

DriveWizard Online Manual



YASKAWA

YASKAWA ELECTRIC CORPORATION

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Safety-Related Symbols

The following symbols are used in this manual according to the safety-related content.

Be sure to observe text annotated with these safety symbols as their content is important.





Indicates precautions that, if not heeded, could possibly result in loss of life or serious injury.



Indicates precautions that, if not heeded, could result in relatively serious or minor injury, damage to the product, or faulty operation.

Furthermore, items marked with  CAUTION may have important consequences depending on the situation.

Warning-related symbols differ between ISO and JIS standards.

ISO Standards	JIS Standards
	

This manual uses ISO standard symbols.

Product warning labels may use either the ISO or JIS standards. Treat either in the same manner.

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Manual Outline

This manual explains the following areas for DriveWizard users.

- Outline of DriveWizard Functions and Operation
- DriveWizard Installation/Removal

Related Manuals

Be sure to refer to the corresponding technical materials regarding related Inverters, options, and other equipment.

Use this product only with a full understanding of its specifications, service life, and other important information.

Notes on the PC Communication Function



CAUTION

- Do not change the Inverter parameters or the MEMOBUS data using other methods, such as communication connection terminals or communication cards, while using DriveWizard.

If the Inverter parameters or the MEMOBUS data are changed using other methods while using DriveWizard, the data of DriveWizard may disagree with the Inverter data and result in a malfunction.

Regarding Software

Usage Notes

- Use this software on one specified PC. Request a separate license to use this software on another computer.
- Copying of this software for purposes other than use as backup copies is strictly prohibited.
- Carefully store the CD-ROM (original medium) upon which this software is written.
- Reverse compiling or assembly of this software is strictly prohibited.
- Use of this software in whole or in part by a third party through transfer, exchange, resale, and so forth, is strictly prohibited without the prior agreement of Yaskawa Electric Corporation.
- Copyright and all other rights for this software are reserved by Yaskawa Electric Corporation.

Operating Systems and Registered Trademarks

- Windows 98, Windows NT, Windows 2000, Windows Me, and Windows XP are registered trademarks of Microsoft Corporation in the United States.
- Adobe, the Adobe logo, and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and /or other countries.

Safety Notes

The following are important cautionary items that must be observed in the wiring and use of this product.

Notes on Wiring

CAUTION

- Never change cables while DriveWizard is running. Always quit DriveWizard before changing connections.

The operation of both or either the PC or Inverter cannot be assured if this is not observed.

Usage Notes

CAUTION

- Always be sure to quit DriveWizard before turning the Inverter power off or on.
The operation of both or either the PC or Inverter cannot be assured if this is not observed.
- Always be sure to stop the Inverter before connecting the Inverter to a PC that has DriveWizard installed.

The operation of the Inverter cannot be assured if this is not observed.

1 System Outline

This section includes an outline of the DriveWizard system, and explains its advantages and preparation prior to use.

1.1 Outline and Advantages of DriveWizard

DriveWizard is an engineering tool for setup, test run, and maintenance of Yaskawa Inverters.

This product provides uniform features and functions enabling everyone from beginners to persons experienced in Inverter tuning to easily perform connections, test runs, and maintenance right out of the box.

Main Functions

- Parameter editing and help displays appropriate for each parameter
- Display of Inverter data, such as I/O signals and the internal status, and product data
- Troubleshooting (help displays appropriate to the cause and corrective action)
- Test run (Manual operation, pattern operation)
- Motor parameter autotuning function
- Oscilloscope function

Note: Some DriveWizard functions may be unusable depending on the Inverter type. Unusable functions will appear dimmed on the selection menu.

1.2 System Requirements

DriveWizard requires the following minimum system configuration.

Personal Computer (PC)	PC/AT DOS/V-compatible device * Operation cannot be assured on the NEC PC9821 series.														
Processor	Pentium 200MHz														
Main Memory	64MB (96MB recommended)														
Free Hard Disk Space	At Normal Setup • 100MB (200MB recommended at installation)														
Monitor	Super VGA (800×600 or greater using a small font)														
Number of Colors	256 colors (65536 colors recommended)														
Operating System (OS)	<ul style="list-style-type: none"> • Windows 98 • Windows NT4.0 Service Pack 3 or later (IE4.01 Service Pack 2 or later) • Windows 2000 • Windows Me • Windows XP 														
Communication	RS-232C, RS-422, and RS-485 communications Use an USB serial conversion adapter for communications with an USB port. Use an available standard adapter at all electric or computer stores. Example <ul style="list-style-type: none"> • Manufacture: I-O Data Device, INC. • Model: USB-RSAQ3 • Specifications: USB I/F Spec.1.1compatible Max. DTE speed: 230.4kbps USB: B receptacle RS-232C: D-sub9 pin (female) Power supply voltage: 5 VDC (from bus) Some serial conversion adapters cannot be used for communications because of their compatibility with the PC or other factors.														
Communication Cables for Inverter to PC Connection	For a RS-232C communication cable, contact Yaskawa if necessary. <table border="1"> <thead> <tr> <th></th><th>Inverter type</th><th>Cable Model</th></tr> </thead> <tbody> <tr> <td rowspan="2">Ordering from Yaskawa in Japan</td><td>G5</td><td>Socket-connector type W5250</td></tr> <tr> <td>G7, F7, L7, V7, J7, and others</td><td>Modular-connector type WV103</td></tr> <tr> <td rowspan="2">Ordering from Yaskawa outside Japan</td><td>G5</td><td>Socket-connector type UWR100-1 UWR103-1 (Also used as a cable for writing data in the flash memory)</td></tr> <tr> <td>G7, F7, L7, V7, J7, and others</td><td>Modular-connector type UWR00468-2 UWR00468-1 (Also used as a cable for writing data in the flash memory)</td></tr> </tbody> </table> <ul style="list-style-type: none"> • When using RS-422 or RS-485 communications, refer to each Inverter's instruction manuals to prepare a communication cable and perform wiring. • If using a VS mini J7 Inverter, a SI-232/J7 Remote Interface Unit is required. 			Inverter type	Cable Model	Ordering from Yaskawa in Japan	G5	Socket-connector type W5250	G7, F7, L7, V7, J7, and others	Modular-connector type WV103	Ordering from Yaskawa outside Japan	G5	Socket-connector type UWR100-1 UWR103-1 (Also used as a cable for writing data in the flash memory)	G7, F7, L7, V7, J7, and others	Modular-connector type UWR00468-2 UWR00468-1 (Also used as a cable for writing data in the flash memory)
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	G7, F7, L7, V7, J7, and others	Modular-connector type UWR00468-2 UWR00468-1 (Also used as a cable for writing data in the flash memory)													
Other	One node or more RS-232C, RS-422, or RS-485 I/F CD-ROM drive (for installation only) Adobe Acrobat Reader (by Adobe Corporation) * Needed when displaying help.														

IMPORTANT

1. For computers with Windows XP, 2000, and NT, only users with administrator privilege can log on and use DriveWizard. Also, only the user who installed DriveWizard can remove it.
2. For use with Windows XP, pay attention to the following items.
 - If using NTFS, contact a user with administrator privileges to log on to the DriveWizard. DriveWizard does not support Limited User Mode on NTFS file systems.
 - Multiple users cannot use Drive Wizard at the same time. DriveWizard can only be used by one user at a time.

1.3 Installing DriveWizard Program

To install DriveWizard, run the setup file for DriveWizard. And the installation process will begin. In this process, DriveWizard and the related files will be installed, or stored on the hard disk.

Operating conflicts may arise with the other programs during installation. Be sure to quit all other programs before installing DriveWizard.

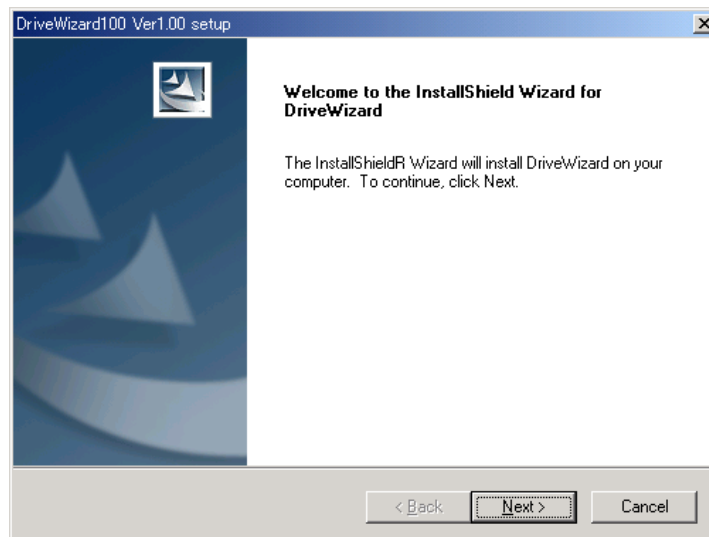
Note: If installing DriveWizard on a computer with Windows XP, 2000, or NT, first log on to the computer as a user with administrator privileges and then install DriveWizard.

Install the program using the following procedure.

1. Insert the CD-ROM into the CD-ROM drive (the D-drive for example).
2. If "Autoplay" is enabled, the installation program will automatically start when the CD-ROM is inserted.

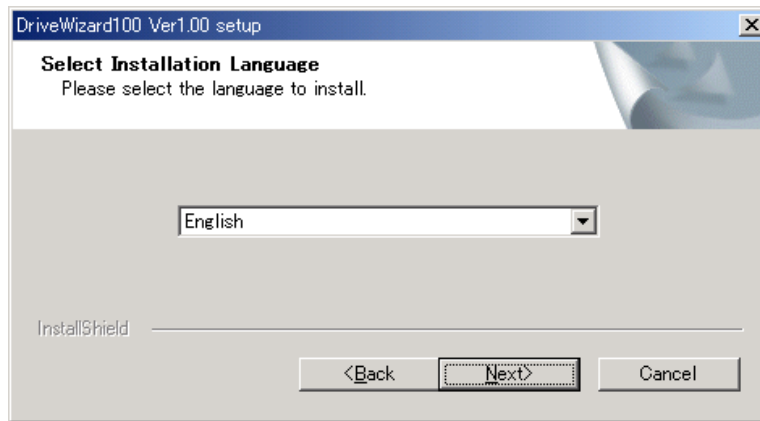
If "Autoplay" is not enabled, either of the following methods may be used.

- On the Start menu, select **Run**. Type "D:\SETUP", and then click **OK**.
- Open the Explorer, load the CD-ROM contents, and double click "D:\SETUP.EXE".

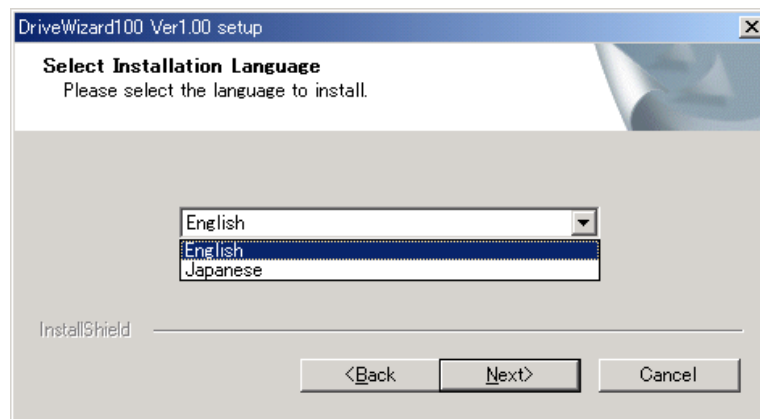


A message will appear, welcoming you to the DriveWizard program.

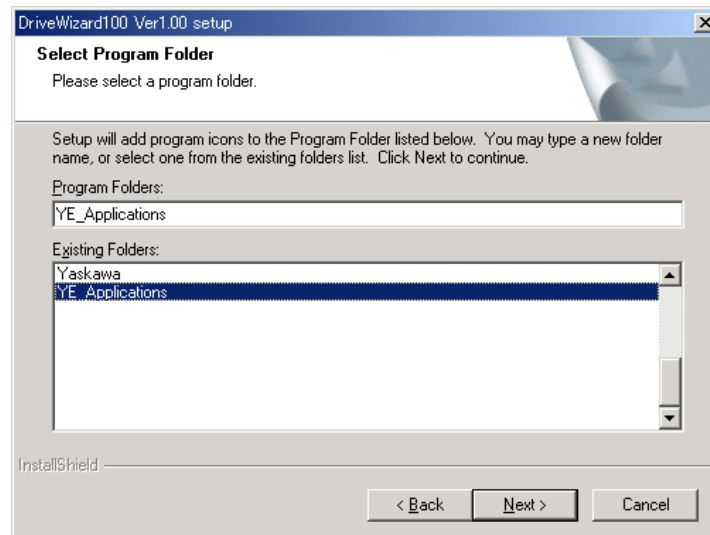
3. Click **Next** to continue.



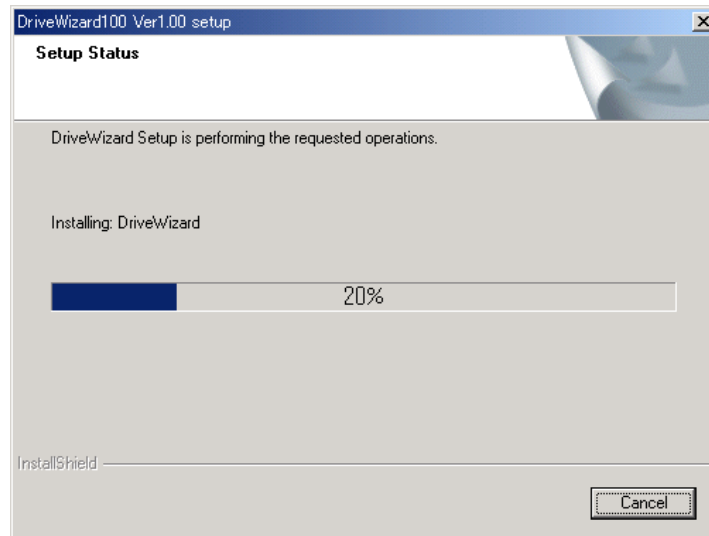
4. Select the language to install, and click **Next** to continue.



5. Choose a destination folder to copy the DriveWizard file to, and click **Next** to continue.



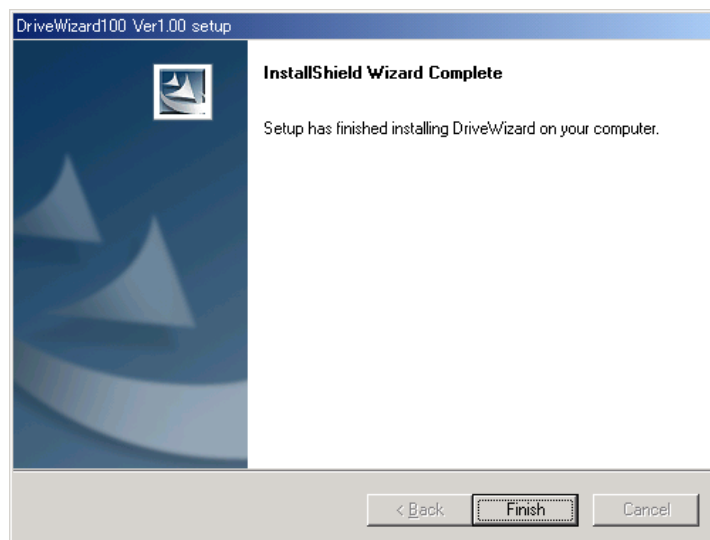
6. Select the program group to create the DriveWizard 100 icon. "YE_Applications" is the default setting. After selecting the program group or folder, click **Next** to continue.



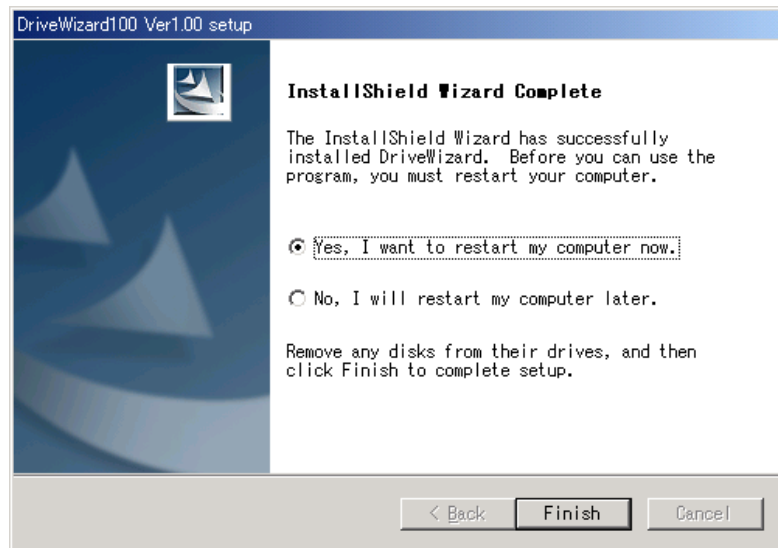
Then the PC files are copied from the CD-ROM. The percentage of the copying that has been completed is shown.

Note: If new versions of the PC support files are needed to install DriveWizard, a window will appear asking whether to overwrite the current version or to cancel the installation. DriveWizard may not run correctly if the new versions of the support files are not installed.

If DriveWizard has been successfully installed, one of two dialog boxes is displayed.



(a)



(b)

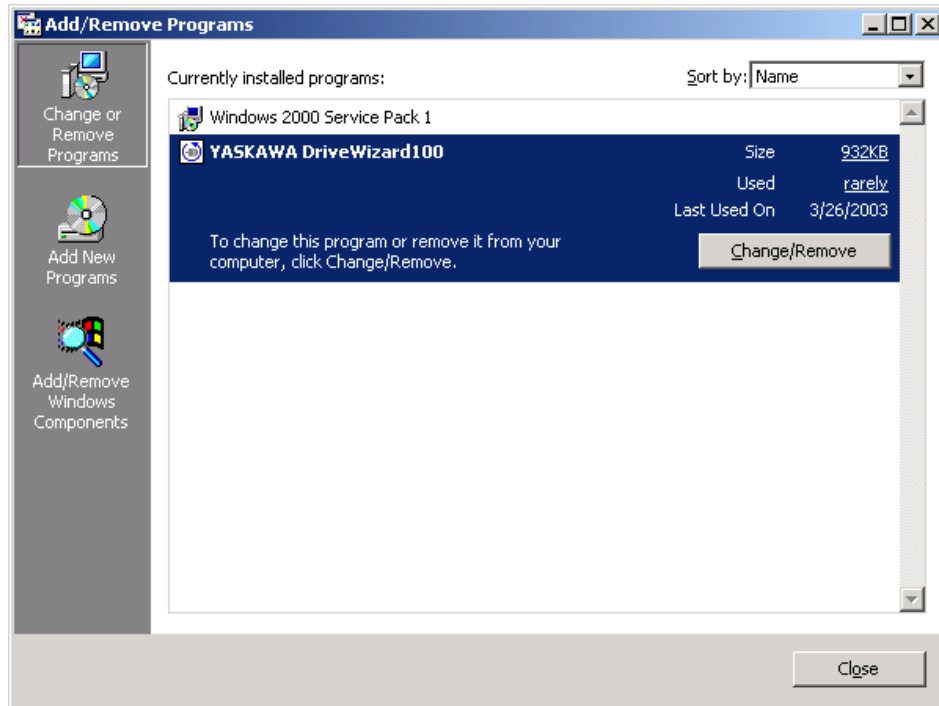
7. If dialog box (a) is displayed, click **Finish** to complete the setup.
If dialog box (b) is displayed, select **Yes** when asked if you want to restart the computer and then click **Finish** to complete the setup.

1.4 Removing DriveWizard Program

Note: If uninstalling DriveWizard from a computer with Windows XP, 2000, or NT, first log on to the computer as a user with administrator privileges and then uninstall DriveWizard.

Remove the DriveWizard program using the following procedure.

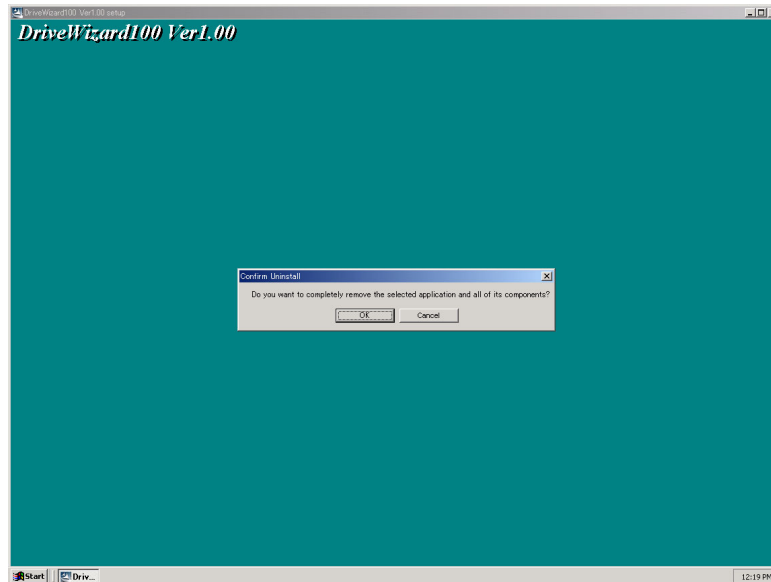
1. Click the **Start** button, point to **Settings** and click **Control Panel**.
2. Click the **Change or Remove Programs** icon. The Add/Remove Programs Properties box appears.



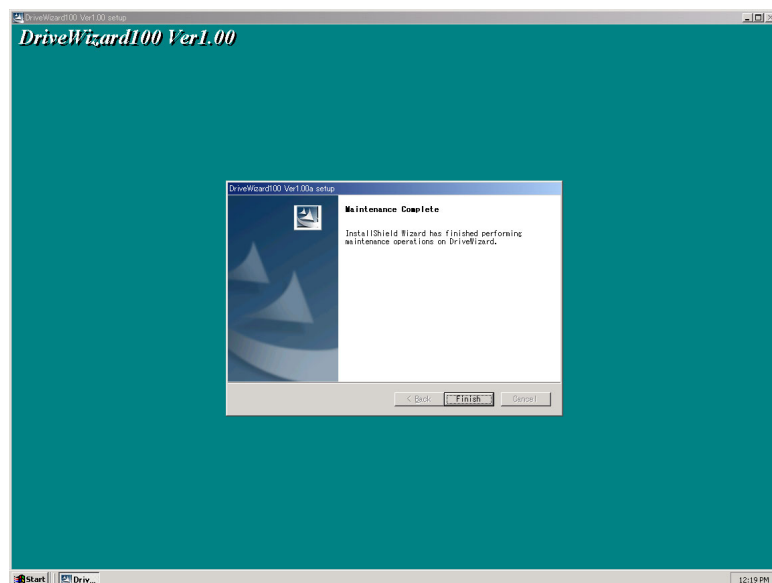
Note: The window layout differs depending on the OS.

- Click the **Change or Remove Programs** tab if it is not already selected. Click **YASKAWA DriveWizard 100** as the program to be removed, and then click **Change/Remove**.

A confirmation message will appear asking if you are sure you want to remove the program.



- Click **OK** to start removing the program. When the program has been successfully removed, the following window will appear telling you that maintenance is complete.



- Click **Finish** to complete the removal process.

2 Starting DriveWizard

Start DriveWizard using the following method.

2.1 Starting DriveWizard

Start DriveWizard:

- from the Start menu
- from a shortcut

2.1.1 From the Start Menu

To start DriveWizard from the **Start** menu:

1. Click the **Start** button, and point to **Programs**.
2. Open the **YE_Applications** folder.
3. Click **DriveWizard**.

2.1.2 From a Shortcut

To start DriveWizard from a shortcut on the desktop:

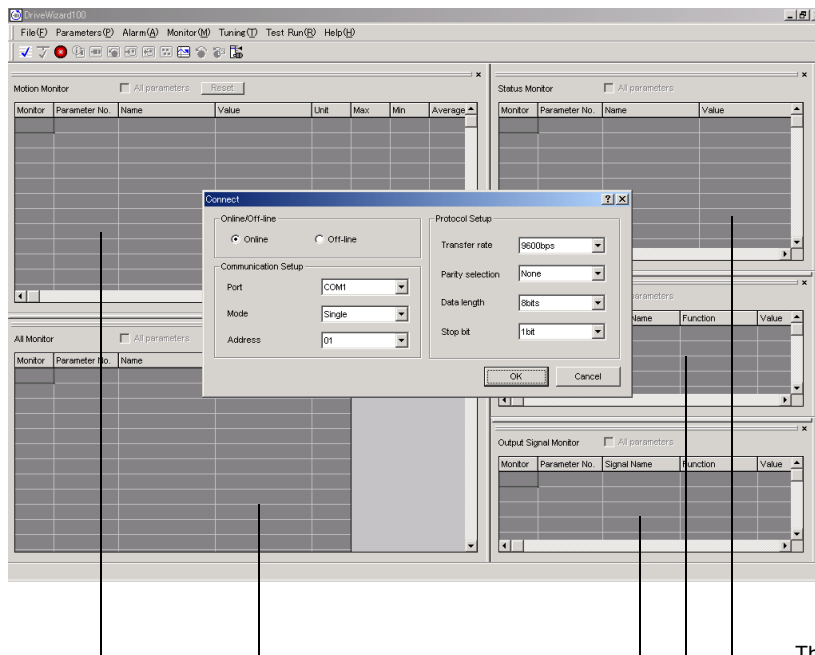
1. Open the YE_Applications folder on the desktop.
2. Click **DriveWizard**.



DriveWizard Startup Screen

2.2 Connecting Communication Port

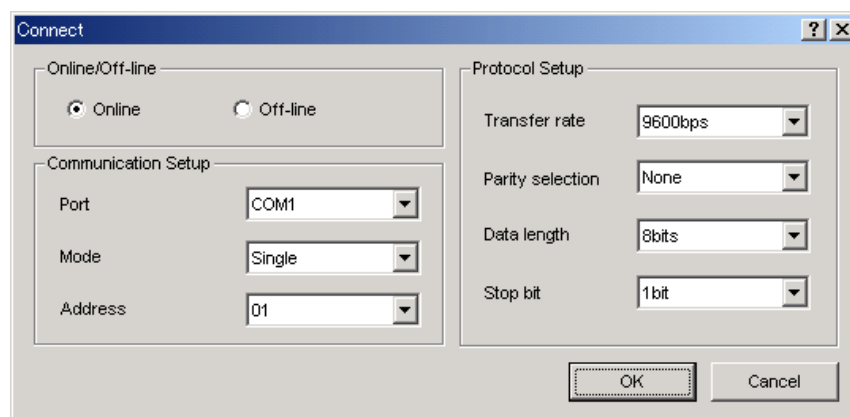
When DriveWizard is initially started, the following screen appears.



The window is divided into five panes, one for each type of monitor. Individual panes can be closed. The panes that are open when you quit DriveWizard will still be open the next time DriveWizard is started.

Communication Settings Window at Initial Startup

Enter the settings for communications between DriveWizard and the Inverter by means of a serial port.



1. Select the method to set up the Inverter: online or offline.
 - Online: Select if editing parameters or performing a test run with the Inverter connected
 - Off-line: Select if editing parameters without the Inverter connected.

2. If **Online** is selected, enter the necessary settings to setup communication and protocol.

<Communication Setup>**Port (Items to be displayed differ depending on the type of PC.)**

Select the communications (COM) port. In the Port list, you can see a list of all the ports that your PC has.

Mode (Single, Range)

Select the specifying method of communication address. If you know the communication address, select “Single.” If you do not know the communication address, select “Range.”

Address/Final Address (1 to 32 ports)

If “Single” is selected in the Mode selection, enter the communication address which is set in the Inverter constants. If “Range” is selected in the Mode selection, enter the final address in the searching range.

<Protocol Setup>

Select the same values as those set in the Inverter parameters. Refer to Inverters instruction manuals because applicable values differ depending on the Inverter type.

Transfer rate

Select from 1200, 2400, 4800, 9600, or 19200 bps.

Parity selection

Select odd, even, or none

Data length

Select 7 or 8 bits.

Stop bit

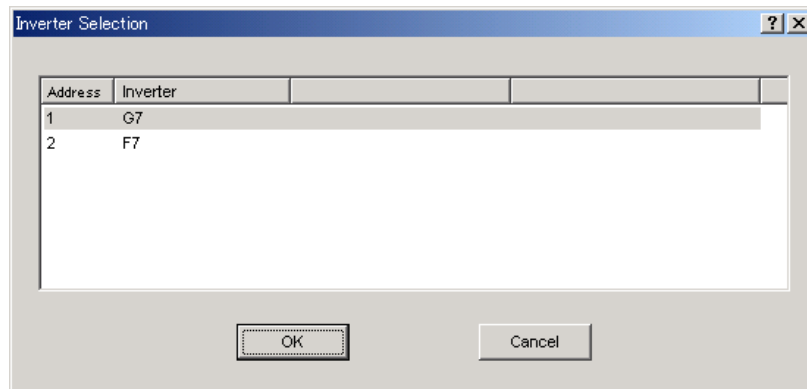
Select 1 or 2 bits.

3. When all the settings have been made, click **OK**.

After the Inverters have been successfully connected to DriveWizard, a list of the connected Inverters will appear on the screen.

2.3 Selecting a Inverter

When DriveWizard is started, the Inverters that are connected will be scanned through the serial ports. The results of this scan will be displayed in the Inverter Selection box.



Inverter Selection Box

Note: When RS-232C is used, only one Inverter will be displayed.

Use the following procedure to select the Inverter to be connected.

Select the Inverter to be connected and then click **OK**.

Click **Cancel** to close the dialog box and the system will enter offline mode.

<If the Inverter Selection Box is not Displayed>

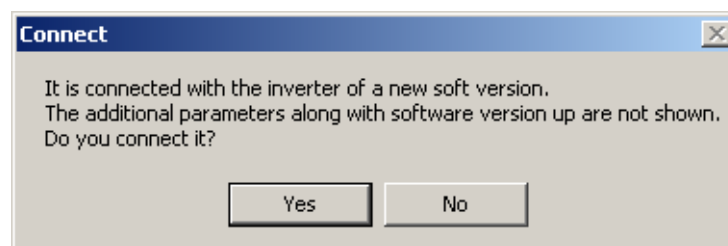
If no Inverter is found, the following message will appear, and the system will enter offline mode.



If the aforementioned message is displayed regardless of whether a Inverter is connected or not, problems may occur in communications.

<If a Connect Confirmation Message is Displayed>

If the versions of the Inverter software and DriveWizard are not compatible because an earlier version of DriveWizard is used, the following message will appear.



Use a version that is compatible with the version of the Inverter software. If the additional parameters along with software upgrades are not to be used, however, the existing version of DriveWizard can be used.

Check the following items if the Inverter is not displayed:

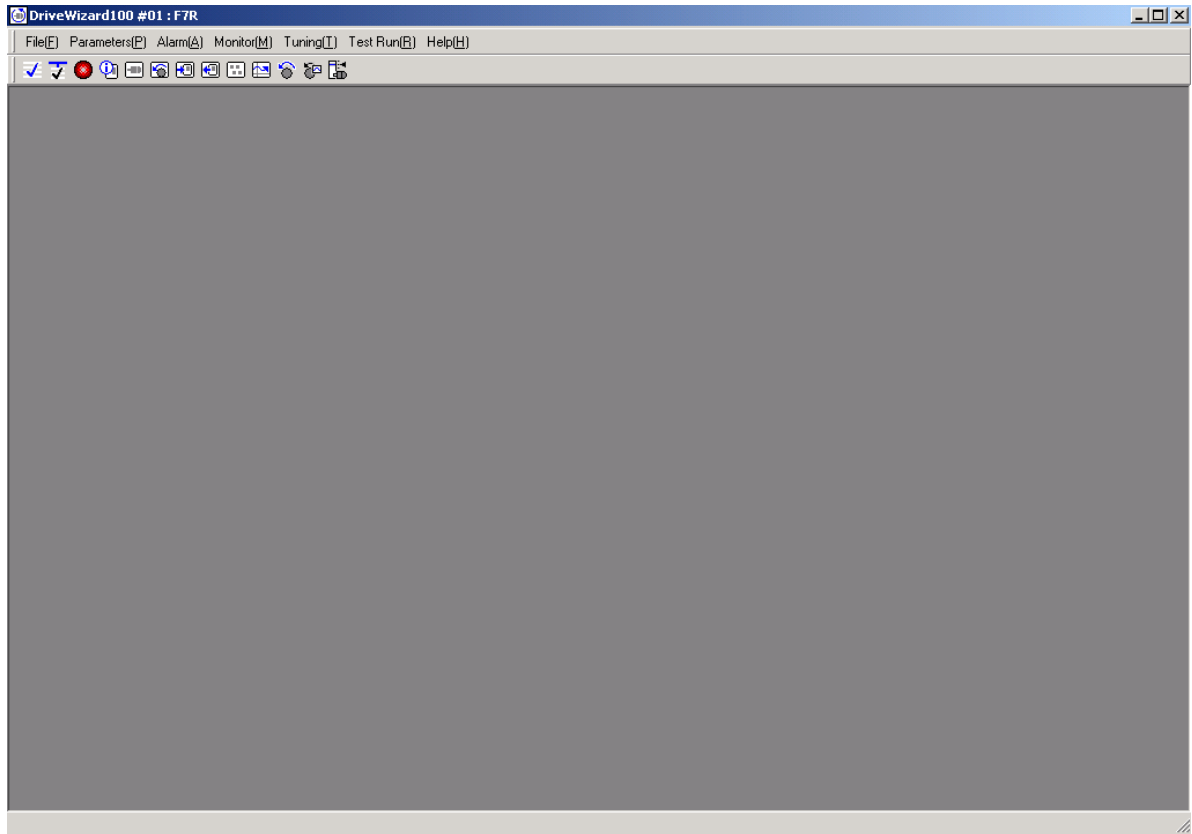
Check Item	Note
Is the power on?	
Are the connections loose?	Fasten all communication cable connectors securely.
Was the correct port selected?	Make sure that the port connected to the communication cable is the same as the port selected during connection.
Is the station address correct?	<p><RS-232C connection> Be sure the setting for the station address set by the Inverter parameter is the same as the station address selected during connection.</p> <p><RS-422/485 connection> Be sure that the station address set by the Inverter parameter is not duplicated and "0" is not set as the station address.</p>
Is the RS-232C port enabled?	<p>To save energy, it is possible to select the option of not feeding power to the RS-232C port in the PC. Check this setting.</p> <p>See the manual for the PC for details on how to select this function.</p>
Is a battery being used to power the PC?	Problems in communications may occur if the PC is running on batteries. Use AC power.
Is the wiring correct?	See the communication cable or the Inverter instruction manuals for more information on the wiring.
Is the communication cable the recommended length?	<p>Shorten the cable length as much as possible.</p> <p>Recommended Lengths of Shielded Twisted-pair Cables RS-232C: Maximum 3m</p>

If the Inverter Selection box still does not appear even after checking the above items, check the following concerns.

- Are the Inverter parameter settings for communications the same as those set in the Connect box?
- If the Inverter parameter settings for communications were changed, was the Inverter shut down and restarted after the Digital Operator's LED turned off to make the settings effective?

3 DriveWizard Main Window

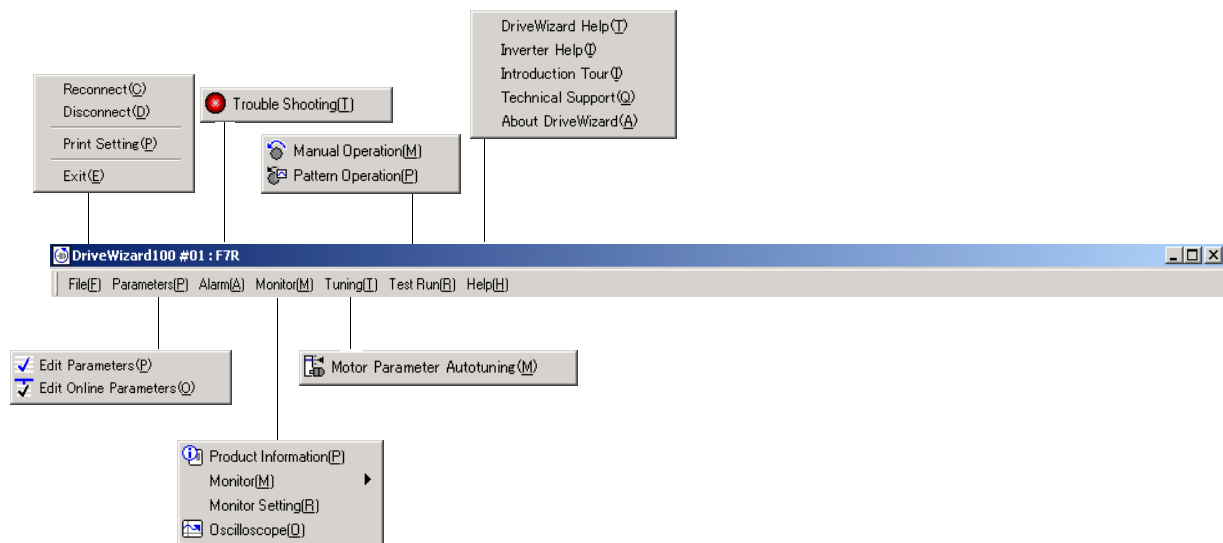
The DriveWizard main window has a menu bar and a toolbar as shown in the following figure.



DriveWizard Main Window

All application functions can be accessed from the menu bar or the toolbar.

■ Menu Bar and Menus



DriveWizard Menu Bar

File menu

Reconnect: Switches between Online and Offline modes or between the connected Inverters.

Disconnect: Switches to Offline mode.

Print Setting: Select your preferences for printing the information seen on the screen. See "[Print Setting](#)" for details on the setting method.

Exit: Quits DriveWizard.

Help menu

DriveWizard Help: Displays a help window for DriveWizard.

Inverter Help: Displays a help window for the Inverter.

Introduction Tour: Introduces main functions of DriveWizard

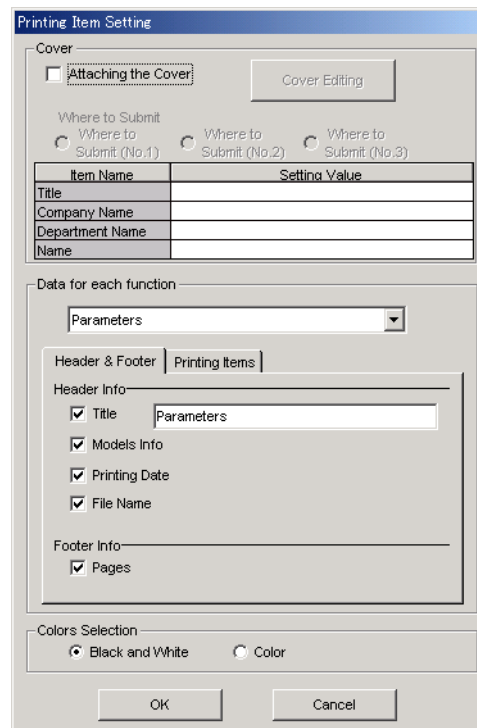
Technical Support: Lists local contacts.

About DriveWizard: Displays version information of DriveWizard.

There are also function menus. For details, see [Chapter 4](#).

Print Setting

In the DriveWizard main window, click **File**, and then click **Print Setting**. The Printing Item Setting box appears.



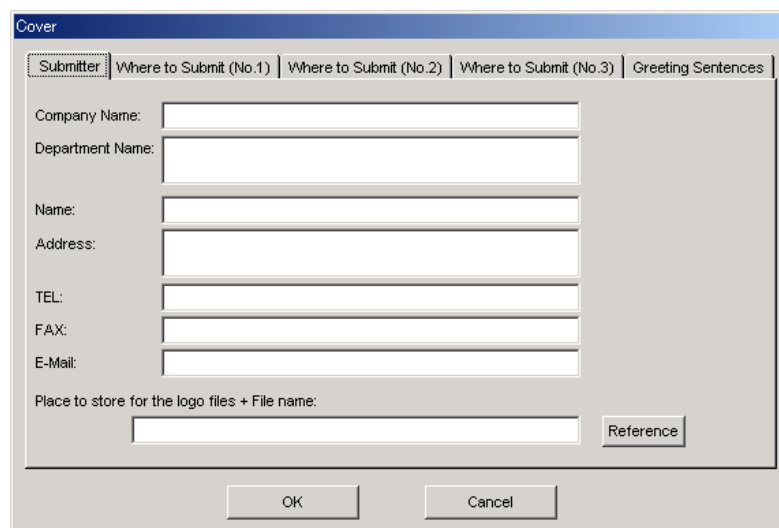
The **Printing Item Setting** dialog box is used to configure printing options. It includes a **Cover** section with an **Attaching the Cover** checkbox and a **Cover Editing** button. Below this are three radio buttons for **Where to Submit**: **Where to Submit (No.1)**, **Where to Submit (No.2)**, and **Where to Submit (No.3)**. A table lists items to be printed:

Item Name	Setting Value
Title	
Company Name	
Department Name	
Name	

The **Data for each function** section contains a **Parameters** dropdown menu. Below it are two tabs: **Header & Footer** and **Printing Items**. The **Header Info** section has checkboxes for **Title**, **Models Info**, **Printing Date**, and **File Name**, each with a corresponding text field. The **Footer Info** section has a checkbox for **Pages**. At the bottom, the **Colors Selection** section has radio buttons for **Black and White** and **Color**. **OK** and **Cancel** buttons are at the bottom.

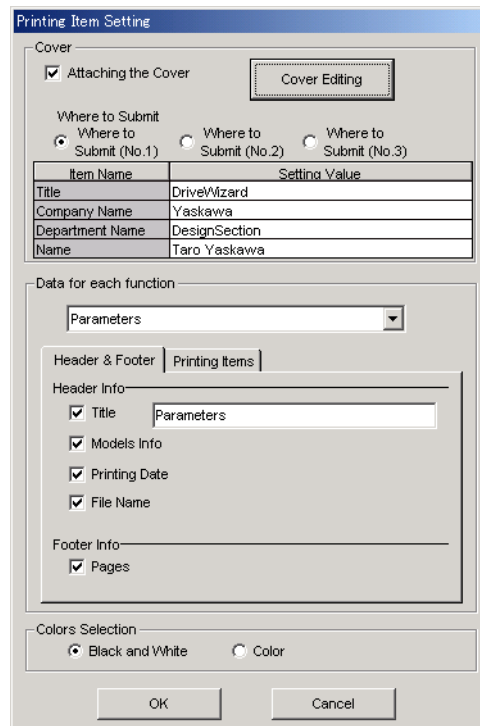
Cover

Select **Attaching the Cover**, and then click **Cover Editing**.



The **Cover** dialog box is used to edit cover information. It has five tabs: **Submitter**, **Where to Submit (No.1)**, **Where to Submit (No.2)**, **Where to Submit (No.3)**, and **Greeting Sentences**. The **Submitter** tab is active, showing fields for **Company Name**, **Department Name**, **Name**, **Address**, **TEL**, **FAX**, and **E-Mail**. At the bottom, there is a field for **Place to store for the logo files + File name:** and a **Reference** button. **OK** and **Cancel** buttons are at the bottom.

The Cover box appears, displaying the Submitter tab in front. Use the formatting options on the tabs to control the content of the cover, such as the greeting sentences and where to submit the information. After the setting is finished, click **OK**.



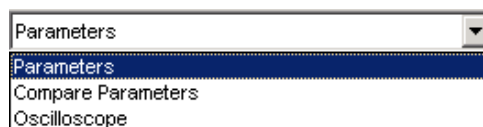
The 'Printing Item Setting' dialog box is shown. It has a 'Cover' section with a checked 'Attaching the Cover' option and a 'Cover Editing' button. Below this are three radio buttons for 'Where to Submit' (No.1, No.2, No.3). A table lists item names and their setting values.

Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa

Below the table is a 'Data for each function' section with a dropdown menu set to 'Parameters'. It contains two tabs: 'Header & Footer' and 'Printing Items'. The 'Header & Footer' tab is active, showing checkboxes for 'Title', 'Models Info', 'Printing Date', 'File Name', and 'Pages' under 'Header Info', and 'Pages' under 'Footer Info'. At the bottom are 'Colors Selection' (Black and White, Color) and 'OK'/'Cancel' buttons.

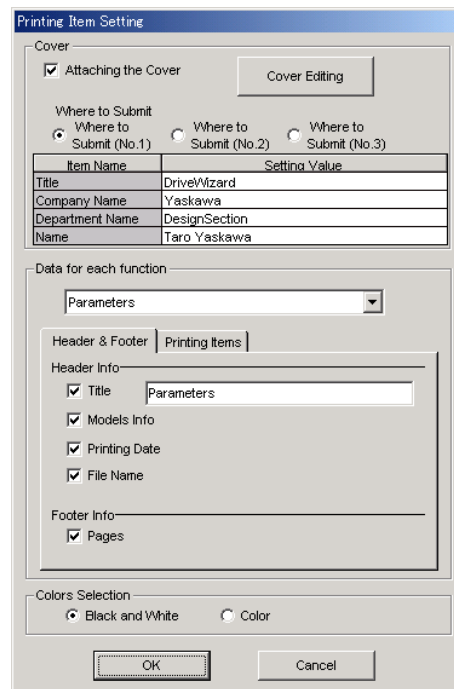
Data for each function

Depending on which one of the functions you select, the items that you can print will differ.



A dropdown menu showing the available functions for printing. The selected item is 'Parameters'. The list of functions includes 'Parameters', 'Compare Parameters', and 'Oscilloscope'.

To enter your printing preferences or specifications, click the tab whose options you want to enter or change, and enter the desired settings.



The 'Printing Item Setting' dialog box contains the following sections:

- Cover:**
 - ☒ Attaching the Cover (with a 'Cover Editing' button)
 - Where to Submit: ☒ Where to Submit (No.1), ☐ Where to Submit (No.2), ☐ Where to Submit (No.3)
- Table:**

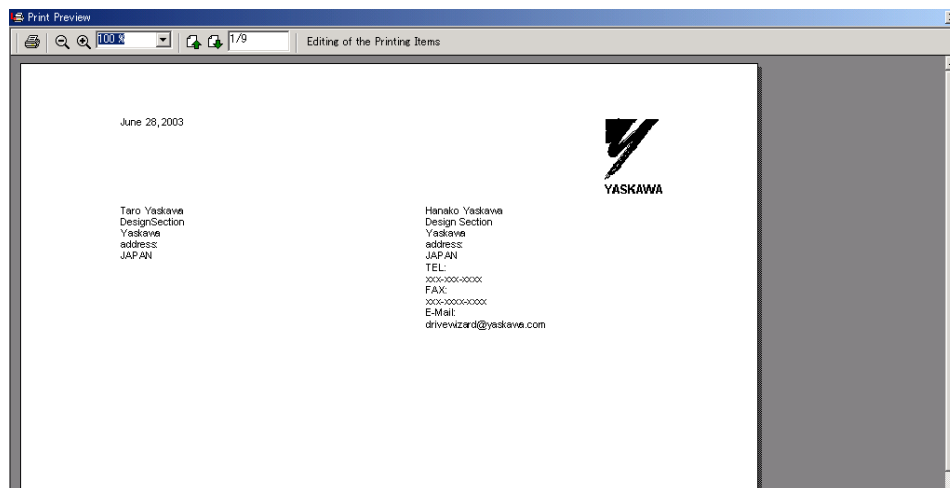
Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa
- Data for each function:**
 - Parameters: [Dropdown menu]
- Header & Footer / Printing Items:**
 - Header Info:**
 - ☒ Title (Parameters)
 - ☒ Models Info
 - ☒ Printing Date
 - ☒ File Name
 - Footer Info:**
 - ☒ Pages
- Colors Selection:**
 - ☒ Black and White, ☐ Color


Buttons: OK, Cancel

Color Selection

Documents can be printed in color or black and white. Select your preference.

Click **OK**. The document appears on the screen the way it will appear in print.

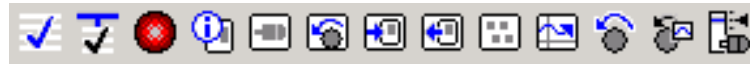


To print the document as is without any changes, click the  button.














To return to the Printing Item Setting box and change some settings, click **Editing of the Printing Items**.

■ Toolbar

Click an icon on the toolbar to directly select its corresponding function.



DriveWizard Toolbar

Toolbar Button	Function Name
	Parameter Editing
	Parameter Online Editing
	Troubleshooting
	Product Information
	Status Monitor
	Motion Monitor
	Input Signal Monitor
	Output Signal Monitor
	All Monitor
	Oscilloscope Function
	Manual Operation
	Pattern Operation
	Motor Parameter Autotuning

4 Operation

4.1 Editing Parameters

The following two methods exist for editing parameters.

- Using the Parameter Edit window
- Using the Parameter Online Edit window

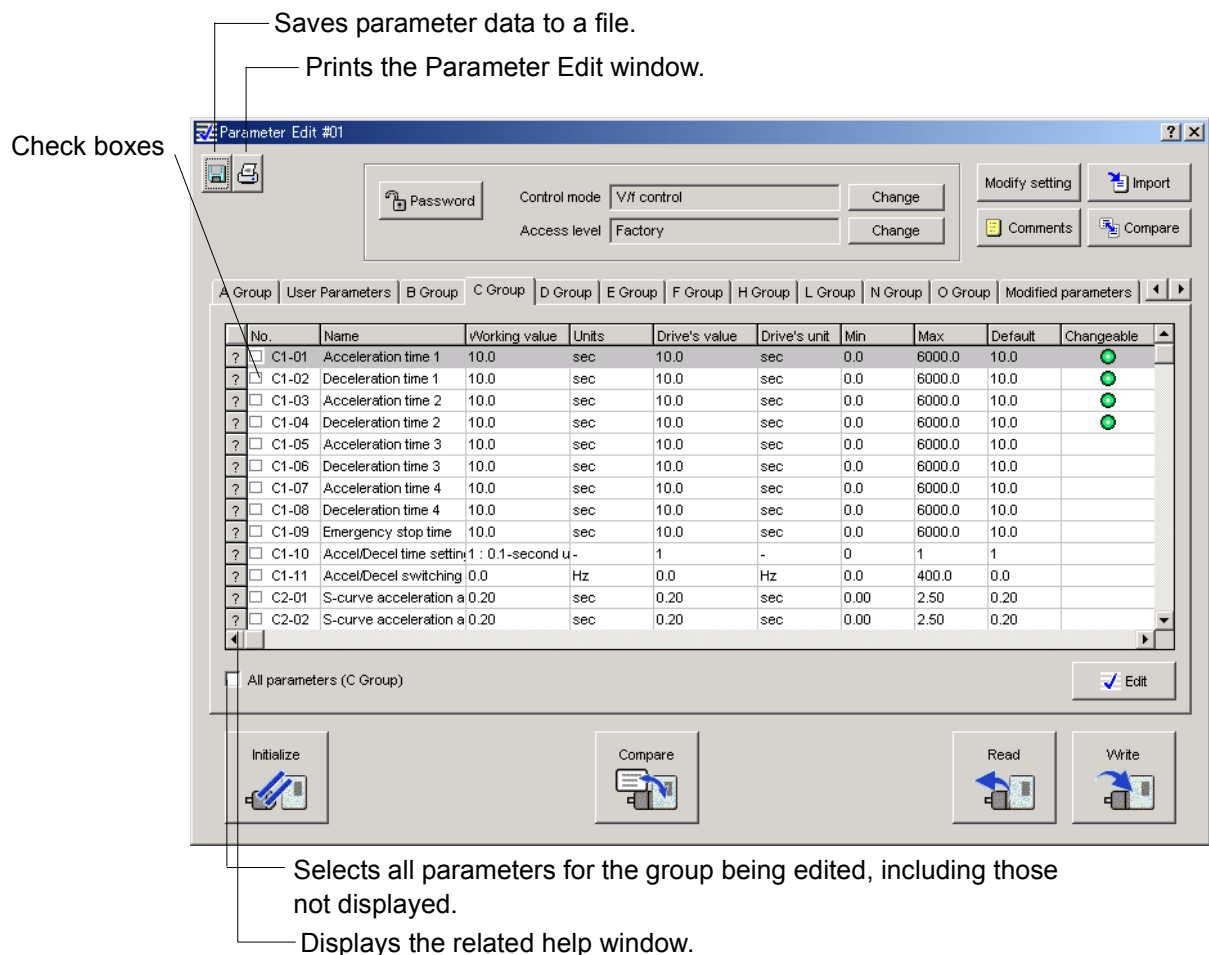
4.1.1 Editing Parameters

Parameters can be displayed or edited in the Parameter Edit window.

The windows differ in the Online and Offline modes.

Parameter Editing when Online

In the DriveWizard main window, click **Parameters** and then click **Edit Parameters**. The Parameter Edit window for the online mode appears.

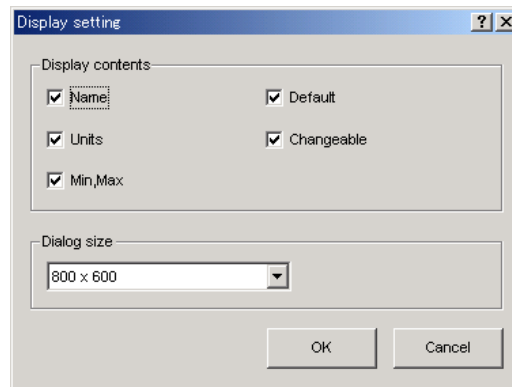


Parameter Edit Window (Online Mode)

Modify setting

Items to be displayed in the Parameter Edit window can be selected.

Click **Modify setting**, and the Display setting box appears. Select the information to be displayed and the size of the Parameter Edit window.



Display Setting Box

Display contents

Select the information to be displayed.

Dialog size

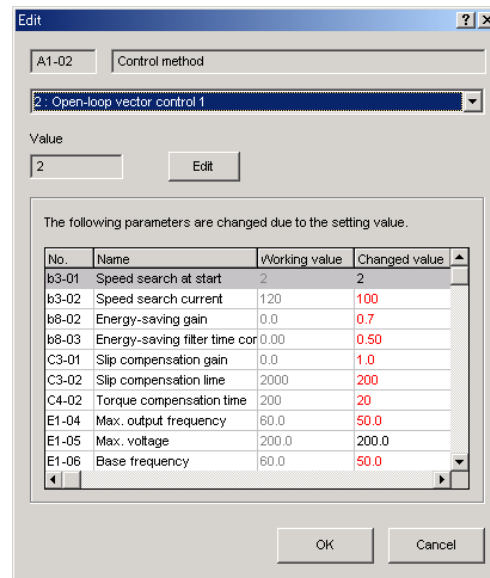
Select the size of the Parameter Edit window.

Click **OK** to save the changes in the display settings and to return to the Parameter Edit window. Click **Cancel** to return to the Parameter Edit window without changing the display settings.

Control Mode

Edits the parameter for the control mode and related parameters that are changed when the control mode is changed.

Click **Change** next to the Control mode or double-click Control method selection (G5, F7, G7, L7) or Control mode (V7) in the list in the Parameter Edit window. The following dialog box appears.



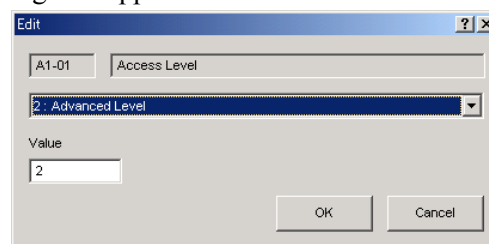
Select the control mode in the list box, and related parameters are displayed on the list. Click **OK** to change the parameter settings and return to the Parameter Edit window. Click **Cancel** to return to the Parameter Edit window without changing the parameter settings.

Note: The control mode can be changed in the edit box opened by clicking **Edit**.

Access Level

Edits the parameter for the access level.

Click **Change** next to the Access level or double-click Constant access level (G5, F7, G7, L7) or Constant selection/initialization (V7, J7) in the list in the Parameter Edit window. The following dialog box appears.

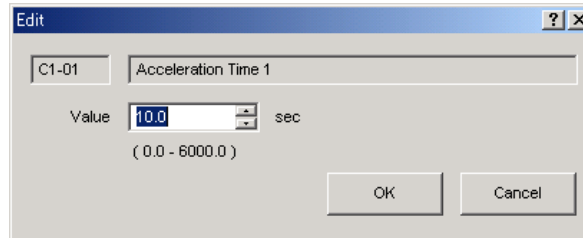


Select the access level in the list box or type the value. Click **OK** to change the access level and return to the Parameter Edit window. Only parameters that can be viewed in the selected access level are displayed. Click **Cancel** to return to the Parameter Edit window without changing the parameter setting.

Edit

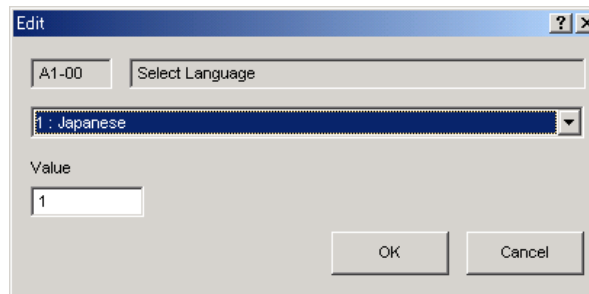
The parameter can be viewed and then changed in the Edit box. Select the parameter to be changed, and click **Edit** or double-click the parameter, and the Edit box appears. The Edit box differs according to the parameter selected.

<Numerical type Edit Box>



Select the value using the spin button or type the value.

<Selection-type Edit Box>



Select the value in the list box or type the value.

<Editing parameters related to other parameters>

If the parameter related to other parameters is changed, those parameters are also changed.

Select the parameter to be changed, and click **Edit** or double-click the parameter, the following dialog box appears.

The following parameters are changed due to the setting value.

No.	Name	Working value	Changed value
C1-01	Acceleration time 1	10.0	10.00
C1-02	Deceleration time 1	10.0	10.00
C1-03	Acceleration time 2	10.0	10.00
C1-04	Deceleration time 2	10.0	10.00
C1-05	Acceleration time 3	10.0	10.00
C1-06	Deceleration time 3	10.0	10.00
C1-07	Acceleration time 4	10.0	10.00
C1-08	Deceleration time 4	10.0	10.00
C1-09	Emergency stop time	10.0	10.00

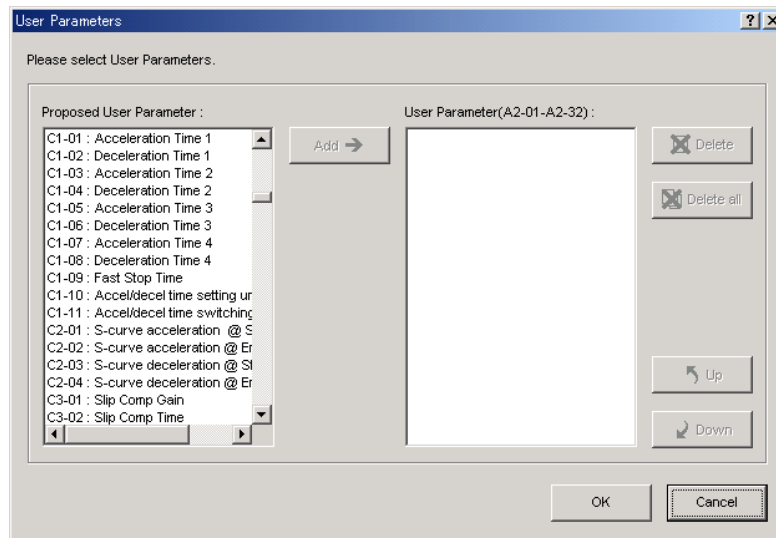
Select the setting in the list box. Or click **Edit** and type the value. Then, click **OK**.

<Setting the user constants to be displayed>

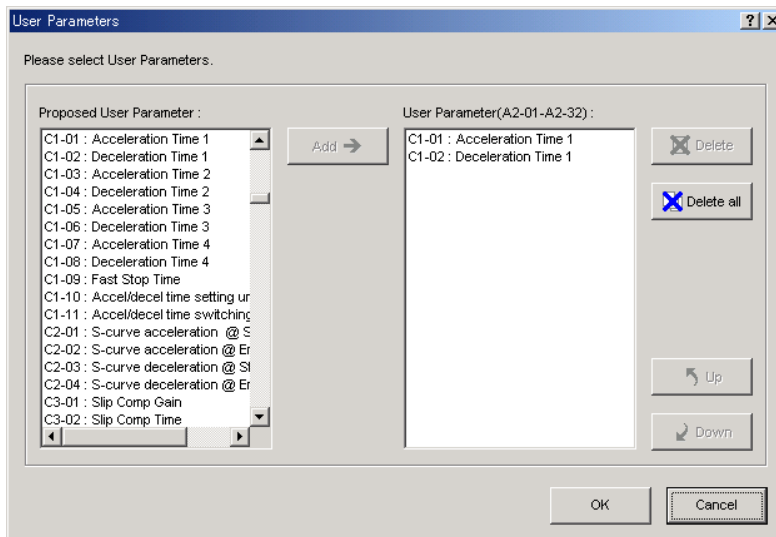
The user constants can be selected, which are displayed when the access level is set to the User constant setting.

Select User setting constant (G5, F7, G7, L7) in the list in the Parameter Edit window and click **Edit** or double-click the parameter, and the User Parameters box appears.

Note: This setting is not available in V7 and J7 Inverters.



Select a parameter in the Proposed User Parameter list and click **Add**. The selected parameter is displayed in the User Parameter list.



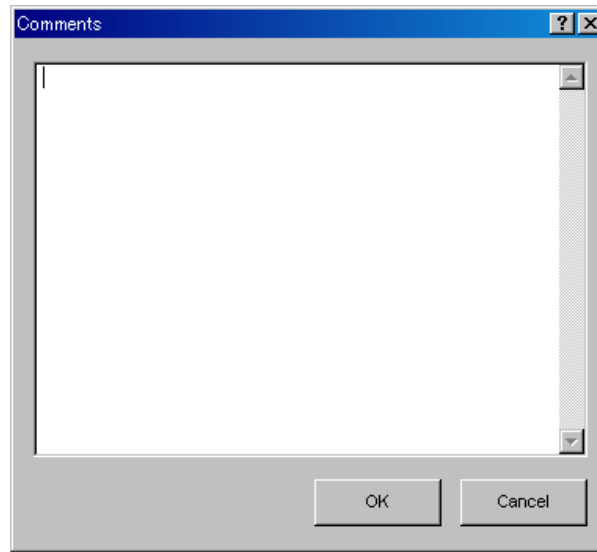
After you have finished selecting the user parameters, click **OK** and the following message appears.



Click **OK**.

Comments

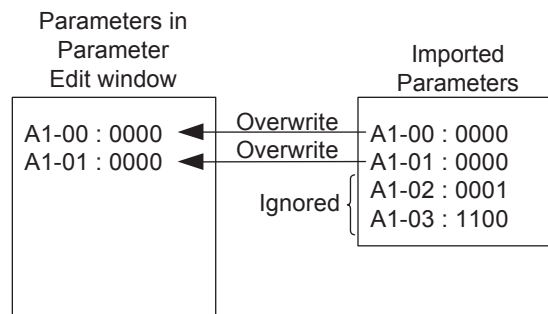
Comments can be typed or edited in the Comment box. Click **Comments**, and the Comment box appears.



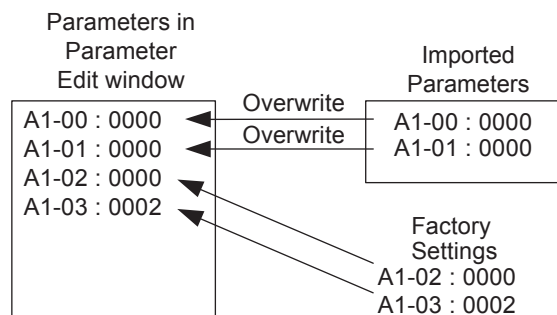
Import

Parameter settings can be transferred or imported from a stored file with the Import function. If the imported parameters differ in number from the on-screen parameters (including parameters not currently displayed), the following processing takes place.

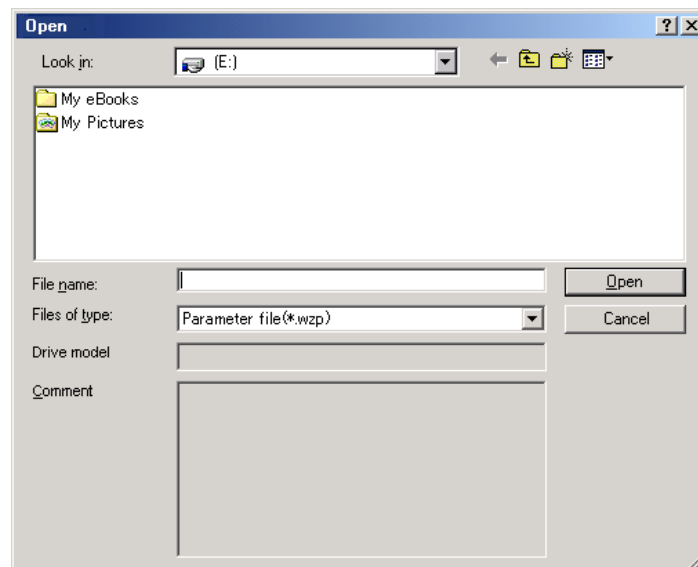
- If the number of imported parameters is greater



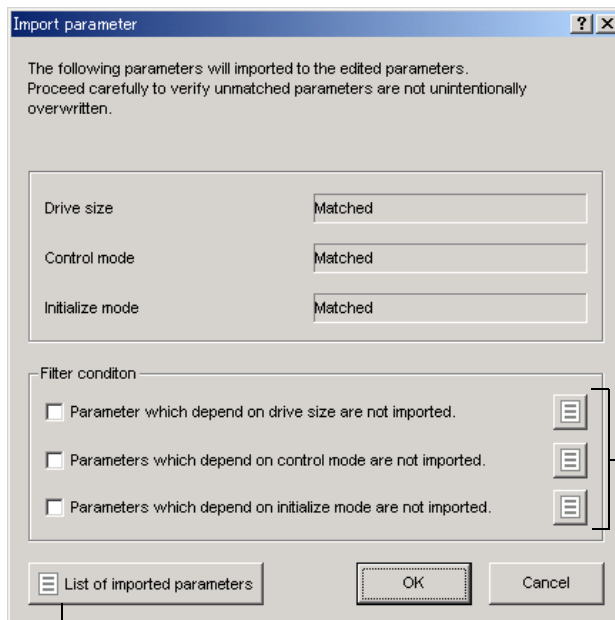
- If the number of imported parameters is fewer



1. Click **Import**, and the Open box appears.



2. Select the file to be transferred, and click **Open**. The Import parameter box appears.



Opens a list of parameters that are changed when the parameters for the drive size, control mode, or initialize mode are changed.

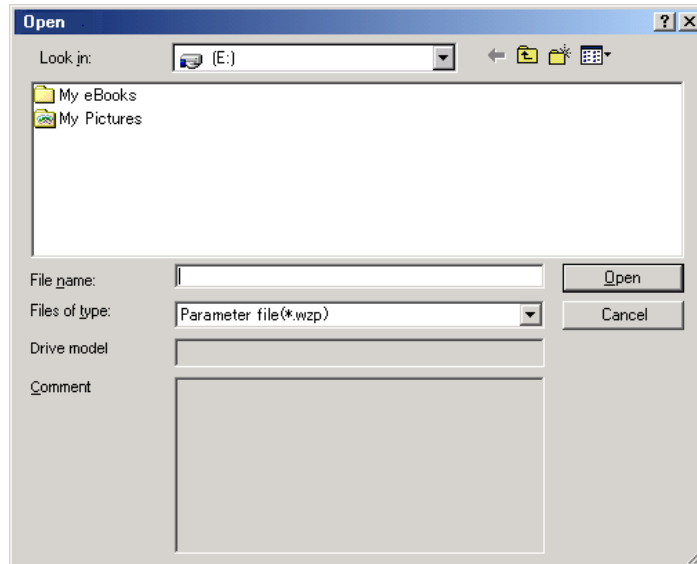
Displays a list of parameters to be imported.

3. Select the appropriate check boxes for the filter conditions, and click **OK**.

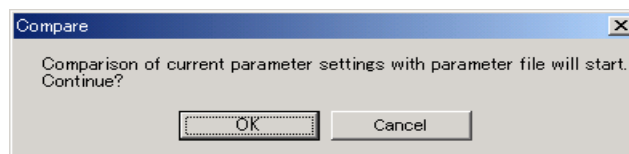
Compare to file

The edited parameter settings can be compared with the values in the specified file for all parameters, including those not displayed, with the Compare function. Check the settings using the following procedure.

1. Click **Compare** at the right-top, and the Open box appears.



2. Select a file and click **OK**. A message appears and confirms if you want to compare all parameter settings.

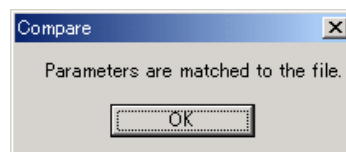


Click **Cancel** to return to the Parameter Edit window without comparing the settings.

3. Click **OK** to start the comparison.

When the comparison has been successfully completed, the following dialog box appears.

- If all parameters match




- If not all parameters match

Comparison results

The following parameter settings differ.

No.	Name	Setting value	Setting Unit	File's value	File's unit
d1-01	Frequency reference 1	0.00	Hz	10.00	Hz
d1-02	Frequency reference 2	0.00	Hz	20.00	Hz
d1-03	Frequency reference 3	0.00	Hz	30.00	Hz
d1-04	Frequency reference 4	0.00	Hz	40.00	Hz
d1-05	Frequency reference 5	0.00	Hz	50.00	Hz

Click the  button to save the results of the comparison.

Initialize

The settings of the Inverter can be returned to the factory settings with the Initialize function. Return to the initial settings using the following procedure.

1. Click **Initialize**. Or Select Initialize (G5, F7, G7, L7), Constant selection/initialization (V7, J7) in the parameter list in the Parameter Edit window. Then click **Edit** or double-click the parameter. The dialog box in which you can initialize the Inverter settings appears.

Drive is initialized

Please select the initialized condition.

A1-03 : Init Parameters

3330 : 3-Wire Initialize

Value

3330 Edit

A1-02 : Control Method

0 : V/f Control

Value

0 Edit

o2-09 : Init Mode Sel

2 : European spec

Value

2 Edit

OK Cancel

These items vary
according to Inverter type.

Click **Cancel** to return to the Parameter Edit window without changing the Inverter settings.

- To set an initialization condition, select a value in the list box. Or, click **Edit** and type the value.

- Usually, the initialization conditions for the inverter capacity, control mode, and Initialize mode do not have to be changed. If changing them, select the new values from each list. Or, Click **Edit** and type the value.
- Click **OK**, and the warning box appears.

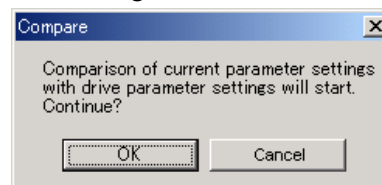


- Click **Execute** to start initialization.

Compare to Inverter

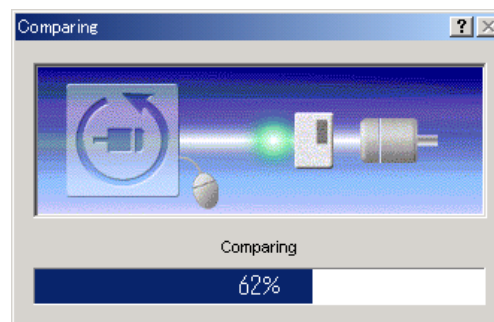
The edited parameter settings can be compared with the values in the Inverter for all parameters, including those not displayed, with the Compare function. Check the settings using the following procedure.

- Click **Compare** at the bottom. A message appears and confirms if you want to compare all parameter settings.



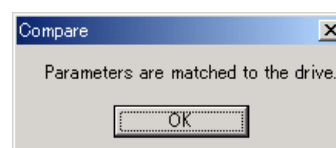
Click **Cancel** to return to the Parameter Edit window without comparing the settings.

- Click **OK** to start the comparison, and the percentage of the progress completed is shown.

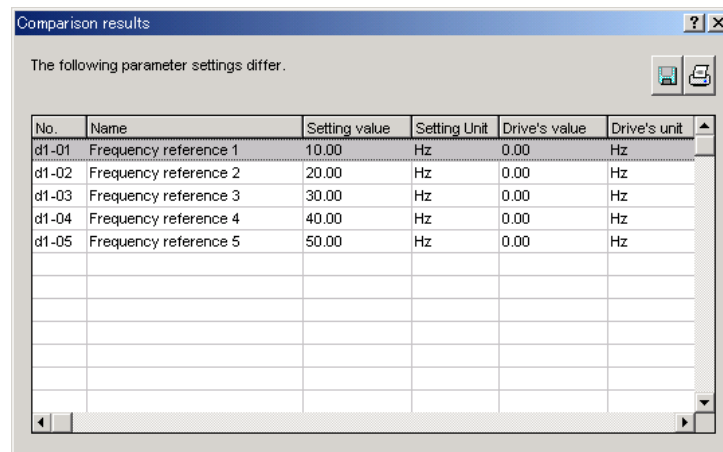


When the comparison has been successfully completed, the following dialog box appears.

- If all parameters match



- If not all parameters match



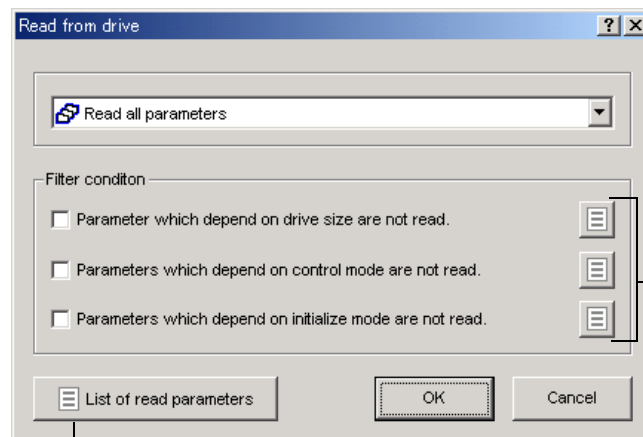
Click the button to save the results of the comparison.

Read from Inverter

Selected parameter settings from the Inverter can be read and then changed by overwriting them with the Read function.

Read the parameters using the following procedure.

1. Click **Read** and the dialog box in which you can read the Inverter settings appears.

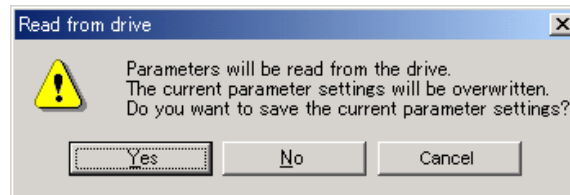


- Opens a list of parameters that are changed when the parameters for the drive size, control mode, or initialize mode are changed.

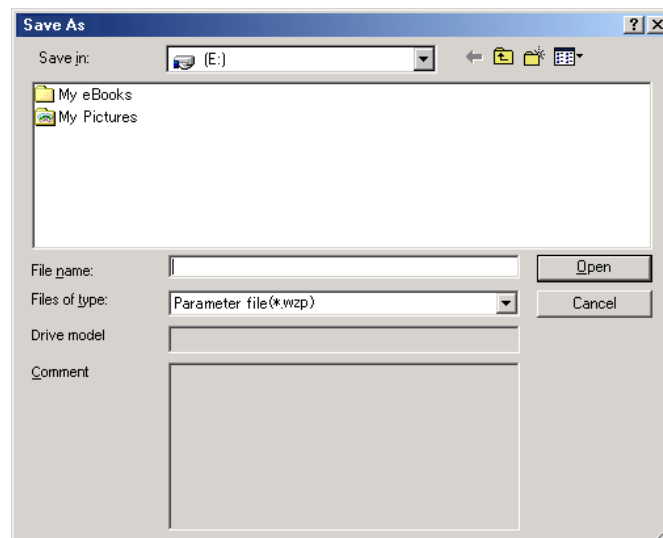
Displays a list of parameters to be read.

<If parameters are being edited>

If parameters are being edited, a message appears and confirms if you want to save the current parameter settings.



- Click **OK** to save the current parameter settings. The Save As box appears.



- Click **No** to overwrite the current parameter settings without saving the current parameter settings. The Read from drive box appears.
 - Click **Cancel** to return to the Parameter Edit window without reading the settings.
2. Select a reading condition in the list box.

Read selected parameters

Only selected parameters in the Parameter Edit window are read.

Read Group

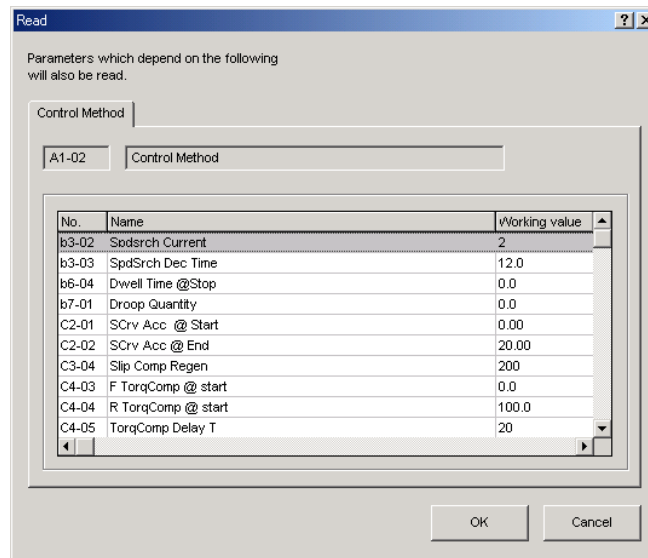
All parameters in the displayed group tab are read.

Read all parameter

All parameters, including those not displayed, are read.

3. Select the appropriate check boxes for the filter conditions.
4. Click **OK** to start reading the settings from the Inverter.

<If parameters related to other parameters are included in the selected group>
The Read box appears.



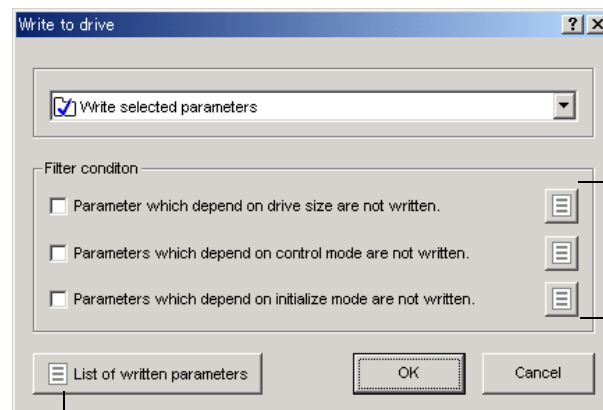
Click **OK** to read the parameter and all related parameters that are listed.

Click **Cancel** to return to the Parameter Edit window without reading the parameters.

Write to Inverter

Selected parameter settings can be saved with the Write function.

1. Click **Write**, and the dialog box in which you can overwrite the Inverter setting appears.



Opens a list of parameters that are changed when the parameters for the drive size, control mode, or initialize mode are changed.

Displays a list of parameters to be overwritten.

2. Select an overwriting condition in the list box.
 - Write selected parameters
Only selected parameters in the Parameter Edit window are overwritten.
 - Write Group
All parameters in the displayed group tab are overwritten.

- Write all parameters

All parameters including those not-displayed are overwritten.

3. Select the appropriate check boxes for the filter conditions.
4. Click **OK** to start saving the settings to the Inverter.

<If parameters related to other parameters are included in the displayed group>

The Write box appears.

No.	Name	Drive's value	Changed value	Default
b3-02	SpdSrchr Current	3	2	3
b3-03	SpdSrchr Dec Time	12.0	12.0	12.0
b6-04	Dwell Time @Stop	0.0	0.0	0.0
b7-01	Droop Quantity	0.0	0.0	0.0
C2-01	SCrv Acc @ Start	0.00	0.00	0.00
C2-02	SCrv Acc @ End	20.00	20.00	20.00
C3-04	Slp Comp Regen	200	200	200
C4-03	F TorqComp @ start	2.0	0.0	2.0
C4-04	R TorqComp @ start	20.0	100.0	20.0
C4-05	TorqComp Delay T	2	20	2

Click **OK** to overwrite the parameter and all related parameters that all listed.

Click **Cancel** to return to the Parameter Edit window without overwriting the parameters.

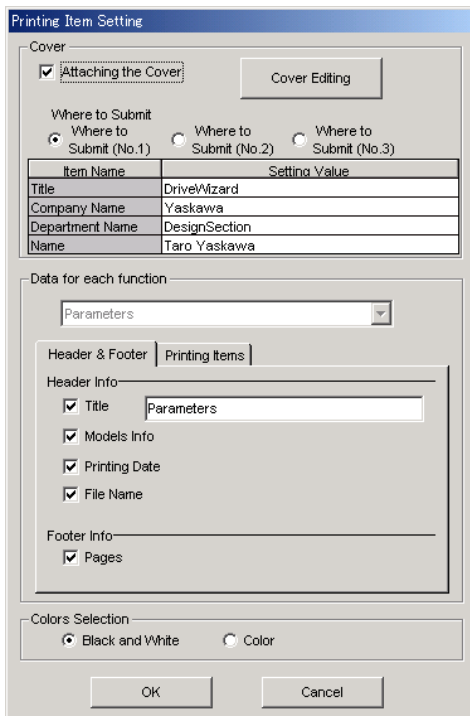


(Print) Button

The data on the Parameter Edit window can be printed.

Only the group parameters selected in the Parameter Edit window can be printed. To print all parameters, select the All parameters check box in the Parameter Edit window, and perform printing.

Click the  button, and the Printing Item Setting box appears.



Printing Item Setting

Cover

☒ Attaching the Cover Cover Editing

Where to Submit

☒ Where to Submit (No.1) ☐ Where to Submit (No.2) ☐ Where to Submit (No.3)

Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa

Data for each function

Parameters

Header & Footer **Printing Items**

Header Info

☒ Title

☒ Models Info

☒ Printing Date

☒ File Name

Footer Info

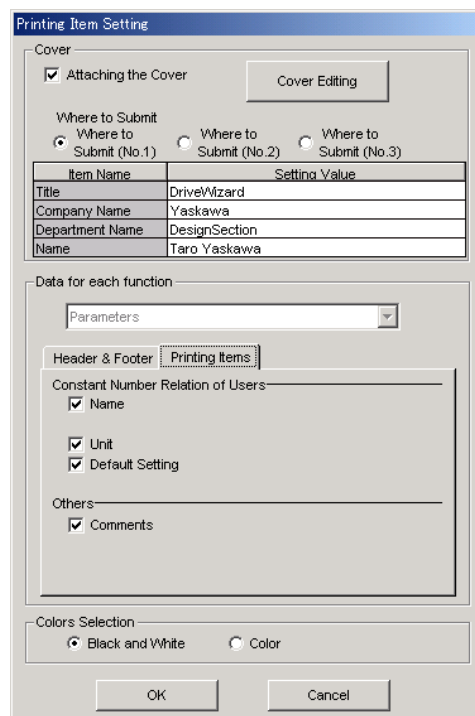
☒ Pages

Colors Selection

☒ Black and White ☐ Color

OK Cancel

Header Footer Tab



Printing Item Setting

Cover

☒ Attaching the Cover Cover Editing

Where to Submit

☒ Where to Submit (No.1) ☐ Where to Submit (No.2) ☐ Where to Submit (No.3)

Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa

Data for each function

Parameters

Header & Footer **Printing Items**

Constant Number Relation of Users

☒ Name

☒ Unit

☒ Default Setting

Others

☒ Comments

Colors Selection

☒ Black and White ☐ Color

OK Cancel

Printing Items Tab

Cover

Select **Attaching the Cover**, and then click **Cover Editing**. For details, see [Chapter 3](#).

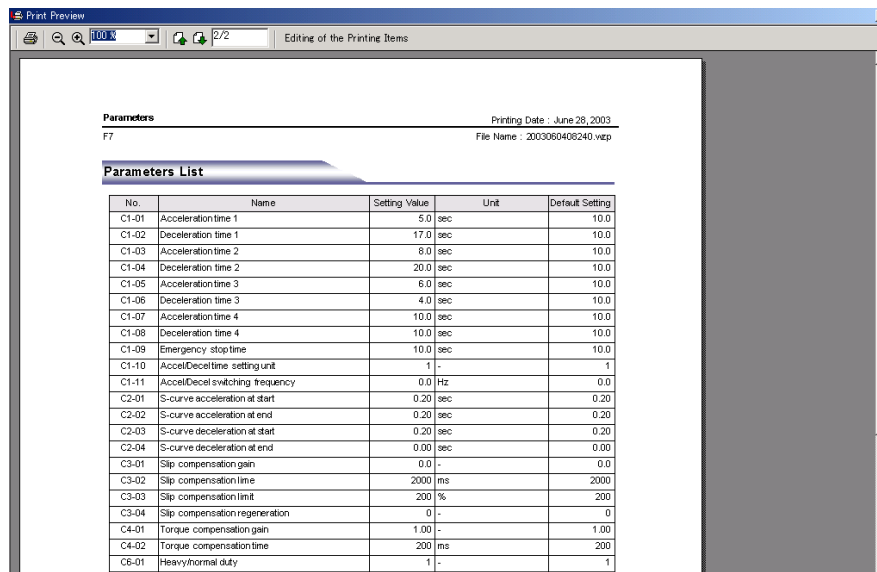
Data for each function

To enter your printing preferences or specifications, click the tab whose options you want to enter or change, and enter the desired settings.

Color Selection

Documents can be printed in color or black and white. Select your preference.


After setting is finished, click **OK**. The document appears on the screen the way it will appear in print.



Parameters Printing Date : June 28, 2003
F7 File Name : 2003060408240.wzp

Parameters List

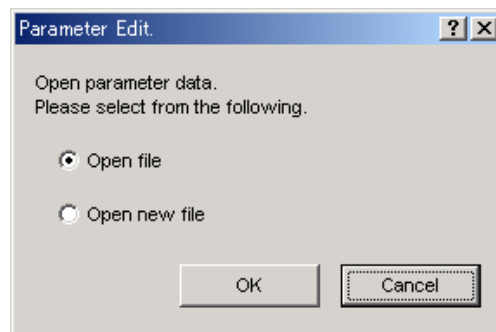
No.	Name	Setting Value	Unit	Default Setting
C1-01	Acceleration time 1	5.0	sec	10.0
C1-02	Deceleration time 1	17.0	sec	10.0
C1-03	Acceleration time 2	8.0	sec	10.0
C1-04	Deceleration time 2	20.0	sec	10.0
C1-05	Acceleration time 3	6.0	sec	10.0
C1-06	Deceleration time 3	4.0	sec	10.0
C1-07	Acceleration time 4	10.0	sec	10.0
C1-08	Deceleration time 4	10.0	sec	10.0
C1-09	Emergency stop time	10.0	sec	10.0
C1-10	Accel/Decel time setting unit	1	-	1
C1-11	Accel/Decel switching frequency	0.0	Hz	0.0
C2-01	S-curve acceleration at start	0.20	sec	0.20
C2-02	S-curve acceleration at end	0.20	sec	0.20
C2-03	S-curve deceleration at start	0.20	sec	0.20
C2-04	S-curve deceleration at end	0.00	sec	0.00
C3-01	Slip compensation gain	0.0	-	0.0
C3-02	Slip compensation time	2000	ms	2000
C3-03	Slip compensation limit	200	%	200
C3-04	Slip compensation regeneration	0	-	0
C4-01	Torque compensation gain	1.00	-	1.00
C4-02	Torque compensation time	200	ms	200
C6-01	Heavy/normal duty	1	-	1

To print the document as is without any changes, click the  button.

To return to the Printing Item Setting box and change some settings, click **Editing of the Printing Items**.

Parameter Editing when Offline

In the DriveWizard main window, click **Parameters** and then click **Edit Parameters**. The Parameter Edit box appears.



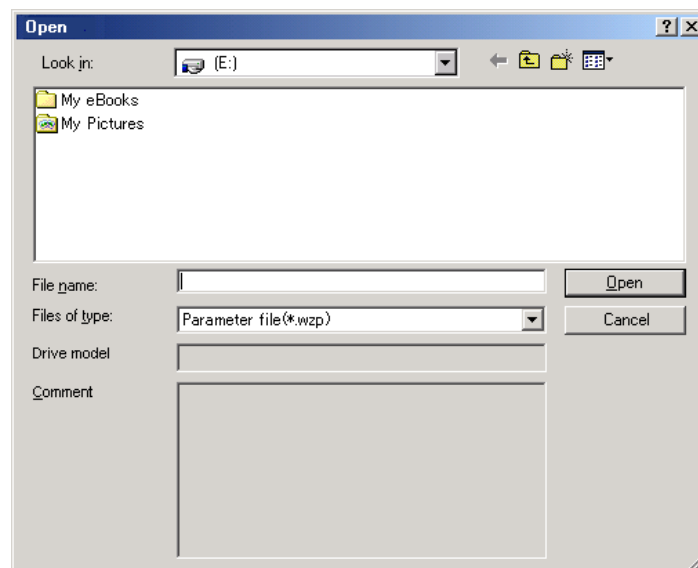
Open file: Reads in existing parameters.

Open new file: Creates new settings for parameters.

Select the desired command and click **OK**.

< When "Open file" is Selected >

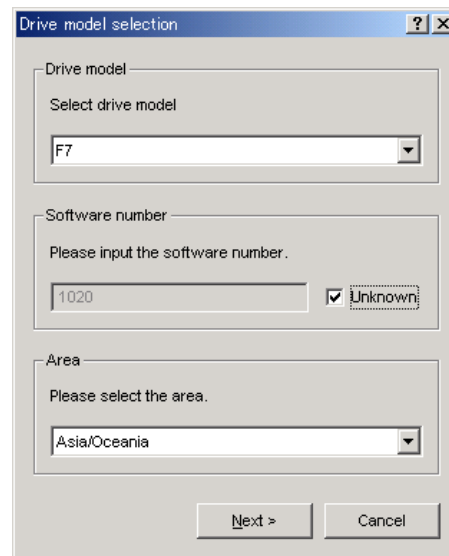
When "Open file" is selected, the Open box appears.



Select the file to be imported, and click **Open**.

< When "Open new file" is Selected >

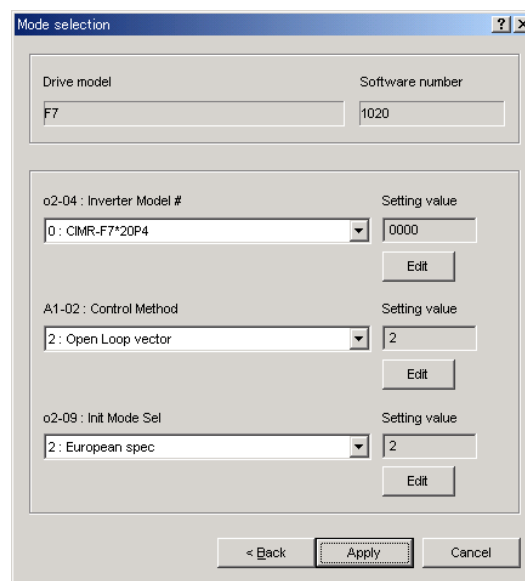
When "Open new file" is selected, the Drive model selection box appears.



The "Drive model selection" dialog box contains three sections: "Drive model" with a dropdown menu showing "F7"; "Software number" with a text input field containing "1020" and a checked checkbox labeled "Unknown"; and "Area" with a dropdown menu showing "Asia/Oceania". At the bottom are "Next >" and "Cancel" buttons.

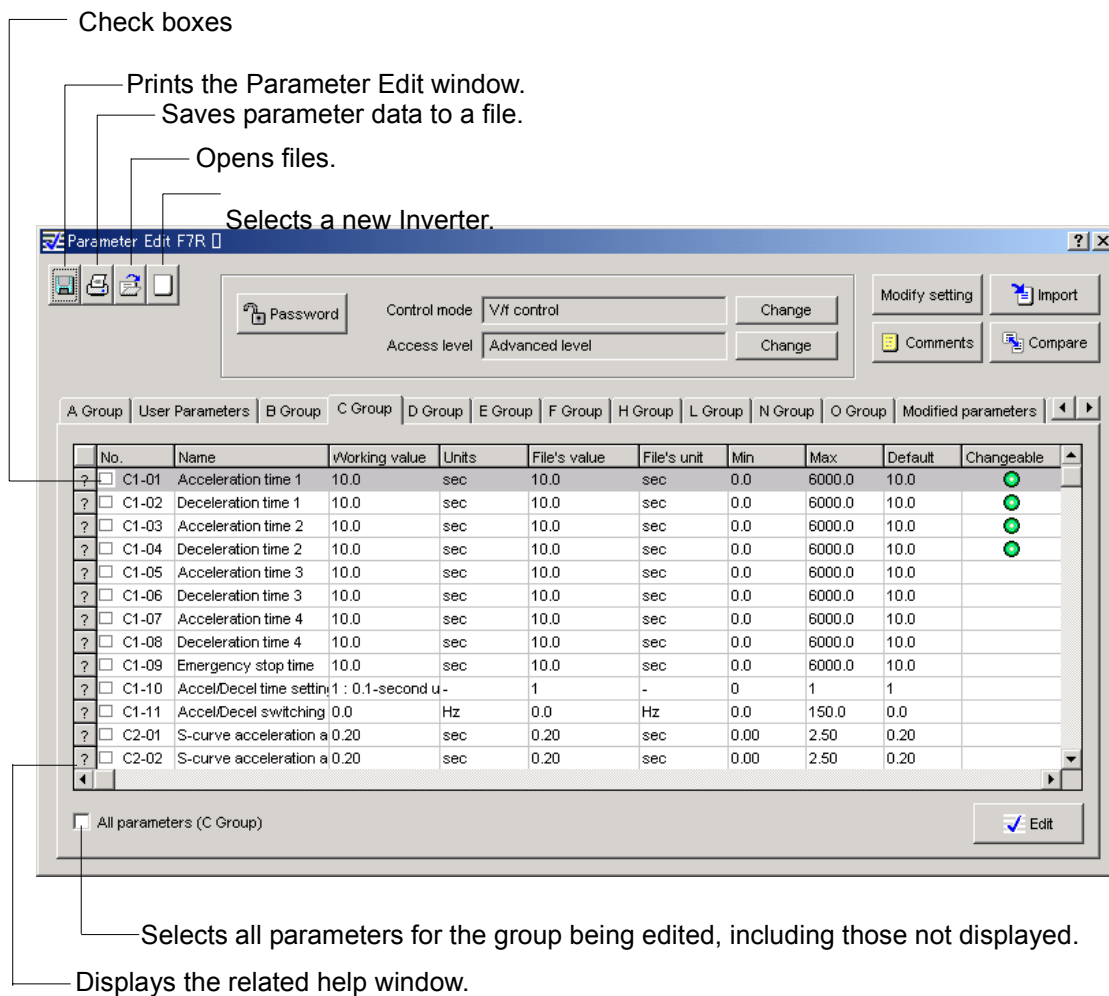
Select the model of Inverter and the area. And type the last four digits of the software number. Click **Next** to continue, and the Mode selection box appears.

Note: Check the software number by checking the nameplate or using the digital operator. Refer to the Inverter instruction manuals for more information.



The "Mode selection" dialog box shows the previously selected "F7" drive model and "1020" software number. It lists three parameters for selection: "o2-04 : Inverter Model #" with a dropdown set to "0 : CIMR-F7*20P4" and a "Setting value" of "0000"; "A1-02 : Control Method" with a dropdown set to "2 : Open Loop vector" and a "Setting value" of "2"; and "o2-09 : Init Mode Sel" with a dropdown set to "2 : European spec" and a "Setting value" of "2". Each parameter has an "Edit" button. At the bottom are "< Back", "Apply", and "Cancel" buttons.

Select the value in each list box. Or click each **Edit** button and type the value. Click **Apply** and the Parameter Edit window for the offline mode appears.




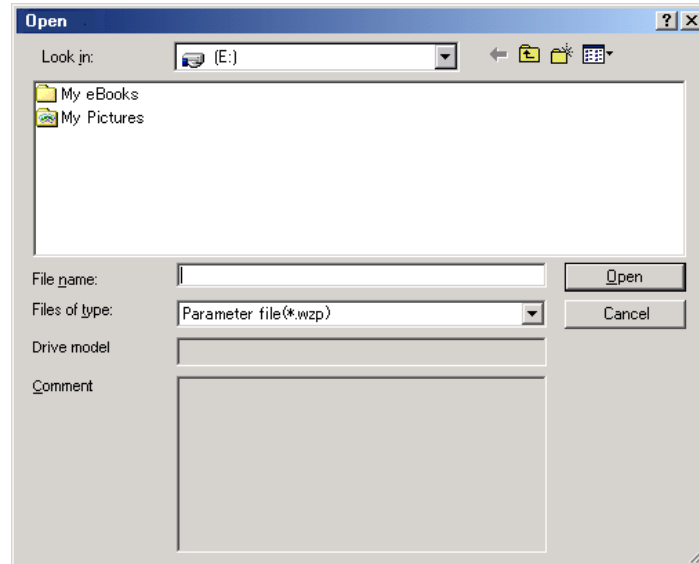
Parameter Edit Window (Offline Mode)



(Open) Button

The parameters file can be loaded in the Open box. To load the file, use the following procedure.

1. Click the  button, and the Open box appears.

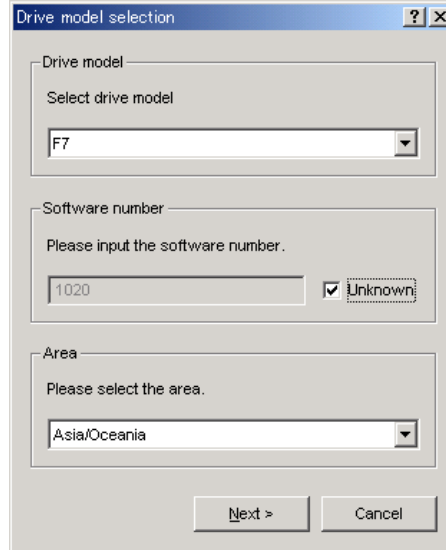


2. Select the name of the parameter file to be imported, and click **Open**.

(New) Button

A new Inverter can be selected in the Drive model selection box using the New command. To change to a different Inverter, use the following procedure.

Click the  button, and the Drive model selection box appears.

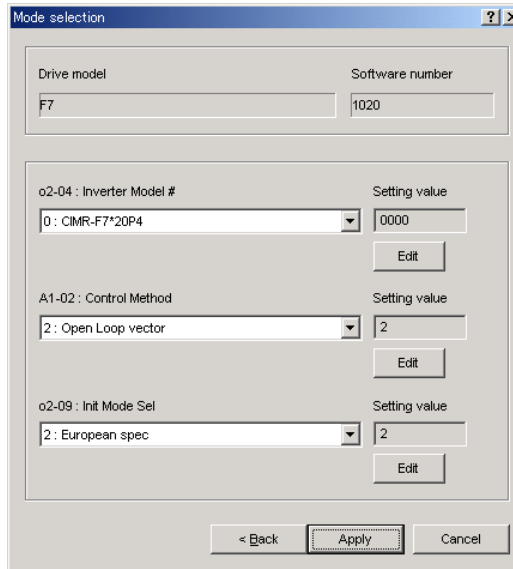


The 'Drive model selection' dialog box contains the following fields:

- Drive model:** A dropdown menu with 'F7' selected.
- Software number:** A text input field containing '1020' and a checked checkbox labeled 'Unknown'.
- Area:** A dropdown menu with 'Asia/Oceania' selected.
- Buttons:** 'Next >' and 'Cancel' at the bottom.

Select the model of Inverter and the area. And type the last four digits of the software number. Click **Next** to continue, and the Mode selection box appears.

Note: Check the software number by checking the nameplate or using the digital operator. Refer to the Inverter instruction manuals for more information.



The 'Mode selection' dialog box contains the following fields:

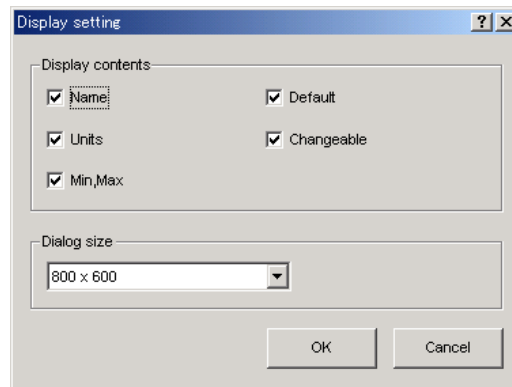
- Drive model:** A text input field containing 'F7'.
- Software number:** A text input field containing '1020'.
- o2-04 : Inverter Model #:** A dropdown menu with '0 : CIMR-F7*20P4' selected. To its right is a 'Setting value' field with '0000' and an 'Edit' button.
- A1-02 : Control Method:** A dropdown menu with '2 : Open Loop vector' selected. To its right is a 'Setting value' field with '2' and an 'Edit' button.
- o2-09 : Init Mode Sel:** A dropdown menu with '2 : European spec' selected. To its right is a 'Setting value' field with '2' and an 'Edit' button.
- Buttons:** '< Back', 'Apply', and 'Cancel' at the bottom.

Select the value in each list box. Or Click each Edit button and type the value. Click **Apply** and the Parameter Edit window for the offline mode appears.

Modify setting

Items to be displayed in the Parameter Edit window can be selected.

Click **Modify setting**, and the Display setting box appears. Select the information to be displayed and the size of the Parameter Edit window.



Display Setting Box

Display contents

Select the information to be displayed.

Dialog size

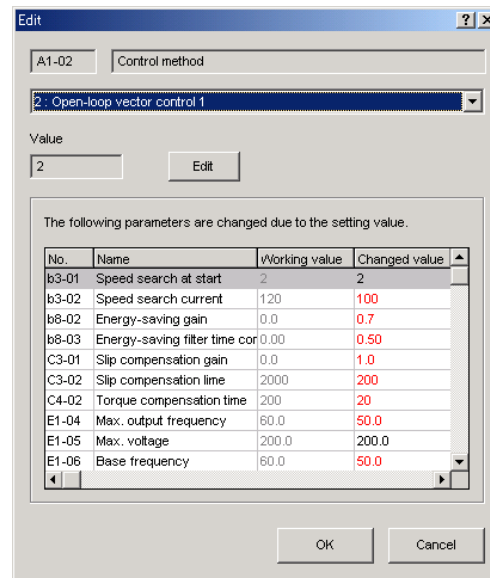
Select the size of the Parameter Edit window.

Click **OK** to save the changes in the display settings and to return to the Parameter Edit window. Click **Cancel** to return to the Parameter Edit window without changing the display settings.

Control Mode

Edits the parameter for the control mode and related parameters that are changed when the control mode is changed.

Click **Change** next to the Control mode or double-click Control method selection (G5, F7, G7, L7) or Control mode (V7) in the list in the Parameter Edit window. The following dialog box appears.



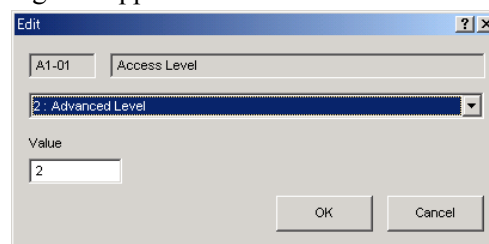
Select the control mode in the list box, and related parameters are displayed on the list. Click **OK** to change the parameter settings and return to the Parameter Edit window. Click **Cancel** to return to the Parameter Edit window without changing the parameter settings.

Note: The control mode can be changed in the edit box opened by clicking **Edit**.

Access Level

Edits the parameter for the access level.

Click **Change** next to the Access level or double-click Constant access level (G5, F7, G7, L7) or Constant selection/initialization (V7, J7) in the list in the Parameter Edit window. The following dialog box appears.

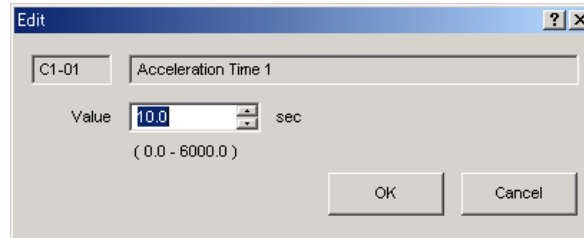


Select the access level in the list box or type the value. Click **OK** to change the access level and return to the Parameter Edit window. Only parameters that can be viewed in the selected access level are displayed. Click **Cancel** to return to the Parameter Edit window without changing the parameter setting.

Edit

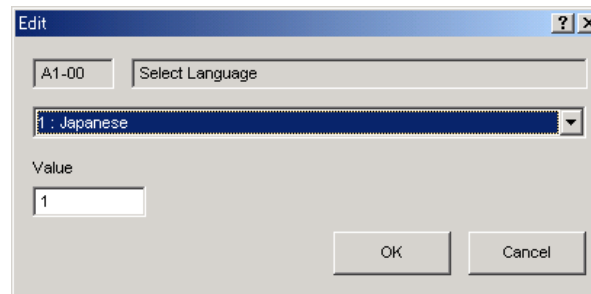
The parameter can be viewed and then changed in the Edit box. Select the parameter to be changed, and click **Edit** or double-click the parameter, and the Edit box appears. The Edit box differs according to the parameter selected.

<Numerical type Edit Box>



Select the value using the spin button or type the value.

<Selection-type Edit Box>



Select the value in the list box or type the value.

<Editing parameters related to other parameters>

If the parameter related to other parameters is changed, those parameters are also changed.

Select the parameter to be changed, and click **Edit** or double-click the parameter, the following dialog box appears.

The following parameters are changed due to the setting value.

No.	Name	Working value	Changed value
C1-01	Acceleration time 1	10.0	10.00
C1-02	Deceleration time 1	10.0	10.00
C1-03	Acceleration time 2	10.0	10.00
C1-04	Deceleration time 2	10.0	10.00
C1-05	Acceleration time 3	10.0	10.00
C1-06	Deceleration time 3	10.0	10.00
C1-07	Acceleration time 4	10.0	10.00
C1-08	Deceleration time 4	10.0	10.00
C1-09	Emergency stop time	10.0	10.00

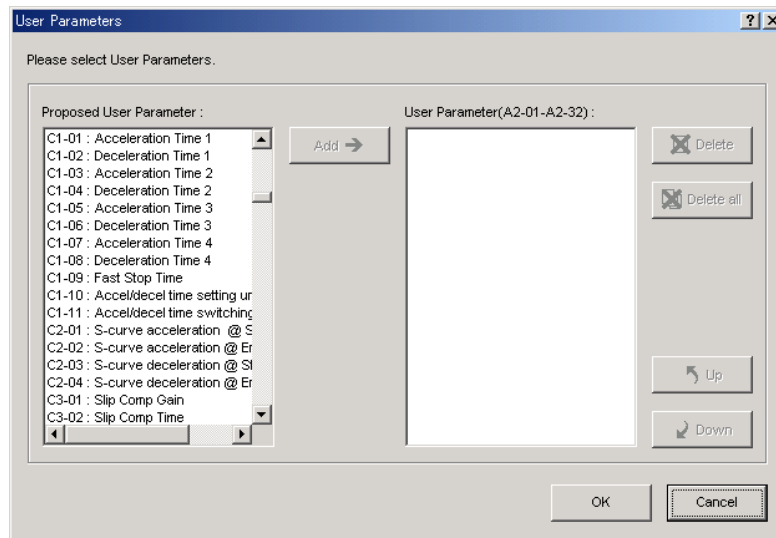
Select the setting in the list box. Or click **Edit** and type the value. Then, click **OK**.

<Setting the user constants to be displayed>

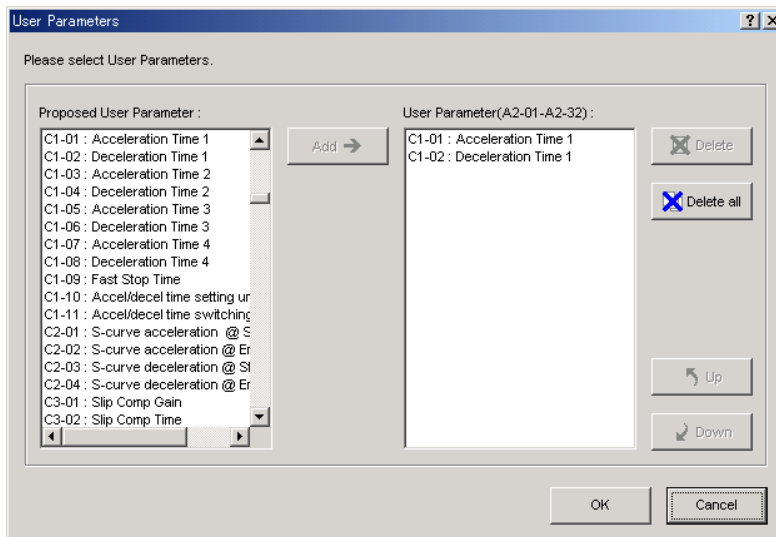
The user constants can be selected, which are displayed when the access level is set to the User constant setting.

Select User setting constant (G5, F7, G7, L7) in the list in the Parameter Edit window and click **Edit** or double-click the parameter, and the User Parameters box appears.

Note: This setting is not available in V7 and J7 Inverters.



Select a parameter in the Proposed User Parameter list and click **Add**. The selected parameter is displayed in the User Parameter list.



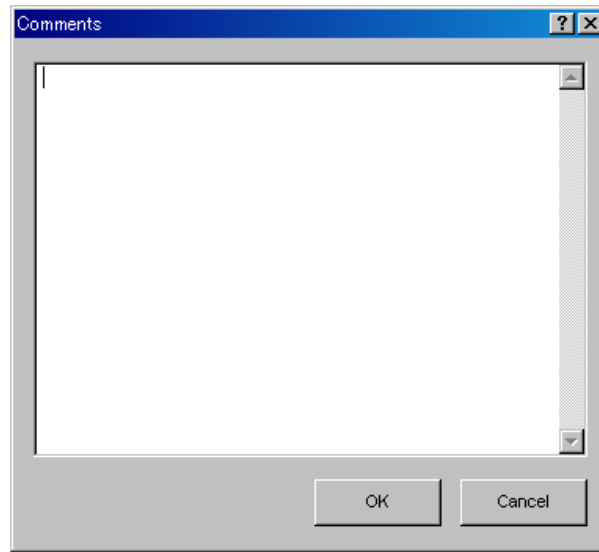
After you have finished selecting the user parameters, click **OK** and the following message appears.



Click **OK**.

Comments

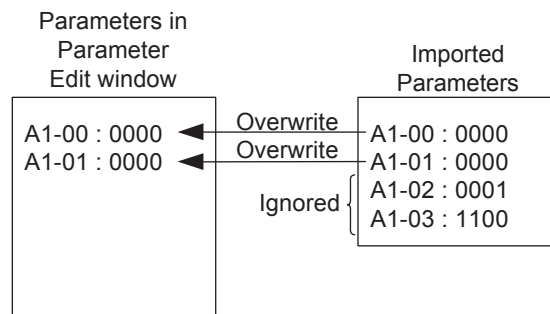
Comments can be typed or edited in the Comment box. Click **Comments**, and the Comment box appears.



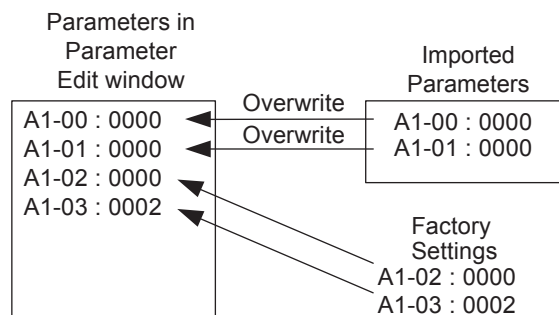
Import

Parameter settings can be transferred or imported from a stored file with the Import function. If the imported parameters differ in number from the on-screen parameters (including parameters not currently displayed), the following processing takes place.

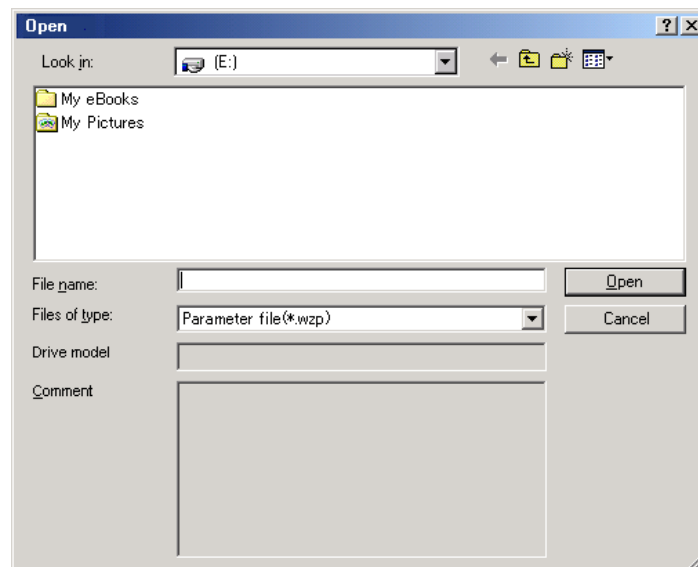
- If the number of imported parameters is greater



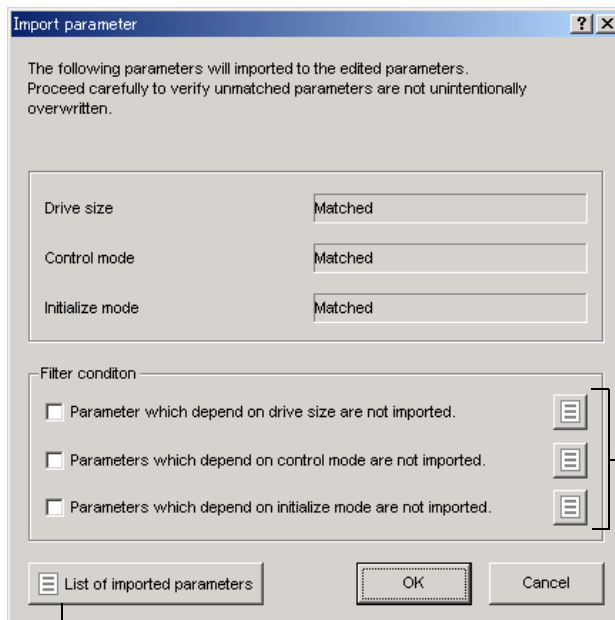
- If the number of imported parameters is fewer



1. Click **Import**, and the Open box appears.



2. Select the file to be transferred, and click **Open**. The Import parameter box appears.



Opens a list of parameters that are changed when the parameters for the drive size, control mode, or initialize mode are changed.

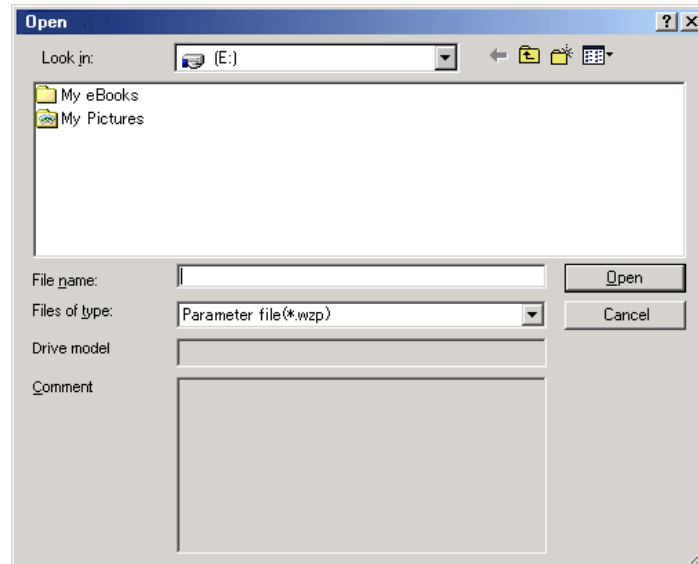
Displays a list of parameters to be imported.

3. Select the appropriate check boxes for the filter conditions, and click **OK**.

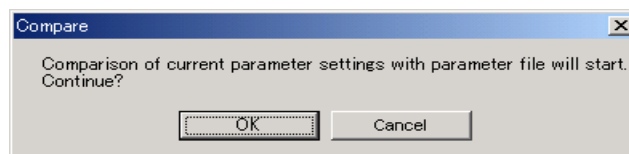
Compare to file

The edited parameter settings can be compared with the values in the specified file for all parameters, including those not displayed, with the Compare function. Check the settings using the following procedure.

1. Click **Compare** at the right-top, and the Open box appears.



2. Select a file and click **OK**. A message appears and confirms if you want to compare all parameter settings.

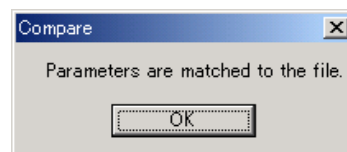


Click **Cancel** to return to the Parameter Edit window without comparing the settings.

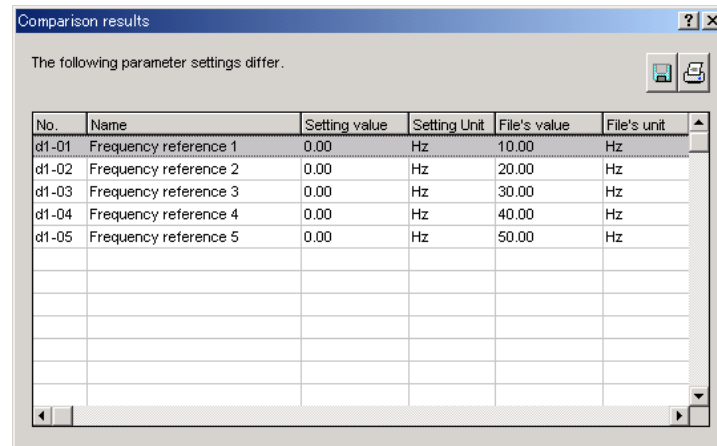
3. Click **OK** to start the comparison.


When the comparison has been successfully completed, the following dialog box appears.

- If all parameters match



- If not all parameters match



Click the  button to save the results of the comparison.



(Print) Button

The data on the Parameter Edit window can be printed.

Only the group parameters selected in the Parameter Edit window can be printed. To print all parameters, select the All parameters check box in the Parameter Edit window, and perform printing.

Click the  button, and the Printing Item Setting box appears.

Printing Item Setting

Cover

☒ Attaching the Cover Cover Editing

Where to Submit

☒ Where to Submit (No.1) ☐ Where to Submit (No.2) ☐ Where to Submit (No.3)

Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa

Data for each function

Parameters

Header & Footer **Printing Items**

Header Info

☒ Title

☒ Models Info

☒ Printing Date

☒ File Name

Footer Info

☒ Pages

Colors Selection

☒ Black and White ☐ Color

OK Cancel

Header Footer Tab

Printing Item Setting

Cover

☒ Attaching the Cover Cover Editing

Where to Submit

☒ Where to Submit (No.1) ☐ Where to Submit (No.2) ☐ Where to Submit (No.3)

Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa

Data for each function

Parameters

Header & Footer **Printing Items**

Constant Number Relation of Users

☒ Name

☒ Unit

☒ Default Setting

Others

☒ Comments

Colors Selection

☒ Black and White ☐ Color

OK Cancel

Printing Items Tab

Cover

Select **Attaching the Cover**, and the click **Cover Editing**. For details, see [Chapter 3](#).

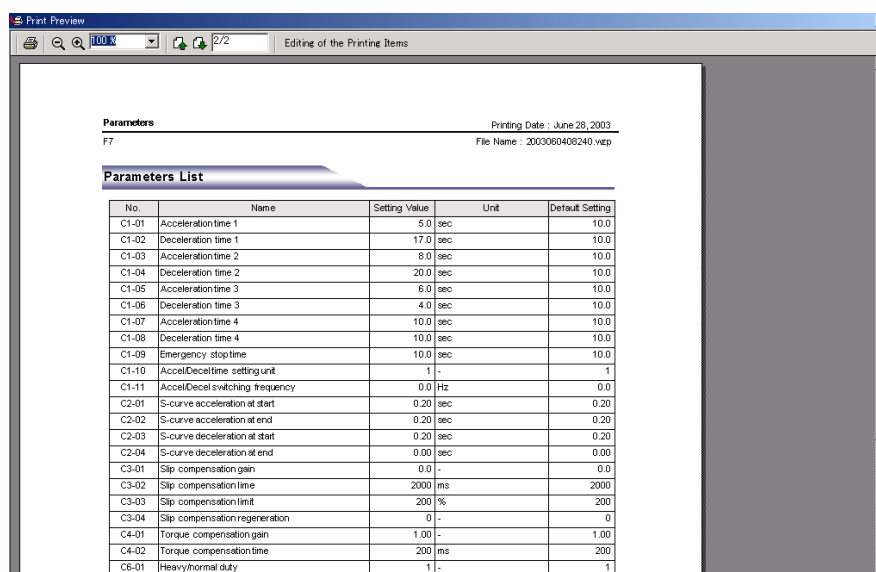
Data for each function

To enter your printing preferences or specifications, click the tab whose options you want to enter or change, and enter the desired settings.

Color Selection

Documents can be printed in color or black and white. Select your preference.


After setting is finished, click **OK**. The document appears on the screen the way it will appear in print.



Parameters Printing Date : June 28, 2003
F7 File Name : 2003060408240.wzp

Parameters List

No.	Name	Setting Value	Unit	Default Setting
C1-01	Acceleration time 1	5.0	sec	10.0
C1-02	Deceleration time 1	17.0	sec	10.0
C1-03	Acceleration time 2	8.0	sec	10.0
C1-04	Deceleration time 2	20.0	sec	10.0
C1-05	Acceleration time 3	6.0	sec	10.0
C1-06	Deceleration time 3	4.0	sec	10.0
C1-07	Acceleration time 4	10.0	sec	10.0
C1-08	Deceleration time 4	10.0	sec	10.0
C1-09	Emergency stop time	10.0	sec	10.0
C1-10	Accel/Decel time setting unit	1	-	1
C1-11	Accel/Decel switching frequency	0.0	Hz	0.0
C2-01	S-curve acceleration at start	0.20	sec	0.20
C2-02	S-curve acceleration at end	0.20	sec	0.20
C2-03	S-curve deceleration at start	0.20	sec	0.20
C2-04	S-curve deceleration at end	0.00	sec	0.00
C3-01	Slip compensation gain	0.0	-	0.0
C3-02	Slip compensation time	2000	ms	2000
C3-03	Slip compensation limit	200	%	200
C3-04	Slip compensation regeneration	0	-	0
C4-01	Torque compensation gain	1.00	-	1.00
C4-02	Torque compensation time	200	ms	200
C6-01	Heavy/normal duty	1	-	1

To print the document as is without any changes, click the  button.

To return to the Printing Item Setting box and change some settings, click **Editing of the Printing Items**.

4.1.2 Editing Parameters Online

Parameters can be viewed or edited in the Parameter Online Edit window.

NOTE

Values edited in the Parameter Online Edit box are also immediately changed in the Inverter.

Edit parameters online using the following procedure.

1. In the DriveWizard main window, click **Parameters** and then click **Edit Online Parameters**. The Parameter Online Edit box appears. The previously saved parameter settings will be displayed.

The dialog box titled "Parameter Online Edit #01" contains two sections. The first section for "C1-01 Acceleration time 1" shows a value of 10.0 in a box on the left and a slider/box on the right also showing 10.0, with a range of (0.0-6000.0) and a unit of [sec]. The second section for "C1-02 Deceleration time 1" shows a similar setup with a value of 10.0 and a range of (0.0-6000.0) and a unit of [sec]. Both sections have an "Enter" button. A "Set" button is at the top right.

Parameter Online Edit Box

2. To change the values of the settings, type the new value in the edit box and click **Enter**. The value will now be displayed in the box on the left.

Note: Parameters that cannot be edited appear shaded.

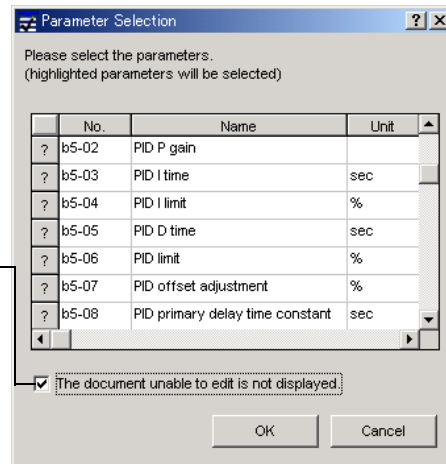
Modified values are also immediately changed in the Inverter. To view different parameters click **Set**, and the following dialog box appears.

The dialog box titled "Parameter Online Edit Setting" contains a table with columns "No.", "Name", and "Unit". It lists parameters C1-01 (Acceleration time 1, sec) and C1-02 (Deceleration time 1, sec). To the right of the table are "Set" and "Delete" buttons for each row. Below the table are "OK" and "Cancel" buttons. Annotations indicate that the "Set" button displays the related help window and the "Delete" button deletes the parameter displayed at left.

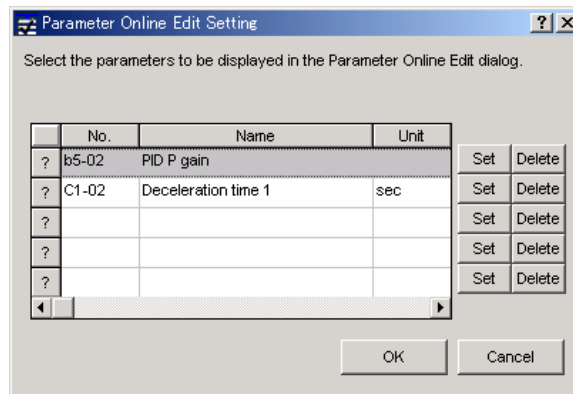
No.	Name	Unit
? C1-01	Acceleration time 1	sec
? C1-02	Deceleration time 1	sec
?		
?		
?		

- Click **Set** to view a parameter other than the "Acceleration time 1." The Parameter selection box appears.

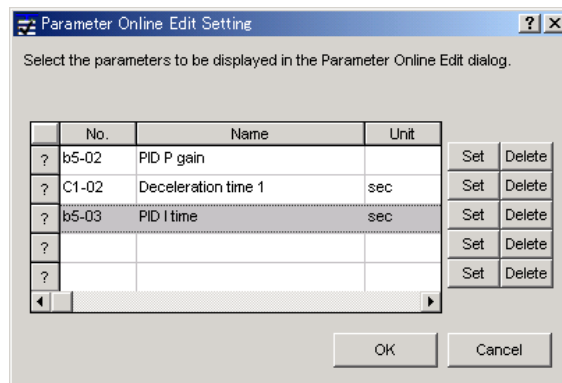
The parameters that appear shaded cannot be edited online or during a run. To hide the parameters, select the check box under the list of parameters.



- Select the parameter to be edited, and click **OK**. The Parameter Online Edit setting box appears.



- If there are still parameters to be edited, click **Set** for a second or third time and set these in the same manner as the first parameter.



Click **Delete** to delete the currently displayed parameter.

6. Click **OK** when parameter display is complete. The Parameter Online Edit box appears, displaying the set parameters.

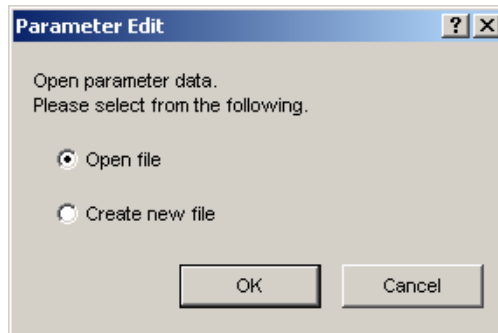
The screenshot shows a window titled "Parameter Online Edit #01". It contains three parameter settings, each with a label, a value field, a range, and an "Enter" button. The first parameter is "PID P gain" (b5-02) with a value of 1.00 and a range of (0.00-25.00). The second parameter is "Deceleration time 1" (C1-02) with a value of 10.0 and a range of (0.0-6000.0). The third parameter is "PID I time" (b5-03) with a value of 1.0 and a range of (0.0-360.0). There is also a "Set" button at the top right of the window.

7. To change the values of the settings, type the value in the edit box and click **Enter**. The typed value will be displayed in the left box. Modified values are also immediately changed in the Inverter.

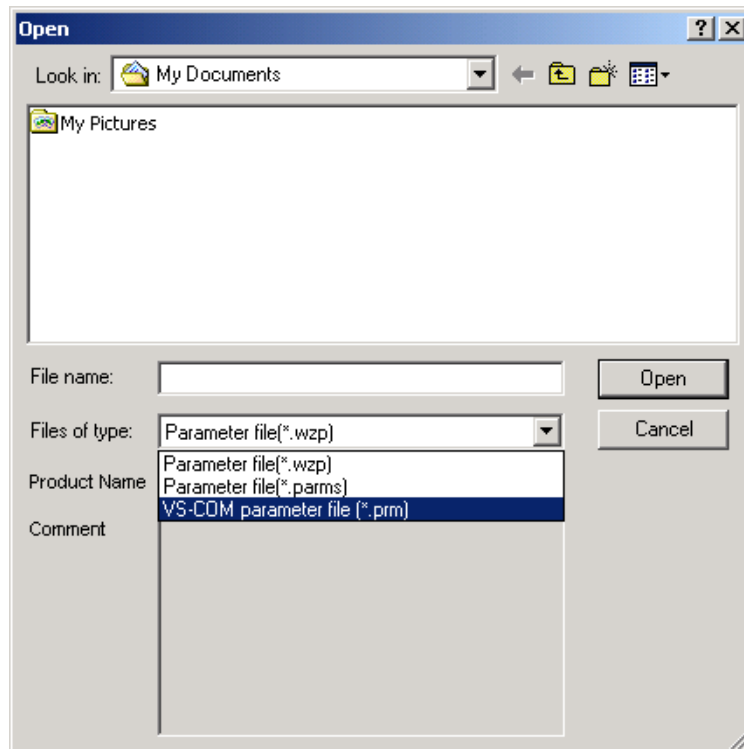
4.1.3 Editing Parameter Files Created by VS-COM

A parameter file created by VS-COM can be imported with DriveWizard and displayed, edited, and saved as a DriveWizard file.

1. Start DriveWizard offline.
2. In the DriveWizard main window, clic **Parameters**, and then click **Edit Parameters**. The Parameter Edit box appears.



3. Select "Open file", and then click **OK**. The Open box appears.



4. Select "VS-COM Parameter file (*.prm)", and then click **Open**. The selected VS-COM parameter file will be imported.

IMPORTANT

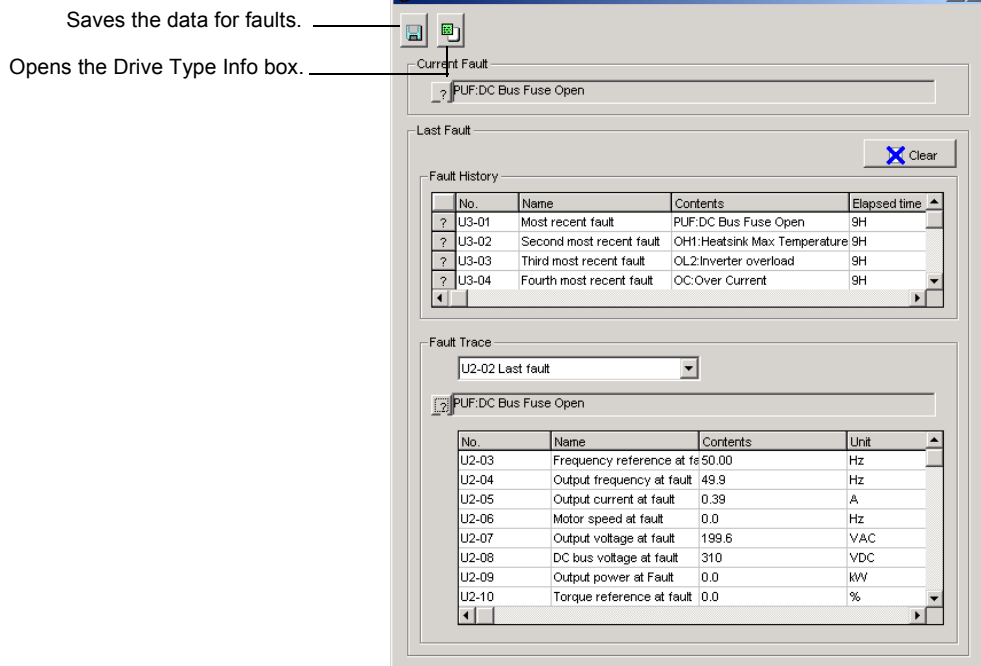
After importing the file, be sure to confirm the parameter settings.

4.2 Troubleshooting

Online Troubleshooting

Faults can be viewed in the Trouble Shooting box.

In the DriveWizard main window, click **Alarm** and then click **Trouble Shooting**. The Trouble Shooting box is displayed.



Trouble Shooting Box (Online)

Note: Display contents differ depending on the Inverter type.

Current Fault



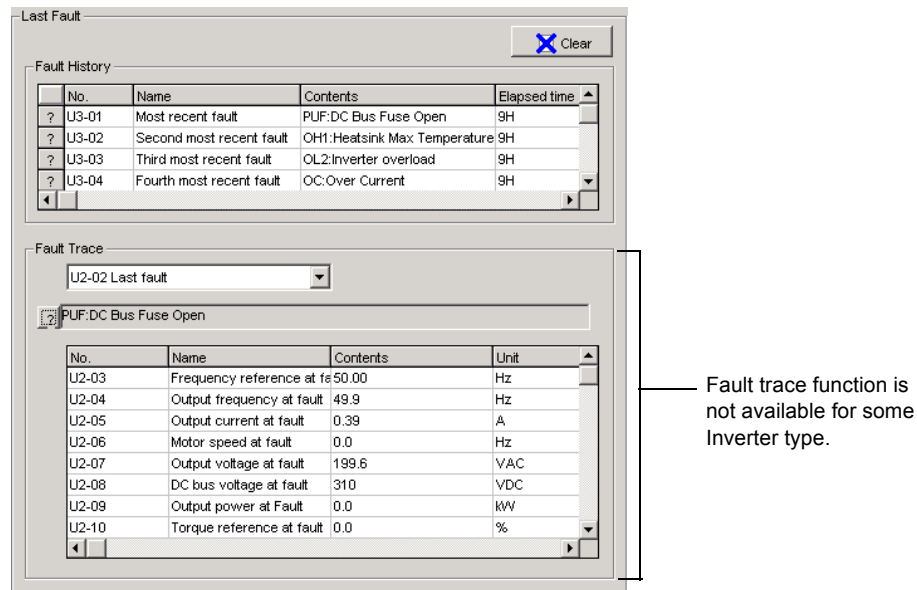
The current fault is displayed.

If Inverter status is normal, “No error” is displayed. If Inverter status is faulty, the current fault is displayed. The fault will continue until Inverter status goes normal or another fault occurs.

Note: Faults cannot be reset in DriveWizard. End DriveWizard, remove the cause of the fault, and then reset the fault using the Digital Operator.

Click the **?** button to display details concerning a specific fault and its corrective measures.

Last Fault



Note: The number of fault history to be stored differs depending on Inverter type. And also, the Elapsed time column is not displayed in some Inverter type.

<Fault History>

The Inverter stores a history of the 10 most recent faults. In DriveWizard, these are displayed in the Fault History column in the Trouble Shooting box, and are shown in order of occurrence with their fault code, the details about the type of fault, such as name, and elapsed time at fault.

When a new fault occurs, it is displayed as the most recent fault at the top of the list and the previous faults displayed move down on the list with the last fault eliminated.

Click the **?** button, to display details concerning a specific fault and its corrective measures.

Click **Clear** to clear the fault history.

<Fault Trace>

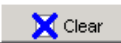
The values of monitor items when the fault occurred are displayed. Select a previous fault in the combo box.

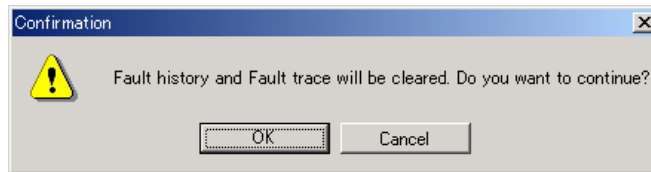
Click the **?** button, to display details concerning a specific fault and its corrective measures.

Click **Clear** to clear the fault trace.



button

To clear the fault history and fault trace, click the  button. The following dialog box is displayed.




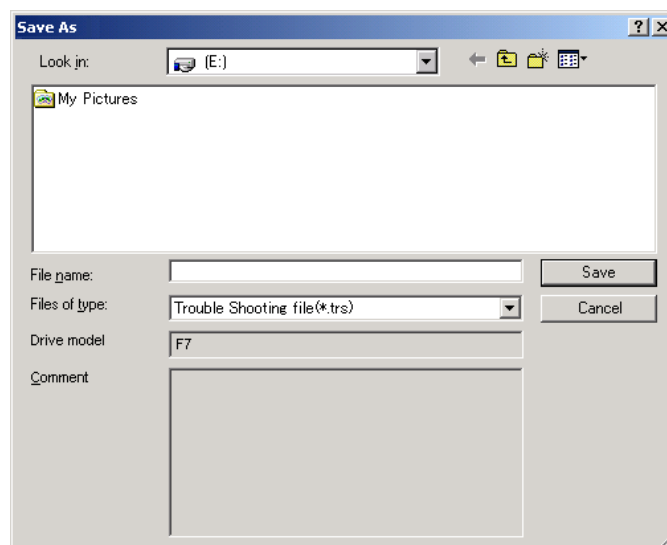
Click **OK** to clear the fault history and fault trace. Click **Cancel** to return to the Trouble Shooting box.

Note: Clear the fault history and fault trace after removing the cause of the fault and resetting the fault using the Digital Operator. If the fault history and fault trace are cleared before resetting the fault, even if the cause of the fault is not removed, the Inverter displays normal status on the Digital Operator. On the other hand, the current fault will continue in DriveWizard.



(Save) button


Click the  button, the Save As box is displayed.



Click **Save** to save the data for current fault, fault history, and fault trace to the specified file.

Click **Cancel** to return to the Trouble Shooting box.

**(Drive Type Info) button**

Click the  button, the Drive Type Info box is displayed.

A screenshot of the 'Drive Type Info' dialog box with the 'Drive Type Info' tab selected. The dialog has a title bar with a question mark and close button. It contains two tabs: 'Drive Type Info' and 'Comment'. The 'Drive Type Info' tab displays a list of drive parameters: File Name (empty), Date (empty), Product Name (F7), Initialize Mode (F7C spec), Model Number (CIMR-F7*20P4), Software Number (1020), and Control Mode (Open-loop vector control 1). At the bottom are 'OK' and 'Cancel' buttons.

File Name	:	
Date	:	
Product Name	:	F7
Initialize Mode	:	F7C spec
Model Number	:	CIMR-F7*20P4
Software Number	:	1020
Control Mode	:	Open-loop vector control 1

Drive Type Info Tab

A screenshot of the 'Drive Type Info' dialog box with the 'Comment' tab selected. The dialog has a title bar with a question mark and close button. It contains two tabs: 'Drive Type Info' and 'Comment'. The 'Comment' tab displays a large empty text area for typing comments. At the bottom are 'OK' and 'Cancel' buttons.

Comment Tab

Comments can be typed in the comment tab.

Click **OK** to save the typed comments.

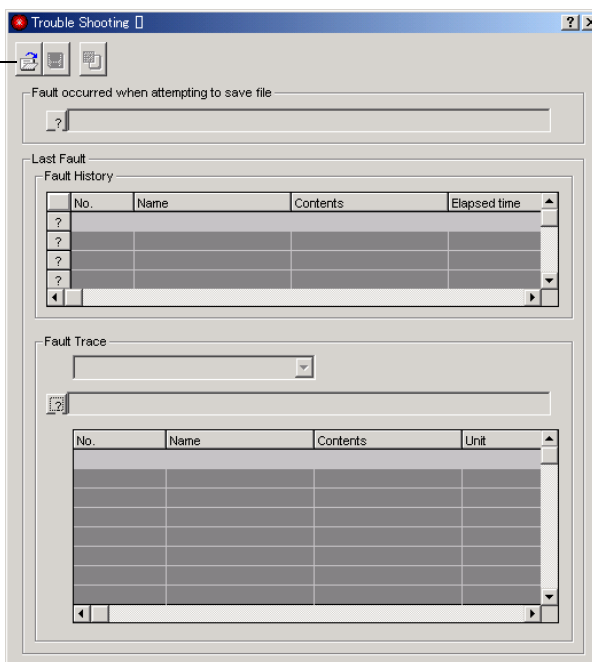
Click **Cancel** to cancel the typed comments.

Offline Troubleshooting


The saved troubleshooting file can be viewed offline.

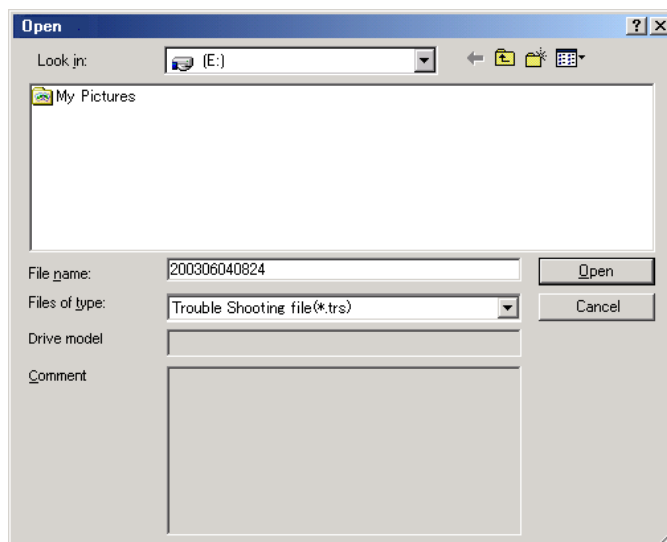
In the DriveWizard window, click **Alarm** and then click **Trouble Shooting**. The Trouble Shooting box is displayed.

Opens the trouble shooting file.

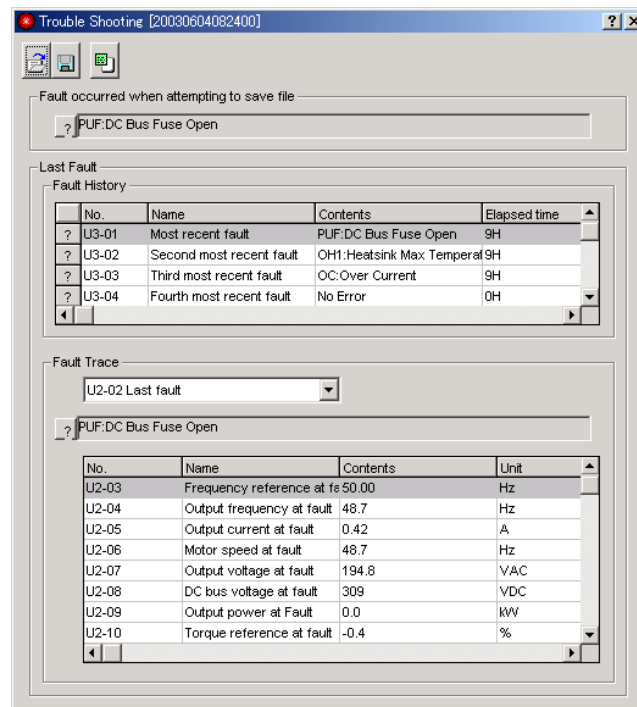


Trouble Shooting Box at Initial Startup

Click the  button, the Open box is displayed.



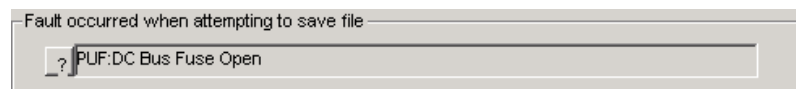
Click **Open**. The specified file is loaded and the Trouble Shooting box is displayed.



Trouble Shooting Box (Offline)

Note: Display contents differ depending on the Inverter type.

Fault occurred when attempting to save file



The alarm that was occurring when the file was saved is displayed.

Click the **?** button, to display details concerning a specific alarm and its corrective measures.

Last Fault

The 'Last Fault' window contains two main sections: 'Fault History' and 'Fault Trace'.

Fault History

No.	Name	Contents	Elapsed time
? U3-01	Most recent fault	PUF:DC Bus Fuse Open	9H
? U3-02	Second most recent fault	OH1:Heatsink Max Temporal	9H
? U3-03	Third most recent fault	OC:Over Current	9H
? U3-04	Fourth most recent fault	No Error	0H

Fault Trace

U2-02 Last fault

? PUF:DC Bus Fuse Open

No.	Name	Contents	Unit
U2-03	Frequency reference at fs 50.00		Hz
U2-04	Output frequency at fault	48.7	Hz
U2-05	Output current at fault	0.42	A
U2-06	Motor speed at fault	48.7	Hz
U2-07	Output voltage at fault	194.8	VAC
U2-08	DC bus voltage at fault	309	VDC
U2-09	Output power at Fault	0.0	kW
U2-10	Torque reference at fault	-0.4	%

Fault trace function is not available for some Inverter type.

Note: The number of fault history to be stored differs depending on Inverter type. And also, the Elapsed time column is not displayed in some Inverter type.

<Fault Trace>

The Inverter stores a history of the 10 most recent faults. In DriveWizard, these are displayed in the Fault History column in the Trouble Shooting box, and are shown in order of occurrence with their fault code, the details about the type of fault, such as name, and elapsed time at fault.

Click the **?** button, to display details concerning a specific fault and its corrective measures.

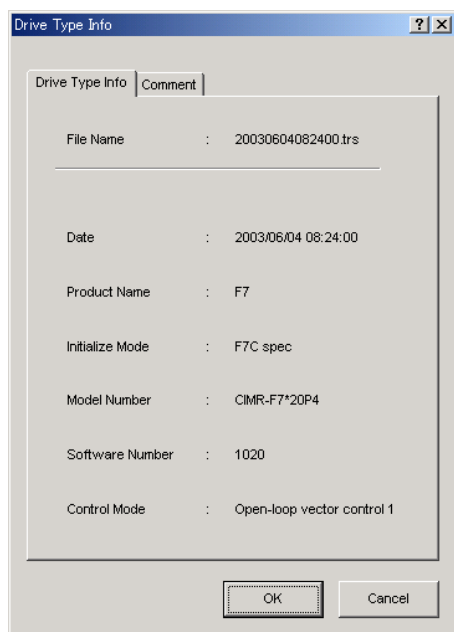
<Fault Trace>

The values of monitor items when the fault occurred are displayed. Select a last fault in the combo box.

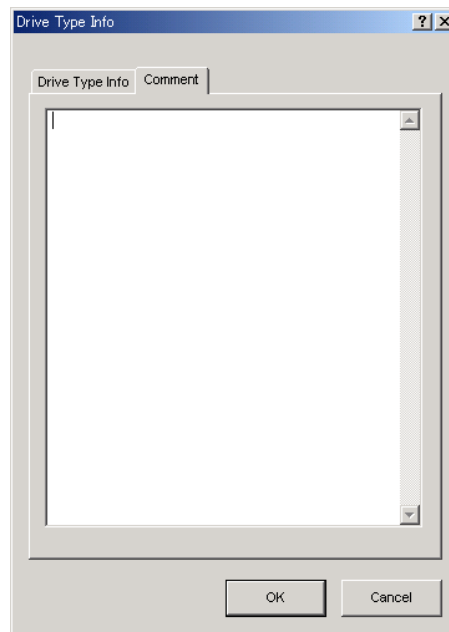
Click the **?** button, to display details concerning a specific fault and its corrective measures.

**(Drive Type Info) button**

Click the  button, the Drive Type Info box is displayed.



Drive Type Info Tab



Comment Tab

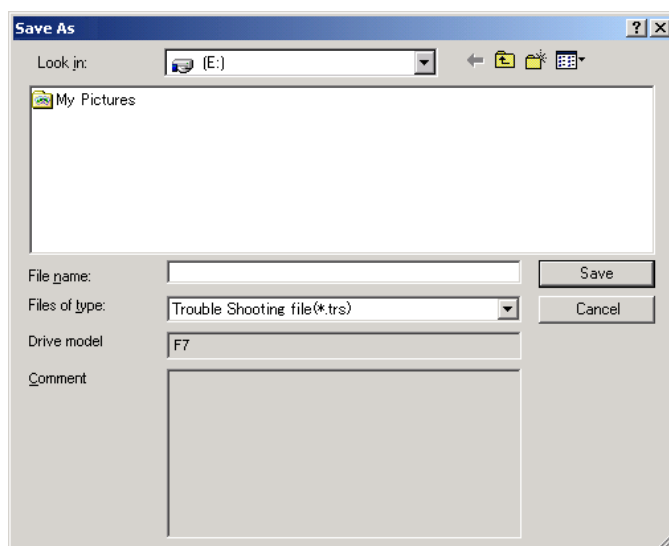
Comments can be typed in the comment tab.

Click **OK** to save the typed comments.

Click **Cancel** to cancel the typed comments.

**(Save) button**

Click the  button, the Save As box is displayed.



Click **Save** to overwrite or save as another file the added or changed comment in the Drive Type Info box.

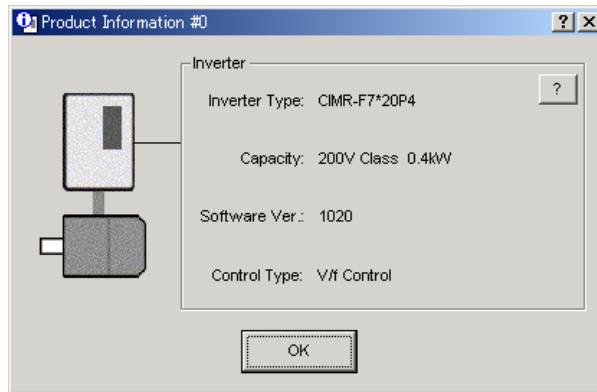
Click **Cancel** to return to the Trouble Shooting box.

4.3 Monitor


4.3.1 Product Information

Information about the Inverter can be viewed in the Product Information window.

In the DriveWizard main window, click **Monitor** and then click **Product Information**. Information about the Inverter will be displayed.



Product Information Window

Click the  button to display the specifications for the product model.

Click **OK** to return to the DriveWizard main window.

4.3.2 Monitor

The Inverter's status, movement, and I/O signal status, can be monitored on the computer screen.

There are five types of monitor windows: Status Monitor, Motion Monitor, Input Signal Monitor, Output Signal Monitor, and All Monitor.

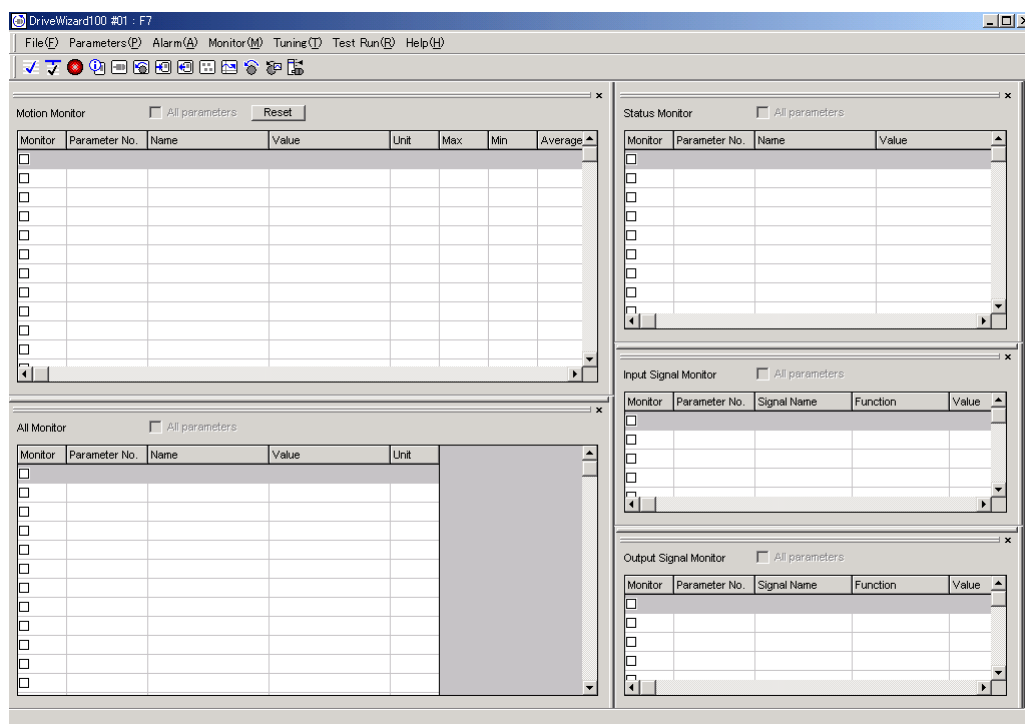
With All Monitor, Inverter status, movement, and I/O signal status are displayed in one window.

The monitor windows are independent of each other, but several windows can be displayed at the same time.

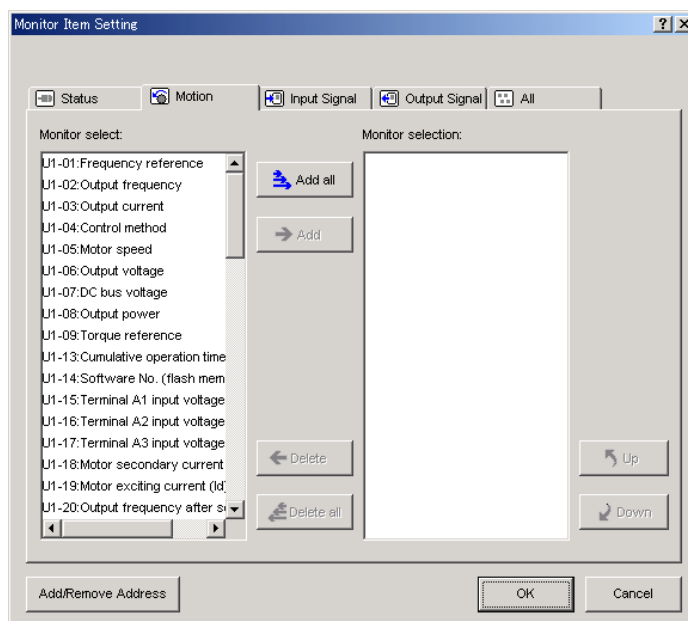
Select the information to be monitored in the Monitor Item Setting box.

Monitor Item Setting

To select the information to be monitored, use the following procedure.

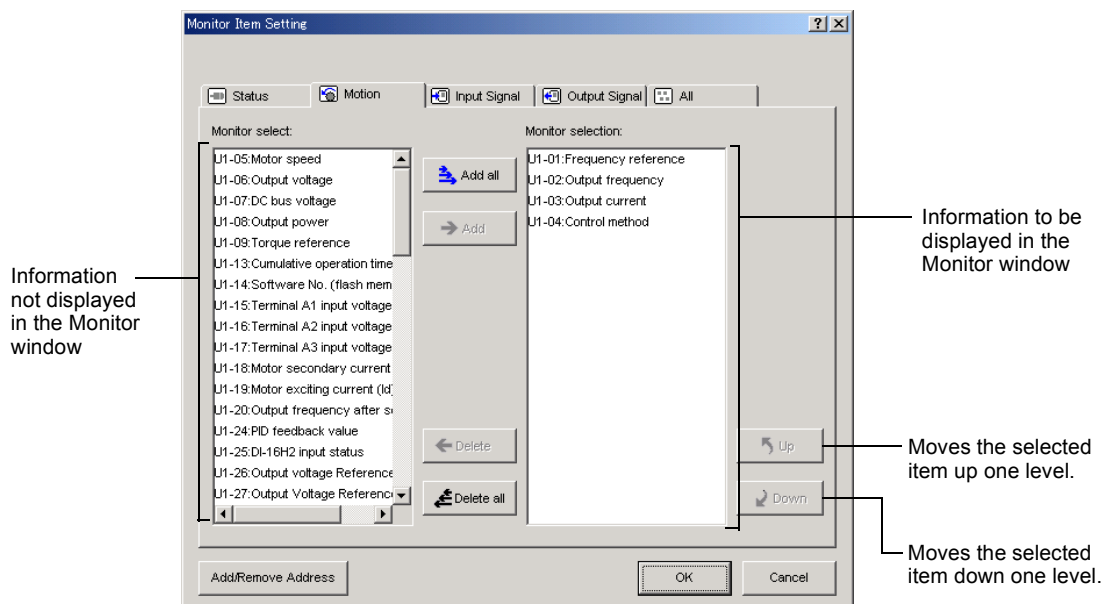


1. In the DriveWizard main window, click **Monitor**, and then click **Monitor Setting**. The Monitor Item Setting box appears.

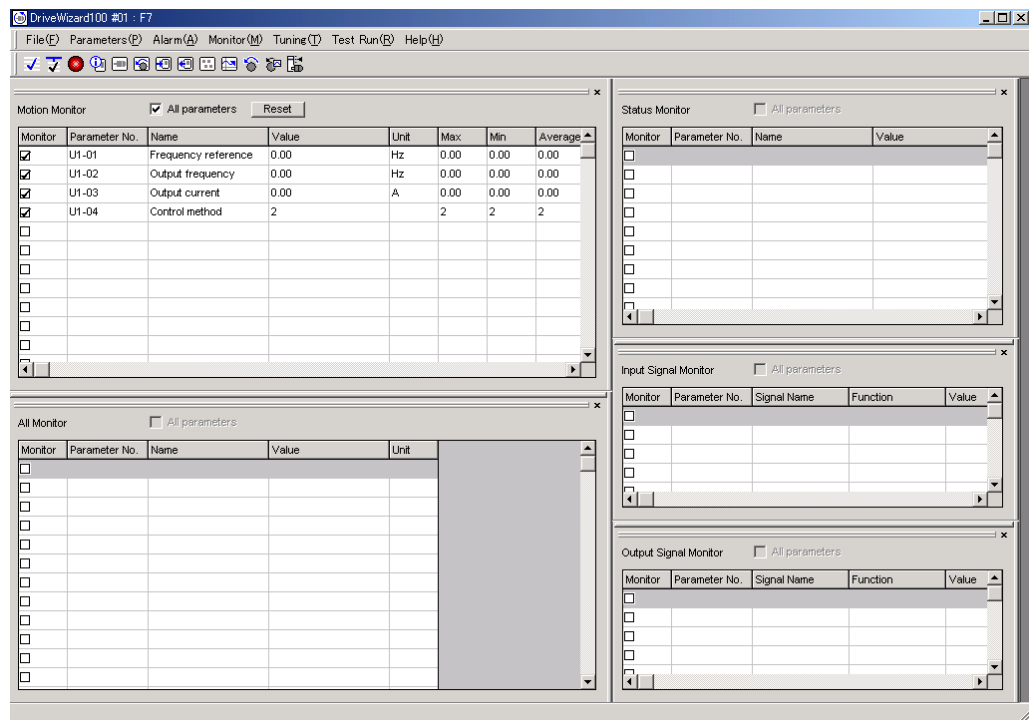


Monitor Item Setting Box

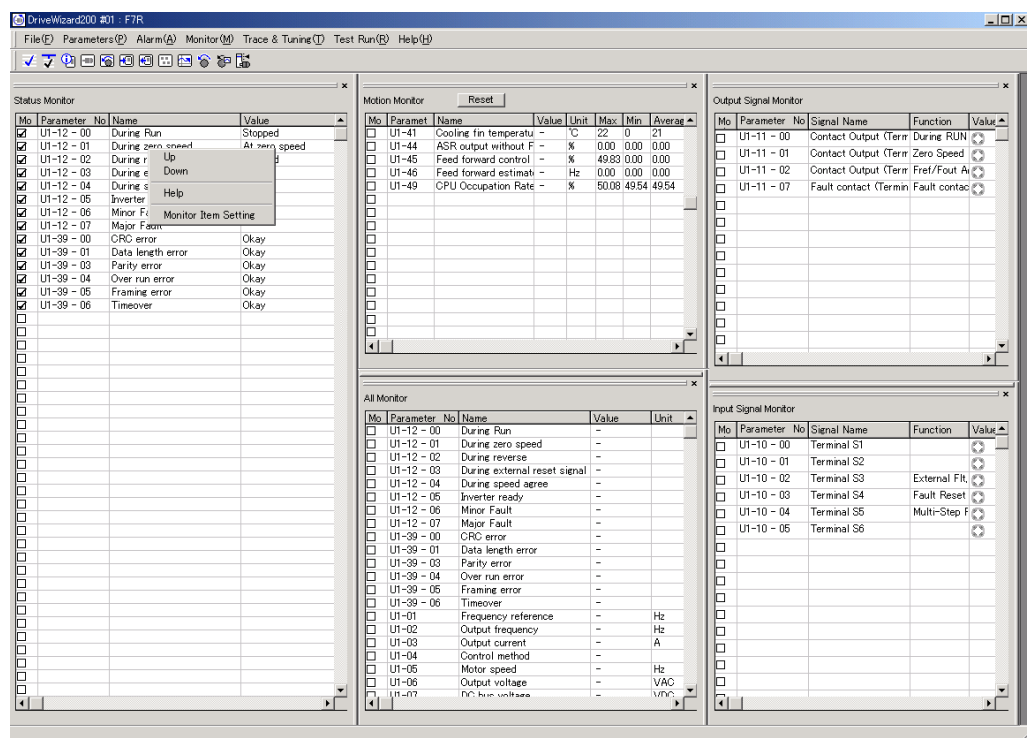
2. Select the tab for which you want to set monitor items.
3. To display an item, select it in the Monitor Select list and then click **Add**.



4. Click **OK**, and the five monitor windows appear showing the selected information.



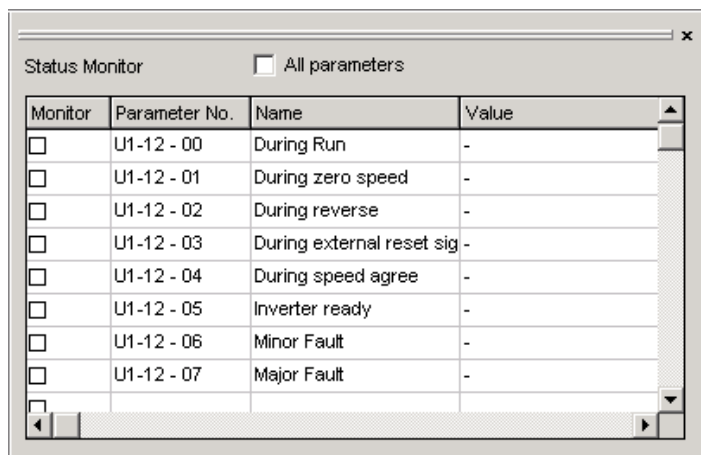
To open the Monitor Item Setting window, right-click and click **Monitor Item Setting**. To move an item, right-click an item and select a command.



Status Monitor

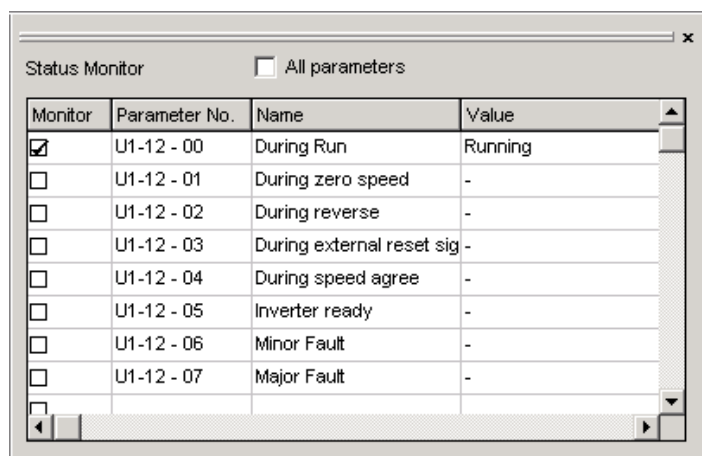
To monitor the status of the Inverter, use the following procedure.

1. In the DriveWizard main window, click **Monitor**, point to **Monitor** and click **Status Monitor**.



The items which can be monitored are listed.

2. Select the items to be monitored. To select all items, select the All parameters check box. The current status of a selected item is displayed in the "Value" column.



Motion Monitor

To monitor the motions of the Inverter, use the following procedure.

1. In the DriveWizard main window, click **Monitor**, point to **Monitor** and click **Motion Monitor**.

The screenshot shows the 'Motion Monitor' window. At the top, there is a checkbox labeled 'All parameters' which is currently unchecked, and a 'Reset' button. Below this is a table with the following columns: Monitor, Parameter No., Name, Value, Unit, Max, Min, and Average. The table contains seven rows of parameters, all of which are currently unchecked in the 'Monitor' column.

Monitor	Parameter No.	Name	Value	Unit	Max	Min	Average
<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	-		-	-	-
<input type="checkbox"/>	U1-07	DC bus voltage	-		-	-	-

The items which can be monitored are listed.

2. Select the items to be monitored. To select all items, select the All parameters check box. The current status of a selected item is displayed in the "Value" column.

The screenshot shows the 'Motion Monitor' window with the 'All parameters' checkbox checked. The 'Monitor' column for all seven parameters is now checked, and the 'Value', 'Unit', 'Max', 'Min', and 'Average' columns are populated with numerical data.

Monitor	Parameter No.	Name	Value	Unit	Max	Min	Average
<input checked="" type="checkbox"/>	U1-01	Frequency reference	10.00	Hz	10.00	10.00	10.00
<input checked="" type="checkbox"/>	U1-02	Output frequency	10.00	Hz	10.00	10.00	10.00
<input checked="" type="checkbox"/>	U1-03	Output current	0.03	A	0.04	0.03	0.03
<input checked="" type="checkbox"/>	U1-04	Control method	2		2	2	2
<input checked="" type="checkbox"/>	U1-05	Motor speed	10.00	Hz	10.00	10.00	10.00
<input checked="" type="checkbox"/>	U1-06	Output voltage	42.2	VAC	42.2	42.2	42.2
<input checked="" type="checkbox"/>	U1-07	DC bus voltage	291	VDC	292	291	291

Max: Displays the maximum value.

Min: Displays the minimum value.

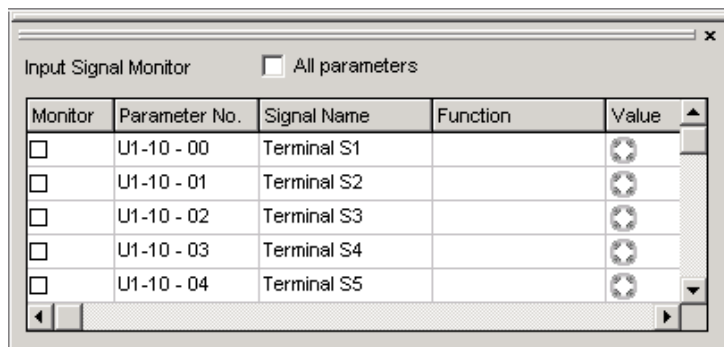
Average: Displays the average value.

To clear the values in the Max, Min, and Average columns, click **Reset**. After the columns are cleared, the display of the items being monitored starts again.

Input Signal Monitor

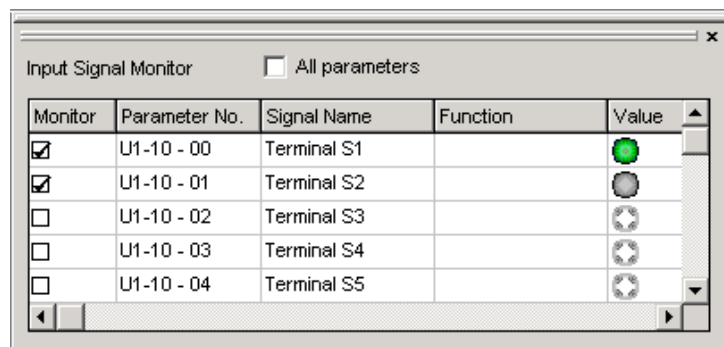
To monitor the input signal of the Inverter, use the following procedure.

1. In the DriveWizard main window, click **Monitor**, point to **Monitor** and click **Input Signal Monitor**.



The items which can be monitored are listed.

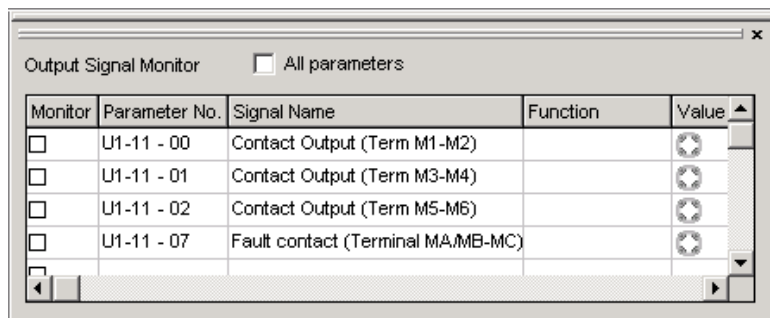
2. Select the items to be monitored. To select all items, select the All parameters check box. The current status of a selected item is displayed in the "Value" column.



Output Signal Monitor

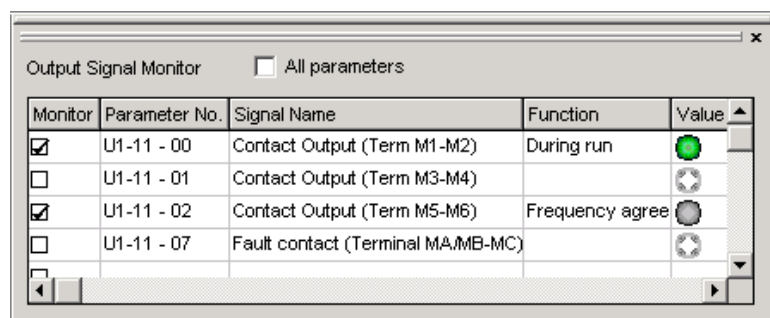
To monitor the output signal of the Inverter, use the following procedure.

1. In the DriveWizard main window, click **Monitor**, point to **Monitor** and click **Output Signal Monitor**.



The items which can be monitored are listed.

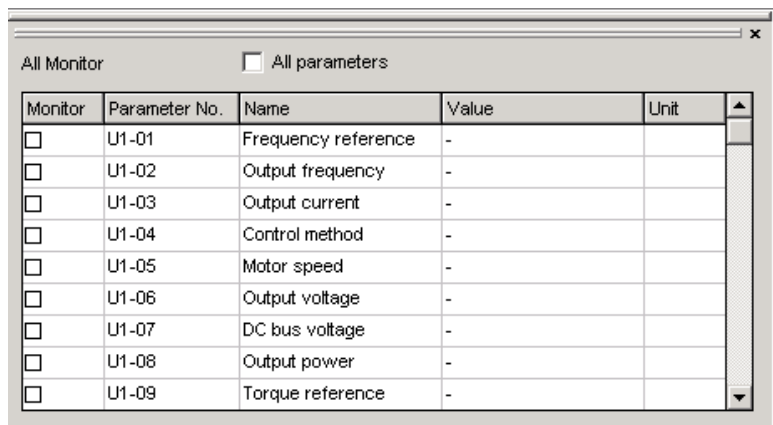
2. Select the items to be monitored. To select all items, select the All parameters check box. The current status of a selected item is displayed in the "Value" column.



All Monitor

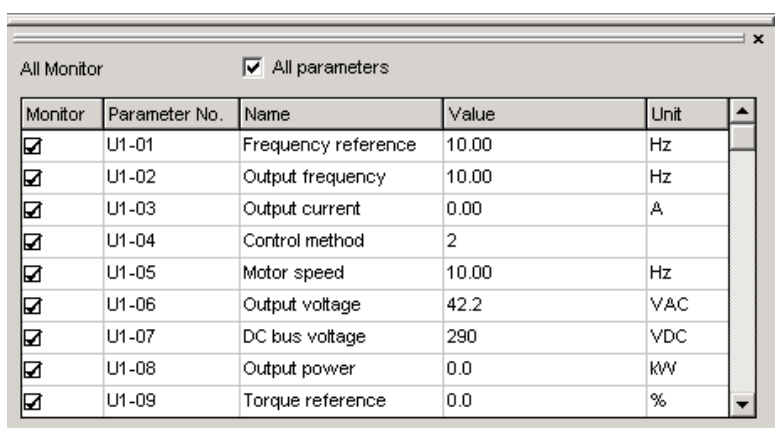
To monitor Inverter status, movement, and I/O signal status in one window, use the following procedure.

1. In the DriveWizard main window, click **Monitor**, point to **Monitor** and click **All Monitor**.



The items which can be monitored are listed.

2. Select the items to be monitored. To select all items, select the All parameters check box. The current status of a selected item is displayed in the "Value" column.

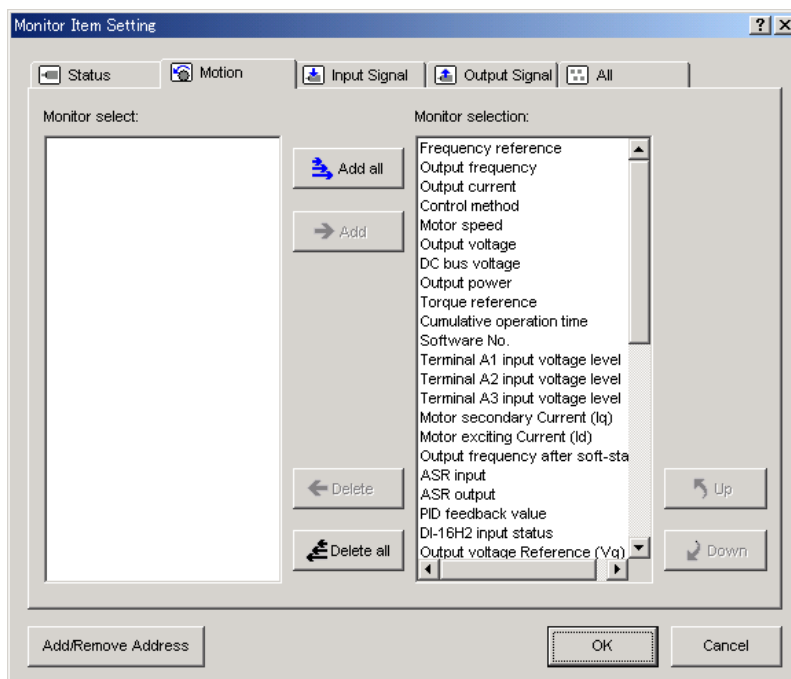


Adding and Removing a Monitor Address

Any constant can be a monitor constant if its MEMOBUS address information is added to the monitor item.

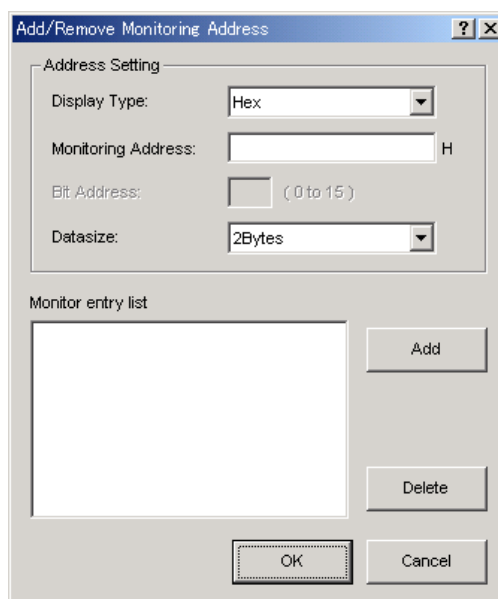
To add or remove the monitor address, use the following procedure.

1. In the DriveWizard main window, click **Monitor** and then click **Monitor Setting**. The Monitor Item Setting box appears.



Monitor Item Setting Box

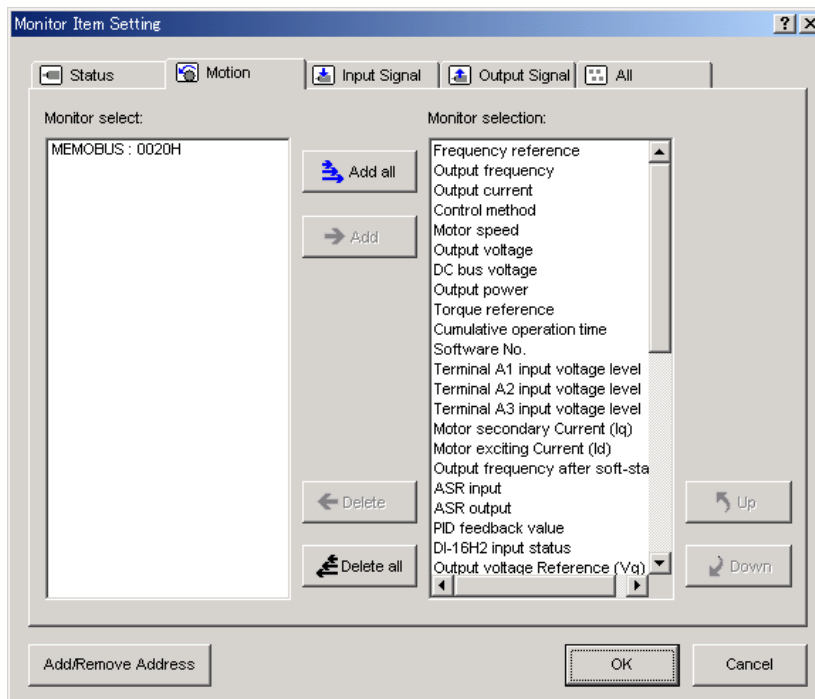
2. Click **Add/Remove Address**, and the Add/Remove Monitoring Address box appears.



3. Enter the value for each items, click **Add**. If the MEMOBUS address is available, it is displayed in the Monitor entry list. If it is not available, the following message appears.



4. Click **OK**, and return to the Monitor Item Setting box, where the MEMOBUS address is displayed in the Monitor select list.



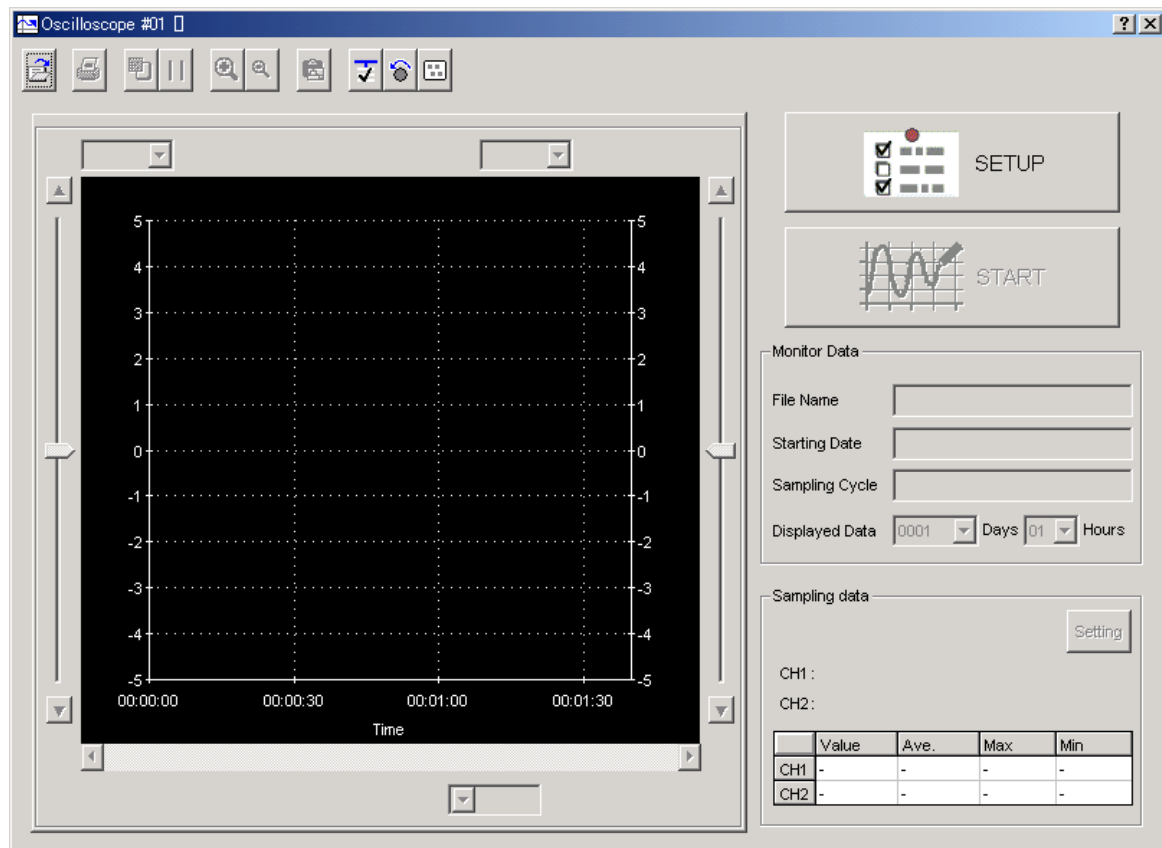
4.3.3 Oscilloscope Function

Inverter items to be monitored can be displayed in graph in real time.

■ Data Monitor

Main Window

In the DriveWizard main window, click **Monitor**, and then click **Oscilloscope**, and the Oscilloscope main window appears.

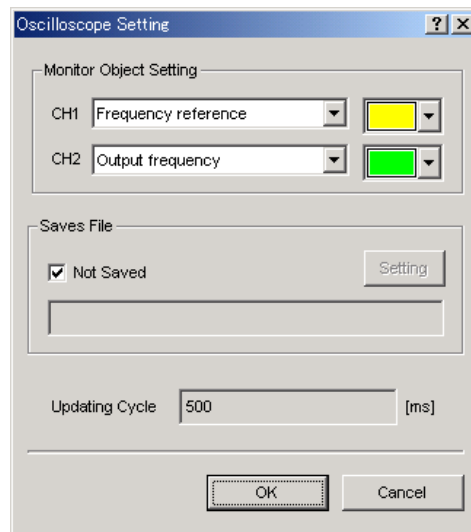


Oscilloscope Main Window

Oscilloscope Settings

In the Oscilloscope main window, click **SETUP**, and the Oscilloscope Setting box appears. Select the objects and conditions for the monitor.

The settings from the previous monitor, if any, are displayed.



Oscilloscope Setting Box

OK

In the Oscilloscope Setting box, click **OK** to return to the Oscilloscope main window. The monitor data are updated according to the settings.

Cancel

In the Oscilloscope Setting box, click **Cancel** to return to the Oscilloscope main window without changing the settings.

<Monitor Object Settings>

CH1/CH2

Select content such as "Output frequency", "Frequency Reference", etc., as monitor objects from the data boxes.

Line

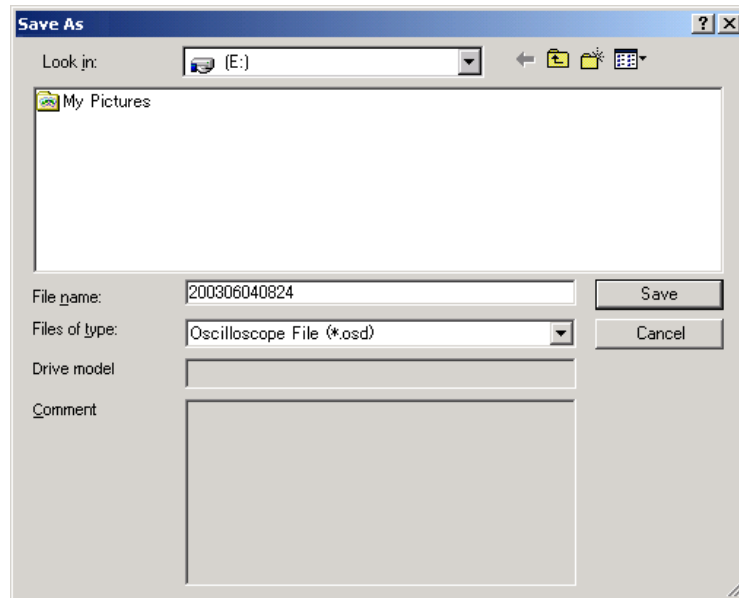
Select a line color for data 1 and 2.

<Saves File>

Selects whether to save the sampling data or not.

Note: To save the data, be sure 30 Mbyte of free hard disk space are available. As a guideline, about 2 Mbyte of free hard disk space is needed to save one hour of normal data.

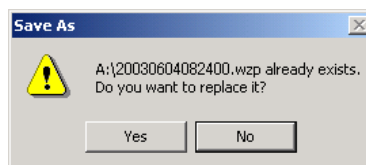
If not saving the data, select the Not Save check box. If saving the data, click to clear the Not Saved check box and click **Setting**. The Save As box is displayed.



Designate the file to save the data, and click **Save**.

Click **Cancel** to return to the Oscilloscope Setting box without saving the file.

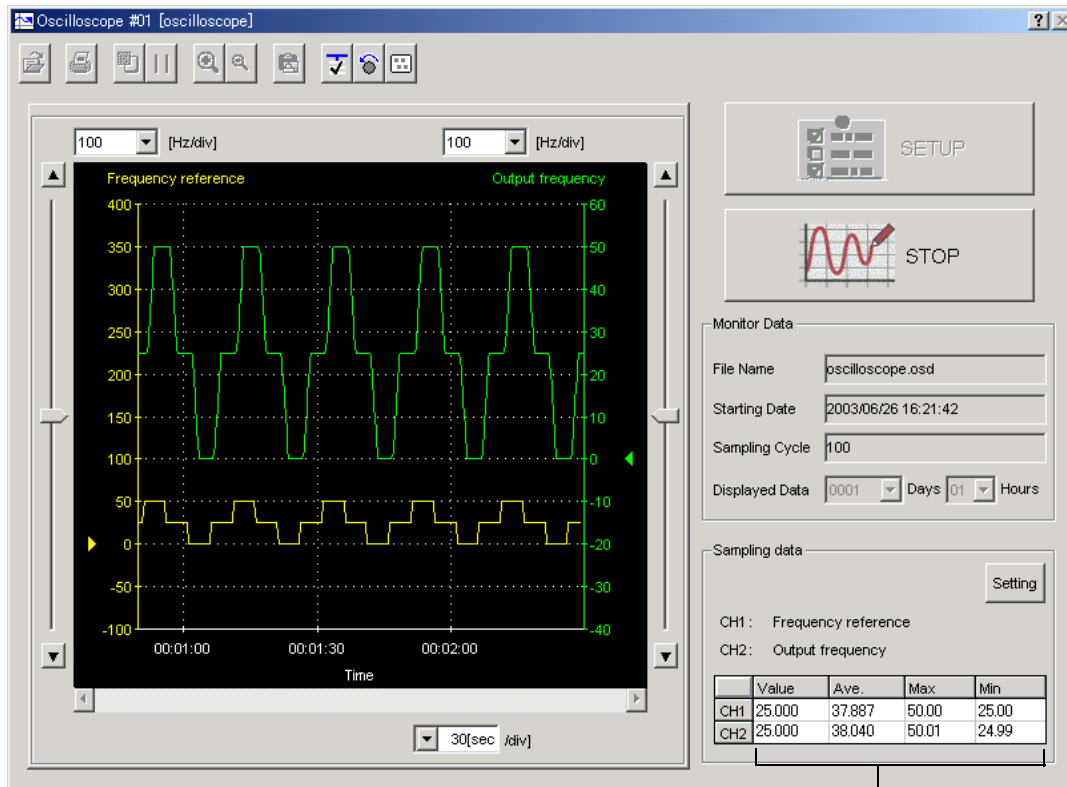
If the file name already exists or if an already existing file is loaded and then re-saved, a warning message appears, telling you that the file name already exists, and asks if you want to replace the existing file.



Click **Yes** to overwrite the already existing file. Click **No** to return to the Save as box.

Starting the Monitor

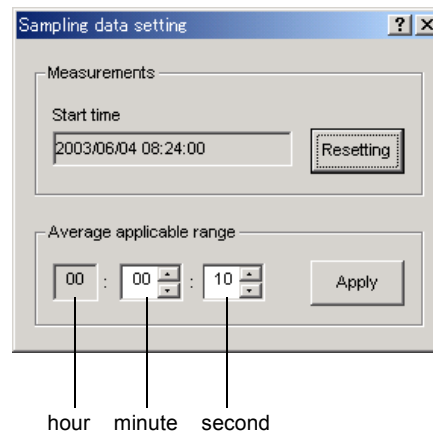
In the Oscilloscope main window, click **START** to start monitoring.



Displays the current measurement and the maximum, minimum, and average values of each item.

To stop monitoring, click **STOP**.

To make the settings for the sampling data, click **Setting**. The Sampling data setting box is displayed.



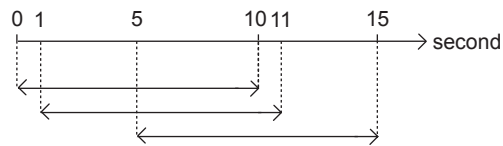
<Measurement>

To clear the values of the table of the sampling data, click **Resetting**. After the table is cleared, the collection of the data for the items being monitored starts again.

<Average applicable range>

Enter the time allowed to measure the maximum, minimum, and average values, and click **Apply**. After the table is cleared, the collection of the data for the items being monitored for the specified time starts.

(Example) When range 10 seconds.



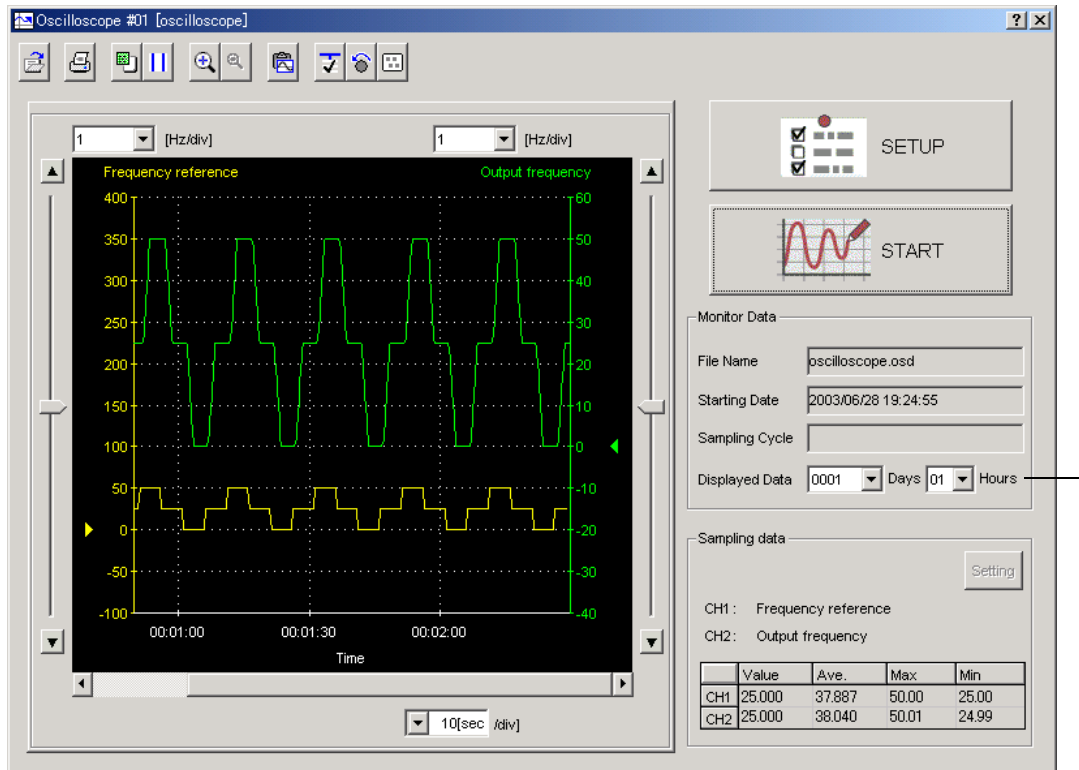
10 seconds later: Maximum, minimum, and average values between 0 to 10 seconds.

11 seconds later: Maximum, minimum, and average values between 1 to 11 seconds.

15 seconds later: Maximum, minimum, and average values between 5 to 15 seconds.

■ Main Window

This Oscilloscope main window displays a graph based on the oscilloscope settings.

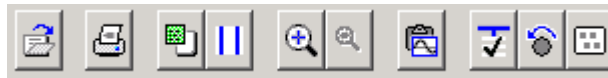


Displays information about when the monitor started.
In this example for the displayed data, "0001" means that it is the first day of the trace and "01" means that the trace has been running for its first hour.











Oscilloscope Main Window

Toolbar

The position of the toolbar can be adjusted, and the on-screen display type selected.



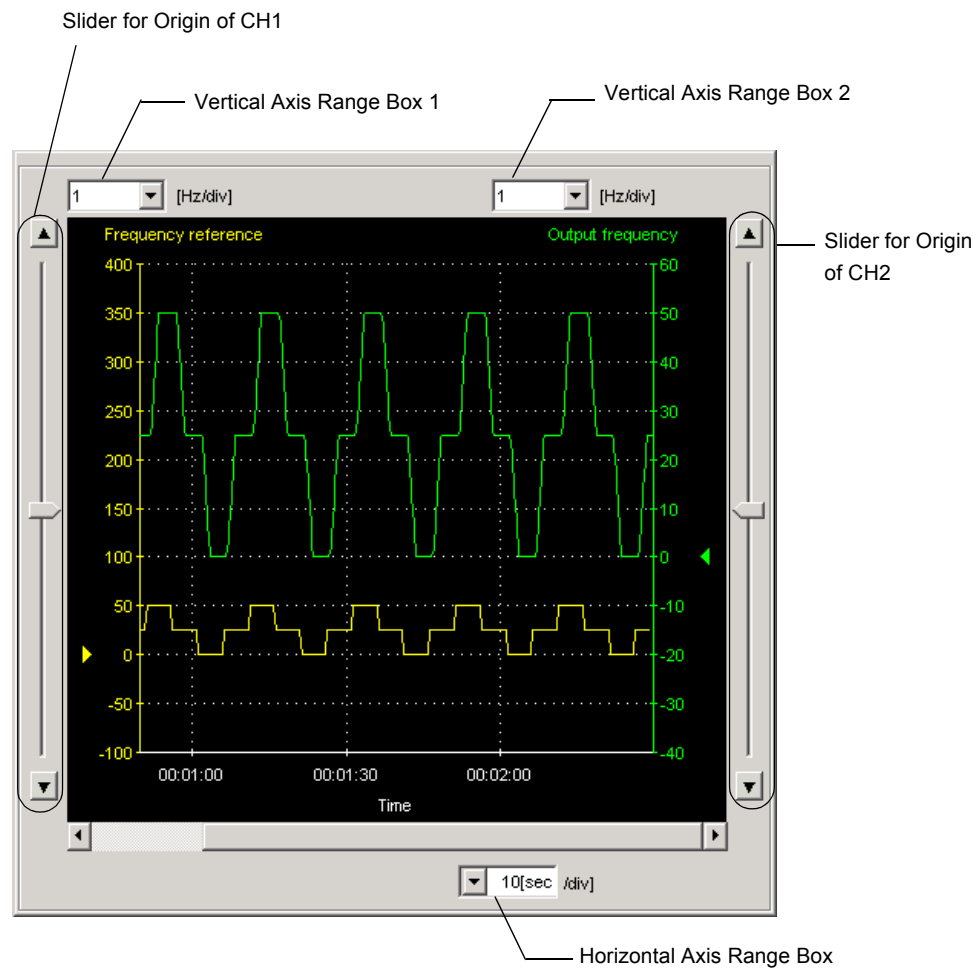
Oscilloscope Main Window Toolbar

Toolbar Button	Click this button to:
 Open	Load the monitor data file.
 Print	Print the Oscilloscope main window.
 Measurement Conditions	View the conditions for monitoring.
 Cursor	View the information for the location where a cursor is shown.
 Parameter Online Editing	View the Parameter Online Editing box. For details, see Section 4.1.2 .
 Zoom In	Enlarge the view of a selected area.
 Return	Restore the area shown in the window to its usual size.
 Clipboard Copy	Copy the displayed screen to the clipboard.
 Manual Operation	View the Manual Operation box. For details, see Section 4.5.1 .
 Monitor Item Setting	View the Monitor Item Setting window. For details, see Section 4.3.2 .

See "[■ Toolbar Details](#)" for details on the toolbar buttons.

Monitor Object Graph

In the graph, you can view the monitor objects designated in the Oscilloscope Setting box.



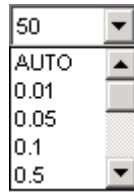
Monitor Object Graph

Vertical Axis Range

In the Vertical axis range box 1.2, select each unit of CH1 and CH2.

If AUTO is selected, the range widths will be automatically adjusted so that all of the data can be shown in the graph.

The range must be selected from the list.



Vertical Axis Range Box

Horizontal Axis Range

In the Horizontal axis range box, select the units of time for the time axis in the graph. If the maximum settings of “6 min” is selected, the data for one hour is displayed in the graph. This is the maximum amount of time that can be displayed in the window. The range must be selected from the list.



Horizontal Axis Range Box


■ Toolbar Details

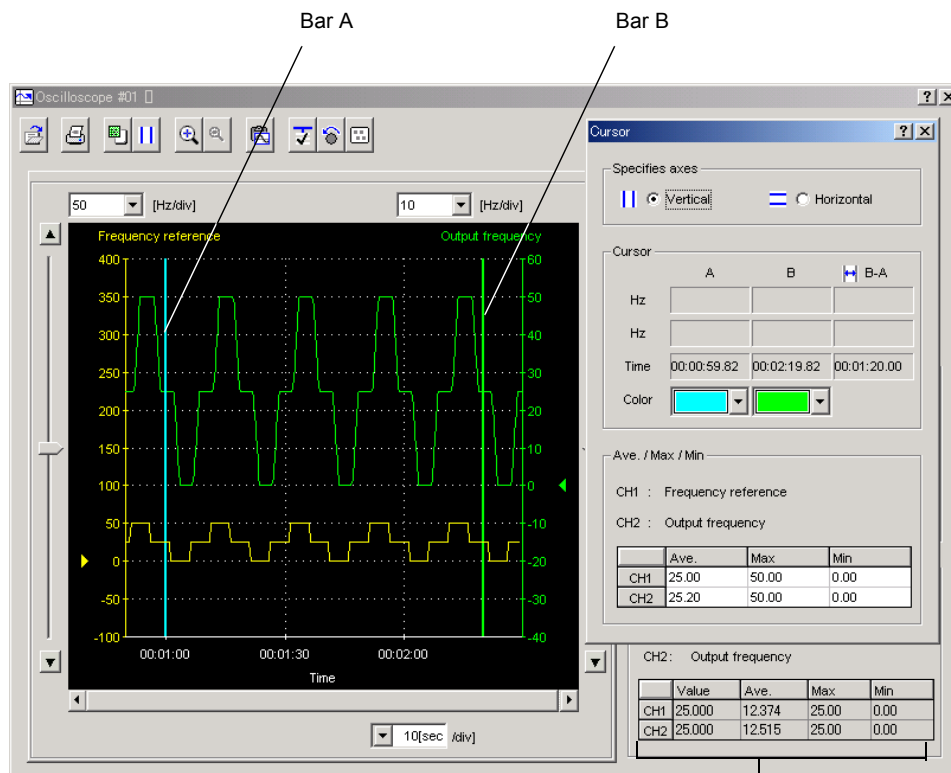
(Cursor) Button

The information for the location of each bar A and B can be viewed. In the window, the bars are referred to as cursors.

The color of bars A and B can be changed.

View the data using the following procedure.

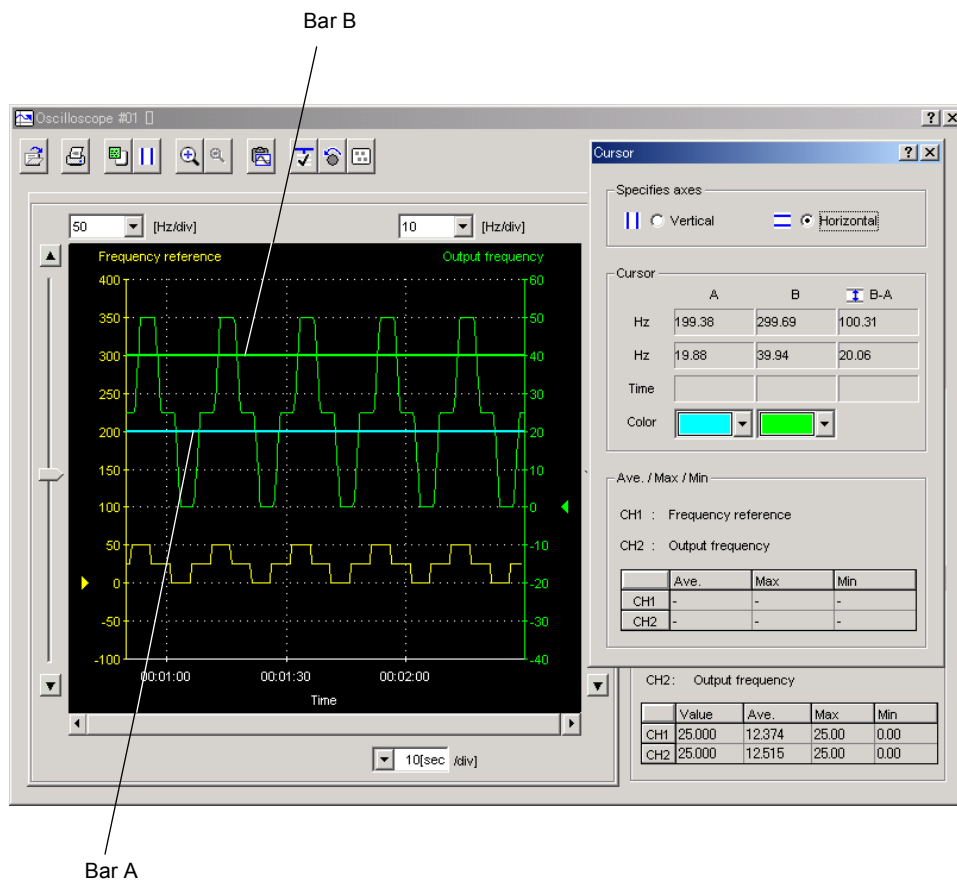
1. Click the  button. Two vertical bars will be displayed.
2. Move each bar. As you move each bar, the data changes in the Cursor table.



Displays the maximum, minimum, and average values of CH1 and CH2 between A and B bars.

3. To view the frequency data, select **Horizontal** in the Specifies axes area. Two horizontal bars will be displayed.


4. Move each bar. As you move each bar, the data changes in the Cursor table.

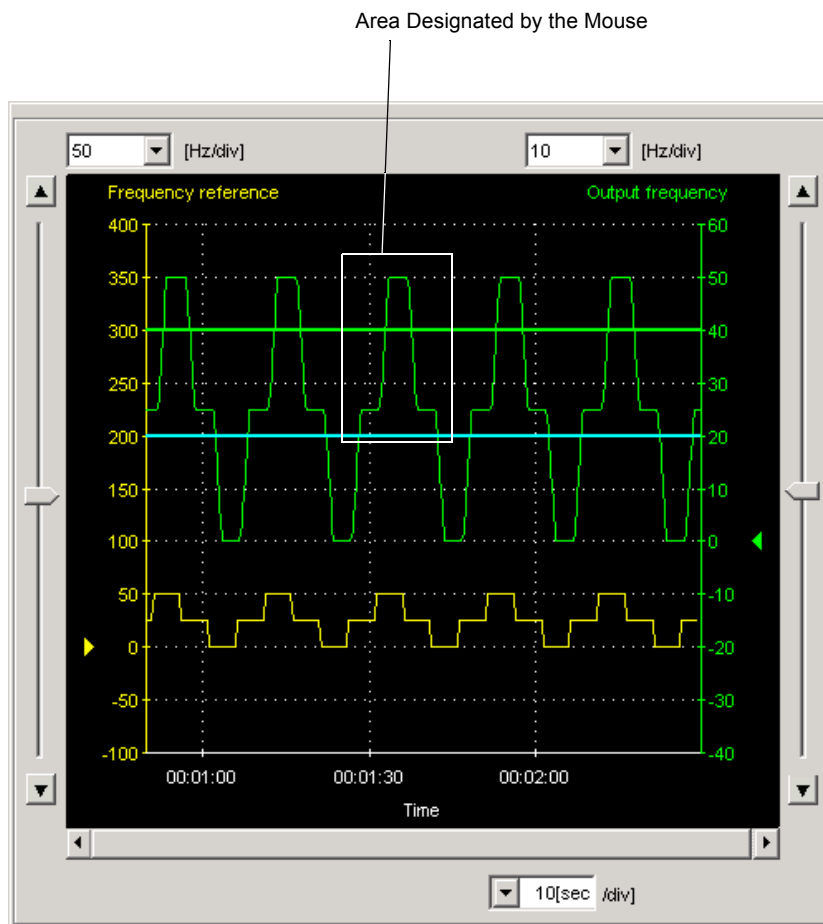




(Zoom) Button

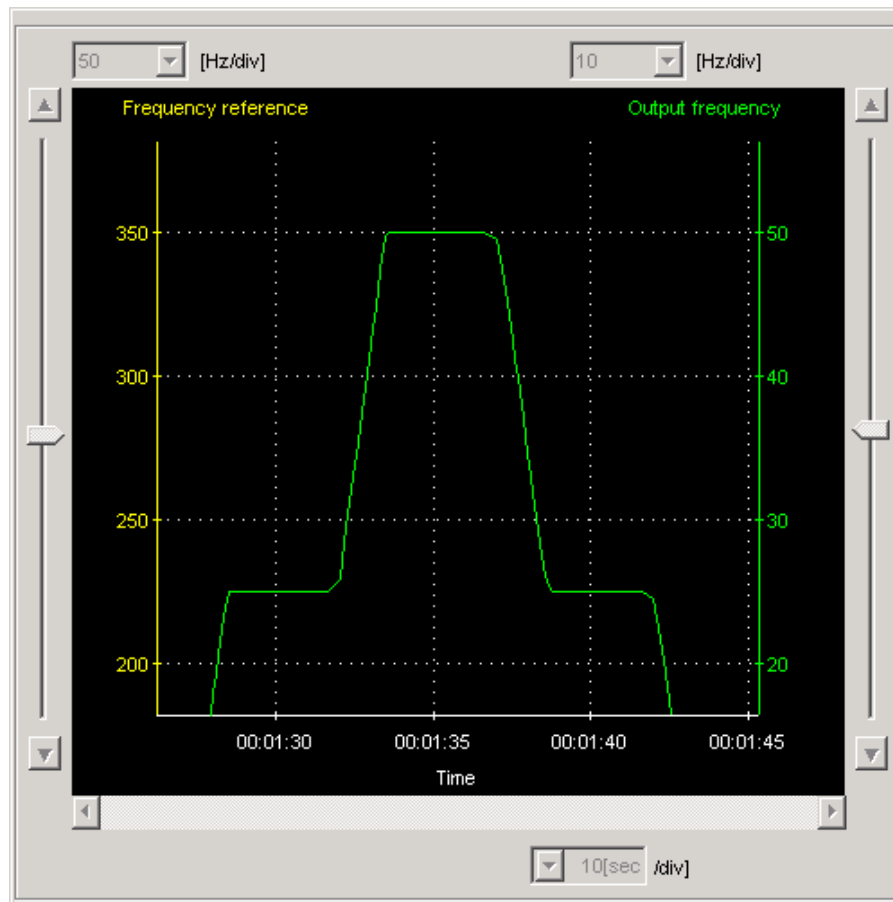
A view of an area selected by the mouse can be magnified. Zoom in on an area using the following procedure.

1. Click the  button.
2. Position the mouse at one corner of the area you want to select, and drag to the opposite corner. A line will appear around the selected area.





Area to be Magnified

3. Release the left mouse button. The selected area of the graph is enlarged.



Magnified Area

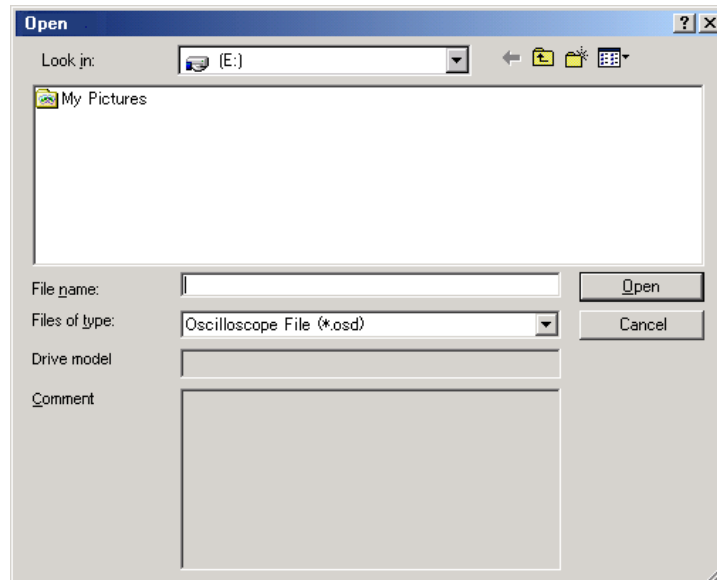
4. Click the  button to view the original graph.


The graph will change in stages. To return to the original graph, click the  button several times.



(Open) Button

The oscilloscope data file can be loaded in the Open box. To load the file, click the button. The Open box appears.



When the  Button is Clicked in the Oscilloscope Main Window

Open


Click **Open** to load the selected oscilloscope file. Returns to the Oscilloscope main window if nothing is selected.

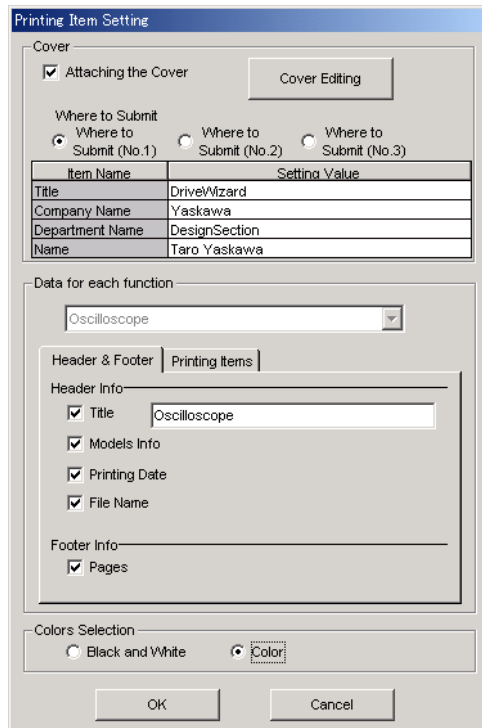
Cancel

Click **Cancel** to return to the Oscilloscope main window without loading the file.



(Print) Button

The graph and data on the Oscilloscope main window can be printed. To print the graph and data, click the  button. The Printing Item Setting box appears.



Printing Item Setting

Cover

☒ Attaching the Cover Cover Editing

Where to Submit

☒ Where to Submit (No.1) ☐ Where to Submit (No.2) ☐ Where to Submit (No.3)

Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa

Data for each function

Oscilloscope

Header & Footer | Printing Items

Header Info

☒ Title

☒ Models Info

☒ Printing Date

☒ File Name

Footer Info

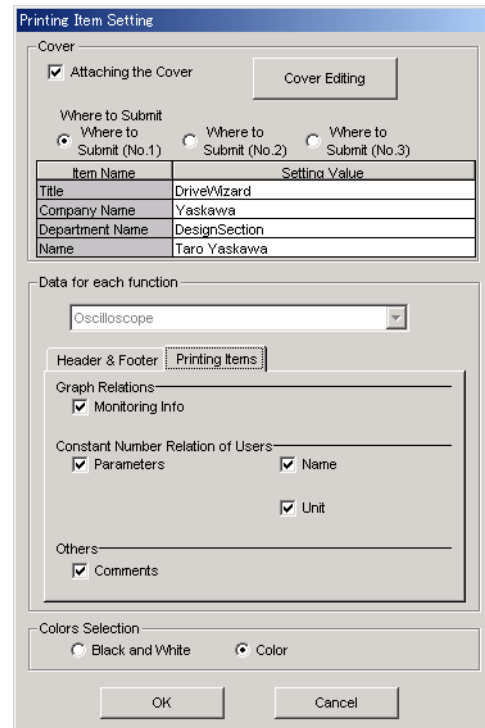
☒ Pages

Colors Selection

☐ Black and White ☒ Color

OK Cancel

Header Footer Tab



Printing Item Setting

Cover

☒ Attaching the Cover Cover Editing

Where to Submit

☒ Where to Submit (No.1) ☐ Where to Submit (No.2) ☐ Where to Submit (No.3)

Item Name	Setting Value
Title	DriveWizard
Company Name	Yaskawa
Department Name	DesignSection
Name	Taro Yaskawa

Data for each function

Oscilloscope

Header & Footer | **Printing Items**

Graph Relations

☒ Monitoring Info

Constant Number Relation of Users

☒ Parameters ☒ Name

☒ Unit

Others

☒ Comments

Colors Selection

☐ Black and White ☒ Color

OK Cancel

Printing Items Tab

Printing Item Setting Box

Cover

Select **Attaching the Cover**, and the click **Cover Editing**. For details, see [Chapter 3](#).

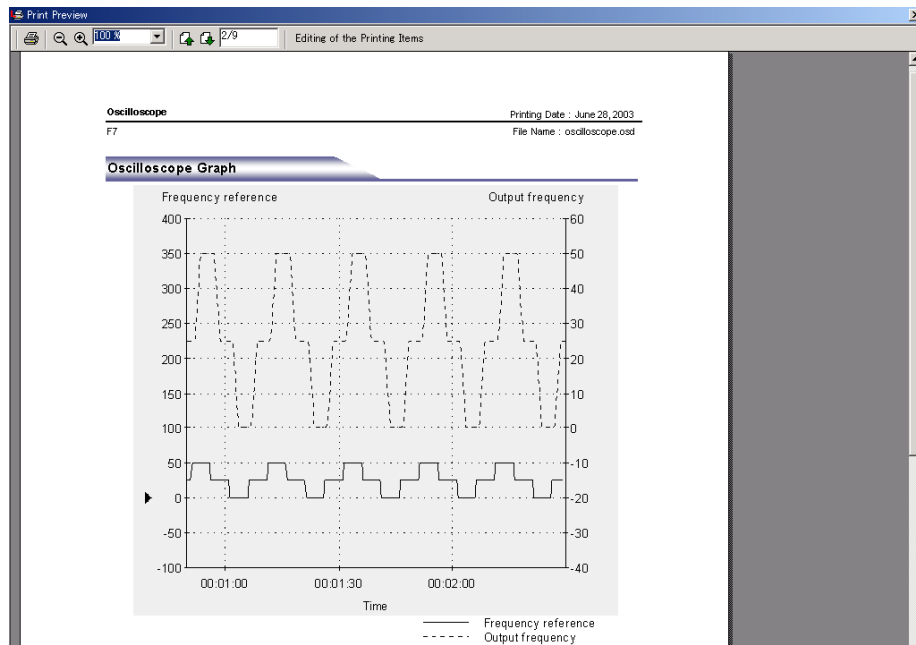
Data for each function


To enter your printing preferences or specifications, click the tab whose options you want to enter or change, and enter the desired settings.

Color Selection

Documents can be printed in color or black and white. Select your reference.

After setting is finished, click **OK**. The document appears on the screen the way it will appear in print.




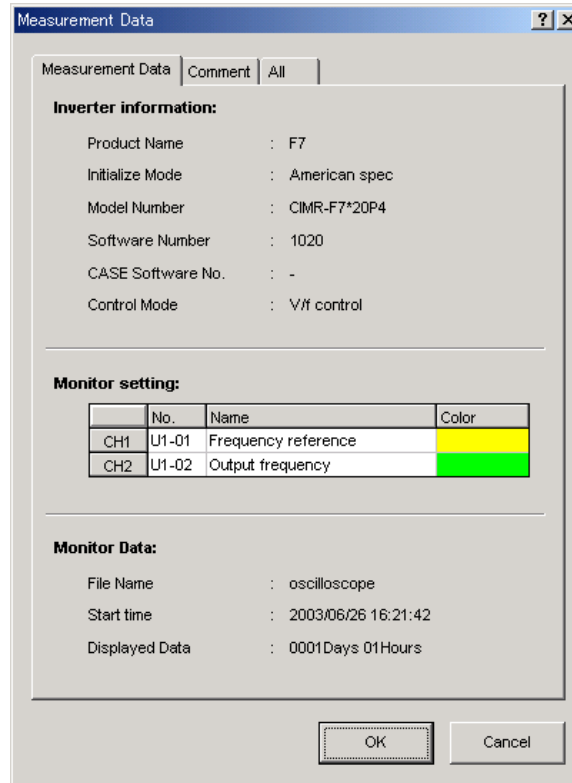
To print the document as is without any changes, click the  button.

To return to the Printing Item Setting box and change some settings, click **Editing of the Printing Items**.



(Measurement Conditions) Button

The conditions for monitoring can be viewed. To view the conditions, click the  button. The Measurement Data box appears. If not already selected, click the Measurement Data tab to view the conditions for monitoring.



Measurement Data

Measurement Data | Comment | All

Inverter information:

Product Name : F7
 Initialize Mode : American spec
 Model Number : CIMR-F7*20P4
 Software Number : 1020
 CASE Software No. : -
 Control Mode : V/f control

Monitor setting:

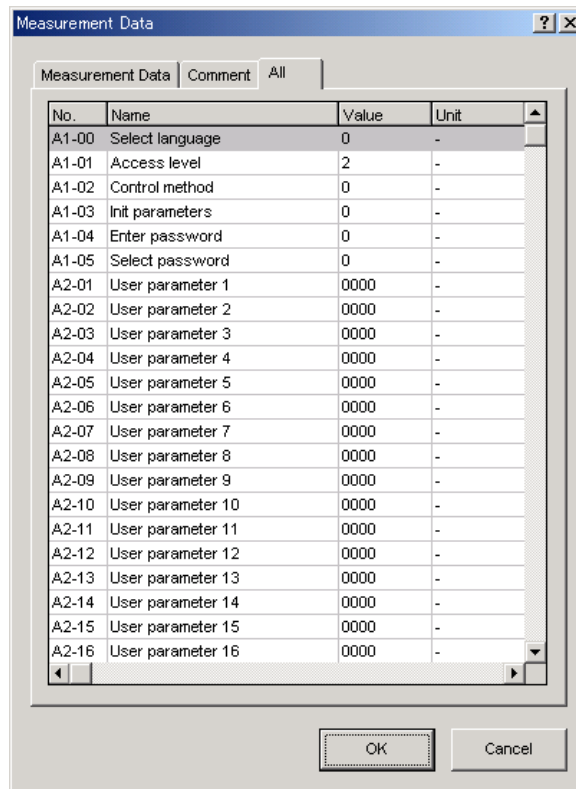
	No.	Name	Color
CH1	U1-01	Frequency reference	Yellow
CH2	U1-02	Output frequency	Green

Monitor Data:

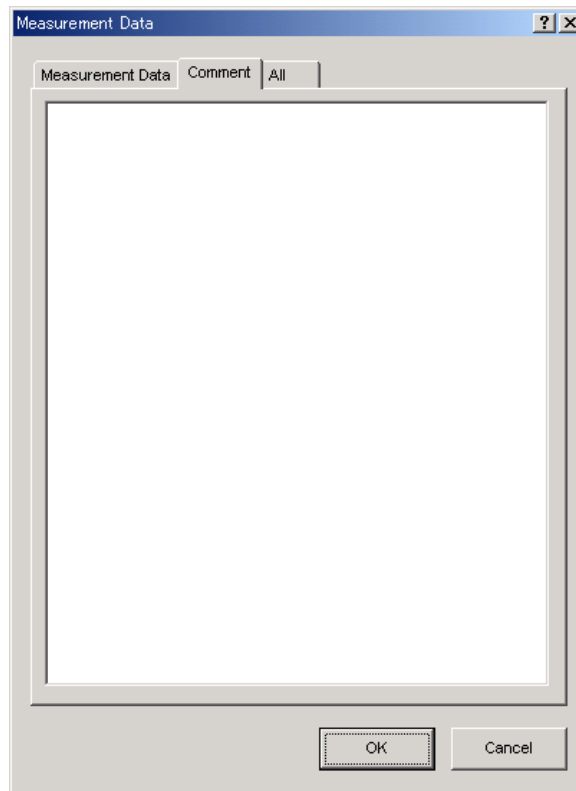
File Name : oscilloscope
 Start time : 2003/06/26 16:21:42
 Displayed Data : 0001Days 01Hours

OK Cancel

Measurement Data Tab



All Tab



Comment Tab

Click the Comment tab and type any comments.

OK

Click **OK** to save comments and return to the Oscilloscope main window.

Note: If "Not Saved" is selected in the Oscilloscope Setting box, the typed comments are not saved.


Cancel

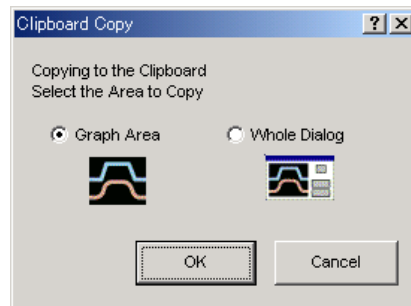
Click **Cancel** to return to the Oscilloscope main window without saving the comments.



(Clipboard Copy) Button

The displayed screen can be copied to the clipboard. It can be exported to other application programs by using this button.

Click the  button, and the Clipboard Copy box appears.



Clipboard Copy Box

OK

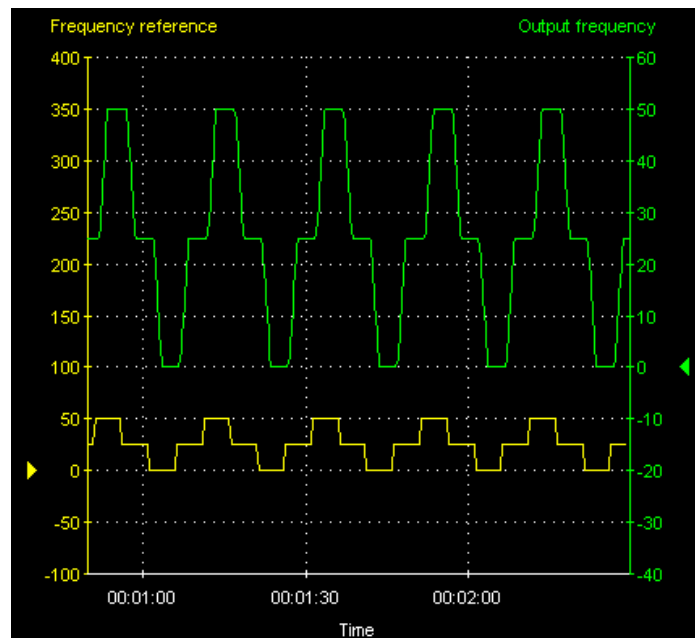
Click **OK** to copy the selected area to the clipboard.

Cancel

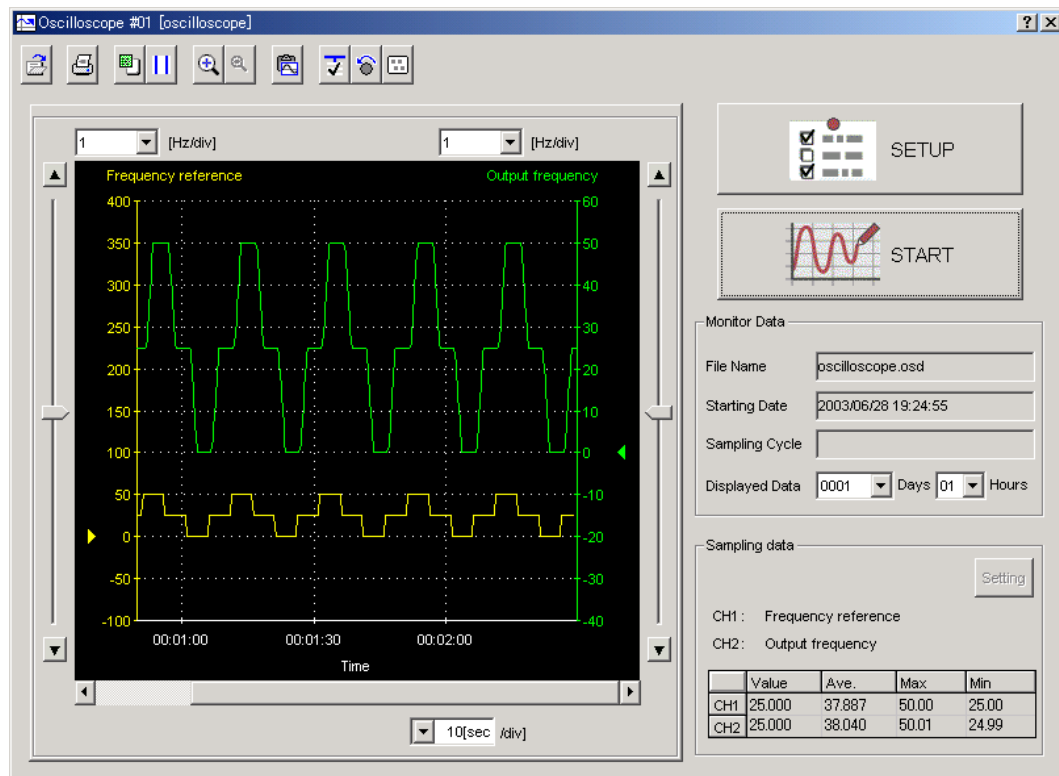
Click **Cancel** to return to the Oscilloscope main window.

Select the area to be copied to the clipboard.

- Graph Area



- Whole Dialog



4.4 Motor Parameter Autotuning

Motor parameters can be turned using autotuning function (online) or auto parameter calculation (offline).

CAUTION

The motor will rotate during autotuning.

Please read the user manual and check the following before operation.

- If executing standard autotuning, please verify the motor is disconnected from all machinery.
- Please verify it is safe to rotate the motor.

CAUTION

Non-rotational autotuning will not turn the motor shaft. However, there will be some voltage applied to the motor.

Please read the user manual and check the following before operation.

- Voltage is applied to the motor during non-rotational autotuning. Do not touch the motor until autotuning is complete.
- When using non-rotational autotuning with the motor connected to a load such as a conveyor, please use a mechanical brake during tuning to prevent unexpected rotation.
- When the drive is run for the first time after non-rotational autotuning, please keep the load less than 50%.

CAUTION

Non-rotational terminal resistance autotuning will not turn the motor shaft. However, there will be some voltage applied to the motor.

Please read the user manual and check the following before operation.

- Voltage is applied to the motor during non-rotational terminal resistance autotuning. Do not touch the motor until autotuning is complete.
- When using non-rotational terminal resistance autotuning with the motor connected to a load such as a conveyor, please use a mechanical brake during turning to prevent unexpected rotation.

! CAUTION

Auto parameter calculation should be used when the product does not have the autotuning function or the motor cannot be disconnected from external machinery.

Please carefully note the following.

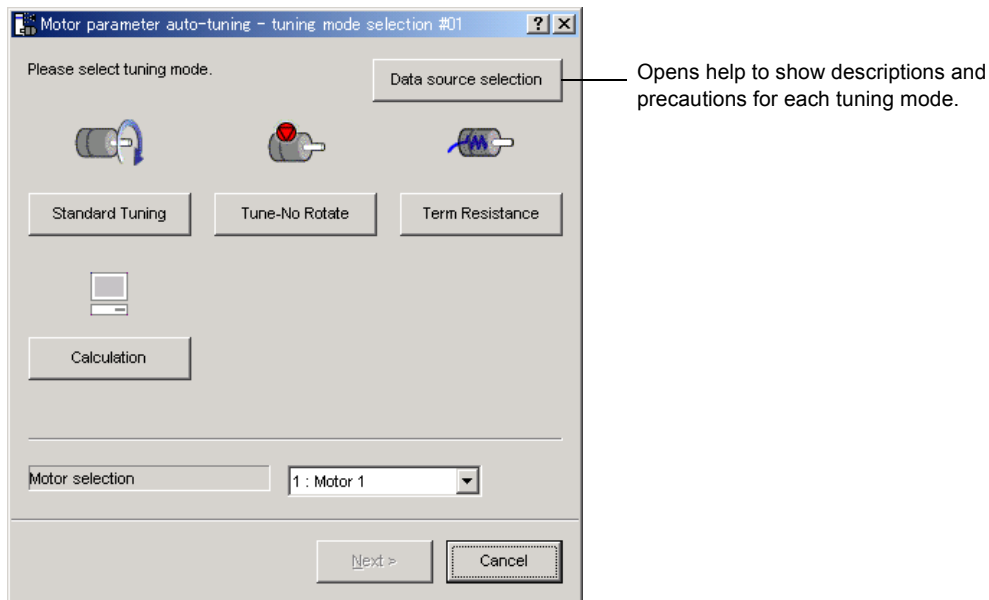
- Performance may be inferior to a system which has been auto-tuned.
- It is necessary to have motor nameplate data, the motor design sheet, or motor test report to use vector control mode. If there is no motor data available, V/f control mode must be used.

Note: If a baseblock command of Multi-function contact input selection is being input from the external terminal, this function can not be performed.

Online Motor Parameter Autotuning

Perform online motor parameter autotuning using the following procedure.

1. In the DriveWizard main window, click **Tuning** and then click **Motor Parameter Autotuning**. The following dialog box is displayed.



Standard Tuning: Rotational autotuning

Automatically sets motor parameters while turning the motor.

Use rotational autotuning whenever performing autotuning for a motor that has fixed output characteristics or for a motor that is not connected to a load.

Tune-No Rotate: Stationary autotuning

Automatically sets motor parameters while supplying power to the stationary motor.

Use stationary autotuning whenever performing autotuning for a motor that is connected to a motor.

Term Resistance: Stationary autotuning for line-to-line resistance only

Automatically sets motor parameters while supplying power to the stationary motor.

This autotuning can be used to prevent control errors when the motor cable is long or the cable length has changed or when the motor and Inverter have different capacities.

Calculation: Auto parameter calculation

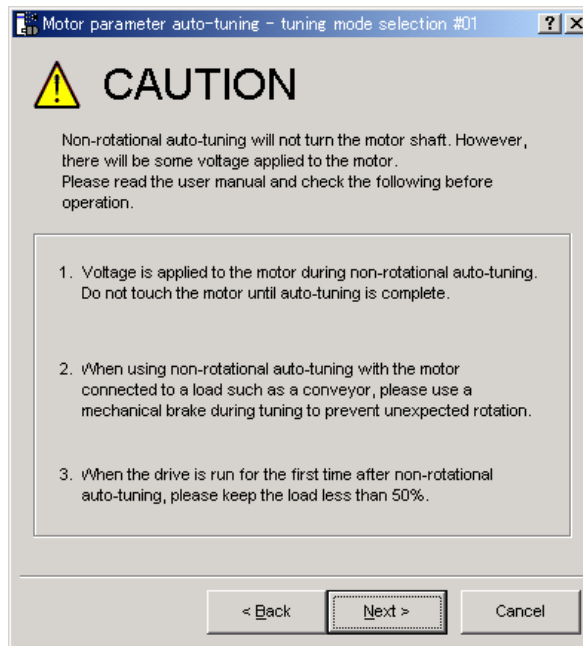
Calculates motor parameters from the value of the motor nameplate or test report.

Only “Hz” is available for the constants related to frequency.

2. Select the motor in the Motor selection combo box. The tuning mode that is available for the selected motor is enabled.

3. Select the tuning mode and click **Next**. The following dialog box is displayed.

Note: Tuning mode that can be selected differs depending on the Inverter type or control mode. Refer to the instruction manual for the details.



Note: Caution contents differ depending on the tuning mode.

Click **Cancel** to cancel autotuning, and return to the DriveWizard main window.

- Click **Next**, and the following dialog box is displayed.

[illegible]

Note: Setting items differ depending on the tuning mode.


5. Enter each setting items required for tuning in the Value column.
6. Click **Next** , and the following dialog box is displayed.


Motor parameter auto-tuning - tuning #01 ? X

Please execute auto-tuning and check the results.

Auto-tuning is executed

Status



Auto-tuning 

Monitor U1-02 : Output frequency [Hz]

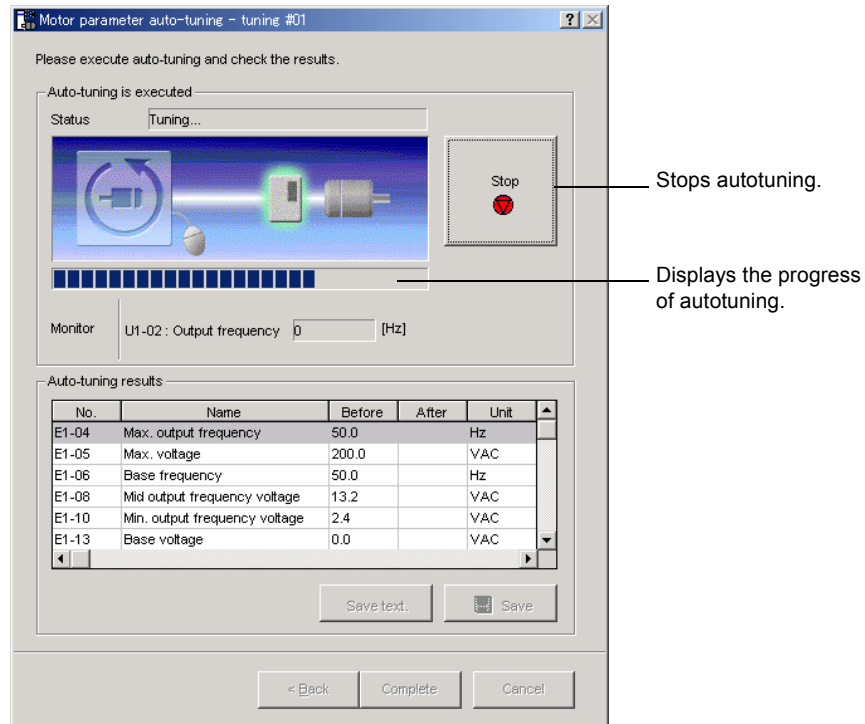
Auto-tuning results

No.	Name	Before	After	Unit
E1-04	Max. output frequency	50.0		Hz
E1-05	Max. voltage	200.0		VAC
E1-06	Base frequency	50.0		Hz
E1-08	Mid output frequency voltage	13.2		VAC
E1-10	Min. output frequency voltage	2.4		VAC
E1-13	Base voltage	0.0		VAC

Save text. Save

< Back Complete Cancel

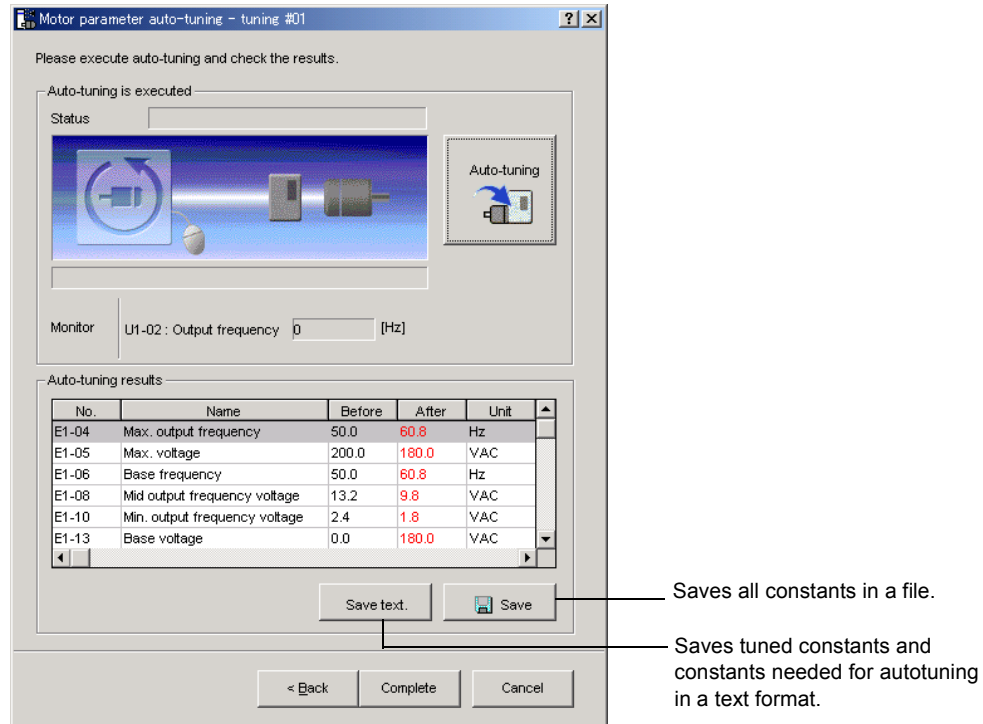
7. Click **Autotuning**. Autotuning is started, and the following dialog box is displayed.



Status: Displays the status of autotuning.

Monitor: Displays the output frequency during autotuning.

After autotuning is finished, the tuned values are displayed in the After column of the Autotuning results list. Values that differ from the values before autotuning are displayed in red.



Click **Back** to return to the tuning motor data set box.

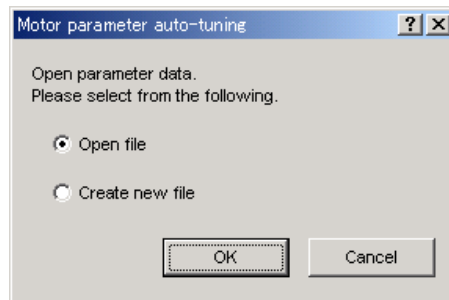
Click **Cancel** to change the tuned values back to their original values and return to the DriveWizard main window.

8. Click **Complete** to save the tuned values to the Inverter and return to the DriveWizard main window.

Offline Motor Parameter Autotuning

Perform offline motor parameter autotuning using the following procedure.

1. In the DriveWizard main window, click **Tuning** and then click **Motor Parameter Autotuning**. The following dialog box is displayed.



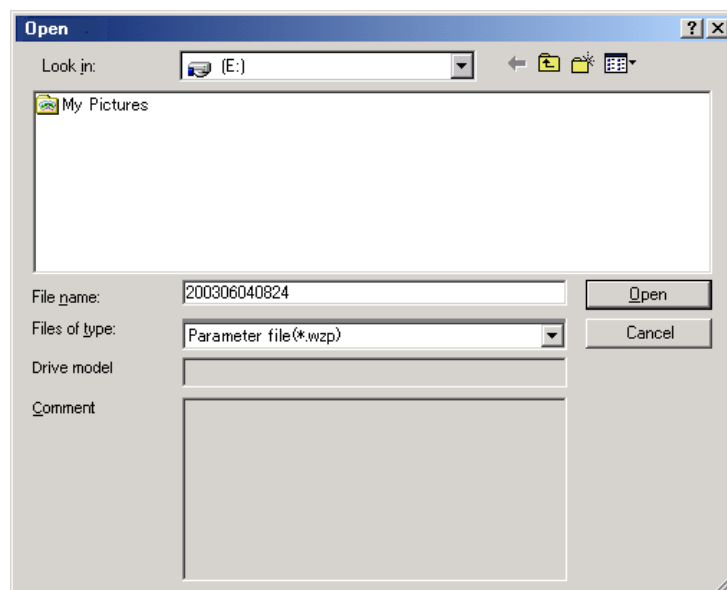
Open file: Reads in existing parameters.

Create new file: Creates new setting for parameters.

2. Select the desired command and click **OK**.

<When "Open file" is Selected>

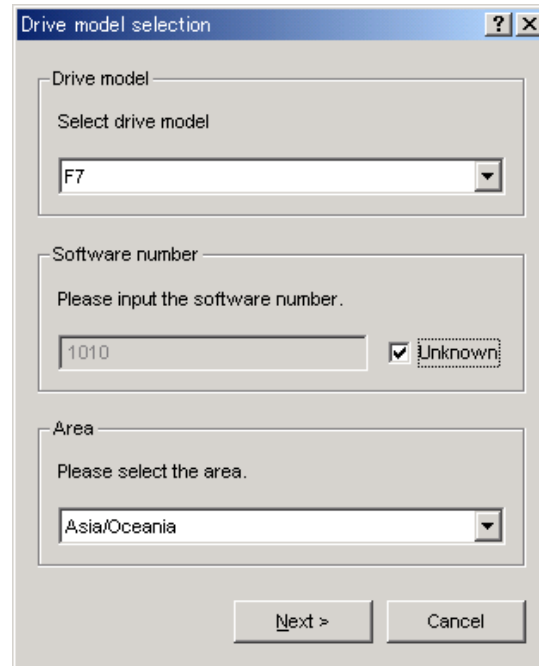
When "Open file" is selected, the Open box appears.



Select the file to be imported, and click **Open**.

<When “Open new file” is Selected>

When “Open new file” is selected, the Drive mode selection box appears.



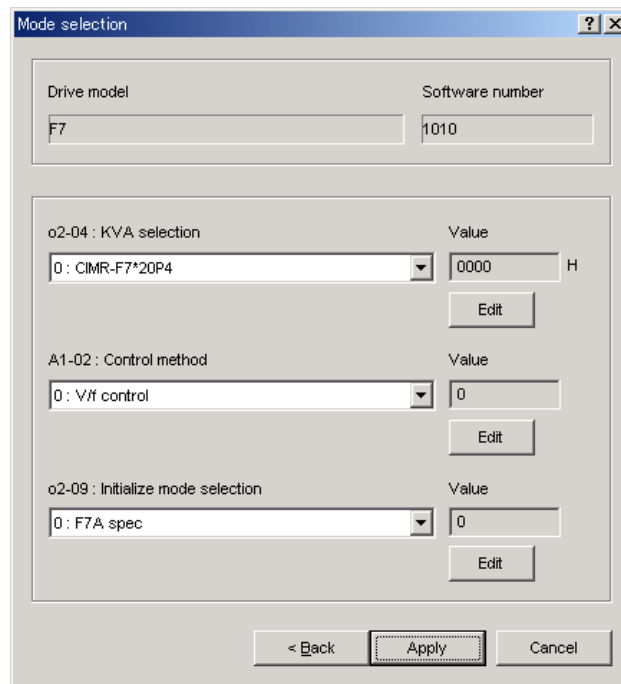
The "Drive model selection" dialog box contains three sections:

- Drive model:** A dropdown menu with "F7" selected.
- Software number:** A text input field containing "1010" and a checkbox labeled "Unknown" which is checked.
- Area:** A dropdown menu with "Asia/Oceania" selected.

At the bottom are "Next >" and "Cancel" buttons.

Select the model of Inverter and the area. And type the last four digits of the software number. Click **Next** to continue, and the Mode selection box appears.

Note: Check the software number by checking the nameplate or using the digital operator. Refer to the Inverter instruction manuals for more information.

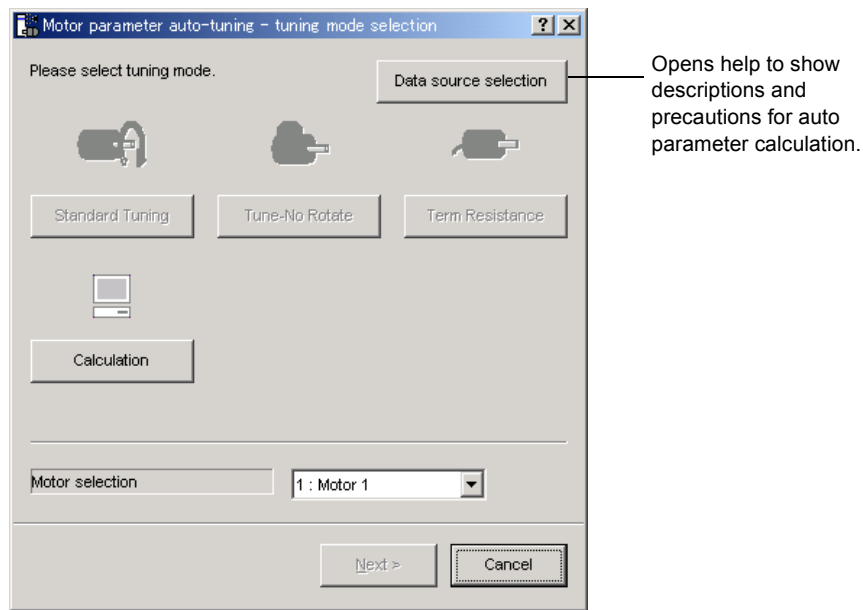


The "Mode selection" dialog box displays the previously entered information and allows for further configuration:

- Drive model:** F7
- Software number:** 1010
- o2-04 : KVA selection:** A dropdown menu showing "0 : CIMR-F7*20P4" with a corresponding "Value" field set to "0000". An "Edit" button is next to it.
- A1-02 : Control method:** A dropdown menu showing "0 : V/f control" with a corresponding "Value" field set to "0". An "Edit" button is next to it.
- o2-09 : Initialize mode selection:** A dropdown menu showing "0 : F7A spec" with a corresponding "Value" field set to "0". An "Edit" button is next to it.

At the bottom are "< Back", "Apply", and "Cancel" buttons.

Select the value in each list box. Or click each **Edit** button and type the value. Click **Apply**. The following dialog box is displayed.

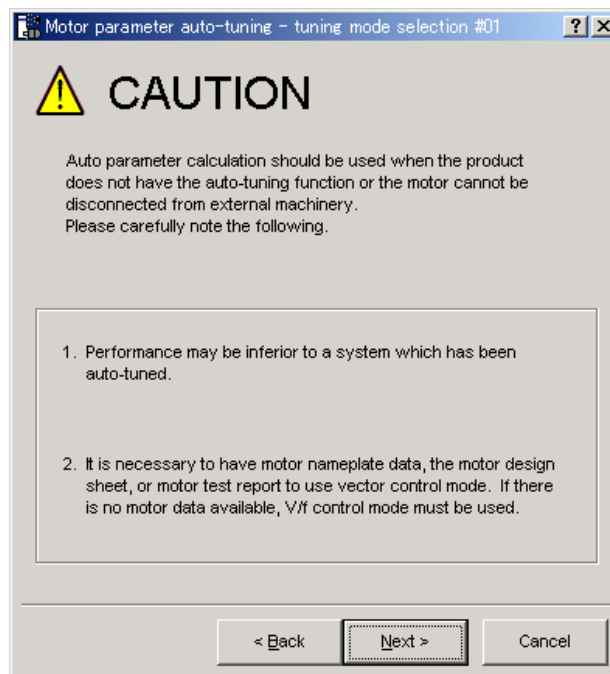


Calculation: Auto parameter calculation

Calculates motor parameters from the value of the motor nameplate or test report.

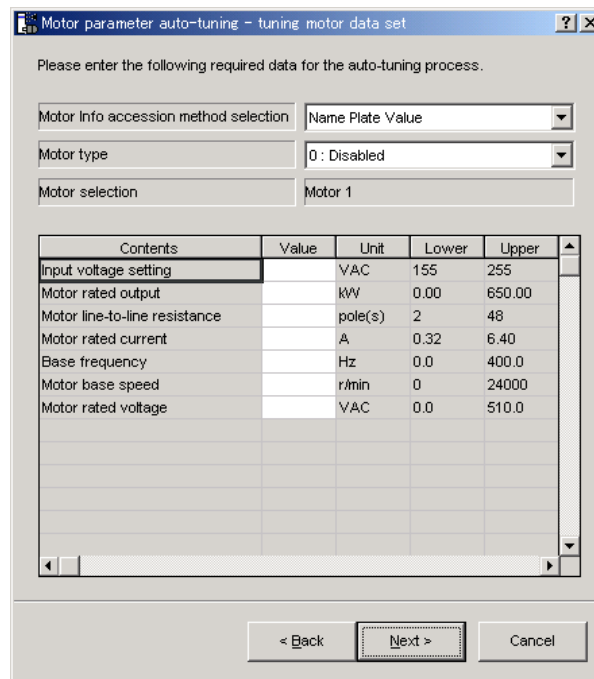
Only "Hz" is available for the constants related to frequency.

3. Select the motor in the Motor selection combo box, and click **Calculation**. The following dialog box is displayed.



Click **Cancel** to cancel autotuning, and return to the DriveWizard main window.

4. Click **Next**, and the following dialog box is displayed.



Please enter the following required data for the auto-tuning process.

Motor Info accession method selection: Name Plate Value

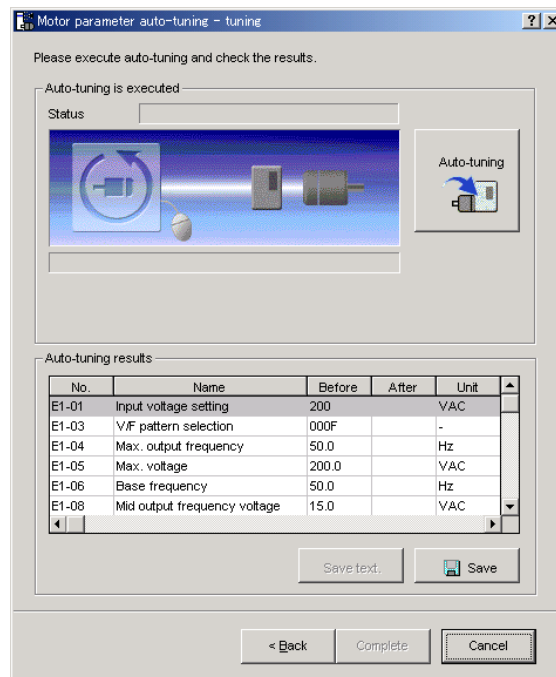
Motor type: 0 : Disabled

Motor selection: Motor 1

Contents	Value	Unit	Lower	Upper
Input voltage setting		VAC	155	255
Motor rated output		kW	0.00	650.00
Motor line-to-line resistance		pole(s)	2	48
Motor rated current		A	0.32	6.40
Base frequency		Hz	0.0	400.0
Motor base speed		r/min	0	24000
Motor rated voltage		VAC	0.0	510.0

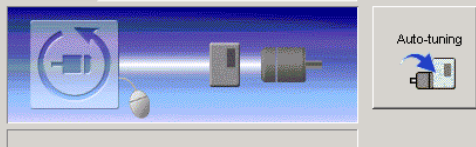
< Back **Next >** Cancel

5. Enter each setting items required for tuning in the Value column.
6. Click **Next** and the following dialog box is displayed.




Please execute auto-tuning and check the results.

Auto-tuning is executed

Status: 

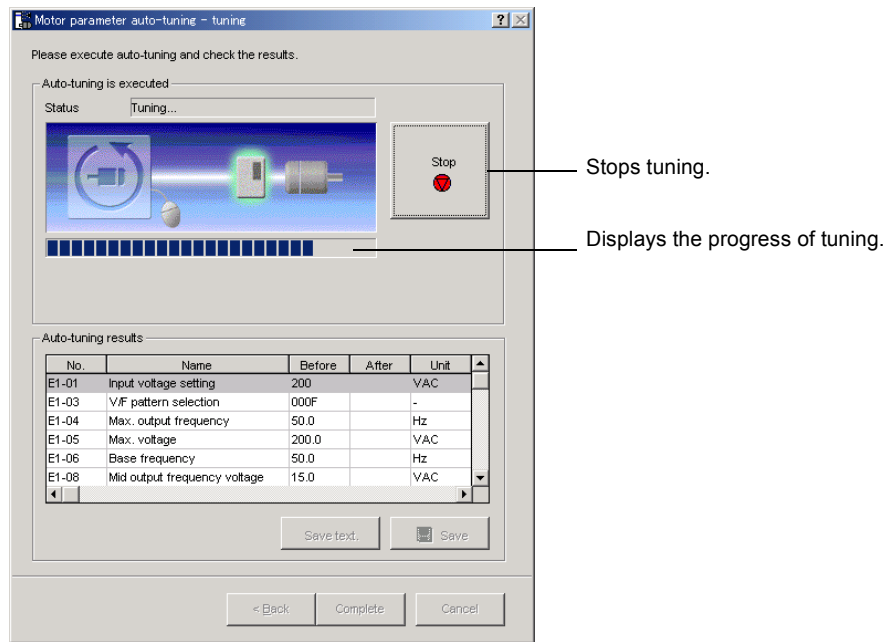
Auto-tuning results

No.	Name	Before	After	Unit
E1-01	Input voltage setting	200		VAC
E1-03	V/F pattern selection	000F		-
E1-04	Max. output frequency	50.0		Hz
E1-05	Max. voltage	200.0		VAC
E1-06	Base frequency	50.0		Hz
E1-08	Mid output frequency voltage	15.0		VAC

Save text.  Save

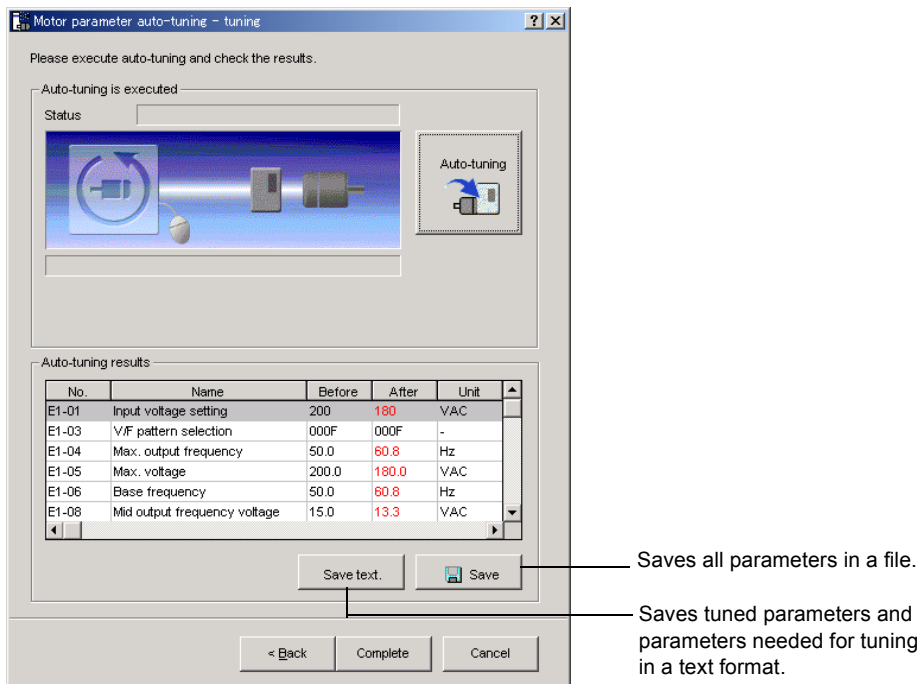
< Back Complete Cancel

7. Click **Autotuning**. Tuning is started, and the following dialog box is displayed.



Status: Displays the status of tuning.

After tuning is finished, the tuned values are displayed in the After column of the Autotuning results list. Values that differ from the values before tuning are displayed in red.

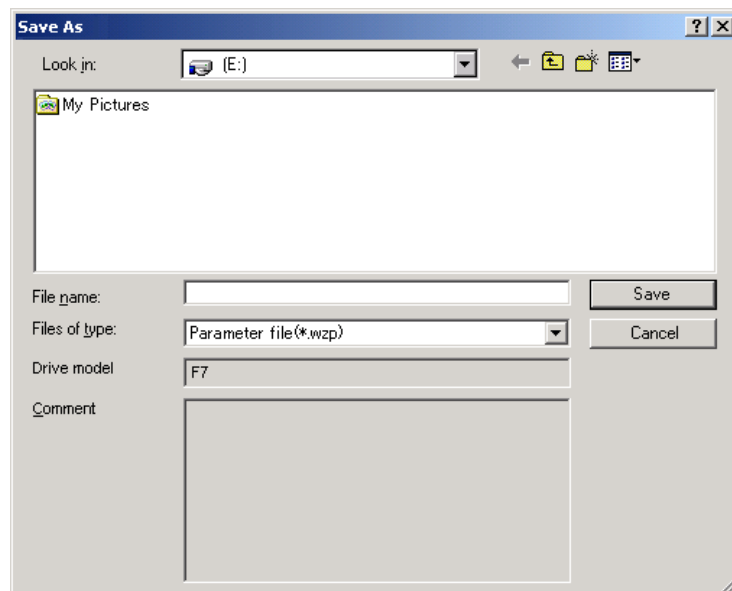


Click **Back** to return to the tuning motor data set box.

8. Save the tuning results using either of the following methods.

<When saving all parameters>

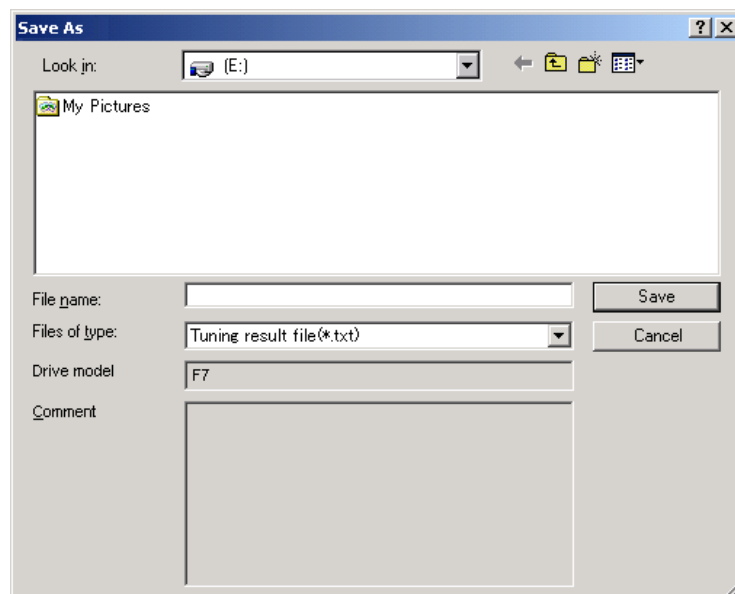
Click **Save**, and the Save As box is displayed.



Click **Save**.

<When saving tuned parameters and parameters needed for tuning>

Click **Save text** and the Save As box is displayed.



Click **Save**.

4.5 Test Run

4.5.1 Manual Operation

This function turns the motor at the set speed. The rotational direction and the speed setting can be verified without connecting an upper-level controller.

WARNING

Manual operation will cause the motor to rotate and can be dangerous.

Be sure to check the user's manual before execution.

Pay particular attention to the following items.

- Check the safety of the area around the drive unit.

The motor runs at the set speed while the Forward or Reverse button is pressed. Make sure that the surrounding area is clear of any items that could interfere with the running of the motor.

- Assign the Emergency Stop to the external terminal.

If a communications error occurred or the PC or DriveWizard is shut down because of an error during a manual operation, the motor may continue to rotate. To stop the motor, use the Emergency Stop.

- Please only use DriveWizard for changing inverter parameters.

If a parameter (such as frequency units) is changed by any method other than DriveWizard, the motor speed can suddenly change and result in injury.

- Reset the parameters to their original setting after an error. (V7, J7, G5)

This feature will change the RUN source selection parameter temporarily. (RUN command selection, Frequency reference selection)

After a communications error occurred or the PC or DriveWizard is shut down because of an error during a manual operation, reset the parameters for the operation method and reference selections to their original settings.

- Restart the Inverter after an error. (G7, F7, L7)

This feature will change the RUN source selection parameter temporarily. (ComCtrl, ComNet)

After a communications error occurred or the PC or DriveWizard is shut down because of an error during a manual operation, restart the Inverter.

- Recommendations for using DriveWizard

Use DriveWizard for inverter setup and run test.

Disconnect the motor from the load when using manual operation mode.

Notes: 1. If a baseblock command of Multi-function contact input selection is being input from the external terminal, this function can not be performed.

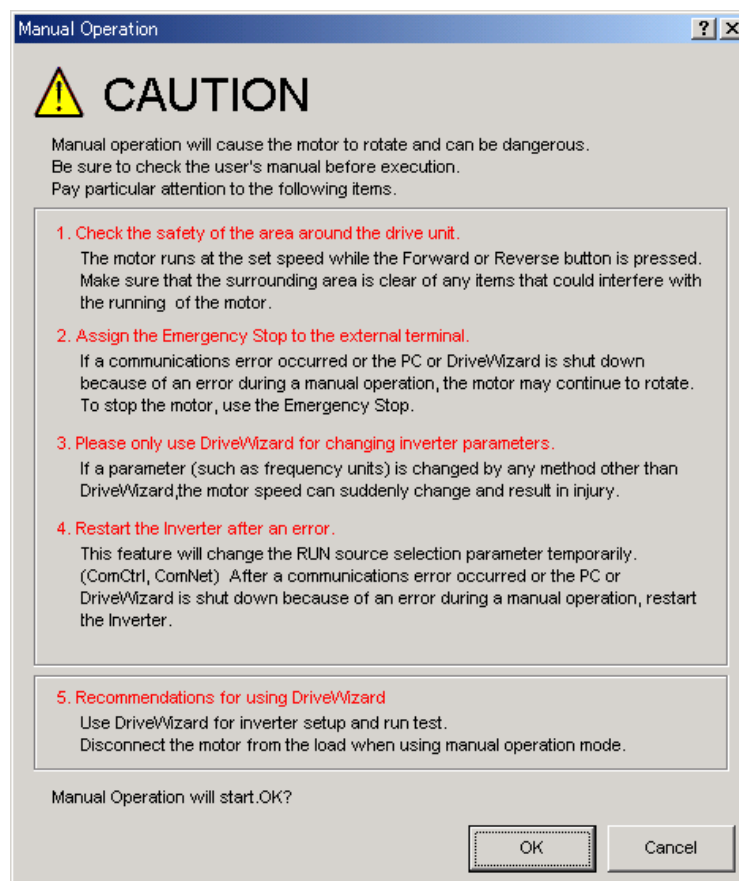
2. For manual operations with the VarispeedG5 Inverter, set the Frequency of the reference setting and the monitor (o1-03) to 0.01 Hz units (factory setting).

The following conditions must be satisfied to carry out a manual operation.

- Remote is selected with the LOCAL/REMOTE key of the Digital Operator or in Multi-function contact input function.
- A fault is not detected.
- The Motor is not running.

Perform a manual operation using the following procedure.

1. In the DriveWizard main window, click **Test Run**, and then click **Manual Operation**.
A warning message appears reminding you of the dangers that are possible when using this operation.

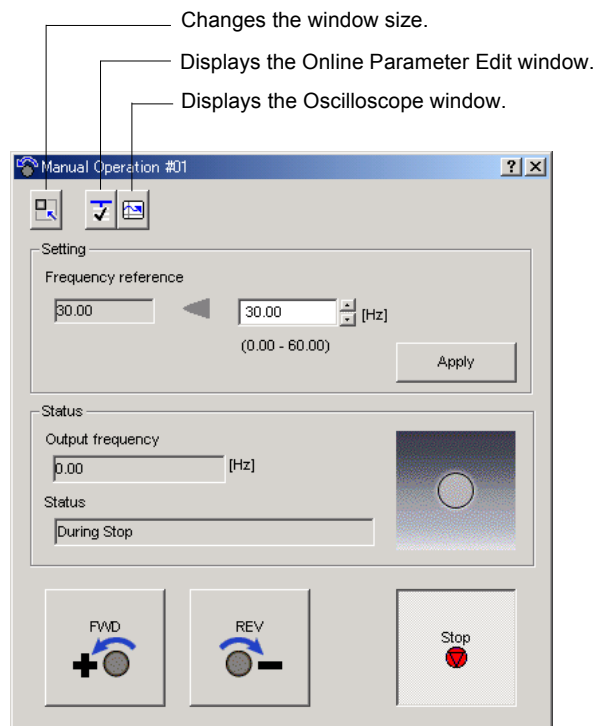


Note: Caution contents differ depending on the Inverter type.

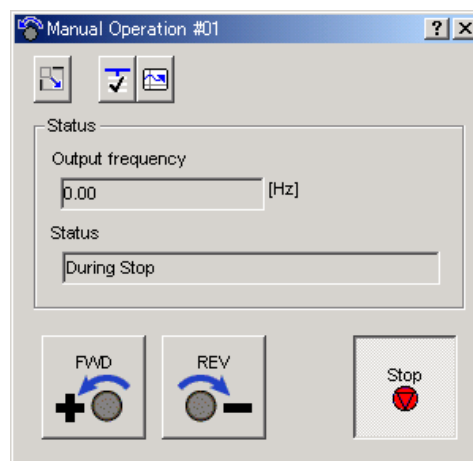
Click **Cancel** to return to the main window without performing a manual operation.

- Click **OK**, and the Manual Operation box appears.

If the motor is running, an error message will appear. Make sure the motor has stopped.



Manual Operation Box (Default)



Manual Operation Box (Minimized)

Note: The speed cannot be set in the minimized box.

Frequency reference

The left box shows the speed for the manual operation. The frequency reference can be changed in the right box.

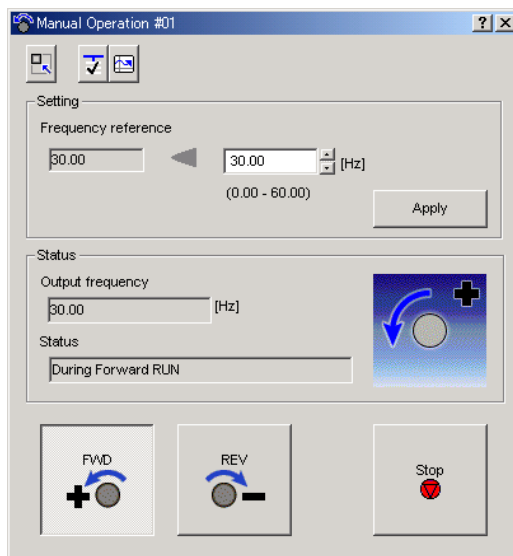
Output frequency

The output frequency box shows the actual running speed.

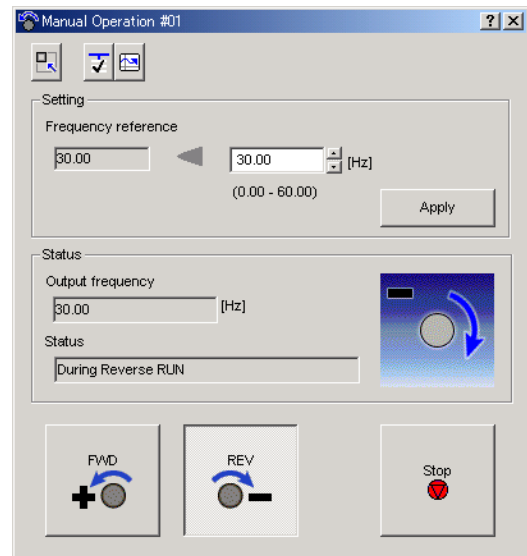
Status

The status box shows the Inverter status: During Forward Run, During Reverse Run, During Stop, Zero-speed, error, or Drive is not ready.

3. Check the speed for a manual operation. To change the speed, enter the frequency reference in the right Frequency reference box by typing or using the spin button and click **Enter**. The new speed will be displayed in the left Frequency reference box.
4. Click **Forward Run** or **Reverse Run**. A manual operation can be performed only while one of these buttons is pressed in.



Forward Run



Reverse Run

Note: The screen shots show the motor running by a forward run command or a reverse run command. The actual direction depends on the motor wiring or the parameter setting.

4.5.2 Pattern Operation

This function turns the motor in the set operation pattern.

CAUTION

Pattern operation will cause the motor to rotate and can be dangerous.

Be sure to check the user's manual before execution.

Pay particular attention to the following items.

- Check the safety of the area around the drive unit.

The motor runs at the set speed while the Forward or Reverse button is pressed. Make sure that the surrounding area is clear of any items that could interfere with the running of the motor.

- Assign the Emergency Stop to the external terminal.

If a communications error occurred or the PC or DriveWizard is shut down because of an error during a pattern operation, the motor may continue to rotate. To stop the motor, use the Emergency Stop.

- Please only use DriveWizard for changing inverter parameters.

If a parameter (such as frequency units) is changed by any method other than DriveWizard, the motor speed can suddenly change and result in injury.

- Reset the parameters to their original setting after an error. (V7, J7, G5)

This feature will change the RUN source selection parameter temporarily. (RUN command selection, Frequency reference selection)

After a communications error occurred or the PC or DriveWizard is shut down because of an error during a pattern operation, reset the parameters for the operation method and reference selections to their original settings.

- Restart the Inverter after an error. (G7, F7, L7)

This feature will change the RUN source selection parameter temporarily. (ComCtrl, ComNet)

After a communications error occurred or the PC or DriveWizard is shut down because of an error during a pattern operation, restart the Inverter.

- Use care when using pattern operation mode with positioning applications.

Use care when using pattern operation mode with positioning applications. As there is no position feedback, make sure that there are no alignment/position problems with the machinery. Running the motor for an extended period of times when such problems exist can be dangerous and cause damage.

- Regards display of operations while running.

This function displays the operational status while the drive is running, although there are times when the motor operations and the time chart will not match due to various factors such as surrounding environment. Please do not rely completely on the time chart.

- Recommendations for using DriveWizard

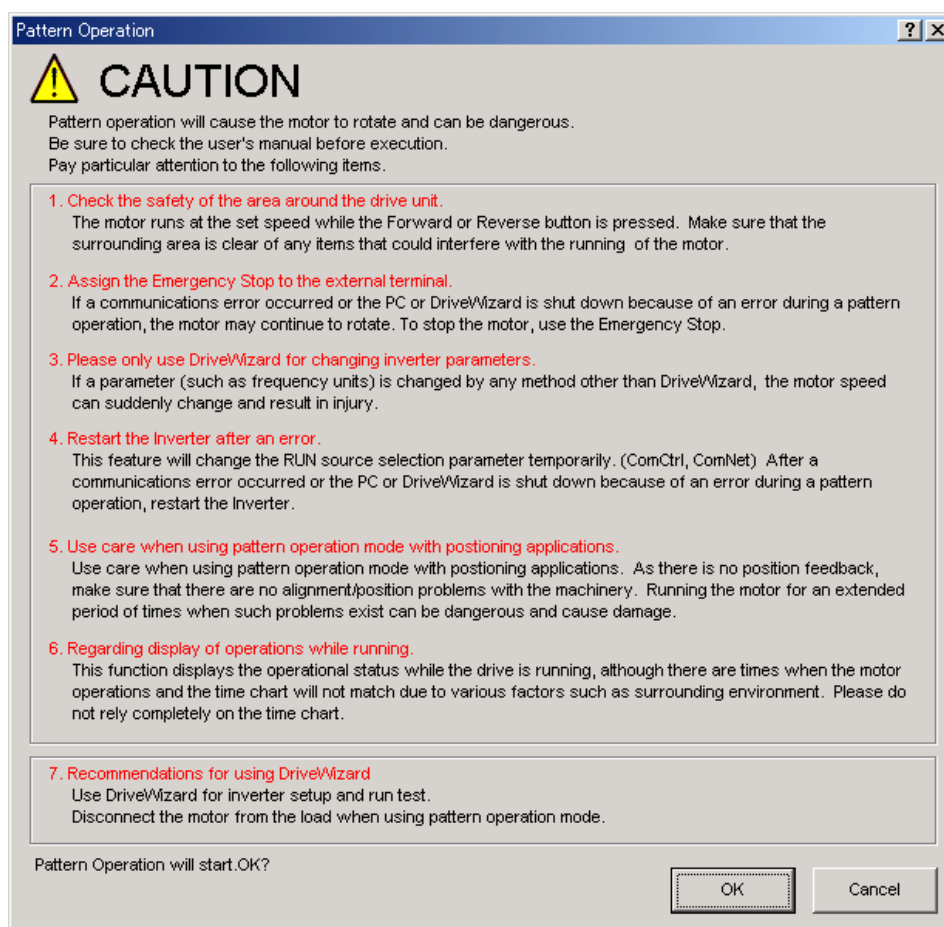
Use DriveWizard for inverter setup and run test.

Disconnect the motor from the load when using pattern operation mode.

- Notes:
1. If a baseblock command of Multi-function contact input selection is being input from the external terminal, this function can not be performed.
 2. The pattern operation is based on the settings, Acceleration/deceleration time 1 and Motor 1, of the multi-function contact input selections. Acceleration/deceleration time 2, 3 and Motor 2 selections are not available in the pattern operation.
 3. For pattern operations with the VarispeedG5 Inverter, set the Frequency of reference setting and the monitor (o1-03) to 0.01 Hz units (factory setting).

Perform a pattern operation using the following procedure.

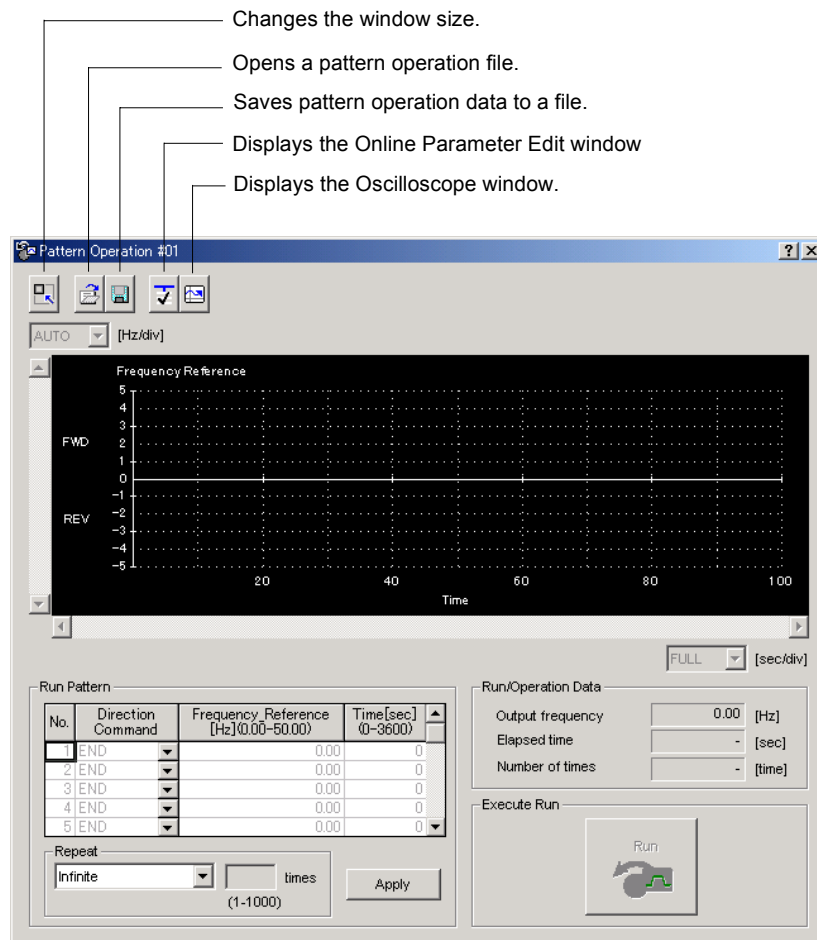
1. In the DriveWizard main window, click **Test Run**, and then click **Pattern Operation**. A warning message appears reminding you of the dangers that are possible when using this operation.



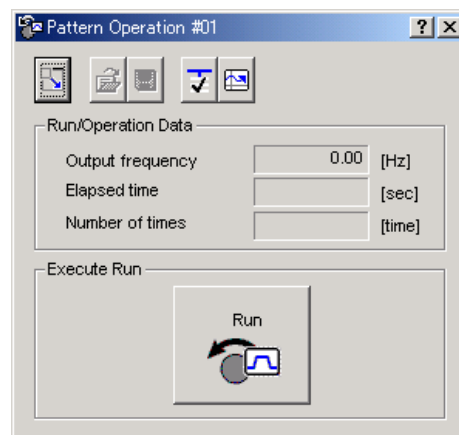
Note: Caution contents differ depending on the Inverter type.

Click **Cancel** to return to the DriveWizard main window without performing a pattern operation.

2. Click **OK**, and the Pattern Operation box is displayed.



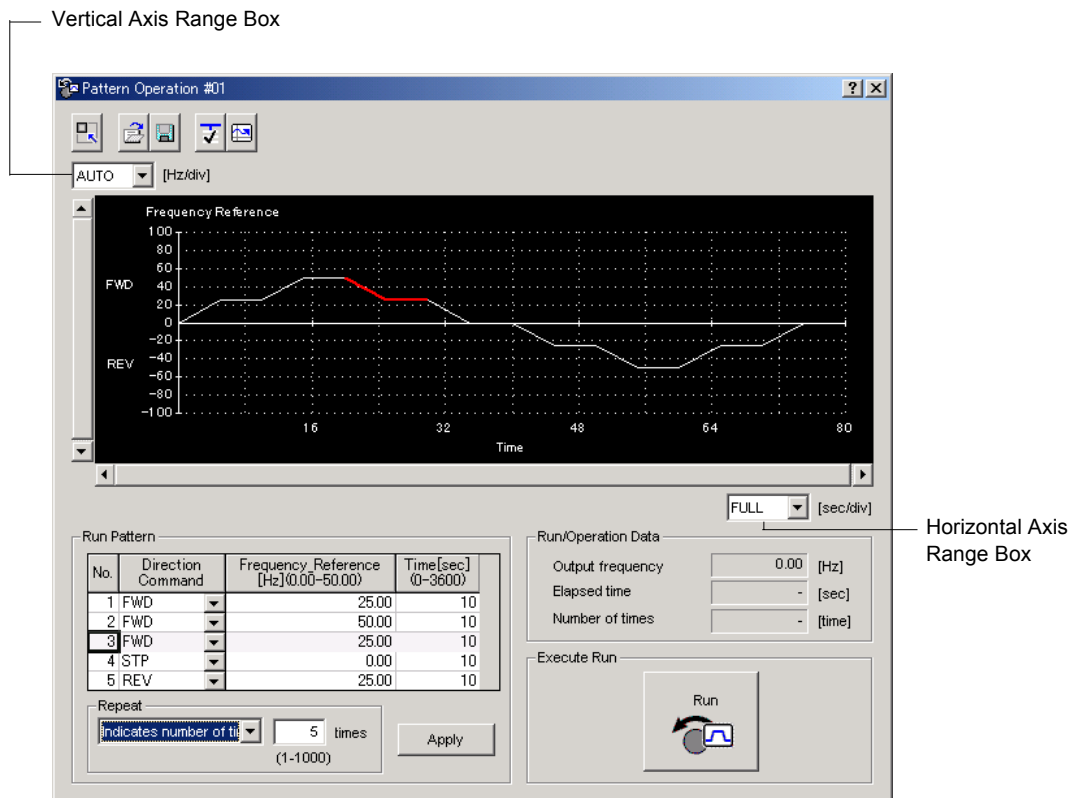
Pattern Operation Box (Default)



Pattern Operation Box (Minimized)

Note: The operation pattern cannot be set in the minimized box.

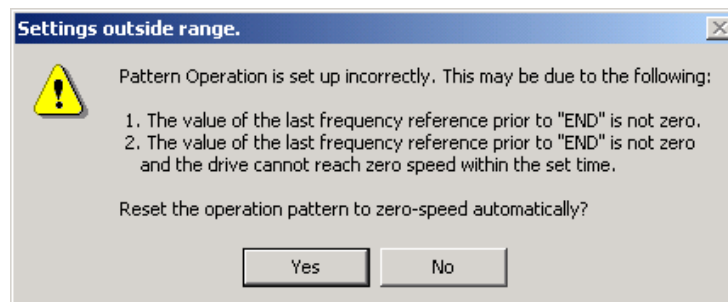
3. Enter each item for operation conditions in the Run Pattern area, click **Apply**. The operation pattern is displayed in a graph.



The line in the graph corresponding to the selected operation pattern in the operation pattern area is displayed in red.

<If the Inverter is not set to stop at the end in the set operation pattern>

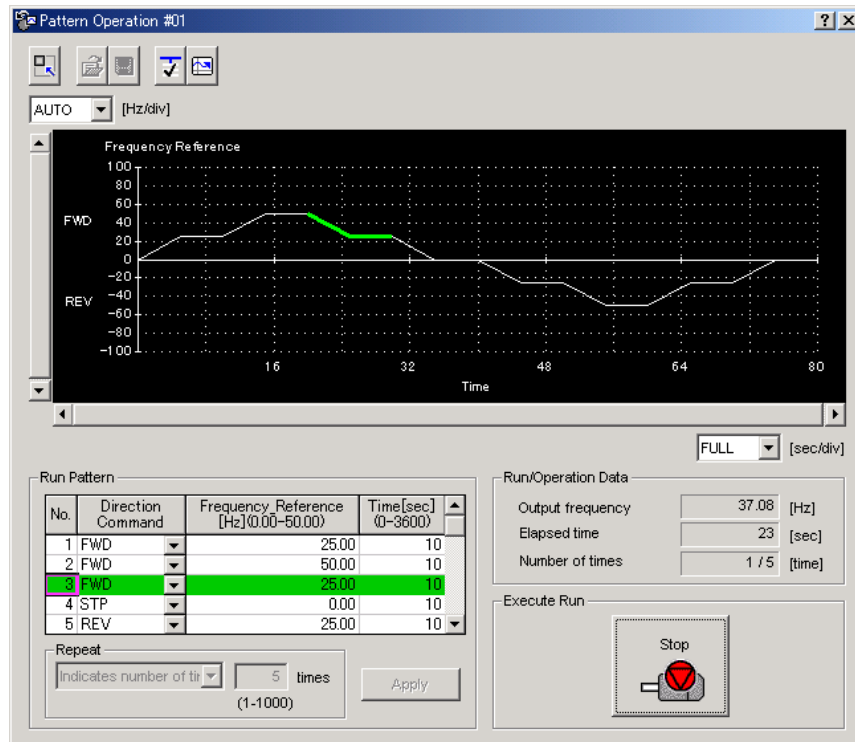
If the Inverter is not set to stop at the end in the set operation pattern, the following dialog box is displayed.



Click **Yes** to reset the operation pattern to zero-speed automatically.

Click **No** to return to the Pattern Operation box and set the operation pattern again.

4. Click **Run**, a pattern operation is performed.



Output frequency: Displays the output frequency

Elapsed time: Displays the elapsed time. The display starts again from zero in a repeat operation.

Number of times: Displays “Number of finished operation / Number of set repeat operation”

The line that indicates executing operation pattern blinks in green. And the corresponding line in the operation pattern area is displayed in green.

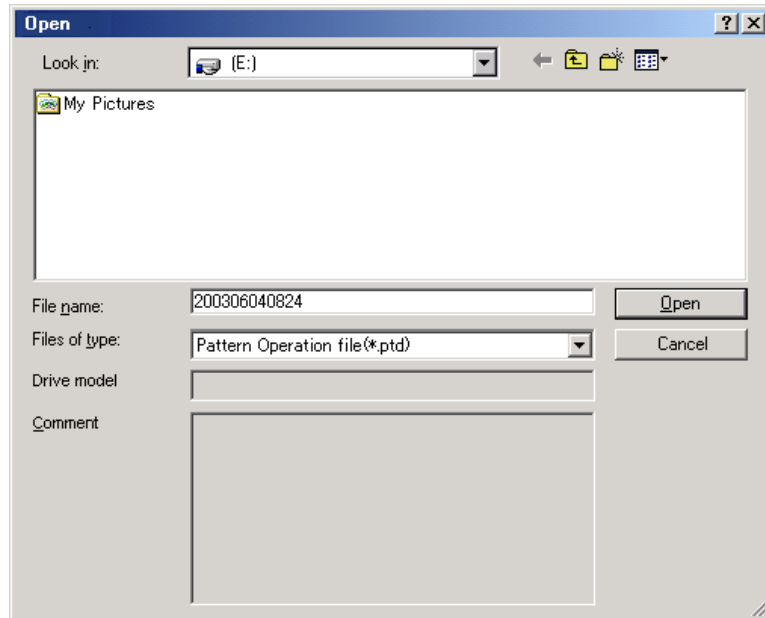
To stop the pattern operation, click **Stop**.



(Open) button

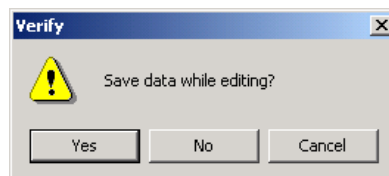
The pattern operation file can be loaded in the Open box.

1. Click the  button, the Open box appears.



<If an operation pattern is being edited>

If an operation pattern is being edited, a message appears and confirms if you want to save the current settings.



Click **OK** to save the current settings.

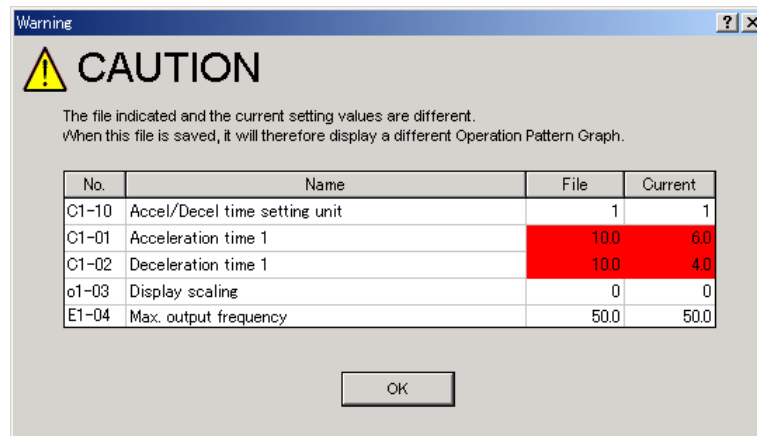
Click **No** to overwrite the current settings without saving the current settings.

Click **Cancel** to return to the Operation Pattern box.

2. Select the file to be loaded, and click **Open**. The Operation Pattern box is displayed.

If the following items differ between in the specified file and in the current settings, the following dialog box is displayed.

- Acceleration time
- Deceleration time
- Accel/decel time setting unit
- Display scaling




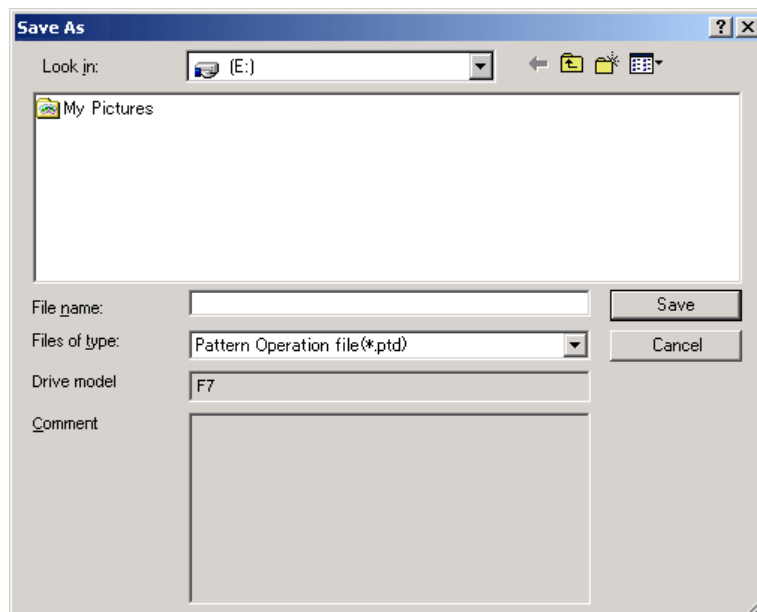
Click **OK** to continue loading the file. After the loading is finished, check the values of those parameters.



(Save) button

The operation pattern data can be saved in a specified file.

Click the  button, and the Save As box is displayed.



Click **Save**, and operation pattern data is saved in the specified file.

Click **Cancel** to return to the Pattern Operation box.

5 Technical Support

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The revision dates and numbers of the revised manuals are given on the bottom of the front cover.

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└─ Date of original publication ─┐

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