



# Weather Oracle<sup>™</sup>

MKIII & MKIII-LR

## User's Guide

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# Table of Contents

<b>1) Getting Started</b> .....	<b>5</b>
1.1) Powering Up.....	5
1.2) Battery Backup.....	6
1.3) Mounting Your Display .....	7
1.4) Quick Reference Guide .....	8
<b>2) Setup Mode</b> .....	<b>9</b>
2.1) Time/Date.....	9
2.2) Parameter Units .....	10
2.21) Temperature .....	10
2.22) Wind Speed.....	10
2.23) Rainfall.....	10
2.24) Barometer.....	11
2.3) Brightness.....	11
2.4) Automatic Toggling of Displays .....	11
2.5) Fine Tuning Temperatures .....	12
2.6) Setting Temperature Characters .....	12
<b>3) Operating the Display</b> .....	<b>13</b>
3.1) Selecting Display Parameters.....	13
3.2) Turning Displays On and Off.....	13
3.3) Displaying Minimums and Maximums.....	13
3.4) Resetting Minimums and Maximums .....	13
3.5) Resetting Rainfall.....	14
3.6) Presetting Rainfall Counts.....	14
3.7) Locking the Display .....	14

3.71)	Lock Display.....	14
3.72)	Unlock Display .....	15
<b>4)</b>	<b>Diagnostic Mode.....</b>	<b>15</b>
4.1)	Factory Reset.....	16
<b>5)</b>	<b>Product Support.....</b>	<b>16</b>
5.1)	Contact Information .....	17
5.2)	Warranty.....	17

## 1) Getting Started

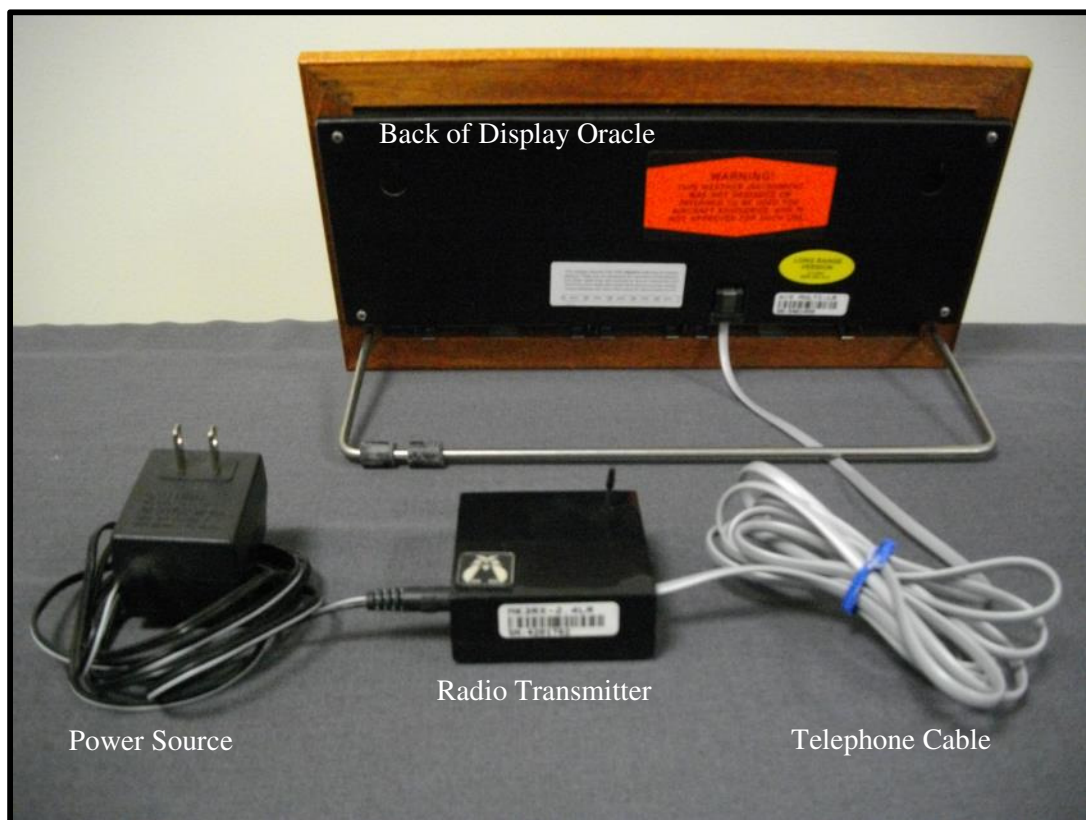
The Multi-Display Oracle for the MK III Wireless Weather Stations receives the weather instrument data via radio signal from the MK III station.

Every measured parameter has a display, including a wind direction indicator.

### 1.1) Powering Up

**Connect Power:** Connect the power source (9 volts DC, 500mA) to the radio transmitter. *Only use the power source provided with this multi-display oracle since it is different from the standard oracle display. Do not attempt to use these power sources with the MK III.*

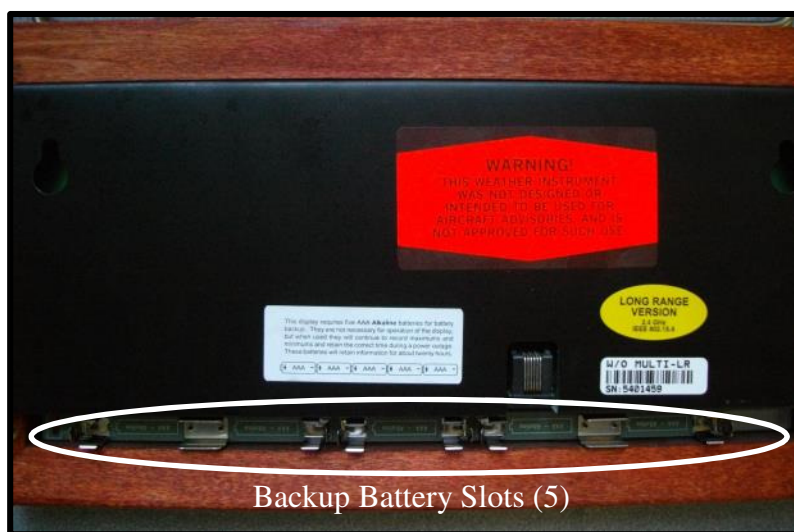
**Connect Transmitter:** Connect the radio transmitter to the display with the 5-foot telephone cable. Should you wish to extend this cable, please contact our service department. The Unit will be **damaged** if the wrong cable is used.



When the display is **powered for the first time**, the time will show 12:00 and the other displays will show ----. Within 30 seconds the unit should receive information from the sensor unit. When this happens, the dashes will be replaced with current values. If after a couple of minutes the dashes do not disappear, try another location. If you feel you are well within the sensor units range and there is still no reception, refer to Section 4.0.

## 1.2) Battery Backup

This Weather Oracle has an option for battery backup. There are slots in the back for 5 AAA alkaline batteries in all wooden frame units. **Metal Framed displays do not have battery backup option.** Refer to the diagram on the back of the display case to install batteries in the correct direction.



All data is stored in non-volatile memory and will not be lost if power is removed from the unit, even without batteries. The batteries are used to keep the receiver active during a power outage. This ensures that you will not miss any new data during the outage. The batteries last approximately 20 hours when direct power is out. For extended outages, remove the batteries from the unit.

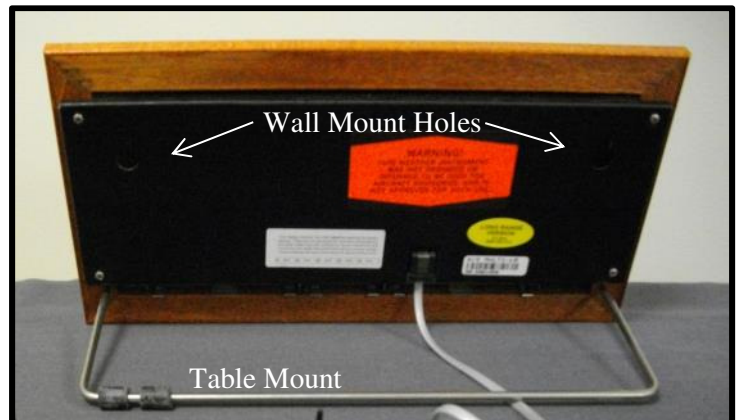
**⚠ NEVER LEAVE DISCHARGED BATTERIES IN THE UNIT, THEY MAY LEAK. ⚠**

### 1.3) Mounting Your Display

**Wall Mounting:** Before drilling any holes, ensure the selected location is within the units range.

**Table Mounting:** Simply insert the two ends of the bracket into the holes provided on the back of the display.

The **internal temperature sensor** will record the exact temperature at the mounting location. For example, if the unit is mounted on an exterior wall, the reading will be affected by the temperature of the wall which may be several degrees different than the room's temperature. To compensate for this refer to Section 2.5.



After locating your display, ensure the radio transmitter is sitting upright with the antenna vertical as shown in Section 1.1 for optimum reception.

## 1.4) Quick Reference Guide

Note: The parameters can be selected by pressing directly on the word. For instance when setting the time press directly on the word “TIME”.

### Setting the Clock/Calendar:

- MAX – SELECT – TIME – MAX
- Up/down with MIN/MAX
- SELECT when done
- Keep pressing SELECT to Exit

### Display a Max or Min:

- MAX/MIN- Parameter button

### Reset a Max or Min:

- Hit SELECT while a max or min is being displayed

### Resetting rainfall:

- Hit MAX, RAINFALL, SELECT while the last reset is being displayed.

### Turning Displays On and Off

- MAX – SELECT – BRIGHTNESS
- Press parameter buttons to toggle on and off.
- SELECT when done
- Keep pressing SELECT to Exit

### Make a parameter toggle

- SELECT – parameter button

### Lock display

- MAX – SELECT – HUMIDITY
- Press HUMIDITY button to toggle to “Loc”.
- SELECT twice when done.

### Unlock display

- HUMIDITY and BAROMETER together.

### Parameters:

**Time:** Displays either current time or date.

**Temperature:** Displays outside and inside temperature as well as wind chill and dew point.


**Humidity:** Displays Relative Humidity and the Temperature Humidity Index (THI). **THI** is a measure of relative heat that a human feels, accounting for temperature and humidity combined.

**Barometer:** Displays barometric pressure and indicates if the pressure is falling, rising or is steady (LEDs off).

**Rainfall:** Displays two rainfall counters current and accumulated. These may be reset independently.

**Wind Speed:** Displays current wind speed and rose shows wind direction.

### In This Manual:

 = Important



## 2) Setup Mode

**Enter the setup mode:** Press  then 

All the displays will go blank and the MIN and MAX lights will be flashing.

In the setup mode you can change one or all of the parameters. Select the parameter you wish to change by pressing the appropriate button. Once you have changed that parameter, you will be returned to the Setup mode. Choose another parameter or press **SELECT** to exit back to normal operation.

### 2.1) Time/Date

- Be sure you are in the setup mode. The max and min LEDs should be flashing.
- Press the **TIME** button (press on the word TIME). The current time will appear.
- Press the **MAX** button once. Use the **MIN** and **MAX** buttons to select 12 hour or 24 hour format. Press **SELECT** to accept.
- Press the **MAX** button once. The hour will now be flashing. To change the hour press the **MAX** button to increase and **MIN** to decrease it. The hours are shown in 24-hour military time.
- Press the **SELECT** button when the hour is correct. The minutes will now flash. Repeat the same steps as with the hour adjustment.
- Press **SELECT** when done. Note that the seconds are set to zero when **SELECT** is pressed.
- The month will flash. Set the month in the same way.
- Press **SELECT** when done.
- The day will flash. Set the day in the same way.
- Press **SELECT** when done.

## 2.2) Parameter Units

Units of temperature, wind speed, rainfall and barometric pressure can be set independently in the setup mode.

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### 2.21) Temperature

- Be sure you are in the setup mode. The max and min LEDs should be flashing.
- Press **TEMPERATURE** (press the word TEMPERATURE).
- The temperature display will show either “U 0” or “U 1”. This indicates the selected temperature units. “0” is for Fahrenheit and “1” is for Celsius. The THI units are also set by this option.
- Press **MAX** button to select Celsius (“1”) or **MIN** for Fahrenheit (“0”).
- Press **SELECT** when done.

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### 2.22) Wind Speed

- Be sure you’re in the setup mode. The max and min LED’s should be flashing.
- Press **WIND SPEED** (press on the words WIND SPEED).
- The wind speed display will show “U.0”, ”U.1”, ”U.2” or “U.3”. This indicates the selected wind speed units.
- “U.0” is miles per hour, “U.1” is kilometers per hour, ”U.2” is knots and “U.3” is meters per second.

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### 2.23) Rainfall

- Be sure you are in the setup mode. The max and min LED’s should be flashing.
- Press **RAINFALL** (press on the word RAINFALL).
- The rainfall display will show either “U. 0” or “U. 1”
- Press **MAX** button to select mm (“1”) or **MIN** for inches (“0”).
- Press **SELECT** when done.
- You can preset both rainfall counters by adjusting the value up and down using the **MIN** and **MAX** buttons. Press **SELECT** after each adjustment to save the preset value.

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## 2.24) Barometer

- Be sure you are in the setup mode. The max and min LED's should be flashing.
- Press **BAROMETER** (press on the word BAROMETER).
- The barometer display will show either "U. 0" or "U. 1".
- Press **MAX** button to select millibar ("1") or **MIN** for inches ("0").
- Press **SELECT** when done.
- Assuming no offset has been entered, the current absolute pressure will be displayed.
- Call a local airport for the current sea-level pressure.
- Adjust your display to match this value by pressing **MAX** to increase the value and **MIN** to decrease it.
- **OPTIONAL:** To display the actual offset value press **MAX** and **MIN** at the same time. You can set this back to zero by pressing the **SELECT** key. You must be holding down both **MAX** and **MIN** when you do this.
- Press **SELECT** when done.

## 2.3) Brightness

Pressing the Brightness button will dim the displays. If the displays are already dim they will return to full brightness.

## 2.4) Automatic Toggling of Displays

Display windows with multiple parameters can be set to toggle every two seconds. One or multiple windows can be set to toggle.

The following windows can be set to toggle:

- Time/Date
- Temperature
- Humidity/THI
- Rainfall

**To start a window to toggle:** Press **SELECT** then the button below the window you wish to scroll. To stop a window scrolling, press the button below the window.

## 2.5) Fine Tuning Temperatures

The inside temperature is affected by a number of environmental factors. You may wish to adjust the temperature offset up or down by a couple of degrees to compensate for these factors. Only perform these adjustments once the unit has had time to stabilize (30 min after power up).

- Enter the Setup mode by pressing **MAX** then **SELECT**. The max and min LEDs should be flashing.
- Press **TEMPERATURE**
- Press **SELECT**. The designator setting “ch” or “ch1” will be displayed.
- Press **BRIGHTNESS once for inside temperature or twice for outside temperature**. The current temp will be displayed. This value may be adjusted by adding an offset. Don't change this unless you are sure the value is not correct.
- Press **MAX** to increase the offset and **MIN** to decrease it.
- Press **MAX** and **MIN** at the same time to display the actual offset value. You can set this back to zero by pressing the **SELECT** key. You must be holding down both **MAX** and **MIN** when you do this.
- Press **SELECT** when done.
- Press **SELECT** again to exit the setup mode.

## 2.6) Setting Temperature Characters

A designated temperature character can be enabled in the temperature window. This feature is typically only used when the temperature window is set to scroll. To set or clear this feature follow these steps:

- Enter the Setup mode by pressing **MAX** then **SELECT**. The max and min LEDs should be flashing.
- Press **TEMPERATURE**. The current units will be displayed either “U 0” or “U 1”.
- Press **SELECT**. The designator setting “ch 0” or “ch 1” will be displayed.
- To enable the designator press the **MAX** button “ch 1”. To clear the designator press the **MIN** button “ch 0”.
- Press **SELECT** when done.
- Press **SELECT** again to exit the setup mode.

### 3) Operating the Display

For a detailed explanation on each parameter display, refer to Section 1.4.

#### 3.1) Selecting Display Parameters

Pressing the button below a display will cycle through the available display options. The LED next to the display will indicate the current selection. The scroll mode will cycle through these selections automatically. Refer to Section 2.4 to set auto scroll.

#### 3.2) Turning Displays On and Off

Displays may be turned on or off independently.

- Enter the Setup mode by pressing **MAX** then **SELECT**. The MAX and MIN LEDs should be flashing.
- Press **BRIGHTNESS**.
- Each display will show either “on” or “oFF”.
- To change a display’s status, press the button below the desired display (for example, “TIME”.) This will toggle the status.
- Press **SELECT** when done.
- Press **SELECT** again to exit the setup mode.

#### 3.3) Displaying Minimums and Maximums

To display a maximum value, press **MAX**, then press the button below the desired display. The maximum value will be displayed along with the date and time of occurrence. The “min” or “max” of the current selection will be displayed. Ensure that the desired selection is being displayed before doing the max/min sequence. If the window is scrolling, stop it by pressing the button below the display before pressing **MAX**.

#### 3.4) Resetting Minimums and Maximums

Minimum values are displayed in the same manner as the maximums. Maximums and Minimums can be reset by pressing **SELECT** while a max or min is being displayed. The new value will flash to indicate that it has been reset.

### 3.5) Resetting Rainfall

To reset rainfall counters first select which counter you want to reset by pressing the **RAINFALL** button. The LED will indicate which counter is selected (CUR or ACC). Press the **MAX** button then press the **RAINFALL** button. Press **SELECT** while the last time/date reset is being displayed in the time window.

### 3.6) Presetting Rainfall Counts

Both rainfall counters can be preset to any value between 0 and 99.99. To set follow these steps:

- Enter the Setup mode by pressing **MAX** then **SELECT**. The MAX and MIN LEDs should be flashing.
- Press **RAINFALL**. The current units will be either “U 0” or “U 1”.
- Press **SELECT**. Adjust the CUR counter using the **MAX** and **MIN** buttons.
- Press **SELECT** when done.
- Press **SELECT** again to exit the setup mode.

### 3.7) Locking the Display

The display can be locked to prevent tampering. The lock will disable the **SELECT** key. This will disable the following functions:

- Min and Max reset.
- Entry into the setup mode.
- Entry into the diagnostic mode.

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#### 3.71) Lock Display

- Enter the Setup mode by pressing **MAX** then **SELECT**. The max and min LED's should be flashing.
- Press **HUMIDITY**.
- The display will show either “run” or “Loc”.
- Toggle this selection by pressing **HUMIDITY**.
- When “Loc” is displayed press **SELECT**.
- Press **SELECT** again to exit the setup mode.

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### 3.72) Unlock Display

- Press **HUMIDITY** and **BAROMETER** together. This will cause the unit to reset. When the unit resets, “- - - -” will be shown in the windows until data is received again. If the display is powered down it will automatically unlock.

**NOTE:** To exit the setup mode at any point, keep pressing **SELECT** until the unit returns to normal operation (In most cases twice).

## 4) Diagnostic Mode

The diagnostic mode is seldom needed or used. It provides information about sensor unit voltage, software versions, communications, and the ability to reset the display back to factory defaults.

Enter the diagnostic mode: Press  then 

**BE SURE TO RECORD THE FOLLOWING VALUES BEFORE RESETTING YOUR DEVICE!**

- **HUMIDITY** – shows the software versions of the display and sensor unit. The two digits on the left represent the display version number and the two on the right is the station version.
- **TEMPERATURE** – for checking the battery condition of the sensor unit. The value toggles between the current, maximum, and minimum battery voltage during the last 24 hours.
- **TIME** – for communication diagnostics. The number on the right indicates the reception of good data packets. Bad data packets are displayed on the left.
- **WIND SPEED** – for communication diagnostics. The value increments with every data byte received. The number wraps at 100. The byte count as well as the packet counters can be reset by pressing the wind speed button.

## 4.1) Factory Reset

The display can be reset to factory defaults if the **BAROMETER** button is pressed while in Diagnostic mode.

**BE SURE TO RECORD DIAGNOSTIC VALUES FROM SECTION 4 BEFORE RESETTING YOUR DEVICE!**



Once the button has been pressed, the unit will reset. The EEPROM memory is tested; this may take a few seconds. If the process is halted and the time display shows “bad,” contact the RainWise Service Department.

## 5) Product Support

Product support can be found at Rainwise.com at the bottom of your products web page. Documents are available here along with frequently asked questions. If your support inquiry is not resolved by troubleshooting or our product support, you may wish to contact RainWise.

A screenshot of a website's product support page. At the top, there are two tabs: "Product Features" and "Product Support", with "Product Support" being the active tab. Below the tabs, the heading "Documentation &amp; Downloads" is followed by a paragraph: "Most often, your support inquiry can be resolved by consulting our extensive collection of product documentation and/or software downloads. Please review the set of available documentation and/or downloads available for this product below:". Below this is a list item with a PDF icon and the text "Info: IP-100 Diagram - Download". Further down, the heading "Before you contact support..." is followed by a paragraph: "Before you contact RainWise support, please review our frequently asked questions for this product." Below that is the heading "Contact Support" followed by a paragraph: "If your support inquiry is not resolved by consulting either our documentation or our downloads, you may wish to contact RainWise Support." At the bottom, there is a link: "Contact RainWise Support »".



## 5.1) Contact Information

RainWise Inc.

18 River Field Road, Trenton, ME 04605 USA

Phone: (207) 288-5169

Toll Free: (800) 762-5723

Online: <http://www.rainwise.com/>

Contact Form: <http://www.rainwise.com/about/contact/#contactform>

## 5.2) Warranty

RainWise, Inc. warrants RainWise, Inc. manufactured IP-100 products against defects in materials and/or workmanship for a period of **2** years from the date of purchase and agrees to repair or replace any defective product without charge. Equipment supplied by RainWise but not manufactured by RainWise is covered by the particular warranty of that manufacturer.

**IMPORTANT:** This warranty does not cover damages resulting from accident, misuse or abuse, lack of reasonable care, the fixing of any attachment not provided with the product or damage due to a lightning strike. RainWise, Inc. will not reimburse for take-down or installation charges. RainWise, Inc. will not pay for warranty service performed by a non-authorized repair service and will not reimburse the consumer for damage resulting from warranty service performed by a non-authorized repair service. No responsibility is assumed for any special, incidental or consequential damages.

To return a unit under this warranty, call (800)762-5723 within the continental US or (207)288-5169. The service department will document the need for repair/replacement and arrange such. Shipping costs from the customer to RainWise are borne by the customer, RainWise will cover return shipment. It is the customer's responsibility to see that the unit is properly packed, preferably in the original box, because damage occurring during return shipment is not covered by this warranty.

**NOTE:** No other warranty, written or oral, is authorized by RainWise, Inc. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above exclusion and limitations may not apply to you.