

# Vent Check Plus

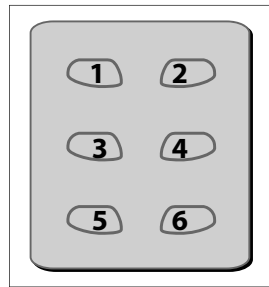


- Triple displays of CO<sub>2</sub>, temperature and relative humidity
- Stable NDIR sensor for CO<sub>2</sub> detection
- Statistics of weighted averages
- BS8494 compliant (from 10 - 60 °C)
- Backlight for working in dark areas
- Audible CO<sub>2</sub> warning alarm
- Easy manual fresh air correction on CO<sub>2</sub> and humidity
- PC connection via USB interface
- With hard case and power adaptor

## Operation

Press button 1 to turn the meter on and off.

After a 30 second warm-up the meter is ready to use and will display the normal operating screen (Fig. 2).



Keypad (Fig. 1)

Pressing button 4 will cycle through current air temperature, dew point and wet bulb temperature.

Pressing button 6 will cycle through minimum CO<sub>2</sub>, maximum CO<sub>2</sub>, Time Weighted Average (TWA - weighted average of CO<sub>2</sub> in the past 8 hours) and Short Time Exposure Limit (STEL - weighted average of CO<sub>2</sub> in the past 15 minutes) readings since power on.

Pressing button 5 will hold all current readings except TWA and STEL.

Pressing and holding button 2 for more than a second will turn the backlight on and off.

The unit will turn off automatically after 20 minutes of inactivity. To override this function, turn the unit off then restart it by holding buttons 1 and 5 together.

The meter will take a new reading every second. When the operating conditions change, the unit will respond in 30 seconds for CO<sub>2</sub> and 30 minutes for humidity.

When battery supply is low, 'Lob' will be displayed. Change the batteries or connect the DC adaptor.

**NOTE:** Do not hold the meter close to the face as exhalation can affect CO<sub>2</sub> readings.

## Display

A	<b>A</b> = CO <sub>2</sub> reading in ppm <b>B</b> = Temperature, Dew Point & Wet Bulb Temperature <b>C</b> = Relative Humidity
B   C	

Normal Operation (Fig. 2)

A	<b>A</b> = Menu name <b>B</b> = N/A <b>C</b> = Menu level (e.g. P 1.0)
B   C	

Menu Mode - Top Level (Fig. 3)

A	<b>A</b> = Current value <b>B</b> = Current menu name <b>C</b> = Menu level (e.g. P 1.1)
B   C	

Menu Mode - Lower Level (Fig. 4)

# Setup

To enter the setup mode (Fig. 3) press and hold button 1 for more than a second.

From here use buttons 2 (UP) and 4 (DOWN) to cycle through the menu screens and button 6 to access the selected menu screen (Fig. 4).

Buttons 2 and 4 can then be used to alter the alarm

threshold on menu P 1.1 and the temperature scale on menu P 3.1 (Fig. 4).

Use button 6 to save the current setting and return to the main menu screen (Fig. 3).

Press button 3 at any time to exit the setup menu.

## Fresh Air Correction & Calibration

### CO<sub>2</sub> Fresh Air Correction

It is strongly suggested that the unit be corrected in a sunny, outdoor environment that is well ventilated. Do not correct the unit in places crowded with people or close to areas with high CO<sub>2</sub> concentration such as ventilating outlets or fireplaces.

To correct the unit for CO<sub>2</sub>, place the meter in the calibration site and press and hold buttons 2 and 3 simultaneously. The unit will flash continually for about 5 minutes, then return to normal operation.

To abort correction at any time, simply turn the meter off.

**CAUTION:** The meter is corrected at ambient air of around 400ppm. Do not correct the meter in an environment with an unknown CO<sub>2</sub> concentration. Doing this could lead to inaccurate measurements.

### Relative Humidity Correction

The unit is calibrated with 33% and 75% salt solution. It is recommended that the unit is calibrated

at 25 °C and at a stable humidity.

To calibrate the unit, plug it into a 33% salt bottle then press and hold buttons 3 and 4 simultaneously. The unit will blink continuously for about 60 minutes.

Once this has completed, plug the bottle into a 75% salt bottle and press button 6 to begin the next calibration stage.

It is possible to perform only one calibration test at a time. To calibrate just 33% salt solution, press button 3 after it has finished the first stage. To calibrate just 75% salt solution, press button 2 or 4 within 5 minutes of 33% calibration having begun.

To abort calibration at any time, simply turn the meter off.

**CAUTION:** Do not calibrate the unit without the default calibration salt. Doing so can cause permanent damage. Contact the dealer for calibration salt.

## Specification

### ■ CO<sub>2</sub>

Range of 0 - 9999ppm  
(maximum alarm threshold 9900ppm)  
Resolution of 2ppm  
Accuracy ± 30ppm Vent Check Plus ±5%

### ■ Temperature

Range of -10 - 60 °C (14 - 140 °F)  
Resolution of 0.1 °C (0.1 °F)  
Accuracy ± 0.6 °C

### ■ Humidity

Range of 0.0 ~ 99.9%  
Resolution of 0.1%  
Accuracy ± 3% (10~90%), ± 5% (others)

### ■ Warm Up

30 seconds

### ■ Operating Ranges

From 0 ~ 50 °C, 0 ~ 95% RH (avoid condensation)

### ■ Storage

From -20 ~ 60 °C, 0 ~ 99% RH (avoid condensation)

### ■ Power

4 pcs AA batteries, DC Adaptor

### ■ Battery Life

> 10 hours (Alkaline)

## Troubleshooting

### ■ Can't power on

Press button 1 for more than 0.3 seconds and try again. Check whether batteries are in good contact and correct polarity is observed.

### ■ Fixed readings

Check whether data hold function was activated.

### ■ Slow response

Check whether the air flow channels on the rear are blocked.

### ■ Error messages

E01: CO<sub>2</sub> sensor damaged  
E02: The value is under range  
E03: The value is over range  
E04: The original data error results in this error  
E07: Voltage to measure CO<sub>2</sub>. Replace batteries or use an adaptor  
E11: Retry humidity calibration  
E17: Retry CO<sub>2</sub> calibration  
E31: Temperature sensor damaged  
E34: Humidity sensor damaged

