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Safety Symbols and Markings

The following conventions are used to indicate and classify safety precautions in this manual. Always heed the information provided with them. Failure to heed precautions can result in injury to people or damage to property.

 DANGER
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

 WARNING
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 Caution
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage.

Important
Indicates a property damage message.

Safety Notes and Instructions

Below is a list of important wiring instructions that must be followed carefully for safety and proper performance:

Cautionary Notes on Wiring

 Note
Use the proper cable when connecting the drive and SDWP001. Close and restart SDWP001 if the cable is inserted during a session of SDWP001. Using any other type of cable will void the warranty for the drive and software.

Notes on Use

 Note
Close and restart SDWP001 if the power to the drive is turned off and then turned on. Failing to do so will void the warranty for the drive and software.

Manual Overview

This manual has been written for those using SDWP001. Information covered in this manual includes:

- An overview of all functions used in SDWP001
- Instructions for installing and uninstalling SDWP001.

Related Manuals

Detailed technical documentation is available on Sumitomo drives and various drive options. Refer to this other documentation as needed.

Make sure that you have a proper understanding of all product specifications and restrictions when using this product.

Notes on Data Communications

Important

SDWP001 is not for use with any other communication-related devices not specified in this manual. Do not make any modifications to the drive, operator, software, or MEMOBUS/Modbus data. Use of any other communication devices will involve data that does not agree or comply with SDWP001 programming, and may not operate properly.

About this Software

Notes on Usage

- This software is for installation to a single computer only. Authorization is required for use on another computer
- It is strictly forbidden to copy the software for any purpose other than as backup
- It is strictly forbidden to reverse compile or reverse engineer this software
- It is strictly forbidden to loan, exchange, or trade this software to a third party
- Sumitomo Heavy Industries, Ltd. possesses all rights of copyright protection related to this software.

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1 System Overview

This section provides an overview of SDWP001 and various features of the software

<Applicable Inverter>

HF—520 (Standard Series)	0.2~7.5 kW
HF—X20 (Flame-Proof [d2G4] Series)	0.2~3.7 kW
SF—520 (Standard Series)	0.1~2.2 kW

<Applicable PC communications cable>

Model : WV103 (RS-232C interface) ··· Cable Length 3m

When connecting with a USB port of the PC, please prepare a USB to RS-232C change cable

1.1 SDWP001 Overview and Functions

SDWP001 is the powerful engineering tool designed for advanced application setup and for performing maintenance tasks on the Sumitomo drive (Inverter).

The advanced functionality of SDWP001 assists all users with powering up the drive, test running the application, or performing maintenance.

Main functions:

- Editing parameters while taking advantage of useful help information
- Displaying drive operation status (I/O signals, internal status information, etc.) as well as product information
- Troubleshooting features, including possible causes for problems and other help options
- Test running the drive and application (both manual and pattern operation)
- Oscilloscope function.

NOTE: Some SDWP001 functions may not be applicable for the specific drive model being used. Such functions will not be available when displayed in the menu toolbars.

There are following way to connect the drive to SDWP001.

Normal Connection (Drive Only)

Connects the drive directly to SDWP001 using an RS-232C communications cable.

To connect a different drive, unplug the communications cable from the drive that is currently connected and connect it to the other drive.

1.2 System Environment

System requirements for running SDWP001 are listed in the table below:

PC	PC/AT DOS/V compatible PCs *Sumitomo will not provide support when using NEC PC9821 series computers.	
CPU	Pentium 1 GHz or higher (1.6 GHz recommended)	
RAM	1 GB or more	
Hardware Disk Space	At least 100 MB (400 MB recommended at time of installation)	
Screen Resolution	XGA monitor (at least 1024 × 768 set for small fonts)	
Color Display	65535 colors (16 bit) or higher	
OS	English or Japanese OS OS compatible with 32-bit and 64-bit memory •Windows 7 The operation can not be guaranteed in other OS.	
Drive and PC Connection Cable	Sumitomo provides a RS-232C communications cable. (Option)	
	Drive Model	Cable Model
	HF-520, HF-X20	Modular Connector Type
	SF-520	WV103 (Cable Length 3m)
	•SI-232/JC-H option card required if using SF-520.	
Other	When connecting with a USB port of the PC, please use a USB to RS-232C change cable. Environment in which the Internet can connect (for installation only) Adobe Acrobat Reader 6.0 *Required for displaying Help information	

NOTE: To install and uninstall SDWP001, the user must be logged in with administrator rights.

NOTE: Windows 7 user should take note of the following: Multiple users cannot log in simultaneously; only one user is allowed at a time.

NOTE: Some security and virus software may interfere with SDWP001 and keep it from starting properly.

1.3 Installing SDWP001

Executing the SDWP001 installation program will install the software.

All files needed to install the software are included on the download file.

For proper software installation, be sure that all other programs have been closed.

NOTE: To install SDWP001, the user must be logged in with administrator rights.

Follow the instructions below to install SDWP001:

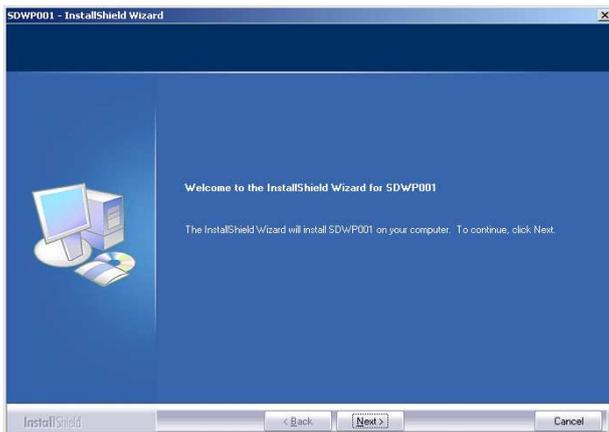
- 1) Download the file from our web site ' <http://cyclo.shi.co.jp/> '.
- 2) From Windows® Explorer, open the folder then double-click on "SETUP.EXE".
- 3) The Language selection dialog box will appear.
Select the appropriate language (Japanese or English).



- 4) Click "OK" and SDWP001 will prepare the InstallShield Wizard and then launch the InstallShield Wizard for SDWP001.



Click the button marked, "Next" to begin installation.



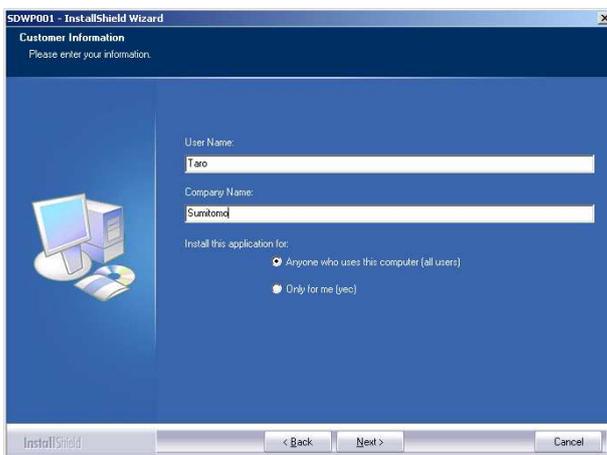
5) America software license agreement.

You must accept the terms to proceed with the installation. Click “Next” to continue.

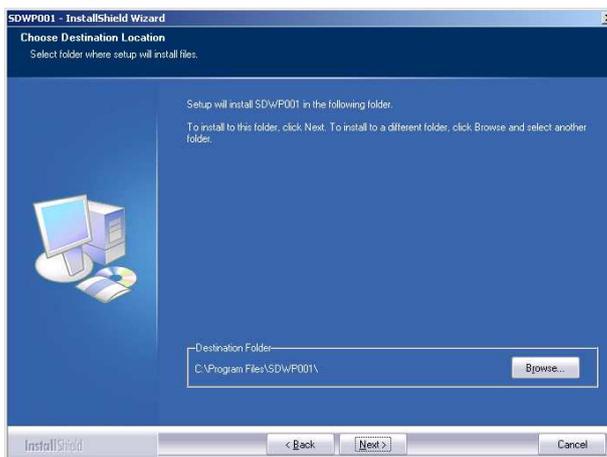


6) Enter the user information into the required fields.

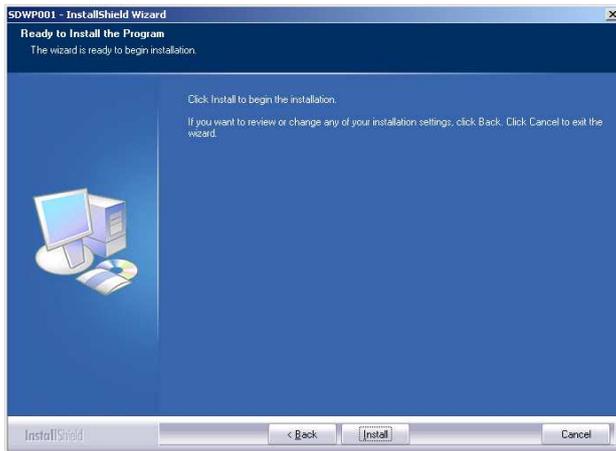
The User Name and company information are required for installation, registration, and use of the software. Click “Next” after the data has been entered.



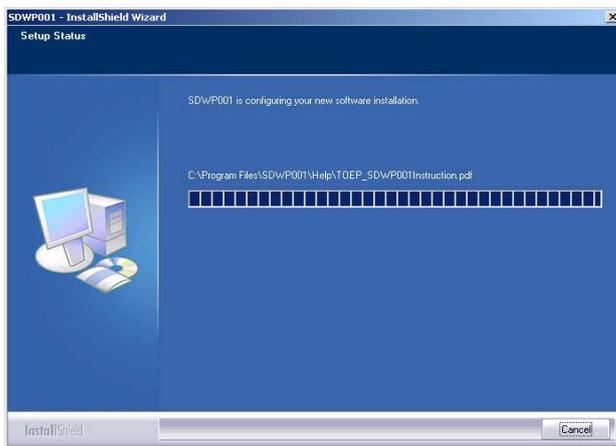
7) SDWP001 asks for the software installation path. The default path will appear as: C:\Program Files\Sumitomo\SDWP001\ . Click “Next”.



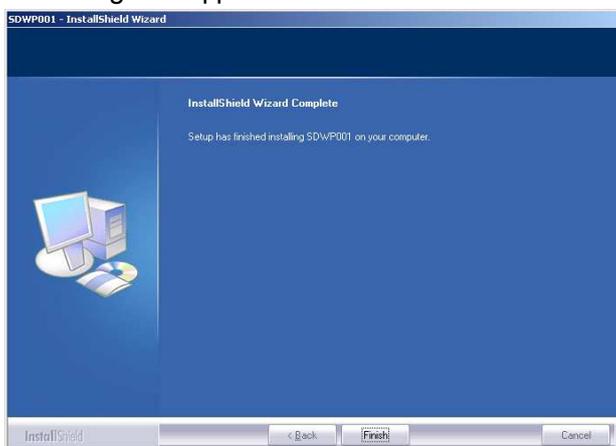
- 8) Once SDWP001 is ready to be installed, a message will appear to indicate that installation preparations are complete. Click “Install” to install the software.



- 9) The required files will be installed and copied to the designated directory. A window will appear to indicate the progress of installation.



- 10) A message will appear to indicate that installation is complete. Click “Finish” to close the window.



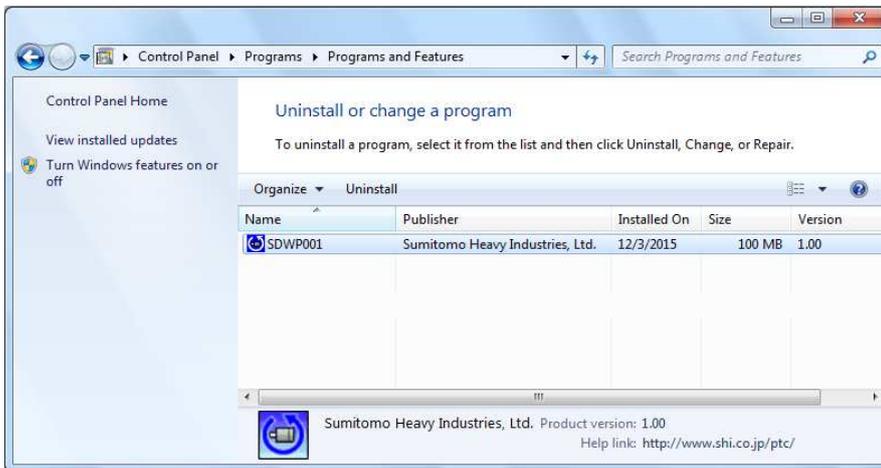
NOTE: A message may appear indicating that the PC requires restart for proper SDWP001 installation. Follow the instructions and restart the computer.

1. 4 Uninstalling SDWP001

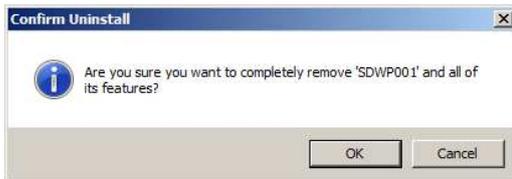
**NOTE: Administrator privileges are required to uninstall SDWP001.
Log in as the administrator to uninstall SDWP001.**

Follow the procedure below to uninstall SDWP001:

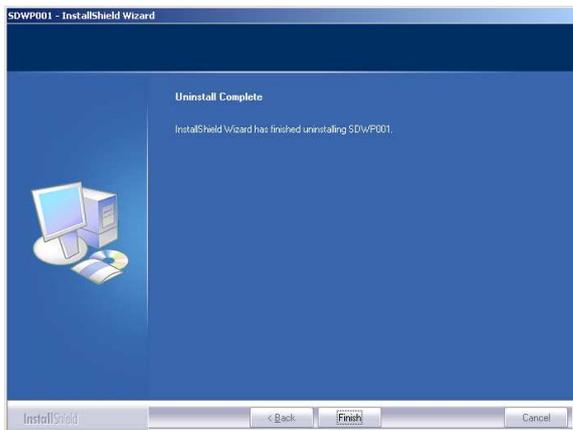
- 1) Open the Start menu in the Windows Task Bar.
- 2) Click “Control Panel” and open the Control Panel folder.
- 3) Double-click on the “Program and Features” icon to open the following window:



- 4) Select SDWP001 and click “Remove”. The following message will appear:



- 5) Click “OK” to execute the uninstall shield.
When the program has been uninstalled, the following message will appear:



- 6) Click “Finish”.

2 Starting SDWP001

Follow the directions below to start using SDWP001:

2.1 Starting the Program

There are three ways to start a session of SDWP001:

- from the Start menu
- from a shortcut
- by double-clicking on a Project file.



2.1.1 Starting from the Start Menu

Follow these instructions to open SDWP001 from the Start menu:

- 1) Open the Start menu in the Windows task bar.
- 2) Go to the Programming menu and open the Programming folder.
- 3) Open the folder marked "Sumitomo Inverter".
- 4) Select "SDWP001".

2.1.2 Starting from a Shortcut

Double-click on the shortcut marked "SDWP001".

2.1.3 Double-clicking on a Project File

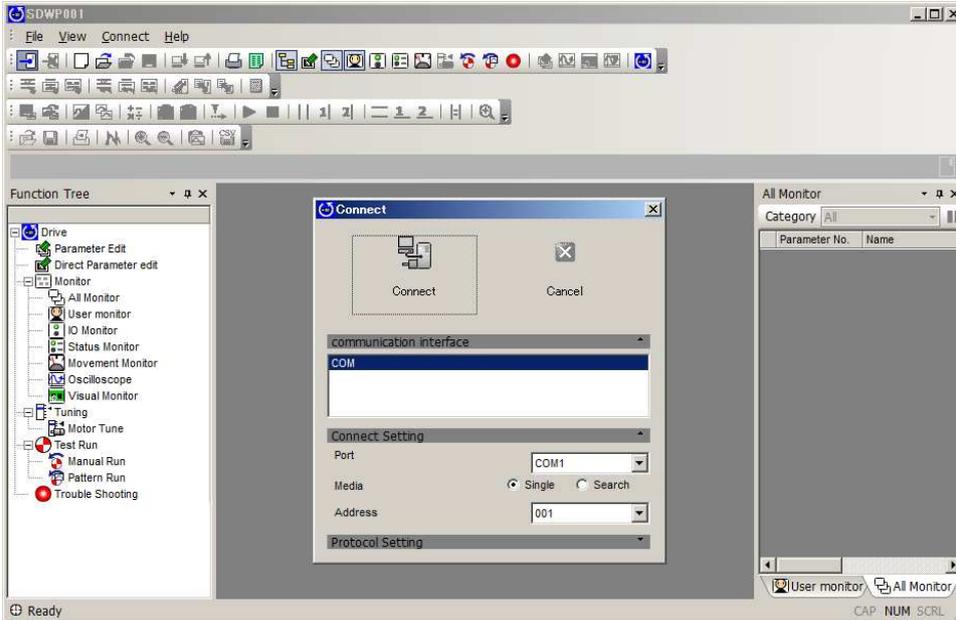
SDWP001 can be opened by double-clicking on a Project file.

- 1) Open up Windows Explorer
- 2) Double-click on a Project file icon.

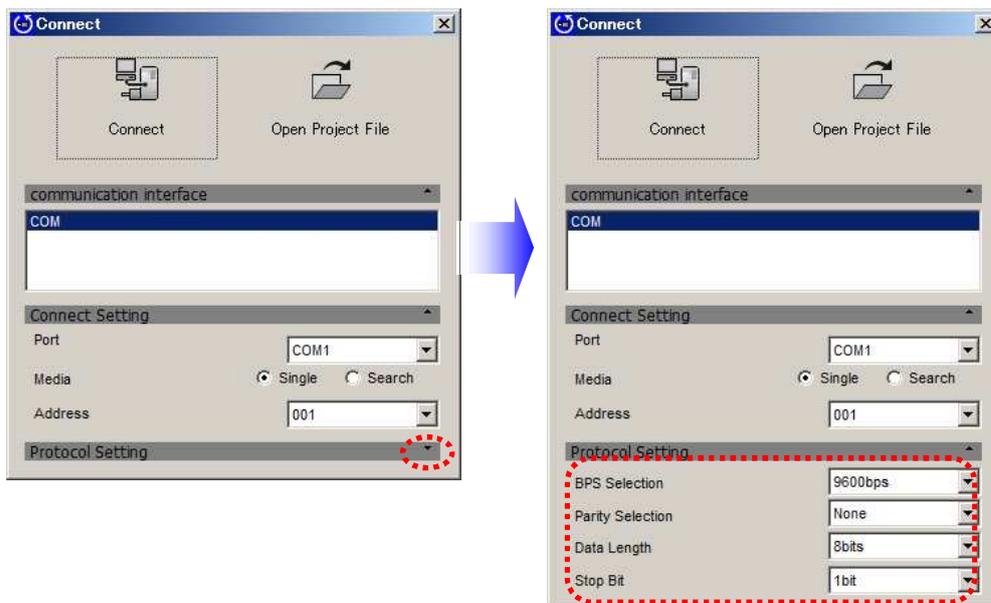
NOTE: A Project file saved to the desktop can also be used to open a session of SDWP001 by double-clicking on that icon.

2.2 Connecting the Drive and PC via the Com Port

When SDWP001 is first opened, the start window shown below will appear on the computer monitor.



The first window to appear asks if the user would like to connect to a drive or open up a Project file.



Connect: PC connects to the drive to edit parameters and perform test run.

Open Project File: Drive does not necessarily need to be connected to edit a project file.

To connect a drive, SDWP001 requires that certain data be entered for the “Connect Setting” and “Protocol Setting”.

1) Specify the Connect Setting

Port

Selects the com port for drive connection. SDWP001 will list the com ports available for the PC being used. This display will vary by PC.

Media

Selects the media for setting the com address: Search or Single.

If you know the com address, enter it here. If not, select "Search" and SDWP001 will automatically search for the address.

Address

Sets the com address for drive parameter settings.

This setting will be grayed out when "Search" has been selected for the media.

2) Selecting the Protocol Setting

Sets the communication speed for drive and PC.

BPS Selection

9600bps

Parity Selection

None

Data Length

8 bit

Stop bit

1 bit

3) Select "Connect"

SDWP001 will attempt to connect to the drive. If select "Search", data of the connected drive will appear when the connection is completed.

If select "Single", SDWP001 main screen will appear when the connection is completed.

2.3 Connecting the Drive and PC

When the “Media” connection setting discussed in the previous section is set for search detection, SDWP001 will automatically search all serial ports for any connections.

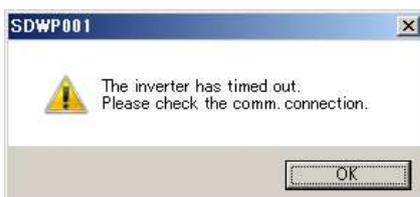
If SDWP001 detects that drive is connected, the following window will appear, showing the models and addresses of all drives that are connected.



Use the window above to select which drive the current session of SDWP001 will focus on and click “OK”. Clicking on “Cancel” will cause the following window to appear:



If SDWP001 is unable to communicate with the drive, the window above will not appear and the following message will be displayed instead:



Regardless of whether the drive is connected to the PC, this message may appear if SDWP001 is unable to properly communicate with the drive.

If the drive selection screen fails to appear, check the items listed in the table below:

Check	Comments
Is the power supply on?	Check the power supply.
Is there a loose connection somewhere?	Make sure the com cable and the connector are properly fastened to the correct ports.
Is the correct com port selected?	The com cable should be connected to the same port specified in the Connect window.
Is the com address correct?	RS-232C Make sure the com address that is set and the one you are trying to connect to are the same.
Is the RS-232C port enabled?	Notebook PCs may not supply enough power to the RS-232C port. Check the setting for the power supplied to the C port. Refer to the PC user's manual for information on setting the power supply.
Is the PC operating from a battery?	PC batteries may not supply the type of power needed for communications. Try switching to an AC power supply.
Is the wiring correct?	Check for correct wiring using the instructions that came with the com cable and the instruction manual for the drive.
Is the com cable the proper length?	<ul style="list-style-type: none"> • Try shortening the length of the com cable • Use a twisted pair shielded line • Check the length of the com cable (RS-232C: 3 m max).

If SDWP001 still has difficulty connecting to the drive after verifying all of the items listed above, check the following:

- Are the communication-related parameters in the drive set for use with SDWP001?
- Remember that any changes to communication-related parameters in the drive require that power be cycled in the drive for those new setting changes to take effect.

Proper cycling of power means that LED indicators on the operator must completely extinguish before the power supply back on.

2.4 Managing Project Files

Data handled by SDWP001 is organized into a Project.

Users can assign names to a Project.

A Project stores all connection data, drive functions, and data that have been edited into a single file to facilitate data tracking and portability.

The flowcharts in the next section outline starting SDWP001, creating a Project, and quitting the program.

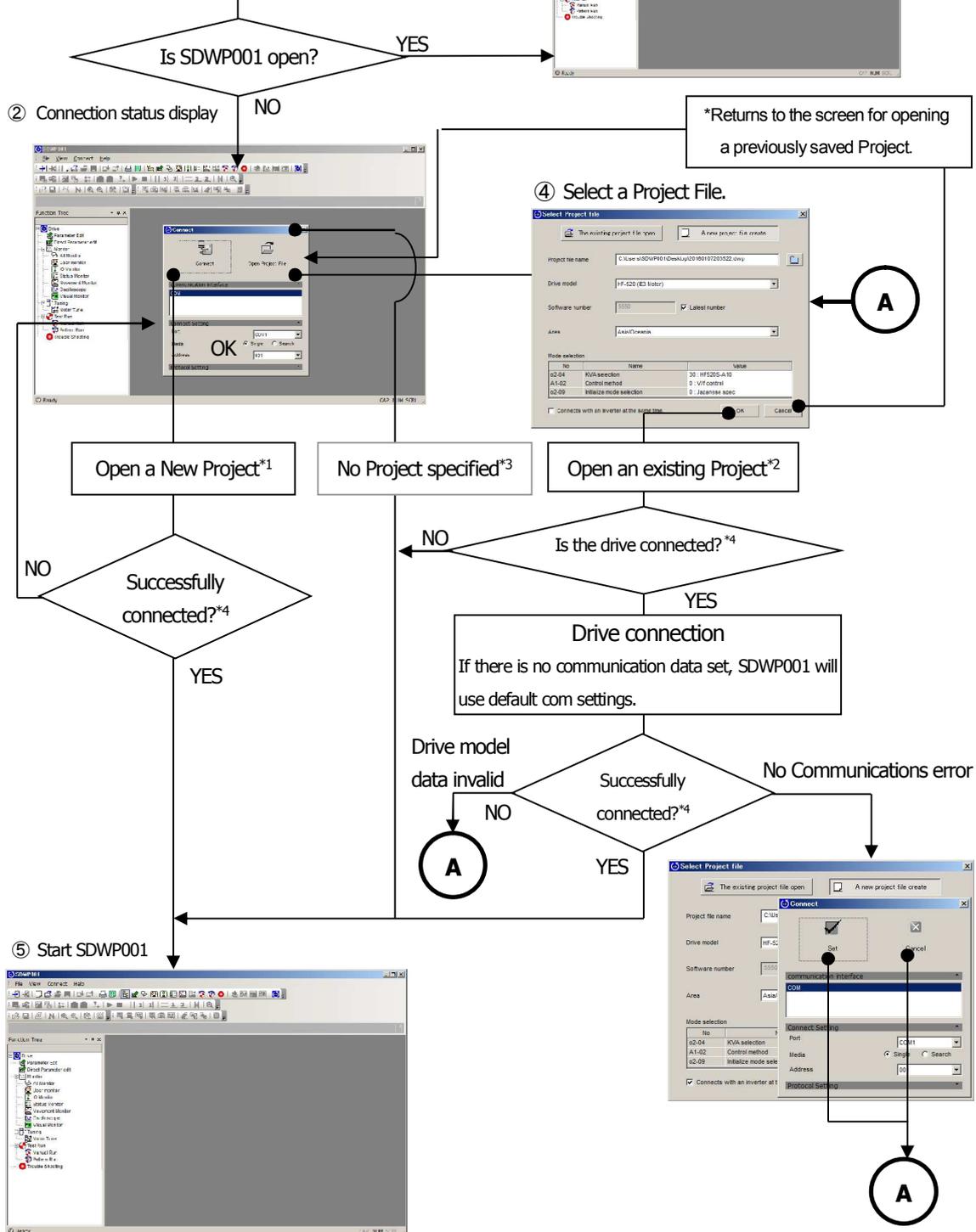
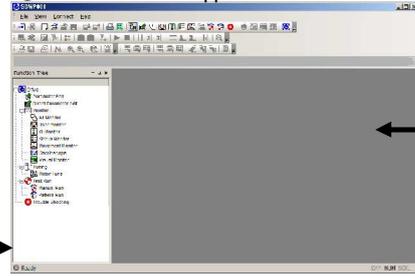
- *1 New Project : SDWP001 creates a new Project file and automatically assigns default values to all parameters.
The Project must be given a name when it is saved.
- *2 Pre-existing Project : The user selects a Project that was saved earlier.
- *3 No Project : No Project file is opened. No data will be displayed and no parameters can be edited.
 - No child windows (such as the Parameter Edit window, etc.) will be displayed.
 - If any docking windows are open, they will not display any data or drive model information.Software functions will become enabled once a Project is opened or once SDWP001 connects to the drive.
- *4 Once a Project has been opened, double check that the drive model information is correct.

2.4.1 Starting SDWP001

① Starting SDWP001

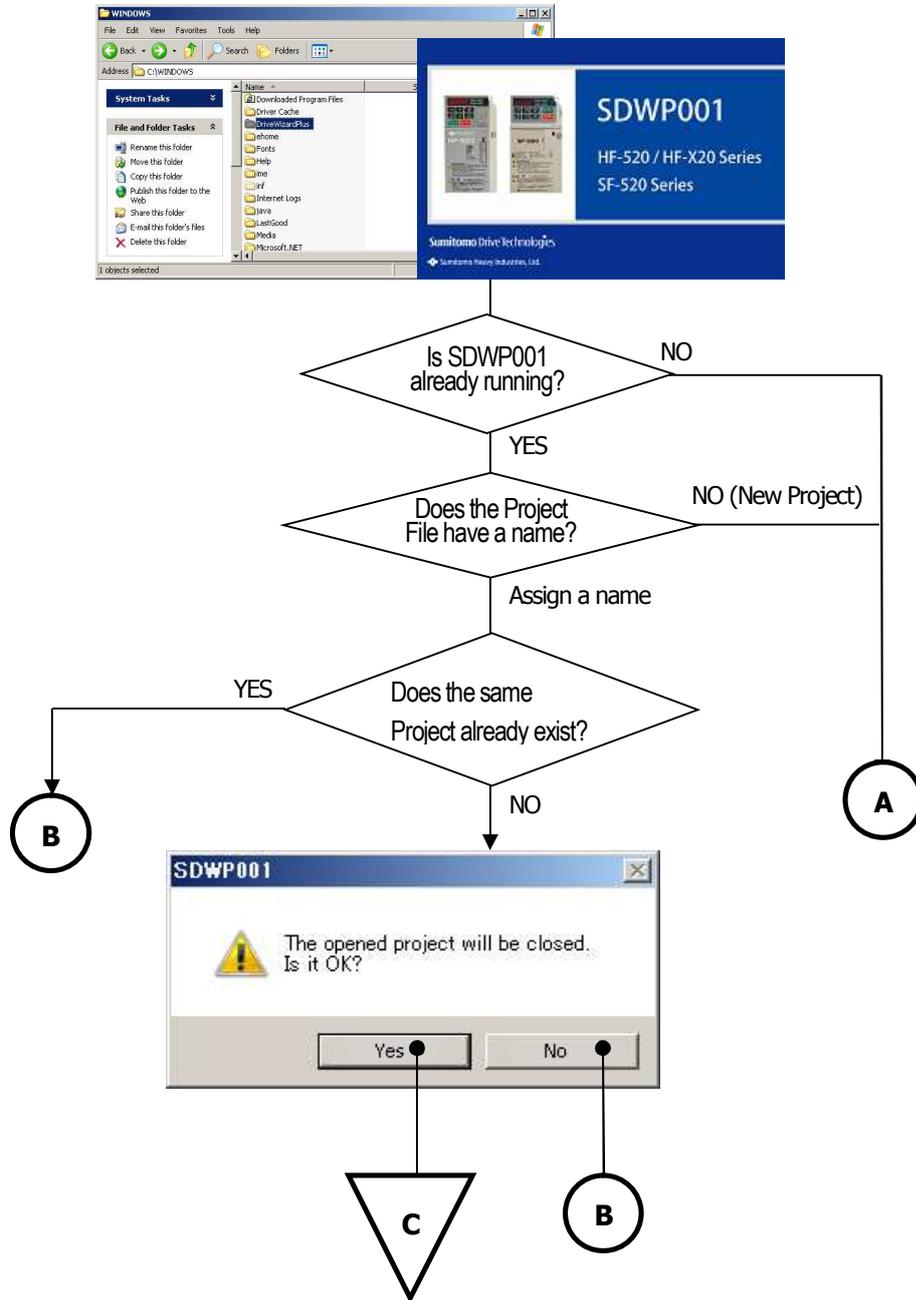


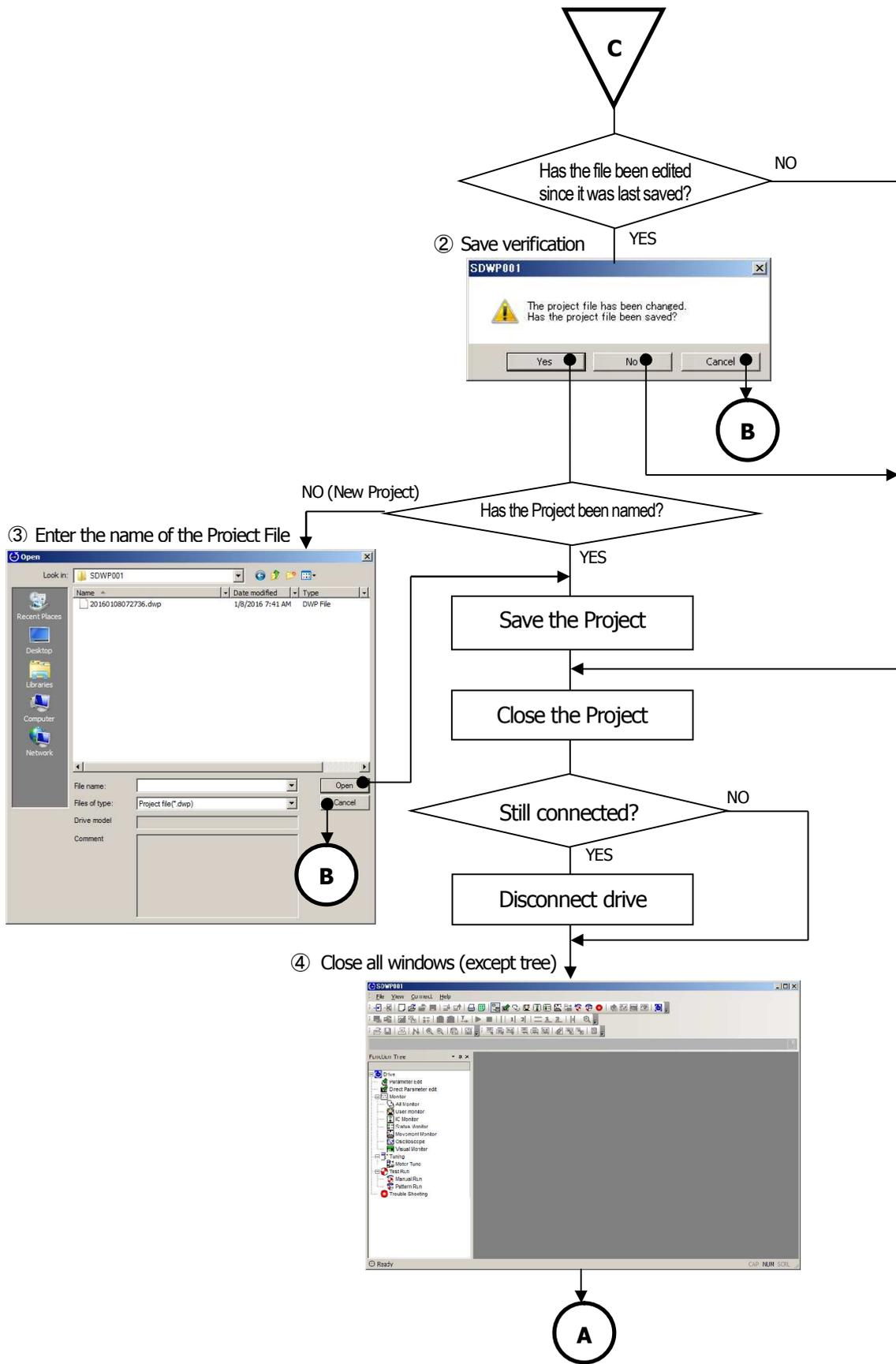
⑥ Active SDWP001 application



2.4.2 Double-clicking on a Project File from Windows Explorer

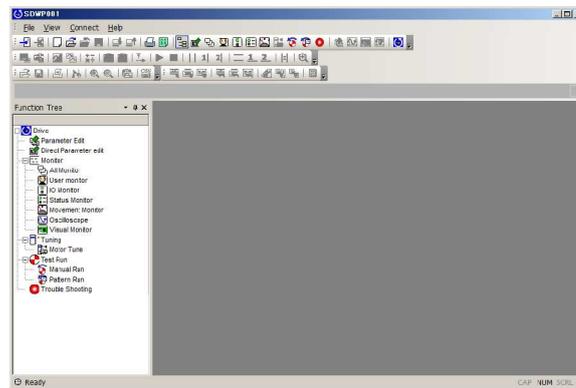
① Double click on a Project File.





2.4.3 Opening a Project File

① Opening a Project File

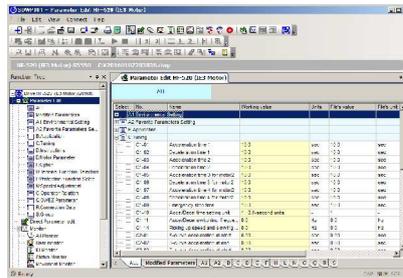


A

When a Project is already open, the "Project Open" selection on the menu is disabled so that only "New Project" can be selected.

2.4.4 Closing a Project File

① Closing a Project File



Has the file been edited since it was last saved?

② Safe verification



B

NO (New Project)

Project Name

Saves Project.

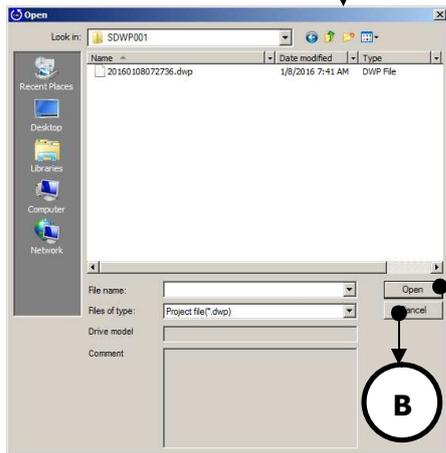
Closes the Project File

Already connected?

SDWP001 disconnects the drive and PC.

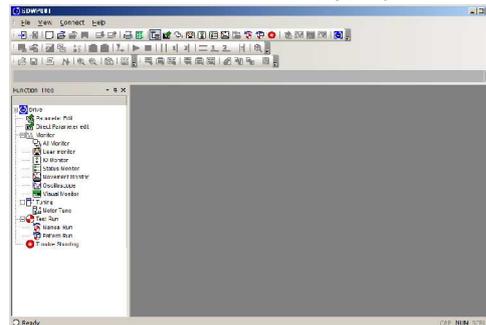
NO

③ Specify the Project file



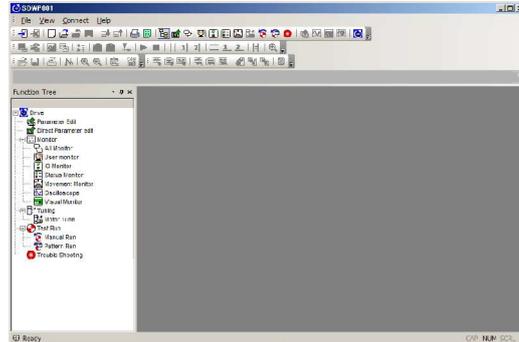
B

④ SDWP001 closes all windows (except the tree window)

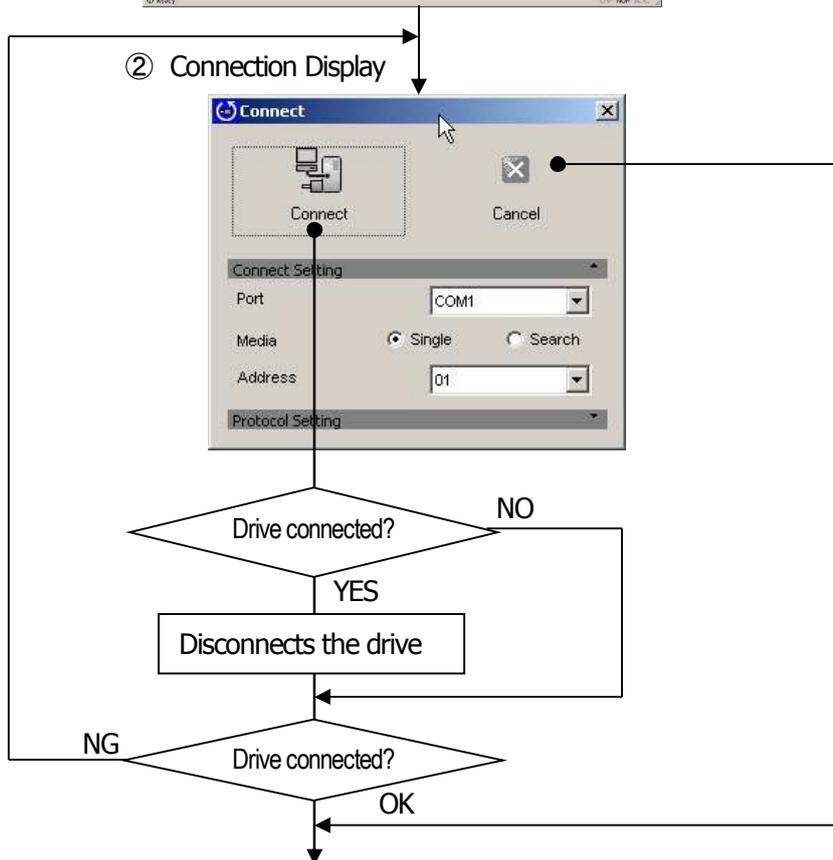


2.4.5 Connecting the Drive to the PC

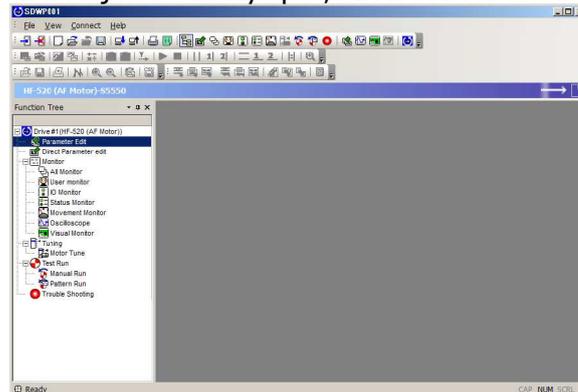
① Connecting the Drive



② Connection Display

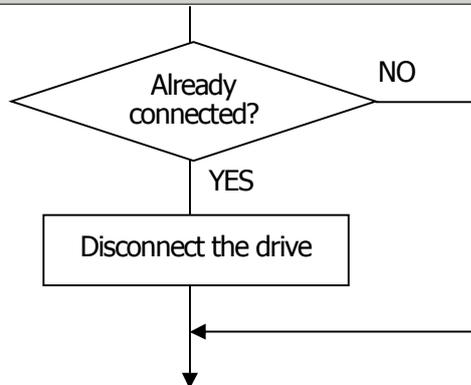
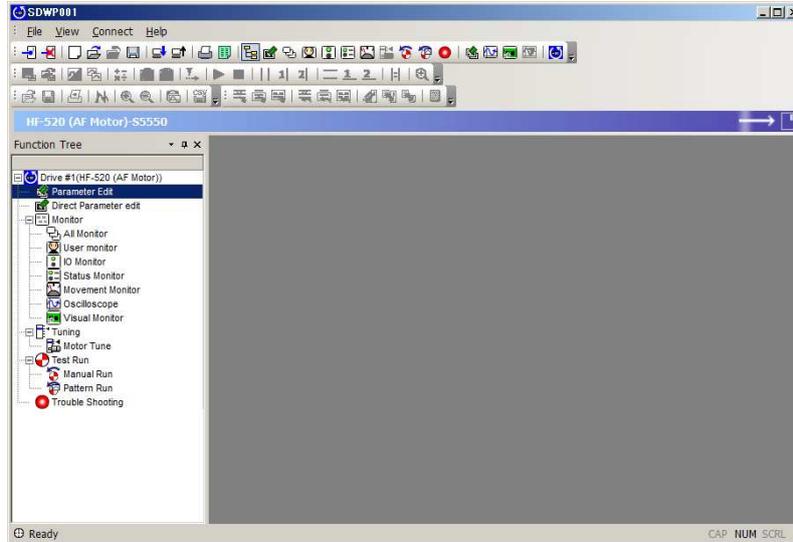


③ If a Project is already open, SDWP001 will connect with the file open.

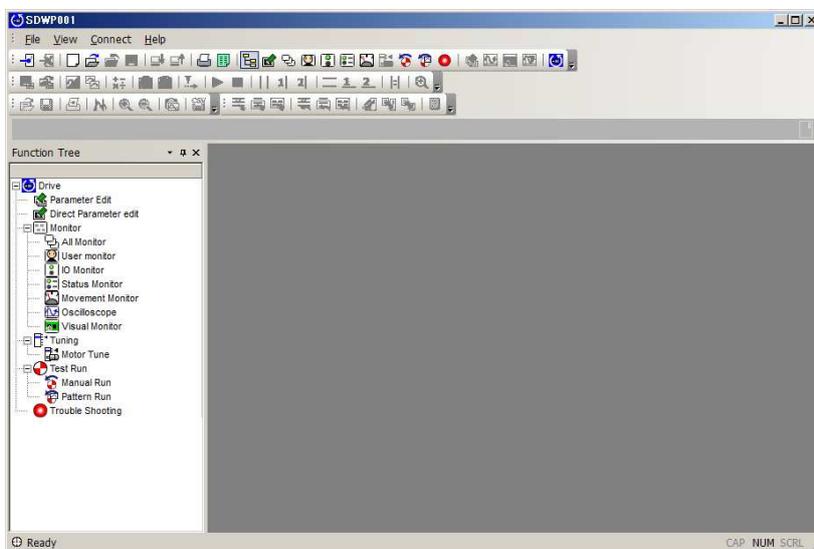


2.4.6 Disconnecting the Drive

① Disconnecting the drive

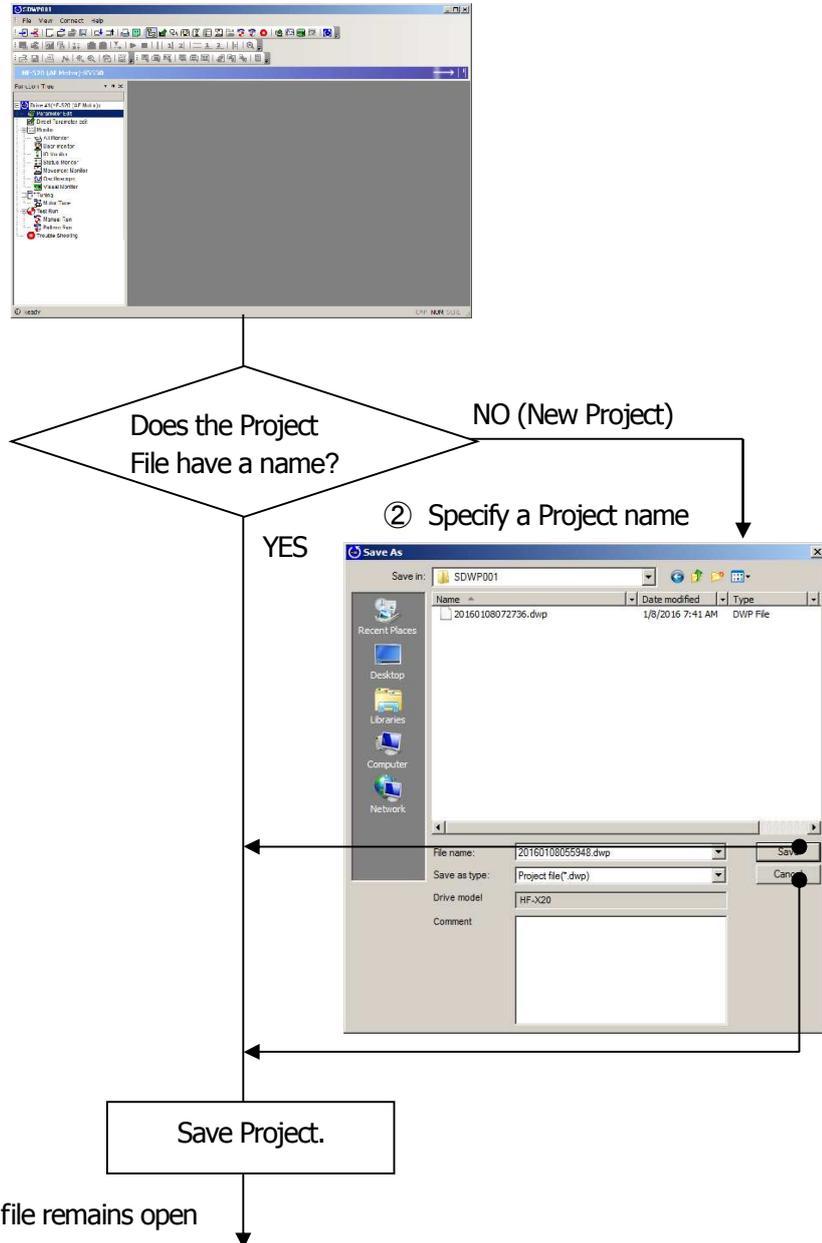


② If a Project File is open, SDWP001 will disconnect the drive and leave the file open.

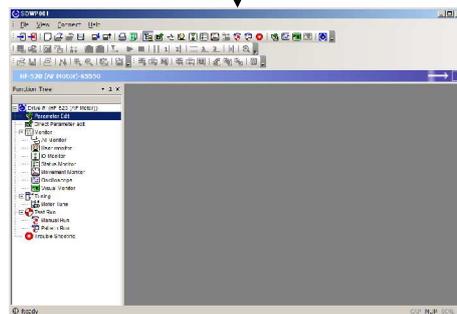


2.4.7 Saving a Project File

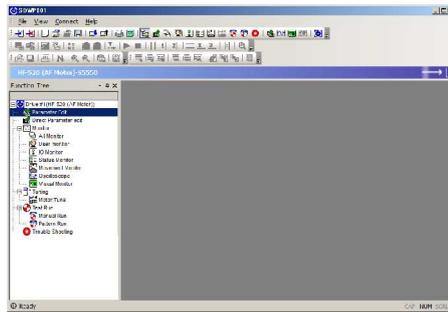
① Saving a Project File



② Project file remains open



2.4.9 Quitting the Application



See "2.4.4 Closing a Project".

SDWP001 application closes.

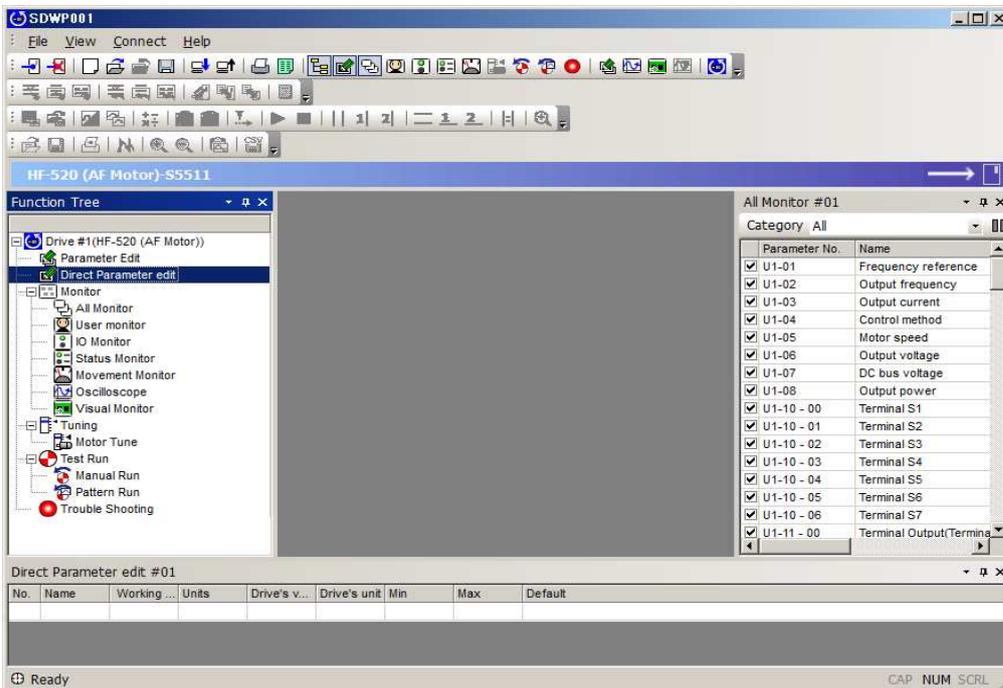
2.4.10 Managing Project Files with the Menu

Menu \ Situation	Project already open		Project not yet opened	
	Drive Connected	Not Connected	Drive Connected	Not Connected
2.4.2 Creating a New Project	×	×	○	○
2.4.3 Opening a Project File	×	×	○	○
2.4.4 Closing a Project	○	○	×	×
2.4.5 Connecting to the Drive	×	○	×	○
2.4.6 Disconnecting the Drive	○	×	○	×
2.4.7 Saving a Project	○	○	×	×
2.4.8 Saving a Project As	○	○	○	×
2.4.9 Quit	○	○	○	○

○: Selection possible, ×: Selection not possible.

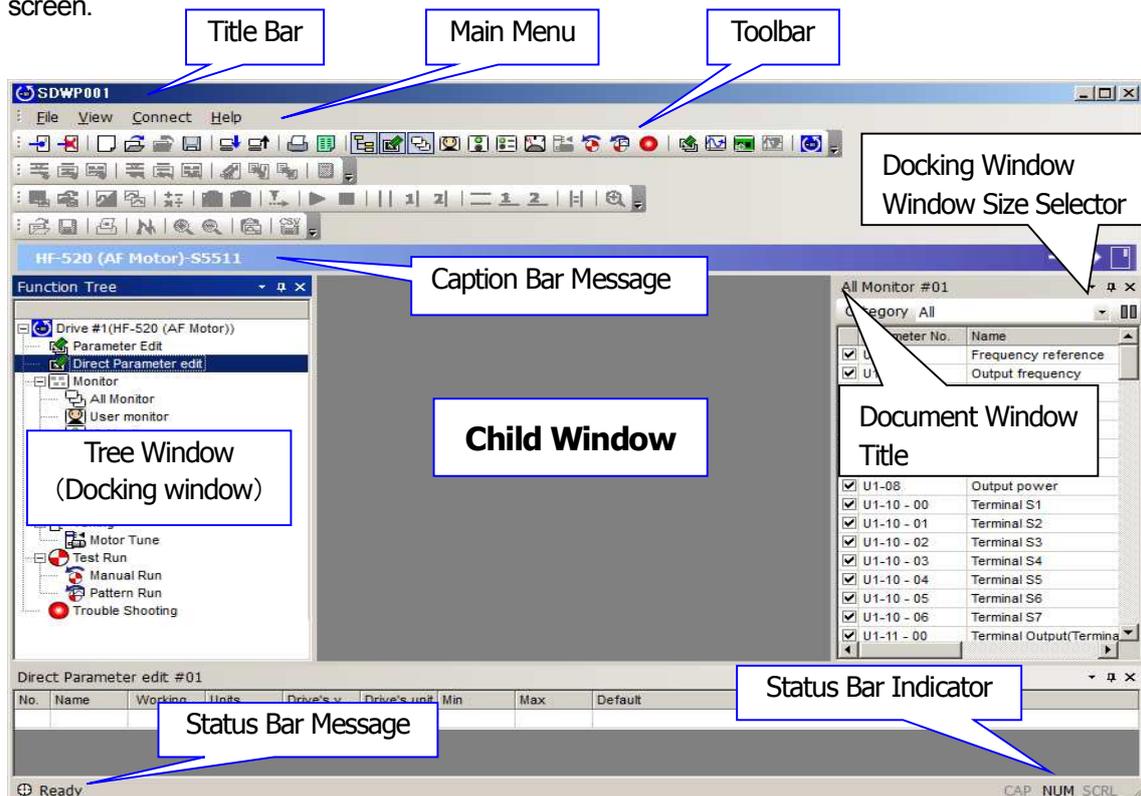
3 SDWP001 Main Screen

The main screen when SDWP001 is first opened appears below.



3.1 Screen Construction

The illustration below indicates the various windows, tabs, and toolbars that appear in the main screen.

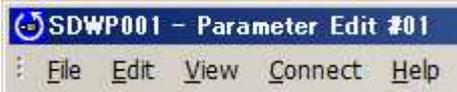


3.1.1 Title Bar

The title bar in SDWP001 shows all active child windows.



When no child windows are displayed

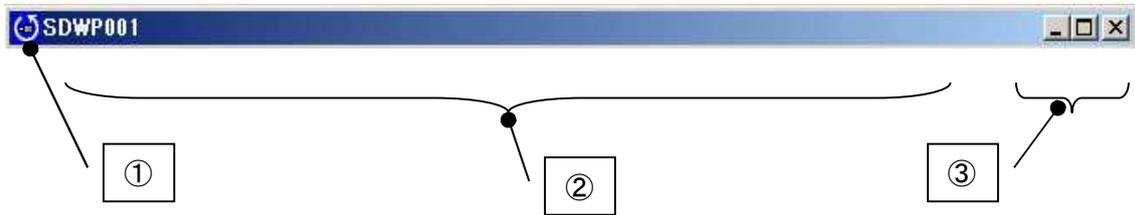


When the Parameter Display Screen is open as a child window



When the Oscilloscope Display is open as a child window

The title bar appears below:



NO.	DESCRIPTION
①	Displays the SDWP001 icon.
②	Displays the name of the application (SDWP001) and information on the child window.
③	Minimizes or maximizes the size of the window.

3.1.2 Main Menu

Options available in the Main Menu in SDWP001 appear below.

(1) Menu

MENU	DESCRIPTION
File (E)	For reading and writing data from a Project, displaying drive information, as well as importing and exporting files.
Edit (E)* ¹	This menu becomes available when using the Parameter Edit and Oscilloscope windows. *This menu is not available when not using a corresponding child window.
View (V)	Determines which function windows are displayed or not displayed.
Connection (C)	For connecting and disconnecting the drive.
Monitor (M)* ¹	For starting and stopping to trace drive performance with the Oscilloscope. *This menu is available only when using the Oscilloscope function.
Tools (T)* ¹	Opens the tools related to the current task.
Help (H)	Displays Help information, including the manual, drive data, and software version data.

***1: For a more detailed description of Menu items, see the description for each function that follows.**

(2) File Menu

SUBMENU	DESCRIPTION
Create New Project (N)...	Creates a new Project.
Open Project (O)...	Open a Project that was saved earlier.
Save Project (S)	Saves the current Project.
Save Project As (A) ...	Saves the current Project under a new or different name
Close Project (L)	Closes the current Project. Closing a Project will disconnect the drive if connected.
Drive Data (T)...	Displays data from the drive when the drive is connected.
Import (I)...	Imports items as selected in the active window.
Export (E)...	Exports items selected in the active window. CSV format, etc., you can choose the format of the saved file.
Print Settings (P)...	Changes settings for print out.
Environment setup (V)...	For various program environment settings (how data is saved, use of filters, etc.).
(Project History)	Displays a list of the five most recently opened Projects.
Quit (X)	Close the current session of SDWP001

(3) Display Menu

SUBMENU	SELECTION	DESCRIPTION
Function Tree	○	Displays the Function Tree.
Direct Parameter Edit	○	Opens the Direct Parameter Edit window.
All Monitors	○	Displays all monitors.
User Monitor	○	Displays user monitors only.
I/O Monitor	○	Displays the input and output monitors.
Status Monitor	○	Displays the Status Monitor.
Operation Monitor	○	Displays the Operation Monitor.
Manual Operation	○	Displays the window for performing Manual Run. *This function cannot be used when connected to an upper controller.
Pattern Operation	○	Displays the window for performing Pattern Run. *This function cannot be used when connected to an upper controller.
Troubleshooting	○	Shows the Troubleshooting window.
Results List	○	Displays the results after comparing parameters.
Drive Replacement	○	Displays the function for replacing the drive with a different model.
Conversion Results	○	Displays the results after performing a Parameter Conversion. *Unused menu
Visual Monitor	—	Displays the Visual Monitors. *Exclusive functions for the HF-520 and HF-X20 series
Parameter Edit	—	Opens the window for editing parameters.
Oscilloscope	—	Displays the Oscilloscope window.
Toolbar (T)	—	Displays or hides the toolbar.
<ul style="list-style-type: none"> Standard (S) Parameter Edit (E) Oscilloscope (O) Customize (C)... 	○	Displays or hides the standard toolbar.
	○	Displays or hides the toolbar for editing parameters.
	○	Displays or hides the Oscilloscope toolbar.
	—	Opens the window for customizing the menu and toolbar.
Language ^{*2}	—	For selecting which language to display.
<ul style="list-style-type: none"> English Japanese 	—	Displays English only. English is not displayed when English has been selected.
	—	Displays Japanese language settings. Japanese is not displayed when Japanese has been selected.

***2: Changing the Language Selection requires restarting SDWP001.**

(4) Connect Menu

SUBMENU	DESCRIPTION
Connect Inverter (C)...	Connects the drive to the PC. *If already connected, this selection will read, "Reconnect (R)".
Disconnect Inverter	Disconnects the drive that is currently connected. *This selection is only available when a drive is connected.

(5) Help Menu

SUBMENU	DESCRIPTION
SDWP001 Manual (M) ...	Opens the instruction manual for SDWP001.
Version Data (A)...	Displays the version of SDWP001 currently installed.

(6) Edit Menu (Parameter Edit)

Submenu	Description
Write selected parameters (S)	Writes the value for the selected parameters to the drive.
Write group (G)...	Writes the setting values for the entire group of parameters selected to the drive.
Select All Parameters (A)	Writes the setting values for all parameters to the drive.
Read selected parameters (E)	Read the parameters selected from the drive that is connected.
Read Group (R)...	Reads the specified group of parameters from the drive.
Read All Parameters (L)	Reads all parameters from the drive.
Drive initialized (I)...	Initializes the drive.
Drive Compare (C)	Compares parameters settings in the current Project with parameter settings stored in the drive that is connected. This option is disabled when no drive is connected.
File Compare (E)...	Compares the parameter settings in the current Project with another Project or parameter file.
Comment Edit (D)	Opens the Comment Edit window.

3.1.3 Toolbars

A list of toolbars in SDWP001 appears below.

Standard Toolbar



ICON	FUNCTION
	Connects to the drive.
	Disconnects the drive.
	Creates a new Project.
	Opens an existing Project.
	Closes the Project currently open.
	Saves the Project.
	Imports the data selected.
	Exports the data selected.
	Prints the current document.
	Opens the Environment setup window.
	Displays the Function Tree window.
	Displays the Direct Edit window.
	Displays the All Monitor function.
	Displays the User monitor.
	Displays the I/O Monitor function window.
	Shows the Status Monitor.
	Shows the Operation Monitor.
	Shows the Manual Run window.
	Shows the Pattern Run window.
	Displays information for Trouble-Shooting.
	Displays the Parameter Edit window.
	Displays the Oscilloscope.
	Shows the Visual Monitor window.
	Shows software version information.

Parameter Edit Toolbar



ICON	FUNCTION
	Saves the selected parameter to the drive.
	Saves an entire group of parameters to the drive.
	Saves all parameters to the drive.
	Reads the selected parameter.
	Reads a group of parameters from the drive.
	Reads all parameters from the drive.
	Initializes the drive.
	Compares settings in the drive.
	Compares a file.
	Opens the Comment Edit window.

Oscilloscope Toolbar

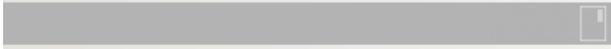


ICON	FUNCTION
	Saves the data that was collected.
	Reads data that was collected.
	Switches the background color and the waveform color.
	Copies an image of the waveform.
	Displays the calculations toolbar.
	Takes a snapshot of the data selected.
	Erases the snapshot data.
	Displays the Trigger Conditions Setting dialog box.
	Starts monitoring drive performance.
	Stops monitoring drive performance.
	Switches to the vertical cursor display.
	Sets the V1 vertical cursor.
	Sets the V2 vertical cursor.
	Switches to the horizontal cursor display.
	Sets the H1 horizontal cursor.
	Sets the H2 horizontal cursor.
	Moves the cursor.
	Enlarges the waveform display.

3.1.4 Caption Bar

The Caption bar shows the connection status with the drive.

When the drive and PC are not connected:



The following displays appear when the drive and PC are connected:

When properly connected, the Caption bar will display:

The drive is stopped:



During run:



A streaming arrow indicates the connection status.



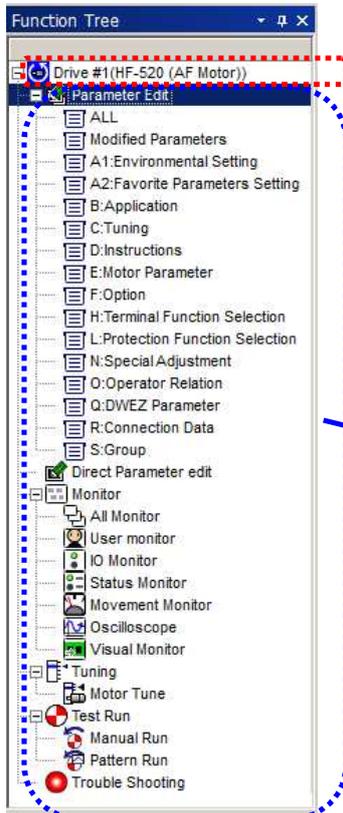
A streaming arrow indicates the connection status.

The following displays indicate that there is a problem with the connection:



3.1.5 Tree Window

All functions in SDWP001 can be executed from the Function Tree window.



Displays information regarding the Project that is currently open.
Drive data also appears when connected to the drive.
If no drive is connected, then the display will show data for the drive the Project has been assigned to.

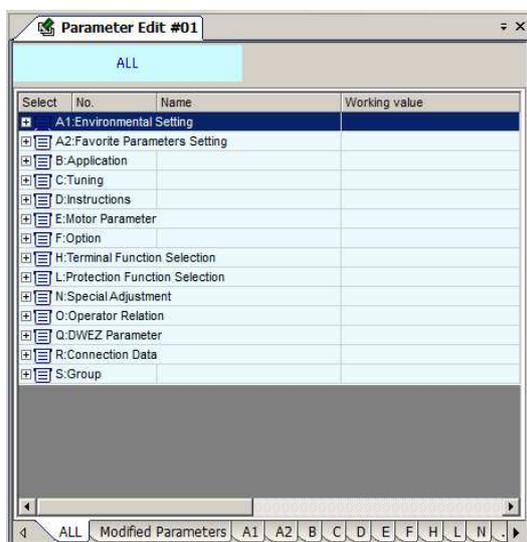
Displays the Function menu.
Functions are listed by category. By double clicking on an item in the tree, a function window that corresponds to that menu item will appear.
If a window for that function is not already open, a new window will appear.
* Parameter "Q", "R" is a reservation area.
DWEZ is not usable.

Right-clicking on the nodes in the display screen will cause a context menu to appear. Most menus read “Open (O)” while others offer more functions.

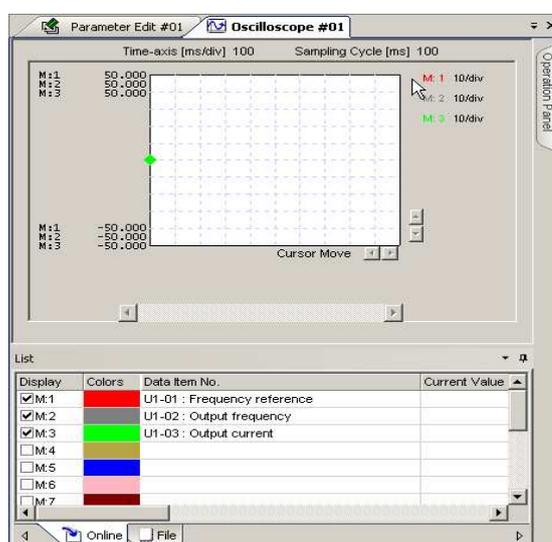
No.	Item	Menu	Operation Description
1	Root	Inverter information (I)	Displays data read from the drive.
		Connect Inverter (C)	Connects the drive and PC.
		Disconnect Inverter (D)	Disconnects the drive from the PC.
2	Parameter Edit	Open (O)	Opens the Parameter Edit window.
		User Parameter (U)	Opens the User Parameter setting window.
3	Direct Parameter Edit	Open (O)	Opens the Direct Parameter Edit window.
4	Monitor	—	—
5	All Monitors	Open (O)	Opens a window displaying all monitors.
6	User Monitor	Open (O)	Opens the User Monitor window.
		Monitor item setting (M)	Opens the Monitor Item Setting Dialog
7	I/O Monitor	Open (O)	Opens the I/O Monitor window.
8	Status Monitor	Open (O)	Opens the Status Monitor window.
9	Movement Monitor	Open (O)	Opens the Movement Monitor window.
		Monitor item setting (M)	Opens the Monitor Item Setting toolbar.
10	Oscilloscope	Open (O)	Opens the Oscilloscope screen.
11	Visual Monitor	Open (O)	Opens the Visual Monitor screen.
12	Trial Run	—	—
13	Manual Operation	Open (O)	Opens the Manual Run window.
14	Pattern Operation	Open (O)	Opens the Pattern Run window.
15	Troubleshooting	Open (O)	Opens the Troubleshooting window.

3.1.6 Child Window

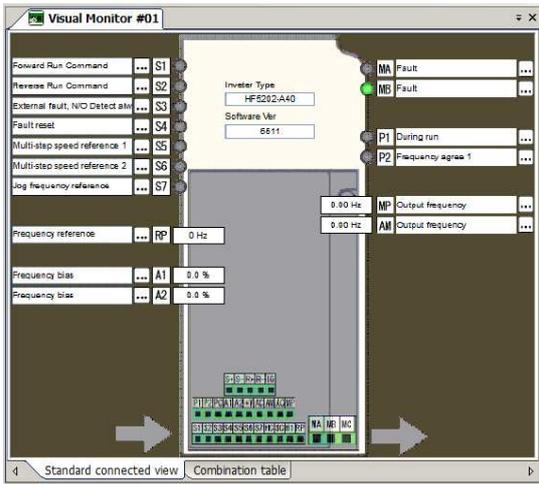
The Parameter Edit screen, Oscilloscope, and Visual Monitor functions are displayed in child windows as shown below.



<Parameter Edit Window>



<Oscilloscope Window>

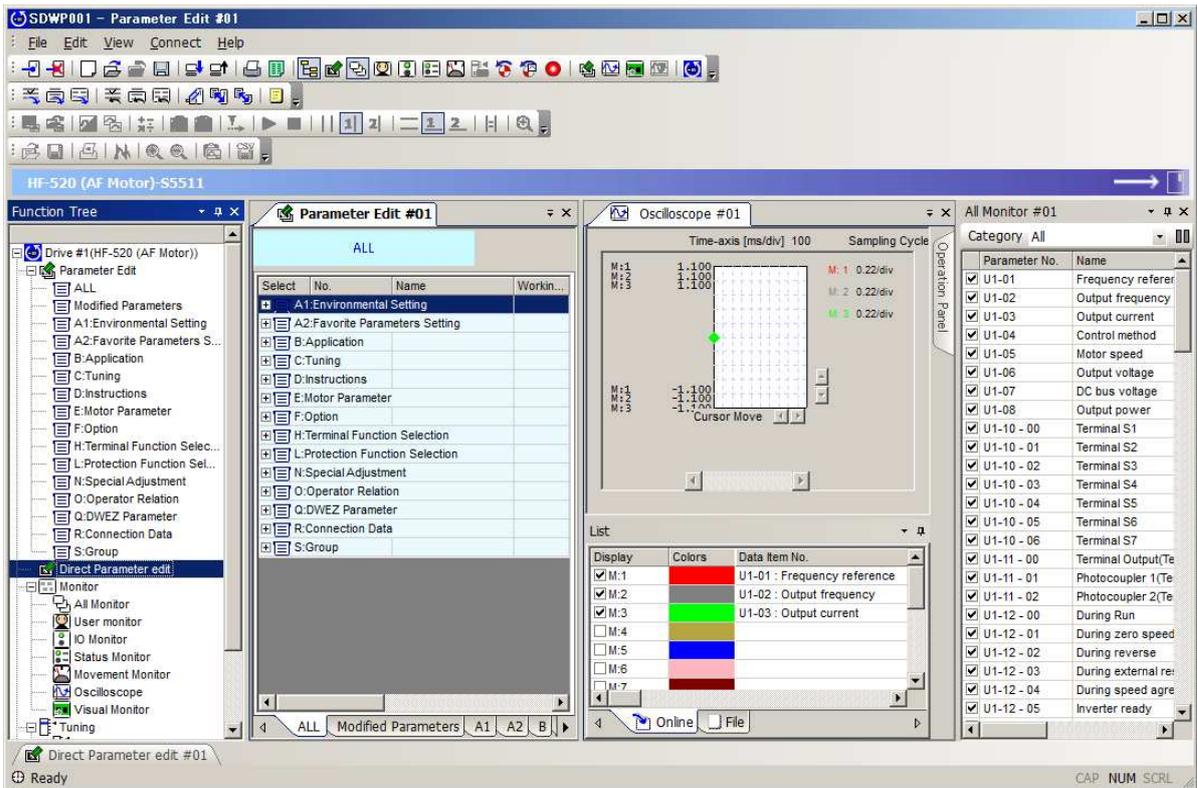


<Visual Monitor Window>

You can switch between displays by clicking on the tabs in the child window, including the Parameter Display window, Oscilloscope, and Visual Monitor functions.

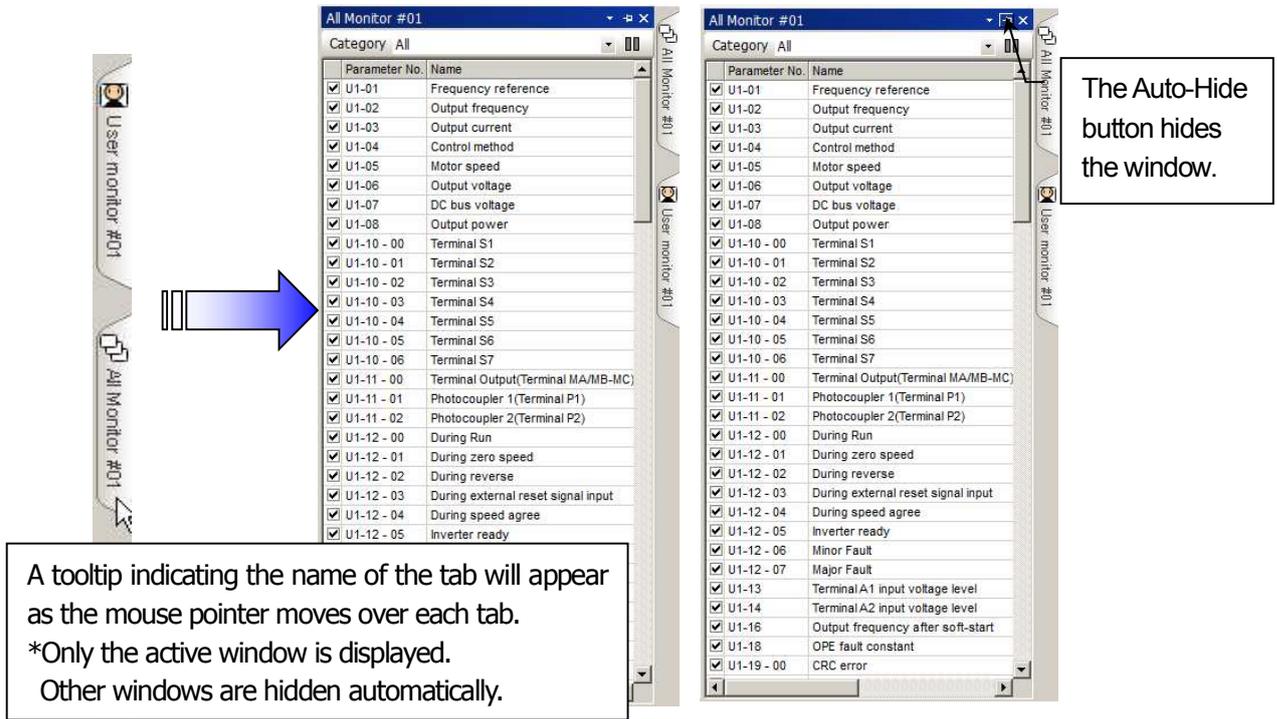
You can also change the screen layout so that the various windows are stacked horizontally or vertically.

<Example of screen layout>



3.1.7 Docking Windows and Floating Windows

Monitor, Manual Run, Pattern Run, and Troubleshooting functions are displayed as docking windows. These windows can be separated from one another to become floating windows. When windows are docked together, other windows may be hidden with the auto-hide function.



3.1.8 Status Bar

The Status Bar shows the progress of the command being executed.



When reading parameters from the drive:



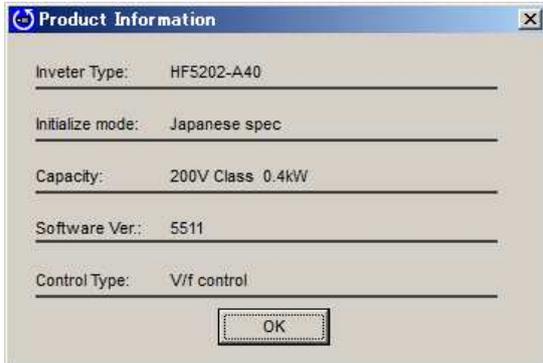
No.	Description
①	Icon appears to indicate the status of SDWP001.
②	Text to indicate the current status of SDWP001 appears here.
③	Progress bar is displayed while the command is executed.
④	Indicates the keyboard status of the Caps Lock, Num Lock, and Scroll Lock keys.

4 Editing Drive Data

4.1 Drive Model Data Display

You can display information on the connected drive by selecting "File (F)" in the Main Menu → "Inverter information (I)...", or by right-clicking on the Function Tree "Drive (number)" and selecting "Inverter information (I)..." in the menu.

NOTE: No data is displayed if the drive is not online.



4.2 Parameter Edit

There are two ways to edit parameters:

- Parameter Edit window
- Direct Edit window

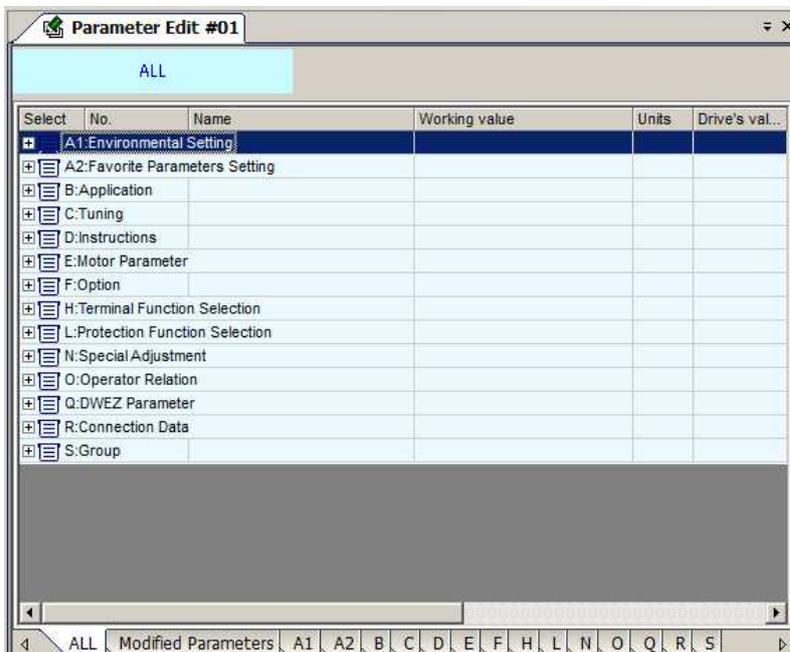
4.2.1 Parameter Edit Window

The Parameter Edit window lets you change and edit parameter settings.

4.2.1.1 Online Parameter Edit Screen

Double-clicking on "Parameter Edit" in the Function Tree makes the Parameter Edit window appear.

* Parameter "Q", "R" is a reservation area. DWEZ is not usable.

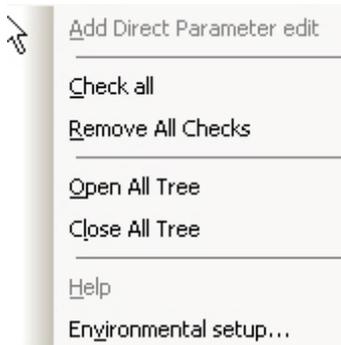


Pop-Up Menu in Parameter List

Right-clicking on the Parameter List will display a pop-up menu.

The selection available will vary depending on the tabs that are currently active.

When all parameter tabs are active:



Add Direct Parameter edit

Lets you add parameters selected in the parameter list to the Direct Parameter Edit window.

For instructions on the Direct Parameter Edit function, see 4.2.2.

Check All

Selects all parameters, including those not displayed in the active tab.

Remove All Checks

Clears any checks for any parameters that have been selected.

Open All Tree

Opens all trees.

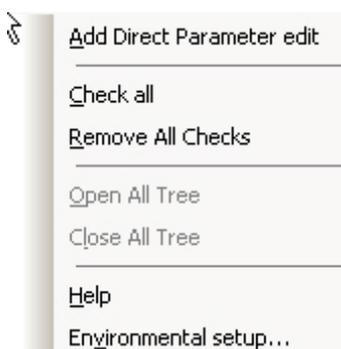
Close All Tree

Closes all tree branches for all parameter tabs.

Environmental setup

Displays the Environment Setting window.

When other tabs are currently active:



Adding to the Direct Parameter Edit Window

Adds the parameters selected from the parameter list to the Direct Parameter Edit window.
For instructions on the Direct Parameter Edit function, see 4.1.2.

Check All

Select all parameters, including those not displayed in the active tab.

Remove All Checks

Deselects all parameters that were selected.

Environmental setup

Displays the Environment Settings window.

Pop-up menu appearing from the column head in the Parameter List

Right-clicking on the column head in the Parameter List will display the following pop-up menu:



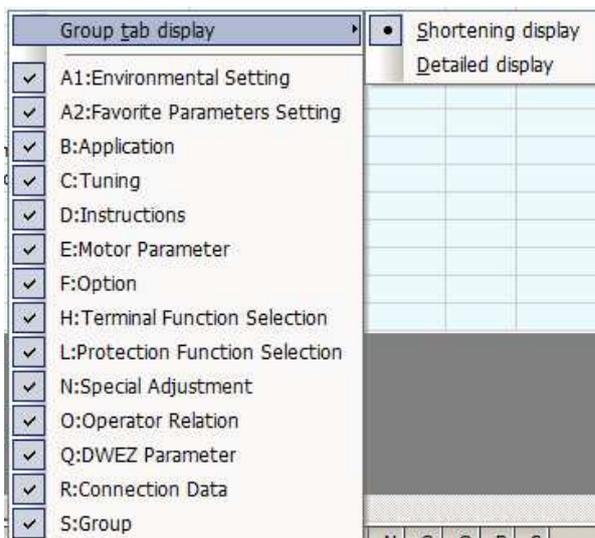
Columns

Columns can be displayed or hidden.

Columns "Selection", "No.", and "Working Value" can not be moved.

Pop-Up Menu in an Active Tab

Right-clicking on a tab window will display the following pop-up menu:



Shortening display

Displays only the parameter group names.

Detailed display

Displays the details for each parameter group.

Group tab display

Switches between displaying and not displaying tabs.

NOTE: The tabs for “All Parameters” and “Modified Parameters” cannot be switched.

NOTE: Parameter “Q”, “R” is a reservation area. DWEZ is not usable.

Move Column

Move columns by dragging and dropping. The “Select” column cannot be moved.

Parameter Edit #01

L:Protection Function Selection

Select	No.	Name	Working value	Units	Drive's value	Drive's unit	Min	Max	Default
<input type="checkbox"/>	L1-01	Motor protection selection	1: General-purpose motor pr...	-	1	-	0	6	1
<input type="checkbox"/>	L1-02	Motor protection time constant	1.0	min	1.0	min	0.1	5.0	1.0
<input type="checkbox"/>	L1-03	MOL thermistor input	3: Operation continued	-	3	-	0	3	3
<input type="checkbox"/>	L1-04	MOL filter time	1: Coast to stop	-	1	-	0	2	1
<input type="checkbox"/>	L1-05	MOL reserved 1	0.20	sec	0.20	sec	0.00	10.00	0.20
<input type="checkbox"/>	L1-08	Motor OL Level1	1.60	A	1.60	A	0.00	2.40	1.60
<input type="checkbox"/>	L1-13	Electronic thermal continues	1: Continue Electronic thermal	-	1	-	0	1	1
<input type="checkbox"/>	L1-22	Leakage Current Filter Time C...	0.0	sec	0.0	sec	0.0	60.0	0.0
<input type="checkbox"/>	L1-23	Leakage Current Filter Time C...	0.0	sec	0.0	sec	0.0	60.0	0.0
<input type="checkbox"/>	L2-01	Momentary power loss detec...	0: Disabled	-	0	-	0	2	0
<input type="checkbox"/>	L2-02	Momentary power loss rideth...	0.1	sec	0.1	sec	0.0	25.5	0.1
<input type="checkbox"/>	L2-03	Min. baseblock time	0.2	sec	0.2	sec	0.1	5.0	0.2
<input type="checkbox"/>	L2-04	Voltage recovery time	0.3	sec	0.3	sec	0.0	5.0	0.3

ALL Modified Parameters A1 A2 B C D E F H L N O Q R S



Parameter Edit #01

L:Protection Function Selection

Select	No.	Working value	Name	Units	Drive's value	Drive's unit	Min	Max	Default
<input type="checkbox"/>	L1-01	1: General-purpose motor pr...	Motor protection selection	-	1	-	0	6	1
<input type="checkbox"/>	L1-02	1.0	Motor protection time constant	min	1.0	min	0.1	5.0	1.0
<input type="checkbox"/>	L1-03	3: Operation continued	MOL thermistor input	-	3	-	0	3	3
<input type="checkbox"/>	L1-04	1: Coast to stop	MOL filter time	-	1	-	0	2	1
<input type="checkbox"/>	L1-05	0.20	MOL reserved 1	sec	0.20	sec	0.00	10.00	0.20
<input type="checkbox"/>	L1-08	1.60	Motor OL Level1	A	1.60	A	0.00	2.40	1.60
<input type="checkbox"/>	L1-13	1: Continue Electronic thermal	Electronic thermal continues	-	1	-	0	1	1
<input type="checkbox"/>	L1-22	0.0	Leakage Current Filter Time C...	sec	0.0	sec	0.0	60.0	0.0
<input type="checkbox"/>	L1-23	0.0	Leakage Current Filter Time C...	sec	0.0	sec	0.0	60.0	0.0
<input type="checkbox"/>	L2-01	0: Disabled	Momentary power loss detec...	-	0	-	0	2	0
<input type="checkbox"/>	L2-02	0.1	Momentary power loss rideth...	sec	0.1	sec	0.0	25.5	0.1
<input type="checkbox"/>	L2-03	0.2	Min. baseblock time	sec	0.2	sec	0.1	5.0	0.2
<input type="checkbox"/>	L2-04	0.3	Voltage recovery time	sec	0.3	sec	0.0	5.0	0.3

ALL Modified Parameters A1 A2 B C D E F H L N O Q R S

Edit Parameter Settings

The Parameter Edit window lets you view and edit parameter settings.

Setting changes can be made in the column marked, "Current Setting Value." The process for editing parameters will vary depending on the parameter that has been selected.

NOTE: Gray text indicates that the parameter cannot be edited. This includes parameters that cannot be changed during run. Such parameters can be edited after the drive has come to a complete stop.

When editing parameter settings, the color of the text and the background color will change.

Select	No.	Working value	Name	Units	Drive
<input type="checkbox"/>	b1-02	0 : Digital operator	Operation method selection	-	0
<input type="checkbox"/>	b1-03	0 : Deceleration to stop	Stopping method	-	0
<input checked="" type="checkbox"/>	b1-04	1 : Reverse disabled	Reverse operation	-	0
<input type="checkbox"/>	b1-07	0 : Cycle External Run - If the...	Local/remote run selection	-	0
<input type="checkbox"/>	b1-08	0 : Cannot operate	Run command at programming	-	0
<input type="checkbox"/>	b1-14	0 : Normal	Phase Turn Selection	-	0
<input type="checkbox"/>	b1-15	0 : Digital Operator	Reference Selection in Local ...	-	0
<input type="checkbox"/>	b1-16	0 : Digital Operator	Operation method selection i...	-	0
<input type="checkbox"/>	b1-17	1 : Permission	Operation permission with p...	-	1
<input checked="" type="checkbox"/>	b2-01	11.0	DC injection start frequency	Hz	0.5
<input checked="" type="checkbox"/>	b2-02	5.1	DC injection current	%	50
<input type="checkbox"/>	b2-03	0.00	DC injection time at start	sec	0.00
<input type="checkbox"/>	b2-04	0.00	DC injection time at stop	sec	0.00

No.	Name	Description
①	Parameter display during Edit	Parameter currently being edited will appear in green. Once that parameter has been written to the drive, the edit status will return to normal and the parameter will appear in light yellow shading. Parameters that have been changed from their original default values will appear in blue text.
②	Parameter display outside range	If a parameter has been set outside the allowable setting range, the text will appear in red. Certain parameters will display "Reserved" when a selection that cannot be set has been entered.
③	Parameter default values differ	Settings that have been changed from their original default values will be displayed in blue text.

Editing a numeric value

Single-click or double-click on the value you want to change, and then enter the new setting.

Select	No.	Working value	Name	Units	Drive's value	Drive's unit	Min	Max	Default
<input type="checkbox"/>	b1-16	0 : Digital Operator	Operation method selection i...	-	0	-	0	3	0
<input type="checkbox"/>	b1-17	1 : Permission	Operation permission with p...	-	1	-	0	1	1
<input type="checkbox"/>	b2-01	0.0	DC injection start frequency	Hz	0.0	Hz	0.0	10.0	0.5
<input checked="" type="checkbox"/>	b2-02	50	DC injection current	%	50	%	0	75	50
<input type="checkbox"/>	b2-03	0.00	DC injection time at start	sec	0.00	sec	0.00	10.00	0.00
<input type="checkbox"/>	b2-04	0.00	DC injection time at stop	sec	0.00	sec	0.00	10.00	0.00
<input type="checkbox"/>	b3-01	0 : Disabled	Speed search at start	-	0	-	0	1	0

Editing the value selected

Select the item from the drop-down menu, or enter the new value directly into the line provided.

Select	No.	Working value	Name	Units	Drive's value	Drive's unit	Min	Max	Default
A1:Environmental Setting									
<input checked="" type="checkbox"/>	A1-01	2 : Advanced Level Access	Access level	-	2	-	0	9999	2
<input type="checkbox"/>	A1-02	0 : Monitoring only	Control method	-	0	-	0	5	0
<input type="checkbox"/>	A1-03	1 : Used to select user constant	Parameters	-	0	-	0	9990	0
<input type="checkbox"/>	A1-04	2 : Advanced Level Access	Enter password	-	0	-	0	9999	0
<input type="checkbox"/>	A1-05	0	Select password	-	0	-	0	9999	0
<input type="checkbox"/>	A1-06	0 : General	Select application	-	0	-	0	15	0
<input type="checkbox"/>	A1-07	0 : Disabled	DWEZ Function Selection	-	0	-	0	2	0

Editing the Control Mode

Below is an example of editing the control mode or parameters that depend on the control mode.

The Edit window will appear by double-clicking on a parameter row, or by selecting "Control Method Selection" from the parameter list, then clicking the  icon.

Select	No.	Working value	Name	Un...	D...
A1:Environmental Setting					
<input type="checkbox"/>	A1-01	2 : Advanced Level A...	Access level	-	2
<input checked="" type="checkbox"/>	A1-02	0 : V/f control	Control method	-	0
<input type="checkbox"/>	A1-03	0 : No initializing	Init parameters	-	0
<input type="checkbox"/>	A1-04	0	Enter password	-	0
<input type="checkbox"/>	A1-05	0	Select password	-	0
<input type="checkbox"/>	A1-06	0 : General	Select application	-	0

Details

A1-02 Control/method

0 : V/f control

Change Parameters

The following parameters are changed due to the setting value.

No.	Name	Working value	Chang...

OK Cancel

Either select the setting value from the List Box, or enter the value directly. Any parameters that are affected when the control mode is changed will be displayed in this list.

Click "OK" to accept all of these related changes, or click "Cancel" if you decide you do not want to make the changes listed in the window.

SDWP001 will return to the Parameter Edit Screen.

Editing the Access Level of the Selected Parameter

Select "Access Level" from the list, then click on the desired setting in the drop-down list or enter the value manually.

Select	No.	Working value	Name	Un...	D..
A1:Environmental Setting					
<input checked="" type="checkbox"/>	A1-01	2 : Advanced Lev...	Access level	-	2
<input type="checkbox"/>	A1-02	0 : V/f control	Control method	-	0
<input type="checkbox"/>	A1-03	0 : No initializing	Init parameters	-	0
<input type="checkbox"/>	A1-04	0	Enter password	-	0
<input type="checkbox"/>	A1-05	0	Select password	-	0
<input type="checkbox"/>	A1-06	0 : General	Select application	-	0

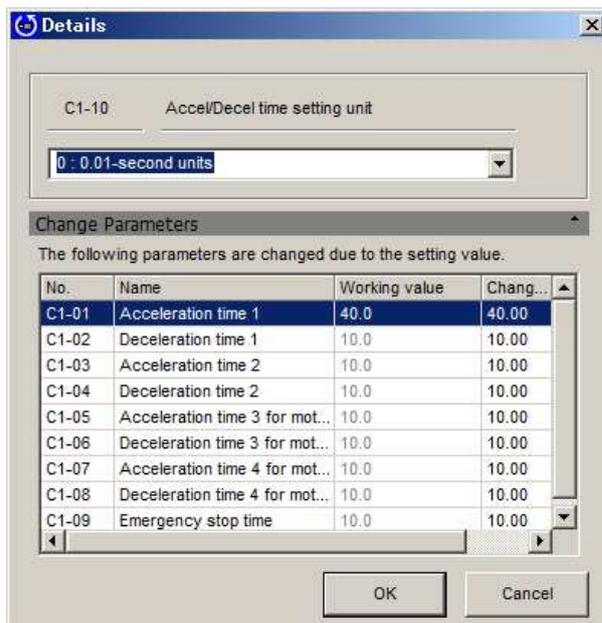
The value will be displayed, provided the value is within the possible setting range, and all parameters with that access level will appear in the parameter list.

Editing parameters that affect other parameter settings

Changing certain parameters will cause other parameters to change accordingly.

Select	No.	Working value	Name	Un...	Drive'...	Drive'...	M
<input type="checkbox"/>	C1-07	10.0	Acceleration time ...	sec	10.0	sec	C
<input type="checkbox"/>	C1-08	10.0	Deceleration time ...	sec	10.0	sec	C
<input type="checkbox"/>	C1-09	10.0	Emergency stop ti...	sec	10.0	sec	C
<input checked="" type="checkbox"/>	C1-10	0 : 0.1-second units ...	Accel/Decel time ...	-	1	-	C
<input type="checkbox"/>	C1-11	0.0	Accel/Decel swit...	Hz	0.0	Hz	C
<input type="checkbox"/>	C2-01	0.00	S-curve accelera...	sec	0.00	sec	C

Select the parameter you want to edit, then click  or double-click on the parameter. The Parameter Edit window will appear.



Either select the setting value from the List Box, or enter the value directly. Any parameters that are affected when the change is made will be displayed in this list.

Click "OK" to accept all of these related changes, or click "Cancel" if you decide you do not want to make the changes listed in the window.

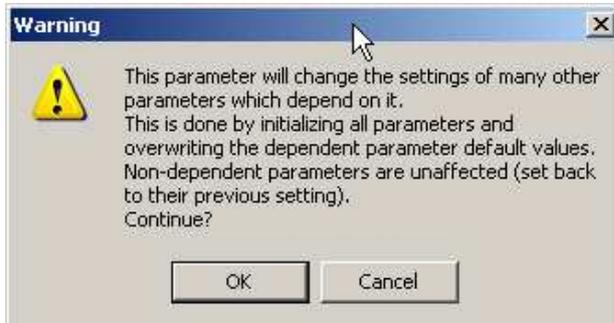
SDWP001 will return to the Parameter Edit Screen.

Changing the Settings for the Drive kVA Selection

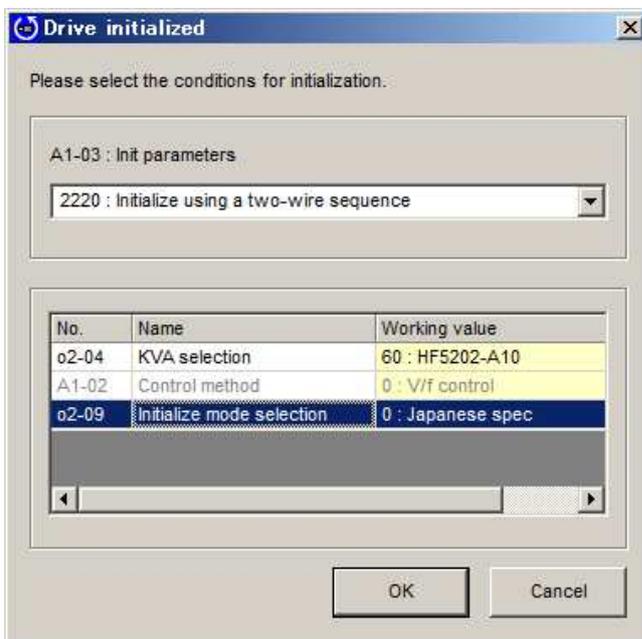
Changing the Drive kVA setting will initialize the drive. Most parameters in the drive will be reset to the default values for the kVA setting that was selected.

Attempting to change any settings to the Drive kVA setting will generate the following message.

The same will happen by clicking



Clicking "OK" will display with the following message:

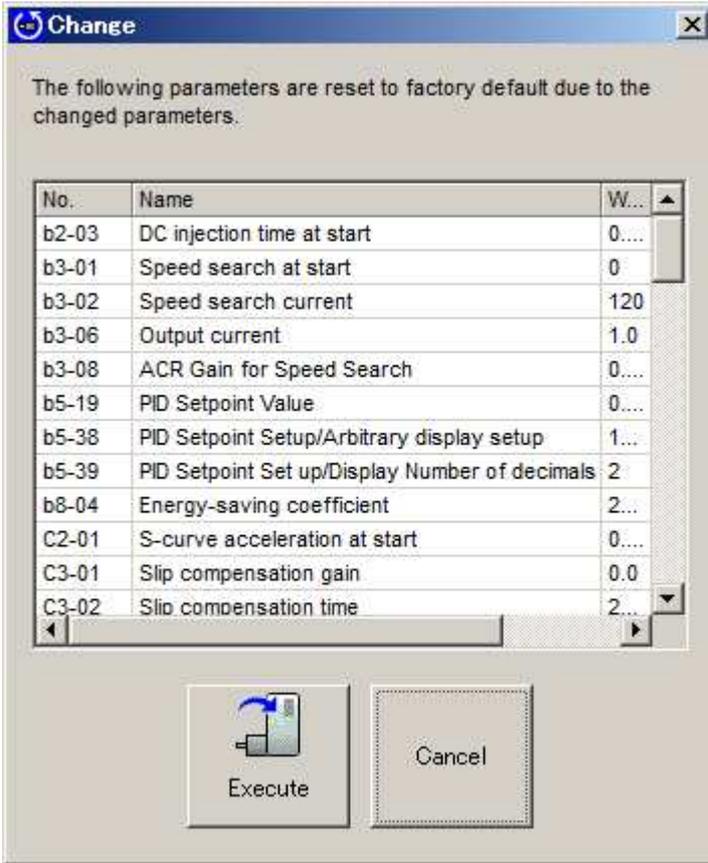


Either select from the drop-down menu or enter the value manually.

Next, either select "Current Setting Value" from the drop-down menu that appears below, or enter the value manually.

Clicking "OK" will generate the following window:

NOTE: The lower drop-down list is enabled only when editing the drive kVA setting.



Click “Execute” to start the initialization process.

After the drive has been initialized, the parameter settings that are affected by the type of initialization selected will be automatically set to their new default values.

All changes that have been written to the drive appear in the “Working values” column, and the view will return to the Parameter Edit screen.

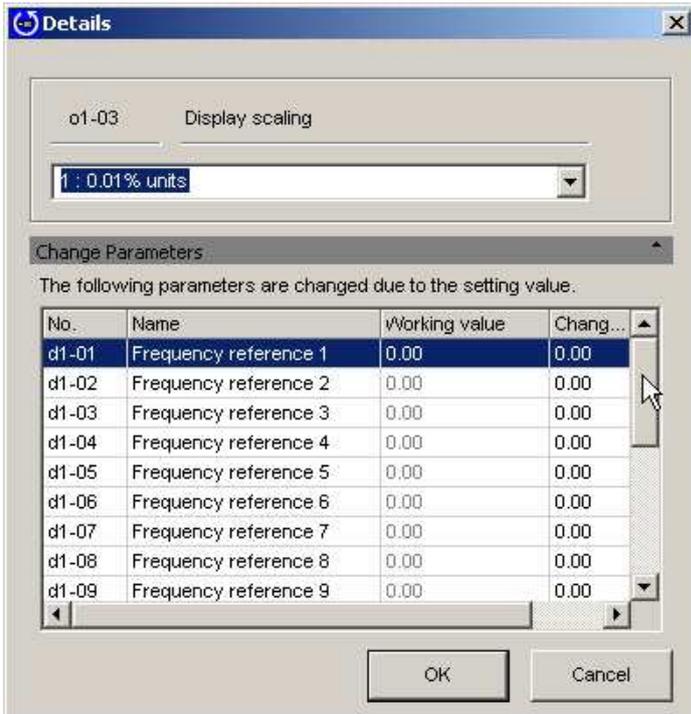
Display Digits for Setting Units

Changing the units displayed or the number of digits for a parameter setting will automatically recalculate parameter values.

Setting Units

Select “Frequency Reference Setting/Display Units” from the parameter list and click  or double-click on the corresponding row.

Some drives do not show “Display scaling”.



Either select the desired setting from the drop-down menu or enter the setting manually.

Once the value has been entered, a list of parameters that are affected by the change in units for the frequency reference will appear in the list shown above.

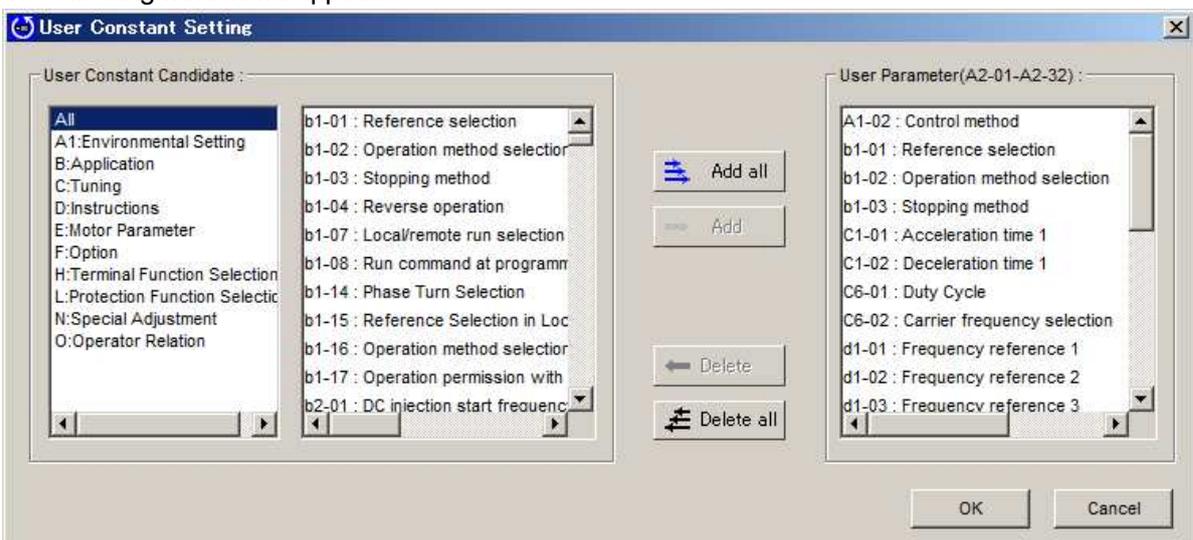
Click "OK" to accept these changes, or click "Cancel" if you decide you do not want to make the changes listed in the window. SDWP001 will return to the Parameter Edit Screen.

User Parameter Setting

Setting parameters to the User Access Level creates a select list of parameters that can be quickly view and edited.

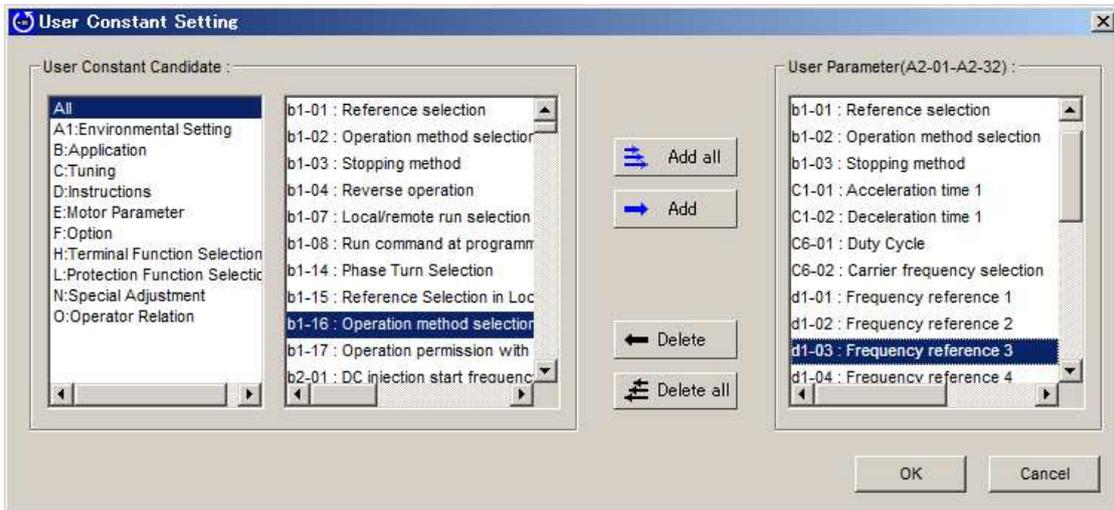
Select a parameter from "A2: Favorite Parameters Setting" from the parameter list and click  or double-click on the appropriate row.

The following window will appear:



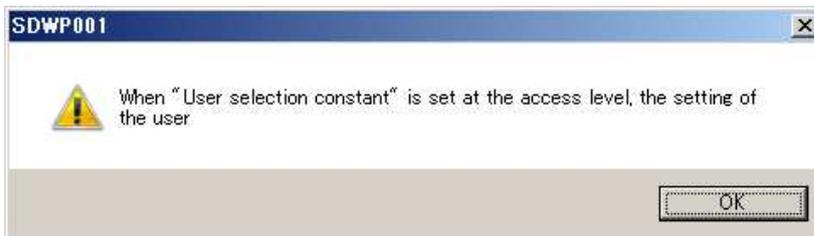
Select the parameter to add to the User Parameter list and click “Add”.

Parameters that have been set to the User Parameter List will appear in the corresponding box on the right.



Click “OK” to accept these changes, or click “Cancel” if you decide you do not want to make the changes listed in the window.

SDWP001 will return to the Parameter Edit Screen.



Clicking “OK” will save the changes that were made and SDWP001 will return to the Parameter Edit Screen.

Saving parameter settings to be used as a User Initialization

Select parameter o2-03 and set the Working value so that the current parameter settings become the default values when a User Initialization is performed.

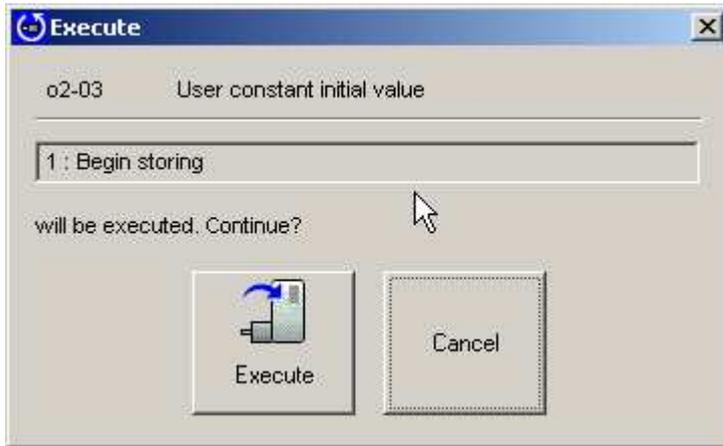
Select	No.	Name	Working value	Units	Drive's value	Drive's unit	Min
<input type="checkbox"/>	o2-01	LOCAL/REMOTE key enable/...	1 : Enabled	-	1	-	0
<input type="checkbox"/>	o2-02	Operation STOP key	1 : Always enabled	-	1	-	0
<input checked="" type="checkbox"/>	o2-03	User constant initial value	0 : Stores/not set	-	0	-	0
<input type="checkbox"/>	o2-04	KVA selection	0 : Stores/not set	-	0061	-	0000
<input type="checkbox"/>	o2-05	Frequency Reference Settin...	1 : Begin storing	-	0	-	0
<input type="checkbox"/>	o2-06	Operator detection	2 : All clear	-	0	-	0
<input type="checkbox"/>	o2-07	Bidirectional when the invert...	0 : Forward run	-	0	-	0

NOTE: Any parameters that have been edited will be returned to their previous values if a function is executed and those changes were not first saved.

*These parameters cannot be edited when online (i.e., they can only be viewed and not changed).

*Initialize parameter values first.

Next either select “1: Begin storing” from the drop-down menu or enter the value manually.



Clicking “Execute” will save the current parameter settings to be used as a User Initialization.

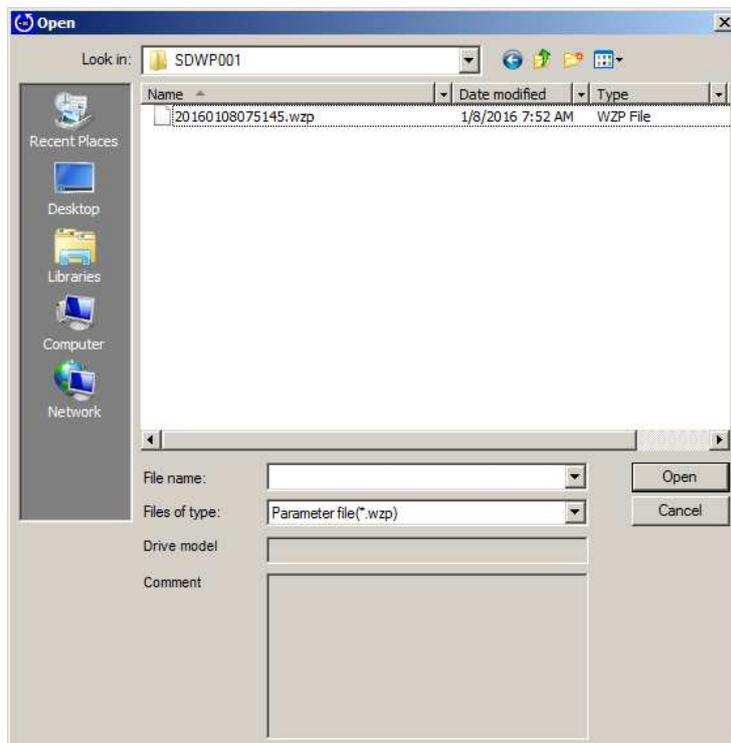
Click “Cancel” if you decide not to save the current parameter settings. When finished, SDWP001 will return to the Parameter Edit window.

Comparing Files

To compare all parameter settings (both those displayed in the current window as well as those that are not displayed) from one file with all parameter settings in another file, follow the directions below.

Click on the “File Compare”  button located on the toolbar.

The following screen will appear:



Select the file you wish to compare and click “Open”.
The following message will appear:



If you do not wish to compare the file, click “Cancel” and the screen will return to the Parameter Edit window.
Click “OK” to compare the files. When finished, the following screen will appear:

When all parameters agree

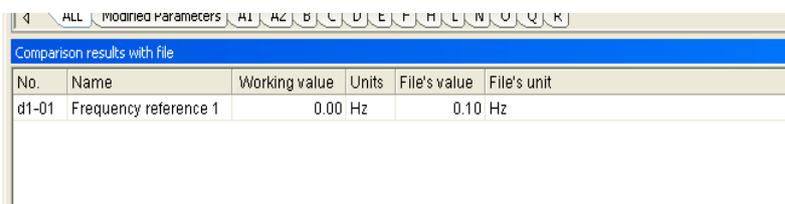
A message appears, indicating that parameters match the file.



When parameters do not agree

The Status bar will read, “Parameters settings differ.”

A list of the parameter setting differences will appear as shown below:

A window titled "Comparison results with file" showing a table of parameter differences. The table has columns for No., Name, Working value, Units, File's value, and File's unit. The first row shows a difference for "Frequency reference 1".

No.	Name	Working value	Units	File's value	File's unit
d1-01	Frequency reference 1	0.00	Hz	0.10	Hz

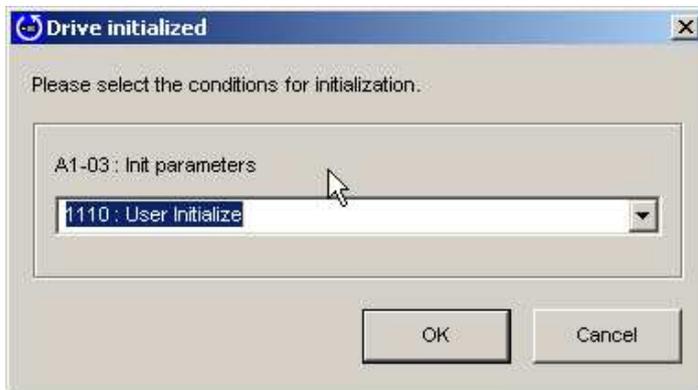
To save the file compare results, right-click on the Results window and select “Save” from the pop-up menu.

Initializing the Drive

Returns all settings to their original default values. To initialize the drive, follow the instructions below:

- 1) To initialize the drive, select "Drive initialized" from the Edit menu or the toolbar, or double-click A1-03, Init Parameters from the Parameter Edit window.

The following window will appear:



If you decide that you do not want to initialize the drive at this point, click "Cancel" and SDWP001 will return to the Parameter Edit window.

- 2) Select the type of initialization to perform using the drop-down menu. Normally, initializing the drive does not require information such as the drive capacity or control mode. If there are any changes to drive capacity or control mode, those changes should be entered directly into the appropriate parameters.
- 3) Click "OK" and the following window will appear:



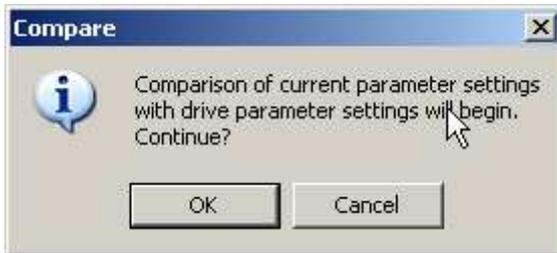
- 4) Click "Execute," and the SDWP001 will begin to initialize the drive.

Comparing Drives

To compare all parameters in a drive with the settings in a Project (including parameters that may not be displayed on the screen), follow the procedure below:

- 1) Go to the Edit menu or the toolbar and select "Drive Compare".

The following screen will appear:



If you decide you do not to compare parameter settings at this point, click "Cancel" and SDWP001 will return to the Parameter Edit window.

- 2) Click "OK" to compare parameter settings in the drive.

When All Parameters Agree

The Status Bar will display the message "Parameters are matched to the drive."



When Parameters Do Not Agree

The Status bar will read, "Parameter values in the drive differ."

A list of parameters that have different setting values will appear.

No.	Name	Working value	Units	Drive's value	Drive's unit
04-01	Cumulative operation time setting	3	H	4	H

To save the results after comparing parameters, right-click on the Results window and select "Save" from the pop-up menu.

Reading parameter settings from the drive

Reads the selected parameters from the drive and writes them to the Project.

From the Edit menu or the toolbar, click “Read selected parameters”, “Group Read”, or “Read All Parameters”.

Read Selected Parameters

SDWP001 will read the parameters selected in the Parameter Edit window.

Read Parameter Group

SDWP001 will read the selected group of parameters.

Read All Parameters

Reads all parameters, including those that are not displayed.

When parameters are currently being edited

If parameter settings are currently being edited, the following warning message will appear:

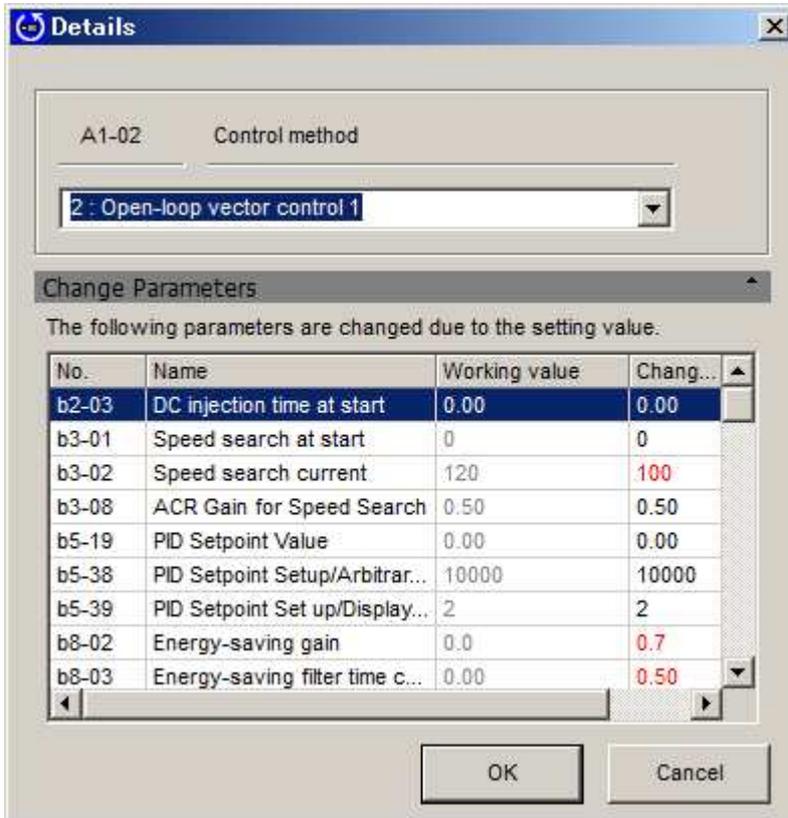


To erase the changes to parameters that are currently being edited and then read parameters in the drive, click “Yes”.

If you decide you do not want to erase the changes currently being made, click “No” and SDWP001 will return to the Parameter Edit window.

When parameters settings are affected by a change to another parameter group

The following window will appear:



To read the entire list of parameters including related parameters, click "OK".

If you decide not to read the parameters in the list, click Cancel and SDWP001 will return to the Parameter Edit window.

Write to Drive

Saves the selected parameters to the drive.

From the Edit menu or the toolbar, and click "Write selected parameters", "Write Group", or "Write all parameters".

Write Selected Parameters

Writes the parameters selected in the Parameter Edit window.

A shortcut key to write parameter settings is available by pressing Ctrl + W.

Write Group

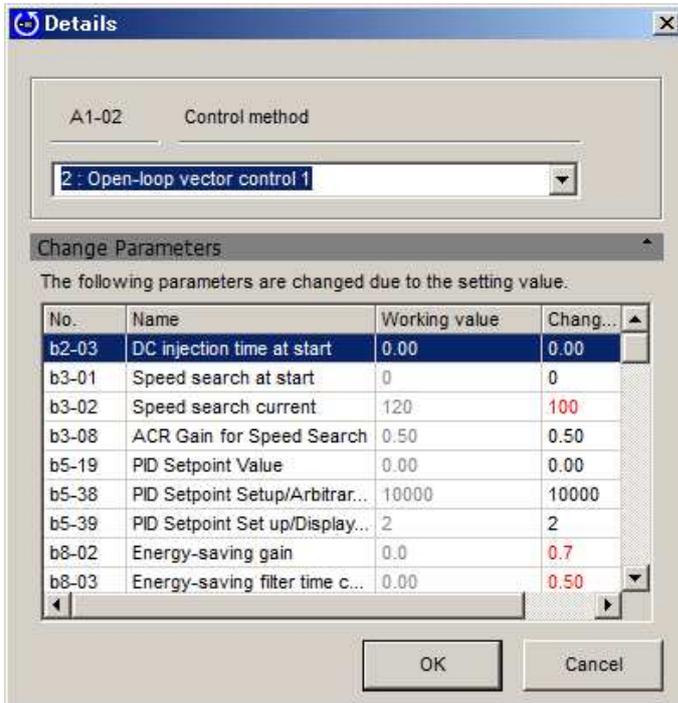
Writes all parameters in the group shown in the Parameter Edit window.

Write All Parameters

Write all parameters (including those that are not displayed).

When parameters selected in a group affect the settings of parameters in other groups

The following window will appear:



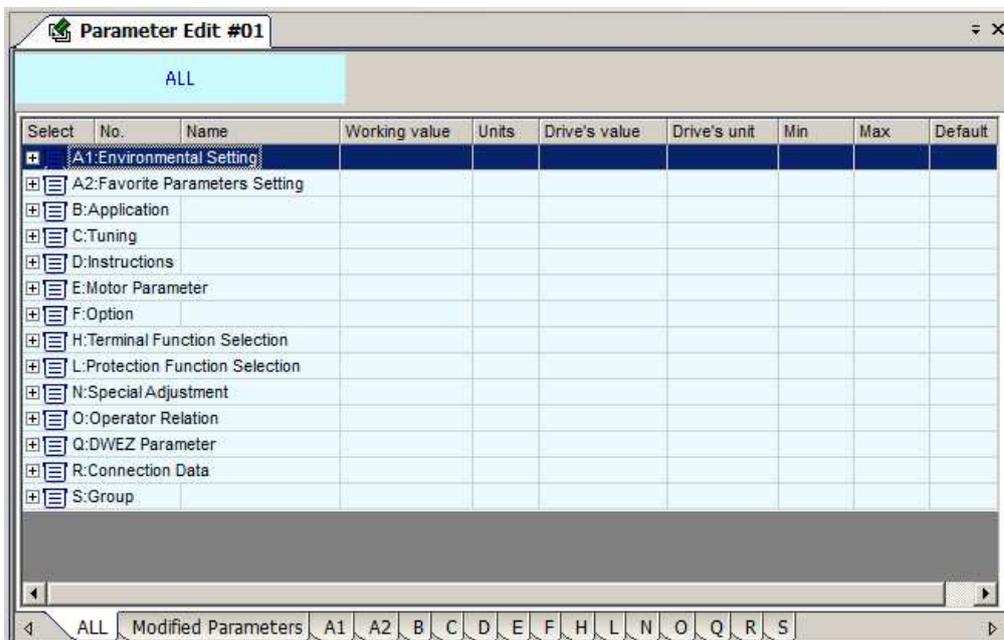
To write all parameters, including related parameters listed in the window, click “OK”.

If you decide not to write the parameter values show, click “Cancel” and SDWP001 will return to the Parameter Edit window.

4.2.1.2 Parameter Edit Screen Working Online

Selecting “Parameter Edit” from the function tree in SDWP001 will call up the Parameter Edit window.

* Parameter “Q”, “R” is a reservation area. DWEZ is not usable.

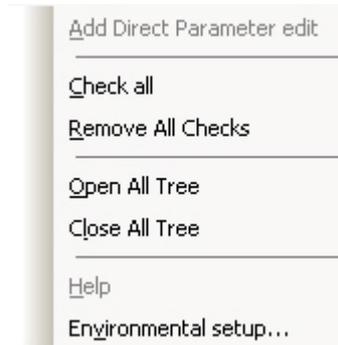


Parameter List Pop-Up Menu

Right-clicking on the parameter list will call up a pop-up menu.

Possible menu items will vary depending on which tabs are currently active.

When all parameter tabs are active



Check all

Selects all parameters in the active tab, including those that aren't displayed.

Remove All Checks

Clears all checks, including those that aren't displayed.

Open All Tree

Opens all trees in the parameter tab.

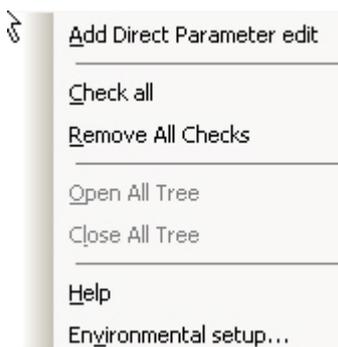
Close All Tree

Closes all trees in the parameter tab.

Environmental setup

Displays the Environment setup window.

When other tabs are active



Check all

Selects all parameters in the active tab, including those that aren't displayed.

Remove All Checks

Clears all checks, including those that aren't displayed.

Environmental setup

Displays the Environment setup window.

Pop-up menu displayed in the column head

The following pop-up menu is generated by clicking on a column head in the parameter list.



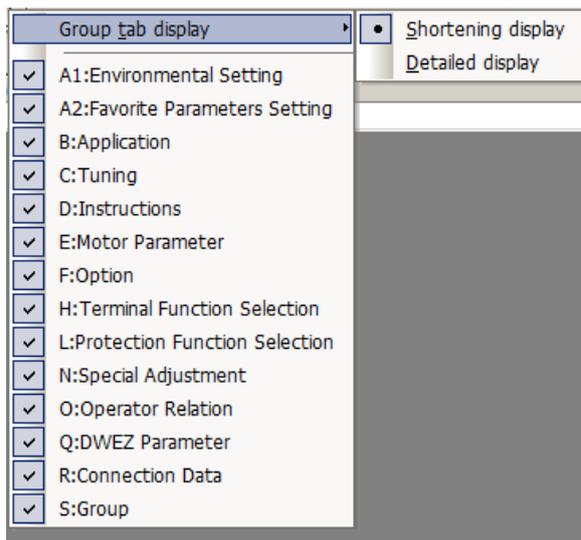
Column Heading

Column headings can be displayed or hidden from view.

It is not possible, however, to hide "Select", "No.", or "Working value".

Tab pop-up menu

The following pop-up menu will appear by right-clicking on the tab:



Shortening display

Displays only the parameter group names.

Detail display

Displays the details for each parameter group.

Group tab display

Switches between displaying and not displaying tabs.

NOTE: The tabs for "All Parameters" and "Modified Parameters" cannot be switched.

NOTE: Parameter "Q", "R" is a reservation area. DWEZ is not usable.

Edit Parameter Settings

The Edit window lets you view and edit parameter settings. Setting changes can be made in the column marked, "Working value."

The process for editing parameters will vary depending on the parameter that has been selected.

NOTE: Gray text indicates that the parameter cannot be edited. This includes parameters that cannot be changed during run. Such parameters can be edited after the drive has come to a stop.

When editing parameter settings, the color of the text and the background color will change.

Select	No.	Name	Working value	Units	Drive's value	Drive's unit	Min	Max	De
<input type="checkbox"/>	b1-02	Operation method selection	0 / Digital operator	-	0	-	0	3	1
<input type="checkbox"/>	b1-03	Stopping method	0 : Deceleration to stop	-	0	-	0	9	0
<input checked="" type="checkbox"/>	b1-04	Reverse operation	1 Reverse disabled	-	0	-	0	1	0
<input type="checkbox"/>	b1-07	Local/remote run selection	0 : Cycle External Run - If...	-	0	-	0	1	0
<input type="checkbox"/>	b1-08	Run command at programming	0 : Cannot operate	-	0	-	0	2	0
<input type="checkbox"/>	b1-14	Phase Turn Selection	0 : Normal	-	0	-	0	1	0
<input type="checkbox"/>	b1-15	Reference Selection in Local...	0 : Digital Operator	-	0	-	0	4	0
<input type="checkbox"/>	b1-16	Operation method selection i...	0 : Digital Operator	-	0	-	0	3	0
<input type="checkbox"/>	b1-17	Operation permission with p...	1 : Permission	-	1	-	0	1	1
<input checked="" type="checkbox"/>	b2-01	DC injection start frequency	11.0	Hz	0.5	Hz	0.0	10.0	0.5
<input checked="" type="checkbox"/>	b2-02	DC injection current	51	%	50	%	0	75	50
<input type="checkbox"/>	b2-03	DC injection time at start	0.00	sec	0.00	sec	0.00	10.00	0.0

No.	Name	Description
①	Parameter display during Edit	Parameters currently being edited will appear in green. Once a parameter has been written to the drive, the edit status will return to normal and the parameter will appear in light yellow shading. Parameters that have been changed from their original default values will appear in blue text.
②	Parameter display outside range	If a parameter has been set outside the allowable setting range, the text will appear in red. Certain parameters will display "Reserved" when a selection that cannot be set has been entered.
③	Parameter default values differ	Settings that have been changed from their original default values will be displayed in blue text.

Editing a numeric value

Click on the value you want to change, and then enter the new setting.

Double-clicking on the value also works.

Select	No.	Working value	Name	Units	Drive's value	Drive's unit	Min	Max	Default
<input type="checkbox"/>	b1-16	0 : Digital Operator	Operation method selection i...	-	0	-	0	3	0
<input type="checkbox"/>	b1-17	1 : Permission	Operation permission with p...	-	1	-	0	1	1
<input type="checkbox"/>	b2-01	0.0	DC injection start frequency	Hz	0.0	Hz	0.0	10.0	0.5
<input checked="" type="checkbox"/>	b2-02	50	DC injection current	%	50	%	0	75	50
<input type="checkbox"/>	b2-03	0.00	DC injection time at start	sec	0.00	sec	0.00	10.00	0.00
<input type="checkbox"/>	b2-04	0.00	DC injection time at stop	sec	0.00	sec	0.00	10.00	0.00
<input type="checkbox"/>	b3-01	0 : Disabled	Speed search at start	-	0	-	0	1	0

Editing the value selected

Either select the item from the drop-down menu, or enter the new value directly into the line provided.

Select	No.	Working value	Name	Units	Drive's value	Drive's unit	Min	Max	Default
A1:Environmental Setting									
<input checked="" type="checkbox"/>	A1-01	2 : Advanced Level Access	Access level	-	2	-	0	9999	2
<input type="checkbox"/>	A1-02	0 : Monitoring only	Control method	-	0	-	0	5	0
<input type="checkbox"/>	A1-03	1 : Used to select user constant	Init parameters	-	0	-	0	9990	0
<input type="checkbox"/>	A1-04	2 : Advanced Level Access	Enter password	-	0	-	0	9999	0
<input type="checkbox"/>	A1-05	0	Select password	-	0	-	0	9999	0
<input type="checkbox"/>	A1-06	0 : General	Select application	-	0	-	0	15	0
<input type="checkbox"/>	A1-07	0 : Disabled	DWEZ Function Selection	-	0	-	0	2	0

Editing the Control Mode

Below is an example of editing the control mode or parameters that depend on the control mode. The Edit window will appear by double-clicking on a parameter row, or by selecting "Control Method Selection" from the parameter list, then clicking the  icon.

Select	No.	Working value	Name	Un...	D...
A1:Environmental Setting					
<input type="checkbox"/>	A1-01	2 : Advanced Level A...	Access level	-	2
<input checked="" type="checkbox"/>	A1-02	0 : V/f control	Control method	-	0
<input type="checkbox"/>	A1-03	0 : No initializing	Init parameters	-	0
<input type="checkbox"/>	A1-04	0	Enter password	-	0
<input type="checkbox"/>	A1-05	0	Select password	-	0
<input type="checkbox"/>	A1-06	0 : General	Select application	-	0

Details

A1-02 Control method

0 : V/f control

Change Parameters

The following parameters are changed due to the setting value.

No.	Name	Working value	Chang...

OK Cancel

Either select the setting value from the List Box, or enter the value directly.

Any parameters that are affected when the control mode is changed will be displayed in this list.

Click "OK" to accept all of these related changes, or click "Cancel" if you decide you do not want to make the changes listed in the window. SDWP001 will return to the Parameter Edit Screen.

Editing the Access Level of the Selected Parameter

Select "Access Level" from the list, then click on the desired setting in the drop-down list or enter the value manually.

Select	No.	Working value	Name	Un...	D..
A1: Environmental Setting					
<input checked="" type="checkbox"/>	A1-01	2 : Advanced Lev...	Access level	-	2
<input type="checkbox"/>	A1-02	0 : V/f control	Control method	-	0
<input type="checkbox"/>	A1-03	0 : No initializing	Init parameters	-	0
<input type="checkbox"/>	A1-04	0	Enter password	-	0
<input type="checkbox"/>	A1-05	0	Select password	-	0
<input type="checkbox"/>	A1-06	0 : General	Select application	-	0

The value will be displayed, provided the value is within the possible setting range and all parameters with that access level will appear in the parameter list.

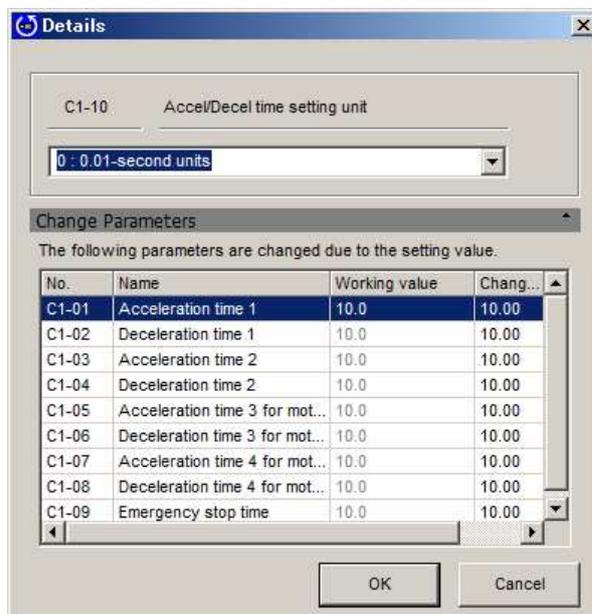
Editing parameters that affect other parameter settings

Changing certain parameters will cause other parameters to change accordingly.

Select	No.	Working value	Name	Un...	Drive'...	Drive'...	M
<input type="checkbox"/>	C1-07	10.0	Acceleration time ...	sec	10.0	sec	0
<input type="checkbox"/>	C1-08	10.0	Deceleration time ...	sec	10.0	sec	0
<input type="checkbox"/>	C1-09	10.0	Emergency stop ti...	sec	10.0	sec	0
<input checked="" type="checkbox"/>	C1-10	1 : 0.1-second units	Accel/Decel time ...	-	1	-	0
<input type="checkbox"/>	C1-11	0.0	Accel/Decel swit...	Hz	0.0	Hz	0
<input type="checkbox"/>	C2-01	0.00	S-curve accelera...	sec	0.00	sec	0

Select the parameter you want to edit, then click or double-click on the parameter.

The Parameter Edit window will appear.



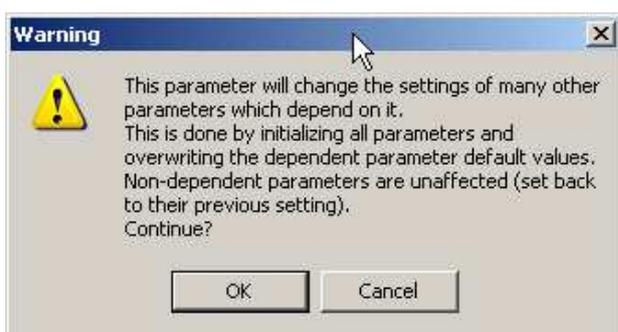
Either select the setting value from the List Box, or enter the value directly. Any parameters that are affected when the change is made will be displayed in this list.

Click “OK” to accept all of these related changes, or click “Cancel” if you decide you do not want to make the changes listed in the window. SDWP001 will return to the Parameter Edit Screen.

Changing the Settings for the Drive kVA Selection or Initialization

Changing the Drive kVA setting or entering a value into the Initialization parameter will initialize the drive. Most parameters in the drive will be reset to the default values for the kVA setting that was selected, or according to the type of initialization that was entered.

Attempting to change any settings to the Drive kVA setting or initialization parameter will generate the following message. The same will happen by clicking .



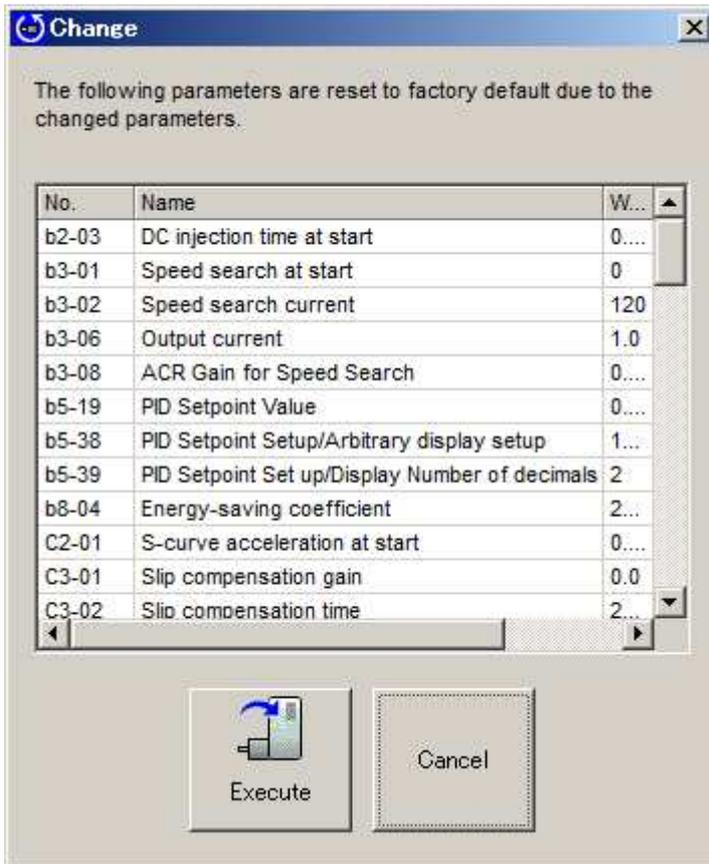
Clicking “OK” will display with the following message:



Either select the type of initialization from the drop-down menu or enter the value manually.

Next, either select “Current Setting Value” from the drop-down menu that appears below, or enter the value manually.

Clicking “OK” will generate the following window:



NOTE: The lower drop-down list is enabled only when editing the drive kVA setting and when selecting the type of initialization to perform on the drive settings.

Click “Execute” to start the initialization process.

After the drive has been initialized, the parameter settings that are affected by the type of initialization selected will be automatically set to their new default values.

All changes that have been written to the drive appear in the “Working values” column, and the view will return to the Parameter Edit screen.

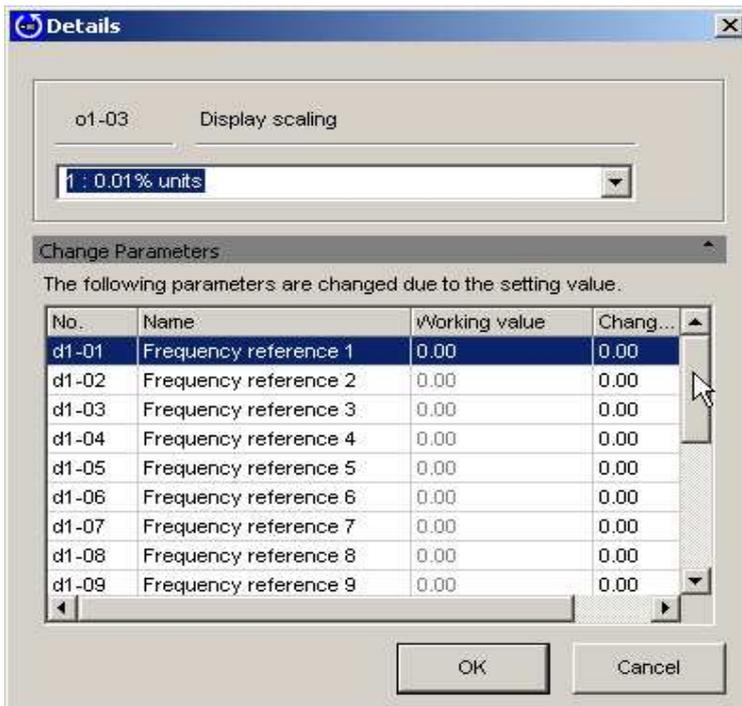
Display Digits for Setting Units

Changing the units displayed or the number of digits for a parameter setting will automatically recalculate parameter values.

Setting Units

Select “Frequency Reference Setting/Display Units” from the parameter list and click  or double-click on the corresponding row.

“Display scaling” is not available in some drives.



Either select the desired setting from the drop-down menu or enter the setting manually.

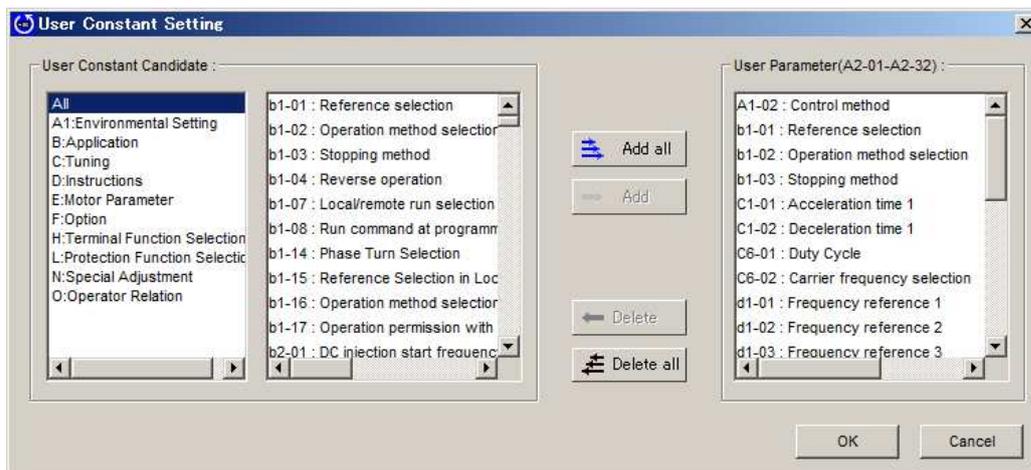
Once the value has been entered, a list of parameters that are affected by the change in units for the frequency reference will appear in the list shown above.

Click "OK" to accept these changes, or click "Cancel" if you decide you do not want to make the changes listed in the window. SDWP001 will return to the Parameter Edit Screen.

User Parameter Setting

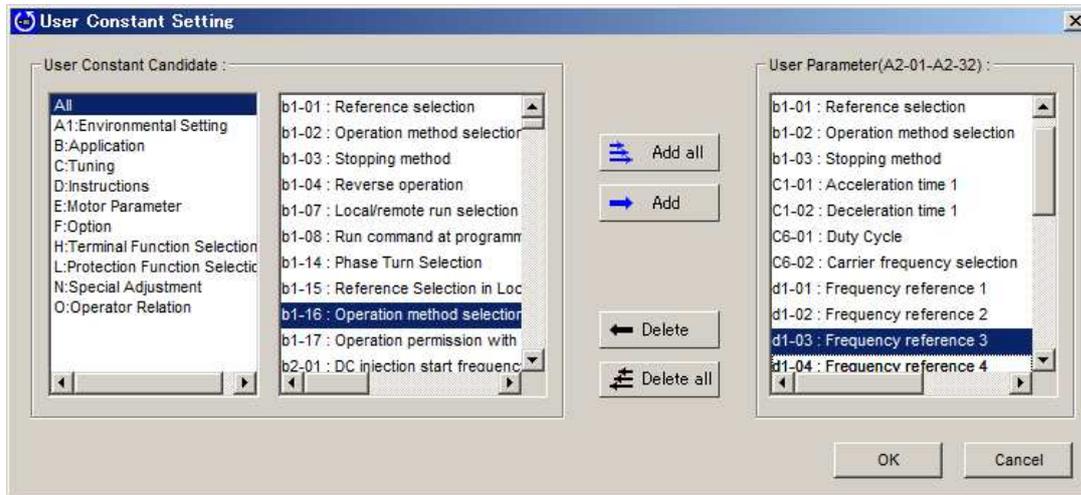
Setting parameters to the User Access Level creates a select list of parameters that can be quickly viewed and edited.

Select a parameter from "A2: Favorite Parameters Setting" from the parameter list and click , or double-click on the appropriate row. The following window will appear:



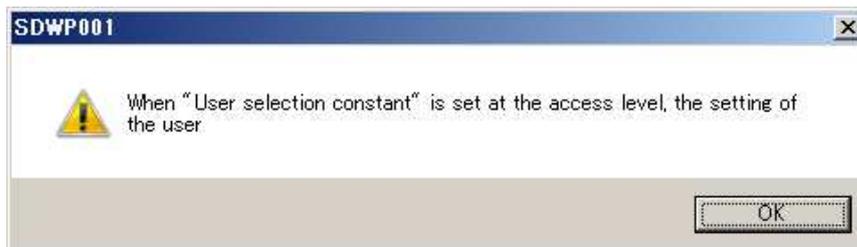
Select the parameter to add to the User Parameter list and click “Add”.

Parameters that have been set to the User Parameter List will appear in the corresponding box on the right.



Click “OK” to accept these changes, or click “Cancel” if you decide you do not want to make the changes listed in the window.

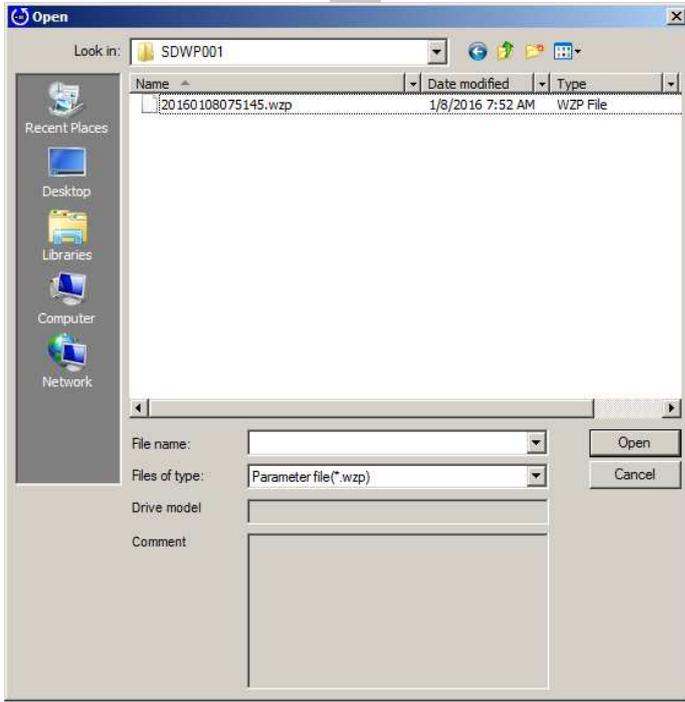
SDWP001 will return to the Parameter Edit Screen.



Clicking “OK” will save the changes that were made and SDWP001 will return to the Parameter Edit Screen.

Comparing Files

To compare all parameter settings (both those displayed in the current window as well as those that aren't displayed) from one file with all parameter settings in another file, follow the directions below. Click on the “File Compare”  button located on the toolbar. The following screen will appear:



Select the file you wish to compare and click “Open”. The following message will appear:



If you do not wish to compare the file, click “Cancel” and the screen will return to the Parameter Edit window. Click “OK” to compare the files. When finished, the following screen will appear:

When all parameters agree

A message appears, indicating that parameters match the file.



When parameters do not agree

The Status bar will read, "Parameters settings differ."

A list of the parameter setting differences will appear as shown below:

Comparison results with file					
No.	Name	Working value	Units	File's value	File's unit
d1-01	Frequency reference 1	0.00	Hz	0.10	Hz

To save the file compare results, right-click on the Results window and select "Save" from the pop-up menu.

4.2.2 Direct Parameter Edit

The Direct Parameter Edit window lets you view and edit parameter settings.

NOTE: Changes made in the "Direct Parameter Edit" window are immediately saved to the drive.

Follow the procedure below to directly edit parameter settings.

- 1) Starting in the Main Screen, go to "View" and "Direct Parameter Edit".

The screen shown below will appear.

NOTE: When a different model of drive is connected, previously edited parameter settings will be returned to their default value.

No.	Name	Working v...	Units	Drive's value	Drive's unit	Min	Max	Default
b1-14	Phase Tur...	0 : Normal	-	0	-	0	1	0
C1-03	Accelerati...	10.0	sec	10.0	sec	0.0	6000.0	10.0
C1-01	Accelerati...	10.0	sec	10.0	sec	0.0	6000.0	10.0
A2-07	User para...	C6-01 : Du...	-	0223	-	0180	0528	0223
C6-01	Duty Cycle	1 : ND(VT)	-	1	-	0	1	1

There are three ways to add parameters to the list above:

- Select, "Add to Direct Parameter Edit" from the pop-up menu in the Parameter Edit window.
- Manually enter the parameter number into the "Number" column.
- Drag and drop from the Parameter Edit window into the Direct Parameter Edit window.

Be careful when entering values into the Working value column, as these new settings will be written immediately to the drive.

After settings are changed, the Parameter Edit window is refreshed and the new values displayed.

NOTE: Parameters that are grayed out cannot be edited. Parameters that cannot be changed while the drive is running the motor will also be grayed out during run. Stop the drive to edit those parameters.

- 2) To remove parameters from the list, right-click on the parameter and select, "Remove" from the pop-up menu.

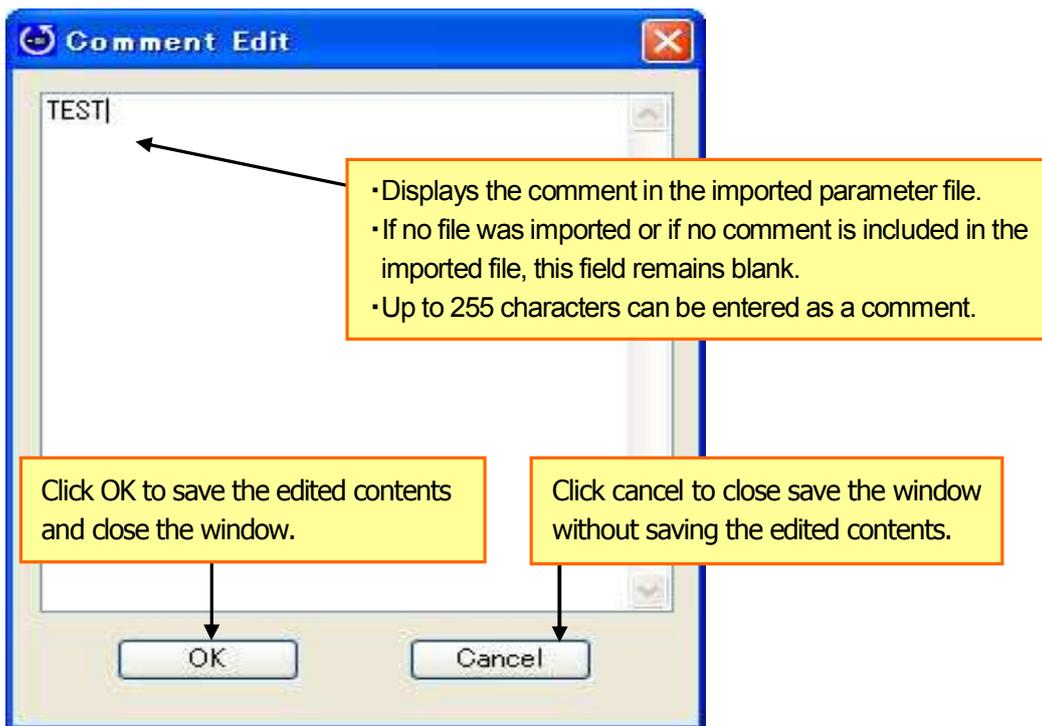
You can also select the parameter and click "Delete" to remove it.

4.2.3 Comment Edit

The Comment Edit window allows you to edit the comment in the imported parameter file. Additionally, it allows you to export a parameter file and include the comment that was edited on the Comment Edit window at printing.

Use either of the following methods to open the Comment Edit window.

- Select “Edit “ → “Comment Edit” from the SDWP001 main menu.
- Click the  (Comment Edit) icon in the Parameter Edit toolbar.



<Comment Edit Window>

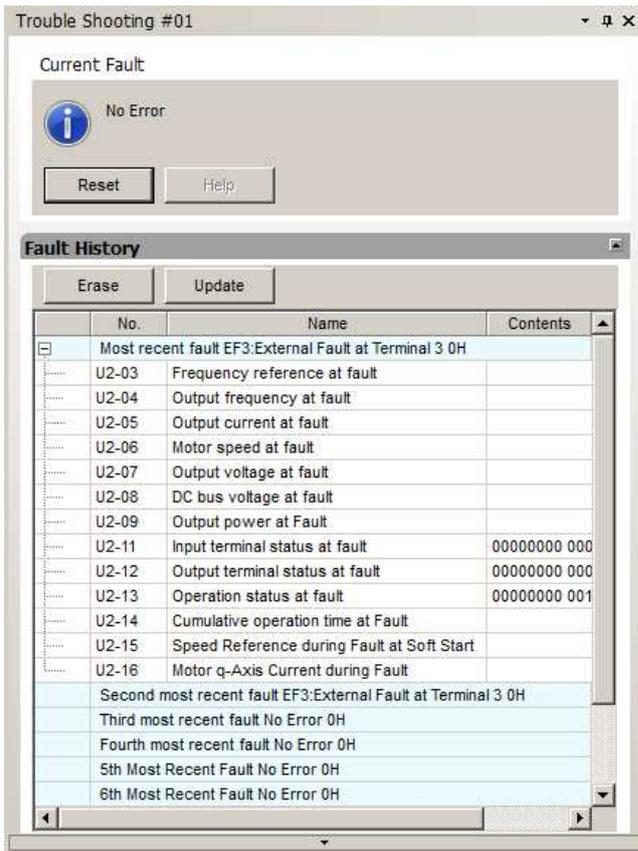
4.3 Troubleshooting

The Troubleshooting function lets you view and verify fault information for the drive that is currently connected.

NOTE: This display will be blank if the drive is not online or is not connected.

To display the Troubleshooting window, go to the SDWP001 Function Tree or select “View (V)” from the Main Menu and select “Troubleshooting”.

The Troubleshooting window can be displayed as a docking window or as a floating window.



<Troubleshooting Screen with Drive Online>

<Troubleshooting Screen with Drive Offline>

4.3.1 Current Fault



The message above will appear when a fault occurs.

If the drive is operating normally without any problems, the Status window will read, "Normal".

When a fault occurs, a message will appear showing the name of the fault, and will remain until the fault is cleared or until another fault occurs.

Fault Reset

To reset a fault, remove whatever is causing the fault and click the "Reset" button that appears in the fault message box.

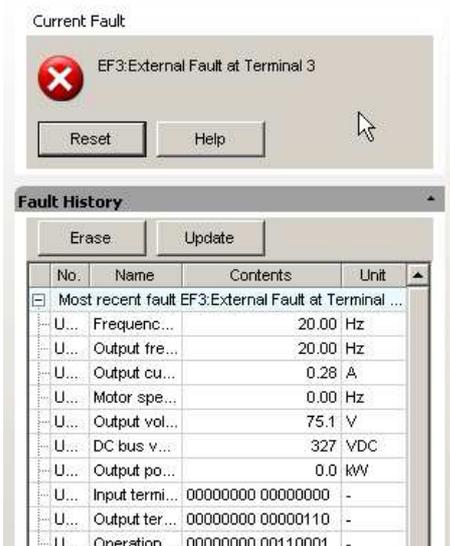
You can also reset the fault using the digital operator on the drive if SDWP001 is closed before the fault is cleared.

4.3.2 Fault History Display

You can view the current fault and any other faults that have already occurred using the History Display. The drive saves data on faults that have occurred, including the order in which the faults occurred, and information on the total operation time of the drive when the fault happened.

The Fault History lists the most recent faults first so that the most recent fault appears at the top of the list in the display window.

NOTE: SDWP001 keeps track of a maximum of ten faults. (The maximum number of faults that are displayed differs in accordance with the model used.)



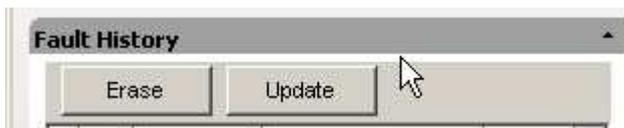
Below is an example of the data saved when a fault occurs :

No.	Name	Contents	Unit
[-] Most recent fault EF3:External Fault at Terminal ...			
U...	Frequenc...	20.00	Hz
U...	Output fre...	20.00	Hz
U...	Output cu...	0.28	A
U...	Motor spe...	0.00	Hz
U...	Output vol...	75.1	V
U...	DC bus v...	327	VDC
U...	Output po...	0.0	kW
U...	Input termi...	00000000 00000000	-
U...	Output ter...	00000000 00000110	-
U...	Operation...	00000000 00110001	-
U...	Cumulativ...	41	H
U...	Speed Re...	20.00	%
Second most recent fault No Error 0H			
Third most recent fault No Error 0H			
Fourth most recent fault No Error 0H			
5th Most Recent Fault No Error 0H			
6th Most Recent Fault No Error 0H			
7th Most Recent Fault No Error 0H			

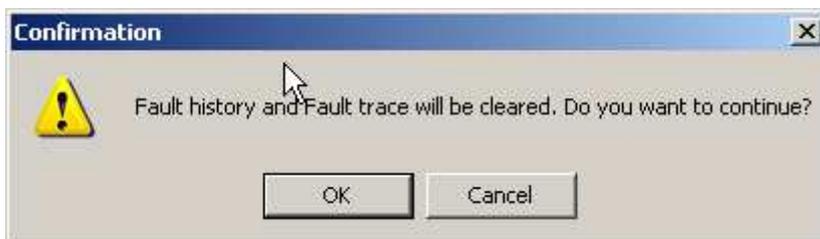
4.3.3 Clearing the Fault History

To erase the data saved to the Fault History, click “Delete”.

NOTE: Depending on the drive, it may not be possible to erase data from previous faults.



Clicking “Erase” will generate the following warning message:



Click “Cancel” if you do not want to erase the information; SDWP001 will return to the Troubleshooting display. Clicking “OK” will clear the contents saved to the Fault History.

NOTE: After clearing the Fault History or other fault data, remove the cause of the fault and reset the fault using the digital operator on the drive. If the Fault History or fault data is erased before the fault is properly reset, the digital operator will indicate that the drive is ready operate the motor, although the cause of the fault still exists. In such occasions SDWP001 will indicate that a fault is still present.

4.3.4 Updating the Fault History

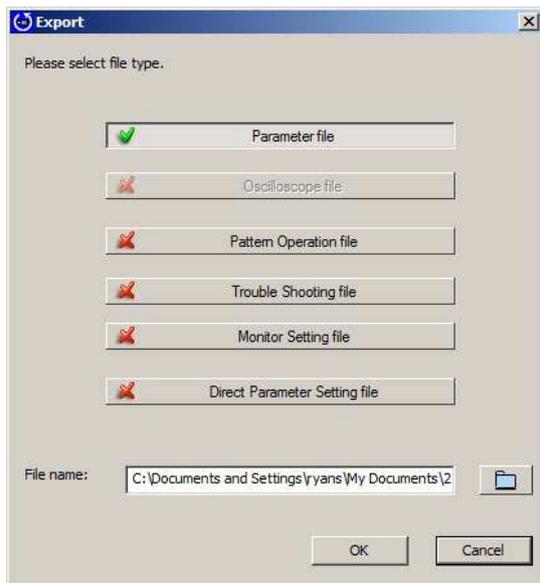
To update the Fault History display, click “Update”.



4.3.5 Saving the Fault History

To save the Fault History, use the Export function.

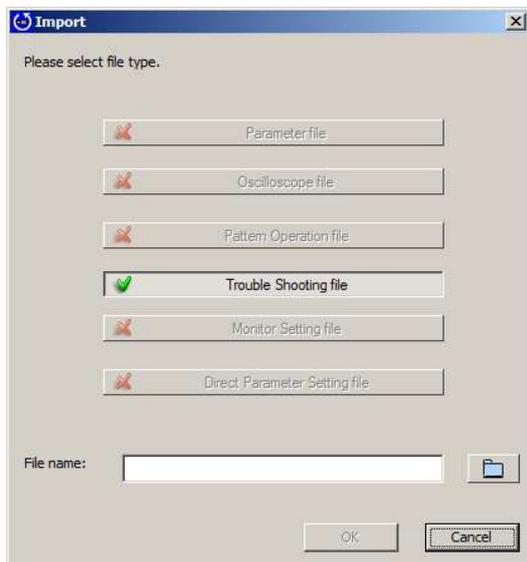
Under “File”, select “Export (E)”.



4.3.6 Reading the Fault History

If the drive is not connected to the PC, you can still view Troubleshooting data that was saved previously.

Go the Main Menu, select “View (V)”, and then click “Troubleshooting”. You can also go to “File (F)” in the Main Menu, and then select “Import (I)”. The following window will appear:



4.4 Monitor

Monitors allow you to view various aspects of drive performance including operation status and I/O signal settings. There are five types of Monitor displays: All Monitors, User Monitors, I/O Monitors, Status Monitors, and Operation Monitors.

4.4.1 All Monitors

When the drive is connected, a window displaying all monitor items will appear automatically. If the drive is not connected, the window will appear blank as shown below:



<All Monitors Display Window (Drive Offline)>

When the drive is connected, all monitor items will appear automatically as shown in the screen below. When a Project is open and a drive is connected, monitor items will appear in the order that they have been saved to the Project.

The screenshot shows a window titled 'All Monitor #01' with a 'Category' dropdown set to 'All'. The table below is populated with 16 rows of data, each with a checked checkbox in the first column.

Parameter No.	Name	Value	Unit	Max	Min
U1-01	Frequency reference	0.00	Hz	0.00	0.00
U1-02	Output frequency	0.00	Hz	0.00	0.00
U1-03	Output current	0.00	A	0.00	0.00
U1-04	Control method	0		0	0
U1-05	Motor speed	0.00	Hz	0.00	0.00
U1-06	Output voltage	0.0	VAC	0.0	0.0
U1-07	DC bus voltage	227	VDC	227	227
U1-08	Output power	0.00	kW	0.00	0.00
U1-10 - 00	Terminal S1	Open		-	-
U1-10 - 01	Terminal S2	Open		-	-
U1-10 - 02	Terminal S3	Open		-	-
U1-10 - 03	Terminal S4	Open		-	-
U1-10 - 04	Terminal S5	Open		-	-
U1-10 - 05	Terminal S6	Open		-	-
U1-10 - 06	Terminal S7	Open		-	-
U1-11 - 00	Terminal Output(Terminal MAI...	Open		-	-
U1-11 - 01	Photocoupler 1(Terminal P1)	Open		-	-
U1-11 - 02	Photocoupler 2(Terminal P2)	OFF		-	-
U1-12 - 00	During Run	Stopp...		-	-
U1-12 - 01	During zero speed	At zer...		-	-
U1-12 - 02	During reverse	Forw...		-	-
U1-12 - 03	During external reset signal l...	---		-	-
U1-12 - 04	During speed agree	---		-	-
U1-12 - 05	Inverter ready	Ready		-	-
U1-12 - 06	Minor Fault	---		-	-
U1-12 - 07	Major Fault	---		-	-
U1-13	Terminal A1 input voltage level	0.0	%	0.0	0.0
U1-14	Terminal A2 input voltage level	0.0	%	0.0	0.0
U1-16	Output frequency after soft...	0.00	Hz	0.00	0.00

<All Monitors Display Window (Drive Online)>

If the drive is disconnected, then monitors will appear as shown below:

Parameter...	Name	Value	Unit	Max	Min
U1-01	Frequency reference	0.00	Hz	0.00	0.00
U1-02	Output frequency	0.00	Hz	0.00	0.00
U1-03	Output current	0.00	A	0.00	0.00
U1-04	Control method	0		0	0
U1-05	Motor speed	0.00	Hz	0.00	0.00
U1-06	Output voltage	0.0	VAC	0.0	0.0
U1-07	DC bus voltage	227	VDC	227	227
U1-08	Output power	0.00	kW	0.00	0.00
U1-10 - 00	Terminal S1	Open	-	-	-
U1-10 - 01	Terminal S2	Open	-	-	-
U1-10 - 02	Terminal S3	Open	-	-	-
U1-10 - 03	Terminal S4	Open	-	-	-
U1-10 - 04	Terminal S5	Open	-	-	-
U1-10 - 05	Terminal S6	Open	-	-	-
U1-10 - 06	Terminal S7	Open	-	-	-
U1-11 - 00	Terminal Output(Terminal MA/...	Open	-	-	-
U1-11 - 01	Photocoupler 1(Terminal P1)	Open	-	-	-
U1-11 - 02	Photocoupler 2(Terminal P2)	OFF	-	-	-
U1-12 - 00	During Run	Stopp...	-	-	-
U1-12 - 01	During zero speed	At zer...	-	-	-
U1-12 - 02	During reverse	Forw...	-	-	-
U1-12 - 03	During external reset signal l...	---	-	-	-
U1-12 - 04	During speed agree	---	-	-	-
U1-12 - 05	Inverter ready	Ready	-	-	-
U1-12 - 06	Minor Fault	---	-	-	-
U1-12 - 07	Major Fault	---	-	-	-
U1-13	Terminal A1 input voltage level	0.0	%	0.0	0.0
U1-14	Terminal A2 input voltage level	0.0	%	0.0	0.0
U1-16	Output frequency after soft...	0.00	Hz	0.00	0.00

<All Monitors Display Window (Drive Connection Interrupted)>

Main Screen Display

Select the type of monitors that are displayed as described below.

Monitors can be arranged and displayed using the combo-box in the Monitor display window.

Parameter	Name	Value	Unit	Max	Min	A...
U1-01	Input					
U1-02	Output					
U1-03	Motion					
U1-04	Status					
U1-04	Control method					

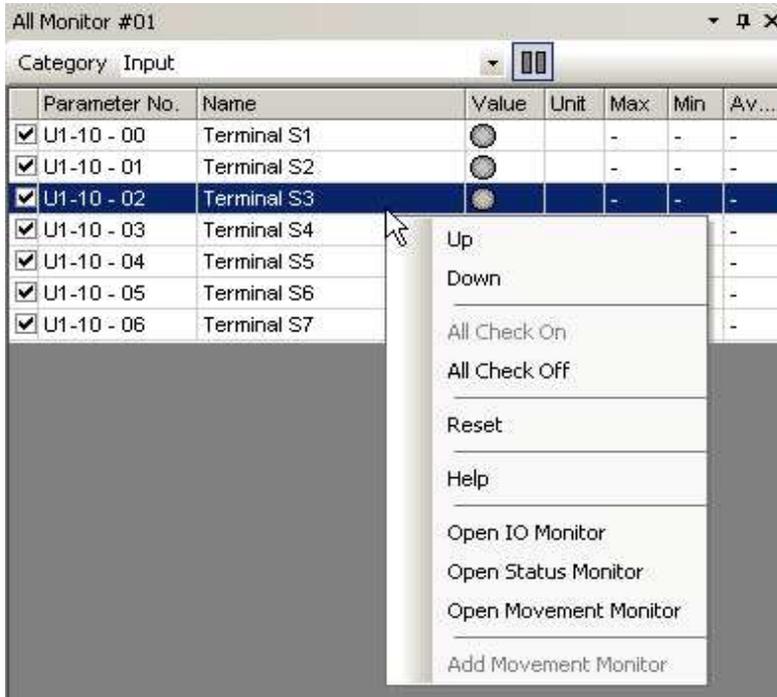
This example shows the Monitor display after selecting to view Input monitors.

Parameter No.	Name	Value	Unit	Max	Min	Av...
U1-10 - 00	Terminal S1	●		-	-	-
U1-10 - 01	Terminal S2	●		-	-	-
U1-10 - 02	Terminal S3	●		-	-	-
U1-10 - 03	Terminal S4	●		-	-	-
U1-10 - 04	Terminal S5	●		-	-	-
U1-10 - 05	Terminal S6	●		-	-	-
U1-10 - 06	Terminal S7	●		-	-	-

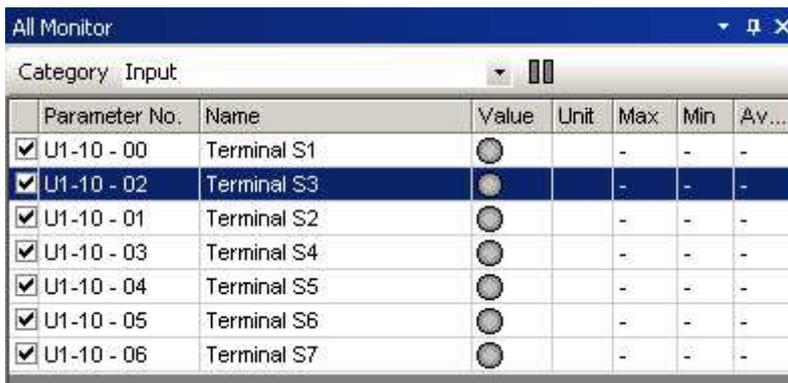
NOTE: When changing between input and output monitor displays, SDWP001 maps out the I/O settings.

Setting the order in which monitors are displayed

Right-click on the monitor items selected in the monitor screen and select the desired order from the pop-up menu.



<Selecting Monitor Order>

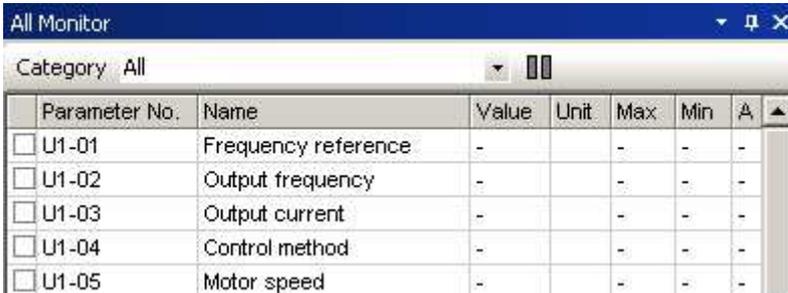


<After Selecting the Order>

Another way to select the order of the monitors is to select the monitor and use the Shift and ↑ or ↓ keys. It is also possible to use the mouse to drag and drop monitors in the desired order.

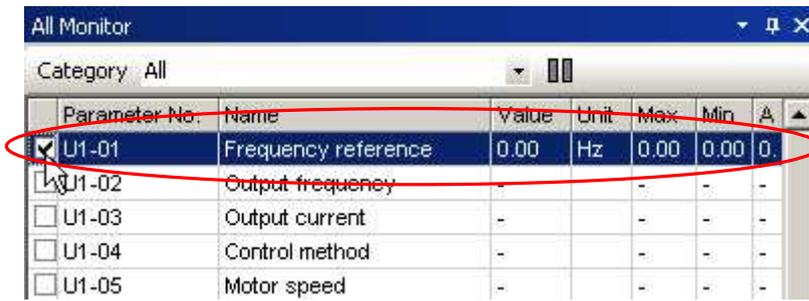
Monitor Status Display

To display specific monitors, click on the check box located in the far left column of each row. To select all monitors right-click on the window and select "Check All" from the pop-up menu.



Parameter No.	Name	Value	Unit	Max	Min	A
<input type="checkbox"/> U1-01	Frequency reference	-	-	-	-	-
<input type="checkbox"/> U1-02	Output frequency	-	-	-	-	-
<input type="checkbox"/> U1-03	Output current	-	-	-	-	-
<input type="checkbox"/> U1-04	Control method	-	-	-	-	-
<input type="checkbox"/> U1-05	Motor speed	-	-	-	-	-

Monitors that have been checked will display data in each column.



Parameter No.	Name	Value	Unit	Max	Min	A
<input checked="" type="checkbox"/> U1-01	Frequency reference	0.00	Hz	0.00	0.00	0.
<input checked="" type="checkbox"/> U1-02	Output frequency	-	-	-	-	-
<input type="checkbox"/> U1-03	Output current	-	-	-	-	-
<input type="checkbox"/> U1-04	Control method	-	-	-	-	-
<input type="checkbox"/> U1-05	Motor speed	-	-	-	-	-

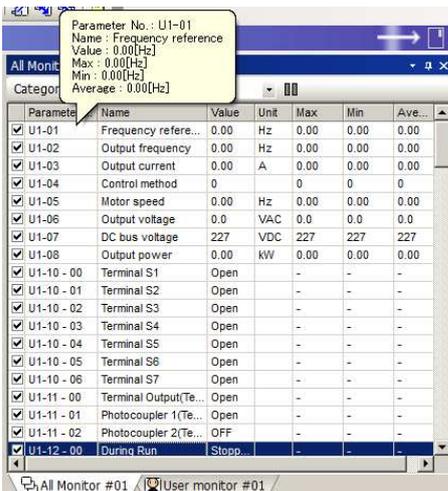
NOTE: The first display screen shows all monitors as checked and has all data displayed.

Hold

By clicking the "Hold" button, the values displayed in the monitor will no longer be refreshed. To update the data that is currently frozen, click "Hold" again.

Tool Tips

If the mouse pointer rests on one of the monitors, a "tool tip" will appear listing monitor data.



Parameter No.	Name	Value	Unit	Max	Min	Ave...
<input checked="" type="checkbox"/> U1-01	Frequency refere...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	Output frequency...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	Output current	0.00	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	Control method	0		0	0	0
<input checked="" type="checkbox"/> U1-05	Motor speed	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-06	Output voltage	0.0	VAC	0.0	0.0	0.0
<input checked="" type="checkbox"/> U1-07	DC bus voltage	227	VDC	227	227	227
<input checked="" type="checkbox"/> U1-08	Output power	0.00	KW	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-10 - 00	Terminal S1	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-10 - 01	Terminal S2	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-10 - 02	Terminal S3	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-10 - 03	Terminal S4	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-10 - 04	Terminal S5	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-10 - 05	Terminal S6	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-10 - 06	Terminal S7	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-11 - 00	Terminal Output(Te...	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-11 - 01	Photocoupler 1(Te...	Open	-	-	-	-
<input checked="" type="checkbox"/> U1-11 - 02	Photocoupler 2(Te...	OFF	-	-	-	-
<input checked="" type="checkbox"/> U1-12 - 00	During Run	Stopp...	-	-	-	-

Column Heading

Column headings describe the type of data listed in the column.

Parameter No.	Name	Value	Unit	Max	Min	Average
<input checked="" type="checkbox"/> U1-01	Frequency reference	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	Output frequency	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	Output current	0.00	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	Control method	0		0	0	0
<input checked="" type="checkbox"/> U1-05	Motor speed	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-06	Output voltage	0.0	VAC	0.0	0.0	0.0

You can move columns by using the mouse to drag and drop the columns into the desired order.

Parameter No.	Value	Name	Unit	Max	Min	Average
<input checked="" type="checkbox"/> U1-01	0.00	Frequency reference	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	0.00	Output frequency	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	0.00	Output current	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	0	Control method		0	0	0
<input checked="" type="checkbox"/> U1-05	0.00	Motor speed	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-06	0.0	Output voltage	VAC	0.0	0.0	0.0

Right-clicking on a column head displays a pop-up menu that lets you hide or show certain columns.

Parameter No.	Value	Name	Unit	Max	Min	Average
<input checked="" type="checkbox"/> U1-01	0.00	Frequenc	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	0.00	Output fre	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	0.00	Output cu	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	0	Control me		0	0	0
<input checked="" type="checkbox"/> U1-05	0.00	Motor spe	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-06	0.0	Output vo	VAC	0.0	0.0	0.0
<input checked="" type="checkbox"/> U1-07	323	DC bus voltage	VDC	324	322	322

Name
 Unit
 Max
 Min
 Average

The following example shows how to hide a column:

Parameter No.	Value	Name	Max	Average
<input checked="" type="checkbox"/> U1-01		Frequency reference	0.00	0.00
<input checked="" type="checkbox"/> U1-02		Output frequency	0.00	0.00
<input checked="" type="checkbox"/> U1-03		Output current	0.00	0.00
<input checked="" type="checkbox"/> U1-04		Control method	0	0
<input checked="" type="checkbox"/> U1-05		Motor speed	0.00	0.00
<input checked="" type="checkbox"/> U1-06		Output voltage	0.0	0.0
<input checked="" type="checkbox"/> U1-07	324	DC bus voltage	324	322

Name
 Unit
 Max
 Min
 Average

4.4.2 User Monitor

User Monitors can be selected and displayed using the Monitor Setting Dialog.

If the drive is not connected when the User Monitor is displayed, a window that looks like this will appear:
When the drive is first connected, the display will initially be blank.

Parameter No.	Name	Value	Unit	Max	Min	Average
---------------	------	-------	------	-----	-----	---------

<User Monitor Screen (Drive Offline)>

Parameter No.	Name	Value	Unit	Max	Min	Average
---------------	------	-------	------	-----	-----	---------

<User Monitor Screen (Drive Online)>

If the drive is connected while a Project is open, then the monitor items that were previously saved to that Project will appear as shown below:

	Parameter No.	Name	Value	Unit	Max	Min	Average
<input checked="" type="checkbox"/>	U1-01	Freq...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-02	Outp...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-03	Outp...	0.00	A	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-04	Cont...	0		0	0	0
<input checked="" type="checkbox"/>	U1-06	Outp...	0.0	VAC	0.0	0.0	0.0

<User Monitor Screen (Drive Connected while Project is Open)>

If the drive is suddenly disconnected, then the monitor items will appear as follows:

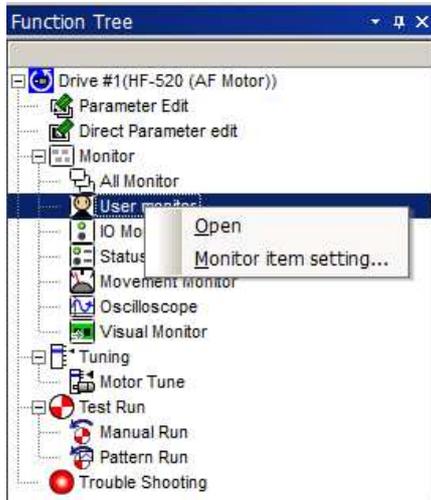
	Parameter No.	Name	Value	Unit	Max	Min	Average
<input checked="" type="checkbox"/>	U1-01	Freq...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-02	Outp...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-03	Outp...	0.00	A	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-04	Cont...	0		0	0	0
<input checked="" type="checkbox"/>	U1-06	Outp...	0.0	VAC	0.0	0.0	0.0

<User Monitor Screen (Drive Connection Interrupted)>

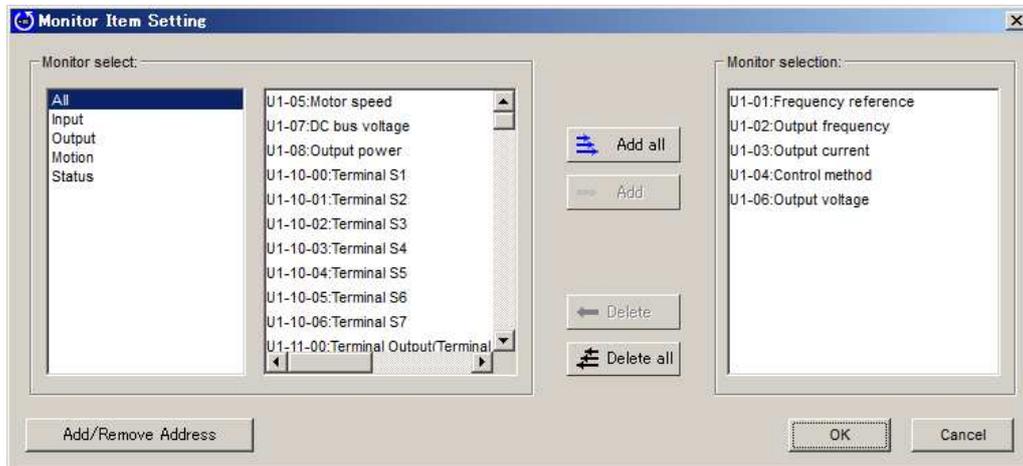
Main Screen Display

To select the order in which User Monitors are displayed, follow the instructions below.

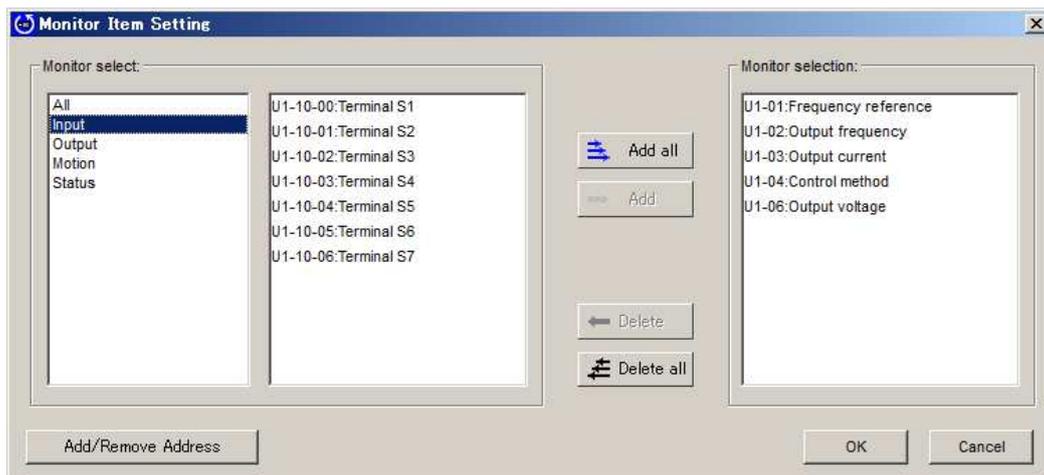
- 1) Right-click on the “User Monitor” in the Function Tree to open the pop-up menu as shown:



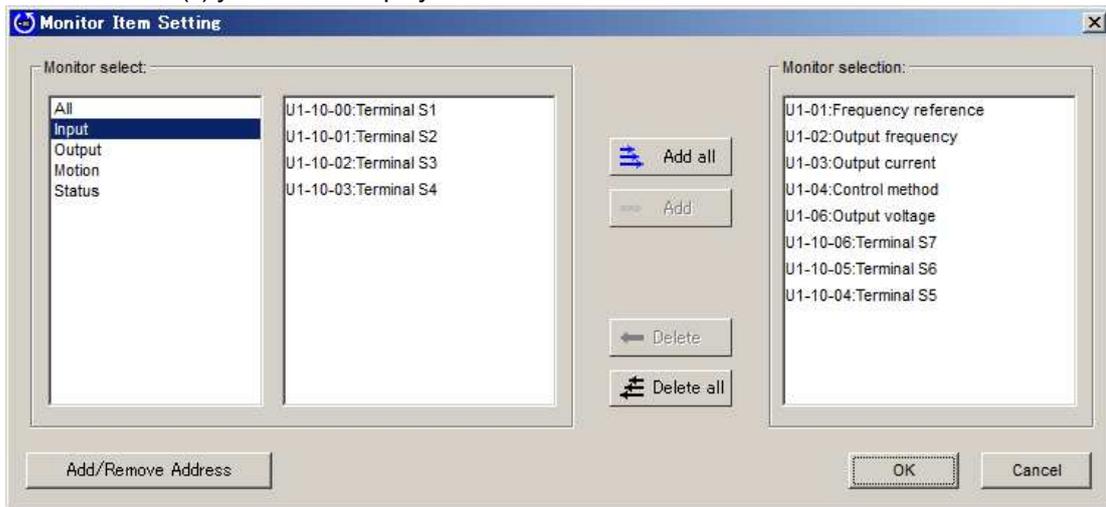
- 2) Select “Monitor item setting” and the following window will appear:



- 3) A list of monitor items and categories will appear.



- 4) Select the item(s) you wish to display and click “Add”.



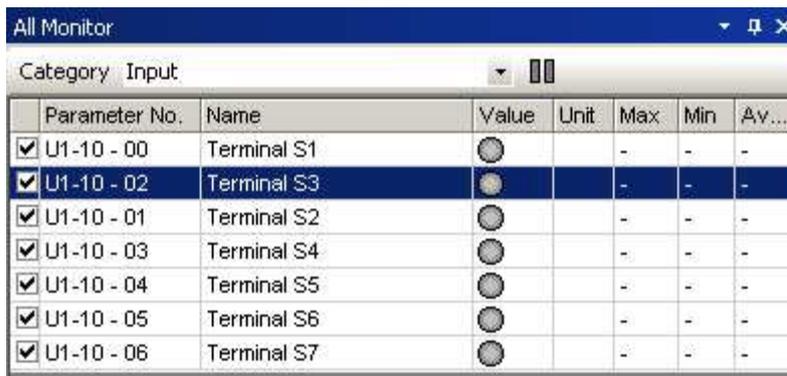
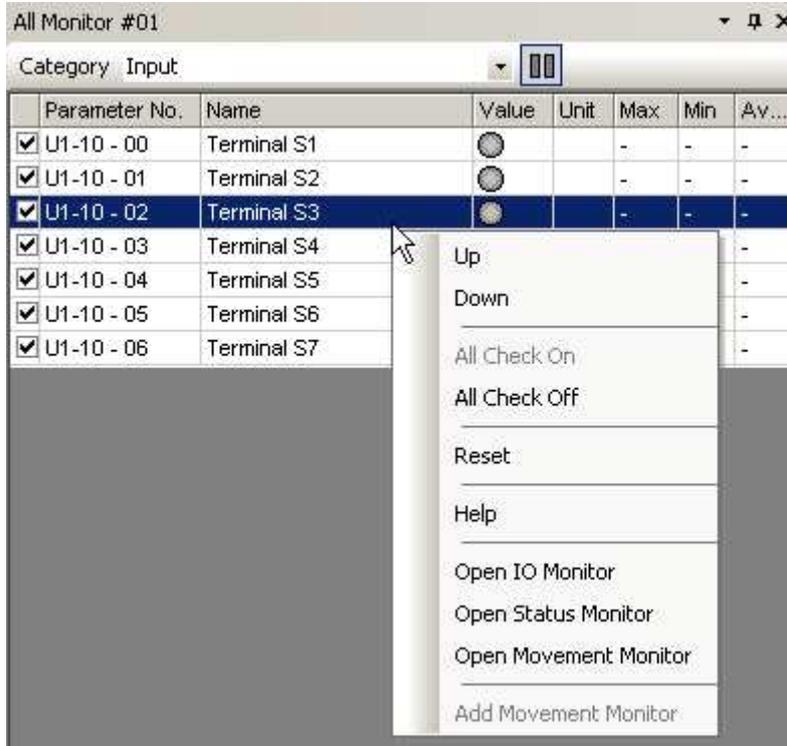
- 5) Click “OK”. Items selected will then appear in the User Monitor screen.

	Parameter No.	Name	Value	Unit	Max	Min	Average
<input checked="" type="checkbox"/>	U1-01	Freq...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-02	Outp...	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-03	Outp...	0.00	A	0.00	0.00	0.00
<input checked="" type="checkbox"/>	U1-04	Cont...	0		0	0	0
<input checked="" type="checkbox"/>	U1-06	Outp...	0.0	VAC	0.0	0.0	0.0
<input checked="" type="checkbox"/>	U1-10 - 06	Term...	Open		-	-	-
<input checked="" type="checkbox"/>	U1-10 - 05	Term...	Open		-	-	-
<input checked="" type="checkbox"/>	U1-10 - 04	Term...	Open		-	-	-

Double-clicking on items in the User Monitor window will also display monitor items.

Setting the order in which monitors are displayed

Right-click on the monitor items selected in the monitor screen and select the desired order from the pop-up menu.



Another way to select the order of the monitors is to select the monitor and use the Shift and ↑ or ↓ keys together.

It is also possible to use the mouse to drag and drop monitors in the desired order.

Monitor Status Display

To display specific monitors, click on the check box located in the far left column of each row. To select all monitors right-click on the window and select "Check All" from the pop-up menu.

Parameter No.	Name	Value	Unit	Max	Min	A
<input type="checkbox"/> U1-01	Frequency reference	-	-	-	-	-
<input type="checkbox"/> U1-02	Output frequency	-	-	-	-	-
<input type="checkbox"/> U1-03	Output current	-	-	-	-	-
<input type="checkbox"/> U1-04	Control method	-	-	-	-	-
<input type="checkbox"/> U1-05	Motor speed	-	-	-	-	-
<input type="checkbox"/> U1-06	Output voltage	-	-	-	-	-

Monitors that have been checked will display data in each column.

Parameter No.	Name	Value	Unit	Max	Min	A
<input checked="" type="checkbox"/> U1-01	Frequency reference	0.00	Hz	0.00	0.00	0.00
<input type="checkbox"/> U1-02	Output frequency	-	-	-	-	-
<input type="checkbox"/> U1-03	Output current	-	-	-	-	-
<input type="checkbox"/> U1-04	Control method	-	-	-	-	-
<input type="checkbox"/> U1-05	Motor speed	-	-	-	-	-
<input type="checkbox"/> U1-06	Output voltage	-	-	-	-	-
<input type="checkbox"/> U1-07	DC bus voltage	-	-	-	-	-
<input type="checkbox"/> U1-08	Output power	-	-	-	-	-

The first display screen shown has all monitors checked and all data displayed.

Hold

By clicking "Hold", the values displayed in the monitor will no longer be refreshed. To update the data that is currently frozen, click "Hold".

Tool Tips

If the mouse pointer rests on one of the monitors, a "tool tip" will appear listing monitor data.

Parameter No.	Name	Value	Unit	Max	Min	Aver...
<input checked="" type="checkbox"/> U1-01	Frequency reference	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	Output frequency	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	Output current	0.00	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	Control method	0		0	0	0

Column heading

Column headings describe the type of data listed in the column.

Parameter No.	Name	Value	Unit	Max	Min	Average
<input checked="" type="checkbox"/> U1-01	Frequency reference	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	Output frequency	0.00	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	Output current	0.00	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	Control method	0		0	0	0
<input checked="" type="checkbox"/> U1-05	Motor speed	0.00	Hz	0.00	0.00	0.00

You can move columns by using the mouse to drag and drop the columns into the desired order.

Parameter No.	Value	Name	Unit	Max	Min	Average
<input checked="" type="checkbox"/> U1-01	0.00	Frequency reference	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	0.00	Output frequency	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	0.00	Output current	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	0	Control method		0	0	0
<input checked="" type="checkbox"/> U1-05	0.00	Motor speed	Hz	0.00	0.00	0.00

Right-clicking on a column head displays a pop-up menu that lets you hide or show certain columns.

Parameter No.	Value	Name	Unit	Max	Min	Average
<input checked="" type="checkbox"/> U1-01	0.00	Frequency reference	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-02	0.00	Output frequency	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-03	0.00	Output current	A	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-04	0	Control method		0	0	0
<input checked="" type="checkbox"/> U1-05	0.00	Motor speed	Hz	0.00	0.00	0.00
<input checked="" type="checkbox"/> U1-06	0.0	Output voltage	VAC	0.0	0.0	0.0
<input checked="" type="checkbox"/> U1-07	323	DC bus voltage	VDC	324	322	322

The following example shows how to hide a column.

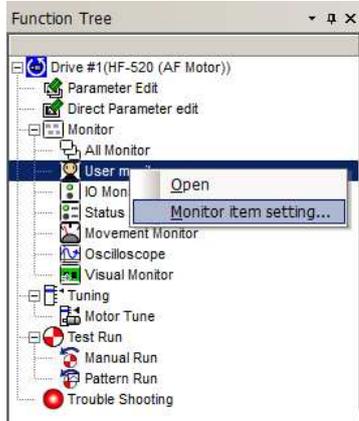
Parameter No.	Value	Name	Max	Average
<input checked="" type="checkbox"/> U1-01	<input checked="" type="checkbox"/> Name	Frequency reference	0.00	0.00
<input checked="" type="checkbox"/> U1-02	<input type="checkbox"/> Unit	Output frequency	0.00	0.00
<input checked="" type="checkbox"/> U1-03	<input checked="" type="checkbox"/> Max	Output current	0.00	0.00
<input checked="" type="checkbox"/> U1-04	<input type="checkbox"/> Min	Control method	0	0
<input checked="" type="checkbox"/> U1-05	<input type="checkbox"/> Average	Motor speed	0.00	0.00
<input checked="" type="checkbox"/> U1-06	<input checked="" type="checkbox"/> Average	Output voltage	0.0	0.0
<input checked="" type="checkbox"/> U1-07		DC bus voltage	324	322

Add or remove a Monitor Address

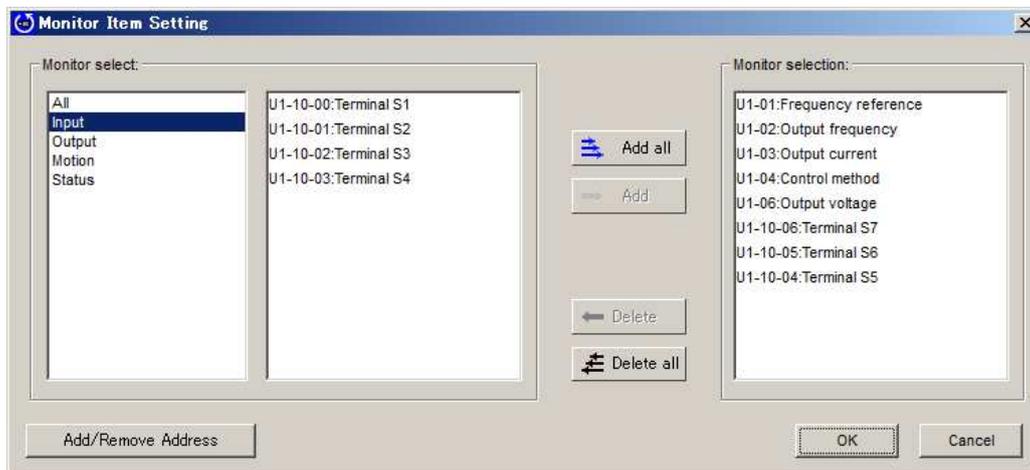
SDWP001 lets you add a MEMOBUS/Modbus address to the monitor items to view user-selected parameters.

To add or delete a monitor address, follow the instructions below:

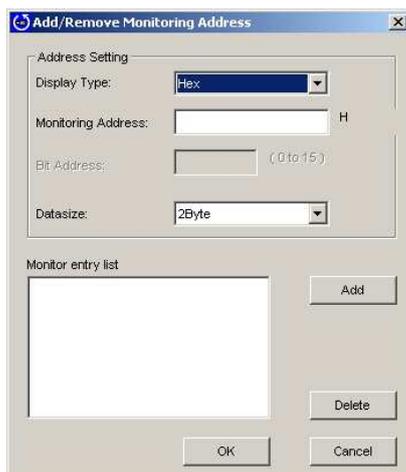
- 1) Right-click on “User Monitor” in the Function Tree.



- 2) Click “Monitor item setting” and the following window will appear



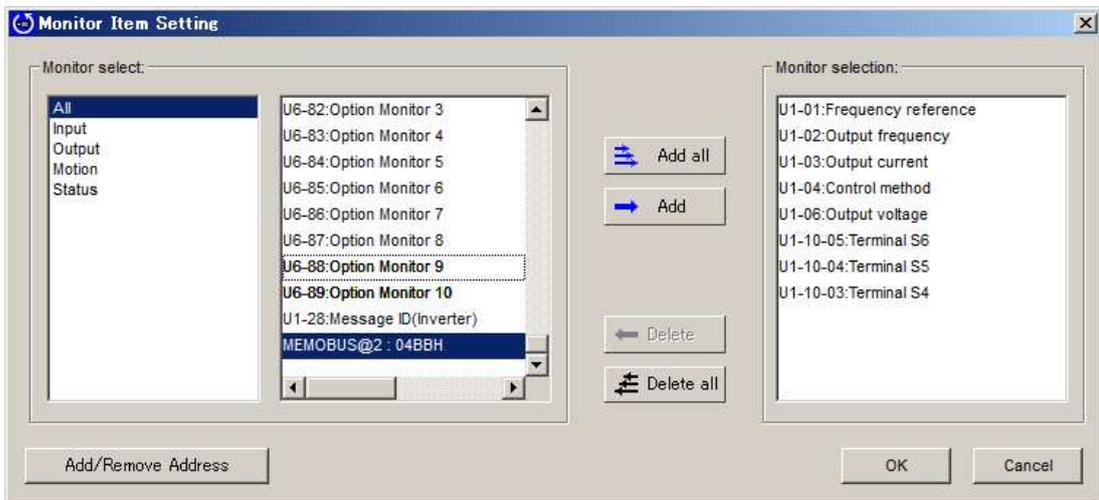
- 3) Click “Add/Remove Address” to open the following window:



- 4) Enter the necessary items and click “Add”. If the addresses entered can be accessed, then those items will be added to the list of monitors.
If access is not possible, a message will appear that indicates that the address entered is not allowed. Click “OK” to return to the “Add/Delete Monitor Address” window.



- 5) Clicking “OK” in the “Add/Remove Address” window will return you to the Monitor Item Setting window. Any added monitors will now be listed.



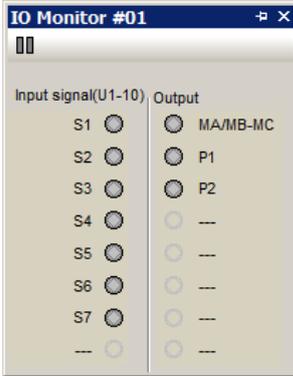
4.4.3 I/O Monitor

I/O monitors display the status of any input and output terminals that have been selected.

The following window will appear automatically whenever the drive is connected to SDWP001:

Close Project

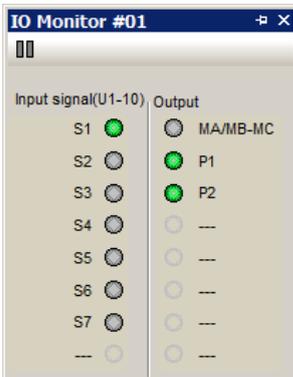
When the drive is not connected, the window will appear blank:



<I/O Monitor Screen (Drive Offline)>

Drive Online

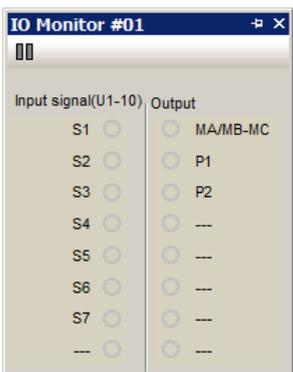
When the drive is connected, the following window will appear automatically:



<I/O Monitor Screen (Drive Online)>

Project Open

If a Project is open and the connection with the drive is suddenly interrupted, the window will appear as follows:

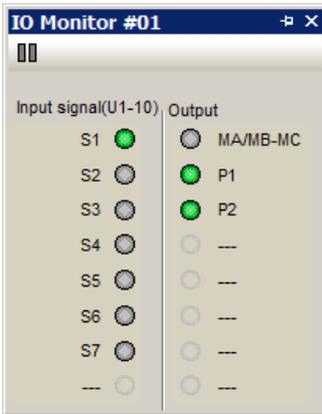


<I/O Monitor Screen (Drive Connection Interrupted)>

Main Screen Display

All monitor items appear automatically when viewing the I/O Monitor window.

I/O data will appear much like an LED display, indicating the terminal name and the current input/output status.

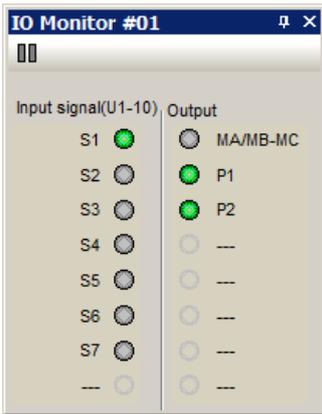


Display Status Switch

By clicking  in the Title Bar, you can switch the display status.

Auto-Reveal Monitor Status

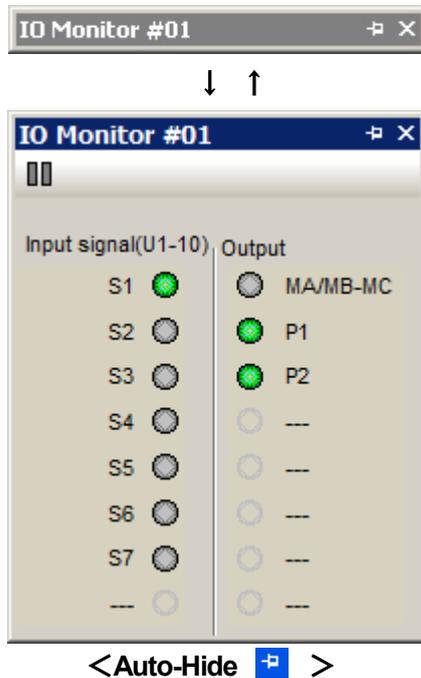
All items are usually displayed.



< **Auto Reveal Status**  >

Auto-Hide Monitor Status

When the display is hidden, the icon in the title bar will appear sideways. Click on the icon to reveal the entire window.

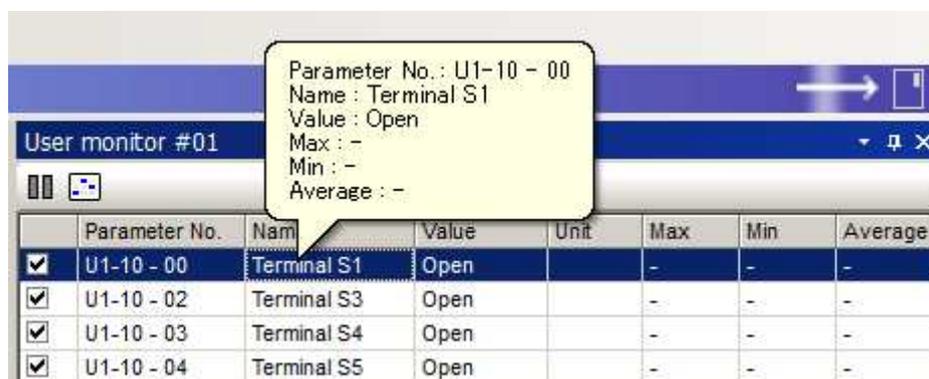


Monitor Start/Stop

Clicking  ("Monitor Start/Stop") will freeze the monitors at their current values. Click  again to update the monitors with data from the drive.

Tool Tips

If the mouse pointer rests on one of the monitors, a "tool tip" will appear listing monitor data.



4.4.4 Status Monitor

Status Monitors provide information on the operation status of the drive.

When the drive is first connected, the Status Monitor window is automatically opened.

Project Closed

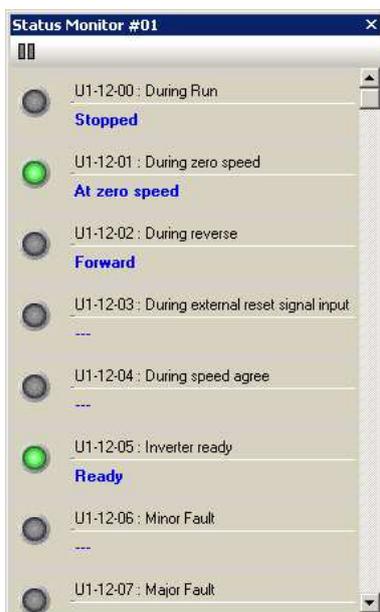
When the Status Monitor is first opened, it will appear blank:



< Status Monitor Window (Drive Offline) >

Drive Online

When the drive is connected, SDWP001 will display the following window.



< Status Monitor Window (Drive Online) >

Project Open

If the connection with the drive is suddenly interrupted, the Status Monitor window will appear as follows:



<Status Monitor Screen (Drive Connection Interrupted)>

Main Screen Display

Status Monitor automatically displays all monitor items.

Monitor numbers and names appear along side an LED-type of display.



Monitor Start/Stop

Clicking  ("Monitor Start/Stop") will freeze the monitors at their current values.

Click  again to update the monitors with data from the drive.

4.4.5 Movement Monitor

Movement Monitor displays the data selected in the Monitor Setting dialog box.

Project Closed

When a Project is first opened but no drive is connected, the Movement Monitor will appear blank:



<Movement Monitor Screen (Drive Offline)>

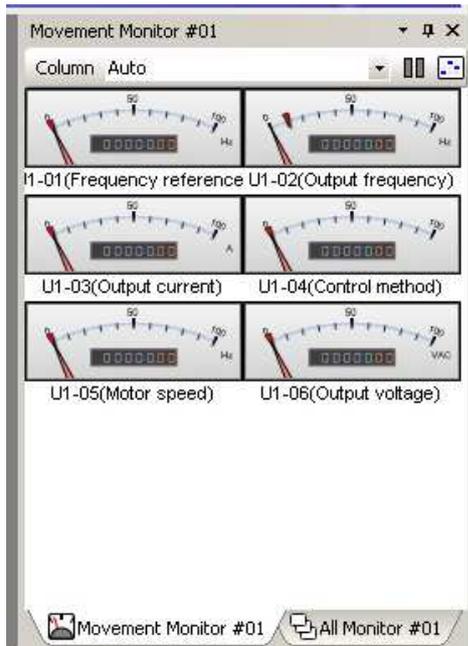
When Drive is Online

When the drive is first connected, the Movement Monitor window will appear blank:



<Movement Monitor Screen (Drive Online)>

As monitor items are added, the Movement Monitor window will appear like this:



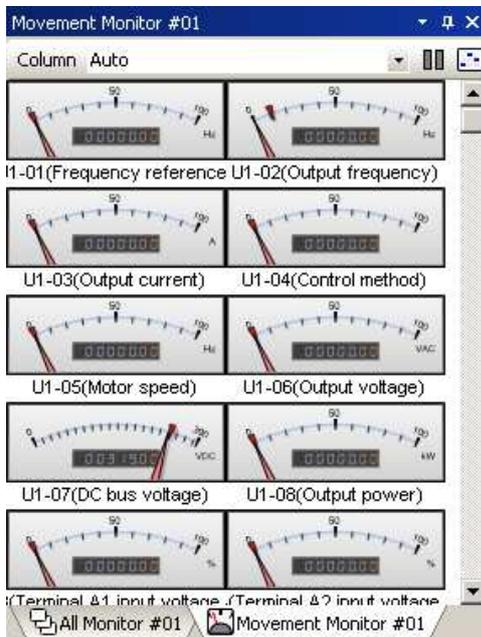
<Movement Monitor Screen (Drive Online, Monitors Items Added)>

Drive Connected and Project Opened

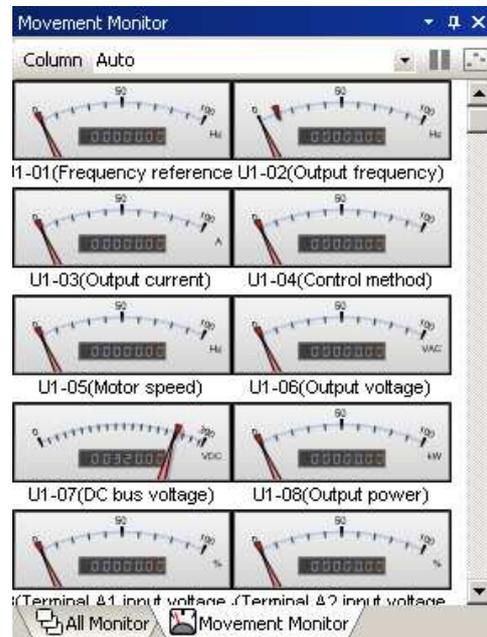
When the drive is connected and a Project is already opened, the monitor items that were already saved to the Project will automatically appear:

Project Open

If the drive connection is suddenly interrupted, the Movement Monitor will appear as follows:



<Movement Monitor Screen>
(Drive Online and Project Open)



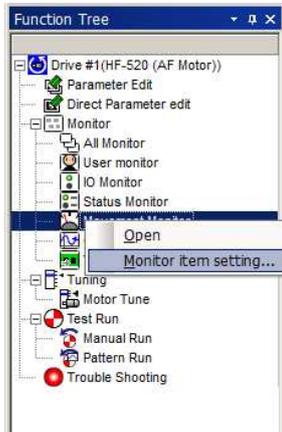
<Movement Monitor Screen>
(Drive Connection Interrupted)

Main Screen Display

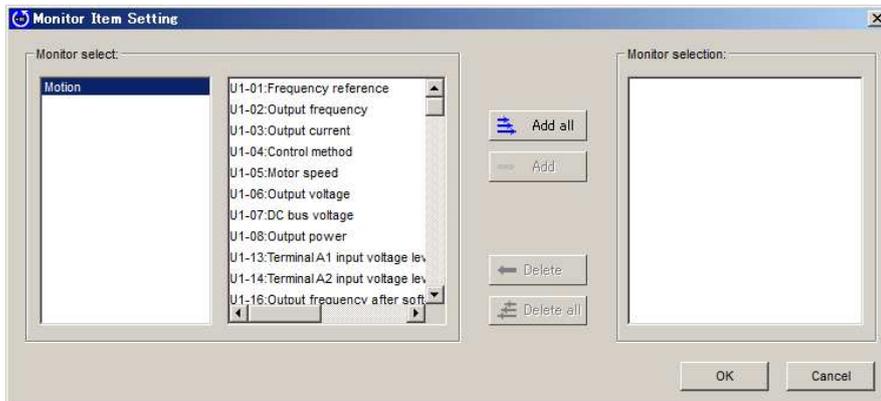
To display monitor items in the Movement Monitor window, follow the instructions below.

Each item selected will appear in the Movement Monitor with the monitor name, item, and a graphic meter display.

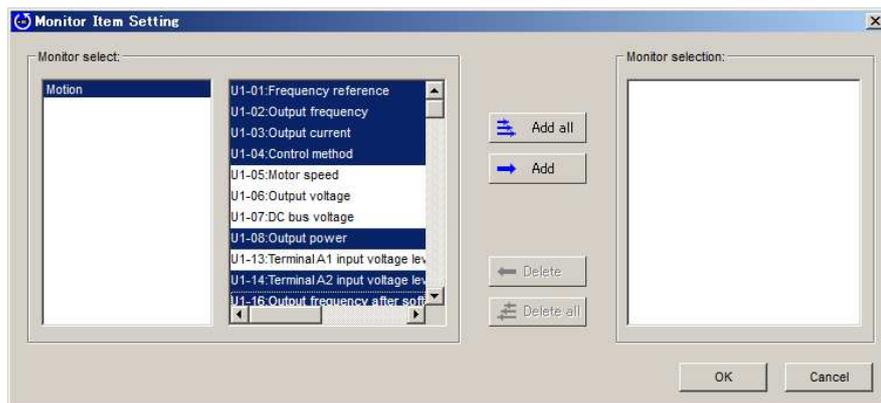
- 1) Right-click on "Movement Monitor" in the function tree.
The following pop-up menu will appear:



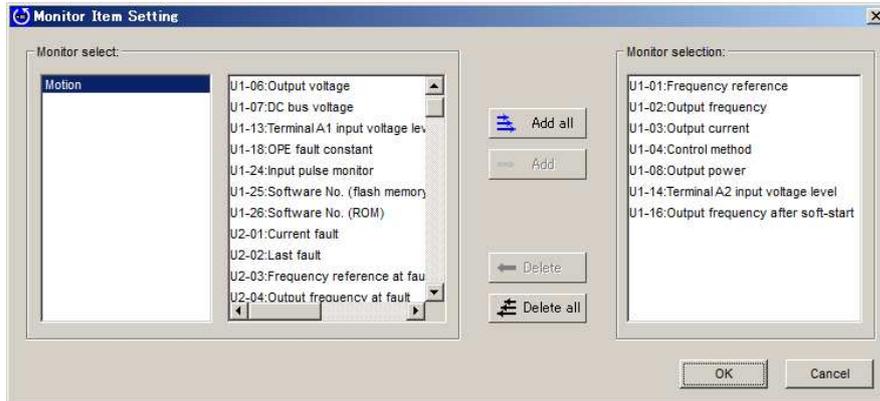
- 2) Select "Open Monitor Item Setting" to generate the following window:



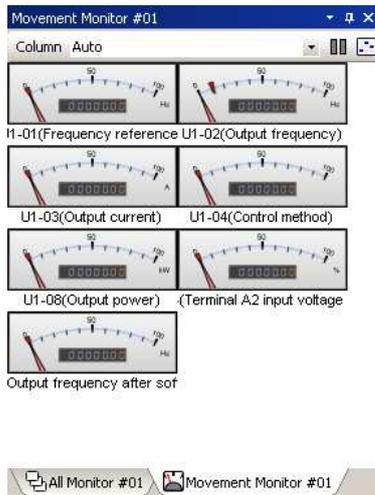
- 3) Select the items you would like to appear in the Movement Monitor window.
NOTE: Parameter categories that set monitor items do not need to be selected.



4) Click “Add”.



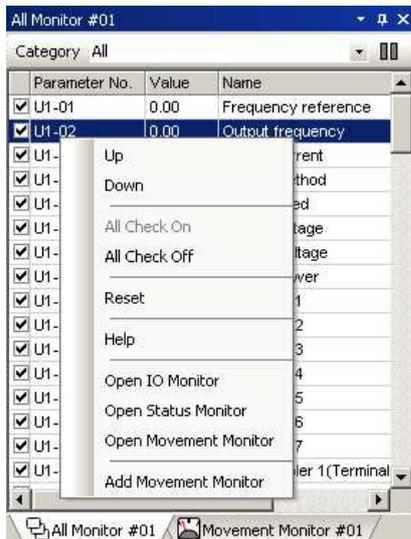
5) Click “OK” and the selected items will now appear in the Movement Monitor window.



You can also double-click on the Movement Monitor window to select items to add.

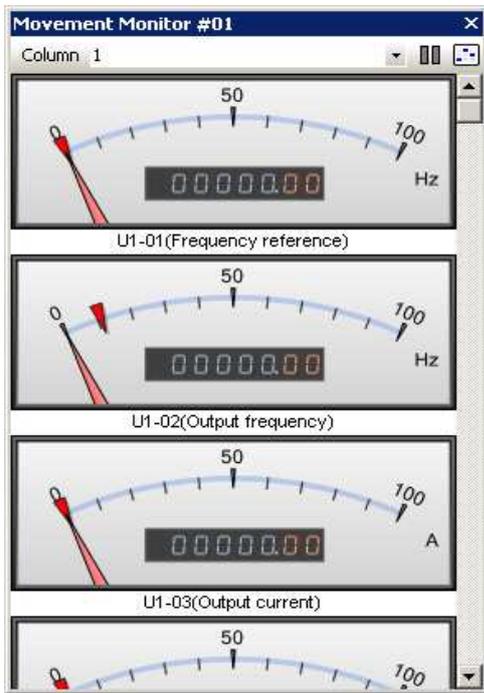
Right-clicking on “All Monitors” or “User Monitors” will generate a pop-up window that lets you add that monitor to the Movement Monitor window.

When the row selected is not part of the Movement Monitor, the pop-up menu will offer the option to disable the monitor.

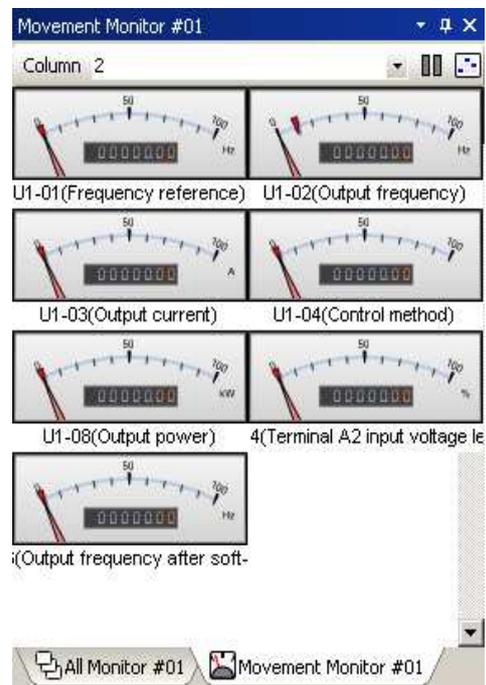


Arranging the Operation Status Display into Columns

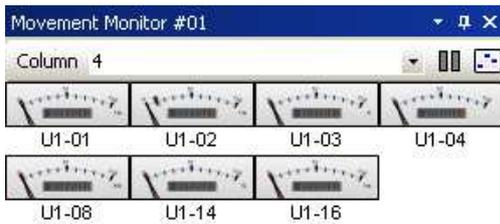
A drop-down menu lets you arrange the Operation Status meters into a single column or multiple columns.



<Single-column display>



<Double-column display>



<Four-column display>

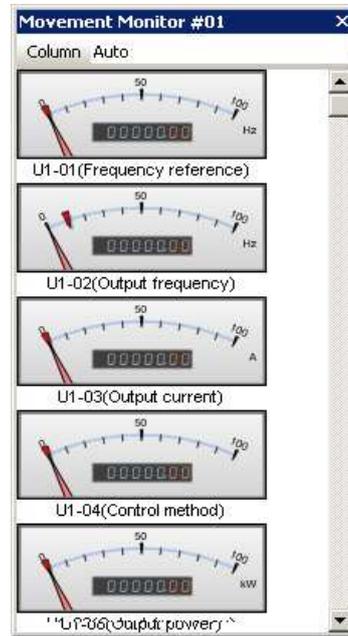
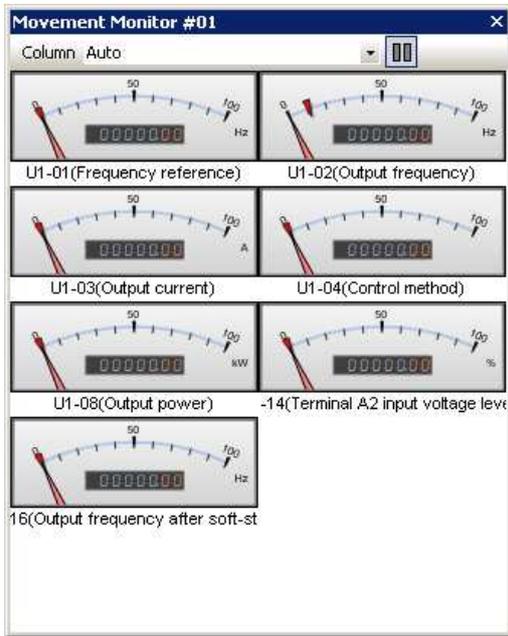


Resize

The size of the Movement Monitor window will change depending on how many columns have been selected.

Automatically Arrange Monitors

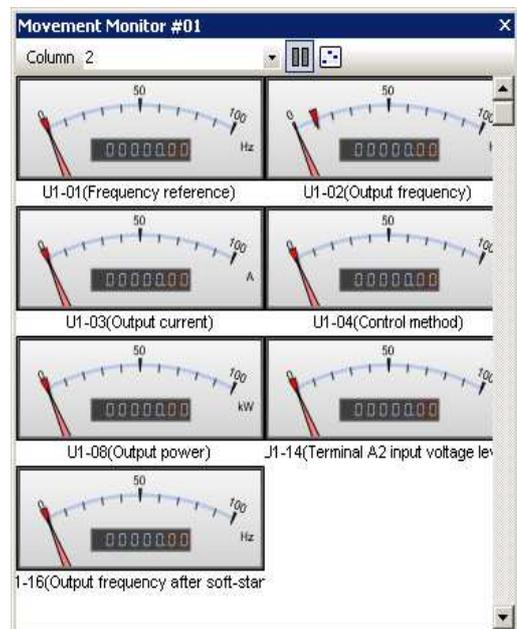
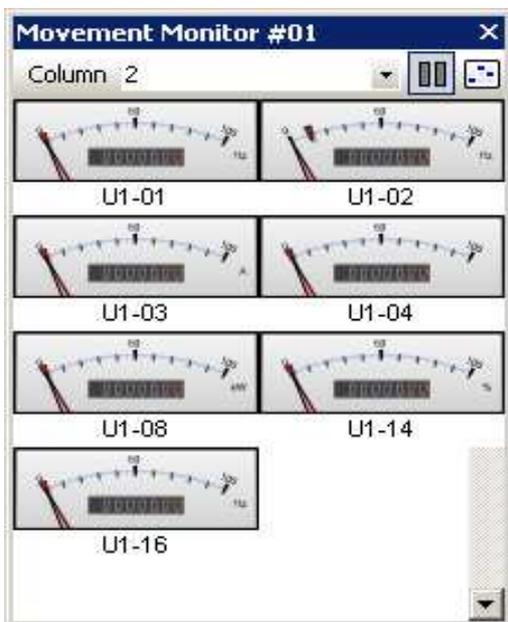
This automatically sets the size of the meter display to fit inside the window.



<Before Resizing(Number of Columns Set Automatically)> <After Resizing>

Adjusting the window size with a fixed number of columns

You can adjust the size of the meters by enlarging or shrinking the window where they appear. Here, the number of columns displayed will remain the same as the size of the window changes.



<Before Resizing> (Number of Columns Fixed)

<After Resizing>

Monitor Start/Stop

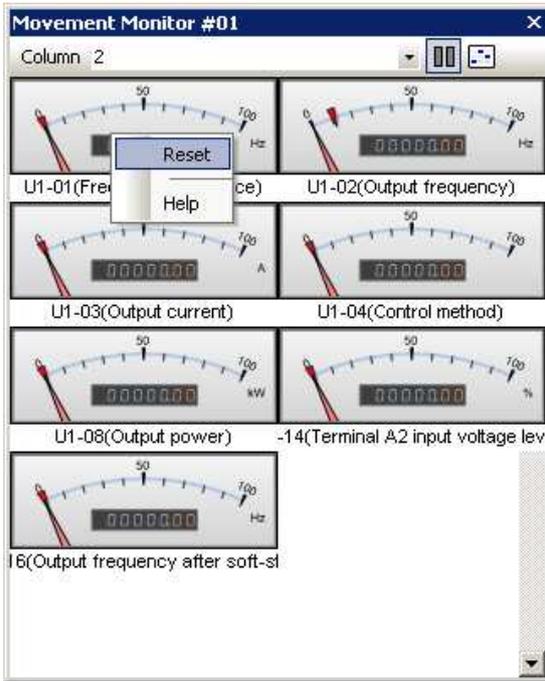
Clicking  ("Monitor Start/Stop") will freeze the monitors at their current values.

Click  again to update the monitors with data from the drive.

Resetting the maximum value

Right-clicking on the Movement Monitor window will produce a pop-up menu.

You can reset the maximum value displayed by selecting Reset in this menu.



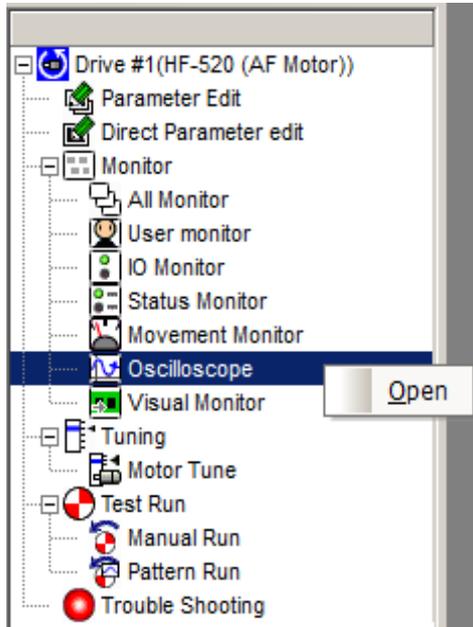
4.4.6 Oscilloscope

The oscilloscope function lets the user view and measure changes to various aspects of drive and motor performance over time.

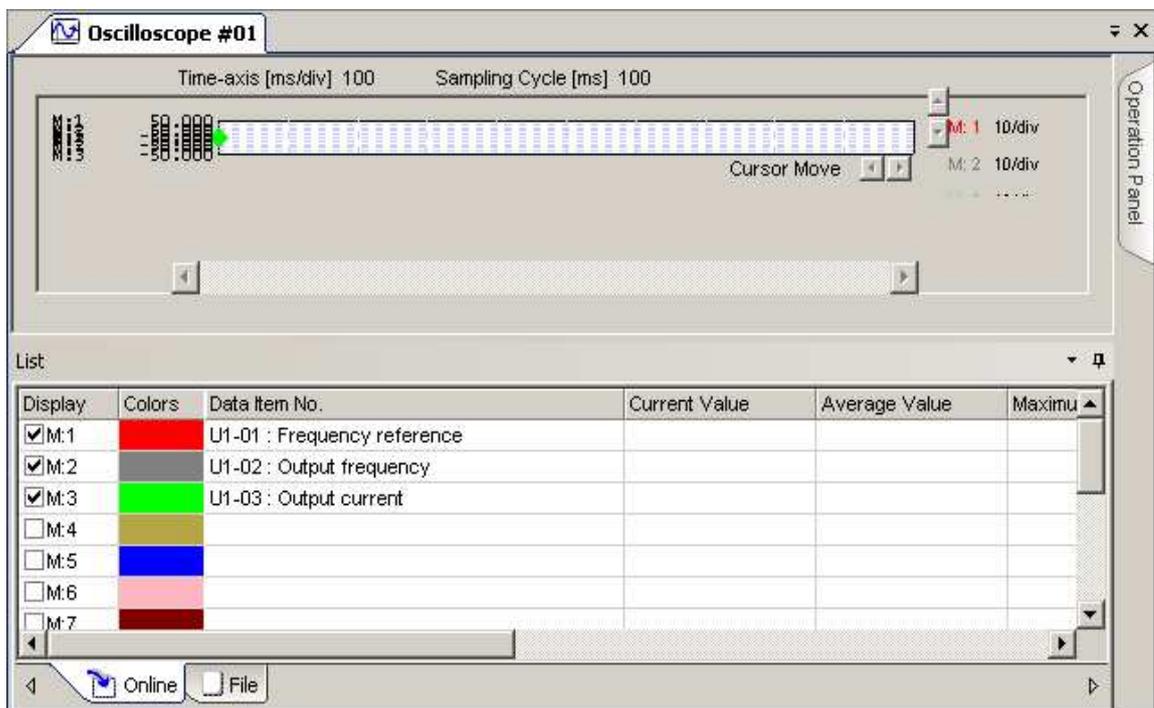
Main Screen Display

To activate the Oscilloscope from the main screen, follow the instructions below.

- 1) Right-click on the Oscilloscope in the Function Tree and select Open from the pop-up menu.

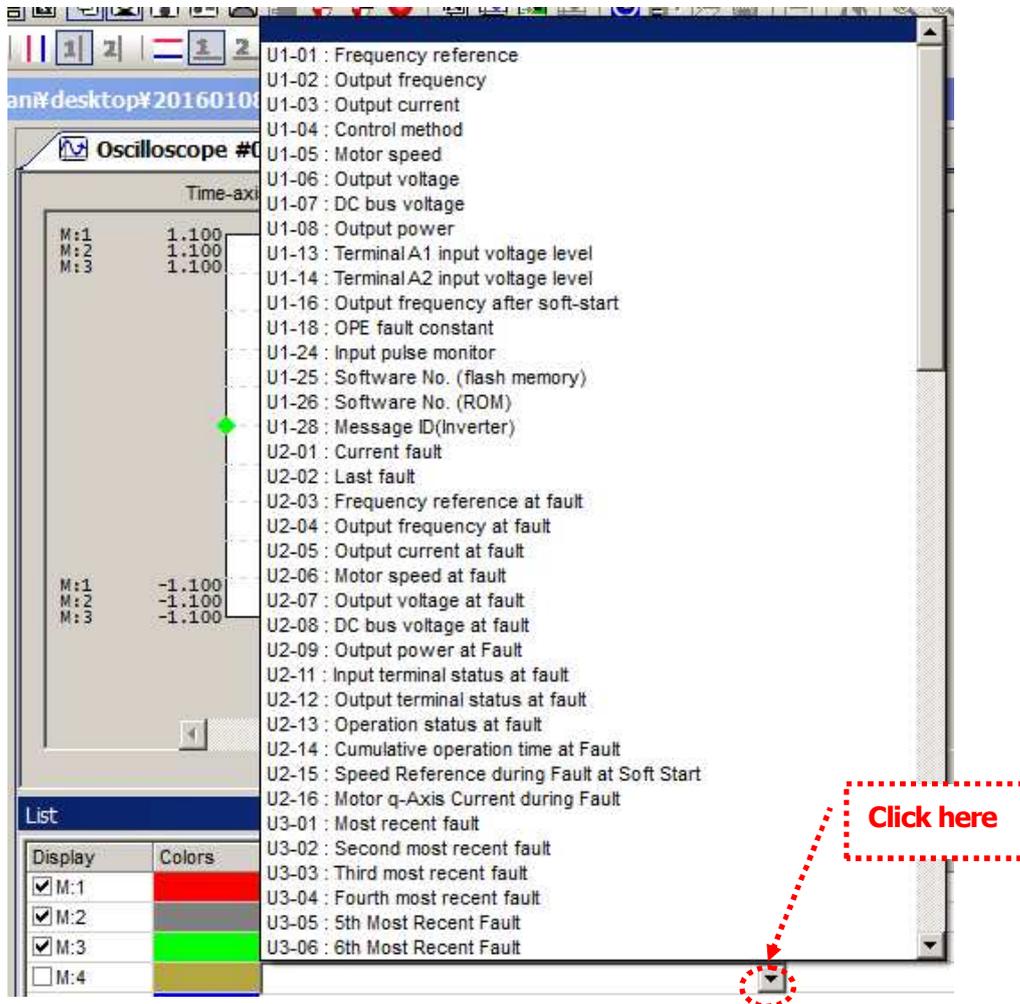


- 2) If the drive is online, the following window will appear:



Starting and stopping the monitor

- 1) Click on the bottom of the window and select the desired monitor from the pop-up window.
NOTE: If the desired parameter is already part of the default display, then this step is not necessary.



- 2) From the display column, check the desired monitor item “MN(N = 1 - 16)”.

Display	Colors	Data Item No.	Current Value	Average Value
<input checked="" type="checkbox"/> M:1	Red	U1-01 : Frequency reference		
<input checked="" type="checkbox"/> M:2	Grey	U1-02 : Output frequency		
<input checked="" type="checkbox"/> M:3	Green	U1-03 : Output current		
<input type="checkbox"/> M:4	Blue			

- 3) Monitors can be started either by selecting Monitor (M) from the Main Menu, or by clicking the moitor start button on the operation panel.



<Starting from the Main Menu>

<Using the Toolbar>

<Using the operation panel>

- 4) Monitors can be stopped either by selecting Monitor (M) from the Main Menu, the toolbar, or the operation panel.



Operation Panel

Clicking the "Operation Panel" tab on the right side of the window will generate the following window:

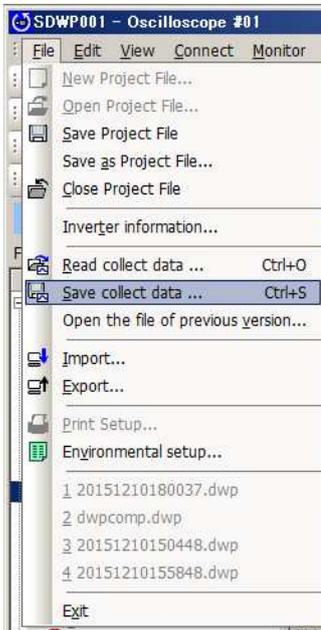
The 'Operation Panel' window contains the following controls and settings:

- Monitor:** A play button and a red square icon. **Starts and stops the monitor**
- ch Operation:**
 - Online: Adjusts the scale of data selected from an online file. File is enabled by the data that is read.
 - File: File is enabled by the data that is read.
- Operation Objects:** A grid of buttons labeled M:1 through M:16. M:1 is highlighted with a red background. **Selects the data to control (M1 - M16 when online, F1- F16 when offline). If the data selected has been allotted to a parameter, then that parameter name will be displayed**
- U1-01:Frequency refer**
- Setup Scale:**
 - Y-axis(Value/div):** A dropdown menu set to 'Auto'. **Sets the y axis. The scale for parameter data values is set automatically as a default. You can specify various graph settings. Change the y axis using the up and down arrows to set the desired value.**
 - Offset:** A checkbox labeled '1 div' and a numeric input field set to '0'.
- Time-axis Op:** A checkbox labeled 'Auto'.
- Time-axis(Time/div) [ms]:** A numeric input field set to '100'. **Sets the x axis. Check "Auto" to have the selected data displayed. Change the x axis using the up and down arrows to set the desired value.**

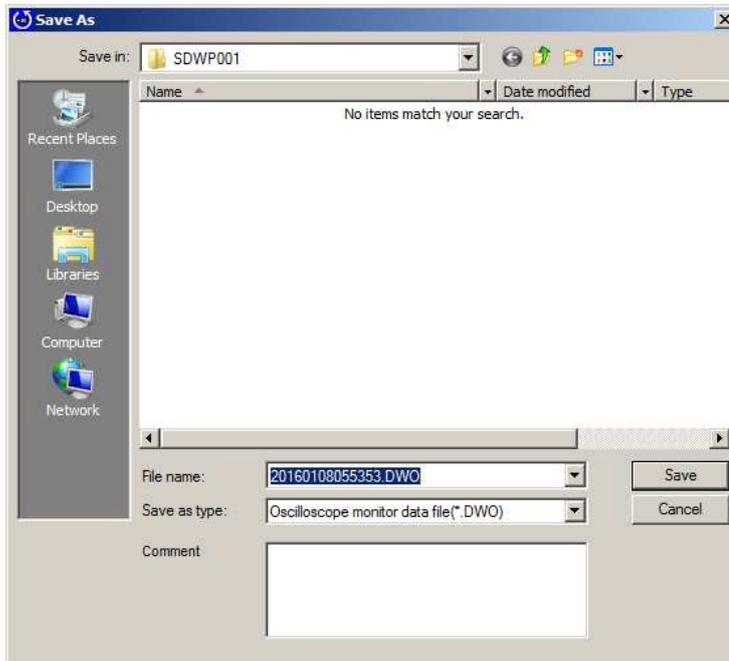
Saving and reading the data collected

Saving data

- 1) Start the monitor and collect the desired data. Stop the monitor when finished.
- 2) Next select “Save collect data” from the File (F) menu, or click  on the toolbar.



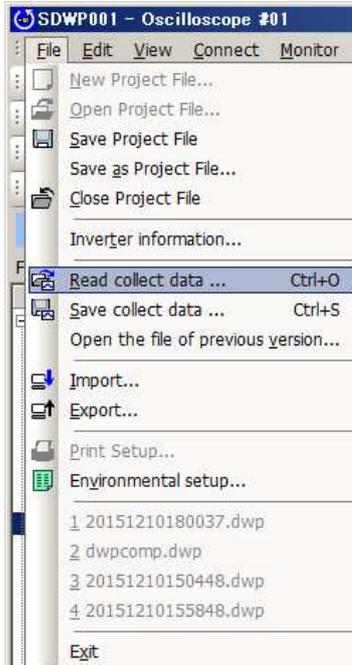
- 3) The save dialog box will appear. Enter a file name.



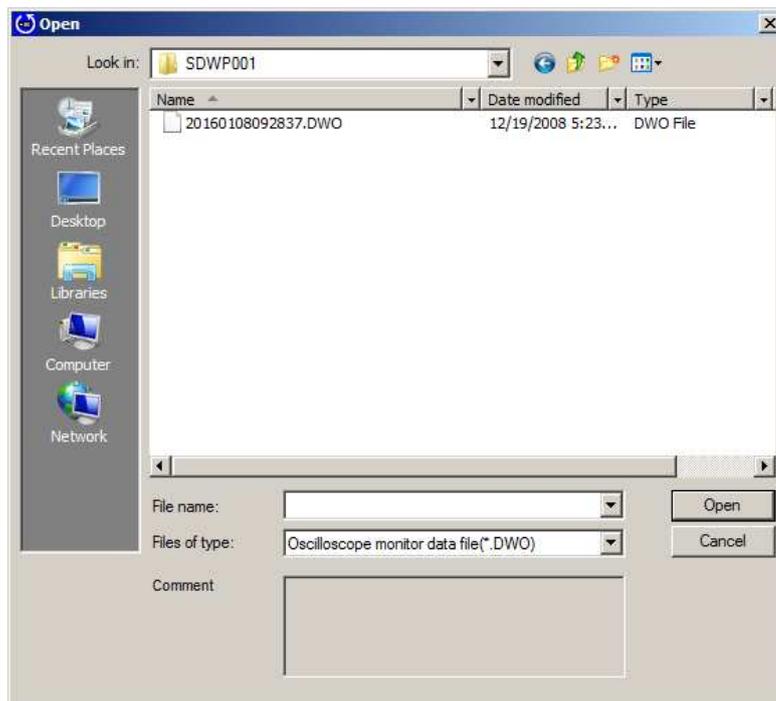
- 4) Click “Save” to save the data.

Reading data that has already been saved

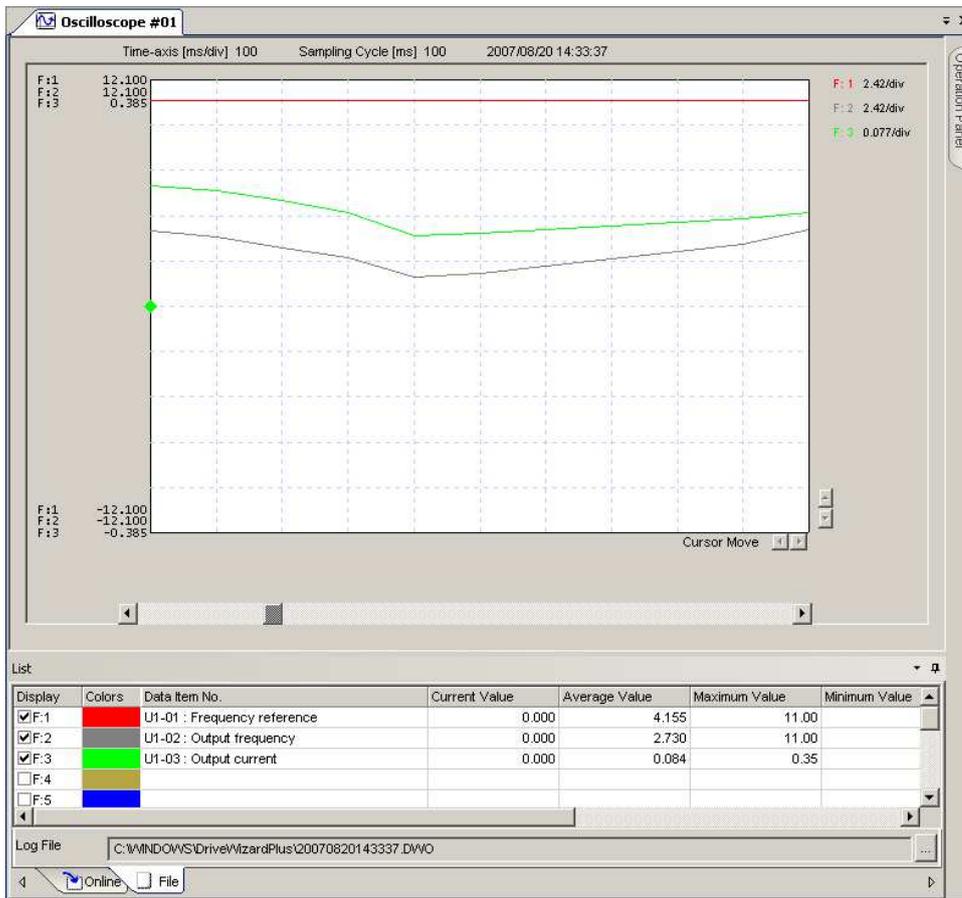
- 1) From "File (E)", select "Read collect data" You can also click  on the toolbar.



- 2) The following dialog box will appear. Select the desired file and click "Open".

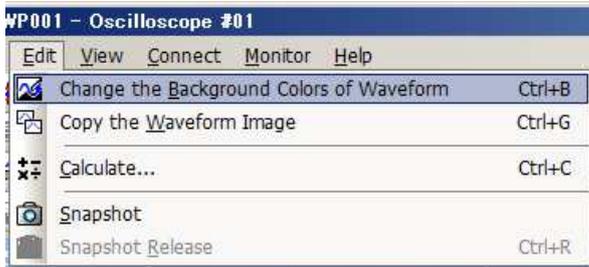


3) The file name appears on the list display, and the data read from the file will appear in the graph.

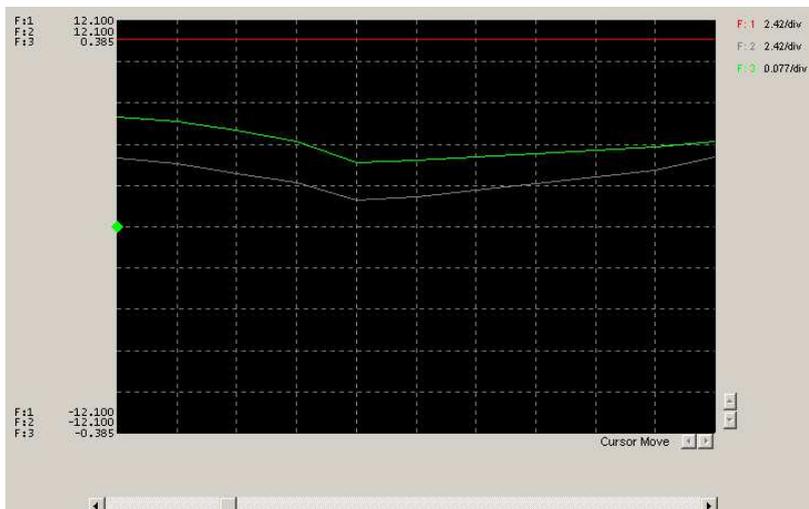
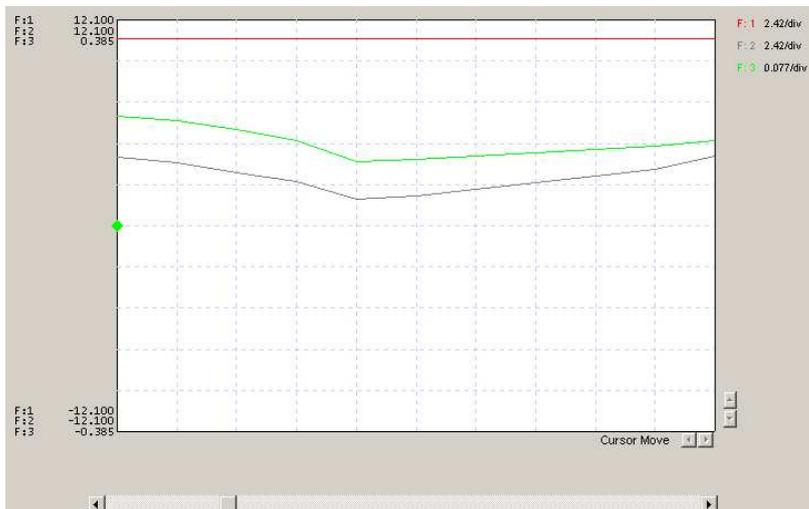


Switching Waveform Background Color

- 1) Change the background color for the waveform by going to Edit (E) in the Main Menu or by clicking on  .

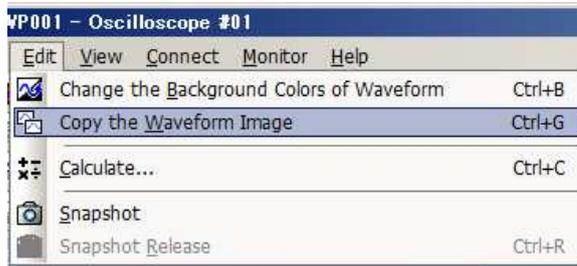


Background color can be set to black or to white.

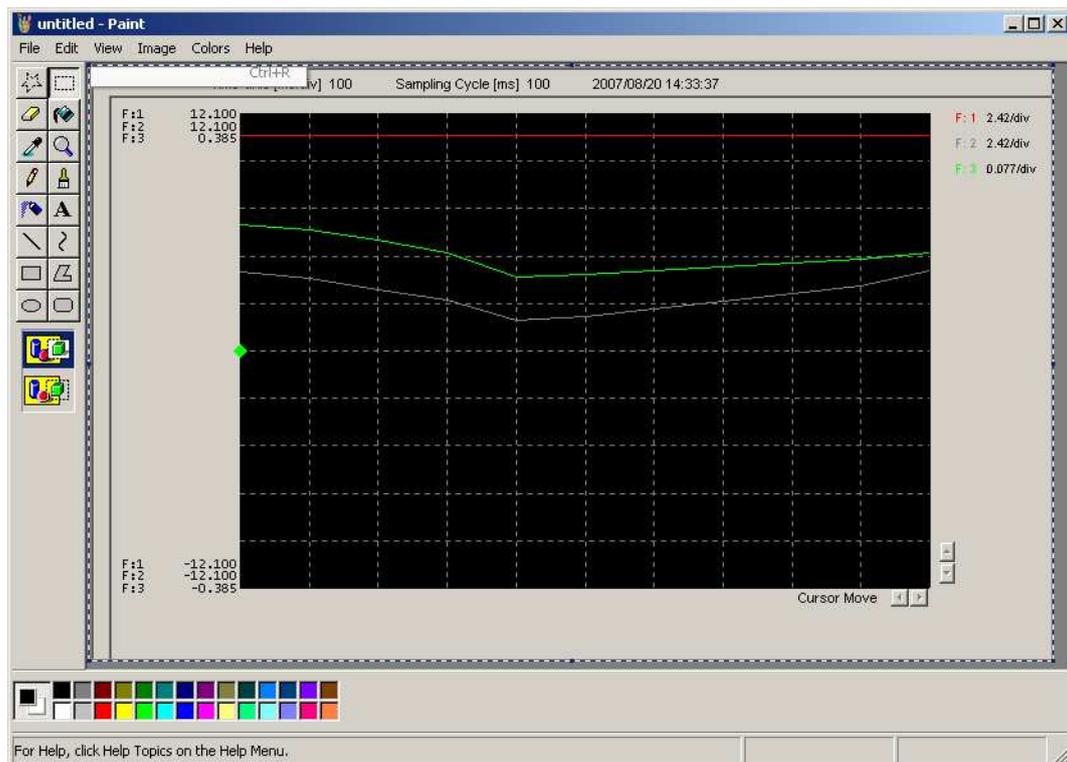


Waveform Image Copy

- 1) Go to Edit (E) in the Main Menu and select "Copy the Waveform Image", or click  in the Toolbar.

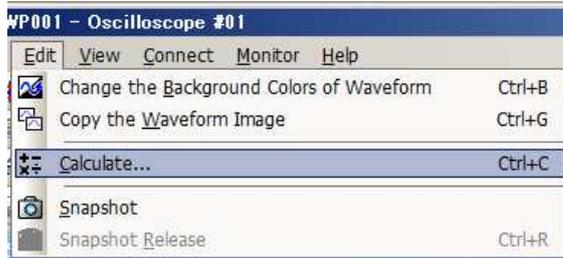


- 2) You can then paste the picture into Microsoft® Paint or another graphics editor.

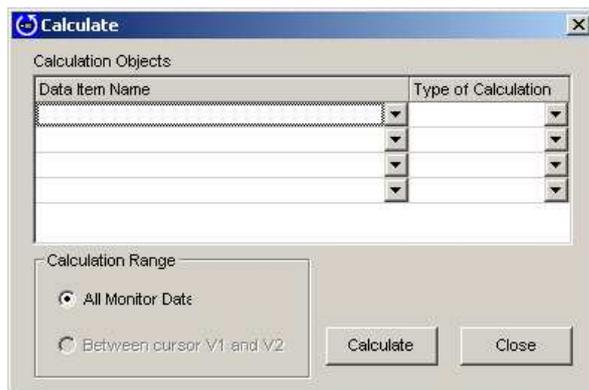


Data Calculation Functions

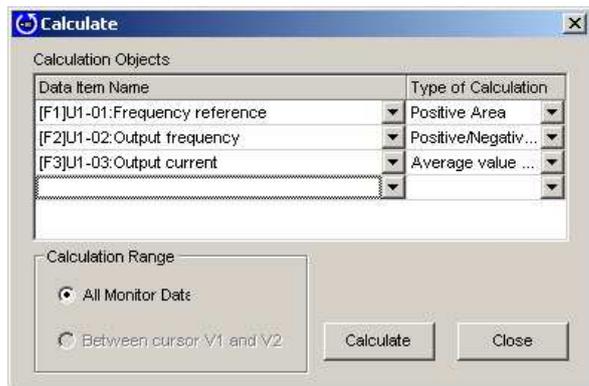
- 1) Go to the Edit (E) menu and select “Calculate”. You can also click on  in the Toolbar.



- 2) The Calculate dialog box will appear.



- 3) Use the drop-down menu to select the parameter in the Data column, and then the type of calculations on the right.



- 4) Click “Calculate” to generate the graph as shown below.



NOTE: Use the cursor to have SDWP001 calculate values within a specified range in the graph.

Taking and Clearing a Snapshot

- 1) Go to Edit in the Main Menu and select "Snapshot". You can also click on  in the Toolbar.



- 2) The portion of the graphs taken with the Snapshot function will appear in gray.



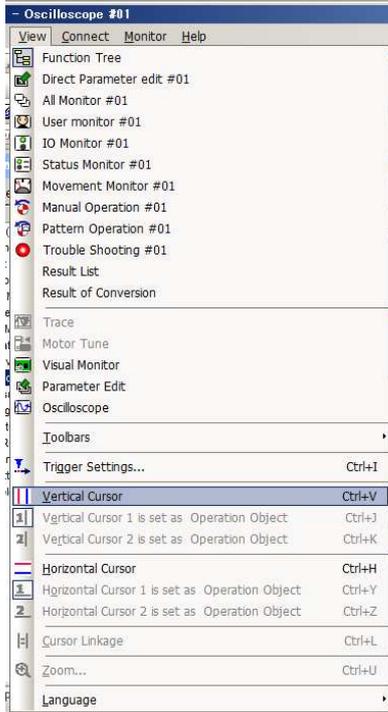
- 3) To clear the Snapshot data, go the Edit menu and select Snapshot Release, or click  on the Toolbar.



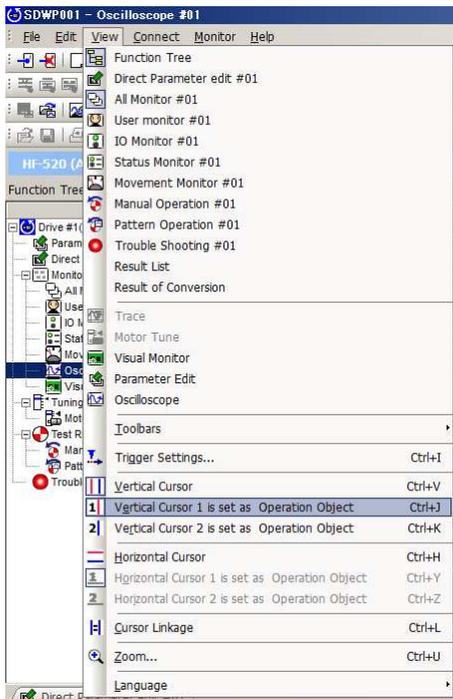
Cursor Display

Using the vertical cursor

- 1) Go to the View (V) menu and select Vertical Cursor (V) or click on  in the toolbar.



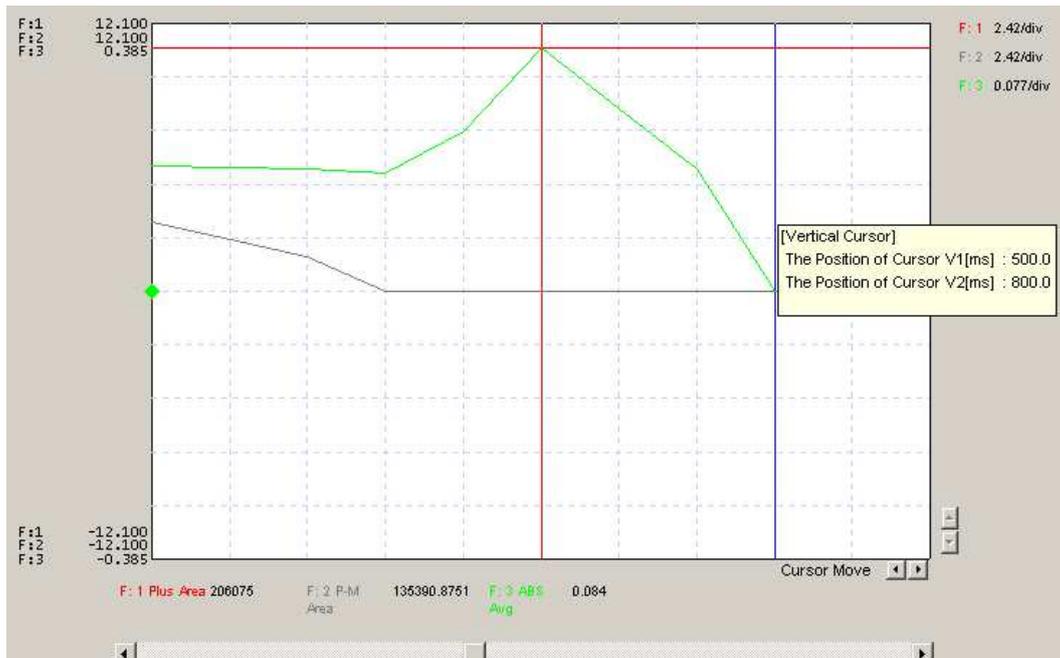
- 2) Set the cursor by selecting "Vertical Cursor 1 is set as Operation Object" from the View (V) menu shown below.



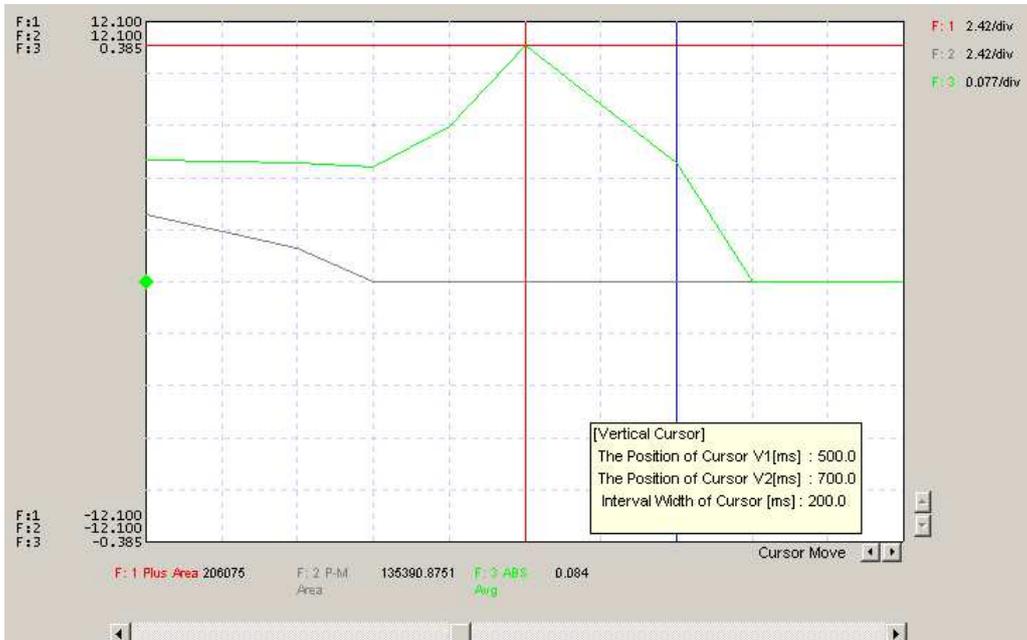
3) After selecting, "Vertical Cursor 1 is set as Operation Object", click on the graph to position the cursor.



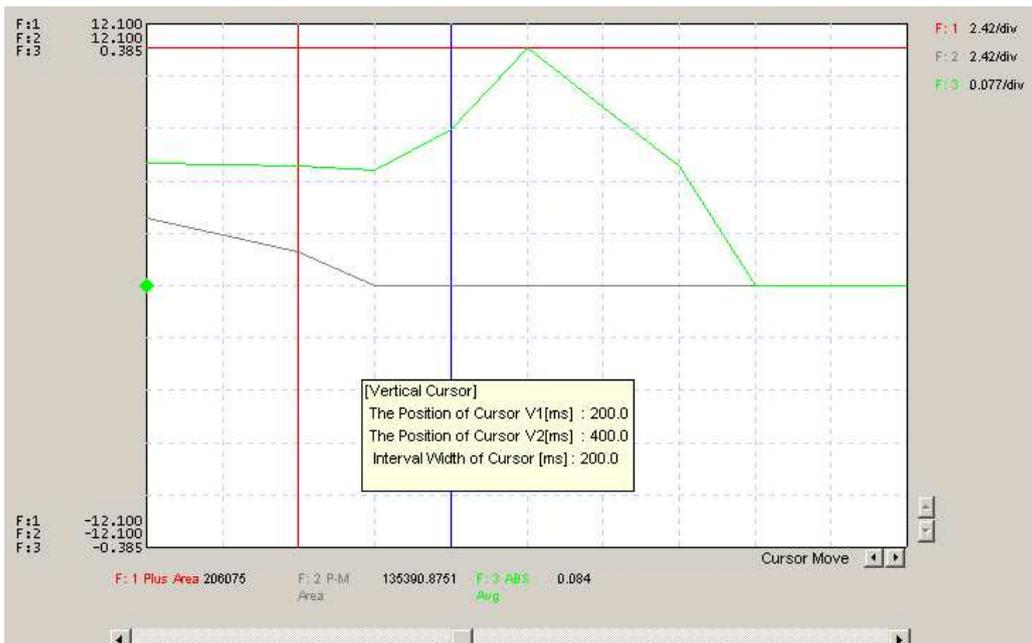
4) Select "Vertical Cursor 2 is set as Operation Object", click on the graph to place the next cursor.



- 5) You can now use the mouse to move the cursors.
Data within the cursor will appear along side the graph.

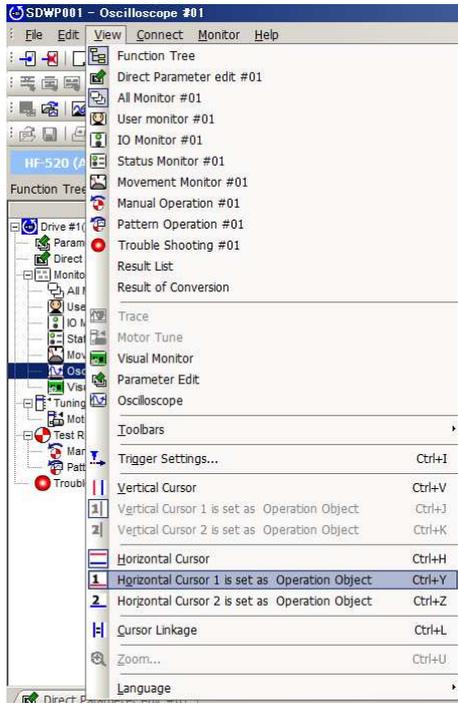


- 6) You Move the cursor by selecting “Cursor Linkage (C)” from the View (V) menu and then adjusting the space between both cursors using the mouse.

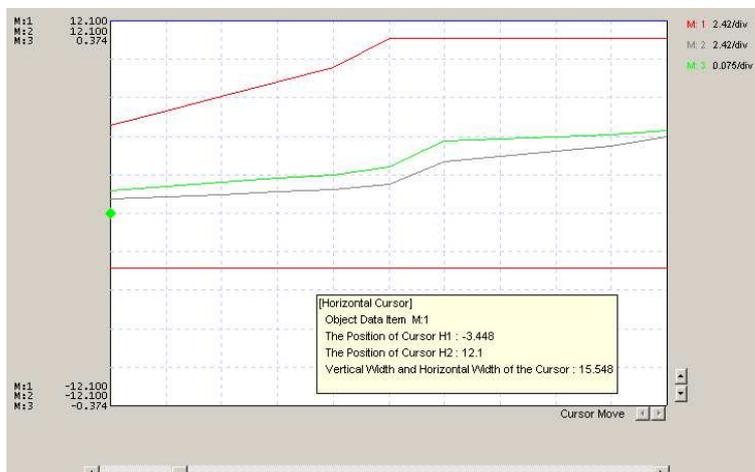


Using the horizontal cursor

- 1) Go to the View (V) menu and select Horizontal Cursor (H) or click on  in the toolbar.



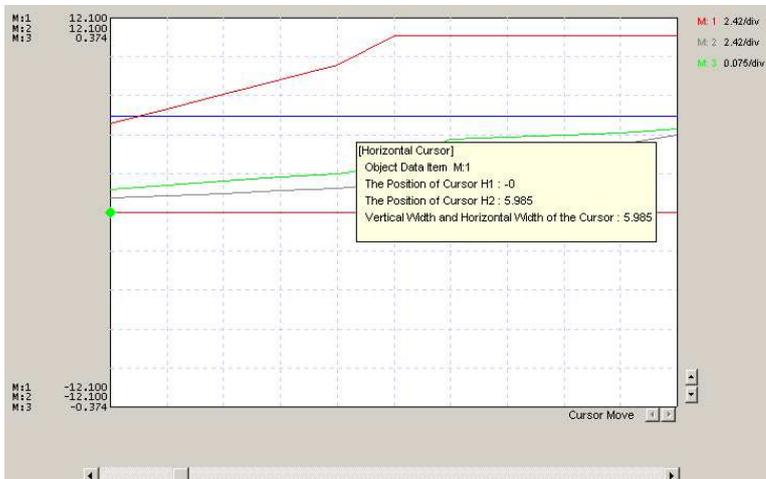
- 2) Set the cursor by selecting “Horizontal Cursor 1 is set as Operation Object” and “Horizontal Cursor 2 is set as Operation Object” from the View (V) menu shown below.
- 3) After selecting, “Horizontal Cursor 1 is set as Operation Object”, click on the graph to position the cursor.



- 4) Select “Horizontal Cursor 2 is set as Operation Object”, and click on the graph to place the next cursor.



- 5) You can now use the mouse to move the cursors. Data within the cursor will appear along side the graph.

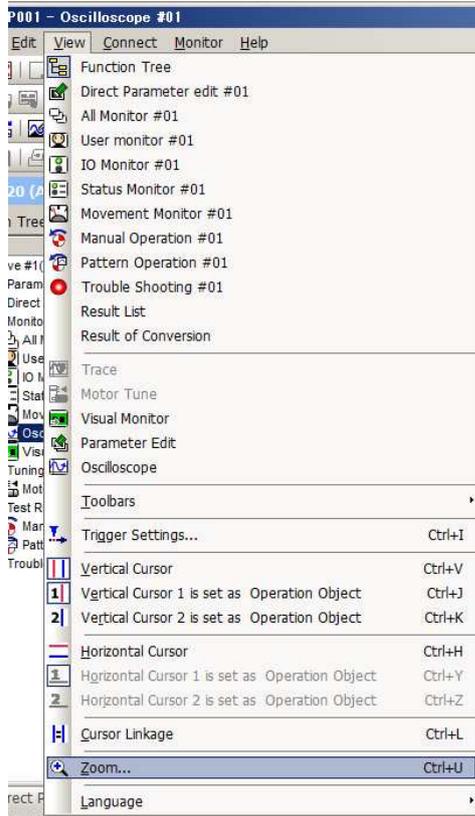


- 6) Move the cursor by selecting “Cursor Linkage (C)” from the View (V) menu and then adjusting the space between both cursors using the mouse.

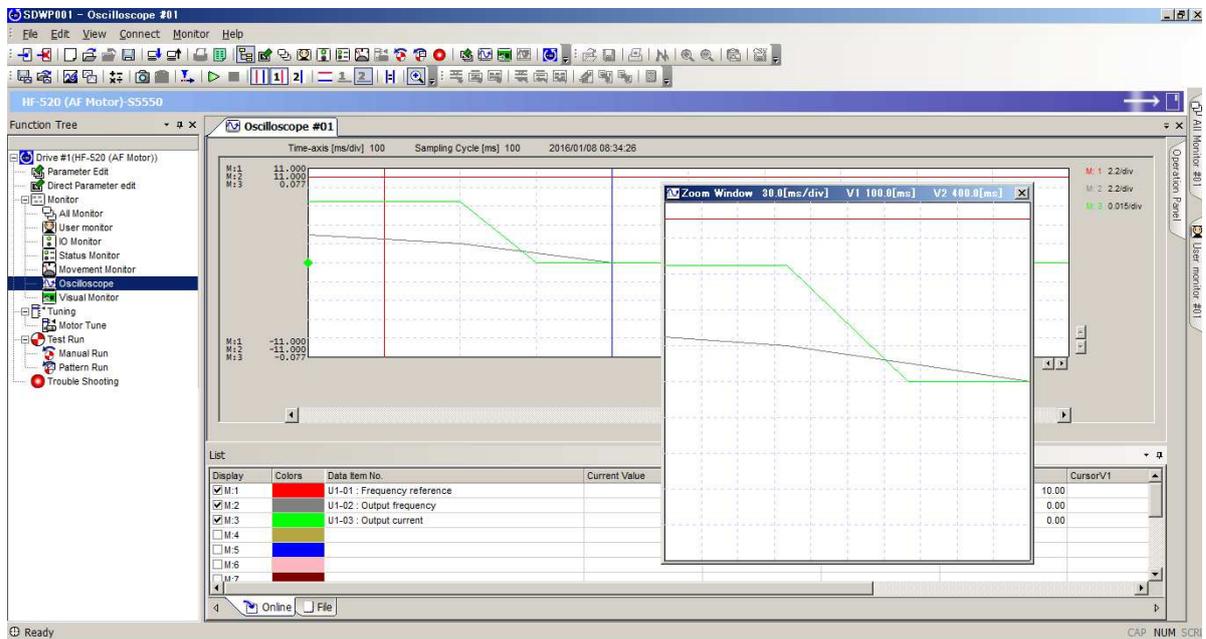


Zoom

You can enlarge the area between the two vertical cursors either by clicking on  in the toolbar or by selecting Zoom (Z) from the View (V) menu.



The area selected will appear as an enlarged image in a separate window.

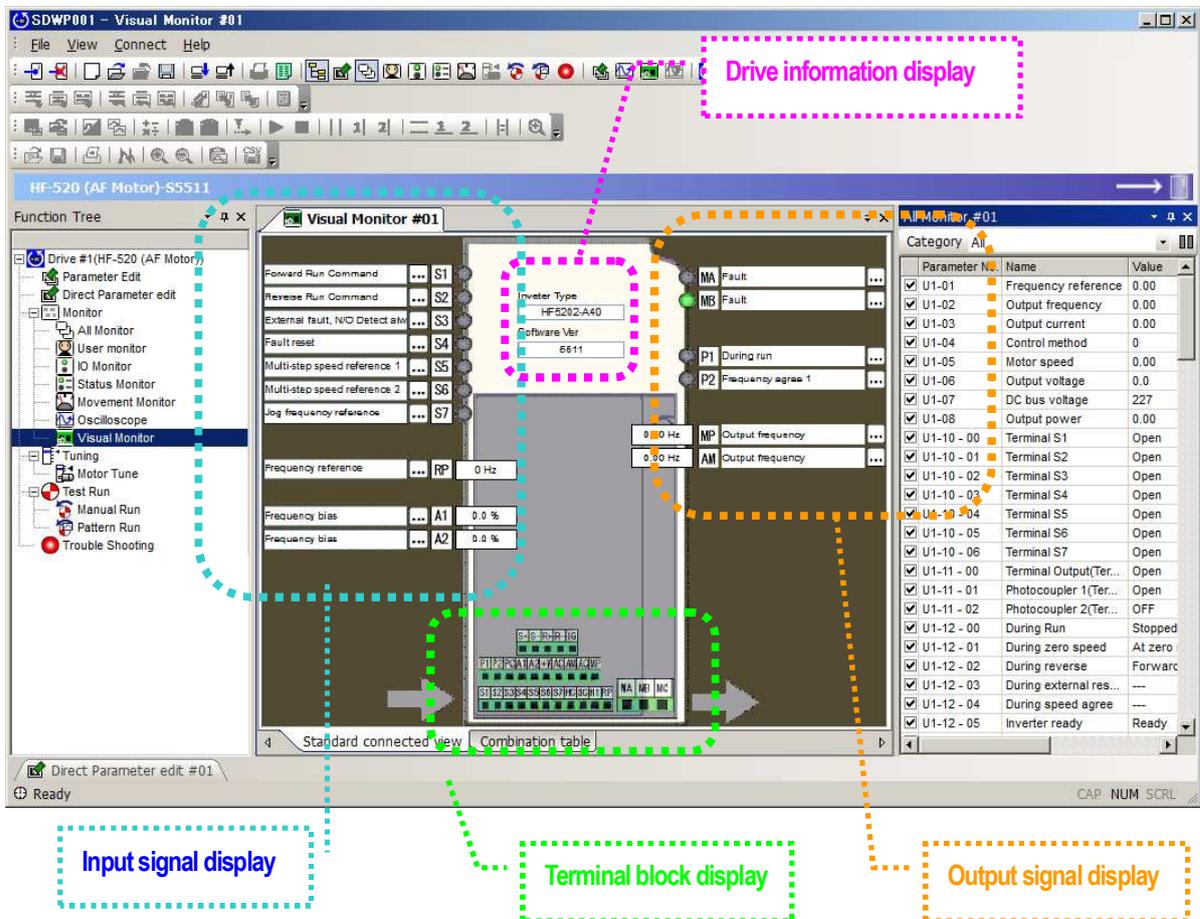


4.4.7 Visual Monitor

The Visual Monitor provides a visual display of the drive operation status and current settings. The image will appear much like a standard wiring diagram.

4.4.7.1 Standard Connection Diagram

The screenshot below indicates the various display features of the Visual Monitor.

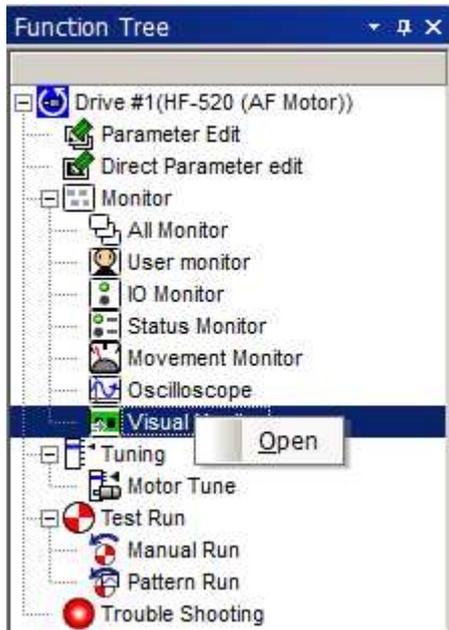


- **Drive Data Display**
Displays data on the drive that is currently connected.
- **Input Signal Display**
Displays data for the drive's input terminals.
- **Output Signal Display**
Displays data for the drive's output terminals.
- **Terminal Block Display Range**
Displays data for the terminal block settings in the drive.

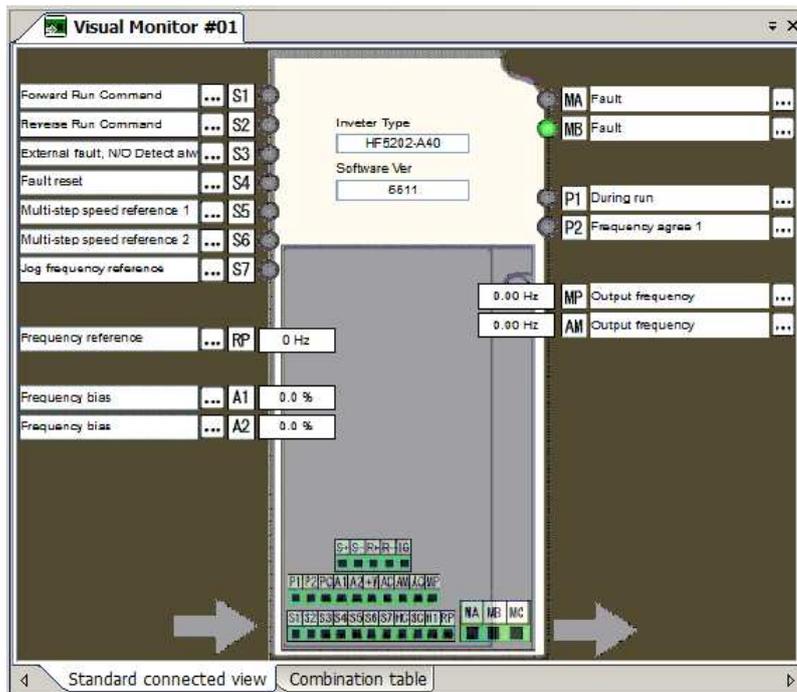
Standard Connection Diagram Screen Display

To display the connection diagram using the Visual Monitor Function, follow the instructions below:

- 1) Right-click on the Visual Monitor icon in the Function Tree to generate the pop-up menu shown below.



- 2) Selecting "Open" will produce the window below:



Parameter Edit Screen Display

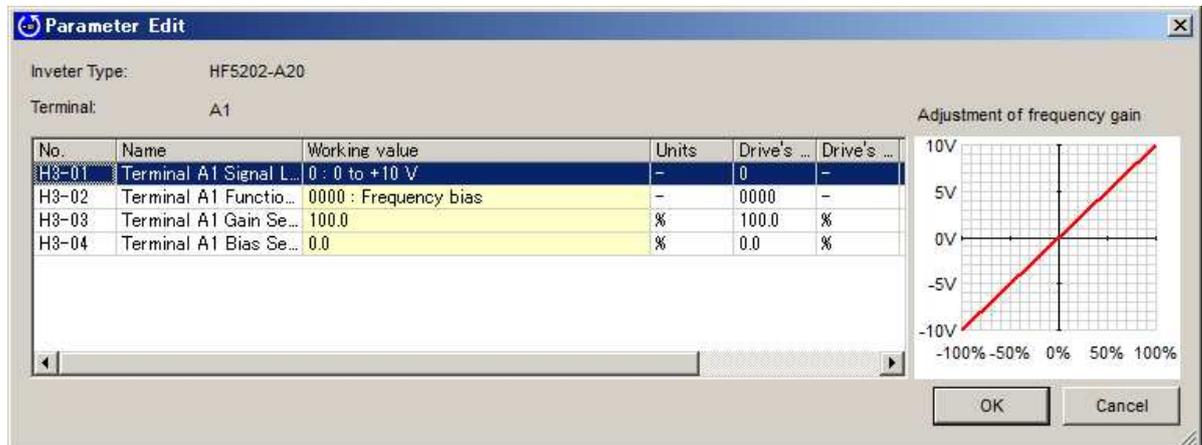
There are three ways to go to the Parameter Edit window from the Standard Connection Diagram.

The Parameter Edit Screen is displayed by clicking on **...**.

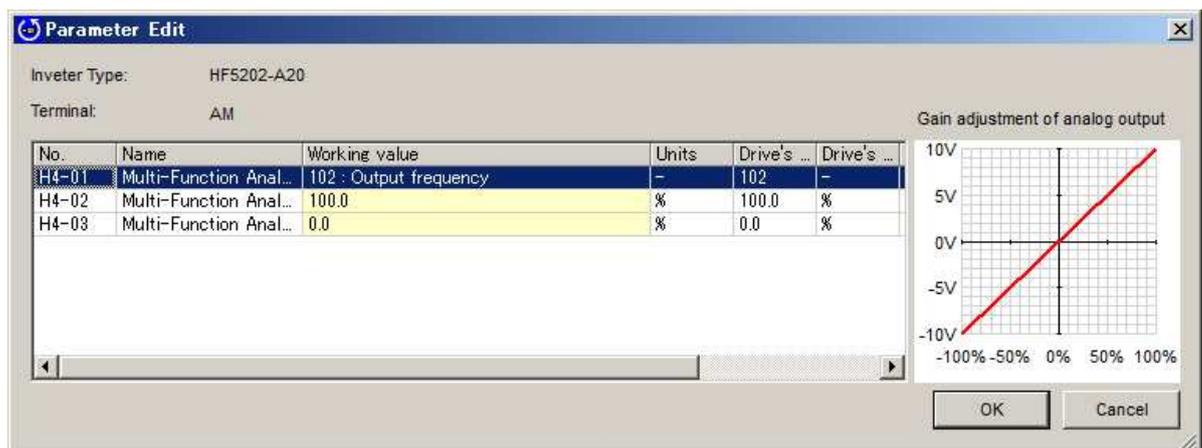
- Display the Parameter Edit window from the bit I/O parameter.



- Display the Parameter Edit window from the Analog Input Parameter.



- Display the Parameter Edit window from the Analog Output Parameter.



4.4.7.2 Terminal Combination for Speed Selection Window

Features of the Terminal Combination for Speed Selection Window appear below:

Multi-step Spee...	Multi-step Speed2	Multi-step Spee...	Multi-step Spee...	JOG frequen...	Parameters	Frequency Reference
OFF	OFF	OFF	OFF	OFF	b1-01=0	Instruction from d1-01
OFF	OFF	OFF	OFF	OFF	b1-01=1	Instruction from terminal
OFF	OFF	OFF	OFF	OFF	b1-01=2	Instruction from MEMOB...
OFF	OFF	OFF	OFF	OFF	b1-01=3	Instruction from option ...
OFF	OFF	OFF	OFF	OFF	b1-01=4	Instruction from pulse r...
ON	OFF	OFF	OFF	OFF	H3-05 != 2 , H3-09 != 2	Instruction from d1-02
ON	OFF	OFF	OFF	OFF	H3-05 != 2 , H3-09=2	Instruction from terminal...
ON	OFF	OFF	OFF	OFF	H3-05=2 , H3-09 != 2	Instruction from terminal...
OFF	ON	OFF	OFF	OFF	H3-05 != 3 , H3-09 != 3	Instruction from d1-03
OFF	ON	OFF	OFF	OFF	H3-05 != 3 , H3-09 != 3	Instruction from terminal...
OFF	ON	OFF	OFF	OFF	H3-05=3 , H3-09 != 3	Instruction from terminal...
ON	ON	OFF	OFF	OFF	-	Instruction from d1-04
OFF	OFF	ON	OFF	OFF	-	Instruction from d1-05
ON	OFF	ON	OFF	OFF	-	Instruction from d1-06
OFF	ON	ON	OFF	OFF	-	Instruction from d1-07
ON	ON	ON	OFF	OFF	-	Instruction from d1-08
OFF	OFF	OFF	ON	OFF	-	Instruction from d1-09
ON	OFF	OFF	ON	OFF	-	Instruction from d1-10
OFF	ON	OFF	ON	OFF	-	Instruction from d1-11
ON	ON	OFF	ON	OFF	-	Instruction from d1-12
OFF	OFF	ON	ON	OFF	-	Instruction from d1-13
ON	OFF	ON	ON	OFF	-	Instruction from d1-14
OFF	ON	ON	ON	OFF	-	Instruction from d1-15
ON	ON	ON	ON	OFF	-	Instruction from d1-16
OFF	OFF	OFF	OFF	ON	-	Instruction from d1-17

Displaying the Terminal Combination for Speed Selection Window

To call up the Terminal Combination for Speed Selection Window using the Visual Monitor, open the Visual Monitor, then select the tab at the bottom of the window marked "Combination Table"



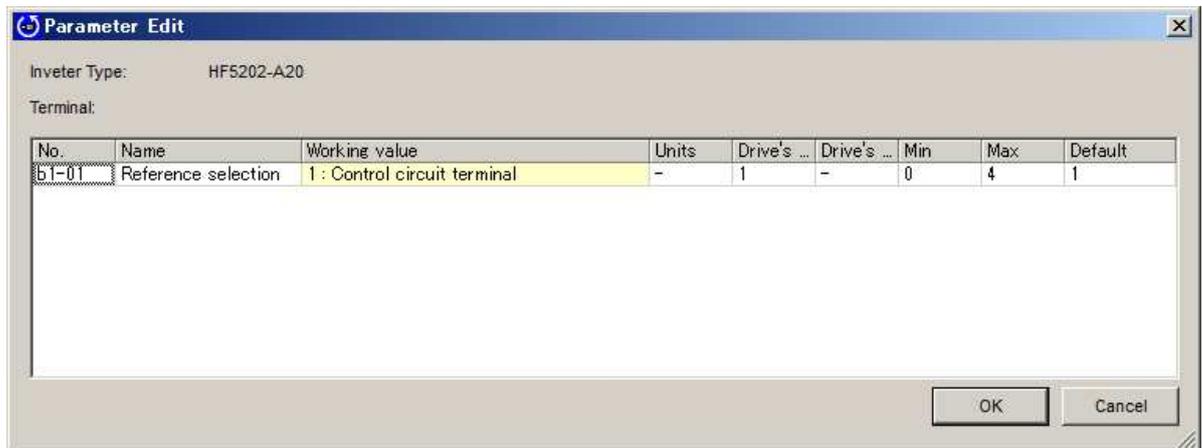
Displaying the Parameter Edit Screen

Follow the procedure below to open the Parameter Edit window from the Combination table:

- 1) Double-click on one of the parameter settings.

Parameters	Frequency Reference
b1-01=0	Instruction from d1-01
b1-01=1	Instruction from terminal...
b1-01=2	Instruction from MEMOB...
b1-01=3	Instruction from option ...
b1-01=4	Instruction from pulse r...
H3-05 l= 2 , H3-09 l= 2	Instruction from d1-02
H3-05 l= 2 , H3-09=2	Instruction from terminal...

- 2) The Parameter Edit window will open as shown below.



4.5 Test Run

4.5.1 Manual Operation

The motor operates at the specific speed setting that has been entered.

Manual Operation lets the user check the direction of motor rotation and the speed setting without needing to use an upper controller.

Warning

Be sure to take proper precautions when performing a Manual Operation.

Read the manually thoroughly, paying particular attention to the following points:

Clear the area around the motor.

Clicking on the button marked "Run" will cause the motor to rotate at the designated speed.

Make sure proper precautions have been taken for the area surrounding the motor.

Make sure a Fast Stop has been set to one of the terminals.

If an error occurs with the PC or with this function while a Manual Run is being performed, there is a chance the motor will continue rotating.

Be sure that a Fast Stop or some other type of emergency stop has been set to one of the external terminals in order to halt the motor.

Do not edit parameter settings with any other software than SDWP001.

Use SDWP001 only to edit parameter settings.

Changing the frequency reference units, for example, with the digital operator or some other device can cause the motor to suddenly speed up and is extremely dangerous.

Check all parameter settings if a fault occurs.

This function switches the frequency reference selection, parameter settings, and Run command selection over to MEMOBUS communications.

Check PC and all function settings if a communications fault occurs.

Always cycle power to the drive if a fault occurs.

This function works by assigning the frequency reference selection (comnet), parameter settings, and Run command selection (comctrl) over to MEMOBUS communications.

Check PC and all function settings if a communications fault occurs, and cycle power to the drive.

Extra Notes on Using Manual Operation

This function is for setting up the drive and performing a test run. It is strongly recommended that the motor be fully decoupled from the load for proper setup.

NOTE: Manual Operation cannot be performed if the Baseblock command is currently enable via one of the input terminals.

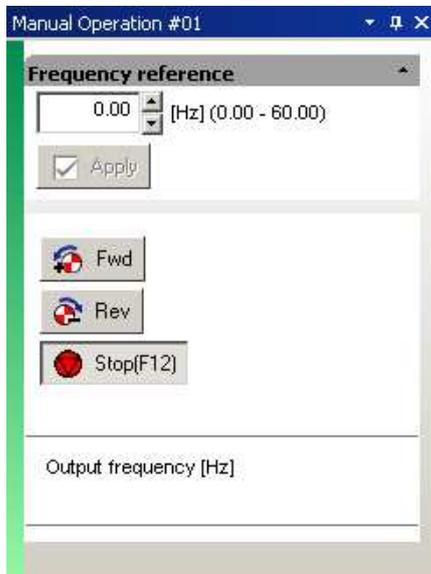
NOTE: To operate manually, set the frequency references units to Hz (the default setting of o1-03).

When performing a Manual Operation, the following conditions are required:

- The drive must be in REMOTE mode, either set by the digital operator or by one of the input terminals
- No faults occur
- The drive is not currently running the motor (i.e., a Run command is not present)

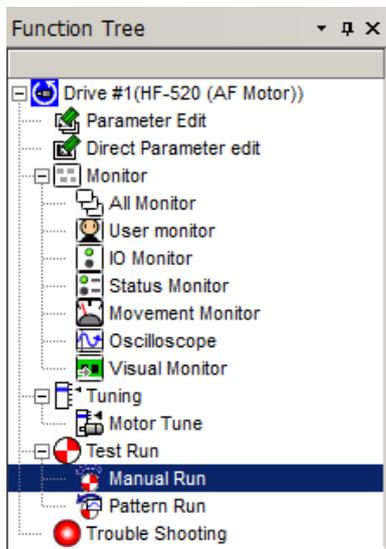
Follow the procedure below to perform a Manual Operation:

- 1) Display the Manual Operation window.

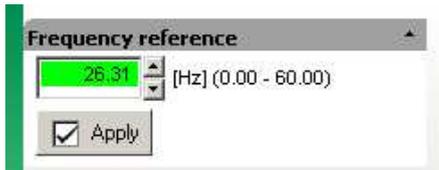


There are three ways to call up the Manual Operation window:

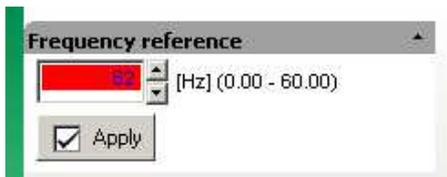
- View (V) in the Main Menu
View (V) → “Manual Operation”
- toolbar
Click 
- Function Tree
Open “Test Run” and double-click on “Manual Run”



2) Set the frequency reference by entering the frequency reference and clicking “Apply”.

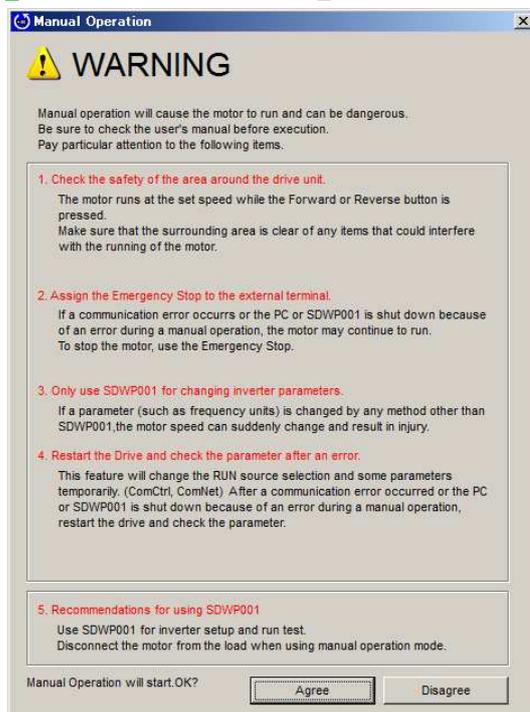


If the frequency reference entered is outside the allowable range, the entered value will appear in red and a warning message will appear.



3) Rotate the motor

When the Fwd or Rev button is first pushed, a warning message will appear:

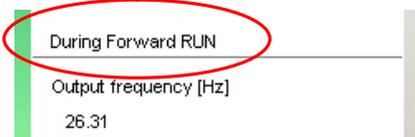


- 4) Click “Agree” to begin rotating the motor. Clicking “Decline” will cancel the process and the motor will not rotate.

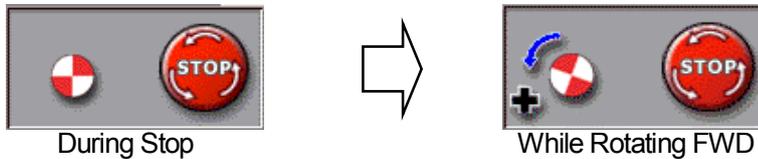
NOTE: This warning message is only displayed the first time the Run command is issued, and will not appear again until SDWP001 is restarted.

While the motor is rotating, the following display will appear:

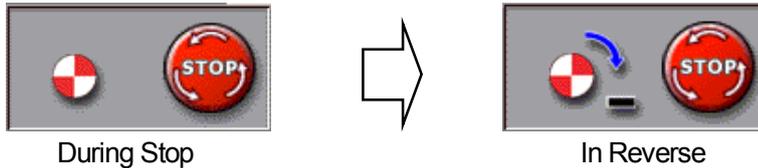
- A display to indicate the current operation status of the motor, which includes During Forward RUN / During Reverse RUN / Zero Speed / During Stop / Fault / Drive Ready)



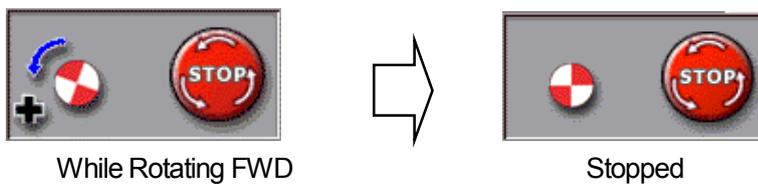
During run, a window will appear near the task tray to stopping the motor. When a Forward command is given, the icon will rotate counterclockwise.



When a Reverse command is given, the icon will rotate clockwise.



Clicking on the window stops the motor.

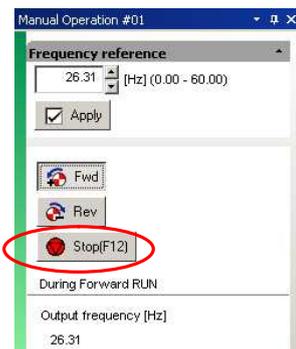


During run, an icon will appear in green to indicate that the drive is operating the motor.



- 5) Stop the motor

To stop the motor, click on the “Stop” button as shown below:



4.5.2 Pattern Operation

Pattern Operation lets the user take advantage of parameters that have already been programmed to operate the drive automatically.



Be sure to take proper precautions when performing a Pattern Operation.
Read the manually thoroughly, paying particular attention to the following points:

Clear the area around the motor.

Clicking on the button marked “Run” will cause the motor to rotate at the designated speed.
Make sure proper precautions have been taken for the area surrounding the motor.

Make sure a Fast Stop has been set to one of the terminals.

If an error occurs with the PC or with this function while a Manual Run is being performed, there is a chance the motor will continue rotating. Be sure that a Fast Stop or some other type of emergency stop has been set to one of the external terminals in order to halt the motor.

Do not edit parameter settings with any other software than SDWP001.

Use SDWP001 only to edit parameter settings. Changing the frequency reference units, for example, with the digital operator or some other device can cause the motor to suddenly speed up and is extremely dangerous.

Check all parameter settings if a fault occurs.

This function switches the frequency reference selection, parameter settings, and Run command selection over to MEMOBUS communications.

Check PC and all function settings if a communications fault occurs.

Always cycle power to the drive if a fault occurs.

This function works by assigning the frequency reference selection (comnet), parameter settings, and Run command selection (comctrl) over to MEMOBUS communications.

Check PC and all function settings if a communications fault occurs, and cycle power to the drive.

Movement during Operation

Because this function relies on an internal Run command, there may be some movement in regards to motor shaft position. Take particular caution of positioning when repeating the same task as this difference may compound.

Operation Status Display during Run

Although this function displays the operation status while running the motor, environmental factors make cause there to be some difference between what appears on the PC screen and the actual waveform. Take this into consideration when using this function.

Extra Notes on Using Manual Run

This function is for setting up the drive and performing a test run. It is strongly recommended that the motor be fully decoupled from the load for proper setup

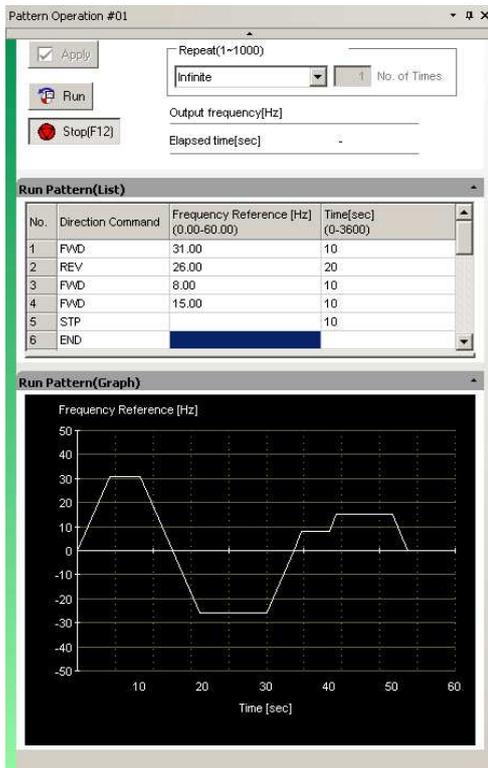
NOTE: Pattern Operation uses the Accel/Decel Time 1 set to the multi-function contact input terminals and disregards Accel/Decel Time 2 and 3, as well as acceleration and deceleration time settings for motor 2.

NOTE: Pattern Operation cannot be performed if the Baseblock command is currently enabled via one of the input terminals.

NOTE: To operate manually, set the frequency references units to Hz (the default setting of o1-03).

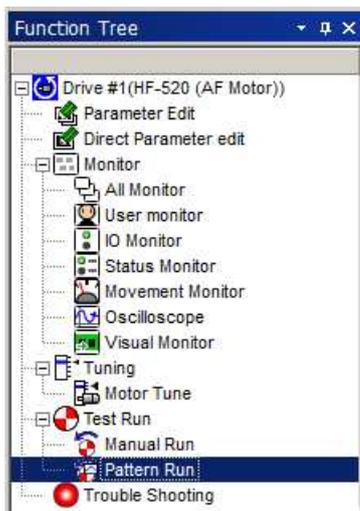
Follow the procedure below to perform a Pattern Operation:

- 1) Open up the Pattern Operation window.



There are three ways to open up the Pattern Operation window:

- From the Main Menu
Main Menu: “View (V)” → “Pattern Operation”
- From the toolbar
Click 
- From the Function Tree
Open “Test Run” in the Function Tree and double-click “Pattern Run”.



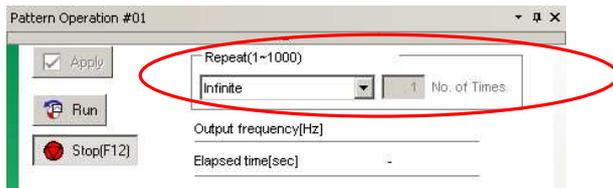
- 2) Set the pattern of operation for a Pattern Operation
 - a) Set the direction of rotation. Select the direction: END / FWD / REV / STP
 - b) Set the output frequency.

Set the frequency reference within the allowable range (between 0.0 to 60.0 Hz).
 - c) Set the time for each operation.

Time can be set from 0 to 3600 seconds. Specify the time the drive should operate from when the Run command is given.

This time will start over when a new Run command is given.

- 3) Set the number of times the drive should execute the command.



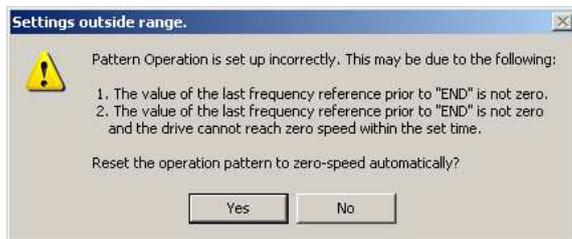
To set the number of repeat times the command should be executed, first specify whether the command should repeat a specified number of times or repeat indefinitely. Next, set the number of times the pattern should be repeated. The total number of times can be set from 1 to 1000. This value is enabled only when the “Specify number of times” setting is enabled.

- 4) Apply the settings that have been entered

Click “Apply” to check the contents that have been set.

Drive performance will appear in a graph.

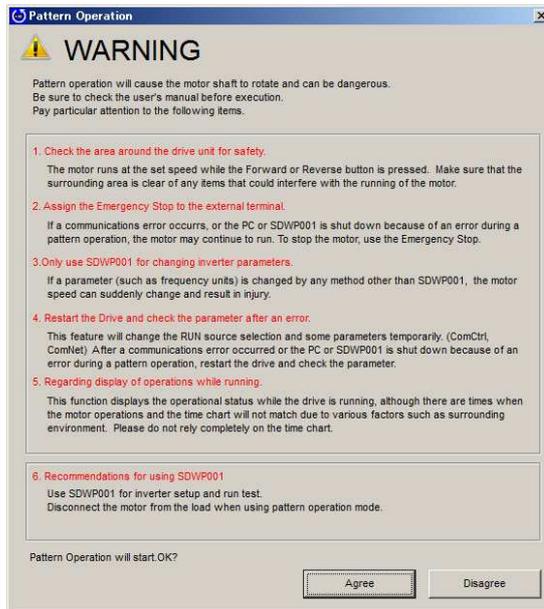
Once the pattern is complete and the drive stops, the following window will appear:



To accept the operation pattern that has been set until the drive reaches zero speed, click “Yes”. To return to the Pattern Run window and start over again, click “No”.

- 5) Start operation

Clicking  will generate the following window:



Click “Agree” to begin rotating the motor. Clicking on “Disagree” will stop the operation and the motor will not rotate.

NOTE: This warning message will appear only once while SDWP001 is operating. It will not appear again until the program is closed and then reopened.

Verify drive operation progress by viewing the display shown below:

- Current drive status:

Output frequency[Hz]	18.24
Elapsed time[sec]	11
Repeat[times]	1 / -

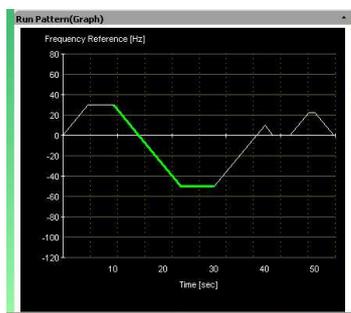
- Operation pattern with a list

The current operation pattern being executed will be highlighted in green.

No.	Direction Command	Frequency Reference [Hz] (0.00-60.00)	Time[sec] (0-3600)
1	FWD	30.00	10
2	REV	50.00	20
3	FWD	10.00	10

- The operation pattern appears in green

During run, a green line will appear to indicate drive operation and progress on the graph.



- During run, the icon shown below will appear near the task tray. The icon contains an animation that will mimic the status of the motor. The animation will change when the motor is running or is stopped.



During stop



While Rotating Forward (flashes)



While in Rotating in Reverse (flashes)

During run, a green bar will appear in the caption bar.



6) Stop the motor

Clicking "STOP" while the motor is running will cause the drive to stop the motor.



You can stop the motor at any time by clicking the "Stop" button that appears during Run. The icon is related to the task window.



Revision History

The revision dates and numbers of the revised manuals are given on the bottom of this page.

MANUAL No. DM2308E-1.0

└─ Revision number

Date of Publication	Rev. No.	Section	Revised Context
January 2016	1.0	–	First edition