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6. Specifications

1. Introduction

Dear Sir or Madam,

Thank you very much for purchasing one of our products. Before operating the data logger please read this manual carefully. You will get useful information for understanding all functions.

2. Kindly note

- Check if the contents of the package are undamaged and complete.
- For cleaning the instrument please do not use an abrasive cleaner only a dry or moist piece of soft cloth. Do not allow any liquid into the interior of the device.
- Please store the measuring instrument in a dry and clean place.
- Avoid any force like shocks or pressure to the instrument.
- No responsibility is taken for irregular or incomplete measuring values and their results, the liability for subsequent damages is excluded!

3. Delivery contents

- CO₂-Monitoring Unit with Datenlogger
- Micro USB cabel for power
- User Manual
- · AC adapter
- · Micro SD carte

4. Features at a Glance

- · CO. Monitor; Tracer
- Chart with variable time Zoom Levels
- · 2-Channel Low Drift NDIR Sensor
- Data Logger by SD card
- Real-Time colock
- · 3 color LEDs for Easy-Reading

5. Operating Instructions

Initial Setup: When first unboxing, plug in the unit to the included Micro USB (or one of your own) to almost any cell phone charger or USB power source. If successfully connected, 3 things will happen while booting up:

- 3 LEDs flash one by one
- Chart display shows the current software version & "Warm Up"
- Main display shows a countdown from 10

Once the countdown is complete, your product is ready to use. No initial setup or calibration is needed.



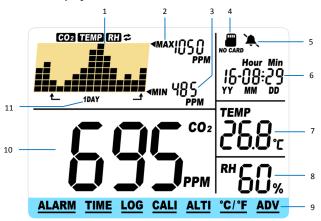
1. Plug in USB Power Cable



2. Plug in SD Card



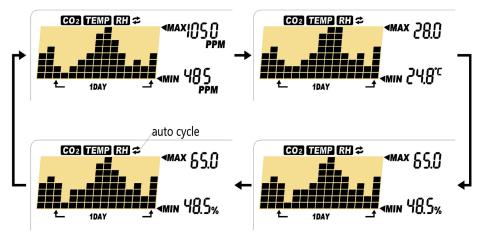
5.1. LCD Display



- 1. CO₂/TEMP/RH Chart
- 2. Max Reading of Chart
- 3. Min Reading of Chart
- 1. Micro SD Card
- . Audible Alarm On/Off
- . Date and Time
- Temperature Reading
- Temperature FRH Reading
- 9. Main Menu
- 10. CO -Reading
- Zoom Level of Time (indicates the chart's span of time)

5.2 Trend Chart

The trend chart (1) displays the past readings for CO₂ and temperture and RH parameters. That can be toggled by using DOWN key: CO₂, TEMP, RH. As show below:



5.3 Trend Chart Zoom

Below is a table that show the available Zoom Levels for all parameters, as well as the duration of each division for corresponding Zoom Levels:

Zoom Level (Time Span) (11)	Time Per Division
1MIN (minute)	5sec /div
1HR (hour)	5m/div
1Day (day)	2h/div
1WEEK(week)	0.5d/div

Using UP will toggle the available Zoom Levels for each parameters. Note that in addition to the Zoom Levels for each paramete.





At the top right corner of the display, there are two numerical indicators: Max (2) and Min (3). As the Zoom Level is changed, the Max and Min values will reflect the maximum and minimum values on the chart of the selected CO₂ parameter. At startup, the unit will automatically display values for CO₂.

5.5 Real Time

The real-time (6) display at the top right corner of LCD, user can adjust date and time by enter TIME mode.

5.6 SD Card For Logger

The device will record data logger by SD card while it existed. It's can record Date, Time, ${\rm CO_2}$, Tempereture, RH, user can check and download logger by SD card reader.

5.7 Main Menu Functions

The Main Menu (9) functions can be toggled through by using MENU. If the main menu is not brought up, the green bar will remain blank, leaving the UP / DOWN buttons to toggle between parameters and Zoom Levels, respectively.

<u>alarm time log cali alti °C/°F adv</u>

Pressing MENU once will bring up the main menu, with a flashing bar indicating the current choice. To select the function, press ENTER when the bar flashing over the current choice. Note that after 1 minute if nothing is pressed, the Main Menu will disappear and the device will revert to the normal state.

HOLD HOME

To revert to start up settings at any point, hold ENTER for 3 sec until an audible beep. The device will revert to Home Setting, displaying "Back Home done." Note that this is not the same as Restore to factory settings.

Below is a table showing what main menu selection is made by pressing MENU multiple times as well as their functions. Note that the device will display "Done," followed by the confirmed selection if selected correctly.

Function	Directions
ALARM	When ALARM is set ON, an audible alarm will resound if the CO ₂ level exceeds varying levels (depending on border lever set). Once ALARM is selected (by pressing ENTER), use either UP or DOWN to toggle the selection from ON to OFF or vice versa. Press ENTER one more time to confirm. A regular bell icon will be displayed if alarm is on; a silenced bell icon will appear on the screen if the alarm is set to be off. As soon as the acoustic alarm will sound, it can be temporarily muted by pressing ENTER. The alarm will resound, if the CO2 value exceeds the upper boarder again.
TIME	This function allows the user to adjust the real-time, once TIME is selected, use UP and DOWN to adjust the current date and time, Press ENTER to comfirm.
LOG	This feature allows the user to see historical data recorded in the log at any point that is displayable on the chart. First make sure the desired Zoom Level is selected before enabling this function. Then once LOG is enabled, use UP and DOWN toggle between the time divisions to see all parameters' measurements for each division. Press ENTER once more to exit this mode.
CALI	Use this function to calibrate your device with outside atmospheric $\mathrm{CO_2}$ level ~ 400ppm. Select this mode, hold ENTER for 3 seconds until a beep and the chart will read "Calibrating", then place the device outside for 20min. To escape, press MENU. Make sure the device is far from a source of $\mathrm{CO_2}$, not in direct sunlight, and not exposed to water.



Function	Directions	
ALTI	This feature provides an altitude correction to the CO ₂ level for increased accuracy. Select this feature, then use UP and DOWN to input the current altitude (look it up if unknown) in meters. Press ENTER once altitude is correct.	
°C/°F	Use this feature to toggle between Celsius and Fahrenheit for the temperature display. First use UP and DOWN, then ENTER when the desired one is selected.	
ADV	This function toggles between 4 things when selected: changing the alarm and lights to suit levels For Low border, or For Hi border, or change the dataloginterva or Restore factory setting. Restore factory setting will reset the device to factory settings and erase all stored data in the chart. To use any of these modes, hold ENTER for 3 seconds until an audible beep.	
(Return)	Exits the main menu. No options will be displayed on the green bar. A different audible beep be heard in this option.	

6. Specifications

Typical test conditions, unless otherwise specified: Ambient Temp =23+/-3°C, RH=50%-70%, Altitude=0~100 meter

Measurement Spec

Operating Temperature: $32^{\circ}F$ bis $122^{\circ}F$ (0°C bis $50^{\circ}C$) Storage Temperature: $-4^{\circ}F$ bis $140^{\circ}F$ ($-20^{\circ}C$ bis $60^{\circ}C$)

Operating & Storage RH: 0-95%, non-condensing

CO, Measurement

Measurement Range: 0-5000ppm

Display Resolution: 1ppm (0-1000); 5ppm (1000-2000); 10ppm (>2000)

Response Time / Warm-up Time: <30 sec

Temp. Measurement

Operating Temperature: 32°F bis 122°F (0°C bis -50°C)

Display Resolution: 0.1°F (0.1°C)
Response Time: <20min (63%)

RH Measurement

Power Requirements:

Range: 5-95% Resolution: 1%

Input: 115VAC 60Hz, or 230VAC 50Hz, 0.2A

Output: 5VDC 5.0W max. Average active efficiency: 73.77% Noload power consumption: 0.075W

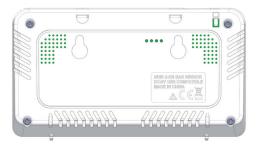
160mA Peak, 15mA average bei 5.0V

Dimension: 4.7x2.6x1.3inch (120x66x33mm)

Weight: 103g only instrument without power supply

7. Rear View:





8. Disclaimers:

USB connection is for power supply only; no communication with PC. Unplugging the device may result in loss of most recent logged data on the chart.

This device is not intended for workplace hazard CO₂ monitoring, nor intended as a definitive monitor for human or animal health institutions, life sustenance, or any medical-related situation.

We and the manufacturer assumes no responsibility for any damage or loss suffered by the user or any third party arising through the use of this product or its malfunction.

We reserve the right to change the spec without notice.

Note (in case of Accu use):

Recommend Accu (Powerbank): larger or equal to 4000mAh (3000mAh still works, with reduced battery life) Recommend battery size: smaller than 101x60x22mm / 4.0x2.4x0.87inch,larger battery still works, but not easy to fit in.

9. Explanation of symbols



This sign certifies that the product meets the requirements of the EEC directive and has been tested according to the specified test methods.

10. Waste disposal

This product has been manufactured using high-grade materials and components which can be recycled and reused



Never dispose of empty batteries and rechargeable batteries in household waste. As a consumer, you are legally required to take them to your retail store or to an appropriate collection site depending on national or local regulations in order to protect the environment.

The symbols for the heavy metals contained are: Cd=cadmium, Hg=mercury, Pb=lead



This instrument is labelled in accordance with the EU Waste Electrical and Electronic Equipment Directive (WEEE). Please do not dispose of this instrument in household waste. The user is obligated to take end-of-life devices to a designated collection point for the disposal of electrical and electronic equipment, in order to ensure environmentally-compatible disposal.