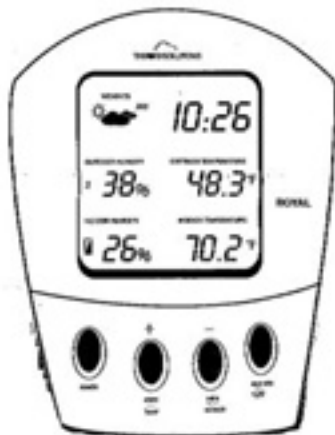


OPERATIONAL MANUAL



ROYAL

Consumer Electronics Products

2025 U.S. Highway 202

Elizabeth, NJ 07207

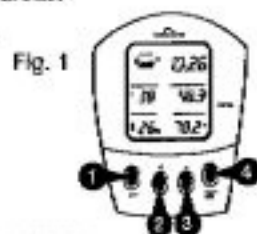
WS 44 INSTRUCTION MANUAL

Congratulations on purchasing the Royal WS 44 Thermosolutions Weather Station. This model features Indoor and Outdoor Temperature and Humidity, Time, Minimum and Maximum Temperature and Humidity Alarms and Weather Forecasting. Outside Temperature and Humidity is provided with the 434 MHz cable free temperature sensor. No wire installation is required. The WS 44 can work with up to 3 remote sensors. One remote sensor is included with this package.

Please read all the instructions to ensure understanding of the features.

The WS 44 uses a liquid crystal display. On occasion, the display has an appearance of being damaged. This is especially true when first receiving the unit or when moving the unit. It is recommended leaving the unit on a flat table for 10 minutes. The liquid in the display will fill all the voided areas.

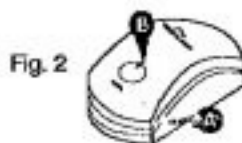
WS 44



1. Mode Button
2. Max/Hours/+ Button
3. Min/Minute/- Button
4. Celsius(°C) / Fahrenheit(°F)

REMOTE UNIT

- A. LED Light
B. Test Button



BEFORE YOU BEGIN

For best operation:

1. Insert the remote unit batteries before inserting the batteries into the main unit.
2. Place the main unit as close as possible next to the remote unit. This will ensure easier synchronization between the transmission and reception of the signals.
3. Position the remote unit and main unit within the effective transmission range, which, in usual circumstances, are 75 to 100 feet.

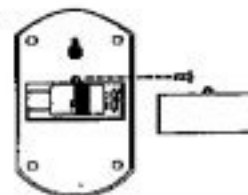
NOTE: Building materials and where the main and remote units are positioned vastly affect the transmission range. Try various locations for best results.

INSTALLATION OF THE BATTERY IN THE REMOTE UNIT

The remote unit uses one 9-volt battery. To install or replace the batteries, please follow these steps:

1. Unscrew the screw on the back of the compartment and remove the cover.
 2. Insert the battery, observing the correct polarity.
 3. Make sure the switch is set to 1 inside the battery compartment. The other two locations are reserved for other models.
 4. Replace the battery cover on unit and seal by re-screwing tightly.
- It is recommended replacing the batteries in both units on an annual basis to ensure optimum accuracy. If the LED light is blinking on the remote unit, it is time to replace the battery.

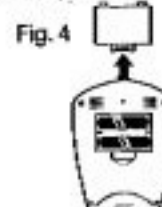
Fig. 3



NOTE: After changing the batteries in the Transmitter or Base unit, both units must be completely reset as per the Setting Up instructions.

INSTALLATION OF THE BATTERIES IN THE MAIN UNIT

The WS 44 uses two "AA" batteries. Should the LCD become dimmer, or the battery icon on the display shows, replace the battery. To install or replace the batteries, please follow these steps:



1. Slide the battery door cover off in the direction of the arrow.
2. Insert 2 AA batteries, following the polarity shown inside the battery compartment.
3. Replace battery cover.

SETTING UP

1. Once the batteries have been placed in the Remote unit, they will start transmitting temperature readings in 30 seconds. By depressing the side Test button on the Remote unit, the signal to the base unit will immediately update the outside temperature. The LED on the remote unit will illuminate after depressing the Test button. This indicates the signal is being sent.
2. It is recommended testing the units side by side prior to installing the units.
3. Consumer should not modify the product.

Once the units synchronize, install the units as per the INSTALLATION SECTION of this manual.

434 MHz RECEPTION

The Royal Thermosolutions WS 44 will receive outside temperature readings, utilizing wireless 434 MHz transmission. Please see the following guidelines when selecting a location for the installation of your Royal WS 44 and Wireless Remote.

1. The maximum transmission range is 50-100 feet from the Remote to the WS44 (in open space). However, this depends on the surrounding environment and interference levels.
2. The distance of the WS 44 or Remote should be at least 6 feet away from any interfering sources.

3. Avoid positioning the WS44 or Remote onto or in the immediate proximity of metal window frames.
4. Neighbors using other electrical devices operating on the 434 MHz signal could cause interference.
5. Extreme temperatures may affect the Wireless Remote Range. If it has been extremely cold (under -13 F) for an extended period of time, then the transmission power from the remote will not be sufficient due to the nature of Alkaline batteries.

INSTALLATION - REMOTE UNIT

Royal provides both screws and double-sided tape. On smooth surfaces this can be used for mounting instead of drilling holes. The surface can, however, affect the transmission range. If, for example, the unit is attached to a piece of metal, it may either reduce or increase the transmitting range. For this reason we recommend not placing the unit on any metal surface or in any position where a large metal surface is in the immediate proximity. Before securing in place, please insure that the Temperature Base Unit can receive the signal from the Remote unit from where you wish to situate them both.

SETTING TIME

- Depress and hold the Mode key until the Time blinks.
- Depress the Max/Hour button until the correct hour is selected.
- Depress the Min/Minute button until the correct minute is selected.
- To select 12/24-Hour format, depress and hold both the Max and Min keys at the same time. The time must be in the setting mode (blinking).
- Depress the Mode key to confirm.

TO SET CENTIGRADE (C) or FAHRENHEIT (F)

This model has two types of temperatures; Centigrade and Fahrenheit. To set the correct type, press and hold the Mode key until the Time blinks. Depress the Remote key once and the temperature will toggle between Centigrade and Fahrenheit. Depress the Mode key once to confirm.

NOTE: Whatever the temperature of the WS 44, the temperature will be converted automatically for both Indoor and Outdoor Temperature.

OUTSIDE TEMPERATURE

THE WS 44 can monitor up to 3 remote units. The remote unit that comes with the unit is set at Remote 1. Remote #2 and #3 are optional and can be purchased at your local retailer.

Setting up the Remote Sensor:

Inside the battery compartment of the remote is a slide switch. Select the remote number for that specific remote. No two remotes can be set for the same number. The remote included in this package is preset at 1. Do not change this remote. A set of House switches is also inside the remote and the WS 44. These switches are set for your specific unit. The switches in the remote unit and WS 44 base unit must match exactly. The house code should only be changed in case of interference or other Thermosolution products within your area.



To View the Outside Temperature and Humidity:

The Inside and Outside (remote 1) Temperature and Humidity will be always displayed at your default screen. Press the remote button to view the temperature on the optional remote #2 and once again for Remote #3. If the outside humidity falls below 30% the display will show 'lo'. If the outside humidity goes over 90% the display will show 'hi'.

Viewing the Daily Minimum and Maximum Temperature:

The WS 44 maintains the minimum and maximum temperature on a daily basis. To view the minimum and maximum temperature:

- Depress the Max key once. The display will show the daily maximum inside and outside temperatures. Depress the Remote button to view the maximum temperature at Remote #2 and #3 if applicable. The daily Maximum temperature will reset daily at 12:00 AM. Press the Max key once to return.
- Depress the Min key once. The display will show the daily minimum inside and outside temperatures. Depress the Remote button to view the minimum temperature at Remote #2 and #3 if applicable. Press the Max key once to return. The daily Minimum temperature will reset daily at 12:00 AM.

MINIMUM AND MAXIMUM TEMPERATURE ALARMS

The WS 44 has a minimum and maximum temperature alarm. By setting the minimum and maximum temperatures, the WS 44 will sound an alarm when the temperature rises above the maximum or falls below the minimum temperature. To turn the alarm off, depress any key.

Setting the MAX/MIN Inside Temperature:

- Depress the Mode button once and the IN Max will blink.
- Depress the + or - key to set Inside Maximum Temperature.
- Depress the Mode button again and the IN Min will illuminate.
- Depress the + or - key to set the Inside Minimum Temperature.
- Depress the Mode button again to confirm.

Setting the Max/Min Outside Temperature Alarm:

- Depress the Mode button once and the IN Max will blink.
- Depress the Remote button. Each time you depress the Remote button this will allow you to access a specific outside remote.
- Depress the + or - key to set Outside Maximum Temperature.
- Depress the Mode button again and the OUT Min will blink.
- Depress the + or - key to set the Outside Minimum Temperature.
- Depress the Mode button again to confirm.

Turn the Alarms off:

- Follow the same steps as the above. However, depress and hold both the + and - key at the same time for 5 seconds to erase the alarm feature. The temperature setting will disappear from the display. This will work the same way for inside and outside alarms.

SPECIFICATIONS

MAIN UNIT

Power Requirements: 2 x AA Battery operated (not included)
Operating Frequency: 434 MHz
Operating Temperature: 0 to +50°C (+32 to +122°)
Detected Temperature: 0 to +50°C (+32 to +122°)
Resolution: 0.1°C
Accuracy: +/- 1.5°C
Operating Humidity: 30% to 90%
Detected Humidity: 30% to 90%
Resolution: 1%
Accuracy: +/- 5%
LCD Viewing Area: 70x82mm
Digital clock display to show hour and minutes
Indoor and Outdoor Temperature
Minimum and Maximum Temperature Memory
Indoor and Outdoor Humidity
Weather report
Temperature Trend
Temperature Alert
Can be expandable up to 3 outdoor stations

REMOTE UNIT

Power Requirements: 9V battery operated (not included)
Operating Frequency: 434 MHz
Operating Temperature: -40 to +70°C (-40 to +158°F)
Operating Humidity: 30% to 90%
Transmission Distance: 20 meters (open area)
LED Indicator for Transmission

WARRANTY, REGISTRATION & TECHNICAL SUPPORT

PLEASE FILL OUT AND RETURN THE WARRANTY CARD INCLUDED WITH YOUR NEW ROYAL PRODUCT OR FILL OUT THE WARRANTY REGISTRATION FORM ON THE ROYAL WEB PAGE AT WWW.ROYAL.COM. IT ENTITLES YOU TO PRODUCT WARRANTY AND TECHNICAL SUPPORT UNDER THE TERMS AND CONDITIONS DESCRIBED HEREIN.

BE SURE TO KEEP A COPY OF YOUR SALES RECEIPT!

STANDARD WARRANTY

OLIVETTI OFFICE USA, Inc. d/b/a ROYAL CONSUMER BUSINESS PRODUCTS ("Royal"), 765 US Highway 202, Bridgewater, NJ, 08807 WARRANTS that your NEW Royal product is free of defects of workmanship and materials. If there is a defect or malfunction of this product, Royal will repair it Free of charge as follows:

PARTS: New or comparable rebuilt parts in exchange for defective parts for ONE YEAR from date of customer purchase.

LABOR: Royal provides labor warranty for NINETY DAYS from date of end-user Purchase. Product must be sent postage prepaid and insured to Royal. At the completion of the repair, the consumer will be responsible for return shipping charges from Royal, and for any parts or services no longer covered under warranty.

This warranty does not apply to persons who purchased this product second hand or used.

This warranty does not include adjustments, parts and repair by circumstances beyond the control of Royal, including but not limited to, fire, or other casualty, accident, neglect, abuse, abnormal use or battery leakage damage.

THERE ARE NO OTHER EXPRESSED WARRANTIES EXCEPT AS STATED HEREIN. AFTER THE PERIOD OF EXPRESSED WARRANTY SET FORTH HEREIN, THERE ARE NO EXPRESSED OR IMPLIED WARRANTIES AND THOSE EXCLUDED INCLUDE THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. Royal shall NOT be held liable for CONSEQUENTIAL DAMAGES resulting from any failure, defect or malfunction of this product. Some States do not allow limitations on how long an implied warranty lasts and some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

WARRANTY PROCEDURES

Royal has taken great care to insure the product you have purchased will provide years of trouble-free service. Should the product require service within the first 30 days after purchase, Royal strongly recommends you return the product to the place of purchase for replacement. Please note this 30-day replacement period may be subject to the limitations of the return policy that has been established by your retailer, may not be available at your retailer, or may be for a different period of time as established by your retailer. Your retailer may allow exchanges past this 30-day period. Should this be the case, Royal strongly recommends you return the product to the place of purchase for replacement.

TO OBTAIN SERVICE UNDER THE TERMS OF THIS WARRANTY:

In the event you are unable to obtain a replacement product from your retailer, please do the following:

1. Send a copy of your original sales receipt showing the original purchase date, along with your mailing address and a note describing the nature of the problem to:

Royal Consumer Warranty Processing
PO Box 161
Jamison, PA 18929-0161

Do Not Return the Product to This Address!

2. You will receive a return authorization number within 7-10 business days from the date your return request is received if it is determined that there is a basis for a replacement product. The return authorization form you receive will list the return procedures, applicable charges, if any, and the correct shipping address for the returned product.

PRODUCT SUPPORT HOTLINE:

For questions on use of this product call 908-429-4357 Monday through Friday between the hours of 8:30AM and 5:00PM EST. You can also email Royal at hotline@royal.com. Allow two to three weeks for email response.