
**User's
Manual**

DXAdvanced™

**DXA120
DAQSTANDARD for DXAdvanced**

vigilantplant.™

Foreword

Thank you for purchasing the DAQSTANDARD (model name: DXA120). This manual explains how to use the software on Windows 2000 and Windows XP. 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

- The contents of this manual are subject to change without prior notice.
- Every effort has been made in the preparation of this manual to ensure accuracy. However, if any questions arise or errors are found in this manual, please inform the nearest Yokogawa sales representative office.
- Copying or reproduction by any means of all or any part of the contents of this manual without permission is strictly prohibited.
- Transfer or loan of the software to a third party is prohibited.
- Once the software is unpacked, Yokogawa will not guarantee the designed operation of the software, except when the original floppy disk is found to be physically defective.
- Yokogawa will not accept any responsibility for damage caused directly or indirectly as result of use of this software.
- **The serial number will not be reissued, therefore, it must be kept in a safe place.**

Copyright

Yokogawa holds the copyright to the software that is on the CD-ROM.

Trademarks

- All the brands or names of Yokogawa Electric's products used in this manual are either trademarks or registered trademarks of Yokogawa Electric Corporation.
- Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Adobe and Acrobat are trademarks of Adobe Systems incorporated.
- Lotus1-2-3 is a registered trademark of Lotus Development Corporation.
- Other product names are trademarks or registered trademarks of the corresponding companies.
- For purposes of this manual, the ™ and ® symbols do not accompany their respective trademark names or registered trademark names.

Revisions

1st Edition: December 2005

Terms and Conditions of the Software License

NOTICE - PLEASE READ CAREFULLY BEFORE USE

Thank you very much for purchasing this medium containing a software program and related documentation provided by Yokogawa Electric Corporation (hereinafter called "Yokogawa"), and the program contained, embedded, inserted or used in the medium (hereinafter called the "Yokogawa Software Program").

By opening this package or plastic wrapping (hereinafter called "Package") enclosing the Yokogawa Software Program, you acknowledge that you understand and agree to the "Terms and Conditions of the Software License" (hereinafter called "Terms and Conditions") which is written in the documentation and separately attached. Accordingly, the Terms and Conditions bind you.

The Yokogawa Software Program and its related documentation including ownership of copyright shall remain the exclusive property of Yokogawa or those third parties from whom sublicensed software in the Yokogawa Software Program is licensed.

Yokogawa hereby grants you permission to use the Yokogawa Software Program on the conditions that you agree to the Terms and Conditions before you open the Package and/or install it in or onto a computer.

IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS, YOU CANNOT OPEN THE PACKAGE, AND MUST IMMEDIATELY RETURN IT TO YOKOGAWA OR ITS DESIGNATED PARTY.

Terms and Conditions of the Software License

Yokogawa Electric Corporation, a Japanese corporation (hereinafter called "Yokogawa"), grants permission to use this Yokogawa Software Program (hereinafter called the "Licensed Software") to the Licensee on the conditions that the Licensee agrees to the terms and conditions stipulated in Article 1 hereof.

You, as the Licensee (hereinafter called "Licensee"), shall agree to the following terms and conditions for the software license (hereinafter called the "Agreement") based on the use intended for the Licensed Software.

Please note that Yokogawa grants the Licensee permission to use the Licensed Software under the terms and conditions herein and in no event shall Yokogawa intend to sell or transfer the Licensed Software to the Licensee.

Licensed Software Name: DAQSTANDARD for DXAdvanced (Software for Daqstation DX1000/DX2000/DX1000N)

Number of License: 1

Article 1 (Scope Covered by these Terms and Conditions)

- 1.1 The terms and conditions stipulated herein shall be applied to any Licensee who purchases the Licensed Software on the condition that the Licensee consents to agree to the terms and conditions stipulated herein.
- 1.2 The "Licensed Software" herein shall mean and include all applicable programs and documentation, without limitation, all proprietary technology, algorithms, and know-how such as a factor, invariant or process contained therein.

Article 2 (Grant of License)

- 2.1 Yokogawa grants the Licensee, for the purpose of single use, non-exclusive and non-transferable license of the Licensed Software with the license fee separately agreed upon by both parties.
- 2.2 The Licensee is, unless otherwise agreed in writing by Yokogawa, not entitled to copy, change, sell, distribute, transfer, or sublicense the Licensed Software.
- 2.3 The Licensed Software shall not be copied in whole or in part except for keeping one (1) copy for back-up purposes. The Licensee shall secure or supervise the copy of the Licensed Software by the Licensee itself with great, strict, and due care.
- 2.4 In no event shall the Licensee dump, reverse assemble, reverse compile, or reverse engineer the Licensed Software so that the Licensee may translate the Licensed Software into other programs or change it into a man-readable form from the source code of the Licensed Software. Unless otherwise separately agreed by Yokogawa, Yokogawa shall not provide the Licensee the source code for the Licensed Software.
- 2.5 The Licensed Software and its related documentation shall be the proprietary property or trade secret of Yokogawa or a third party which grants Yokogawa the rights. In no event shall the Licensee be transferred, leased, sublicensed, or assigned any rights relating to the Licensed Software.
- 2.6 Yokogawa may use or add copy protection in or onto the Licensed Software. In no event shall the Licensee remove or attempt to remove such copy protection.
- 2.7 The Licensed Software may include a software program licensed for re-use by a third party (hereinafter called "Third Party Software", which may include any software program from affiliates of Yokogawa made or coded by themselves.) In the case that Yokogawa is granted permission to sublicense to third parties by any licensors (sub-licensor) of the Third Party Software pursuant to different terms and conditions than those stipulated in this Agreement, the Licensee shall observe such terms and conditions of which Yokogawa notifies the Licensee in writing separately.
- 2.8 In no event shall the Licensee modify, remove or delete a copyright notice of Yokogawa and its licensor contained in the Licensed Software, including any copy thereof.

Article 3 (Restriction of Specific Use)

- 3.1 The Licensed Software shall not be intended specifically to be designed, developed, constructed, manufactured, distributed or maintained for the purpose of the following events:
 - a) Operation of any aviation, vessel, or support of those operations from the ground;
 - b) Operation of nuclear products and/or facilities;
 - c) Operation of nuclear weapons and/or chemical weapons and/or biological weapons;
 - d) Operation of medical instrumentation directly utilized for humankind or the human body.
- 3.2 Even if the Licensee uses the Licensed Software for the purposes in the preceding Paragraph 3.1, Yokogawa has no liability to or responsibility for any demand or damage arising out of the use or operations of the Licensed Software, and the Licensee agrees, on its own responsibility, to solve and settle the claims and damages and to defend, indemnify or hold Yokogawa totally harmless, from or against any liabilities, losses, damages and expenses (including fees for recalling the Products and reasonable attorney's fees and court costs), or claims arising out of and related to the above-said claims and damages.

Article 4 (Warranty)

- 4.1 The Licensee shall agree that the Licensed Software shall be provided to the Licensee on an "as is" basis when delivered. If defect(s), such as damage to the medium of the Licensed Software, attributable to Yokogawa is found, Yokogawa agrees to replace, free of charge, any Licensed Software on condition that the defective Licensed Software shall be returned to Yokogawa's specified authorized service facility within seven (7) days after opening the Package at the Licensee's expense. As the Licensed Software is provided to the Licensee on an "as is" basis when delivered, in no event shall Yokogawa warrant that any information on or in the Licensed Software, including without limitation, data on computer programs and program listings, be completely accurate, correct, reliable, or the most updated.
- 4.2 Notwithstanding the preceding Paragraph 4.1, when third party software is included in the Licensed Software, the warranty period and terms and conditions that apply shall be those established by the provider of the third party software.

- 4.3 When Yokogawa decides in its own judgement that it is necessary, Yokogawa may from time to time provide the Licensee with Revision upgrades and Version upgrades separately specified by Yokogawa (hereinafter called "Updates").
- 4.4 Notwithstanding the preceding Paragraph 4.3, in no event shall Yokogawa provide Updates where the Licensee or any third party conducted renovation or improvement of the Licensed Software.
- 4.5 THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF QUALITY AND PERFORMANCE, WRITTEN, ORAL, OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY YOKOGAWA AND ALL THIRD PARTIES LICENSING THIRD PARTY SOFTWARE TO YOKOGAWA.
- 4.6 Correction of nonconformity in the manner and for the period of time provided above shall be the Licensee's sole and exclusive remedy for any failure of Yokogawa to comply with its obligations and shall constitute fulfillment of all liabilities of Yokogawa and any third party licensing the Third Party Software to Yokogawa (including any liability for direct, indirect, special, incidental or consequential damages) whether in warranty, contract, tort (including negligence but excluding willful conduct or gross negligence by Yokogawa) or otherwise with respect to or arising out of the use of the Licensed Software.

Article 5 (Infringement)

- 5.1 If and when any third party should demand injunction, initiate a law suit, or demand compensation for damages against the Licensee under patent right (including utility model right, design patent, and trade mark), copy right, and any other rights relating to any of the Licensed Software, the Licensee shall notify Yokogawa in writing to that effect without delay.
- 5.2 In the case of the preceding Paragraph 5.1, the Licensee shall assign to Yokogawa all of the rights to defend the Licensee and to negotiate with the claiming party. Furthermore, the Licensee shall provide Yokogawa with necessary information or any other assistance for Yokogawa's defense and negotiation. If and when such a claim should be attributable to Yokogawa, subject to the written notice to Yokogawa stated in the preceding Paragraph 5.1, Yokogawa shall defend the Licensee and negotiate with the claiming party at Yokogawa's cost and expense and be responsible for the final settlement or judgment granted to the claiming party in the preceding Paragraph 5.1.
- 5.3 When any assertion or allegation of the infringement of the third party's rights defined in Paragraph 5.1 is made, or when at Yokogawa's judgment there is possibility of such assertion or allegation, Yokogawa will, at its own discretion, take any of the following countermeasures at Yokogawa's cost and expense.
 - a) To acquire the necessary right from a third party which has lawful ownership of the right so that the Licensee will be able to continue to use the Licensed Software;
 - b) To replace the Licensed Software with an alternative one which avoids the infringement; or
 - c) To remodel the Licensed Software so that the Licensed Software can avoid the infringement of such third party's right.
- 5.4 If and when Yokogawa fails to take either of the countermeasures as set forth in the preceding subparagraphs of Paragraph 5.3, Yokogawa shall indemnify the Licensee only by paying back the price amount of the Licensed Software which Yokogawa has received from the Licensee. THE FOREGOING PARAGRAPHS STATE THE ENTIRE LIABILITY OF YOKOGAWA AND ANY THIRD PARTY LICENSING THIRD PARTY SOFTWARE TO YOKOGAWA WITH RESPECT TO INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS INCLUDING BUT NOT LIMITED TO, PATENT AND COPYRIGHT.

Article 6 (Liabilities)

- 6.1 If and when the Licensee should incur any damage relating to or arising out of the Licensed Software or service that Yokogawa has provided to the Licensee under the conditions herein due to a reason attributable to Yokogawa, Yokogawa shall take actions in accordance with this Agreement. However, in no event shall Yokogawa be liable or responsible for any special, incidental, consequential and/or indirect damage, whether in contract, warranty, tort, negligence, strict liability, or otherwise, including, without limitation, loss of operational profit or revenue, loss of use of the Licensed Software, or any associated products or equipment, cost of capital, loss or cost of interruption of the Licensee's business, substitute equipment, facilities or services, downtime costs, delays, and loss of business information, or claims of customers of Licensee or other third parties for such or other damages. Even if Yokogawa is liable or responsible for the damages attributable to Yokogawa and to the extent of this Article 6, Yokogawa's liability for the Licensee's damage shall not exceed the price amount of the Licensed Software or service fee which Yokogawa has received. Please note that Yokogawa shall be released or discharged from part or all of the liability under this Agreement if the Licensee modifies, remodels, combines with other software or products, or causes any deviation from the basic specifications or functional specifications, without Yokogawa's prior written consent.
- 6.2 All causes of action against Yokogawa arising out of or relating to this Agreement or the performance or breach hereof shall expire unless Yokogawa is notified of the claim within one (1) year of its occurrence.
- 6.3 In no event, regardless of cause, shall Yokogawa assume responsibility for or be liable for penalties or penalty clauses in any contracts between the Licensee and its customers.

Article 7 (Limit of Export)

Unless otherwise agreed by Yokogawa, the Licensee shall not directly or indirectly export or transfer the Licensed Software to any countries other than those where Yokogawa permits export in advance.

Article 8 (Term)

This Agreement shall become effective on the date when the Licensee receives the Licensed Software and continues in effect unless or until terminated as provided herein, or the Licensee ceases using the Licensed Software by itself or with Yokogawa's thirty (30) days prior written notice to the Licensee.

Article 9 (Injunction for Use)

During the term of this Agreement, Yokogawa may, at its own discretion, demand injunction against the Licensee in case that Yokogawa deems that the Licensed Software is used improperly or under severer environments other than those where Yokogawa has first approved, or any other condition which Yokogawa may not permit.

Article 10 (Termination)

Yokogawa, at its sole discretion, may terminate this Agreement without any notice or reminder to the Licensee if the Licensee violates or fails to perform this Agreement. However, Articles 5, 6, and 11 shall survive even after the termination.

Article 11 (Jurisdiction)

Any dispute, controversies, or differences between the parties hereto as to interpretation or execution of this Agreement shall be resolved amicably through negotiation between the parties upon the basis of mutual trust. Should the parties fail to agree within ninety (90) days after notice from one of the parties to the other, both parties hereby irrevocably submit to the exclusive jurisdiction of the Tokyo District Court (main office) in Japan for settlement of the dispute.

Article 12 (Governing Law)

This Agreement shall be governed by and construed in accordance with the laws of Japan. The Licensee expressly agrees to waive absolutely and irrevocably and to the fullest extent permissible under applicable law any rights against the laws of Japan which it may have pursuant to the Licensee's local law.

Article 13 (Severability)

In the event that any provision hereof is declared or found to be illegal by any court or tribunal of competent jurisdiction, such provision shall be null and void with respect to the jurisdiction of that court or tribunal and all the remaining provisions hereof shall remain in full force and effect.

How to Use this Manual

Structure of the Manual

This manual consists of the following five chapters and index.

Chapter	Title	Content
1	Before using the DAQSTANDARD	Explains the PC system environment required for use of the DAQSTANDARD. Also explains how to install it.
2	Functions of Launcher	Explains Launcher which is used to start the utility programs. Also explains how to set communications between the DX1000/DX2000 and your computer.
3	Configuring the DX1000/DX2000	Explains how to set measurement conditions of the DX1000/DX2000.
4	Displaying Data with the Data Viewer	Explains how to display data stored in the hard disk etc. Also explains how to convert data to various data formats such as ASCII.
5	Troubleshooting	Gives a list of error messages and corrective measures.
	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 Windows 2000 and Windows XP. 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 useful information regarding operation of the software.

Contents

Foreword	i
Terms and Conditions of the Software License	ii
How to Use this Manual	iv
Chapter 1 Before using the DAQSTANDARD	
1.1 Overview of the DAQSTANDARD	1-1
1.2 Required PC System Environment	1-2
1.3 Installing the DAQSTANDARD	1-3
1.4 Starting/Exiting the Utility Software	1-4
Chapter 2 Functions of Launcher	
2.1 Functions of Launcher	2-1
2.2 Displaying the Version Information	2-2
2.3 Setting the Communication Method	2-3
Chapter 3 Configuring the DX1000/DX2000	
3.1 Starting the Hardware Configurator	3-1
Starting the Hardware Configurator	3-1
To Load Setup Data from the DX1000/DX2000	3-1
Creating Setup Data by Configuring a New System	3-2
Loading Preexisting Setup Data	3-2
3.2 Setting and Checking the System Configuration and Initializing Setup Data	3-3
Changing/Checking the System Configuration	3-3
Initializing the Setup Data	3-4
3.3 Creating and Editing Hardware Setup Data	3-5
3.4 Sending the Setup Data to the DX1000/DX2000	3-10
3.5 Saving the Setup Data	3-11
3.6 Printing the Setup Data	3-12
Setting the Printer	3-12
Print Preview	3-12
Printing	3-12
3.7 Starting and Stopping Measurement on the DX1000/DX2000, Checking the DX1000/ DX2000 System Configuration	3-13
3.8 Characters That Can Be Used	3-14
Chapter 4 Displaying Data with the Data Viewer	
4.1 Starting and Exiting the Data Viewer	4-1
Starting the Data Viewer	4-1
Opening the File by Specifying its Location	4-2
Exiting the Data Viewer	4-3
4.2 Displaying the Waveform	4-4
Displaying the Waveform	4-4
General Display Settings	4-5
Setting the Time Axis	4-7
Setting the Y-axis	4-8
Turn ON/OFF the Alarm Display	4-11
Selecting the Characters Used to Identify Channels	4-12
Showing/Hiding Cursors	4-12
Displaying Cursor's Values	4-13

- Displaying Statistics 4-14
- Adding Arbitrary Marks 4-14
- Searching the Alarm Transition Point and Mark Position 4-15
- Deleting Marks 4-16
- Resetting Marks 4-16
- Setting the Window 4-17
- 4.3 Circular Display 4-18
 - Circular Display 4-18
 - General Display Settings 4-18
 - Setting the Time Axis 4-19
 - Setting the Y-axis 4-19
 - Turning ON/OFF the Alarm Display 4-19
- 4.4 Displaying Numeric Values 4-20
 - Displaying Numeric Values 4-20
 - General Display Settings of the Numeric Display 4-20
 - Setting the Time Axis 4-20
 - Turn ON/OFF the Alarm Display 4-20
 - Selecting the Characters Used to Identify Channels 4-21
 - Showing/Hiding Cursors 4-21
 - Adding Arbitrary Marks, Deleting Marks, and Resetting Marks 4-21
- 4.5 Linking Files and Saving the Link Settings File 4-22
 - Linking Files 4-22
 - Saving the Link Settings File 4-24
- 4.6 Listing Alarms and Marks and Converting the List 4-25
- 4.7 Displaying the Report Files 4-27
- 4.8 Saving the Display Settings 4-28
- 4.9 Saving Display Template 4-29
 - Saving Templates 4-29
 - Using Templates 4-29
- 4.10 Converting the Data 4-30
 - Conversion Example 4-31
- 4.11 Printing 4-32
 - Setting the Printer 4-32
 - Specifying the Contents to be Printed (for Display Data File and Event Data File) 4-32
 - Header 4-34
 - Print Preview 4-34
 - Printing 4-34

Chapter 5 Troubleshooting

- 5.1 Troubleshooting 5-1

Index

1.1 Overview of the DAQSTANDARD

The DAQSTANDARD consists of the following three utility programs.

- Launcher
- Hardware Configurator
- Data Viewer

Launcher

Launcher is provided to start the last two utility programs. It also allows you to set communication conditions between the DX1000/DX2000 and this DAQSTANDARD. Launcher and Data Viewer will be automatically registered to the Start menu of Windows when the DAQSTANDARD is installed.

Hardware Configurator

Allows you to set the DX1000/DX2000 hardware (measurement/math channels, display method etc.). It also allows transfer of the setup data to the DX1000/DX2000 and saving it to the personal computer's hard disk. Setup data can be set by the following three methods.

- Receiving the setup data from the DX1000/DX2000 currently connected to the PC
- Loading existing setup data
- By configuring a system

Data Viewer

Displays the following four types of data generated by the DX1000/DX2000 and prints them. The data can be displayed graphically or digitally.

- Display data file (.dad)
- Event data file (.dae)
- Report data file (.dar)
- Manual sample data file (.dam)

Note

If you want to open a single Data Viewer, select [Program] - [DAQSTANDARD] - [Viewer].

1.2 Required PC System Environment

Hardware

Personal Computer

A computer which runs on Windows 98, Windows Me, Windows 2000, Windows NT4.0, or Windows XP, and is equipped with Pentium II 333 MHz or higher (Pentium III 600 MHz or higher is recommended).

Main Memory

32 MB or more (generally, 128 MB or more recommended with a Pentium II, though the computer performance depends on the graphics board). However, some application programs may require more memory. Also, memory requirements depended on the OS.

Hard Disk

A free space of 100 MB or more.

CD-ROM Drive

To be used for installing the software.

Mouse

A mouse supported by Windows.

Monitor

A monitor supported by Windows, Resolution: 800 × 600 dots or higher, Number of colors: 32 K or more (A monitor with 1024 × 768 dots and 65536 colors is recommended)

Interface Port

An RS-232 port or an Ethernet port supported by the OS.

Printer

A printer supported by Windows is required. An appropriate printer driver is also required.

Operating System (OS)

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 DAQSTANDARD

The DAQSTANDARD is provided by a CD-ROM. To install the software, an appropriate serial number needs to be entered. The serial number is indicated on the CD.

Operating Method

1. Start Windows. Log onto Windows as an administrator.
2. Insert the CD into the CD-ROM drive of the computer.
3. The installation program starts automatically. Follow the instructions on the screen to proceed with the installation.

If the installation program does not start automatically when you insert the CD-ROM into the CD-ROM drive, use the following procedure to start it.

4. In [My Computer], double-click the CD-ROM icon.
5. Double-click the setup.exe file in the root directory. Installation starts. Follow the instructions on the screen to complete the installation.

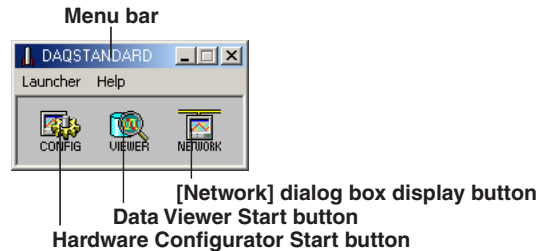
Note

- Before starting installation, make sure that all the resident programs such as anti-virus programs are exited.
- When installation is complete, Launcher and Data Viewer will be registered to the Start menu.
- To re-install the software, first uninstall it, then re-install it.
- To uninstall the software, follow the procedure given below.
 1. In the [Control Panel], double-click [Add/Remove Programs]. The [Add/Remove Programs Properties] dialog box will appear. From the list, select [DAQSTANDARD] and uninstall it.
 2. If necessary, back up the following files to another directory.
 - Setup data file (*.pdl) saved under the directory where the DAQSTANDARD has been installed
 3. From Windows Explore, delete all the files (data files and subdirectories) created after installation as well as the directory where the software was installed.

1.4 Starting/Exiting the Utility Software

Starting

1. From the Start menu, select [Programs] - [DAQSTANDARD] - [Launcher]. Launcher starts, and the following window appears.



After installing the software, when you first start it, the [Network] dialog box appears. For details about the setting method, see section 2.3, "Setting the Communication Method". If the DX1000/DX2000 is not turned ON or connected when the communication settings are completed, the [Network] dialog box opens.

2. Click the start button of the desired utility, or select the desired utility from the Launcher menu. [Hardware Configurator], [Data Viewer], and [Network Configuration] appear on the [Launcher] menu.

Note

- Once Hardware Configurator, Data Viewer or [Network] dialog box has started, the corresponding start button will be disabled until it is exited.
- If you want to open a single Data Viewer, select [Program] - [DAQSTANDARD] - [Viewer].
- Once Hardware Configurator has started, it is not possible to open the [Network] dialog box.
- Once the [Network] dialog box is opened, it is not possible to start Hardware Configurator and Data Viewer.

Exiting

To exit Hardware Configurator or Data Viewer, select [File] - [Exit], or click the [X] button. To exit the [Network] dialog box, click [OK], [Cancel] or [X] button. To exit Launcher, select [Launcher] - [Exit], or click the [X] button.

Note

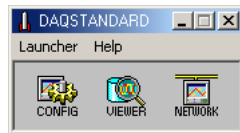
- Before exiting Launcher, make sure that all the utilities are exited.
- When Launcher is exited, the DAQSTANDARD will also be exited.

2.1 Functions of Launcher

Starting

The utilities of the DAQSTANDARD can be started from Launcher.

From the Start menu, select [Programs] - [DAQSTANDARD] - [Launcher]. Launcher starts, and the following window appears. If communications have not been set, the [Network] dialog box appears. Hardware Configurator (CONFIG), Data Viewer (VIEWER) and [Network] dialog box (NETWORK) can be started from Launcher.



Description of Each Button

The following three tool buttons are available.

CONFIG	Hardware Configurator Start button. Used to start Hardware Configurator. Once Hardware Configurator has started, this button will be disabled.
VIEWER	Data Viewer Start button. Used to start Data Viewer. Once Data Viewer has started, this button will be disabled.
NETWORK	[Network] Dialog Box Display button. Used to open the [Network] dialog box to set communication conditions. Once Hardware Configurator has started, this button will be disabled.

Description of Each Menu

The following two menus are available.

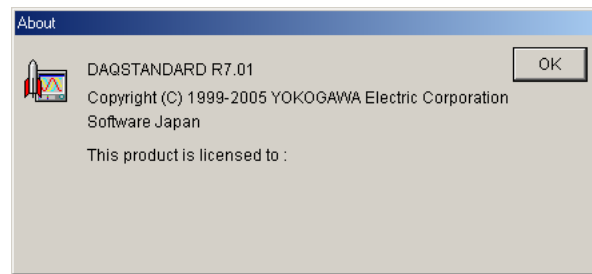
Launcher	Hardware Configurator	Same as the CONFIG button
	Data Viewer	Same as the VIEWER button
	Network Configuration	Same as the NETWORK button
Help	About	Displays the version number of Launcher.

2.2 Displaying the Version Information

To confirm the version of the DAQSTANDARD, open the [About] dialog box.

Operating Method

1. From the menu bar of Launcher, select [Help] - [About].
The [About] dialog box appears.



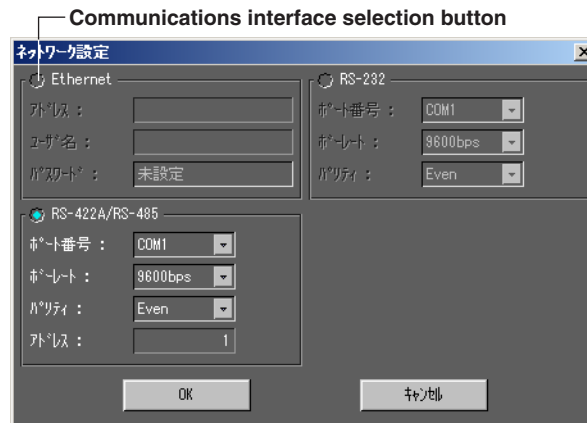
2. To close the dialog box, click [OK].

2.3 Setting the Communication Method

Set the communications interface and parameters according to the connection between your PC and the FX.

Operating Method

1. Click the CONFIG button of Launcher, or select [Launcher] - [Network Configuration] from the menu bar. The [Network] dialog box appears. Ethernet or serial interface (RS-232 or RS-422A/RS-485) can be used.



2. Select the desired network type. The color of the selected network turns blue.
3. Set each communication parameter.
4. When all the communication parameters are set, click [OK]. To cancel the settings, click [Cancel].

The dialog box closes, and the settings are applied to enable communications. (If communications are in progress, the dialog box closes and communications are re-started.)

Description of Each Communication Parameter

Ethernet

- Address: Specify the IP address or host name.
 User Name: Specify the user name.
 Password: Specify the password of the user name.

Serial Interface (RS-232 or RS-422A/RS-485)

- Port No.: Specify the port no. (COM1 to COM9) to be used.
 Baud Rate: Specify the baud rate (2400 to 38400).
 Parity: Specify the parity check (None, Odd or Even).
 Address: Specify the address (for RS-422A/RS-485 only)

3.1 Starting the Hardware Configurator

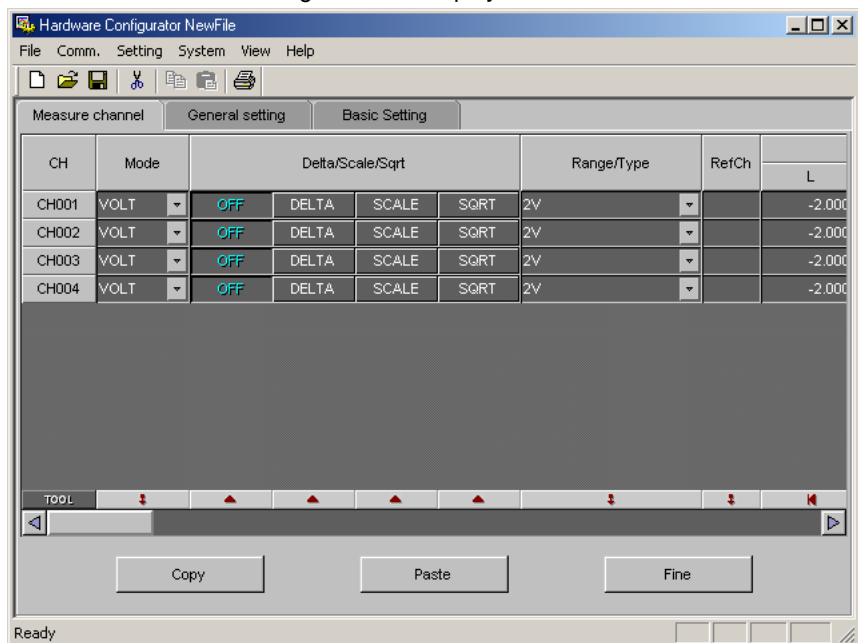
The Hardware Configurator can transmit and receive the setup data, change the setup data, and create new setup data. **The setting screen may differ from your actual screen.**

Starting the Hardware Configurator

1. Click the [Config] button in the Launcher window.



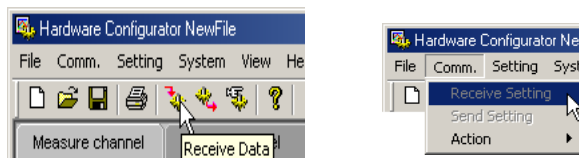
The DX1000/DX2000 setting screen is displayed.



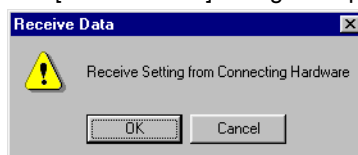
To Load Setup Data from the DX1000/DX2000

Before performing the following procedure, please make sure that the communication method and parameters are correct. (For details, see section 2.3, "Setting the Communication Method.")

1. Click the [Receive Setting] button, or choose **Comm. > Receive Setting** from the menu bar.



The [Receive Data] dialog box opens.

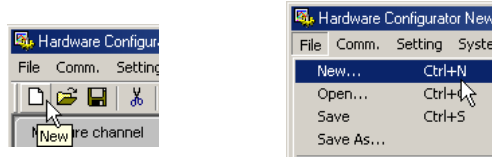


2. Click [OK].
Receiving starts.

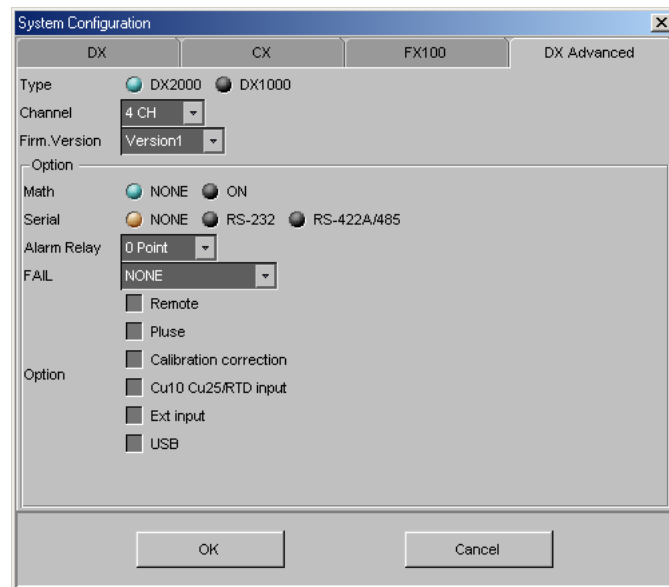
3.1 Starting the Configurator

Creating Setup Data by Configuring a New System

1. Click the [New] button, or choose **File > New** from the menu bar.



The [System Configuration] dialog box opens.

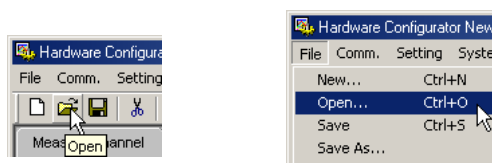


2. Enter all settings on the [DX Advanced] tab, then click the [OK] button. The DX1000/DX2000 setting screen is displayed.

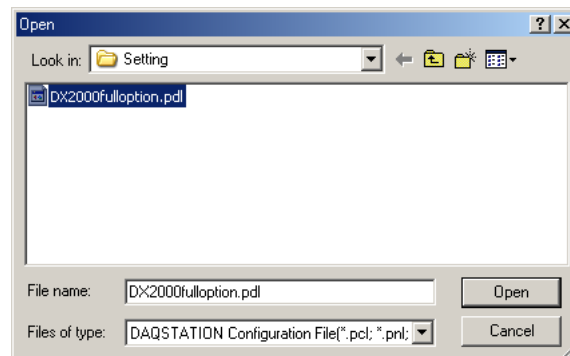
Loading Preexisting Setup Data

You can specify the location where the setup data file is located and open the Configurator.

1. Click the [Open] button, or choose **File > Open** from the menu bar.



The [Open] dialog box is displayed.



2. Select a setup data file (with the .PDL extension).

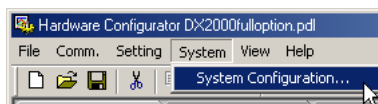
3.2 Setting and Checking the System Configuration and Initializing Setup Data

Changing/Checking the System Configuration

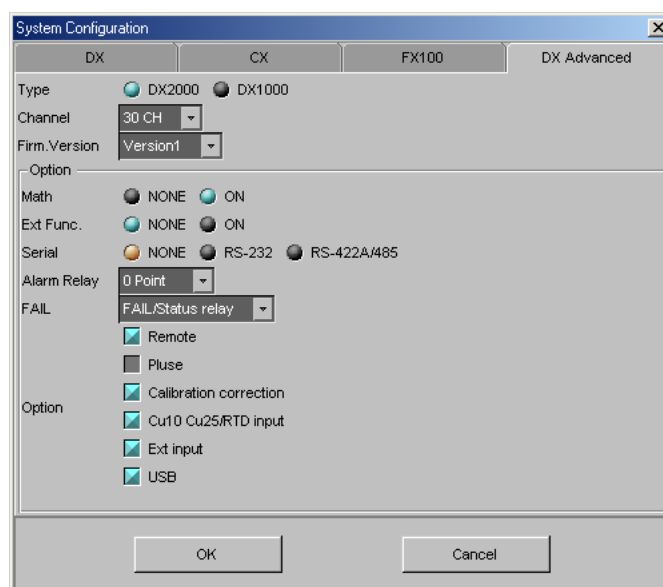
You can create new hardware configuration files, or open existing configuration files and then check the system configuration or change the configuration according to the specifications of the connected DX1000/DX2000.

Normally, a system is set up according to the specifications of the DX1000/DX2000 to be set up.

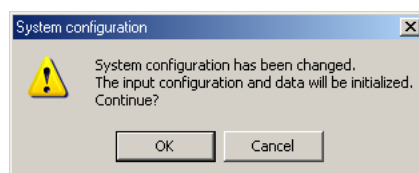
1. Choose **System > System Configuration** from the menu bar.



The [System Configuration] dialog box opens.



2. Change the various settings according to the DX1000/DX2000 that you will connect to (blue and brown items are selected, gray items are cleared). The settings in the Option group differ depending on the model and options of the instrument.
For example, for the DX1000, or for the DX2000 with eight channels or fewer, the external function item cannot be selected. If Pulse is selected (blue), the Math and Remote items are disabled.
3. After changing the configuration and clicking the [OK] button, the message, "System configuration has been changed. The input configuration and data will be initialized. Continue?" appears.

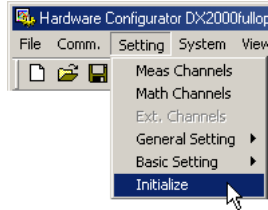


4. Click the [OK] button to initialize the data.

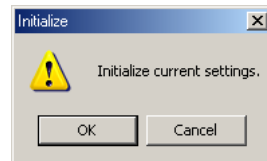
3.2 Setting and Checking the System Configuration and Initializing Setup Data

Initializing the Setup Data

1. Choose **Setting > Initialize** from the menu bar.



The [Initialize] dialog box opens.



2. Click the [OK] button to initialize the current settings.
The changed settings are restored to the condition when they were newly created.

3.3 Creating and Editing Hardware Setup Data

The following explains operations in the hardware setup screen. For details on settings, see the DX1000/DX2000 user's manual (IM 04L41B01-01E or IM 04L41B02-01E) or the communication interface manual (IM 04L41B01-17E).

The setting items vary depending on the model and options of the instrument. (Some settings may be disabled, the items in list boxes may differ.)

1. Click a settings tab, or in the menu bar choose **Setting > Meas Channels / Setting > Math Channels / Setting > Ext. channels / Setting > Genetating > ... / Setting > Basic Setting > ...**

2. Enter settings for each item.

The following are examples of settings.

Selecting and Setting a Range, and Entering Settings in Dialog Boxes

The range select shortcut buttons turn ON (select) a range of items all at once. If no channels are selected, all items are turned ON (selected).

Drag to select a range

Turn all channels ON/OFF

Click and select from the list

Reference channel when DELTA (difference computation) is selected

CH	Mode	Delta/Scale/Sqrt			Range/Type	RefCh	Span	
		Delta	Scale	Sqrt			L	U
CH001	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.
CH002	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.
CH003	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.
CH004	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.
CH005	TC	OFF	DELTA	SCALE	SQRT	TypeR	1	-1760.0
CH006	TC	OFF	DELTA	SCALE	SQRT	TypeR	1	-1760.0
CH007	TC	OFF	DELTA	SCALE	SQRT	TypeR	1	-1760.0
CH008	TC	OFF	DELTA	SCALE	SQRT	TypeR	1	-1760.0
CH009	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.
CH010	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.
CH011	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.
CH012	VOLT	OFF	DELTA	SCALE	SQRT	2V	-2.0000	2.

Turn ON (select) all items in the selected range at once

Copies the settings from the first channel in the selected range to all other items in the range

Range select shortcut buttons

Set the initial value

3.3 Configuring the Basic Setting Mode

Click to display the channel settings screen

Click to display the color settings screen

Click to display the input value correction setting screen

Click to change the display

Turn all ON/OFF, or toggle all.

Set the maximum possible value

Set the minimum possible value

Range select shortcut buttons

Measure channel	Color	Green Band		Mark kind	Scale display	Alarm Mark				Calibration Correction
		L	U			Mark color 1	Mark color 2	Mark color 3	Mark color 4	
CH001	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off
CH002	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off
CH003	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off
CH004	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off
CH005	Green	0.0	10.0	Fixed	ON	Red	Orange	Yellow	Red	6
CH006	Green	0.0	10.0	Fixed	ON	Red	Orange	Yellow	Red	6
CH007	Green	0.0	10.0	Fixed	ON	Red	Orange	Yellow	Red	6
CH008	Green	0.0	10.0	Fixed	ON	Red	Orange	Yellow	Red	6
CH009	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off
CH010	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off
CH011	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off
CH012	Green	0.0000	0.0100	Alarm	OFF	Red	Orange	Yellow	Red	Off

Color setting screen

001

Display Green Band Alarm Mark Correct

Color

- Red
- Green
- Blue
- Purple
- Brown

001

Display Green Band Alarm Mark Correct

Region OFF Inside Outside

L 0.0000

U 0.0100

Color

- Red
- Green
- Blue
- Purple
- Brown

Mark kind Alarm Fixed

Scale display OFF ON

Mark color 1

- Red
- Green
- Blue
- Purple
- Brown
- Orange
- Light Blue
- Gray
- Violet
- Yellow
- Dark Blue
- Cyan
- Y.Green
- Lime
- Light Gray
- Blue Violet
- Black
- Pink
- L.Brown
- L.Green
- Dark Gray
- Olive
- Dark Cyan
- S.Green

Mark color 2

- Red
- Green
- Blue
- Purple
- Brown
- Orange
- Light Blue
- Gray
- Violet
- Yellow
- Dark Blue
- Cyan
- Y.Green
- Lime
- Light Gray
- Blue Violet
- Black
- Pink
- L.Brown
- L.Green
- Dark Gray
- Olive
- Dark Cyan
- S.Green

Mark color 3

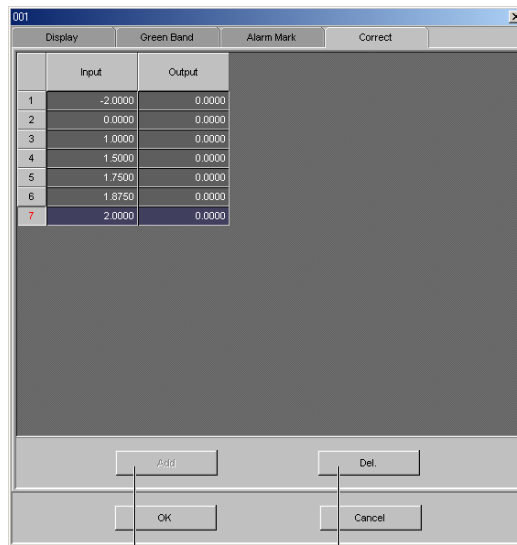
- Red
- Green
- Blue
- Purple
- Brown
- Orange
- Light Blue
- Gray
- Violet
- Yellow
- Dark Blue
- Cyan
- Y.Green
- Lime
- Light Gray
- Blue Violet
- Black
- Pink
- L.Brown
- L.Green
- Dark Gray
- Olive
- Dark Cyan
- S.Green

Mark color 4

- Red
- Green
- Blue
- Purple
- Brown
- Orange
- Light Blue
- Gray
- Violet
- Yellow
- Dark Blue
- Cyan
- Y.Green
- Lime
- Light Gray
- Blue Violet
- Black
- Pink
- L.Brown
- L.Green
- Dark Gray
- Olive
- Dark Cyan
- S.Green

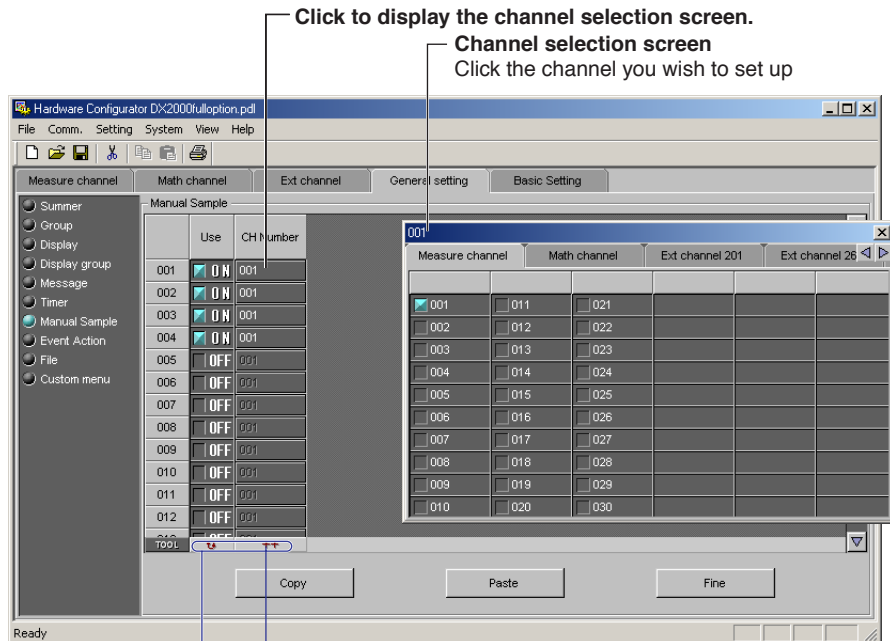
OK Cancel

Input Value Correction Screen



Click to delete the last row.
Click to add setting values to only the number of corrected points.

Channel setup screen



Click to display the channel selection screen.
Channel selection screen
Click the channel you wish to set up
Set while adding 1 to the first number of the selected range
Range select shortcut buttons

3.3 Configuring the Basic Setting Mode

Copying Channel Settings and Entering Expressions

You can copy settings arbitrarily and paste them in a specified range.

The operation is the same as for copying in Basic Settings and General Settings.

An example of inputting expressions is shown. For details on writing expressions, see the DX1000/DX2000 user's manual (IM 04L41B01-01E or IM 04L41B02-01E).

Text Entry of Expressions

Example of the selection screen of the setting item that is displayed when clicking the Details button
The setting item names of the channel setup screen appear. Blue means selected, gray means cleared.

Show/hide constant setup screen

Constant Setup Screen

Click to display the screen for selecting setting items to copy, then select the desired items.

Only the selected settings are copied to the specified range.

Selects a range of channel settings to be copied

Copy **Paste** **Fine**

Switch the setup screen to set groups

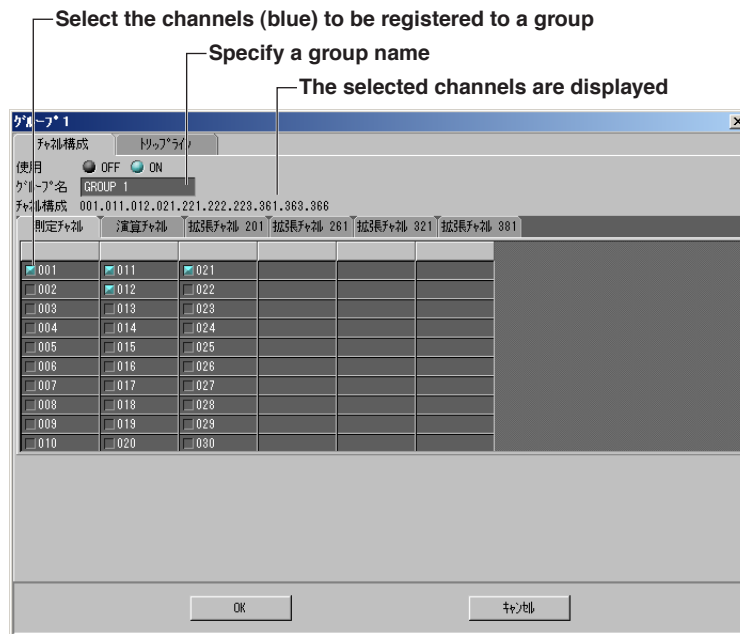
When you click to select an item to set (blue), the display changes

Ex: To set channels 001, 003, and 006 to Group1 (named GroupXYZ)

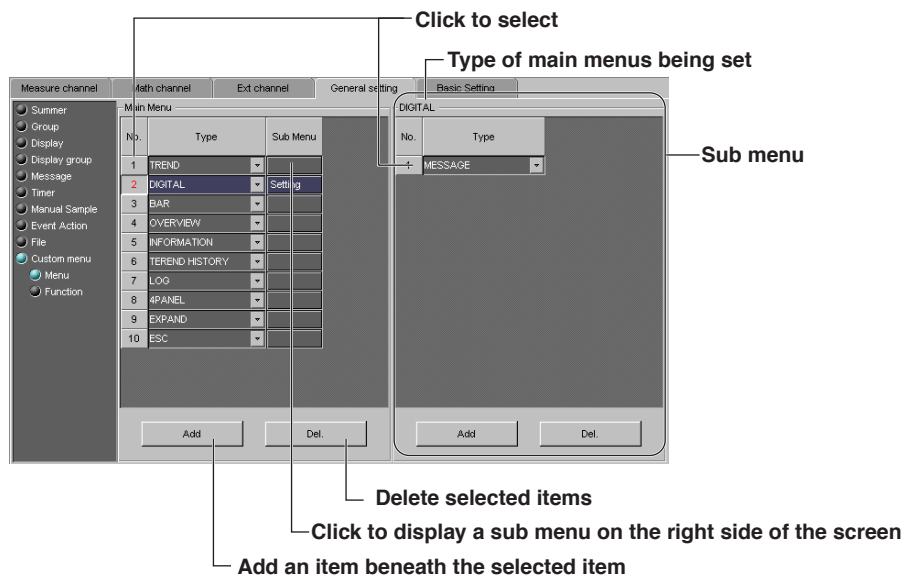
Click to display the corresponding setup screen

Group	Use	Group Name	Channel Configuration	Use	Position	Color	Line Width
1	ON	GROUP XYZ	001.003.006.007.008.009	OFF	50	Red	2
2	OFF	GROUP 2	001	OFF	50	Red	2
3	OFF	GROUP 3	001	OFF	50	Red	2
4	OFF	GROUP 4	001	OFF	50	Red	2
5	OFF	GROUP 5	001	OFF	50	Red	2
6	OFF	GROUP 6	001	OFF	50	Red	2

Channel configuration setup screen



Creating Custom Menus



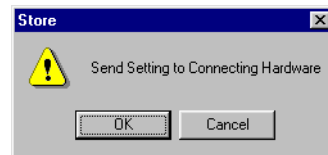
3.4 Sending the Setup Data to the DX1000/DX2000

Data cannot be sent while the DX1000/DX2000 is starting up (while loading data into memory) or Math in progress.

1. Click the [Send Data] button, or choose **Comm. > Send Setting** from the menu bar.



The send settings dialog box opens.



2. Click [OK] to start sending. A message is displayed when sending is complete. Click [OK] to clear the message.

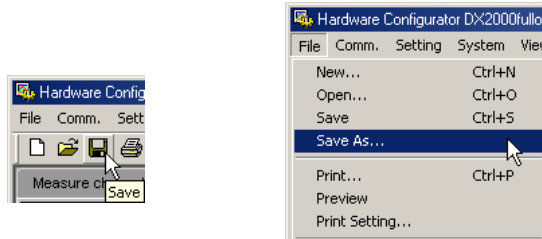
Note

The following items located on the setup tab cannot be sent.

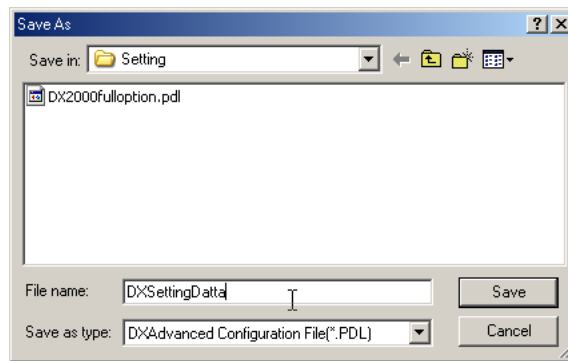
- The **Ethernet communication > TCP/IP** and **Modbus client** setting items
- All serial communication settings

3.5 Saving the Setup Data

1. Click the Save button or choose **File > Save**, or **File > Save as**.



If you choose **File > Save as**, the [Save As] dialog box appears.



2. Enter a destination file name and location and click the [Save] button.

Save

The setup data are overwritten to the preexisting file (*.PDL). The [Save As] dialog box does not open.

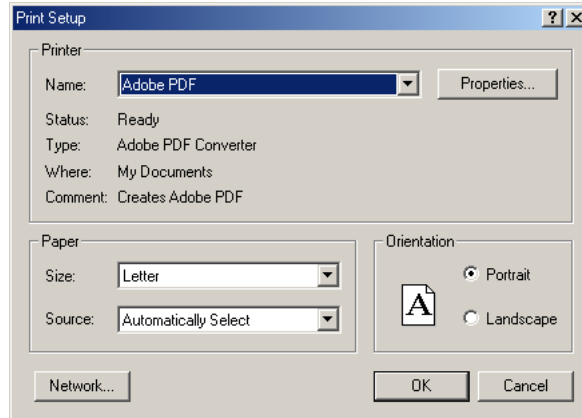
Save As

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

3.6 Printing the Setup Data

Setting the Printer

1. Select **File > Print Setting**.



2. Set the printer, paper and orientation.

Note

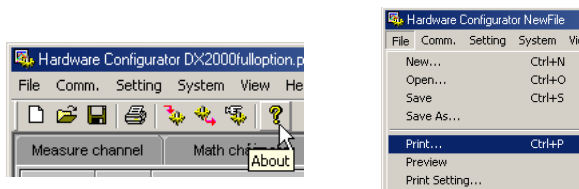
Set the printer according to the environment of the system that you are using.

Print Preview

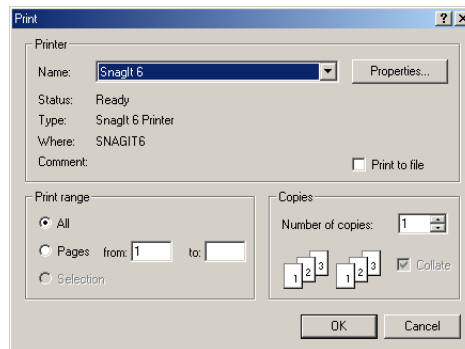
You can preview the print layout before actually printing the data. Selecting **File > Print Preview** displays the print preview screen.

Printing

1. Click the [Print] button, or choose **File > Print** from the menu bar.



The [Print] dialog box opens.



3.7 Starting and Stopping Measurement on the DX1000/DX2000, Checking the DX1000/DX2000 System Configuration

From this software you can start and stop the DX1000/DX2000, and display DX1000/DX2000 system configuration information.

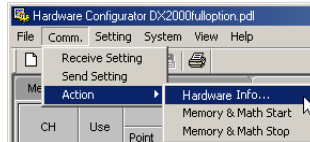
Starting and Stopping Measurement

1. Choose **Comm. > Action > Memory and Math > Start/Stop** from the menu bar.



Displaying DX1000/DX2000 System Configuration Information

1. Choose **Comm. > Action > Hardware info** from the menu bar.



3.8 Characters That Can Be Used

The characters listed in the table below can be used for entering group names, view group names, messages, file header comments, directory names for saving files, passwords for the key lock function, and login parameters such as user name, user ID, and password.

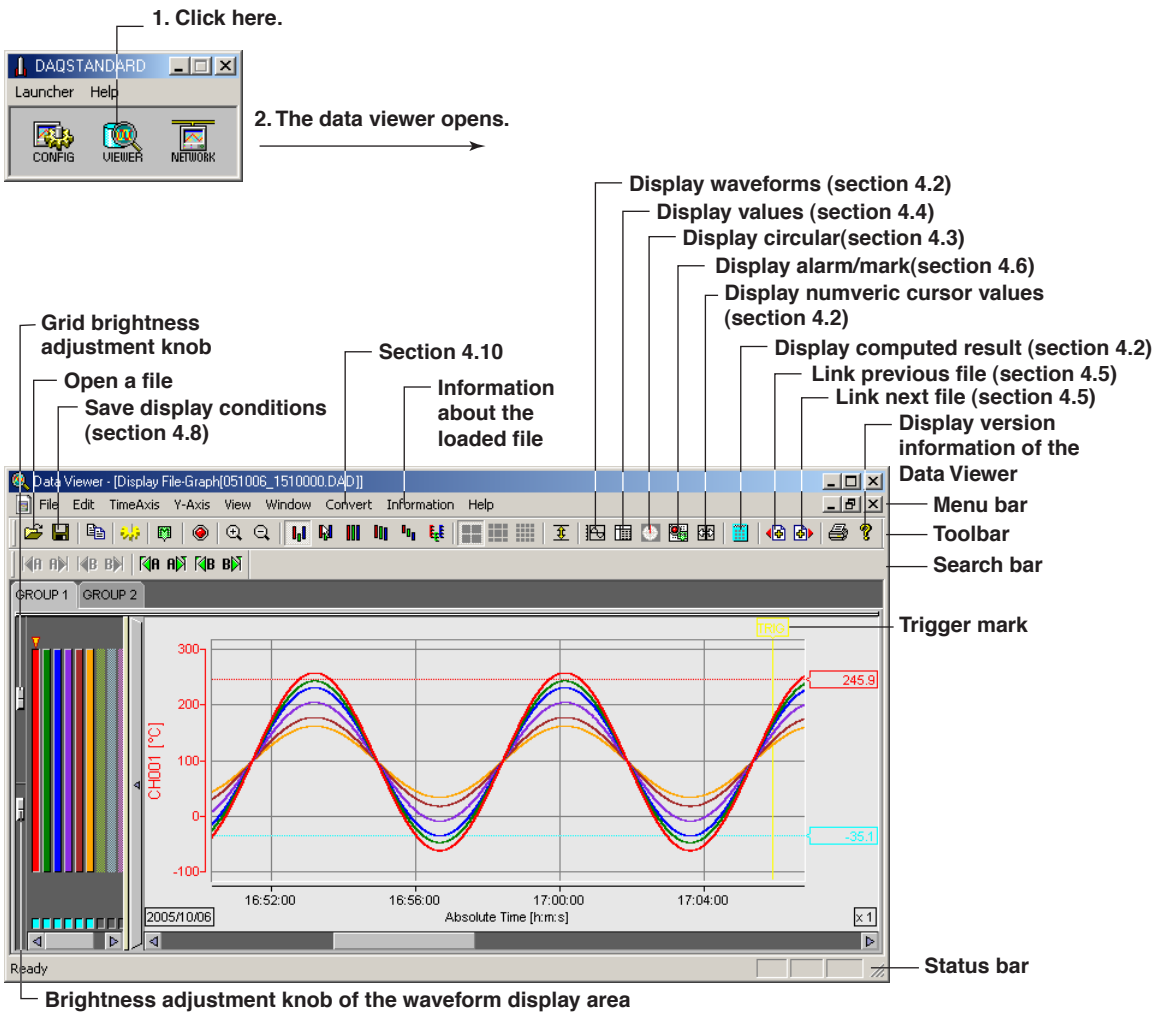
SP	#	%	()	*	+	-	.	/
0	1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z				
a	b	c	d	e	f	g	h	i	j
k	l	m	n	o	p	q	r	s	t
u	v	w	x	y	z				
_	°	@	[]	:	?			

Note

- [°] is the symbol for degrees of temperature [^] indicates input/output. [^] is handled as [°] by the main unit. [°] is handled as [^] by the setting software.
 - [SP] indicates a space.
 - Square brackets (“[” and “]”), “:”, and “?” are only used in expressions.
 - The character strings that can be used differ depending on the setting item.
For details, see the DX1000/DX2000 main unit user’s manual (IM 04L41B01-01E or IM 04L41B02-01E).
-

4.1 Starting and Exiting the Data Viewer

Starting the Data Viewer



You can also start the program by selecting [Start] - [Programs] - [DAQEXPLORER] - [Viewer].

You cannot start multiple Data Viewers. If you set file associations you can start Data Viewer by double-clicking a data file. You can start Data Viewer by dragging a data file onto the Data Viewer icon.

Files that Launch the Data Viewer

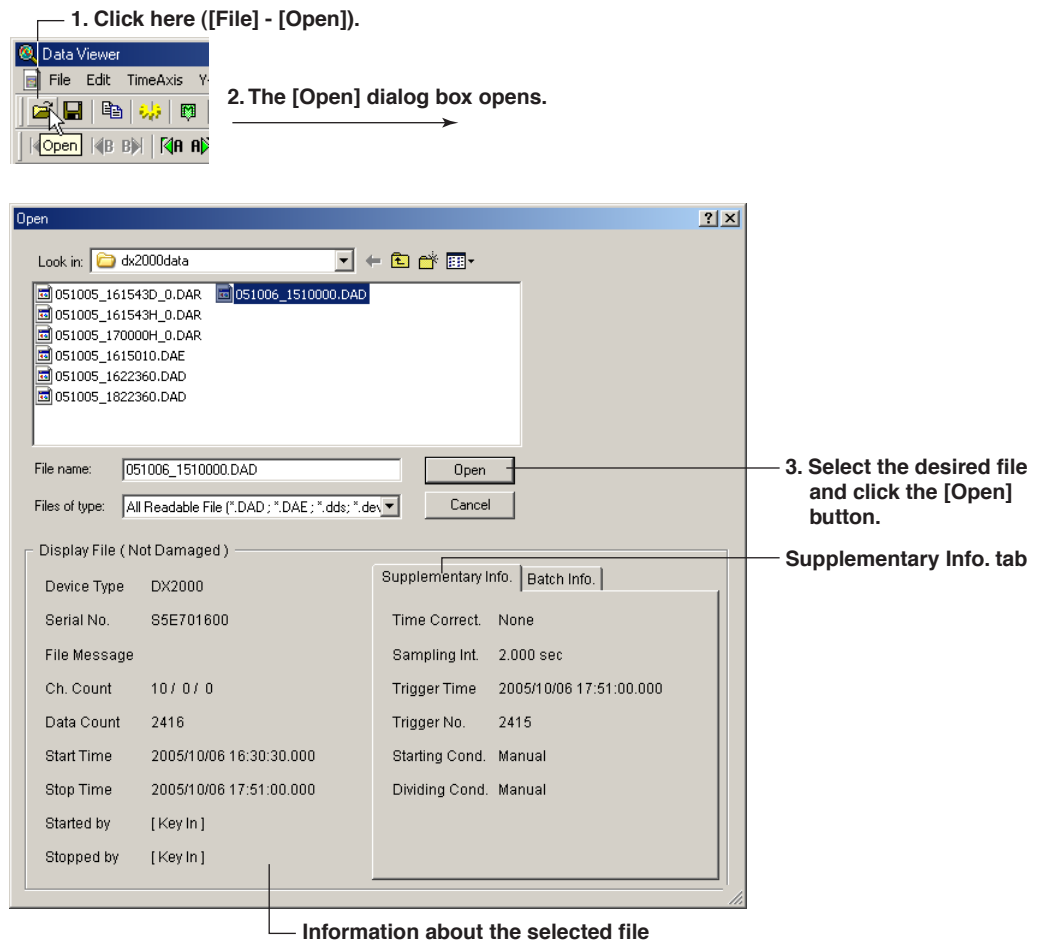
- Display data file (*.DAD)
- Event data file (*.DAE)
- Link setting file (*.Idx)
- Report file: .DAR
- Manual sample file: .DAM

Toolbar, Search Bar, and Status Bar

Clicking [View] - [Toolbar], [Search Bar], or [Status Bar] from the menu bar displays the corresponding bar in the window. The bar will disappear if the check is removed.

4.1 Starting and Exiting the Data Viewer

Opening the File by Specifying its Location

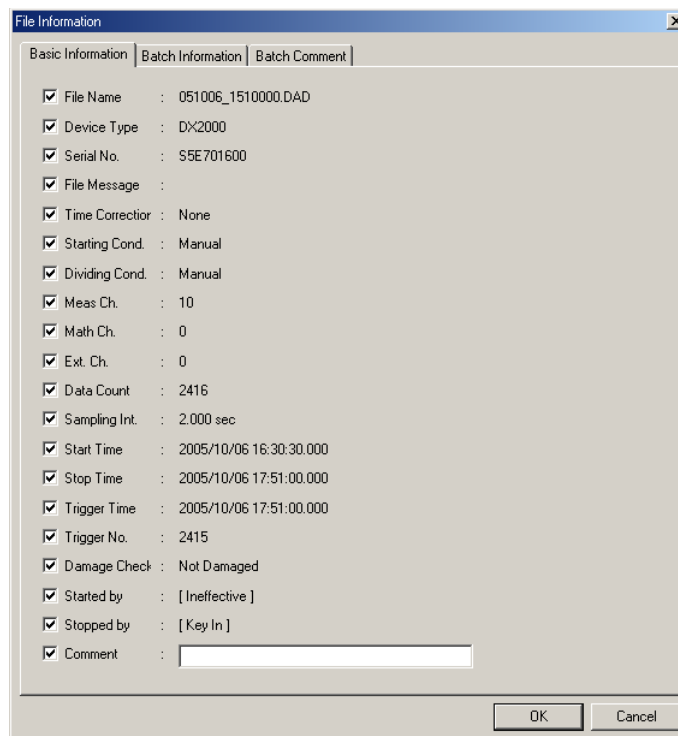


You can open a file by specifying the location.

Checking the Information About the Loaded File

You can check the information about the active data file by selecting [Information] - [About Document].

- For waveform data files and event data files



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

Note

- Multiple files can be opened simultaneously.
- The number of files that can be opened simultaneously depends on the memory size of the PC and the free disk space.
- CX1000/CX2000 series files cannot be opened using DX100/DX200 series instruments. When displaying these files, the File Information dialog box, Alarm List tab, and the report file display screens are formatted differently in each Data Viewer software.

Exiting the Data Viewer

Select [File] - [Exit] or click the [x] button. If you changed the settings in any of the windows, a message “Save changes to ****.***?” is displayed. Click the [Yes] button, if you wish to save the settings and exit the Data Viewer. Click the [No] button, if you do not wish to save the settings and exit the Data Viewer.

4.2 Displaying the Waveform

Displaying the Waveform

1. Click here ([Window] - [Graph]).

2. The waveform display screen opens.

Group selection tab (click the tab of the group you wish to display)

Mark on the active waveform

Zone display area

Show/Hide the zone display area

Waveform label (Select channel No. or tag)

Indicates the section of the waveform that is being displayed in a white frame

Display the alarm/mark list

Display the cursor value

Link the previous file

Link the next file

Color overview

Color display adjuster (turn ON/OFF the color overview display)

Trip line of the active waveform

Alarm display area

Magnification

Date

Waveform display area

Move the waveform display position (Scroll bar)

Absolute or relative time

Drag this bar to change the size of the zone display area

Turn ON/OFF waveform display

Color Overview Display

Displays marks and cursors

Displays the waveforms that have the display turned ON

The measured values of the entire data are displayed using various colors. By assigning 50 different colors from the minimum to the maximum values of the scale, the measured values are assigned to those colors.

If the data are 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.

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

Note

The color overview is turned OFF as default.

General Display Settings

1. Click here ([View] - [General Display Settings]).

2. The [General Display Settings] dialog box opens.

3. Click the tab of the group to be configured.
The waveform corresponding to the waveform No. that is clicked becomes active.

Enter the group name

Select normal display or exponential display

Enter the display range

Enter the display position

Show/Hide the trip line

Enter the trip line

Display color

No.	Channel	Y-Axis	Form.	Scale		Zone		Trip		Color
				MIN	MAX	MIN	MAX	Trip 1	Trip 2	
W01	CH001	Linear	⌵	-100.0	300.0	0	100	245.9	-29.4	Red
W02	CH002	Linear	⌵	-1.000	1.000	0	100	1.000	-1.000	Green
W03	CH003	Linear	⌵	0.0	500.0	0	100	500.0	500.0	Blue
W04	CH004	Linear	⌵	0.0	100.0	0	100	100.0	100.0	Purple
W05	CH005	Linear	⌵	0.0	800.0	0	100	800.0	800.0	Brown
W06	CH006	Linear	⌵	0.00	200.00	0	100	200.00	200.00	Orange
W07	CH007	Linear	⌵	0.00	100.00	0	100	100.00	100.00	Light Green
W08	CH008	Linear	⌵	0.00	200.00	0	100	200.00	200.00	Cyan
W09	CH009	Linear	⌵	0.0	100.0	0	100	100.0	100.0	Pink
W10	CH010	Linear	⌵	0.0	100.0	0	100	100.0	100.0	Light Blue
W11	<None>	Linear	⌵	-22.00	22.00	0	100	22.00	-22.00	Bright Green
W12	<None>	Linear	⌵	-22.00	22.00	0	100	22.00	-22.00	Cyan
W13	<None>	Linear	⌵	-22.00	22.00	0	100	22.00	-22.00	Dark Blue
W14	<None>	Linear	⌵	-22.00	22.00	0	100	22.00	-22.00	Yellow
W15	<None>	Linear	⌵	-22.00	22.00	0	100	22.00	-22.00	Light Yellow

OK Cancel Scale Calc Copy Setting ... Copy Paste

Initialize

Paste the copied setup data to the active waveform number

Copy the setup data of the active waveform number

Select the items to be copied

Set the maximum and minimum values of the measured data the maximum and minimum values of the scale.

Copy the settings of the first channel in the selected range to all other channels

Show/Hide the Y-axis

Register the channel

Assign numbers to the channels in the selected range in ascending order

Activate the settings and close the dialog box

Turn ON/OFF at once

Turn ON/OFF waveform display (Blue is ON)

Group

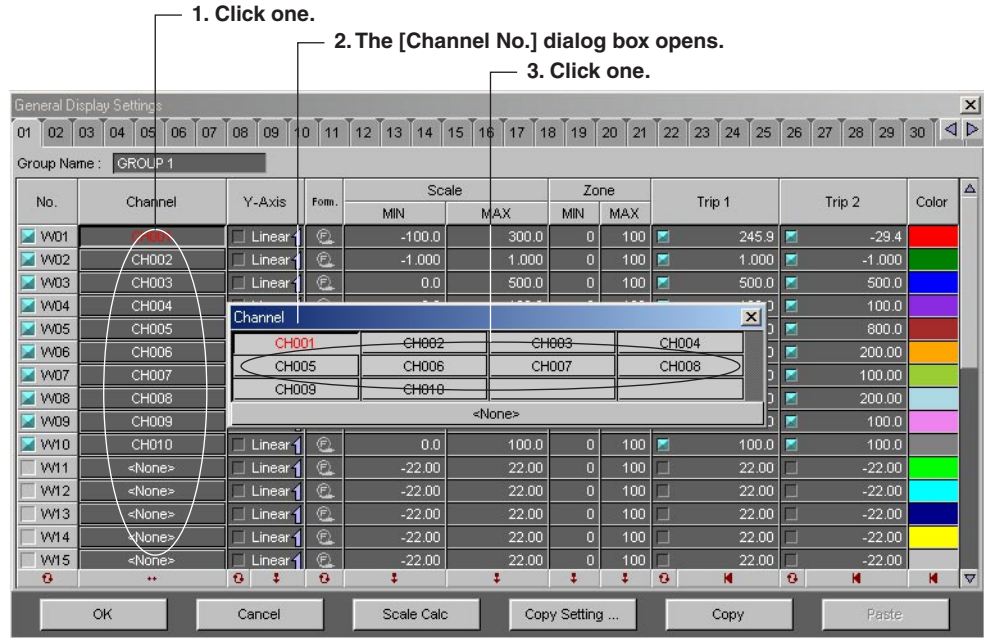
A maximum of 50 groups can be set. A maximum of 32 channels can be registered in one group.

4.2 Displaying the Waveform

Turn 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.

Registering the Channel



Types of Y-axis and Turning ON/OFF the Y-axis

Select linear or logarithmic by clicking the Y-axis display area. If [Multi-Axis Zone] (page 4-8, Setting the Y-axis) is selected, you can select whether or not to display the Y-axis. The Y-axis of the waveform for which the check box is shown in [blue] will be displayed.

Scale (display range)

The range of minimum and maximum values is from -1.0×10^{-16} to 1.0×10^{16} . Click the scale value display area to enter values.

Zone (display position)

The range is as follows:

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

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%. Click the zone display area to enter values.

Trip Line

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 4-8), the trip lines of all displayed waveforms that are checked are displayed.

You can change the waveform display zone on the trend display screen by clicking the edit zone icon on the tool bar or by selecting [Y-Axis] - [Edit Zone] in the menu bar.

Display Color

You can select the color of each waveform. To create custom colors, click the [Define Custom Colors] button in the [Color] dialog box.

Copy/Paste

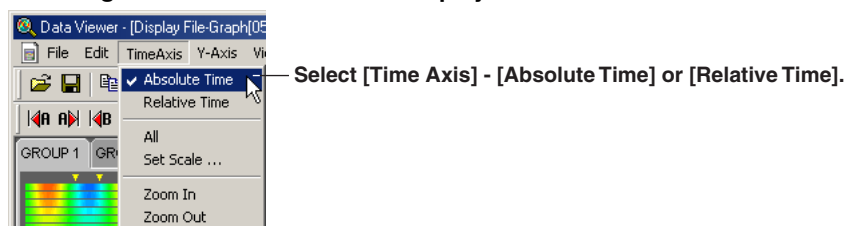
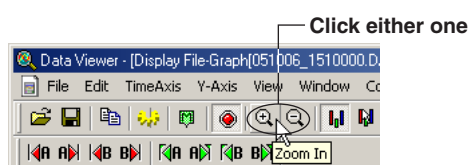
You can copy the setup data of one channel or more to other channels. Use the following procedure to copy and paste.

1. Click the source channel number that you want to copy. To select many channels, click the first source channel, then drag over all the channels that you want to copy.
2. Click the [Copy] button at the bottom of the window.
3. Click the destination channel number. To select many channels, click the first destination channel, then drag over all the channels where you want to paste.
4. Click the [Paste] button at the bottom of the window. The setup data is pasted in the active waveform(s).

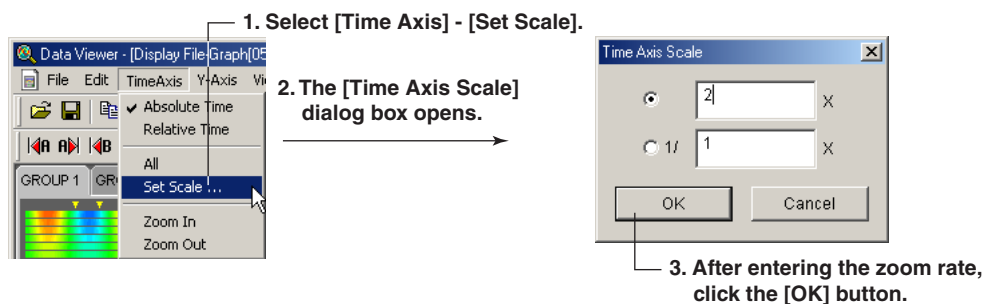
You can also copy and paste specific channel items.

After selecting the copy source in step 1, click the [Copy Details] button to display the [Copy Details] dialog box.

Select the items that you want to copy.

Setting the Time Axis**Selecting absolute or relative time display****Zoom in or zoom out on the time axis**

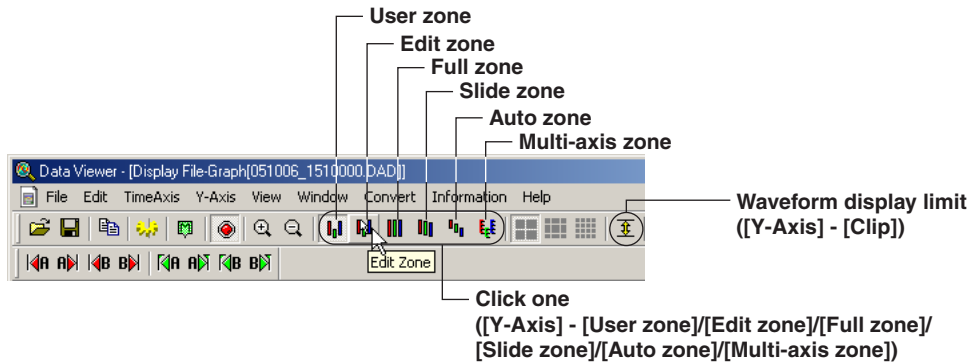
By selecting [Time Axis] - [All], the time axis is adjusted so that all the data can be displayed. If you wish to zoom in or out by specifying the zoom rate, take the following steps (resolution is 1/1000 to 20):



4.2 Displaying the Waveform

Setting the Y-axis

Selecting the waveform display zone



Select from the following list of choices:

For the display examples of each zone, see the next page.

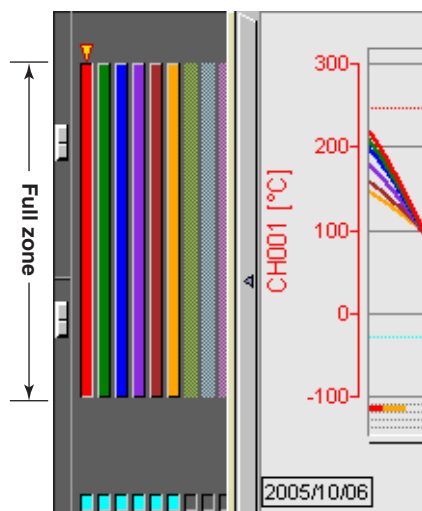
- User zone: Each waveform is displayed in the range specified in [Zone] under the [General Display Setting] (the zone cannot be changed on the trend display screen).
- Edit zone: Each waveform is displayed in the range specified in [Zone] under the [General Display Setting] (the zone can be changed on the trend display screen).
- Full zone: Display all waveforms using full zones.
- Slide zone: Display the waveforms in a cascade fashion from the top to the bottom of the waveform display area.
- Auto zone: Display the waveforms by equally dividing the waveform display area by the number of displayed waveforms.
- Multi-axis zone: Display the Y-axis of multiple waveforms.

Note

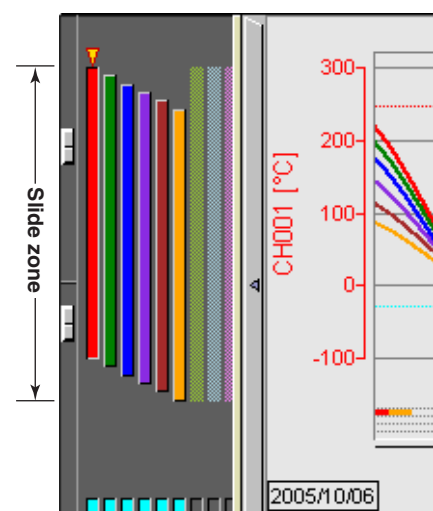
If the waveform display zone is set to some setting other than multi-axis zone and auto zone, only the Y-axis of the active waveform is displayed.

Examples of the Various Zone Settings

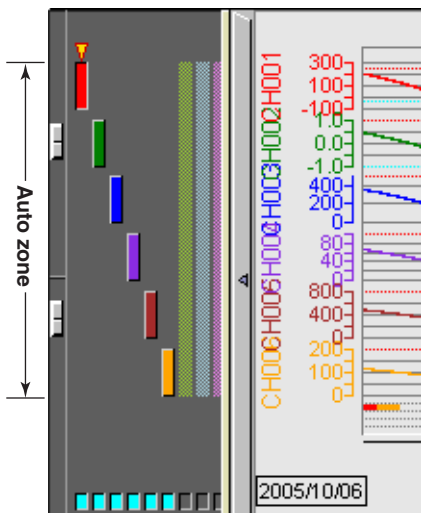
- Full zone



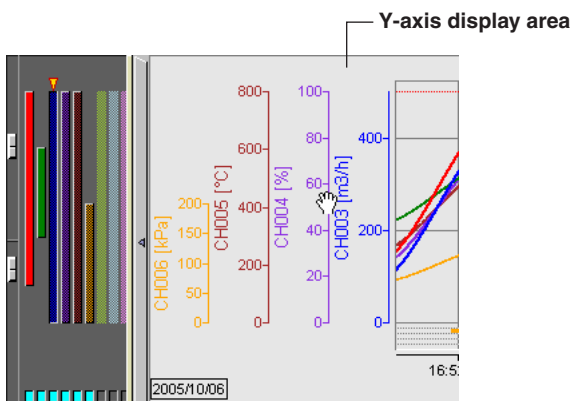
- Slide zone



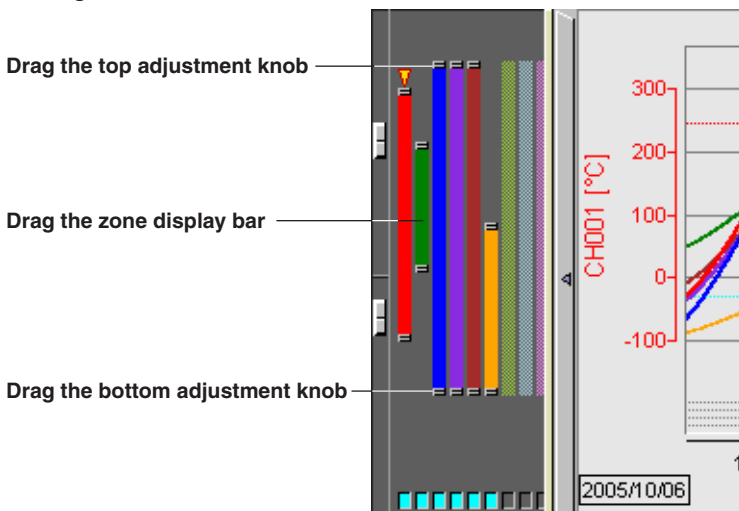
- Auto zone



- Multi-axis zone



Editing Zones



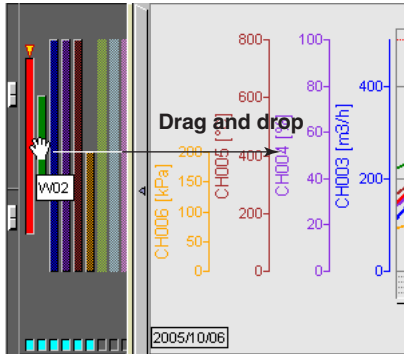
You can change the waveform display zone on the trend display screen by clicking the edit zone icon on the tool bar or by selecting [Y-Axis] - [Edit Zone] in the menu bar. The size of the zone can be changed by dragging the top and bottom adjustment knobs. The entire zone can be moved by dragging the zone display bar. The zones that are set in [Edit Zone] are reflected in the [Zone] setting of the [General Display Settings].

4.2 Displaying the Waveform

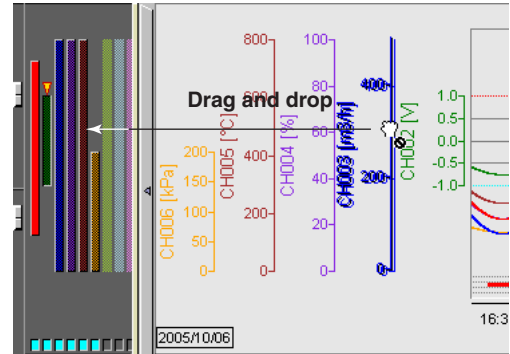
Displaying Multiple Y-axis

When multi-axis zone is selected, the Y-axis scales corresponding to the [Y-Axis] boxes in the [General Display Settings] that are checked will be displayed.

- Adding a Y-axis

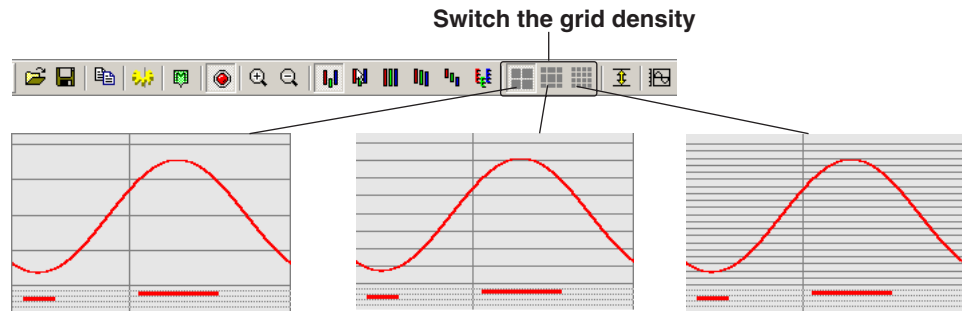


- Deleting a Y-axis



Changing the Grid Display

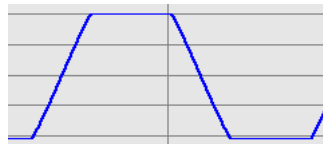
Select the grid type by clicking Grid density on the toolbar, or Y-axis on the menu bar. Switch the grid density.



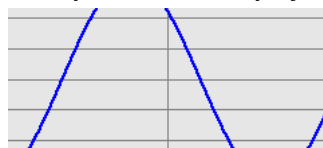
Waveform Display Limit (clip)

When the waveform display limit is enabled by clicking the clip icon or by selecting [Y-Axis] - [Clip], the Y-axis display range of the waveform are limited to the minimum and maximum values that were specified under [General Display Settings] - [Scale]. 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.

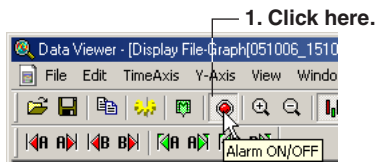
- Example in which Display Limit is Enabled



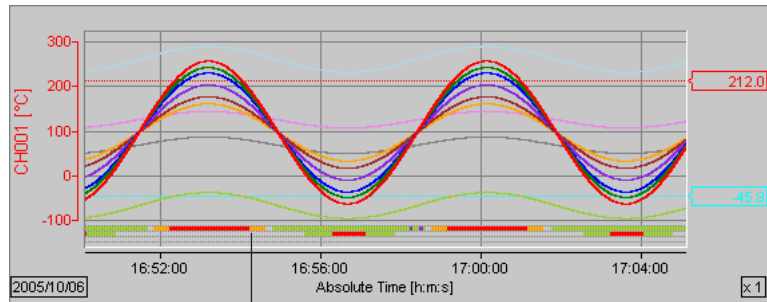
- Example in which Display Limit is Disabled



Turn ON/OFF the Alarm Display

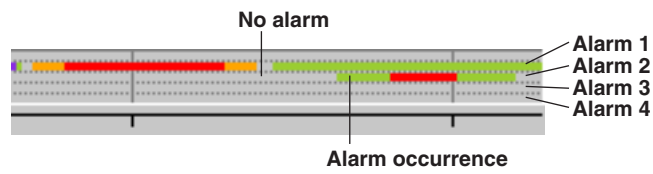


2. The alarm conditions of alarm 1 to 4 are displayed in the alarm display area.



2. The alarm is displayed.

Alarm display



The alarm of the active waveform is displayed in front.

4.2 Displaying the Waveform

Selecting the Characters Used to Identify Channels

You can select the channel No. or tag as the character string used to identify the channels by selecting [View] - [Channel No.] or [Tag]. The selected character string will be used as a label to indicate the waveform.

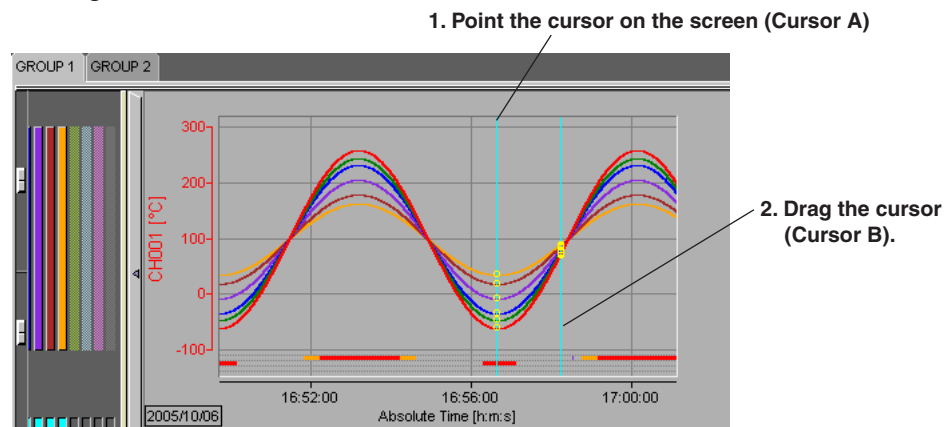
The character string is registered on the DX1000/DX2000 or by using the Hardware Configurator.

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, [Cursor Value] window, [Computed Result] window, [General Display Setting] dialog box, 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



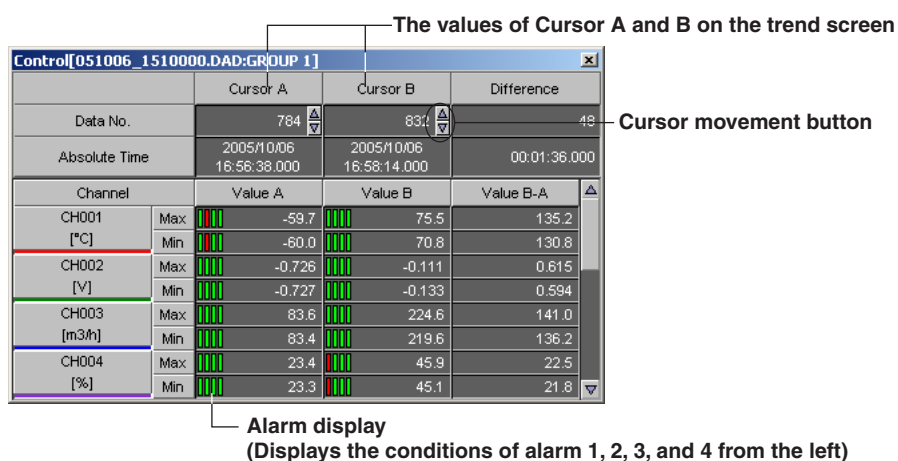
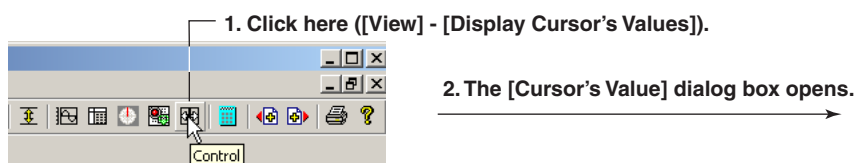
On the numerical window and list display window (section 4.6), you can copy the data between Cursor A and Cursor B to the Windows clipboard. On the waveform display window and circular display window, the displayed image can be copied to the clipboard.

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

Clicking the control icon or selecting [Window] - [Control] displays the [Control] dialog box.



A list of Cursor A and B values and their differences on the trend screen is displayed. You can change the values of Cursor A and B by clicking the cursor movement buttons. 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 on the trend screen, the cursor's value display area becomes blank. Difference becomes INVALID.

4.2 Displaying the Waveform

Displaying Statistics

1. Click here.

2. The statistics display screen opens.

The first data number of the computed region (Cursor A)
The last data number of the computed region (Cursor B)

Section	778	-	832	Re-Calc.		
Channel	MIN	MAX	P-P	Mean	RMS	
CH001 [°C]	Max	-60.0	75.5	135.5	-17.1	45.8
	Min	-60.0	70.8	130.8	-19.7	45.5
CH002 [V]	Max	-0.727	-0.111	0.616	-0.532	0.566
	Min	-0.727	-0.133	0.594	-0.544	0.575
CH003 [m3/h]	Max	83.4	224.6	141.2	128.0	135.5
	Min	83.4	219.6	136.2	125.4	132.5
CH004 [%]	Max	23.3	45.9	22.6	30.5	31.3
	Min	23.3	45.1	21.8	30.1	30.6

Note

$$RMS = \sqrt{\frac{1}{n} \sum_{k=0}^{n-1} (x_k)^2}$$

n : umber of data
x_k : value

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.

As the results of the computation do not update automatically, you must click the ReCalc. button in the Statistics dialog box to update the computed results if you change the position of Cursor A or B.

Adding Arbitrary Marks

1. Point the cursor.

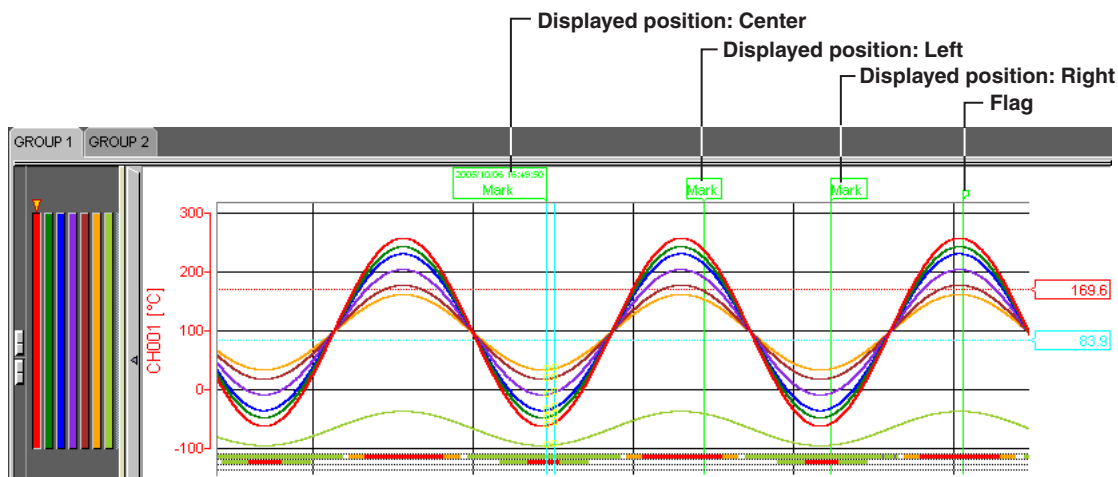
2. Click here ([View] - [Append Mark]).

3. The [Mark Settings] dialog box opens.

4. After entering the string, selecting the displayed position, or selecting whether the time is displayed, click the [OK] button.

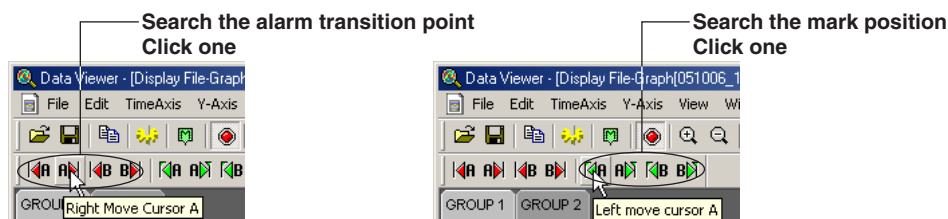
When Cursor A and Cursor B are at the same position, arbitrary marks can be placed. You can select whether to put the arbitrary marks on all groups or only on the displayed group. And you can set the displayed position of the mark and select whether the time is displayed by the mark.

The displayed time is either the absolute time or relative time depending on the time axis setting.



If you left-click the mark while pressing the “Ctrl” key, the mark is displayed in front. If you left-click the mark while pressing the “Shift” key, the mark is displayed in the back. Double-clicking a mark, that has been created using the Data Viewer, opens the [Mark] dialog box in which you can change the displayed group and the mark name.

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

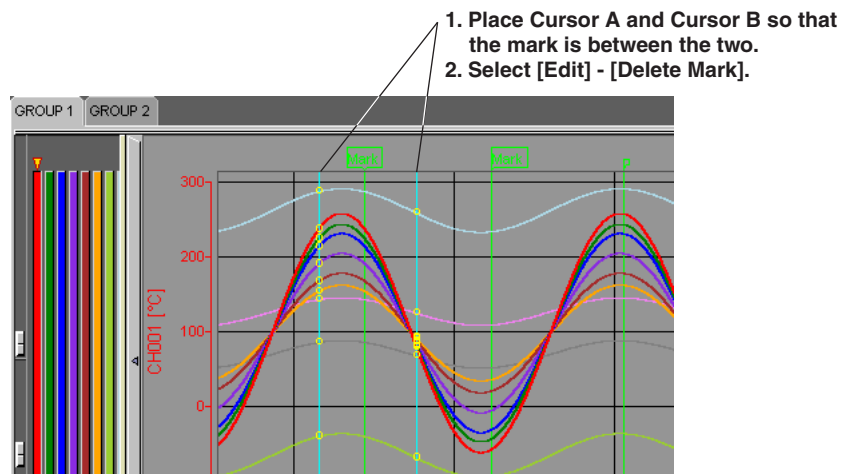
Moves Cursor A or Cursor B to the mark position (arbitrary mark or trigger mark) of the active group. Searching is possible to the left and right of the cursor.

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.

4.2 Displaying the Waveform

Deleting Marks



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

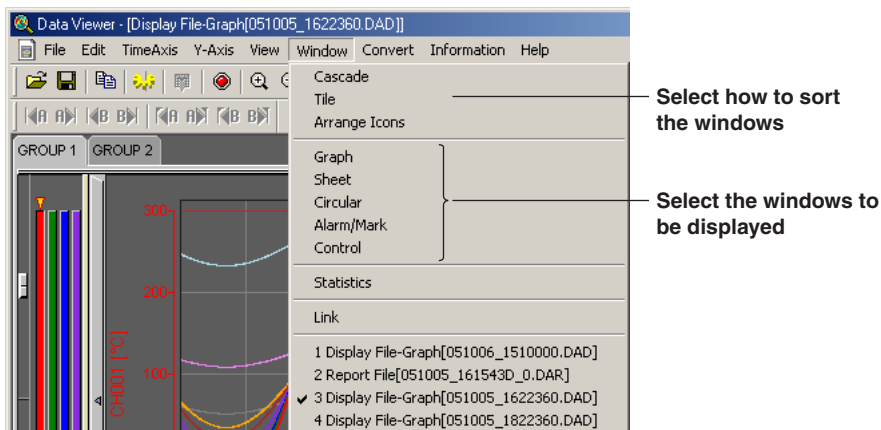
Note

- The arbitrary marks placed on the Data Viewer are green. The arbitrary marks (messages) and trigger points placed on the DX1000/DX2000 are yellow.
 - Up to 32 characters can be used for a mark name.
-

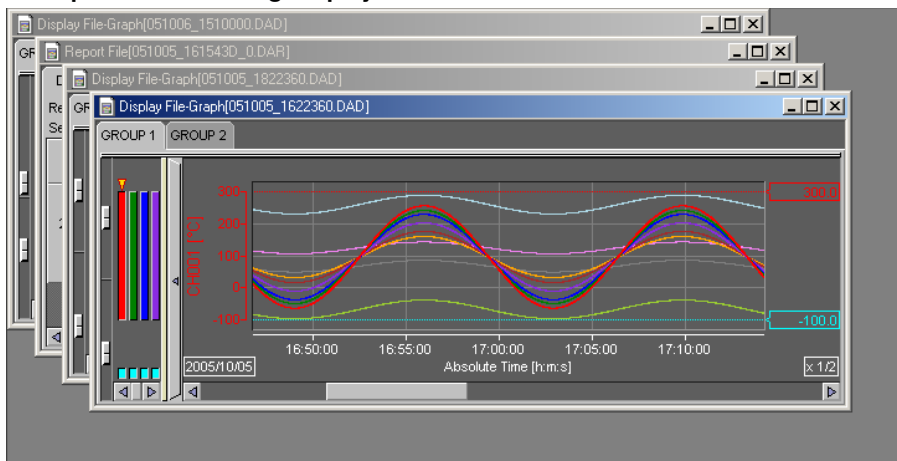
Resetting Marks

All arbitrary marks created on the Data Viewer are erased by selecting [Edit] - [Reset Mark]. The marks (messages) and the trigger point that were created on the FX100 but deleted on the Data Viewer are displayed again.

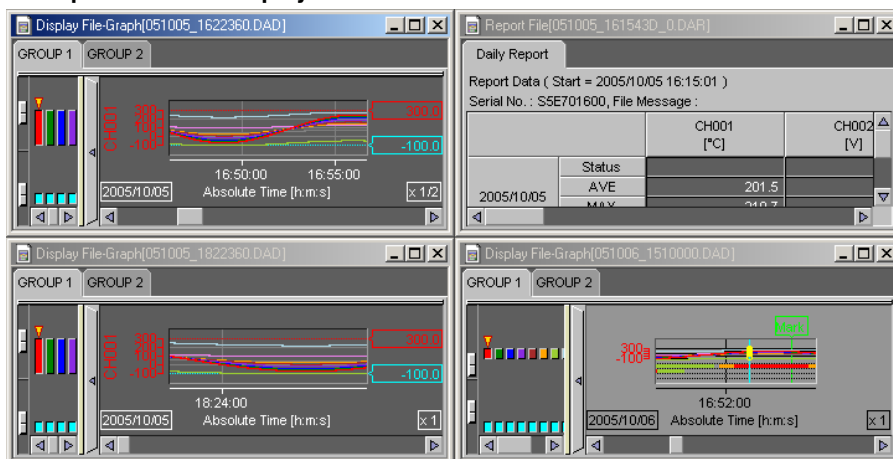
Setting the Window



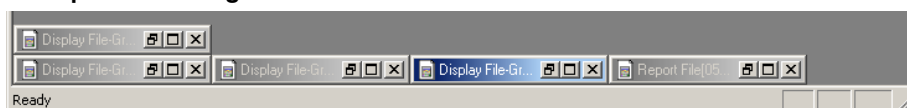
• Example of a Cascading Display



• Example of a Tiled Display

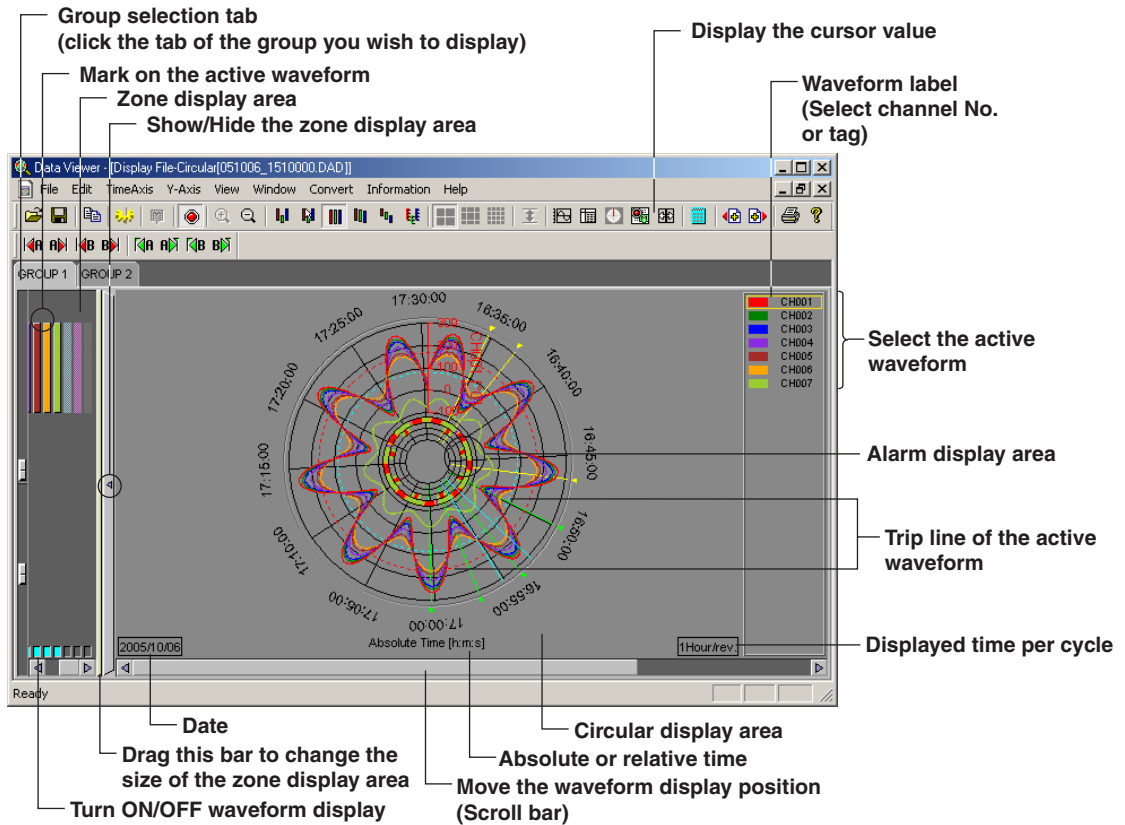
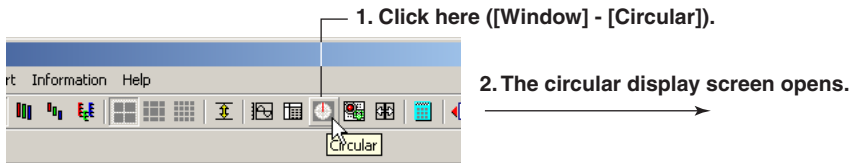


• Example of a Arranged Icon



4.3 Circular Display

Circular Display



General Display Settings

The parameters in the [General Display Settings] dialog box that are different between the circular display and the trend display (section 4.2) are as follows:

Trip Line

The trip lines on the circular screen cannot be dragged and dropped.

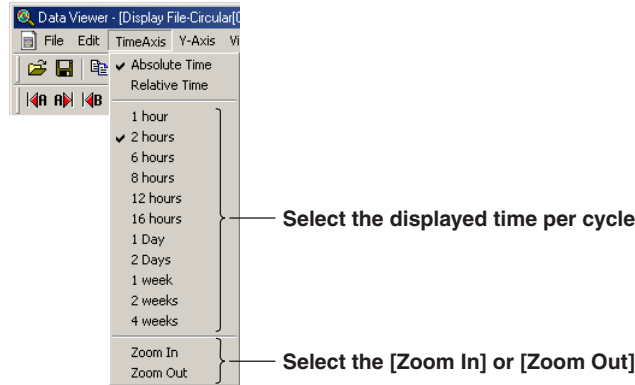
You can change the position of the trip lines by changing the values in the [General Display Settings] dialog box.

Setting the Time Axis

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

See section 4.2, "Displaying the Waveform."

Selecting the displayed time

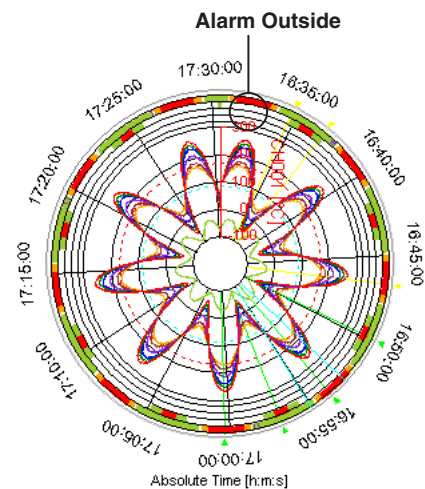
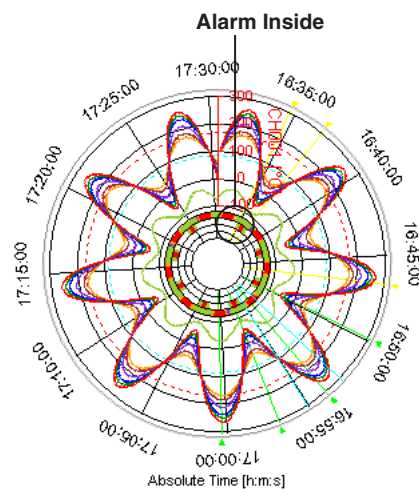
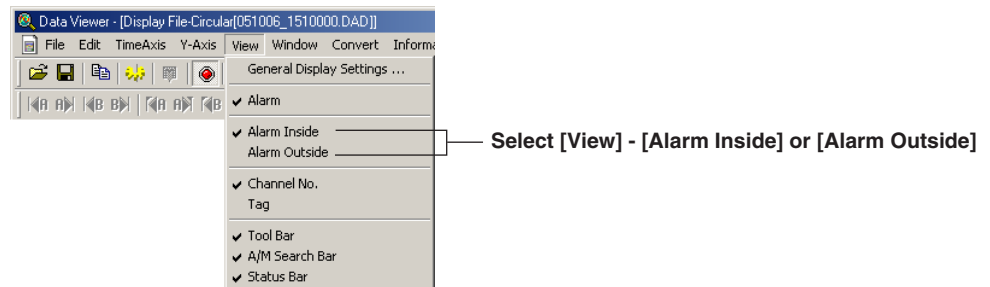


Setting the Y-axis

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. The range is set using [Scale] in the [General Display Settings] dialog box.

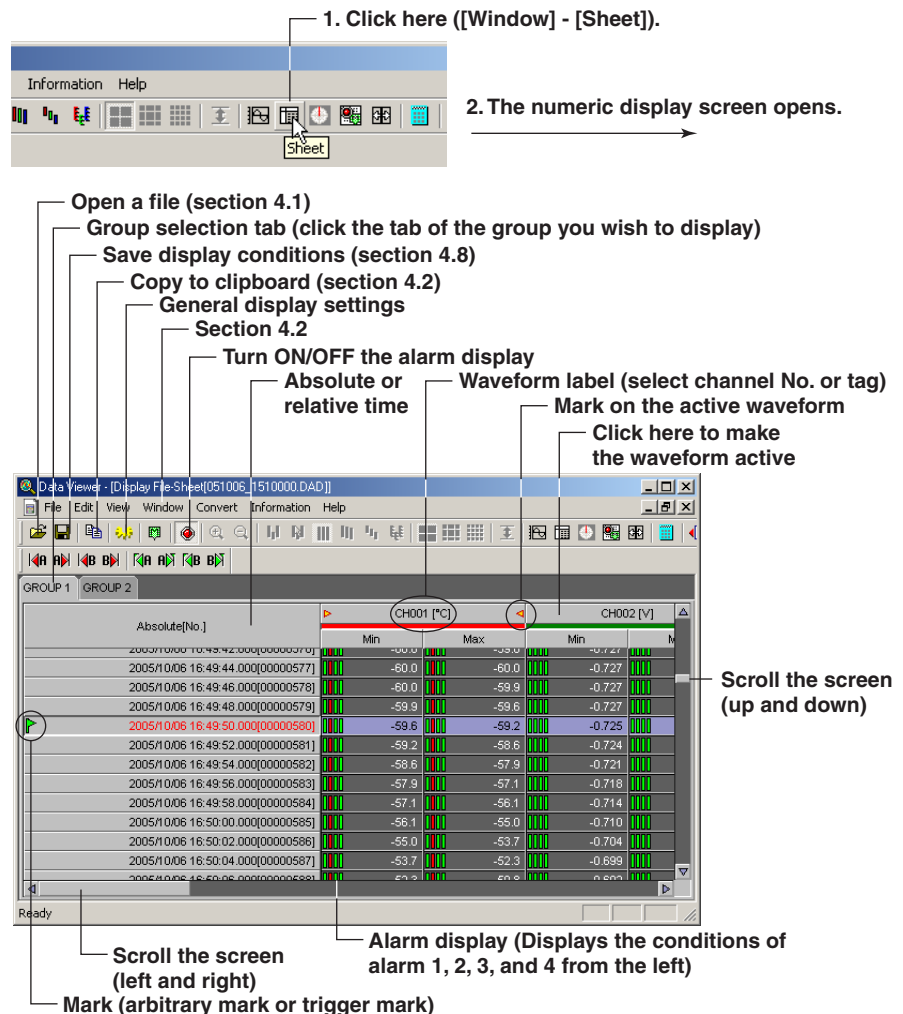
Turning ON/OFF the Alarm Display

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



4.4 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:

- Normal or Exponential display of numerical values
- Registering the channel and turn the display ON or OFF

For details related to the setting procedures, see “General Display Settings” in section 4.2, “Displaying the Waveform.”

Setting the Time Axis

Select [View] - [Absolute Time] or [Relative Time]. Then, select the time display format using [Format].

Turn ON/OFF the Alarm Display

The alarm conditions of alarms 1 to 4 are displayed on the screen by clicking the alarm display icon or selecting [View] - [Alarm] and turning ON the alarm display. 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 4.2, “Displaying the Waveform.”

Showing/Hiding Cursors

Showing the cursor

1. Point the cursor (Cursor A)

Absolute[No.]	CH001 [°C]		CH002 [V]	
	Min	Max	Min	Max
2005/1/06 16:34:58.000[00000134]	-13.3	-9.9	-0.515	-0.499
2005/1/06 16:35:00.000[00000135]	-16.6	-13.3	-0.530	-0.515
2005/1/06 16:35:02.000[00000136]	-19.9	-16.6	-0.545	-0.530
2005/1/06 16:35:04.000[00000137]	-23.1	-19.9	-0.560	-0.545
2005/1/06 16:35:06.000[00000138]	-26.1	-23.1	-0.573	-0.560
2005/1/06 16:35:08.000[00000139]	-29.0	-26.1	-0.586	-0.573
2005/1/06 16:35:10.000[00000140]	-31.8	-29.0	-0.599	-0.586
2005/1/06 16:35:12.000[00000141]	-34.5	-31.8	-0.611	-0.599
2005/1/06 16:35:14.000[00000142]	-37.1	-34.5	-0.623	-0.611
2005/1/06 16:35:16.000[00000143]	-39.5	-37.1	-0.634	-0.623
2005/1/06 16:35:18.000[00000144]	-41.7	-39.5	-0.645	-0.634

2. Drag the cursor (Cursor B).

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

Showing the Cursor Value, Displaying Statistics and Hiding the Cursor

For details, see “Displaying Cursor’s values,” “Hiding the Cursor,” “Displaying Statistics” in section 4.2, “Displaying the Waveform.”

Adding Arbitrary Marks, Deleting Marks, and Resetting Marks

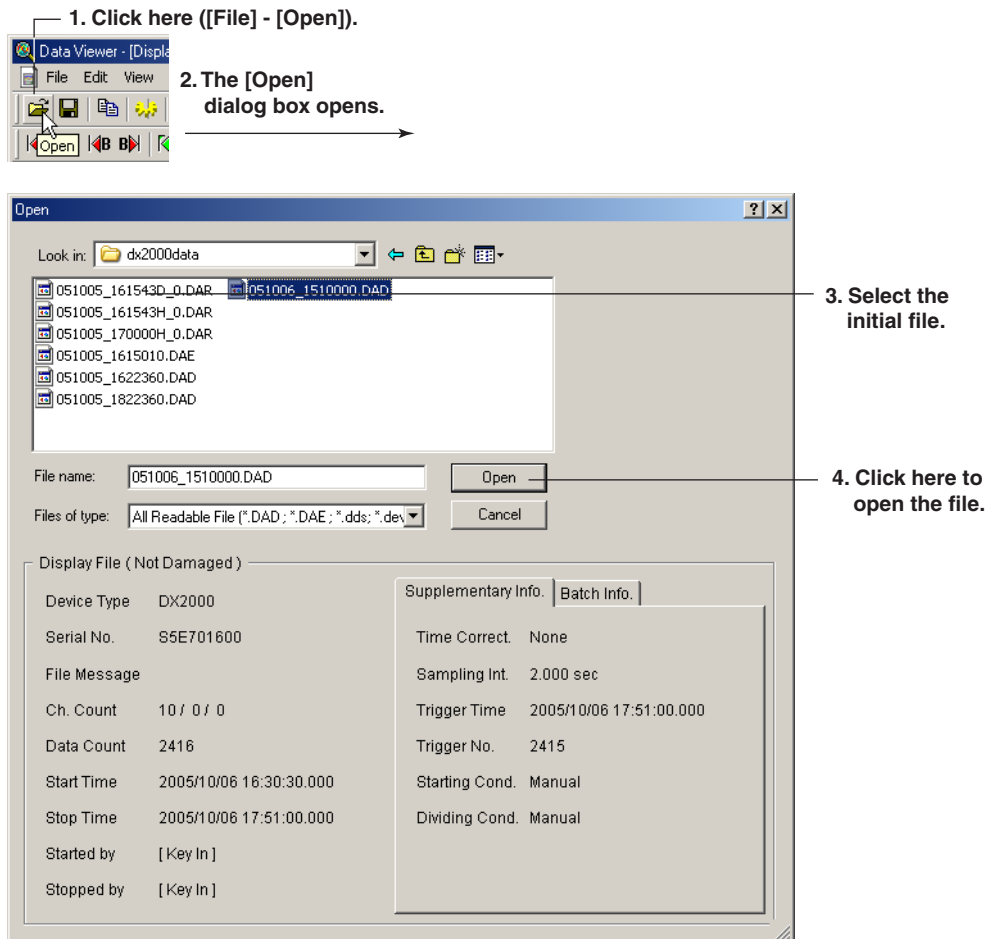
For details, see “Adding Arbitrary Marks,” “Deleting Marks,” and “Resetting Marks” in section 4.2, “Displaying the Waveform.”

4.5 Linking Files and Saving the Link Settings File

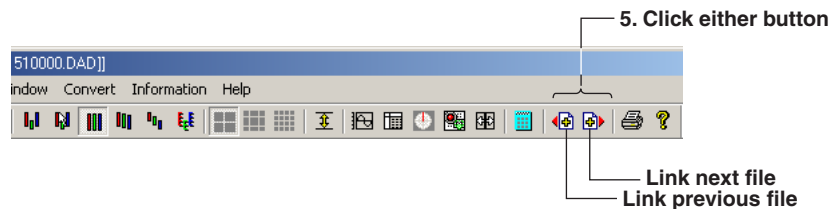
Linking Files

You can link and display DX1000/DX2000 files that have been divided by the auto save function, power failures, or other means (factors).

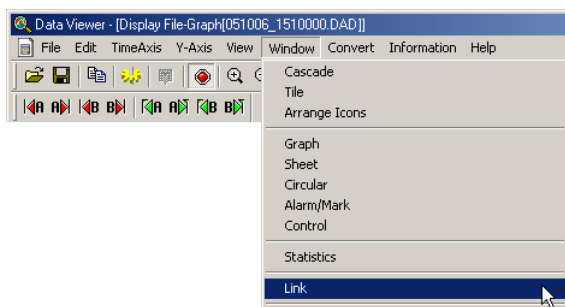
The files that can be linked are those that exist in the same directory. There are two methods to link files, from the toolbar and from the menu bar.



From the Toolbar



From the Menu Bar



5. Click here([Window]-[Link]).

6. The [Link] dialog box opens.

8. Select [Prev](previous file) or [Next](next file).

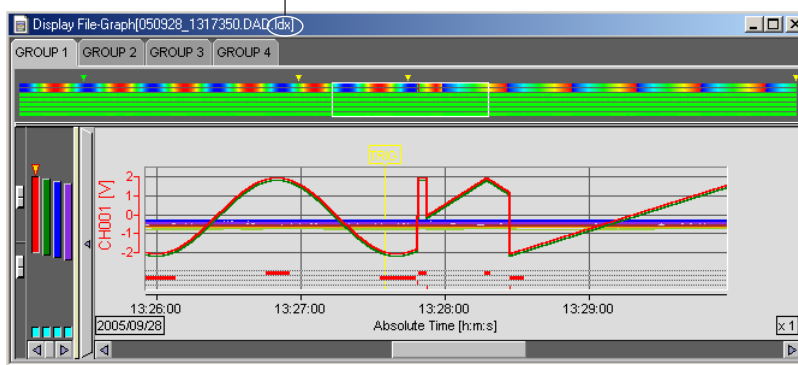
7. Click here(display files for linking).



9. Displays the linked files.

10. Displays the linked files in a different color.

The file extension .idx is appended to the original file name



Note

When linking and displaying files, make sure that the number of data points after linking does not exceed 5242880.

In addition, if there is a period over which data does not exist such as when a power failure occurs, data is counted as if the data is acquired at the given scan interval even during that period. The scan interval and the maximum period for linking files are indicated below.

Interval	Period
25 ms	7.26 hour
1/8 s	1.51 days
1 s	12.1 days
10 s	3.91 months
60 s	1.99 years
10 min	19.9 years

For example, if data is acquired continuously at 1-s scan interval and there is a period of power failure over 12.1 days, the data before and after the power failure cannot be linked and displayed.

Saving the Link Settings File

Select [File] - [Save Display Setting As] to save the link settings file to the same directory as the linked files.

The file name takes the form of the original file name with the file extension .ldx.

You can save the file by specifying the file name and the destination directory by selecting [File] - [Save Display Setting].

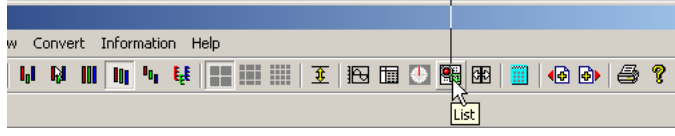
Note

Files with the extension .ldx contain only link settings. To reopen a linked file, you must have the original data file.

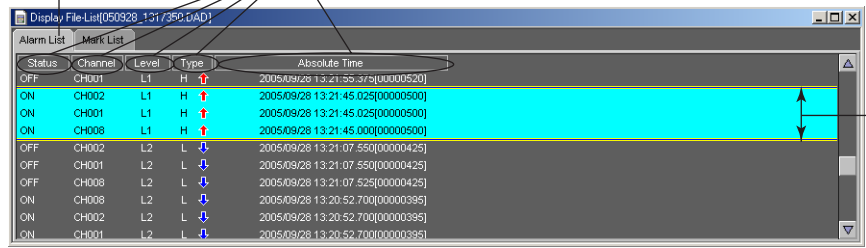
4.6 Listing Alarms and Marks and Converting the List

A list of alarms and marks is displayed with the display file or event file opened.

1. Click here([Window]-[Alarm/Mark]).



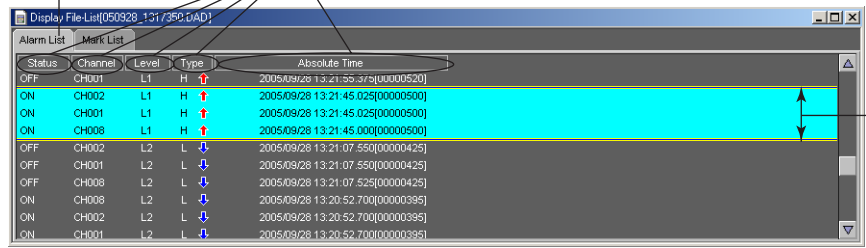
2. The [Display File List] dialog box opens.



3. Click here([Alarm List]).

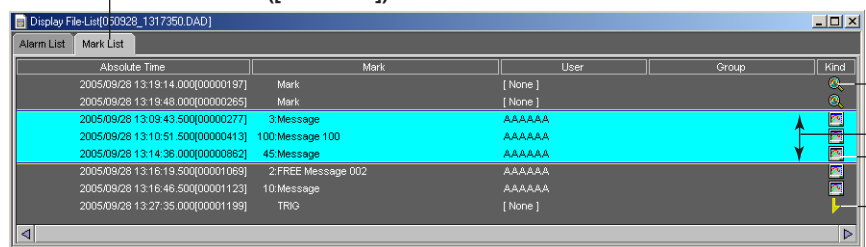
Label

Pointer



Status	Channel	Level	Type	Absolute Time
OFF	CH001	L1	H	2005/09/28 13:21:55.375(00000520)
ON	CH002	L1	H	2005/09/28 13:21:45.025(00000500)
ON	CH001	L1	H	2005/09/28 13:21:45.025(00000500)
ON	CH008	L1	H	2005/09/28 13:21:45.000(00000500)
OFF	CH002	L2	L	2005/09/28 13:21:07.550(00000425)
OFF	CH001	L2	L	2005/09/28 13:21:07.525(00000425)
OFF	CH008	L2	L	2005/09/28 13:20:52.700(00000395)
ON	CH008	L2	L	2005/09/28 13:20:52.700(00000395)
ON	CH002	L2	L	2005/09/28 13:20:52.700(00000395)
ON	CH001	L2	L	2005/09/28 13:20:52.700(00000395)

3. Click here([Mark List])



Absolute Time	Mark	User	Group	Kind
2005/09/28 13:19:14.000(00000197)	Mark	[None]		
2005/09/28 13:19:48.000(00000265)	Mark	[None]		
2005/09/28 13:09:43.500(00000277)	3:Message	AAAAAA		
2005/09/28 13:10:51.500(00000413)	100:Message 100	AAAAAA		
2005/09/28 13:14:36.000(00000862)	45:Message	AAAAAA		
2005/09/28 13:16:19.500(00001069)	2:FREE Message 002	AAAAAA		
2005/09/28 13:16:46.500(00001123)	10:Message	AAAAAA		
2005/09/28 13:27:35.000(00001199)	TRIG	[None]		

Mark created on the viewer

Cursor

Mark created on the DX1000/DX2000

Trigger mark

Click a label on the “Alarm List” display screen to sort using the label. The first click will sort the list in the ascending order; the second click will sort the list in the descending order.

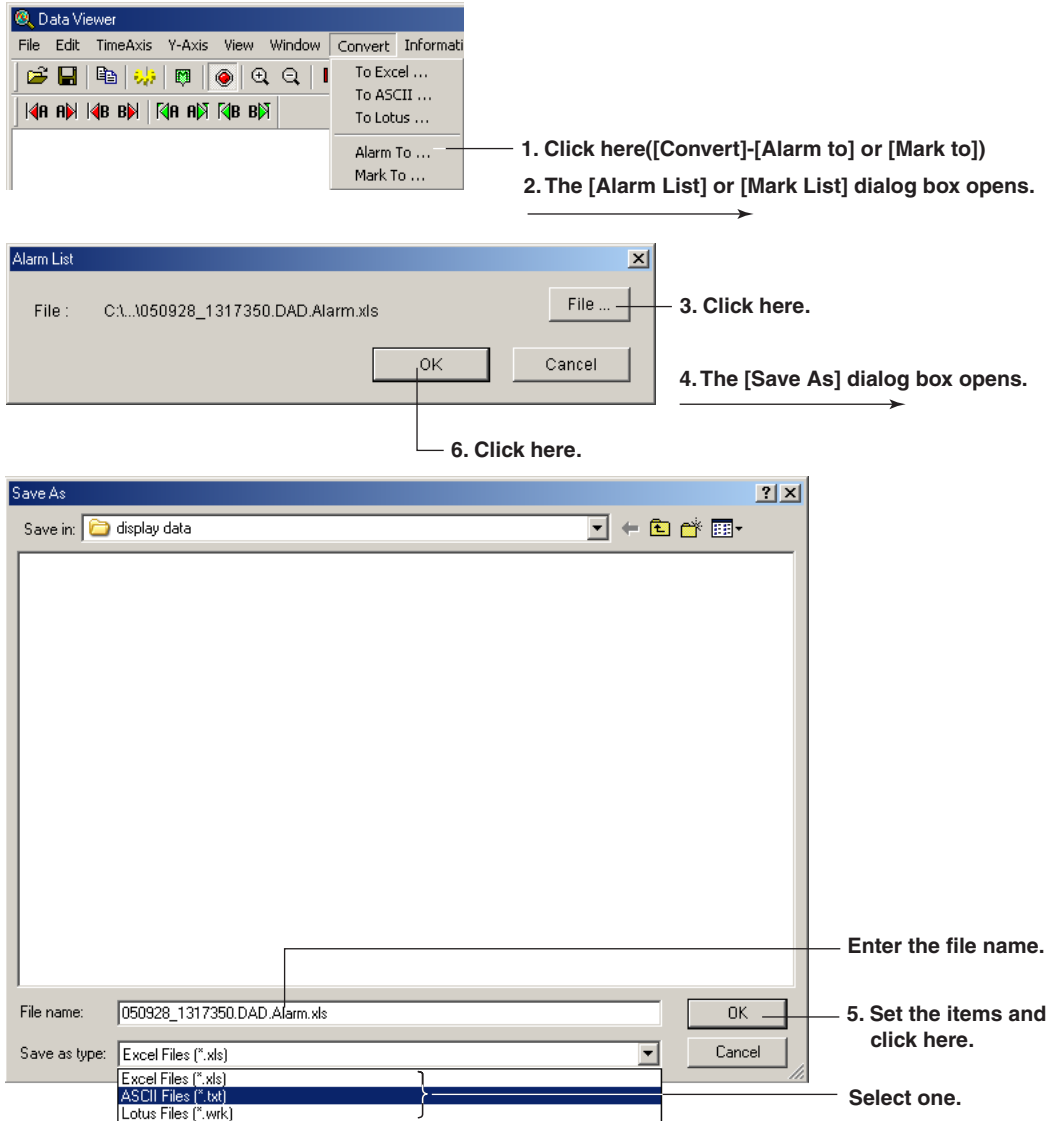
Note

If you drag on the “Alarm List” display screen, a pointer is displayed. The cursor on the waveform display, circular display, numerical display, and cursor value display are not synchronized to this pointer.

4.6 Listing Alarms and Marks and Converting the List

Converting and Outputting the Alarm or Mark List

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



4.7 Displaying the Report Files

1. Click Open button or select [File]-[Open] from menu bar.
2. Select the report file.

		CH001 [°C]	CH002 [V]	CH003 [m3h]	CH004 [%]	CH005 [°C]
2005/10/25 01:00:00	Status					
	AVE	99999	0.563	379.0	70.6	523.8
	MAX	297.7	1.100	503.1	90.4	642.5
	MIN	123.4	0.107	274.5	53.9	423.6
	SUM	9.999999E+99	1.451460E+02	9.776990E+04	1.822370E+04	1.351484E+05
2005/10/25 02:00:00	Status					
	AVE	180.4	0.365	333.7	63.4	480.3
	MAX	237.9	0.627	393.6	73.0	537.8
	MIN	115.7	0.072	266.3	52.6	415.6
	SUM	1.840210E+04	3.726500E+01	3.403600E+04	6.465500E+03	4.898660E+04
2005/10/25 23:55:50	Status					
	AVE	-99999	-0.447	147.2	33.6	301.3
	MAX	114.5	0.066	265.1	52.4	414.4
	MIN	-99.6	-1.075	3.5	10.6	153.3
	SUM	0.000000E+00	7.000000E-01	0.000000E+00	5.000000E-01	1.000000E+00

The above screens differ when displaying reports and other files of the DX100/DX200 or CX1000/CX2000.

Status

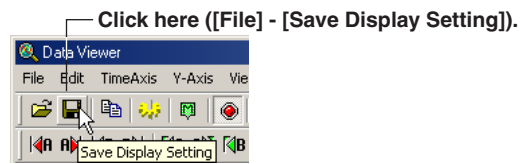
The following icons are displayed in Status.

- : A measurement error or computation error occurred during the period over which the report was created.
- : An ober range or computation overflow occurred during the period over which the report was created.
- : A power failure occurred during the period over which the report was created.
- : The time was changed during the period over which the report was created.

Note

When displaying DX100/DX200, CX1000/CX2000, or other report files, the screen differs from above.

4.8 Saving the Display Settings



The display settings can be saved to a file. The following display settings can be saved:

For Display File, Event File, and Link File Displays

- Print comment
- Cursor A and Cursor B positions
- ON/OFF condition of the clipping of the displayed waveform
- Settings specified in the General Display Settings
- Mark information
- Zoom rate of the time axis
- Display mode of the time axis (absolute/relative)
- Waveform display area
- Grid type
- The channel identification string mode (channel/tag)
- ON/OFF condition of file information items (see section 4.1)
- The background and grid color of the waveform display area
- Y-axis zone setting
- The active waveform
- The height of the data overview of each group
- The width of the zone display area of each group
- Show/Hide condition of the zone display area
- Selected group
- ON/OFF condition of the alarm display
- Position of the display screen

The information is saved to the same directory as the data files. The name of the saved file is the name of the data file being displayed, with an added [vdx] extension (Y1116040.DDS.vdx, for example).

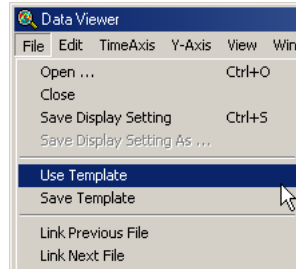
This display setting file can be overwritten unlimited number of times.

When the data with the same file name is reopened, the display settings that were saved are used. If you do not wish to open the data using the saved settings, delete the display setting file ([vdx] extension) before opening the data file.

4.9 Saving Display Template

Saving Templates

- From the File menu, choose Save Template.
The currently displayed settings are saved as a template file to the same folder as the displayed data.



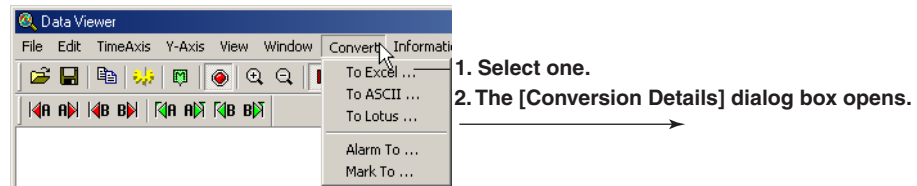
Using Templates

- From the File menu, choose Use Template.
If the currently displayed data file is not accompanied by its display settings file, it is displayed according to the setting information of the template file residing in the same folder.
If the currently displayed data file is accompanied by its display settings file, it is displayed according to the setting information of the display settings file.
If you do not wish to use the template, select File > Use Template again to clear the check mark.

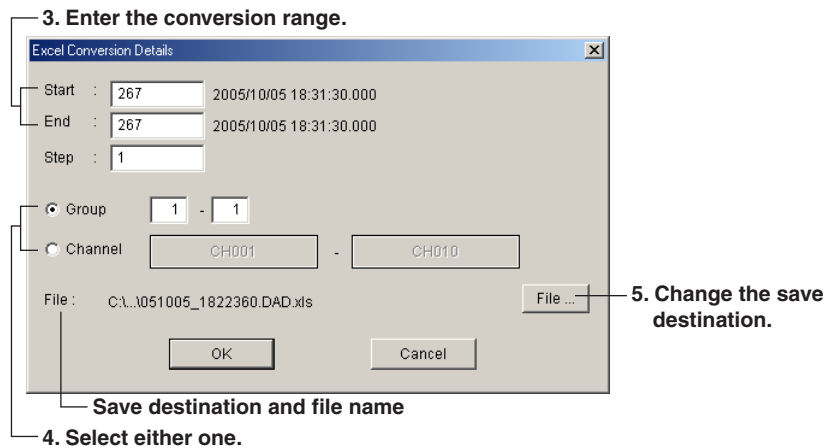
The template file is saved with the name default.tdx in the folder of the currently displayed data. When using a template file, the template file residing in the same folder as the displayed data is used. The setting information saved to the template file is as follows.

- Print comment
- Y-axis zone setting
- ON/OFF condition of the clipping of the displayed waveform
- Settings specified in the General Display Settings
- Zoom rate of the time axis
- Display mode of the time axis (absolute/relative)
- Waveform display area
- Grid type
- The channel identification string mode (channel/tag)
- ON/OFF condition of file information items (see section 4.1)
- The background and grid color of the waveform display area
- The width of the zone display area of each group
- The active waveform
- The height of the data overview of each group
- Show/Hide condition of the zone display area
- Selected group
- ON/OFF condition of the alarm display
- Position of the display screen

4.10 Converting the Data



When Waveform Display or Numeric Display is Open



The measured data can be converted to ASCII, Lotus, and Excel formats.

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.

To convert all the data in the specified range, set the step number to 1.

Step

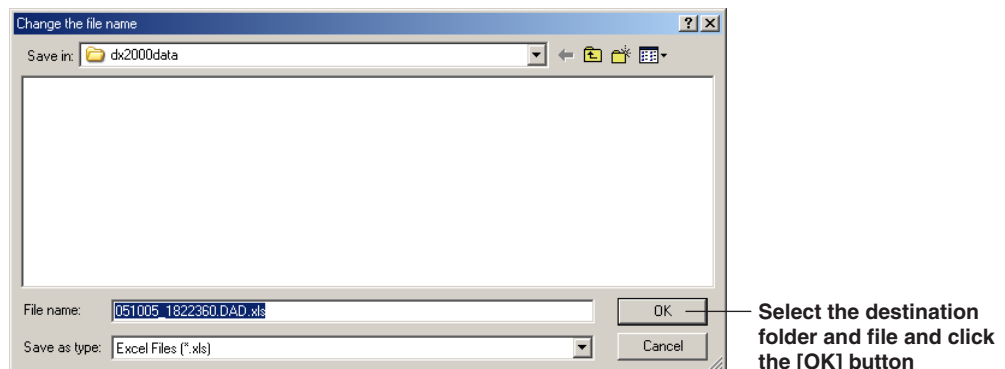
To convert all the data in the specified range, set the step number to 1.

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.

Changing the Save Destination

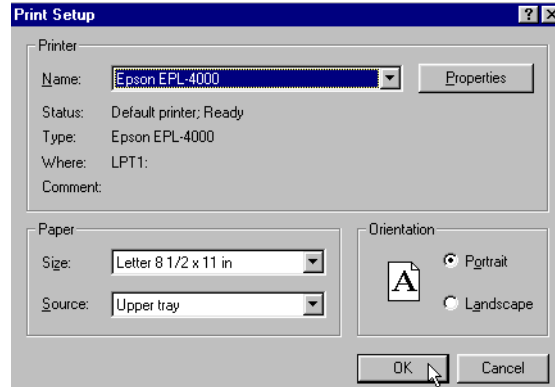


To change the destination folder or the name of the file containing the converted data, click the [File] button. The [Change the file name] dialog box opens.

4.11 Printing

Setting the Printer

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



2. Set the printer, paper and orientation.

Note

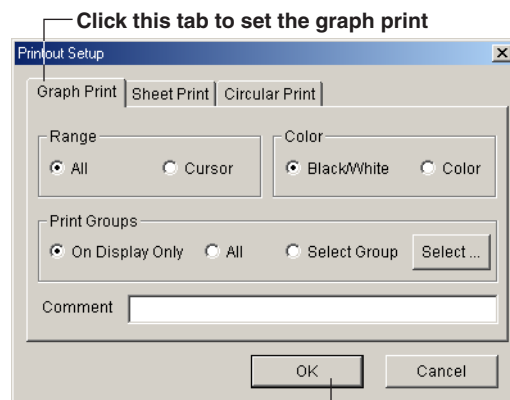
Set the printer according to the configuration of the system that you are using.

Specifying the Contents to be Printed (for Display Data File and Event Data File)

Specify the contents to be printed before executing the print.

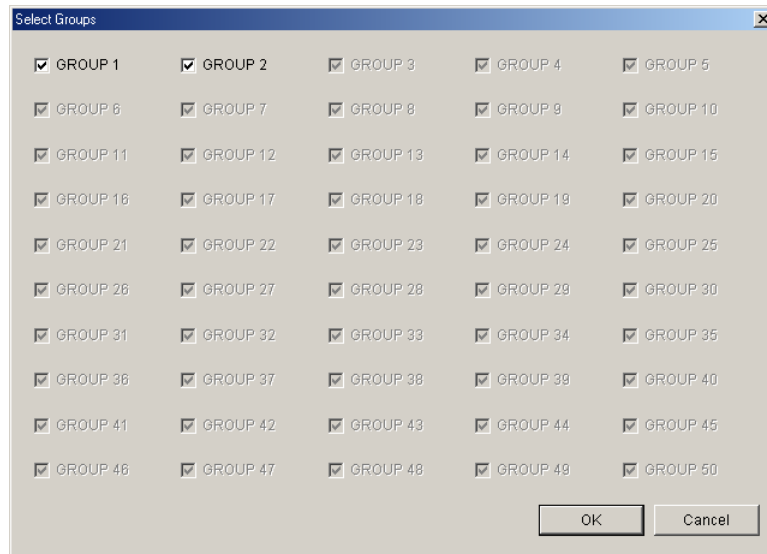
Select [File] - [Print Settings]. The [Printout Setup] dialog box opens. When the waveform is displayed, printing is carried out according to the settings under the Graph Print tab of the [Printout Setup] dialog box. If numeric values are displayed, printing is carried out according to the settings under the Sheet Print tab.

Setting Graph Print

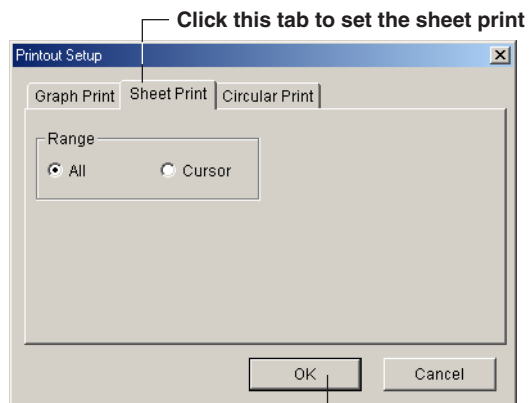


Set the range, color, print group, and comment, then click the [OK] button

If you selected [Select Group], click the [Select] button. The [Select Groups] dialog box opens. Select the groups to be printed. Click the [OK] button to close the dialog box.

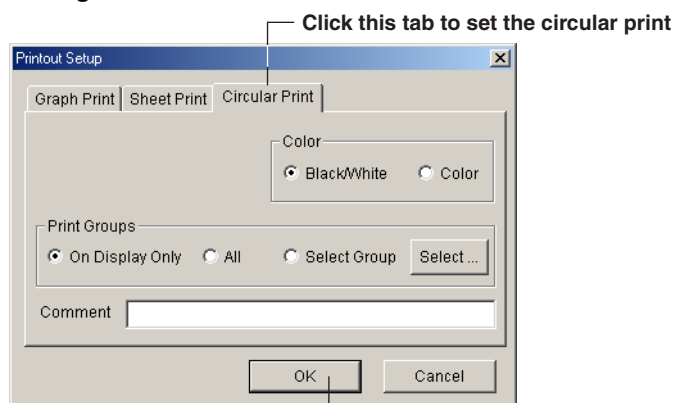


Setting Sheet Print



Select the range to be printed, and click the [OK] button

Setting Circular Print



Select the range to be printed, and click the [OK] button

Note

- The [Comment] can be entered or changed using [About Document] (see “Checking the Information About the loaded File” page 4-3). When the print comment is entered or changed, it is reflected in the comment of [About Document] 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.

4.11 Printing

Header

A header can be printed when printing the waveform or a TLOG file.

Of the items that are displayed in the file information dialog box ([Information] - [About Document]), those that are checked are printed in the header section. For details related to the file information, see section 4.1.

Print Preview

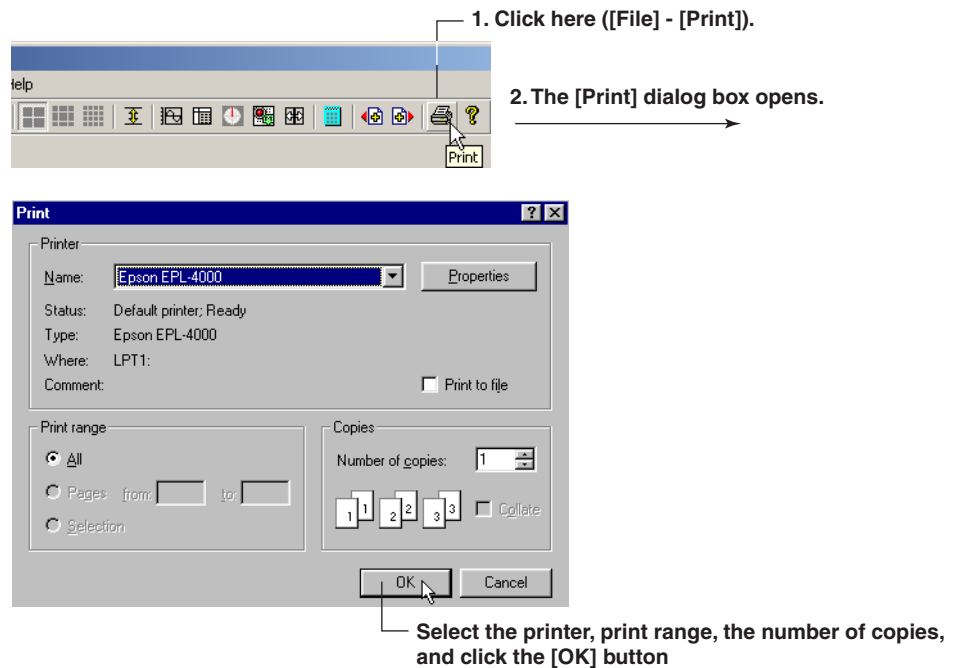
You can preview the print layout before actually printing the data.

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, [Cursor value] 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



5.1 Troubleshooting

Launcher

Message	Corrective Action	Reference Pages
Check communication settings.	Open the [Network] dialog box and check the settings.	2-3

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?	3-3
Data created in 2038 or later cannot be handled.	–
Some A/D converters are faulty. Some items cannot be set.	–
Some information cannot be set. Do you still want to continue?	–
Settings may not be made correctly since the configuration does not match the connected DX1000/DX2000. Do you still want to send?	–
The current setup data will be initialized.	3-4
Setup data will be received from the DX1000/DX2000.	3-1
The setup data will be sent.	–
Memory sampling will be stopped.	–
Memory sampling will be started.	–

Error List

Message	Corrective Action	Reference Pages
Illegal file to load	Select another file.	3-2
Failed to load the file.	Try to load the file again. If still not possible, the file may be damaged. Select another file.	3-2
Failed to create a file.	Check the free space in the directory.	–
Memory sampling in progress Stop sending.	Send after data has been written to the internal memory of the DX1000/DX2000.	–
Math in progress Stop sending.	Send after math is completed.	–
Memory sampling & math in progress Stop sending.	Send after data has been written to the internal memory of the DX1000/DX2000 and math is completed.	–
Saving to the media. Re-send later.	Send after data has been saved to the external media.	–
Communication error	Check the communication settings.	2-3
Time out	Traffic may be busy. Retry later.	–
Illegal user information	Check whether the user name is correct.	–
Failed to connect.	Check the communication settings. Check whether the DX1000/DX2000 is powered ON.	2-3
Communication busy	Retry later.	–
Memory error	Exit other programs then restart, or reboot the OS then restart.	–
User level error	No right is given to the login user ID	–

5.1 Troubleshooting

Message

Message

Data has been sent.
Data has been received.
Some information has not been sent.
Not allowed.
A password is required.
A user name is required.
Some information requires attention.

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.	4-2
The number of data sets is "0".	Select another file.	4-2
The number of channels is "0".	Select another file.	4-2
Some files may be overwritten. Do you still want to continue?	Continue if OK. If not, change the file names.	–

Index

A

abnormal data	4-13
about document	4-2, 4-34
absolute time	4-7, 4-20
alarm display	4-11, 4-20
alarm list	4-25
alarm transition point	4-15
arbitrary mark	4-14
auto zone	4-8

C

change the destination folder	4-30
changing the system configuration	3-3
channel	4-30
channel No.	4-12
characters that can be used	3-14
checking the system configuration	3-3
circular	4-18
circular print	4-33
clip	4-10
clipboard	4-12
color overview display	4-4
converting the Data	4-30
converting the data	4-30
copy	4-7, 4-12
creating hardware setup data	3-5
creating setup data	3-2
cursor's value	4-13

D

delete the mark	4-16
display color	4-7
display numeric value	4-20
display position	4-6
display range	4-6
displaying the waveform	4-4

E

edit zone	4-8
editing hardware setup data	3-5
end point	4-30
event file	4-28

F

full zone	4-8
-----------------	-----

G

general display setting	4-5
graph print	4-32
group	4-5, 4-30

H

hardware configurator	3-1
header	4-34
hide cursor	4-12

I

initializing the setup data	3-4
-----------------------------------	-----

L

LACK	4-13
link file	4-22, 4-28
link settings file	4-24
list of alarms	4-25
list of marks	4-25
loading preexisting setup data	3-2

M

mark	4-14
mark list	4-25
mark position	4-15
multi-axis zone	4-8

O

open	4-2
OVER	4-13

P

paste	4-7
print	4-32
print preview	4-34
printing	3-12

R

registering the channel	4-6
relative time	4-7, 4-20
reset mark	4-16

S

save the display setting	4-28
saving the setup data	3-11
scale value	4-6
select all	4-21
select groups	4-32
sending the setup data	3-10
sheet print	4-33
showing the cursor	4-12
slide zone	4-8
start point	4-30
starting and stopping measurement	3-13
starting the Data Viewer	4-1
starting the hardware configurator	3-1
statistics	4-14
step	4-30
system configuration	3-3, 3-4

Index

T

tag	4-12
templates	4-29
terms and conditions of the software license	ii
to load setup data	3-1

U

user zone	4-8
using templates	4-29

W

waveform display limit	4-10
------------------------------	------

Y

Y-axis	4-6, 4-8
--------------	----------

Z

zone	4-6, 4-8
zoom in	4-7
zoom out	4-7