**Atomic Projection Clock with
Weather Forecast
Model: BAR623PA**

USER MANUAL

CONTENTS

INTRODUCTION

Thank you for selecting the Oregon Scientific™ Atomic Projection Clock with Weather Forecast (BAR623PA). This device bundles precise time keeping with a projection clock, weather forecast, and indoor and outdoor temperature monitoring features into a single tool you can use from the convenience of your home.

In this package, you will find:

- Main unit with projection clock
- Main unit 4.5V AC / DC adaptor
- Remote sensor (THN122N)

Keep this manual handy as you use your new product. It contains practical step-by-step instructions, as well as technical specifications and warnings you should know.
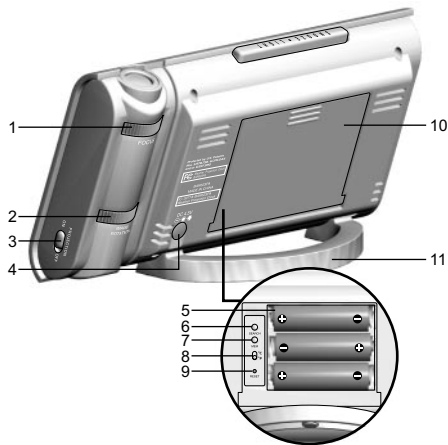
PRODUCT OVERVIEW

FRONT VIEW

1. **SNOOZE** / **LIGHT** button
2. ▲ and ▼ : Increase or decrease setting / activate or deactivate atomic clock
3. **MODE**: Change display / settings
4. (•): View alarm status; set alarm
5. ◄ : Press to activate or deactivate alarm
6. Clock and outdoor temperature projector unit
7. LCD display

BACK VIEW

1. Projector **FOCUS** knob
2. Projector **IMAGE ROTATION** knob
3. **PROJECTION ON / OFF** switch
4. AC / DC adaptor plug cover
5. Battery compartment (cover off)
6. **SEARCH** button to locate the remote sensor
7. **MEM**: View current, maximum, and minimum temperature readings
8. °**C /** °**F** switch
9. **RESET** hole
10. Battery compartment (cover on)
11. Fixed table stand

LCD DISPLAY
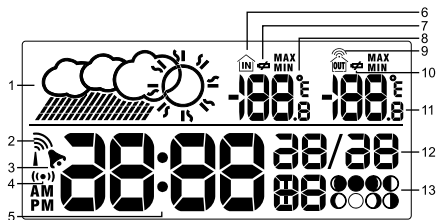
1. Weather display
2. Atomic clock signal icon
3. Alarm activated
4. Alarm setting
5. Time
6. Indoor temperature
7. Low battery icon for main unit
8. °C / °F (Outdoor temperature)
9. Sensor signal
10. Low battery icon for sensor
11. Outdoor temperature
12. Calendar
13. Moon Phase

REMOTE SENSOR (THN122N)

1. LED status indicator
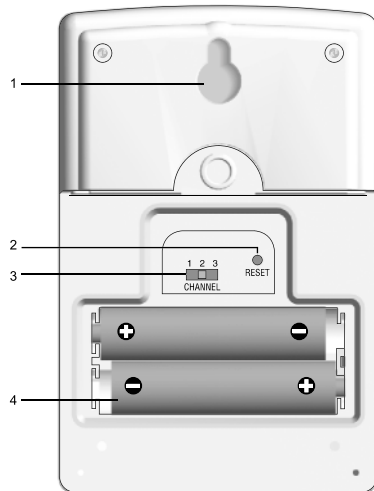
1. Wall mount hole
2. **RESET** hole
3. **CHANNEL** number (**1-3**)
4. Battery compartment
   (Battery compartment cover not shown)

GETTING STARTED

BATTERIES

Main unit   3 x UM-3 (AA) 1.5V batteries
Remote unit   2 x UM-4 (AAA) 1.5V batteries

Insert batteries before first use, matching the polarity (+ and -) as shown in the battery compartment. For best results, install batteries in the remote sensor before the main unit. Press **RESET** after each battery change.

NOTE Do not use rechargeable batteries.

⊏▭ shows when batteries are low.

NOTE It is recommended that you use alkaline batteries with this product for longer performance.

Installing the batteries:
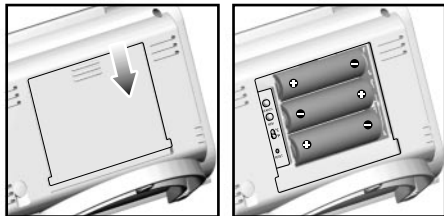
UNIT	⊏▭ LOCATION
Main	Indoor Temperature Area
Remote	Outdoor Temperature Area

AC ADAPTOR

The main unit is supplied with a 4.5V AC / DC adaptor, which provides continuous clock / temperature projection.

Inserting the adaptor:

ADJUST SETTINGS

To adjust the time, calendar and language settings:

1. Press and hold **MODE** for 2 seconds to enter setting mode.
2. Press ▲ or ▼ to change settings. (To reach the setting you want quickly, press and hold ▲ or ▼ .)
3. Press **MODE** to confirm.

REMOTE SENSOR (THN122N)

This product is shipped with a THN122N Thermometer Sensor that collects Temperature data. The main unit can be connected to only 1 remote sensor.

SET UP SENSOR

1. Open the remote sensor battery compartment with a small Phillips screwdriver.
2. Insert the batteries, matching the polarity (+ and -) as shown in the battery compartment.
3. Set the channel switch to any channel. The switch is located in the battery compartment.
4. Place the sensor near the main unit. Press **RESET** on the sensor. Then, press and hold **SEARCH** on the main unit to initiate signal sending between the sensor and the main unit. The reception icon on the main unit will blink for approximately 3 minutes while it is searching for the sensor. (Refer to the Data Transmission section for more information.)
5. Close the remote sensor battery compartment.
6. Secure the sensor in the desired location using the wall mount or table stand.

Installing the batteries:
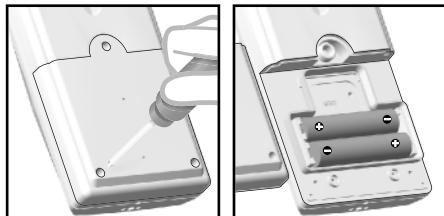
Using the wall mount or stand:
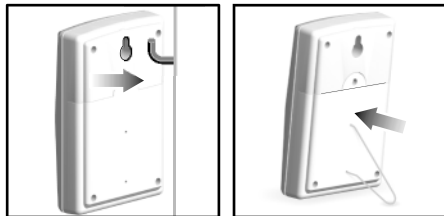
For best results:

- Insert the batteries and before you mount the sensor.
- Place the sensor out of direct sunlight and moisture.
- Do not place the sensor more than 98 feet (30 meters) from the main (indoor) unit.
- Position the sensor so that it faces the main (indoor) unit, minimizing obstructions such as doors, walls, and furniture.
- Place the sensor in a location with a clear view to the sky, away from metallic or electronic objects.
- Position the sensor close to the main unit during cold winter months as below-freezing temperatures may affect battery performance and signal transmission.

You may need to experiment with various locations to get the best results.

Standard Alkaline batteries contain significant amounts of water. Because of this they will freeze in low temperatures of approximately 10°F. Disposable Lithium batteries have a much lower threshold for temperature with an estimated freezing range of below -40°F. The Liquid Crystal Display in outdoor thermometers will remain operational to -20°F with adequate power.

Wireless ranges can be impacted by a variety of factors such as extremely cold temperatures. Extreme cold may temporarily reduce the effective range between the sensor and the base station. If the unit's performance fails due to low temperature, the unit will resume proper functioning as the temperature rises to within the normal temperature range (i.e. no permanent damage will occur to the unit due to low temperatures).

DATA TRANSMISSION

Data is sent from the sensor every 40 seconds. The reception icon shown in the Temperature Area shows the status.

ICON	DESCRIPTION
⌒⌒→ . →⌒⌒	Main unit is searching for the sensor
⌒ → ⌒⌒ → ⌒⌒	A Channel has been found
--- show in Outdoor Temp Area	The sensor cannot be found. Search for the sensor or check batteries

SEARCH FOR SENSOR

To search for the sensor, press and hold **SEARCH** (on the main unit) for 2 seconds.

NOTE If the sensor is still not found, check the batteries, obstructions, and remote unit location.

NOTE Signals from household devices such as doorbells, electronic garage doors, and home security systems may cause temporary reception failure. This is normal and does not affect general product performance. The reception will resume once the interference ends.

CLOCK

The clock automatically synchronizes the current time and date when it is brought within range of the WWVB-60 atomic clock signal generated from Fort Collins, Colorado. For more information, please visit: http://www.boulder.nist.gov/timefreq/stations/radioclocks.htm

NOTE The signals are collected by the main unit when it is within 932 miles (1500 km) of a signal.

Initial reception takes 2-10 minutes, and is initiated when you first set up the unit, and whenever you press **RESET**.

Once complete, the reception icon will stop blinking. The icon is shown in the Clock Area.

STRONG SIGNAL	WEAK SIGNAL	NO SIGNAL
📶	📶	▌

To force a manual search for atomic clock signals, press and hold ▲ for 2 seconds. If no signal is found, check the batteries.

TURN ATOMIC CLOCK SIGNAL ON / OFF

Perform this step if you cannot receive atomic clock signals. Press and hold ▼ for 2 seconds. Then, manually set the clock following the "Set Clock" instructions.

📶 The signal icon indicates that the clock feature is ON. No icon means that it is OFF.

10

You only need to do this if the unit is unable to synchronize with the atomic clock broadcast, or if you have disabled the atomic clock feature (see "Turn Atomic Clock Signal ON / OFF" section).

To manually set the clock:

1. Press and hold **MODE** for 2 seconds. The Clock Area will blink.
2. Select the US time zone, hour, minute, year, month, day, and day-of-the-week language. Press▲ or▼ to change the setting.
3. Press **MODE** to confirm.

NOTE   The time zone options are (PA) Pacific, (CE) Central, (MO) Mountain and (EA) Eastern.

NOTE   The language options are (E) English, (F) French, (D) German, (I) Italian, and (S) Spanish.

SWITCH CLOCK DISPLAY

Press **MODE** to toggle between Clock with Seconds and Clock with Weekday display.

ALARM

This product is equipped with a 2-minute crescendo alarm.

VIEW ALARM SETTINGS

Press **((•))**. The alarm time and status will show in the Clock Area.

SET ALARM

1. Press **((•))** to switch to alarm display.
2. Press and hold **((•))** again for 2 seconds. The alarm settings will blink.
3. Select the hour and minute. Press ▲ or ▼ to change settings. Press **((•))** to confirm.

ACTIVATE ALARM

Press **⚞** to activate or deactivate the alarm. **⚞** shows in the Clock / Alarm Area when the alarm is activated.

SILENCE ALARM

When the alarm time is reached, the crescendo alarm will sound for 2 minutes. To silence the alarm:

• Press **SNOOZE** to silence it for 8 minutes.

OR

• Press any key except **SNOOZE** to mute the alarm and activate it again after 24 hours.

If no button is pressed, the alarm will automatically silence after 2 minutes. It will then sound again after 8 minutes.

WEATHER FORECAST

This product forecasts the weather for the next 12 to 24 hours within a 19-31 mile (30-50 km) radius, with 70 to 75 percent accuracy. The weather forecast is displayed as below.

SUNNY	PARTLY CLOUDY	CLOUDY	RAINY

TEMPERATURE

This product can display current, minimum, and maximum temperature information collected by the remote sensor and main (indoor) unit.

Outdoor data is collected and displayed every 40 seconds. Indoor data is collected and displayed every 10 seconds.

SELECT TEMPERATURE UNIT

Slide the °**C** / °**F** switch into the desired location. The switch is located in the main unit battery compartment. The setting for the main unit overrides the remote sensor setting.

MINIMUM / MAXIMUM RECORDS

The **MEM** button is located in the main unit battery compartment. Press **MEM** to toggle between current, maximum (MAX) and minimum (MIN) records. To clear the records, press and hold **MEM** for 2 seconds. A beep will sound to confirm that the memory has been cleared.

MOON PHASE

The Calendar must be set for this feature to work, see "Set Clock" section.

- Press ▲ or ▼ to view the moon phase for the next or previous day.
- Press and hold ▲ or ▼ to scan quickly through the years (2001 to 2099).

●	New Moon
◐	Waxing Crescent
◑	First Quarter
◒	Waxing Gibbous
○	Full Moon
◓	Waning Gibbous
◐	Last-quarter
◑	Waning Crescent

BACKLIGHT

Press **SNOOZE / LIGHT** to activate the backlight for 8 seconds.

RESET SYSTEM

The **RESET** button is located in the main unit battery compartment. Press **RESET** when you change the batteries and whenever performance is not behaving as expected (for example, you are unable to establish a connection with the remote sensor or atomic clock signal).

PROJECTION UNIT

The projection unit can display both time and outdoor temperature. To use this feature:

• Press the **SNOOZE / LIGHT** button to project the time and outdoor temperature for 8 seconds.

OR

• Slide the **PROJECTION** switch to **ON** to activate continuous projection. However, this function will not work unless the supplied AC / DC adaptor is used.

You can also:

• Adjust the **FOCUS** knob to make the image clearer.
• Adjust the **IMAGE ROTATION** knob to rotate the image clockwise or anti-clockwise.
• Manually tilt the projection unit to position the image vertically upwards or downwards.

SAFETY AND CARE

Clean the product with a slightly damp cloth and alcohol-free, mild detergent. Avoid dropping the product or placing it in a high-traffic location.

WARNINGS

This product is designed to give you years of service if handled properly. Oregon Scientific will not be responsible for any deviations in the usage of the device from those specified in the user instructions or any unapproved alterations or repairs of the product. Observe the following guidelines:

- Never immerse the product in water. This can cause electrical shock and damage the product.
- Do not subject the main unit to extreme force, shock, or fluctuations in temperature or humidity.
- Do not tamper with the internal components.
- Do not mix new and old batteries or batteries of different types.
- Do not use rechargeable batteries with this product.
- Remove the batteries if storing this product for a long period of time.
- Do not scratch the LCD display.

NOTE The technical specification of this product and contents of this user guide are subject to change without notice. Images not drawn to scale.

TROUBLESHOOTING

PROBLEM	SYMPTOM	REMEDY
Calendar	Strange date / month	Change language
Clock	Cannot adjust clock	Disable clock
	Cannot auto-synchronize the date and time	1. Adjust batteries 2. Press **RESET** 3. Manually activate clock feature
Temp	Shows "LLL" or "HHH"	Temperature is out-of-range
Remote sensor	Cannot locate remote sensor	Check batteries
		Check location
	Data does not match main unit	Initiate a manual sensor search

SPECIFICATIONS

MAIN UNIT DIMENSIONS

L x W x H	3.6 x 6.6 x 2.1 inches (92 x 167 x 53 mm)
Weight	8.04 ounces (228 grams) without battery

REMOTE SENSOR DIMENSIONS

L x W x H	3.6 x 2.4 x 0.9 inches (92 x 60 x 23 mm)
Weight	1.6 ounces (46 grams) without battery

TEMPERATURE

Unit	°C / °F
Indoor range	23°F to 122°F (-5°C to 50°C)
Outdoor range	-22°F to 140°F (-30°C to 60°C)
Resolution	0.2°F (0.1°C)
Display	Rainy, cloudy, partly cloudy, sunny

REMOTE SENSOR (THN122N)

RF frequency	433 MHz
Range	98 feet (30 meters) with no obstructions
Transmission	Every 40 seconds
Channel No.	1

CLOCK / PROJECTOR

Atomic Clock	Auto or manual (disabled)
Clock display	HH:MM:SS
Hour format	12hr AM / PM (Model BAR623PA)

Calendar	MM / DD; weekday in 5 languages (E, D, F, I, S)
Alarm	Single alarm with 2-minute crescendo and 8-minute Snooze
Projector	Outdoor temperature and time

POWER

Main unit batteries	3 x UM-3 (AA) 1.5V
Sensor batteries	2 x UM-4 (AAA) 1.5V
AC / DC adaptor	4.5V with jack

NOTE It is recommended that you use alkaline batteries with this product for longer performance.

ABOUT OREGON SCIENTIFIC

Visit our website (www.oregonscientific.com) to learn more about Oregon Scientific products such as digital cameras; MP3 players; children's electronic learning products and games; projection clocks; health and fitness gear; weather stations; and digital and conference phones. The website also includes contact information for our customer care department in case you need to reach us, as well as frequently asked questions and customer downloads.

We hope you will find all the information you need on our website, however if you're in the US and would like to contact the Oregon Scientific Customer Care department directly, please visit:
www2.oregonscientific.com/service/support

OR

Call 949-608-2848.

For international enquiries, please visit:
www2.oregonscientific.com/about/international/default.asp

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 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 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.

DECLARATION OF CONFORMITY

The following information is not to be used as contact for support or sales. Please call our customer service number (listed on our website at www.oregonscientific.com, or on the warranty card for this product) for all inquiries instead.

We

Name:	Oregon Scientific, Inc.
Address:	19861 SW 95th Place,
	Tualatin, Oregon 97062 USA
Telephone No.:	1-800-853-8883
Fax No.:	1-503-684-8883

declare that the product

Product No.:	BAR623PA
Product Name:	Weather Projection Clock
Manufacturer:	IDT Technology Limited
Address:	Block C, 9/F, Kaiser Estate,
	Phase 1, 41 Man Yue St.,
	Hung Hom, Kowloon,
	Hong Kong

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

Oregon

S C I E N T I F I C

**Atomic Projection Clock with
Weather Forecast
Model: BAR623PA**

USER MANUAL