



# EA80 Indoor Air Quality Meter Datalogger

## Software Manual

# Software Requirements and Setup

Start up windows 95 / 98 / 2000 / XP operating system

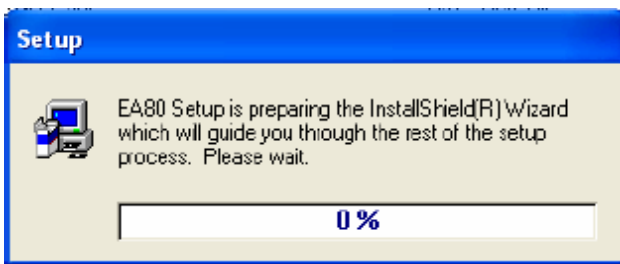
Close all other applications

Insert disk in CD drive

Wait for "Autorun" to start and follow the on-screen instructions

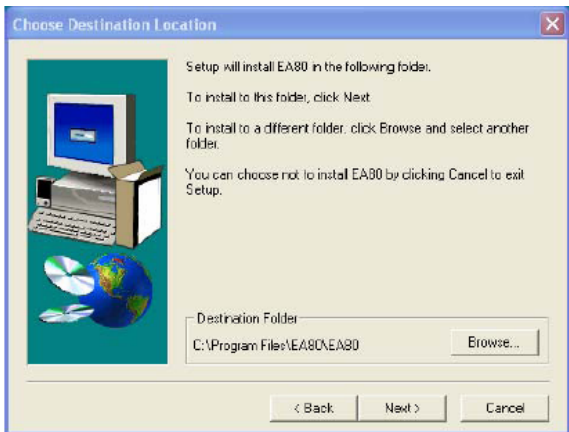
(If "autorun" does not start, click on "Start" then "Run". Type the drive letter and ":\Disk1\Setup.exe" and click "OK" .)

Setup program will run automatically.



Click Next> button





Click Next> to use the default folder or  
Click Browse... to select a different folder



Click Next> button

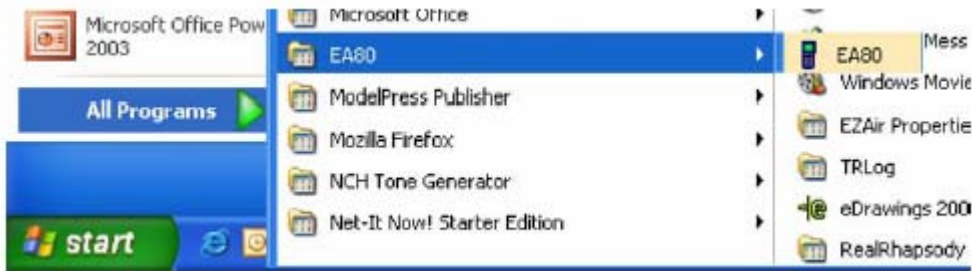


Setup is complete.

# Software Operation

## Run the software

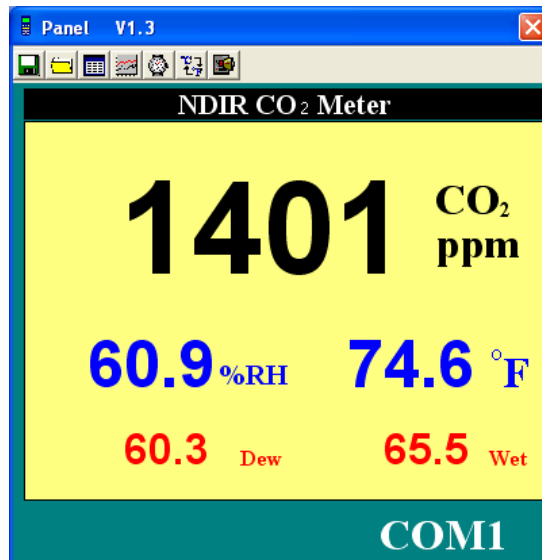
Click "Start" from Start menu then move to "All Programs" (or "Programs") then "EA80" and then click the "EA80" icon.




Click an available COM port

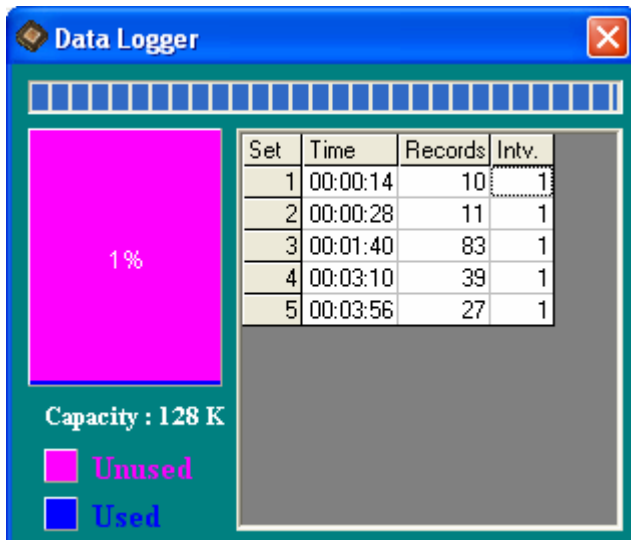


Main software screen

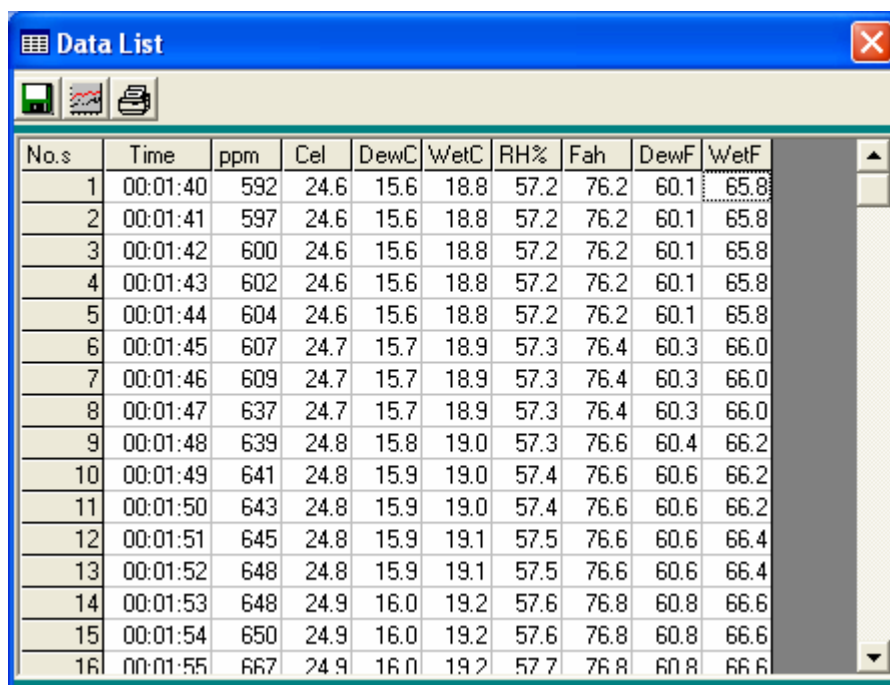


## Downloading Logged Data

Push and hold the  button on the meter for about 3 seconds ( 3 beeps ). The Data Logger window, shown below, will open.



Click on a SET number to view the logged data. In the window above, there are 4 sets from which to choose. The list below is an example of an opened set.

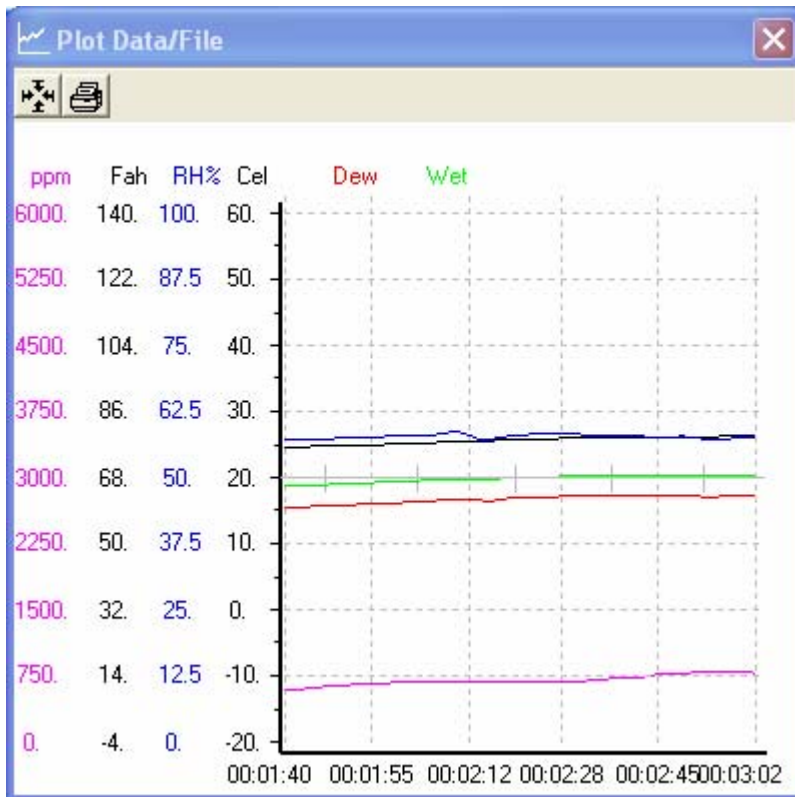



No.s	Time	ppm	Cel	DewC	WetC	RH%	Fah	DewF	WetF
1	00:01:40	592	24.6	15.6	18.8	57.2	76.2	60.1	65.8
2	00:01:41	597	24.6	15.6	18.8	57.2	76.2	60.1	65.8
3	00:01:42	600	24.6	15.6	18.8	57.2	76.2	60.1	65.8
4	00:01:43	602	24.6	15.6	18.8	57.2	76.2	60.1	65.8
5	00:01:44	604	24.6	15.6	18.8	57.2	76.2	60.1	65.8
6	00:01:45	607	24.7	15.7	18.9	57.3	76.4	60.3	66.0
7	00:01:46	609	24.7	15.7	18.9	57.3	76.4	60.3	66.0
8	00:01:47	637	24.7	15.7	18.9	57.3	76.4	60.3	66.0
9	00:01:48	639	24.8	15.8	19.0	57.3	76.6	60.4	66.2
10	00:01:49	641	24.8	15.9	19.0	57.4	76.6	60.6	66.2
11	00:01:50	643	24.8	15.9	19.0	57.4	76.6	60.6	66.2
12	00:01:51	645	24.8	15.9	19.1	57.5	76.6	60.6	66.4
13	00:01:52	648	24.8	15.9	19.1	57.5	76.6	60.6	66.4
14	00:01:53	648	24.9	16.0	19.2	57.6	76.8	60.8	66.6
15	00:01:54	650	24.9	16.0	19.2	57.6	76.8	60.8	66.6
16	00:01:55	667	24.9	16.0	19.2	57.7	76.8	60.8	66.6

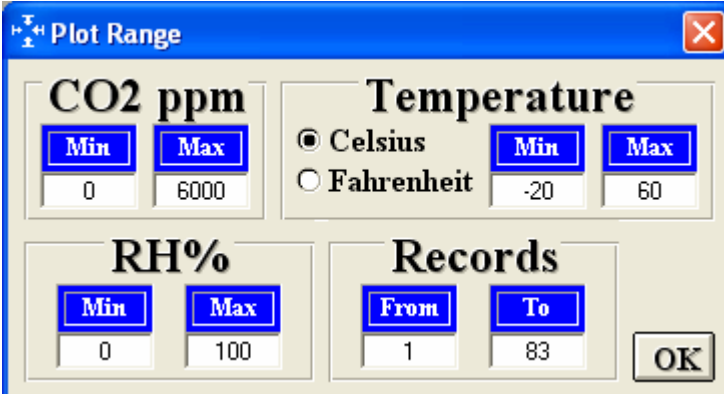
Click  to save.

## Graphing Data

Click  to graph. Graph Appears



Click  to edit plot ranges.



The 'Plot Range' dialog box allows users to configure the display ranges for CO2 ppm, Temperature, RH%, and Records. It includes fields for Minimum (Min) and Maximum (Max) values, as well as radio buttons for selecting the temperature unit (Celsius or Fahrenheit).


Parameter	Unit	Min	Max
CO2 ppm		0	6000
Temperature	Celsius	-20	60
Temperature	Fahrenheit		
RH%		0	100
Records		From: 1	To: 83

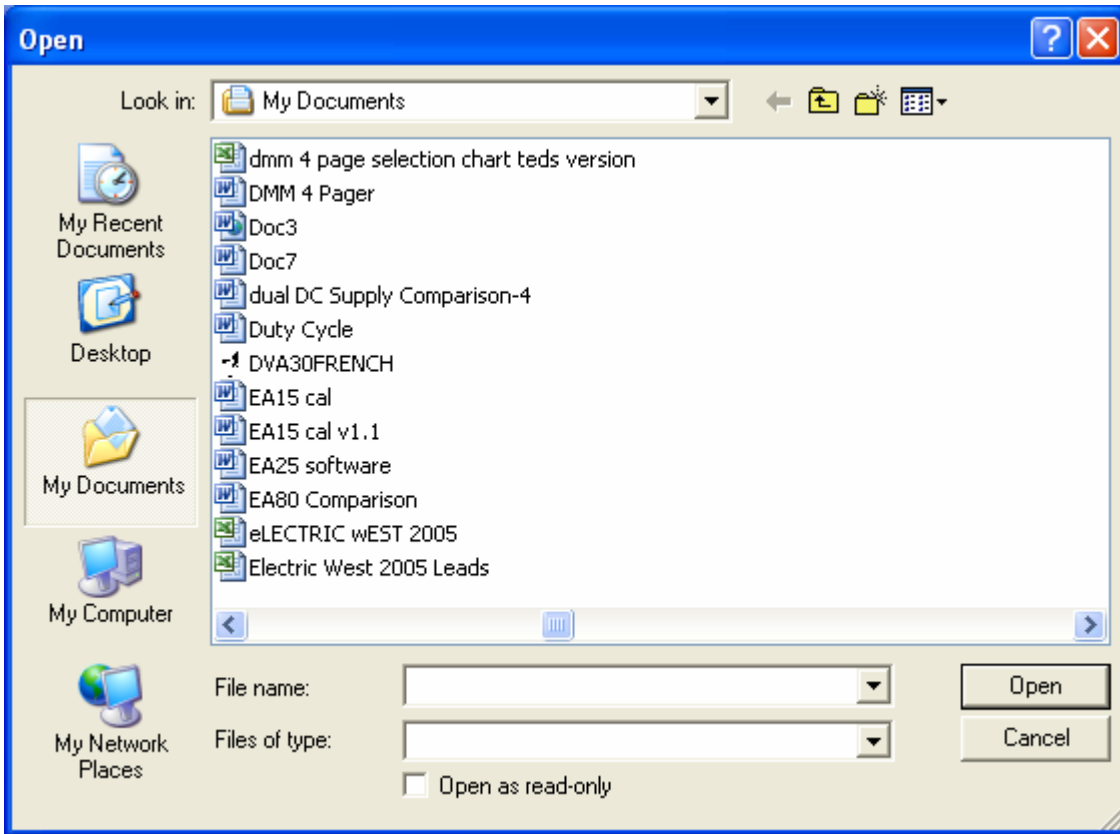
Buttons: Min, Max, OK

## Printing Data

Click  to print.

## Opening a Previously Saved File


Click the  button. The Open File window appears

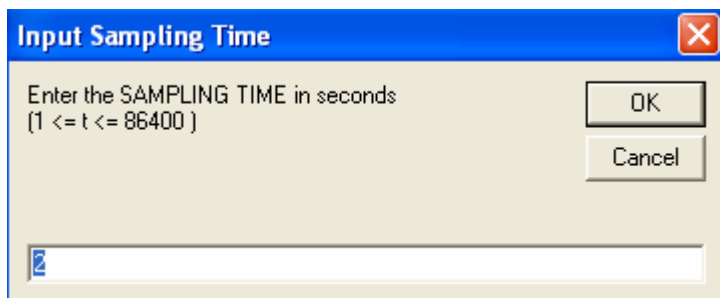


Select the file then click the Open button.

## Data Acquisition

In data acquisition mode the meter is connected to a PC.

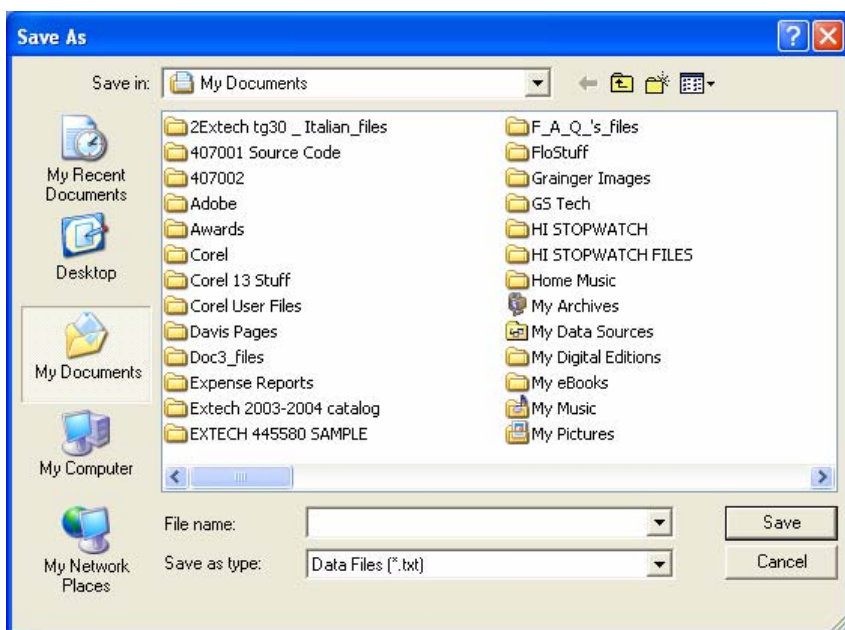
Click  to set the sampling rate.




Enter sampling time and click OK then click on  to view data in table format or  to graph.

## Saving A File

Click the  button. The dialog box shown below will appear.




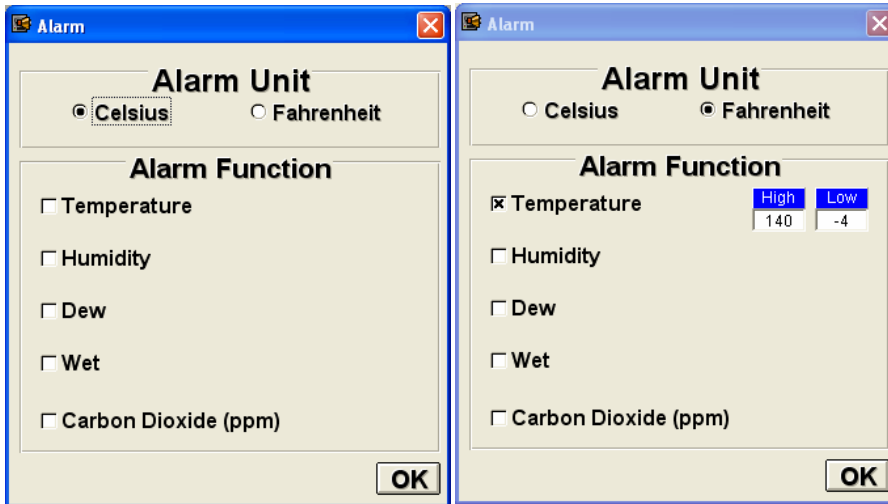
Input a file name and then click "Save" to begin saving data to the file just named.

Click the  button to stop recording.



## Alarm Function in Data Acquisition

Click the  button to bring up the alarm menu. Select the desired alarm. Fill in the high and low limits and click OK. Your PC will beep if the levels are exceeded.

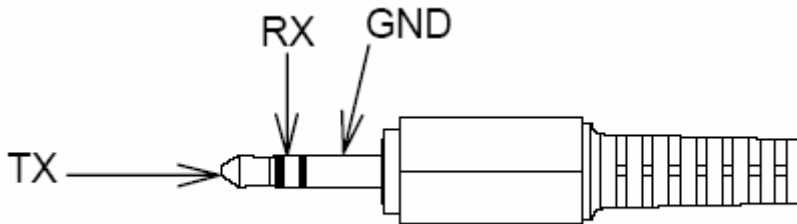


# RS232 Wiring Hardware

## PC Interface Cable

### Meter side of PC Interface Cable

The RS-232 “phono” plug side of the PC Interface Cable connects to the meter’s RS-232 phono jack. Refer to the diagram below for wiring information.



### Computer’s Serial Port side of Interface Cable

The RS-232 “DB-9” side of the PC Interface Cable connects to the PC’s COM port. Refer to the diagram below for wiring information. Note that a SERIAL to USB Adapter may be used.



## RS232 Settings

28800, N, 8, 1

## RS232 Protocol

02	Flag	ppm	H	ppm	L	RH	H	RH	L	Cel	H	Cel	L	03
----	------	-----	---	-----	---	----	---	----	---	-----	---	-----	---	----

**02 : Starting Byte**

**Flag : ( Reserved )**

**ppm ( H, L ) : 0~6000**

**RH ( H, L ) : 0~100**

**Celsius ( H, L ) : -20.0~60.0**

**03 : LCD Ending Byte**

### Calibration Used

0	N2_H	N2_L	AIR_H	AIR_L	FF
---	------	------	-------	-------	----

**0 : Marking Byte**

**N2 : SENSER N2 Value**

**AIR : SENSER CO2 Value**

**FF : Marking Byte**

**Baud Rate : 28800 ( 15 bytes data / 0.25 seconds)**

**Datalogging : (Maximum: 99 sets )**

**Head : AA 55 AA 55 AA 55 AA 55 AA 55 AA +Total Set+ Last Add+Any command**

**Records of 1<sup>st</sup> set+Time+INTV+ Any command...Data...Any command**

**Records of 2<sup>nd</sup> set+Time+INTV+ Any command...Data...Any command**

**After 256 bytes data has been downloaded, the Meter wait for Any command from PC.**

**.The Last Recorded data...wait for Any command from PC**

# Hardware Requirements and Setup

## PC HardWare Requirements :

HDD, CD Rom, 486 PC or above, with available COM port EGA  
or higher monitor  
4M bytes or more memory size

## PC HardWare Setup :

- 1) Switch off all power related to the PC
- 2) Connect the DB9 (female) end of the supplied RS-232 cable to available COM port
- 3) Switch on all related power
- 4) Connect the phono plug end of the RS232 cable to the meter



**Support line (781) 890-7440**

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