Indoor Air Quality Monitor/Logger
Model C.A 1510

Monitor CO₂, Temperature and Humidity around you for a healthy environment.

Used in Government Offices, Transportation, Workplaces, Private Residences, Educational Institutions and more.
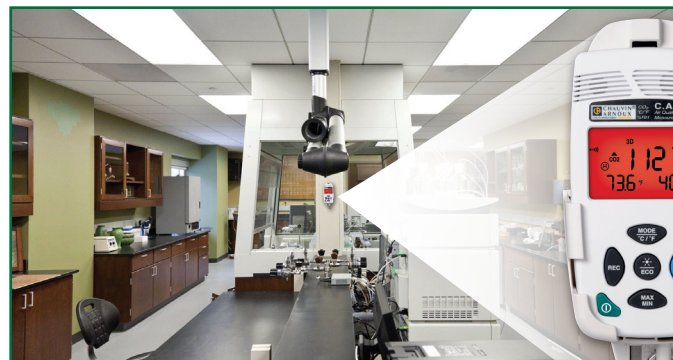
► FEATURES

- Simultaneously monitors and displays CO_2, Temperature and Humidity
- Stores up to 1 million measurements
- Case design facilitates both wall mount and stand-alone use
- Easy-to-read comfort indicators based on CO_2, Temperature and Humidity
- Complies with the latest air quality standards
- Display can be turned off to conserve battery power
- Quick and simple data download via USB cable or wireless *Bluetooth*
- Supplied with AQR (Air Quality Report) software for data processing and report generation
- Optional on-site calibration kit and software available for adjusting to zero and 1700 ppm thresholds
- Available in two colors; white for laboratories, schools, medical, private residences and office environments and gray for industrial environments
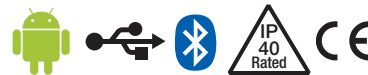
► WHY MONITOR?

Outdoor air contains approximately 0.04% (400 ppm) of CO_2. In indoor environments, human activity (breathing) can quickly raise this concentration to 1500 ppm.

We spend most of our time indoors, in public places (schools, hospitals, workplaces, private residences and planes, bus or train stations). For this reason, the levels of CO_2 are an excellent indicator of ventilating efficiency.

Typical installation in an educational laboratory

The Model C.A 1510 is compliant with the latest standards for measuring CO_2 to assess ventilation system indoor air quality. It is also an accurate preliminary diagnostic indicator, because of its alarms set at 1000 ppm or 1700 ppm of CO_2.

► APPLICATIONS

Monitor Air Quality In:
Check HVAC Ventilation System Efficiency In:

Schools
Hospitals
Workplaces
Private Residences
Government Offices
Plane, Bus or Train Stations
And More!

AEMC® INSTRUMENTS

ENVIRONMENTAL TESTER
CO$_2$ - Temperature - Humidity

► COMFORT & HEALTH

Carbon dioxide is a colorless, odorless gas. Although it is non-toxic at normal levels, in high levels it may cause difficulty in concentrating, headaches and nausea. Temperature and humidity can also contribute to the development of mold which may release allergenic and irritant substances.
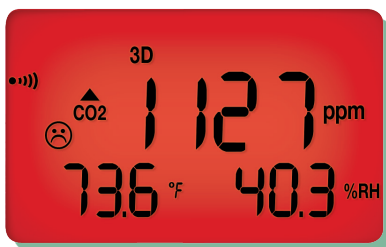
Two Color Backlit Screen:

The Model C.A 1510 measures and displays three parameters simultaneously (CO$_2$, temperature and relative humidity). An integrated help and a visual aid is provided to assist in interpretation of the comfort level indicators.

The display blinks with red backlighting when any of the measured parameters exceeds the user-selected threshold. The red backlighting is solid when levels exceed upper limit values.

Normal Level

High Level

► MULTIPLE MOUNTING SYSTEMS

Model C.A 1510 offers a variety of mounting options.

Padlockable Wall Mount Holster (padlock not included)

Hole on top for hanging options

Desk Stand

Embedded magnets on backside for mounting on metal surfaces

► SPECIFICATIONS

MODEL	C.A 1510
MEASUREMENT	
CO$_2$ Measurement	
Measuring Principle	Non-dispersive infrared (NDIR) technology
Type of Sensor	Double-beam infrared cell sensor
Measurement Range	0 to 5000 ppm
Accuracy	±50 ppm ± 3% of value measured
Response time to 63%	<200 seconds
Resolution	1 ppm
Temperature Measurement	
Type of Sensor	CMOS
Units	°F or °C
Measurement Range	14° to +140°F (-10° to +60°C)
Accuracy	±0.9°F (0.5°C)
Resolution	0.1°F (0.1°C)
Humidity Measurement	
Type of Sensor	Capacitive
Measurement Range	5 to 95% RH
Accuracy	±2% RH
Resolution	0.1% RH
GENERAL	
Recording Interval	Programmable from 1 minute to 2 hours
Storage	Up to 1 million measurements
Alarm	Yes
Backlighting, Display Hold Function & Min-Max	Yes
Automatic Power-Off	Yes (in portable mode only)
Operating Range	Temperature: 14° to +140°F (-10° to +60°C) Humidity: 5 to 95% RH)
Dimensions	4.92 x 2.58 x 1.26" (125 x 65.5 x 32 mm)
Weight	6.70 oz (190g with batteries)
Protection	IP40
Compliance	IEC 61010-1, 50V CAT II – IEC 61326-1
Power Supply	Alkaline batteries: 2 AA or rechargeable battery connection to 120V 60Hz line/ USB to wall adapter
Communication	*Bluetooth* Class 2 wireless communication / USB link; the product is then recognized as a USB key for easy file transfer
Mounting	Embedded magnets on backside, tear drop wall hook, optional padlockable wall mount (padlock is not included) and optional desktop stand
Functions of the AQR (Air Quality Report) software, for PC, supplied with model	Graphic representation or as table of values, data export, real-time mode calculation of the confinement index with selection of presence periods & report generation

► OPERATIONAL MODES

Portable:

Start up mode is the most responsive, taking CO_2 readings every 15 seconds and the temperature and humidity readings every 2 seconds. Ideal for quickly checking air quality in multiple rooms by walking from room to room, taking measurements.

1D Mode:

Monitors CO_2 levels every 60 seconds and the temperature and humidity every 2 seconds. Provides a visual indication of comfort level based on CO_2 levels. Display blinks with red backlighting when CO_2 level exceeds 1000 ppm. Audible alarm sounds, if level exceeds alarm threshold.
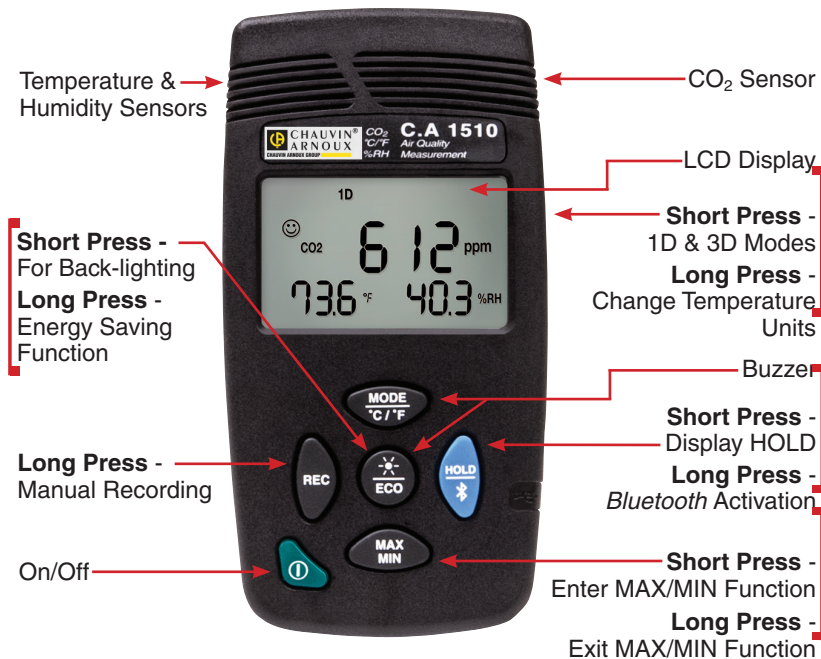
3D Mode:

Monitors CO_2 levels every 60 seconds and the temperature and humidity every 2 seconds. Provides a visual indication of comfort level based on all three measurements. Display blinks with red backlighting when CO_2, temperature or humidity levels exceed threshold. Audible alarm sounds, if level exceeds alarm threshold.

ECO (Energy Saving) Mode:

Used for long term monitoring. Monitors CO_2 levels every 10 minutes and the temperature and humidity every 5 seconds. Backlighting and alarms are deactivated. The C.A 1510 goes into sleep mode between user programmable hours to conserve battery life. Times can be programmed through the AQR Software.
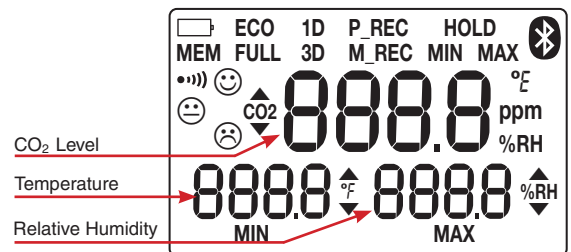
► LOGGING

P_REC (Programmed Recording):

The start and end date and times can be programmed, as well as the storage rate, using the AQR (Air Quality Report) software provided or by using the available Android App. Additionally, the display can be locked (turned off during recording) or unlocked (displays measurements and record mode).

M_REC (Manual Recording):

Recording sessions can be started and stopped by pressing the REC button on the front panel. CO_2, temperature and humidity are recorded at the rates associated with the operational mode selected.

► DISPLAY FUNCTIONS AND INDICATORS

CO₂ Level
Temperature
Relative Humidity

► FUNCTIONS

Temperature & Humidity Sensors

CO₂ Sensor

LCD Display

Short Press - 1D & 3D Modes
Long Press - Change Temperature Units

Short Press - For Back-lighting
Long Press - Energy Saving Function

Buzzer

Short Press - Display HOLD
Long Press - Bluetooth Activation

Long Press - Manual Recording

On/Off

Short Press - Enter MAX/MIN Function
Long Press - Exit MAX/MIN Function

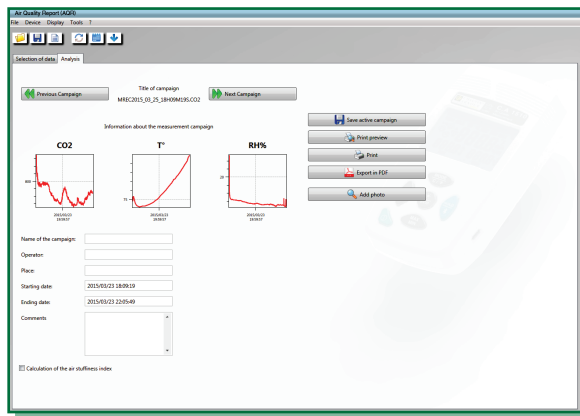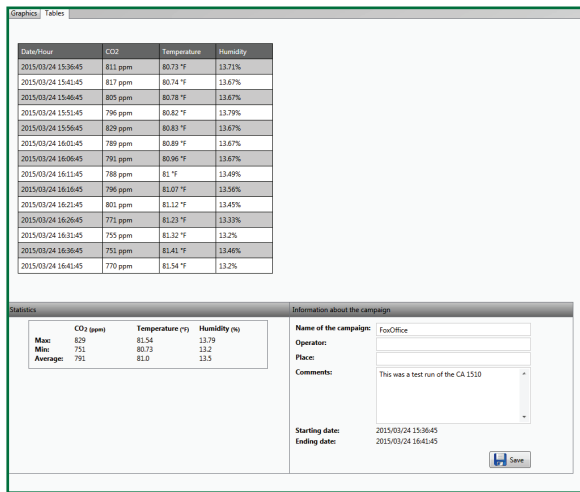| DISPLAY INDICATORS	
MEM_FULL	Memory Full
1D	Monitor CO_2 level
3D	Monitor CO_2, temperature and humidity comfort zone thresholds
MAX	Maximum value
MIN	Minimum value
ECO	Energy saving mode
P_REC	Programmed recording
M_REC	Manual recording
HOLD	Display hold
MAX MIN	Maximum and minimum value detection
ppm	Parts per million concentration
●)))	Buzzer active
Bluetooth	Bluetooth active
battery	Blinking - batteries low Steady - external power supply indicator
▲	High threshold triggered
▼	Low threshold triggered
☺ ☹ ☹	Indication of air quality and temperature/humidity comfort zone

►Communications

Two communication modes are available: USB or *Bluetooth*. They are used to configure recording, remote display on a PC or Android™ tablet and data display of trend graphs or tabular listings. They can also be used to export the data into Excel, to calculate the confinement index with selection of periods aligned to when people are present and to generate reports.

AQR (Air Quality Report) Software

Provided with Model C.A 1510

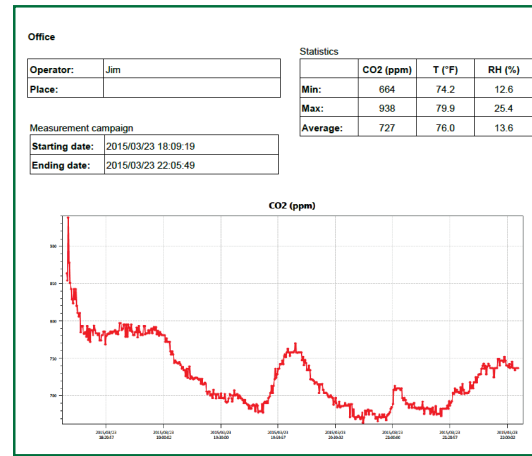| CATALOG NO.	DESCRIPTION
2138.08	Air Quality Logger Model C.A 1510 (Gray)
2138.09	Air Quality Logger Model C.A 1510 (White)
Accessories (Optional)	
2126.45	*Bluetooth /* Adapter USB
2138.61	Wall Mount Holster (Gray)
2138.62	Desk Stand (White)
2138.63	Calibration Kit
2138.67	Wall Mount Holster (White)
2154.71	Small carrying pouch

Android Compatible Application

Available FREE at the Google play store

- Displays trend graph or tabular listing of the data
- Real-time mode calculation of the confinement index with selection of "presence" periods
- Report generation and printout
- Data export

► PRODUCT INCLUDES

Model C.A 1510

Meter in hard carrying case, USB-to-wall plug adapter, 6 ft USB cable, 2 AA batteries, mini-CD with AQR software, USB stick with AQR software, quick start user guide and user manual.

Optional Accessories

Wall Mount Holster (White) Cat. #2138.67

Calibration Kit Cat. #2138.63

Wall Mount Holster (Gray) Cat. #2138.61

Desk Stand Cat. #2138.62

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