FIVE YEAR WARRANTY
Sper Scientific warrants this product against defects in materials and
delivership for a period of five 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
damage resulting from accident, misuse, or abuse of the product. In
order to obtain warranty service, ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.
7720 East Redfield, Suite 7, Scottsdale, Arizona 85260
(480) 948-4448, www.sperscientific.com

Please Note: The defective unit must be accompanied by a description of the problem and your
return address. Please be sure to return your warranty registration card within ten (10) days of
purchase.

CFM ANEMOMETER
840033
Instruction Manual

Sper Scientific  Environmental Measurement Instruments
I. INTRODUCTION

Your CFM Anemometer reads air velocity in m/s, km/h, mile/h, knots, or ft/min, air volume in CFM or CMM and temperature in °C or °F. Other features include min-max, hold, an RS232 computer interface, auto power off, low battery indicator, large LCD with dual display and a detachable probe for easy replacement and repair.

II. PANEL DESCRIPTION (see Figure A, page 3)

1. Display 9. ▲ (Up) button
2. POWER button 10. FLOW MODE button
3. HOLD button 11. AVG. START button
4. °C/°F button 12. ENTER/RESET button
5. MAX/MIN (Record) button 13. SAMPLE AREA button
6. UNIT (Down) button 14. PROBE INPUT socket
7. VEL/FLOW button 15. RS232 Out socket
8. ◄ (Select) button 16. VANE PROBE head

III. OPERATING INSTRUCTIONS

A. Air Velocity Measurement
   - Attach the probe plug to the PROBE INPUT socket.
   - Power on the unit by pressing the POWER button.
   - Press the VEL/FLOW button to select the velocity mode. "VEL" is displayed.
   - Press the °C/°F button to select the temperature scale.
   - Press the UNIT (Down) button to select the desired unit of measure (mph, ft/min, knot, Km/h, or m/s).
   - Obtain your measurement by aiming the VANE PROBE head into the direction of the airflow.

V. ACCESSORIES

Included Instructions, probe, hard carrying case, and 9V battery.

Optional Part Number and Description
840055 - RS232 Cable
840090 - Water Resistant Instrument Pouch
840094 - USB Converter
850080 - Intelligent Software
D. Automatic Shut Off
Your meter has an automatic shut off function in order to prolong battery life. After approximately 10 minutes without activity (no buttons pushed), the meter will automatically shut off. To disable this feature, press the MAX/MIN (record) button. "REC" is displayed.

E. Battery Replacement
Replace the 9V battery when "LBT" is displayed in the left corner of LCD. In-spec measurements may be made for several hours after the low battery.
B. Air Flow Measurement

- Attach the probe's plug into the PROBE INPUT socket.
- Power on the meter by pressing the POWER button.
- Press the VEL/FLOW button to select the flow mode. "FLOW" is displayed.
- Press the UNIT (Down) button to select CMM ($\text{m}^2$) or CFM (ft$^2$).
- Press the SAMPLE AREA button to set the area. A rectangular box is displayed and the first digit blinks.
- After you set the area value, press ENTER/RESET button to complete the area setting procedure.

Hold Function
- During the measurement, press the HOLD button to freeze the measurement. "HOLD" is displayed.
- Press the HOLD button again to exit the hold function.

Record (MAX/MIN)
- Press the MAX/MIN (record) button to enter the record mode. "REC" is displayed. At the same time, the meter records the air flow.
- Press the MAX/MIN (record) button again and "Max" is displayed. At the same time, the maximum air flow measurement taken during the recording procedure is displayed.
- Press the MAX/MIN (record) button again and "Min" is displayed. At the same time, the minimum air flow measurement taken during the recording procedure is displayed.
- Press and hold the MAX/MIN (record) button for approximately 3 seconds to exit the record mode.

C. RS232 PC Serial Interface

The unit features an RS232 Output (2-2) via a 3.5 mm terminal. The output is a 16 digit data stream which can be adapted to the user's specific application. Optional RS232 Cable 840055, or an RS232 lead with the following connection is required to link the instrument with the computer:

<table>
<thead>
<tr>
<th>Meter (3.5 mm jack plug)</th>
<th>PC (9W D Connector)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Pin</td>
<td>Pin 2</td>
</tr>
<tr>
<td>Ground/shield</td>
<td>Pin 5</td>
</tr>
</tbody>
</table>

RS232 Settings:
- Baud Rate 9600
- No parity
- 8 Data bits
- 1 Stop bit

The 16 digit data stream will be displayed in the following format:

D1 D14 D13 D12 D11 D10 D9 D8 D7 D6 D5 D4 D3 D2 D1 D0

Notes: A. Under 2/3V Max and AVG modes, press the ENTER/RESET button to reset and restart measuring. B. The temperature function is not available during air flow measurement. C. The yellow mark on the VANE PROBE head indicates the opposite direction of measured air flow.