SPER
SCIENTIFIC

Environmental Measurement Instruments

Anemometer/Thermometer
840003

840003 Anemometer/ Thermometer measures both air speed and temperature in a light weight, compact unit. Measures air velocity in 5 scales: m/s, km/hr, mile/ hr, knots, or ft/min, as well as temperature in ºC or ºF. Other features include hold, max/min, a USB computer interface, auto power off, low battery indicator, and a large LCD with dual display and audible “beeps” when buttons are pressed.

OPERATING INSTRUCTIONS

Measuring Air Velocity

1. Press the **POWER** button to turn the meter on. The full display appears briefly.
2. The unit is ready for use when “vel” (velocity) and the ambient temperature are displayed.
3. Place the unit in front of the air source. The measurement is displayed.
4. Press the **SCALE** button to switch units of measure: ft/m, mile/hr, or knots in the US mode, and m/s, km/hr, or knots in the metric mode.
5. For measuring air velocity in difficult to reach areas, press the **HOLD** button during the reading. This “freezes” the measurement on the display. Press the **HOLD** button again to exit this feature.

Continuous Moving Average

(displayed for up to 2 hours provided the Automatic Shut Off feature is disabled)

1. Press the **POWER** button to turn the meter on.
2. Place the unit in front of the air source.
3. Press the **MAX/MIN** button. The LCD displays “AVG” and the moving average, with updates every second.

Max/Min/Average (Single Point)

1. Press the **POWER** button to turn the meter on.
2. Place the unit in front of the air source.
3. Press the **MAX/MIN** button to record the readings.
4. Press the **HOLD** button before moving the meter away from the air source.
5. Press the **MAX/MIN** button twice to display the minimum velocity. “MIN” is displayed.
6. Press the **MAX/MIN** button again to display the maximum velocity. “MAX” is displayed.
7. Press the **MAX/MIN** button again to display the average velocity. “AVG” is displayed.
8. To clear the readings, either turn off the unit or press the **MAX/MIN** button until the unit beeps twice.

Air Velocity Average (Multi-Point)

1. Press the **POWER** button to turn the meter on.
2. Place the unit at the first point to be measured.
3. Press the **HOLD** button to store the first measurement. The unit will beep once and display “HOLD.”
4. Press the **MAX/MIN** button. The unit will beep once and a digit from the one to eight will be displayed. This represents the point being recorded. Repeat the process up to eight times.

5. Once all measurements have been recorded, press the **AVERAGE** button to display the average air velocity and the number of points measured.

Default Settings (US/Metric and Baud Rate)

1. Turn on the meter by pressing both the **POWER** and the **AVERAGE** buttons.
2. Release the **POWER** button first. Release the **AVERAGE** button when “Ft/min” “M/s” “°F” and “°C” appear on the LCD.
3. Either “Ft/m” and “°F” or “M/s” and “°C” will be displayed. To switch modes, press the **HOLD** button for metric, or the **AVERAGE** button for US settings.
4. Save the setting by pressing the **MAX/MIN** button. “S” will display.
5. Press the **HOLD** button to continue to the baud rate selection.
6. Set the baud rate required by your software’s instructions. For 840052, make sure that the software and the meter are both set to 2400 baud rate.
7. Press the **AVERAGE** button to select 2400, or the **HOLD** button for 1200.
8. To save the settings, press the **MAX/MIN** button. When “S” is displayed, press the **HOLD** button to exit this function.

USB CONNECTION (OPTIONAL CABLE REQUIRED)

Plug the 3.5mm cable jack into the meter's USB output and the 9-pin connector into the computer's COM port. Press the **POWER** button to turn the meter on.

Format: 1 Stop Bit, 8 Data bits, TXXXX.XF, VXXXXFTM, TXXX.XC, VXXXXMPS

AUTOMATIC SHUT OFF

After about 15 minutes without activity, the meter will beep 3 times then shut off to preserve battery life. To disable:

1. With the unit turned off, simultaneously press the **POWER** and **HOLD** buttons.
2. Release the **POWER** button.
3. When "n" displays, release the **HOLD** button. The meter will remain on until the **POWER** button is pressed again.

BATTERY REPLACEMENT

Replace the 9V battery when "LOW BATTERY" is displayed. In-spec measurements may be made for several hours after the low battery indicator appears.

PRECAUTIONS

- **DO NOT** use the meter in air velocities that exceed the specified range.
- **DO NOT** use the meter at or near hurricane wind velocities.
- **DO NOT** use the meter in air that exceed the operating temperature range.

SPECIFICATIONS

Range	Resolution	Accuracy
80 to 5900 ft/min	1	±3%
0.4 to 30 m/sec	0.01	
0.9 to 68 mil/hr	0.1	
0.8 to 58 knots		
1.4 to 108 km/hr		
-10 to 50°C	0.1	±0.6°C
+14 to 122°F		±1.0°F

Battery Life: Apx 100 hrs

Max. Reading: 9999

Sampling Time:
Meter = 1 second; USB output = every 2 sec.

Dimensions: 7¼" × 3" × 1¾" (184 × 76 × 44 mm)

Weight: 7 oz (198 g)

WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for period of **five (5) years** from the date of purchase and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted, if available. This warranty does not cover probes, batteries, battery leakage, or damage resulting from accident, tampering, misuse, or abuse of the product. Opening the meter to expose its electronics will void the warranty.

To obtain warranty service, ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.
8281 E. Evans Rd, Suite #103
Scottsdale, AZ 85260

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at www.sperwarranty.com within 10 days.

Please note: The most current version of the manual can always be found at www.sperdirect.com