NOTE: This equipment generates and uses radio frequency energy, and if not installed properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna
* Increase the separation between the equipment and the 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/television technician for help.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

GUARANTEE

RainWise, Inc. warrants this new weather station against defects in materials and workmanship for a period of two years from the date of purchase, and agrees to repair or replace any defective product without charge. Additionally, the solar panel is guaranteed for five years from the date of purchase.

This warranty does not cover damage 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 will not reimburse for take down or reinstallation charges. RainWise will not pay for any 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. 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 may vary from state to state. Some states do not allow the exclusion , incidental or consequential damages, so the above exclusions and limitations may not apply to you.

To return a unit under warranty call 1-800-762-5723. For a period of 90 days after date of purchase, RainWise will issue a UPS call tag for pickup of the equipment at your address. RainWise will also pay for return UPS charges. If expedited shipping is requested, the excess cost must be paid by the customer. After 90 days from the date of purchase, the customer is responsible for all shipping charges. Make sure that the equipment is properly packed. . . preferably in the original box, because damage incurred in shipping is not covered by this warranty.

RainWise Inc.

P.O. BOX 443 - BAR HARBOR, MAINE 04609-0443 - (207) 288-5169

Service Department:

Ph: 1-800-762-5723 Hours: 8-5pm EST
Fax: 207- 288-3477
Email: service@rainwise.com

Visit the Rainwise web site www.rainwise.com for latest information and updates.

Weather Oracle®

MKIII & MKIII-LR

Instruction Manual

REV 3.2

RainWise Inc.

P.O. BOX 443 - BAR HARBOR, MAINE 04609-0443 - (207) 288-5169

1. Connecting the Display.

Please follow the following steps in sequence to install your display.

Connecting the receiver.
The black box housing the receiver is connected to the display by means of a 5-foot cable with telephone jacks on either end. Should you wish to extend this cable please contact our service department . The unit will be damaged if the wrong cable is used.

Connecting power.
The (9 volts DC, 500mA) wall transformer is connected to the black box receiver. Use only the wall transformer supplied. The transformer is different than the standard Oracle display and computer interface. Do not attempt to use these transformers with the MK III.

Battery backup.
The display requires 5 AAA alkaline batteries for battery backup. These are installed in the back of the display. Ensure that the batteries are installed in the correct direction, refer to the diagram on the rear of the display.
Mins and maxs and other parameters are 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 won't miss any new minimum or maximum values. The batteries will last for approximately 20 hours. For extended outages remove the batteries from the unit.

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

Selecting a mounting location.
The display may be wall mounted using the keyhole slots provided or table mounted using the U-shaped metal bracket.

Wall Mounting:
Before drilling any holes, ensure that the location you have selected is within the units range. Refer to " Making sure you have communication".

The internal temperature sensor is very accurate and therefore the inside temperature reading will record the exact temperature

Quick Reference Guide

Setting the Clock/Calendar:
- MAX – SELECT – TIME – MAX
- Up/down with MIN/MAX
- SELECT when done
- Keep hitting 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 hitting SELECT to Exit

Make a window toggle
- SELECT – window button

Lock display
- MAX – SELECT – HUMIDITY
- Press HUMIDITY button to toggle to "Loc".
- SELECT twice when done.

Unlock display
- HUMIDITY and BAROMETER together.

4. Diagnostics 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.

To enter the Diagnostics Mode press **MIN** followed by **SELECT.**

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.

Press **SELECT** to exit back to normal operation.

In the event of a problem our service technicians will explain the operation of these features

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

WARNING: ALL DATA WILL BE ERASED!

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.

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 rooms ambient temperature. To compensate for this affect the offset can be adjusted. Refer to “Fine-tuning” in the Setup mode.

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

IMPORTANT: After locating the display, be sure that the receiver box is standing upright with the antenna vertical to ensure optimum reception.

Powering up for the first time
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 don’t disappear try another location. If you feel you are well within the sensor units range and there is still no reception refer to “*Diagnostic Mode*”.

2. Setup Mode.

To enter the setup mode press the **MAX** key and then press the **SELECT** key. All the displays will blank and the MIN and MAX LEDS will be flashing.

Setting the clock and date.
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.

Setting the units of measure and fine-tuning.
Units of temperature, wind speed, rainfall and barometric pressure can be set independently. You should still be in "Setup Mode" at this point indicated by blank displays and flashing MIN and MAX LEDS.

Temperature

- 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.

Wind Speed

- 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 mph, "U.1" is kph,"U.2" is knots and "U.3" is m/s.

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

Automatically toggling display windows.
Display windows with multiple parameters can be set to toggle every two seconds. One, all or none of the windows can be set to toggle.

The following windows can be set to toggle:

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

To start a window scrolling press **SELECT** and then press the button bellow the window you want to scroll.
To stop a window scrolling press the button bellow the window.

3. Operating the Display.

The displays in detail.

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).
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.

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.

Displaying mins and maxs.
To display a maximum value press **MAX** and 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 first by pressing the button below the display before pressing **MAX.**

Resetting mins and maxs.
Minimum values are displayed in the same manner as the maximums.
Maxs and mins 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.

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.

- Select an option using the **MAX** and **MIN** buttons. Press **SELECT** when done.

Rainfall
- Press **RAINFALL** (press on the word RAINFALL).
- The rainfall display will show either " U 0" or "U 1". This indicates the selected units. "0" is for inches and "1" is for millimeters.
- 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.

Barometer
- Press **BAROMETER** (press on the word BAROMETER).
- The barometer display will show either " U 0" or "U 1". This indicates the selected units. "0" is for inches of Mercury and "1" is for millibars.
- Press **MAX** button to select mbar ("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 Step*) 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.

Turning displays on and off.
Displays may be turned on or off independently.

- Press **BRIGHTNESS**.
- Each display will show either "**on**" or "**oFF**".
- To change a display's status, press the button below the desired display. This will toggle the status.
- Press **SELECT** when done.

Press **SELECT** to return to normal operation.

Now that the clock is set, you should reset all the min's and max's as well as the rainfall counters. – See *4. Operating the Display.*

Regarding the Setup Mode…

After entering the setup mode you can change one or all of the parameters, there is no set sequence. Simply 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.

Fine tuning inside temperature.
As 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 this adjustment once the unit has had time to stabilize. This may take up to 30 minutes after initial power up.
Follow these steps to perform the adjustment.

- Enter the Setup mode by pressing **MAX** followed by **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.
- Press **BRIGHTNESS**.
  The current inside temperature will be displayed. This value may be adjusted by means of adding an offset. Don’t change this unless you are sure that 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.

Setting the temperature designator character.
A designator character can be enabled in the temperature window.
This feature is typically 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** followed by **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.

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** followed by **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.
- Adjust the ACC counter in the same way.
- Press **SELECT** when done.
- Press **SELECT** again to exit the setup mode.

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.

To lock the display do the follow:
- Enter the Setup mode by pressing **MAX** followed by **SELECT**. The max and min LEDs 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.

To unlock the display press **HUMIDITY** and **BAROMETER** together. This will cause the unit to reset. When the unit resets “- - - -” will be shown in the windows until information is received from the roof top sensor assembly.
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).