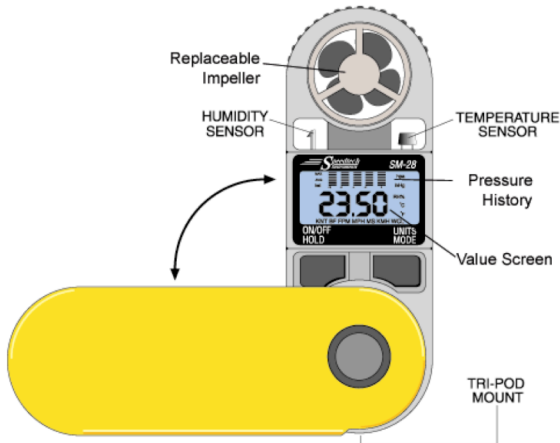


# Skymate Pro Users Manual V 1102

## Getting Started

Your Skymate Pro package contains one 400-Hr Lithium CR2032 battery (see the battery section for installation instructions) and a lanyard. Voltage input numbers for humidity calibration can be found inside the hard case. It is very important that you keep the calibration numbers for future calibration needs. Please note that the unit does come factory calibrated, and calibration is not necessary upon receipt. To install the lanyard, feed one end through the hole at the bottom of the handle and tie it to the other end. Open case and click into fully opened position or, if using a tripod, click to the 90-degree position. Your Skymate Pro's sensors are extremely sensitive. Hold the Skymate Pro at the bottom of the handle, away from your face and body, to avoid getting false readings. **It is also important that you do not touch the sensors.**



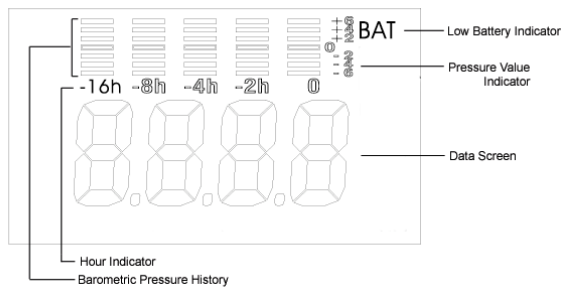
### Operating Modes:

Turn the unit on using the ON/OFF button on the left. Use the MODE button on the right to scroll to the desired function. To turn off the unit, press and hold the ON/OFF button for 3 seconds, until the display is blank, then release.

### Changing the Units of Measure:

With the Skymate Pro on, change the units of measure by selecting the mode you wish to change (i.e. Windspeed). Next, press and hold the ON/OFF button and, while holding, press the MODE button to change the units of measure.

## General Indicators



### Bar Graph:

Using the bar graph: The bar graph represents a 16-hour history of the barometric pressure. The column labeled "0" indicates the current pressure. Each horizontal bar represents +/-2 mb/hpa as indicated by the pressure value indicator. *(Please note that the bar graph will not be displayed until barometric history has accumulated, as the Skymater only records barometric pressure while the unit is on.)*

### Low Battery Indicator:

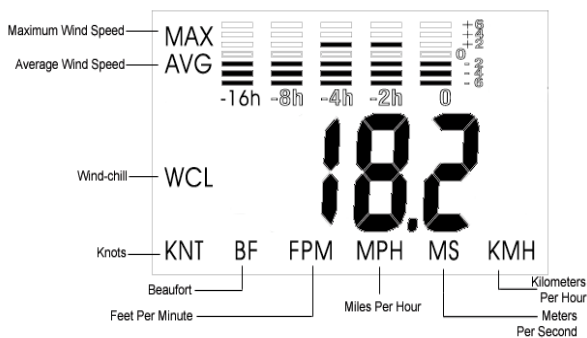
Indicates the battery is running dry.

### Data Screen:

Indicates the value of data being collected by the Skymate Pro.

## Modes

### Wind Speed



### Units of Measure:

The Skymate Pro measures windspeed in six different units of measure: Knots, Beaufort, Feet Per Minute, Miles Per Hour, Meters Per Second, and Kilometers Per Hour. To switch between units of measure please see the Units of Measure section for instructions.

### Current Windspeed:

In current windspeed mode, only the unit of measure will be shown.

### Maximum Windspeed:

Displays maximum speed recorded since the unit was turned on.

### Average Windspeed:

Displays a running average over ten seconds.

### Wind-Chill:

Displays the effect that air temperature combined with windspeed has on human skin.

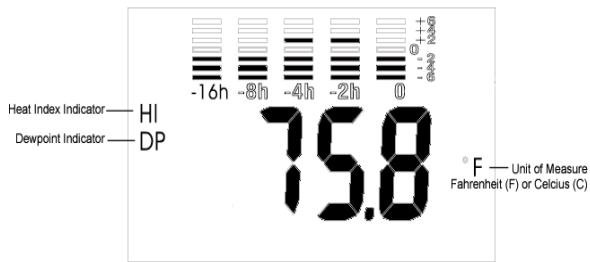
## Temperature

### General Temperature:

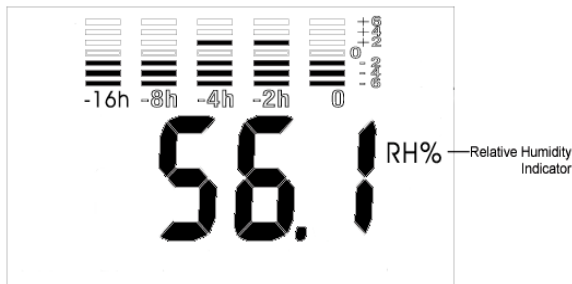
Displays the temperature in Fahrenheit or Celsius.

### Heat Index:

Displays the measure of how humidity acts along with high temperatures to reduce the body's ability to cool itself. In most cases, the heat index will be lower than the temperature.



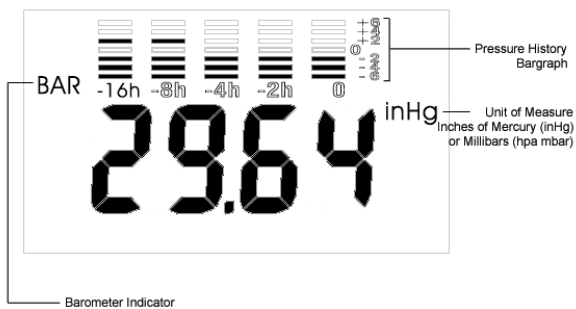
## Relative Humidity



### General Relative Humidity:

Displays the current relative humidity. Relative humidity is the amount of water vapor measured in the air, divided by the potential amount of vapor that the air can hold – at that temperature. **Your Skymate Pro comes pre-calibrated from the factory for relative humidity.** However, the Skymate Pro can be calibrated manually for more demanding field requirements. To calibrate the relative humidity, see the Humidity Calibration section.

## Barometric Pressure



### Unit of Measure:

The Skymate Pro can display barometric pressure in inches of mercury (inHg) or in millibars / hectopascals (hpa mbar).

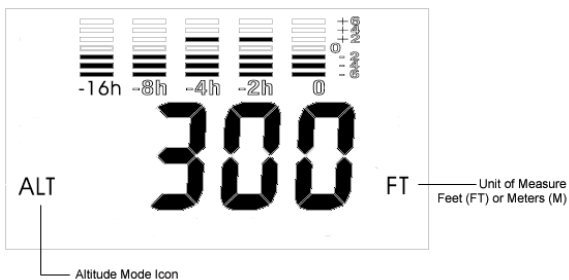
### Barometer Indicator:

Indicates the unit is in barometric pressure mode.

### Pressure History Bar Graph:

Displays barometric pressure history for the past 16 hours. Note: The unit must be on for 16 hours before the complete graph is displayed. For more information, please see section titled Bar Graph.

## Altitude



### General Altitude Mode:

The Skymate Pro can register altitudes between -650 to 9000 meters. During altitude use, the storm alarm is disabled to prevent false alarms from changes in pressure. Note: Altitude changes occur with air pressure changes, therefore it is useful to re-calibrate periodically.

### Altitude Mode Icon:

Indicates the unit is in altitude mode.

### Unit of Measure:

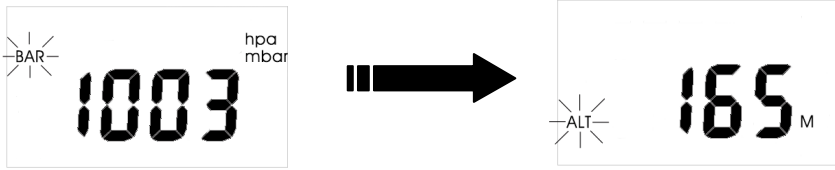
The Skymate Pro can display altitude in feet (FT) or meters (M).

## Calibration

### Barometric Pressure: First obtain a nearby, reliable reading.

While the unit is **off**, press and hold the on/off key for 2 seconds. The screen will display current pressure with a flashing "BAR" indicator on the left side. When you see the indicator flashing, release the on/off button. Press the on/off key to go **up** in units, press the mode key to go **down** in units. If you are calibrating your Skymate Pro using inHg as your unit of measure, convert the value to millibars by multiplying by 33.86. The Skymate Pro only allows calibration in millibars. After calibrating barometric pressure, wait 5

seconds and the unit will automatically go into altitude calibration. If you do not wish to calibrate altitude, simply leave the unit on and it will return to its normal operating mode. The changes have now been stored until you recalibrate it.



**Altitude: First obtain your local altitude.**

With the unit off, press and hold the on/off key for 2 seconds. You will see the flashing “BAR” indicator on the left. After flashing for 5 seconds, it automatically moves to Altitude calibration mode and you will see the current altitude and a flashing “ALT” indicator. Press the on/off key to go **down** in units, press the mode key to go **up** in units. The altitude can only be calibrated in meters. If you are calibrating your altitude and you know the value in feet, convert it by dividing the value in feet by 3.3. When you have completed the calibration, the unit will automatically return to normal operation in a few seconds. The changes have now been stored until you recalibrate it.

**Humidity (Your Skymate Pro comes pre-calibrated from the factory. You do NOT need to calibrate upon receipt.)**

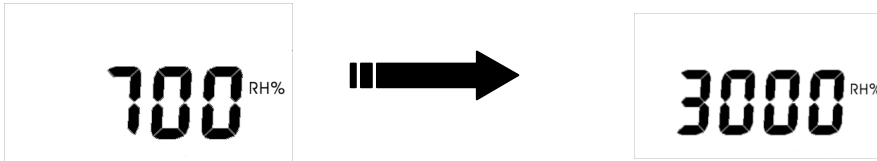


Figure A

Figure B

First, locate the calibration paper that was supplied with your Skymate Pro (it is a small white slip of paper with numbers on it). You will find on the bottom left corner the word **VOUT**, followed by two numbers (voltage input value at 0% and 75%). It will look similar to this:

**Example: Vout @0% = 0.744 @75.3% = 3.056**

With the unit on, press and hold the on/off button for 10 seconds. The display will turn off and then back on, displaying the number 700 (Fig. A). Enter the **first voltage input number** (in the above example, the number is 744) into this screen by pressing the mode button to scroll up (omitting the decimal). **Note:** When in humidity calibration mode, the mode button only scrolls up, not down, so it is important that you do not miss the number you are entering. When finished, press the on/off button again, you will see the number 3000 (Fig. B). Enter the **second voltage input number** (3056 in the example above), using the same procedure as before. To store the changes, press the on/off button. The unit will then shut off with the new values stored internally. (Even though they show default values again when you return to calibration mode, the unit did hold the calibration.) **NOTE:** It is **very important** that the voltage input information be kept with your Skymate Pro instructions. If this paper is lost, you will need to call Speedtech's technical support line at 703.759.0511 to return your unit for recalibration.

**Impeller Replacement:**

To replace the impeller, use a small screwdriver (preferably a #2 Phillips head screwdriver) to loosen the set-screw found on the back of the weather monitor. Remove the impeller by twisting the impeller assembly clockwise (if you are facing the back of the windmeter) to the “O” position marked on the rear of the meter.

**Battery:**

To replace the battery, turn the compartment cover in a counter-clockwise direction to remove it. The battery will be visible in the battery compartment. Be sure to observe the position of the battery and replace with a new **CR2032 lithium battery** in the same position. Lithium batteries, including the CR2032, can be purchased anywhere batteries are sold.

**To conserve battery life, either turn the unit off or leave it in barometer mode when not in use.** Different modes have different drains on the battery. When left on in barometer mode, the battery should last 400 hours. Wind speed will drain the battery most rapidly, followed by relative humidity.

**Severe Weather Alarm:**

The severe weather alarm will sound if there is a dramatic change in pressure. The feature is set to go off if the air pressure changes by 6 millibars (up or down) within a 3-hour period. (This is a good indication of severe weather approaching.) The alarm will sound once for five seconds. If the pressure continues to change by the same amount, the alarm will continue to sound once every hour.

**Note:** the storm alarm feature is disabled when the Skymate Pro is in Altitude mode. This is to prevent the alarm from sounding false alarms as your altitude changes (due to the altitude's effect on air density).

**IMPORTANT !** This instrument is designed as an aid to users who are in an open air environment, but IT CANNOT replace advice and warnings from the local weather station. This means that you should regularly check and compare the measurements provided by your instrument with the information put out by the weather station. Open-air climatic conditions can sometimes change quite dramatically and this can happen very quickly indeed. Sunny weather can, for example, change to thunderstorm conditions in the space of half an hour and sometimes less. You should therefore always follow basic safety rules whenever you undertake open air activity. Weathertec Equipment - Weathertec GmbH can in no way be held responsible for any consequences, direct or indirect, or for any prejudice, which might result from the use of this instrument.

**Limited Warranty:**

Weathertec Equipment - Weathertec GmbH warrants this unit to be free from defects in material and/or workmanship for a 2-year period beginning from the date of purchase. This warranty does not cover second-hand ownership or products that are purchased for

sale or lease to another. This warranty does not cover damage resulting from acts of God, lightning accident, misuse, improper installation or operation, or unauthorized repair or alteration. If this unit has become defective within the two years after purchase, return it to the retailer where it is obtained (with all of the original packing materials and parts) for reconditioning or replacement. Whether or not to replace or recondition the unit would be decided by the retailer. The replaced / reconditioned unit will be warranted for a period of 90 days or the remainder of the original two years period, whichever is longer. To obtain warranty service on your unit, you must provide proof of date of purchase. We strongly recommend that you keep your sales receipt and all of the packing materials in order to take advantage of your Skymate Pro's limited warranty. Include all accessories and operational manual when returning to the retailer. A brief description of the defect and a copy of your sales receipt.

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<http://www.weathertec.de>