

■ AIR QUALITY LOGGER

# 1510



ENGLISH

User Manual

 **AEMC**<sup>®</sup>  
INSTRUMENTS  
CHAUVIN ARNOUX GROUP

# Statement of Compliance

Chauvin Arnoux<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> Instruments certifies that this instrument has been calibrated using standards and instruments traceable to international standards.

We guarantee that at the time of shipping your instrument has met its published specifications.

**An N.I.S.T. traceable certificate may be requested at the time of purchase, or obtained by returning the instrument to our repair and calibration facility, for a nominal charge.**

The recommended calibration interval for this instrument is 12 months and begins on the date of receipt by the customer. For recalibration, please use our calibration services. Refer to our repair and calibration section at [www.aemc.com](http://www.aemc.com).

**Serial #:** \_\_\_\_\_

**Catalog #:** \_\_\_\_\_

**Model #:** 1510 \_\_\_\_\_

Please fill in the appropriate date as indicated:

Date Received: \_\_\_\_\_

Date Calibration Due: \_\_\_\_\_












Chauvin Arnoux<sup>®</sup>, Inc.  
d.b.a AEMC<sup>®</sup> Instruments  
[www.aemc.com](http://www.aemc.com)

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Thank you for purchasing the Air Quality Logger Model 1510. For best results from your instrument:

- read these operating instructions carefully
- comply with the precautions for use

	WARNING, risk of DANGER! The operator must refer to these instructions whenever this danger symbol appears.
	Information or useful tip.
	Battery.
	Magnet.
	The product has been declared recyclable after analysis of its life cycle in accordance with the ISO14040 standard.
	AEMC has adopted an Eco-Design approach in order to design this appliance. Analysis of the complete lifecycle has enabled us to control and optimize the effects of the product on the environment. In particular this appliance exceeds regulation requirements with respect to recycling and reuse.
	
	Indicates conformity with European directives and with regulations covering EMC.
	Indicates that, in the European Union, the instrument must undergo selective disposal in compliance with Directive WEEE 2002/96/EC. This instrument must not be treated as household waste.

### Definition of measurement categories

- **CAT IV** corresponds to measurements taken at the source of low-voltage installations.  
Example: power feeders and protection devices.
- **CAT III** corresponds to measurements on building installations.  
Example: distribution panel, circuit-breakers, machines or fixed industrial devices.
- **CAT II** corresponds to measurements taken on circuits directly connected to low-voltage installations.  
Example: power supply to electro-domestic devices and portable tools.

### Precautions

This instrument is compliant with safety standard IEC 61010-2-030, for voltages up to 5V with respect to ground. Failure to observe the following safety instructions may result in electric shock, fire, explosion, and damage to the instrument and/or the installation in which it is located.

- The operator and/or the responsible authority must carefully read and clearly understand all precautions to be taken prior to using the instrument. Thorough knowledge and awareness of electrical hazards are essential when using this instrument.
- Observe the conditions of use, including temperature, relative humidity, altitude, pollution degree, and location of use.
- Do not use the instrument if it appears damaged, incomplete, or improperly closed.
- Before each use, check the condition of the housing and accessories. Any item on which the insulation is deteriorated (even partially) must be set aside for repair or disposal.
- Never make measurements in atmospheres contaminated by solvents, which could damage the sensor.
- All troubleshooting and metrological checks must be done by accredited personnel.

## Receiving Your Shipment

Upon receiving your shipment, make sure that the contents are consistent with the packing list. Notify your distributor of any missing items. If the equipment appears to be damaged, file a claim immediately with the carrier and notify your distributor at once, giving a detailed description of any damage. Save the damaged packing container to substantiate your claim.

## Ordering Information

Air Quality Logger Model 1510 (gray)..... **Cat. #2138.08**  
Air Quality Logger Model 1510 (white)..... **Cat. #2138.09**  
*Both models include soft carrying pouch, two AA batteries, 6 ft. USB cable, quick start guide, USB drive with DataView<sup>®</sup> software and user manual.*

## Replacement Parts:

Cable – Replacement 6 ft. (1.8m) USB..... **Cat. #2138.66**  
Soft Carrying Pouch ..... **Cat. #2154.71**

## Accessories:

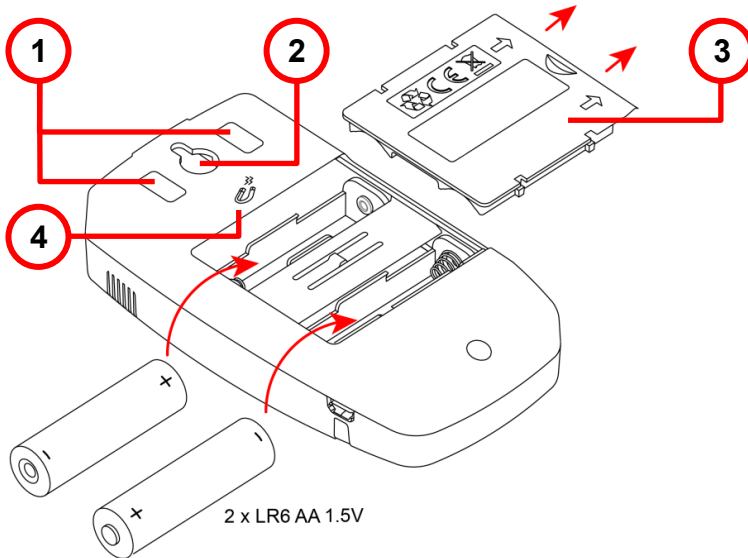
Adapter, Bluetooth USB for Simple Logger II 4-Channel Models,  
Models 6417, 1510 & L452 ..... **Cat. #2126.45**  
Wall Mount for Models 1510 & L452 (gray or black) ..... **Cat. #2138.61**  
Desk Stand for Model 1510 (white) ..... **Cat. #2138.62**  
Calibration Kit for Model 1510 (includes calibration software CD)..... **Cat. #2138.63**  
Metal Carrying Case ..... **Cat. #2138.65**  
Wall Mount for Model 1510 (white) ..... **Cat. #2138.67**  
Adapter – USB to Wall Plug ..... **Cat. #2153.78**

For the accessories and replacement parts, visit our web site: [www.aemc.com](http://www.aemc.com)

# 1. GETTING STARTED

## 1.1. Battery Installation

The instrument accepts two AA or LR6 alkaline batteries.

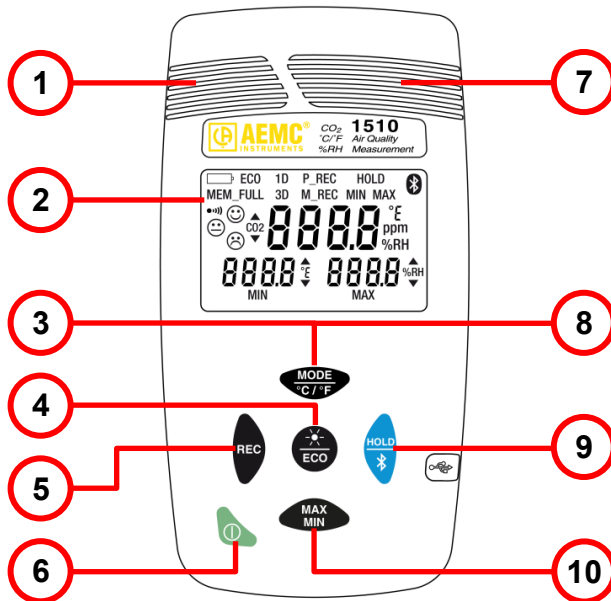


1. Non-skid pads
2. “Tear-drop” notch to hang instrument
3. Battery compartment cover
4. Magnets for mounting to a metallic surface

To change the batteries:

1. Press the tab of the battery compartment cover and lift it clear.
2. Remove the battery compartment cover.
3. Insert the new batteries, ensuring correct polarity.
4. Close the battery compartment cover; ensuring it is completely and correctly closed.

## 1.2. Instrument Front Panel



1. Temperature and humidity sensors
2. LCD display
3. MODE/temperature units button
4. Backlight/ECO mode button
5. Record button
6. ON/OFF button
7. CO<sub>2</sub> sensor
8. Activate/deactivate buzzer
9. HOLD/Bluetooth enable/disable button
10. MAX/MIN button

### 1.3. Instrument Functions

The Model 1510 measures:



- Concentration of carbon dioxide (CO<sub>2</sub>) in the air
- Ambient temperature
- Relative humidity

The instrument uses these measurements to determine and display the current comfort level.

DataView with the Data Logger Control Panel software can be installed on a computer to allow you to configure the instrument, view measurements in real time, download data from the instrument, and create reports.

### 1.4. Turning the Instrument ON/OFF







- **ON:** Press the  button.
- **OFF:** Press the  button for >2 seconds when the instrument is ON. Note that you cannot turn OFF the instrument when it is in **HOLD** or in recording mode.



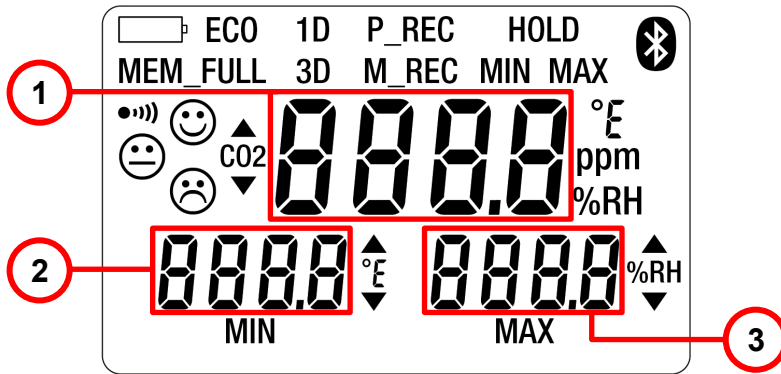
In **Portable** mode, the instrument automatically turns OFF after 15 minutes of inactivity. This feature is de-activated in other modes (**1D** or **3D**, **ECO**, **P\_REC**, **MIN MAX**, and **M\_REC**), if the instrument is actively communicating via Bluetooth or USB, or is running on USB power.

### 1.5. Function Buttons

On each button, a short press activates the top function and a long press (>2 seconds) activates the lower function.

Button	Function
<b>MODE</b> °C / °F	<ul style="list-style-type: none"> <li>■ Short press enables <b>1D</b> and <b>3D</b> modes.</li> <li>■ Long press changes temperature units.</li> <li>■ Pressing this button while holding down  activates/deactivates alarm buzzer.</li> </ul>
<b>REC</b>	<ul style="list-style-type: none"> <li>■ Starts manual recording.</li> </ul>
 <b>ECO</b>	<ul style="list-style-type: none"> <li>■ Short press turns on the backlight.</li> <li>■ Long press enables/disables energy-saving mode.</li> <li>■ Holding down this button and then pressing  activates/deactivates alarm buzzer.</li> </ul>
<b>HOLD</b> 	<ul style="list-style-type: none"> <li>■ Short press freezes the display.</li> <li>■ Long press activates/deactivates Bluetooth.</li> </ul>
<b>MAX</b> <b>MIN</b>	<ul style="list-style-type: none"> <li>■ Short press enters <b>MAX MIN</b> mode; measurement values continue to be displayed. Second press displays the maximum value. Third press displays minimum value. Fourth press returns to normal measurement operation.</li> <li>■ Long press exits <b>MAX MIN</b> mode.</li> </ul>

## 1.6. Display



1. CO<sub>2</sub> measurement
2. Temperature
3. Relative humidity

Symbol	Function
MEM_FULL	Memory full
1D	Monitor CO <sub>2</sub> level
3D	Monitor CO <sub>2</sub> , temperature, and humidity comfort zone thresholds
MAX	Maximum value
MIN	Minimum value
ECO	Energy-saving operating mode
P_REC	Programmed recording <ul style="list-style-type: none"> <li>■ Blinking: waiting to start recording</li> <li>■ Steady: recording</li> </ul>
M_REC	Manual recording
HOLD	Hold of the display
MIN MAX	<b>MIN MAX</b> function: detection of minimum and maximum values
ppm	Unit of concentration of CO <sub>2</sub> in the air in parts per million
● 1))	Buzzer active
Bluetooth symbol	Bluetooth <ul style="list-style-type: none"> <li>■ Blinking: waiting for connection</li> <li>■ Steady: connected.</li> </ul>
Battery symbol	<ul style="list-style-type: none"> <li>■ Blinking: Batteries low</li> <li>■ Steady: Indicator of external power supply by connection of the mains adapter or of the USB connection.</li> </ul>
▲	High threshold passed
▼	Low threshold passed
😊 😐 😞	Air quality/comfort level indicator



## 2. OPERATION

### 2.1. Making a Measurement

When the instrument is turned ON, the message **CO2** is displayed on the screen (and function buttons are disabled) until the first CO<sub>2</sub> measurement appears. Updated measurements then appear automatically.



If the instrument is exposed to large variations of temperature, after the temperature stabilizes, wait 20 minutes before starting measurements.

The instrument has four operating modes: **Portable** mode, **1D** and **3D** modes, **ECO** mode, and **P\_REC** mode. It also has several functions that can be used in certain modes: **MIN MAX**, **HOLD**, **M\_REC**, and Backlight.

#### 2.1.1. Selecting Temperature Units

Long-press the  $\overset{\text{MODE}}{\text{°C / °F}}$  button to toggle between °F and °C. The setting remains in effect when the instrument is turned OFF.

### 2.2. Portable Mode

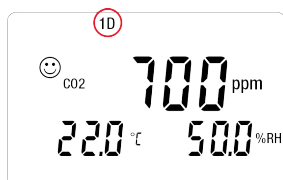
When you turn ON the instrument, it automatically starts up in **Portable** mode. In this mode the instrument makes a measurement every 15 seconds, more frequently than in other modes. It is therefore highly responsive to changes in air quality. This mode is used to inspect several rooms one after another. Install the instrument in a room and wait for the CO<sub>2</sub> measurement to stabilize (approximately 10 minutes).

### 2.3. 1D and 3D Modes

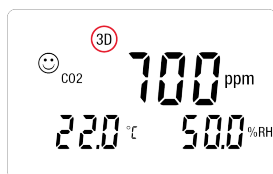
- **1D** mode: surveillance of CO<sub>2</sub> level.
- **3D** mode: surveillance of CO<sub>2</sub> level, temperature, and humidity.

The audible and/or visual warnings alert you to overages. The level of CO<sub>2</sub> is measured every minute.

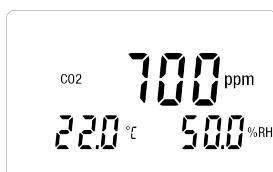
#### 2.3.1. 1D and 3D Modes Activation



1. Press  $\overset{\text{MODE}}{\text{°C / °F}}$  to activate 1D mode. The symbol **1D** appears on the display.



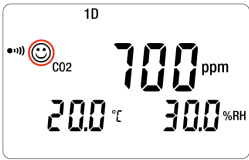
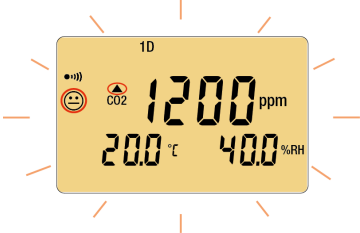

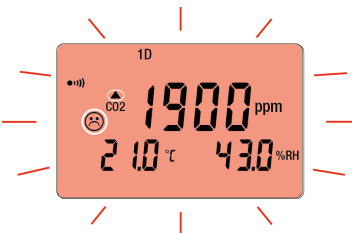

2. Press  $\overset{\text{MODE}}{\text{°C / °F}}$  a second time to activate 3D mode. The symbol **3D** appears on the display.



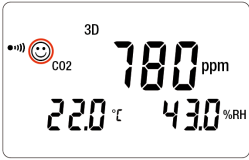
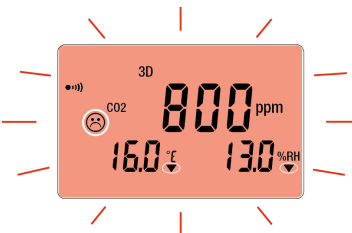

3. Press  $\overset{\text{MODE}}{\text{°C / °F}}$  a third time to return to normal operation.

### 2.3.2. Visible and Audible Warnings

#### 1D Mode

Air quality good (CO <sub>2</sub> level below 1000ppm)	
	<p>Optimum comfort zone indicator: 😊 Backlight OFF.</p>
Air quality average (CO <sub>2</sub> level between 1000 and 1700ppm)	
	<p>Average comfort zone indicator: 😐 Arrow indicates overage of low CO<sub>2</sub> threshold. Backlight blinks orange.</p> <hr/> <p> Backlight is OFF in <b>ECO</b> mode.</p>
Air quality poor (CO <sub>2</sub> level over 1700ppm)	
	<p>"Outside optimum comfort zone" indicator: ☹️ Arrow indicates overage of high CO<sub>2</sub> threshold. Buzzer sounds (if enabled). Backlight blinks red.</p> <hr/> <p> Backlight is OFF in <b>ECO</b> mode.</p>

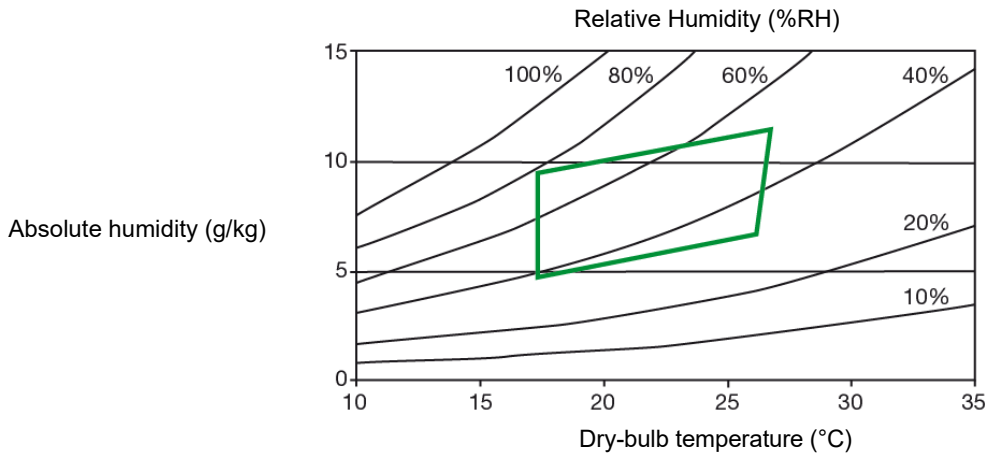
#### 3D mode

Air quality good (no overages of CO <sub>2</sub> , temperature, and humidity comfort zones)	
	<p>Optimum comfort zone indicator: 😊 Backlight OFF.</p>
Air quality poor (overage of temperature and humidity thresholds)	
	<p>"Outside optimum comfort zone" indicator: ☹️ Arrow in the direction of the overage for each quantity outside the comfort zone. Buzzer sounds (if enabled). Backlight blinks red.</p> <hr/> <p> Backlight is OFF in <b>ECO</b> mode.</p>




For **1D** and **3D** modes, if the buzzer is active it will sound intermittently when ☹️ is displayed.

The Porcher diagram defines the hygrothermal comfort zones:




## 2.4. ECO (Energy Saving) Mode

**ECO** mode saves energy when the Model 1510 measures air quality over a long period. The backlight and the buzzer are deactivated, and CO<sub>2</sub> is measured only once every 10 minutes. This saves the batteries. In addition, the instrument automatically activates “sleep” mode between 4:30 p.m. to 8:30 a.m. These times can be changed using DataView software (see § 3).




> 2s




**ECO**


CO<sub>2</sub> 700 ppm

20.0 °C 41.0 %RH

1. Long-press  (>2 seconds) to activate **ECO** mode. The symbol **ECO** appears on the display.




> 2s



CO<sub>2</sub> 700 ppm

20.0 °C 41.0 %RH

2. Long-press  a second time to return to normal operation.




In **ECO** mode, measurements are more sensitive to instantaneous variations of CO<sub>2</sub>. For example, breathing near the instrument can affect measurement. It will be necessary to wait for the next measurement to recover the true concentration of CO<sub>2</sub> in the room.

## 2.5. P\_REC (Programmed Recording) Mode

When the instrument is connected to a computer, you can program two types of recordings (see §3):

- Locked recording, in which the instrument only displays the **P\_REC** symbol (blinking before recording starts, then steady while recording) and the keys are inactive. At the end of recording, the instrument automatically turns OFF.
- Unlocked recording, in which the instrument displays the measurements. The **P\_REC** symbol is displayed, blinking before recording starts, then steady while recording. The instrument otherwise operates normally. It is not possible to change the mode, but the **MIN MAX**, **HOLD**, and backlight functions can be used.



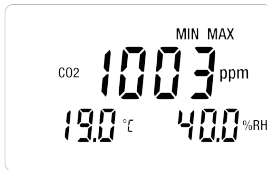
In **P\_REC** mode, pressing the  button has no effect.

## 2.6. MIN MAX Function

This function displays the maximum and minimum measured values in addition to the current value: the instrument compares each new measurement to those displayed. If the new measurement is greater than the current MAX value or less than the current MIN value, it replaces them in the display.



The **MIN MAX** function cannot be used in the **1D** and **3D** modes.



1. Press **MAX** to activate the MIN MAX function. The symbol **MIN MAX** appears on the display.-



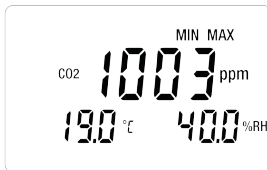
2. Press **MAX** a second time to display maximum and minimum measurements for CO<sub>2</sub>.



3. Press **MAX** a third time to display maximum and minimum measurements for temperature.



4. Press **MAX** a fourth time to display maximum and minimum measurements for humidity. Additional presses of **MAX** repeat this cycle.



5. Long-press **MAX** to exit MIN MAX and return to normal measurement display.

## 2.7. HOLD Function

Pressing HOLD freezes the displayed measurement on the screen. This function does not interrupt recording or operation of the current mode; but access to the other functions is disabled.



1. Press **HOLD** to activate HOLD. The symbol **HOLD** appears and the current measurement remains on the screen.



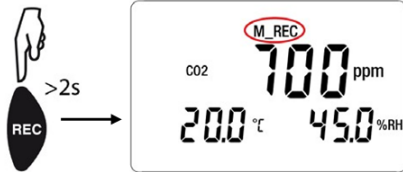
2. Press **HOLD** a second time to return to normal measurement display.

## 2.8. M\_REC (Manual Recording) Function

You can start a recording session manually. All measurement data is recorded in the instrument at the rate determined by the current mode (see § 4.3).



You can start a manual recording session in any mode except **P\_REC**. After recording is in progress, you cannot change modes.



1. Long-press **REC** (>2 seconds) to start a manual recording. The symbol **M\_REC** appears on the display.



2. Long-press **REC** a second time to stop recording.

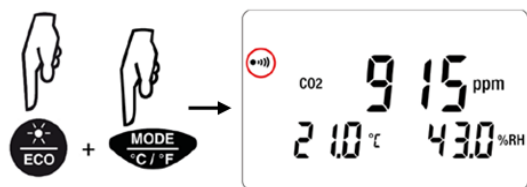
## 2.9. Backlight




Press  **ECO** to turn on the backlight. The backlight automatically turns OFF after 10 seconds.

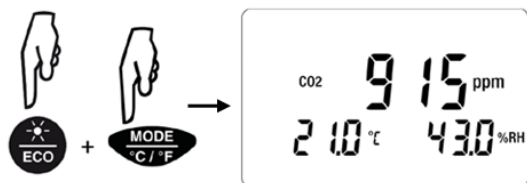




The backlight function is disabled in **ECO** mode.

## 2.10. Alarm Buzzer



1. To activate the alarm buzzer, press the  **ECO** button; and while holding it down press . The  icon appears on the screen.



2. To deactivate the alarm, press  **ECO** and while holding it down press .



The alarm buzzer function is disabled in **ECO** mode.

## 2.11. Error Messages

### 2.11.1. OL (Overload) Symbol

The **OL** symbol appears when the measurement is outside the range measured by the instrument:

- $\text{CO}_2 > 5000\text{ppm}$
- $14 < T < 140^\circ\text{F}$  ( $-10 < T < 60^\circ\text{C}$ )
- $5\% < \text{RH} < 95\%$

### 2.11.2. Err (Error) Symbol

If an **Err** error is displayed, turn the instrument OFF and back ON. If the error persists, the instrument must be sent in for repair (see Repair and Calibration at the end of this manual).

### 2.11.3. MEM\_FULL (Memory Full) Symbol

When the memory is full, the **MEM\_FULL** symbol appears on screen.



If a recording is in progress, it automatically stops when the memory becomes full. The memory must be erased before starting a new recording.

You can erase memory manually or via DataView. To do this in DataView, install the software (see § 3) and consult the Help system.

To erase memory manually, do the following:

1. Connect the instrument to a computer via the USB cable.
2. Open the computer's file system.
3. Locate and open the folder named CA1510.
4. Delete any unnecessary files to free memory space.

## 3. DATAVIEW

DataView is required to perform several basic setup tasks including connecting the instrument to a computer and setting the time and date on the instrument. In addition, DataView allows you to:

- Configure and schedule a recording session on the instrument.
- Download recorded data from the instrument to the computer.
- Generate reports from downloaded data.
- View instrument measurements in real time on the computer.

### 3.1. DataView Installation

1. Insert the USB drive that comes with the instrument into a USB port on your computer.
2. If Autorun is enabled, an AutoPlay window appears on your screen. Click “Open folder to view files” to display the DataView folder. If Autorun is not enabled or allowed, use Windows Explorer to locate and open the USB drive labeled “DataView.”
3. When the DataView folder is open, double-click Setup.exe in the USB drive root directory.
4. The Setup screen appears. This enables you to select the language for the setup UI. You can also select additional install options (each option is explained in the Description field). Make your selections and click Install.
5. Click OK to confirm setup. The InstallShield Wizard screen appears. This leads you through DataView install. As you complete these screens, be sure to check Data Loggers when prompted to select features to install.
6. When the InstallShield Wizard finishes installing DataView, the Setup screen appears. Click Exit to close. The DataView folder appears on your computer desktop.

### 3.2. Connecting the Instrument to a Computer




You can connect the instrument to a computer either through USB cable (provided with the instrument) or Bluetooth®. The first two steps of the connection procedure depend on the connection type:

#### USB:


1. Connect the instrument to an available USB port using the supplied cable.
2. Turn ON the instrument. If this is the first time this instrument has been connected to this computer, drivers will be installed. Wait for this to finish before proceeding with step 3 below.

#### Bluetooth:

Connecting the instrument via Bluetooth requires a Bluetooth USB adapter, Cat. #2126.45 (sold separately). When the dongle is installed, do the following:

1. Turn ON the instrument by pressing the  button.
2. Activate Bluetooth on the instrument by pressing the  button until the  symbol appears in the LCD.

**After the USB cable is connected or Bluetooth is activated**, proceed as follows:

3. Open the DataView folder on your desktop. This displays a list of icons for the Control Panel(s) installed with DataView.
4. Open the DataView Data Logger Control Panel by clicking the  icon.
5. In the menu bar at the top of the screen, select Help. In the drop-down menu that appears, click the option Help Topics. This opens the Data Logger Control Panel Help system.
6. Use the Contents window in the Help system to locate and open the topic "Connecting to an Instrument." This provides instructions explaining how to connect your instrument to the computer.
7. When the instrument is connected, its name appears in the Data Logger Network folder in the left side of the Control Panel. A green check mark appears next to the name indicating it is currently connected.

For instructions about using DataView with the instrument, consult the Data Logger Control Panel Help system.

## 4. SPECIFICATIONS

### 4.1. Reference Conditions

Quantity of influence	Reference conditions
Supply voltage	3 ± 0.5V
Air pollution	No pollution (CO, solvents, etc.)

The intrinsic uncertainty is the error specified for the reference conditions.

### 4.2. Measurement Characteristics

#### 4.2.1. CO<sub>2</sub> Measurements

Type of sensor: Dual-beam infrared cell  
Measuring principle: Non-dispersive infrared (NDIR) technology  
Measurement range: 0 to 5000ppm  
Intrinsic uncertainty: ±3% ± 50ppm at 77°F (25°C) and 1013mbar  
In **ECO** mode: ±3% ± 80ppm at 77°F (25°C) and 1013mbar  
Response time at 63%: 195 seconds  
Resolution (R): 1ppm

#### 4.2.2. Influences on the Measurements of CO<sub>2</sub>

The influence of the temperature is 1 ppm/°C from -10 to +45°C (14 to 113°F).

The influence of the atmospheric pressure is:

$$\text{CO}_{2\text{ real}} = \text{CO}_{2\text{ measured}} \times (1 + (1013 - P) \times 0.0014)$$

where P = pressure in mbar

#### 4.2.3. Temperature Measurements

Type of sensor: CMOS  
Measurement range: 14 to 140°F (-10 to +60°C)  
Intrinsic uncertainty: ±0.5°C at 50% RH  
Influence of relative humidity: ±0.5°C ± R from 10 to 40% RH  
Outside this range: ±0.032 x (T - 25°C) ± R  
Resolution (R): 0.1°C or 0.1°F

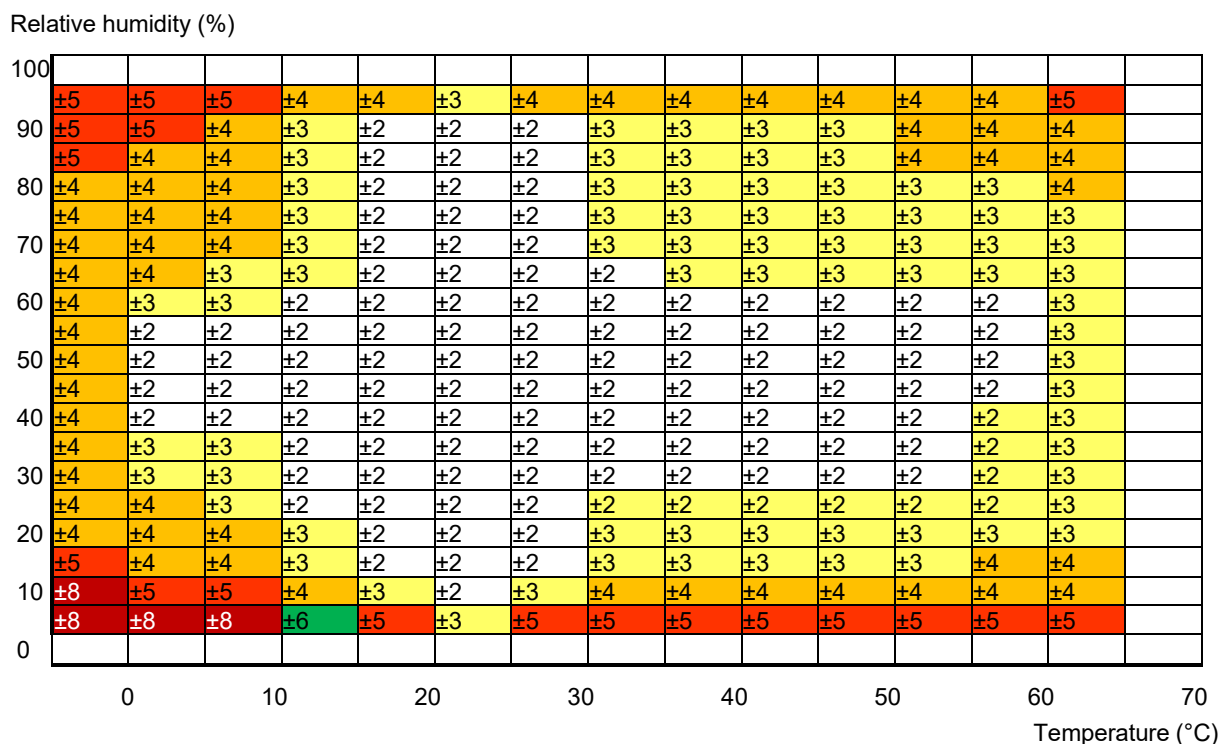
#### 4.2.4. Humidity Measurement

Type of sensor: Capacitive  
Measurement range: 5 to 95% RH  
Intrinsic uncertainty: ±2% RH ± R from 10 to 90% RH  
±3% RH ± R outside of the range stated above.  
Resolution (R): 0.1% RH  
Measurement hysteresis: ±1% RH  
**NOTE:** Prolonged exposure to humidity outside the 10% to 80% range may produce measurement bias up to ±3% RH. This bias disappears after 5 days between 68 to 86°F (20 and 30°C) and 40 and 75% RH.

Rate of increase of intrinsic uncertainty: < 0.5% RH/year



#### 4.2.5. Influence of the temperature on the relative humidity measurement



#### 4.3. Measurement Modes

Measurement mode	Displayed value	Display rate of CO2 values	Polling rate for temperature and RH sensors
Portable	Mean of 11 successive measurements	Every 15 seconds	Every 2 seconds
1D and 3D	Mean	Every minute	Every 2 seconds
ECO	Instantaneous, not averaged	Every 10 minutes	Every 5 seconds
P_REC	Mean	User programmable	User programmable

#### 4.4. Power Supply

Batteries: 2 x 1.5V AA/LR6

Mean battery life (without backlighting and Bluetooth):

- **Portable** mode: 15 days
- **1D** or **3D** mode: 45 days
- **ECO** mode: approximately 1 year
- **P\_REC** 10 minutes mode: 45 days

Rechargeable storage batteries can be used, but the period between charges will be shorter. The batteries are not used while the instrument is connected to USB power.

#### **4.5. Recording**

Memory: 1,000,000 measurements (8MB) FAT12 format

#### **4.6. Environment Conditions**

Use indoors

Operating range: 14 to 140°F (-10 to +60°C) and 5 to 95% RH

Range in storage (without battery): -4 to 140°F (-20 to +60°C)

Altitude: <2000m

#### **4.7. Mechanical Characteristics**

Dimensions

(L x W x H): 125 x 65.5 x 32mm

Weight: Approximately 190g

Protection class: IP 40 per IEC60529  
IK 04 per IEC50102

Free fall test: Per IEC61010-1

#### **4.8. Compliance with International Standards**

Compliant with IEC61010-1 safety standard for voltages of 50V in category II.

#### **4.9. Electromagnetic Compatibility**

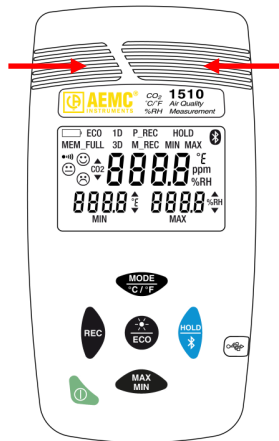
Emissions and immunity in an industrial setting compliant with IEC 61326-1.

## 5. MAINTENANCE



Except for batteries, the instrument contains no parts that can be replaced by personnel who have not been specially trained and accredited. Any unauthorized repair or replacement of a part by an “equivalent” may significantly impair safety.

### 5.1. Cleaning





Disconnect the instrument from all sensors, cable, etc. and turn it OFF.

Use a soft cloth, dampened with soapy water. Rinse with a damp cloth and dry rapidly with a dry cloth or forced air. Do not use alcohol, solvents, or hydrocarbons.

Be sure to keep the two sensor intakes perfectly clean (indicated by arrows in illustration on left).

### 5.2. Battery Replacement

The  symbol indicates the remaining battery life. When the  symbol is empty, all the batteries must be replaced (see §1.1).



Spent batteries must not be treated as ordinary household waste. Take them to an appropriate recycling facility.

## REPAIR AND CALIBRATION

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To ensure that your instrument meets factory specifications, we recommend that it be scheduled to be sent back to our factory Service Center at one-year intervals for recalibration, or as required by other standards or internal procedures.

### **For instrument repair and calibration:**

You must contact our Service Center for a Customer Service Authorization Number (CSA#). This will ensure that when your instrument arrives, it will be tracked and processed promptly. Please write the CSA# on the outside of the shipping container. If the instrument is returned for calibration, we need to know if you want a standard calibration or a calibration traceable to N.I.S.T. (Includes calibration certificate plus recorded calibration data).

### **For North / Central / South America, Australia and New Zealand:**

**Ship To:** Chauvin Arnoux<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> Instruments  
15 Faraday Drive • Dover, NH 03820 USA  
Phone: (800) 945-2362 (Ext. 360)  
(603) 749-6434 (Ext. 360)  
Fax: (603) 742-2346 • (603) 749-6309  
E-mail: [repair@aemc.com](mailto:repair@aemc.com)

(Or contact your authorized distributor.)

Costs for repair, standard calibration, and calibration traceable to N.I.S.T. are available.

**NOTE:** You must obtain a CSA# before returning any instrument.

## TECHNICAL AND SALES ASSISTANCE

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If you are experiencing any technical problems, or require any assistance with the proper operation or application of your instrument, please call, fax, or e-mail our technical support team:

**Contact:** Chauvin Arnoux<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> Instruments  
Phone: (800) 945-2362 (Ext. 351) • (603) 749-6434 (Ext. 351)  
Fax: (603) 742-2346  
E-mail: [techsupport@aemc.com](mailto:techsupport@aemc.com)

## LIMITED WARRANTY

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Your AEMC instrument is warranted to the owner for a period of two years from the date of original purchase against defects in manufacture. This limited warranty is given by AEMC® Instruments, not by the distributor from whom it was purchased. This warranty is void if the unit has been tampered with, abused, or if the defect is related to service not performed by AEMC® Instruments.

Full warranty coverage and product registration is available on our website at:

[www.aemc.com/warranty.html](http://www.aemc.com/warranty.html).

Please print the online Warranty Coverage Information for your records.

### **What AEMC® Instruments will do:**

If a malfunction occurs within the warranty period, you may return the instrument to us for repair, provided we have your warranty registration information on file or a proof of purchase. AEMC® Instruments will, at its option, repair or replace the faulty material.

### **Warranty Repairs**

#### **What you must do to return an Instrument for Warranty Repair:**

First, request a Customer Service Authorization Number (CSA#) by phone or by fax from our Service Department (see address below), then return the instrument along with the signed CSA Form. Please write the CSA# on the outside of the shipping container. Return the instrument, postage or shipment pre-paid to:

**Ship To:** Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments

15 Faraday Drive • Dover, NH 03820 USA

Phone: (800) 945-2362 (Ext. 360)

(603) 749-6434 (Ext. 360)

Fax: (603) 742-2346 • (603) 749-6309

E-mail: [repair@aemc.com](mailto:repair@aemc.com)

**Caution:** To protect yourself against in-transit loss, we recommend you insure your returned material.

**NOTE:** You must obtain a CSA# before returning any instrument.

## NOTES:

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## NOTES:

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**Chauvin Arnoux<sup>®</sup>, Inc. d.b.a. AEMC<sup>®</sup> Instruments**  
15 Faraday Drive • Dover, NH 03820 USA • Phone: (603) 749-6434 • Fax: (603) 742-2346  
**[www.aemc.com](http://www.aemc.com)**