A. Measuring Air Velocity (Single Point) Feet Per Minute (FPM)

1. Press the ON/OFF button and turn meter on. Meter will show full display when first powered on.
2. Unit is ready for use when LCD display shows "vel" at upper left corner and temperature at lower right corner.

B. Continuous Moving Average

The meters displays continuous moving average for up to two (2) hours.

1. Power unit on.
2. Place sensor in front of air flow source.
3. Press MIN/MAX record key and unit will begin to display moving average. The Meter will record the reading every second.
4. Press HOLD prior to moving instrument away from air flow source to store readings.

C. MIN/MAX/AVG reading on a single point

To obtain MIN/MAX/AVG readings on a single point.

1. Power unit on.
2. Place sensor in front of air flow source.
3. Press MIN/MAX REC SINGLE POINT key. The unit will begin to record readings.
4. Press HOLD prior to moving instrument away from air flow source to store readings.
   a) Press MIN/MAX key once the screen displays AVG velocity readings under REC.
   b) Press MIN/MAX key again AVG disappears .
   c) Press MIN/MAX key again to display MIN velocity readings side by REC.
   d) Press MIN/MAX key again to display MAX velocity readings.
   e) Press MIN/MAX key again to display current velocity.
5. To clear the current MIN/MAX average readings, turn off the power or press and hold MIN/MAX key until unit beeps twice, then release.

D. Air Velocity Average for Multiple Points

1. Power the unit on and position the vane at the first point to be measured.
2. As soon as the first measurement is completed press the HOLD key until you hear a single beep, then release. The display will show Hold above the reading.
3. Press the MIN/MAX key, When you will hear a single beep release the button . The display will show a digit (1-8). This number represents the point that is being recorded.
4. Repeat this process until all desired points have been measured and recorded, A maximum of 8 points may be recorded at one time.
5. Once all measurements have been recorded press AVERAGE key. The unit will display the average air velocity reading and number of points measured.

E. Non Sleep Mode (Bypass auto power off)

1. Power unit off
2. Press ON and HOLD at the same time and then release ON only.
3. An "n" appears on the LCD then you can release the HOLD key. The instrument will remain on until the OFF button is pressed.

F. Changing the Default Setting / Imperial to Metric

The default setting for the measuring unit of air velocity is feet/min. and the unit of temperature is °F. You can change the measuring units to meter/sec and °C by following these steps:

1. Press ON and AVERAGE at the same time.
2. Release ON first, then average. the lcd will show small printing of "ft/m"(default) on the upper right corner and an "°F" on the lower right corner.
   a). Press HOLD key to change the measuring units to metric system; press AVERAGE key for imperial measuring units.
   b). Press MIN/MAX REC key and an "S" will show on the LCD. Press HOLD to confirm and save the changed value. At this time, the baud rate "2400" (default) appears on the screen to be followed by Step 1 for changing RS232 output (if necessary).

G. Setting the RS232 Output (optional accessory)

By following the Steps under E you will see a "2400" (default) number on the screen. The 2400 is the default setting of the baud rate for RS232 output. You can change the setting to "1200" by following these steps:

1. Press HOLD Key, The setting can be changed back to "2400" by pressing the AVERAGE key.
2. Please remember to save your changes by pressing the MIN/MAX REC key. An "S" displays on the screen. Press the HOLD key to confirm and save the changed value. The meter will return to air velocity mode automatically.

H. Auto Power Off

The unit will turn off automatically after 20 minutes to save the battery. This will be preceded by 3 beeps. Press the ON key and the unit will resume operation.

I. Measuring ft./m , MPH, Knots .

In imperial:

1. Press the SEL:.MIL/H·KNOT Key and the reading will change from ft./min to mil/h to knots in turn.

In metric:

2. Press the SEL:MIL/H·KNOT Key and the reading will change from m/s to km/h to knots in turn.

J. Direct Measuring of Air Flow (Single Point) CFM

Air Velocity measurement is calculated by multiplying the air velocity readings by the free area dimensions. Free area is published by the grill and register manufacturer you are servicing. You must first determine the free area of the air source before entering it into the meter.

1. Power unit on
2. Press MODE once (you will hear one beep). Meter will display"AREA" in upper case lettering and "1.111" will appear.The first digit will be flashing .
3. Press the HOLD key to increase the number.
4. Press the AVERAGE key to advance to next number. Follow Step 3 and repeat.
5. Press the MODE key once all digits have been entered. The word "flow"will appear.

The meter is now ready to measure air flow (CFM). To clear memory of current multi – point average readings, press and hold AVERAGE key until unit beeps twice, then release. Unit must be in velocity/FPM mode in order to clear current average readings.

K. Obtaining Air Flow(CFM)Average For Multipoints

Complete steps 1~4 in section D

Once all multipoint averages are determined:

1. Press MODE key once to confirm that the correct free area setting is locked into the instrument. (if free area needs adjustment, make necessary changes now)
2. Once free area setting is correct, press MODE key again to enter air flow mode.
3. Unit will now display average air flow reading and number of points measured.

The meter's free area dimension has been set to 1.111 square feet which is the most commonly used free area dimension in the USA. If you want to measure the air flow for a single point without changing the area dimension:

1. Power the unit on and position the fan
2. Press the MODE key twice, You will then be in the air flow(CFM) mode. The air flow displayed is equal to the current air velocity reading (FPM x Free Area=CFM) times the 1.111 square feet.

We would suggest to set the free area dimensions before you start measuring the air velocity so after you measure the air velocity, you can jump to the air flow mode to view the cubic feet per minute without further changing of the free area dimensions.

Trouble shooting

LOW BATTERY: Indicates battery is low. Please replace with a 9 volt battery.

Note:

On initial startup the unit will display flow, area, ft/mph, knots, mil/h, cfm, km/h and cms.

Specifications:

Air Flow Range:	Resolution	Accuracy
80-6900 ft/min	1	±3%FS
0.4-35 m/sec	0.01	±3%FS
Temperature:		
+14°F to 122°F	0.1	±2.0°F
-10°C to 50°C	0.1	±1.0°C

Battery Life: 100 Hours
Display Type: LCD
Display Size: 1-1/4 x 1-5/8" (37 X 42 mm)
Maximum Reading: 9999
Dimensions (L x W x D): 7-1/4 x 3 x 1-3/4" (183 x 76 x 45 mm)
Fan Diameter : 2-7/8"(70mm)
RS232 Output Format TXXX.XF, VXXXXFTM/ TXXX.XC, VXXXXMPS
Auto Power Off: 20 minutes
Data Hold