (▲)** button for 3 seconds
- Keep holding **UP (▲)** button until the desired US Time Zone (Pacific, Mountain, Central or Eastern) is highlighted on the display's US map, located to the right of the time display and above the day of the week
- Release the **UP (▲)** button. The Time Zone is set

CLOCK

- Press and hold **MODE** button for 3 seconds: the year will flash. Press **UP (▲)** or **DOWN (▼)** to change flashing digits.
- After the year is set, press **MODE** button to confirm and move to the next parameter (month)
- Continue setting month, date, hour, minutes, language for the day of the week and temperature in Fahrenheit or Celsius
- Press **MODE** for the last time to return to the time of day with seconds, after the last parameter is set

PRECAUTIONS

This product is engineered to give you years of satisfactory service if handled carefully. Here are a few precautions:

- Do not immerse the units in water.
- Do not clean the units with abrasive or corrosive materials. They may scratch the plastic parts and corrode the electronic circuits.
- Do not subject the product to excessive force, shock, dust, temperature, or humidity, which may result in malfunctions, shorter lifespan, damaged batteries, and damaged parts.
- Do not tamper with the units internal components. Doing so will invalidate the warranty and may cause damage. These units contain no user-serviceable parts.
- Use only fresh batteries. Do not mix new and old batteries.
- Read the user's manual thoroughly before operating the units.

BATTERY SAFETY INSTRUCTIONS

- Always purchase the correct size (2 x 1.5V AA, 15A/15AC ANSI, LR6 IEC), (2 x ANSI/NEDA-5004LC, IEC-CR2032) and grade of battery most suitable for the intended use.
- Replace all batteries of a set at the same time.
- Clean the battery contacts and also those of the device prior to battery installation.
- Ensure the batteries are installed correctly with regard to polarity (+ and -).
- Remove the batteries from any weather station which is not to be used for an extended period of time.
- Remove used batteries promptly.
- Do not mix old batteries with new batteries.
- Do not mix alkaline, lithium, standard (Carbon Zinc), or rechargeable (Nickel Cadmium) batteries.

Caution:

- If batteries or parts are swallowed, see a doctor immediately.

TROUBLESHOOTING

Check here before contacting customer service.

Issue	Symptom	Solution
Main unit	US Atomic Time signal is not received	Place unit by the window and keep it there overnight
Remote sensor	Cannot locate remote sensor	Check batteries
		Check location
		Press and hold DOWN (▼) button on the main unit to search for the signal form the remote sensor
	Cannot change the C° to F° and back	Press " RESET " after setting C/F
	Data does not match data on the main unit	Initiate manual sensor search (Press and hold DOWN (▼) button on the main unit)

SPECIFICATIONS

Main Unit

Indoor Temperature

Proposed operating range: 23.0°F to 122.0°F (-5°C to +50°C)

Temperature resolution: 0.2°F (0.1°C)

User-selectable (°F or °C) temperature display

RF range: Maximum 100 feet (30 meters)

Weather Forecast in five large graphic icons: Sunny, Partly Cloudy, Cloudy, Light Rain and Heavy Rain

Maximum number of remote sensors: 1 (one included)

Readings update interval: every 45 seconds

Low battery indicators – for remote channel and main unit

Clock

Precise atomic time

4 US Time Zones

12/24 hour time format

Remote Sensor

Remote Temperature

Proposed operating range with alkaline batteries:

-4°F to +158°F (-20°C to +70°C)

Proposed operating range with lithium batteries:

-38.8°F to +158°F (-38.8°C to +70°C)

Temperature resolution: 0.1°C/0.2°F

RF Transmission Frequency: 433 MHz

Temperature transmission cycle: approximately 45 seconds

Low battery indicator

Wall-mount or Table stand

Power

Main unit: 2 AA size (UM-3) 1.5V batteries (not included)

Remote Sensor: 2 AA size 1.5V batteries (not included)

Dimensions

Main unit: 11.18(L) x 6.77(H) x 1.26(D) inches

Remote sensor: 2.37(L) x 4(H) x 1(D) inch

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) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modification 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 had 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, installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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 improve or correct turning the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

DECLARATION OF CONFORMITY

We

Name: Meade Instruments Corp

Address: 27 Hubble

Irvine, CA 92618-4209

declare that the product

Product No.: RCW33W

Product Name: Meade Atomic Wall Clock

Manufacturer: Hideki Electronics Ltd.

Address: Unit 2304-06, 23/F Riley House, 88 Lei Muk Road, Kwai Chung, New Territories, Hong Kong

is in conformity with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

The information above is not to be used as a contact for support or sales. Please call our customer service (refer to the Standard Warranty Information) for all injuries instead.

STANDARD WARRANTY INFORMATION

This product is warranted from manufacturing defects for **one year** from date of retail purchase. It does not cover damages or wear resulting from accident, misuse, abuse, commercial use, or unauthorized adjustment and repair.

Note that online product registration is required to ensure valid warranty protection.

To register your product, return completed warranty registration card enclosed.

Should you require assistance with this product and its operation, please contact our **Customer Service Hotline 1(800) 626-3233**.

Please direct all returns to the place of the original purchase. Should this not be possible, contact Meade Instruments Customer Service for assistance and to obtain a Return Goods Authorization (RGA). Returns without a return authorization will be refused. Please retain your original receipt as you may be asked to provide a copy for proof of purchase.

Meade Instruments Corp. reserves the right to repair or replace the product at our option.

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All user manual contents and information are subject to change.