
**User's
Manual**

**WX201
DataBrowser**

vigilantplant®

This user's manual contains useful information about the functions and operating procedures of the DataBrowser and lists the handling precautions of the software. To ensure correct use, please read this manual thoroughly before beginning operation. After reading this manual, keep it in a convenient location for quick reference in the event a question arises during operation.

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Overview of This Manual

Structure of This Manual

This manual consists of four chapters and an index as shown below.

Chapter	Title	Description
1	Before Using the DataBrowser	An overview of DataBrowser. Provides DataBrowser's PC system requirements and configuration, flow of operations, and other information.
2	Operation of the Data Search Window	Describes methods to search for data files. Explains how to search by folder name, file date, extension, data tywi, characters, serial number, and other criteria; how to display search results; how to add channels to data; and other operations.
3	Operation of the Trend Display Window	Describes how to display data found during a search. Explains how to display waveforms, cursor values, and computed results; how to save settings and change data formats; and other operations.
4	Responding to Error Messages	Lists error messages, their causes, and their corrective actions.
	Index	An alphabetical index of the manual's contents.

Scope of This Manual

This manual does not explain the basic operations of your PC's operating system (OS). For information regarding the basic operations of Windows, see the Windows user's manual.

Conventions Used in This Manual

- **Unit**

K: Denotes *1024*. Example: 100 KB
M: Denotes *1024 K*. Example: 10 MB
G: Denotes *1024 M*. Example: 2 GB

- **Bolded Items**

Hardware and software controls that the user manipulates such as dialog boxes, buttons, and menu commands are often set in boldface type.

- **Subheadings**

On pages in chapters 1 through 3 that describe operating procedures, the following subheadings are used to distinguish the procedure from their explanations.

Procedure

Carry out the procedure according to the step numbers.

Explanation

All procedures are written with inexperienced users in mind; depending on the operation, not all steps need to be taken. Explanation gives information such as limitations related the procedure.

Note

Calls attention to information that is important for proper operation of the instrument.

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1.1 Overview of DataBrowser

Functional Overview

DataBrowser is a software application providing data file searching and display functions. It allows you to search for and display data files saved by Yokogawa recorders and data acquisition software programs from a local or network host.

Note

Hosts on the network must be running DataBrowser.

Data Search Function (Search Window)

Five categories of search conditions are available, making entry of criteria simple. Also, you can select multiple search conditions to refine your searches.

(1) Time

You can search for files of a specific year, month, date, and time (Time Range), or for those of a specific time range regardless of the day (Time Range each day).

(2) File Name

Search for data files of a specified file name or extension.

(3) Data Type

Search for data files from a specific instrument (DX100/200, CX1000/2000, MX100, MV100/200, or FX100) or data acquisition software application (DAQLOGGER, AddTrigger, or AddMulti, MXLOGGER, MX Standard).

(4) Keywords

Search for data files containing a specified keyword(s).

(5) Serial Number

Search for data files of the specified instrument serial number.

Data Display Function (Trend Display Window)

- You can display waveforms of data having different times and acquisition intervals, and obtained by different instruments and applications, all on the same screen.
- You can read values using cursors, and compute statistics over an area.
- Data can be converted to Excel, text, or Lotus format.
- All data, or a range of data specified by the cursor can be printed.

Diagram of Data Saving and Loading

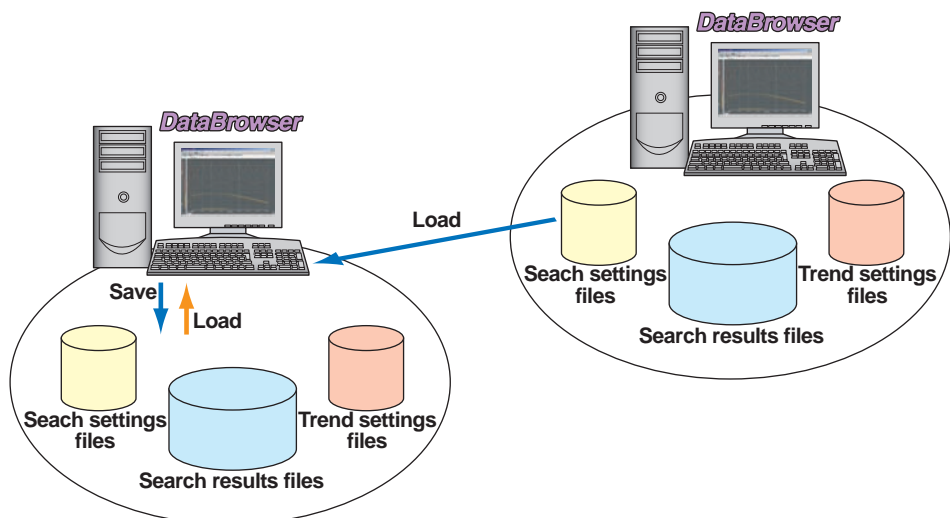
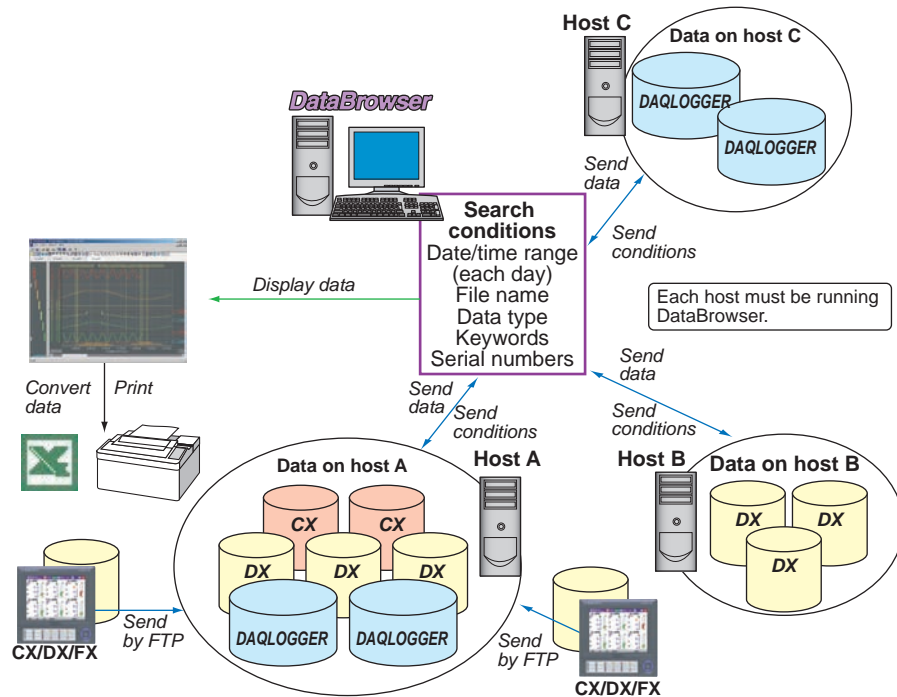
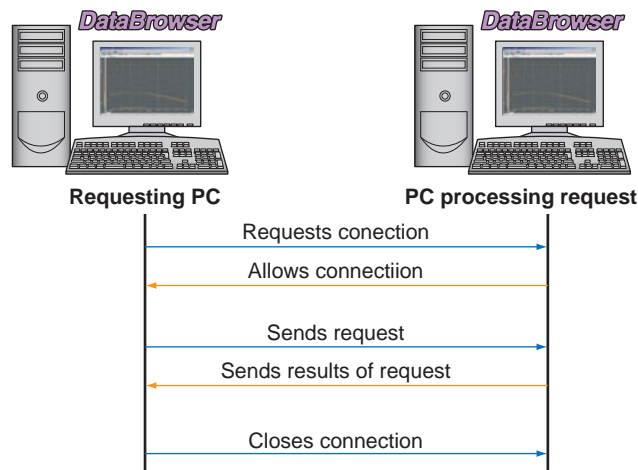


Diagram of Data Searching and Display



Communication with Network Hosts

DataBrowser can communicate with hosts on the network (other PCs running DataBrowsers) and execute searches, obtain data, download specified files, and acquire search results. The following is a description of the communication that occurs when executing functions on a DataBrowser network host from another DataBrowser. For each request, (1) a connection with the host is made, (2) the request is sent and the response is received, (3) then the connection is closed. The connection with the host is not always open. Rather, it only opens when the request is issued.



1.2 System Requirements

Operating System (OS)

Run DAQWORX under any of the following operating systems.

- Windows 2000 Professional SP4
- Windows XP Home Edition SP3
- Windows XP Professional SP3 (excluding Windows XP Professional x64 Editions)
- Windows Vista Home Premium SP2 (excluding the 64-bit editions)
- Windows Vista Business SP2 (excluding the 64-bit editions)
- Windows 7 Home Premium, SP1 (32-bit and 64-bit editions)
- Windows 7 Professional, SP1 (32-bit and 64-bit editions)

The language displayed by the software under different language versions of the OS are as follows.

OS Language	Software Language
Japanese	Japanese
Other	English

Note

This manual uses screens displayed on Windows 2000 to describe the procedures.

PC

A PC that runs one of the OS above, and that meets the following CPU and memory requirements.

When Using Windows 2000 or Windows XP

Pentium 4, 1.6 GHz or faster Intel x64 or x86 processor; 512 MB or more of memory

When Using Windows Vista

Pentium 4, 3 GHz or faster Intel x64 or x86 processor; 2 GB or more of memory

When Using Windows 7

32-bit edition: Intel Pentium 4, 3 GHz or faster x64 or x86 processor; 2 GB or more of memory

64-bit edition: Intel x64 processor that is equivalent to Intel Pentium 4, 3 GHz or faster; 2 GB or more of memory

Note

The specifications above are for a desktop PC, not a notebook PC.

Hard Disk

Free disk space: 200 MB or more

CD-ROM Drive (for Use during Installation)

Monitor

A video card that is recommended for the OS and a display that is supported by the OS, has a resolution of 1024x768 or higher, and that can show 65,536 colors (16-bit, high color) or more.

Printer and Mouse

A printer and mouse supported by the OS.

Ethernet Port

An Ethernet compatible port (10BASE-T or 100BASE-TX).

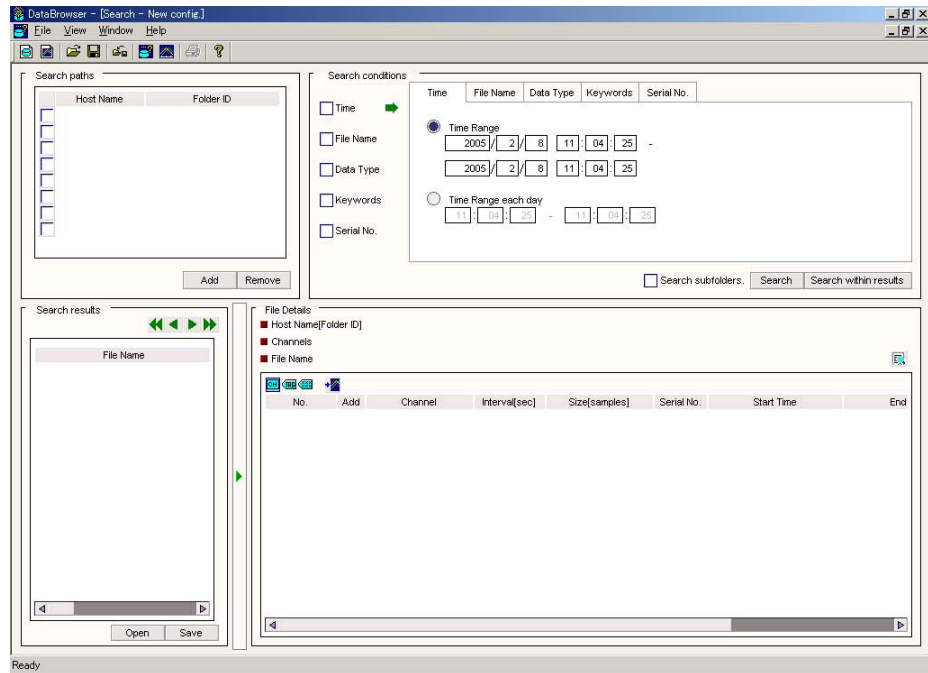
1.3 Starting and Exiting the Software

Starting the Software

Procedure

1. From the Windows Start menu, choose **Programs > YOKOGAWA DAQWORX > DataBrowser > DataBrowser**.

DataBrowser starts.



Note

When you start DataBrowser, it is restored to the same configuration that was active during the previous session. However, the search results in memory when exiting the software cannot be recovered in subsequent sessions.

Exiting the Software

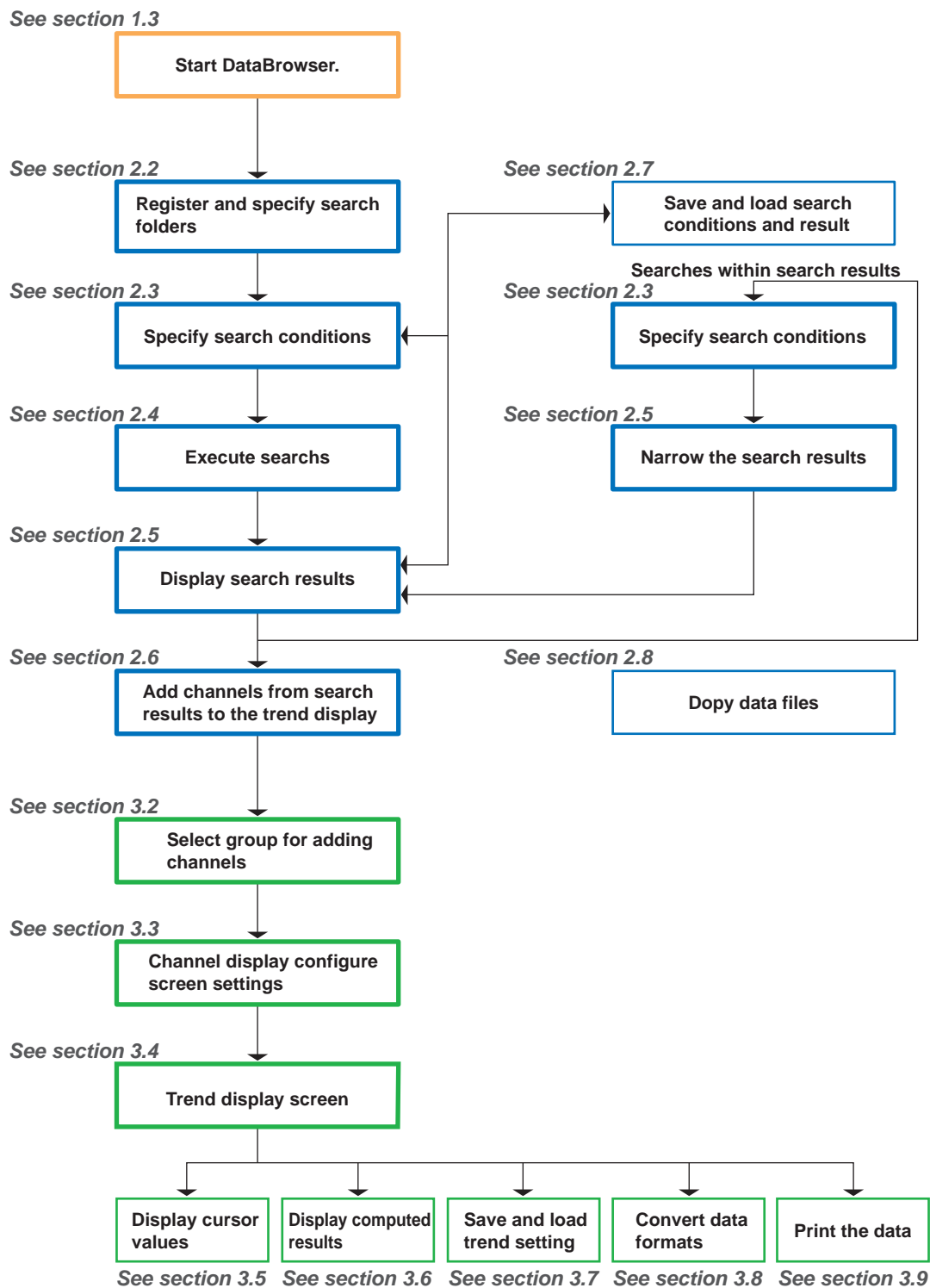
Procedure

1. Choose **File > Exit** from the menu bar, or click the **X** button at the right end of the title bar.

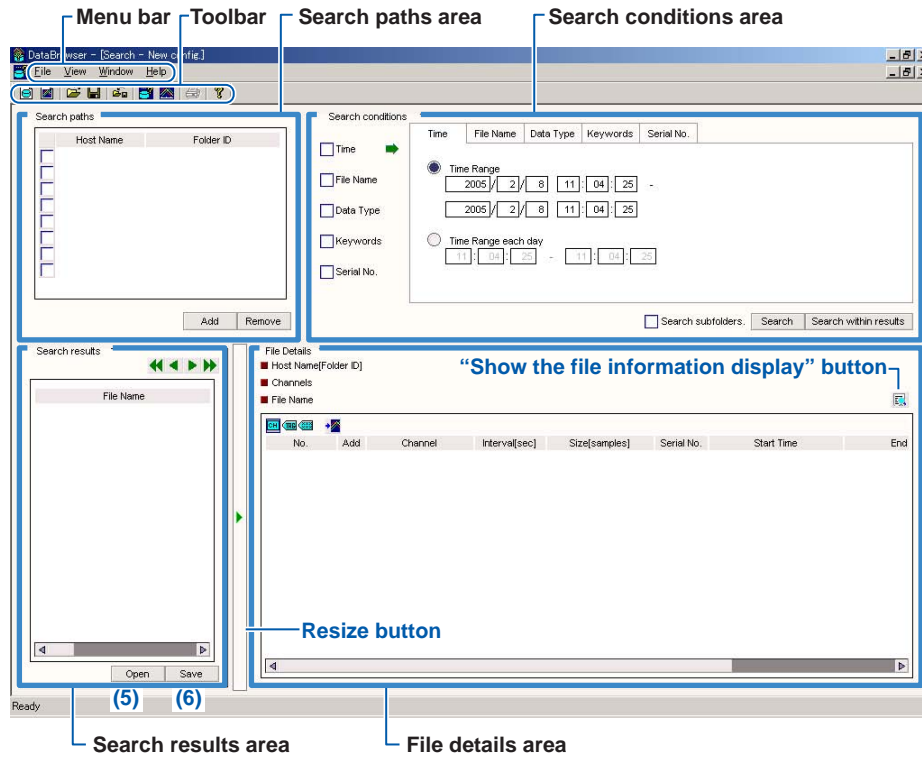
DataBrowser closes.

1.4 Flow of Operations

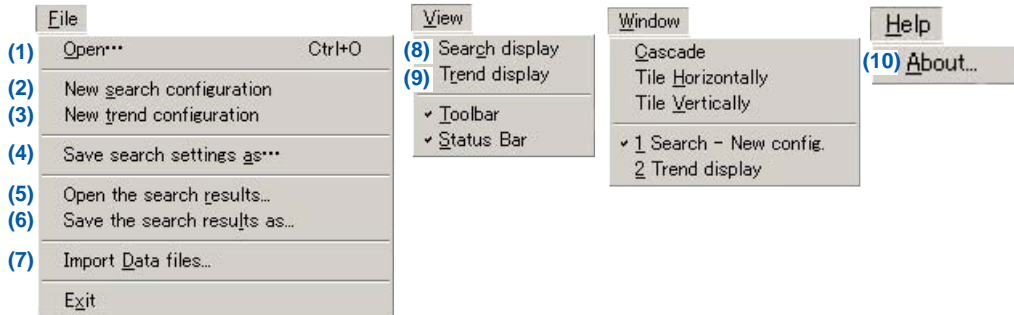
The figure below shows the general flow of operation when using DataBrowser.



2.1 Names of Parts in the Data Search Window



Menu bar



Toolbar



- (1) Loads search settings from local or network hosts and displays them.
- (2) Opens a new Search window.
- (3) Opens a new Trend display window.
- (4) Saves search folder and search condition settings to the local host.
- (5) Loads search results from local or network hosts and displays them.
- (6) Saves search results to the local host.
- (7) Copies data files from a specified folder to another folder.
- (8) Displays the Search window.
- (9) Displays the Trend Display window.
- (10) Displays version information.

2.2 Registering and Specifying Search Folders

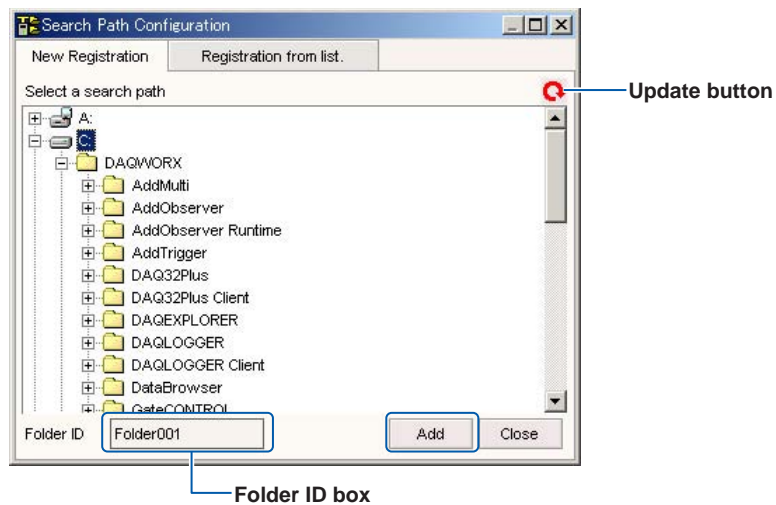
You can register source folders for data file searches. Up to two hundred folders can be registered, and up to eight of those can be specified at a time for a search.

Registering New Search Folders

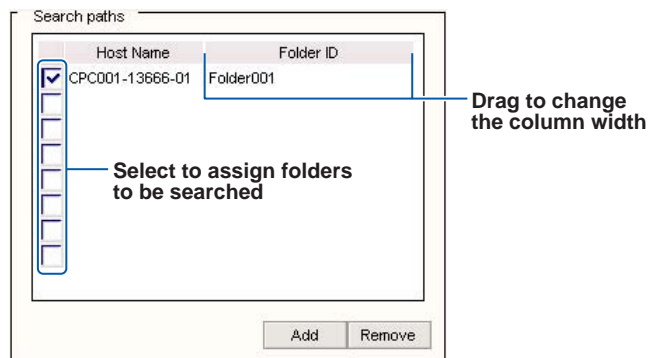
The following is the procedure for registering new source folders for searches on local or network hosts.

Procedure

1. Open the Search window, then click the **Add** button in the Search paths area. The Search Path Configuration dialog box is displayed.



2. Select a folder to register, then enter a folder ID.
3. Click the **Add** button. The host name and ID of the registered folder appears in the Search paths area (the folder's check box is selected, indicating that it will be included in any searches performed).



Explanation

Search Paths Area

Host Name

The name of the host of the registered folder.

Folder ID

The name specified for the folder when it was registered.

Add button

The Search Path Configuration dialog box is displayed when this button is clicked.

Remove button

Deletes the selected folder registration from the Search paths area.

Search source check boxes

Select or clear the check boxes to include or exclude folders from searches.

Search Path Configuration Dialog Box**Update button**

Updates the directory tree for the local host.

Folder ID Box

You can enter an identifying string for the folder using up to sixteen alphanumeric characters. The folder ID is registered along with the folder.

Add button

Registers the selected folder using the specified folder ID.

Close button

Closes the Search Path Configuration dialog box.

Note

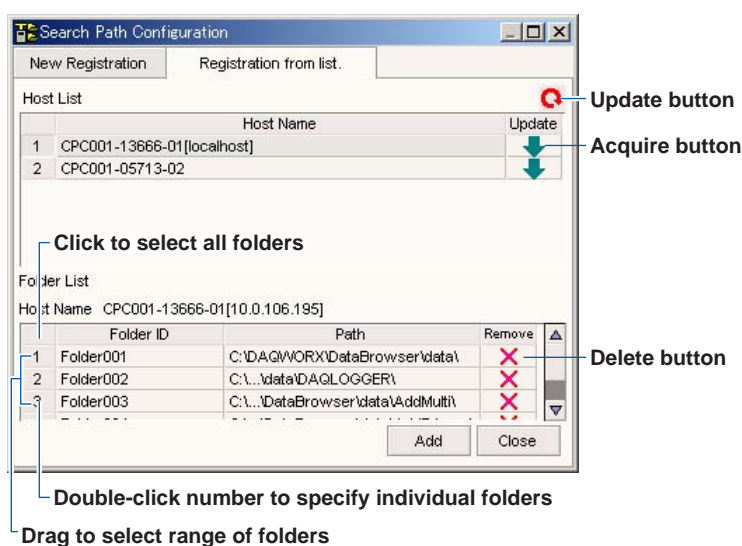
- Two or more folders cannot be registered under the same folder ID.
- Registered folders are shown under Folder List in the Registration from list tab of the Search Path Configuration dialog box. Up to two hundred folders can be registered. If you need to register a new folder when two hundred have already been registered, first delete one or more of the registered folders from the folder list.

Specifying a Folder from the List

The following is the procedure for selecting a search folder from the list of registered folders from local or network hosts.

Procedure

1. Open the Search window, then click the **Add** button in the Search paths area. The Search Path Configuration dialog box is displayed.
2. Click the **Registration from list** tab. The Registration from list tab is displayed.



3. Select a host from the Host List. The folders registered under the selected host appear in the Folder List.

2.2 Registering and Specifying Search Folders

4. Select a folder and click **Add**, or double-click the folder number. The host name and ID of the specified folder appear in the Search paths area (with check box selected).



Explanation

Host List

The Host List displays any hosts on the network that are running DataBrowser. Up to two hundred hosts can be displayed.

Folder List

The Folder List displays the folder ID and paths registered to the host selected in the host list. Up to two hundred folders can be displayed.

Update button (red circular icon)

Updates the host list and folder list.

Update button (green arrow icon)

Updates the folder list for individual hosts.

Remove button

Deletes folders from the folder list. (You can only delete folders registered to the local host.)

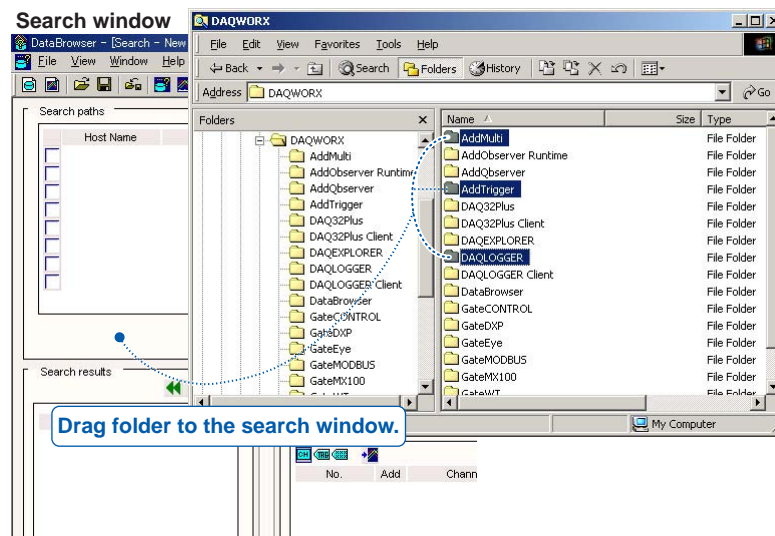
Add button

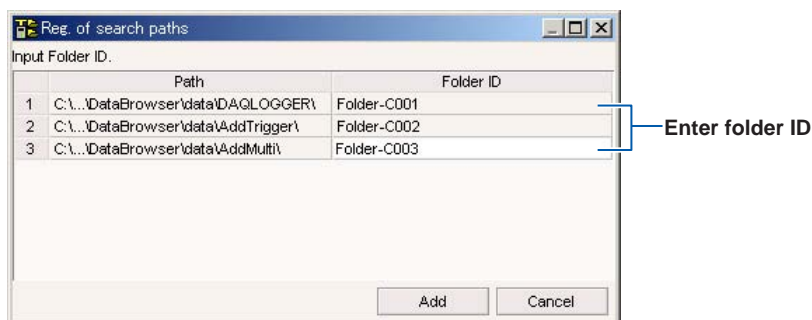
Adds the folder specified in the folder list to the Search paths list in the Search window.

Registering a Folder from the Explorer

Procedure

1. Open the Search window. Drag a folder you wish to register from the Windows explorer (from a folder) onto the Search window. The Reg. of search paths dialog box is displayed.





2. Enter a folder ID and click the **Add** button. The host name and ID of the registered folder appears in the Search paths area (the folder's check box is selected, indicating that it will be included in any searches performed).

Explanation

Path

The Path column shows the absolute path to the folder that was dragged.

Note

- Two or more folders cannot be registered under the same folder ID.
- Registered folders are shown under Folder List in the Registration from list tab of the Search Path Configuration dialog box. Up to two hundred folders can be registered. If you need to register a new folder when two hundred have already been registered, first delete one or more of the registered folders from the folder list.

Notes When Registering Search Folders

Note

- Even if you delete a folder from the Search paths area, the folder is not removed from the Folder List. Likewise, even if you delete a folder from the Folder List, it is not removed from the Search paths area.
- A new folder cannot be registered under the same folder ID as one that is currently registered in the Search paths area.
- Likewise, a new folder cannot be registered under the same folder ID as one that is currently registered in the Folder List area. However, the same folder can be registered twice under a different folder ID.

2.3 Specifying Search Conditions

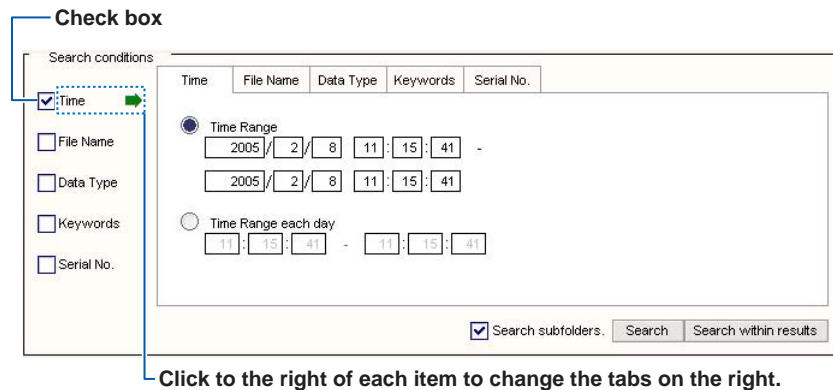
The following five categories of search criteria can be used. Multiple search conditions can be specified.

- Date and/or time range
- File name or extension
- Data type
- Keywords
- Serial numbers

Specifying a Date and/or Time Range

Procedure

1. Specify a search folder. (See section 2.2)
2. Select the Time check box in the Search conditions area.
3. Click the Time tab or click the word "Time" to the right of the check box. The Time tab is displayed.



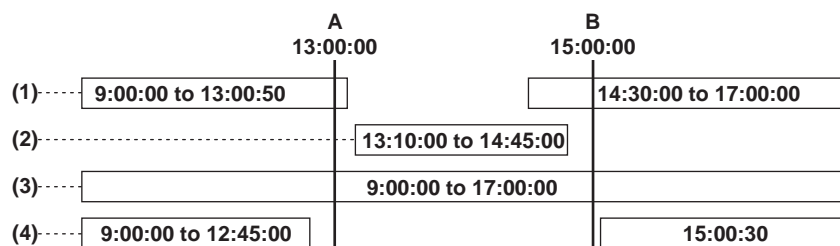
4. Select Time Range (for a specific day) or Time Range each day (for any day).
5. Enter a range of dates and time (by year, month, date, and time), or a daily time range.

Explanation

Date and time specification allows you to search for files containing data acquired on certain dates and times.

- Milliseconds cannot be specified here, and any milliseconds in files are read as "0" by the program.
- The files included by the date and time specification range are shown in the figure below.

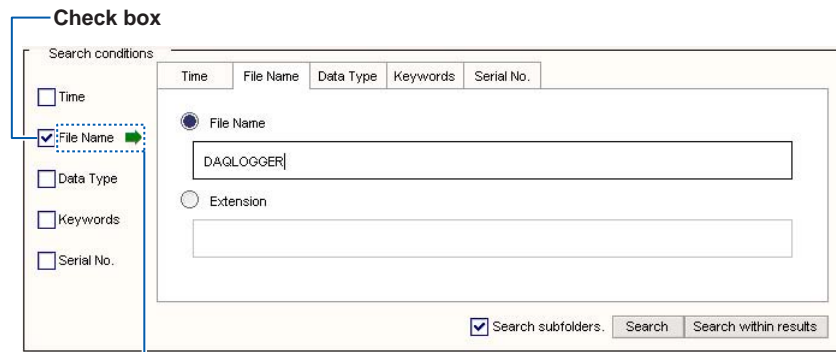
Given date/times A and B, the search finds any files containing data between A and B. As long as the file contains data between A and B, it is found even if it also contains data prior to A. Likewise, it is found if the start date/time is between A and B. Files (1), (2), and (3) are found, but not file (4).



Specifying a File Name or Extension

Procedure

1. Specify a search folder. (See section 2.2)
2. Select the File Name check box in the Search conditions area.
3. Click the File Name tab or click the words "File Name" to the right of the check box. The File Name tab is displayed.



Click to the right of each item to change the tabs on the right.

4. Select the File Name or Extension option.
5. Enter the file name or extension to use as a search criterion.

Explanation

File name specification allows you to search for files whose names contain the specified keyword or extension.

File Name

You can enter an entire file name or portion thereof.

Extension

You can enter an entire file name extension or portion thereof.

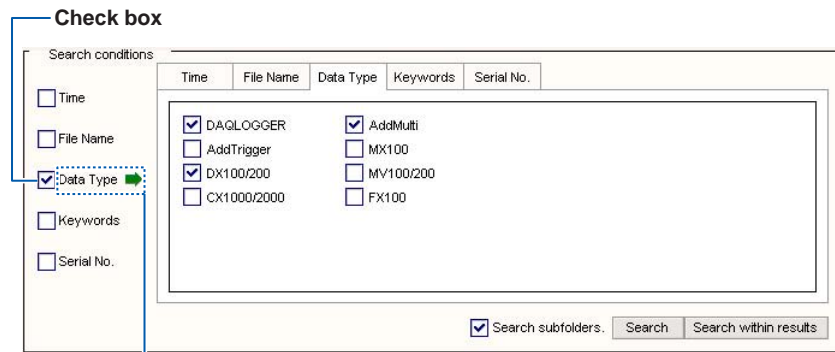
Note

To specify multiple files names or extensions, use a space as a delimiter. Note that wildcards (*, ?, etc.) are not allowed.

Specifying Data Types

Procedure

1. Specify a search folder. (See section 2.2)
2. Select the Data Type check box in the Search conditions area.
3. Click the Data Type tab or click the word “Data Type” to the right of the check box. The Data Type tab is displayed.



Click to the right of each item to change the tabs on the right.

4. Select the types of data to search for.

Explanation

Data type specification allows you to search for files of the specified instrument or PC software.

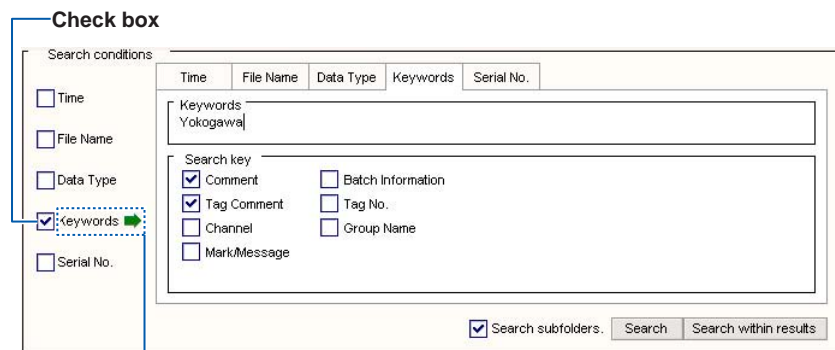
Data Types

DAQLOGGER, AddMulti, AddTrigger, MX100 (data file created on the MX100 or with the MXLOGGER software or the MX100 standard software), DX100/DX200, MV100/MV200, and CX1000/CX2000, FX100

Specifying Keywords

Procedure

1. Specify a search folder. (See section 2.2)
2. Select the Keyword check box in the Search conditions area.
3. Click the Keywords tab or click the word “Keywords” to the right of the check box. The Keywords tab is displayed.



Click to the right of each item to change the tabs on the right.

4. Select a search key, then enter a keyword or keywords to search for.

Explanation

Keyword specification allows you to search for files that contain the keywords in their text or data. Files that do not contain any data of the specified search key are not included in the search. The table below shows the types of data available by product.

	DAQLOGGER	AddMulti	AddTrigger	MX100	DX100/200	MV100/200	CX1000/2000	FX100
File comments			✓	✓	✓	✓	✓	✓
Batch information					✓	✓	✓	
Tag comments	✓	✓	✓	✓	✓	✓	✓	✓
Tag numbers	✓	✓	✓	✓				
Channels	✓	✓	✓	✓	✓	✓	✓	✓
Group names	✓	✓	✓	✓	✓	✓	✓	✓
Marks/Messages	✓	✓	✓	✓	✓	✓	✓	✓

✓ : data type exists in data file, Blank: data type not included

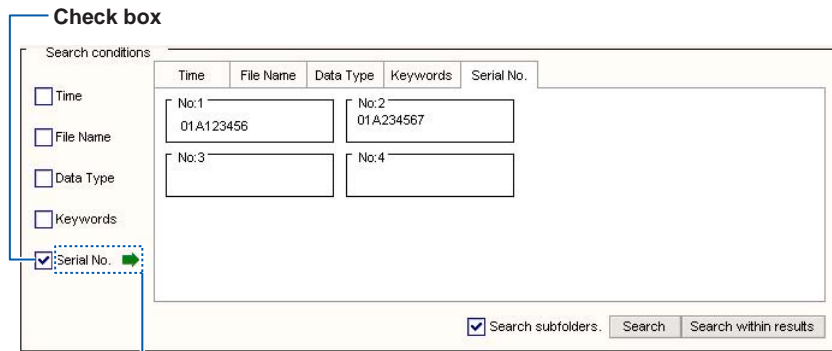
Note

- You can specify multiple keywords by separating them with a space.
- If multiple search keys are selected, the software searches for files whose keywords are found in data corresponding to all of the keys.
- Up to one thousand marks/messages can be found per file. All other marks or messages thereafter are not found.

Specifying a Serial Number

Procedure

1. Specify a search folder. (See section 2.2)
2. Select the Serial No. check box in the Search conditions area.
3. Click the Serial No. tab or click the words "Serial No." to the right of the check box. The Serial No. tab is displayed.



Click to the right of each item to change the tabs on the right.

4. Enter a serial number.

Explanation

Serial number specification allows you to search for data files of the specified instrument serial number.

Note

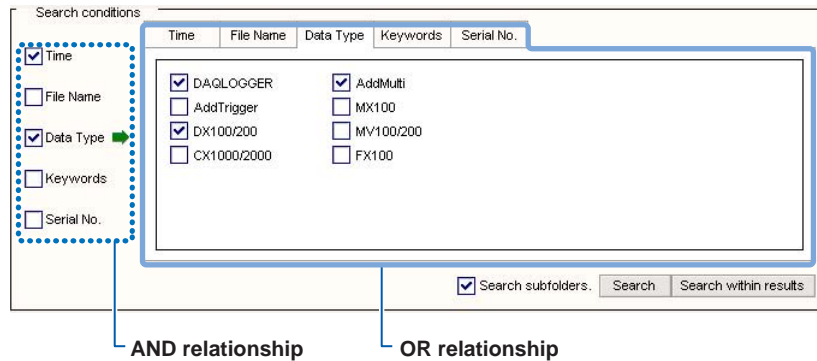
- DAQLOGGER, AddMulti, and AddTrigger do not have serial numbers, and therefore data acquired by those programs cannot be searched for using this criterion.
- Enter the serial number carefully as only exact matches will be found.

Specifying Search Conditions

Explanation

Specifying Multiple Search Conditions

You can apply multiple or even all entered search conditions to the same search, including date and/or time, file name, data type, keyword, and serial number. As in the figure below, the major search categories are combined in an AND relationship, and the conditions within each category are applied in an OR relationship. When specifying search items, for example date/time and data type, files with data from the specified date/time *and* of the specified data type are found. When specifying search conditions within a tab, for example two or more data types, files of any of the specified type are found.



Searching Subfolders

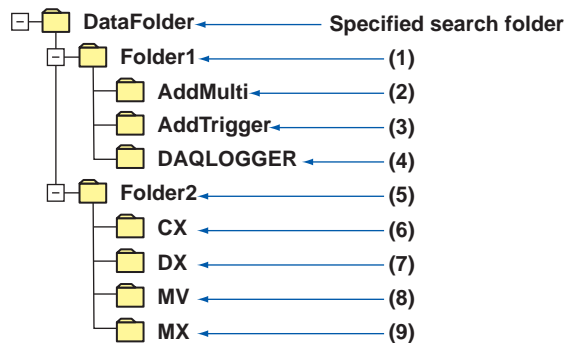
If you select Search subfolders, any subfolders existing in the registered search paths are included in the search. If Search subfolders is not selected, any subfolders within the primary search folders are not included.

If Search Subfolders is Cleared

- Searches only the files within the specified folder
- Data files (1) to (9) are not searched

If Search Subfolders is Selected

- Searches the subfiles within the specified folder
- All data files (1) to (9) are searched



Note

The maximum allowable length for a path is 255 characters including the file name.

2.4 Executing the Search

Procedure

1. Specify search folders and search conditions. (See sections 2.2 and 2.3)
2. Click the **Search** button in the Search conditions area. (Select the Search subfolders check box if necessary.)

The Search status dialog box appears.

	Host Name	Folder ID	Status	Status	Error
1	CPC001-13666-01	Folder001	Finished	295 / 401	○
2	CPC001-13666-01	Folder002	Finished	7 / 7	○
3	CPC001-13666-01	Folder003	Finished	36 / 37	○
4	CPC001-13666-01	Folder004	Finished	0 / 29	○
5	CPC001-05713-02	Folder-B002	Failure	0 / 0	×

Total 338 / 474

Error E4946: Connection failure.

Close

Cancel

Explanation

Host Name

Displays the name of the host containing the specified search folder.

Folder ID

Displays the folder ID of the specified search folder.

Status (left)

Displays the search status.

Starting → Searching → Receiving data in progress ...% → Finished

Error: An error occurred during the search.

Stop: Press to stop the search.

Status (right)

Displays the results of the search. The number to the left of the slash indicates the number of files that matched the criteria, and the number to the right represents the total number of files searched. The number of files that can be searched from a single registered folder ID is sixty thousand. Once that limit is reached, the search stops.

Error button

If an error occurs, the button becomes "×". You can click the Error button to display the contents of the error message.

Error

Displays the error number and message.

Total

Displays the total number of files found and searched.

Stop button

Stops the search. Once a search is stopped, the results obtained in progress are displayed.

Close button

Closes the Search status dialog box. When the search stops, the Stop button changes to the Close button.

2.5 Displaying Search Results

Displaying the Search Status

Procedure

1. When a registered folder is searched with specified conditions, the search results are displayed in the Search results area.

Registering Search Folders (section 2.2), Specifying Search Conditions (section 2.3), Executing the Search (section 2.4)

Annotations in the screenshot:

- Display previous page
- Display next page
- Display first page
- Display last page
- Resize button
- Click a file in the search results area to display its details

No.	Add	Channel	Interval[sec]	Size[samples]	Serial No.	Start Time	End Time
[0001]		TAG0001	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0002]		TAG0002	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0003]		TAG0003	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0004]		TAG0004	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0005]		TAG0005	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0006]		TAG0006	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0007]		TAG0007	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0008]		TAG0008	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0009]		TAG0009	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0010]		TAG0010	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0011]		TAG0011	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0012]		TAG0012	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000
[0013]		TAG0013	1.000sec	400		2000/01/03 14:53:01.000	2000/01/03 14:59:40.000

File Name	Data Type	Start Time	End Time	Title	Comment
DAQLOGGER-20000103-0006.mkd	DAQLOGGER	2000/01/03 14:53:01.000	2000/01/03 14:59:40.000		
DAQLOGGER-20000103-0007.mkd	DAQLOGGER	2000/01/03 14:59:41.000	2000/01/03 15:04:19.000		
Z0315210.DDS	DX100	2004/1/2/03 15:21:46.000	2004/1/2/03 16:01:26.000	DX100 12ch Disp 1min/div	
Z0316350.DDS	DX100	2004/1/2/03 16:35:08.000	2004/1/2/03 17:15:24.000	DX100 12ch Disp 1min/div	
Z0317490.DDS	DX100	2004/1/2/03 17:36:00.000	2004/1/2/07 14:16:00.000	DX100 12ch+Math1 2ch Disp 4h/div	
Z0718120.DEV	DX100	2004/1/2/07 17:49:00.000	2004/1/2/08 11:13:00.000	DX100 12+12Disp30min/div/Event60s	
Z0806120.DEV	DX100	2004/1/2/07 18:12:00.000	2004/1/2/08 06:11:00.000	DX100 12+12Disp30min/div/Event60s	
Z0806120.DEV	DX100	2004/1/2/08 06:12:00.000	2004/1/2/08 11:13:00.000	DX100 12+12Disp30min/div/Event60s	
Z0813500.DDS	DX100	2004/1/2/08 13:50:10.000	2004/1/2/08 16:56:30.000	DX100 12+12Disp 5min/div/Event10s	
Z0813520.DEV	DX100	2004/1/2/08 13:52:50.000	2004/1/2/08 16:56:30.000	DX100 12+12Disp 5min/div/Event10s	
Z0817360.DDS	DX100	2004/1/2/08 17:25:20.000	2004/1/2/09 08:58:00.000	DX100 12+12Disp20min/div/Event30s	
Z0817360.DEV	DX100	2004/1/2/08 17:36:30.000	2004/1/2/09 08:58:00.000	DX100 12+12Disp20min/div/Event30s	
Z0909400.DDS	DX100	2004/1/2/09 09:40:24.000	2004/1/2/09 11:10:16.000	DX100 12+12 Disp2min/div Event5s	
Z0909410.DEV	DX100	2004/1/2/09 09:41:25.000	2004/1/2/09 11:10:15.000	DX100 12+12 Disp2min/div Event5s	
Z0911230.DDS	DX100	2004/1/2/09 11:23:00.000	2004/1/2/09 17:06:00.000	DX100 12+12 Disp10min/div	

Explanation

Search Results Area

Displays any found files in a list. The list is located in the lower left part of the screen.

- File Name: The names of the found files.
- Data Type: The data type of the found files.
- Start Time: The time of the first data in the found files.
- End Time: The time of the last data in the found files.
- Title: Any titles given to the found files.
- Comment: Any comments included with the files.
- Host Name[Folder ID]: The host name and folder ID of the found files.

Note

- Data files are listed in the order in which their hosts were registered.
- If multiple titles and comments exist, only the first title or comment is displayed.

Specifying Pages

One hundred search results are displayed on a single page. If several pages are generated, you can access other pages by clicking the arrow buttons in the upper right of the Search results area.

Open button

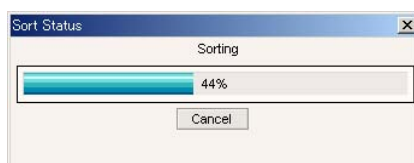
Opens previously saved search results files. (See section 2.6)

Save button

Saves the currently displayed search results. (See section 2.6)

Sort Function

You can sort the search results by various items. When you click a column title in the search results display, the Sort Status dialog box appears, and the results are sorted according to the information in that column.



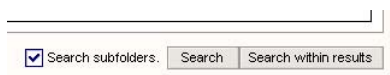
If you click the Stop button during the sort, the items are restored to their original order.

Resize button

- Clicking this button widens the search results area to its maximum width. Click the Resize button again to restore the window to its original size.
- You can also drag the button to the right to size the window manually. (Unless the area is already at its maximum width)

Narrowing the Search Results**Procedure**

1. Specify search conditions.
2. Click the **Search within results** button in the Search conditions area.

**Explanation**

The Search within results button allows you perform a search of the files found during the previous search. This function allows you to do the following.

- When a large number of search results are obtained, you can find desired files by applying new conditions and searching through those results.
- If you save the search results (see section 2.6), you can perform multiple, different searches on those results. By combining the Save/Open functions with the Search within results function, you can create a search results file that fits your particular task.

Note

The Search within results function searches on-screen files, and does not perform communication. Searching within results can be performed on the local data, but data from files found on a network host cannot be displayed (see chapter 3). To display data, the network hosts must be running DataBrowser.

Displaying File Details

Procedure

1. Click a file in the search results area to display its details in the File Details area.

Click the tag display switching buttons to display the channel, Tag No., or Tag comment.

The screenshot shows a 'File Details' window with the following information:

- Host Name[Folder ID]: CPC00 -13666-01 [Folder001]
- Channels: 24
- File Name: C:\DA\WORX\DataBrowser\data\DAQLOGGER-20000103-0006.mld

Below this information is a table with columns: No., Add, Channel, Interval[sec], Size[samples], Serial No., Start Time, and End Time. The table lists 13 channels (TAG0001 to TAG0013) with a 1.000sec interval and 400 samples per channel. The start time for all channels is 2000/01/03 14:53:01.000.

Callouts in the image point to:

- 'Tag display switching buttons' (three buttons: Channel, Tag No., Tag Comment)
- 'Show the file information display button' (a button with a magnifying glass icon)

Explanation

Host Name [Folder ID]

Displays the host name and folder ID.

Channels

Displays the number of channels in the current file.

File Name

Displays the path and file name of the current file.

No.

A number for the files in the list.

Add

A button for adding the item to the trend display. (See section 2.7)

Tag display switching buttons

Channel: Displays the channel numbers.

Tag No.: Displays the tag numbers.

Tag Comment: Displays the tag comments.

Interval [sec]

Displays the save interval for each channel.

Size [samples]

Displays the number of data for each channel.

Serial No.

Displays the serial number for each channel.

Start Time

Displays the time of the first data for each channel.

End Time

Displays the time of the last data for each channel.

Trigger Time

Displays the trigger time for each channel.

Note

Tag numbers and serial numbers are not displayed for the following data types.

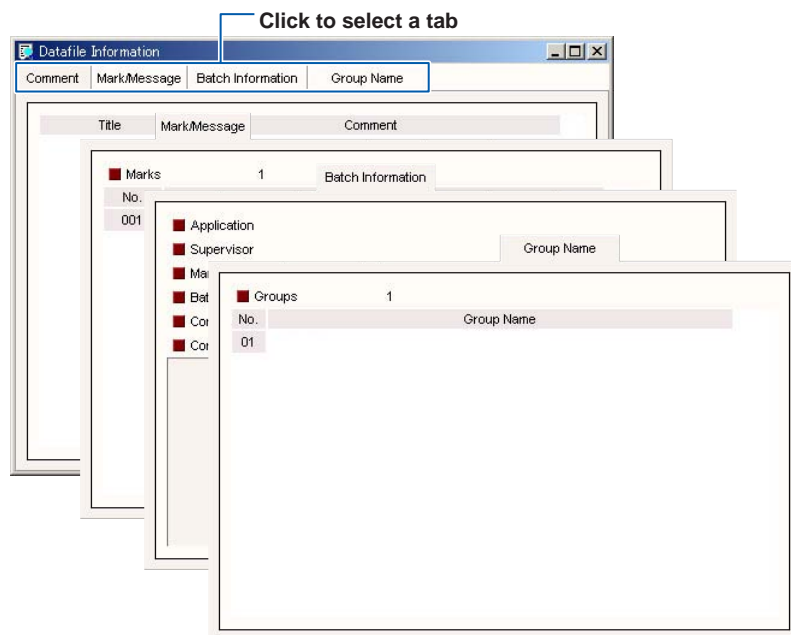
Tag numbers CX1000/2000, DX100/200, MV100/200, FX100

Serial numbers DAQLOGGER, AddMulti, AddTrigger, MX100

Serial numbers are also not displayed for computation-only data from the MX100, and for data saved by Viewer.

“Show the file information display” button

Click this button to display the Datafile Information dialog box for the found file.

**Comment**

Displays the comments (title and comment) for the selected data file. If no data exists, nothing is displayed.

Mark/Message

Displays the number and text of marks for the selected data file. If no data exists, nothing is displayed.

Batch Information

Displays the batch information (Application, Supervisor, Manager, Batch Name, Comment User, Comment) for the selected data file. If no data exists, nothing is displayed.

Group Name

Displays the number and names of groups for the selected data file. If no data exists, nothing is displayed.

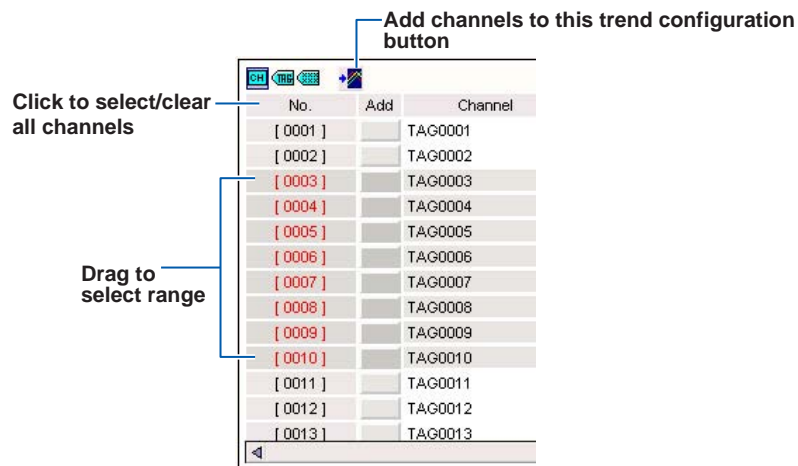
2.6 Adding Channels from Search Results to the Trend Display Window

The following describes the procedure for adding channels from the search results to the Trend display window.

Collectively Adding a Selected Range of Channels

Procedure

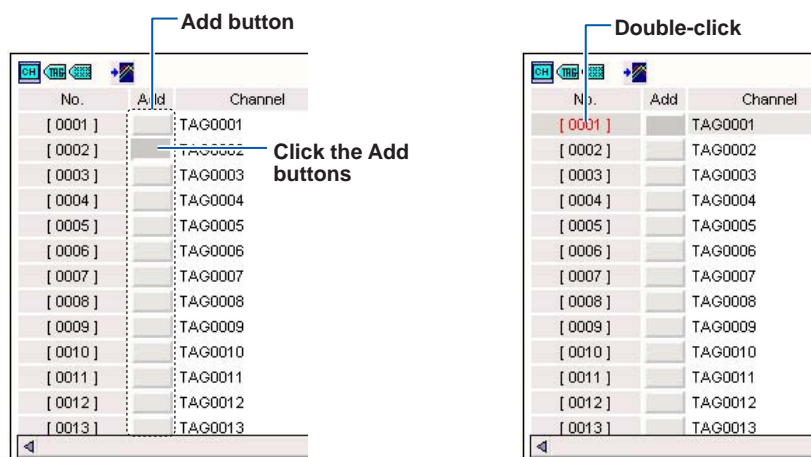
1. Select a file from the search results area to display its details. (See section 2.5)
2. Select a range of channels to add and click the **Add channels to this trend configuration** button.



Adding Individual Channels

Procedure

1. Select a file from the search results area to display its details. (See section 2.5)
2. Click the **Add** button next to the channel to add, or double-click its number.



Note

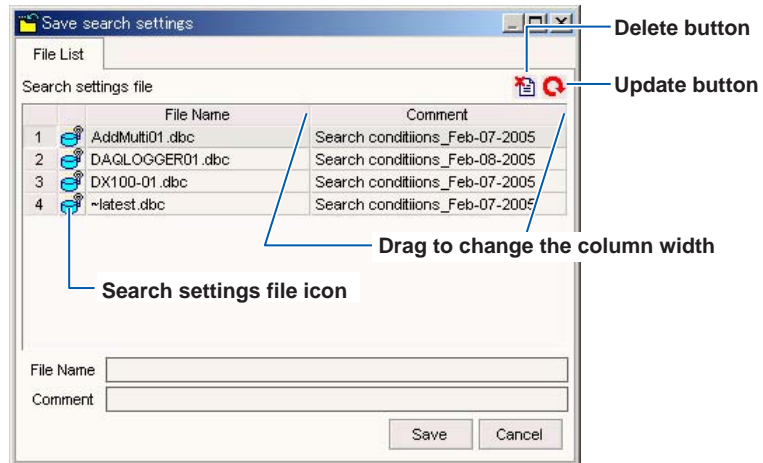
The Add buttons are hidden if the File Details area is scrolled to the right. In this case, you can double-click the item or click the Add channels to this trend configuration button.

2.7 Saving and Loading Search Settings and Results

Saving Search Settings

Procedure

1. Click  on the toolbar or choose **File> Save** search settings as from the menu bar. The Save search settings dialog box appears.



2. Enter a file name and comment and click the **Save** button.
The currently specified search folder and search conditions are saved.

Explanation

File List

Displays the search settings file name and comments of the search settings saved on the local host.

Delete button

Deletes the selected search settings file.

Update button

Updates the displayed search results file list.

File Name

Enter the name of the file you wish to save. (An extension is automatically added.)

Comment

Enter comments to be saved with the file. Up to 255 alphanumeric characters can be entered.

Save button

Saves the settings file under the specified file name on the local host.

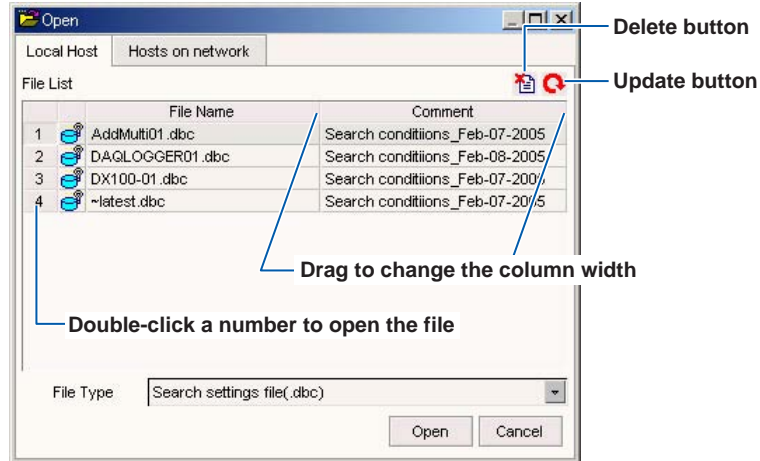
Note

After saving a search settings file, the saved file name and comment appears in the text box the next time you open the Save search settings dialog box (these items are blank if no settings have been saved previously, or when starting up the software). Also, when you select a file in the Save search settings dialog box, the file and comment are displayed in the input boxes at the bottom of the window. This allows you to conveniently overwrite settings.

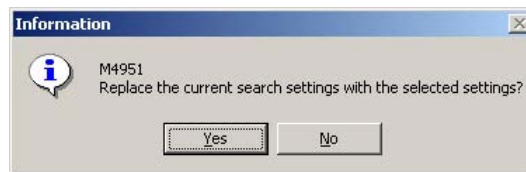
Opening Search Settings from a Local Host

Procedure

1. Click  on the toolbar or choose **File> Open** from the menu bar. The Open dialog box is displayed.



2. Select a file and click **Open**, or double-click the file number. The Information dialog box opens.



3. Click the **Yes** button. The search paths and search conditions loaded from the search settings file are displayed. Click **No** to close the Information dialog box.

Explanation

File List

Displays the name of the settings file and comments saved on the local host.

Delete button

Deletes the selected file.

Update button

Updates the displayed file list.

File Type

If you select all files (.dbc; .dbv), the saved search settings files and display settings files are displayed.

If you select Search settings file (.dbc), only the search settings files are displayed.

If you select Trend settings file (.dbv), only the display settings files are displayed.

Open button


Opens the settings file selected in the File List. When a search settings file is opened, the Search window becomes active. (When a trend settings file is opened, the Trend display window becomes active.)

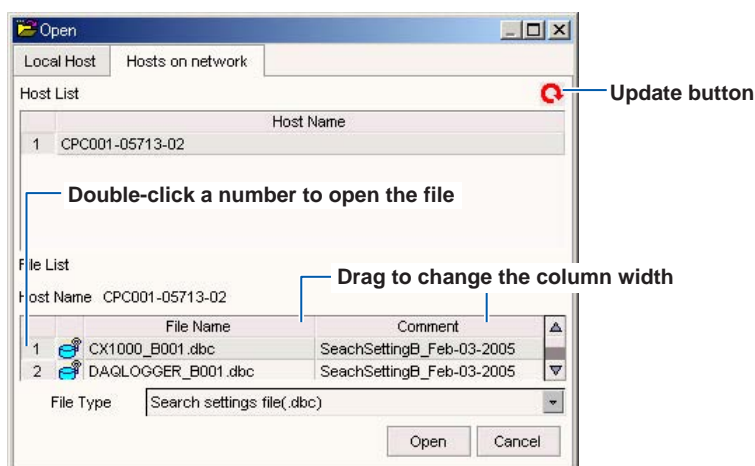
Cancel button

Closes the Open dialog box.

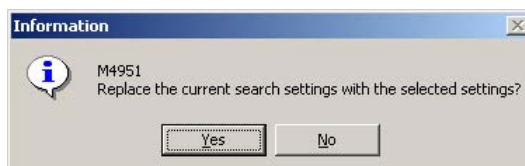
Opening Search Settings from a Network Host

Procedure

1. Click  on the toolbar or choose **File> Open** from the menu bar. The Open dialog box is displayed.
2. Click the **Hosts on network** tab. The Hosts on network tab is displayed.
3. Click the **Update** button. The names of hosts running DataBrowser, and their corresponding files names and comments are displayed.



4. Select a host from the Host List. The a list of files saved on the selected host is displayed.
5. Select a file from the list that you wish to load and click **Open**, or double-click the file number. The Information dialog box opens.



6. Click the **Yes** button. The search paths and search conditions loaded from the search settings file are displayed. Click **No** to close the Information dialog box.

Explanation

Host List

The Host List displays the names of any hosts on the network that are running DataBrowser. Up to two hundred hosts can be displayed.

File List

Displays the settings files and comments saved on the host selected in the host list.

Host Name

Displays the name of the host selected in the host list.

Update button

Updates the host list and file list.

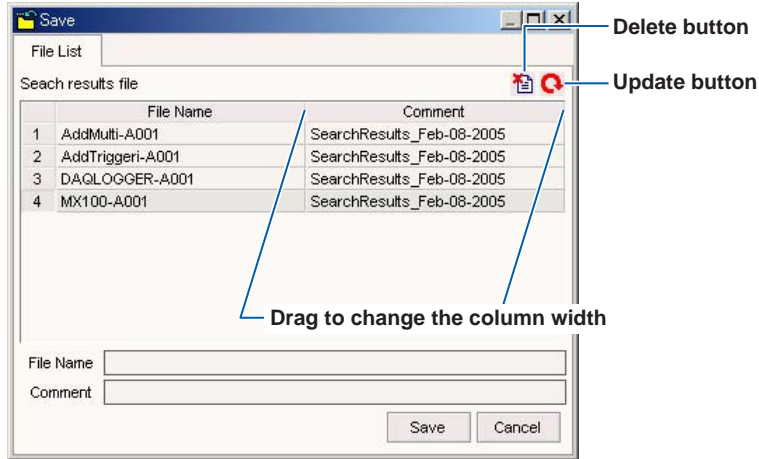
File Type, Open Button, and Cancel Button

See Opening Search Settings from a Local Host.

Saving Search Results

Procedure

1. Click the **Save** button in Search results area or choose **File> Save** the search results as from the menu bar. The Save dialog box appears.



2. Enter a file name and comment and click the **Save** button.
The displayed search results are saved.

Explanation

File List

Displays the name of the search results file and comments saved on the local host.

Delete button

Deletes the selected search results file.

Update button

Updates the displayed search results file.

File Name

Enter the name of the file you wish to save. (An extension is automatically added.)

Comment

Enter comments to be saved with the file. Up to 255 alphanumeric characters can be entered.

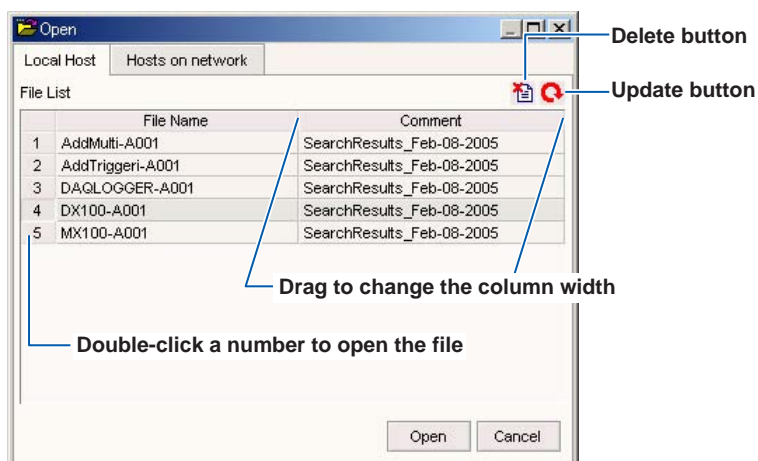
Save button

Saves the search results file under the specified file name on the local host.

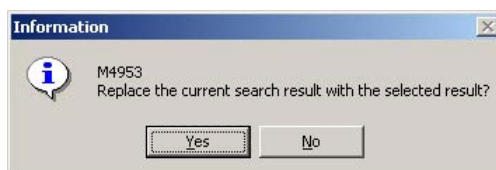
Opening Search Results from a Local Host

Procedure

1. Click the **Open** button in Search results area or choose **File> Open** the search results from the menu bar. The Open dialog box is displayed.



2. Select a file and click **Open**, or double-click the file number. The Information dialog box opens.



3. Click the **Yes** button. The search results loaded from the search results file are displayed. Click **No** to close the Information dialog box.

Explanation

File List

Displays the name of the search results file and comments saved on the local host.

Delete button

Deletes the selected file.

Update button

Updates the displayed file list.

Open button

Opens the search results file selected in the File List.

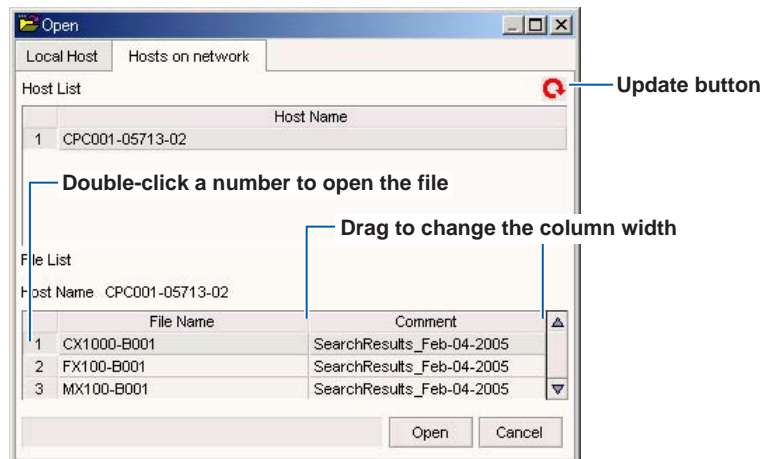
Cancel button

Closes the Open dialog box.

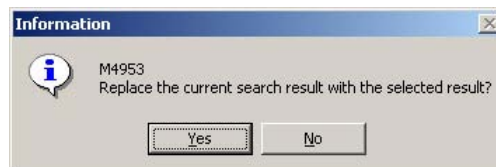
Opening Search Results from a Network Host

Procedure

1. Click the **Open** button in Search results area or choose **File> Open** the search results from the menu bar. The Open dialog box is displayed.
2. Click the **Hosts on network** tab. The Hosts on network tab is displayed.
3. Click the Update button. The names of hosts running DataBrowser, and their corresponding files names and comments are displayed.



4. Select a host from the Host List. The a list of files saved on the selected host is displayed.
5. Select a file from the list that you wish to load and click **Open**, or double-click the file number. The Information dialog box opens.



6. Click the **Yes** button. The search results loaded from the search results file are displayed. Click **No** to close the Information dialog box.

Explanation

Host List

The Host List displays the names of any hosts on the network that are running DataBrowser. Up to two hundred hosts can be displayed.

File List

Displays the settings files and comments saved on the host selected in the host list.

Host Name

Displays the name of the host selected in the host list.

Update button

Updates the host list and file list.

Open Button and Cancel Button

See Opening Search Results Files from a Local Host.

2.8 Copying Data Files

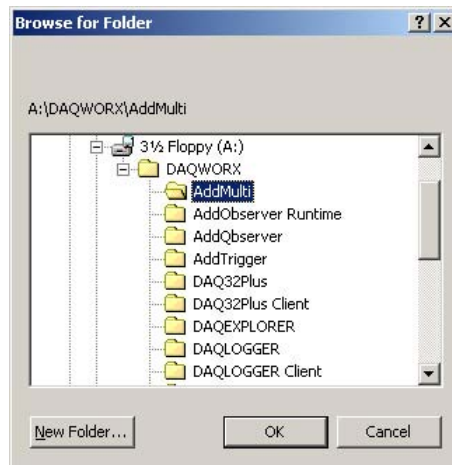
This section describes the procedure for copying a data file from a specified folder to another folder.

Procedure

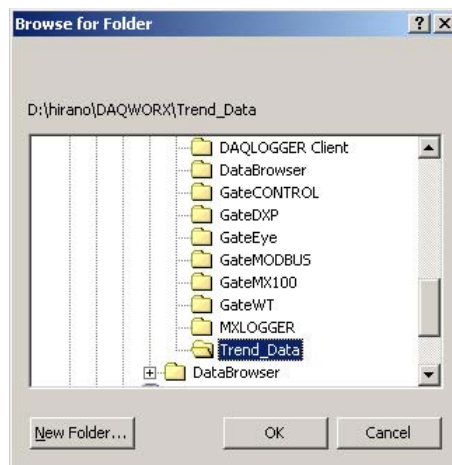
1. Click  on the toolbar or choose **File > Import Data Files** from the menu bar. The Import Data files dialog box opens.



2. Click the **Select** button for the Source. The Browse for Folders dialog box is displayed.

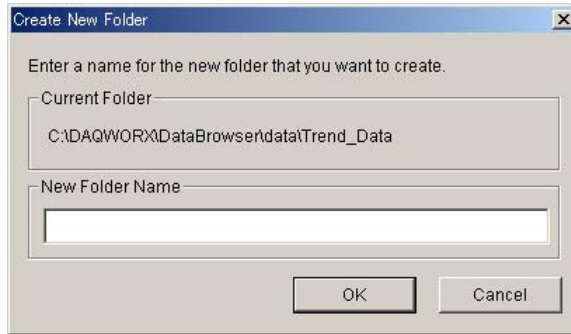


3. Select a source folder and click the **OK** button. The Import Data files dialog box reappears.
4. As in step 2, click the Select button for the Destination. The Browse for Folders dialog box is displayed.



If you do not want to create a new folder, skip to step 7.

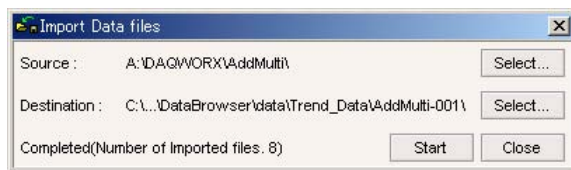
5. Select a location in which to create a new folder, and click the **New Folder** button. The Create New Folder dialog box is displayed.



6. Enter the name of the folder to be created, and click the **OK** button. The Browse Folders dialog box is displayed (the screen in step 4).
7. Select the destination folder and click the **OK** button. The Import Data files dialog box reappears.



8. Click the **Start** button. When copying is complete, "Completed" is displayed in the bottom of the Import Data files dialog box along with the number of copied files.



Explanation

The Import Data files function allows you to copy data files saved on the floppy disk or CF card of a recorder to a specified folder. By specifying a copy source and destination the first time you import files, subsequent imports can be done quickly and easily.

Note

Only folders on the local host can be specified as the source and destination folders.

Select Buttons (Import Data files Dialog Box)

A folder for specifying folders is displayed.

New Folder (Browse Folders Dialog Box)

Lets you create a new folder in a specified location. The Create New Folder dialog box is displayed.

Start Button (Import Data files Dialog Box)

Executes the import of data files. This button is not active unless a source and destination folder are selected.

Stop Button (Import Data files Dialog Box)

Becomes available once importing has started. Stops the importing of data files.

Close Button (Import Data files Dialog Box)

Closes the Import Data files dialog box.

OK Button (Create New Folder Dialog Box)

Creates the new folder.

Cancel Button (Create New Folder Dialog Box)

Cancels creation of the new folder and closes the Browse Folders dialog box.

3.1 Names of Parts in the Trend Display Window

The Trend display window consists of the display channel settings screen and the waveform display screen.

Opening the Trend Display Window

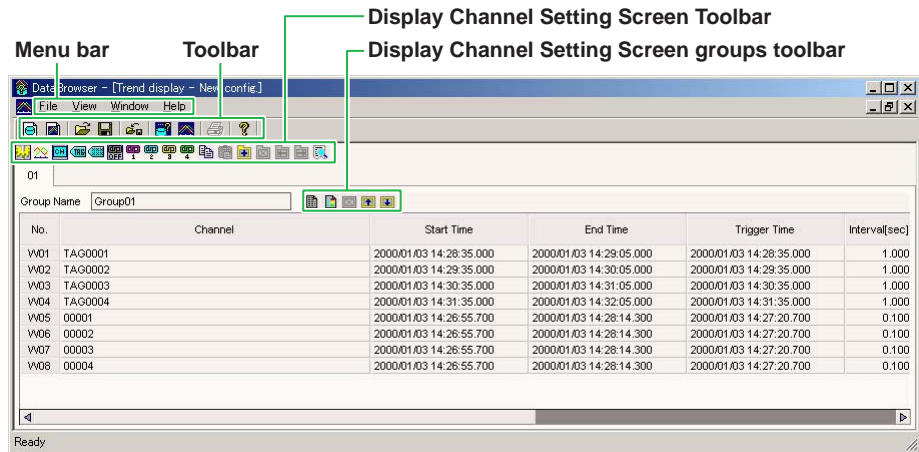
Procedure

1. Click  on the toolbar or choose **View> Trend display** from the menu bar. The Trend display window opens.

Display Channel Setting Screen

The display channel setting screen can display the channel information screen, or the channel display configure screen, each of which contain channels added from the search results.

Channel Information Screen

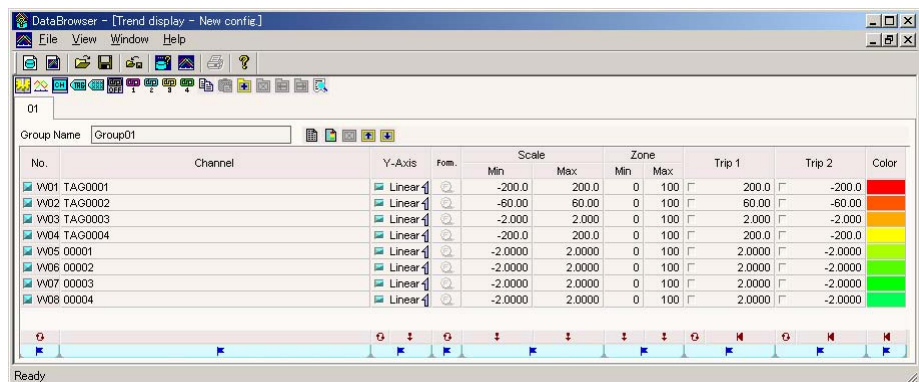


Labels in the screenshot:

- Menu bar
- Toolbar
- Display Channel Setting Screen Toolbar
- Display Channel Setting Screen groups toolbar

No.	Channel	Start Time	End Time	Trigger Time	Interval[sec]
W01	TAG0001	2000.01.03 14:28:35.000	2000.01.03 14:29:05.000	2000.01.03 14:28:35.000	1.000
W02	TAG0002	2000.01.03 14:29:35.000	2000.01.03 14:30:05.000	2000.01.03 14:29:35.000	1.000
W03	TAG0003	2000.01.03 14:30:35.000	2000.01.03 14:31:05.000	2000.01.03 14:30:35.000	1.000
W04	TAG0004	2000.01.03 14:31:35.000	2000.01.03 14:32:05.000	2000.01.03 14:31:35.000	1.000
W05	00001	2000.01.03 14:26:55.700	2000.01.03 14:28:14.300	2000.01.03 14:27:20.700	0.100
W06	00002	2000.01.03 14:26:55.700	2000.01.03 14:28:14.300	2000.01.03 14:27:20.700	0.100
W07	00003	2000.01.03 14:26:55.700	2000.01.03 14:28:14.300	2000.01.03 14:27:20.700	0.100
W08	00004	2000.01.03 14:26:55.700	2000.01.03 14:28:14.300	2000.01.03 14:27:20.700	0.100

Channel Display Configure Screen



No.	Channel	Y-Axis	Scale		Zone		Trip 1	Trip 2	Color
			Min	Max	Min	Max			
W01	TAG0001	Linear	-200.0	200.0	0	100	200.0	-200.0	Red
W02	TAG0002	Linear	-60.00	60.00	0	100	60.00	-60.00	Orange
W03	TAG0003	Linear	-2.000	2.000	0	100	2.000	-2.000	Yellow
W04	TAG0004	Linear	-200.0	200.0	0	100	200.0	-200.0	Light Green
W05	00001	Linear	-2.00000	2.00000	0	100	2.00000	-2.00000	Green
W06	00002	Linear	-2.00000	2.00000	0	100	2.00000	-2.00000	Light Green
W07	00003	Linear	-2.00000	2.00000	0	100	2.00000	-2.00000	Green
W08	00004	Linear	-2.00000	2.00000	0	100	2.00000	-2.00000	Light Green

3.1 Names of Parts in the Trend Display Window

Explanation

Group Name

You can specify a group name using up to thirty alphanumeric characters.

No.

Number assigned within groups.

Channel, Tag Number, and Tag Comment

Displays identifiers for the channels (display can be switched using the group tab toolbar).

Start Time

Time of the first data.

End Time

Time of the last data.

Trigger Time

Time of the trigger point (if no trigger point exists, the first data is used.)

Interval [sec]

The save interval for the data.

Data Size

The number of saved data.

Data Type

The instrument or software that saved the data.

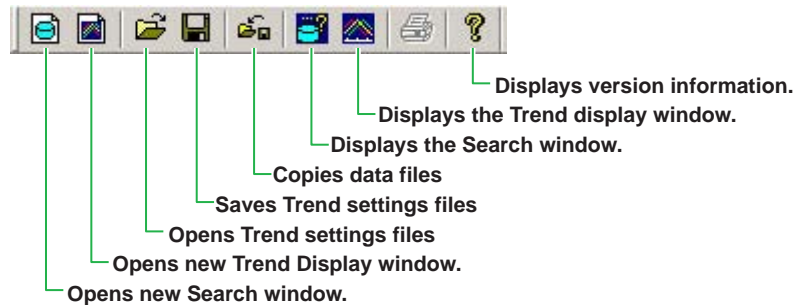
File Name

Name of the file to which the channel belongs.

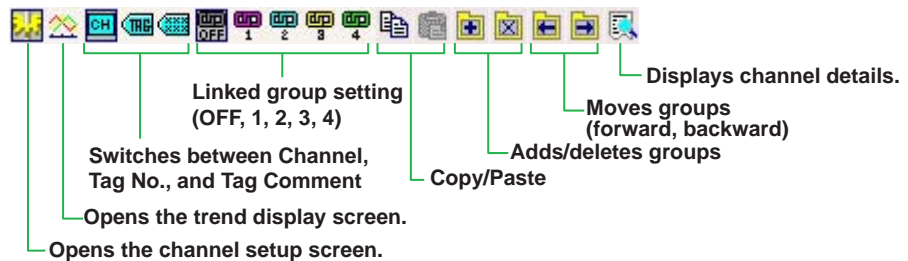
Host Name

Name of the host on which the channel to which the file belongs resides.

Toolbar



Display Channel Setting Screen Toolbar (for Channel Info and Configure Screens)



Display Channel Setting Screen Group Tab Toolbar



Editing Functions in the Channel Display Configure Screen

The screenshot shows a software interface for configuring channels. At the top, there are icons for 'Copy' and 'Paste'. Below is a table with columns: No., Channel, Y-Axis, Fom., Scale (Min, Max), Zone (Min, Max), Trip 1, Trip 2, and Color. The table contains 8 rows of channel data. Below the table is a toolbar with various icons. Annotations with arrows point to specific parts of the interface:

- 'Click to select all' points to the 'No.' column header.
- 'Copy' and 'Paste' point to the top icons.
- 'Drag to select a range' points to a selection range in the 'No.' column.
- 'Click to select for Copying/Pasting. The flag is display.' points to a flag icon in the toolbar.
- 'Click this button to turn all select buttons ON/OFF collectively' points to a button with a downward arrow in the toolbar.
- 'Click this button to set all to the same as the top of the selection' points to a button with a downward arrow and a small square in the toolbar.
- 'Click this button to reset to default' points to a button with a circular arrow in the toolbar.

No.	Channel	Y-Axis	Fom.	Scale		Zone		Trip 1	Trip 2	Color
				Min	Max	Min	Max			
W01	TAG0001	Linear		-200.0	200.0	0	100	200.0	-200.0	Red
W02	TAG0002	Linear		-60.00	60.00	0	100	60.00	-60.00	Orange
W03	TAG0003	Linear		-2.000	2.000	0	100	2.000	-2.000	Yellow
W04	TAG0004	Linear		-200.0	200.0	0	100	200.0	-200.0	Light Green
W05	00001	Linear		-2.0000	2.0000	0	100	2.0000	-2.0000	Green
W06	00002	Linear		-2.0000	2.0000	0	100	2.0000	-2.0000	Light Green
W07	00003	Linear		-2.0000	2.0000	0	100	2.0000	-2.0000	Green
W08	00004	Linear		-2.0000	2.0000	0	100	2.0000	-2.0000	Light Green

Copy

Copies the selected range to the clipboard.

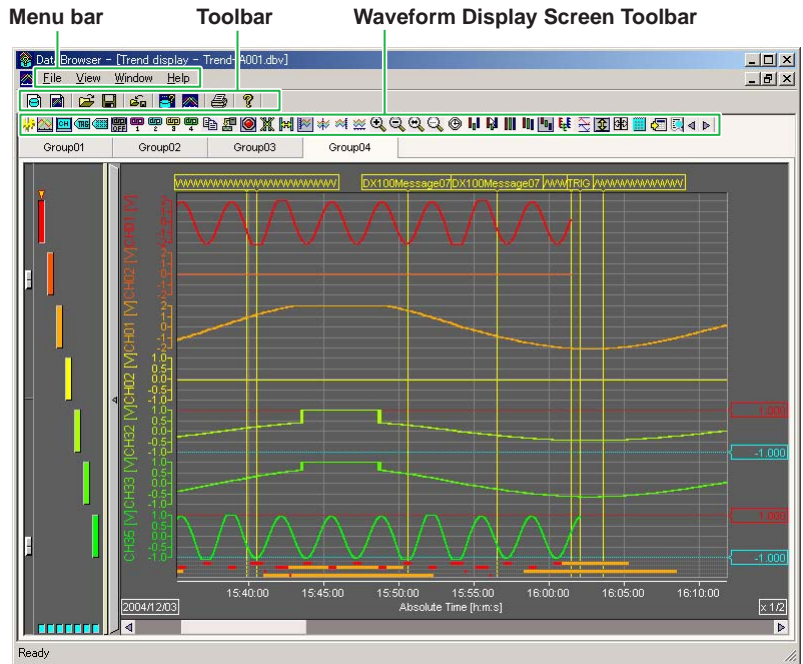
Paste

Pastes copied contents to the displayed group. If a range is selected, pastes the contents into that range. If a range is not selected, the contents are added at the bottom.

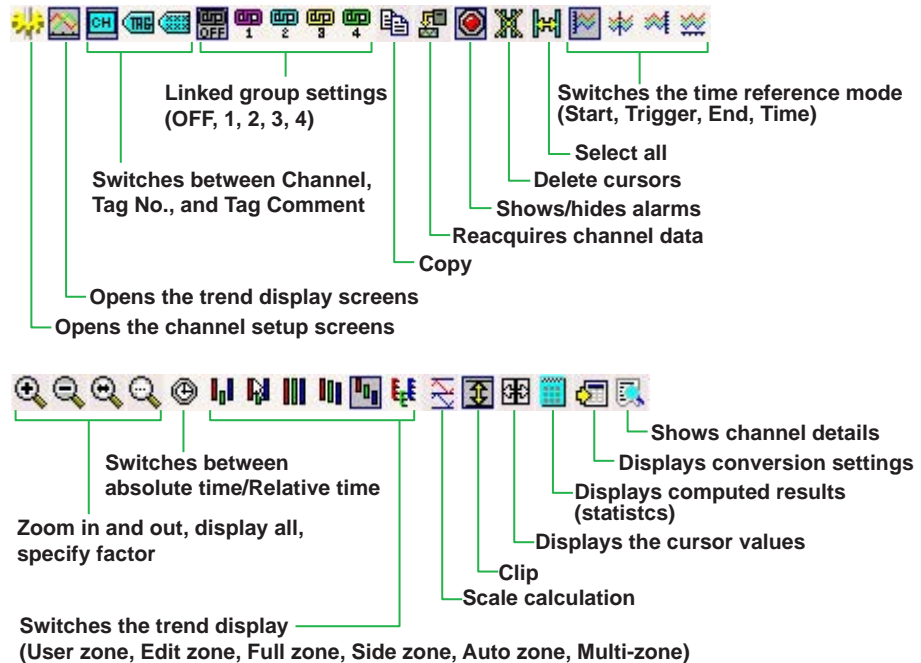
3.1 Names of Parts in the Trend Display Window

Waveform Display Screen

Displays the waveforms of the channels in the channel information screen.




Waveform Display Screen Toolbar




3.2 Selecting a Group for Adding Channels

Channels can be assigned to groups in the channel display configure screen. Up to fifty groups can be created, each with up to thirty-two channels. When channels are added in the Search window (see section 2.6) they are added to the selected groups.

Adding and Deleting Groups

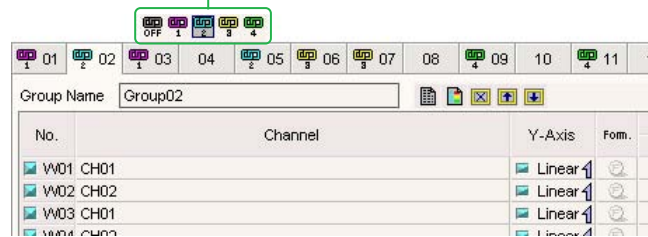
Clicking the  button in either of the channel setup screens adds a new group tab on the end of any existing tabs.

Clicking the  button in either of the channel setup screens deletes the currently displayed group tab.

Linked Group Settings

This function links cursor positions and time reference modes across groups in the trend display screen. The available settings are Link OFF, Link 1, Link 2, 3, and 4. You can select either from any group. Groups with the same link number are called *linked groups*, and up to four linked groups can be set.

Select a group, then select one of the options



3.3 Settings in the Channel Setup Screens

Procedure

You can edit display settings by following the indications in the figure below.

Switch between the display channel settings screen and waveform display screen

Set linked groups (OFF, 1, 2, 3, 4)

Add/delete/move forward/backward groups

Display channel details.

Switch the displayed group

No.	Channel	Start Time	End Time	Trigger Time	Interval[sec]
W01	CH01	2004/12/03 15:21:46.000	2004/12/03 16:01:26.000	2004/12/03 16:01:26.000	2.000
W02	CH02	2004/12/03 15:21:46.000	2004/12/03 16:01:26.000	2004/12/03 16:01:26.000	2.000
W03	CH01	2004/12/08 13:50:10.000	2004/12/08 16:56:30.000	2004/12/08 16:56:30.000	10.000
W04	CH02	2004/12/08 13:50:10.000	2004/12/08 16:56:30.000	2004/12/08 16:56:30.000	10.000

Select channels

Select/clear all channels

Switch between the channel information and channel display configure screens

Delete channels or move them (up and down)

No.	Channel	Y-Axis	Fom.	Scale		Zone		Trip 1	Trip 2	Color	
				Min	Max	Min	Max				
<input type="checkbox"/>	W01 CH01	<input type="checkbox"/>	linear	-2.000	2.000	0	100	<input type="checkbox"/>	2.000	-2.000	
<input type="checkbox"/>	W02 CH02	<input type="checkbox"/>	linear	-2.000	2.000	0	100	<input type="checkbox"/>	2.000	-2.000	
<input type="checkbox"/>	W03 CH01	<input type="checkbox"/>	linear	-2.000	2.000	0	100	<input type="checkbox"/>	2.000	-2.000	
<input checked="" type="checkbox"/>	W04 CH02	<input checked="" type="checkbox"/>	linear	-1.000	1.000	0	100	<input type="checkbox"/>	1.000	-1.000	
<input checked="" type="checkbox"/>	W05 CH32	<input checked="" type="checkbox"/>	linear	-1.000	1.000	0	100	<input type="checkbox"/>	1.000	-1.000	
<input checked="" type="checkbox"/>	W06 CH33	<input checked="" type="checkbox"/>	linear	-1.000	1.000	0	100	<input type="checkbox"/>	1.000	-1.000	
<input checked="" type="checkbox"/>	W07 CH35	<input checked="" type="checkbox"/>	linear	-1.000	1.000	0	100	<input type="checkbox"/>	1.000	-1.000	

Select channels

Turn waveforms ON/OFF

Turns the Y-axis ON/OFF when in multi-zone display

Select Y-axis type (linear or logarithmic)

Specify a waveform display zone

Select a scale value display format (floating point or exponential)

Turn trip point ON/OFF

Channel display color

Explanation

Display/Hide Channels

By selecting and clearing the check buttons in the No. column on the channel display configure screen, you can select whether to display those channels' data in the Trend display screen.

Channel (Tag Number and Tag Comment): Can be selected/deselected for display.

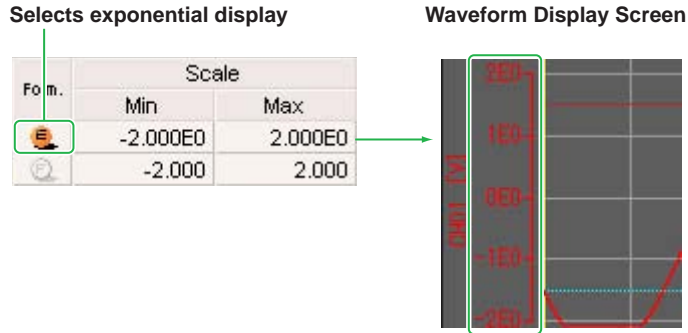
The Channel column displays the channel, tag number, and tag comment.

Display/Hide Y-Axis and Type

By selecting and clearing the check buttons in the Y-axis column, you can select whether to display the Y-axes of the corresponding channels in the Trend display screen. This setting is only valid if multiple zones are specified in the Trend display screen.

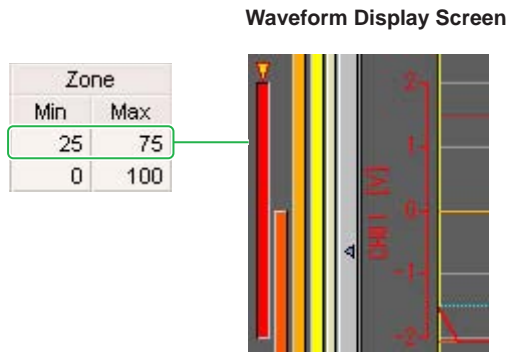
Minimum and Maximum Values of Scale, and the indstart Scale Value Display Format instop

You can set the maximum and minimum values of the scale when displaying waveforms. The value in the Scale Min column is the lower end of the Y-axis, and that of the Scale Max column is the upper end. In the Form. column, you can specify floating point or exponential format for the scale values.



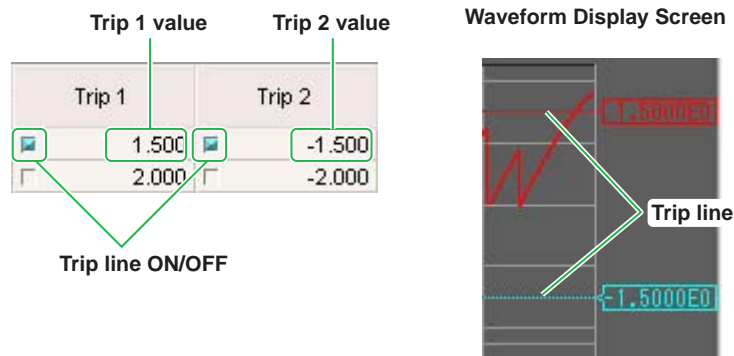
Setting the Waveform Display Zones

You can set waveform display range for displaying trends. The waveform display range is set as 0% at the bottom, and 100% at the top. The values in the Zone Min and Max columns represent the lower (0-9%) and upper (1-100%) ends of the trend display range.



Setting Trip Points

You can display a trip line to indicate a particular value of interest (trip point) in the trend display area. Two trip points (trip 1 is red, trip 2 is blue) can be set for each waveform. By selecting and clearing the check buttons in the Trip 1 and Trip 2 columns, you can select whether to display the corresponding trip points in the Trend display screen.




Channel Display Colors

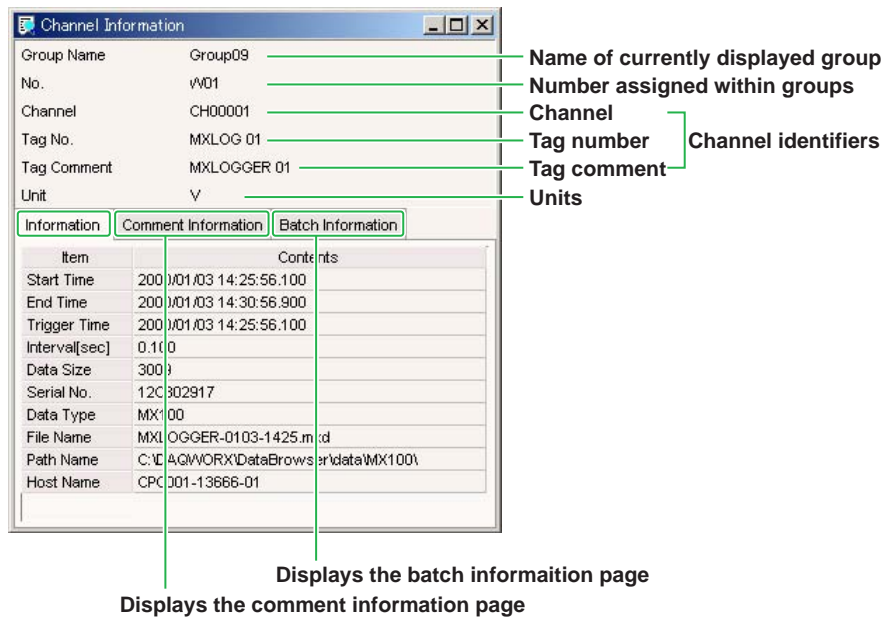
You can assign colors to channels displayed in the trend display screen. Click the colored part to open the Color Settings dialog box.



Showing Channel Details

You can view detailed information about a channel selected in the channel setup screens.

- Click  in the channel setup screen toolbar. The Channel Information dialog box opens.



Information Tab

Displays the start time, end time, trigger time*, interval (sec), data size, data type, file name, path name, and host name.

* (If the data has no trigger point, the first data is used.)

Comment Information Tab

Displays the title and tag comment. Displays all comments. The item is blank if the data contains no comments.

Batch Information Tab

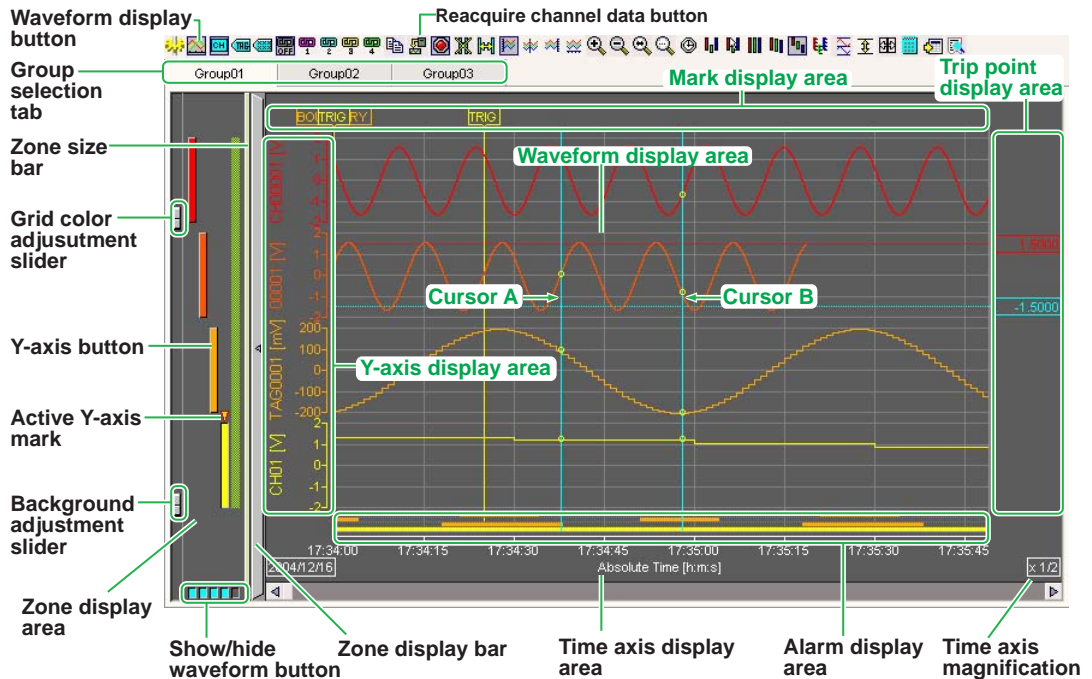
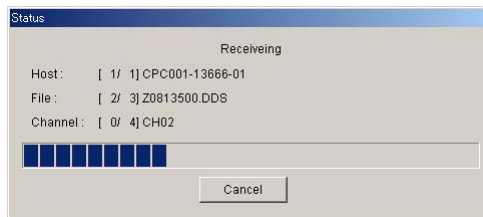
Displays the batch information. The items are blank if the data contains no batch information. The displayed items are application, supervisor, manager, batch name, lot number, comment user, comment time, and comments 1 through 3 (for details, see the user's manual of the instrument that saved the batch information.)

3.4 Displaying Trends

Displays waveforms according to the settings in the channel setup screens.

Procedure

1. Click the **Show the trend display** button in either of the channel setup screens. The channels selected in the tab are loaded. While loading, the “Receiving” dialog box is displayed, and when complete, the waveforms appear (click the Cancel button to stop the loading process. Only the waveforms of channels completely loaded at the point the Cancel button was clicked are displayed. To load the remaining waveforms, click the “Get data for all channels” button).



Note

If some channels are not displayed, check the following.

- That the host exists, and that it is running DataBrowser.
- That the files shown under File Name in the folder indicated by the path in the Channel Information dialog box exist.
- That the network is connected correctly, and that no problems occurred on the network.

Explanation

Group Selection Tabs

Click a tab to display the group. The name displayed is the one specified in the channel setup screen.

Waveform Display Area

The area in which the waveforms are displayed. Displays waveforms according to the settings in the channel setup screens. Click in the waveform display area to display a cursor. Drag the cursor to display a second cursor. Cursor A appears at the position where you first clicked; Cursor B appears at the position where you released the mouse button. (See section 3.5, "Displaying Cursor Values.")

Alarm Display Area

The area in which the alarms are displayed. Toggle the display using the Alarm ON/OFF button on the toolbar.

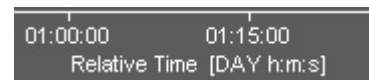
Y-Axis Display Area

The area in which the Y-axes are displayed. The Y-axes are shown in the specified colors. If the trend display is user zone, edit zone, full zone, or slide zone, only the Y-axis of the active channel is displayed. For auto zone or multi-zone, all channels are displayed.

Time Axis Display Area

The area in which the time axis is displayed. You can select the display range using the scroll bar.

Toggle the display between absolute time and relative time display using the button on the toolbar.



Zone Display Area

The area in which the display status of each channel can be changed.

Active Y-Axis Mark

The channel with this mark is the active channel. The waveform and alarm data of the active channel are displayed in front.

Grid Color Adjustment Slider

Drag the slider up and down to adjust the grid color between white and black.

Background Adjustment Slider

Drag the slider up and down to adjust the background color between white and black.

Y-axis button

Each channel has its own color-coded button. Click a button to make its channel active. The active Y-axis mark moves to the top of the clicked button.

Zone Display Bar

Click to show or hide the zone display area.

Zone Size Bar

Drag to change the width of the zone display area.

Show/Hide Waveform Buttons

Click to show or hide channels. These buttons mirror the waveform display ON/OFF buttons in the channel display configuration screen.

Trip Point Display Area

Displays trip points.

Mark Display Area

Displays marks. All marks of the channels registered to the displayed groups are displayed. Up to one thousand marks per channel can be displayed, and they can be added, edited, or deleted here. When marks are displayed on top of one another, the mark of the active channel is displayed in front.

Time Axis Display Area

- The time display shows the time of the channel. When the time reference mode is Start Reference, Trigger Reference, or End Reference, the time of the active channel is displayed.
- The time display shows the time relative to the start of the waveform display area.

Showing Channel Details

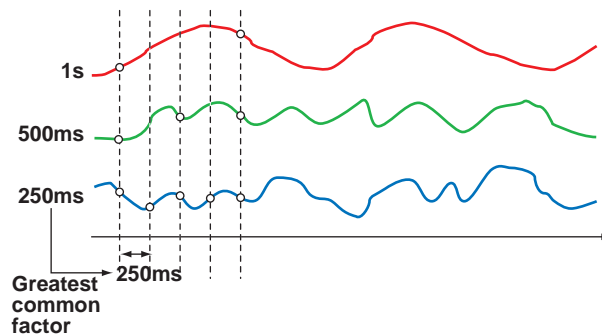
In the Trend display screen, the information of the active channel is displayed.

Displaying Waveforms of Different Intervals

Data of differing measurement intervals can be displayed in the same waveform display screen.

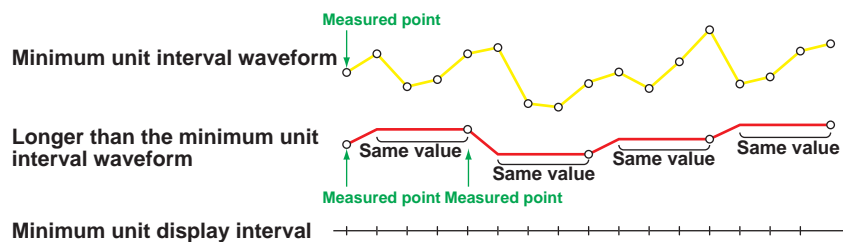
Measurement Interval of Displayed Waveforms

When the measurement intervals differ, the greatest common factor of the measurement intervals of the channels assigned to the displayed groups is used as the minimum interval unit for displaying all of the waveforms. In the figure below, since the intervals for the three channels are 1 s, 500 ms, and 250 ms respectively, 250 ms is used as the interval when all channels are displayed together.

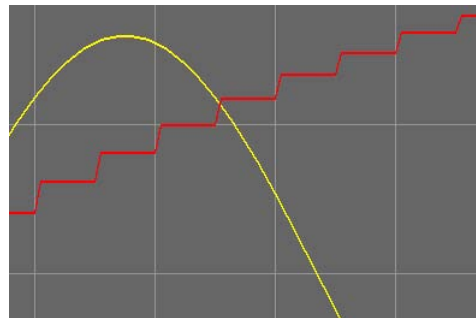


Displaying Waveforms of Intervals Greater Than the Minimum Unit

If a channel's interval is longer than the minimum unit interval, data values that are not measured points are displayed at the value of the points directly thereafter.



The figure below shows a 100 ms and 1 s interval waveform. The waveform with the long interval is displayed in stages.



Minimum Unit Interval for Linked Groups

The greatest common factor of the measurement interval of all channels registered to all groups belonging to the linked group is used as the minimum unit interval.

Time Reference Mode

There are four time reference modes: Start Reference, Trigger Reference, End Reference, and Time Reference.

Start Reference

Waveforms are displayed using the first data of the channels assigned to the group as a reference.

Trigger Reference

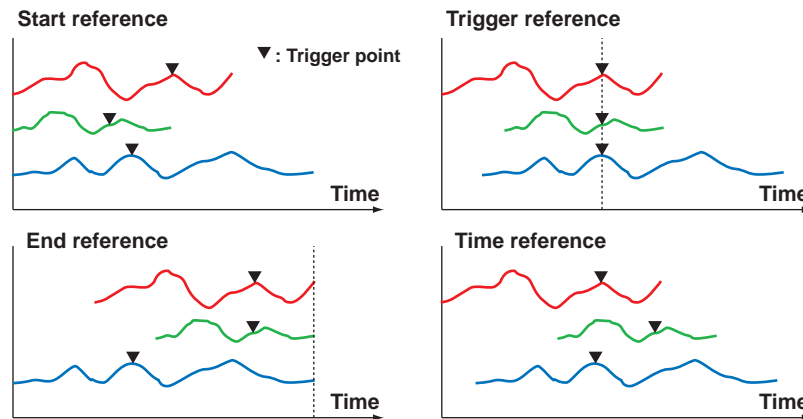
Waveforms are displayed using the trigger point of the channels assigned to the group as a reference.

End Reference

Waveforms are displayed using the last data of the channels assigned to the group as a reference.

Time Reference

Waveforms are displayed using the measurement time of the channels assigned to the group as a reference.



Save Format of Displayed Data

Data files are saved in two formats: one for waveform display and one for the cursor value dialog box. Data saved in different formats can be displayed in the same Trend display screen.

The format in which one data is saved per unit of time is called Normal format, and the format in which two data—a minimum and maximum value—are saved per unit of time is called MinMax format.

The following shows the correspondence between data types and save formats.

Data Type	Normal Format	MinMax Format
DX100	Yes	Yes
MV100/MV200	Yes	Yes
CX1000/CX2000	Yes	Yes
FX100	Yes	Yes
MX100	Yes	No
DAQLOGGER	Yes	No
AddMulti	Yes	No
AddTrigger	Yes	No

Note

Instruments that can save in MinMax format such as the DX100/200, MV100/200, CX1000/2000, and FX100 save data in two formats called Event data and Display data format. Event data is saved in Normal format, and Display data is saved in MinMax format. For details, see the user's manual for your particular instrument.

Waveform Display in Normal Format and MinMax Format

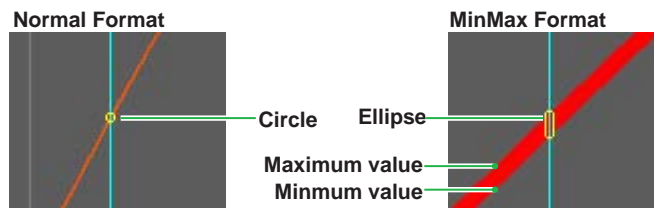
In Normal format, waveforms are displayed in the position corresponding to the data value at that time.

In MinMax format, waveforms are displayed as a fill between the two points corresponding to the Min and Max values at that time. When the Min and Max values are the same, items are displayed as if in Normal format. If the difference between the Min and Max values is large, the thickness of the trace increases.

Intersection between Waveform and Cursor

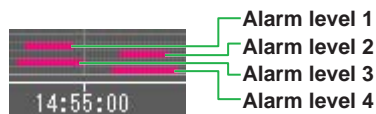
In Normal format, the intersection is marked with a circle.

In MinMax format, the two intersecting points of the Min and Max values are enclosed by an ellipse.



Displaying Alarms

You can show or hide the alarm display area using the Alarm ON/OFF button on the toolbar. This operation mirrors the alarm ON/OFF operation in the Cursor Value dialog box. Up to four alarm levels per channel are allowed. As shown in the figure below, the alarm levels are 1, 2, 3, and 4, starting from the top level. The colors of channels on which alarms occurred indicate the period of occurrence. If multiple alarms occur at the same time, the alarm of the active channel is displayed in front.

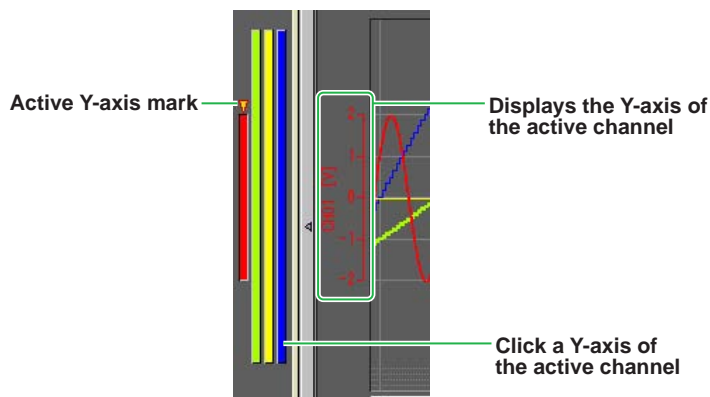


Y-Axis Display

There are six formats for the Y-axis: user zone, edit zone, full zone, slide zone, auto zone and multi-zone. You can switch between them using the toolbar.

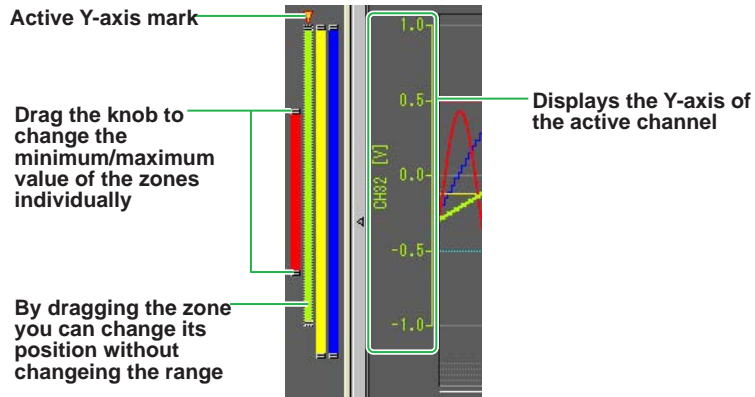
User Zone

The waveform of each channel is displayed in the position specified under Zone in the channel display configure screen. A single Y-axis of the active waveform is displayed.



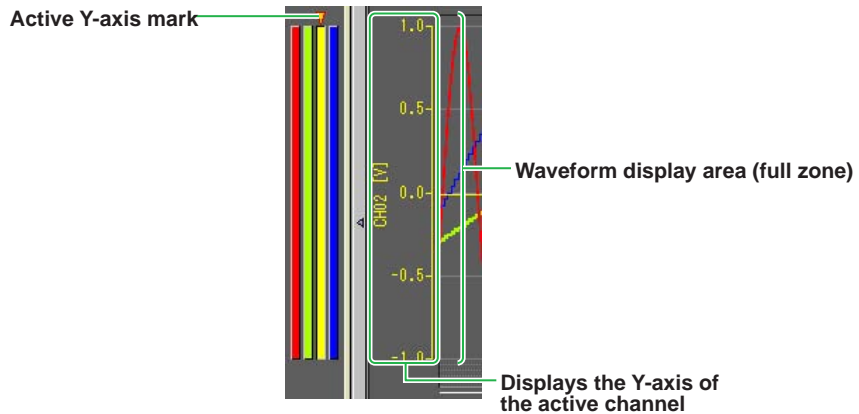
Edit Zone

The waveform of each channel is displayed in the position specified under Zone in the Channel Display Configuration Screen. You can edit the waveform display range by manipulating the Y-axis buttons in the zone display area. Move the waveform position by dragging the Y-axis button up and down. The waveform zone settings implemented here are reflected in the Zone setting in the Channel display configuration screen, as well as the user zone and multi-zone settings. A single Y-axis of the active waveform is displayed.



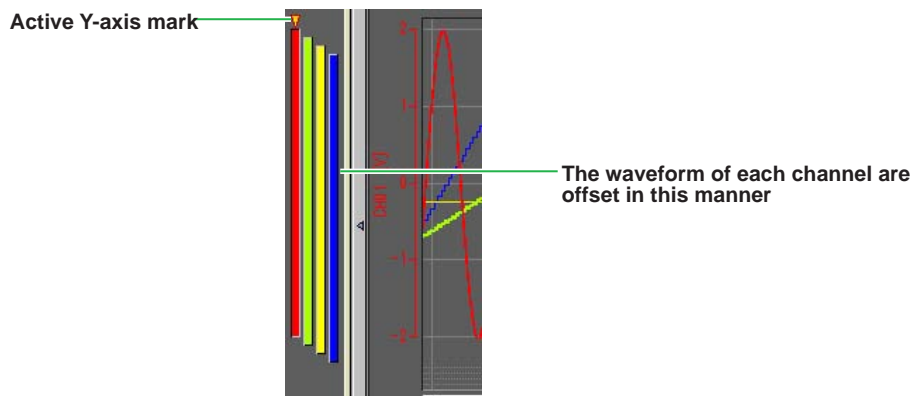
Full Zone

Displays all the waveforms over the full zone of the waveform display area regardless of the Zone settings on the Channel display configuration screen. A single Y-axis of the active waveform is displayed.



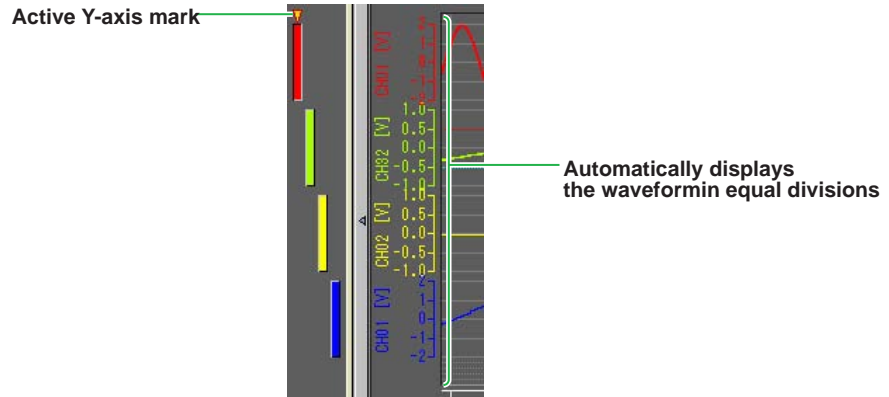
Slide Zone

Displays the waveforms by slightly offsetting the display position of each waveform vertically regardless of the Zone settings in the Channel display configuration screen. A single Y-axis of the active waveform is displayed.



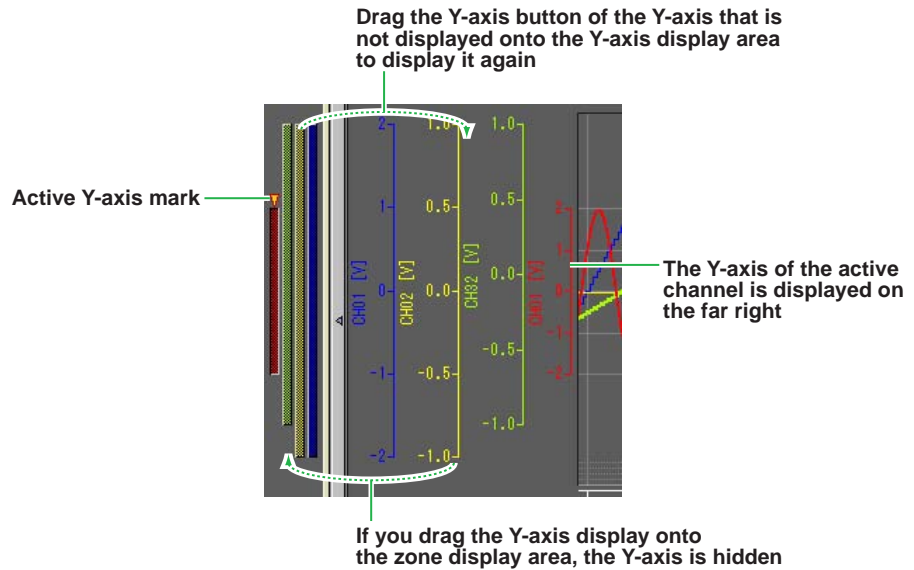
Auto Zone

Displays the waveforms by dividing the waveform display area evenly according to the number of displayed waveforms regardless of the Zone settings in the Channel display configuration screen.



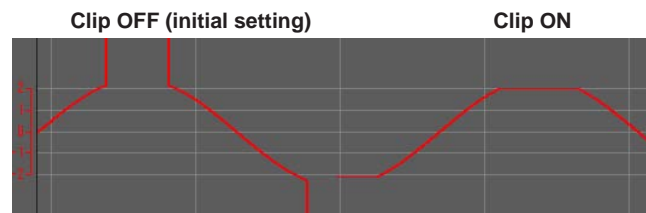
Multi-Zone

Arranges all the Y-axes from left to right, displaying all specified Y-axes. Y-axes not selected in the Channel display configuration screen are not displayed. The display range is set using the Zone parameter in the Channel display configuration screen. When you drag a Y-axis button onto the Y-axis display area, the Y-axis of the relevant channel is displayed. Conversely, if you drag a Y-axis onto the zone display area, the Y-axis of the relevant channel is hidden.



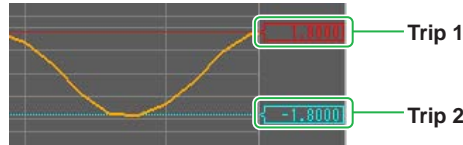
Clip Function

Turning ON the clip function forces displayed points on the waveform that fall outside of the scale range to revert to the max. or min. value of scale. Use the Clip button on the toolbar to turn the clip function ON and OFF.



Trip Point

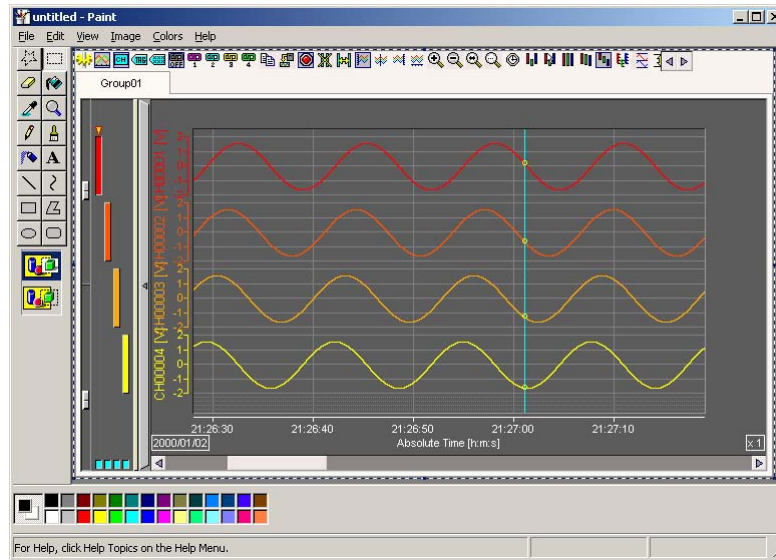
The trip points are displayed according to the Trip 1 and Trip 2 settings in the Channel display configuration screen. You can drag the trip 1 and trip 2 displays to change them. These changes are reflected in the Trip 1 and Trip 2 items in the Channel display configuration screen.



You can change the trip point by dragging

Copying the Trend Display

Clicking the XX button (copy button) in the Trend display toolbar copies the displayed trend screen. You can paste the copied screen onto a standard "Paint" program that comes with your operating system.



3.5 Displaying Cursor Values

Procedure

1. In the waveform display, click the group from which you wish to read values using cursors.
2. Click the position in the waveform display area where you wish to read the data. If you wish to read another point at the same time, drag the cursor. Cursor A appears at the position where you first clicked; Cursor B appears at the position where you released the mouse button. The measurement point is displayed where the waveform and the cursor cross using a yellow circle.



3. Click the Display Cursor Rearout button on the toolbar. The Cursor Readout dialog box opens.

Data number at the Cursor A position Move Cursor A Data number at the Cursor B position Move Cursor B

Active channel mark		Cursor A	Cursor B	Difference	Difference in the data number between Cursor A and B	
Data No.		450	678	228		
Time Difference		0 00:07:36.000		Relative Time		0 00:15:00.000 - 0 00:22:36.000
Channel	Value A	Value B	Value B-A	Time A	Time B	
W01	CH01[V] Min	-1.424	-1.218	0.206	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
	Max	-1.333	-1.116	0.217	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
W02	CH02[V] Min	0.000	0.000	0.000	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
	Max	0.000	0.000	0.000	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
W03	CH01[V] Min	-0.528	+OVER		2004/12/08 14:05:10.000	2004/12/08 14:12:46.000
	Max	-0.451	+OVER		2004/12/08 14:05:10.000	2004/12/08 14:12:46.000
W04	CH02[V] Min	0.000	0.000	0.000	2004/12/08 14:05:10.000	2004/12/08 14:12:46.000
	Max	0.000	0.000	0.000	2004/12/08 14:05:10.000	2004/12/08 14:12:46.000

Channel display color Alarm indication Value of Cursor A Value of Cursor B Value of Cursor B-A Time of Cursor A Time of Cursor B

Explanation

The data at the currently displayed cursors are displayed.

Data No.

Displays the data number at the Cursor A and B positions.

Time Difference

Displays the time difference between cursors A and B.

Relative Time

Displays the time using the first data of the displayed range between cursors A and B as a reference.

Value A and Value B

Displays the values and alarms of each channel at cursor A or cursor B. Changes to red if an alarm occurred, and green if an alarm did not occur. The value is blank if no data exists at the cursor position.

Value B-A

Displays the result of subtracting the values at cursor A from those at cursor B.

Time A and Time B

Displays the time at cursors A and B.

3.5 Displaying Cursor Values

Normal and MinMax Format Display

Values of channels in Normal format are displayed in a single row. Values of channels in MinMax format are displayed in two rows, one for the minimum and maximum value at the cursor position.

Switching the Active Channel

You can switch the active channel. The active channel mark is displayed between the waveform number and its color. Click the box of the channel you wish to make active. This changes the active channel in the trend display screen as well.


Moving Cursors

You can move the cursor positions on the trend display using the Up and Down buttons.

Note

- The cursors used to display cursor values and those used to specify the interval for statistical computation over an area are the same.
 - The Cursor Readout dialog box opens. The Computation Results dialog box can be displayed at the same time.
 - If you click a different group in the Trend display screen with the Cursor Readout dialog box open, the Cursor Readout dialog box displays the cursor values of the selected group.
 - You can change the cursor positions in the trend display screen while the Cursor Readout dialog box is open.
-

Deleting Cursors

Click the  button (Erase Cursor button) on the Trend display toolbar. The cursors are cleared as well as the cursor values displayed in the Cursor Readout dialog box.

3.6 Displaying Computed Results (Statistics)

Procedure

1. In the waveform display screen, click the tab of the group on which you wish to perform statistical computation over an area.
2. Click the start point of the computation area in the waveform display area, then drag the cursor to define the area and end point (use the cursor in the same manner as in section 3.5, iDisplaying Cursor Values.”
3. Click the Statistics button on the toolbar. The Statistics dialog box opens.

Channel	Min	Max	PP	Mean	RMS	Start Time	End Time	
W01 CH01[V]	Min	-2.159	2.156	4.315	-0.280	1.459	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
	Max	-2.159	2.156	4.315	-0.232	1.451	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
W02 CH02[V]	Min	0.000	0.000	0.000	0.000	0.000	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
	Max	0.000	0.000	0.000	0.000	0.000	2004/12/03 15:36:46.000	2004/12/03 15:44:22.000
W03 CH01[V]	Min	-0.528	2.199	2.727	0.969	1.276	2004/12/08 14:05:10.000	2004/12/08 14:12:46.000
	Max	-0.451	2.199	2.650	1.005	1.289	2004/12/08 14:05:10.000	2004/12/08 14:12:46.000
W04 CH02[V]	Min	0.000	0.000	0.000	0.000	0.000	2004/12/08 14:05:10.000	2004/12/08 14:12:46.000
	Max	0.000	0.000	0.000	0.000	0.000	2004/12/08 14:05:10.000	2004/12/08 14:12:46.000

Channel display color

Progress bar

Explanation

Specify using two cursors the interval over which computation is to be performed.

If the cursors are not displayed, all the data are used in the statistical computation.

The statistical parameters are the minimum value, the maximum value, the P-P value (maximum - minimum), the mean value, and the rms value. The computation is executed when the dialog box is displayed, or when you click the Calculate button.

(Channels in Normal format are displayed in a single row. Values of channels in MinMax format are displayed in two rows, one for the minimum and maximum value at the cursor position.)

Min and Max

Shows the maximum and minimum values of the range selected by the cursors, or the entire range.

PP

Shows the difference between the maximum and minimum values of the range selected by the cursors, or the entire range.

Mean

Shows the mean values of the range selected by the cursors, or the entire range.

RMS

Shows the RMS values of the range selected by the cursors, or the entire range.

Start Time and End Time

Shows the start and end times for computation for each channel.

Progress Bar

Displays the execution status of the computation.

Calculate button

Recalculates the statistics. If you change the positions of cursors while the Statistics dialog box is open, click this button to refresh the computed results.


Note

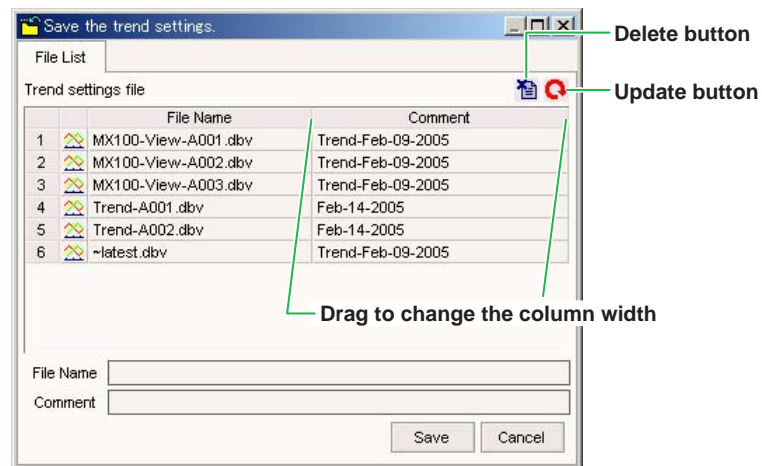
- The cursors used to display cursor values and those used to specify the interval for statistical computation over an area are the same.
- The Statistics dialog box and Cursor Value dialog box can be displayed at the same time.
- The statistical results are not linked to cursor movements or switching of groups. After any such changes are made, click the Statistics button or the Calculate button to recalculate and display the results.

3.7 Saving and Loading Trend Settings

Saving Data Trend Settings

Procedure

1. Click  (the Save button) in the DataBrowser window or choose **File > Save** current trend configuration as from the menu bar. The Save the trend settings dialog box appears.



2. Enter a file name and comment and click the **Save** button.
The currently displayed trend settings are saved.

Explanation

File List

Displays the trend settings file name and comments saved on the local host.

Delete the selected file button

Deletes the selected trend settings file.

Update button

Updates the trend settings file list.

File Name

Enter the name of the file you wish to save (an extension is automatically added).

Comment

Enter comments to be saved with the file. Up to 255 alphanumeric characters can be entered.

Save button


Saves the settings file under the specified file name on the local host.

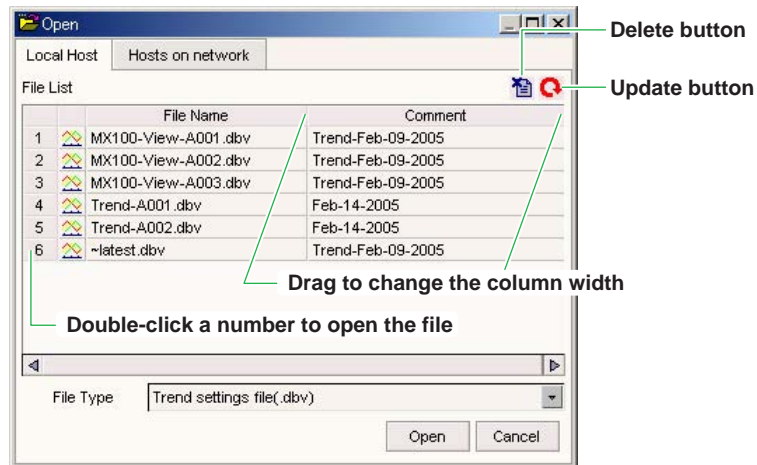
Note

After saving a trend settings file, the saved file name and comment appears in the text box the next time you open the Save the trend settings dialog box (these items are blank if no settings have been saved previously, or when starting up the software). Also, when you select a file in the Save the trend settings dialog box, the file and comment are displayed in the input boxes at the bottom of the window. This allows you to conveniently overwrite settings.

Opening Trend Settings from a Local Host

Procedure

1. Click  (the Open button) in the DataBrowser window or choose **File> Open** from the menu bar. The Open dialog box is displayed.



2. Select a file and click **Open**, or double-click the file number. The Information dialog box opens.



3. Click the **Yes** button. The trend settings loaded from the trend settings file are displayed. Click **No** to close the Information dialog box.

Explanation

File List

Displays the name of the settings file and comments saved on the local host.

Delete the selected file button

Deletes the selected file.

Update button

Updates the displayed file list.

File Type

If you select all files (.dbc; .dbv), the saved search settings files and display settings files are displayed.

If you select Search settings file (.dbc), only the search settings files are displayed.

If you select Trend settings file (.dbv), only the display settings files are displayed.

Open button


Opens the settings file selected in the File List. (When a trend settings file is opened, the Trend display window becomes active.) When a search settings file is opened, the Search window becomes active.

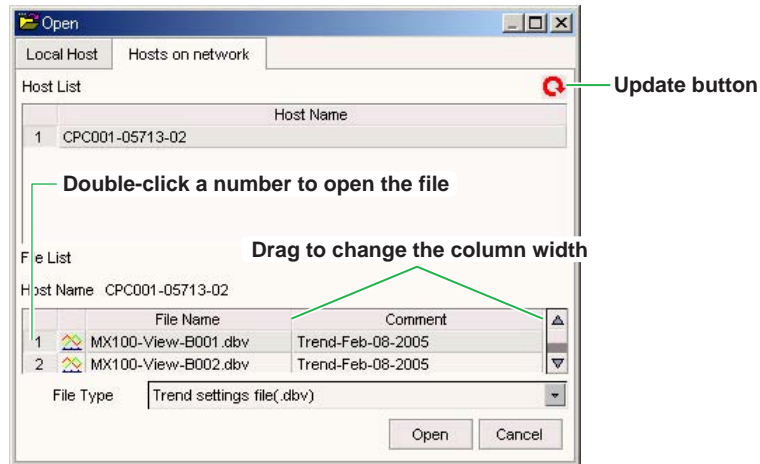
Cancel button

Closes the Open dialog box.

Opening Trend Settings indstop from a Network Host

Procedure

1. Click  on the toolbar or choose **File> Open** from the menu bar. The Open dialog box is displayed.
2. Click the **Hosts on network** tab. The Hosts on network tab is displayed.
3. Click the **Update** button. The names of hosts running DataBrowser, and their corresponding files names and comments are displayed.



4. Select a host from the Host List. The a list of files saved on the selected host is displayed.
5. Select a file from the list that you wish to load and click **Open**, or double-click the file number. The Information dialog box opens.



6. Click the **Yes** button. The trend settings loaded from the trend settings file are displayed. Click **No** to close the Information dialog box.

Explanation

Host List

The Host List displays the names of any hosts on the network that are running DataBrowser.

File List

Displays the settings files and comments saved on the host selected in the host list.

Host Name

Displays the name of the host selected in the host list.

Update button


Updates the host list and file list.

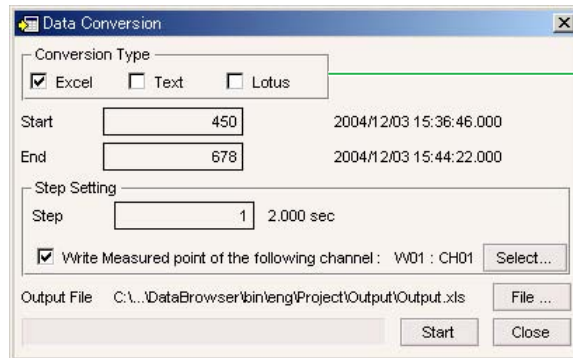
File Type, Open Button, and Cancel Button

See Opening Trend Settings Files from a Local Host.

3.8 Converting Data Formats

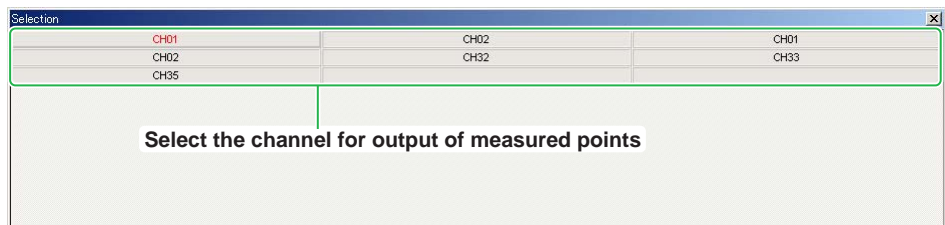
Procedure

1. Open the waveform display screen and display the waveforms of the data you wish to convert.
2. Select a range to convert using the cursors (if no cursors are displayed all data will be converted). Click  in the waveform display screen toolbar. The Data Conversion dialog box opens.

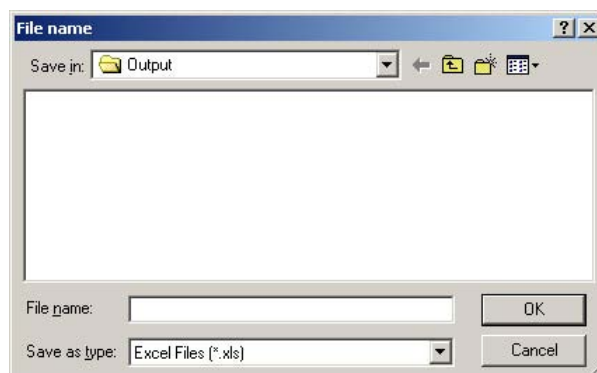


Select the check box of the desired conversion type to turn it ON

3. Select a conversion type of Excel, Text, or Lotus. To change the range of data to be converted, specify a Start and End point.
4. Enter the number of steps. (See Explanation for details.)
5. To select a channel whose interval is to be used for the interval during data conversion, select the Write Measured point of the following channel check box and click the **Select** button. The Selection dialog box opens. (See Explanation for details.)

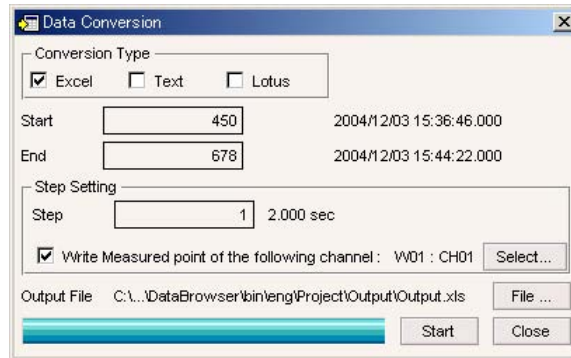


6. If you click channel whose measured points are output, that channel is displayed in the Data Conversion dialog box.
7. Click the **File** button. The File name dialog box opens.



3.8 Converting Data Formats

8. Enter a destination folder and file name and click the **OK** button.
The name of the output file appears in the Data Conversion dialog box.
9. Click the **Start** button.



Explanation

Conversion Type

Excel

Data that can be opened using Microsoft's spreadsheet application Excel version 8.0 (Excel97) or later. The extension is .xls.

Text

Text data with each data point separated by a comma. The extension is .txt.

Lotus

Data that can be opened using Lotus's spreadsheet application 1-2-3 version 2.0 or later. The extension is .wj2.

Start and End Points

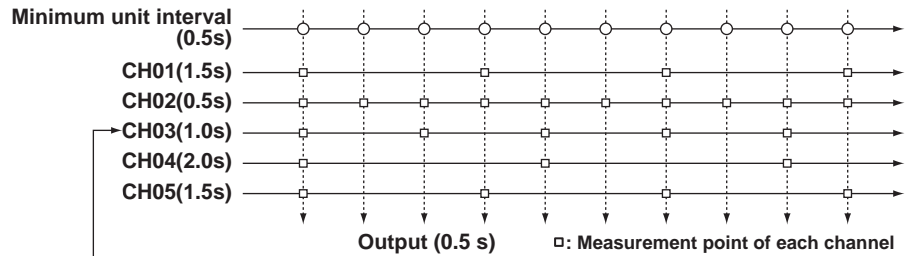
You can select a range of data to convert. If cursors are placed in the trend display screen, the range determined by the cursors defines the start and end points. If no cursors are displayed, all the first and last data of all the data represent the start and end points. Also, the start and end times are displayed to the right of the entry boxes.

Step Setting

You can specify an interval for data conversion output. This area includes the setting for the number of steps, and a setting for specifying the channel whose measured points are to be output (Write Measured point of the following channel).

- If the Write Measured point of the following channel check box is not selected, the measured points of all channels assigned to the group are output, and the smallest unit interval is used as the reference interval.
- If the Write Measured point of the following channel check box is selected, the interval of the selected channel is used as the reference interval.
- By specifying the number of steps, rather than outputting all points in the range (steps = 1), you can thin the data by outputting only the points sampled at certain intervals.

The figure below shows an example of output when the Write Measured point of the following channel check box is not selected, the smallest unit interval (reference interval) is 0.5 s, and the number of steps is 1 (if the steps were set to 3, samples would be output every 1.5 s).



The squares represent the output of measured points on each channel (0.5 s) If the Write Measured points of the following channel check box is selected and channel 3 is also selected, measured points on each channel are output every 1 s.

Note

- If the output points are not measured points, the points directly after are output.
- When the Write Measured point of the following channel check box is selected, the start and end times on the right are those of the selected channel.

Example of the Converted Data

	A	B	C	D	E	F	G	H	I	J
47	Measurement data									
48	Channel			CH01					CH02	
49	TagNo.									
50	TagComment									
51	Unit			V					V	
52	Interval(Sec)			2.000					2.000	
53	Days	Time	Second	Date	Time	Second	Value(Min)	Value(Max)	Date	Time
54		0 00:21:14	0.000	2004/12/C15:43:00		0.000	-0.063	0.218	2004/12/C15:43	
55		0 00:21:16	0.000	2004/12/C15:43:02		0.000	-0.076	0.063	2004/12/C15:43	
56		0 00:21:18	0.000	2004/12/C15:43:04		0.000	-0.200	-0.076	2004/12/C15:43	
57		0 00:21:20	0.000	2004/12/C15:43:06		0.000	-0.325	-0.200	2004/12/C15:43	
58		0 00:21:22	0.000	2004/12/C15:43:08		0.000	-0.448	-0.325	2004/12/C15:43	
59		0 00:21:24	0.000	2004/12/C15:43:10		0.000	-0.570	-0.448	2004/12/C15:43	
60		0 00:21:26	0.000	2004/12/C15:43:12		0.000	-0.689	-0.570	2004/12/C15:43	
61		0 00:21:28	0.000	2004/12/C15:43:14		0.000	-0.806	-0.689	2004/12/C15:43	

Notes When Converting Data

- There is a limit to the number of data points that Excel and Lotus1-2-3 can handle. Before executing the conversion, set the channels/groups to be converted, the conversion range, and the step so that the number of data points is appropriate (see Automatic Division Function for Conversion Output Files). In addition, if the free memory space on the PC is low, you may not be able to load the data using Excel or Lotus 1-2-3.
- If you set the save destination to a storage medium that has slow access such as a floppy disk, the saving of the data may take an extended time. It is recommended that such storage medium not be selected for the save destination.
- Select a save destination with adequate free space.

3.8 Converting Data Formats

Automatic Division Function for Conversion Output Files

If the number of points to be converted and output is large and you attempt to save all the points to a single file, the file will exceed the allowable number of rows in Excel or Lotus 1-2-3, making the file unloadable.

The Automatic Division function automatically creates multiple files that are within the row number limit of Excel and Lotus 1-2-3. The names of the divided files are the original file name plus an appended sequence number.

File name format: file name-****.extension (where **** is a four-digit number).

Ex. Output-0003.xls

Excel row limit: 65536


Lotus 1-2-3 row limit: 8192

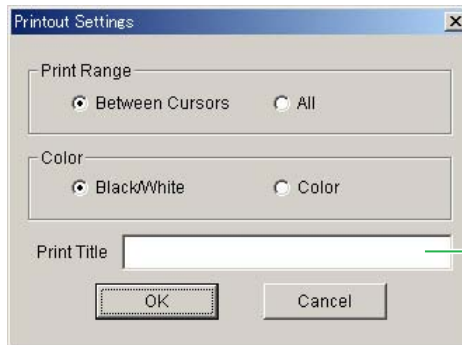
Automatic division is not available for conversion to text format.

3.9 Printing Data

Printing

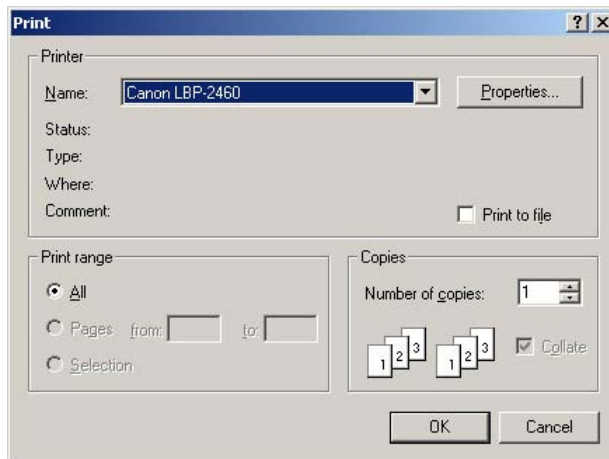
Procedure

1. Open the waveform display screen.
2. Click  (the Print button) on the toolbar or choose **File > Print** from the menu bar. The Printout settings dialog box opens.



Enter a comment to be printed (of up to 255 alphanumeric characters)

3. Select a print range and color, and enter a print title. Click the **OK** button. The Print dialog box opens.



4. Click the **OK** button.

Viewing a Print Preview

Procedure

1. Open the trend display screen.
2. Choose **File > Print Preview** from the menu bar.



Explanation

You can print cursor values and statistics along with waveforms from the trend display screen. To print cursor values and waveforms, open the Cursor Value dialog box before printing. To print statistics, open the Statistics dialog box before printing. To print cursor values and statistics, open both dialog boxes before printing.

Print Range

Choose from Between Cursors and All. Selecting Between Cursors prints the waveforms in the cursor range displayed on the trend display screen on a single page.

Specifying Colors

You can select black/white print or color print.

Print Title

Enter a title to be printed at the top of the paper.

4.1 Error Messages and Corrective Actions

A message (such as an error message) may appear during operation. The following describes the meanings of the messages and their corrective actions.

Code	Description	Corrective Action
E0002	Insufficient memory. Please close at once.	Exit all other software programs and restart the OS.
E0004	Invalid license number. Please reinstall.	Reinstall the software.
E0101	Please open from the DataBrowser.	This software cannot be opened by itself. Start it from the DataBrowser.
E4948	Could not initialize communications.	Check whether TCP/IP is operating normally.
M4959	Cannot exit while DataBrowser is starting up.	Close DataBrowser, then shut down or log off.

Search Folder Registration

Code	Description	Corrective Action
E4925	No more search folders can be registered.	The limit of eight folders that can be registered in the search folder registration area has been reached. If you need to register a new folder, first delete one or more of the folders first.
E4940	Same folder ID already exists. Check the list of registered folders.	A folder with the same ID has already be registered in the search folder registration dialog box. Either delete the existing folder from the list, or register the new folder using a different ID.
E4957	Same folder ID already exists. Check the search folders.	Same folder ID already exists in the search folder registration area. Therefore, the new one cannot be registered. Delete the folder with the same ID from the registration area, or, register the new folder using a different ID. If registering with a different ID, use a folder ID not already listed in the registration area.
E4960	Limit of folders that can be registered exceeded.	If more than two hundred folders would be registered, registration is denied. If you need to register a new folder, first delete an existing one from the folder registration list in the search folder registration dialog box.

Executing Searches

Code	Description	Corrective Action
E4907	No response.	Check whether the network is connected correctly (cables, hubs, and other hardware), and that no problems occurred on the network.
E4939	Folder ID not found.	On the host on which the error occurred, the search could not be performed because the folder ID does not exist in the folder registration of the DataBrowser being run. Register the search folder on the DataBrowser on the host on which an error occurred.
E4942	Folder not found.	Check whether the folder exists on the DataBrowser on the host on which an error occurred.
E4945	Failed to write file.	Failed to write the search results file. Confirm that the disc capacity and file system are correct.
E4946	Connection failure.	Check whether the host on which an error occurred exists. If it exists, check whether DataBrowser is running on that host. Check whether the network is connected correctly (cables, hubs, and other hardware), and that no problems occurred on the network.

4.1 Error Messages and Corrective Actions

Code	Description	Corrective Action
E4947	DataBrowser not found.	Software may be running on the same port (50285) used by DataBrowser. Check the host on which the error occurred.
E4956	The number of data files that meet the criterion exceeded the limit.	If the number of data files that meet the search the upper limit of 60000, narrow down your search conditions and perform the search again.

Saving and Loading Settings and Search Results

Code	Description	Corrective Action
E0211	Cannot write to the file.	Failed to save the file. Confirm that the disc capacity and file system are correct.
E0212	Cannot read file.	Confirm that a file exists, that the software supports it, and whether the file system is correct.
E0213	Cannot open the file.	Confirm that a file exists, that the software supports it, and whether the file system is correct.
E4955	Failed to delete file.	When files were deleted, one or more files could not be completely deleted.
M4959	No search results.	Since no search results files are in the data search window, search results could not be saved.

Saving and Loading Settings and Search Results

Code	Description	Corrective Action
E4961	Failed to copy data file.	Failed to copy data file. Check whether the disk capacity in the copy destination is sufficient, whether the copy destination folder is write-protected, and whether the file system is correct.
E4962	The copied data file exists under a different name.	A data file of the same name was found in the copy destination. Change the name. In this case, save the file in the copy destination under the name, "copied file name-four digit number.extension." The four digit number starts with 0000, followed by 0001, and so on.

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