

Parameter change software

PSetN

Instruction Manual

-Nano Stage FC/SC Series Stage Controller-



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1. Overview

Software is software for operating the parameters of the stage controller manufactured by Sigma Koki Co., Ltd. You can change any parameter. You can also make the necessary settings when connecting a new stage.

2. Target stage controller

The stage controller that can operate parameters is described below.

Product name	Model
Submicron feedback stage controller	FC-111
Submicron feedback stage controller	FC-114
Submicron feedback stage controller	FC-411
Submicron feedback stage controller	FC-414
10nm feedback stage controller	FC-511
10nm feedback stage controller	FC-514
5nm feedback stage controller	FC-611
1 nm feedback stage controller	FC-911
Pulse Motor stage controller	SC-111
Pulse Motor controller	SC-114

3. Specifications

To execute, Windows 10 and the environment where Microsoft .NET Framework 4.7.2 runtime is installed are required.

Parameters can be read from the stage controller, displayed in the parameter list, and the contents of the parameter list can be written to the stage controller. For the explanation of each parameter, see the instruction manual of the stage controller.

*GP-IB communication uses DLL provided by National Instruments. Use National Instruments, Inc. for the GP-IB interface unit.

4. Specifications - Hardware

Use either USB / GP-IB / Ethernet interface to connect the stage controller.

5. Distribution file structure

The distribution file structure is as follows.

File name	Contents
setup.exe	SetupFile
PSetNSetup Ver1.11.msi	Windows Installer package

6. Install

Execute the distribution file "setup.exe" and install according to the instructions. After installation, a shortcut will be created on your desktop and all programs-SIGMAKOKI.

7. Uninstall

Execute the distribution file "setup.exe" used during installation, and then select delete. Alternatively, use Control Panel-Programs and Features to uninstall the publisher "SIGMAKOKI" and the name "PSetN Ver1.11".

8. Starting method

Execute the created shortcut "PSetN Ver1.11".

9. How to finish

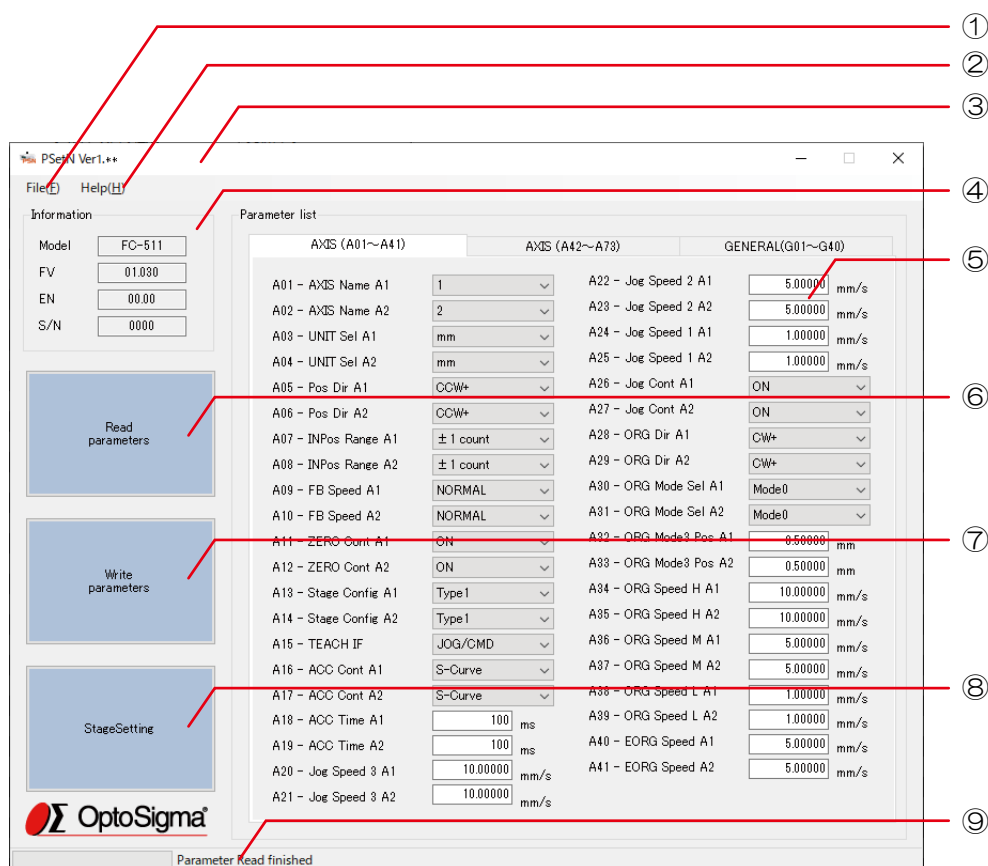
Select the close button on the upper right of the software or select the application end of the menu to end.

10. Contact

Tokyo Head Office	TEL	+81-3-5638-6551
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11. Parameter operation panel

This section describes the parameter change operation panel of this application.



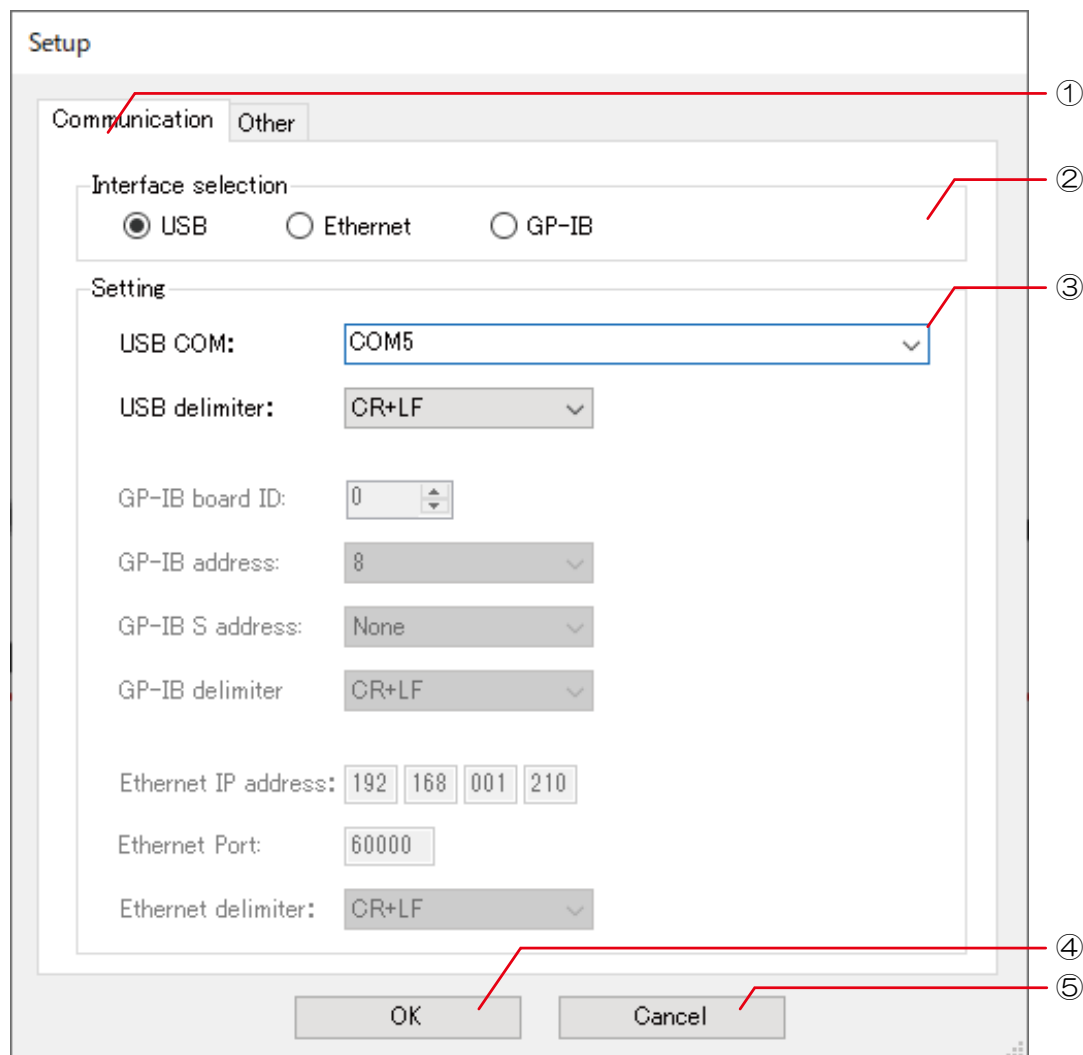
- Parameter Operation panel description

No	Name		Contents
①	Menu File	Open	Open the parameter setting file and read it into the parameter list.
		Save	Overwrites the open parameter setting file.
		Save As	Save the parameter setting file with a name.
		Setup	Open various settings such as communication settings.
		Exit	Exit the application.
②	Menu Help	Version	Version information.
③	Title name and file path		Menu-Displays the file path when opened and saved.
④	Model information	Model	Displays the model.
		FV	Display the firmware version.
		EN	Displays the equipment number.
		S/N	Displays the serial number.
⑤	Parameter list		Parameter list used for reading and writing. For details on the parameters, see the instruction manual for the stage controller.
	AXIS (A01 ~ A41)		The AXIS parameters A01 to A41 are displayed.
	AXIS (A42 ~ A73)		The AXIS parameters A42 to A73 are displayed.
	GENERAL (G01 ~ G40)		The GENERAL parameters G01 to G40 are displayed.
⑥	Read parameters button		Read the parameters of the stage controller.
⑦	Write parameters button		Write the parameters to the stage controller.
⑧	Stage Setting		Change the parameter contents to match the connection stage.
⑨	Progress bar		The progress of reading and writing parameters is displayed.

12. Settings panel

This panel is used to set communication related information and check items. Select the communication interface and set each interface. It can be displayed from the setting button of the parameter reading panel that is displayed at startup, or the menu-File-Setting of the parameter operation panel. Check the settings before operating the parameters. The set contents are saved and displayed at the next startup.

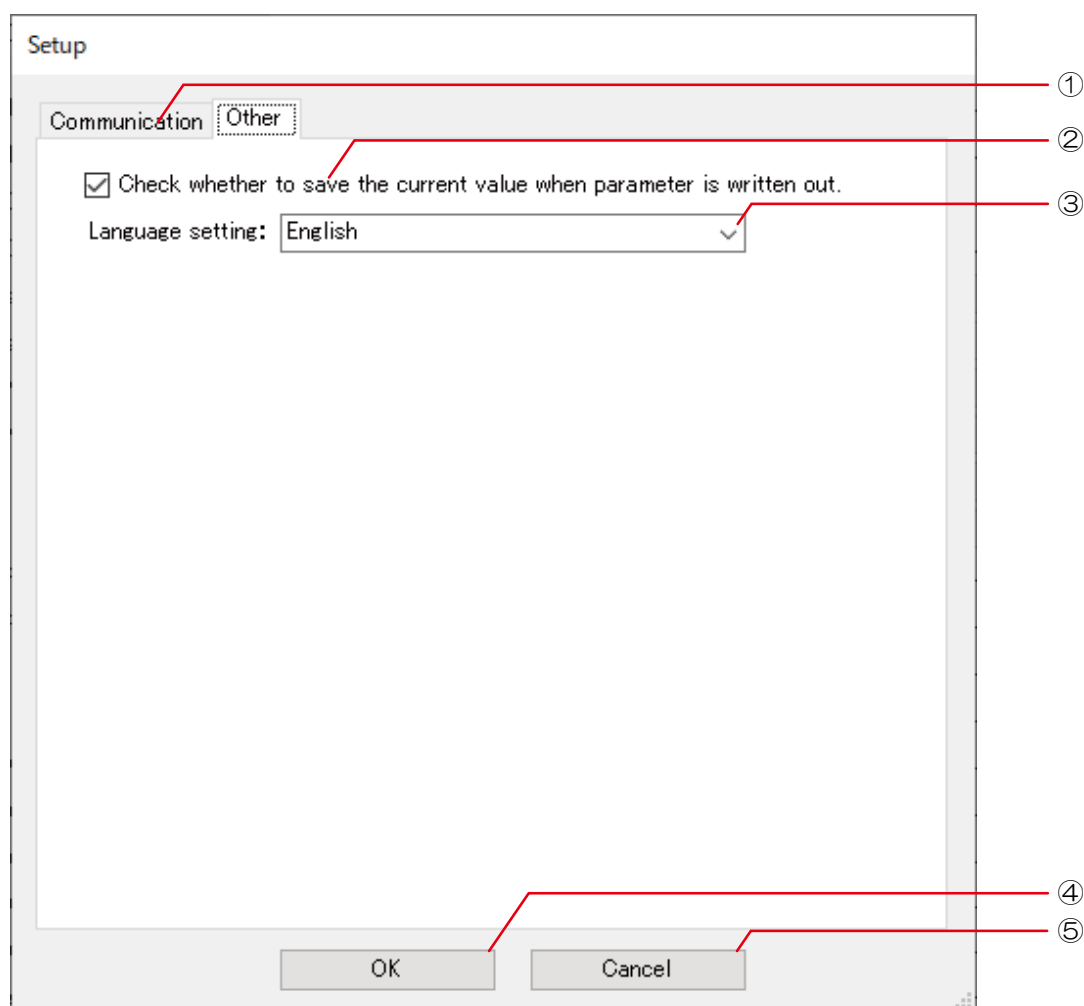
- Setup panel-Communication



- Setup panel-Communication description

No	Name		Contents
①	Tab	Communication	Display the Communication tab.
		Other	Display the Other tab.
②	Communication interface selection	USB	Select the USB interface.
		Ethernet	Select the Ethernet interface.
		GP-IB	Select the GP-IB interface.
③	Communication settings	USB connection	Set the connection destination of the USB interface.
		USB delimiter	Set the delimiter of the USB interface.
		GP-IB board ID	Set the board ID of the GP-IB interface.
		GP-IB address	Set the GP-IB interface address.
		GP-IB S address	Set the secondary address of the GP-IB interface.
		GP-IB delimiter	Set the delimiter of the GP-IB interface.
		Ethernet IP address	Set the IP address of the Ethernet interface.
		Ethernet port	The port number of the Ethernet interface.
④	OK button		Save the settings and close the properties panel.
⑤	Cancel button		Closes the property panel without saving the settings.

- Setup panel-other



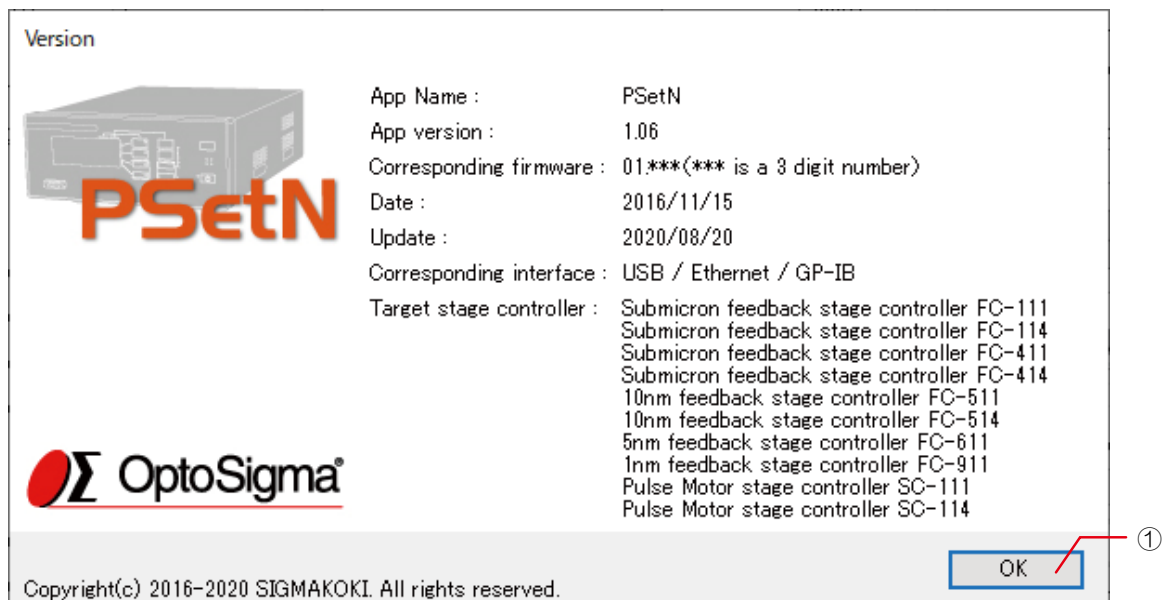
- Setup panel-Other description

No	Name		Contents
①	Tab	Communication	Display the Communication tab.
		Other	Display the Other tab.
②	Checkbox		When checked, before writing parameters in the stage controller Displays a confirmation panel to read and save parameters.
③	Language setting		Select from English and Japanese. If you change your selections, restarting the application will switch languages.
④	OK button		Save the settings and close the properties panel.
⑤	Cancel button		Closes the property panel without saving the settings.

13. Version panel

This section describes the version information panel of this application. The version information panel shows the version and update date of this application, compatible model name, and compatible FV.

- Version panel



- Version panel description

No	Name	Contents
-	App Name	The software name.
-	App version	The software version.
-	Updatable firmware	Displays the firmware version for which parameter operation is possible.
-	Date	The date the software was created.
-	Update	The date the software was last updated.
-	Corresponding interface	It is a compatible interface.
-	Target stage controller	Displays the model name of the stage controller that can be used.
①	OK button	Close the version panel.

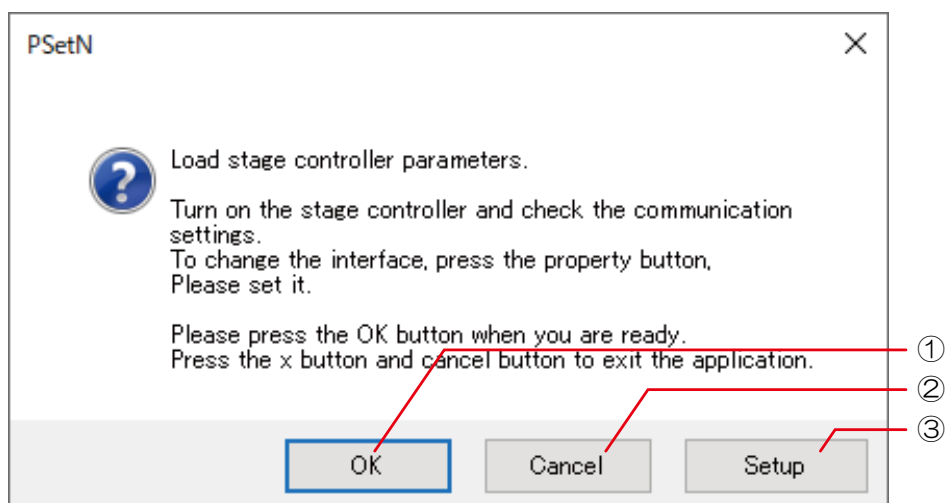
14. Operation

i. Start-Parameter reading panel operation at startup

When this software starts up, it reads the parameters of the stage controller. When you start the application, the parameter loading panel will be displayed. Before reading, check that the power supply of the stage controller is ON and the communication settings. If you want to set the communication settings, press the setting button (3) to display the setting panel. Load the parameters with the OK button (1). The cancel button (2) will exit this software. OK button After executing and loading, the parameter operation panel will be displayed with the parameters of the stage controller displayed in the parameter list.

*The parameter changing software cannot be started without reading the parameters at startup.

- Startup parameter reading panel



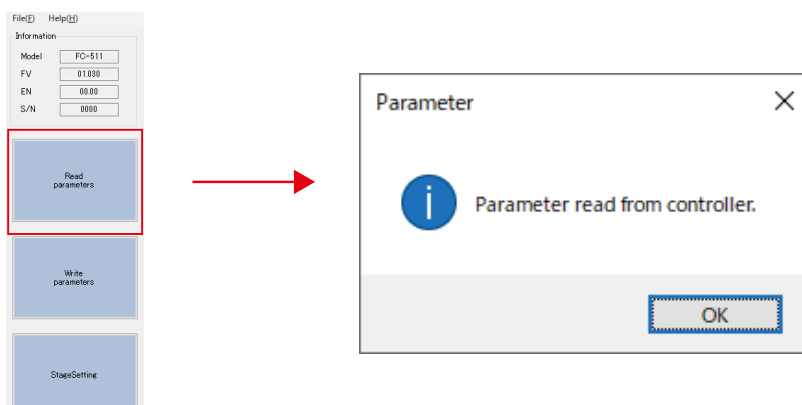
- Description of parameter reading panel at startup

No	Name	Contents
①	OK button	Read the parameters.
②	Cancel button	Exit the application.
③	Setup button	Display the settings panel.

ii. Parameter load-Parameter operation panel-Parameter load button

Click the parameter load button to load the stage controller parameters into the parameter list. The loaded parameters can be changed in the parameter list. The following panel will be displayed after loading.

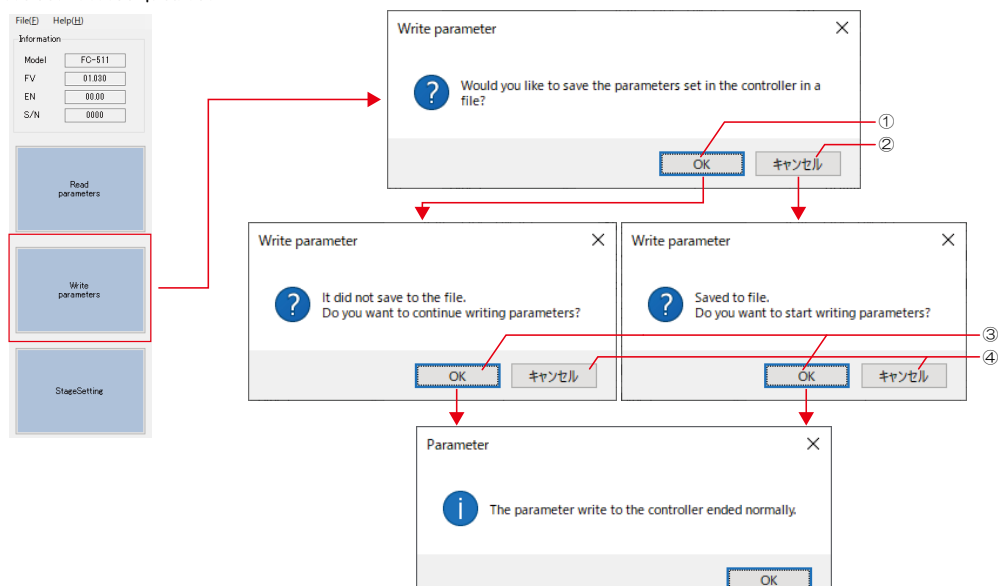
- Display panel after reading parameters



iii. Parameter write-Parameter operation panel-Parameter write button

Click the Parameter Write button to write the parameter list contents to the stage controller. When you execute the write, the confirmation panel for saving the file before write is displayed, and you can save the contents of the stage controller to a file before writing. If you do not need it, press the cancel button. After that, the writing confirmation panel will be displayed. Click the OK button to start writing.

• Parameter write panel



• Parameter write panel description

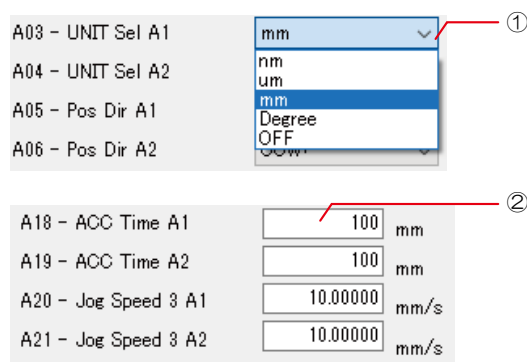
No	Name	Contents
①	OK button	Save the contents of the parameter list to a file and move to writing.
②	CANCEL button	Move to writing without saving to a file.
③	OK button	Write the parameters to the stage controller.
④	CANCEL button	Exit without writing parameters to the stage controller.

iv. Parameter change-Parameter operation panel-Parameter list

The parameter list consists of AXIS parameters and GENERAL parameters. Each parameter consists of a selection box (1) or a numerical input box (2). Select and enter each item to use. For details on parameters, see the parameter section in the operation manual for the stage controller.

* There is a limit to the input value for the numerical value input box. For the input value restrictions, please refer to the instruction manual of the stage controller.

• Parameter list



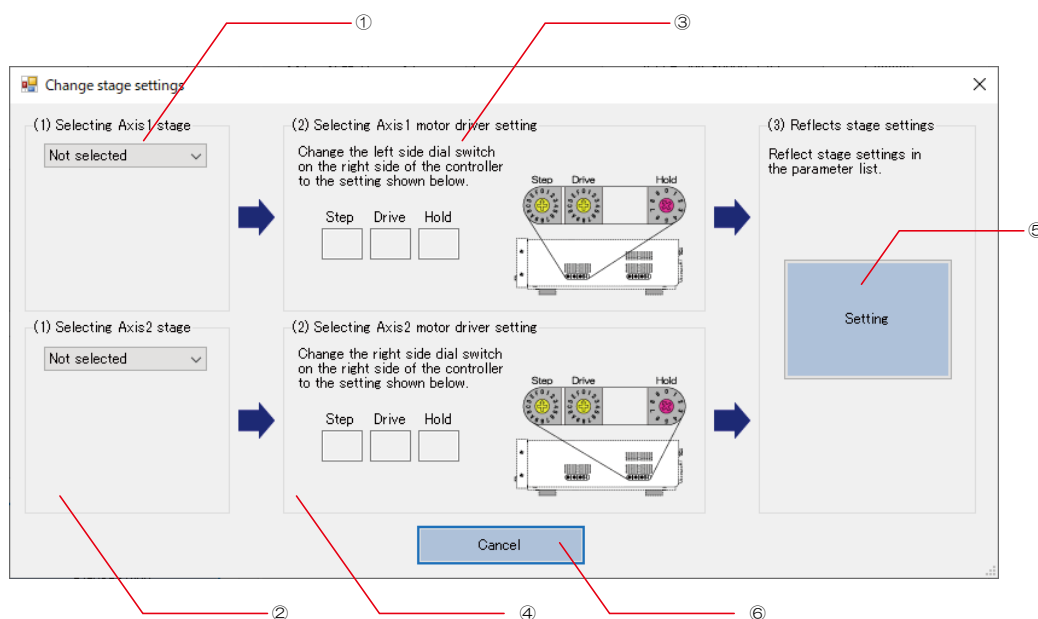
• Parameter list panel description

No	Name	Contents
①	Selection box	Select a parameter.
②	Numeric input box	Enter the parameter numerically.

v. Stage setting

The stage setting display the set value in the parameter list according to the connected stage. Depending on the stage, the setting value may not be the standard setting value of the parameter. At that time, please use this function. Stage settings are available for each axis.

- Stage setting panel



- Stage setting panel description

No	Name	Contents
①	1 axis side stage selection	Select the part number of the stage.
②	2 axis side stage selection	
③	Change the settings of the 1-axis side motor driver	Displays the motor driver setting values for the selected stage. The motor driver setting values are displayed in Step/Drive/Hold or Stop/Run/M, and can be set by operating the dial switch of the stage controller shown in the figure.
④	Change the settings of the 2-axis side motor driver	
⑤	Reflect setting button	Reflects the setting values of the stage selected by the stage part number in the parameter list.
⑥	Cancel button	Return without changing the setting.

vi. Open-Parameter operation panel-Menu

The ".scp" file saved by overwriting and saving with a name is read and displayed in the parameter list. The path of the opened file is displayed in the title.

vii. Overwrite-Parameter operation panel-Menu

Overwrite the file displayed in the title (the file read by opening the contents of the parameter list or the ".scp" file saved with a name).

viii. Save As-Parameter Control Panel-Menu

Save the contents of the parameter list with a name. The path of the saved file is displayed in the title. The initial input name of the file name (②) is "AD_Time_Model_SN.scp" .

* Example of initial input name "20**-**-**_**-**-**_FC-***_SN****.scp"

Example "2099-12-31_23-59-59_FC-911_SN0123.scp"

ix. Application termination-Parameter operation panel-Menu

Exit the application.

15. Update history

Version	Update date	Content
01.04	2017/04/04	-
01.05	2017/11/30	Change Ethernet communication processing
01.06	2020/08/20	Language setting addition
01.08	2021/01/18	Stage setting function changed.
01.09	2021/04/23	Support for controller firmware Ver1.032
01.10	2021/08/25	Support for controller firmware Ver1.033
01.11	2023/11/16	Correction of motor driver settings

Memo

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