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Getting Started

Thanks for purchasing our OFPG AirCare CO2 meter! This product is used to monitor CO2 concentration, relative humidity (RH), and temperature for indoor air quality.

Packing List

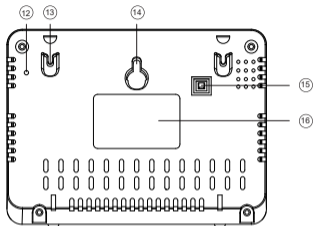
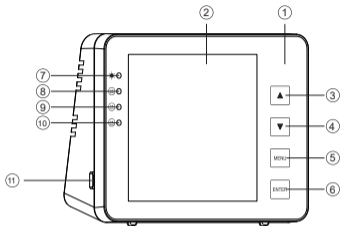
- CO2 Monitor Unit with back-up battery
- USB Cable for Power
- User's Manual
- AC Adapter

Features at a Glance

- Large Display
- Touch Button Operation
- 15° Bevel Design, Easy to Read
- Low Drift NDIR Sensor, Long Lifespan
- Audible Alarm
- Chart with Variable Time Zoom Levels
- CO2/Relative Humidity/Temperature Monitor Tracer
- CO2 Auto-Calibration and Manual Calibration
- Temp and RH Manual Calibration
- Max/Min Value Display in Certain Time
- Built-in Backup Battery












Overview

Drawing Sketch and Components List




Item	Description	Item	Description
①	Front Panel	⑨	Orange Condition Indicator
②	LCD	⑩	Green Condition Indicator
③	UP Button	⑪	USB Port
④	DOWN Button	⑫	Hole for Buzzer
⑤	Menu Button	⑬	Hole for Rope
⑥	Enter/OK Button	⑭	Hole for Screws
⑦	Battery Indicator	⑮	ON/OFF Switch
⑧	Red Condition Indicator	⑯	Label

General Operation and Settings

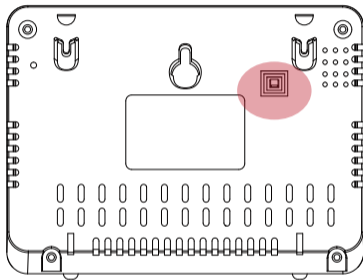
- Press down the switch on the back to activate this monitor. After 3 minutes' warm-up, your device is ready for use. See details on page 4.
- Use the provided USB cable to connect the device for charging. See details on page 5.
- Use  and  buttons to switch timeline and CO2/RH/TEMP. The trend chart displays the history records for any of the three parameters. See details on page 7.
- Press  once will bring up the main menu. To select the function, press  /  button. See details on page 9.
- Select **PLANT** to switch human  and plants  modes. See details on page 10.
- Enter **ALARM** to switch alarm  and mute . See details on page 10.
- Select **ADV** to change the high/low alarms for human  and plant . See details on page 13.
- Enter **°C/°F** to switch between temperature units °C and °F. See details on page 12.

Restore Factory Defaults

On the Detection Panel, hold  for 4 seconds until an audible beep is heard.

Switch On/Off

Press down the switch to activate this monitor. Wait for 3 minutes for the device to warm up. Press the switch again to switch off the device.



Switch on: 

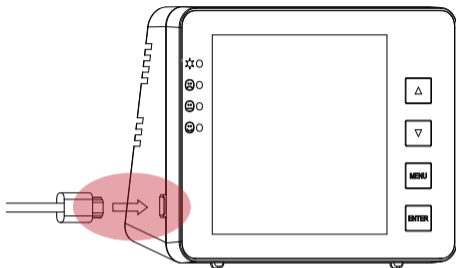
Switch off: 

Switch off the device if you plan to not use it for more than 1 week.

Power Source

Plug in USB power

When the device is ON, plug in the USB cable power.



Battery

Battery indicator

Low battery: steady red indicator (charge the device within 20 minutes to avoid battery damage)

Charging: flashing red indicator

Charged: steady green indicator

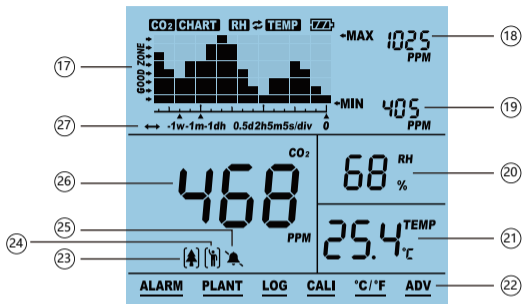
Battery recharging

When the device is ON, plug in USB cable power

Charging time: 2,5 hours (charge an extra 30 minutes after the indicator turns from red to green)


Working time: 8-10 hours

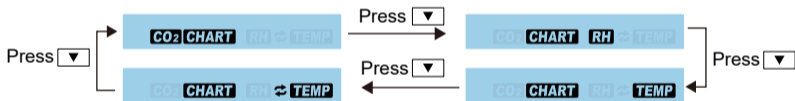
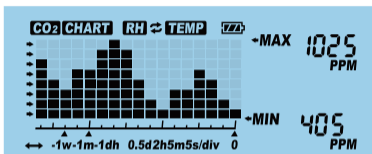
LCD Display




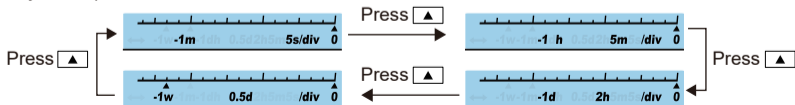
Item	Name	Item	Name
①7	CO2/RH/TEMP Chart	②3	Plant Mode
①8	Max Reading of Chart	②4	Human Mode
①9	Min Reading of Chart	②5	Audible Alarm On/Off
②0	RH Reading	②6	CO2 Reading
②1	Temperature Reading °C / °F	②7	Time per division - indicates the chart's span of time
②2	Main Menu		

Trend Chart Display

The below chart displays the past readings for any of the three parameters (CO₂/RH /Temp). There are 4 modes that can be toggled by using the  key: CO₂, TEMP, RH, and Cycle (automatically cycles through CO₂/Temp/RH).



Press  will toggle the available Zoom Levels for each parameter (minute/hour/day/week).



Below is a table that shows the available zoom levels for all parameters, as well as the duration of each division for corresponding zoom levels:

Zoom Level (Time Span)	Time per Division
1M (minute)	5sec/div
1H (hour)	5m/div
1D (day)	2h/div
1W (week)	0,5d/div

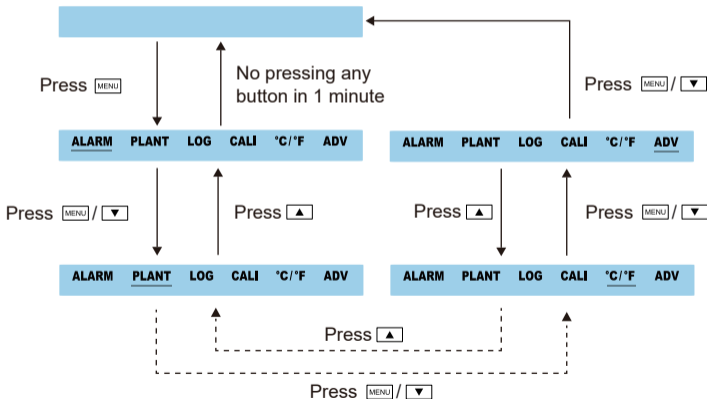
Max/Min

At the top right corner of the display, there are two numerical indicators: MAX and MIN. As the Zoom Level is changed, the MAX and MIN values will reflect the maximum and minimum values on the chart of the selected parameter (CO₂, RH and Temp).

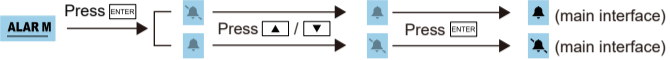


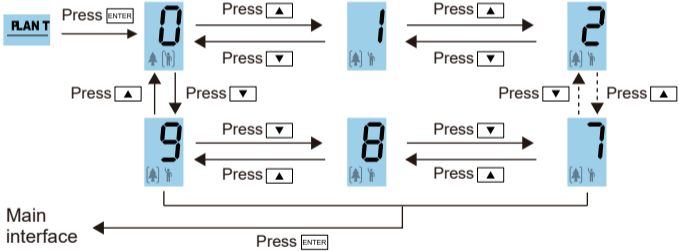
Main Menu Functions

ALARM PLANT LOG CALI °C/°F ADV

The main menu functions can be activated by pressing **MENU**. Pressing **▼** / **MENU** once will bring up the main menu, with an underlining flashing bar indicating the current choice.



To select a function, press **ENTER** when it is underlined by the flashing bar. Note that after 30 seconds if nothing is pressed, the main menu will disappear and the device will revert to the normal state.

Function	Description
ALARM	 <p>When ALARM displays , an audible alarm will sound if the CO2 level exceeds preset CO2 alarm value;  means MUTE.</p>
PLANT	 <p>Select number 0 to enter human mode. 0 is defaulted as human mode, unchangeable. The preset low and high alarm are 800 and 1200ppm. Enter "ADV" to adjust them if necessary. In plant mode, users can choose between types of plants for optimal settings by using ▲ / ▼ to cycle from 1-9. See number references with corresponding alarm settings in high and low alarms on page 17.</p>

Function	Description
LOG	<p>Press ENTER</p> <p>LOG</p> <p>CO₂ CHART 01 = 1000 777</p> <p>GOOD ZONE</p> <p>-1m 5s/div 0</p> <p>Press ▼</p> <p>-1 h 5m /div 0</p> <p>Press ▼</p> <p>-1d 2h /div 0</p> <p>Press ▼</p> <p>-1w 0.5d /div 0</p> <p>Press ▼</p> <p>Press ▶, right 2nd column flashes</p> <p>Press ▶, right 2nd, 3rd... column flashes</p>
This function allows the user to see historical data records.	

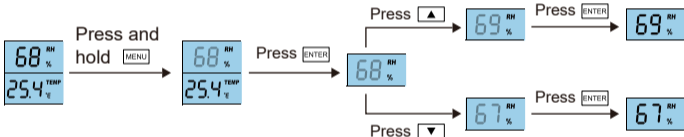
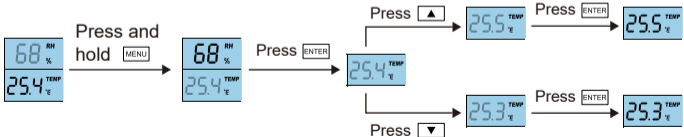
Function	Description
CALI	<p data-bbox="230 181 1263 393"> </p> <p data-bbox="216 429 1278 564"> Before calibration, run this device for at least 20 minutes with windows open or in outdoor environment with portable battery source to reach an atmosphere with 400PPM CO₂. Wait until the CO₂ reading is stable, follow above steps for calibration. After calibration leave the device for another 10 minutes before normal use. </p>
°C / °F	<p data-bbox="230 606 1159 802"> </p> <p data-bbox="216 844 1159 916"> Use this function to toggle between Celsius (°C) and Fahrenheit (°F) for the temperature display. </p>

Function	Description
ADV	<p style="text-align: center;">Press <input type="button" value="ENTER"/></p> <p style="text-align: center;">Press <input type="button" value="ENTER"/></p>
	<p>Use this function to set high and low alarm values of human mode (0) as well as the first option of plant mode (1). High and low alarms for options 2-9 under plant mode are not adjustable. See details on page 14 (appendix).</p>

RH/TEMP Calibration

This function allows the user to calibrate the temperature or humidity manually (RH = Relative Humidity, TEMP = Temperature).

In the detection mode, press and hold **MENU** for 3 seconds to bring up an underlining flashing bar of RH.

Function	Description
RH	 <p>The RH calibration process starts with a display showing 68 RH % and 25.4 TEMP °C. Pressing and holding the MENU key for 3 seconds underlines the RH value. Pressing the ENTER key moves the flashing bar to the RH value. Pressing the UP arrow key increases the RH value to 69 RH %, and pressing the ENTER key again confirms the new value. Pressing the DOWN arrow key decreases the RH value to 67 RH %, and pressing the ENTER key again confirms the new value.</p>
TEMP	 <p>The TEMP calibration process starts with a display showing 68 RH % and 25.4 TEMP °C. Pressing and holding the MENU key for 3 seconds underlines the TEMP value. Pressing the ENTER key moves the flashing bar to the TEMP value. Pressing the UP arrow key increases the TEMP value to 25.5 TEMP °C, and pressing the ENTER key again confirms the new value. Pressing the DOWN arrow key decreases the TEMP value to 25.3 TEMP °C, and pressing the ENTER key again confirms the new value.</p>

Specifications

Typical test conditions: ambient temp $23^{\circ}\text{C} \pm 3^{\circ}\text{C}$, RH 50% ~ 70%, altitude 0-10 meters

Measurement	Specifications
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Operating & storage RH	0 - 95% (non-condensing)
CO2 Measurement	
Measuring range	0 - 5000 PPM
Display resolution	1 PPM (0-1000); 5 PPM (1000-2000); 10 PPM (>2000)
Accuracy	0 - 3000 PPM: $\pm 50 \text{ PPM} \pm 5\%$ of reading (take the maximum)
	> 3000 PPM: $\pm 7\%$ of reading
Repeatability	20 PPM at 400 PPM
Temp compensation	$\pm 0,1\%$ of reading per $^{\circ}\text{C}$, $\pm 2 \text{ PPM}$ per $^{\circ}\text{C}$, referenced to 25°C
Response time	< 2 min for 63% of step change or < 4,6 min for 90% step change
Warm-up time	< 20 seconds

Temperature Measurement	
Operating temperature	32°F ~ 195°F (0°C ~ 90°C)
Display resolution	1°F / 0,1°C
Response time	< 20 minutes (63%)
RH Measurement	
Measuring range	5 ~ 95%
Accuracy	± 5%
Display resolution	1% main interface display, 1% Max/Min display
Operating Voltage	DC 5V ± 0,25V
Dimension	120mm x 90mm x 35mm
Weight	190g

Appendix

No.	Refers to	Low/High Alarm	Adjustable
0	Human	800-1200ppm	Yes
1	Customized Plant	600-900ppm	Yes
2	Bean	600-900ppm	No
3	Chillies	800-1000ppm	No
4	Cucumber	1000-1500ppm	No
5	Grape	800-1400ppm	No
6	Orchid	800-1400ppm	No
7	Potato	1200-1800ppm	No
8	Strawberry	800-1200ppm	No
9	Tomato	800-1200ppm	No



EMC 2014/30/EU - RoHS 2.0
EN 55032:2015
EN 55035:2017

SA1200P

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