



Data Extract Software

For CardVibro Air2

Model : DB-2012

User Manual

User Manual Part No. TVE-6-3853E

Ver2.0.3

Release Note

Date	Version	Notes
March, 13 2013	1.0.0	New
April, 23 2013	1.1.0	Added Language select function
April, 30 2013	1.1.2	Added Trouble Shooting
July, 10 2013	1.2.0	Added Routing Function
July, 29 2013	2.0.0	Added USB protection mode
March, 10 2014	2.0.1	For New Database version (later from Android App. Ver.2.0.7)
May, 30 2014	2.0.2	Added CSV file notation
January, 16 2015	2.0.3	Added Measured Data Move

Notice

Thank you for purchasing of CardVibro Air2.

In this manual, the using method of Data extract software DB-2012 for CardVibro Air2 is mentioned.

- Contact IMV or our Representative if you have questions about this user manual.
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- The rental of software is prohibited by the Copyright Act.
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- It is recommended to take backup of the saved contents periodically.
- Accessory software is not available for units other than the CardVibro Air2.
- This software may be changed without notice.
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Introduction

Overview

Data Extract Software is to utilize the measured data by CardVibro Air (Pocket PC) on PC. The measured data by CardVibro Air is transferred to PC with using Microsoft ActiveSync. Data Extract Software is the application to control the measuring data imported to PC totally and to display Trend graph, FFT graph and Waveform.

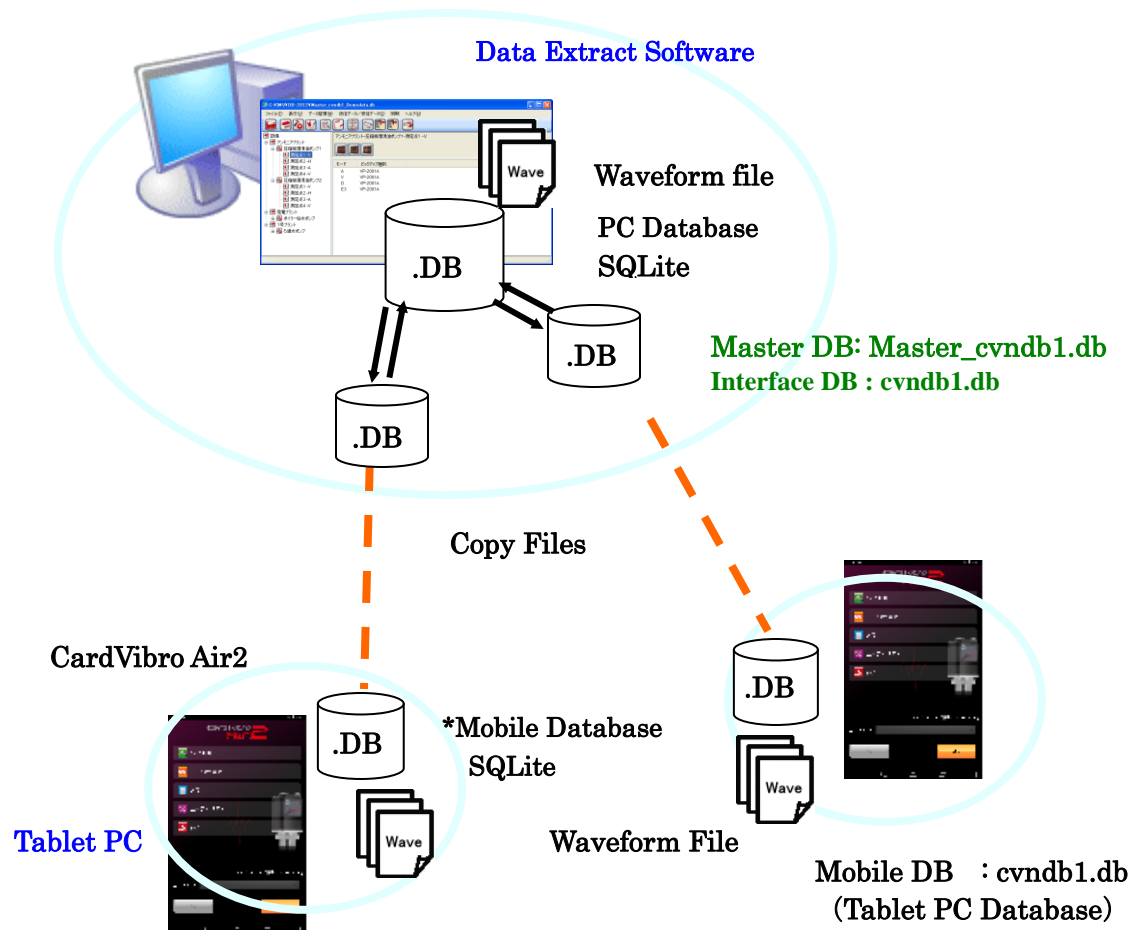


Fig. System Configuration

Features

- Controls the measurement data every machine as Motor , Pump etc.
- Display of trend graph of Overall (OA) value.
- Display of FFT analysis graph
- Display of Time waveform graph
- Outputs the graph of measuring data in Excel file format and printing is possible.
Edition by Excel file is at your will.
- Outputs FFT data and waveform data in CSV format.

Specifications

- Indispensable specification

OS:	Windows XP, Windows7 (32bit, 64bit)
Resolution:	Over 800 x 600 dot
Interface:	USB(Connect to Tablet PC)
Software:	Microsoft Excel 2003(or later) Necessary to use printer function

Preparation

Instration of data Extract Software


- Install **Data Extract software** from USB, and the USB device always have to be inserted into USB port for a liscence certification.
- Data Extract Software is installed in the folder of C:/IMV/DB-2012.
Main files to be installed will be described as below.

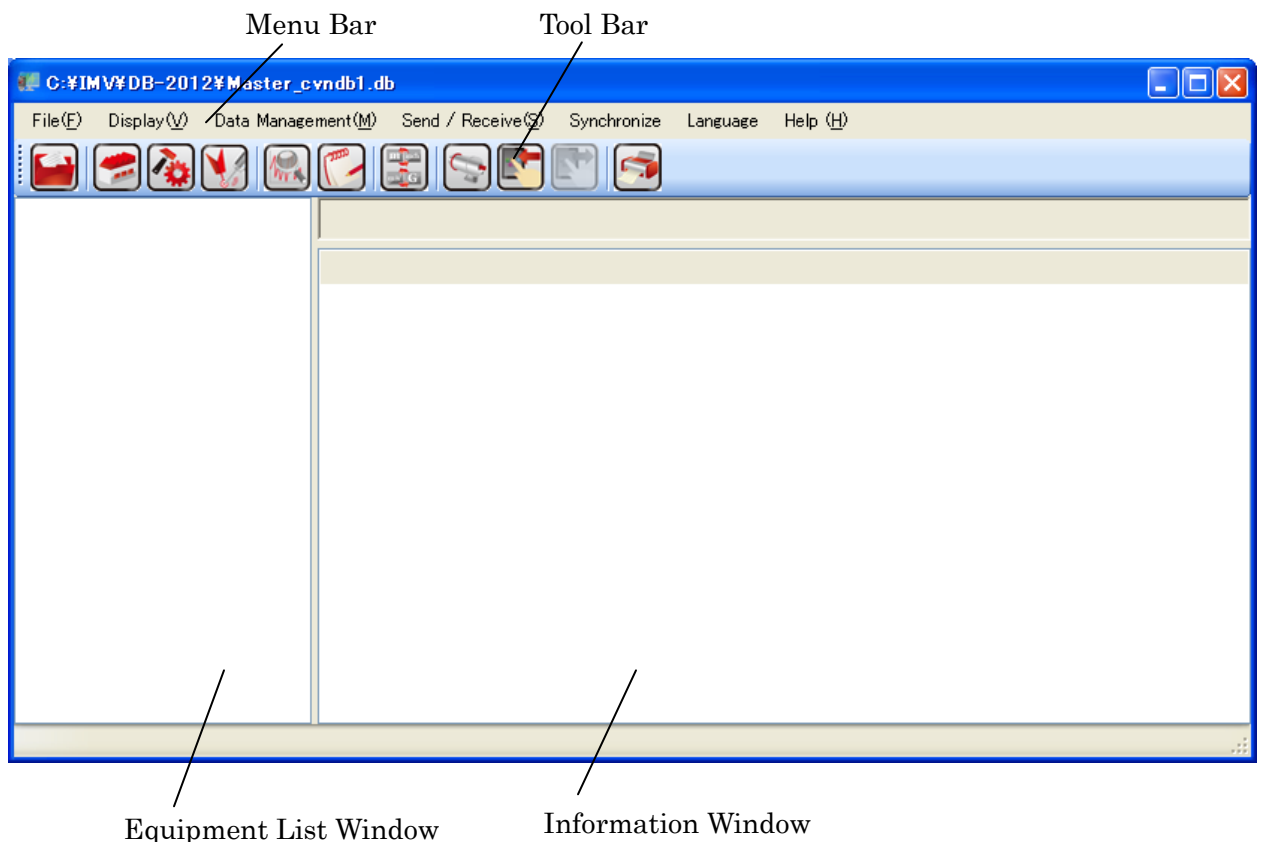
Folder Name & File Name	Content
DB-2012	Folder name
└DB-2012.exe	Exe file for Data Extract Software
└Master_cvndb1.db	Master Database (Master database) Data is saved in this Database
└Sample_Point_List.csv	Sample of CSV file to make Point list.
└Book1.xls	Excel macro file for printing
└Book2.xls	Excel macro file for printing(for multi glaph of trend)
└Vibro1	Folder name
└└cvndb1.db	Interface database (slave database) to synchronize with first Pocket PC.
└Wave	Folder to save Waveform file
└Sample_DB	Folder name
└└Sample_cvndb1.db	Sample data (for sample data, usually not used.)
└Sample_Wave	Waveform data sample folder
└└.wav File	Waveform data sample
└database	Folder which new Database(empty Database) is saved
└└Master_cvndb1.db	New Master database (emptyDatabase) *1
└└cvndb1.db	New Interface database (empty Database) *2

There are files which the application makes automatically other thanabove files.

*1,*2: Spare new empty Database file. In case to make data base newly, copy this file and use.

Boot-up of Data Extract Software

Double click the short-cut icon  on the Desk top to open windows of Data extract software.



Click  button to open Master_cvndb1.db .

(Saved folder C:/IMV/DB-2012/Master_cvndb1.db)

In case to use the first time, nothing other than the Equipment list window is displayed as above figure. Because the initial registration of measuring point to be controlled is not completed.

Registration of Machine to be controlled

There are two method to register the machines as below.

- (1) Making of Measuring point list by CSV format and import (→Page 6～ Page 8)

This method is convenient to register a lot of machine and measuring point at one time such as using Data extract software first time.

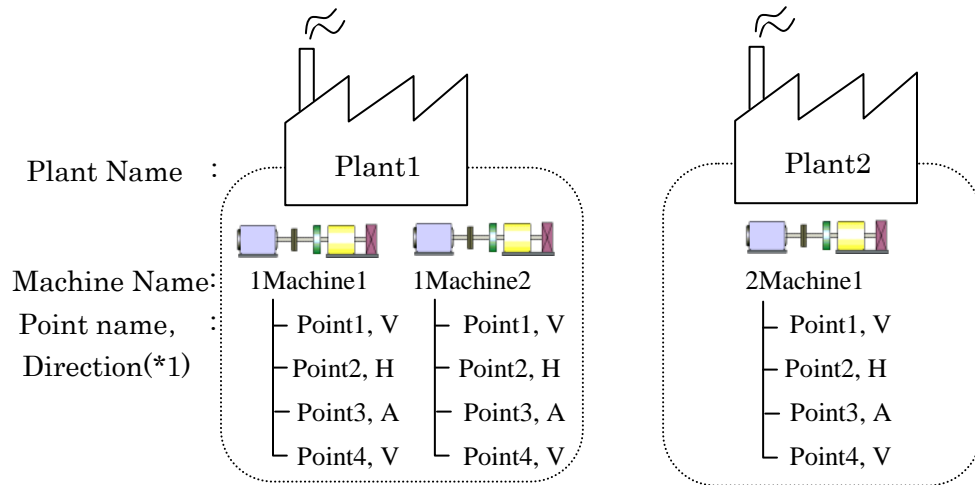
- (2) Addition of machine and measuring point one by one. (→ Page 9～ Page 16)

This method is convenient to register a few machines and measuring points.

In case to use the first time, refer the explanation shown from the next page and register the measuring point by the method (1).

Making of Measuring Point List by CSV file and Import

- Sample of CSV format to make the Point list is saved in the folder where Data Extract Software is installed. (Sample_Point_List.csv)
See the sample file and make the CSV file for measuring point list.
- Use the text editor as Excel or WordPad to edit CSV file.
- For example, in case to control the machines and measuring points as below figure, make the CSV file which is punctuated by comma as below format.



Direction(*1) : The direction of detection is specified by the alphabet.

V:Vertical, **H**: Horizontal, **A**: Axially

Example of CSV file

```
Plant Name,Machine Name,Point Name,Direction
Plant1,1Machine1,Point1,V
Plant1,1Machine1,Point2,H
Plant1,1Machine1,Point3,A
Plant1,1Machine1,Point4,V
Plant1,1Machine2,Point1,V
Plant1,1Machine2,Point2,H
Plant1,1Machine2,Point3,A
Plant1,1Machine2,Point4,V
Plant2,2Machine1,Point1,V
Plant2,2Machine1,Point2,H
Plant2,2Machine1,Point3,A
Plant2,2Machine1,Point4,V
```

- Limitation of character

Plant Name : 30byte

Machine Name : 30byte

Name of Measuring Point : 30byte

1byte: 1-character

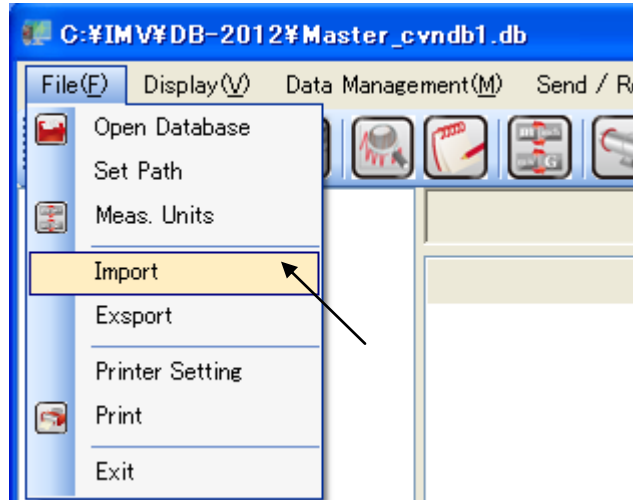
- Limitation of Measuring Point

Up to 36 points per 1 machine

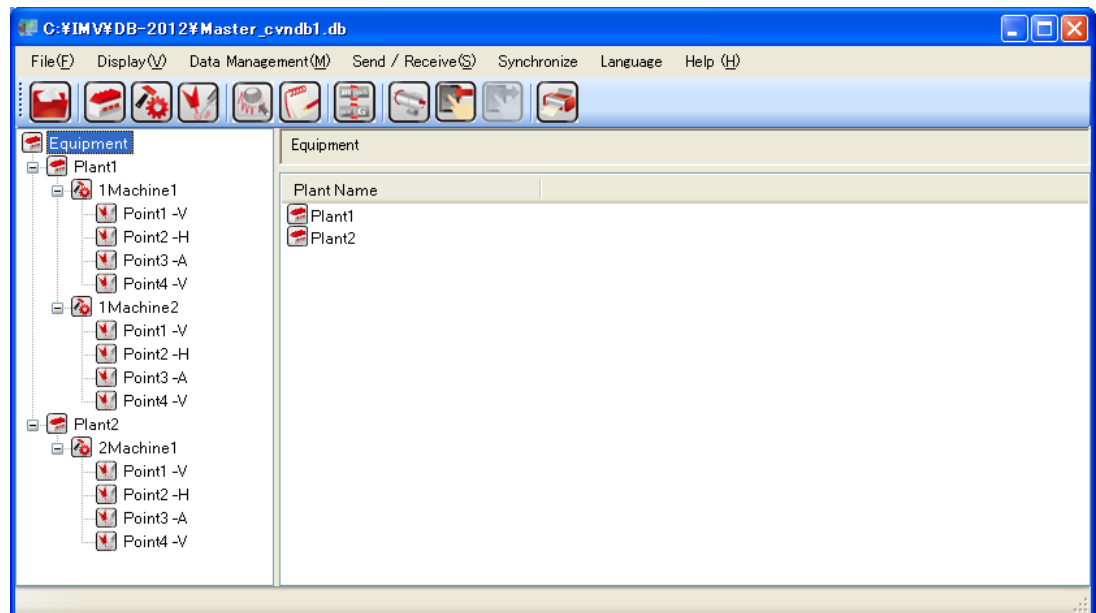
- File format Limitation

When you save a file, the format should be set to [Unicode], not [ANSI].

- Point is imported in the order written in CSV format.
Make the CSV file with referring the order.
- Import the made CSV format.
Open the made CSV file from Menu file → Import. Data is imported.



- After the import, the measuring points are displayed on the Equipment list in tree status.



Notation for CSV file making

In case of not importing a csv file, the file format might not be suitable for DB-2012. When you open such a file by Excel, you can see that the data is not set to each cell rightly. (See below right-side figure, and left-side one shows that the data is imported rightly.)

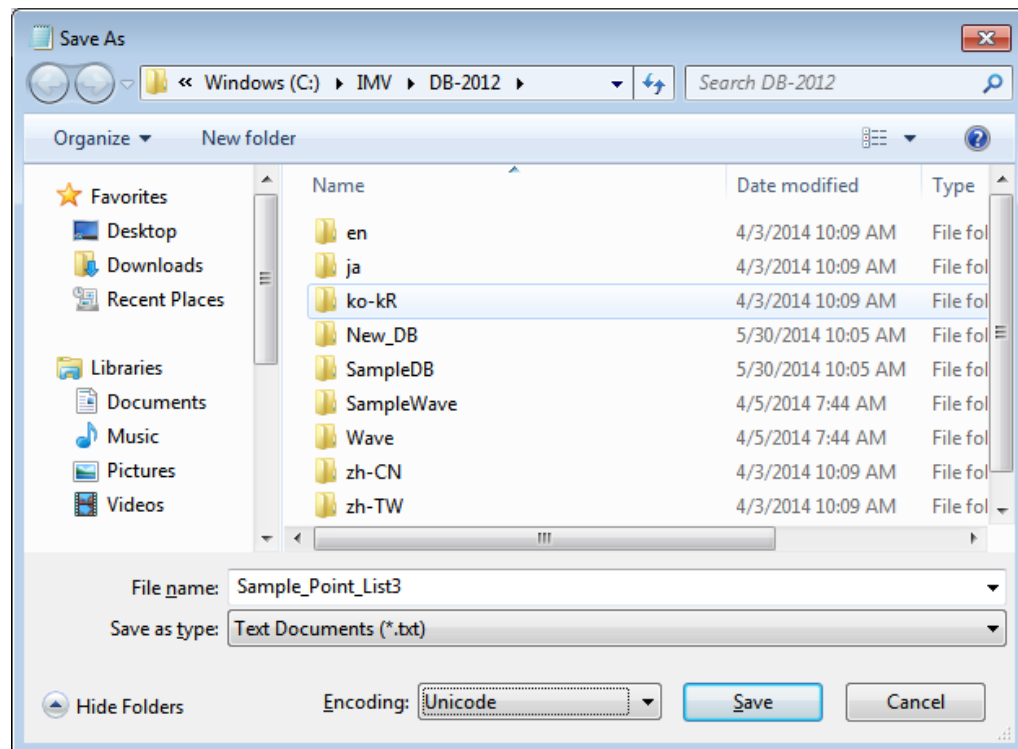
A	B	C	D
Plant Name	Machine Name	Point Name	Direction
Plant1 1	Machine1	Point1	V
Plant1 1	Machine1	Point2	H
Plant1 1	Machine1	Point3	A
Plant1 1	Machine1	Point4	V
Plant1 1	Machine2	Point1	V
Plant1 1	Machine2	Point2	H
Plant1 1	Machine2	Point3	A
Plant1 1	Machine2	Point4	V
Plant1 2	Machine1	Point1	V
Plant1 2	Machine1	Point2	H
Plant1 2	Machine1	Point3	A
Plant1 2	Machine1	Point4	V

Good

A	B	C	D	
Plant Name	Machine Name	Point Name	Direction	
Plant1 1	Machine1	Point1	V	
Plant1 1	Machine1	Point2	H	
Plant1 1	Machine1	Point3	A	
Plant1 1	Machine1	Point4	V	
Plant1 1	Machine2	Point1	V	
Plant1 1	Machine2	Point2	H	
Plant1 1	Machine2	Point3	A	
Plant1 1	Machine2	Point4	V	
Plant1 2	Machine1	Point1	V	
Plant1 2	Machine1	Point2	H	
Plant1 2	Machine1	Point3	A	
Plant1 2	Machine1	Point4	V	

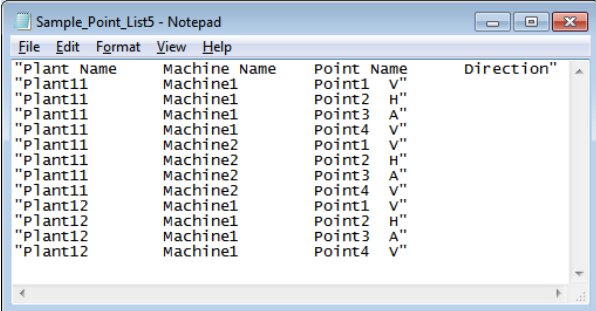
Not Good

If you encounter an above bad situation, you have to re-input Plant name, Machine name, etc in each cell on Excel, or you save a csvfile as Unicode, not ANSI, opening it by a Text editor, Notepad, etc.



Also, when a file is showed as below left-side figure on Excel, if you save the file as csv format by Excel, you might find a below right-side figure, that shows double quotations ["].

A	B	C	D
Plant Name	Machine Name	Point Name	Direction
Plant1 1	Machine1	Point1	V
Plant1 1	Machine1	Point2	H
Plant1 1	Machine1	Point3	A
Plant1 1	Machine1	Point4	V
Plant1 1	Machine2	Point1	V
Plant1 1	Machine2	Point2	H
Plant1 1	Machine2	Point3	A
Plant1 1	Machine2	Point4	V
Plant1 2	Machine1	Point1	V
Plant1 2	Machine1	Point2	H
Plant1 2	Machine1	Point3	A
Plant1 2	Machine1	Point4	V

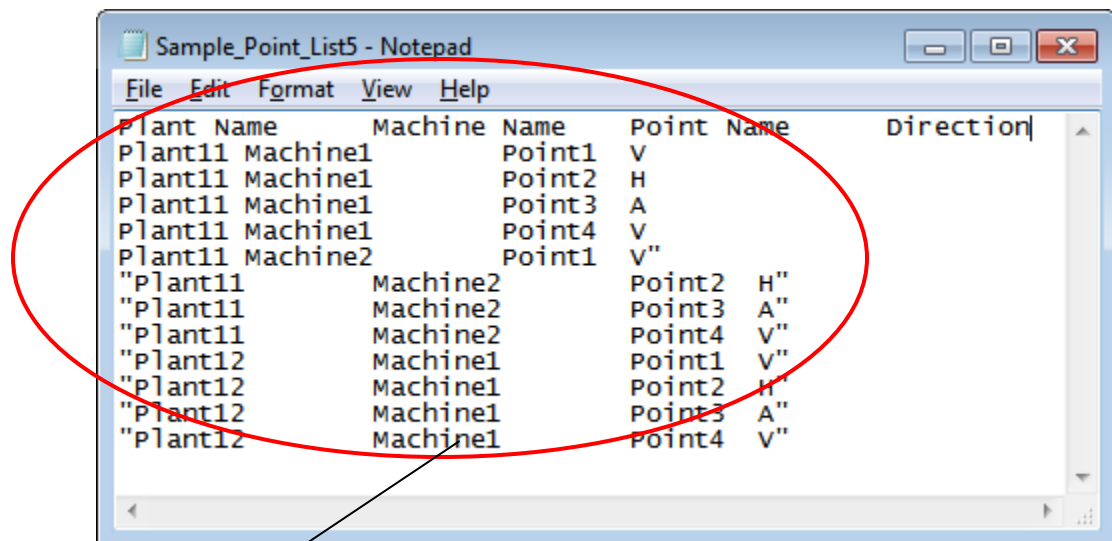


```

Sample_Point_List5 - Notepad
File Edit Format View Help
"Plant Name"      "Machine Name"    "Point Name"      "Direction"
"Plant11"         "Machine1"        "Point1"          "V"
"Plant11"         "Machine1"        "Point2"          "H"
"Plant11"         "Machine1"        "Point3"          "A"
"Plant11"         "Machine1"        "Point4"          "V"
"Plant11"         "Machine2"        "Point1"          "V"
"Plant11"         "Machine2"        "Point2"          "H"
"Plant11"         "Machine2"        "Point3"          "A"
"Plant11"         "Machine2"        "Point4"          "V"
"Plant12"         "Machine1"        "Point1"          "V"
"Plant12"         "Machine1"        "Point2"          "H"
"Plant12"         "Machine1"        "Point3"          "A"
"Plant12"         "Machine1"        "Point4"          "V"

```

You can not import such a file to DB-2012, even though you change the format from ANSI to Unicode by Notepad. You should delete or erase double quotations before saving the file as Unicode.



After delete ["], save the file as Unicode

Plant Screen

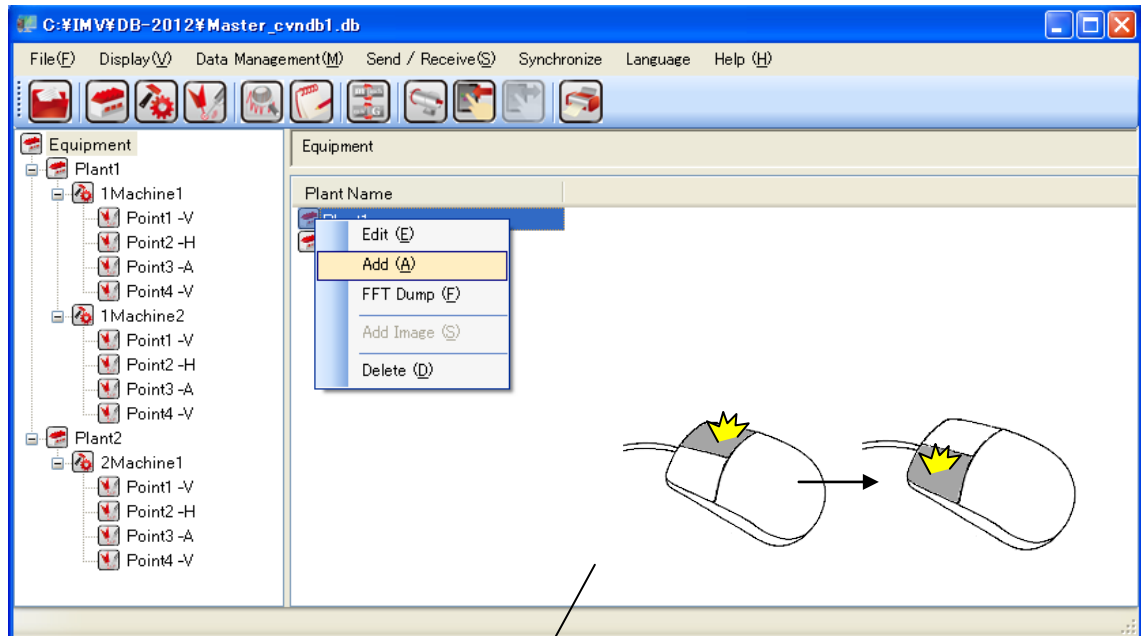


Press Plant button to display the Plant list on information window.

Addition of Plant

- Press Plant button, move the mouse cursor to Information window, select any Plant, then right click on the mouse to display the pop-up menu.

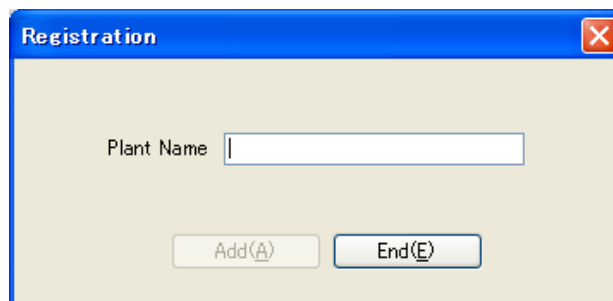
Select Add by left click.



Information window

- Add registration screen will appear. Input the Plant Name and click the Add button to add.

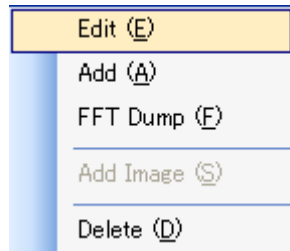
Maximum memory is 30 byte.



It can be added continuously until End button is pressed.

Edition of Plant

- Press the Plant button, move the mouse cursor to Information window and select the Plant to be edited, then right click on the mouse to display the pop-up menu.

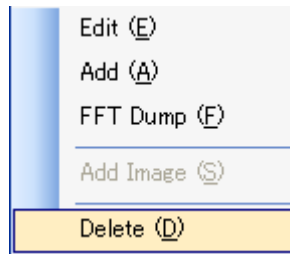


Select Edit by left click.

- Edit registration screen will appear. Input the Plant Name and click Define button to register. Maximum memory is 30byte

Delete of Plant

- Press the Plant button, move the mouse cursor to Information window and select the Plant to be deleted, then right click on the mouse to display the pop-up menu.




Select Delete by left click.

- If the Plant is deleted, the information of Machine, Measuring Point and measuring data included in the Plant is deleted. Pay attention when deleted.

Printing



Press  print button to output the contents shown on Information windows into Excel file. The message to confirm the effective/ineffective of Macro displays. Select “Macro is effective” . Print from the Excel screen.

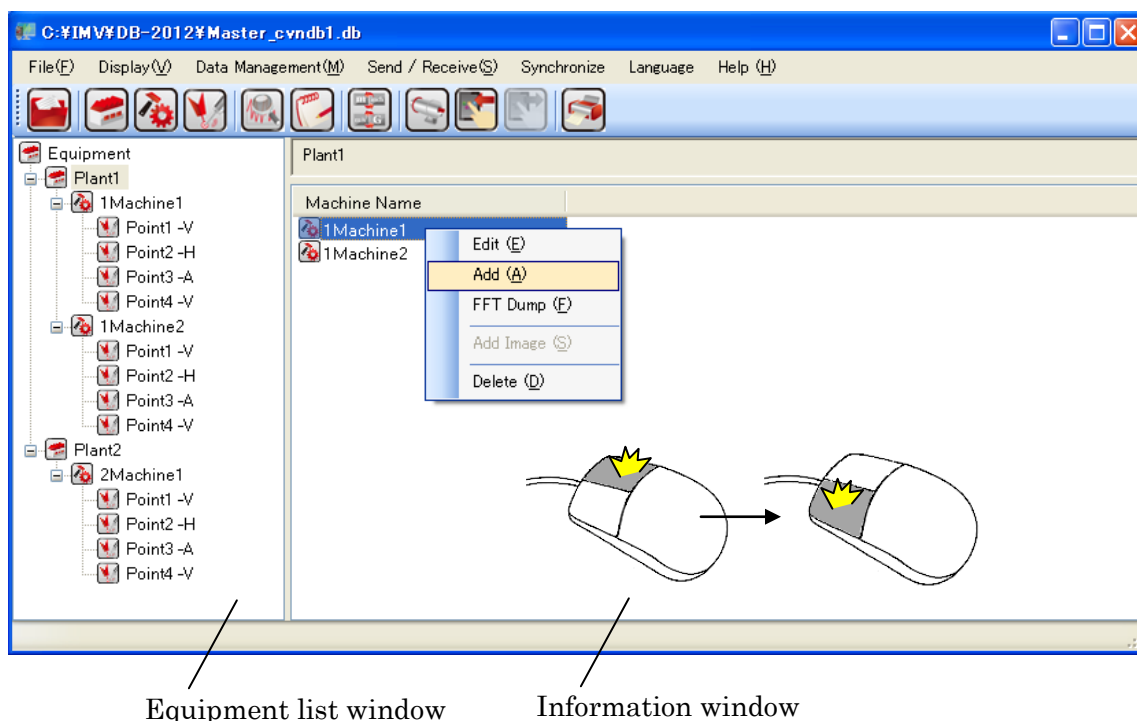
Machine Screen



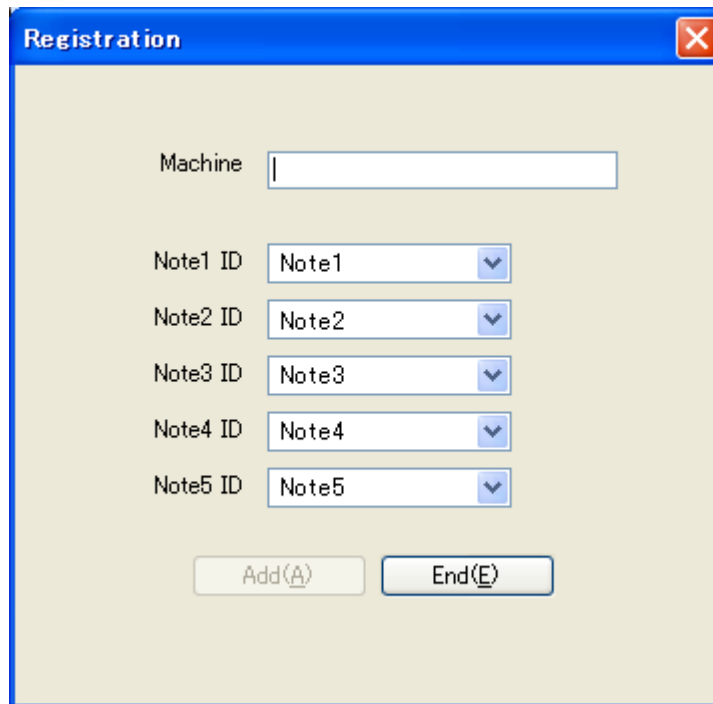
Press Machine button to display the Machine list on Information window.
Displays the Machine list included in the Plant selected by the Equipment list window.

Addition of Machine

- Display the Machine list on Information window, move mouse cursor to Information window and select any Machine, then right click on the mouse to display the pop-up menu. Select Add by left click.



- Add registration screen will appear. Input the Machine Name and Memo Label and click Add button to add.
- Maximum memory of Machine name is 30byte.
- Memo label is the item to be controlled as Memo of Machine and can be set up to 5-items. In Memo1~5, Memo1~5 and the item as RPM/TEMPERATURE/PRESSURE/VOLT/WATT/CURRENT/FLOWMETER is prepared as default. The item of Memo label can be edited in Memo label Edit. See the chapter of Other Preparation and Memo label Edit as for detailed procedures.

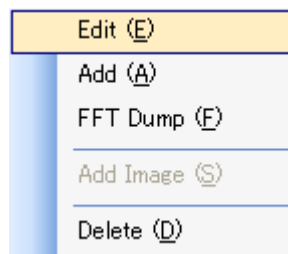


The image shows a 'Registration' dialog box with a blue title bar and a close button (X) in the top right corner. The dialog has a light beige background. It contains the following fields and controls:

- A text input field labeled 'Machine'.
- Five dropdown menus labeled 'Note1 ID', 'Note2 ID', 'Note3 ID', 'Note4 ID', and 'Note5 ID'. Each dropdown currently shows 'Note1', 'Note2', 'Note3', 'Note4', and 'Note5' respectively.
- Two buttons at the bottom: 'Add(A)' and 'End(E)'.

Edition of Machine

- Press the Machine button, move the mouse cursor to Information window and select the Machine to be edited, then right click on the mouse to display the pop-up menu.

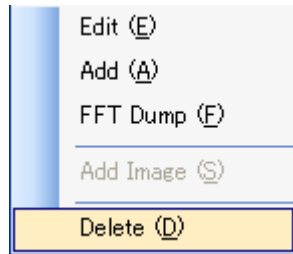


Select Edit by left click.

- Edition registration screen will appear. Input the contents to be changed and click Define button to register.

Delete of Machine

- Press the Machine button, move the mouse cursor to Information window and select the Machine to be deleted, then right click on the mouse to display popup menu.Plant Machine




Select Delete by left coick.

- If the Machine is deleted, the information of Measuring Point and measuement data included in Machine is deleted. Pay attention when deleted.


Printing



Press  printng button to output the contents displayed on Information window to Excel file. Print from the Excel screen.

Point Screen

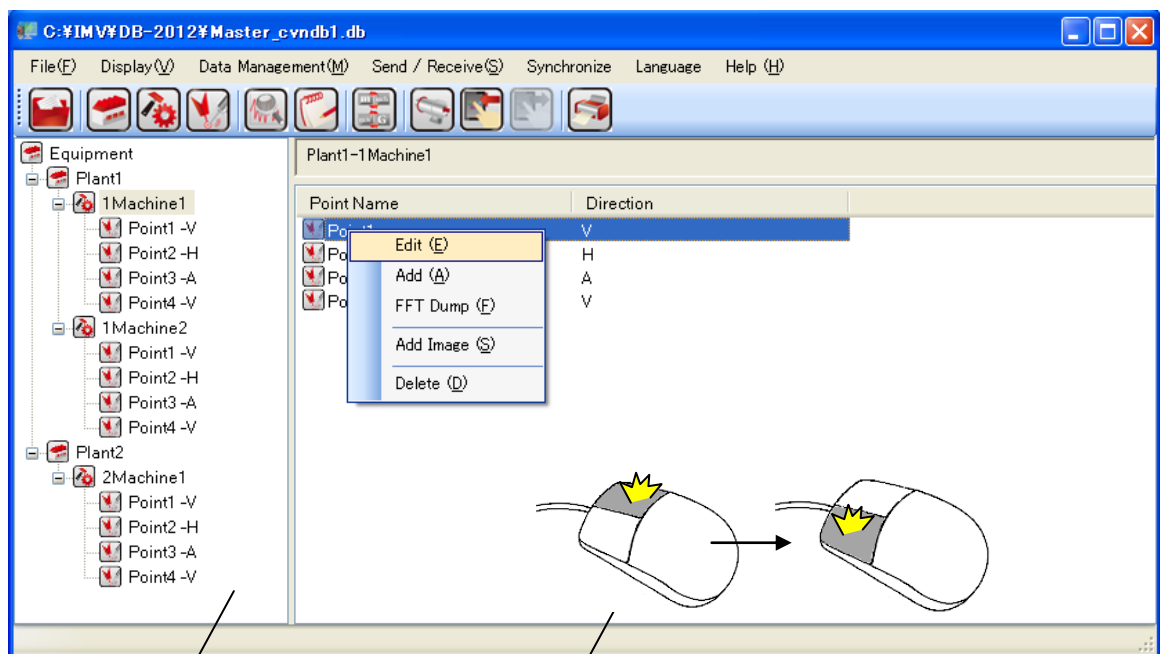


Press  Point button to display the Point list on Information window.

Displays the Point list included in the Machine selected by the Equipment list window.

Addition of Point

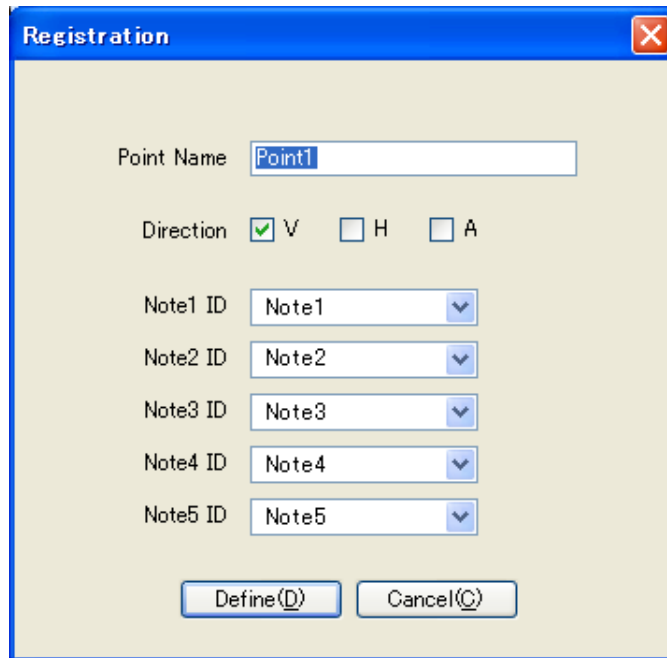
- Display the Point list on Information window, move the mouse cursor to Information window and select any point, then right click on the mouse to display the pop-up menu. Select Add by left click.



Equipment list window

Information window

- Add registration screen will appear. Input the Point Name, Direction, Memo Label and click Add button to add.



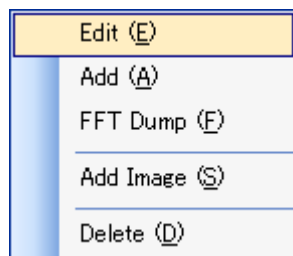
The Registration dialog box has a title bar with 'Registration' and a close button. It contains the following fields and controls:

- Point Name:** A text box containing 'Point1'.
- Direction:** Three radio buttons labeled 'V', 'H', and 'A'. The 'V' button is selected.
- Note1 ID:** A dropdown menu showing 'Note1'.
- Note2 ID:** A dropdown menu showing 'Note2'.
- Note3 ID:** A dropdown menu showing 'Note3'.
- Note4 ID:** A dropdown menu showing 'Note4'.
- Note5 ID:** A dropdown menu showing 'Note5'.
- Buttons:** 'Define(D)' and 'Cancel(C)' at the bottom.

- Maximum memory of the Point name is 30byte.
- Direction is V:Vertical, H: Horizontal, A: Axially
- Memo label is the item controlled as Memo of Machine and can be set up to 5-items. In Memo1~5, Memo1~5 and the item as RPM/TEMPERATURE/PRESSURE/VOLT/WATT/CURRENT/FLOWMETER is prepared as default. The item of Memo label can be edited in Memo label Edit. See the chapter of Other Preparation and Memo label Edit as for detailed procedures.

Edition of Point

- Press the Point button, move the mouse cursor to Information window and select the Point to be edited, then right click on the mouse to display the pop-up menu.

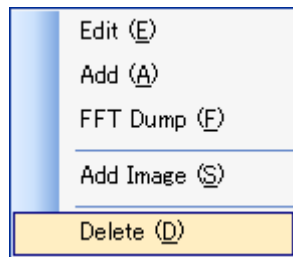


Select Edit by left click.

- Edit registration screen will appear. Input the content to be changed and click the Define button to register.

Delete of Point

- Press the Point button, move the mouse cursor to Information window and select the Point to be deleted, then right click on the mouse to display the pop-up menu.




Select Delete by left click.

- If the Point is deleted, the measuring data of the Point is deleted. Pay attention when deleted.

Printing



Press  printing button to output the contents displayed on Information window into Excel file. Print from the screen of Excel.

Setting Screen of Group



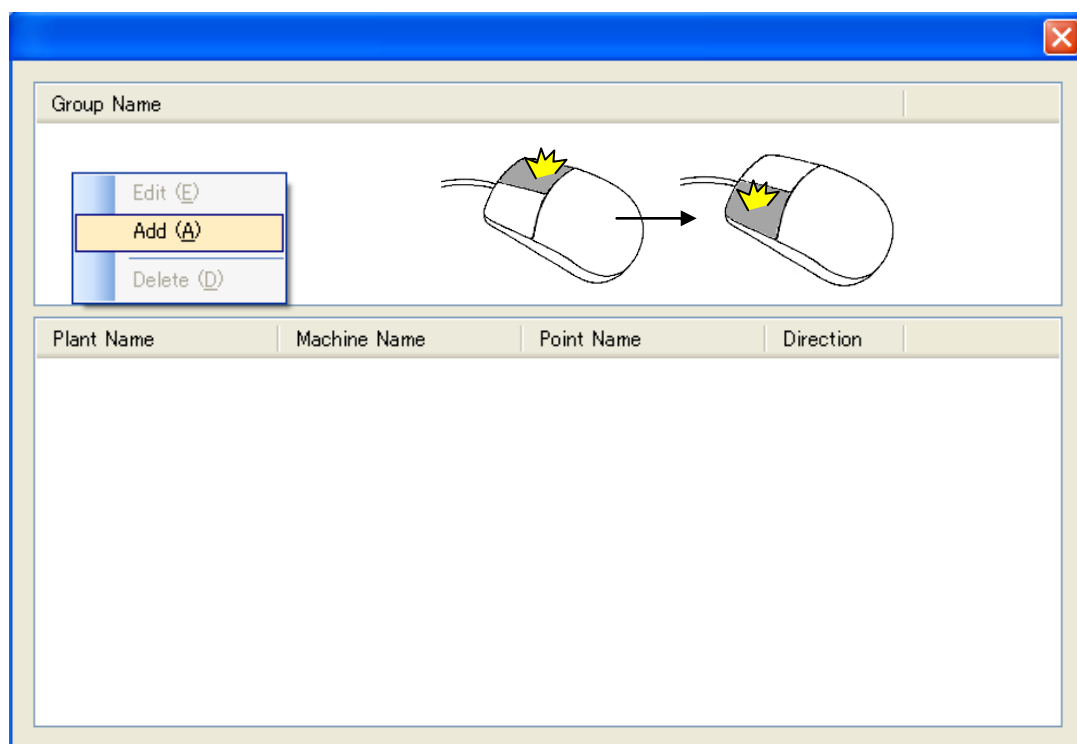
Press Group button to display the setting screen of the Group.

The Group functions to classify the registered measuring position into any small group for easier use. Transfer the measuring point information to Pocket PC with this group unit.

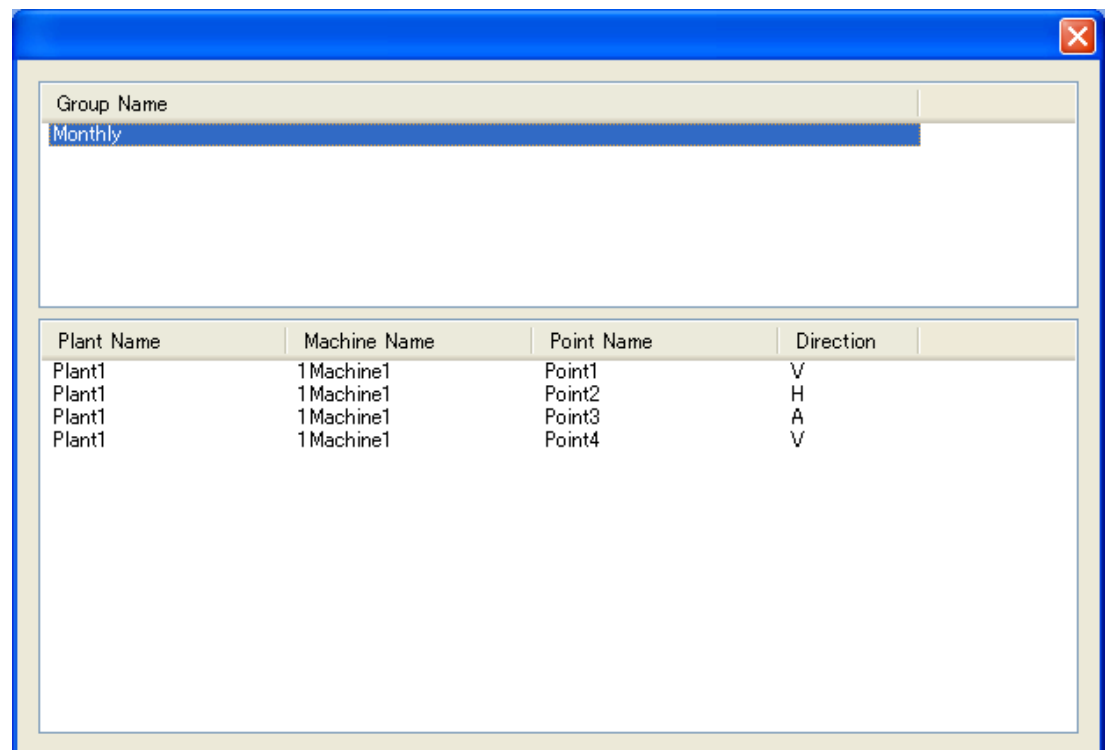
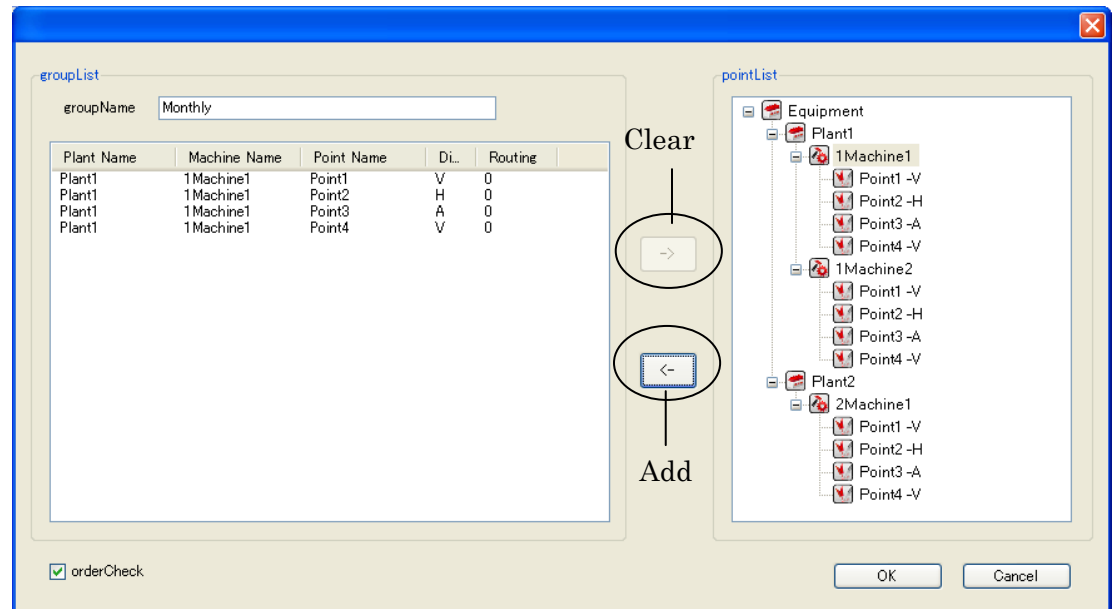
For example, classify the group by factory as Plant1、 Plant2 or do the group by the inspection period as monthly inspection, routine inspection.

Or classify the group by the person in charge.

- Move the mouse cursor on Window and left click on the mouse to display the pop-up menu. Select Add by left click.

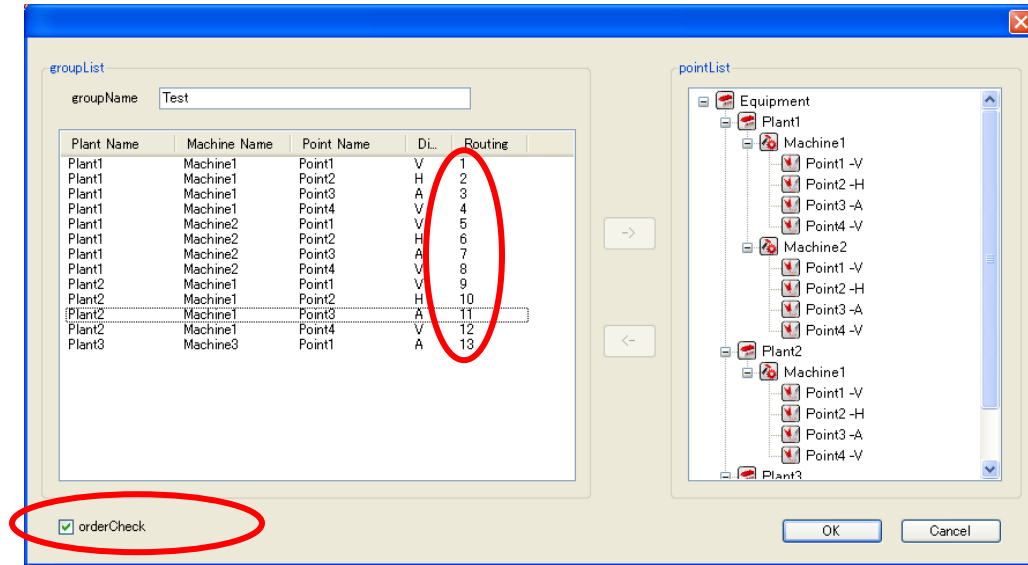


- Select the measuring point to be registered on the Group in the right tree on screen and add by the arrow button. Input the name on the Group Name column of left screen and register with the Define button.



Rooting Function

It is the function that set the number of ordering to measuring points defined into the group. You can easily switch the measuring point on the Tablet by this setting.



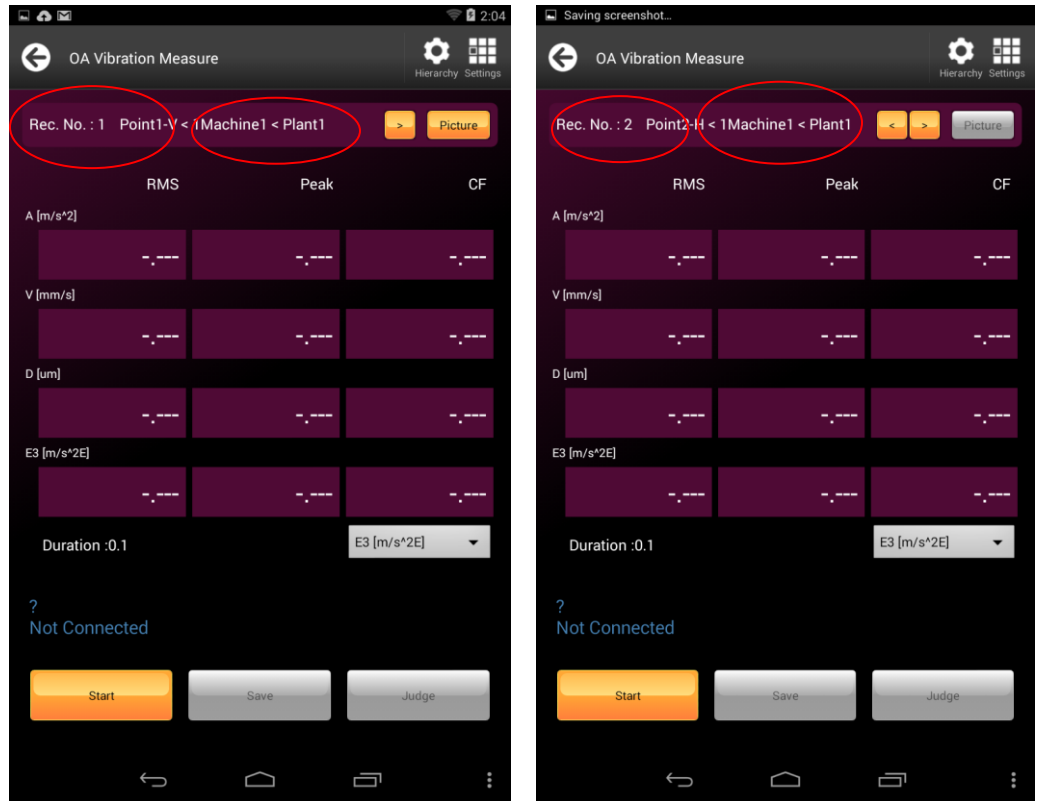
A default setting is the normal order, namely from top to bottom, 1, 2, 3.... by checking the “orderCheck” at the bottom of the input window. If you want to set your customized order, click the number of Routing column, then set the number. The duplicate of same number is, of course not allowed.

It might be useful that first, set the default numbering, and press the OK button, then again call the input window to edit the routing numbers, if you have many measuring points.

Point Name	Di...	Routing
Point1	V	5
Point2	H	13
Point3	A	8
Point4	V	12
Point1	V	10
Point2	H	6
Point3	A	7
Point4	V	3
Point1	V	9

After normal ordering, set the customized number.

Follwing figures show the screenshots of Routing function on the Tablet PC. Please refer to “Measuring point sending ” for sending the database to Tablet PC.



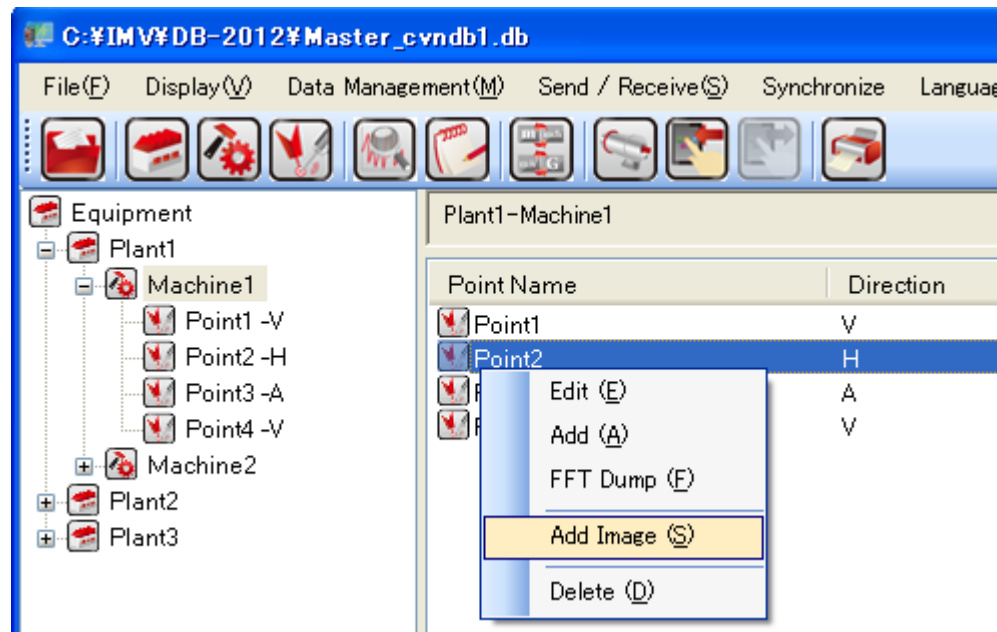
Using Routing Function, you can find the name of measuring point and [< , >]button for shifting the measuring point(next or back). The shifting measuring points is done on the defined routing order by using DB-2012. The above leftsaide figure does not show [<] button, because of the first point to measure.

The rightside figure shows the state of switching next measuring point. In this case, [<]button is displayed. You can set easily the measuring point, by setting measuring order.

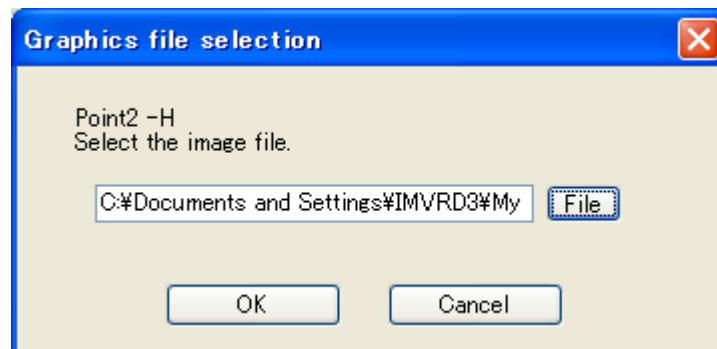
Setting the image to the measuring point

It is available to set the image or figure of the machine to each measuring point.

On the definition window of Database, click the right side of your mouse on the target measuring point, then the pop-up menu is showed. Then you select [Add images].



The selecting window is showed for setting the image, and you set the image.



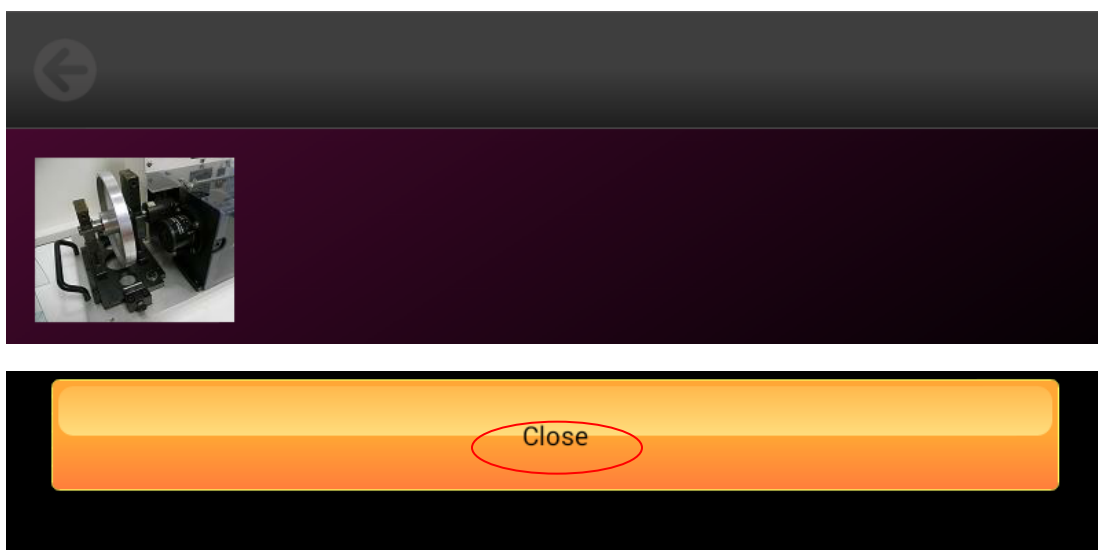
The all setting is done.

On your Tablet PC, the setting image is showed as following figure.

The image is displayed, by pressing the [Picture] button, if you set the image to the measuring point.



When you press the [Close] button, the image screen will be closed, and the measuring mode screen is displayed on the Tablet.



Other Preparation

Memo Label Edit

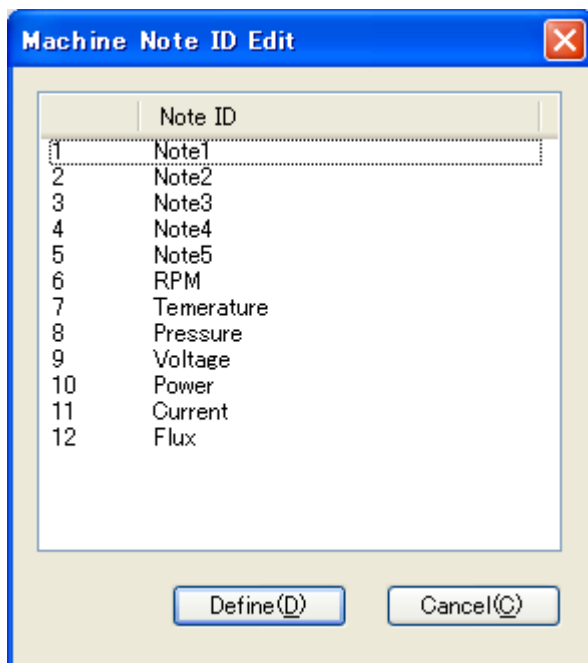
The Memo item controlled by the Memo function can be edited in the Memo Label Edit.

- To edit the label of the Machine Note,



When any Machine is selected in the Equipment list window, select in the order of Menu→Data Management→Note ID Edit

The Equipment Note ID Edit screen will appear.



Input the letter in the Note ID column.

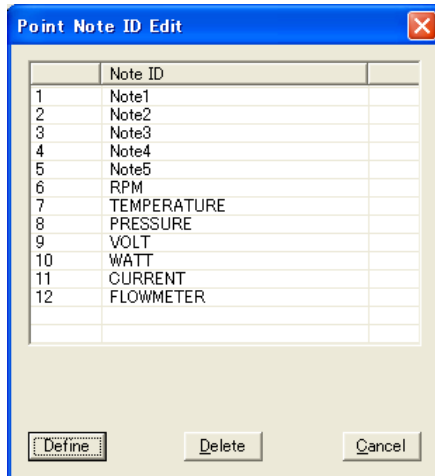
Maximum memory is 20 byte.

- To change the ID of the Point Note,



Select any Point in the Equipment list window, then select in the order of Menu→Data Management→Note ID Edit

The Point Note ID Edit screen will appear.



Input the letter in the Note ID column.
Maximum memory is 20 byte.

Folder Setting

The saved file in Waveform file can be changed.

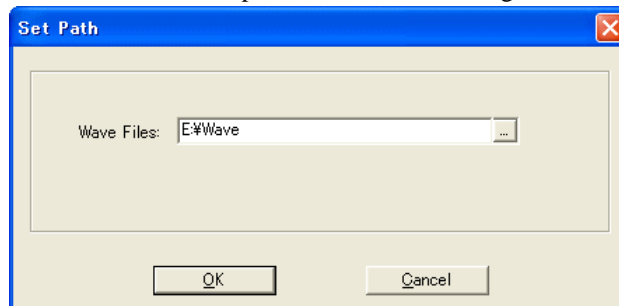
Note) The content for Folder setting is applied when “Ece” operation of receiving function is done. Complete the registration without fail before using Data Extract Software.

- To change the folder, select in the order of

Menu→File→Set Path

The Set Path screen will appear.

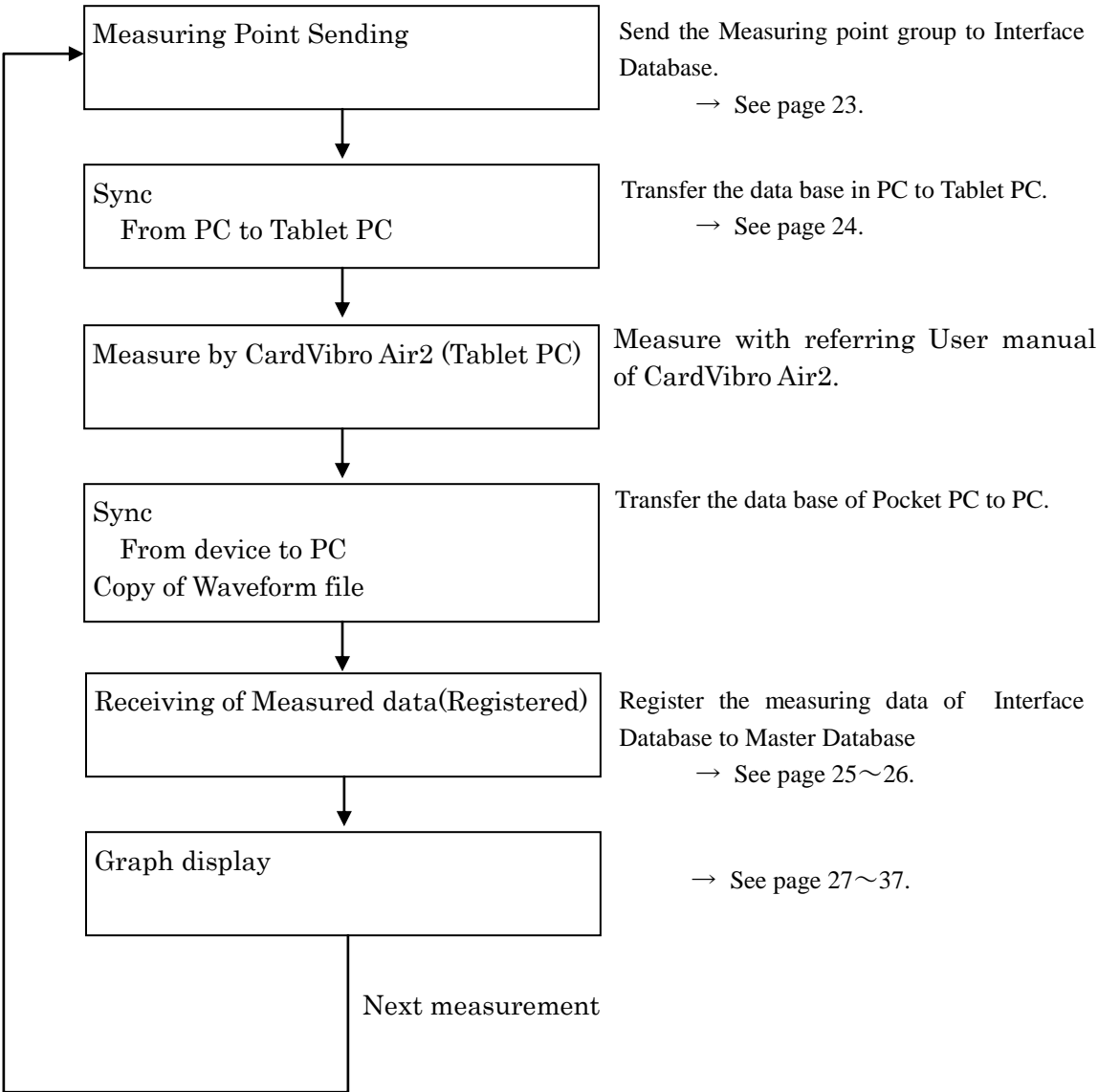
Select the Folder and press OK button to change.



Basic Operation

Starts Measurement

The procedure from the measurement by Pocket PC till graph display is shown.



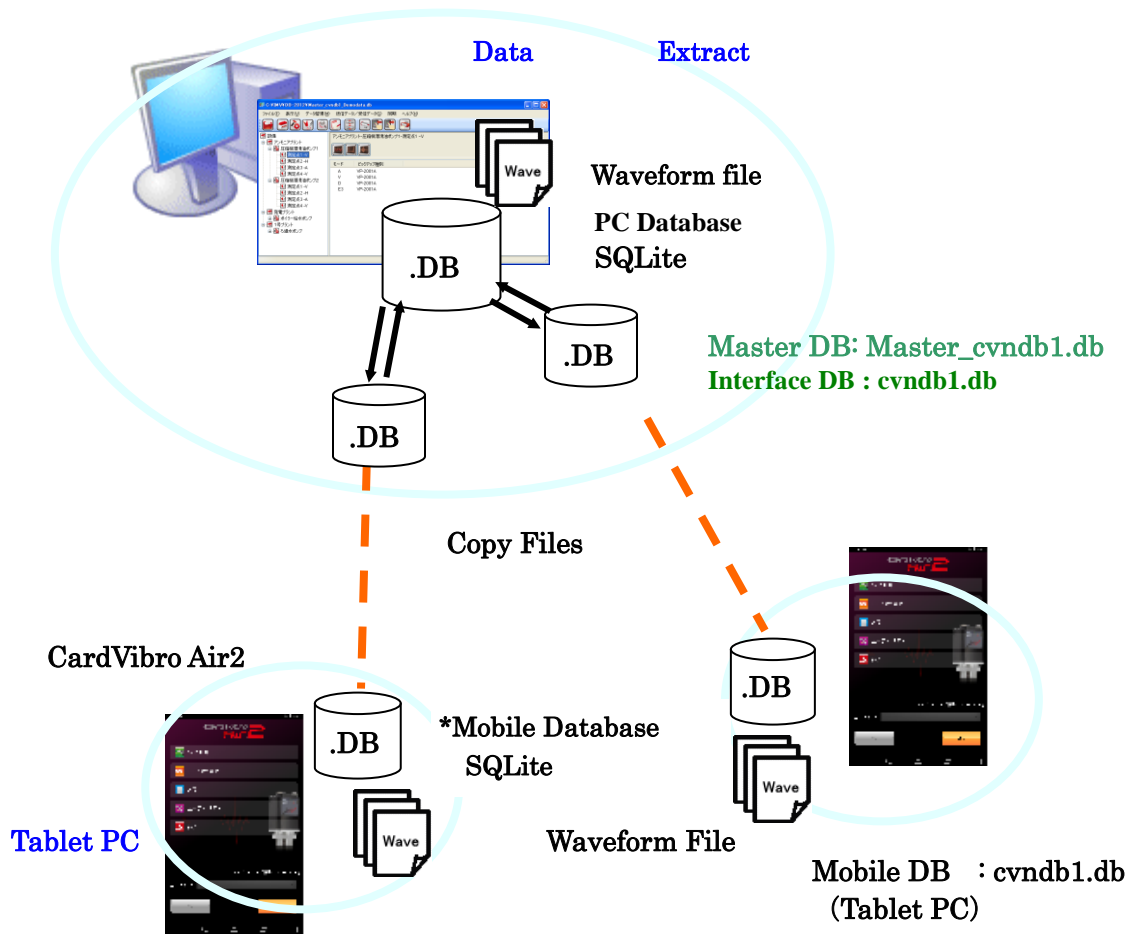



Fig. Block Diagram

Measuring Point Sending

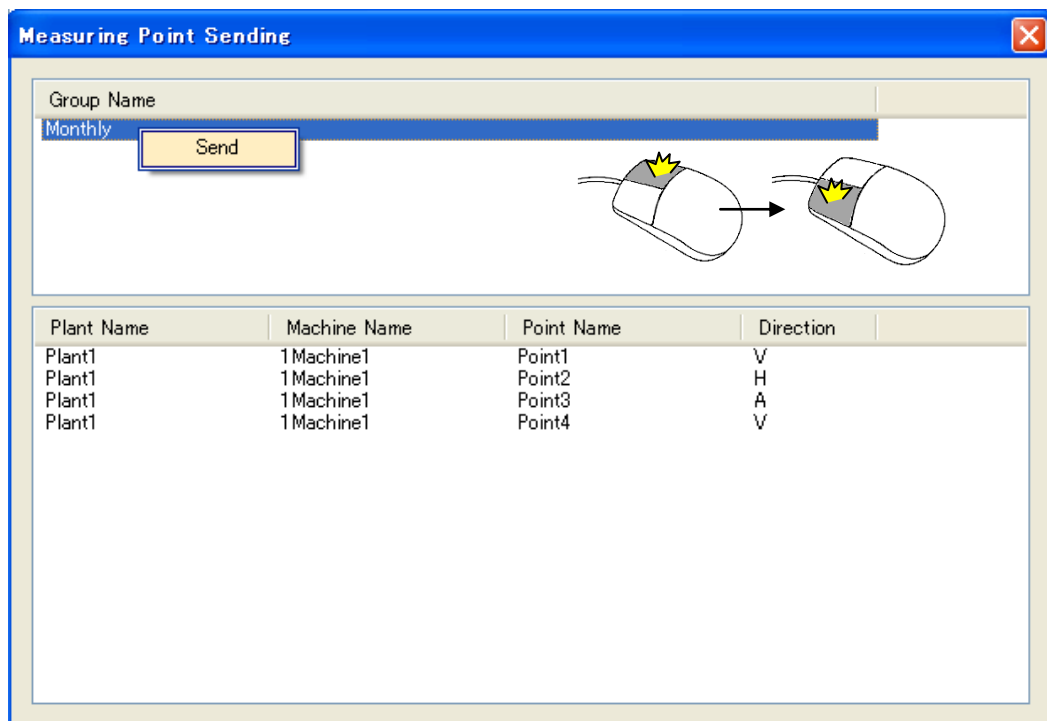


Press  Send button to display the Measuring Point Sending screen.

The Send functions to send the measuring point registered every group to Interface DB.

The information of measuring point sent to Interface DB is transferred to Pocket PC at “synchronization (from PC to device)” operation.

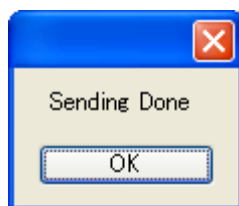
- Move the mouse cursor to the upper part of window and select the Group which will be transferred to Pocket PC. Right click on the mouse to display the pop-up menu. Select Send by left click.



The dialog box titled "Measuring Point Sending" has a blue title bar with a close button. It contains a "Group Name" text box with "Monthly" entered. Below the text box is a yellow "Send" button. To the right of the button is an illustration of two computer mice connected by an arrow, indicating data transfer. Below this is a table with four columns: "Plant Name", "Machine Name", "Point Name", and "Direction".

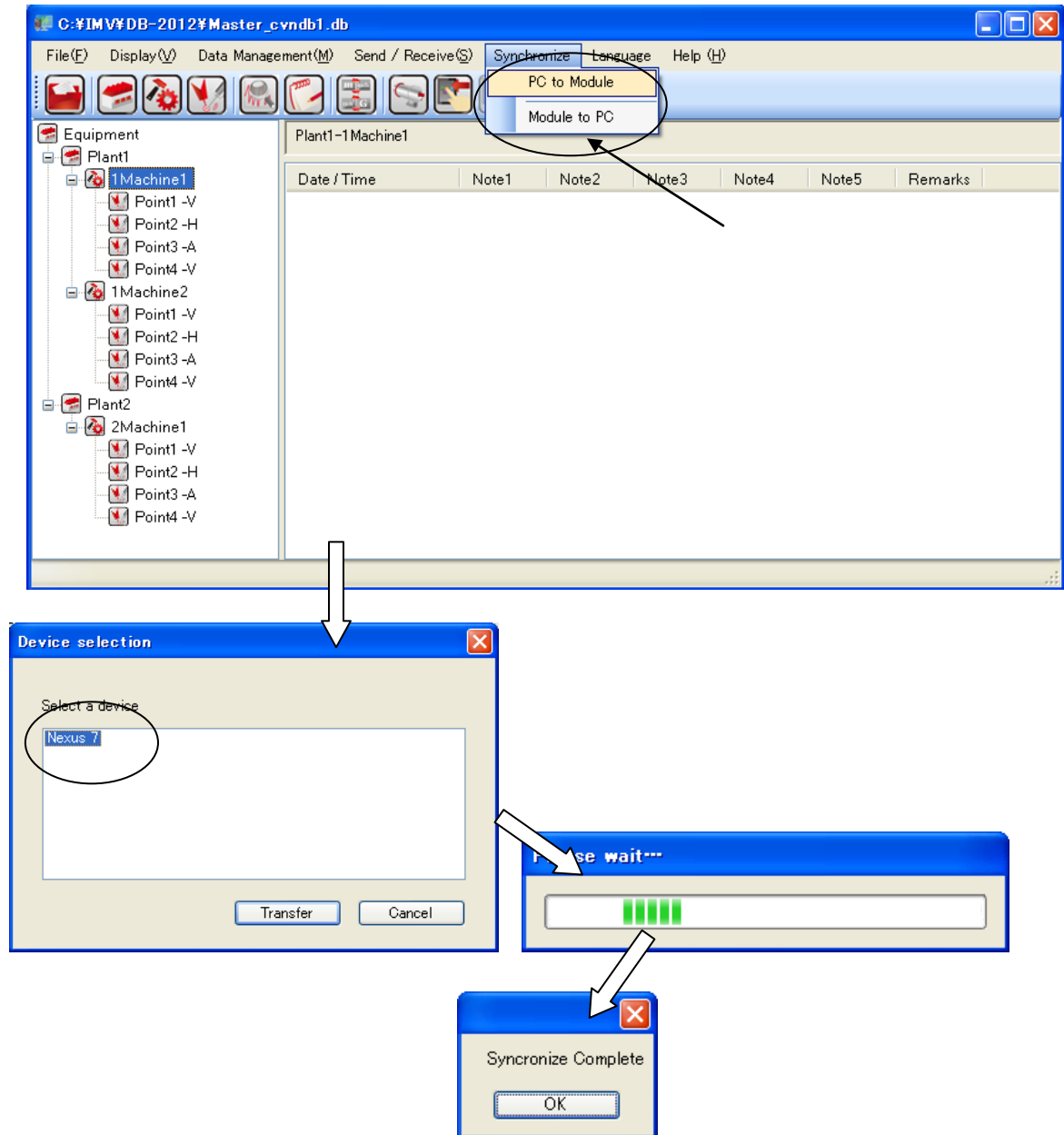
Plant Name	Machine Name	Point Name	Direction
Plant1	1 Machine1	Point1	V
Plant1	1 Machine1	Point2	H
Plant1	1 Machine1	Point3	A
Plant1	1 Machine1	Point4	V

- The measuring point information is sent to Interface DB. Close the screen when the pop-up message of Sending completion appears.



Note: In this stage, the data transfer to Tablet PC is not yet done. It is transferred after doing Synchronization “From PC to Device”.

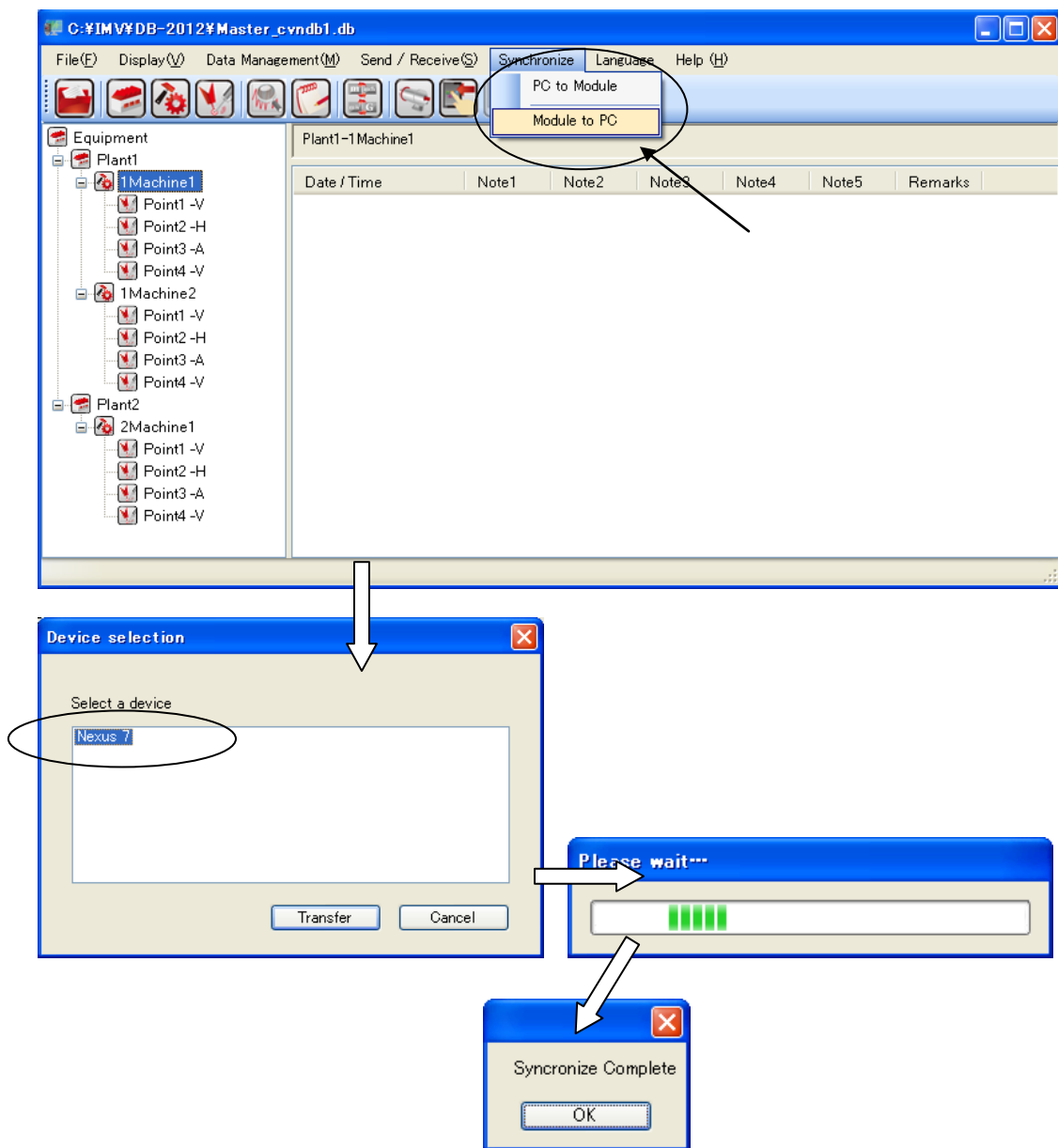
- Execute “Synchronization” → ”From Pc to Device” to transfer the database of PC to Tablet PC.



- During the transferring database, the message “Wait a moment” appears. Do not move Pocket PC and do not do other operation till the completion of transference.
- After sending operation, the database is not transferred if this Synchronizatton «from PC to Device» operation is not done,. Please take care.
- After synchronization, mesure the vibration with CardVibro Air2 (Tablet PC) .


Measuring Data Receiving (Registration)

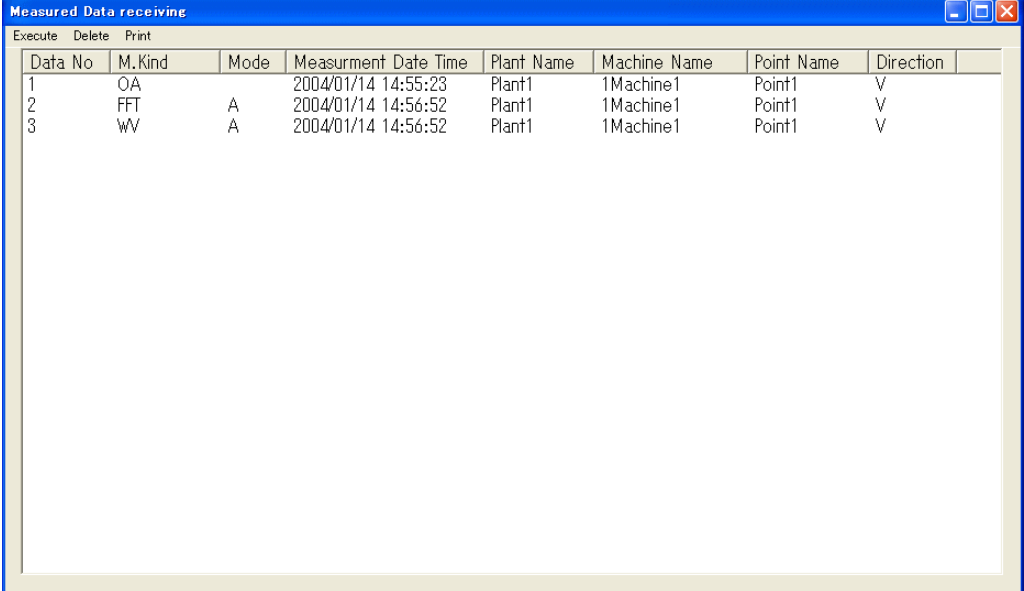
- After the measurement by CardVibro Air(Pocket PC), connect PC with Pocket PC via cradle and transfer the measured data from Pocket PC to PC by “Synchronization “ on Menu → 「From Device to PC」



- During the transferring, the message “Wait a moment” appears. Do not move Pocket PC and do not do other operation till the completion of transference.

Note

- After the transference from the measured data from Pocket PC to PC with the operation of “Synchronized (From Device to PC)”. Press  receiving button to display the measuring data receiving screen. The receiving function is to register the imported data into Interface DB to Master Database.
- The list of measured data is displayed on Measuring data receiving screen.




Data No	M.Kind	Mode	Measurement Date Time	Plant Name	Machine Name	Point Name	Direction
1	OA		2004/01/14 14:55:23	Plant1	1Machine1	Point1	V
2	FFT	A	2004/01/14 14:56:52	Plant1	1Machine1	Point1	V
3	WV	A	2004/01/14 14:56:52	Plant1	1Machine1	Point1	V

- Press Execute button to register the measured data from Interface DB to Master Database.
 - The measured data of Interface DB is completely deleted with pressing Delete button. In case the registration to Master Database is unnecessary, delete it.
 - Press Print button to export the List to Excel file. Print from Excel screen.


Display of Graph

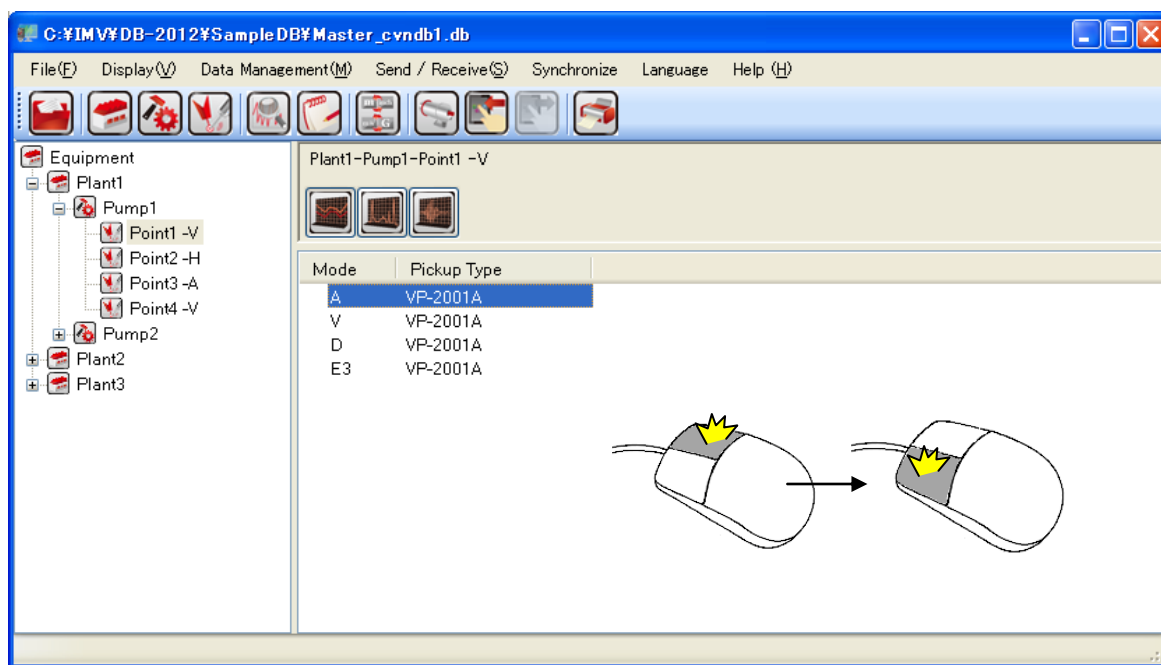


Press  graph button to display the measurement data list on Information window.
Displays the measurement data list of measuring point selected by Equipment list window.

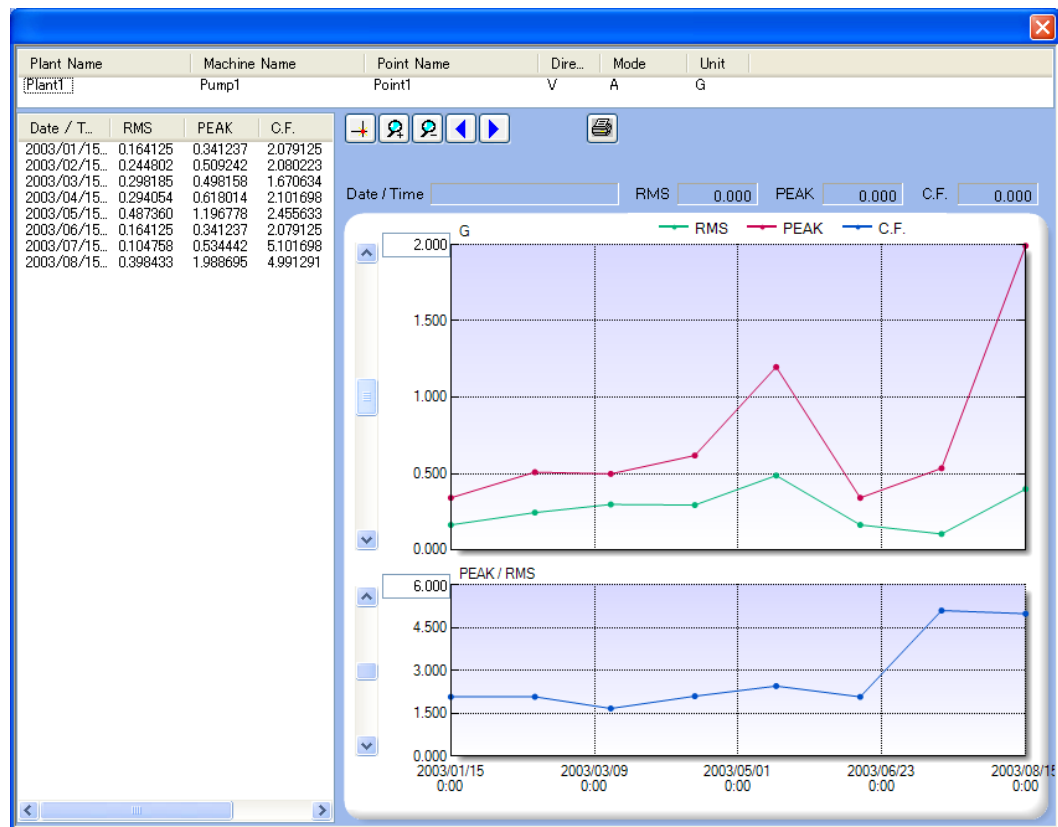
Display of Trend Graph (Overall value)







- Press  Trend graph button and select the mode to be displayed, then right click to display the pop-up menu. Select the Measured Data by left click. (Double-click is available)

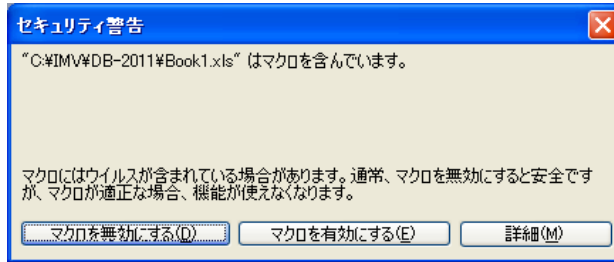


- Displays Trend graphs.



- Press  Cursor button to display the cursor on graph and to confirm the indication value of cursor position. Cursor moves laterally with drag y mouse.
-  Zoom In/Out button magnifies or reduces the scale of X-axis on graph.
- With moving of scroll bar located at left side of Y-axis, Y-axis of graph can be changed.
- Graph moves laterally by  Scroll button.
- Press  Printing button to output the Trend graph into Excel file. The message to confirm the message. Select “Macro is effective”.

Note: It is necessary that Excel 2003 later is installed.



Print from Excel screen.

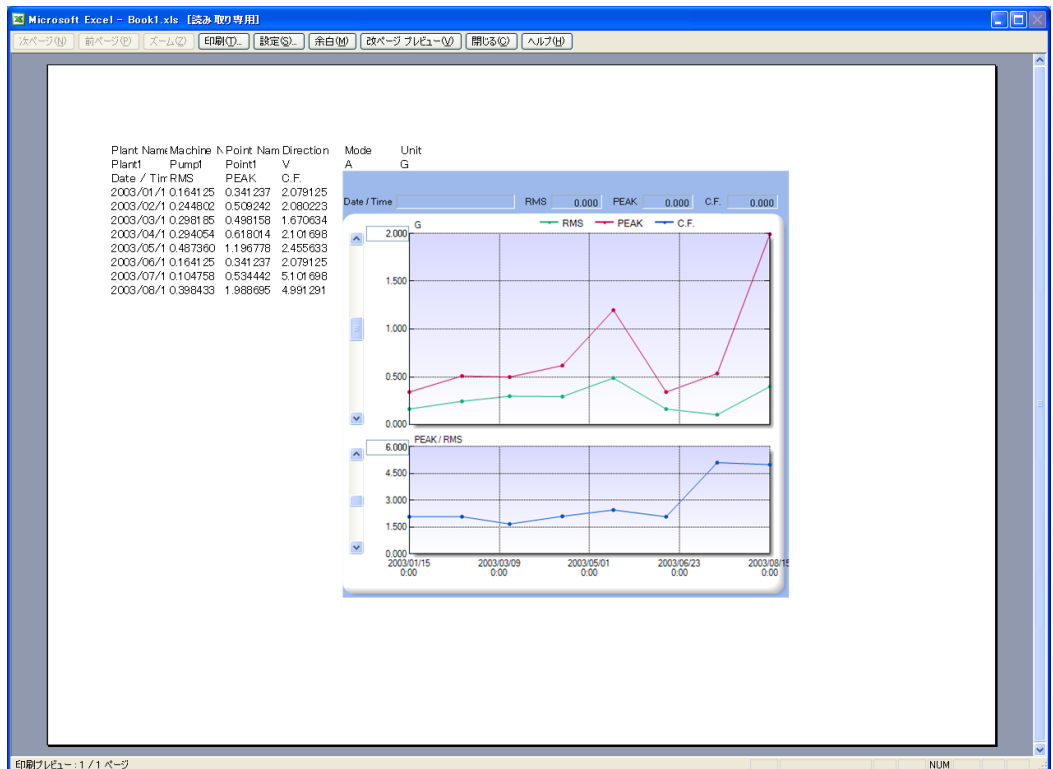


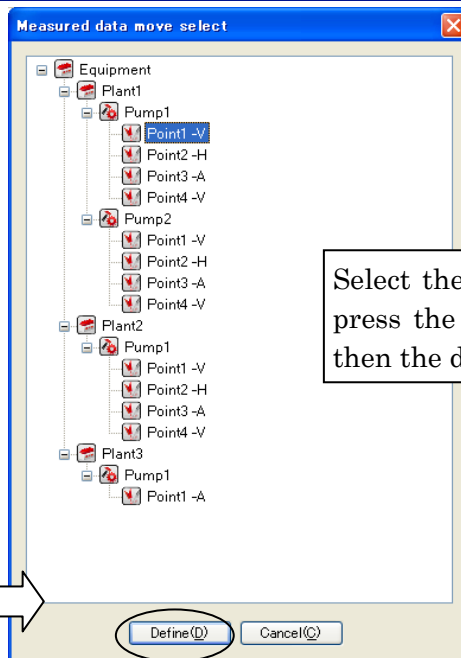
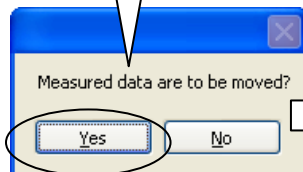
Fig. Preview of OA Graph Printing

- You can move the OA data to another measurement point.
On the left side of window, select the measured data, and click the right button of the mouse, then select the “ move”.
Also, you can delete the data, but it is impossible to recover the data, if you once delete it.
Please keep this issue in mind.




The message of confirmation is showed.

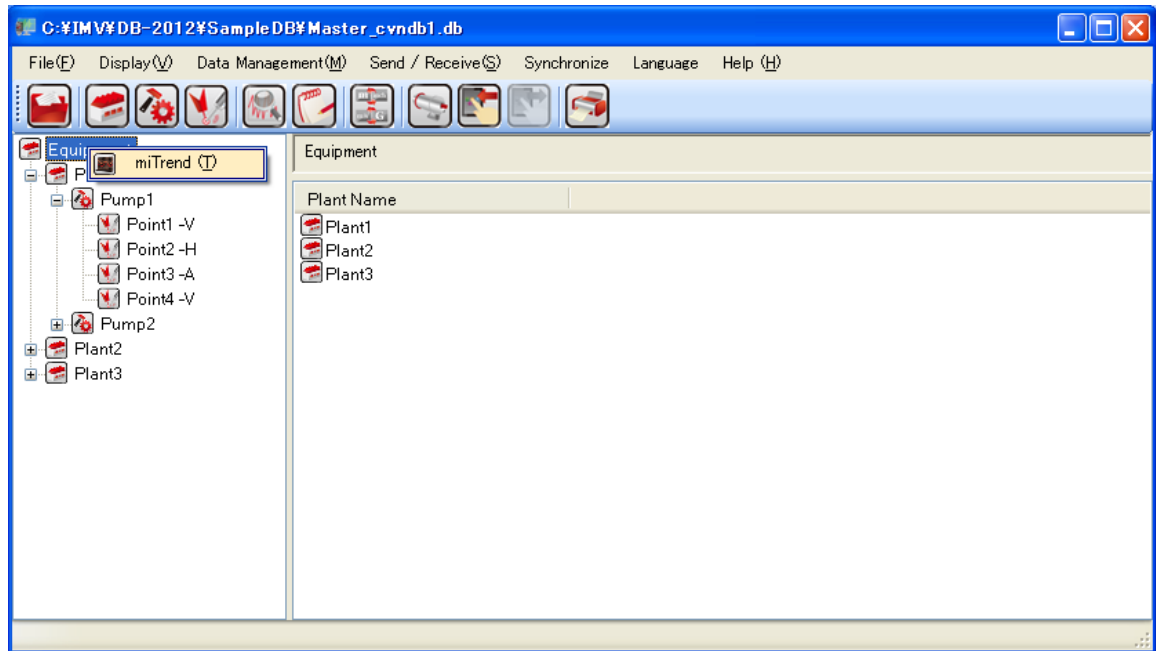
After that, the selection window, which you can select the target point for moving, is displayed.



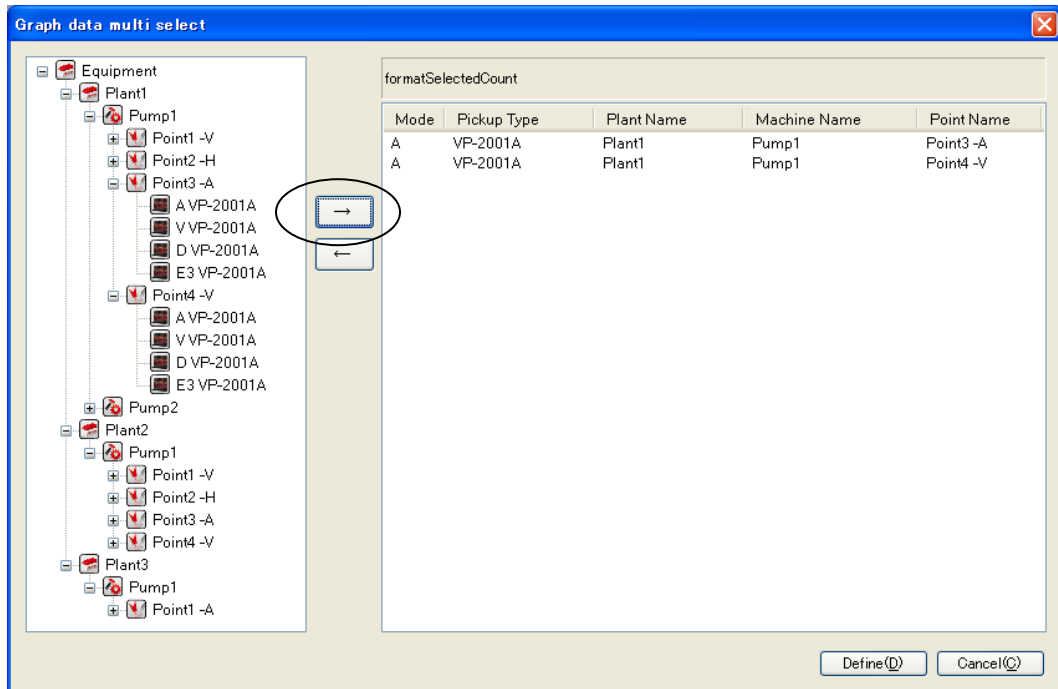
Select the target point, and press the "Confirm" button, then the data will be moved.

Display of Multi-Trend Graph (Overall value)

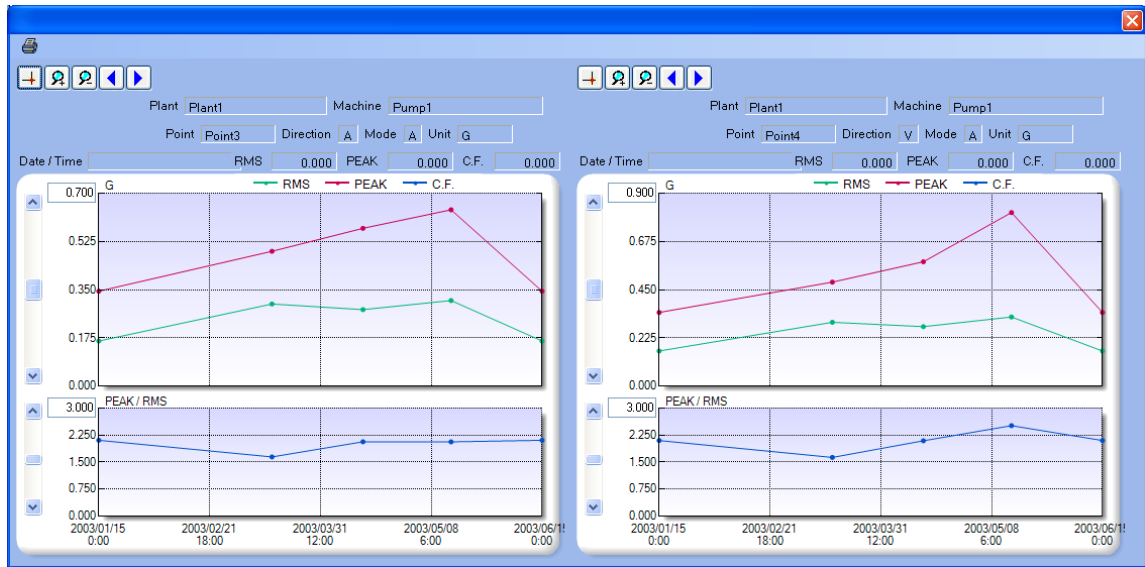
- Press  Plant button and after to be selected, then right click to display the pop-up mi Trend menu.



After selected, Point selection menu is displayed, and select point data for displaying up to 6data.




A display example is showed as following.

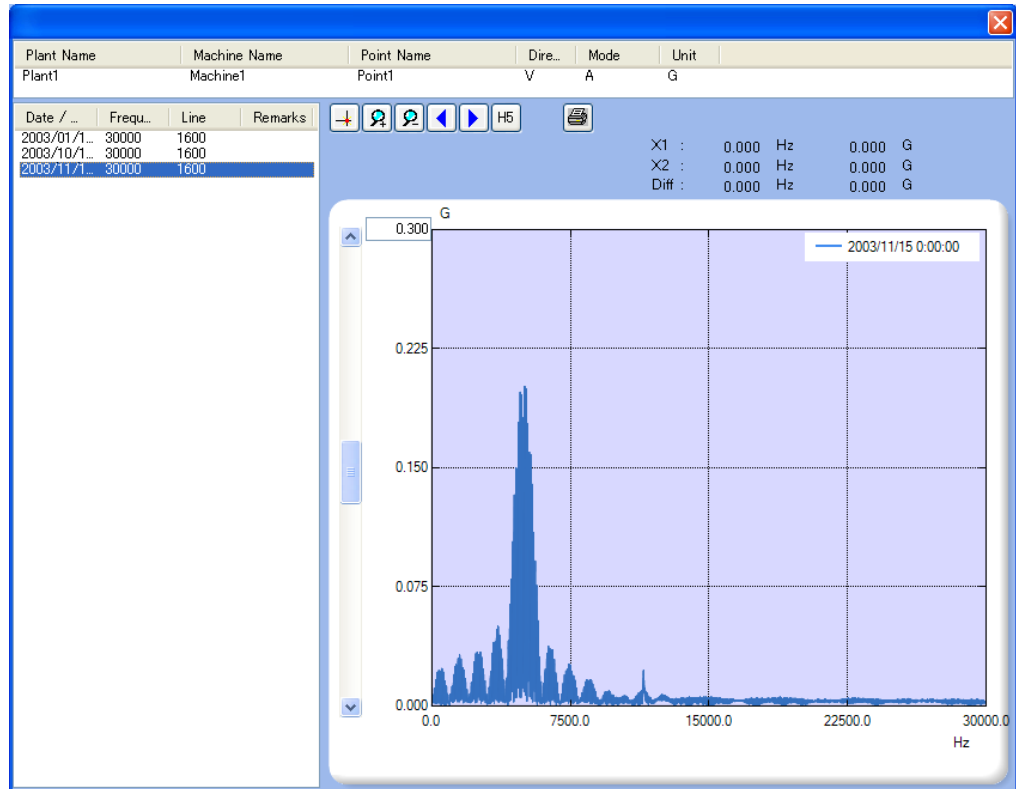







Display of FFT Graph



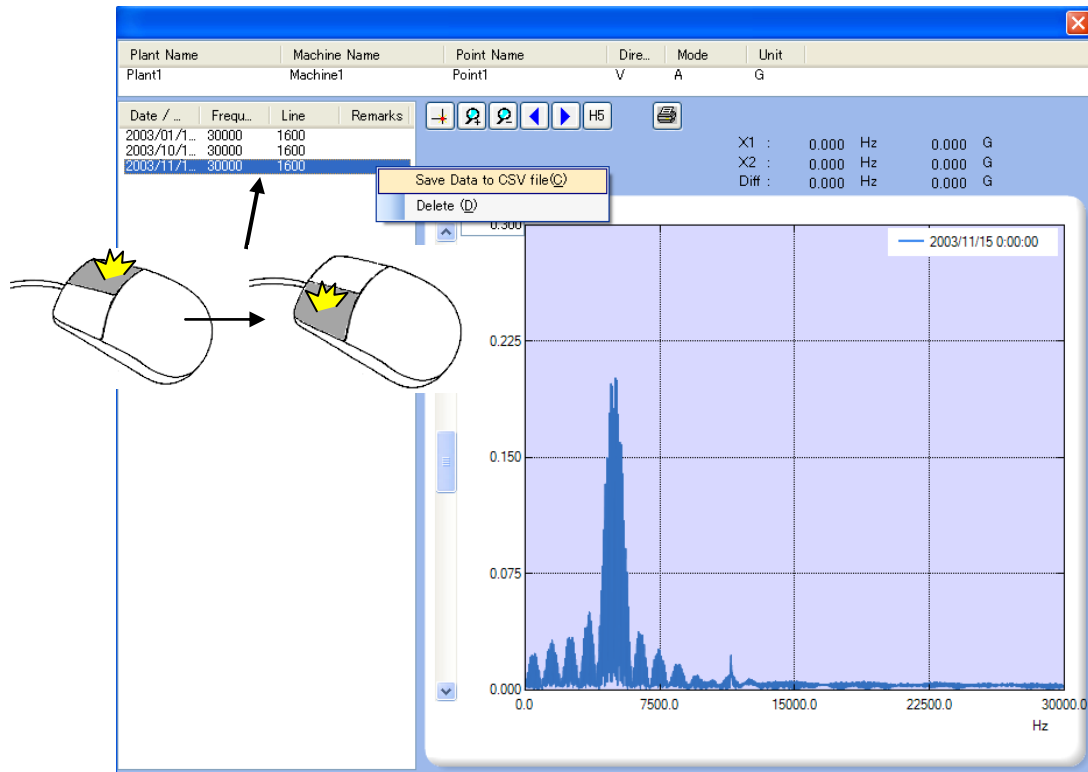
Press  FFT graph button and select the mode to be displayed, then right click on the mouse to display the pop-up menu. Select the Measured Data with left click.

- Displays FFT graph

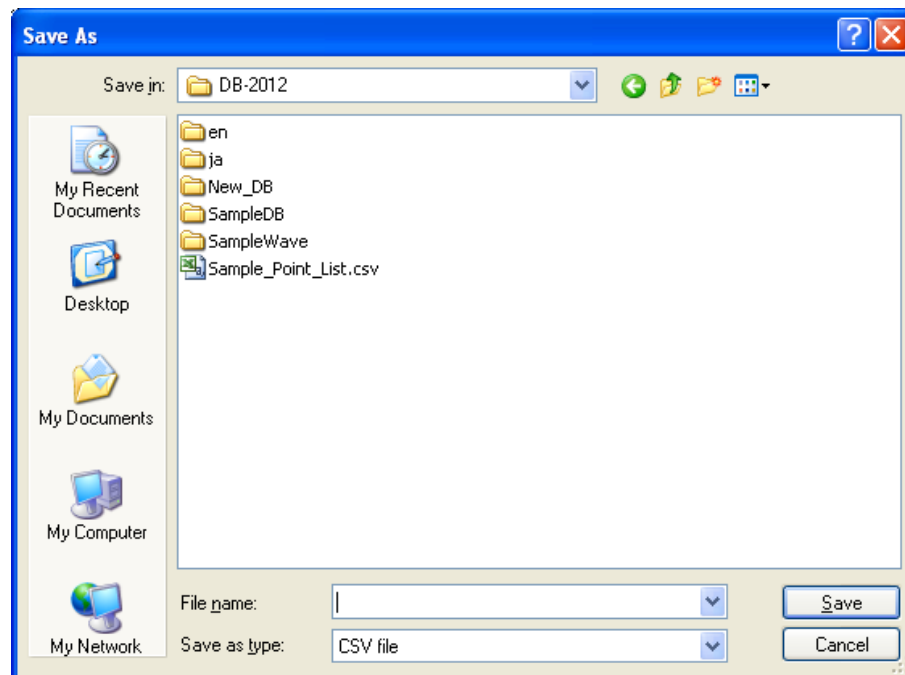


- Press  Cursor button to display the cursor on graph and to confirm the indication of cursor position. Cursor moves laterally by drag.
-  Zoom In/Out button magnifies or reduces the scale of X-axis of graph.
- With moving of scroll bar located at left side of Y-axis, Y-axis of graph can be changed.
- Graph moves laterally by  Scroll button.
- Press  High5 button to display the upper 5 of dominant frequency component.
- Press  Printing button to output FFT graph into Excel file. The message to confirm Macro displays. Select “Macro is effective”. Print from the Excel screen.


- FFTdata is possible to save in CSVformat.
Select Measured data at left side of window and right click to select “Save to CSV file”.



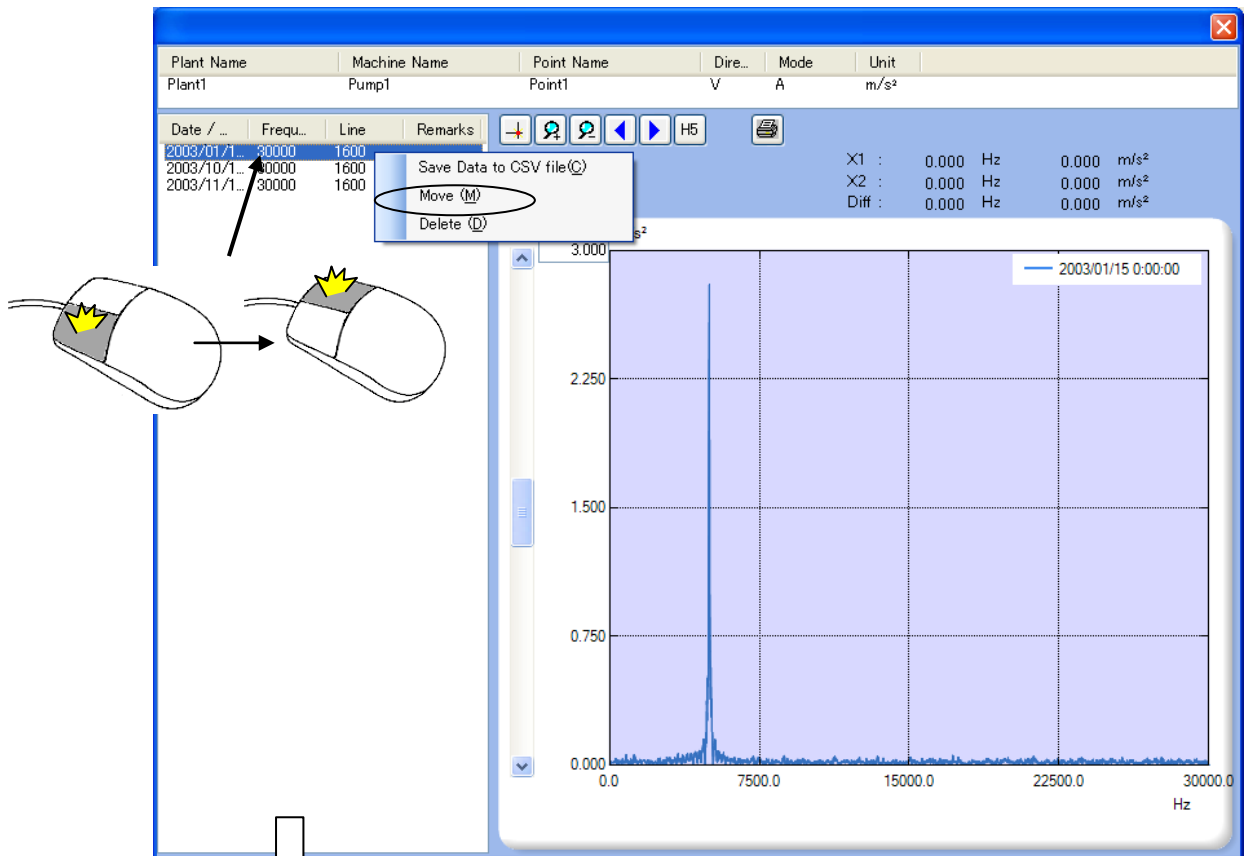
Give the file name and press the Open button. CSV file is saved.



Example of C S V file

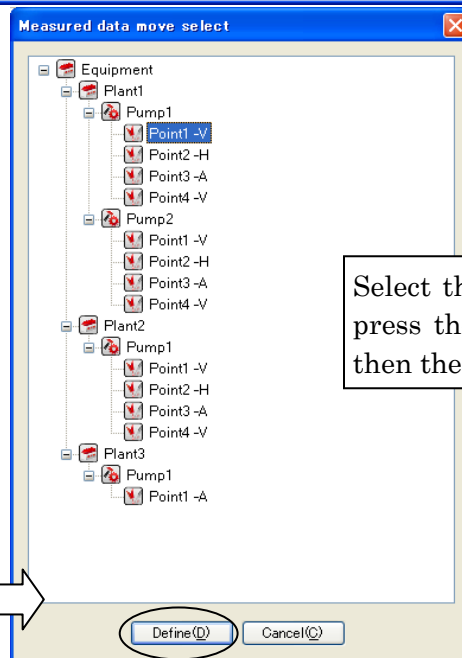
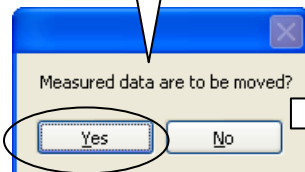
Plant name, Machine name, Measuring point name, Direction, Mode, Measuring date,
Remark
Ammonia Plant, Compressor Oil Pump 1, Measuring point 1,V,E3,2003/12/15 15:16:49,
Defect of outer race, Frequency, Line number,,,,,
1000,1600,,,,,
FFT Data
4.313754
0.048777
0.225721
0.271360
0.766011
0.451614
0.500064
0.497198
0.485761
0.668171
0.480232

0.059178
0.054763
0.050814
0.009789
0.002623
0.019429
0.029428
0.019082
0.014393
0.009290
0.002424
0.025980

- You can move the FFT data to another measurement point.
On the left side of window, select the measured data, and click the right button of the mouse, then select the “ move”.
Also, you can delete the data, but it is impossible to recover the data, if you once delete it.
Please keep this issue in mind.



The message of confirmation is shown.

After that, the selection window, which you can select the target point for moving, is displayed.



Select the target point, and press the "Confirm" button, then the data will be moved.

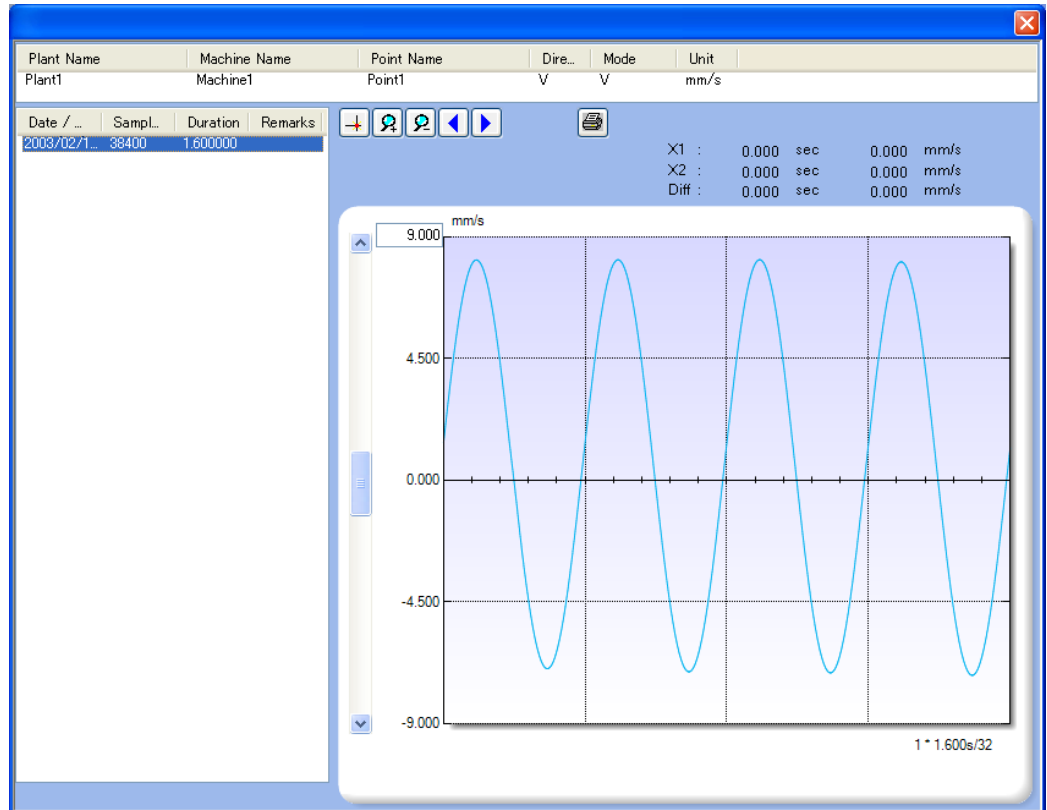
Display of WV Graph







Press WV graph button and select the mode to be displayed, then right click on the mouse to display the pop-up menu. Select the Measured Data with left click.

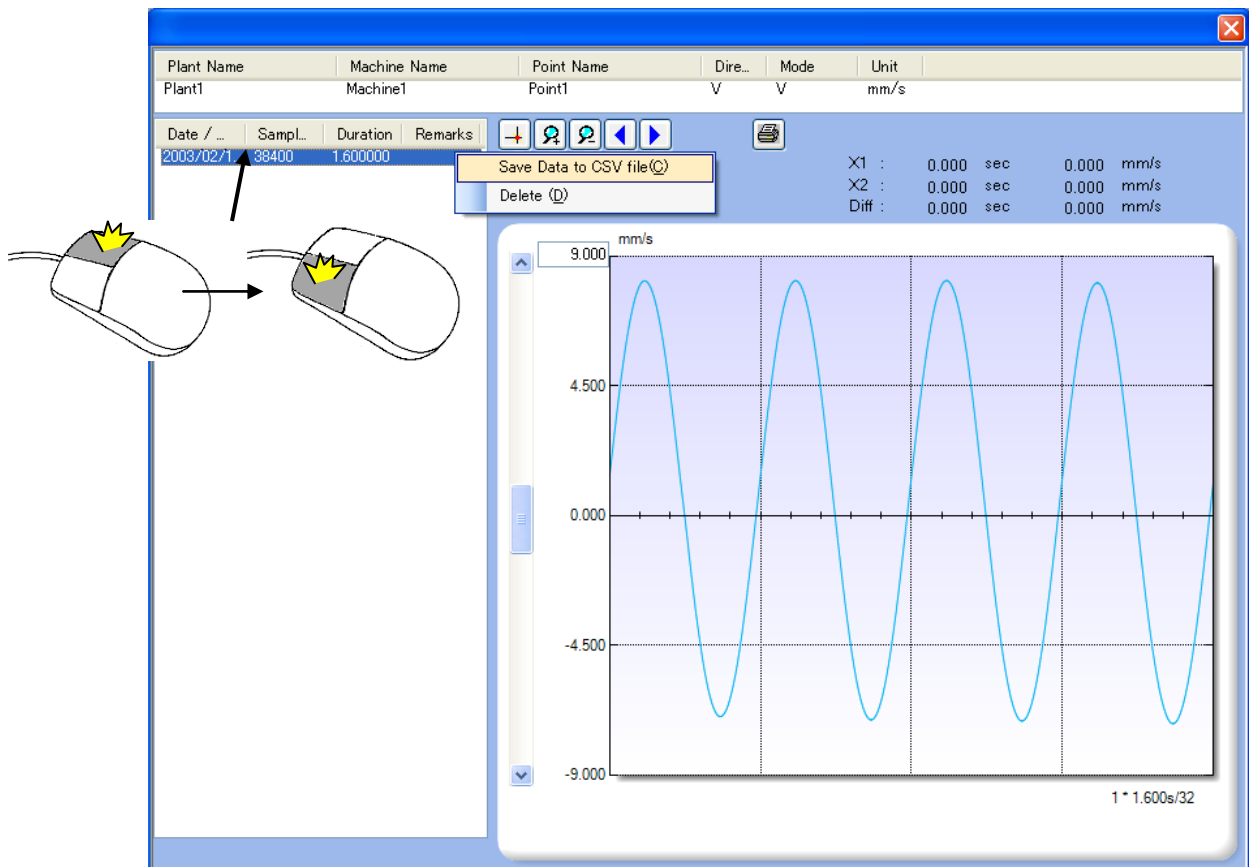
(Double click is available to open.)

- Displays WV graph.

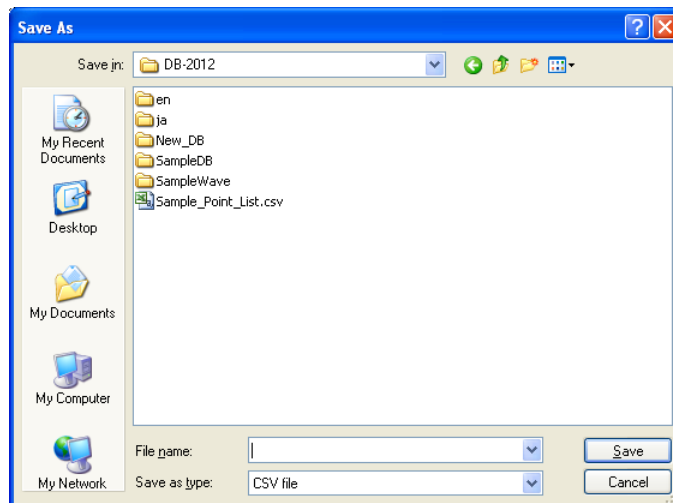


- Press  cursor button to display the cursor on graph and to confirm the indication value of cursor position. Cursor moves laterally with drag.
-  Zoom In/Out button magnifies or reduces the scale of X-axis on graph.
- With moving left scroll bar located at left side of Y-axis, Y-axis of graph can be changed.
- Graph moves laterally by  scroll button.
- Press  Printing button to output Waveform graph into Excel file. The message to confirm Macro displays. Select “Macro is effective”. Print from the Excel screen.

- WV data is possible to save in CSVformat.
Select Measured data at left side of window and right click to select “Save to CSV file”.



Give the file name and press the Open button. CSV file is saved.



Note: Since the volum of Waveform data is big, save CSV file divided into multi-files. For example, in case saved in the name of Wav.csv, it will be saved in the sequential number of Wav_1.csv、Wav_2.csv、Wav_3.csv.....

Example of C S V File

Plant name, Machine name, Measuring point name, Direction, Mode, Measuring date,
Remark

Ammonia Plant, Compressor Oil Pump 1, Measuring point 1,V,V,2003/02/15 11:57:12,
Sampling, Measuring time, File No.,,
38400,1.600000,1/8 files,,,,

WV Data

13.637205

14.608380

15.577950

16.545739

17.511572

18.475274

19.436671

20.395593

21.351866



50.383027

51.156780

51.922649

52.680490

53.430162

54.171544

54.904514

55.628936

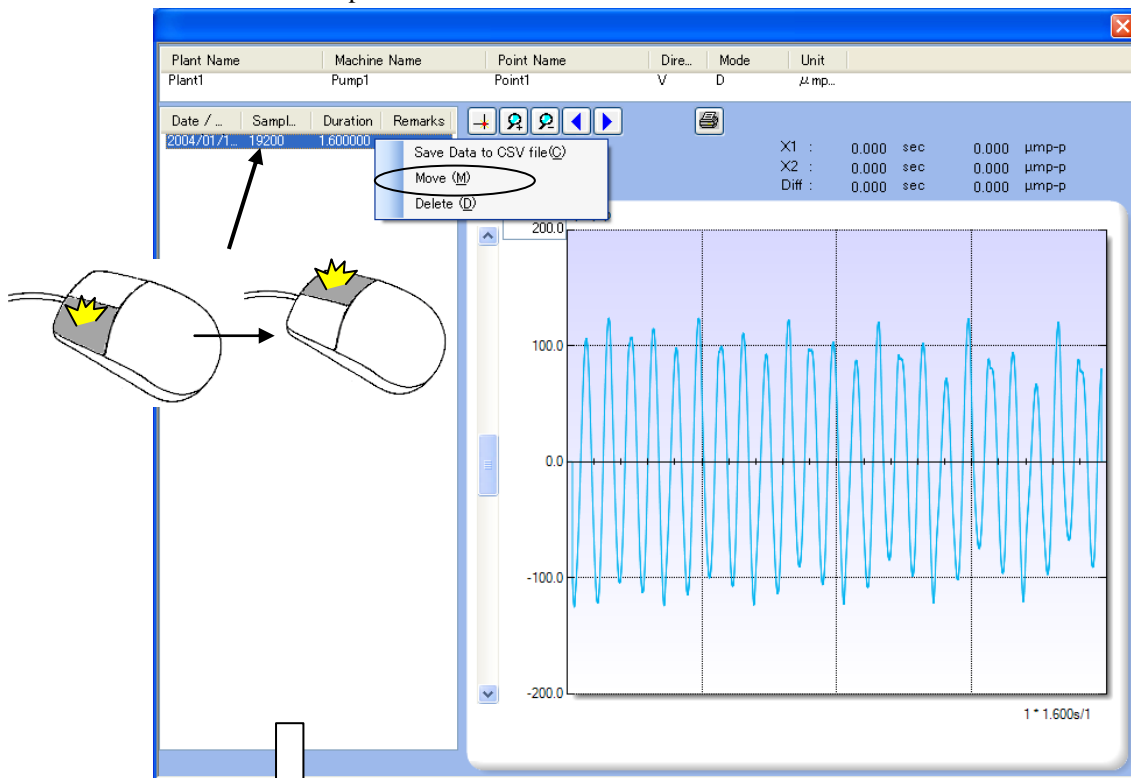
56.344680

57.051634

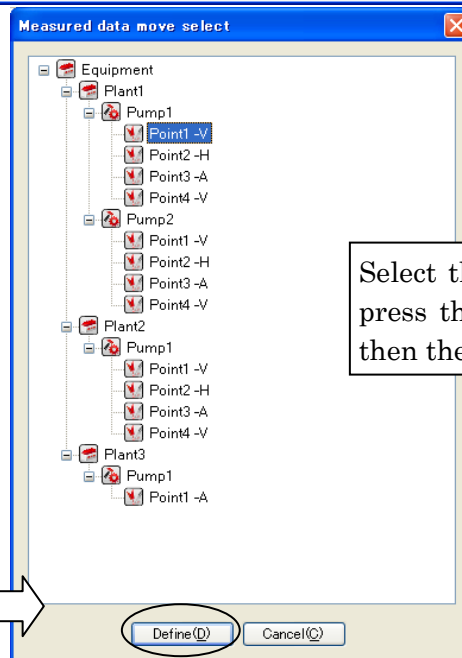
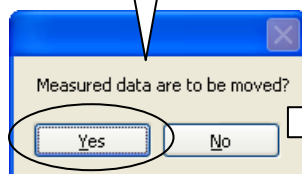
57.749675

58.438692

- You can move the WV data to another measurement point.
On the left side of window, select the measured data, and click the right button of the mouse, then select the “move”.
- Also, you can delete the data, but it is impossible to recover the data, if you once delete it. Please keep this issue in mind.



The message of confirmation is shown.
After that, the selection window, which you can select the target point for moving, is displayed.



Select the target point, and press the “Confirm” button, then the data will be moved.

Display of Memo

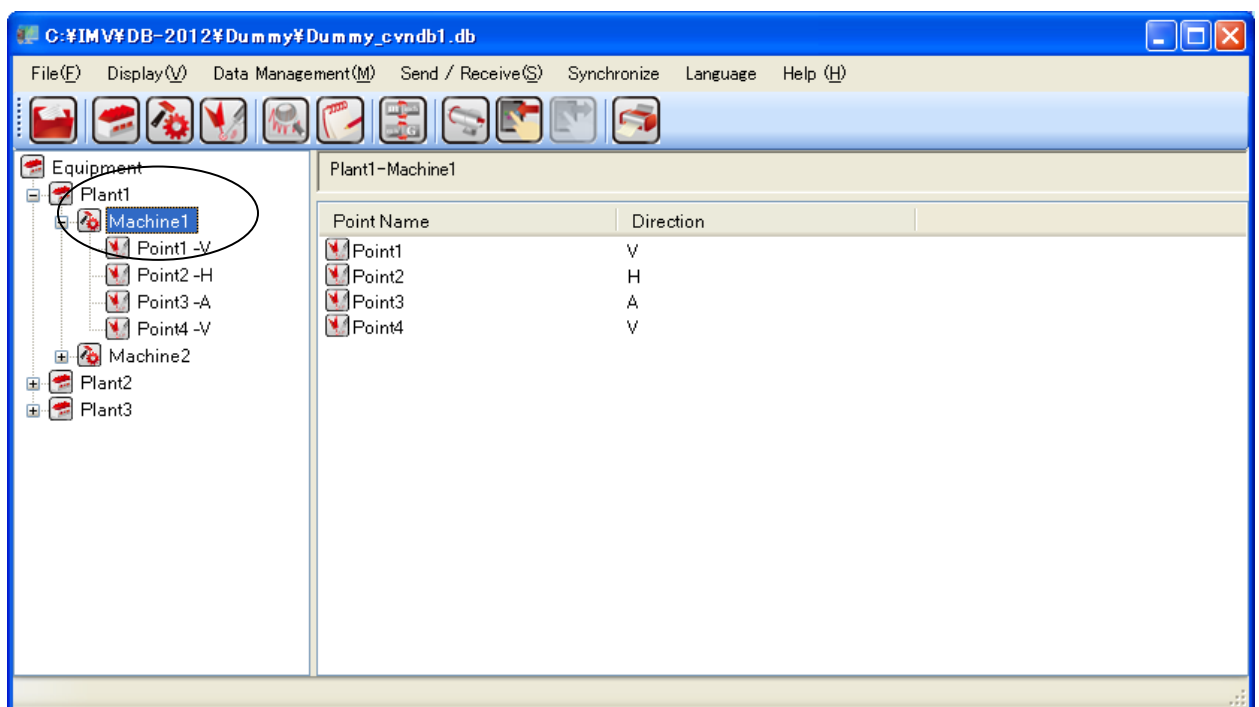


Press Memo button to display the Memo list on Information window. Displays Memo list of machine and measuring point selected by Equipment list window.

Display of Machine Memo



Press Memo button and select Machine from Equipment list window to display the Machine memo list.

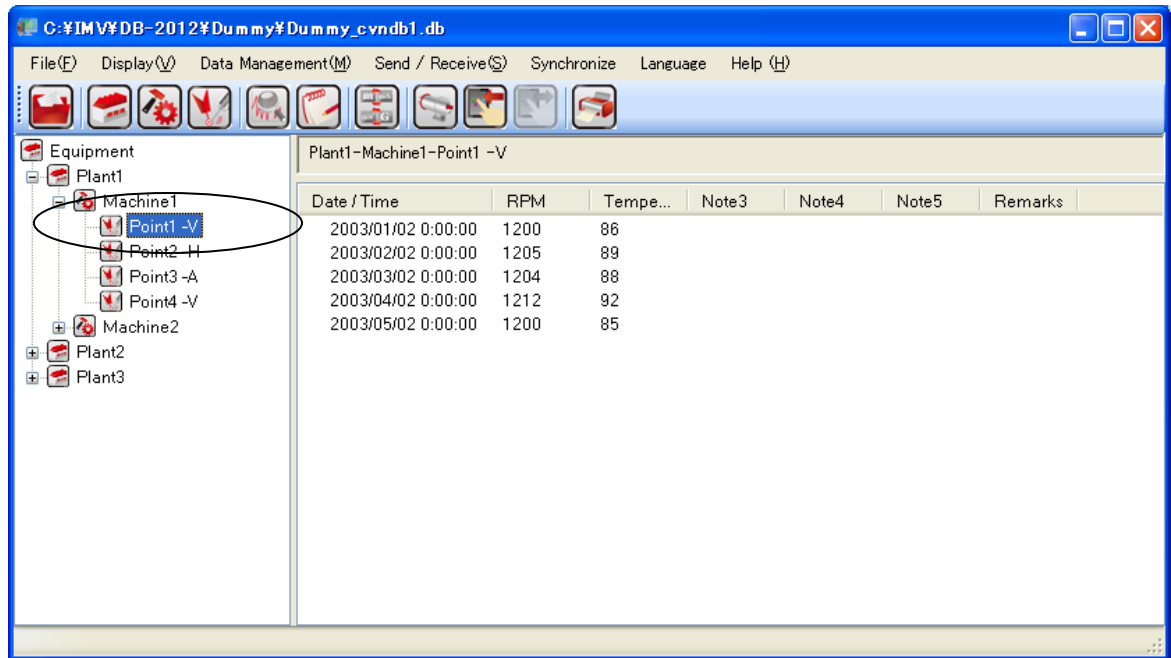


- Press Printing button to output Memo list to Excel file. The message to confirm Macro displays. Select "Macro is effective". Print from the Excel screen.
- In case to delete Memo, select the Memo to be deleted and right click. Since Pop-up menu displays, select Delete with left click.

Display of Measuring Point Memo



Press Memo button and select Measuring point from Equipment list window to display the Measuring point memo list. ,



- Press Printing button to output Memo list to Excel file. The message to confirm Macro displays. Select "Macro is effective". Print from the Excel screen.
- In case to delete Memo, select the Memo to be deleted and right click. Since Pop-up menu displays, select Delete with left click.

Other Operation

Export of Equipment List

The inputted information of Plant, Machine, Measuring Point etc can be exported from Database and saved as CSV file to re-use for the reconstruction of database.

- Select Menu → File → Export
Specify the CSV file name to be saved and the folder to be saved, then export.
- Utilize the exported CSVfile to import to the new database with using import function.

Change Language

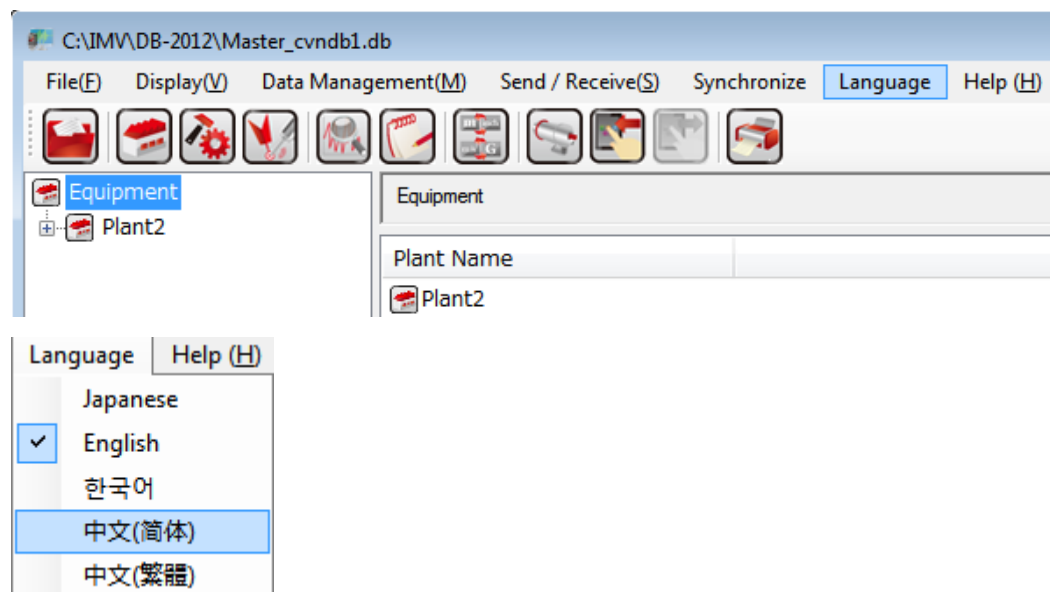
While installation, the installer select and set the display language on the Operating System.
And you can select 5 language as following.

Japanese, English, Korea, Simple-Chinese, Original-Chinese

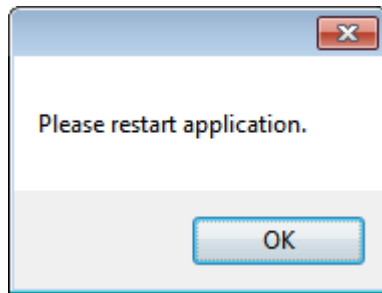
When you want to change the language, you can do with the following instruction.

Click the language menu, and you can select the suitable language.

(Current language is marked)

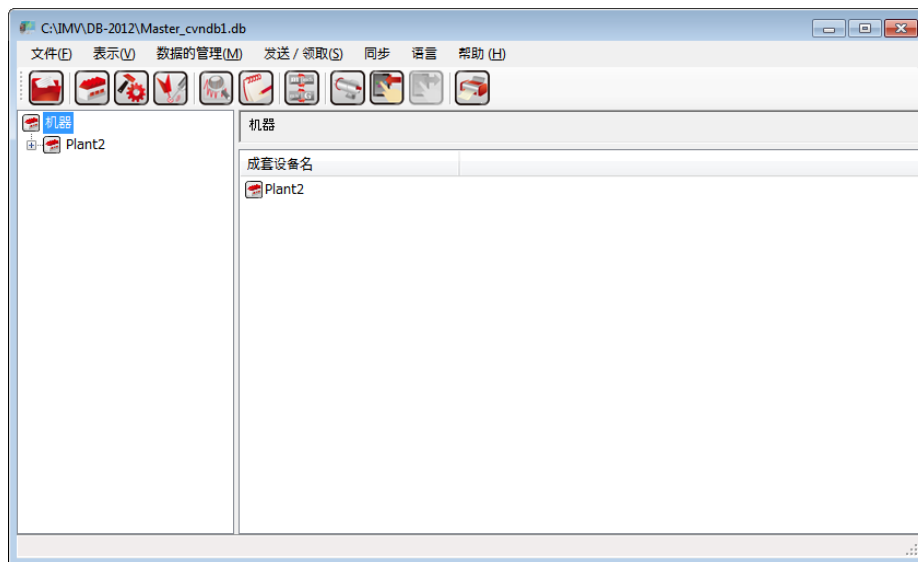


After you select another language, you can find the window as following,



After that, close DB-2012 application and re-start.

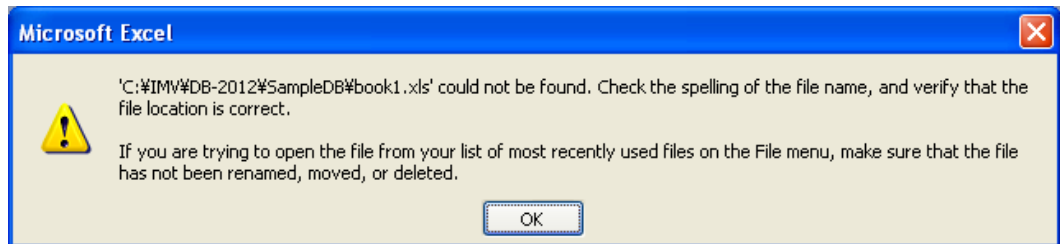
The application's character is displayed by using the new setting language.



Trouble Shooting

No files at the graph printing

When you press [the Print Button], the software output the graph. In the case of that the database folder is specified by user, the follwong messsage will be showed on the Excel screen.



In such a case, please copy the xls files, book1.xls and book2.xls to the folder which the message shows. These files are copied in the folder , C:/IMV/DB-2012, which the management software was installed. You can see the follwing figure.

