



KANOMAX

Piezobalance Dust Monitor Software

MODEL S352-10

Operational Manual

Read this manual carefully and understand the warnings described in this manual before operating the product.
Keep this manual handy for ready reference

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No. S352-10

Thank you for purchasing a product of Kanomax, Inc.
Please read this operation manual carefully and operate the instrument appropriately by following the instructions given in this manual.

- This manual is stored in a CD-ROM as a PDF file, which can be read by “Adobe Acrobat 4.x” and higher.
- Windows 9x/NT/2000/XP/Vista/7 is a resisted trademark of Microsoft Corporation.
- Any unauthorized duplication of the product, in whole or in part, without written consent from Japan Kanomax Inc. is strictly prohibited.
- Contents of the Operation Manual are subject to change without notice.

Important Safety Information

Types and definitions of warning signs used in this instruction manual are shown below.

[Danger]

To prevent serious injury or death.

Items under this heading show measures to prevent serious injury or death, which may result if the instructions in this manual are not followed and the instrument is operated inappropriately.

<Caution>

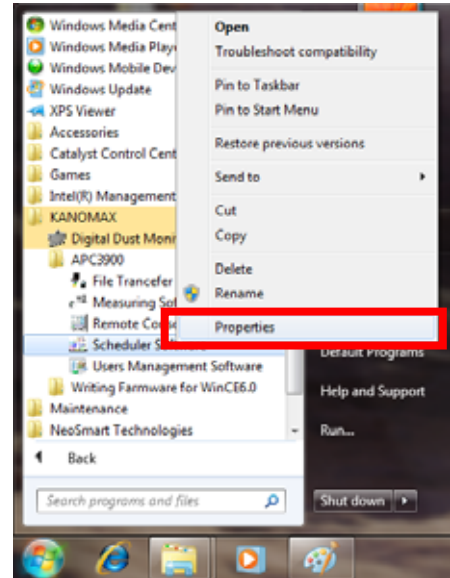
To prevent damage to the product.

Items under this heading show measures to prevent damage to the product and conditions that affect our product warranty.

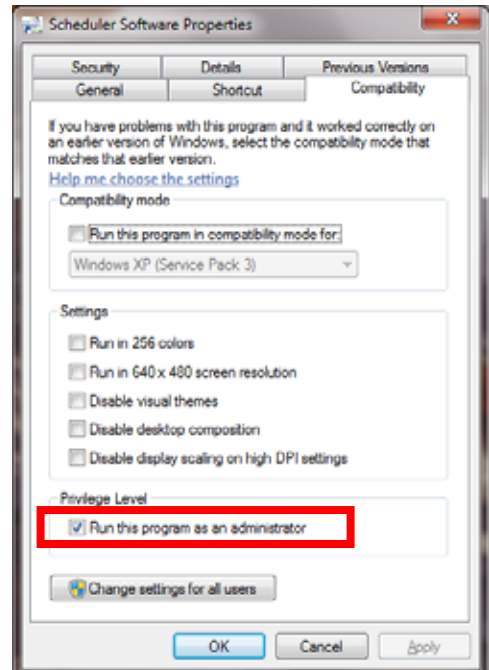
Precautions When Using Kanomax Software Products in Windows Vista or 7

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.

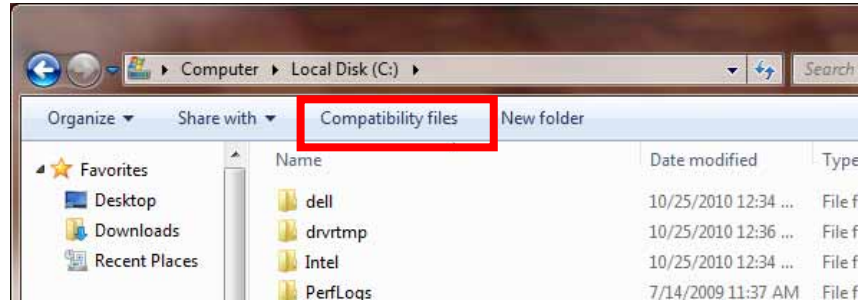


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1. Overview

1.1 System Overview

This software is provided for Piezobalance Dust Monitor (model 3521).

By using this software, data records of the Piezobalance Dust Monitor can be transferred to the computer.

The data is stored in the computer in a “csv” format. Thus, the data can be read and processed by applications such as Excel.

This software is operable under Windows 2000 and XP.

Applicable Computer Requirements:

| | |
|-----------------------|--|
| Model | IBM PC compatible (DOS/V) |
| Communication Port | To be equipped with more than one COM(RS232C) port. |
| OS | Windows 2000 SP4, Windows XP SP1 or higher, Windows Vista, Windows 7 |
| Memory Capacity | 500MB or more |
| Required HDD Capacity | 50MB or more |
| Display | Resolution of 800*600 or higher |

* Please note that proper operation may not be possible when using a RS232C-USB conversion cable depending on conditions such as computer and communication cable conditions.

For further details, please contact our service center.

1.2 System Settings

Setting of Piezobalance Dust Monitor.

1) Communication Setting

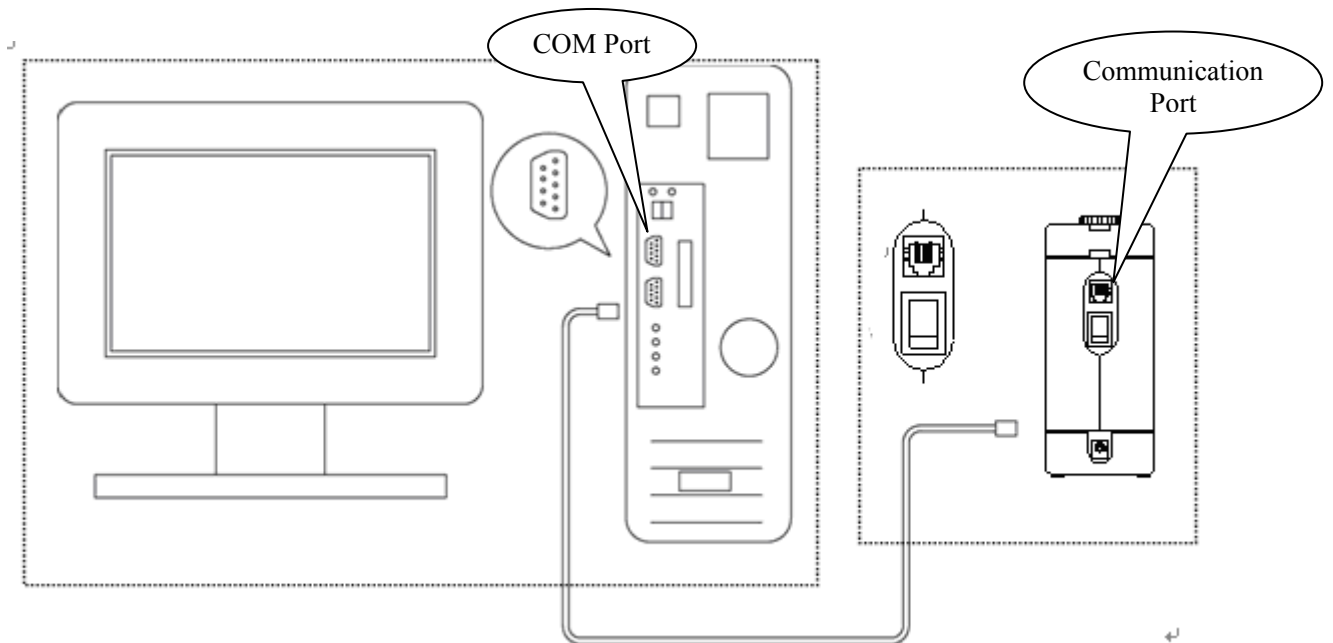
| Screen of Piezobalance Dust Monitor | Key Operation | Description of Operation |
|--|---------------|--|
| <div style="border: 1px solid black; padding: 5px;"> <p>MENU 1.NORMAL 2.SAMPLING TIME 3.DATA OUTPUT 4.PRINT OUTPUT 5. DATA CLEAR 6.TIME ADJUST 7.COMMUNICATION</p> </div> <p style="text-align: center;">↓</p> | | <p>When high voltage is NOT supplied, press the “MENU” key, and the screen shown in the left will be displayed. Select “COMMUNICATION” by using the <input type="button" value="△"/> <input type="button" value="▽"/> key. Press the “SET” key to proceed to the communication setting screen.</p> |
| <div style="border: 1px solid black; padding: 5px;"> <p>COMMUNICATION 1.BAUDRATE 19200 2.SAVE INFO</p> </div> | | <p>Set the communication baud rate at item 1 by using the <input type="button" value="△"/> <input type="button" value="▽"/> key. To enter the setting, press the “SET” key at item 2.</p> <p>The baud rate can be selected from the followings by using the <input type="button" value="△"/> <input type="button" value="▽"/> key.</p> <p>19200 9600 4800</p> |

Cautions for Operation

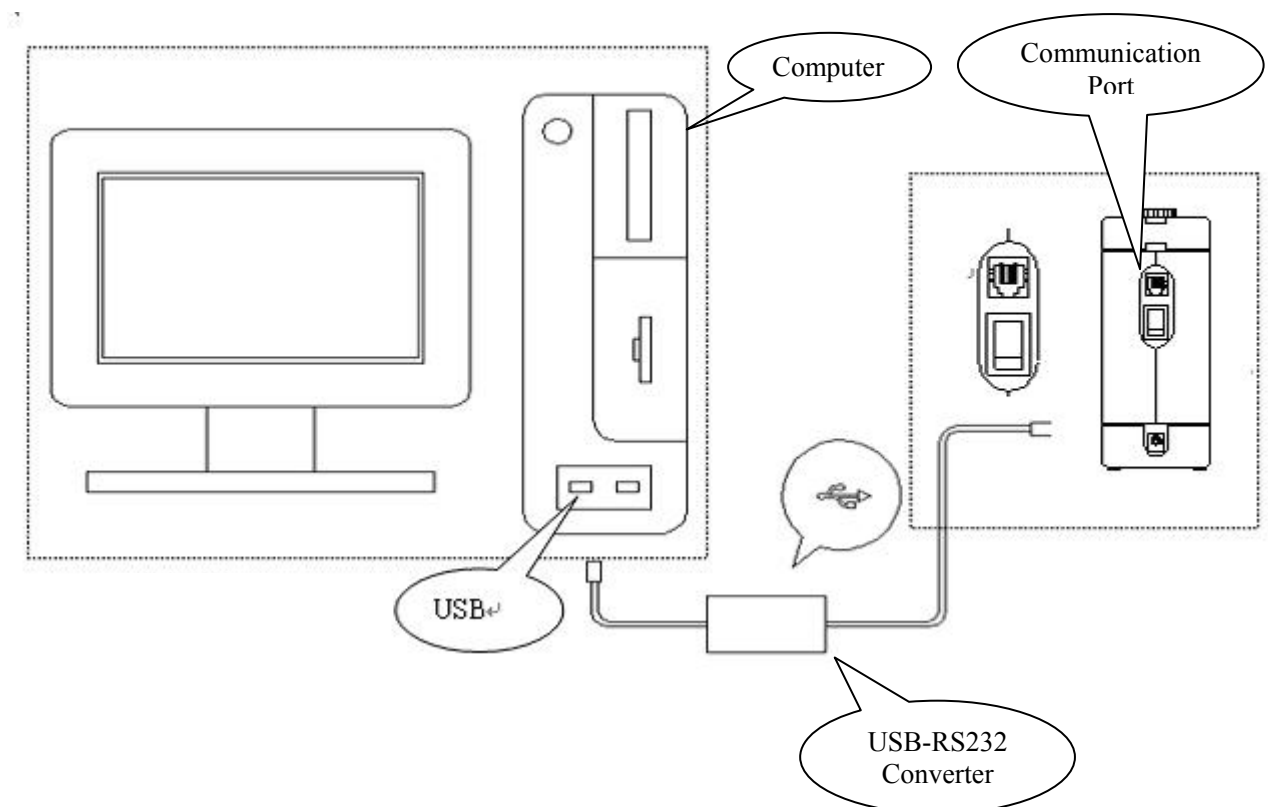
- By selecting the COM port by the computer, the software will automatically provide settings such as baud rate setting.
- When a computer is connected to the instrument, communication is possible without using the screen of the instrument .
In this case, the instrument screen must be set to the “MENU” screen.
- Do NOT use this software when the instrument is performing a measurement. The computer may fail to collect data if a communication is made with an instrument under measurement.

2) Connecting with Computer

(1) Use the dedicated communication cable to connect the instrument and the COM port of the computer.



(2) If the computer is not equipped with a COM port, the connection must be made by using a USB-RS232 converter.



2. Installation

2.1 Software Setup

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

- 1) Insert the installation CD-ROM (hereinafter called “CD”) in the computer.
(* If an old version is already installed, uninstall the old version before setup.)

Before starting setup, close any operating application software.

- 2) The window shown below will be displayed automatically on inserting the CD.
Press the “OK” button to proceed.



Click

- 3) The installation directory confirming window as shown below will be displayed.
To proceed with the default directory, click the installation starting icon.



Click

4) Select the Program Group for installing the software. By default, a program group called “Kanomax” will be created. To proceed with the default setting, click the “Continue” button, and the installation will start.



Click



5) When installation is completed properly, the following window will be displayed. Press the “OK” button.

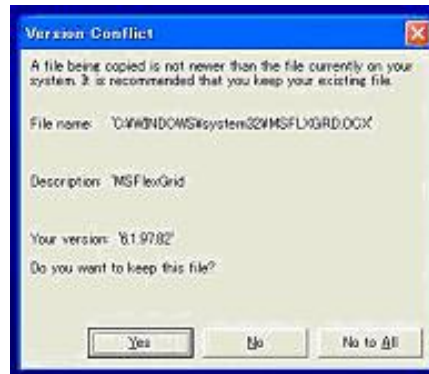


Click

2.2 Cautions for Setup

The following window may be displayed during setup. This window indicates that the same file is already installed in the computer.

If you are not having any operational problems with the current system, press “YES”.



3. Startup and Measurement

3.1 Software Startup

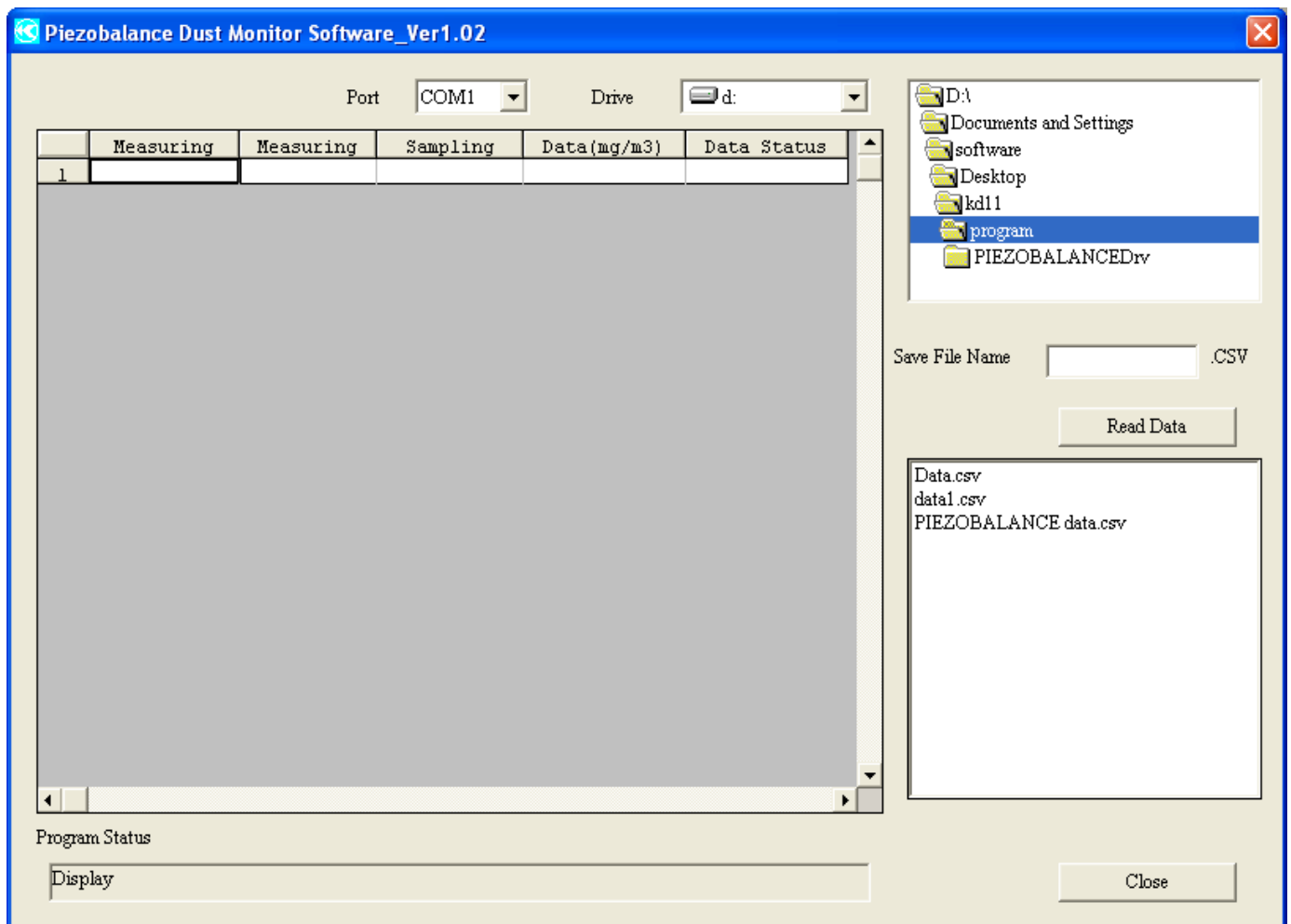
To start the Piezobalance software, select

[Start] → [All Programs] → [Kanomax] → [Piezobalance Dust Monitor Software] ,

or

[My computer] → [Appropriate Drive] → [Program Files] → [Piezobalance Dust Monitor Software] → [Piezobalance]

The following screen will be displayed when the software is started up.



3.2 How to Read in Data

Procedure for reading in data:

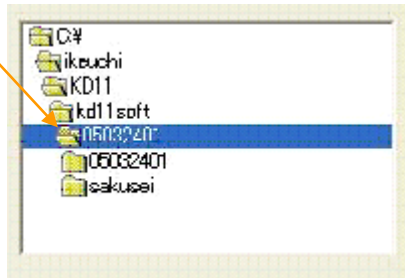
- 1) Select the communication port:(COM1 to COM8)



- 2) Select the drive name for storing the data.



- 3) Select the destination folder for storing the data.



- 4) Enter the file name for storing the data.



- 5) Click **Read Data** to read in the data stored in the instrument into the computer.

The data will be stored in the computer and displayed on the screen.

- 6) Program status will indicate “Read Data” while the data is transferred. The status will change to “Display” when data transfer is complete.

- 7) Click **Close** to close the software.

The screenshot shows the Piezobalance Dust Monitor Software Ver1.02 interface. At the top, there are dropdown menus for 'Port' (set to COM1) and 'Drive' (set to d:). Below these is a data table with columns: Measuring, Measuring, Sampling, Data(mg/m3), and Data Status. The table contains 22 rows of data. To the right, there is a file explorer showing the directory structure: D:\, Documents and Settings, software, Desktop, kd11, program, and PIEZOBALANCEDrv. Below the file explorer is a 'Save File Name' field with 'data3' entered and '.CSV' as the extension. A 'Read Data' button is located below the file explorer. At the bottom right, there is a 'File List' section displaying a list of files: Data.csv, data1.csv, data2.csv, data3.csv (highlighted), and PIEZOBALANCE data.csv. At the bottom left, there is a 'Program Status' section with a 'Display' button. A 'Close' button is located at the bottom right of the window.

| | Measuring | Measuring | Sampling | Data(mg/m3) | Data Status |
|----|------------|-------------|----------|-------------|-------------|
| 1 | 12/22/2005 | 4:34:20 PM | 0120 | 0.85 | 0 |
| 2 | 12/22/2005 | 4:42:20 PM | 0120 | 0.84 | 0 |
| 3 | 12/22/2005 | 4:50:19 PM | 0120 | 0.81 | 0 |
| 4 | 12/22/2005 | 4:58:19 PM | 0120 | 0.77 | 0 |
| 5 | 12/22/2005 | 5:06:20 PM | 0120 | 0.75 | 0 |
| 6 | 12/23/2005 | 9:29:48 AM | 0040 | 5.10 | 0 |
| 7 | 12/23/2005 | 9:37:49 AM | 0040 | 4.83 | 0 |
| 8 | 12/23/2005 | 9:45:49 AM | 0040 | 4.55 | 0 |
| 9 | 12/23/2005 | 9:53:49 AM | 0040 | 4.24 | 0 |
| 10 | 12/23/2005 | 10:01:50 AM | 0040 | 4.05 | 0 |
| 11 | 12/23/2005 | 11:15:39 AM | 0120 | 3.17 | 0 |
| 12 | 12/23/2005 | 11:23:39 AM | 0120 | 3.02 | 0 |
| 13 | 12/23/2005 | 11:31:39 AM | 0120 | 2.83 | 0 |
| 14 | 12/23/2005 | 11:39:38 AM | 0120 | 2.66 | 0 |
| 15 | 12/23/2005 | 11:47:40 AM | 0120 | 2.49 | 0 |
| 16 | 12/23/2005 | 1:28:39 PM | 0120 | 1.27 | 0 |
| 17 | 12/23/2005 | 1:36:28 PM | 0120 | 1.23 | 0 |
| 18 | 12/23/2005 | 1:44:28 PM | 0120 | 1.20 | 0 |
| 19 | 12/23/2005 | 1:52:28 PM | 0120 | 1.13 | 0 |
| 20 | 12/23/2005 | 2:00:28 PM | 0120 | 1.16 | 0 |
| 21 | 12/26/2005 | 4:48:50 PM | 0024 | 0.05 | 0 |
| 22 | 12/26/2005 | 4:50:25 PM | 0024 | 0.07 | 0 |

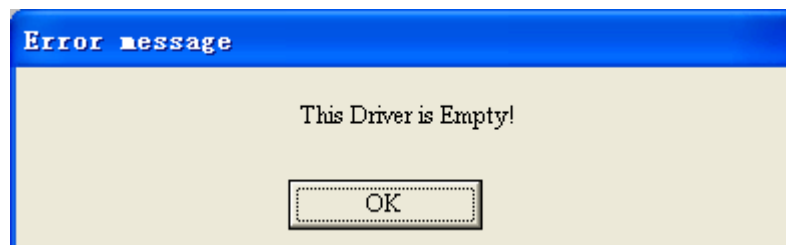
When there is data stored in the appointed drive, the file name of the stored data will be displayed at the file list section. (Used when reading in stored data.)

3.3 Operational Messages

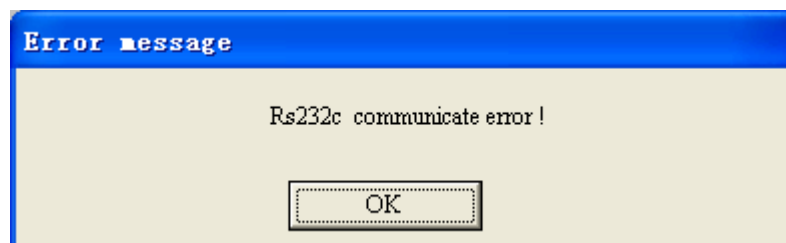
- 1) When “Read Data” button is pressed without entering a file name, the following message will be displayed. It is also displayed when the entered file name is already used.



- 2) When data cannot be written in the drive, the following message will be displayed.



- 3) When there is a communication failure between the computer and the instrument, the following message will be displayed. Confirm the communication cable and baud rate.



4. File Description

Viewing Stored Data (Example of a case using Excel)

The screenshot shows a Microsoft Excel spreadsheet titled "data3" with the following data:

| No | Measuring Date | Measuring Time | Sampling time | Data(mg/m3) | Data Status |
|----|----------------|----------------|---------------|-------------|-------------|
| 1 | 12/22/2005 | 4:34:20 PM | 120 | 0.85 | 0 |
| 2 | 12/22/2005 | 4:42:20 PM | 120 | 0.84 | 0 |
| 3 | 12/22/2005 | 4:50:19 PM | 120 | 0.81 | 0 |
| 4 | 12/22/2005 | 4:58:19 PM | 120 | 0.77 | 0 |
| 5 | 12/22/2005 | 5:06:20 PM | 120 | 0.75 | 0 |
| 6 | 12/23/2005 | 9:29:48 AM | 40 | 5.1 | 0 |
| 7 | 12/23/2005 | 9:37:49 AM | 40 | 4.83 | 0 |
| 8 | 12/23/2005 | 9:45:49 AM | 40 | 4.55 | 0 |
| 9 | 12/23/2005 | 9:53:49 AM | 40 | 4.24 | 0 |
| 10 | 12/23/2005 | 10:01:50 AM | 40 | 4.05 | 0 |
| 11 | 12/23/2005 | 11:15:39 AM | 120 | 3.17 | 0 |
| 12 | 12/23/2005 | 11:23:39 AM | 120 | 3.02 | 0 |
| 13 | 12/23/2005 | 11:31:39 AM | 120 | 2.83 | 0 |
| 14 | 12/23/2005 | 11:39:38 AM | 120 | 2.66 | 0 |
| 15 | 12/23/2005 | 11:47:40 AM | 120 | 2.49 | 0 |
| 16 | 12/23/2005 | 1:28:39 PM | 120 | 1.27 | 0 |
| 17 | 12/23/2005 | 1:36:28 PM | 120 | 1.23 | 0 |
| 18 | 12/23/2005 | 1:44:28 PM | 120 | 1.2 | 0 |
| 19 | 12/23/2005 | 1:52:28 PM | 120 | 1.13 | 0 |
| 20 | 12/23/2005 | 2:00:28 PM | 120 | 1.16 | 0 |
| 21 | 12/26/2005 | 4:48:50 PM | 24 | 0.05 | 0 |
| 22 | 12/26/2005 | 4:50:25 PM | 24 | 0.07 | 0 |
| 23 | 12/27/2005 | 8:00:41 AM | 120 | 0.1 | 0 |

Callouts in the image identify the following columns:

- Measurement Number (Column 1)
- Measurement Date (Column 2)
- Measurement Start Time (Column 3)
- Sampling Period (Column 4)
- Measured Concentration (Column 5)

Legend for Error Status:

- 1 --- Error
- 0 --- No Error

5. Troubleshooting

5.1 Startup of RS232C setup window is slow.

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

5.2 Operation failure under Windows 9x systems or Windows NT.

The operation of this software is guaranteed only for running under Windows 2000/XP.
Please prepare a Windows 2000/XP computer for proper use.

5.3 Communication error message is displayed.

Confirm the communication setting.
Reconfirm that the computer and the instrument 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.

6. After Service

This software is a standard accessory of Piezobalance Dust Monitor 3521.

All of our products have gone through thorough inspection based on our quality assurance system prior to shipment. However, in case a defect in materials/workmanship, or damage due to a transportation accident is found, please contact your local distributor, or call our service desk.

This product is warranted against defects in materials and workmanship for a period of one year from the date of original purchase. The limited warranty covers all defects encountered in normal use of the product, and does not apply in cases such as; loss or damage to the product due to abuse, mishandling, or alternation by the owner, or natural disaster.

7. Contact Information



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