CELESTRON

HomeCast™ Deluxe

Weather Station with Remote Sensor

Users Manual
Model #47022

English
PERSONAL WEATHER STATION WITH REMOTE SENSOR
MODEL #47023 USER MANUAL

LCD
A1: Air pressure trend
A2: Weather forecast
A3: Barometric pressure bar graph
A4: Indoor temperature
A5: Indoor humidity
A6: Comfort indicator bar
A7: Outdoor temperature trend
A8: Outdoor temperature
A9: Selected channel
A10: Outdoor humidity
A11: Outdoor humidity trend
A12: Barometric pressure of previous hour
A13: Barometric pressure reading
A14: Time
A15: Date
A16: Day of week
A17: Sunrise time
A18: Moonrise time
A19: Moon phase
A20: Location
A21: Moonset time
A22: Sunset time

Buttons
B1: MODE Button
B2: ▲ (12/24) Button
B3: SNOOZE/LIGHT Button
B4: ▼ Button
B5: AL ON/OFF Button
B6: CHANNEL Button
B7: HISTORY/WEATHER Button
B8: +/-C/F Button
B9: -/MAX/MIN Button
B10: RELATIVE/ABSOLUT Button
B11: SUN/MOON Button
B12: RESET Button

Structure
C1: Wall mount hole
C2: Battery cover
C3: Stand
OUTDOOR THERMAL SENSOR

Sensor
D1: Transmission indication LED
D2: Outdoor temperature display
D3: Outdoor humidity display
D4: Battery compartment
D5: Wall mount hole
D6: RESET Button
D7: C/F Button
D8: Channel select switch
D9: Stand

FEATURES

- **Weather Forecast** - Sunny, slightly cloudy, cloudy, rainy and snow animation
- **Time** - 12/24 Hour - User selectable
  - Dual Daily Alarm Function
  - Daily sunrise/sunset, moonrise/moonset time based on your location
  - Moon phase display
  - Perpetual calendar up to year 2099
  - Day of week in 8 languages - User selectable
- **Barometric Pressure** - Current and past 12hr absolute and relative barometric pressure reading
  - Barometric pressure bar chart
  - Measures mb/hPa, inHg & mmHg - User selectable
- **Humidity** - Measurable range: 20 ~ 99%
  - Max/Min memory
- **Temperature** - Indoor measurable range: 0 ~ 50°C [+32 ~ +122°F]
  - Measures °C / °F - User selectable
  - Outdoor measurable range: -20 ~ 50°C [-4 ~ +122°F]
  - Max/Min memory [indoor & outdoor]
- **Wireless Outdoor Sensor** - Low-battery indicator for outdoor thermo sensor
  - Wall mount or table stand
  - One wireless thermo sensor included
  - 433MHz RF transmitting frequency
  - 30 Meter [98 feet] transmission range in an open area
GETTING STARTED

Main Unit:
• Open main unit battery compartment cover (C2).
• Insert 3 x AA batteries and replace the cover.
• Use a paper clip or similar small pin to press the **RESET** button (B12) on the rear of the main unit, the unit is now ready for use.

Outdoor Sensor:
• Open the battery Cover (D4) of sensor. Insert 2 x AAA batteries and replace the cover.

Installation:
• Place the main Unit on any flat surface using the hinge out stand (C3), or wall mount using the wall mount hole (C1).
• Place the remote sensor outside. It can be mounted in a similar way using the hinge out stand (D9) or wall mount hole (D5).

*Note: Transmissions between the main unit and sensor can reach up to 30m barring any interfering obstacles such as buildings, trees, vehicles, high voltage lines, etc.*

WEATHER FORECAST FUNCTION

• Your personal weather station displays an animation showing the current weather status.
• To pre-set the status setting, press and hold the **WEATHER** button (B7) for 3 seconds. The Weather Forecast icon (A2) will flash.
• To change the current weather status animation press the - (B9) or + (B8) buttons.
• Press the **WEATHER** button (B7) again to confirm your choice.

*Note: The current weather status should be reset if there is a change of altitude.*

There are 5 different weather status animations in the weather forecast:

Freezing or Snow  Rain  Slightly Cloudy  Cloudy  Sunny

BAROMETRIC PRESSURE READING

Barometric Trend Pointer: The arrow displayed on the LCD (A1) indicates the Barometric Pressure “trend”.

- Indicating the barometric pressure trend is rising
- Indicating the barometric pressure trend is steady
- Indicating the barometric pressure trend is falling

Absolute/ Relative Air Pressure:
• **Display**: Press the **ABSOLUTE/ RELATIVE** button (B10) to change display from the Absolute Pressure icon “ABS” or Relative Pressure icon “REL”.
• **Set Benchmark of Relative Pressure**: When viewing relative pressure, hold the **ABSOLUTE/ RELATIVE** button (B10) for 3 seconds, press the - (B9) or + (B8) button to adjust; press the **ABSOLUTE/ RELATIVE** button (B10) to confirm.
  You can set this pressure based on your local weather forecast.

Past Hour Air Pressure (History) Reading:
• Press the **HISTORY** button (B7) to view the past 12 hour’s barometric pressure history. Each button press changes the hour indicator (A12) by 1 hour. Press 12 times to scroll through all 12 hours. Hold the + button (B8) for 3 seconds to switch through the barometric pressure readings in millibars (hPa), inches of Mercury (inHg) or millimeters of Mercury (mmHG).

Barometric Pressure Bar Graph:
• The barometric pressure reading at 0hr, -2hr,-4hr,-8hr,-12hr is recorded and shown on the barometric pressure bar graph (A3). The graph is displayed in both hPa and inHg.
THERMOMETER

• The main unit will record the room temperature once the batteries are installed and will start to receive transmission from the sensor(s) as soon as step 5 is completed. The sensor will automatically transmit temperature readings once batteries are inserted. If you are using multiple sensors (up to 3 maximum) make sure each has different channels selected.
• If the main unit fails to receive transmission from the outdoor thermo sensor for one minute, press and hold the CHANNEL button (B6) for 3 seconds. The RF icon will flash on the LCD until the temperature is displayed correctly.

Maximum and Minimum Temperature & Humidity Alert:
• Your personal Weather Station allows you to monitor the high and low outdoor temperature reading within a desired time frame. To start monitoring, press and hold the MAX/MIN button (B9) on the back of the weather station for 3 seconds. You have just reset the “start” time for the weather station to monitor the high and low temperatures. Anytime you want to see a high or low temperature, press button B9. The “MAX” icon will be displayed atop the inside and outside maximum temperature readout. Press B9 again and the minimum temperature will be displayed, accompanied by the “MIN” icon.

Outdoor Temperature, Humidity and Pressure Trend Arrows:
• The main unit has trend arrow icons displayed on the LCD. A7 is the temperature trend arrow, A11 is the humidity trend arrow and A1 is the pressure trend arrow.

Celsius / Fahrenheit Setting
• Press the °C /°F button (B8) to select the temperature reading in either Celsius or Fahrenheit.

Note: If the temperature is out of the measurable High or Low range, LL.L or HH.H will be shown on the LCD. Comfort Indicator Bar:
• The LCD display has a color bar icon (A6) that gives a quick visual reference of the ‘comfort’ of the current outdoor climate. Green is good, Blue is cold and/or wet, and Red is hot.

TIME AND ALARM SETTING

Manual Time Setting:
• Hold the MODE button (B1) for 3 seconds to enter the Clock/Calendar setting mode.
• Press the ▲ (B2) or ▼ (B4) button to adjust the settings and press the MODE button (B1) to confirm each setting.
• The sequence is as follows: Hours, Minutes, Seconds, Year, Month, Day, Country, (State-US only) and City.
• To turn DST (Daylight Savings Time) on or off, press and hold “12/24” button (B2). “DST” will be displayed above the minute digits when on. Sunrise/Sunset times will adjust accordingly.

Notes:
• Refer to the separate Country Code list for the correct country, city and state abbreviations.
• The seconds automatically adjust to zero when resetting.
• 15 seconds without activity and the Time Setting Mode will close.

12/24 Hour Display Mode:
• Press the 12/24 button ▲ (B2) to select 12 or 24 hour mode.

Dual Daily Alarm Function:
• Press the MODE button (B1) to view Alarm 1 and Alarm 2 and the corresponding icon:
• While viewing Alarm Time 1 or Alarm Time 2, hold the MODE button (B1) for 3 seconds to enter that Alarm Time setting. Press the ▲ (B2) or ▼ (B4) button to adjust the alarm time, press the MODE button (B1) to confirm the setting.
• When viewing Alarm Time 1 or Alarm Time 2, press the AL ON/OFF (B5) button to activate the alarm function. Repeat process to de-activate.

Sunrise/Sunset, Moonrise/Moonset Time Display Function:
• The main unit automatically calculates the Sunrise/Sunset & Moonrise/Moonset settings once the date, time and calendar are set.
• Press the SUN/MOON button (B11) to display the total Sun hours of the selected day.
• You can check the Sunrise/Sunset, Moonrise/Moonset for any city in the database as well. To do so press and hold the SUN/MOON button (B11) for 3 seconds to enter Sunrise/ Sunset, Moonrise/Moonset time search mode. The location digits (A20) will blink. Using buttons ▲ (B2) or ▼ (B4), select the Country, City, Year, Month and Day which you would like to check readings on. At each step, press the SUN/MOON button to confirm the selection.
• If Moonrise or Moonset occurs the next day, “MOONRISE +1” or “MOONSET +1” will be displayed on the LCD.
• If there is no Moonrise or Moonset on that particular day, no time will be displayed on the LCD.
**OTHER LCD DISPLAYS**

- **Moon Phases**
  
  A. New Moon  
  B. Waxing Crescent  
  C. First Quarter  
  D. Waxing Gibbous  
  E. Full Moon  
  F. Waning Gibbous  
  G. Last Quarter  
  H. Waning Crescent

- **Low Battery Indicator**
  The low battery icon will appear when the sensor battery is low.

- **Backlight**
  Press the SNOOZE/LIGHT button (B3), backlight starts for 3 seconds.

- **Frost Alert**
  Shown in A2 area of the LCD, if the outdoor temperature (any channel) is between -2°C ~ +3°C.

**NOTES:**

- Use a pin to press the reset button (B12) if the unit does not work properly.
- Avoid placing the clock near interference sources/metal frames such as computer or TV sets.
- The clock will lose time information when the battery is removed.
- Keep unit out of direct sunlight, extreme heat and cold and extremely wet areas.
- Never clean the device using abrasive or corrosive materials or products.
- Your personal weather station is not to be used in place of your local weather station’s forecast.
- Frost Alert: is shown if the outdoor temperature (any channel) is between -2°C ~ +3°C.
- If there is any inconsistency of weather forecast between your Local weather station and this unit, the local weather station’s forecast should prevail. The manufacturer will not be held responsible for any trouble that may arise due to wrong forecasting from this unit.

<table>
<thead>
<tr>
<th>Indoor</th>
<th>Outdoor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>0 to 50°C [+32 to +122°F]</td>
</tr>
<tr>
<td><strong>Temperature Units Measured:</strong></td>
<td>°C or °F</td>
</tr>
<tr>
<td><strong>Humidity Range:</strong></td>
<td>20% to 99%</td>
</tr>
<tr>
<td><strong>Air Pressure Range:</strong></td>
<td>850 – 1050 hPa</td>
</tr>
<tr>
<td><strong>Air Pressure Units Measured:</strong></td>
<td>mb/hPa, inHg &amp; mmHG</td>
</tr>
<tr>
<td><strong>Weather Forecast Display:</strong></td>
<td>5 icons (sunny, slightly cloudy, cloudy, and rainy &amp; snow)</td>
</tr>
<tr>
<td><strong>Transmission Distance:</strong></td>
<td>30m @ 433MHz</td>
</tr>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>-20°C to 50°C [-4 to +122°F]</td>
</tr>
<tr>
<td><strong>Mount:</strong></td>
<td>wall / table</td>
</tr>
<tr>
<td><strong>Main Unit Dimensions:</strong></td>
<td>w230 x h150 x d30 mm</td>
</tr>
<tr>
<td><strong>Sensor Dimensions:</strong></td>
<td>w62 x h101 x d24 mm</td>
</tr>
<tr>
<td><strong>Battery Requirements:</strong></td>
<td>3 x AA batteries</td>
</tr>
<tr>
<td><strong>Base Station:</strong></td>
<td>2 x AAA batteries</td>
</tr>
</tbody>
</table>
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.

FCC 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.

Product design and specifications are subject to change without prior notification.

This product is designed and intended for use by those 14 years of age and older.