User's Manual

DXA150
DAQSIGNIN

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YOKOGAWA
Yokogawa Electric Corporation

IM 04L05A01-61E
4th Edition

Foreword

Thank you for purchasing the DAQSIGNIN.
This manual explains how to use the DAQSIGNIN. Please read this manual carefully before operating the software to ensure its correct use. After you have read this manual, keep it in a safe place where it can be referred to anytime a question arises.

Notes

- This manual describes the DAQSIGNIN that is used with the DX100P/DX200P style number “S5.” Data files created on the DX100P/DX200P style number “S5” or before can be handled.
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How to Use this Manual

Structure of the Manual

This manual consists of the following six chapters and index.

Chapter	Title	Content
1	Before using the DAQSIGNIN	Describes the overview of the DAQSIGNIN, the PC requirements needed to run the DAQSIGNIN, and the installation procedures.
2	Manager Software	Describes operations using the Manager such as how to import/export the data, how to list and manage the data, and how to start the Data Viewer, Hardware Configurator, and Communicator.
3	Data Viewer	Describes how to display and confirm the imported data, how to sign the data, and how to convert the data into other formats such as ASCII.
4	Hardware Configurator	Describes how to display and confirm the setup data of the DX100P/DX200P, how to create new setup data, and how to start the Communicator.
5	Communicator	Describes how to transmit setup data to and from the DX100P/DX200P via the Ethernet interface.
6	Troubleshooting	Describes the error messages and their corrective actions.
Index		Gives a list of important terms used in this manual.

Range of Explanation in this Manual

This manual does not provide a description of basic operations of the operating system (OS). For such descriptions, refer to the Windows User's Guide etc.

Conventions Used in This Manual

- **Unit**
  K ..... Indicates "1024." (Example: 100 KB)

- **Menus, commands, dialog boxes and buttons**
  Enclosed in [ ].

- **Note**
  Provides important information regarding operation of the software.

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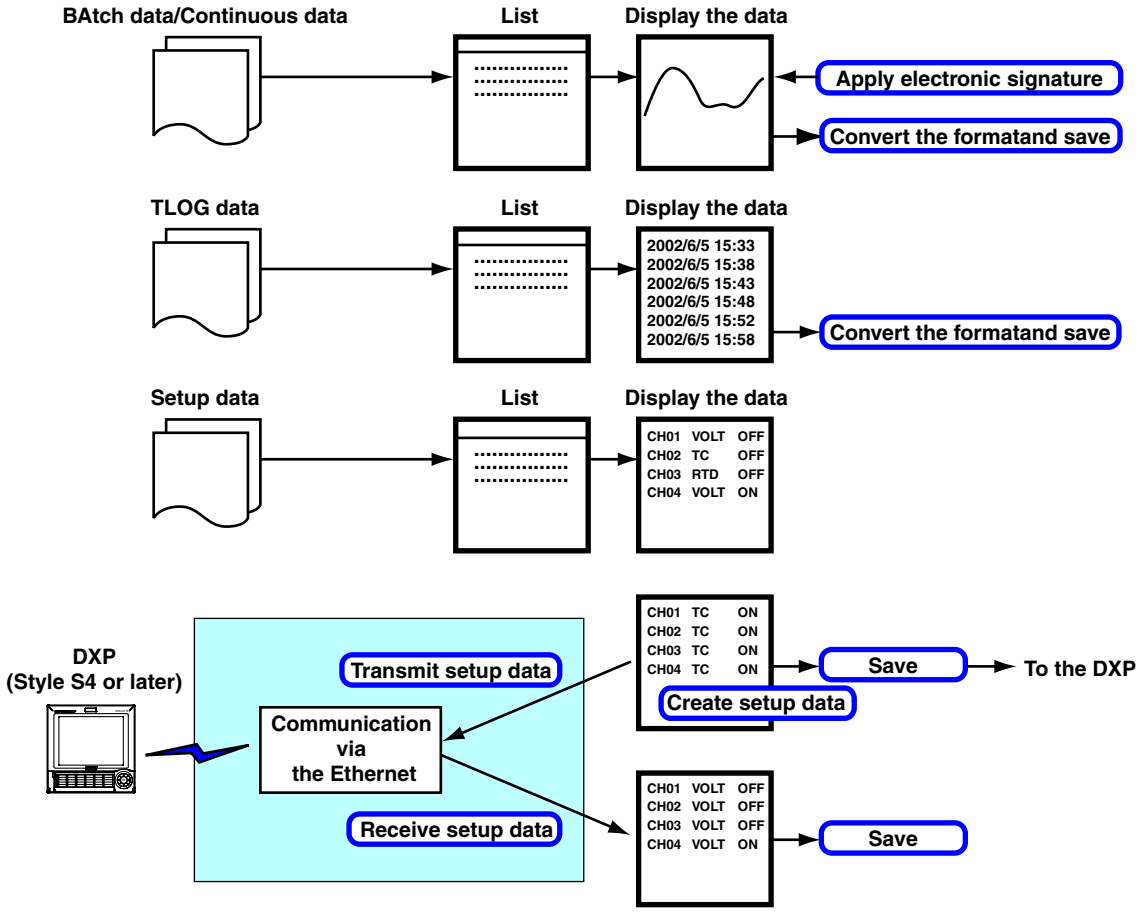
1.1 DAQSIGNIN Overview

Capabilities of DAQSIGNIN

- Display and confirm batch data/continuous data and apply electronic signature to the data.
- Display and confirm TLOG data.
- Convert the data format of batch data/continuous data and TLOG data to ASCII, Excel, or Lotus format and save the converted data.
- Display and confirm the setup data.
- Create new setup data.
- Load the DX100P/DX200P (hereinafter “the DXP”) setup data via the communication interface. Transmit setup data to the DXP (function available on DXP style S4 or later).



Batch data: “Display data” (.dbd extension) or “event data” (.dbe extension) that has been acquired by the DXP with the type of process set to “Batch.”
Continuous data: “Display data” or “event data” that has been acquired by the DXP with the type of process set to “Continuous.”

* Batch data/continuous data consists of one or more files.

TLOG data: Measured/computed data stored at a specified interval (.dtg extension).
Setup data: Setup data of the DXP (.ppl extension).

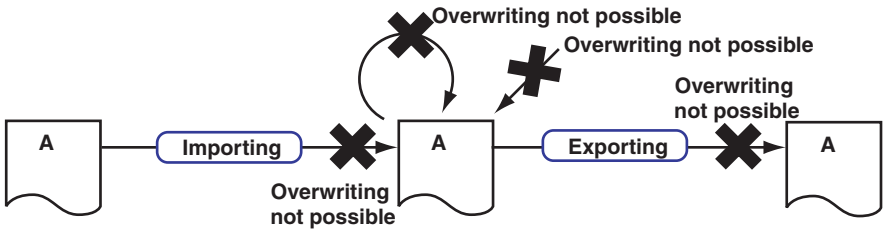
Data Management Method

Data Cannot Be Altered

The data imported into DAQSIGNIN can be viewed, but the contents and the file name cannot be changed. However, the following exceptions exist.

- Apply electronic signature to the batch data/continuous data (add approval information).
- User locked (invalidated) due to erroneous operation (password disable is added to the operation log of the data file).
- Export the batch data/continuous data to a different name (change the file name).

You cannot overwrite to an existing file when importing or exporting data.



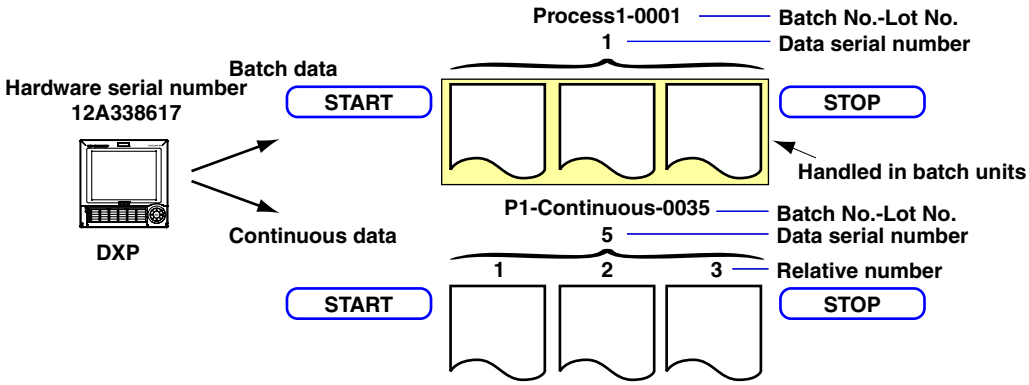
Batch Data and Continuous Data

Batch data is handled in batch units (“batch number-lot number”) and can be identified from the following information (see section 2.3).

- Hardware serial number: Serial number of the instrument that acquired the data.
- Batch number-lot number.
- Data serial number: Sequence number assigned in the order of occurrence by the instrument that acquired the data (numbered for every “data acquisition start and stop” operation).

Continuous data is handled in units of files and can be identified from the following data (see section 2.3).

- Hardware serial number
- Batch number-lot number.
- Data serial number
- Relative number: File number assigned in the order of occurrence within a single continuous data set.



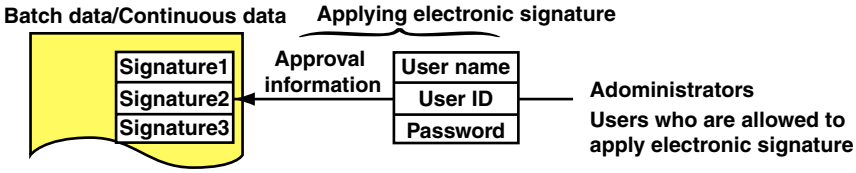
Applying Electronic Signature (Signing, see section 3.9)

The user that was registered when data was acquired can apply electronic signature to the batch data/continuous data.

- The administrator can apply signature at all authority levels (Signature 1, Signature 2, and Signature 3).
- Users who are allowed to apply electronic signature can do so at the specified authority level.
- Users are confirmed using **the user name, user ID, and password.**
- Batch data can be signed in batch units (data of every batch number-lot number).

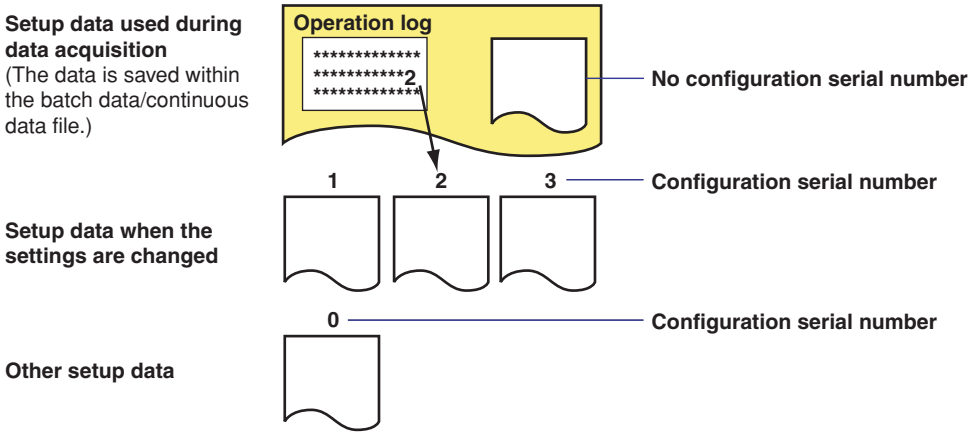
However, the data cannot be signed if any of the files making up the batch data is missing.

- Continuous data can be signed in units of files.
- A user can sign once at the unsigned authority level (Signature1, Signature2, or Signature3).
- A user cannot change or clear signatures.



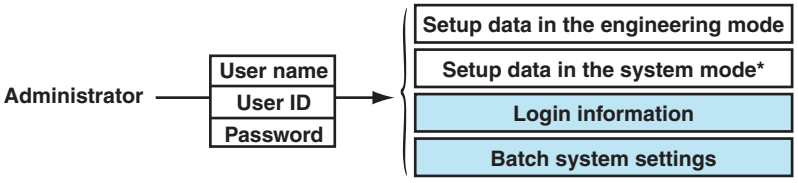
Setup Data

- Setup data used during data acquisition
  The data is saved within the batch data/continuous data file.
- Setup data when the settings are changed
  This is the setup data after the settings are changed. The setup data is assigned a "**configuration serial number**" in the order of occurrence. This number is recorded in the batch data/continuous data as a part of the operation log of setting changes (see section 2.5).
- Other setup data
  Includes setup data saved using keys on the DXP, setup data saved using the Hardware Configurator, and setup data received using the Communicator.
  The configuration serial number is "0."



Viewing the Contents of the Login Information and Batch System Settings

Only the administrator that was registered at the time the data was acquired can view the contents of the login information and batch system settings of the data. The administrator is confirmed using **the user name, user ID, and password** (see sections 2.3, 3.7, and 3.8).



* Setup data in the system mode excluding the login information and batch system settings

- **Login information:** Contents of the registered administrators and users
- **Batch system settings:** Contents of the login function and the electronic signature function

User Locked

A user is invalidated if a wrong password is entered three consecutive times at the password prompt. An invalidated user cannot apply electronic signature to the data. In addition, the user cannot view the contents of the login information and batch system settings of the relevant batch data and continuous data.

Handling of the Batch Data and Continuous Data Saved Using Keys

Use the data saved to the storage medium using keys when data acquisition is not in progress as reference data.

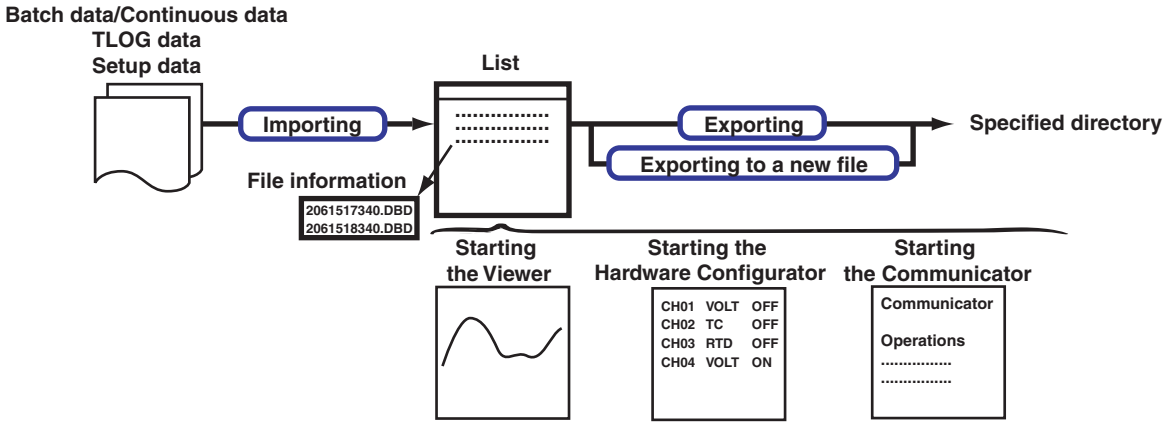
Reason: The login information, setup data, alarm summary, operation log, message summary, and acknowledge information that exist *at the time data save operation from the internal memory is carried out* are saved to the batch data and continuous data files. The information may be different from the information when the data was stored by the auto save function.

Functional Structure of DAQSIGNIN

DAQSIGNIN consists of the following four software programs.

- **Manager (see chapter 2)**
- **Viewer (see chapter 3)**
- **Hardware Configurator (see chapter 4)**
- **Communicator (see chapter 5)**

Functions of the Manager (See Chapter 2)



Importing Data

Imports the following three types of data created using the DXP (loads and saves the data to the DAQSIGNIN directory).

- Types of data that can be imported
  Batch data/continuous data, TLOG data, and setup data
- When importing a file, you can specify whether to **delete the original data.**
- You **cannot import the same data** that has already been imported and not yet exported.

Managing the Imported Data

Imported batch data/continuous data, TLOG data, and setup data are listed. For a description on the displayed items, see section 2.3, 2.4, and 2.5.

- Batch data/continuous data is displayed using **the batch name ("batch number-lot number").**
- The list can be sorted by the displayed items ("batch number-lot number," "start time," etc.).

- You can display detail information to view the files making up the batch data/ continuous data. The files has .dbd or .dbe extensions.

Starting the Viewer

You can start the Viewer from the list of batch data/continuous data or TLOG data.

Starting the Hardware Configurator

- You can start the Hardware Configurator from the list of batch data/continuous data. The setup data is displayed on the Hardware Configurator.
- You can start the Hardware Configurator from the list of setup data. In this case, the setup data excluding the login information and batch system settings can be viewed.

Starting the Communicator

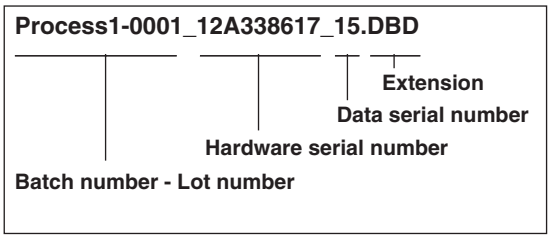
You can connect the PC to the DXP via the Ethernet network to receive setup data from the DXP. However, the DXP style number S3 or before cannot be connected.

Exporting Data

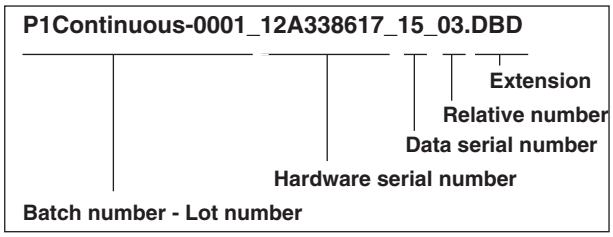
Batch data/continuous data, TLOG data, and setup data can be exported (moved to a specified directory).

- **Exported data is deleted from the directory** in which the data was saved during importing and cleared from the list.
- Batch data/continuous data can be exported by changing the data file name as follows.

Batch data



Continuous data

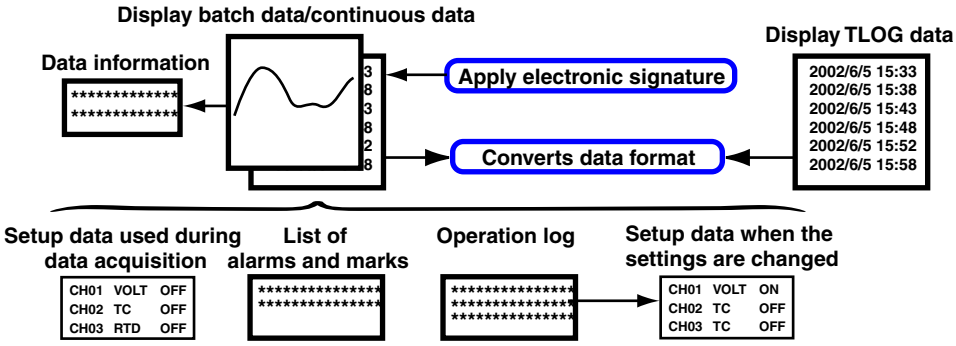


Note

- If the batch data is made up of multiple files, the data is combined into a single file when the data is exported to a new name.
- Data that has been combined cannot be loaded by the DXP.
- The time stamp of the last file combined becomes the time stamp of the combined data

- Data cannot be exported in the following cases.
  - A file with the same name exists at the export destination.
  - When the file is opened on the Viewer or Hardware configurator.
- Data cannot be exported to another name in the following cases.
  - If any of the files making up the batch data is missing.
  - If the data has the number of samples beyond the Viewer's limit (see "Functions of the Viewer")
  - If any of the files making up the batch data is damaged (CRC check).
  - If the continuous data file is damaged (CRC check).
  - If the file contains or includes data saved using keys.

Functions of the Viewer (See Chapter 3)



Confirming the Batch Data/Continuous Data

- The batch data/continuous data can be displayed as waveforms or numerical values in a table format.
  - Batch data is displayed in batch units (batch number-lot number).
  - Continuous data is displayed in units of files. You can also view the file by linking the file before and after the file.
  - You can create display settings for each data set and display the data file using the same settings.
  - You can create a "template" for each DXP and display the data created on a particular DXP using the same settings (the contents to be printed are included).
- Alarms, marks, and the operation log in the batch data/continuous data file can be listed.
- You can confirm whether some of the file information in the batch data/continuous data or the files making up the batch data/continuous data are missing.

Note

DAQSIGNIN cannot display data in which the number of samples exceeds 5,000,000. For the operating procedure in this case, see section 2.3.

Applying Electronic Signature to the Batch Data/Continuous Data.

The user that was registered when data was acquired can apply electronic signature to the batch data/continuous data. See "Applying Electronic Signature (Signing)" on page 1-2.

Confirming the TLOG Data

Data is displayed using numerical values in table format.
You can create display settings and templates (see "Confirming the Batch Data/ Continuous Data" above).

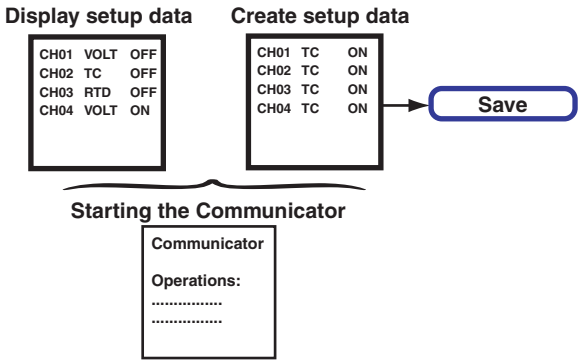
Starting the Hardware Configurator

- **Displaying the setup data that was used when the batch data/continuous data currently displayed was acquired.**
  The setup data stored in the batch data/continuous data can be displayed.
- **Displaying the setup data when the settings were changed**
  You can select the setting change operation in the operation log and display the corresponding setup data. To do so, the relevant setup data must be imported.

Converting Data Formats

Batch data/continuous data, TLOG data, and the list of alarms, marks, and operation log attached to the batch data/continuous data can be converted to Excel format, ASCII format, or Lotus format and saved to a separate file.

Functions of the Hardware Configurator (See Chapter 4)



Confirming the Setup Data

You can use the Hardware Configurator to display and confirm the setup data.

Creating Setup Data

You can create new setup data by editing the imported setup data. However, **the setup data of login information and batch system settings cannot be created.**

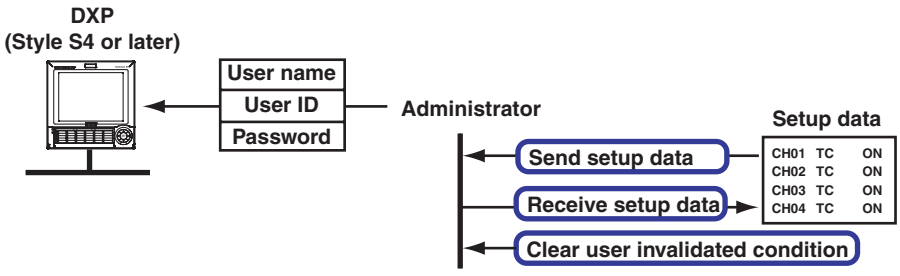
- You cannot overwrite the imported data.
- You can also create setup data by changing the system configuration (number of measurement channels, options, etc.) of the imported setup data.
- On the DX200P, you can assign screens to the [4 panel] display and set screen names.

Starting the Communicator

You can connect the PC to the DXP via the Ethernet network to transmit setup data to the DXP and receive setup data from the DXP. However, the DXP style number S3 or before cannot be connected.

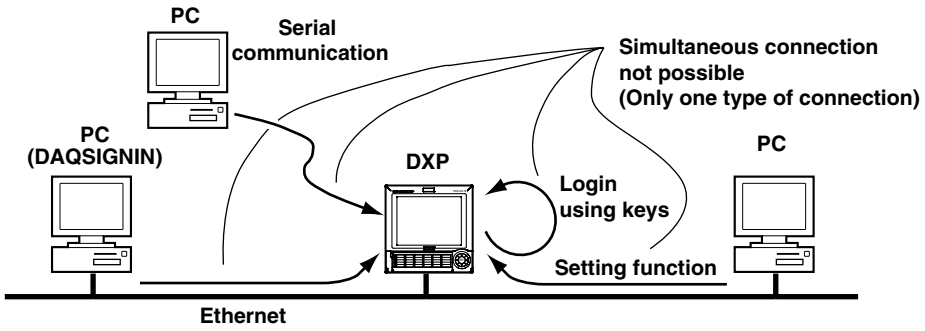
Functions of the Communicator (See Chapter 5)

This function can be used on the DXP style S4 or later.



Connection (Login) Conditions

- Only the administrators that are registered to the target DXP can log in. The administrator is confirmed using the **user name, user ID, and password**.
- Connection is not possible if there is a user logged in using the keys on the DXP or if there is a user logged into the setting function of the setting/measurement server via the communication interface (see IM04L05A01-17E).
- Connection is not possible using a user name that is already connected.



Note

The administrator logs into the setting function of the setting/measurement server via the communication interface using DAQSIGNIN (see IM04L05A01-17E).

Transmitting and Receiving Setup Data

You can load DXP setup data. You cannot view the login information and batch/system settings.

You can send setup data to the DXP. The contents of [Login information], [Batch system settings], [IP Address], and [Serial] are not transmitted.

Clearing the Invalidated User

When a user is invalidated, other administrators can reset the password of the invalidated user to default.

In addition, the user locked icon displayed on the DXP can be cleared (operation acknowledge).

Logging Operations

When the DXP is controlled from DAQSIGNIN, the operation is recorded in the DXP operation log.

Auto Logout/Communication Timeout/Keepalive

“Auto Logout”, “Communication Timeout”, and “Keepalive” that are set on the DXP applies.

Style S1 Data

Batch data and setup data created on the DX200P with a style number of S1 does not include login information and batch system settings. Therefore, operations related to the login information cannot be performed.

The “relative number” for the batch data created on the DX200P with a style number of S1 are “0” (see page 2-4).

1.2 Required PC System Environment

Hardware

Personal Computer
A computer which runs on Windows 98, Windows Me, Windows NT4.0, Windows 2000, or Windows XP, and is equipped with MMX 166 MHz or higher (Pentium II 266 MHz or higher is recommended)

Main Memory
64 MB or more (generally, 64 to 96 MB is recommended with Pentium II, though the computer performance depends on the graphic board). However, some application programs may require more memory.

Hard Disk
A free space of 20 MB or more

CD-ROM Drive
To be used for installing the software.

Mouse
A mouse supported by the operating system.

Monitor
A monitor supported by the operating system.
Resolution: 800 x 600 dots or higher
Number of colors: 32 K or more (A monitor with 1024 x 768 dots and 65536 colors is recommended)

Interface Board
An Ethernet card supported by Windows is required. TCP/IP protocol also needs to be installed.

Printer
A printer supported by the operating system is required. An appropriate printer driver is also required.

Operating System (OS)

Windows 98, Windows Me, Windows NT4.0, Windows 2000, or Windows XP.

Note

- The time zone can be set in [Date/Time] which can be opened from [Control Panel].
- If daylight saving time is used, mark the check box of “Automatically adjust clock for daylight saving changes”.
- The time zone should not be set using the autoexec.bat file. If “TZ=GTM0” is set in the file, specify “rem” to disable it.
- Data created in 2038 or later cannot be handled.
- The font “Courier New” needs to be installed on your personal computer.

1.3 Installing the DAQSIGNIN

To install the DAQSIGNIN, an appropriate serial number needs to be entered. The serial number is indicated on the CD case.

Operating Method

1. Turn ON the PC and start Windows.
2. Insert the CD into the CD-ROM drive.
3. After a few moments, the “DAQSIGNIN Install CD” window appears. Proceed to step 4.

   If the “DAQSIGNIN Install CD” window does not appear, carry out the following procedure.
   Click “My Computer” and double-click the CD icon (DAQSIGNIN). When the “DAQSIGNIN Install CD” window appears, proceed to step 4.
   If the “DAQSIGNIN Install CD” window does not appear, and the DAQSIGNIN folder opens instead, double-click “Install.exe” in the folder. The “DAQSIGNIN Install CD” window will appear. Proceed to step 4.

4. Click the button corresponding to the software program you wish to install. Then, follow the instructions that appear on the screen.

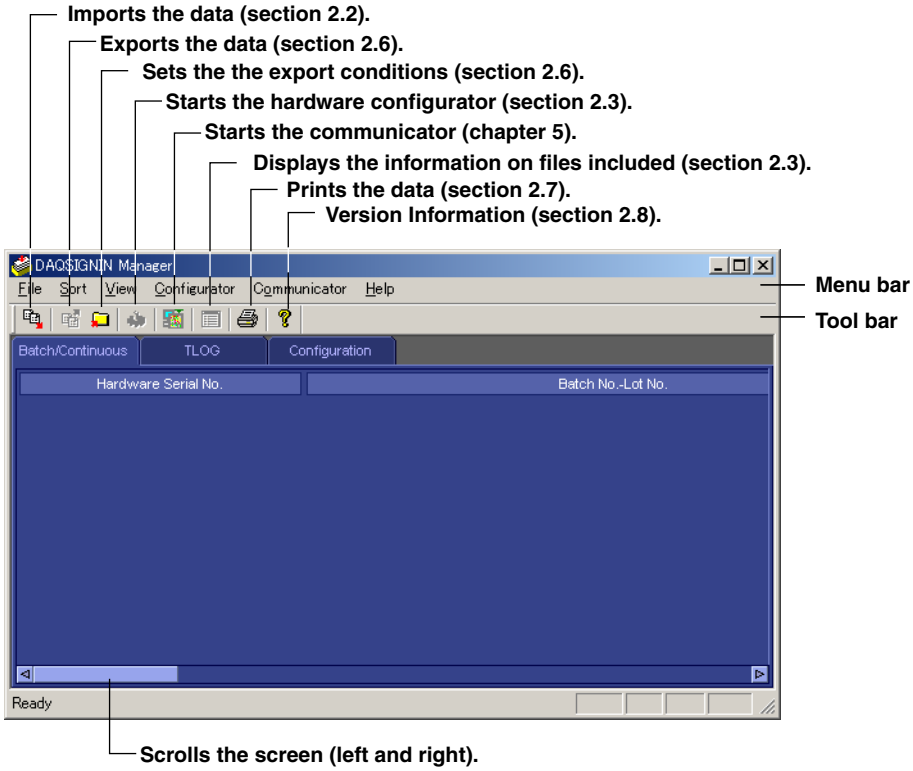
Note

- Exit memory resident programs such as virus protection programs before installation.
- Immediately after installation, DAQSIGNIN Manager is registered in the Start menu.
- When reinstalling the software, uninstall the software first.
- To uninstall the program, follow the procedures below.
  1. If you need to keep the imported data, export the data outside the DAQSIGNIN directory.
  2. Double-click “Add/Remove Programs” in the Windows Control Panel and uninstall the program.
  3. Using Explorer, delete the Files and subdirectories that were created after the installation of the program. Also, delete the directory to which the program was installed.

2.1 Starting/Exiting the Manager

Starting the Program

From the Start menu, select [Programs] - [DAQSIGNIN Manager]. Manager will start, and the following window will open.



Exiting

Note

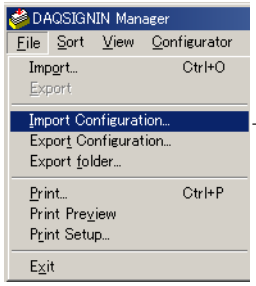
Before exiting the Manager, make sure that all the utilities are exited.

To exit Manager, select [File] - [Exit], or click the [x].

2.2 Importing Data

Setting the Import Conditions

You can set whether to automatically delete the original data when importing batch data/ continuous data, TLOG data, or setup data.



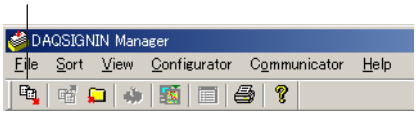
1. Sellect [File]-[Configuration of Import].

2. The [Configuration of Import] dialog box opens.

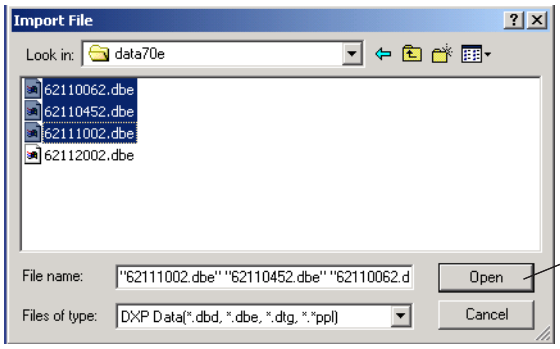
3. Select either one on the left and click here.

Importing

1. Click here

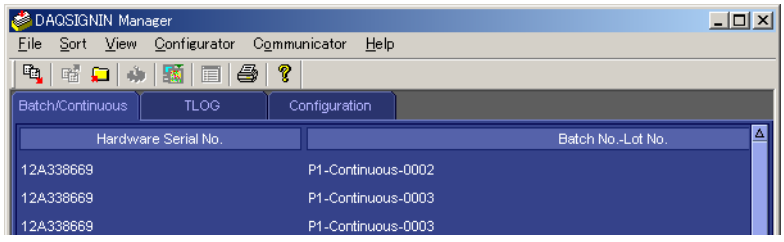


2. The [Import File] dialog box opens.



3. Select files to be imported and click here.

4. Imported data are listed.

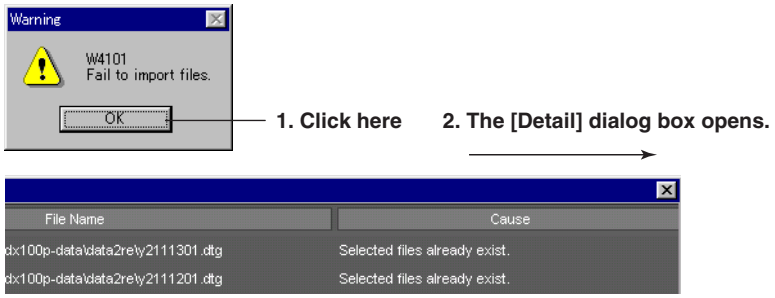


Drag & Drop Operation

Select the file and drag & drop the file on the Manager window.

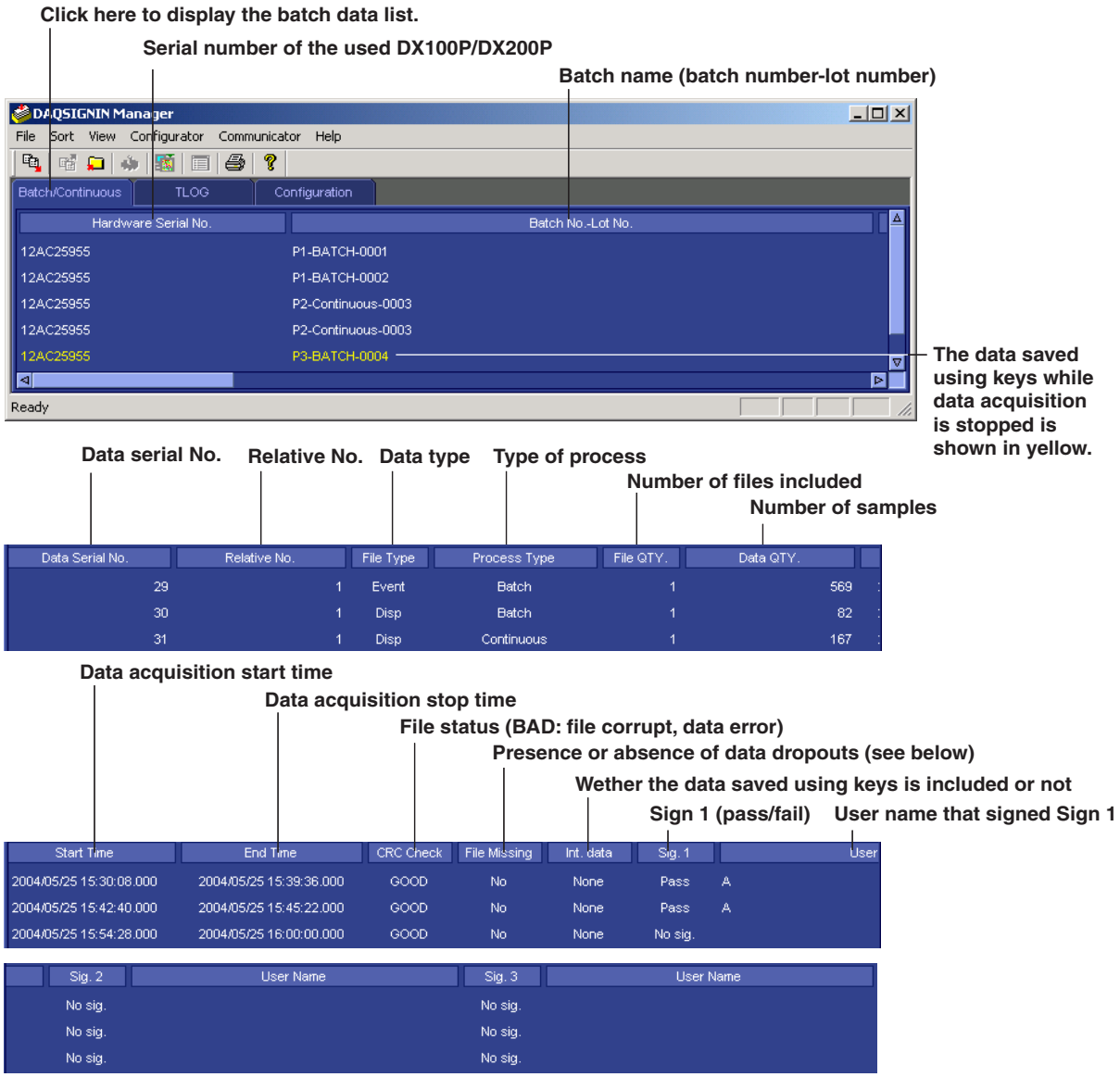
Note

- You can select and import several different types of files at once.
- Files that have been imported once and have not been exported cannot be imported.
- If the importing fails, a message is displayed followed by the information in a dialog box.



2.3 Handling Batch Data/Continuous Data

Listing Batch Data



Number of Samples

If the number of samples exceeds 5,000,000, the number is displayed in red. In such case, the data cannot be displayed at once on the Viewer (you can display the data in segments, see “Note” on page 2-7).

Presence or Absence of Data Dropouts

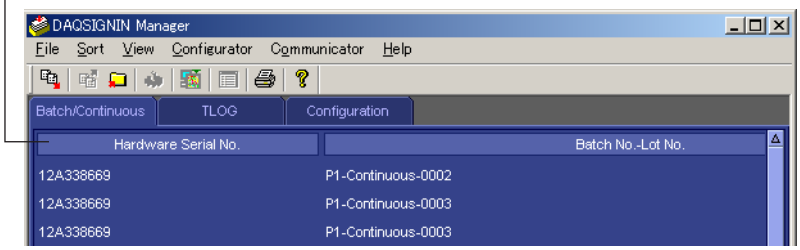
No: All files that make up the batch data are present.
Yes: Files that make up the batch data is missing.
You can confirm the files that make up the batch data using the file information (see next page). To specify the missing file, see section 3.2.

Int. Data

Exist: Includes data saved using keys while the data acquisition is stopped. Handle the data as reference data.
None: Does not include data saved using keys.

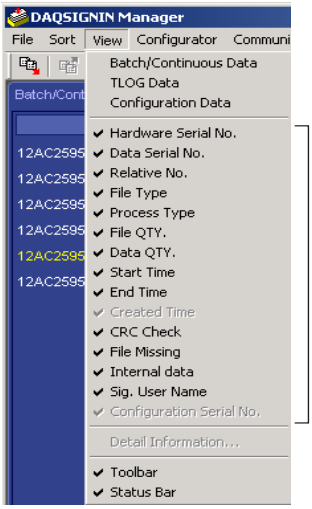
Sorting Batch Data/Continuous Data

Click the item name in this column to sort the data list by the item. (You can also select the item from the [Sort] menu.)



First click sorts the list in ascending order; second click in descending order.

Showing/Hiding Display Items



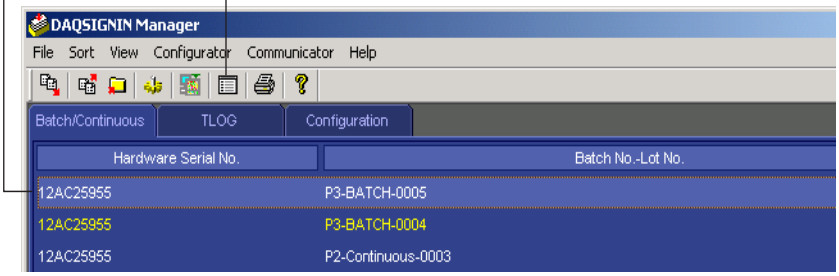
Select [View] - [(item)] to show or hide the display item.

Displaying the File Information

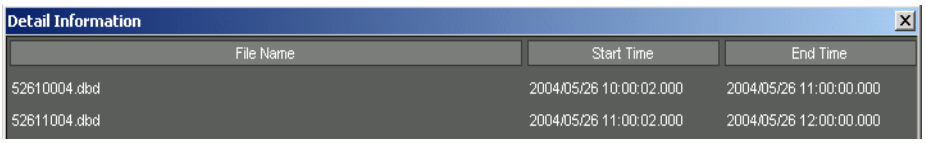
Lists the files that make up the batch data.

1. Select the data.

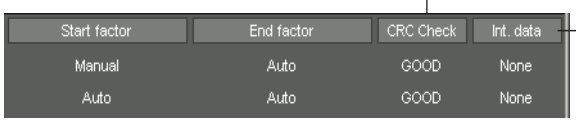
2. Click here (also selectable from [View] - [Detail Information]).



3. [Detail Information] dialog box opens.



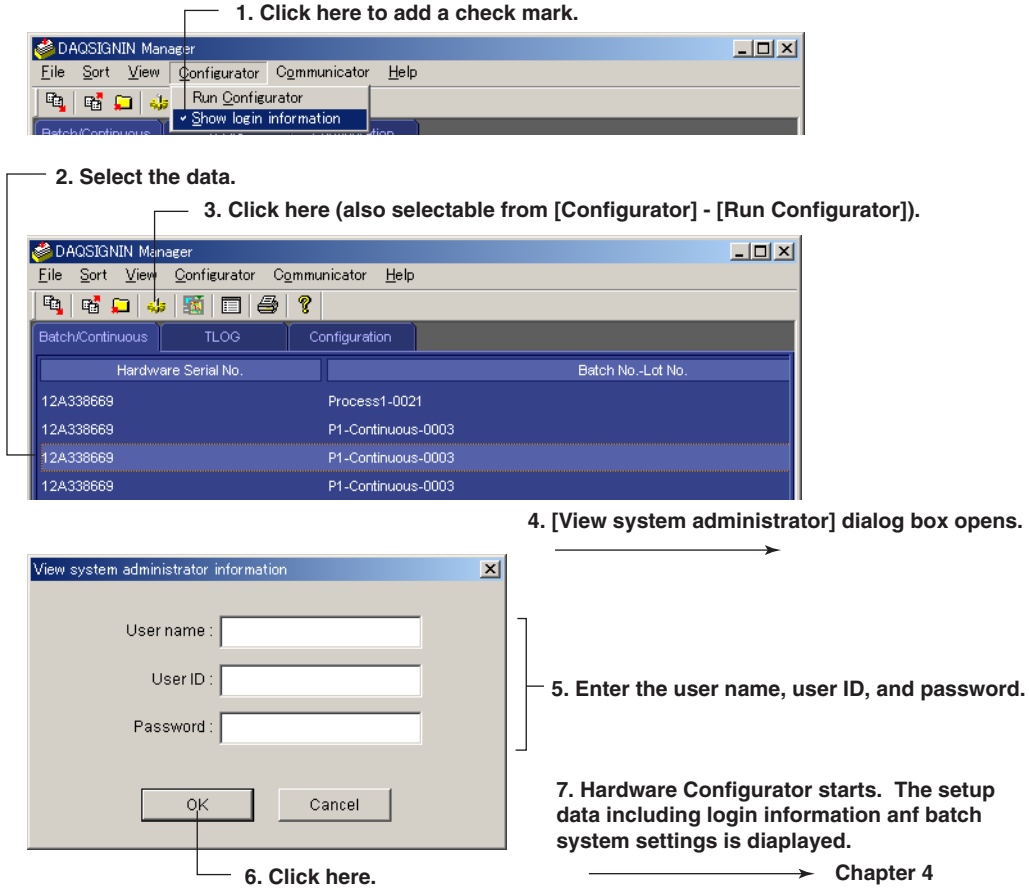
BAD: You cannot apply signature to the data.



Exist: Data saved using key operation.

Displaying Setup Data (Starting the Hardware Configurator)

Displays the setup data that was used when the batch data/continuous data was acquired.



If you cancel the operation of entering the user name, user ID, and password in the above procedure, setup data excluding the login information and batch system settings is displayed.

Note

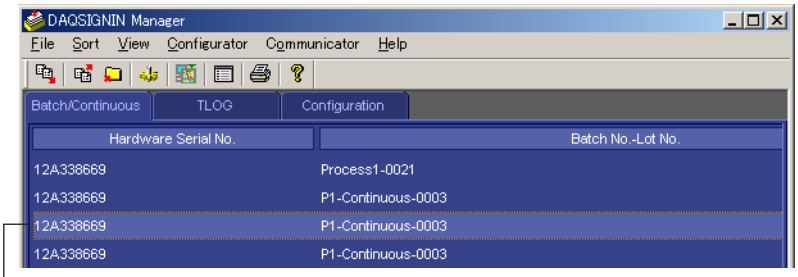
- If any of the files making up the batch data is missing, the [View system administrator information] dialog box does not appear. The setup data excluding login information and batch system settings is displayed.
- As the setup data created on the DX200P style S1 dose not have the login information, the setup data excluding login information and batch system settings is displayed.
- If you repeat the operation of entering a wrong password and clicking [OK] three consecutive times, the user name cannot be used to display the login information and batch system settings of the data or sign the data. “User Locked” is recorded in the operation log.

Displaying setup data excluding login information and batch system settings

If a check mark is not placed on [Configurator] - [Show login information], setup data excluding login information and batch system settings is displayed in step 3.

For the operating procedure of the Hardware Configurator, see chapter 4.

Displaying Batch Data/Continuous Data (Starting the Data Viewer)

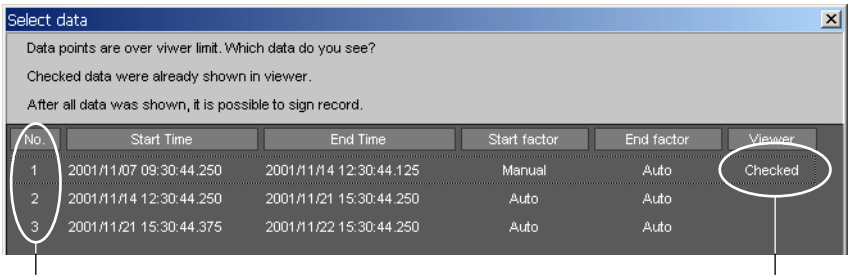


Double-click the data to start the Viewer.

For the operating procedure of the Viewer, see chapter 3.

Note

If the number of samples in the batch data exceeds 5,000,000, the data cannot be displayed at once using the Viewer. The [Select data] dialog box shows the file list of data in displayable blocks. Select the block you wish to view.

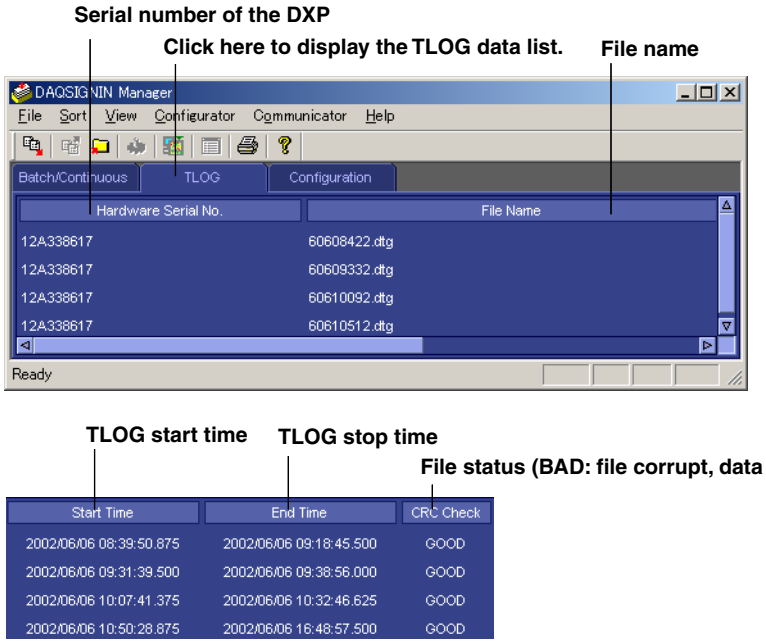


The data is divided into displayable blocks. Select the block you wish to view.

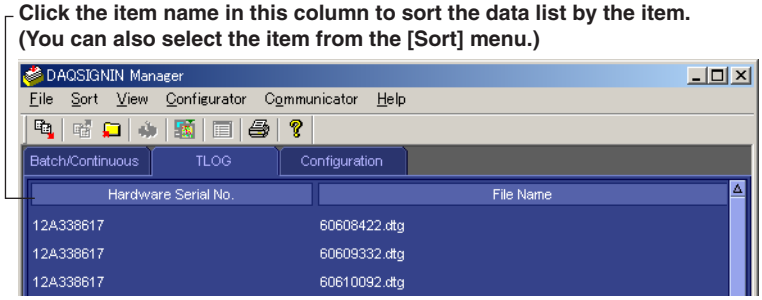
Once the data block is displayed on the Viewer, it is "Checked." You can apply signature to the data when all data blocks are "Checked (see section 3.9)."

2.4 Handling TLOG Data

Listing TLOG Data

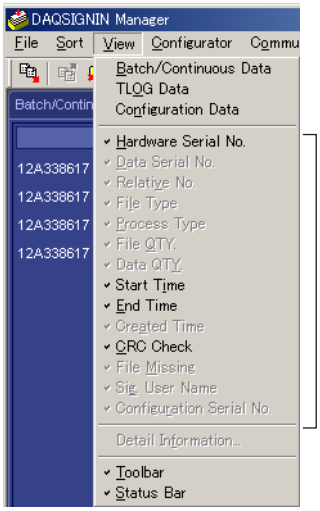


Sorting TLOG Data



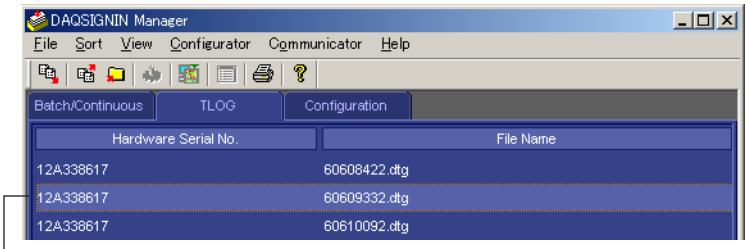
First click sorts the list in ascending order; second click in descending order.

Showing/Hiding Display Items



Select [View] - [(item)] to show or hide the display item.

Displaying TLOG Data (Starting the Data Viewer)

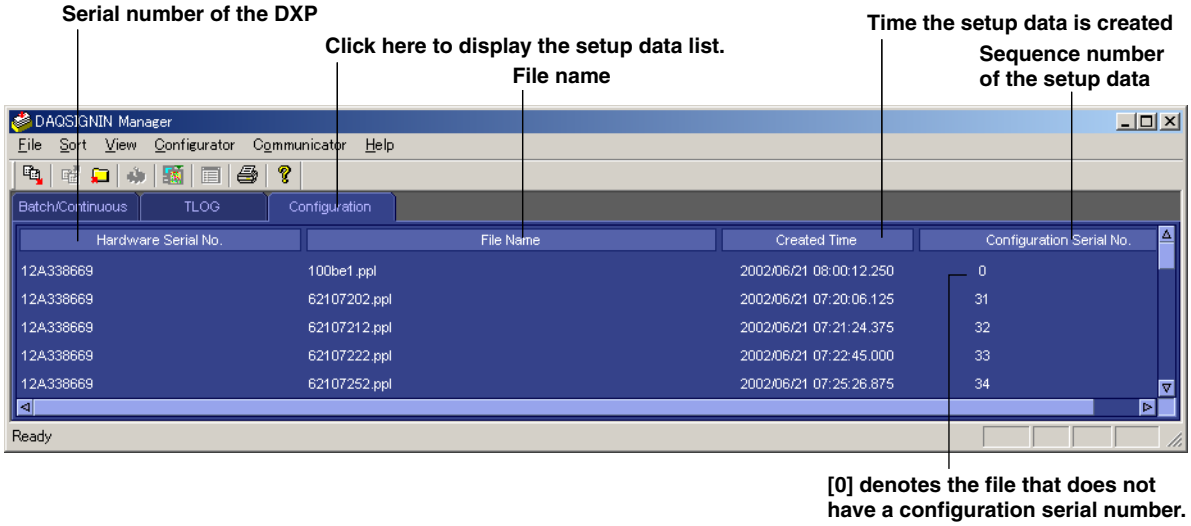


Double-click the data to start the Viewer.

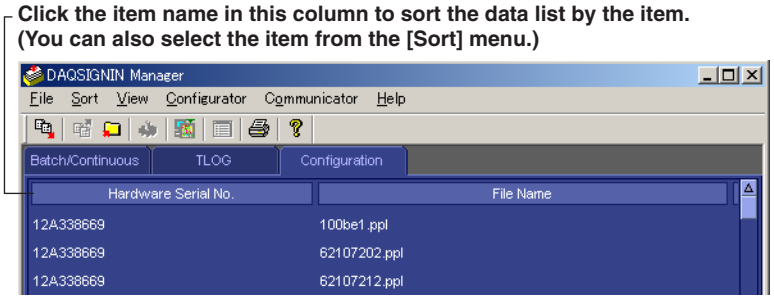
For the operating procedure of the Viewer, see chapter 3.

2.5 Handling Setup Data

Listing Setup Data

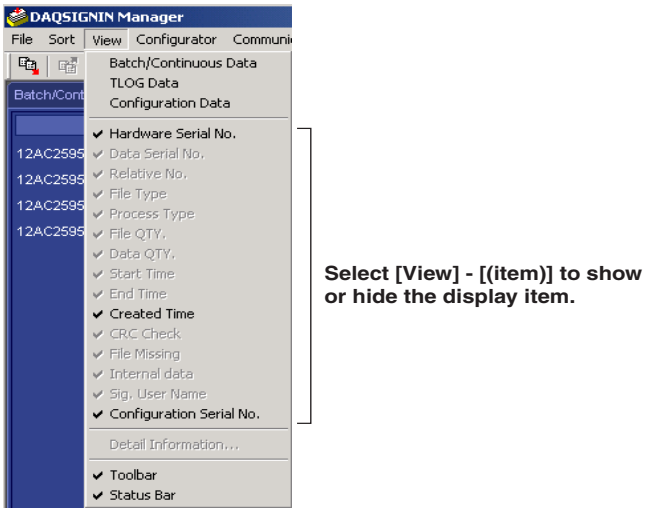


Sorting Setup Data

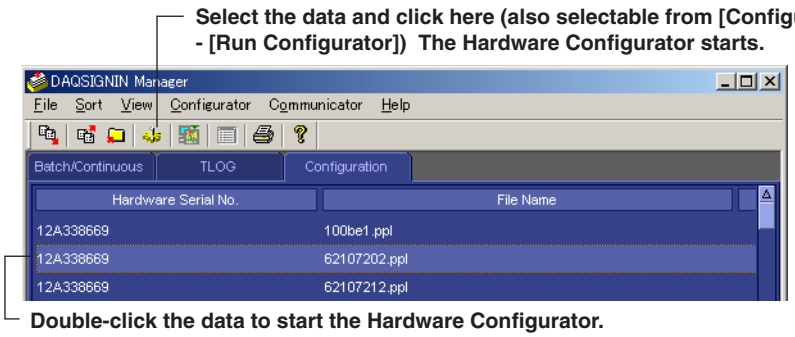


First click sorts the list in ascending order; second click in descending order.

Showing/Hiding Display Items



Displaying the Setup Data (Starting the Hardware Configurator)



For the operating procedure of the Hardware Configurator, see chapter 4.

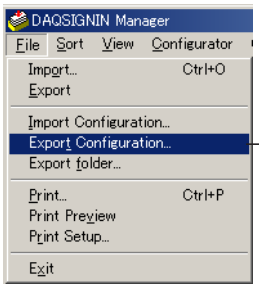
Note

If the setup data is displayed from the setup data list, login information and batch system settings are not displayed.

2.6 Exporting Data

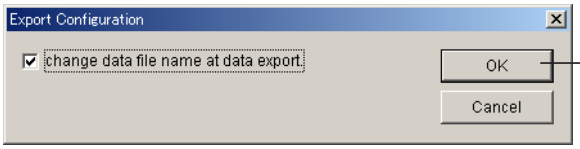
Setting the Export Conditions

Set whether to change the file name when exporting batch data/continuous data. For a description of the file name when it is to be changed, see section 1.1.



1. Select [File] - [Export Configuration].

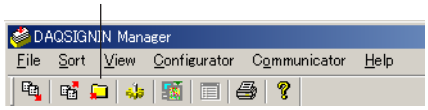
2. The [Export Configuration] dialog box opens.



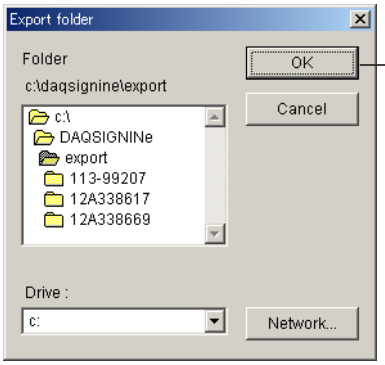
3. Make selection on the left and click here.

Setting the Destination

1. Click here.



2. The [Export folder] dialog box opens.



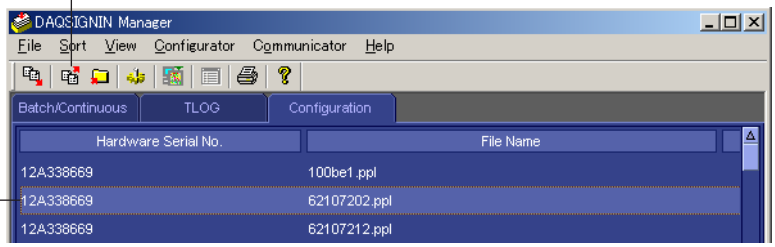
3. Select the folder and click here.

Exporting

1. Select the data.

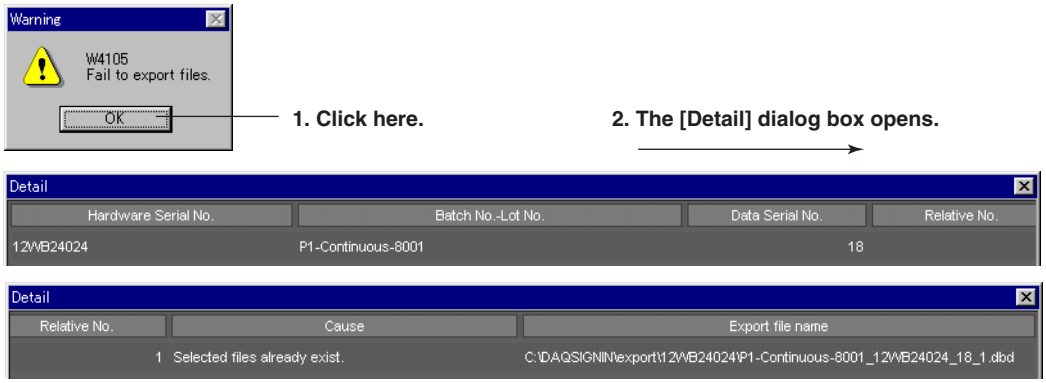
2. Click here. exports the data.

3. The data is exported and removed from the list.



Note

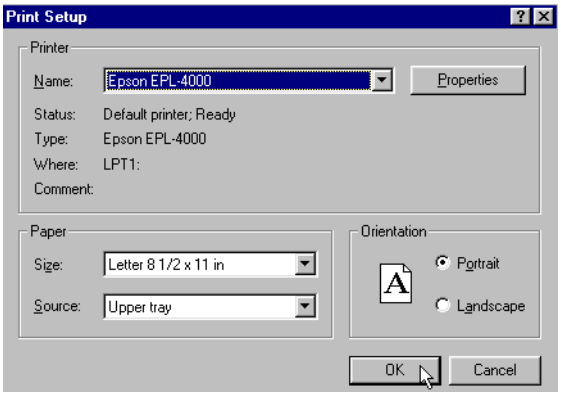
- You can select and export multiple data.
- The exported data are deleted from the directory of DAQSIGNIN.
- Once the data is exported, the display settings file is also deleted. However, the template file is not deleted.
- Data cannot be exported in the following cases.
  - A file with the same name exists at the export destination.
  - When the file is opened on the Viewer or Hardware configurator.
- Data cannot be exported to another name in the following cases.
  - If any of the files making up the batch data is missing.
  - If the data has the number of samples beyond the Viewer's limit (see "Functions of the Viewer", section 1.1)
  - If any of the files making up the batch data is damaged.
  - If the continuous data file is damaged.
  - If the file contains or includes data saved using keys.
- If the exporting fails, a message is displayed followed by the information in a dialog box.



2.7 Printing the Data

Setting the Printer

1. Select [File] - [Print Setup].



2. Set the printer, paper and orientation.

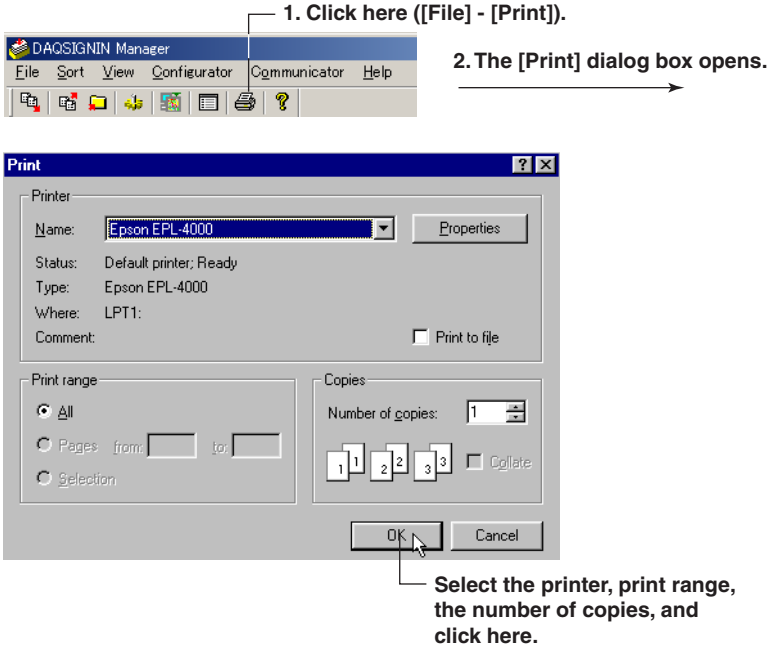
Note

Set the printer according to the environment of the system that you are using.

Print Preview

You can preview the print layout before actually printing the data.
Selecting [File] - [Print Preview] displays the print preview screen.

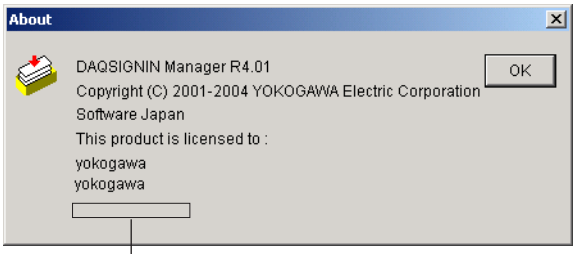
Printing



2.8 Displaying the Version Information

Version Information

1. From the menu bar, select [Help] - [About].
   The [About] dialog box will appear.



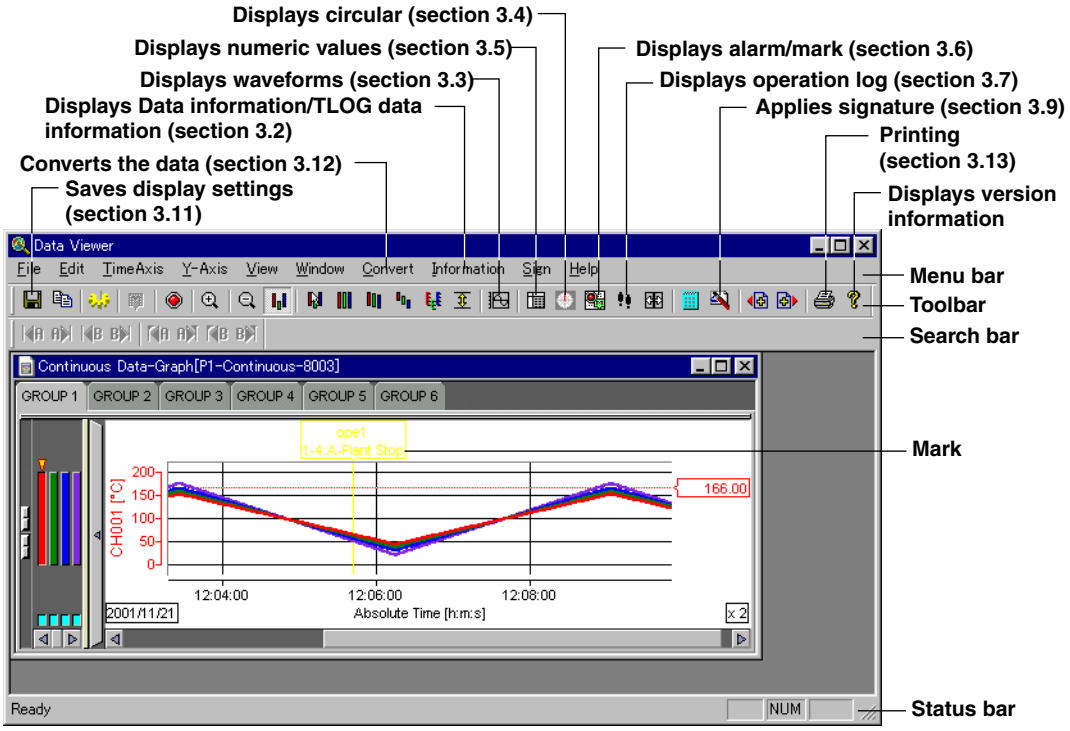
2. To close the dialog box, click [OK].

3.1 Starting and Exiting the Data Viewer

Starting the Data Viewer

The Data Viewer is started from the Manager. To start the Viewer by selecting the batch data/ continuous data, see section 2.3. To start the Viewer by selecting TLOG data, see section 2.4.

Display Example of Continuous Data



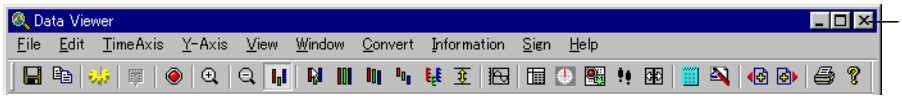
Tool Bar, Search Bar, and Status Bar

Select the [Tool Bar], [A/M Search Bar], or [Status Bar] check box from the [View] menu bar to show the corresponding bar in the window. Clear the check box to hide the bar.

Note

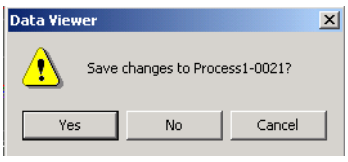
- Multiple data can be opened simultaneously. The number of data that can be opened simultaneously depends on the memory size of the PC and the free disk space.
- If you attempt to display large amounts of numerous types of data on the viewer, the system may become unstable. In such case, reduce the number of data that is displayed simultaneously on the viewer.
- If you import missing files of the batch data that is opened, the data are not added to the display automatically. Close the batch data and open it again using the Manager.

Exiting the Data Viewer



1. Click here ([File] - [Exit]).

2. The [Data Viewer] dialog box opens.

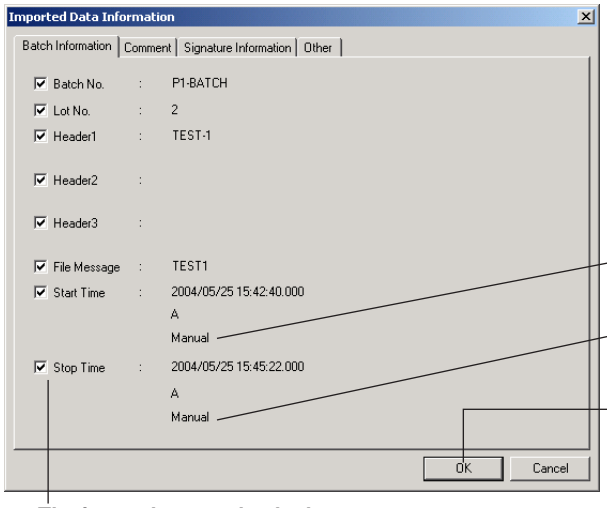


3. Click [Yes] or [No].
Yes: Save the display settings and exit the Viewer.
No: Do not save the display settings but exit the Viewer.
* When the continuous data file is displayed linking the file before and after, this message does not appear and the Viewer ends immediately.

3.2 Confirming the Data Information

Batch Data Information/Continuous Data Information

Select [Information] - [About Data...] to display the data information.

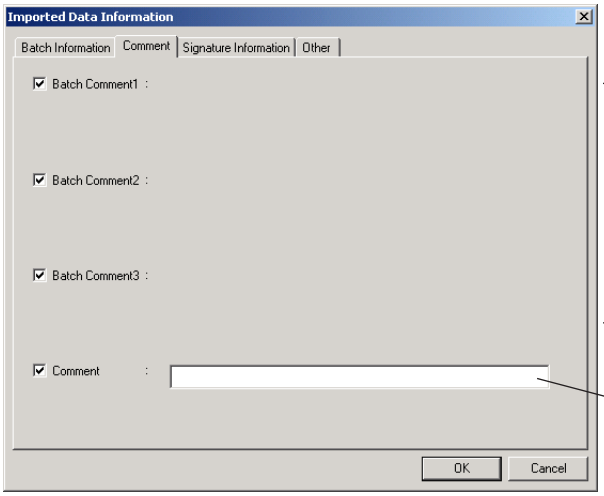


Start trigger

Stop trigger

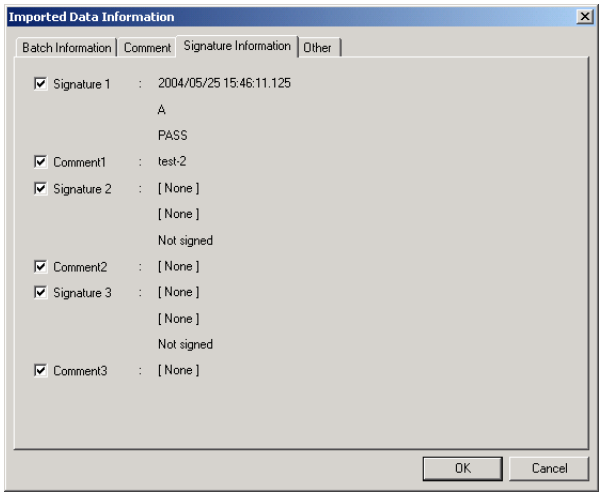
Click here to make the new checks effective.

The items that are checked are output in the header section when printed.

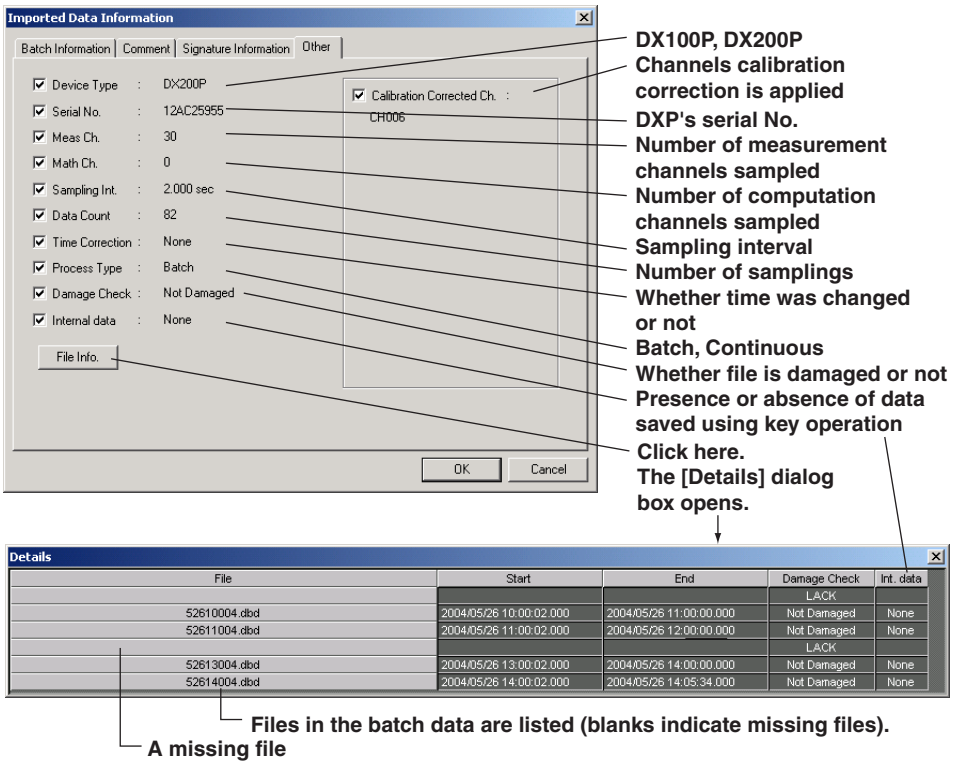


Batch comment

Comment to be printed (see section 3.13)



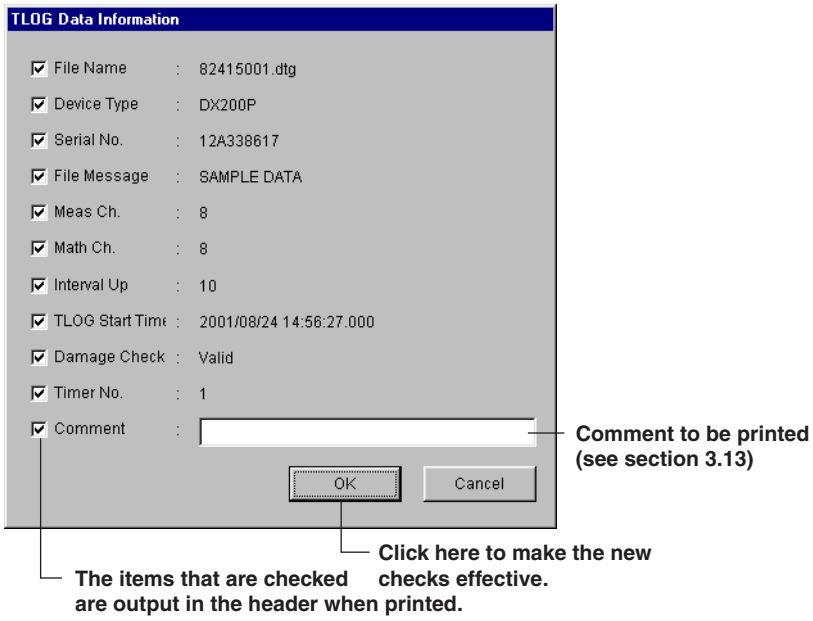
Signatures



You can confirm the files that are included in the batch data in the [Details] dialog box. If a file is missing, a blank is displayed. Import the missing file.

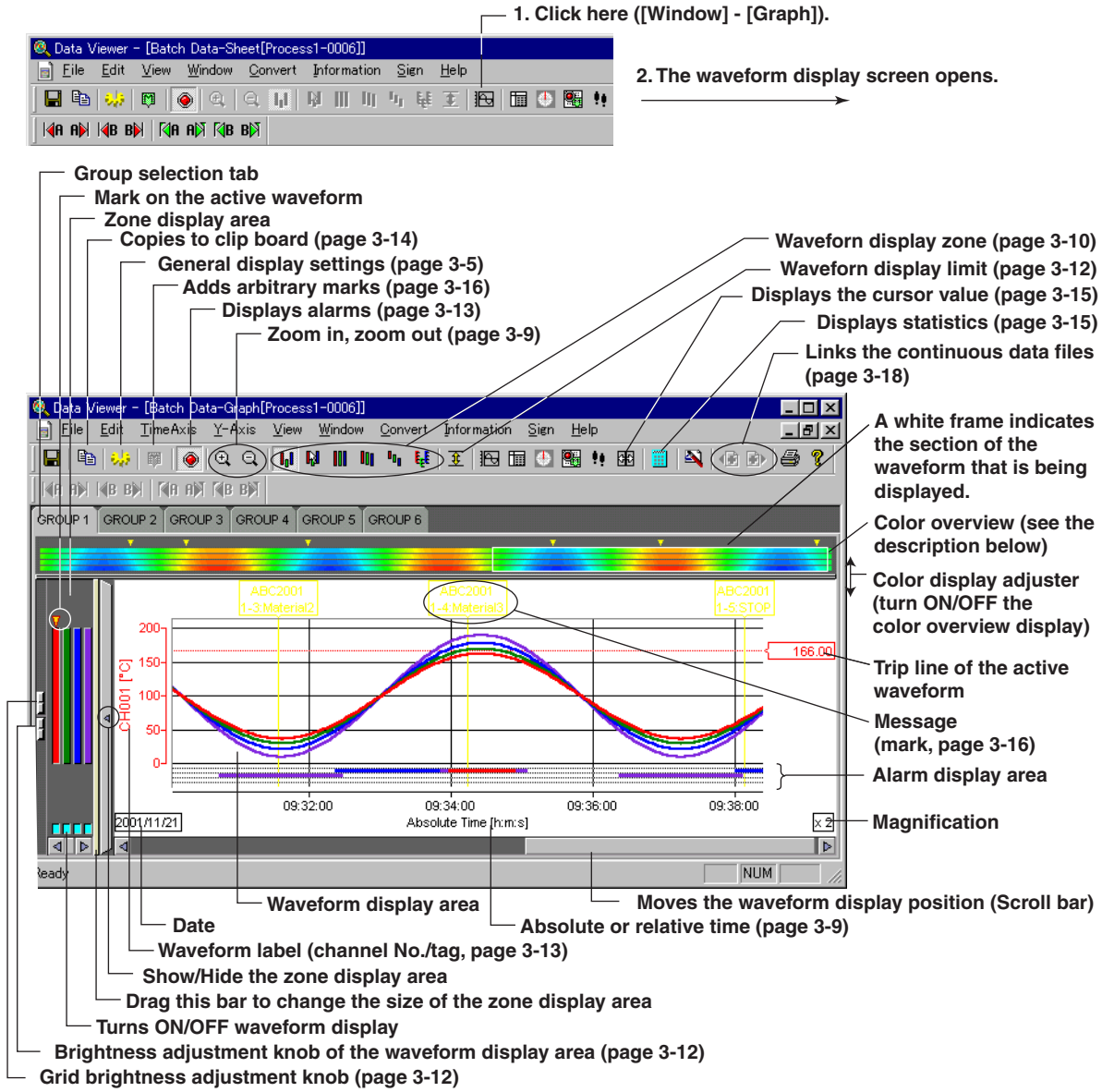
TLOG Data Information

Select [Information] - [About TLOG Data] to display the TLOG data information.



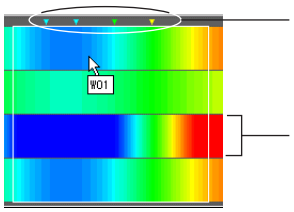
3.3 Displaying the Waveform

Displaying the Waveform



Color Overview

The color overview is displayed by dragging the adjuster up or down.



Displays marks and cursors

A single waveform space
For the display data, the maximum value is displayed at the top of the space allocated to a single waveform, and the minimum value is displayed at the bottom.

By assigning 50 different colors from the minimum to the maximum values of the scale, the measured values are assigned to those colors.

Blue (minimum display scale) - light blue - green - yellow - red (maximum display scale)

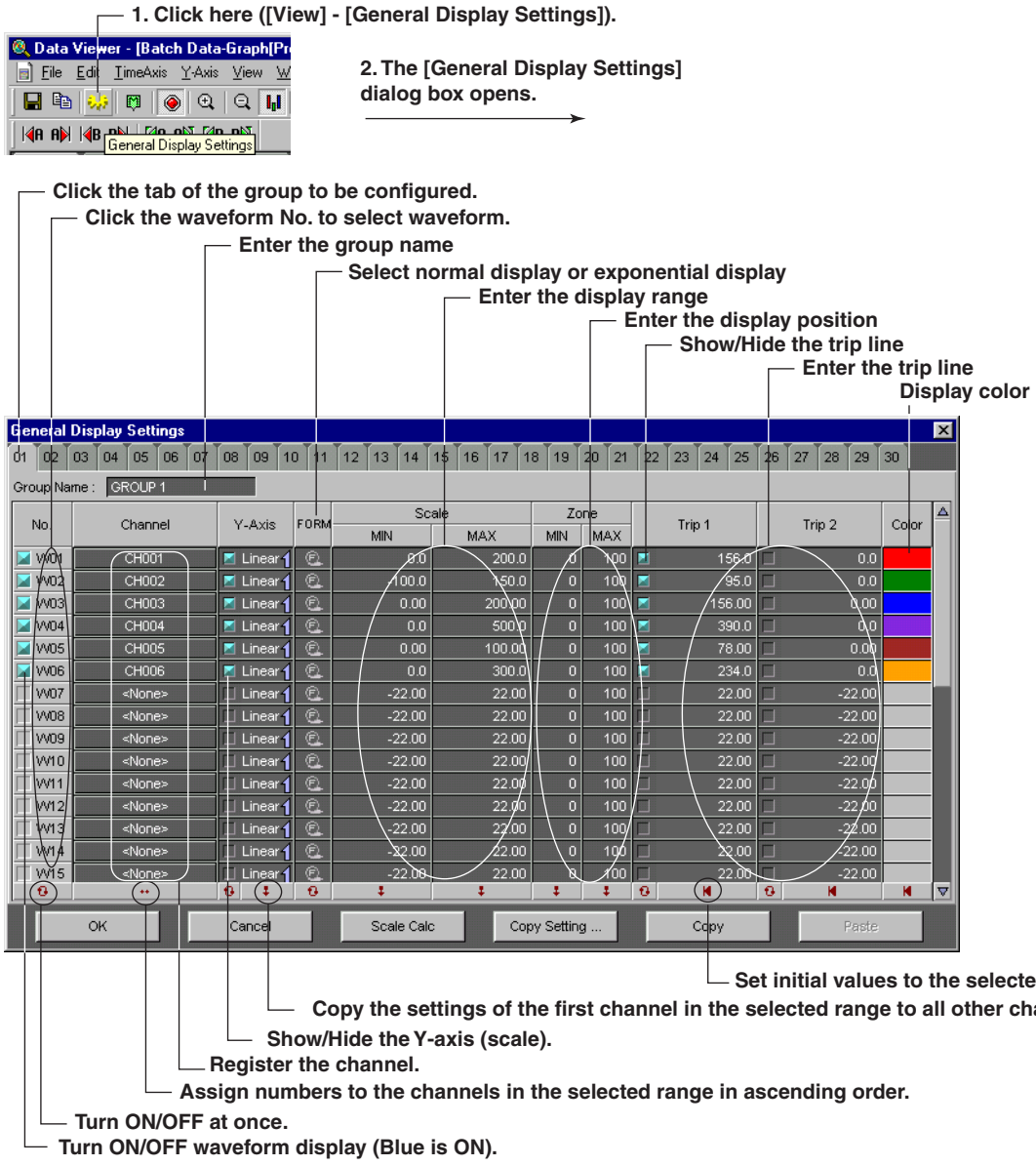
If you click on the color overview display area or drag the white frame, the section of the waveform is displayed in the waveform display area.

Note

The color overview is turned OFF as default.

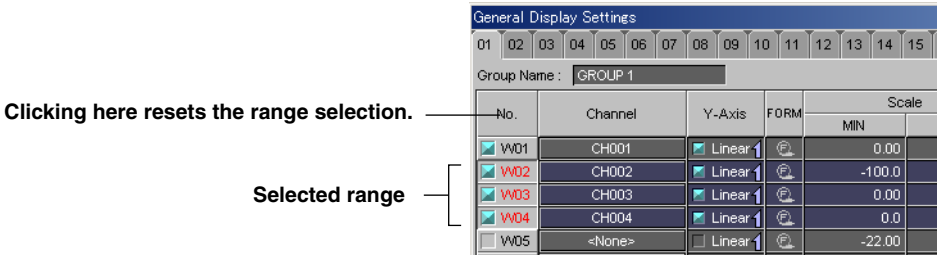
General Display Settings

Sets the display conditions.



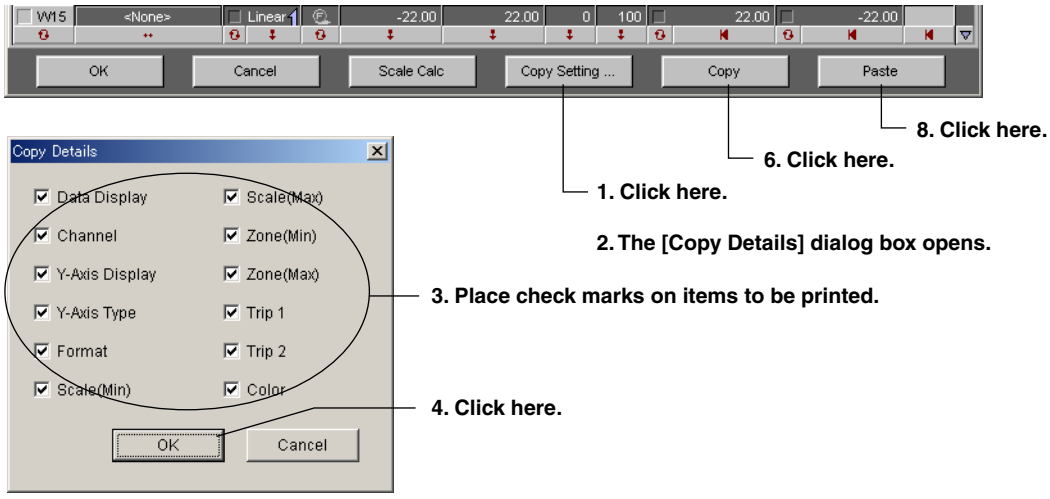
Basic Operation

- **Selecting the Setting Range**
  - Click the waveform number (the No. column).
  - To select waveform numbers consecutively, click the first cell, and then, pressing the SHIFT key, click the waveform number. You can also drag the cursor from the first waveform to the last.
  - To reset the setting range, click [No.].

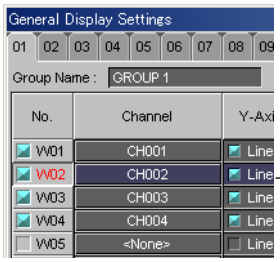


- **Copying/Pasting**

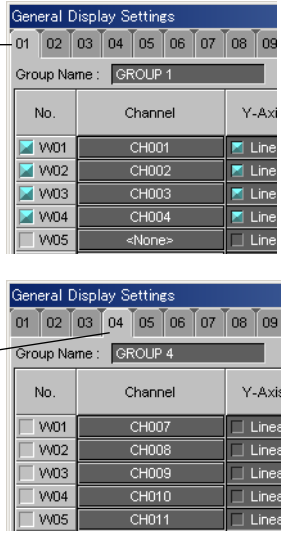
  Copies the detail settings of a group or waveform numbers, and pastes them to another group or waveform numbers.



When copying W02 to W04



When copying Group 01 to Group 04



Note

- Carry out steps 1 to 4, if necessary.
- You can select waveform numbers at a time and paste them to other waveform numbers.

- **Scale Calculation**

  If you select a waveform number and click [Scale Calc], the scale of the selected waveform number is set as follows:
  - Scale minimum = the minimum value of the sampled data of the assigned channel
  - Scale maximum = the maximum value of the sampled data of the assigned channel

- **Saving the Settings**

  Click OK to save the settings and close the General Display Settings dialog box.
  Click Cancel to cancel the settings and close the General Display Settings dialog box.

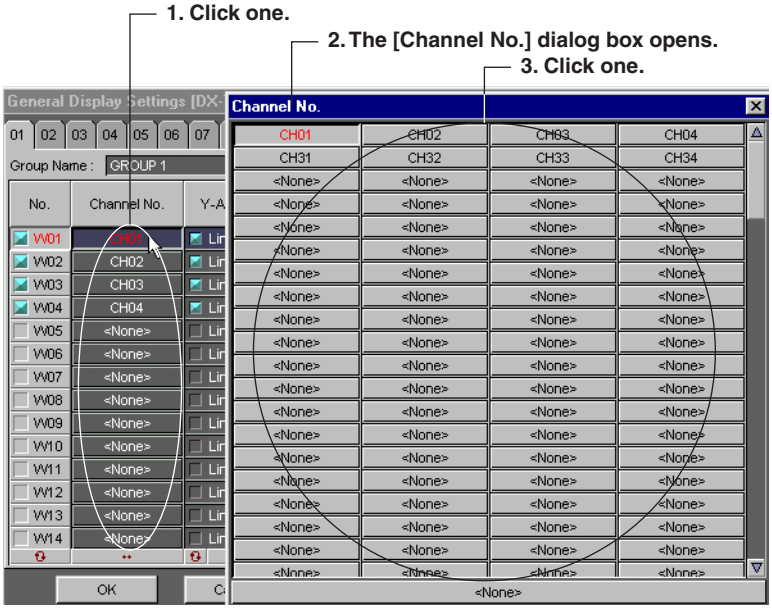
Group

A maximum of 30 groups can be set. A maximum of 32 channels can be registered in one group.

Turning ON/OFF the Display

Check the box of the waveform number to be displayed. This is synchronized to the ON/OFF button of the waveform display of the zone display area (see page 3-4).

Registering the Channel



Types of Y-axis and Turning ON/OFF the Y-axis (Scale)

Select linear or logarithmic by clicking the Y-axis display area.
Click the check box in the Y-axis column to make it blue. If [Multi-Axis Zone] (page 3-9, “Setting the Waveform Display Zone”) is selected, the Y-axis (scale) is shown.

Scale (Display Range)

Clicking the scale value display area enables entering a new value.
The range of minimum and maximum values is from -1.0×10^{-16} to 1.0×10^{16}.

Zone (Display Position)

Click the zone display area to enter values.
Specify the waveform display position by taking the bottom edge of the waveform display area of the trend display screen to be 0% and the top edge to be 100%.
The range is as follows:

- Minimum value: 0 to 99%
- Maximum value: 1 to 100%

Trip Line

Clicking the position value area enables entering a new value.
Two trip lines (trip 1 is red, trip 2 is blue) can be set for each waveform. Only the trip lines of the active waveform are displayed on the trend screen. However, on the auto zone display screen (“Setting the Y-axis” on page 3-10), the trip lines of all displayed waveforms that are checked are displayed.

Display Color

You can select the color of each waveform.

To create a new color, click [Define Custom Colors]. Use the palette that appears to create the new color.

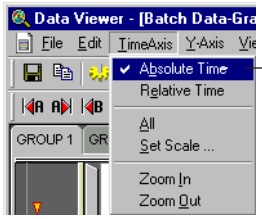
Setting the Time Axis

Selecting Absolute or Relative Time Display

You can select the time axis display.

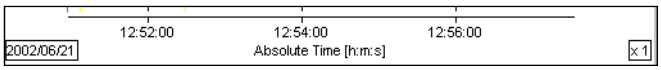
Absolute Time: Displays the time.

Relative Time: Displays the elapsed time from the first data point.

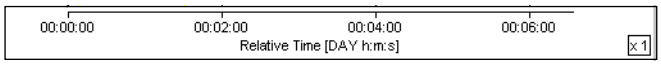


Select [Time Axis] - [Absolute Time] or [Relative Time].

Absolute time display

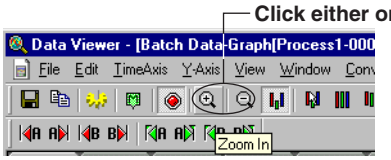


Relative time display

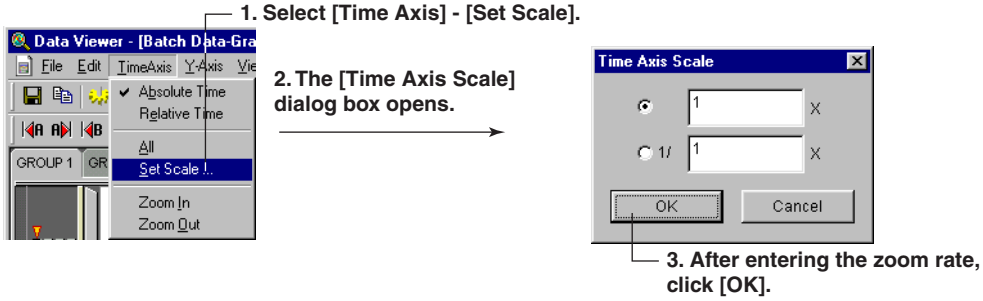


Zoom in or Zoom out on the Time Axis

The waveform is displayed by zooming in or out of the time axis.



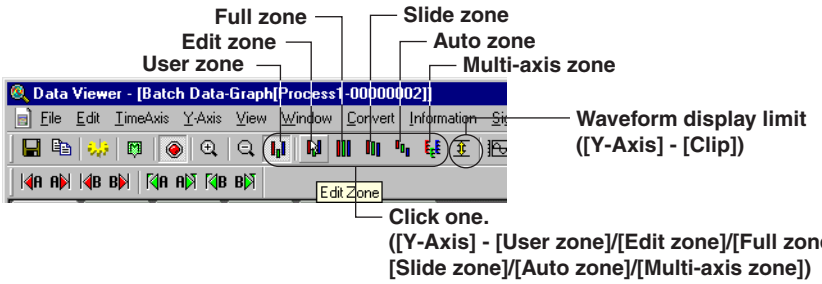
By selecting [Time Axis] - [All], the time axis is adjusted so that all the data can be displayed. If you wish to zoom in or out by specifying the zoom rate, take the following steps (resolution is 1/1000 to 20):



Setting the Waveform Display Zone

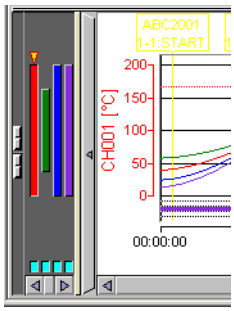
You can change the display zone of the waveform.

Selecting the Waveform Display Zone



User Zone

Each waveform is displayed in the range specified in [Zone] under the General Display Settings.

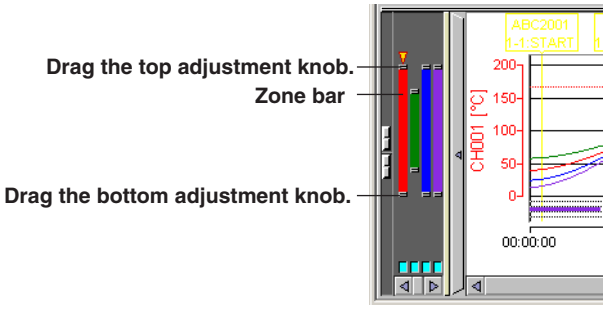


Edit Zone

You can change the zone in the zone display area of the graph screen.

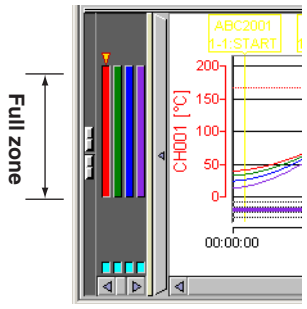
- Drag the top adjustment knob to move the top end of the zone.
- Likewise, drag the bottom adjustment knob to move the bottom end of the zone.
- The entire zone moves by dragging the zone bar.

The zones that are set in [Edit Zone] are reflected in the [Zone] setting of the General Display Settings.



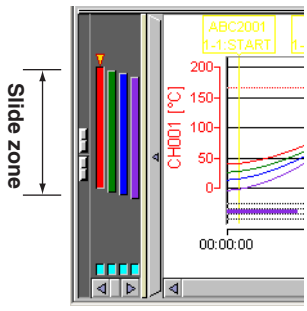
Full Zone

Assigns a full zone to all the displayed waveforms.



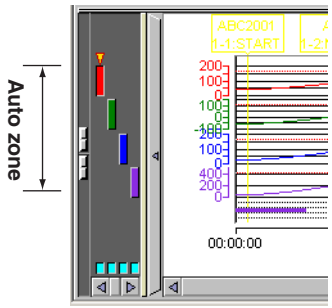
Slide Zone

The zone width of each waveform is made equal, and the start position of the display zone is offset slightly for each waveform.



Auto Zone

Displays the waveforms by equally dividing the waveform display area according to the number of displayed waveforms.



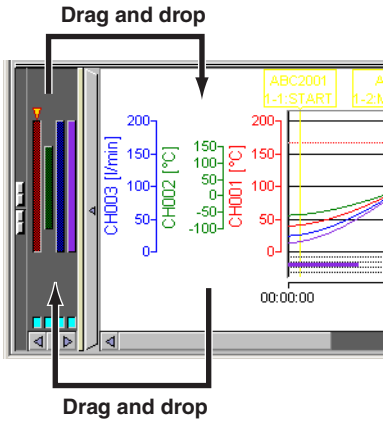
Multi-Axis Zone

Displays the waveforms and multiple Y-axis (scale) in the zone specified in the General Display Settings.

You can add/delete the Y axis by carrying out the following procedure.

When adding an Y axis: In the zone display area, drag the zone bar to be displayed in the waveform display area.

When deleting an Y axis: In the waveform display area, drag the Y axis to be deleted and drop it in the zone display area.

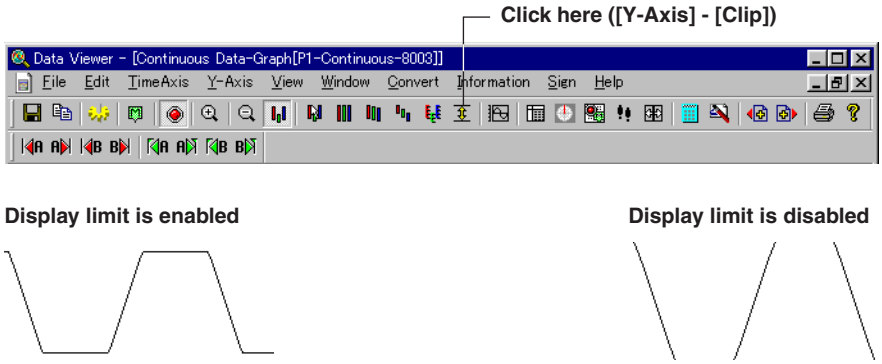


Note

If the waveform display zone is set to some setting other than multi-axis zone and auto zone, only the Y-axis of the active waveform is displayed.

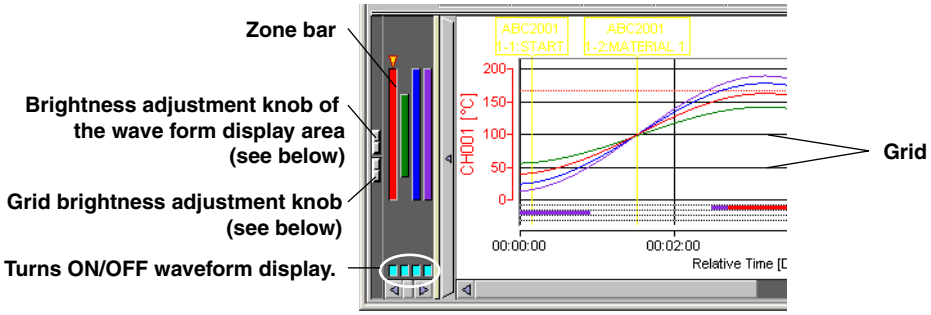
Waveform Display Limit (Clip)

When the waveform display limit is enabled, measured values that are less than the minimum value are set to the minimum value and values that are greater than the maximum value are set to the maximum value.



Turning ON/OFF the Waveform Display

To make a specific waveform stand out, you can hide other waveforms.
Click the check box below the zone bar to turn ON (blue)/OFF the waveform display.
ON/OFFs are reflected to the General Display Settings.

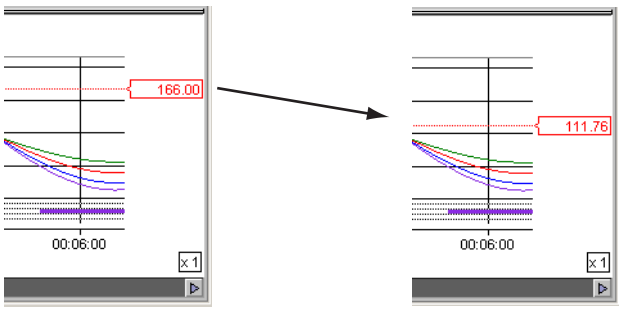


Adjusting the Brightness

You can adjust the brightness of the grid and background.
Drag the grid brightness adjustment knob to change the grid brightness.
Drag the brightness adjustment knob of the waveform display area to change the brightness.

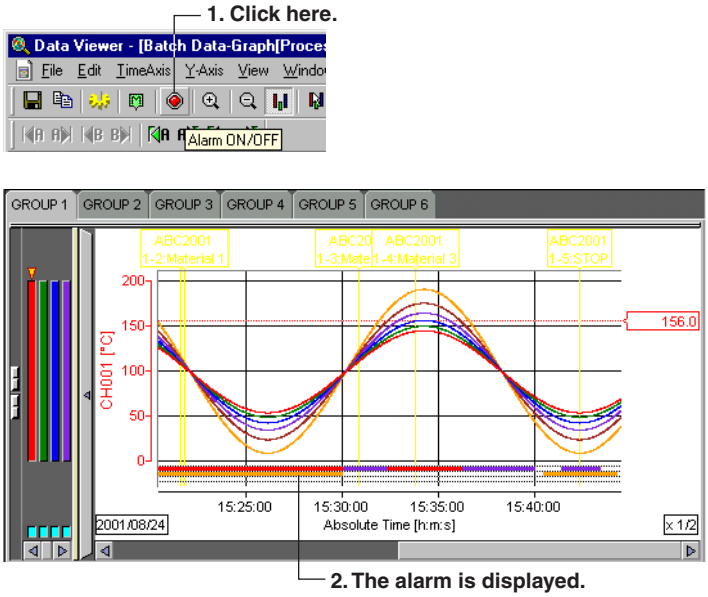
Moving the Trip Line

Drag and drop the trip line to the desired position. The trip line position is reflected to the General Display Settings.



Turning ON/OFF the Alarm Display

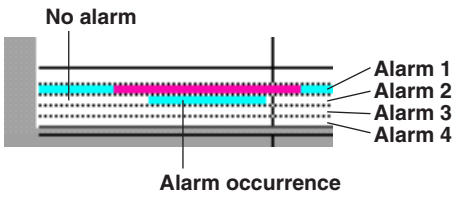
You can show or hide the alarm display.



If there is no alarm data in the loaded data file, alarms are not displayed.
Repeat the above operation to hide the alarm display.

Alarm display

The time span during which alarm is activated is displayed using the waveform display color. When multiple alarms occur simultaneously, the alarm corresponding to the active waveform (with an active mark) is displayed on top.



Selecting the Characters Used to Identify Channels

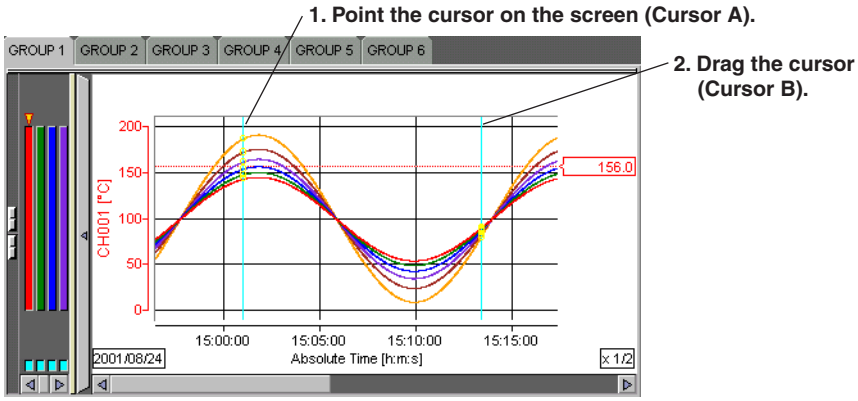
Select [View] - [Channel No.] or [Tag].
The selected character string will be used as a label to indicate the waveform name.

Note

- When the identification string is switched, the channel character string displayed on the Y-axis of the waveform display window, circular display window, numeric window, list display window, [Control] window, [Statistics] window, [General Display Setting] window, and data conversion dialog box will change accordingly.
- Both the channel No. and tag are used in the output result of the data conversion.

Showing/Hiding Cursors

Showing the Cursor



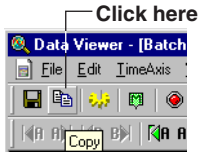
By selecting [Edit] - [Select All], Cursor A and Cursor B moves to the beginning and the end of the data, respectively.

Hiding the cursor

Select [View] - [Hide Cursor].

Copying the Data to the Clipboard

On the waveform display window and circular display window, the displayed image can be copied to the clipboard.

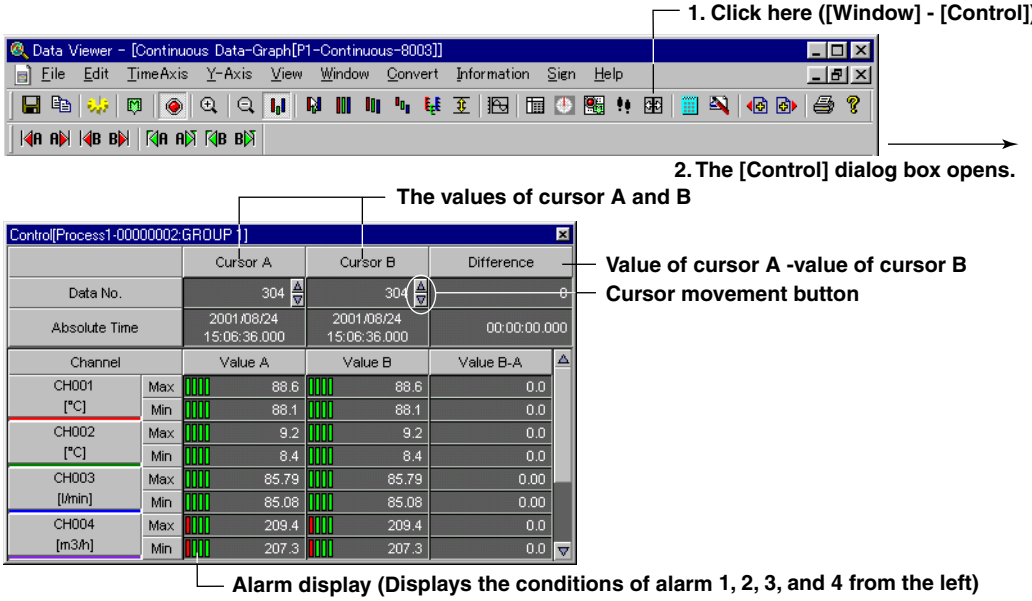


Note

- The maximum number of data points that can be copied to the clipboard is 1000.
- The channels that are copied to the clipboard are those that are registered in the selected group with the waveform display turned ON.
- When the display mode of the time axis is set to absolute time, the absolute time is output. If it is set to relative time, the relative time from the first data point is output.
- Contents that have been copied to the clipboard can be pasted to other applications for use.

Displaying Cursor's Values

A list of Cursor A and B values and their differences is displayed.



To fine adjust the cursor position, click the cursor movement buttons to the right of the data number. Click once to move the cursor by one data point.

When the alarm display is turned ON, the alarm conditions are displayed. When an alarm is in effect, the indicator is red. When it is not, the indicator is green.

Displaying Numeric Values of Abnormal Data

The abnormal data are displayed as follows:

+OVER: Measured/computed data are over the positive limit

–OVER: Measured/computed data are under the negative limit

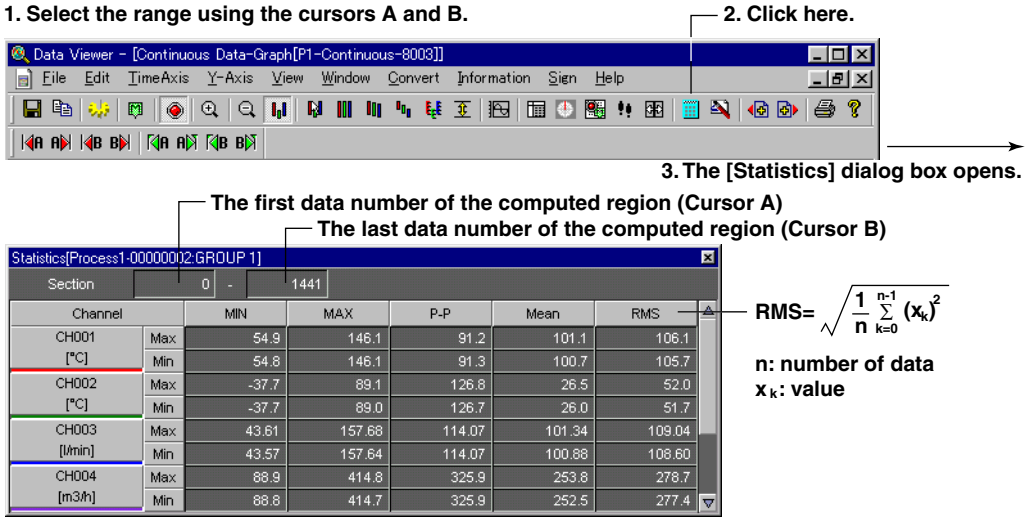
LACK: Computation error or data dropout

Note

When a cursor is not displayed, the cursor's value display area becomes blank.

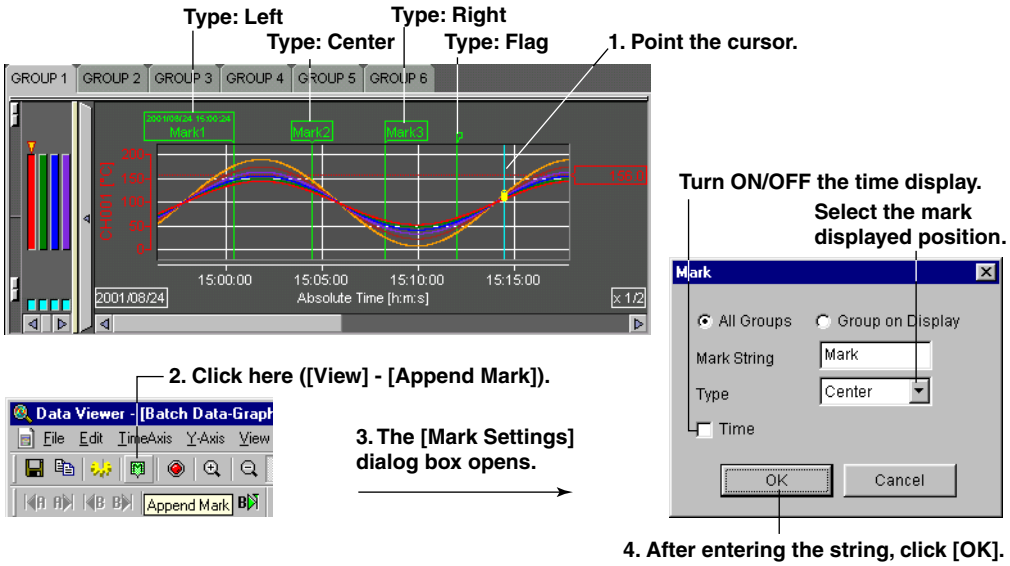
Displaying Statistics

The minimum value, maximum value, P-P, mean, and rms value for each waveform in the range specified by Cursors A and B are computed and displayed. If the cursor is not displayed, the computation is performed over the entire data.



Adding Arbitrary Marks

When Cursor A and Cursor B are at the same position, arbitrary marks can be placed.



All Groups/Group on Display

You can select whether to put the marks on all groups or only on the displayed group.

Mark String

Up to 32 characters can be used for a mark string.

Type

The mark string can be displayed on the right side, left side, or the center of the marked point. A flag mark can be used instead of the mark string (see the above figure).

Time

You can select whether the time is displayed by the mark. The displayed time is either the absolute time or relative time depending on the time axis setting.

Note

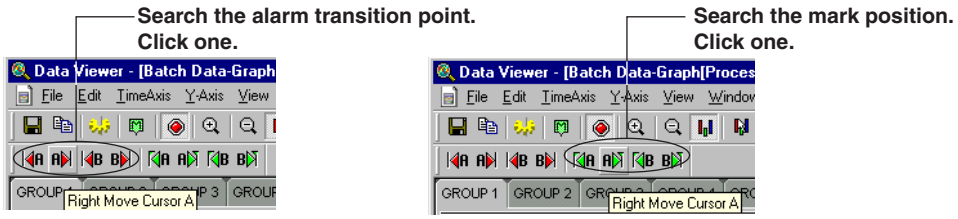
- f the continuous data is linked with previous and succeeding files, marks cannot be added.
- Marks added using the Viewer are printed in outline characters on a black background.

Editing Marks

Both messages written on the DXP and arbitrary marks added on the DAQSIGNIN are called “marks.” The arbitrary marks placed on the Data Viewer are green. The messages on the DXP are yellow.

Double-clicking a mark opens the [Mark] dialog box in which you can change the settings. When the mark is a message, however, only [Type] and [Time] can be changed.
If you click the mark while pressing the “Ctrl” key, the mark is displayed in front.
If you click the mark while pressing the “Shift” key, the mark is displayed in the back.

Searching the Alarm Transition Point and Mark Position



Searching the Alarm Transition Point

Moves Cursor A or Cursor B to the alarm transition point (the point at which the alarm occurred and the point at which the alarm was released) of the active channel.
Searching is possible to the left and right of the cursor.

Searching the Mark Position

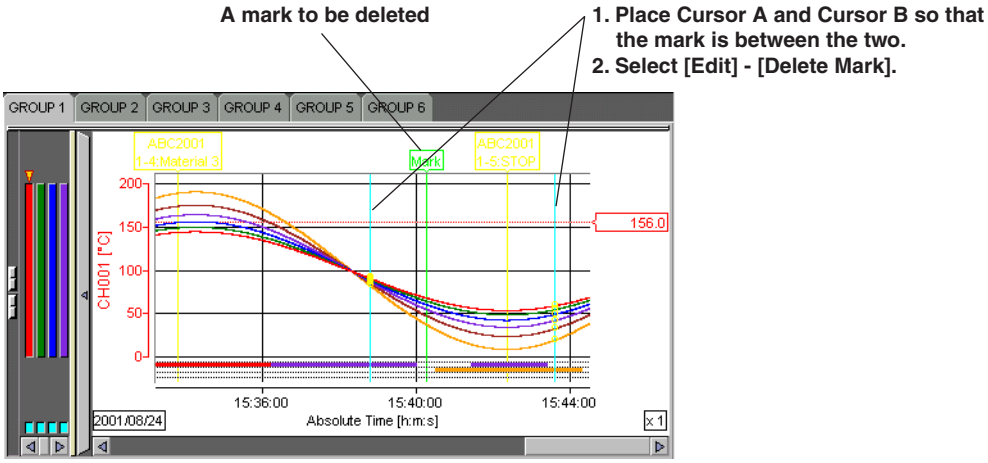
Moves Cursor A or Cursor B to the arbitrary mark position of the active channel.
Searching is possible to the left and right of the cursor.

Note

- The searching function cannot be used, if the cursor is not displayed.
- The search function cannot be used, if there are no arbitrary marks or when the alarm display is OFF.

Deleting Arbitrary Marks

The arbitrary marks (green) between Cursor A and Cursor B are deleted.



Note

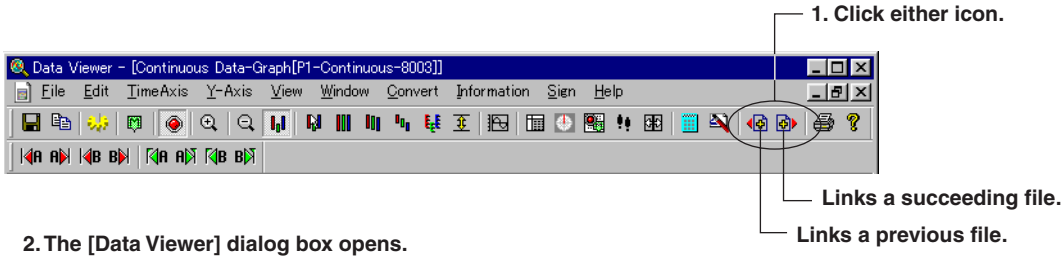
- Marks added using the DXP (messages, in yellow) cannot be deleted.
- The mark information belongs to the display settings. Marks are erased when the display settings are deleted (when the data is exported).

Resetting Marks

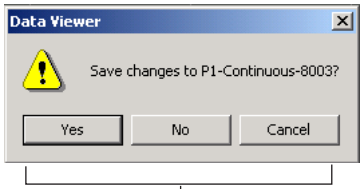
Select [Edit] - [Reset Mark].
All arbitrary marks created on the Data Viewer are erased.

Linking the Continuous Data Files

You can view the continuous data by linking the file before and after the file.

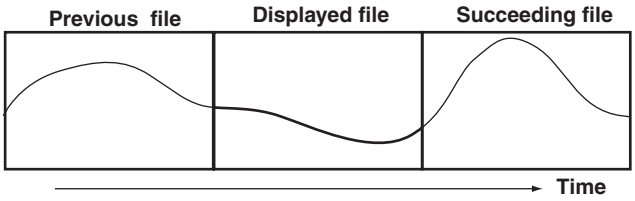


2. The [Data Viewer] dialog box opens.
(only when the display settings are changed)



3. Click here.

4. The file linked and displayed.



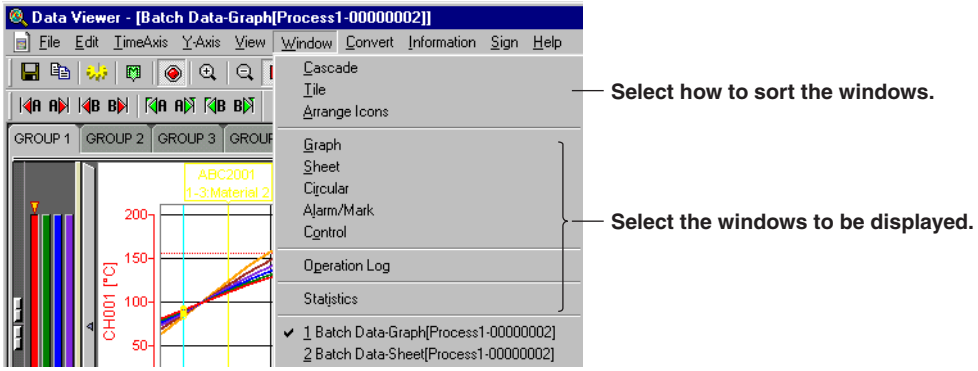
You can link more files by repeating the above procedure.

Note

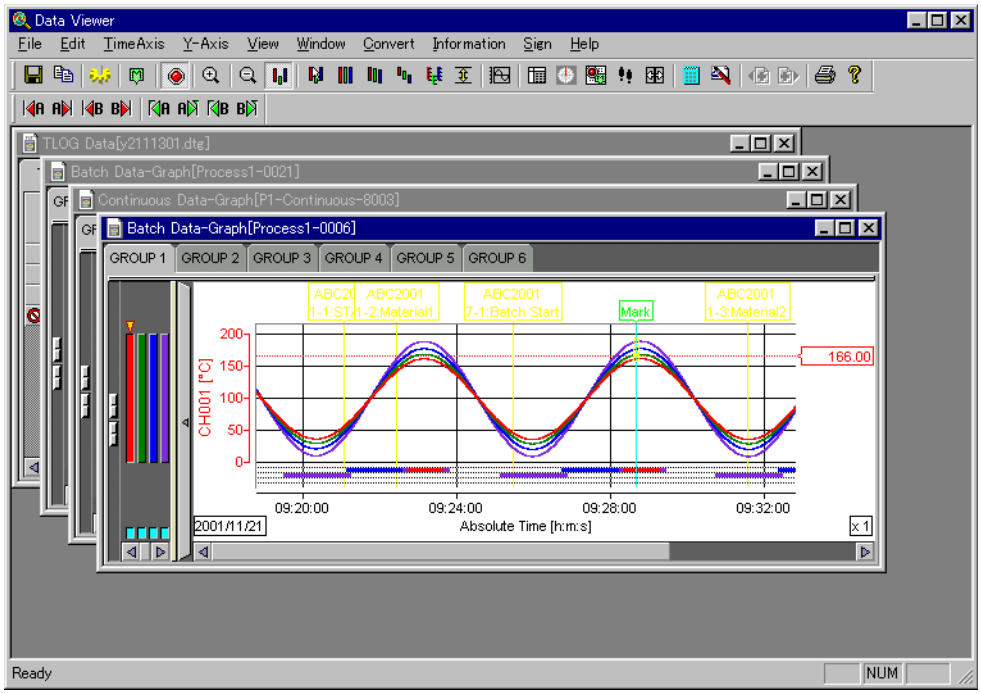
- You cannot link files further in the following cases.
  - When the time was changed on the file linked.
  - When the total number of samples exceeds 5,000,000 by linking files.
  - If a file is missing.
- You cannot do the followings when files are linked.
  - Saving the display settings
  - Adding, deleting, and resetting marks
  - Signing the data
  - Viewing the login information (see section 3.8)
  - Viewing the signature information (see section 3.2)

Setting the Window

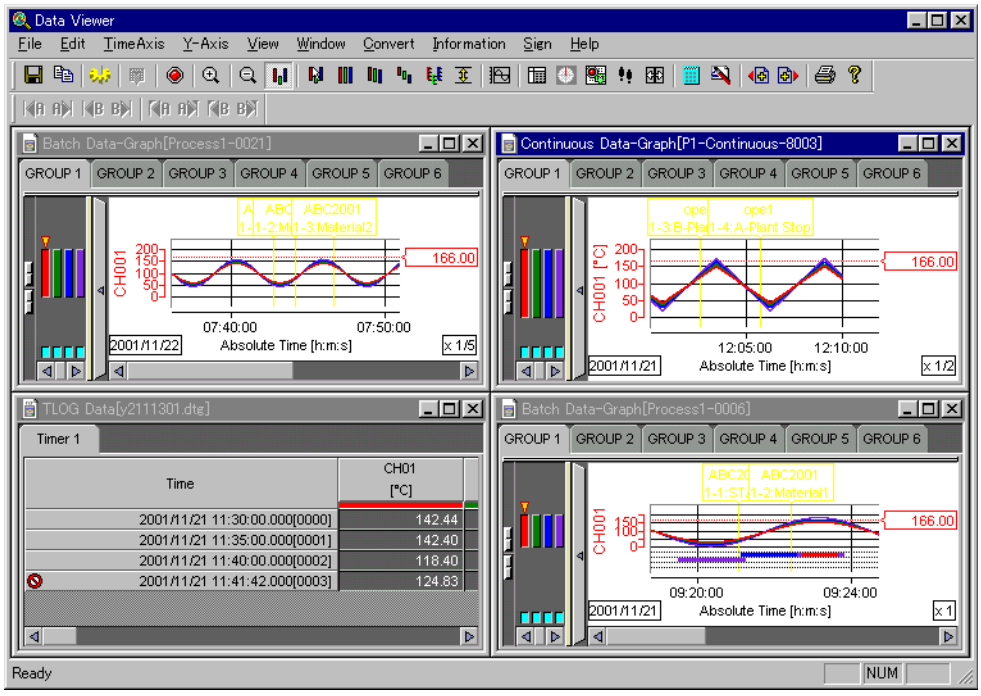
Display windows can be aligned.



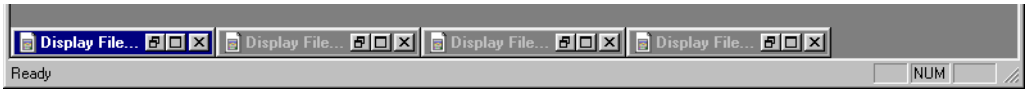
- **Example of a Cascading Display**



- **Example of a Tiled Display**

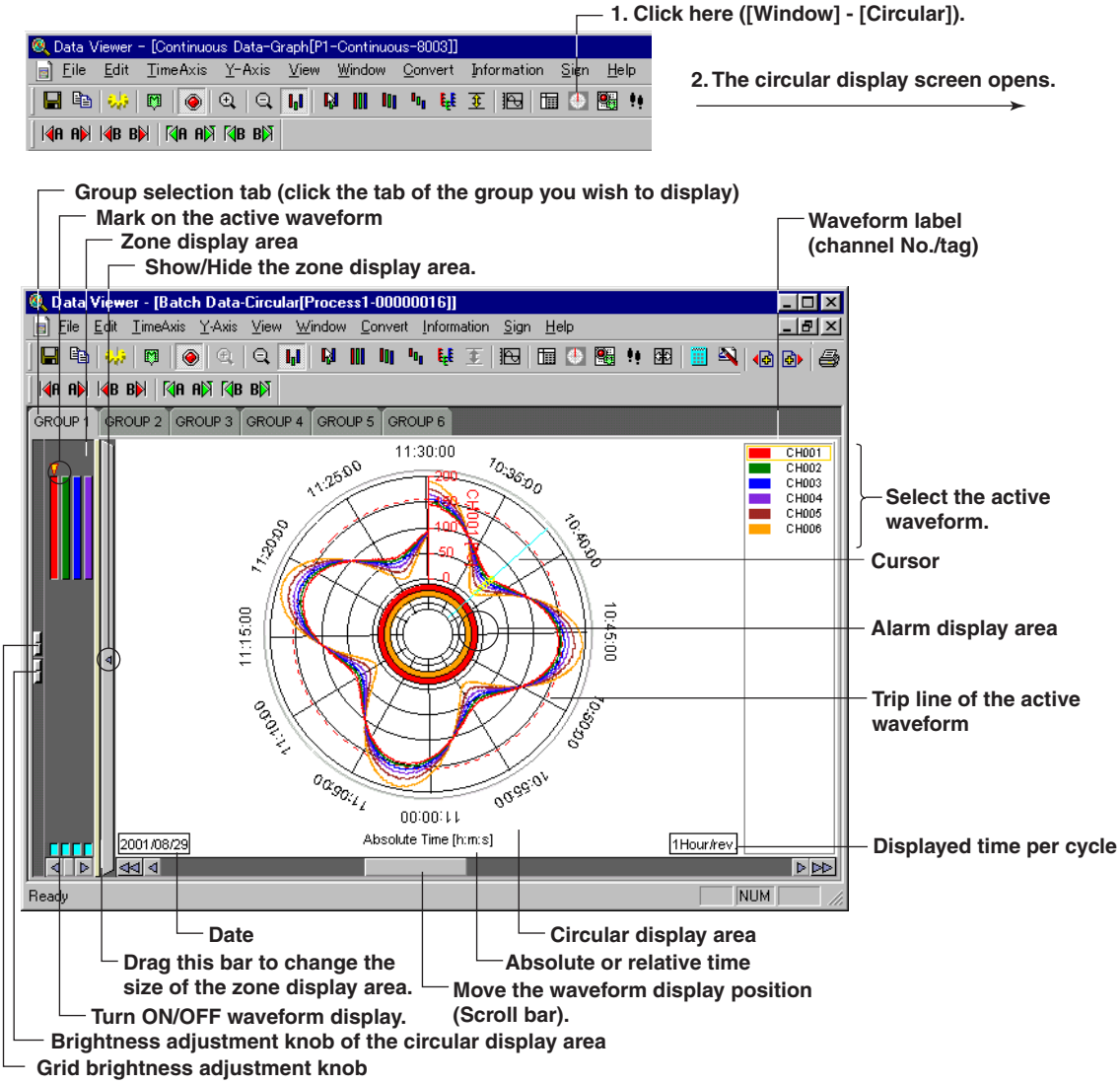


- **Example of a Arranged Icon**



3.4 Circular Display

Circular Display



Note

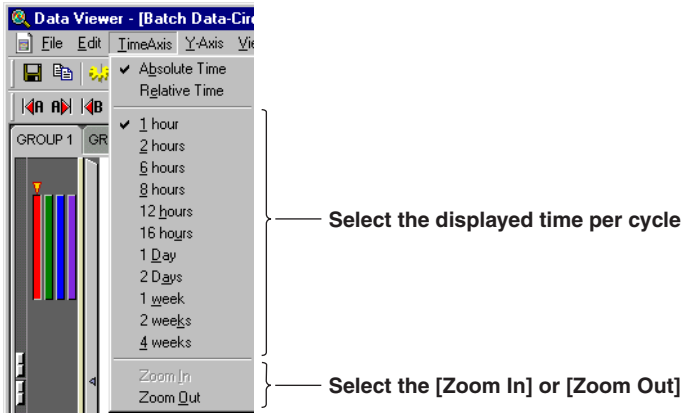
The trip lines on the circular screen cannot be dragged and dropped. You can change the position of the trip lines by changing the values in the [General Display Settings] dialog box.

Setting the Time Axis

Selecting absolute or relative time display, zooming in or zooming out on the time axis

See section 3.3, “Displaying the Waveform.” However, zooming in or zooming out by specifying the zoom rate is not applied.

Selecting the displayed time

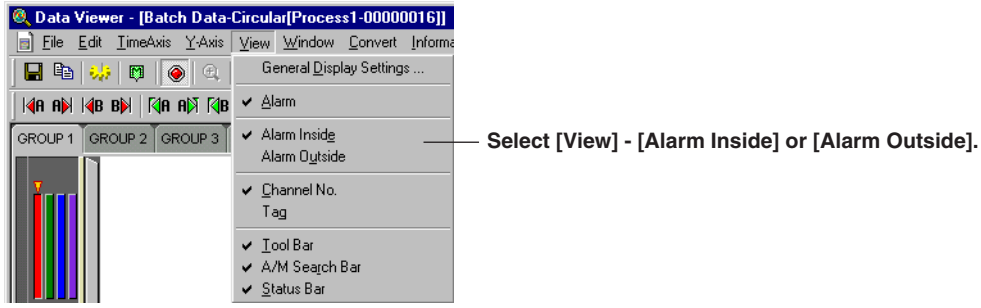


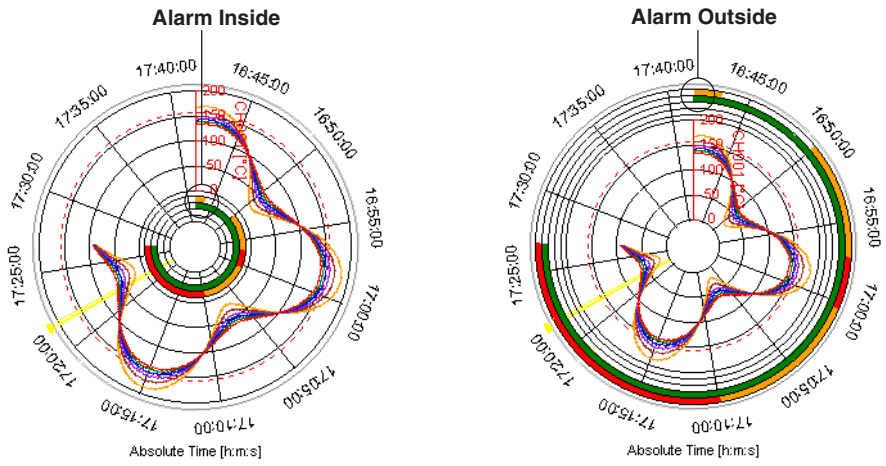
Setting the Y-axis

The circular screen always displays the waveform that is limited to the values between the maximum and minimum values of the Y-axis display range.

Turning ON/OFF the Alarm Display

You can select whether to display the alarm on the inside or the outside of the waveform display section of the circular screen.



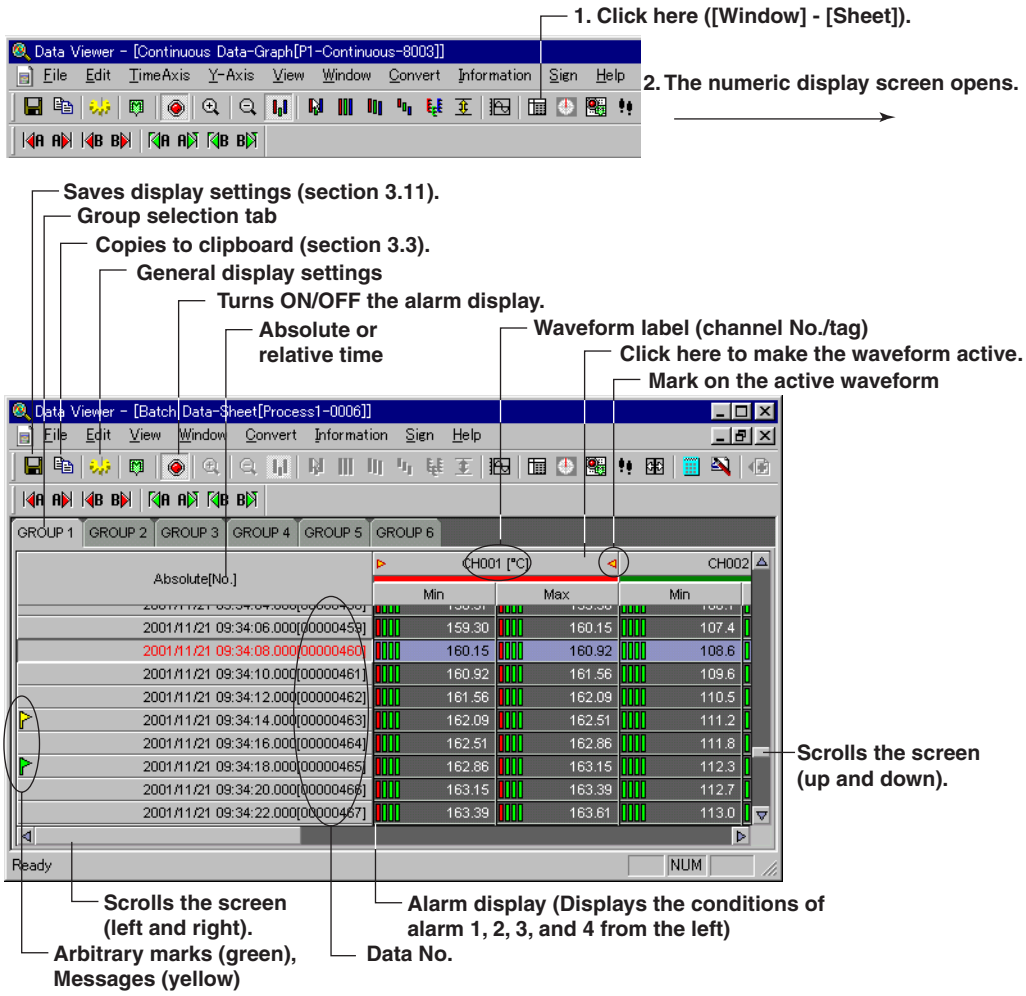


Copying the Data to the Clipboard

On the circular display window, the displayed image can be copied to the clipboard. For the operating procedure, see section 3.3.

3.5 Displaying Numeric Values

Displaying Numeric Values



General Display Settings of the Numeric Display

Clicking the General Display Settings icon or selecting [View] -[General Display Settings] opens the [General Display Settings] dialog box. Of the parameters in the [General Display Settings] dialog box, those that relate to the numeric display are as follows:

- Turn ON/OFF numeric value display
- Registering the channel

For details related to the setting procedures, see “General Display Settings” in section 3.3, “Displaying the Waveform.”

Setting the Time Axis

1. Select [View] - [Absolute Time] or [Relative Time].
2. Select the time display format using [Format].

Display type	Date format	Time format	Data No.
Absolute	YYYY/MM/DD YYYY/MM none	HH:MM:SS:SSS HH:MM:SS HH:MM	Show or hide
Relative	Days none	HH:MM:SS:SSS HH:MM:SS HH:MM	Show or hide

YYYY (year)/MM (month)/DD (date), HH (hour):MM (minute):SS (second):SSS (milisecond)

Turning ON/OFF the Alarm Display

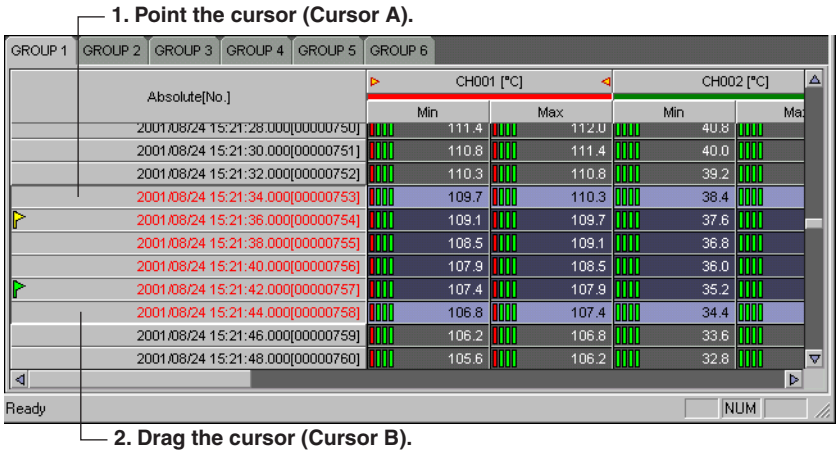
The alarm conditions are displayed on the screen by clicking the alarm display icon or selecting [View] - [Alarm]. When an alarm is in effect, the indicator is red. When it is not, the indicator is green.

Selecting the Characters Used to Identify Channels

For details, see "Selecting the Characters Used to Identify Channels" in section 3.3, "Displaying the Waveform."

Showing/Hiding Cursors

Showing the Cursor



By selecting [Edit] - [Select All], Cursor A and Cursor B moves to the beginning and the end of the data, respectively.

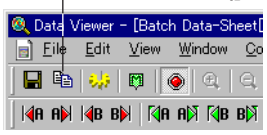
Hiding the Cursor

Select [View] - [Hide Cursor].

Copying the Data to the Clipboard

On the numerical window and list display window (sections 3.6 and 3.7), you can copy the data between Cursor A and Cursor B to the Windows clipboard.

1. Select the copy range using cursors A and B.
2. Click here ([Edit] - [Copy]).



Note

- The maximum number of data points that can be copied to the clipboard is 1000.
- The channels that are copied to the clipboard are those that are registered in the selected group with the waveform display turned ON.
- When the display mode of the time axis is set to absolute time, the absolute time is output. If it is set to relative time, the relative time from the first data point is output.
- Contents that have been copied to the clipboard can be pasted to other applications for use.

Showing the Cursor Value/Displaying Statistics

For details, see "Displaying Cursor's values" and "Displaying Statistics" in section 3.3, "Displaying the Waveform."

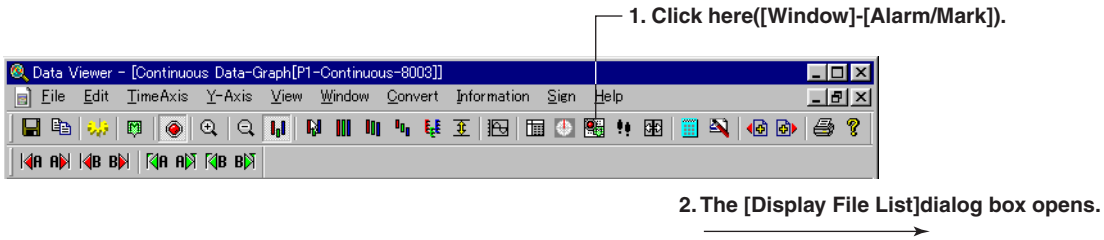
Adding Arbitrary Marks, Deleting Arbitrary Marks, and Resetting Marks

For details, see "Adding Arbitrary Marks," "Deleting Marks," and "Resetting Marks" in section 3.3, "Displaying the Waveform."

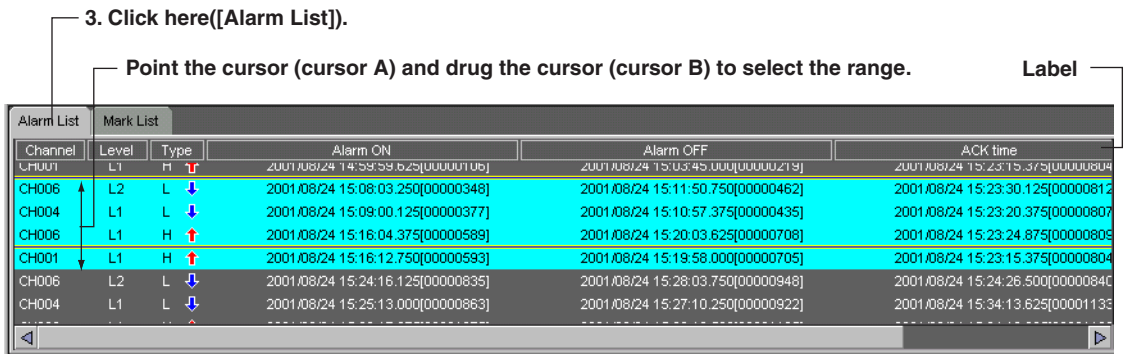
3.6 Listing and Converting Alarms and Marks

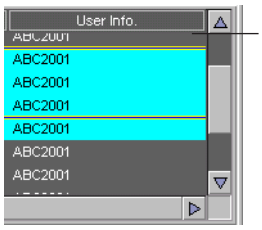
Listing Alarms and Marks

Alarms and Marks are listed with the batch data file opened.



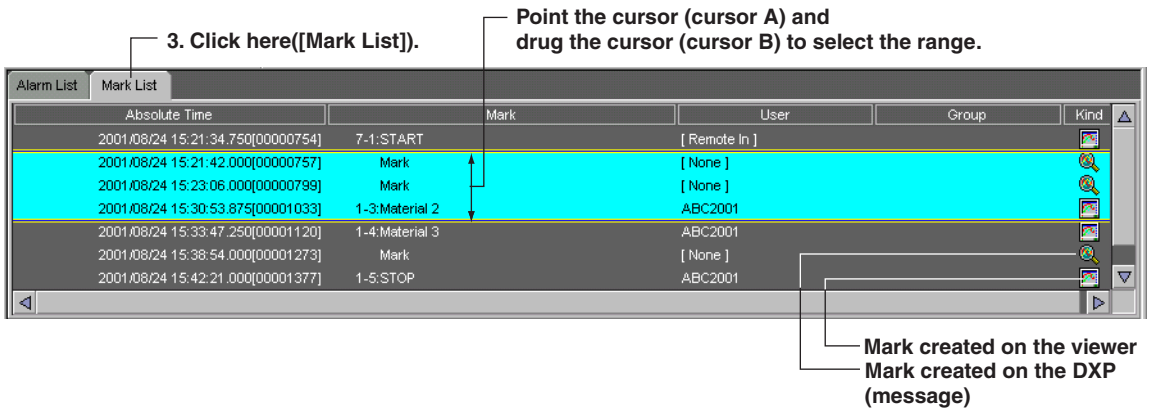
Listing Alarms





- **Sorting**
  Click a label on the alarm list to sort by the selected item. First click sorts the data in ascending order; second click in descending order.

Listing Marks



Showing/Hiding Cursors

Showing the Cursor

Cursors A and B are displayed by pointing to an alarm or marker or by carrying out the same mouse operation as a drag & drop operation on each screen.

Note

The alarm or mark cursors are linked to the cursors on the waveform display, circular display, numerical display, and cursor value display.

Hiding the Cursor

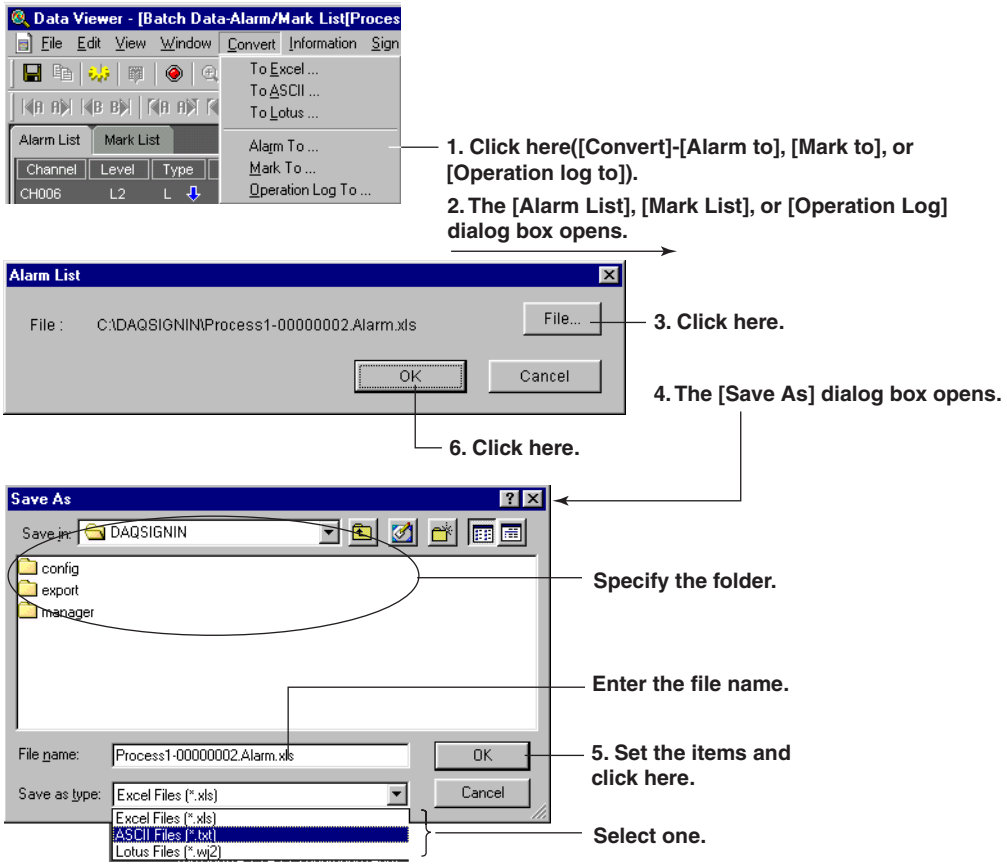
Select [View] - [Hide Cursor].

Copying to the Clipboard

For the operating procedure, see page 3-23.

Converting the Alarm List, Mark List, and Operation Log List

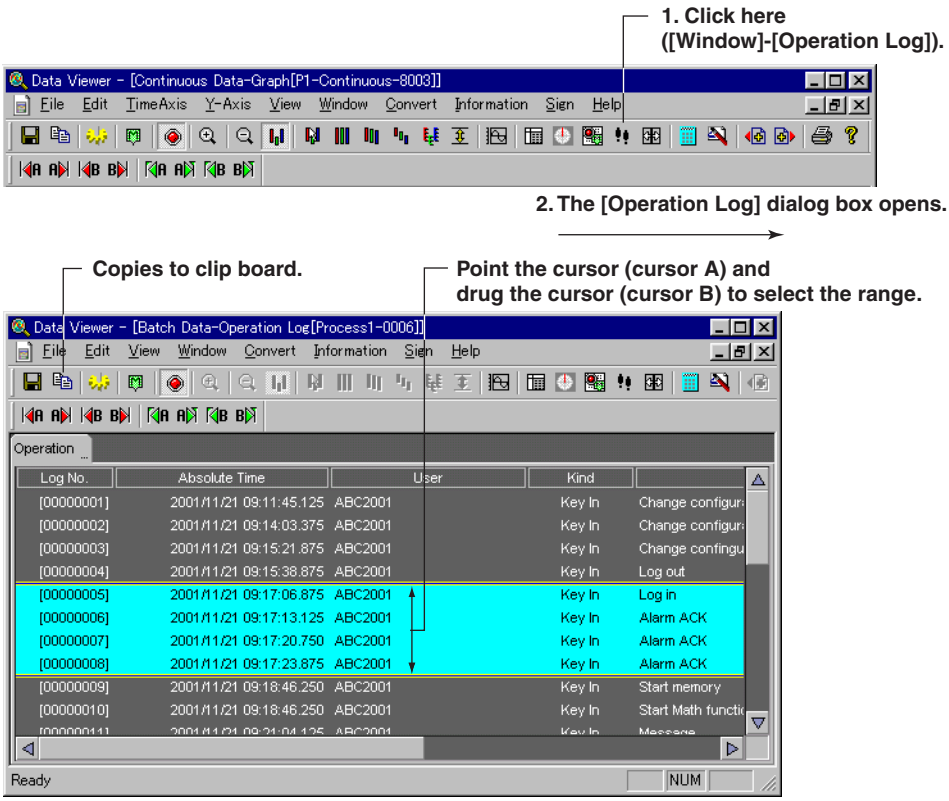
The Alarm List, Mark List, and Operation Logs can be converted to ASCII, Lotus, and Excel formats.



3.7 Listing and Converting Operation Logs

Listing the Operation Log

The operation log is listed with the batch data file opened.



Sorting

Click a label to sort by the selected item. First click sorts the data in ascending order; second click in descending order.

Copying to the Clipboard

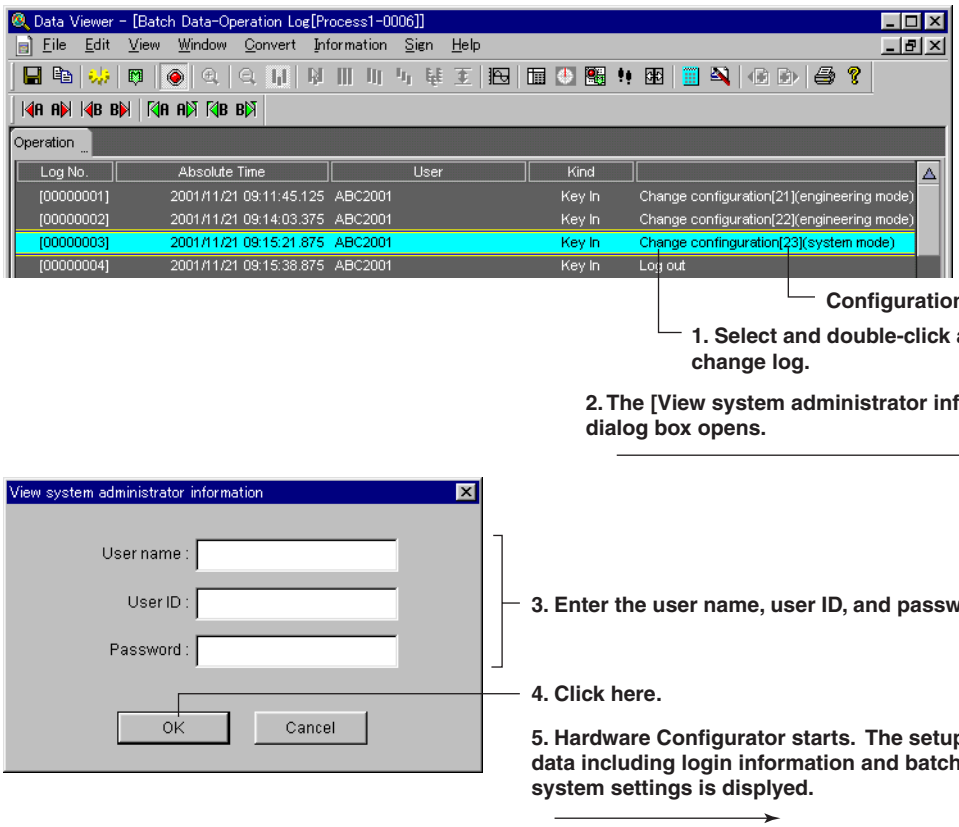
For the operating procedure, see page 3-23.

Note

The pointer indicating the selected range of operation log is not linked to cursors on other screens.

Displaying the setup data when the settings were changed

You can select the setting change operation on the operation log and display the setup data including the login information and batch system settings. To do so, the relevant setup data (setup data with the “configuration serial number” displayed on the operation log) must be imported.



If you cancel the operation of entering the user name, user ID, and password in the above procedure, setup data excluding the login information and batch system settings is displayed.

Note

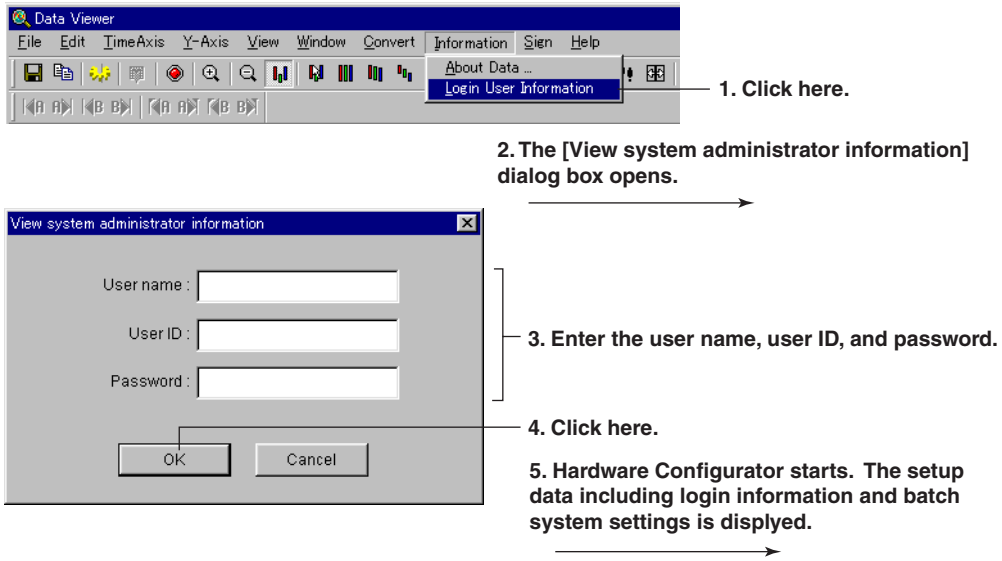
- If any of the files making up the batch data is missing, the [View system administrator information] dialog box does not appear. The setup data excluding login information and batch system settings is displayed.
  To confirm the missing files, see section 3.2.
- As the setup data created on the DX200P style 1 dose not have the login information, the setup data excluding login information and batch system settings is displayed.
- If you repeat the operation of entering a wrong password and clicking [OK] three consecutive times, the user name cannot be used to display the login information and batch system settings of the data or sign the data. “User Locked” is recorded in the operation log.

Converting the Operation Log List

Converts the operation log list to Excel, ASCII, or Lotus format. For the procedure, see “Converting the Alarm List, Mark List, and Operation Log List” in section 3.6.

3.8 Displaying the Setup Data When the Data Was Acquired

You can display the setup data including the information and batch system settings in the batch data/continuous data.



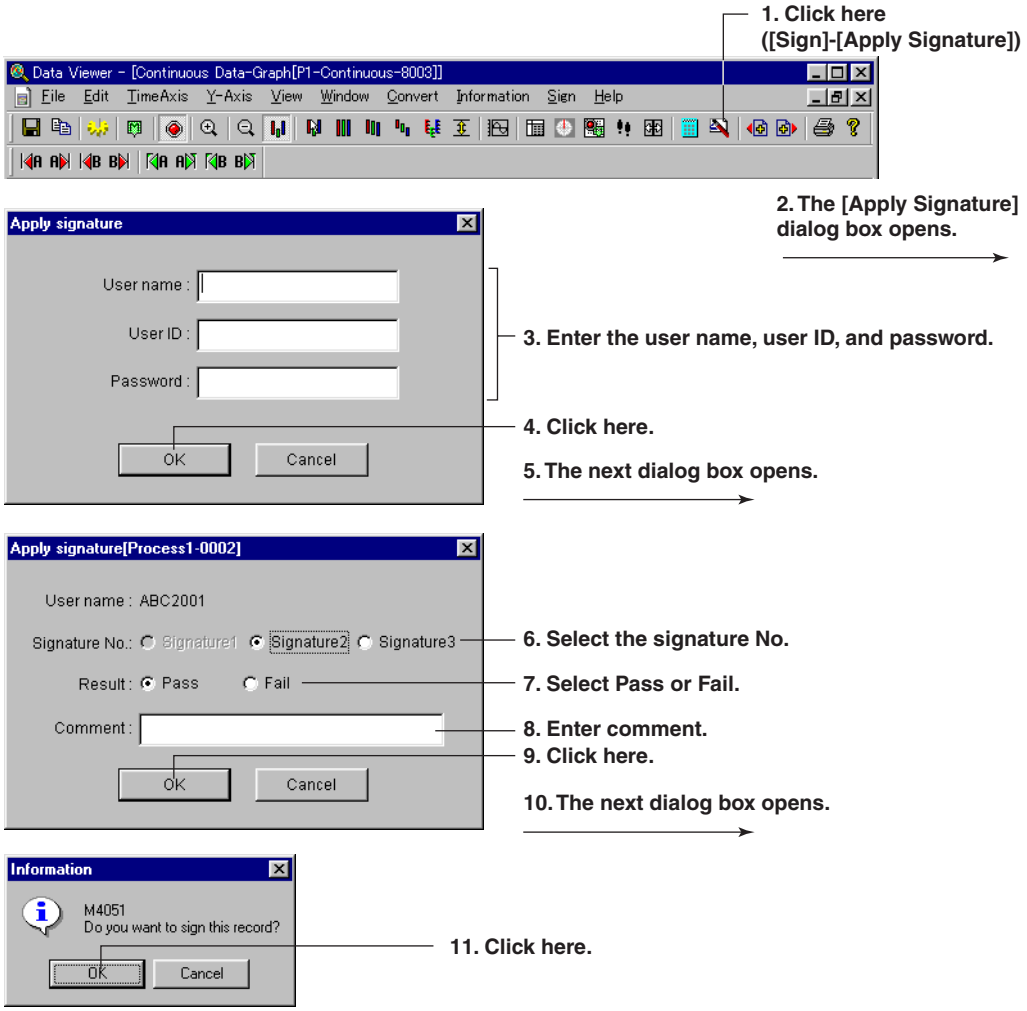
If you cancel the operation of entering the user name, user ID, and password in the above procedure, setup data excluding the login information and batch system settings is displayed.

Note

- If any of the files making up the batch data is missing, the [View system administrator information] dialog box does not appear. The setup data excluding login information and batch system settings is displayed.
- As the setup data created on the DX200P style 1 dose not have the login information, the setup data excluding login information and batch system settings is displayed.
- If you repeat the operation of entering a wrong password and clicking [OK] three consecutive times, the user name cannot be used to display the login information and batch system settings of the data or sign the data. “User Locked” is recorded in the operation log.

3.9 Applying Electronic Signature To Batch Data/ Continuous Data

Applying Electronic Signature



Note

- You cannot sign the data in the following cases.
  - Sign 1 to 3 have already been signed.
  - Files that make up the batch data is missing.
  - Continuous data is being displayed with the files linked.
  - File is corrupt.
- If you repeat the operation of entering a wrong password and clicking [OK] three consecutive times, the user name cannot be used to display the login information and batch system settings of the data or sign the data. "User Locked" is recorded in the operation log.
- If the number of samples in the batch data exceeds 5,000,000, the Viewer shows the data in blocks of 5,000,000 samples or less. You cannot sign the batch data unless all the blocks are displayed and confirmed (see "Note" on page 2-7).

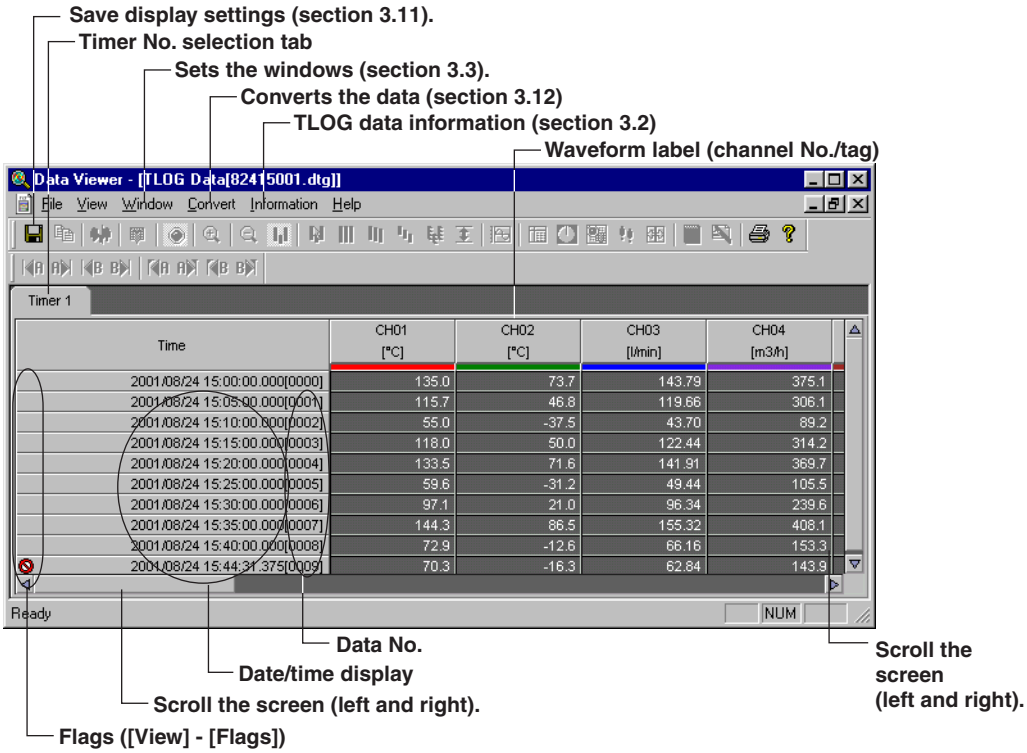
Confirming the Signature Information

You can display and confirm the signature information by selecting [Information] - [About Batch Data] - [Signature Information]. For details, see section 3.2, “Confirming the Data Information.”

3.10 Displaying the TLOG Data

Displaying the TLOG Data

To open the TLOG data, double-click the data on the Manager. For the procedure, see section 2.4.



Turning ON/OFF Flags

When [View] - [Flags] is checked, the following status information is displayed:

: Stopped TLOG data saving.

: The DXP time and date was changed during TLOG data saving.

: Power failure occurred during TLOG computation.

Date/Time Display

Select [View] - [Date Format] or [Time Format] to select the display format. If [None] is selected, the date or time will not be displayed.

Date format: YYYY (year)/MM (month)/DD (date), MM/DD, None

Time format: HH (hour):MM (minute):SS (second):SSS (milisecond), HH:MM:SS, HH:MM, None

Data No.

When [View] - [Data No.] is checked, the data number is displayed. The data number of the first data is “0000.”

Selecting the Characters Used to Identify Channels

Select [View] - [Channel No.] or [Tag].

The selected character string will be used as a label to indicate the channel.

For details, see “Selecting the Characters Used to Identify Channels” in section 3.3, “Displaying the Waveform.”

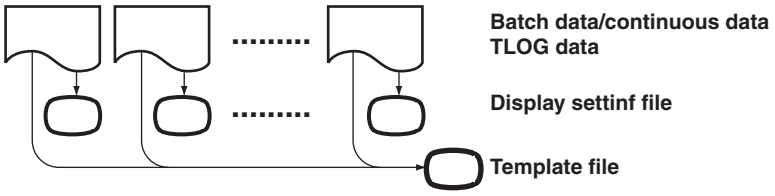
3.11 Displaying Data Using Display Setting Files and Template Files

Batch data/continuous data and TLOG data can be displayed in a preset format.

Display Setting File and Template File

A display setting file can be created for each data set. It contains display and print item information.

A template file can be created for each DXP. It contains display and print item information. The data created on a particular DXP can be displayed and printed using the same settings.



Below are the contents of the display setting file and template file.

For batch data/continuous data

- ON/OFF condition of the alarm display
- Cursor A and Cursor B positions*
- The brightness of the waveform display area and grid
- The color overview display
- The zone display area
- Time axis mode (absolute/relative)
- Zoom rate of the time axis/time axis of the circular display
- The active waveform
- Clipping of the waveform
- Waveform display zone
- The channel identification string mode (channel/tag)
- Print condition (color)
- Print header (ON/OFF condition of file information items (see section 3.2))
- Print comment
- Arbitrary mark information*
- Active displayed group
- General display settings
- Size and position of the displayed screen

* Display setting file only

For TLOG Data Display

- Print header (ON/OFF condition of TLOG file information items (see section 3.2))
- Print comment
- The channel identification string mode (channel/tag)
- Timer No.
- Display format of date and time

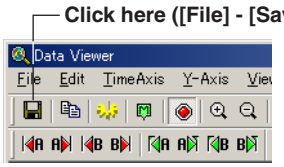
Note

A display setting file and a template file cannot be used simultaneously.

Displaying Data Using Display Setting Files

Saving Display Setting Files

This operation is for creating or updating the display setting file for the active data.

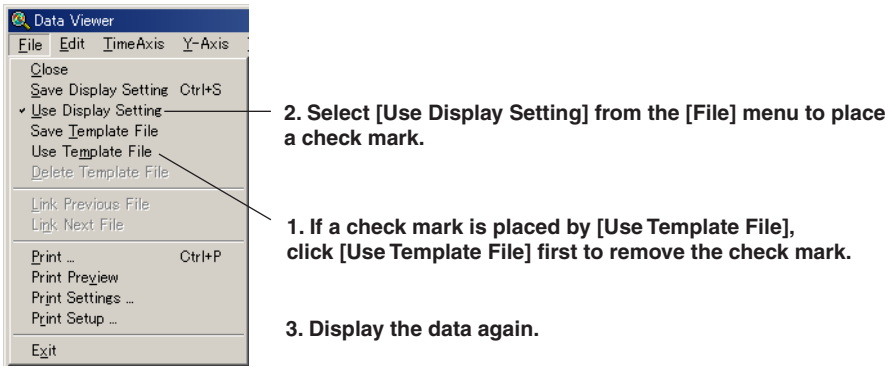


Note

- The display settings is automatically deleted when the number of files that make up the batch data is changed. It is recommended that the display settings be saved when all the files for the batch data are present.
- You cannot save the display conditions, if the continuous data is being displayed by linking the previous and succeeding files (icon and menu cannot be selected).
- If you export the data, the display condition is deleted.

Displaying Data Using Display Setting Files

If you place a check mark by [Use Display Setting], the data is displayed using the display setting file.



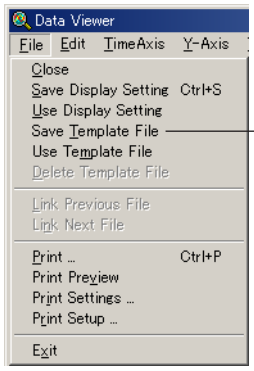
Note

- If a check mark is not placed by [Use Display Setting] or [Use Template File] (see the next page), the data is displayed using the initial settings of the data.
- If you open a data file for which a display setting file or a template file (see the next page) has not be created yet, the data is displayed using the initial settings.

Displaying Data Using Template Files

Saving Template Files

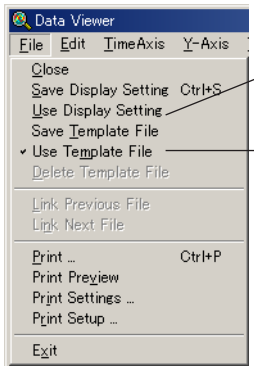
This operation is for creating or updating the template file of the DXP that acquired the active data.



Select [File] - [Save Template File].

Displaying Data Using Template Files

If you place a check mark by [Use Template File], the data is displayed using the template file.



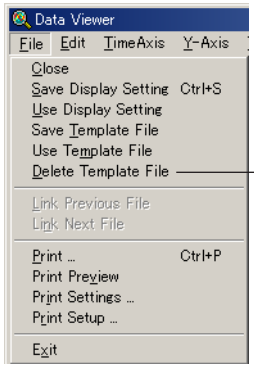
1. If a check mark is placed by [Use Display Setting], click [Use Display Setting] first to remove the check mark.

2. Select [Use Template File] from the [File] menu to place a check mark.

3. Display the data again.

Deleting Template Files

This operation is for deleting template files. The data that is currently displayed using a template file does not change even if you delete the template file.

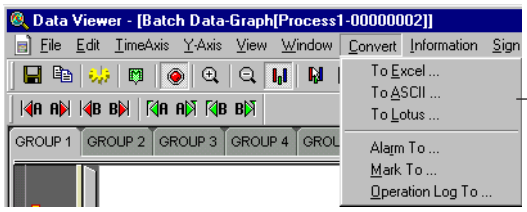


2. Select [File] - [Delete Template File].

3.12 Converting the Data

Converting the Batch Data and TLOG Data

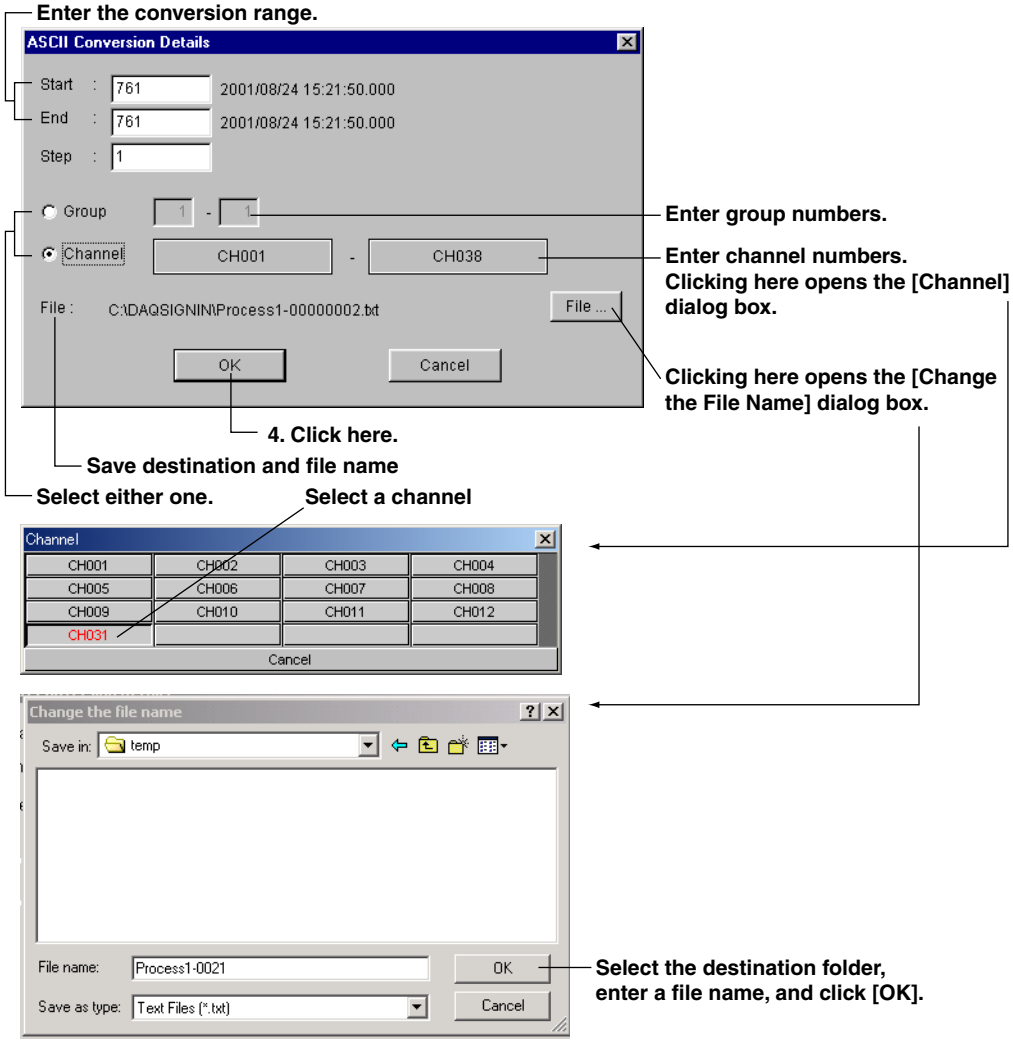
The batch data or TLOG data can be converted to ASCII, Lotus, and Excel formats.



1. Select one.
2. The [Conversion Details] dialog box opens.

When waveform display or numeric display is open

3. Set the items.



- **Start Point and End Point**

  Cursor A and Cursor B are used to set the start point and end point of the range, respectively. If Cursor A and Cursor B are not specified or the cursors were erased, the data numbers of the start and end points are automatically set to [0] and [total number of data points - 1], respectively. The data number counts 0, 1, 2, ... from the first data.

- **Step**
  To convert all the data in the specified range, set the step number to “1.” To convert the every other data in the specified range, set the step number to “2.”

- **Group/Channel**
  If you select [Group], enter the range of groups to be converted.
  If you select [Channel], enter the range of channels to be converted.

Note

The default group is set to the number of the group that is currently being displayed. The default channel is set to all channels.

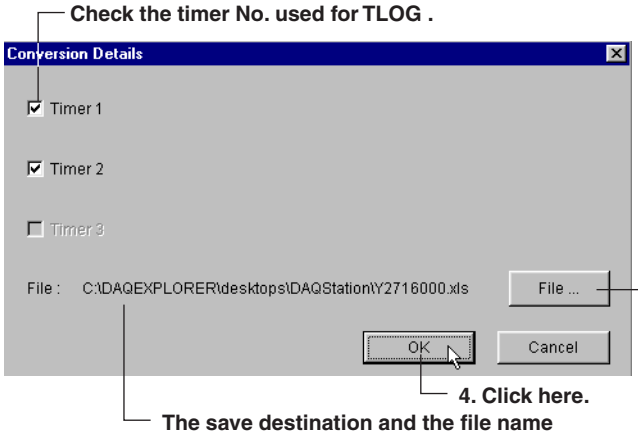
- **Changing the Save Destination**
  You can specify the destination folder or the name of the file.

Note

- The name of the destination file is automatically set to the displayed data name followed by the extension that identifies the data format. For ASCII, Lotus, and Excel conversions, the file extensions [txt], [wrk] (can be loaded using version 2.0 or later, and [xls] (can be loaded by version 4.0 or later) are attached, respectively.
- There is a limit in the number of data points that Lotus 1-2-3 and Excel can handle. For these programs, specify the number of data points to be converted before performing the conversion. Note that even if the number of data points to be converted is within the limits, it still may not be possible to load the data if there is not enough free memory available on the PC.
- Do not specify a floppy disk or an external storage medium as the save destination as it will take a long time for the save operation.
- Do not specify the root directory as the save destination.
- Prepare enough free space on the destination disk.

When displaying the TLOG Data File

3. Set the items.



- **Timer1, Timer2, Timer3**
  Select the timer used to log the data.

Conversion Example

ASCII Conversion File

```
"DAQSIGNIN","R3.01"
"Data Viewer","R3.01"
"yokogawa","yokogawa","XXX-XXXXX"
"Device Type","DX100P","Process Type","Batch"
"Serial No.","12A338669"
"File Message","P1process/SAMPLE"
"Time Correction","None"
"Starting Condition","Manual"
"Dividing Condition","Manual"
"Meas Ch.",       12
"Math Ch.",        1
"Data Count",      855
"Sampling Interval",    1.000,"Second"
"Start Time","2002/06/21","12:50:58",    0.000
```

```
None
"Signature2 Comment","None"
"Signature3","Not signed"
"None"
"None"
"Signature3 Comment","None"
"Cal Corrected Ch.","None"
"Converted Group",        1,"-",        1
"Ch.","CH001","CH002","CH003","CH004"
"Tag","TI-001","TI-002","FI-001","FI-002"
"Days","Time","Second","-C","-C","l/min","m3/h"
"000","00:00:00",    0.000,    39.38,    -59.2,    24.23,     33.5
"000","00:00:01",    0.000,    39.49,    -59.0,    24.38,     33.9
```

Excel Conversion File

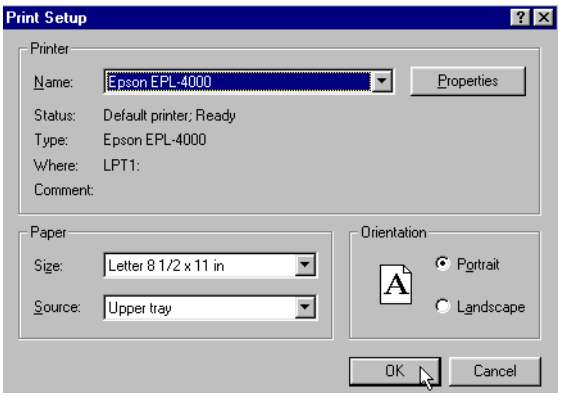
	A	B	C	D	E	F	G	H
1	DAQSIGNIN		R3.01					
2	Data Viewer		R3.01					
3	yokogawa		yokogawa		XXX-XXXXX			
4								
5	Device Type		DX100P		Process Type		Batch	
6	Serial No.		12A338669					
7	File Message		P1process/SAMPLE					
8	Time Correction		None					
9	Starting Condition		Manual					
10	Dividing Condition		Manual					
11	Meas Ch.		12					
12	Math Ch.		1					
13	Data Count		855					
14	Sampling Interval		1.000	Second				
15	Start Time		2002/06/21	2:50:58	0.000			

44	Signature3		Not signed					
45			None					
46			None					
47	Signature3 Comment		None					
48								
49	Cal Corrected Ch.		None					
50	Converted Group		1	-	1			
51								
52			Ch.	CH001	CH002	CH003	CH004	
53			Tag	TI-001	TI-002	FI-001	FI-002	
54	Days	Time	Second	-C	-C	l/min	m3/h	
55	000	00:00:00	0.000	39.38	-59.2	24.23	33.5	
56	000	00:00:01	0.000	39.49	-59.0	24.38	33.9	

3.13 Printing

Setting the Printer

1. Select [File] - [Print Setup].
   [Print Setup] dialog box opens.



2. Set the printer, paper and orientation.

Note

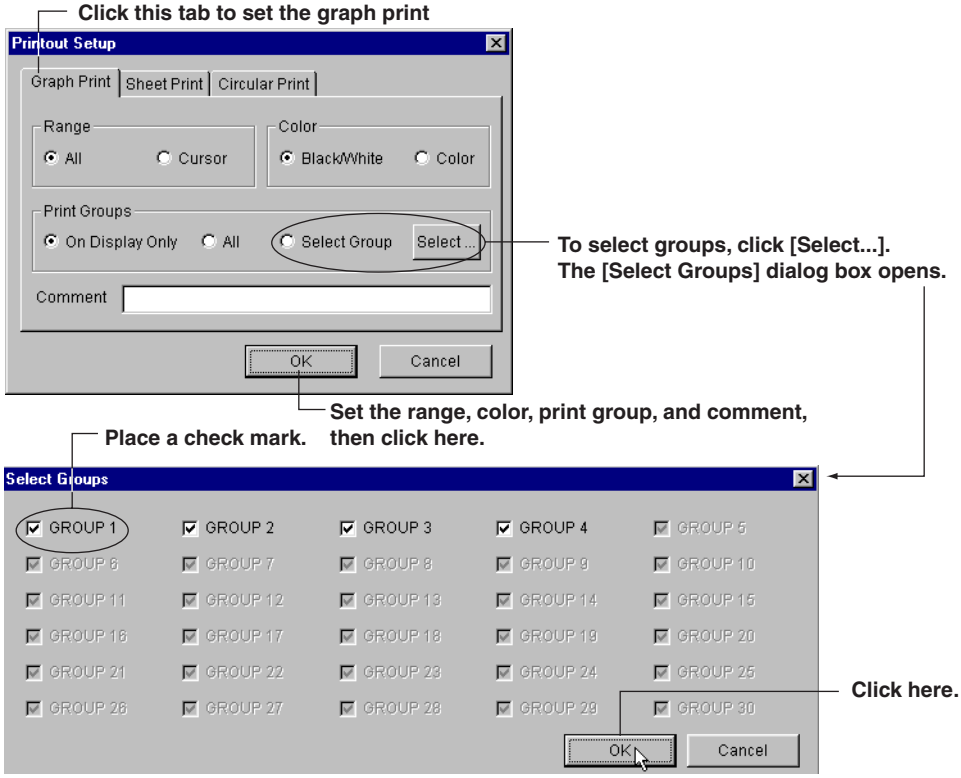
Set the printer according to the configuration of the system that you are using.

Specifying the Contents to be Printed (for Batch Data/Continuous Data)

Specify the contents to be printed before executing the print.

1. Select [File] - [Print Settings].
   The [Printout Setup] dialog box opens.
2. Set each item.

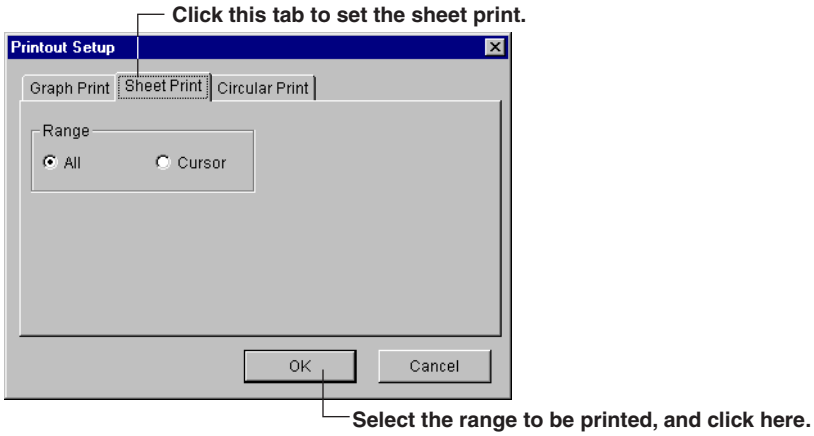
Setting Graph Print



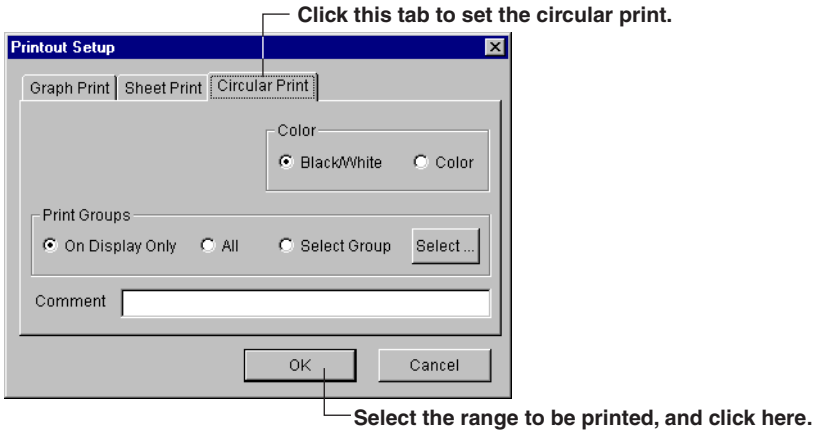
Note

- The [Comment] can be entered or changed using [About Batch Data]/[About TLOG Data] (see "Confirming the Data Information," section 3.2). When the print comment is entered or changed, it is reflected in the comment of [About Batch Data]/[About TLOG Data] dialog box.
- Up to 127 characters can be entered in the [Comment] entry box. However, the number of characters that is actually printed is limited.
- When the cursor is not displayed, select the [All] button under [Range] in the [Printout Setup] dialog box.
- You can use the template file to unify the print condition (see section 3.11).

Setting Sheet Print



Setting Circular Print



For the operations that follows, see "Setting graph print."

Note

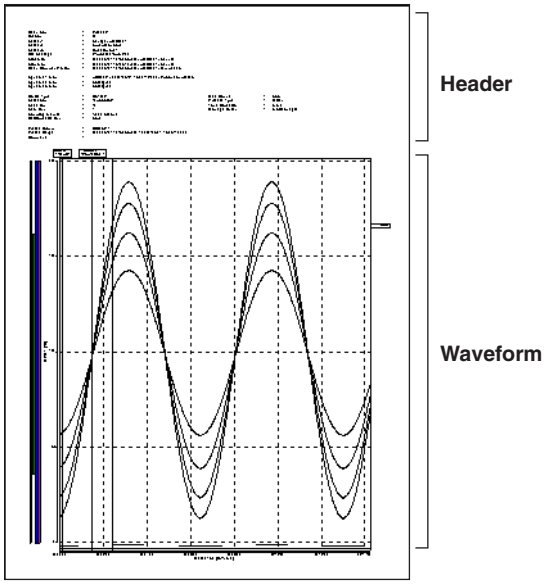
TLOG data does not have [Print Settings].

Header

Of the items that are displayed in the data information dialog box ([Information] -[About Batch Data]/[About TLOG Data]), those that are checked are printed in the header section. For details related to the data information, see section 3.2.

Print Preview

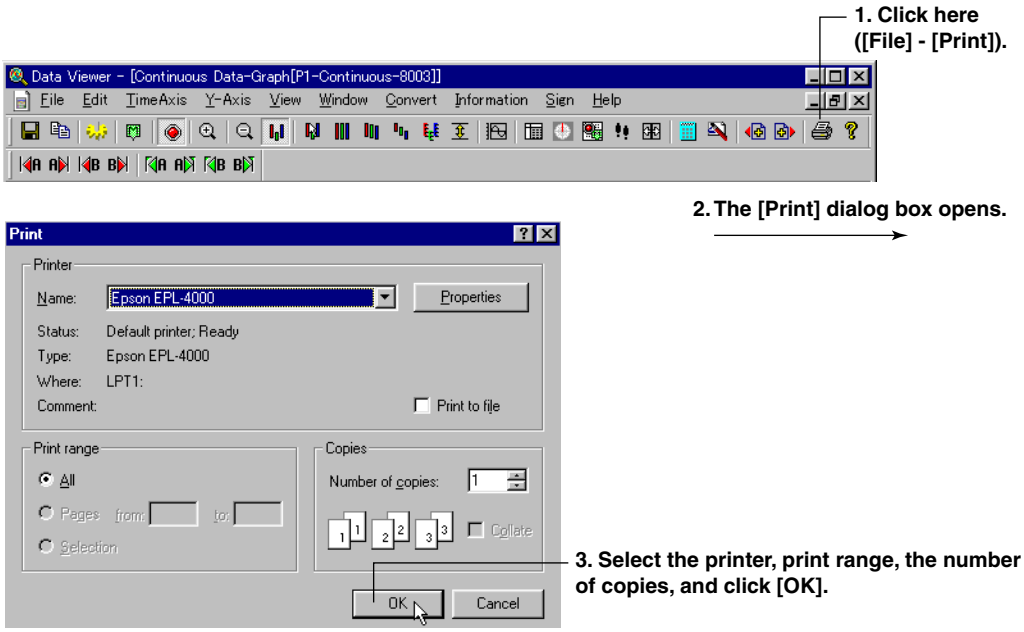
You can preview the print layout before actually printing the data.
Selecting [File] - [Print Preview] displays the print preview screen.



Note

- The preview screen will display the print image of the specified range.
- The file information is also displayed when previewing the graph. If the color overview, alarm, [Control] window, and [Statistics] window are displayed, these are also displayed on the preview screen along with the graph
- For the print preview operation, see the instruction manual that came with your operating system.

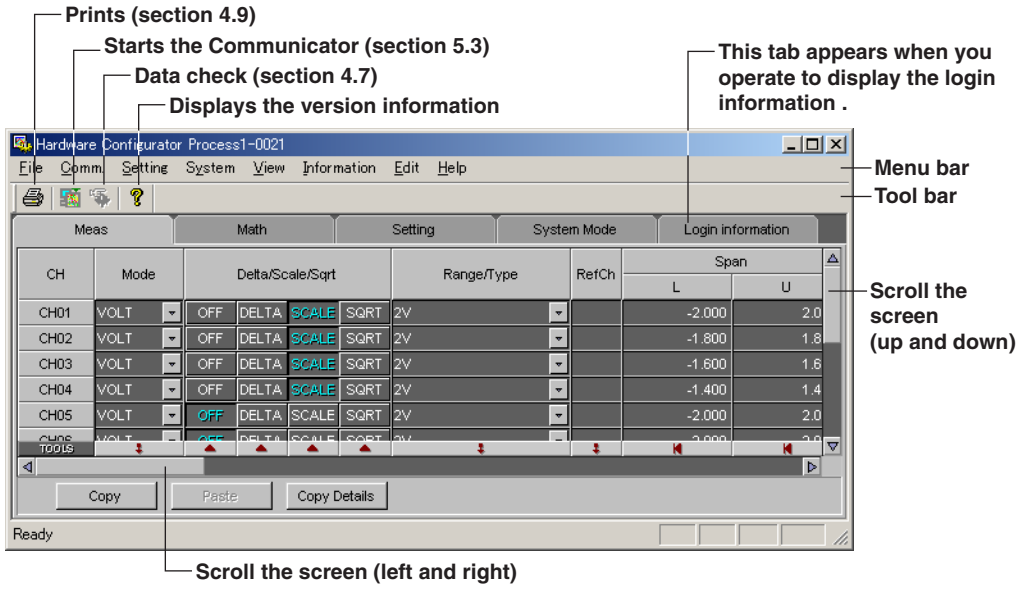
Printing



4.1 Confirming the Setup Data

Starting the Hardware Configurator

The Hardware Configurator is started from the Manager or the Viewer. The login information and the batch system settings (in the system mode tab) can be displayed when you operate properly. See section 2.3, 2.5, 3.7, or 3.8.



Note

You cannot change the contents of the imported setup file and overwrite the file.

Exiting the Hardware Configurator

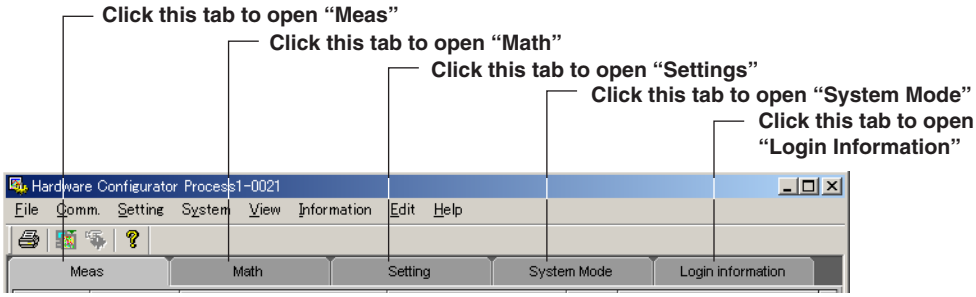
Select [File] - [Exit] or click [x]. The Hardware Configurator ends.

If you changed the settings in any of the windows (see section 4.2), operate as follows:

1. Select [File] - [Exit] or click [x].
   A message “Save changes to ***?” is displayed.
2. Click [Yes], if you wish to save the new settings and exit the Hardware Configurator.
   The [Save as] dialog box opens (see section 4.8). Proceed to step 3.

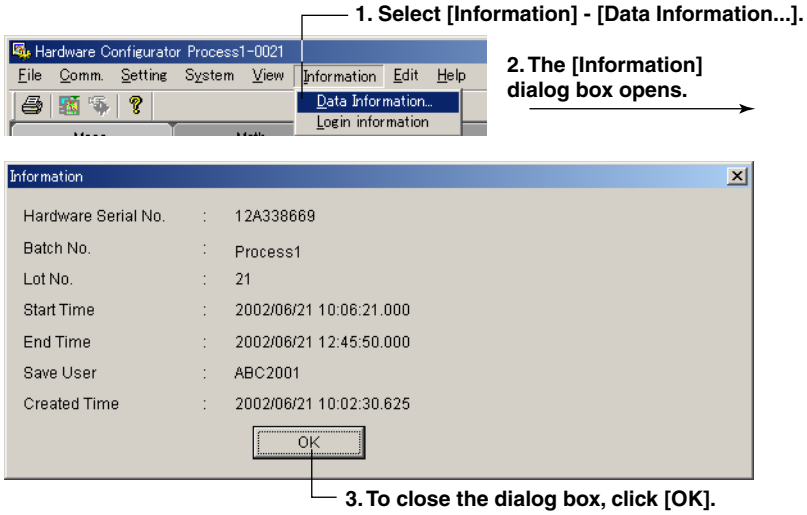
   Click [No], if you wish to exit the Hardware Configurator without saving the settings. The Hardware Configurator ends.
3. Set the directory and the file name. Click [Save].
   The Hardware Configurator ends.

Confirming the Setup Data

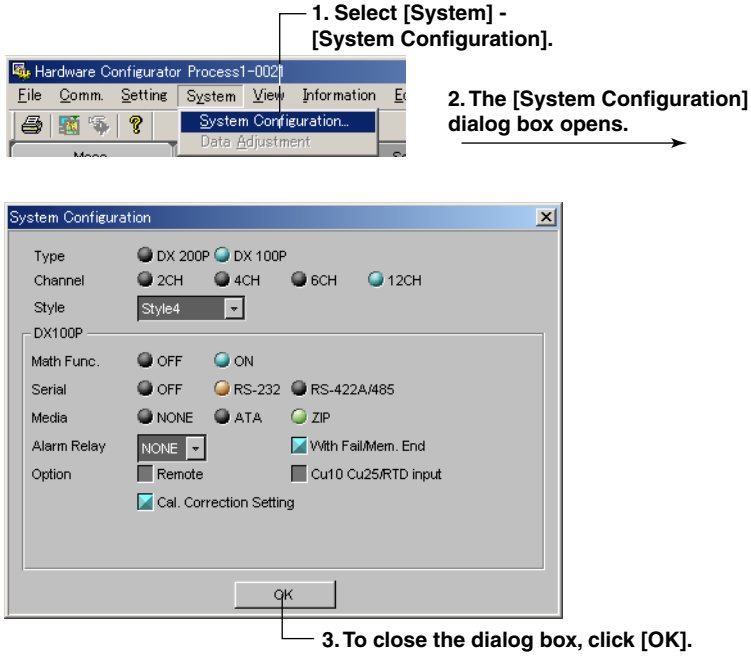


For the detail of the login information and the batch system settings, see next page. For the description of other settings, see sections 4.3 to 4.6.

Confirming the Data Information



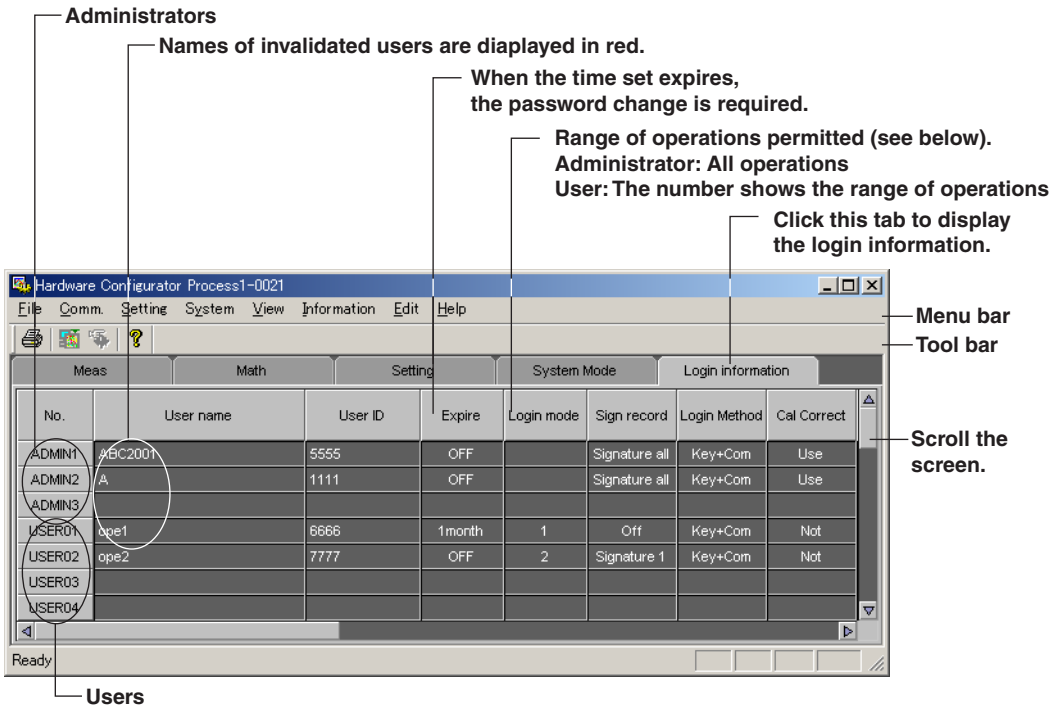
Confirming the System Configuration

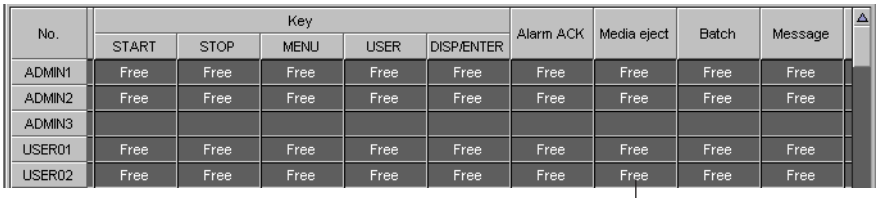


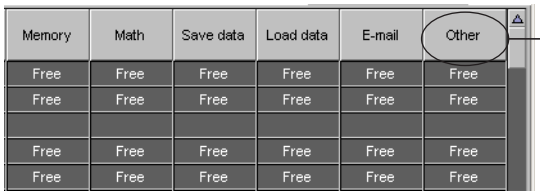
Confirming the Login Information and the Batch System Settings

To confirm the information other than login information and batch system settings, see section 4.2 and the following sections.

Confirming the Login Information



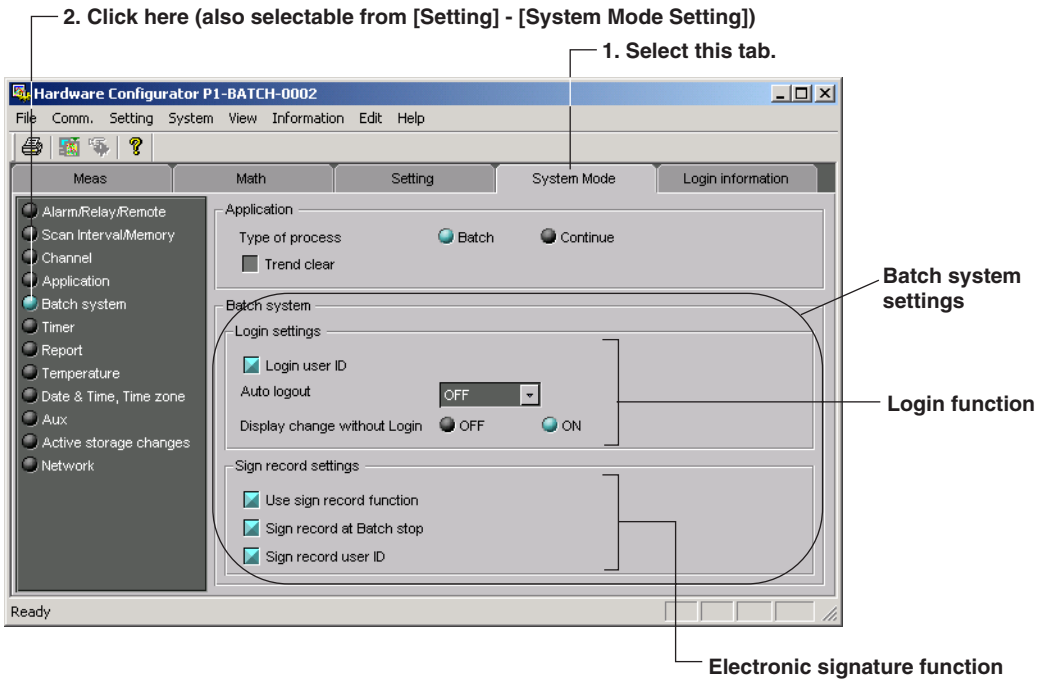




Login Mode

The settings of [Sign record] and [Key] to [Other] are called [Login Mode].

Confirming Batch System Settings



- **Login user ID**
  You are requested to enter the user ID when logging in.

- **Auto logout**
  If there is no key operation for the specified time, the user is automatically logged out. If [OFF] is selected, the user is logged out only when the logout operation is performed.

- **Display change without Login**
  If [ON] is specified, the operation screen can be switched without logging in.

- **Use sign record function**
  Use the electronic signature function.

- **Sign record at Batch stop**
  Sign record display is automatically displayed when data acquisition is stopped. However, this is invalid if a single batch data is divided into multiple files.

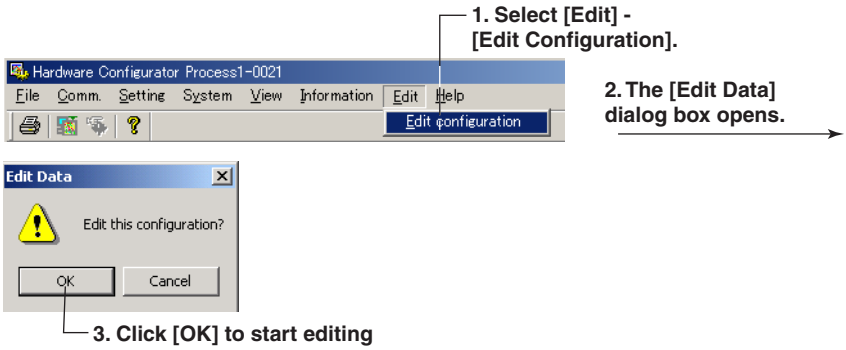
- **Sign record user ID**
  You are requested to enter the user ID when applying electronic signature.

4.2 Configuration

This operation is for creating new setup data (excluding the login information and batch system settings).

Starting Editing

This operation enables editing setup data.



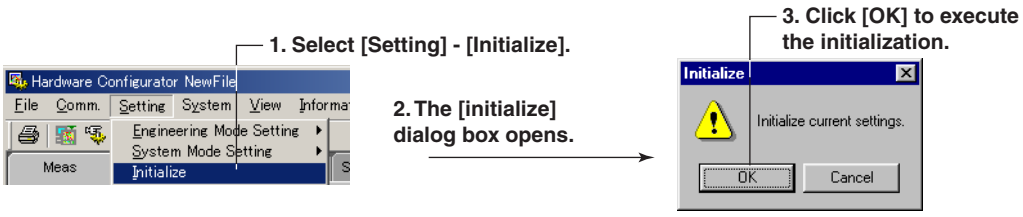
Note

When you start editing, the login information and batch system settings are not displayed.

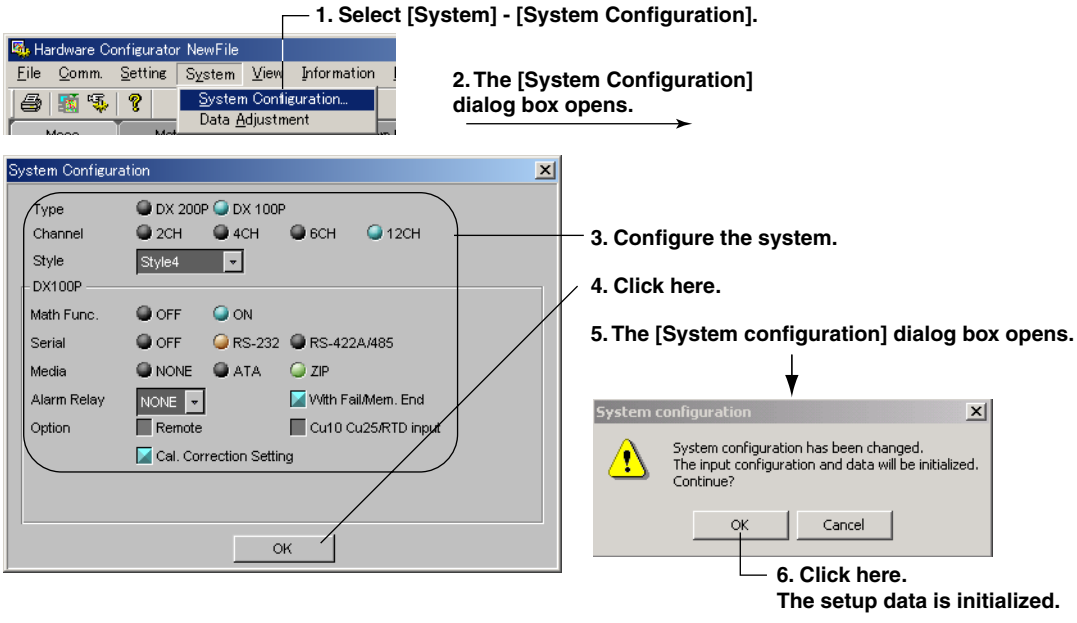
To initialize the setup data without changing the system configuration, proceed to “Initializing the Setup Data.” To change the system configuration, proceed to “Changing the System Configuration.”

Initializing the Setup Data

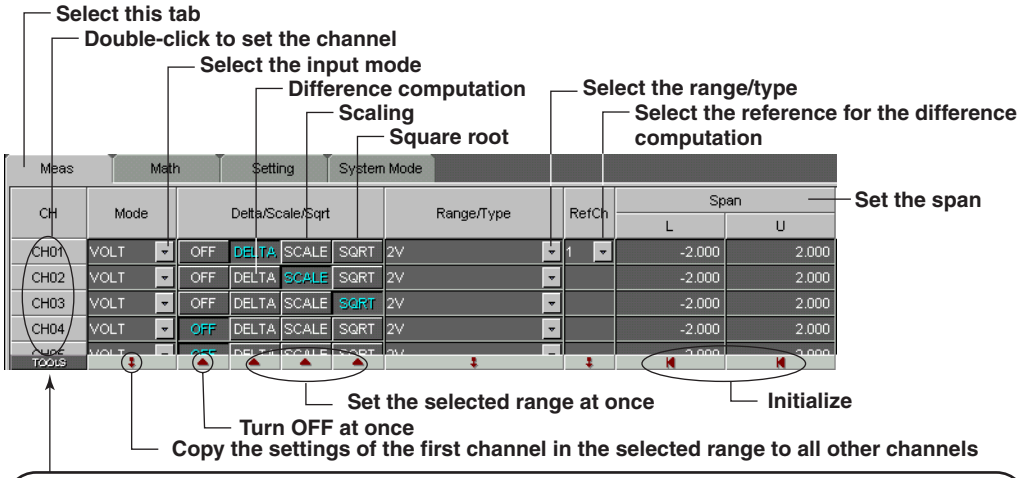
This operation is for initializing the setup data without changing the system configuration.



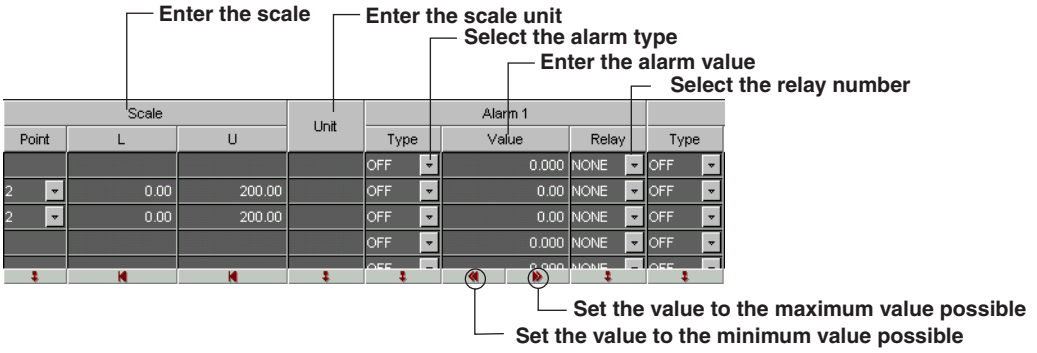
Changing the System Configuration

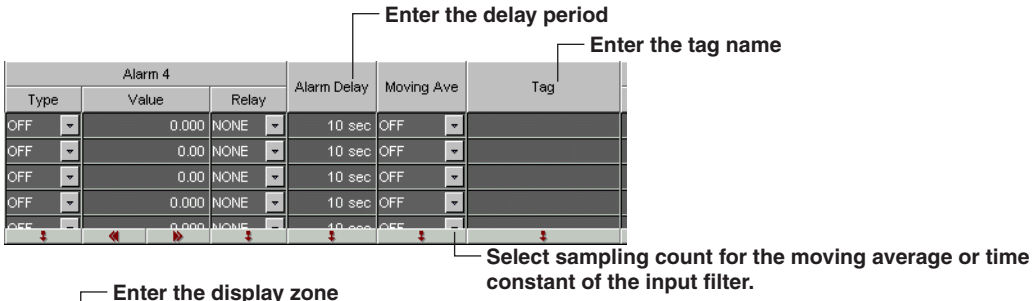


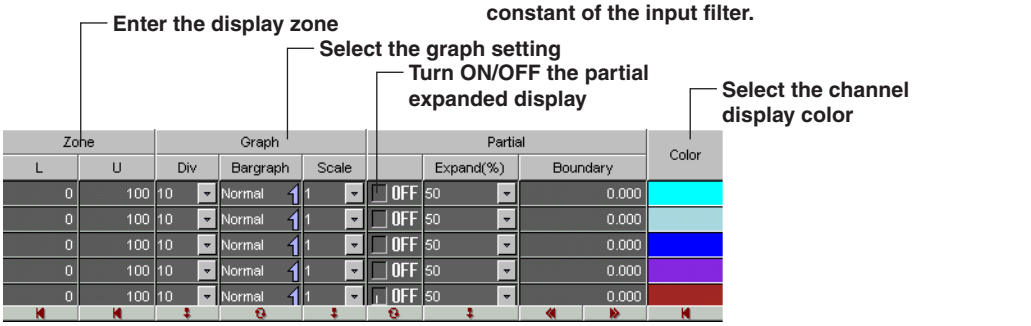
4.3 Setting the Measurement Channels



Selecting a Range of Channels
You can select a range of channels by dragging the mouse from a channel to another channel in the CH column. Click [CH] to reset the selected range.







Input Type and Span

Mode, Range/Type

Select from the list of choices from the pull-down menu.

Input Type	Mode	Range/Type
DC Voltage	VOLT	20 mV, 60 m V, 200 mV, 2 V, 6 V, 20 V, 50 V
Thermocouple	TC	TypeR, S, B, E, K, J, T, N, W, L, U
Resistance temperature detector	RTD	Pt100, JPt100, Cu10*, Cu25*
ON/OFF input	DI	LEVEL (voltage level), CONT (Contact)
Measurement/Display OFF	SKIP	None

* /N1 option

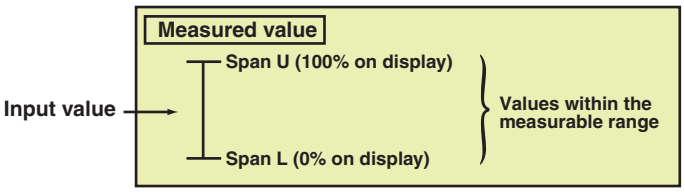
Note

If SKIP is selected, settings such as Delta/Scale/Sqrt and Range/Type are discarded.

Span L, Span U

Sets the upper and lower limits (full scale) of the display.

When a value outside the range is entered or when the span L and span U values are set to the same value, they are corrected when the data are checked.



Difference Computation/Scaling/Square Root Computation

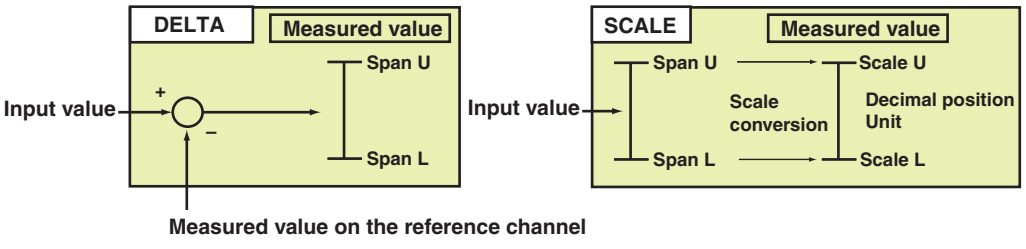
DELTA: Displays the difference between the input and the reference channel.

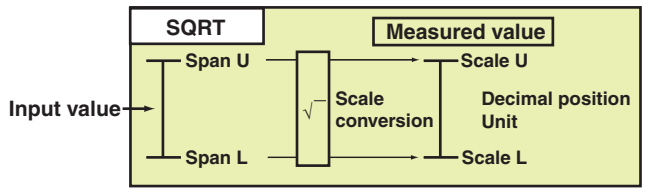
Note

Difference computation is performed between channels that have different [Mode] and [Range/Type] settings. The decimal position of the computed result is set to that of the channel computing the difference. If the number of digits to the right of the decimal of the reference channel is greater than that of the channel computing the difference, the reference value below the least significant digit of the channel computing difference is rounded beforehand.

SCALE: Converts the input value to a value in the appropriate unit.

SQRT: Computes the square root of the input. The result is converted to a value in the appropriate unit. This setting can be used only when the input mode is set to VOLT.





Span L, Span U

Sets the appropriate upper and lower limits (see figures above).

When a value outside the range is entered or when the span L and span U values are set to the same value, they are corrected when the data are checked.

Scale L, Scale U, and Decimal Point

Enter the upper and lower limit values to which you wish to convert the input values. Set the decimal position by the number of digits to the right of the decimal point.
When the scale L and scale U values are set to the same value or when a value outside the range is entered, they are corrected when the data are checked.

Unit

Clicking the unit display area enables entering a new unit.
Enter the unit using up to six characters.

Alarm

Four alarms (Alarm 1 to 4) can be specified on each channel.

Type

Select from [H], [L], [h], [l], [R], [r], [T] or [t]. [h] and [l] can be specified on difference computation channels only. Select [OFF] to disable alarm.

Alarm Value

Alarm is generated using the specified value as the boundary. The selectable range of alarm values vary depending on the input mode and range.

Alarm Delay

This applies to delay upper (T) and lower (t) limit alarms.
Alarm is generated when the measured value stays above or below the specified alarm value for the specified time (delay period).

Relay

To output relays, select the output relay number. Otherwise, select [NONE].

Input Filter and Moving Average

Moving average can be specified on models DX106P, DX112P, DX210P, DX220P, and DX230P.
Input filter can be specified on models DX102P, DX104P, DX204P, and DX208P.

Input Filter

To use the input filter, select the time constant (2 s, 5 s, or 10 s).

Moving Average

To use the moving average, select the sampling count (2 to 16).

Tag

Up to 16 characters can be entered for the tag.
You can use the tag name instead of the channel number to be displayed on the screen.
The [System Mode] screen is used to select whether to display the channel number or the tag name on the screen.

Display Zone

You can select the range of the screen in which the waveform of each channel is to be displayed.
Specify positions (%) on the display scale for the upper and lower limits.
The conditions for setting the zones are as follows:

- Range: 0% to 100%
  The lower limit must be less than the upper limit
- The difference between the lower and upper limits is at least 5%.

Graph

Divisions

Select the number of scale divisions.

Bar Graph

Select the reference position of the bar graph. Selecting [Center] when the bar graph is vertical produces no effect. It is set back to [Normal] when the data are checked.

Scale

When using scale display on the trend screen, select the position to display the scale.
For details related to divisions, bar graph, and scale, see section 5.12 in the DX100P/DX200P User's Manual.

Partial Expanded Display

ON/OFF

Set whether or not to use the partial expanded display for each channel.

Note

The partial expansion settings take effect when the partial expansion function is set to [Use] in the [Aux] section of the [System Mode] tab.

Position (%)

Set the position to which the boundary value is to be moved. The range is from 1 to 99%.

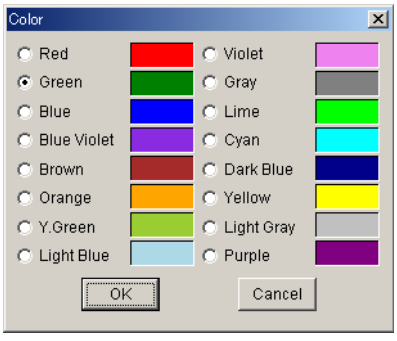
Boundary

Set the boundary value within the display span.
The conditions used to set the boundary vary depending on the measurement and computation channels as follows:

- Measurement channel
  When SCALE and SQRT are not used: Span L < boundary < span U
  When SCALE and SQRT are used: Scale L < boundary < scale U
- Computation channel
  Span L < boundary < span U

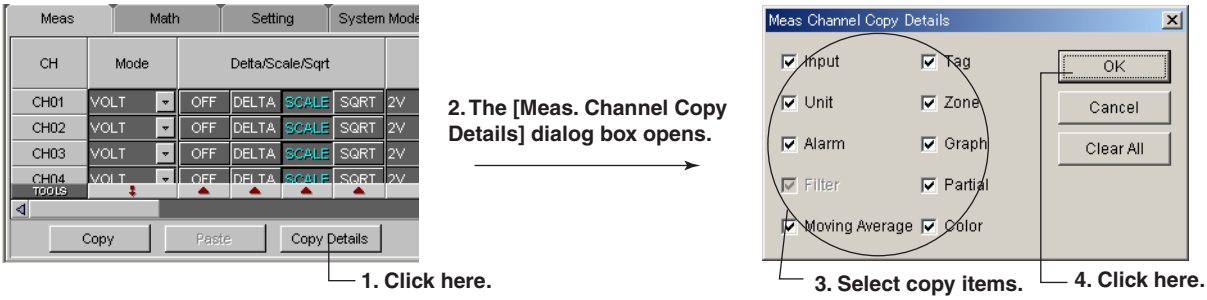
Display Color

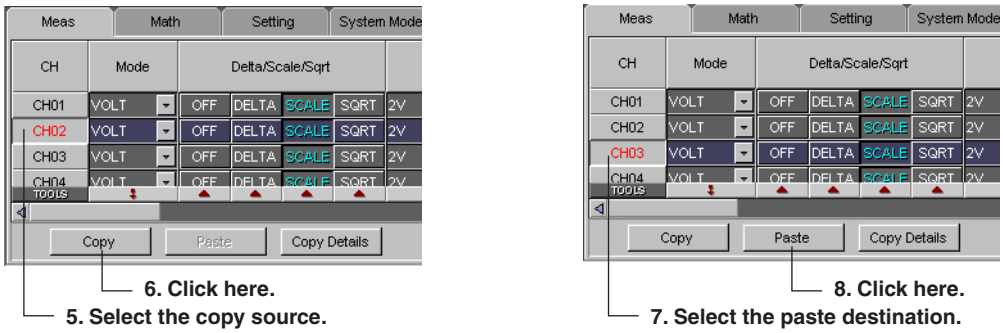
You can select the display color of each channel from 16 colors.
Clicking the color area displays the [Color] dialog box. Select a color and click [OK].



Copying and Pasting Setup Data

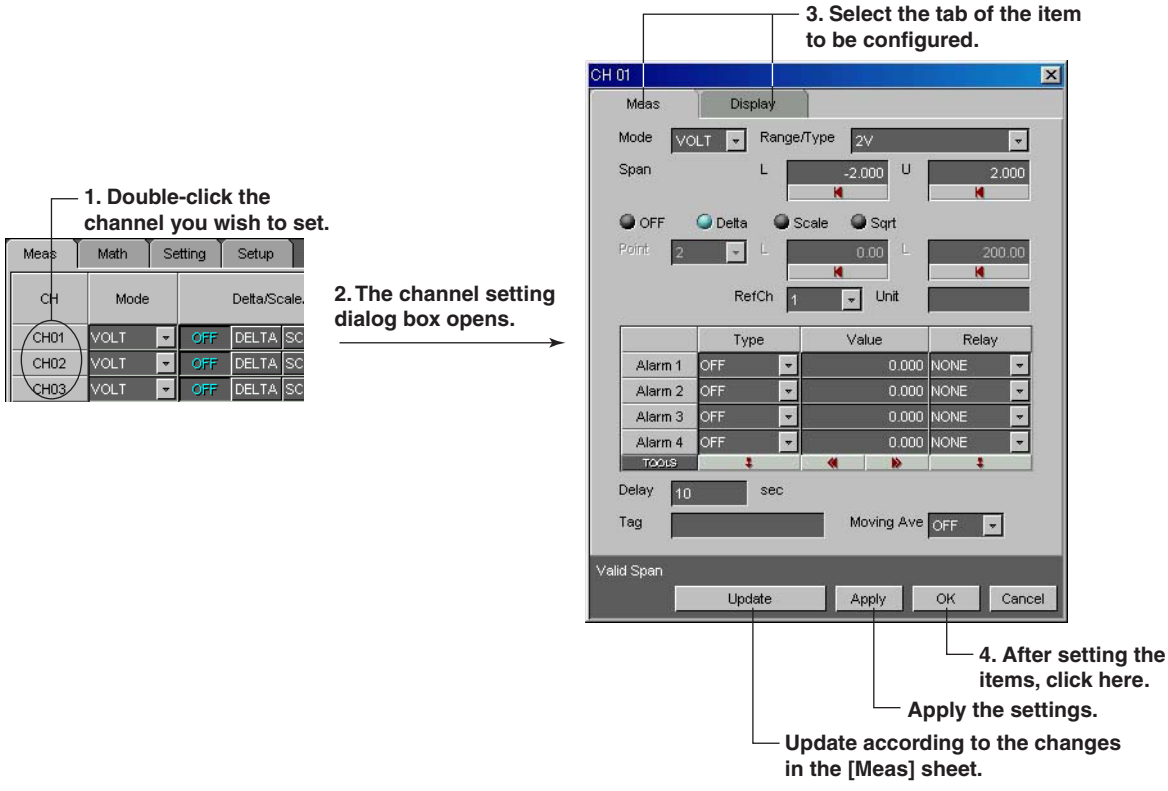
The items checked in [Copy Details] can be copied and pasted.
Click the channel number to select the copy source or paste destination. To select multiple channels to be copied, drag the channel number to specify the range to be copied. To select multiple copy destinations, select the range in a similar fashion.



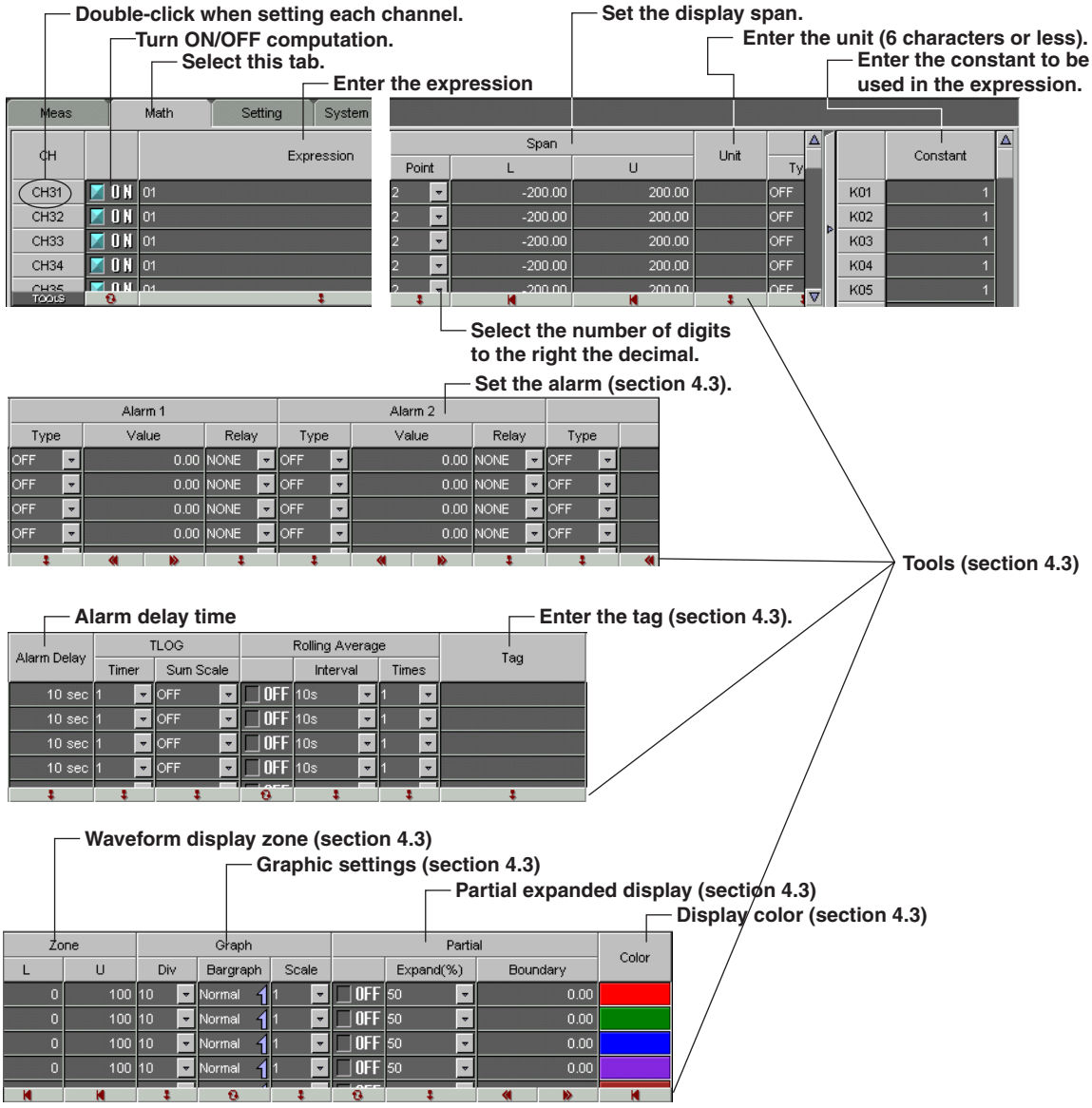


Setting One Channel at a Time

The items in the [Meas] tab can be configured for each channel. The items that are configured are the same as those configured on the spreadsheet. For details, see pages 4-6 to 4-9.



4.4 Setting the Computation Channels (/M1 Option)



Turning ON/OFF Computation

Select whether or not to perform computation for each channel.

Expression

Enter the expression using up to 40 characters. For details related to the expression, see the DX100P/DX200P User's Manual.

Constant

You can set constants to be used in the expression. Up to 12 (DX100P) or 30 (DX200P) constants can be specified. The allowed range is as follows:
–9.9999E+29 to –1.0000E–30, 0, 1.0000E–30 to 9.9999E+29

Display Span

Sets the upper and lower limits of the display.
The range is from –9999999 to 99999999. Set the number of digits to the right the decimal to four digits or less.

Alarm

You can set up to 4 alarms on each computation channel. The alarm types are upper limit alarm (H), lower limit alarm (L), delay upper limit alarm (T), and delay lower limit alarm (t). For details, see section 4.3.

Tag

The settings are the same as the measurement channels. For details, see section 4.3.

TLOG Computation

Timer

Select one of the timers (1 to 3) set in the setup mode.
The computation interval of TLOG computation is set to the time assigned to the selected timer.

Sum Scale

Set the sum scale.

Rolling Average

Interval

Select the sampling interval when rolling average is activated.

Times (Number of Samples)

Select the number of samples (number of data points used to compute the rolling average).

Display Zone, Graph, Partial Expansion, and Color

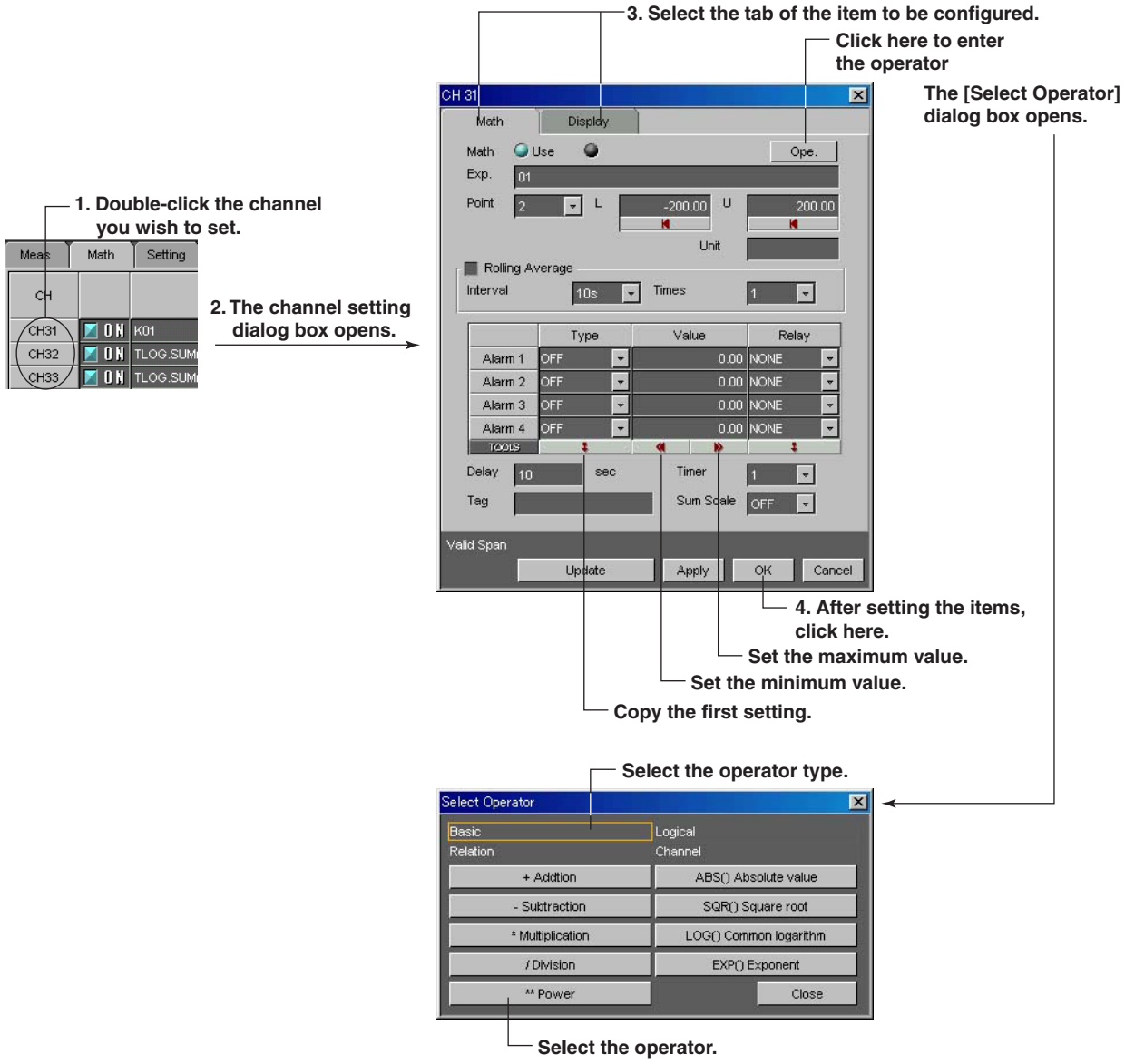
The settings are the same as the measurement channels. For details, see section 4.3.

Copying and Pasting Setup Data

The items checked in [Copy Details] can be copied and pasted.
See the operating procedure, see section 4.3.

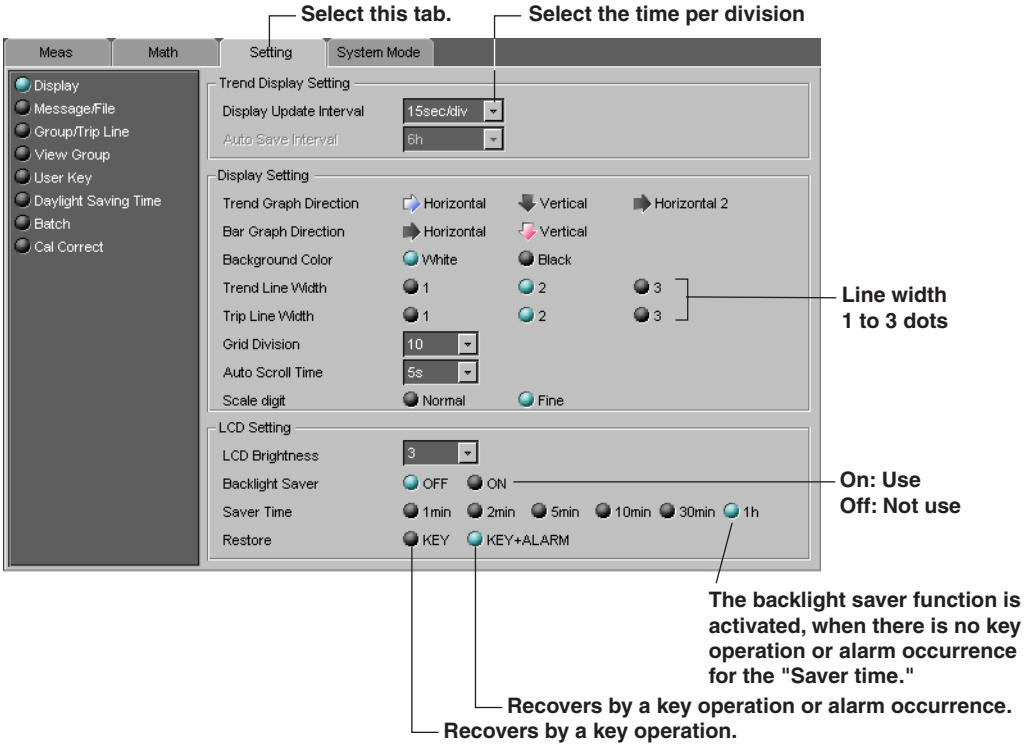
Setting One Computation Channel at a Time

The items in the [Math] tab can be configured for each channel. The items that are configured are the same as those configured on the spreadsheet. For details, see pages 4-11 and 4-12.



4.5 Configuring the Engineering Mode

Screen Display



Display Update Interval

You can select the display update interval from [1 min/div], [2 min/div], [5 min/div], [10 min/div], [15 min/div*], [20 min/div], [30 min/div], [1 h/div], [2 h/div], [4 h/div], and [10 h/div]. In addition to these selections, [15 sec/div] and [30 sec/div] can also be selected on the DX102P, DX104P, DX204P and DX208P.

* A [15 min/div] is for the DXP style S4 or later only.

Auto Save Interval

You can set the interval, if the data type is set to [DISPLAY] in the memory sample settings of the system mode tab. However, if the type of process is set to [Batch] in the application settings of the system mode tab, the maximum selectable time is automatically entered and cannot be selected.

Grid Division

Select number of grids on the waveform display area from [Auto] or [4] to [12].
Auto: Display the same number of grids as the number of scale divisions of the first assigned channel of the group.

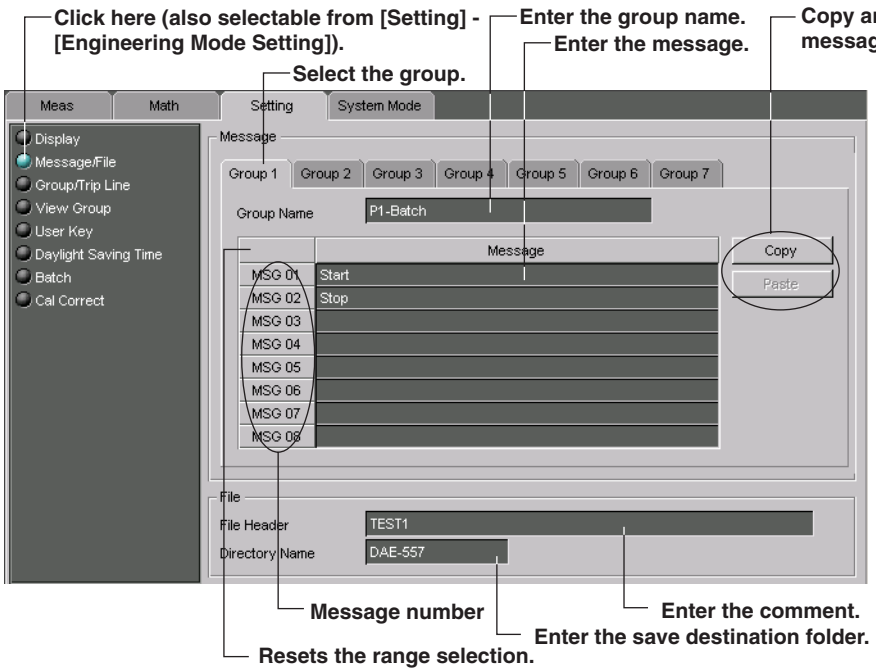
Auto Scroll Time

This is the time period used to automatically switch the displayed group. Select the time period from [5 s], [10 s], [20 s], [30 s], or [1 min].

LCD Brightness

Select the brightness of the screen from [1] to [8] (DX100P), or [1] to [4] (DX200P). A higher value corresponds to a brighter screen setting.

Message/File



Note

Messages 1 to 8 of the message group 7 can be assigned to the USER key and the remote control function (option, /R1).

Group Name

Up to 16 characters can be entered for the message.

Message

Up to 32 characters can be entered for the message.

File Header

Adds a comment (up to 32 characters) to the header section of the measured/computed data file.

Directory Name

Set the name of the folder (up to 8 characters) in which the measured/computed data files is to be saved.

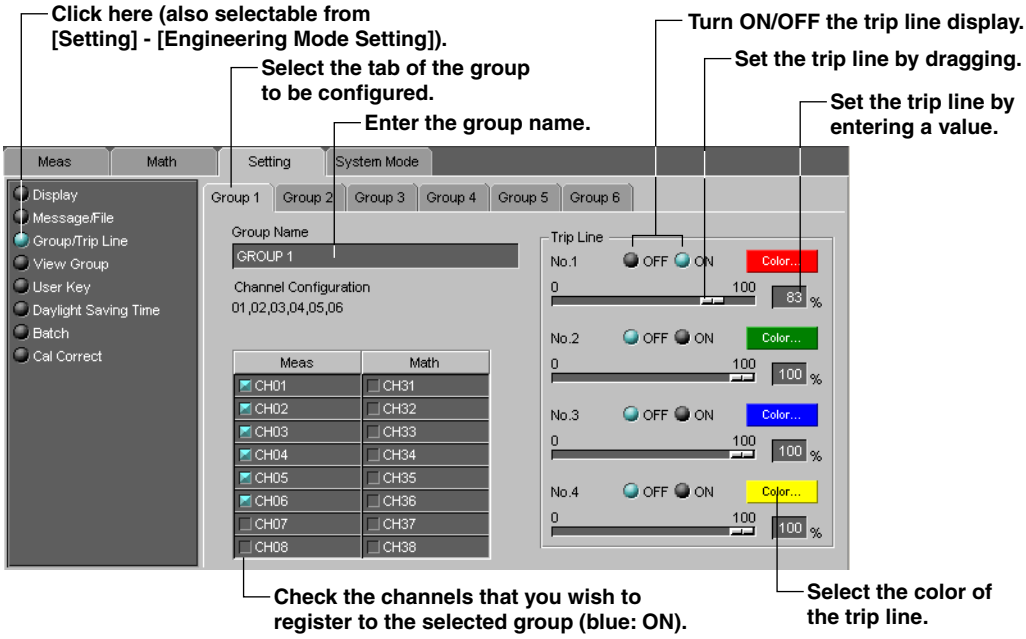
Note

- AUX, CON, PRN, NUL, and CLOCK cannot be used as the directory name.
- If the directory name is not specified, DATA0 (default) is automatically set.

Copying and Pasting the message

1. Click the message number of the copy source. To select multiple messages to be copied, drag the message number to specify the range to be copied.
2. Click [Copy].
3. Click the message number of the paste destination. To select multiple paste destinations, select the range in a similar fashion.
4. Click [Paste].

Group/Trip Line



Group Name

Up to 16 characters can be entered for the group name.

Number of Channels

The maximum number of channels that can be assigned to a group is 6 for the DX100P and 10 for the DX200P. The assigned channels are listed under [Channel Configuration].

Trip Line

Up to four trip lines can be set to one group.

With regard to the trip lines set here, the first and second settings (No.1 and No. 2) refer to the trip lines in the Data Viewer. If you change them here, they will also change in the Data Viewer.

View Group (for the DX200P Only)

View Group

Up to four view groups can be registered.

Group Name

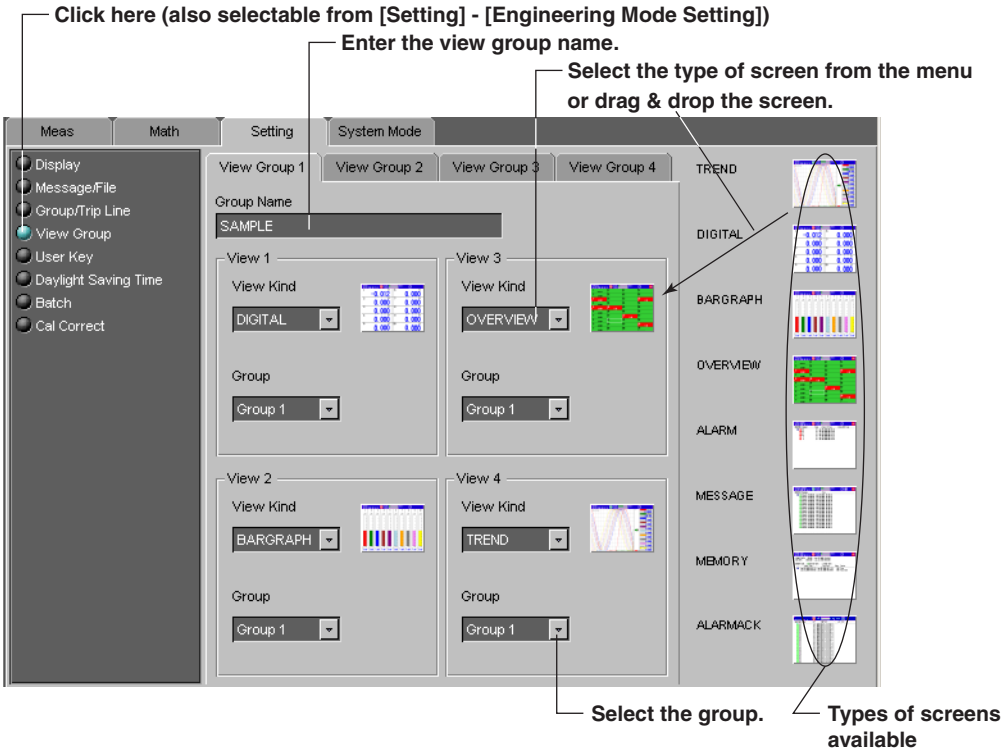
Up to 16 characters can be entered for the group name. The specified group name appears as a sub menu of the [4 Panel] display of the DX200P.

Screen Type

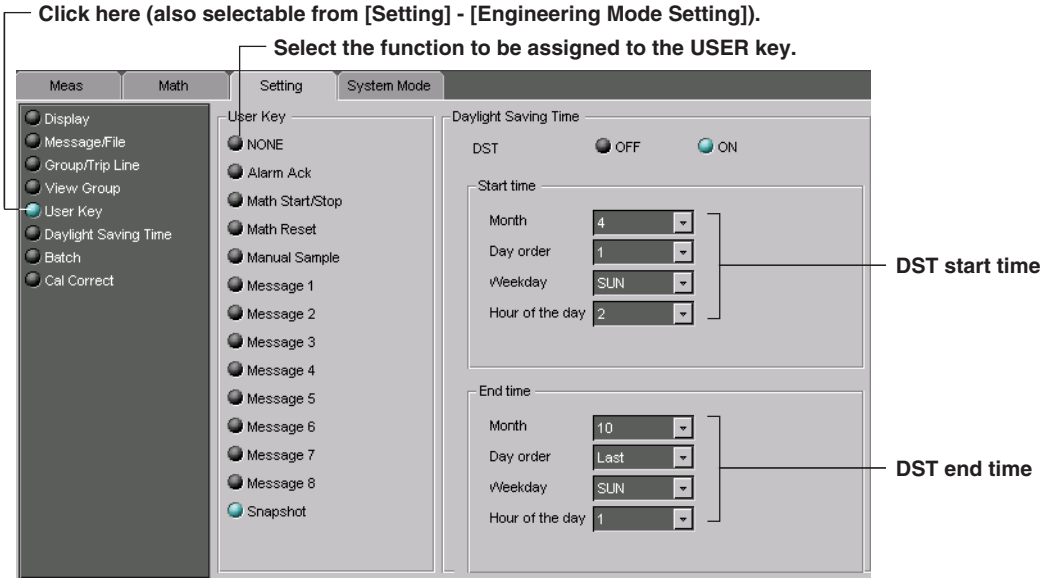
The view group is made up of four screens. Select the type of screen to display in each screen.

Group to Be Displayed

Select the group to be displayed from group 1 to group 6 when the screen type is set to trend, digital, or bar graph.



USER Key and Daylight Saving



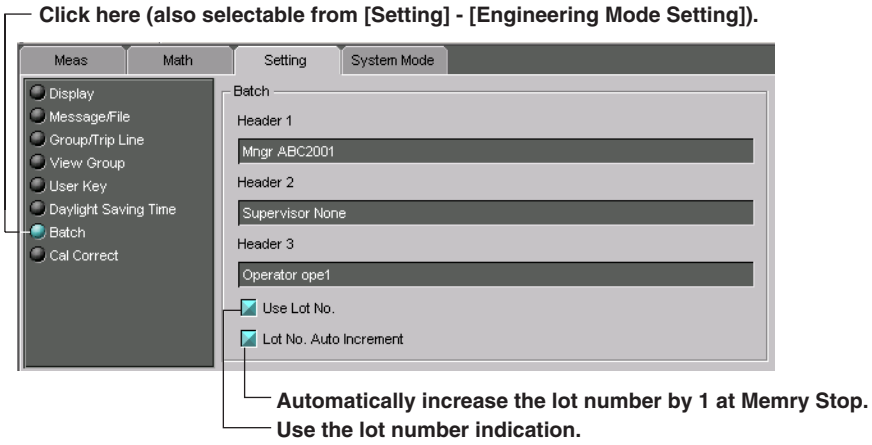
User Key

Assign an action to the USER key. The [Message1] to [Message8] correspond to messages 1 to 8 of the message group 7. Select [NONE] to disable the USER key.

Daylight Saving

Select whether or not to use the daylight savings time adjustment function. Specify the start and end time of the DST.

Batch

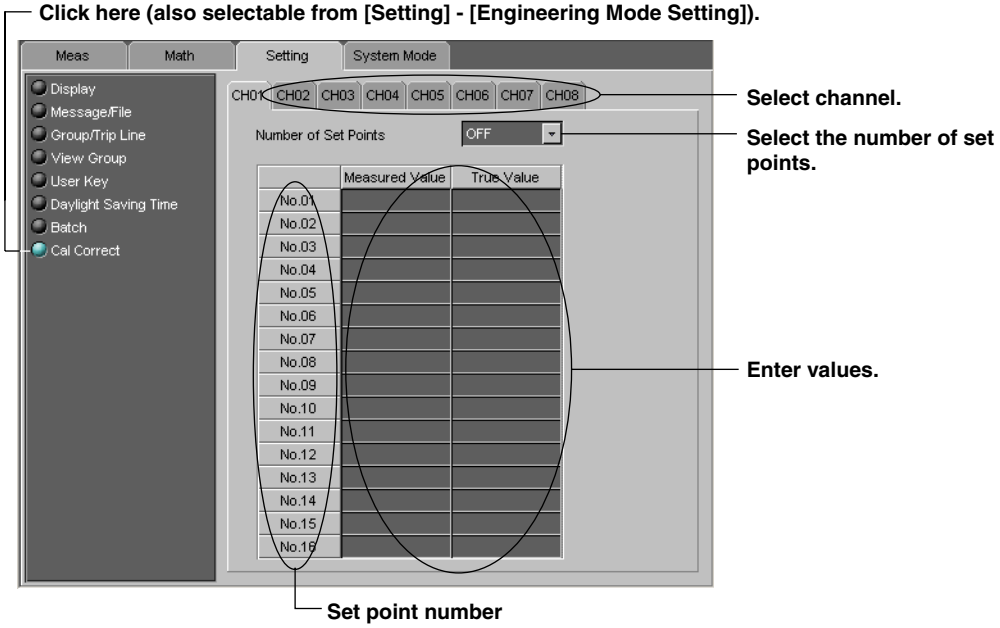


Header 1 to 3

Enter character strings (up to 64 characters) that are written to the batch and continuous data files.

Calibration Correction

Can only be specified on measurement channels.



Number of Set Points

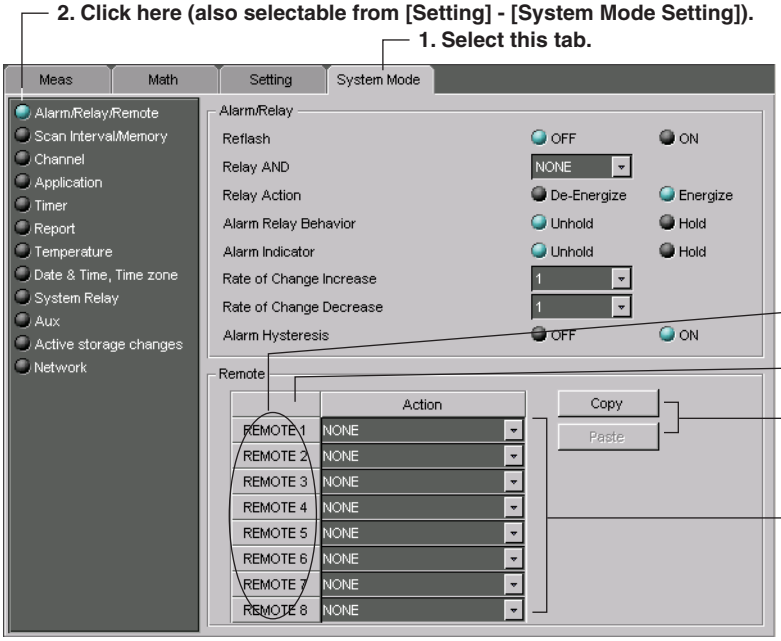
Select the number of set points from [OFF] or [2] to [16].
Select [OFF] if you are not using the correction function.

Selectable Range of Measured and True Values

Channels that are set to scaling or square root computation: –30000 to 30000 (the decimal point position depends on the channel setting)
All other channels: Selectable range in the specified range
For the measured value, set a value that is greater than the previous measured value. If you enter a setting that does not meet these conditions, the [Number of Set Points] is set to [OFF] when you store the setup data, print the setup data, or send the setup data to the DXP using the Communicator.

4.6 Configuring the System Mode

Alarm/Relay/Remote



Alarm/Relay

- **Reflash**

  When multiple alarms are set to one alarm output relay, this function notifies the succeeding alarms after the first alarm that causes the relay activation.
- **Relay AND**

  Set the range of relays (from the first alarm relay) to take the AND logic. All other relays will be set to OR logic. If [NONE] is selected, all relays will operate using the OR logic.
  - AND: Activated when all alarms are being generated simultaneously.
  - OR: Activated when at least one of the alarms is being generated.
- **Relay Action**

  Select whether to energize or de-energize the alarm output relay when the alarm occurs.
- **Alarm Relay Behavior**
  - Unhold: Turns OFF the output relay when the cause of the alarm is no longer met.
  - Hold: Holds the output relay ON until the alarm acknowledge operation is executed.
- **Alarm Indicator**

  Unhold, Hold: See “Alarm Relay Behavior.”

  When [Alarm Relay Behavior] is set to [Hold], only [Hold] can be selected for the [Alarm Indicator].
- **Rate of Change Increase/Rate of Change Decrease**

  Select the time interval for the rate of change alarms in terms of the number of samplings (1 to 15).

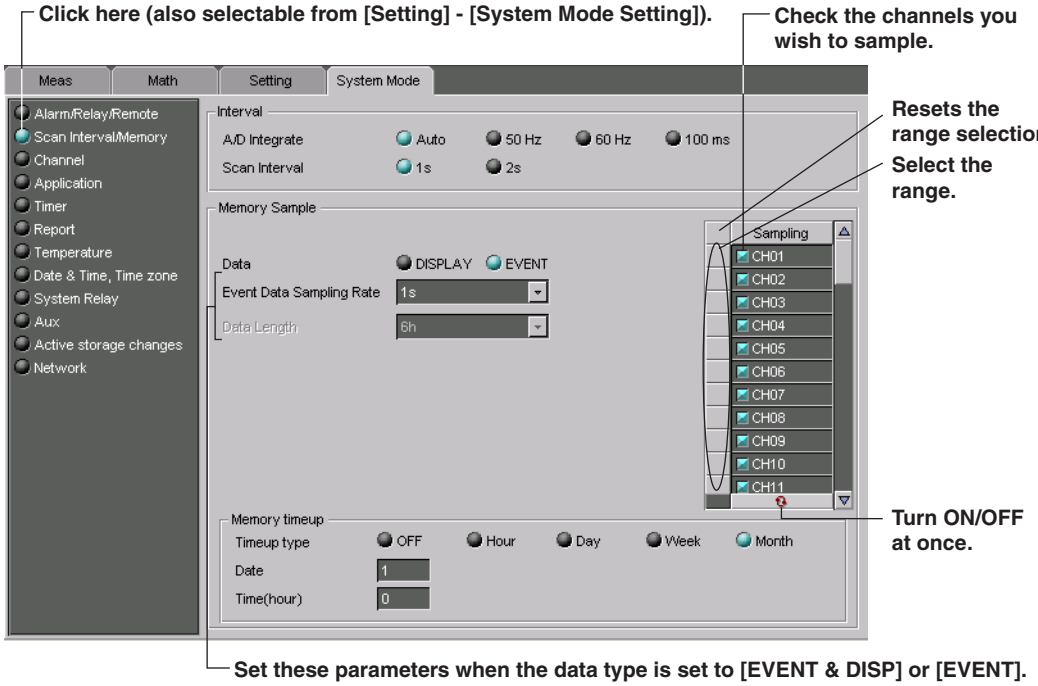
  Interval = scan interval × number of samplings
- **Alarm Hysteresis**

  A width (hysteresis) of 0.5% of the display span can be specified on the value used to set or release the alarm. This applies to upper (H) and lower (L) limit alarms on measurement channels.

Remote (Option, /R1)

You can assign items to be controlled by the eight remote control terminals. This is possible, if the remote function is available.

Scan Interval/Memory/Memory Timeup



A/D Integrate

100 ms can be selected only when the scan interval is set to [2 s].

Auto: The DXP will automatically detect the power supply frequency and set [60 Hz] or [50 Hz].

Scan Interval

The selectable scan intervals vary depending on the model as follows:

DX102P, DX104P, DX204P, DX208P: 125 ms and 250

DX106P, DX112P, DX210P, DX220P, DX230P: 1 s and 2 s

Memory Sample (Save Method of Measured/Computed Data)

- **Data**

  When the data type is [EVENT], set [Event Data Sampling Rate] and [Data Length]. The selectable data length vary depending on the sampling rate. However, if the type of process is set to [Batch] in the application settings of the system mode tab (see next page), the maximum selectable time is automatically entered and cannot be selected.

- **Sampling**

  Select the channels whose data is to be saved to the memory.

  To collectively select or deselect a specified range, carry out the following procedure.

  1. Specify the range by dragging the mouse over the desired range on the column (if you do not carry out this step, all channels are specified). You can reset the range by pressing the Initialize button.
  2. The selected/deselected condition of the specified range of channels switch each time the ON/OFF at once button is clicked.

Memory Timeup

Specify the date and time to save the data in the internal memory to the external storage medium.

- **Timeup type**

  Time interval to save the data. Set [OFF] to disable the function.

  Hour: 1 hour, Day: 1 day, Week: 1 week, Month: 1 month

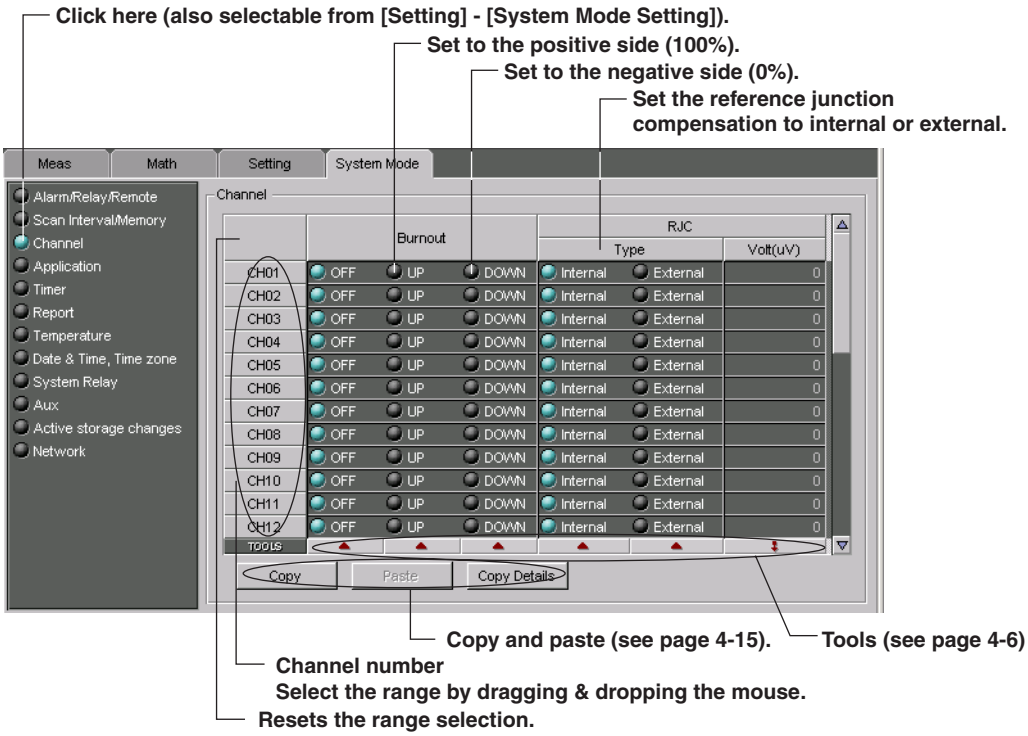
- **Date**

  Date (1 to 28) or the day of the week (SUN, MON, TUE, WED, THU, FRI, and SAT)

- **Time (Hour)**

  Hours (00 to 23)

Channel (Setting the Burnout and RJC)



Burnout

For thermocouple (TC) inputs, select how the measurement results are to be handled when the thermocouple burns out.

RJC Volt (uV)

Internal: Use the DXP's reference junction compensation function

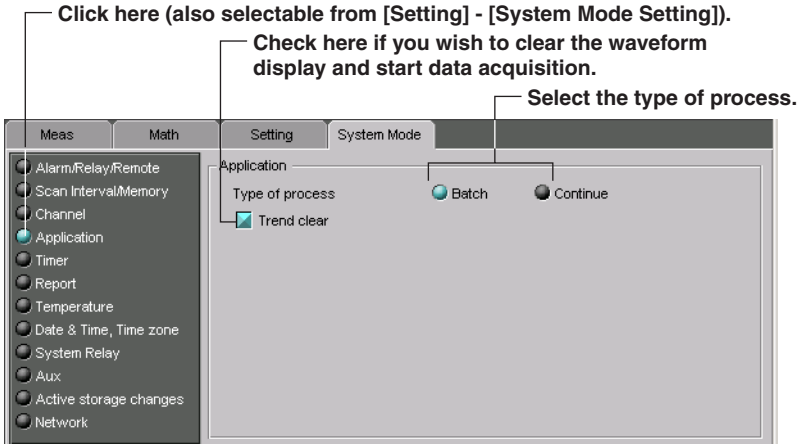
External: Use an external reference junction compensation function.

Volt(uV): When the type is set to [External], set the compensation value in the range from –20000 to 20000.

Copying and Pasting Setup Data

The items checked in [Copy Details] can be copied and pasted. For the operating procedure, see page 4-15.

Application

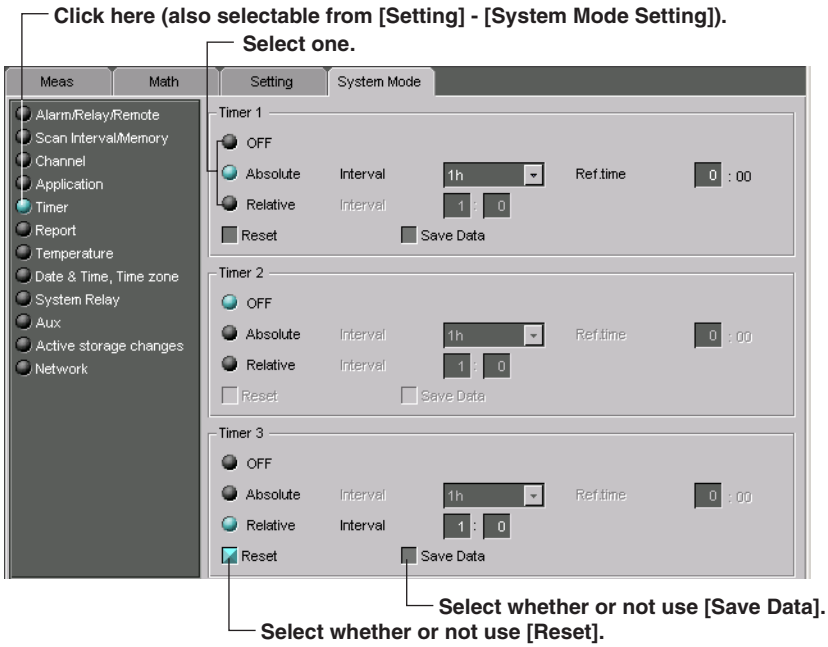


Application

Batch: You can sign the batch data in batch units.

Continue: You can sign the continuous data in units of file

Timer (/M1 Option)



You can set three types of timers. You can have the data saved to a TLOG file or reset the TLOG computation when the specified timeout time elapses.

Timer Mode

There are two timer modes: absolute mode and relative mode. Select [OFF] to disable the timer.

- **Absolute Mode**
  Timer expires at times determined from the reference time and the interval.
  Interval: Select from [1 min], [2 min], [3 min], [4 min], [5 min], [6 min], [10 min], [12 min], [15 min], [20 min], [30 min], [1 h], [2 h], [3 h], [4 h], [6 h], [8 h], [12 h], and [24 h]. The reference time is specified by the hour (00 to 23).
  Ref. time: Select from 0 to 23 hours.
- **Relative Mode**
  The timer is started when the computation is started. The timer is repeated at each interval.
  Interval: 1 min to 24 hours

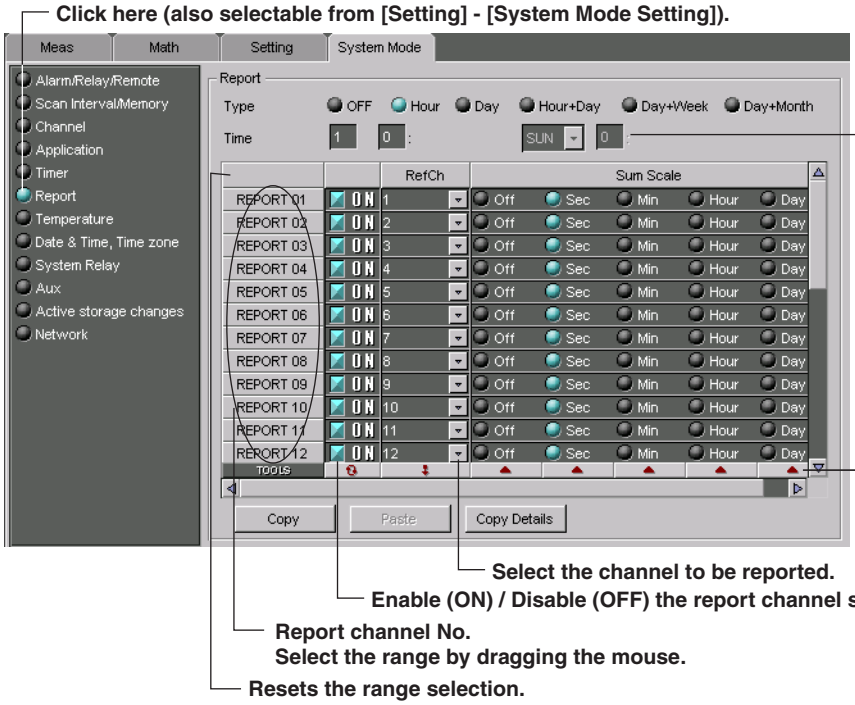
Reset

Reset the results of TLOG computation when the timer expires.

Save Data

Measured/computed data of all channels can be saved to the external storage medium at intervals specified by a timer (TLOG data).

Report (Creating Hourly/Daily/Weekly/Monthly Reports, Option)



Report Type

Select the type of report to be created. Select [OFF] to create no report.

Report Time

Date (1 to 28) and time (0 to 23) for monthly report, time (0 to 23) for daily report, the day of the week (SUN to SAT) and time (0 to 23) for weekly report.

Report Channel

There are 12 (DX100P) and 30 (DX200P) report channels.

To collectively select or deselect a specified range, carry out the following procedure.

Specify the range by dragging the mouse over the desired range on the column (if you do not carry out this step, all report channels are specified). You can reset the range by pressing the reset button.

Converting the Reference Unit Time

Select whether or not to convert the computed results of the TLOG.SUM computation channels to a specified time unit value.

Off: Carry out a simple summation.

Sec: Convert a measured value to a value per second and carry out the summation.

Min: Convert a measured value to a value per minute and carry out the summation.

Hour: Convert a measured value to a value per hour and carry out the summation.

Day: Convert a measured value to a value per day and carry out the summation.

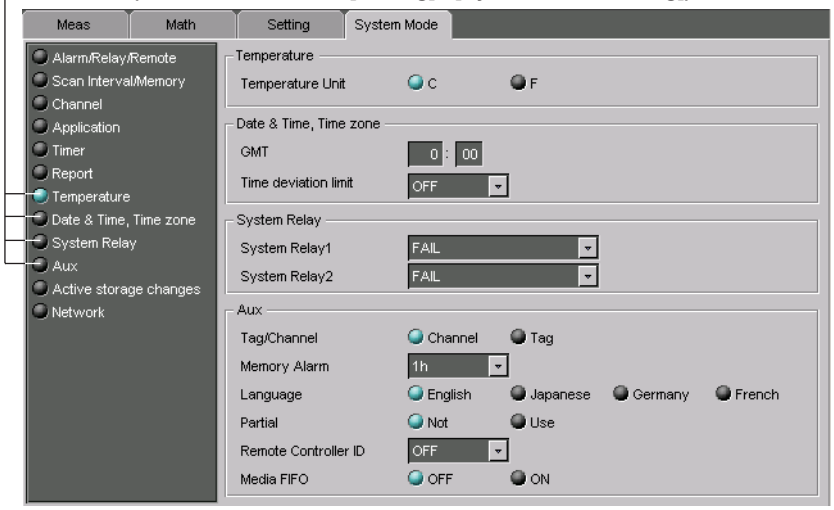
Copy/Paste

The items checked in [Copy Details] can be copied and pasted.

For details related to the copy and paste function, see page 4-10.

Temperature Unit, Time Zone, Time deviation limit, System Relay, and Auxiliary Functions

Click here (also selectable from [Setting] - [System Mode Setting]).



Temperature Unit

Select the °C or °F for the temperature unit.

GMT (Time Zone)

Set the time difference from the GMT.

Time deviation limit

If the time deviation between the specified time and the time on the DXP is within ±(the value specified here) when data acquisition is in progress, the time on the DXP is gradually corrected.
Select [OFF], [10s], [20s], [30s], [1min], [2min], [3min], [4min], or [5min].
If [Off] is selected, the time cannot be adjusted when data acquisition is in progress.

System Relay

Assign functions to the system relays 1 and 2.
FAIL: De-energized when failure occurs.
MEMORY END: Energized when the remaining write time of the internal memory is less than or equal to the specified time, or when the free space of the external storage medium is less than or equal to 10% or 6 MB.
BATCH START/STOP: Energized at Memory Start, de-energized at Memory Stop.
USER LOCKED: The relay is energized when user lock occurs.
LOGIN: The relay is energized when there is a user logged into the DXP*.

* Login using keys and login to the setting function via the Ethernet or serial interface.

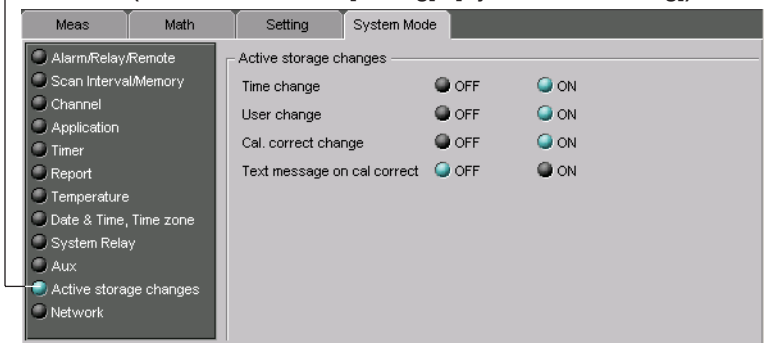
Aux

- **Tag/Channel**
  Select whether to use the tag name or channel number as the measurement/computation channel label.
- **Memory Alarm Time**
  When the remaining time for storing the display or event data in the internal memory falls to the specified time (Memory alarm time), an alarm is generated via e-mail or the relay contact output (/F1 option).
  Memory Alarm: 1 h, 2 h, 5 h, 10 h, 20 h, 50 h, or 100 h
  OFF: Do not use the memory end function.

- **Displayed Language**
  Select the language to be used on the display.
- **Partial Expanded Display**
  If the partial expanded display is set to [Not], the partial expanded display settings of the Meas/Math tab are void.
- **Remote Controller ID (/KB1, /KB2 option)**
  Select the remote controller ID from [0] to [31]. Select [Off] if you do not use the remote control terminal.
- **Media FIFO**
  Select [ON] when using the storage area of the storage medium cyclically (FIFO).

Active Storage Change

Click here (also selectable from [Setting] - [System Mode Setting]).



Turn [ON] the setting changes that are allowed when data acquisition is in progress.

Time change

The time can be changed.

User change

Users can be registered or the registration information can be corrected.

Cal. correct change (/CC1 option)

The calibration correction setting can be changed.

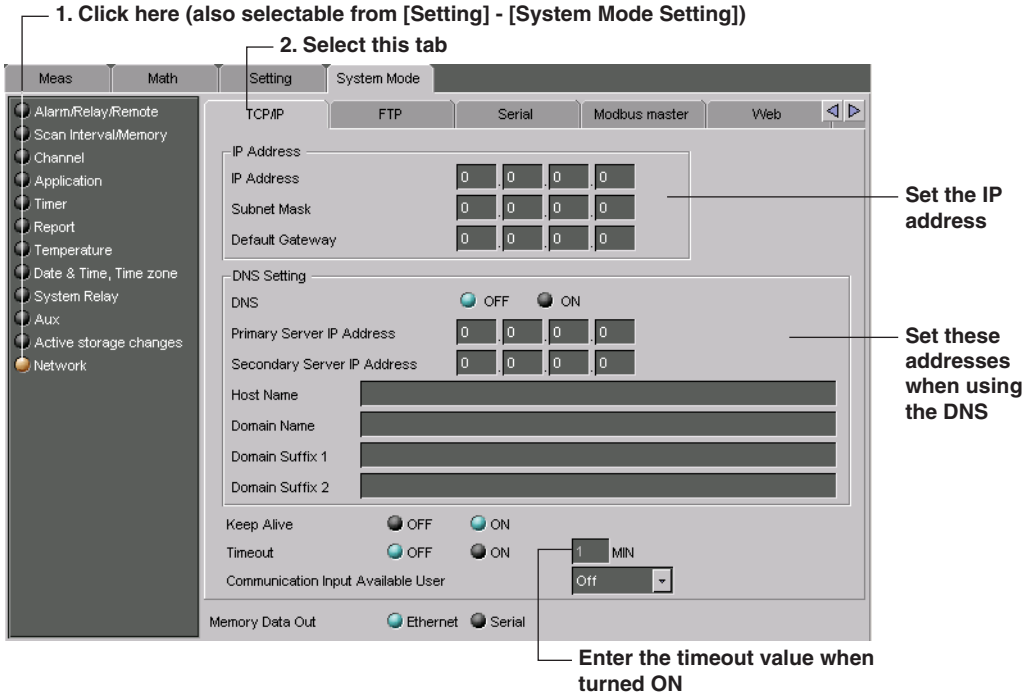
Text message on cal correct (/CC1 option)

Selectable when [Cal. correct change] is set to [ON]. If the calibration correction setting is changed when acquisition is in progress, a message “Cal Correct Setting” is written.

Network

The “Memory Data Out” setting is void on the DX100P/DX200P.

Setting the TCP/IP



DNS setting

You must set the DNS, if you are using a host name to specify the destination server of the file transfer on an FTP client or the server of the e-mail recipient.

Host Name, Domain Name, Domain Suffix: Up to 64 characters

Keep Alive

This function forcibly drops the connection if there are no responses to the test packets that are sent periodically (every 30 seconds) at the TCP level.

Timeout

This function drops the connection if no data transfer is detected between the PC and the DXP over a predetermined period of time. This applies to data transfer at the application level only. To use this function, select [ON] and enter a time period (1 to 120 min).

Communication Input Available User

Specify a user that uses the communication input data (DX100P: C01 to C12, DX200P: C01 to C30) from [Admin 1] to[User 30], and [Serial] (/C2 or /C3 option).

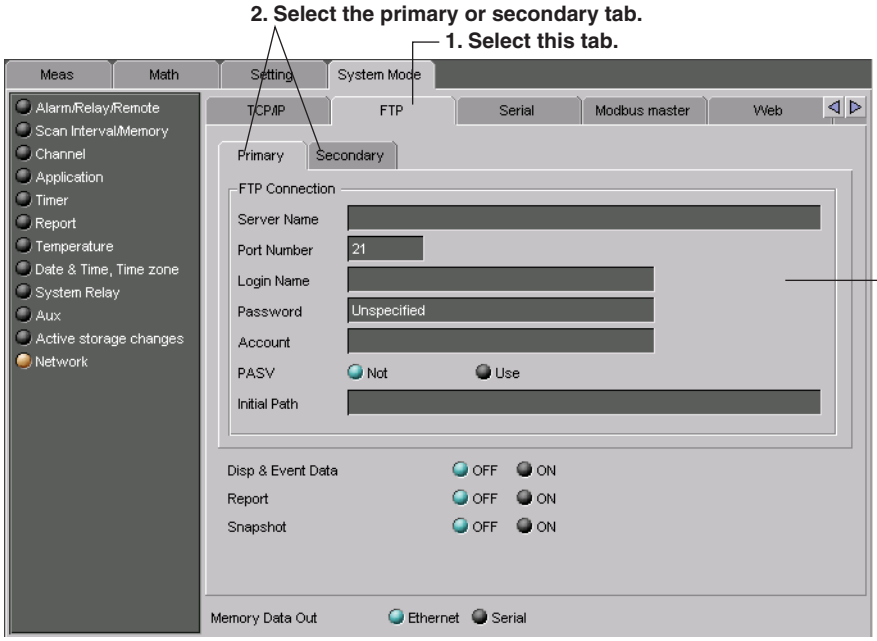
Serial: The communication input data can be used via the serial communication.

Memory Data Out

Select [Ethernet].

FTP Connection

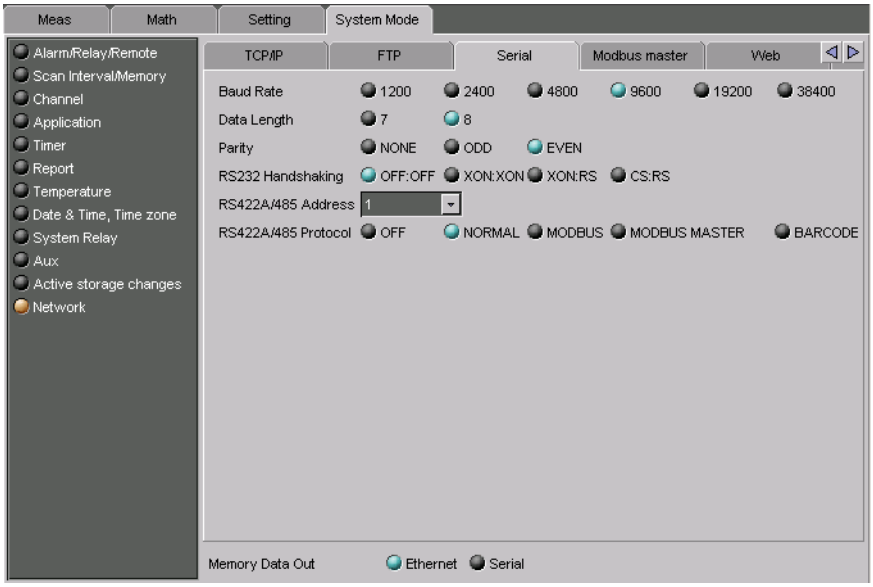
Specify the primary and secondary file transfer destinations (FTP servers).



- **Server Name**
  Set the FTP server name using up to 64 alphanumeric characters. You can also specify the IP address. In this case, DNS is not necessary.
- **Port Number**
  Set the port number of the destination FTP server in the range from 1 to 65535. The default setting is [21].
- **Login Name, Password, Account**
  Set the login name (up to 32 characters), the password (up to 32 characters), and the account (the ID number, up to 32 characters) to use when accessing the FTP server.

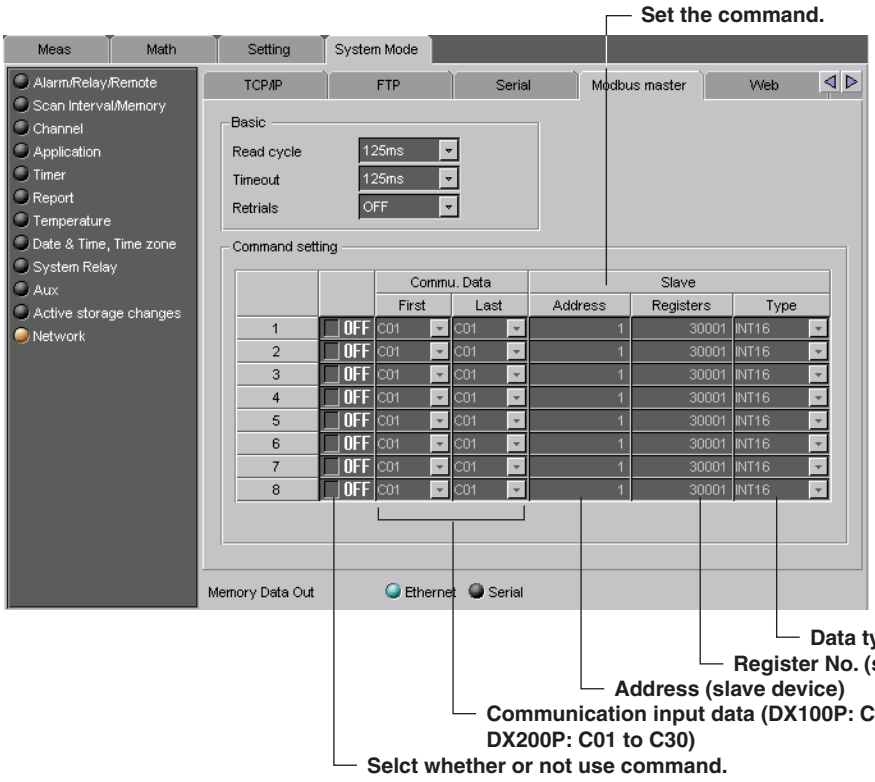
- **PASV**
  When using the DXP behind a firewall that requires the PASV mode, turn this mode [On].
- **Initial Path**
  Set the destination directory for the file transfer using up to 64 alphanumeric characters.
  Example: /home/data
- **Disp & Event Data**
  Display data files and event data files are automatically transferred to the specified destination at specified intervals.
- **Report**
  A Report file is automatically transferred to the specified destination when it is created.
- **Snapshot**
  A screen image data file is automatically transferred to the specified destination when a snapshot is executed.

Setting the Serial Communication



- **Data Length**
  Select the data length from the following list. Make sure to select 8 bits when outputting data in binary format.
- **RS232 Handshaking**
  Select the handshaking method from the following list. This setting is valid only for the RS-232 interface.
- **RS-422A/485 Address**
  Select the address from 1 to 32. This setting is valid for the RS-422A/485 interface and the Modbus protocol.
- **RS-422A/485 Protocol**
  OFF: Serial communication is disabled.
  NORMAL: Setting/measurement server
  MODBUS: Modbus slave
  MODBUS MASTER: Modbus master
  BARCODE: Bar code input

Setting the Modbus Master



- **Basic**

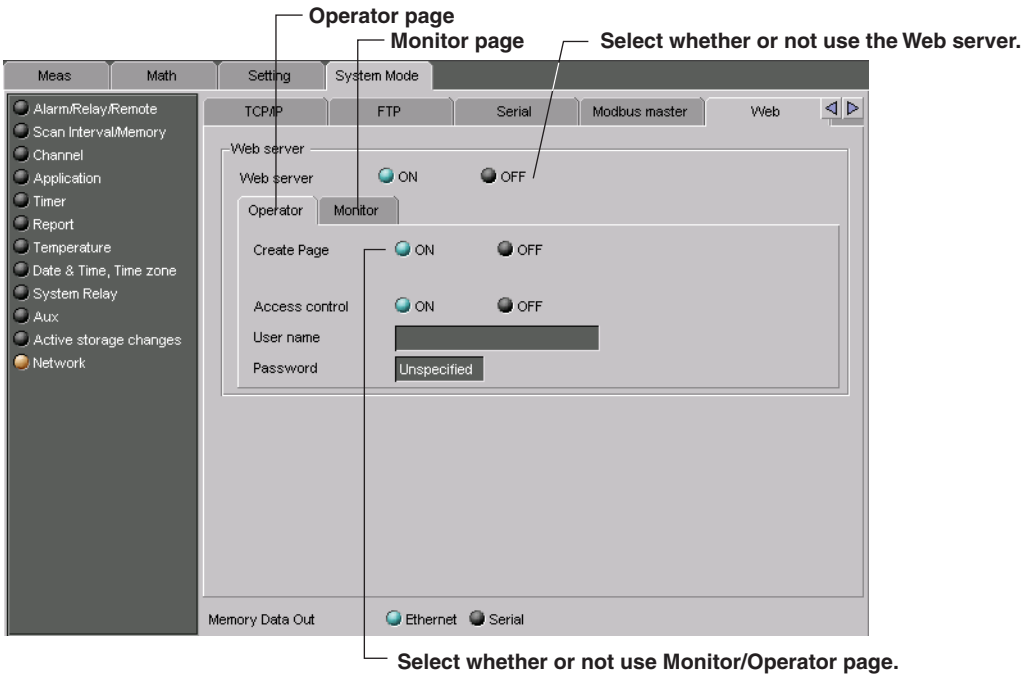
  Read cycle: The cycle at which data is read from other devices. Select the read cycle from [125 ms], [250 ms], [500 ms], [1 s], [5 s], [2 s], or [10 s]

  Timeout: Specify a time period that the DXP waits for a response from the specified slave device after transmitting a command. Select the timeout time from [125 ms], [250 ms], [500 ms], [1 s], [5 s], [2 s], [10 s], or [1 min].

  Retrials: The number of times to retransmit the command when there is no response from the specified slave device. Select the number of retrials from [Off] (0), [1], [2], [3], [4], [5], [10] or [20].

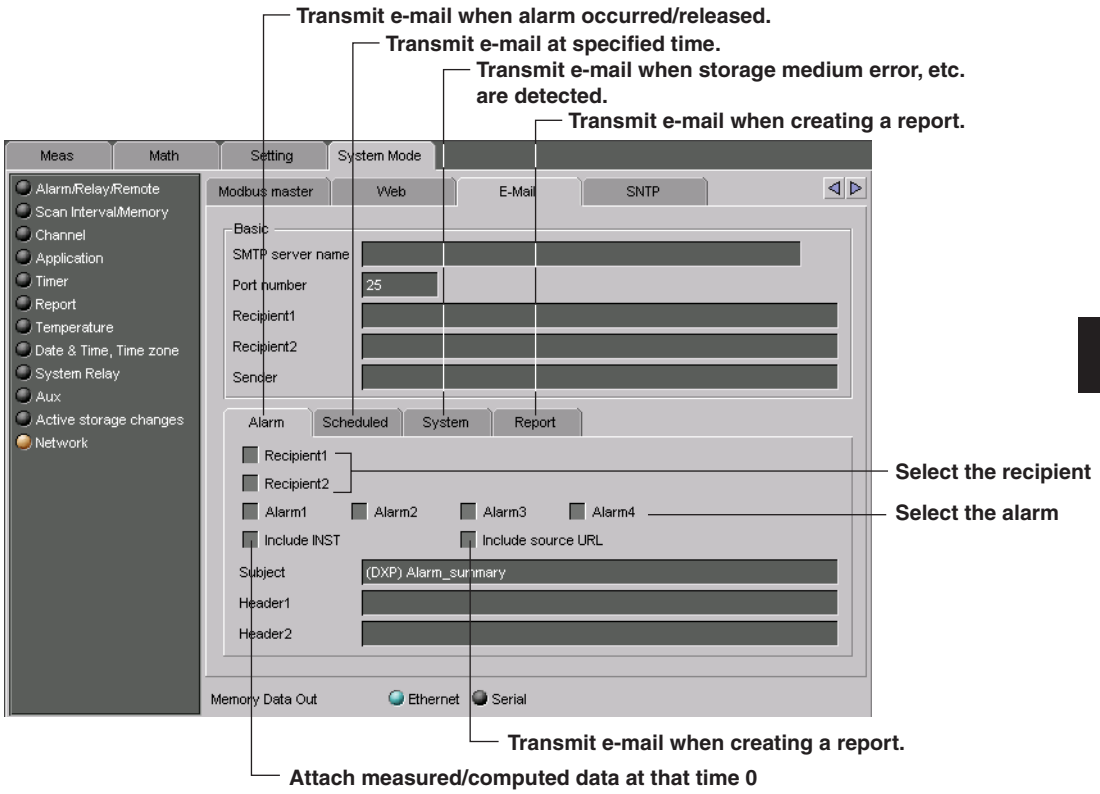
- **Type**
  - INT16: 16-bit signed integer
  - UINT16: 16-bit unsigned integer
  - INT32_B: “32-bit signed integer” is assigned to the Modbus register in the order upper 16 bits followed by the lower 16 bits.
  - INT32_L: “32-bit signed integer” is assigned to the Modbus register in the order lower 16 bits followed by the upper 16 bits.
  - UINT32_B: “32-bit unsigned integer” is assigned to the Modbus register in the order upper 16 bits followed by the lower 16 bits.
  - UINT32_L: “32-bit unsigned integer” is assigned to the Modbus register in the order lower 16 bits followed by the upper 16 bits.
  - FLOAT_B: “32-bit floating-point data” is assigned to the Modbus register in the order upper 16 bits followed by the lower 16 bits.
  - FLOAT_L: “32-bit floating-point data” is assigned to the Modbus register in the order lower 16 bits followed by the upper 16 bits.

Setting the Web Server



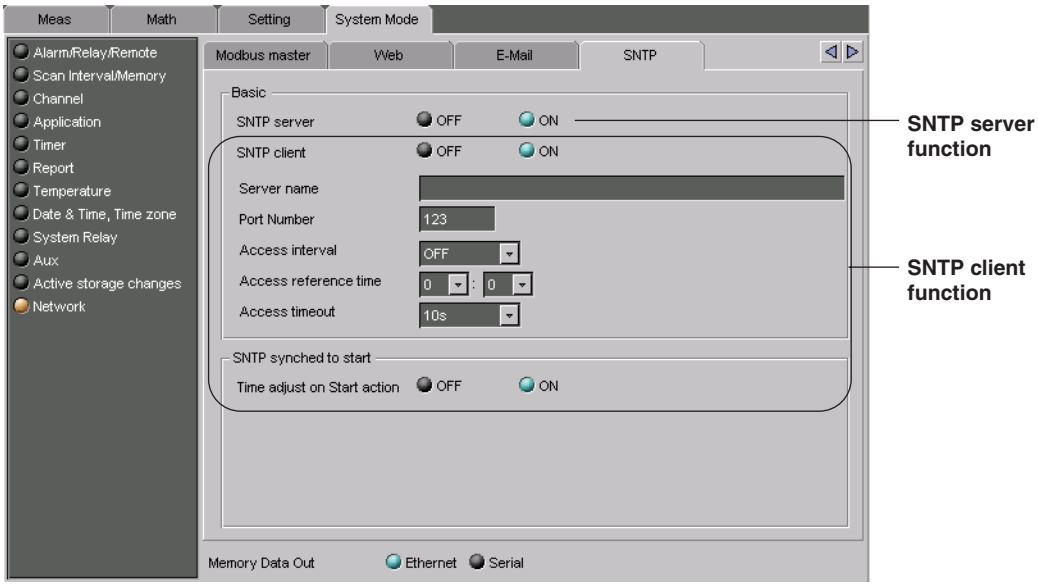
- **Access control/User name/Password**
  Select whether or not use the access control. To use the access control, enter the user name (up to 20 characters) and password (up to 8 characters) to display the operator or monitor page.

Setting the E-Mail Transmission



- **SMTP server name**
  Set the SMTP server name (up to 64 alphanumeric characters) or the IP address of the SMTP server.
- **Port number**
  Set the port number to use in the range from 1 to 65535. The default value is [25].
- **Recipient**
  Set the transmission destination of the e-mail message using up to 150 alphanumeric characters. You can specify multiple addresses. To specify multiple addresses, delimit the addresses using spaces.
- **Sender**
  Set the e-mail address using up to 64 alphanumeric characters. If the address is not set, the first address set in the recipient box is used as the sender's address instead.
- **Alarm**
  Transmits an e-mail messages when alarm is active/released.
- **Scheduled**
  Transmits an e-mail message when the specified time is reached.
- **System**
  Transmits an e-mail message during recovery from a power failure, when memory end is detected, or when an error related to the external storage medium and FTP client occurs
- **Report**
  Transmits an e-mail message when report is created (only on models with the optional computation function (/M1)
- **Subject, Header1, Header2**
  Subject: Set the subject of the e-mail message using up to 32 alphanumeric characters.
  Header1 and Header2: Set the string to be attached to the e-mail message using up to 64 alphanumeric characters.

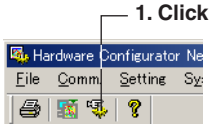
Setting SNTP



- **Basic**
  - **SNTP server**
    Select [ON] when using the SNTP server function. The DXP sends time information to SNTP clients on the network.
  - **SNTP client**
    Select [ON] when using the SNTP client function. The DXP queries time information to an SNTP server on the network.
  - **Server name**
    Set the access destination of time information using up to 64 alphanumeric characters. Set the server host name or IP address.
  - **Port Number**
    Set the port number of the SNTP server in the range from 1 to 65535. The default value is [123].
  - **Access interval**
    Select the time interval for querying the time on the SNTP server from [Off], [1h], [8h], [12h], or [24h]. Time is not queried if [Off] is selected.
  - **Access reference time**
    The time used as a reference for the time query. The time is queried at the specified access interval with respect to this time.
    Set the time in the range of 00:00 to 23:59.
  - **Access timeout**
    The timeout period for a response from the SNTP server. If no response is received within this time period, time query will not be performed.
    Select [10s], [30s], or [90s].
- **SNTP synched to start (Time adjust on Start action)**
  Set whether to query the time using the SNTP client function (ON/OFF) when data acquisition is started.

4.7 Adjusting the Setup Data (Checking the Data)

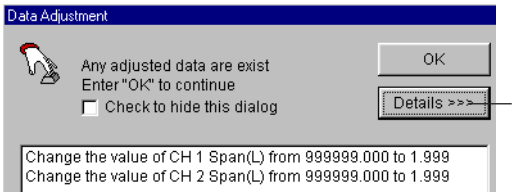
Checking the Setup Data



2. If the data are not consistent, they are automatically corrected.

or

2. If the data are not consistent, the [Data Adjustment] dialog box opens (see the description below).



Click here to display the correction list

The data are corrected in the following cases:

- When the values of the items of the Meas/Math tab are outside the range.
- When an invalid character string is used
- When a set point value in the calibration correction setting is wrong.

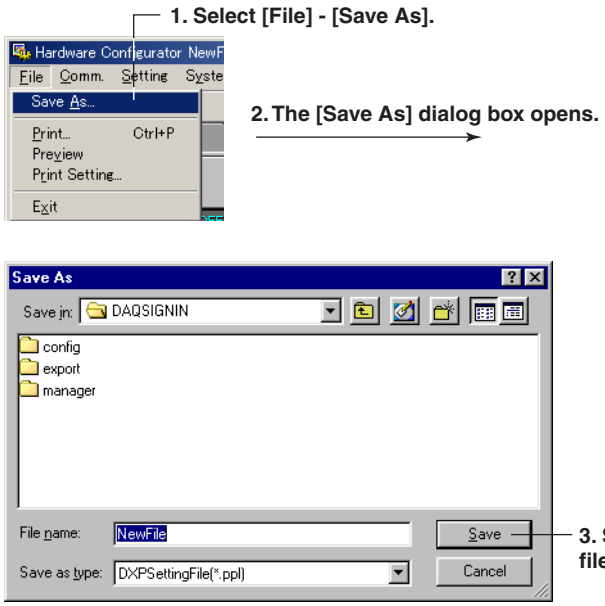
[Data Adjustment] Dialog Box

Select [View] - [Data Adjustment Dialog] to use the [Data Adjustment] dialog box.

4.8 Saving the Setup Data

Saving the Setup Data

Saves the setup data by specifying the save destination and file name.



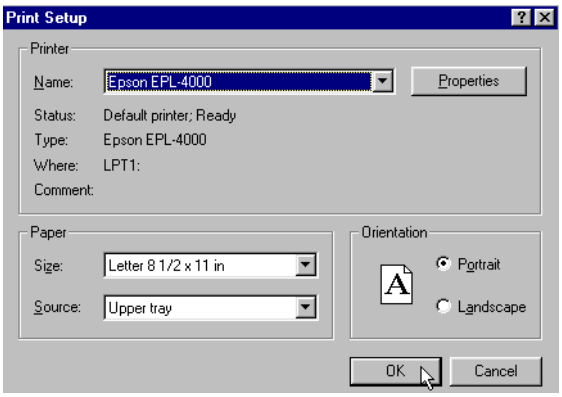
Note

- You cannot save the data using the same file name as the file in the save destination (overwriting the file is not allowed).
- You cannot edit the setup data after saving it. If you wish to change the settings further, start from “Starting Editing” in section 4.2.

4.9 Printing the Setup Data

Setting the Printer

1. Select [File] - [Print Setup].



2. Set the printer, paper and orientation.

Note

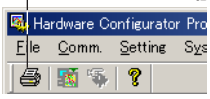
Set the printer according to the environment of the system that you are using.

Print Preview

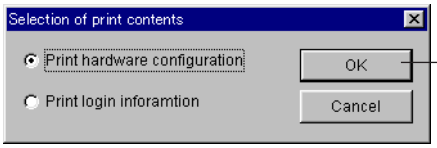
You can preview the print layout before actually printing the data.
Selecting [File] - [Print Preview] displays the print preview screen.

Printing

1. Click here ([File] - [Print]).

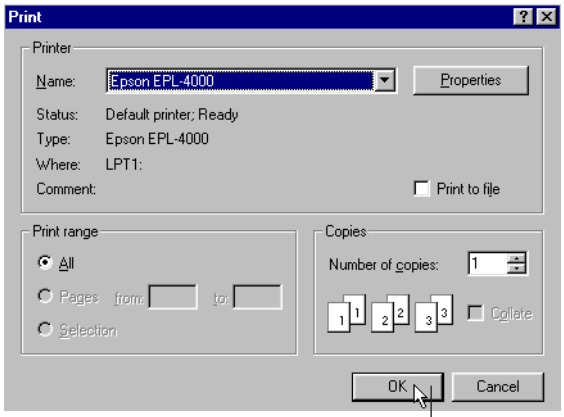


2. The [Selection of print contents] dialog box opens. (Only when the login information is displayed)



3. Select the print contents and click here.

4. The [Print] dialog box opens.



5. Select the printer, print range, the number of copies, and click [OK].

4.10 Characters that can be Used

The characters in the following table can be used when entering a group name, a view group name, a message, a comment to the file header, a save destination directory name, and parameters such as the user name, user ID, and password for signing.

SP	#	%	(	)	*	+	-	.	/
0	1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z				
a	b	c	d	e	f	g	h	i	j
k	l	m	n	o	p	q	r	s	t
u	v	w	x	y	z				
_	°	@							

Note

(*), (+), (.), and (/) cannot be used for the name of the directory where files are to be saved.

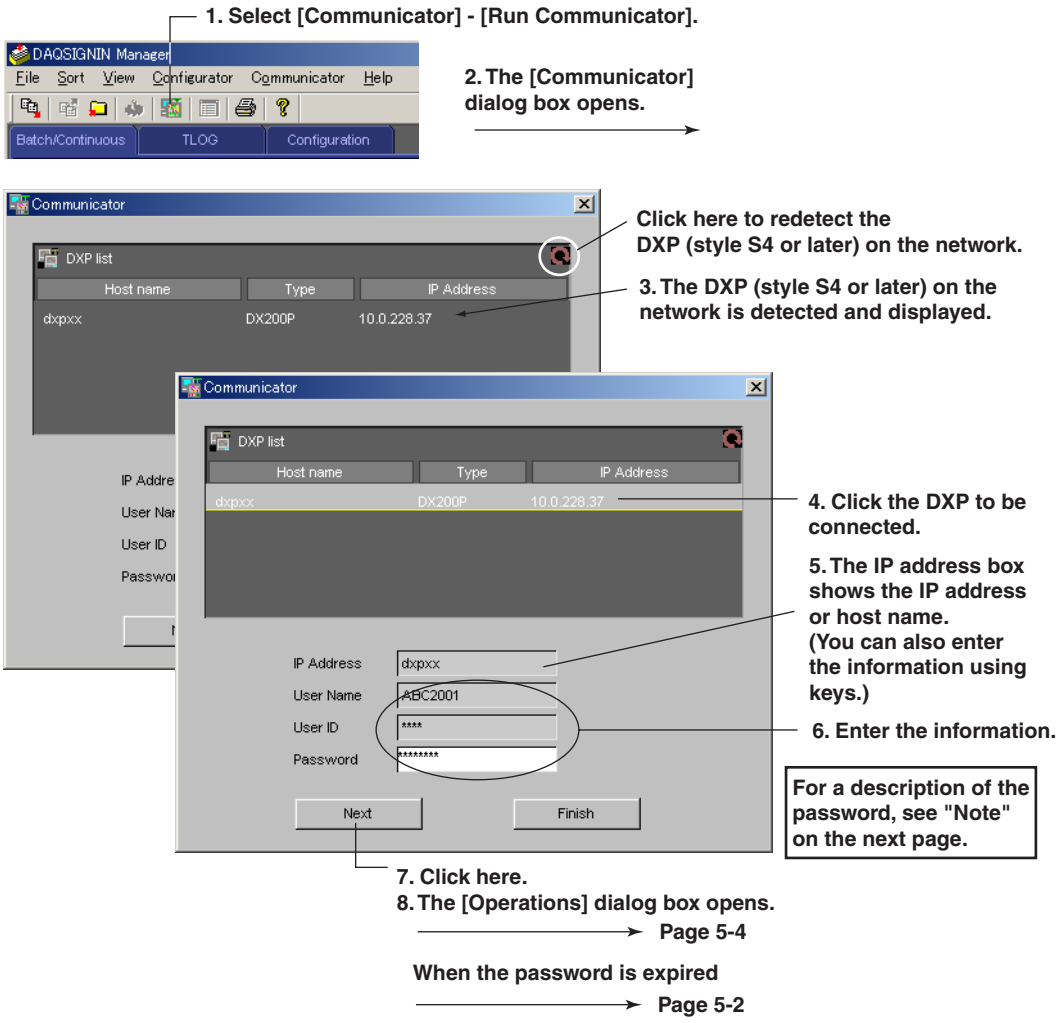
5.1 Connecting to the DXP and Disconnecting from the DXP

There are two methods for connecting to the DXP. One is to connect from the Manager; the other is to connect from the Hardware Configurator. This section describes the method of connecting to the DXP from the Manager. For a description of the method of connecting from the Hardware Configurator, see section 5.3.

Connecting to the DXP from the Manager (Logging In)

Note

- The Communicator Software can connect to the DXP style number S4 or later.
- Only the administrators that are registered to the target DXP can connect to it.
- Connection is not possible if there is a user logged in using the keys on the DXP or if there is a user connected to the setting function via the communication interface.
- Connection is not possible if a user with the same user name is already connected via the communication interface (the setting/measurement server, the monitor function of the maintenance/test server, or the FTP server).
- If the DXP is configured not to use the login function (no administrators are registered), you can connect to the DXP by entering the IP address or host name in the IP address box.
- The Manager is locked while connected to the DXP.



Note

Default password

For the following cases, enter the default password in the Password box.

- Connecting for the first time after user registration.
- Connecting for the first time after resetting the password because the user was invalidated.

User	Default Password
Administrator 1 to 3	Admin1, Admin2, and Admin3
User 01 to 30	User01, User02, User03, ... , User29, and User30

Wrong Password

If the user enters a wrong password and click [Next], the connection fails and the setup information is cleared. If the user repeats this operation three consecutive times, the user is invalidated, and the Communicator Software closes.

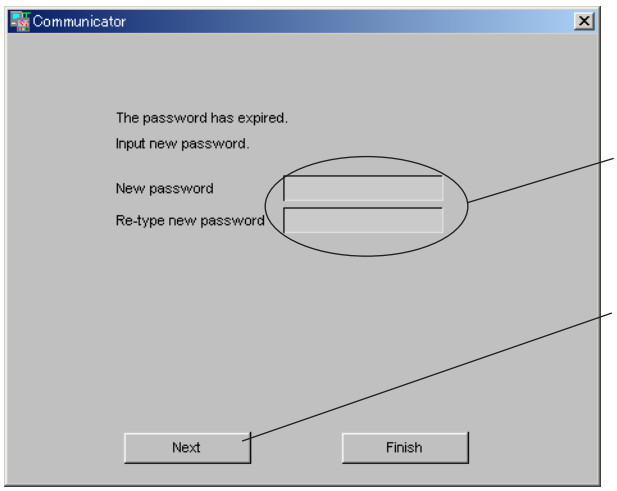
User Locked

The user who is invalidated through the key operation on the DXP cannot log in from the DAQSIGNIN.

Clearing User Invalidated Condition

The user invalidated condition can be cleared by an administrator who is not invalidated. For the operating procedure, see section 5.4.

When the password is expired



9. Enter the password.

For a description of the password, see "Note" below.

10. Click here.

11. The [Operations] dialog box opens.

→ **Page 5-4**

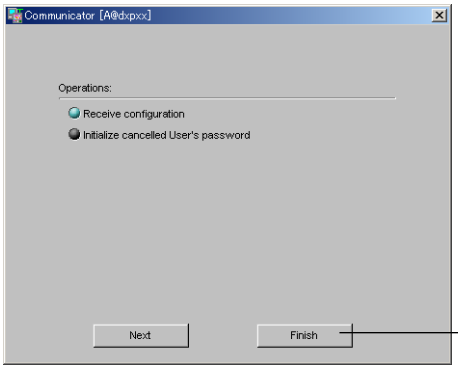
Note

New password

- Enter the password using 6 to 8 characters.
- Spaces are not allowed.
- Combinations of the user ID and password that have been used in the past are not allowed.

Disconnecting from the DXP (Logging Out)

Click [Finish] on the dialog box with the [Finish] button to disconnect the communications and log out from the DXP.



Communication Timeout

The DXP drops the connection if no data transfer is detected between the DXP and the Communicator over a predetermined period of time.

Auto Logout

The DXP drops the connection if there is no key operation on the DXP and no data transfer between the DXP and the Communicator for the specified time (see section 4.4 of the DX100P/DX200P User's Manual).

Maintenance/Test Server

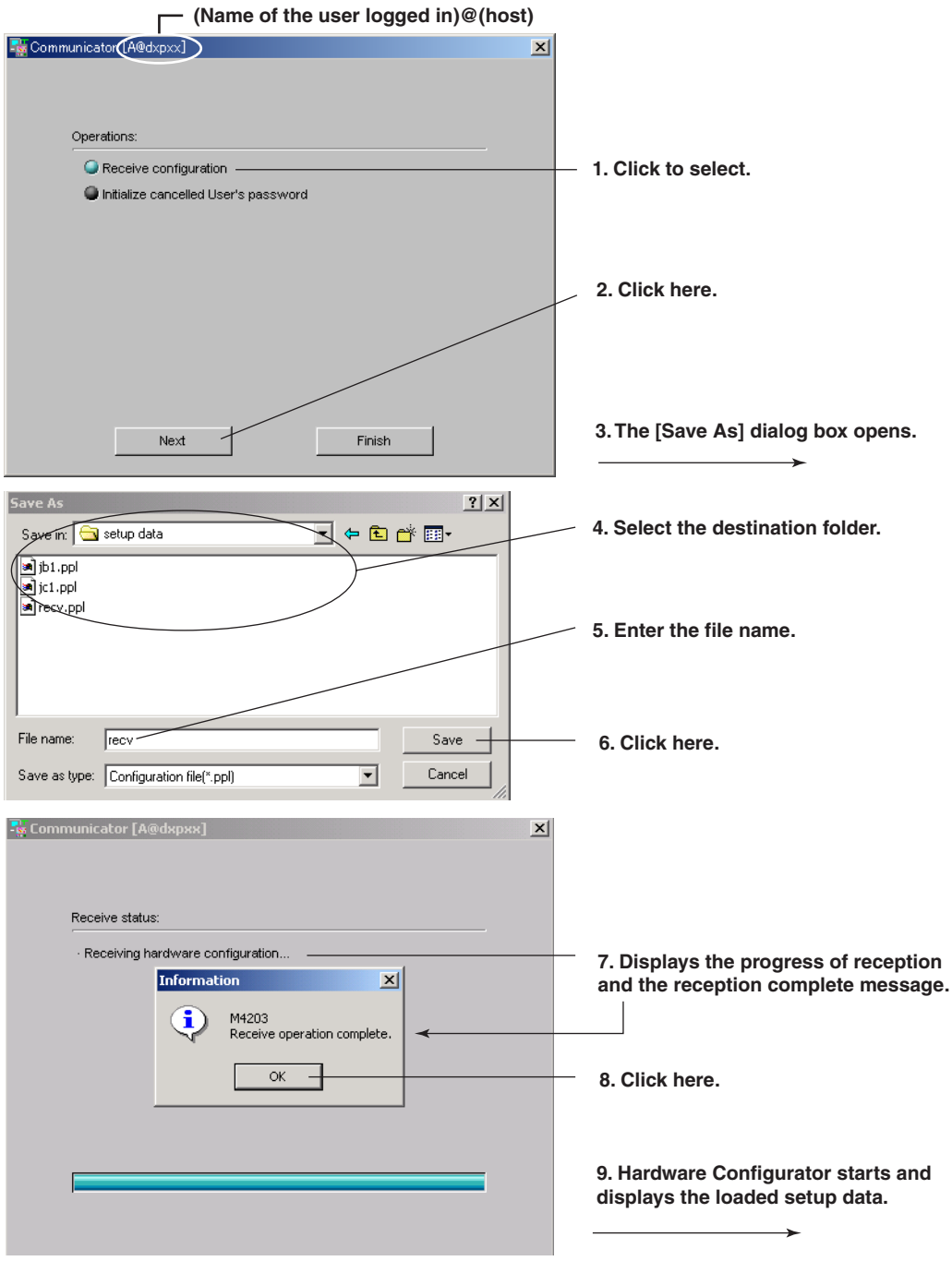
The Maintenance/Test Server can drop the connection between the DXP and the Communicator (see IM04L05A01-17E).

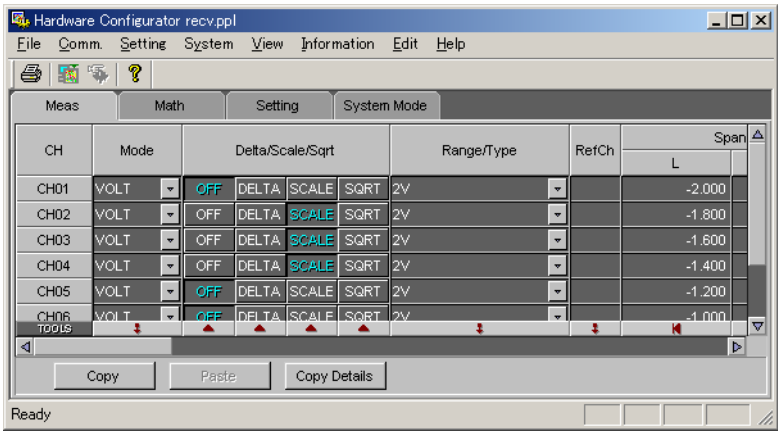
Communication Error/Keep Alive

The connection drops when a communication error or a timeout of the keep alive function is detected (see section 1.1 of IM04L05A01-017E).

5.2 Loading the Setup Data from the DXP

Loading the Setup Data





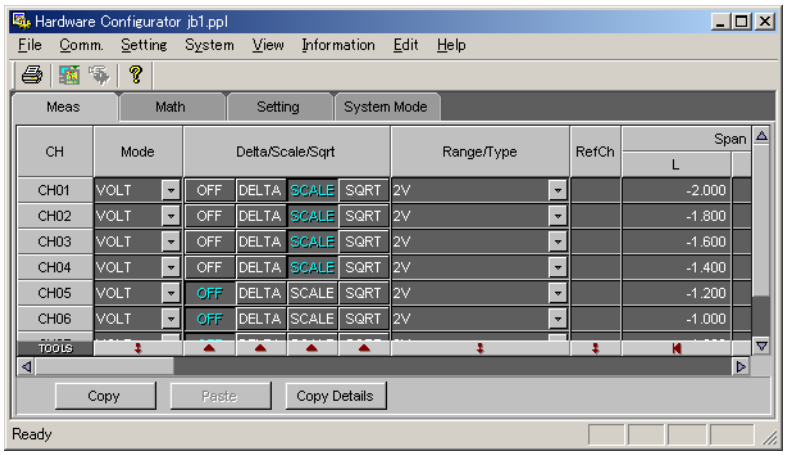
Note

- The loaded setup data is only for viewing.
- The login information and batch/system settings are not displayed.
- For a description of creating a new setup data based on the loaded setup data, see section 4.2.
- The loaded setup data is not imported. For the importing procedure, see section 2.2.

5.3 Sending Setup Data to the DXP

Connecting to the DXP

To send the setup data to the DXP, display the setup data to be sent on the Hardware Configurator and connect to the DXP.



1. Display the setup data to be sent.

3. The [Communicator] dialog box opens.

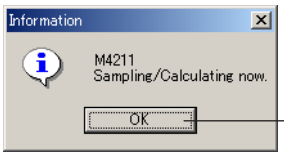
→

The succeeding steps are the same as those given on pages 5-1 and 5-2.
The [Operations] dialog box opens.

→ **Page 5-6**

Note

- Only the setup data of style number S4 and later can be sent. If the setup data of style number S3 or earlier is open, the communicator cannot be started.
- The function for sending the setup data to the DXP cannot be used while the DXP is acquiring data or performing computation.



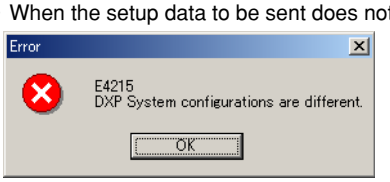
Click here to connect to the DXP without the setup data transmission function and the function for clearing invalidated users.

- The Manager or Hardware Configurator is locked while connected to the DXP.

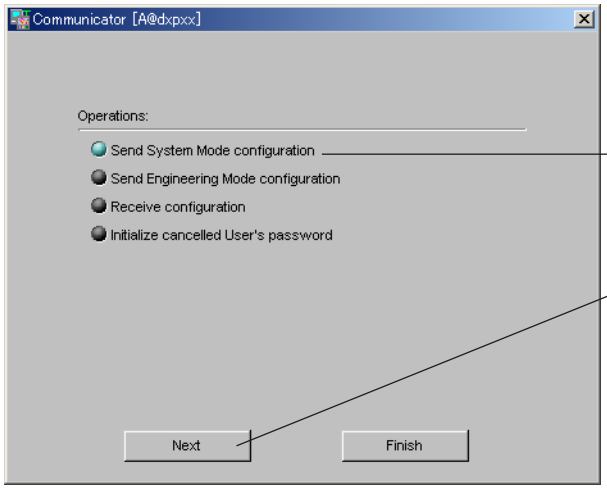
Sending Setup Data of System Mode to the DXP

Note

- The contents of [Login information], [Batch system settings], [IP Address], and [Serial] are not transmitted.
- In the following cases, errors occur and the data cannot be sent to the DXP.
  - When an external storage medium is not inserted in the DXP.
  - When the setup data to be sent does not match the system configuration of the DXP.

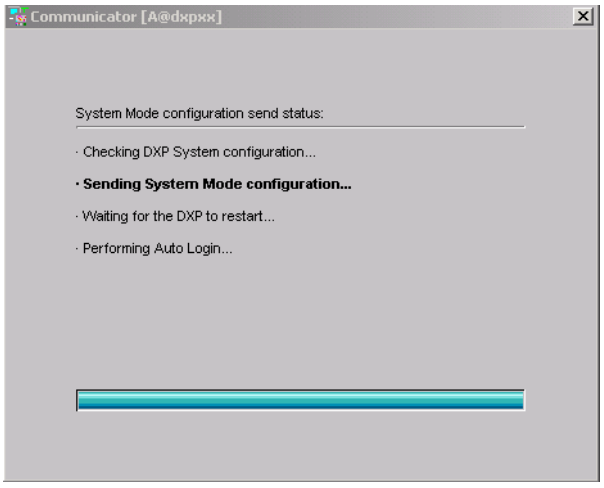


- If a communication error occurs while sending data, the connection is dropped and the screen returns to the [Communicator] dialog box. Repeat the procedure from the step for connecting to the DXP. **The information in the middle of the transmission is not applied to the DXP.**

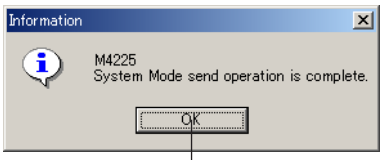


1. Click to select.

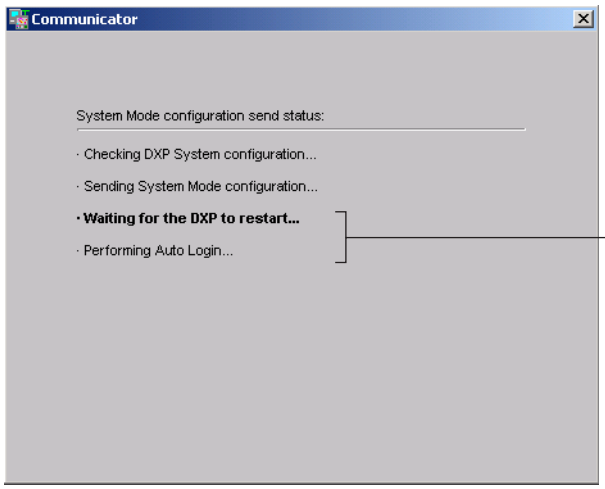
2. Click here.



3. Displays the progress of transmission and the transmission complete message.



4. Click here.



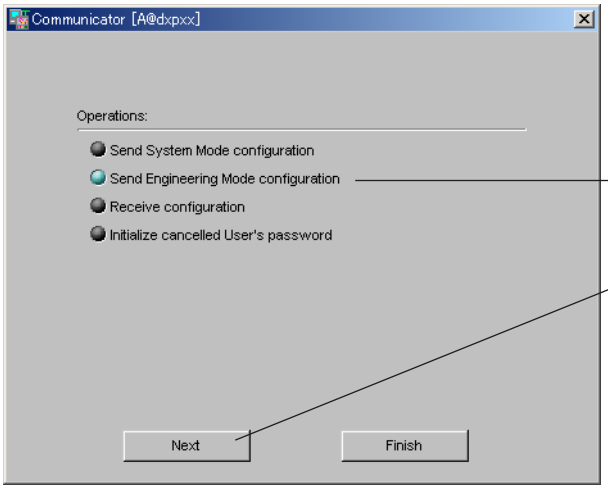
5. Displays the progress of DXP reboot and auto login. The screen returns to the [Operations] dialog box.

After the transmission is complete, the system mode information is saved to the external storage medium, and the user is logged out. DAQSIGNIN automatically logs the user in again.

Sending Setup Data in Engineering Mode to the DXP

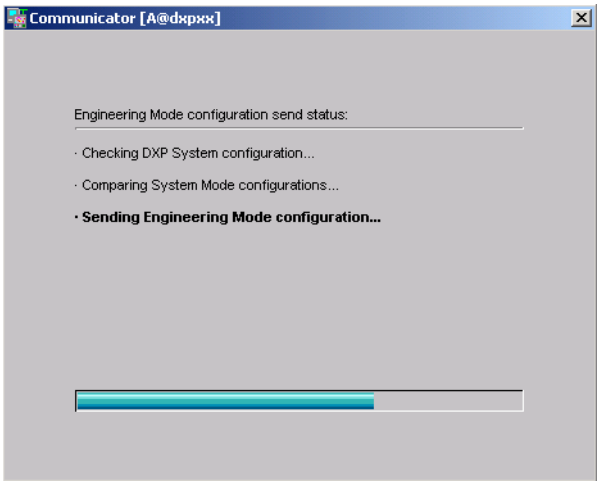
Note

- To send the setup data of system mode and engineering mode, send the setup data of system mode first.
- In the following cases, errors occur and the data cannot be sent to the DXP.
  - When an external storage medium is not inserted in the DXP.
  - When the setup data to be sent does not match the system configuration of the DXP.
  - When the setup data to be sent does not match the setup contents of the DXP system mode (excluding contents that are not sent in the transmission of the setup data of system mode such as the login information).
- If a communication error occurs while sending data, the connection is dropped and the screen returns to the [Communicator] dialog box. Repeat the procedure from the step for connecting to the DXP. **The information in the middle of the transmission is not applied to the DXP.**
- After the transmission is complete, the setup data is saved to the external storage medium.

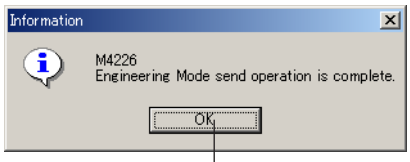


1. Click to select.

2. Click here.



3. Displays the progress of transmission and the transmission complete message.



4. Click here.

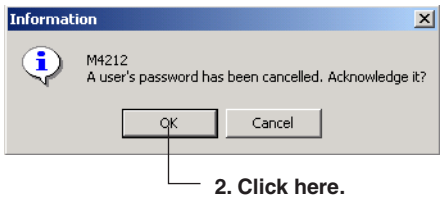
5. Returns to the [Operations] dialog box.

5.4 Clearing the Invalidated User

Clearing the User Locked Icon

Clears the user locked icon that is displayed in the status display section of the DXP.

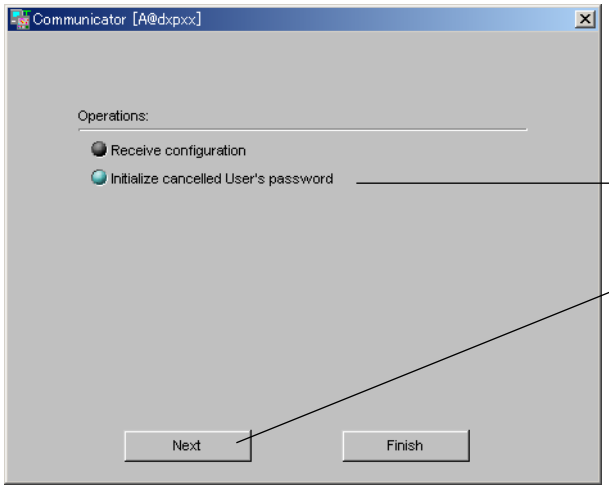
1. The following message is displayed if there is an invalidated user when connecting to the DXP.



2. Click here.

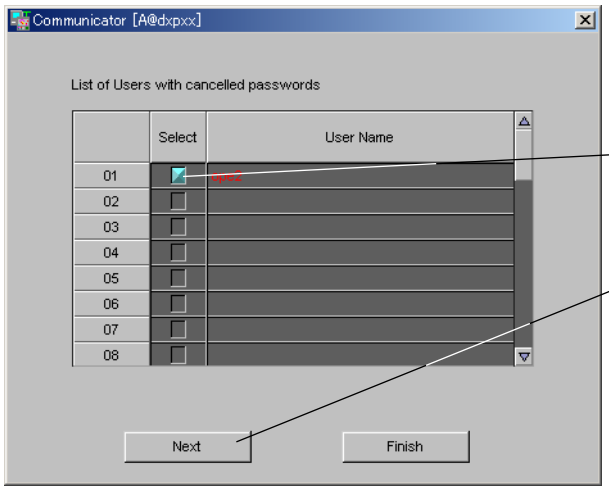
3. The user locked icon on the DXP is cleared.

Setting the Password of the Invalidated User to the Default Password



1. Click to select.

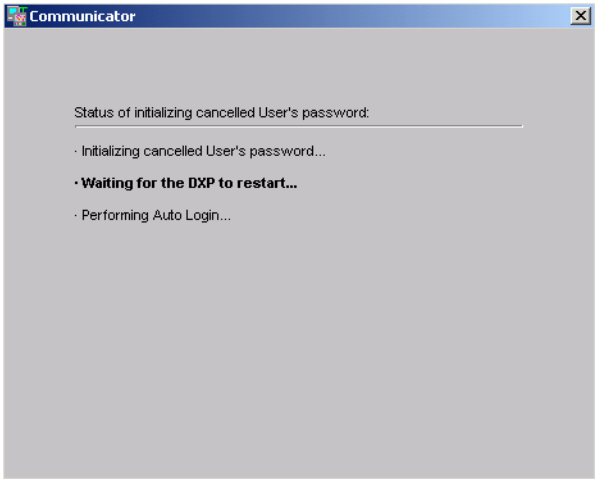
2. Click here.



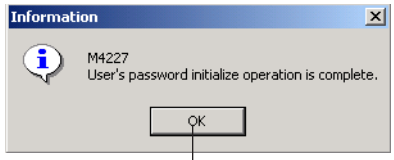
3. Cancelled user list is displayed.

4. Click here to select the user.

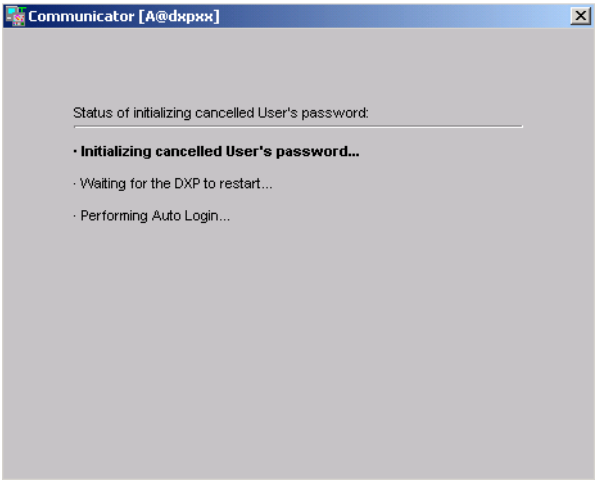
5. Click here.



6. Displays the progress and the completion message.



7. Click here.



8. Displays the progress of DXP reboot and auto login. The screen returns to the [Operations] dialog box.

6.1 Troubleshooting

Hardware Configurator

Warning Message List

Message	Reference Pages
System settings have been changed. Input configuration and data will be initialized. Do you want to proceed?	4-5
Data created in 2038 or later cannot be handled.	–
Some A/D converters are faulty. Some items cannot be set.	–
The current setup data will be initialized.	4-5

Error List

Message	Corrective Action	Reference Pages
Illegal file to load	Select another file.	–
Failed to load the file.	Try to load the file again. If still not possible, the file may be damaged. Select another file.	–
Failed to create a file.	Check the free space in the directory.	–
File already exist.	Use other file name.	–
Communicator already run.	Multiple Communicators cannot run simultaneously. End the running Communicator first to start another Communicator.	–

Data Viewer

Message	Corrective Action	Reference Pages
Insufficient memory. Exit immediately.	Exit other programs then restart, or reboot the OS then restart.	–
Cannot write to the file.	Check the free space in the directory. The file may be currently used by another program, so check it.	–
Cannot load the file.	Check whether the file exists. Also check whether the file system is correct.	–
Cannot open the file.	Check whether the file exists. Also check whether the file system is correct.	–
Illegal file	Select another file.	–
The number of data sets is “0”.	Select another file.	–
The number of channels is “0”.	Select another file.	–
Some files may be overwritten. Do you still want to continue?	Continue if OK. If not, change the file names.	3-22, 3-24, 3-31
Selected data was already shown.	Close the data that is displayed and open the data you wish to display.	–

Manager

Message	Reference Pages
Fail to import files.	2-2
Fail to export files.	2-12
Export folder doesn't exist.	2-12
Other applications are running. Do you want to exit?	–
Cannot end session while DAQSIGNIN is available !	–

Communicator

Message	Reference Pages
Insufficient Memory. Please close at once.	–
Invalid serial number.	1-10
Receiving Completed.	–
Receiving Failed.	–
Password is incorrect.	5-1
Unable login now.	–
The password is not effective.	–
The number of connection has been exceeded.	5-1
Communication timed out.	5-3
The password is not effective or has been used already.	5-2
Sampling/Calculating now.	5-6
An user's password has been set ineffective. Acknowledge it?	5-9
No system administrator's privilege.	–
Abort current operation due to not enough free space on media.	–
DXP options are different.	5-6
An error occurred during sending procedure.	–
An user already logged in.	5-1
No users password is ineffective. Auto login now.	–
Communication error.	–
Operation aborted because an error was found on media.	5-6
Not enough free space on media.	–
Media is read-only.	–
Media is damaged or not formatted.	–
Media has not been inserted.	–
Sending system mode configurations completed.	5-7
Sending engineering mode configurations completed.	5-8
Initializing ineffective user's password completed.	5-10
System mode configurations are different.	–
No users are selected.	–
Specified file extension is not .ppl.	–

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