



KANOMAX
The Ultimate Measurements

IAQ Monitor

MODEL 2212-41

User's Manual

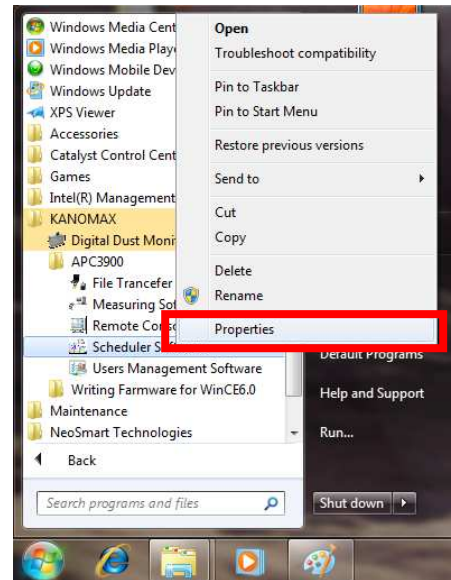
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- This manual is stored as in a CD-ROM as a PDF file, which can be read by “Adobe Acrobat 4.x” and higher.
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- Contents of the Operation Manual are subject to change without notice
- This manual refers to Carbon Dioxide as CO₂ and Carbon Monoxide as CO.

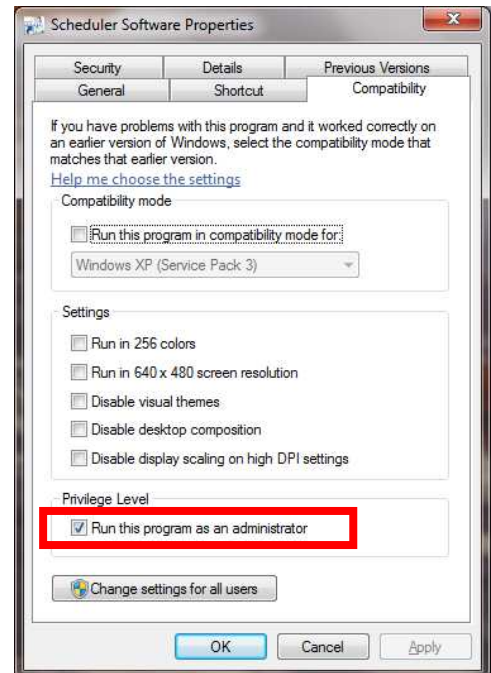
Precautions When Using Kanomax Software Products in Windows Vista/7/8

1. Setting icon of the software :

1. Click [Start] -> [ALL Programs] -> [KANOMAX] or right-click the desktop icon of the software.
2. Right-click the icon of the software and click [Properties], or click [Properties] of the desktop icon.



3. Click the [Compatibility] tab in the Software Properties window.
4. Check "Run this program as an administrator" under Privilege Level.
5. Click [OK] to close the window.



Note: If you do not follow the above procedure, the software may abort with a runtime error when reading or printing data.

2. For Stored data:

Stored data may not appear in Windows Explorer if it was saved in the C:¥ folder or one of the folders in Program Files (Program Files(x86) for 64 bit).

Click “Compatibility files” in Windows Explorer to display the data.

If you cannot perform this operation, or “Compatibility files” does not appear, you need to save the data in a folder such as “My Documents” which users can read and write to.

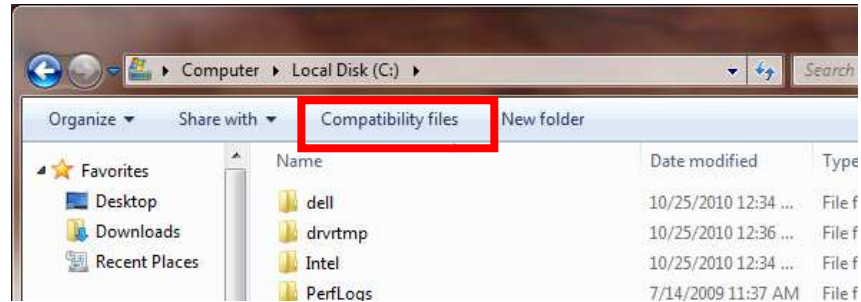


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1. OVERVIEW

1.1. System Overview

This software allows the users to collect data from IAQ Monitor, display the data in a graph and store it as a file on a computer.

It also allows transferring the data stored in the IAQ Monitor to the computer, and storing it in a file.

Applicable Computer Requirements:

Model	IBM PC compatible
RS232C Communication Port	To be equipped with more than one port.
OS	English or Japanese Windows Vista, 7, 8

* Please note that there is a possibility of operation failure when using a RS232C-USB conversion cable, depending on conditions of the computer and communication cable.

For further details, please contact our service center.

2. INSTALLATION

2.1. Installation

When performing installation, make sure to log in with the user having administrative right and follow the procedure below.

- (1) Execute “Setup.exe” located in the [Japanese] [English] folder in the product CD-ROM.
- (2) Follow the directions shown on the screen.
- (3) When the installation is completed successfully, “Kanomax” will be added in the [Program] of the [Start Menu].

2.2. Startup and Shutdown

To startup the IAQ Monitor software:

From the [Start Menu], click: [Program] → [Kanomax] → [IAQ Monitor Software].

The main screen of the IAQ Monitor software will be displayed.

To shutdown the IAQ Monitor software:

- Click [File] → [Exit] from the menu.
- Click [×] button located at the right end of the title bar of the main screen.

2.3. Uninstallation

- 1) Open [My Computer] → [Control Panel] → [Add or Remove Programs].
- 2) Select [IAQ Monitor Software] from [Set up and Delete] tab, and click [Remove] button.

3. GETTING STARTED

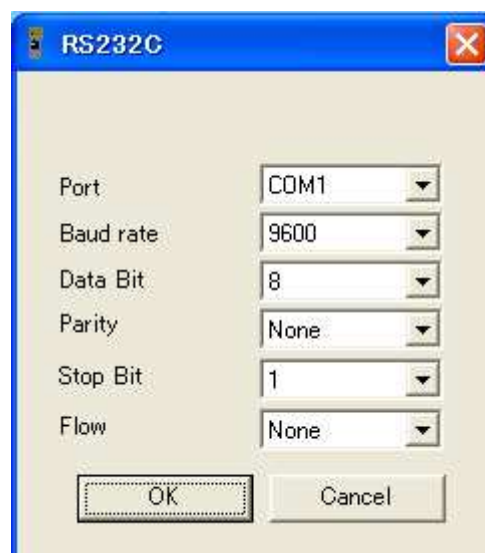
3.1. Communication Setting

1. Confirm COM Port Number on the computer being connected by the communication cable.
(It can be confirmed by selecting [Control Panel] from Start Menu → [System] → [Device Manager].)
2. Confirm the baud rate on the IAQ Monitor. How to confirm is described in the operation manual for IAQ Monitor. The default value is 9600.
3. Startup the software, and select [Setup] from the menu bar → [RS232C].
RS232C window shown below will be displayed. By clicking an arrow key, the setting can be changed.
4. For the Port Number use the same number on the computer side.
5. For the baud rate use the same value on the IAQ Monitor.

Other settings do not need to be changed.

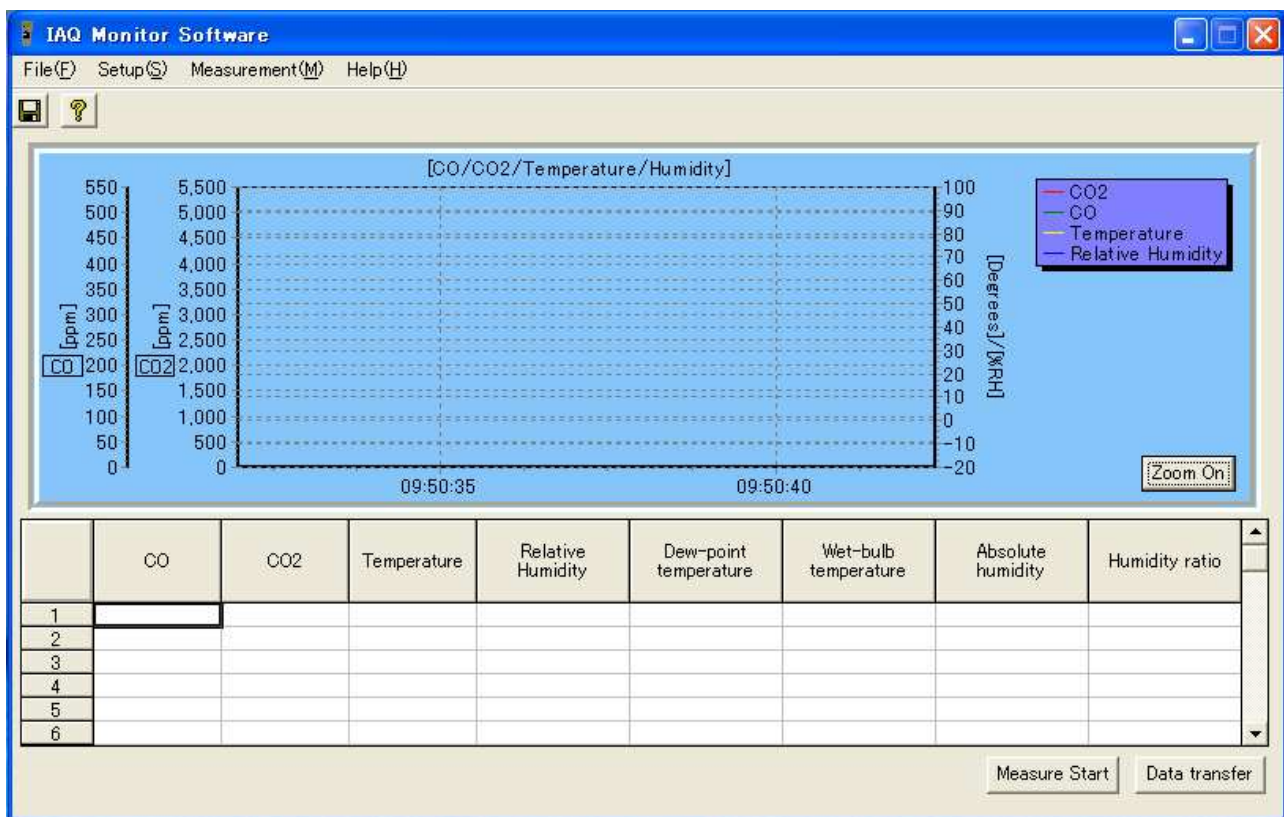
Port	A list of port number equipped on the computer is displayed.
Baud rate	Select 4800, 9600*, 19200 or 38400.
Data Bit	Select either 7 or 8*.
Parity	Select Even, Odd or None*.
Stop Bit	Select 1*, 1.5 or 2.
Flow	Select None*, Xon/Xof, RTS or Xon/RTS.

*: values with * are default values.



3.2. Main Screen

Features on the main screen are described below.



3.3. Menu List

File Menu:

Used for operations concerned with files.

[Save as...] Stores measurement data in a CSF formatted file.

[Exit] Terminates the program.

Setup Menu:

Used for setting various parameters.

[RS232C] Sets RS232C setting.

[Option] Sets the folder for stored data.

Measurement Menu:

Used for setting various parameters for performing a measurement.

[Set] Sets the parameter for performing a measurement.

Help Menu:

[About IAQ Monitor Software] Displays the version information.

3.4. Command Button

Measure Start:

Starts sampling in accordance with the conditions set in the measurement [Set].

When starting for the second or subsequent time, a message of “Data is not saved. Do you save?” will be displayed if the former data has not been stored.

When [Yes] is clicked, a window for data storage will be displayed. Store the data.

To perform sampling, click [Measure Start] again.

When [No] is clicked, the previous data will be deleted and new sampling will start.

Data Transfer:

Transfers the data stored in the IAQ Monitor to the computer. When the button is clicked, the data stored in the IAQ Monitor will be displayed. Select the data to be transferred.

Zoom On (Zoom Off):

Enables enlargement of a graph. When zooming-in a graph is enabled, [Zoom Off] button will be displayed.

When [Zoom Off] is selected, the enlarged graph will return to its initial size.

Please note that this enlargement function button cannot be used while performing a measurement.

3.5. Graph

Left Axis:

Axis of “0-550 (ppm)” shows the scale of CO.

Axis of “0-5500 (ppm)” shows the scale of CO₂.

Scrolling a graph:

To scroll a graph, drag the graph to the right or left while holding down the right mouse button.

Enlarging a graph:

Select the area to be enlarged by dragging the mouse from the upper left to the right bottom while holding down the left mouse button.

When the button is released, the enlarged graph of the desired area will be displayed.

To restore the size of the graph, click anywhere on the graph and drag to the left while holding the left mouse button. Then release the button. Or click [Zoom Off] button.

Please note that this enlargement function button cannot be used while performing a measurement.

3.6. Option



Data Storage Folder: Sets the folder where the calibration result has to be saved.

Either input the folder name directly or select the folder by clicking the reference [...] button.

* The default setting for the location where the data is to be saved is "C:¥".

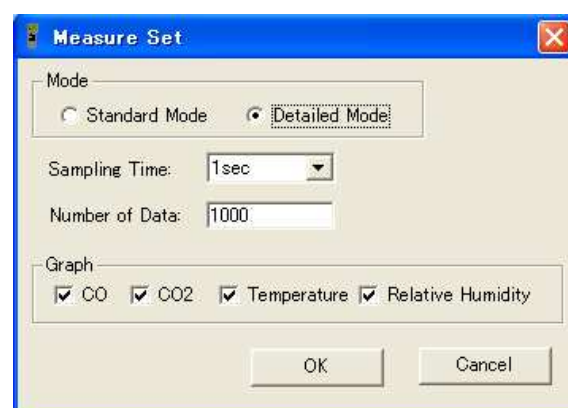
4. MEASURING AND DATA TRANSFER

4.1. How to Make a Measurement

How to read data in real time when IAQ Monitor is connected to the computer is described below.

1. Set the communication setting as instructed in the previous chapter. Then from the menu click [Measurement] → [Set].
2. The window like the one shown below will be displayed. Then set the setting and click [OK].

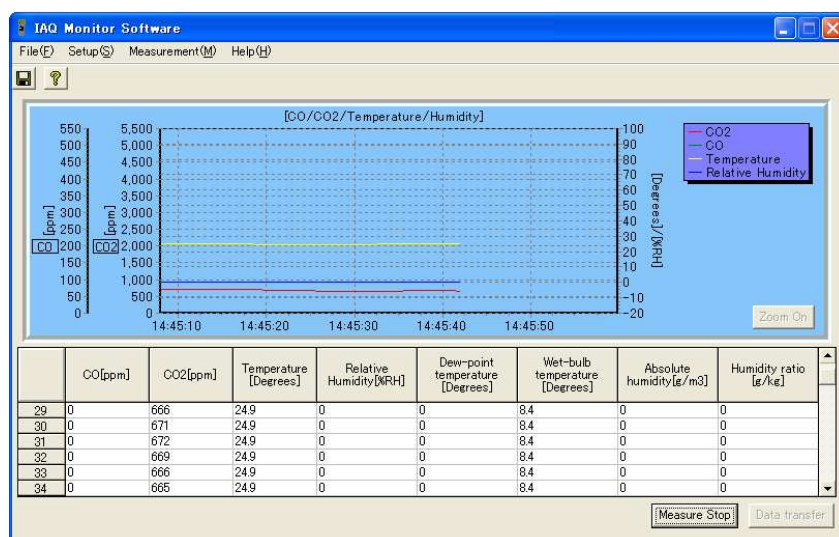
Mode	Choose data items to be retrieved. [Standard Mode]: CO/CO ₂ /Temperature/ Relative Humidity [Detailed Mode]: CO/CO ₂ /Temperature/ Relative Humidity/Dew-point Temperature/Wet-bulb Temperature/ Absolute Humidity/Humidity Ratio
Sampling Time	Select 1sec, 2sec, 5sec, 10sec, 30sec or 60sec. Data will be retrieved every selected second.
Number of Data	Set the number of data to be retrieved. Select any integer number from 1 to 65500.
Graph	Select the items to be displayed in the graph when the data is retrieved. For the items that shall not be displayed, uncheck the box.



3. Measuring will start after clicking [Measure Start] button located at the bottom right on the main screen.
To stop measuring before it completes, click [Measure Stop] button.

4. When measuring is done, select [Save as...] from the menu, and save it under a new file name. The file format is CSV.

* The default setting for the location where the file is to be saved is "C:¥".



4.2. How to Transfer Data

How to transfer the measurement data stored in the IAQ monitor to a computer is described below.

1. Set the communication setting as instructed previously, and click [Data Transfer] button located at the right bottom of the main screen.
2. The window similar to the one below will be displayed. Then select the page number and the measurement mode (Standard or Detailed) of the data needed to be read, and click [Transmit] button.

The screenshot shows a 'Data transfer' window with a blue header. Below the header, there is a text field for 'Total numbers of pages' with the value '2'. Below this is a table with the following data:

	Operational mode	Sampling time	Number of data	Measurement operational mode	Date of Measurement
1	CALCULATION	001	005	AVG	2007/09/06 11:03:46
2	CALCULATION	001	005	AVG	2007/10/03 11:44:10

Below the table, there is a 'Reading Page' field with the value '1'. To the right of this field are two radio buttons: 'Standard Mode' and 'Detailed Mode', with 'Detailed Mode' being selected. At the bottom right, there are two buttons: 'Transmit' and 'Close'.

Numbered callouts in the image point to the following elements:

- 1) Points to the 'Data transfer' title bar.
- 2) Points to the 'Total numbers of pages' field.
- 3) Points to the 'Reading Page' field.
- 4) Points to the 'Standard Mode' radio button.
- 5) Points to the 'Transmit' button.
- 6) Points to the 'Close' button.

By clicking [Data Transfer] button on the main screen, the window similar to above will be displayed. If the measured data has not been stored, a message of “Data is not saved. Do you save?” will be displayed.

When [Yes] is clicked, a window for data storage will be displayed. Store the data.

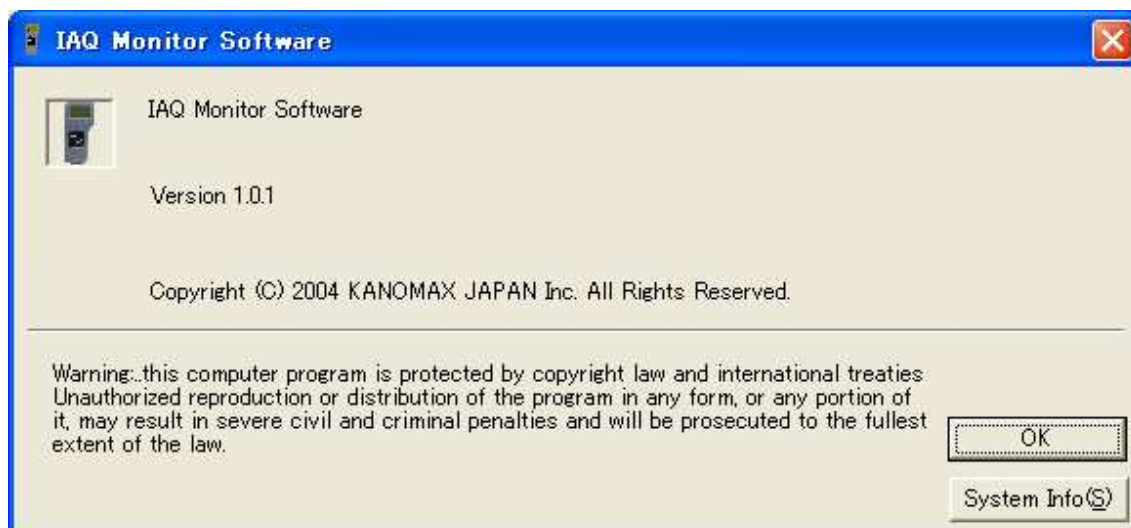
In order to transfer data, click [Data Transfer] again.

When [No] is clicked, the Data Transfer window will be opened.

- 1) Shows the total number of pages stored in the main unit.
- 2) The number of data stored in the main unit.
- 3) Sets the page needed to be read. You can also specify it by clicking the cell in the table above.
- 4) When “CALCULATION” data is being read, the setting value will be effective. When [Standard Mode] is selected, four data (CO / CO2 / Temperature / Relative Humidity) will be transferred. When [Detailed Mode] is selected, eight data (CO / CO2 / Temperature / Relative Humidity / Dew-point Temperature / Wet-bulb Temperature / Absolute Humidity / Humidity Ratio) will be transferred.
- 5) Click to start data transfer
- 6) Click to close this window. When data is being transferred, the data transfer will be stopped and the window will be closed.

3. When the window to set the destination of the file to save will be displayed, save it under a new file name. The file will be saved in CSV format. The default setting for the location where the file is to be saved is “C:¥”

5. HELP



By selecting [Help] → [About IAQ Monitor Software], the above window will be displayed.

6. FILE DESCRIPTION

Sampled data and transferred data can be stored with a random file name.

6.1. Sampled Data Storage File

File Name: random file name.csv

Content

Format: CSV file format text file

Date,2004/02/24

Time,12:00:00

Data,9999

Sampling Time,1

Mode,NORMAL

Atmos.Pressure,1013

CO,CO2,Temperature., Relative humidity(, Dew-point temperature,
Wet-bulb temperature, Absolute humidity, Humidity ratio)
ppm,ppm, °C, %RH(, °C, °C,g/m3,g/kg)

AAAAAA,BBBBBB,TTTTTT,HHHHHH(,WWWWW,XXXXXX,YYYYYY,ZZZZZZ)

|

AAAAAA,BBBBBB,TTTTTT,HHHHHH(,WWWWW,XXXXXX,YYYYYY,ZZZZZZ)

Depending on the sampling mode, when standard mode is selected, four data (CO/CO2/Temperature/Relative humidity) will be saved. When detailed mode is selected, eight data (CO/CO2/Temperature/Relative humidity/Dew-point temperature/Wet-bulb temperature/Absolute humidity/Humidity ratio) will be saved in the file.

AAAAAA:CO

TTTTTT: Temperature

WWWWW: Dew-point temperature

YYYYYY: Absolute humidity

BBBBBB:CO2

HHHHHH: Relative Humidity

XXXXXX: Wet-bulb temperature

ZZZZZZ: Humidity ratio

6.2. Transferred Data Storage File

File Name: random file name.csv

Content

Format: CSV file format text file

[Calculation] data

Date,2004/02/24

Time,12:00:00

Data,9999

Sampling Time,1

Mode,CALCULATION(INS)

Atmos.Pressure,1013

CO,CO2,Temperature., Relative humidity(, Dew-point temperature,
Wet-bulb temperature, Absolute humidity, Humidity ratio)
ppm,ppm,°C,%RH(,°C,°C,g/m3,g/kg)

AAAAAA,BBBBBB,TTTTTT,HHHHHH(,WWWWW,XXXXXX,YYYYYY,ZZZZZ)

|

AAAAAA,BBBBBB,TTTTTT,HHHHHH(,WWWWW,XXXXXX,YYYYYY,ZZZZZ)

Depending on the sampling mode, when standard mode is selected, four data (CO/CO2/Temperature/Relative humidity) will be saved. When detailed mode is selected, eight data (CO/CO2/Temperature/Relative humidity/Dew-point temperature/Wet-bulb temperature/Absolute humidity/Humidity ratio) will be saved in the file.

AAAAAA:CO

TTTTTT: Temperature

WWWWW: Dew-point temperature

YYYYYY: Absolute humidity

BBBBBB:CO2

HHHHHH: Relative humidity

XXXXXX: Wet-bulb temperature

ZZZZZ: Humidity ratio

[%OA] data

Date,2004/02/24

Time,12:00:00

Data,9999

Sampling Time,1

Mode,%OA(CO2)

Atmos.Pressure,1013

Return_Air,Supply_Air,Outdoor_Air,Percent_Outdoor_Air

ppm,ppm,ppm,%OA

CCCCCCCC,DDDDDDDD,EEEEEEEE,FFFFFFF

|

CCCCCCCC,DDDDDDDD,EEEEEEEE,FFFFFFF

CCCCCCCC: Return Air

EEEEEEEE: Outdoor Air

DDDDDDDD: Supply Air

FFFFFFF: Percent Outdoor Air

6.3. IAQ.INI File

Data such as parameters necessary for starting up the software is stored.

Caution! If this file is deleted, the software will be initialized.

* Please be noted that deleting or modifying any files except CSV formatted files in “C:¥Kanomax¥IAQMonitor” may cause malfunctioning of the software.

7.TROUBLESHOOTING

7.1. Startup of RS232C setup window is slow.

The setup window is displayed after searching for RS232C port equipped to the computer.
Since the required time is dependent on factors such as the computer's processing speed, please wait for the window to be displayed.

7.2. Operation failure under Windows 9x/Windows NT/Windows XP systems.

The operation of this software is guaranteed only for running under Windows Vista/7/8.
Please prepare a Windows Vista/7/8 computer for proper use.

7.3. Communication error message is displayed.

Confirm the communication setting. (P.3-1)。
Reconfirm that the computer and the IAQ monitor are connected by a communication cable.
After making proper connection, close the software and reboot.

For other failures, please contact your local distributor or our service center.

8. CONTACT INFORMATION



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