SGSample operation manual



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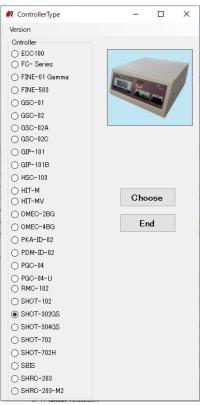
SGSample operation manual (Common edition)

1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

Choose a controller to use, and click a "Choose" button. SGSample is finished when you click an "End" button.

If change the IP address of HIT-M/HIT-MV, Start the SGSample as Administrator.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.

SGSample Ver.1.0.9 Settines Functions Step 1 Controller	-Step 2 Stage 2	-Step 3 Communicat 3 -	Step 4 Test
			OFF.
SHOT-302GS	1: OSMS(SGSP)15/20 Series 2: 3: 4:		
Choose	Choose	Set	Test
			End



1 Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed. When you change a controller, click a "Choose" button.

2 Step 2 Stage choice

Click a "Choose" button, and then a stage choice screen is displayed. Choose a stage to use with the screen. (In the case of the controller which does not need the stage choice, the "Choose" button is non-indication.)

(1) Stage choice screen

Choose a stage to use.

When a stage is not connected, choose "None".

The stage which is not displayed by a list, choose "Other".

You can choose a pulse or mm or a degree at the indication unit of stage control screen.

Perform the choice of the unit and the necessary setting with a "Quantity per pulse setting" screen. The screen is displayed by clicking a "Set quantity per pulse" button.

∩None ∩Other	Set quantity per puls	se	
OSMS(SGSP)15/20 Series	C SGSP46 Series		
© OSMS(SGSP)26 Series	C SGSP65 Series		
OSMS(SGSP)40-5ZF	C KST-50/100 Series		
© OSMS(SGSP)60-ZF Series	C KST-200 Series		
O OSMS(SGSP)80-20ZF	C KST-YAW Series		
SGSP-40/60YAW Series			
C SGSP-ACT-B0 Series	C TSDM(GS) Series		
TSDM Series	C SGSP(GS) Series		
	C OSMS(CS)20 Series		↓
○ TAMM Series	C OSMS(CS)26 Se	Quantity per pulse	Setting Axis-1
○ OSMS-40/60(GOHTM) Series	C OSMS(CS)33 Se	2 Quantity per pulse	
C HPS Series		Unit	
○ HDS Series		mm	
	C KST(GS)-50/10		
C SGSP33 Series		-	
	C KST(GS)-200 Se		
OSMS33 Series	 KST(GS)-200 Se * (GS) (CS) close 	C Specify divide	2 -
COSMS33 Series CSGSP80/120/160YAW Series		C Specify divide	
C SGSP33 Series C OSMS33 Series C SGSP80/120/160YAW Series C KLSA/KLSS-100 Series C KLSA/KLSS-200 Series		C Specify divide	2 Match the settings of controllers and drivers
C OSMS33 Series C SGSP80/120/160YAW Series C KLSA/KLSS-100 Series		C Specify divide	Match the settings of controllers and



- (2) Quantity per pulse setting screen
 - Unit

Choose the unit of coordinate of the stage control screen. (pulse / mm / degree)

When you choose mm or a degree, perform the following "Specify divide" or "Specify directly".

Specify divide

To the setting of a controller or the driver, specify number of divide.

Specify directly

Input quantity of movement per 1 pulse directly.

- To the setting of a stage and a controller or a driver to use, input quantity of movement per 1 pulse.
- When you choose a stage with a stage choice screen, specify either "Specify divide" or "Specify directly". When you choose "Others", input quantity of movement per 1 pulse by "Specify directly".

3 Step 3Communication setting

Click a "Set" button, and then a communication properties screen is displayed.

Set the RS232C communication with the screen.

The setting content is different by a controller partly.

	Port COM1 (1) Baudrate C 2400 C 4800 C 4800
-	© 9600 Flow control © 19200 Flow control © 38400 © None
2)	Communication Mode Follow the setting of "Memory Swich" © MAIN © SUB
»	Control Timeout Command Timeout 30 sec 60 sec

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.



(2) Communication Mode

•SHOT-302GS/304GS/702, FINE-01/503

Choose MAIN or SUB according to the memory switch COMM/ACK of the controller.

•SHOT-102

Choose SHOT-102 Mode or MINI-5P Mode according to the Dip Switches of the controller. を選択します。

(3) Command Timeout

Specify maximum allowable time from sending a command to a stage to receiving the response. If no response is returned within the specified time, an error occurs.

(4) Stop Timeout

Specify maximum allowable time for a stage to stop completely (or, became ready). If a stage fails to stop within this time, an error occurs.

4 Step 4 Communication Test

Click a "Test" button, and then a communication Test screen is displayed.

Test a communication with the screen.

Communications Test	X
Connect	Result
	Cancel Set

Click the "Connect" button, then a result will be displayed.

When you terminate the communication, click a "Disconnect" button.

When a connection result is OK, click a "Set" button, then **3. Functions screen** displayed.

When a connection result is NG, please check the interface parameters, the controller setting and cables, then try the communication test again.



3. Functions screen

At the time of connection OK, you can display a functions screen. The function that you can use varies according to a controller.

When you change various settings, click a "Settings" tab and display 2. settings screen.

ℓŽ SGSample Ver.1.0.9		
Settings Functions		
1	Stage Control	
2	Terminal	
3	Programs	
4	MemorySwitch	
5	Excel Instruction	
		End

1 "Stage Control" button

Click a button, and then a stage control screen is displayed.

The stages can be operated by clicking the buttons in the stage control screen.

2 "Terminal" button

Click a button, and then a terminal screen is displayed.

The controller will be controlled by commands on the terminal screen.

3 "Program" button

Click a button, and then a program screen is displayed.

You can upload, edit, download, and run a program which is memorized in the controller inside. (Only for SHOT-302GS/304GS, FINE503/01gamma)

(4) "Memory Switch" button

Click a button, and then a Memory switch screen is displayed.

You can upload, edit, and download a memory switch which is memorized in the controller inside.(Only for SHOT-302GS/304GS, SHOT-702, FINE503/01gamma, PKA-ID-02,GSC-01A/C)

(5) "Excel Instruction" button

Click a button, and then an Excel instruction screen is displayed.

You describe the instructions contents to a controller for Excel book. The instructions are read and can be executed in the Excel instruction screen.



4. Stage Control screen

The stages which are connected to the controller can be operated by clicking the buttons in the screen.

Axis Control	CAPTOR COLLEGE			X
Axis 1-0-	Current position	Move the speci	4	Manual movement
5000 pulse/s Set			1000 pulse	
Axis 2				
Speed	Current position	Move the specif	fied amount	Manual movement
5000 pulse/s Set	0 pulse		1000 pulse	
Axis 3				
Speed	Current position	Move the specif	the second se	Manual movement
5000 pulse/s Set	0 pulse		1000 pulse	
Axis 4				
Speed	Current position	Move the specif	fied amount	Manual movement
5000 /s Set			1000	
				End

1 Speed

Current speed is displayed. When you change speed, click a "Set" button, and display an Axis Speed screen.

(1) Axis Speed screen

Input a speed. You can specify a speed by moving a slide bar to right and left.

(For reference, the maximum speed according to the stage is displayed.)

Click a "Set" button to fix the speed setting.

The speed to specify with this screen is maximum speed (Fast). When you specify a minimum speed (Slow) and an acceleration / deceleration time (Rate), click a "Detail" button and display an "Axis Speed Detail" screen.

(2) Axis Speed Detail screen

Input a maximum speed (Fast), minimum speed (Slow) and an acceleration / deceleration time (Rate). Click a "Set" button to fix the speed setting.

※Input speed in GSC-02 so that the speed range of axis-1 and axis-2 is the same. The speed of axis-2 is set at speed same as axis-1 automatically when speed varying in the range of both axes was input.

Speed Axis	1	_		● ∑ AxisSpe					
5000	pulse/sec	De	etail	-Speed A:		-			
				Slow	500 pulse/sec	Fast	5000 pulse/sec	Rate	200 ms
	' The maximum speed		(ulse/sec)	0	nce : The maximur DSMS26-(X) : 4 , 5GSP26-(X) : 3 , 5	OSMS26-(Z	2):1		
OSMS21 SGSP21	6-(X):4, OSMS2 6-(X):3, SGSP2	6-(Z):1 6-(Z):1						Cancel	Set
	(ancel	Set						



2 Current position

Display the current Position of a stage.

- 3 Axis operation button
 - Click to stop the stage.
 - Move axis back to the machine origin.
 - Move axis back to the logical origin.
 - Set current position to 0. (Logical origin)

4 Move the specified amount

Input quantity of movement and click _____button. An axis moves quantity of movement that was input into the negative direction.

Click button. An axis moves quantity of movement that was input into the positive direction.

5 Manual movement

- While pushing a mouse left button, an axis moves to the negative direction fast. If the button is released, it stops.
- While pushing a mouse left button, an axis moves to the negative direction slowly. If the button is released, it stops.
- While pushing a mouse left button, an axis moves to the positive direction fast. If the button is released, it stops.
- While pushing a mouse left button, an axis moves to the positive direction slowly. If the button is released, it stops.

※ Stage control screen of FINE-XXX series

🕖 Axis Control	
Axis 1 6	Current position Move the specified amount Applied voltage 0 Image: Constraint of the specified amount Image: Constraint of the specified amount
Axis 2 Step number	STEP Current position Applied voltage
Axis 3	STEP Current position
	End
6 Step nu	mber



Input the number of the steps and click "STEP" button. The number of the steps is set.

⑦ Applied voltage

Click "VOLT" button. The applied voltage is acquired and displayed.

RMC102CtlForm	×
Axis 1 8 JOG Current position 8 Set Set 0 um	Move the specified amount
Axis 2 Speed JOG Current position 8 Set Set 0 um	Move the specified amount
	End

X Stage control screen of RMC-102

8 Speed

Input the number of the speed(1 - 8) and click "Set" button. The number of the speed is set.



※ Stage control screen of GIP-101B

Axis Control			X
Axis 1 Speed 10000 pulse/s Set	Current position	Move the specified amount	
Position 40000 80000 SET 1 SET 2	200000 400000 SET 3 SET 4	600000 SET 5	
1 2	3 4	5 1	

1 Position SET1 - SET5

Click the button to memorize the current position.



When you click the button, the stage moves to the stored position for that button.



5. Terminal screen

The controller will be controlled by commands on the terminal screen.

Send commands to control the controller and stages.

Or check the current status of stages and I/O interfaces with status checking command(Q:) or I/O checking command(I:) etc.

Input the character string into "Send Character" and push Enter key, the command will be sent. The returned data will be displayed in the text box below.





6. Program screen

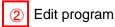
(Only for SHOT-302GS/304GS, FINE503/01gamma)

Line number	Operating pattern	1st-axis coordinate	2nd-axis coordinate	Output 🔺	Create program		
1	0	6000	-2000	1M	Download program		
2	F	40	22		Upload program		
3	20	-8000	8000	1M	Start program		
4	0	-100	0	1M			
5	20	8000	-8000	1M	● No.1 ○ No.2		
6	0	100	0	1M			
7	N	-	0				
8	20	-6000	2000	1M			
9	F	40	-				
10	0	0	200000	1M			
11	0	-100	0	1M			
12	0	0	-200000	1M			
13	0	100	0	1M			
14	N	-0	=				
15	0	0	200000	1M			
10 •	20	2000	10000	1M -			

1 Create program

- •When composing a new program, click the "Create program" button, there will be a programming screen.
- •When clicking "New" button, there is a blank screen with blank cells. Please fill in the data into them.
- Click the "Develop" button after inputting movement range and pitch, a program will be created automatically.
- · You can download or upload the program from or to controller, and drive stages by the program.

1st-axis(X-axis) Movement range 0	2nd-axis(Y-axis) Movement range
Movement pitch 0	Movement pitch
Wait time The stop point in one line is to	(0.1 seconds a unit)





- •The program can be edited, such as insert/copy/add/cut etc. with "Edit" of dropdown menu. %Please reset the line numbers after line edit.
- Please move the cursor to rewrite (overwrite) the data.

<u>F</u> ile	<u>E</u> dit			
Line		Add	Ctrl+A	21
number	4	<u>I</u> nsert	Ctrl+I	C
1	1	C <u>u</u> t	Ctrl+X	-2
2		<u>C</u> opy	Ctrl+C	
3	1	<u>P</u> aste	Ctrl+V	80
4	- 6	InsertPas <u>t</u> e	Ctrl+T	0
5		<u>N</u> umbering	Ctrl+N	-8
6	10		100	0

3 Download program

• The program in the screen can be sent (downloaded) to the controller.

A message "Downloading the program is completed." will be displayed on the screen, if the download finished normally.

• The controller can store two programs. (No.1/No.2)

Please choose the No.1 or No.2, when you download a program.

4 Upload program

•Read (upload) a program from the controller.

A message "Uploading the program is completed." will be displayed on the screen when the upload finished normally and program data is displayed.

• The controller can store two programs. (No.1/No.2).

Please choose the No.1 or No.2, when you upload a program.

•The uploaded program can be saved as a CSV file.

And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

5 Start program

•Execute the program which is stored in the controller and drive motorized stages or I/O interfaces.

• The controller can store two programs. (No.1/No.2).

Please choose the No1 or No 2, when you execute a program.

7. Memory switch screen



(Only for SHOT-302GS/304GS, SHOT-702, FINE503/01gamma,PKA-ID-02, GIP-101B)

<u>F</u> ile			
No.	Setting	Value	Upload MemorySwitch
1	SPEED SEL	2	Vownioag
2	SPEED1 (S)	250	MemorySwitch
3	SPEED1 (F)	2500	
4	SPEED1 (R)	200	
5	SPEED2 (S)	500	
6	SPEED2 (F)	5000	
7	SPEED2 (R)	200	
8	SPEED3 (S)	750	
9	SPEED3 (F)	7500	
10	SPEED3 (R)	200	
11	SPEED4 (S)	1000	
12	SPEED4 (F)	10000	
13	SPEED4 (R)	200	
14	AXIS	4	
15	INTERFACE	RS232C	
16	BAUDRATE	9600	
17	DELIMIT	CR+LF	
18	GP-IB ADDR	8	

1 Upload Memory Switch

Read (upload) the contents of the memory switch from the controller.

A message of "Uploading the Memory Switch is completed." will be displayed, if the upload finished normally. And the contents of memory switch will be showed on the screen.

•The uploaded contents of the memory switch can be saved as a CSV file. And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

2 Download Memory Switch

• The contents of memory switch in the screen can be sent (downloaded) to the controller. A message "Downloading the Memory Switch is completed." will be displayed, if the download finished normally.

8. Excel Instruction screen



Excel Instruction			
Excel Book			
			Ref
	START	STOP	End
ATTENTION:			
and can perform to Click a Ref buttor If the START buttor If the STOP butto Please make the sinto the name whi The contents of in The contents of in The contents of in The contents of in (The data for the	wy making it read. n and select an Excel b con is clicked, instruction is clicked, instruction sheet name which desc ch starts in 'sigma' nstructions of the 1st a structions of the 3rd a istructions of the 3rd a istructions of the 4th a number of axes of the	ons are performed.	structions olumn. olumn. olumn. olumn. surely required.
The description m Numerical value value.		tively according to the s	pecified numerical
Н		cal origin. (It cannot be u ic (logical) origin to the	

Describe the instructions to a controller for Excel book. You can read and execute them.

Click the "Ref" button to choose an Excel book.

Click the "START" button to run it.

Click the "STOP" button to stop it.

- Please name the sheet starting with "sigma".
- Please input the instructions into A column for axis 1, B column for axis 2, C column for axis 3 and D column for axis 4.

(It is necessary to fill in the columns as many as the axis numbers of the controller. But you can fill some characters into the columns which are not used freely, such as * etc.)

Description method:

Number ••• The relative movements of the stage

*When you choose mm or a degree to the unit of stage, please appoint numerical value with a multiple of quantity per pulse.

H ····Move to mechanical origin. (PKA-ID-02 cannot use this instruction)

R ····Set the current position as a logical origin.

RH····Move to logical origin.

•Example:

	A	В	С	D	E	
1	1000	2000	*	*		
2	1000	2000	*	*		
3	3000	4000		*		
4	3000	4000	*	*		
5						
6						
7						
8						
H 4	K ↓ ▶ N sigma /Sheet2 / Sheet3 /					

XThis works only for the listed motorized stage controllers.



SGSample operation manual (HIT-M edition)

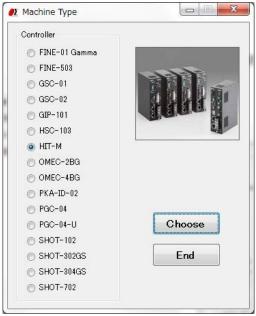
1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

Choose a controller to use, and click a "Choose" button.

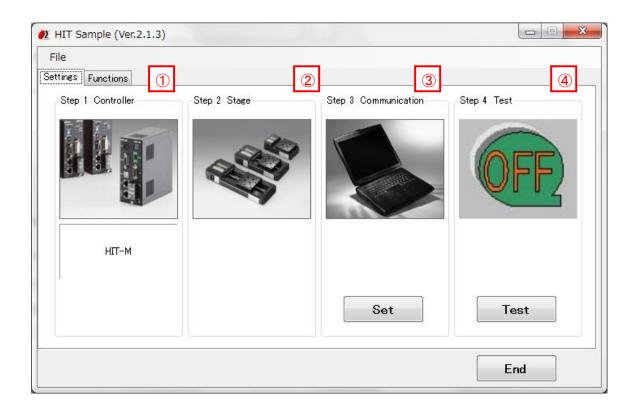
SGSample is finished when you click an "End" button.

XIf change the IP address of HIT-M/HIT-MV, Start the SGSample as Administrator.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.





1 Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed. When you change a controller, click a "Choose" button.

2 Step 2 Stage choice

HIT-M does not need the stage choice.

3 Step 3Communication setting

Click a "Set" button, and then a communication interface screen is displayed. Choose an interface and click a "Settings" button.

Then a communication setting screen depending on an interface is displayed.



•	RS23	32C	settir	igs
---	------	-----	--------	-----

Baudrate		limiter 7 R+LF -	"imeOut(S)5
2400	Parity		
🖱 4800	🔘 None 🔘 Odd 🔵	Even 🕜 Mark	O Space
9600 🔘	Data bits		
14400			-
🖱 19200	05 06	0.7	8
28800	Stop bits		
38400		02	
57600	Flow control		
) 128000			DTC AV. V
256000	🔘 None 🔘 Xon/Xoff	O RIS/CIS) R13/Xonoff

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.



·LAN settings

	🙋 LAN Settings		×	
(2)	Host 192.168.0.1			
	Port 9004	Timeout Delimiter		(1)
(3)	Setting	OK Cance	ı ,	

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.

(2) Host, Port

Adjust a host and a port to settings of HIT-M connected at present. Factory default is host (IP address):192.168.0.1 port:9004.

(3) Setting

When you change the host (IP address) and port, change them with an LAN detail settings screen. The screen is displayed by clicking a "Setting" button.

IP Address	Subnet mask
192.168.0.1	255.255.255.0
Default route gatev	vay Port number
0.0.00	9004
permits passive_ope	
permits passive_ope	in
permits passive_ope	5: 0.0.0.0

Click "OK" button after setting IP address and others on LAN detail settings screen in accordance with PC condition.

- XYou set an interface of the memory switch of HIT in "Ethrnet" and make LAN available, and please set the LAN.
- When all the setting from 1 to 8 are "0,0,0,0", the IP address of the partner host who permits passive_open admits the passive_open from all IP addresses. Otherwise, it admits only Passive_Open from the IP except "0,0,0,0" set to 8 from 1.



%Redo PC settings according to new LAN settings when any changes have been made in settings.

4 Step 4 Communication Test

Click a "Test" button, and then a communication Test screen is displayed. Test a communication with the screen.

×
Result COK

Click the "Start Test" button, then a result will be displayed.

When you click "Connect" of the communication menu, the communication is confirmed whether communication is available. Unlike a "Start Test" button, it is not confirmed the transmission and reception of the command.

When you terminate the communication, click a "Disconnect" menu.



When a connection result is OK, click an "OK" button, then **3. Functions screen** displayed. When a connection result is NG, please check the interface parameters, the controller setting and cables, and then try the communication test again.



3. Functions screen

At the time of connection OK, you can display a functions screen.

When you change various settings, click a "Settings" tab and display 2. Settings screen.

HIT Cample (Ver.2.1.3)	
File S Settings Functions	
1 Stage Control	
2 Terminal	
3 Program	
Memory Switch	
	End

1 "Stage Control" button

Click a button, and then a stage control screen is displayed.

The stages can be operated by clicking the buttons in the stage control screen.

2 "Terminal" button

Click a button, and then a terminal screen is displayed.

The controller will be controlled by commands on the terminal screen.

3 "Program" button

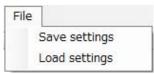
Click a button, and then a program screen is displayed.

You can upload, edit, download, and run a program which is memorized in the controller inside.

(4) "Memory Switch" button

Click a button, and then a Memory switch screen is displayed.

You can upload, edit, and download a memory switch which is memorized in the controller inside.



5 "File" menu

Save settings

Save each set condition and contents in the setting file. (extension .sgh)

Load settings

Read the saved setting file, and restore setting contents.



4. Stage Control screen

The stages which are connected to the controller can be operated by clicking the buttons in the screen.

1	2 3	9	
Bample for HIT (Ver.2.1.3)			
CH SO 0 S1 0 S2 0 S3 0 S4 0	0 s5 0 s6 0 s7 HIT 0 4 5	S0 Limit Speed F 100000 + Divide 20 - Alarm BUSY READY	S4 Limit Speed F 100000 + Divide 20 - Alarm BUSY READY
Move Rel ▼ 0 <<<< < < Jog <<<< << <	> >> >>> >>>>>>>>>>>>>>>>>>>>>>>>>>>>>	S1 Limit Speed F 100000 + Divide 20 - 7 SY READY	S5 Limit Speed F 100000 + Divide 20 - Alarm
ORG ZERO RESET Input comman	I/O check lamp	S2 Limit Speed F 100000 + Divide 20 - Alarm	S6 Limit Speed F 100000 + Divide 20 - Alarm
S 100000 F 1000000 Set R 200		S3 Limit Speed F 100000 + Divide 20 - Alarm	S7 Limit Speed F 100000 + Divide 20 - Alarm
6	8 10		
1 "I/O" menu An "I/O" menu is display	ved by clicking it.	Input +	on Off
• Input			

Input

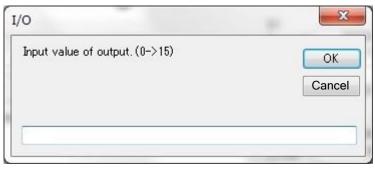
Choose whether to input an I/O signal, or not to input it.

When you choose "Input", an I/O signal is input every about one second from a controller and it is displayed in an I/O check lamp.

%An I/O signal is not input during stage movement.

•Output

When you output an I/O signal, an I/O output screen is displayed by clicking "Output" menu. Input an output value of 0-15, and click an "OK" button. Then input value is output.





2 CH

Choose an axis for the operation.

SHOT mode : Choose it among S0 - S3.

HIT mode : Choose it among S0 - S7.

з Mode

The mode of the controller is displayed.

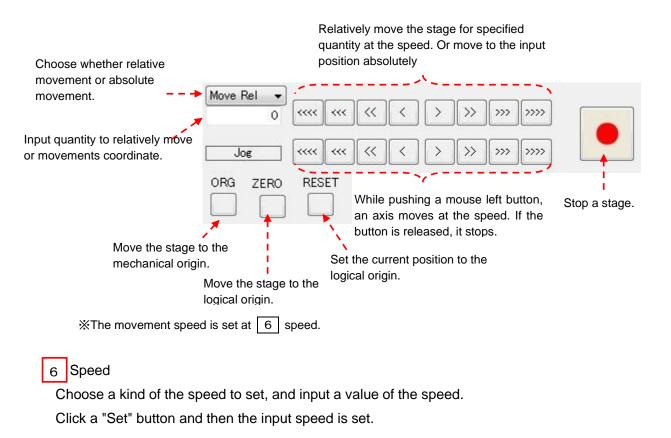
When you test connection of the communication, and communication was OK'd, the mode of the controller is acquired and is displayed.

4 Current position

Display the current position of an axis for the operation.

5 Axis operation button

Click each button, and operate an axis for the operation.



Speed Choose a kind of the >>>> @ >> (>>> ((< speed to set. Input a speed. S 100000 S: Minimum speed Click a "Set" button and then F 1000000 Set F: Maximum speed the input speed is set. R: acceleration / deceleration time R 200



7 Input command (Terminal)

You can input a command directly and can communicate with a controller.

Input the character string (command) to transmit and push Enter key. And then the command will be sent to a controller.

The returned data from the controller will be displayed.

It is the function like the **5. Terminal screen**.

8 I/O check lamp

Display the state of the I/O signal.

In the case of OFF, a signal is displayed in \blacksquare (gray). In the case of ON, a signal is displayed in \blacksquare (green)

(green).

9 Axis information section

Display information of each axis.

 Speed F 	Maximum speed	<u></u>	1.1.1.
• Divide		S0 Speed F 10000	Limit 0 +
•Alarm	■(Green) : Alarm OFF ■(Red) : Alarm ON	Divide 2 Alarm READ	Alarm code
	■(Gray) : Slave is unconnected.		
	Orange): Stage is unconnected.		
 Alarm code 	Blank: Alarm OFF		
	10: Stage is unconnected.		
	20: Scale alarm		
	40: DRV alarm		
•Limit +, –	■(Gray): Limit OFF		
	(Red) : Limit ON		
•BUSY/READY	BUSY (Green) : BUSY		
	READY•(Green): READY		

10 "Exit" button

Click a button and then close the stage control screen.



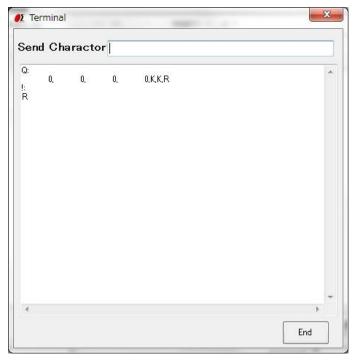
5. Terminal screen

The controller will be controlled by commands on the terminal screen.

Send commands to control the controller and stages.

Or check the current status of stages and I/O interfaces with status checking command(Q:) or I/O checking command(I:) etc.

Input the character string into "Send Character" and push Enter key, the command will be sent. The returned data will be displayed in the text box below.



6. Program screen

Line number	Operating pattern	0-axis coordinate	1-axis coordinate	2-axis coordinate	New program
l	Y				Download program
					Upload program
					Start program
					Stop program
					No.0 👻
					No.0 🗸
					No.0 •
					No.0 🗸
					No.0 -
					No.0 🔻
					No.0 -
					No.0 -



1 New program

•When clicking the button, blank lines are displayed.

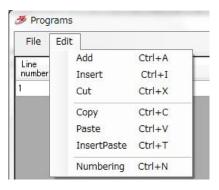
Input contents according to a program description method.

2 Edit program

• The program can be edited, such as insert/copy/add/cut etc. with "Edit" of dropdown menu.

%Please reset the line numbers after line edit.

·Please move the cursor to rewrite (overwrite) the data.



3 Download program

•The program in the screen can be sent (downloaded) to the controller.

A message "Succeeded in downloading the program." will be displayed on the screen, if the download finished normally.

Upload program

•Read (upload) a program from the controller.

A message "Uploaded the program." will be displayed on the screen when the upload finished normally and program data is displayed.

•The uploaded program can be saved as a CSV file.

And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

5 Start program

•Execute the program which is stored in the controller and drive motorized stages or I/O interfaces.

%The controller can store ten programs. (No.0 - 9).

Please choose the program number, when you download, upload and execute a program.



7. Memory switch screen

ile			
eneral	Interface Axis Senso	/ Speed Close	Upload MemorySwitch
No.	Setting	Value	Download
l.	Speed SEL	Ì	
2	Speed 1(S)	10000	
}	Speed 1(F)	100000	
ŧ.	Speed 1(R)	200	
5	Speed2(S)	30000	
6	Speed2(F)	300000	
r.	Speed2(R)	200	
3	Speed3(S)	70000	
)	Speed3(F)	700000	_
10	Speed3(R)	200	
11	Speed4(S)	100000	
2	Speed4(F)	1000000	
13	Speed4(R)	200	
14	MODE_SEL	SHOT	
15	TRG Level	Normal High	
16	LED_ON	ON	
	10	10-	

1 Upload Memory Switch

- Read (upload) the contents of the memory switch from the controller.
- A message of "Uploaded Memory Switch settings." will be displayed, if the upload finished normally. And the contents of memory switch will be showed on the screen.
- •The uploaded contents of the memory switch can be saved as a CSV file. And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

2 Download Memory Switch

•The contents of memory switch in the screen can be sent (downloaded) to the controller. A message "Succeeded in downloading Memory Switch." will be displayed, if the download finished normally.



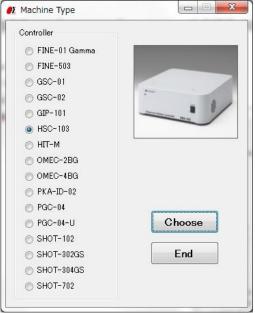
SGSample operation manual (HSC-103 edition)

1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

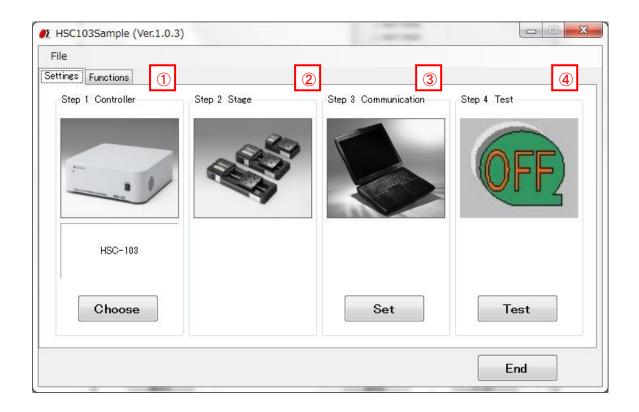
Choose a controller to use, and click a "Choose" button.

SGSample is finished when you click an "End" button.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.





1 Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed. When you change a controller, click a "Choose" button.

2 Step 2 Stage choice

HSC-103 does not need the stage choice.

3 Step 3Communication setting

Click a "Set" button, and then a communication interface screen is displayed. Choose an interface and click a "Settings" button.

Then a communication setting screen depending on an interface is displayed.

Interface	
OUSB(RS232C)
Settings	Exit

·USB(RS232C) settings

Baudrate	CommPort Delimiter TimeOut(S) 1 CR+LF = 20	
2400 4800	Parity None O Odd O Even O Mark O Space	
9600 14400 19200	Data bits	
 28800 38400 53000 	Stop bits	
57600 128000 230400	Flow control None Xon/Xoff RTS/CTS RTS/Xonoff	

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.



4 Step 4 Communication Test

Click a "Test" button, and then a communication Test screen is displayed. Test a communication with the screen.

●∑ Communications Test	×
Connect	Result
	ОК

Click a "Connect" button, then a result will be displayed.

When you terminate the communication, click a "Disconnect" button.

When a connection result is OK, click an "OK" button, then **3. Functions screen** displayed. When a connection result is NG, please check the interface parameters, the controller setting and cables, and then try the communication test again.



3. Functions screen

At the time of connection OK, you can display a functions screen.

When you change various settings, click a "Settings" tab and display 2. settings screen.

HSC mple (Ver.1.0.3) File Settings Functions	
1 Stage Control	
2 Terminal	
3 Program	
(4) Memory Switch	
	End

1 "Stage Control" button

Click a button, and then a stage control screen is displayed.

The stages can be operated by clicking the buttons in the stage control screen.

2 "Terminal" button

Click a button, and then a terminal screen is displayed.

The controller will be controlled by commands on the terminal screen.

3 "Program" button

Click a button, and then a program screen is displayed.

You can upload, edit, download, and run a program which is memorized in the controller inside.

(4) "Memory Switch" button

Click a button, and then a Memory switch screen is displayed.

You can upload, edit, and download a memory switch which is memorized in the controller inside.

5	"File"	menu

Save settings

Save communication setting in a file.

Load settings

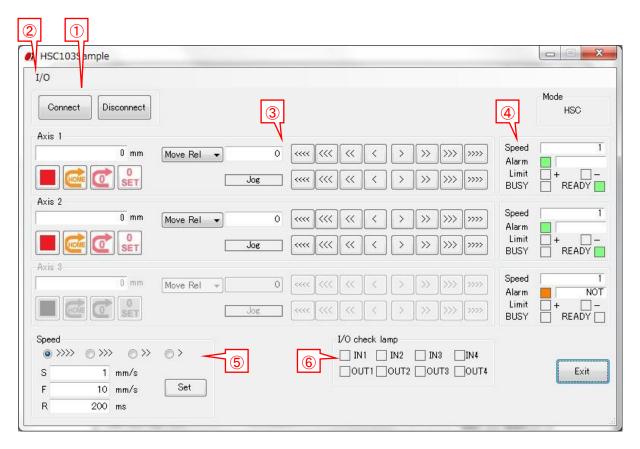
Read the saved setting file, and restore setting contents.

File	
	Save settings
	Load settings



4. Stage Control screen

The stages which are connected to the controller can be operated by clicking the buttons in the screen.



1 Connect / Disconnect button

- •Connect•••Confirm whether communication is available, and connect communication by clicking the button.
 - Unlike the connection test of the settings tab, it does not confirm the transmission and reception of the command.
- •Disconnect •••Disconnect the communication by clicking the button.

2 "I/O" menu

An "I/O" menu is displayed by clicking it.

I/O	Program	Memory switch
	Input 🔸	On
į.	Output	✓ Off

Input

Choose whether to input an I/O signal, or not to input it.

When you choose "Input", an I/O signal is input every about one second from a controller and it is displayed in an I/O check lamp.

%An I/O signal is not input during stage movement.



Output

When you output an I/O signal, an I/O output screen is displayed by clicking "Output" menu. Input an output value of 0-15, and click an "OK" button. Then input value is output.

	Input value of output. (0->15) OK Cancel	
Axis control but Click each buttor Display current positi	n, and operate an axis for the operation. Relatively move the stage for specified ion Input quantity to relatively move quantity at the speed. Or move to the input	I
1	or movements coordinate. position absolutely.	
Axis 1	^	
0 1	mm Move Rel 🗸 0 <<<< < > >> >>> >>>>>>>>>>>>>>>>>>>>	
<u>y</u>	Choose whether relative	
· · · · · · · · · · · · · · · · · · ·	movement or absolute While pushing a mouse left button, an movement.	
Stop a stage.	axis moves at the speed. If the button is released, it stops.	
Move the stag	e to the mechanical origin.	
C Move the stag	e to the logical origin. The movement speed is set at 5speed.	
Set the curren	t position to the logical origin.	
4 Axis informatio	on section	
Display informati	on of each axis.	
Speed F	Maximum speed	
• Alarm	■(Green) : Alarm OFF Speed 1	
	(Red) : Alarm ON Alarm Alar	9
	Orange): Stage is unconnected.	
 Alarm type 	Blank : Alarm OFF	
	Stage is unconnected, Driver alarm, Retry over alarm	
•Limit +, –	Gray) : Limit OFF	
	(Red) : Limit ON	
•BUSY/READY	BUSY ■(Green) : BUSY	

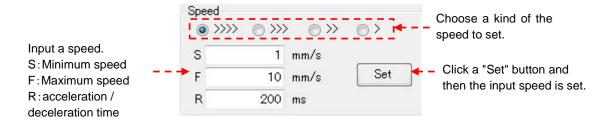
READY (Green) : READY



5 Speed

Choose a kind of the speed to set, and input a value of the speed.

Click a "Set" button and then the input speed is set.



6 I/O check lamp

Display the state of the I/O signal.

In the case of OFF, a signal is displayed in a (gray). In the case of ON, a signal is displayed in

(green).

5. Terminal screen

The controller will be controlled by commands on the terminal screen.

Send commands to control the controller and stages.

Or check the current status of stages and I/O interfaces with status checking command(Q:) or I/O checking command(I:) etc.

Input the character string into "Send Character" and push Enter key, the command will be sent. The returned data will be displayed in the text box below.





6. Program screen

1 H 1 1 1 1 2 F 10 I I I I 3 M 10000 10000 10000 IUpload program IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	number	Operating pattern	1-axis value	2-axis value	3-axis valu	New program
3 M 100000 100000 100000 100000 4 A 0 0 0 Start program 5 A 0 0 0 Start program 6 N Image: Start program Start program	1	H	1	1	1	Download program
3 M 10000 10000 10000 10000 4 A 0 0 0 0 Start program 5 A 0 0 0 0 Start program 6 N - - - Stop program	2	F	10			
5 A 0 0 0 6 N Stop program Stop program	3	М	100000	100000	100000	
6 N Stop program	4	A				Start program
	5	A	0	0	0	Ctop program
7 Y No.0 V	6	N				Stop program
	7	Y				No.0 👻

1 New program

•When clicking the button, blank lines are displayed.

Input contents according to a program description method.

2 Edit program

•The program can be edited, such as insert/copy/add/cut etc. with "Edit" of dropdown menu.

※Please reset the line numbers after line edit.

• Please move the cursor to rewrite (overwrite) the data.

File	Edit		Ctrl+A	
Line		Add		2
number		Insert Ctrl+	Ctrl+I	
1		Cut	Ctrl+X	1
2		Сору	Ctrl+C	
3				
4		Paste	Ctrl+V	
5		InsertPaste	Ctrl+T	
6		Numbering	Ctrl+N	
7	-	M	100000	20

- 3 Download program
- •The program in the screen can be sent (downloaded) to the controller.

A message "Succeeded in downloading the program." will be displayed on the screen, if the download finished normally.



4 Upload program

• Read (upload) a program from the controller.

A message "Uploaded the program." will be displayed on the screen when the upload finished normally and program data is displayed.

• The uploaded program can be saved as a CSV file.

And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

5 Start program

·Execute the program which is stored in the controller and drive motorized stages or I/O interfaces.

*The controller can store ten programs. (No.0 - 9).

Please choose the program number, when you download, upload and execute a program.

7. Memory switch screen

ieneral	Interface Axis Sensor	Speed	Upload MemorySwitch
No.	Setting	Value	Download
1	SPD SEL	1	
2	SPD 1S	10000	
3	SPD 1F	100000	
4	SPD 1R	200	
5	SPD 2S	30000	
6	SPD 2F	300000	
7	SPD 2R	200	
8	SPD 3S	70000	
9	SPD 3F	700000	_
10	SPD 3R	200	
11	SPD 4S	100000	
12	SPD 4F	1000000	
13	SPD 4R	200	
14	IO_LVL	ACT HIGH	

1 Upload Memory Switch

• Read (upload) the contents of the memory switch from the controller.

A message of "Uploaded Memory Switch settings." will be displayed, if the upload finished normally. And the contents of memory switch will be displayed on the screen.



•The uploaded contents of the memory switch can be saved as a CSV file. And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

2 Download Memory Switch

• The contents of memory switch in the screen can be sent (downloaded) to the controller. A message "Succeeded in downloading Memory Switch." will be displayed, if the download finished normally.



SGSample operation manual (PGC-04,PGC-04-U edition)

1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

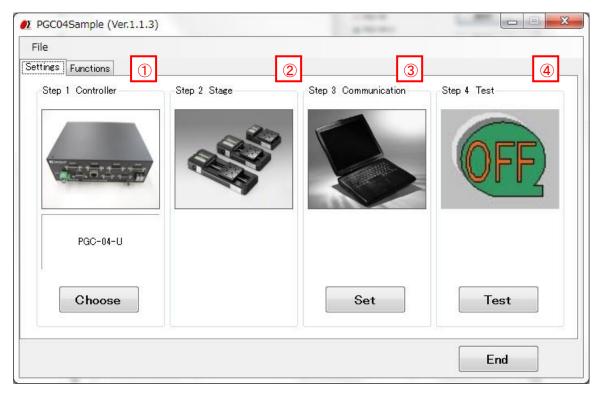
Choose a controller to use, and click a "Choose" button.

SGSample is finished when you click an "End" button.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.





① Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed. When you change a controller, click a "Choose" button.

2 Step 2 Stage choice

PGC-04 and PGC-04-U do not need the stage choice.

3 Step 3Communication setting

Click a "Set" button, and then a communication interface screen is displayed.

Choose an interface and click a "Settings" button.

Then a communication setting screen depending on an interface is displayed.

🕐 Communication	Communication
Interface	Interface USB(RS232C) LAN
Settings	Settings
PGC-04	PGC-04-U

•RS232C and USB(RS232C) settings

Baudrate	CommPort Delimiter TimeOut(S) 1 CR+LF20
2400	Parity
4800	🔘 None 🔘 Odd 🔵 Even 🔘 Mark 🔘 Space
9600	Data bits
5 14400	05 06 07 @8
19200 28800	
38400	Stop bits
57600	
) 128000	Flow control
) 230400	None 🔿 Xon/Xoff 🔘 RTS/CTS 🔿 RTS/Xonoff

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.



LAN settings

	Host	
	192.168.0.1	
Ľ۲	Port	Timeout Delimiter
	9004	20 CRLF

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.

(2) Host, Port

Adjust a host and a port to settings of PGC-04-U connected at present. Factory default is host (IP address):192.168.0.1 port:9004.

(3) Setting

When you change the host (IP address) and port, change them with an LAN detail settings screen. The screen is displayed by clicking a "Setting" button.

IP Address	Subnet mask
192.168.0.1	255.255.255.0
Default route gateway	Port number
0.0.0.0	9004

LAN Detail Settings screen

Click "OK" button after setting IP address and others on LAN detail settings screen in accordance with PC condition.

%Redo PC settings according to new LAN settings when any changes have been made in settings.



4 Step 4 Communication Test

Click a "Test" button, and then a communication Test screen is displayed. Test a communication with the screen.

● Communications Test	×
Connect	Result
	ОК

Click the "Connect" button, then a result will be displayed.

When you terminate the communication, click a "Disconnect" button.

When a connection result is OK, click an "OK" button, then **3. Functions screen** displayed.

When a connection result is NG, please check the interface parameters, the controller setting and cables, and then try the communication test again.



3. Functions screen

At the time of connection OK, you can display a functions screen.

When you change various settings, click a "Settings" tab and display 2. settings screen.

PGC(
① Stage Control	
2 Terminal	
3 Program	
(4) Memory Switch	
	End

1 "Stage Control" button

Click a button, and then a stage control screen is displayed.

The stages can be operated by clicking the buttons in the stage control screen.

2 "Terminal" button

Click a button, and then a terminal screen is displayed.

The controller will be controlled by commands on the terminal screen.

3 "Program" button

Click a button, and then a program screen is displayed.

You can upload, edit, download, and run a program which is memorized in the controller inside.

(4) "Memory Switch" button

Click a button, and then a Memory switch screen is displayed.

You can upload, edit, and download a memory switch which is memorized in the controller inside.

5	"File"	menu

Save settings

Save communication setting in a file.

Load settings

Read the saved setting file, and restore setting contents.

File		
	Save settings	
	Load settings	



4. Stage Control screen

The stages which are connected to the controller can be operated by clicking the buttons in the screen.

2															
02	PGC04Sa nple														J
1	/0														
	Connect	onnect		(3								4	Mode PGC	
	Axis 1	-									۱ ۲		Speed	1	
		0 mm	Move Rel	•	0	····				>>>	>>>>	>>>>	Alarm		
		0 SET		Jog		···· </th <th><]<<</th> <th><</th> <th></th> <th>)>></th> <th>)>>></th> <th>>>>></th> <th>Limit BUSY</th> <th></th> <th></th>	<]<<	<) >>) >>>	>>>>	Limit BUSY		
	Axis 2									10 2	10 2		Speed	1	
		0 mm	Move Rel	T	0	~~~ <	<][<<		>		<u>>>></u>	>>>>	Alarm	NOT	
		OSET		Joe		~~~~]<<	<]<<			>>	>>>	>>>>	Limit BUSY		
	Axis 3								_				Course of	·	
		0 mm	Move Rel	*	0	~~~ <<	< <<	<	\geq	>>	>>>	2222	Speed Alarm	1 NOT	
		0 SET		Jog		~~~ <	<]<<		>	>>) >>>	>>>>	Limit BUSY	+ - READY	
一夜	Axis 4	24			216									1	
- 22		0 mm	Move Rel	*	0	<<<< <	< <<	K.	>	>>) >>>	>>>>	Speed Alarm	NOT	
		0 SET		Jog		~~~ (<	<]<<) (<) >>	 >>>	2222	Limit BUSY	+ READY	
	Speed						I/O cł	neck la	mp						
		100	\odot >	5		6		11	IN2]IN4			
	S m					\square			OUT2		JT3 []OUT4		Exit	
	F 10 m		Set												
	R 200 m	IS													:1

1 Connect / Disconnect button

• Connect • • • Confirm whether communication is available, and connect communication by clicking the button.

Unlike the connection test of the settings tab, it does not confirm the transmission and reception of the command.

•Disconnect •••Disconnect the communication by clicking the button.

2 "I/O" menu

An "I/O" menu is displayed by clicking it.

I/O	
Input 🕨	On
Output	✓ Off

Input

Choose whether to input an I/O signal, or not to input it.

When you choose "Input", an I/O signal is input every about one second from a controller and it is displayed in an I/O check lamp.

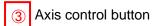
%An I/O signal is not input during stage movement.



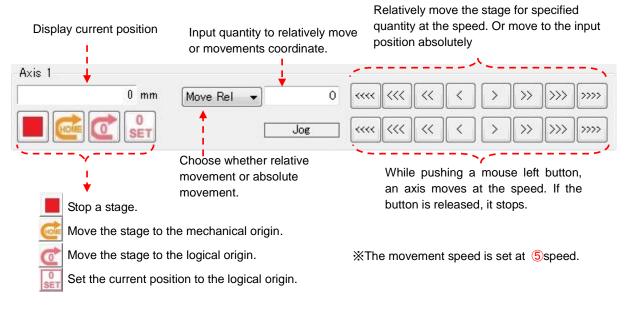
Output

When you output an I/O signal, an I/O output screen is displayed by clicking "Output" menu. Input an output value of 0-15, and click an "OK" button. Then input value is output.

0	-X
Input value of output. (0->15)	ОК
	Cancel



Click each button, and operate an axis for the operation.



4 Axis information section

Display information of each axis.

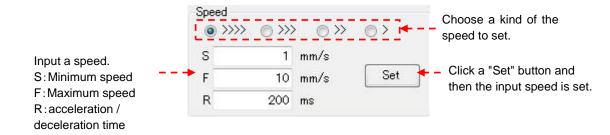
•Speed F	Maximum speed
opeeur	Speed 1
 Alarm 	■(Green) : Alarm OFF
	(Red) : Alarm ON Limit + - Alarm type
	Orange): Stage is unconnected. BUSY READY
 Alarm type 	Blank : Alarm OFF
	Stage is unconnected, Driver alarm, Scale alarm, Retry over alarm
•Limit +, –	■(Gray) : Limit OFF
	■(Red) : Limit ON
•BUSY/READY	BUSY ∎(Green) : BUSY
	READY ∎(Green) : READY



5 Speed

Choose a kind of the speed to set, and input a value of the speed.

Click a "Set" button and then the input speed is set.



6 I/O check lamp

Display the state of the I/O signal.

In the case of OFF, a signal is displayed in a (gray). In the case of ON, a signal is displayed in

(green).

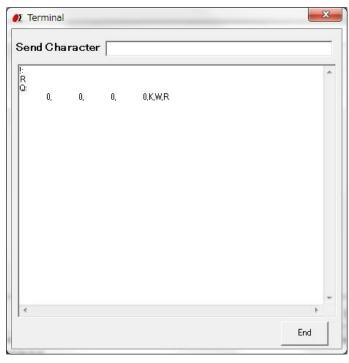
5. Terminal screen

The controller will be controlled by commands on the terminal screen.

Send commands to control the controller and stages.

Or check the current status of stages and I/O interfaces with status checking command(Q:) or I/O checking command(I:) etc.

Input the character string into "Send Character" and push Enter key, the command will be sent. The returned data will be displayed in the text box below.





6. Program screen

Line number	Operating pattern	1-axis value	2-axis value	3-axis valu	New program
1	H	1	1	0	Download program
2	A	1000000			
3	A	0			Upload program
4	м	1000000			Start program
5	м	-1000000			
6	С	3			Stop program
7	M	1000000	2000000		No.0
8	A	0	0		
9	M	100000	1000000		
10	?	0			
11	Y				

1 New program

•When clicking the button, blank lines are displayed.

Input contents according to a program description method.

2 Edit program

- The program can be edited, such as insert/copy/add/cut etc. with "Edit" of dropdown menu. **%Please reset the line numbers after line edit.**
- Please move the cursor to rewrite (overwrite) the data.

File	Edit			
Line		Add	Ctrl+A	
number		Insert	Ctrl+I	2
1		Cut	Ctrl+X	1
2		Conv	Ctrl+C	
3		Сору		
4		Paste	Ctrl+V	
5		InsertPaste	Ctrl+T	
6		Numbering	Ctrl+N	
7	-	M	100000	20

- 3 Download program
- •The program in the screen can be sent (downloaded) to the controller.
- A message "Succeeded in downloading the program." will be displayed on the screen, if the download finished normally.



Upload program **(4**)

• Read (upload) a program from the controller.

A message "Uploaded the program." will be displayed on the screen when the upload finished normally and program data is displayed.

• The uploaded program can be saved as a CSV file.

And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

5 Start program

·Execute the program which is stored in the controller and drive motorized stages or I/O interfaces.

*The controller can store ten programs. (No.0 - 9).

Please choose the program number, when you download, upload and execute a program.

7. Memory switch screen

àeneral	Interface Axis Sensor	Speed	Upload MemorySwitch
No.	Setting	Value	Download
1	SPD SEL	1	
2	SPD 1S	10000	
3	SPD 1F	100000	
4	SPD 1R	200	
5	SPD 2S	30000	
6	SPD 2F	300000	
7	SPD 2R	200	
8	SPD 3S	70000	
9	SPD 3F	700000	
10	SPD 3R	200	
11	SPD 4S	100000	
12	SPD 4F	1000000	
13	SPD 4R	200	
14	IO_LVL	ACT HIGH	
	W	W	

1 Upload Memory Switch

• Read (upload) the contents of the memory switch from the controller.

A message of "Uploaded Memory Switch settings." will be displayed, if the upload finished normally. And the contents of memory switch will be displayed on the screen.



•The uploaded contents of the memory switch can be saved as a CSV file. And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

2 Download Memory Switch

• The contents of memory switch in the screen can be sent (downloaded) to the controller. A message "Succeeded in downloading Memory Switch." will be displayed, if the download finished normally.



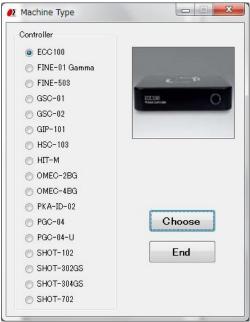
SGSample operation manual (ECC100 edition)

1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

Choose a controller to use, and click a "Choose" button.

SGSample is finished when you click an "End" button.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.

€ ECC100Sample (Ver.1.0.0))	**	
File (5)			
Settings Functions			
-Step 1 Controller - 1	Step 2 Positioner 2	Step 3 Communicat 3	Step 4 Test
Eccano O			OFF2
ECC 100	1:Positioner 2:Positioner 3:Positioner		
Choose	Choose	Set	Test
			End



1 Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed. When you change a controller, click a "Choose" button.

2 Step 2 Positioner choice

Click a "Choose" button, and then a positioner choice screen is displayed. Choose a positioner to use with the screen.

Axis 1	Axis 2	Axis 3
🗋 None	C None	C None
Positioner	 Positioner 	Positioner
Rotator	C Rotator	C Rotator
Goniometer	C Goniometer	C Goniometer

3 Step 3 Communication setting

Click a "Set" button, and then a communication properties screen is displayed.

☞ Wait until enter the in-position range In-position range: 0.1 (um or millide	
in the second	
	gree)
C Wait until stop confirmation time	
Stop confirmation time: 10 sec	
○ Wait until a stop button is pushed	

Stop confirmation type : Choose a type to confirm that a positioner stopped after movement.

•Wait until enter the in-position range

··· It waits until a current position enters the in position range.

The value specified for the in-position range completes the positioning if the travel reaches this range against your travel instruction.

You can specify by 0.001 (μ m or m °) from 0 to 10.

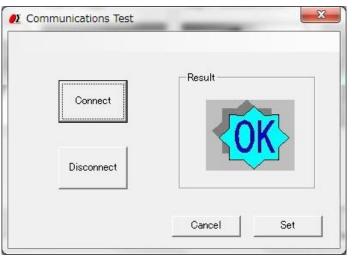


- Example) when you set a movement position with 100 μ m and set an in-position range with 0.1 μ m
 - -> Wait until a current position enters the ranges less than 100.1µm more than 99.9µm.
- ·Wait until stop confirmation time
 - ••• After having started movement, wait until specified time passes. If time passes, it is considered to be a stop, and other operation is enabled.
 - You can specify from 0 to 600 seconds.
- ·Wait until a stop button is pushed
 - ••• Even if it seems that movement is finished as a positioner stopped, it waits until a stop button is pushed. When a stop button is pushed, other operation is enabled.

4 Step 4 Communication Test

Click a "Test" button, and then a communication Test screen is displayed.

Test a communication with the screen.



Click the "Connect" button, then a result will be displayed.

When you terminate the communication, click a "Disconnect" button.

When a connection result is OK, click a "Set" button, then **3. Functions screen** displayed.

When a connection result is NG, please check the interface parameters, the controller setting and cables, and then try the communication test again.

5 File menu

Save settings

Save positioner choice contents and communication setting in a file.

Load settings

Read the saved setting file, and restore setting contents.

File		
	Save settings	
	Load settings	



3. Functions screen

At the time of connection OK, you can display a functions screen.

When you change various settings, click a "Settings" tab and display 2. Settings screen.

🛿 ECC100Sample (Ver.1.0.0)	
File	
Settings Functions	
1 Positioner Control	
	End

(1) "Positioner Control" button

Click a button, and then a positioner control screen is displayed.

The positioners can be operated by clicking the buttons in the positioner control screen.

4. Positioner Control screen

The positioners which are connected to the controller can be operated by clicking the buttons in the screen.

When the screen is displayed, the current set speed and voltage are displayed.

Positioner Control Axis 1 1 Speed Current po	3 Move	the special int	Manual manual	Step number	Amplitude
Axis 2 Speed		the specified amount	Manual movement	Step number	Amplitude
1000 Hz Speed Speed Current position		1000 milli degree	Manual movement	10 C - C + STEP	Amplitude
1000 Hz Set 56.189 milli degre		1000 milli degree			30 V VOLT



1 Speed

Enter the desired frequency of the voltage signal. The speed of the positioner rises when frequency is raised.

The allowed frequency values range from 1 Hz to 2 kHz.

Input the number of the frequency and click "Set" button. The speed is set.

2 Current position

Display the current position of a positioner.

3 Axis operation button

- Click to stop the stage.
- Detect the reference marker and move to the position and set a coordinate value to 0.
- Move axis back to the logical origin. (Current 0)
- Set current position to 0. (Logical origin)

(4) Move the specified amount

Input quantity of movement and click dutton. An axis moves quantity of movement that was input into the negative direction.

Click button. An axis moves quantity of movement that was input into the positive direction.

5 Manual movement

- While pushing a mouse left button, an axis moves to the negative direction fast. If the button is released, it stops.
- While pushing a mouse left button, an axis moves to the negative direction slowly. If the button is released, it stops.
- While pushing a mouse left button, an axis moves to the positive direction fast. If the button is released, it stops.
- While pushing a mouse left button, an axis moves to the positive direction slowly. If the button is released, it stops.

6 Step number

Input the number of times of the step movement and choose a movement direction and click step button. An axis performs 1 step movement for the specified number of times.

The step size is determined by the "Amplitude" value (V).

The allowed step number range from 1 to 3000.





Input the number of the amplitude and click **vot** button. The amplitude is set. By changing this value, the step size of the positioner can be varied. The allowed voltage values range from 0V to 45V.



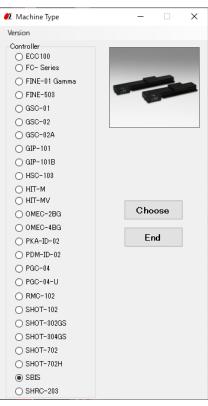
SGSample operation manual (SBIS edition)

1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

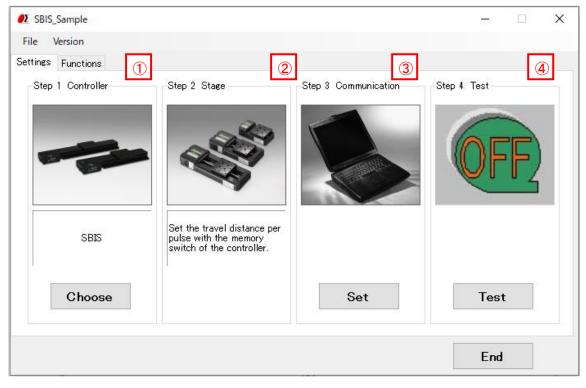
Choose a controller to use, and click a "Choose" button.

SGSample is finished when you click an "End" button.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.





1 Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed. When you change a controller, click a "Choose" button.

2 Step 2 Stage choice

SBIS does not need the stage choice.

3 Step 3Communication setting

Click a "Set" button, and then a communication setting screen is displayed.

○ 2400 ○ 4800 ○ 9600 ○ 14400 ○ Data bits	
O 9600	
- Data hits	e
14400	
0 19200 0 5 0 6 0 7 ⊙ 8	
28800 Stop bits	
● 38400 ● 1 ○ 1.5 ○ 2	
57600 128000 Flow control	
230400 None Xon/Xoff RTS/CTS RTS/Xor	noff

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.



4 Step 4 Communication Test

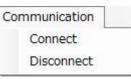
Click a "Test" button, and then a communication Test screen is displayed. Test a communication with the screen.

Communication	
Start Test	Result
	ОК

Click the "Start Test" button, then a result will be displayed.

When you click "Connect" of the communication menu, the communication is confirmed whether communication is available. Unlike a "Start Test" button, it is not confirmed the transmission and reception of the command.

When you terminate the communication, click a "Disconnect" menu.



When a connection result is OK, click an "OK" button, then **3. Functions screen** displayed. When a connection result is NG, please check the interface parameters, the controller setting and cables, and then try the communication test again.



3. Functions screen

At the time of connection OK, you can display a functions screen.

When you change various settings, click a "Settings" tab and display 2. Settings screen.

€ SBIS Conte File			-	×
Settings Functions				
1	Stage Control]		
2	Terminal			
	Program			
3	Setting & Memory Switch			
			End	

(1) "Stage Control" button

Click a button, and then a stage control screen is displayed.

The stages can be operated by clicking the buttons in the stage control screen.

2 "Terminal" button

Click a button, and then a terminal screen is displayed.

The controller will be controlled by commands on the terminal screen.

(3) "Memory Switch" button

Click a button, and then a Memory switch screen is displayed.

You can upload, edit, and download a memory switch which is memorized in the controller inside.

4 "File" menu

File Save settings Load settings

Save settings

Save each set condition and contents in the setting file. (extension .sgh)

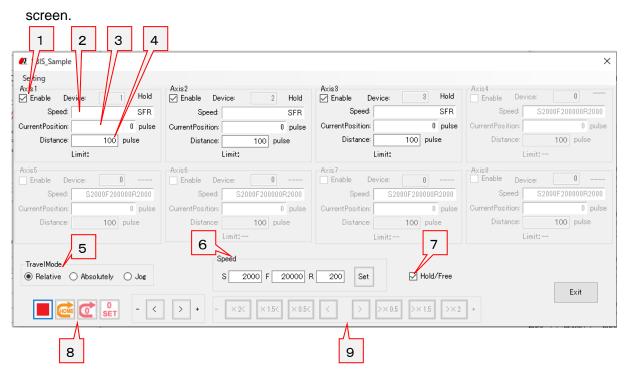
Load settings

Read the saved setting file, and restore setting contents.



4. Stage Control screen

The stages which are connected to the controller can be operated by clicking the buttons in the



Operation target axis

Select the axis to operate.

2 Speed

1

Displays the currently set speed.

3 Current Position

Displays the current position of the stage.

4 Distance

Set the amount to move the stage when "relative" or "absolute" is specified.

5 Travel Mode

Select the travel mode from "relative", "absolute" and "jog".

6 Speed Setting

Enter the speed to be set and click the "Set" button to set the entered speed.



7 Hold/Free

Switches the excitation state of the stage.

8 Movement Operation

Perform movement operations for "relative" movement and "absolute" movement.

Stop Move to th	he machine origin.	Sets the current position to C	move absolutely	vement. Or
	Move	e to the logical origin.	position.	
9 Moveme	ent Operation			
Performs t	he movement oper	ation for "jog" movement.		
	× 2< × 1.5< × 0.9	5< < > >×0.5	>×1.5 >×2 +	
	Move while holdi	ing down the left mouse button.		

Release the button to stop. Each button operates at the display times of the current

10 "Exit" button

Click a button and then close the stage control screen.

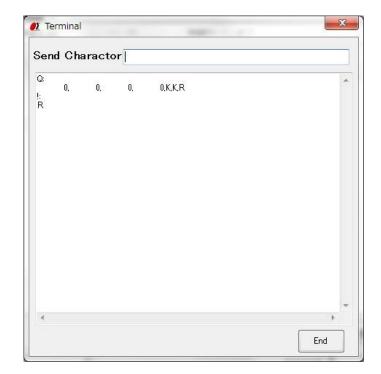


5. Terminal screen

The controller will be controlled by commands on the terminal screen.

Send commands to control the controller and stages.

Input the character string into "Send Character" and push Enter key, the command will be sent. The returned data will be displayed in the text box below.





6. Memory switch screen

Item	Example	Value	
Vender Name	SIGMAKOKI		Device Na 1 3
Device Name	SBIS00-00		
Serial No.	00001		Upload
F.W.Version	V1.00.001		Download
Block Na,Device Na	1,1	1,1	Download
Rotary Amount of movement/click	1	2	
Excitation	0:OFF, 1:ON	1	
Speed(When turned on)	1000,10000,200	20001,70000,201	Turn On Item
Origin Speed	1000,10000,200	20000,700000,201	
OriginSpeed(When turned on)	1000,10000,200	20000,700000,201	
Divide	80	100	
Divide(When turned on)	80	100	
Direction	0:POS, 1:NEG	1	
Origin Mode	0:OFF, 1:NINI, 2:MINI_PLUS, 3:CENTER, 4:ORGS	2	
OriginMode(When turned on)	0:OFF, 1:NINL2:MINLPLUS, 3:CENTER, 4:ORGS	2	
Origin Offset Pulse	0~60000	60000	
Origin Offset Pulse(When turned on)	0~60000	60000	
Manual Control	0:Enable, 1:Disable	1	
LED	0:Enable, 1:Disable	1	



•Read (upload) the settings from the SBIS.

If the upload is successful, the settings will be showed on the screen.

•The uploaded contents of the memory switch can be saved as a CSV file. And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

2 Download

• The settingsin the screen can be sent (downloaded) to the controller.

3 DeviceNo.

· Specify the device No. to be displayed/edited.



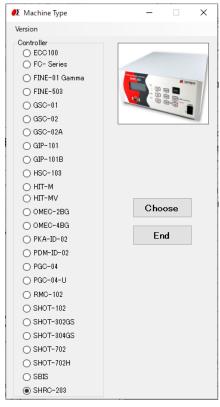
SGSample operation manual (SHRCedition)

1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

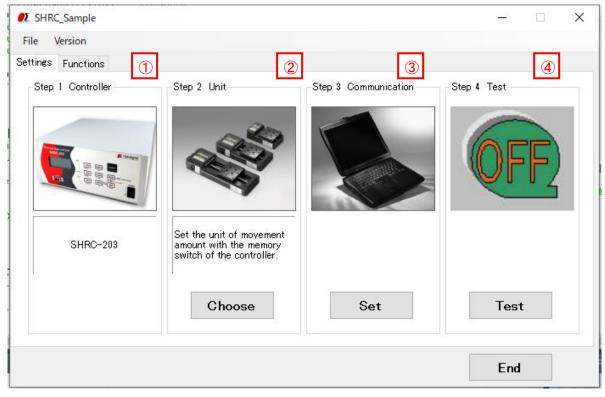
Choose a controller to use, and click a "Choose" button.

SGSample is finished when you click an "End" button.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.





1 Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed.

2 Step 2 Unit choice

Click the " Choose"" button to display the unit selection screen, so select the unit to use.

(Set per axis. Match the unit with the controller setting.)

🕰 Unit 🦳		×
Axis: 1 🗸		
Unit : [Pulse/Micrometer/Millimeter/Nanometer/Degree]		
• Pulse \bigcirc micrometer[μ m] \bigcirc millimeter[mm] \bigcirc Nanometernm[nm]	○ Degree[°]
Please match the setting of the MemorySwitch of the SHRC-203.	Exit]

3 Step 3 Communication setting

Click the "Settings" button to display the communication interface selection screen. Select an interface and click the "Communication settings" button.

Also, select the operation mode of the controller (match the setting of the main unit).

● Communication	×
Interface	
● USB(RS232C) ◯ LAN	Settings
ControllerMode	
● SHOT/FC ○ HIT	Exit

RS232C communication settings

🕖 RS232C_Se	ettings ×	
Baudrate 1200 2400 4800 9600 14400 19200 28800 38400 57600 128000 230400	CommPort Delimiter TimeOut(S) COM4 CR+LF 10 Parity 0 Even Mark Space Data bits 5 6 7 0 8 Stop bits 0 1.5 2 2 Flow control None Xon/Xoff 0 RTS/CTS RTS/Xonoff	_(1)
	OK Cancel	



(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.

LAN settings

	🚺 LAN Settings		×	
(2)	Host 192.168.0.1			
	Port 9004	Timeout Delimiter		(1)
(3)	Setting	OK Cancel		

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.

(2) Host, Port

Adjust a host and a port to settings of HIT-M connected at present. Factory default is host (IP address):192.168.0.1 port:9004.

(3) Setting

When you change the host (IP address) and port, change them with an LAN detail settings screen. The screen is displayed by clicking a "Setting" button.

IP Address	Subnet mask
192.168.0.1	255.255.255.0
Default route gatewa	·
0000	91114
0.0.0.0 The IP address of the permits passive operation	
	he partner host who
The IP address of the permits passive_ope	he partner host who
The IP address of the permits passive_oper 1: 0.0.0.0	he partner host who en 5: 0.0.0.0

Click "OK" button after setting IP address and others on LAN detail settings screen in accordance with PC condition.

XYou set an interface of the memory switch of HIT in "Ethrnet" and make LAN available, and please set the LAN.



- When all the setting from 1 to 8 are "0,0,0,0", the IP address of the partner host who permits passive_open admits the passive_open from all IP addresses. Otherwise, it admits only Passive_Open from the IP except "0,0,0,0" set to 8 from 1.
- %Redo PC settings according to new LAN settings when any changes have been made in settings.

4 Step 4 Communication Test

Click a "Test" button, and then a communication Test screen is displayed. Test a communication with the screen.

● Communications Test	×
Connect	Result
	CancelSet

Click the "Connect" button, then a result will be displayed.

When you terminate the communication, click a "Disconnect" button.

When a connection result is OK, click a "Set" button, then **3. Functions screen** displayed.

When a connection result is NG, please check the interface parameters, the controller setting and cables, then try the communication test again.



3. Functions screen

At the time of connection OK, you can display a functions screen.

● SHRC_Sample				_	Х
File Version					
Settings Functions					
	1	Stage Control			
	2	Terminal			
	3	Program			
	4	Memory Switch			
				End	

1 "Stage Control" button

Click a button, and then a stage control screen is displayed.

The stages can be operated by clicking the buttons in the stage control screen.

2 "Terminal" button

Click a button, and then a terminal screen is displayed.

The controller will be controlled by commands on the terminal screen.

3 "Program" button

Click a button, and then a program screen is displayed.

You can upload, edit, download, and run a program which is memorized in the controller inside. (Only for SHOT-302GS/304GS, FINE503/01gamma)

(4) "Memory Switch" button

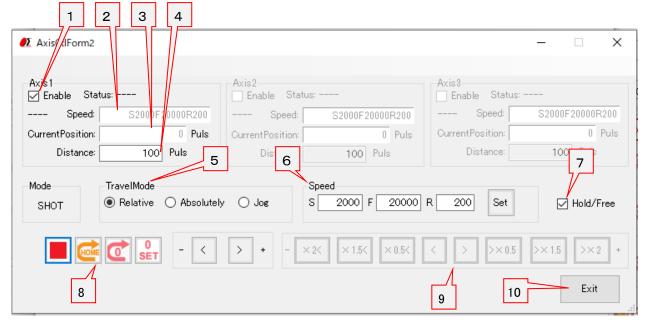
Click a button, and then a Memory switch screen is displayed.

You can upload, edit, and download a memory switch which is memorized in the controller inside.(Only for SHOT-302GS/304GS, SHOT-702, FINE503/01gamma, PKA-ID-02,GSC-01A)



4. Stage Control screen

The stages which are connected to the controller can be operated by clicking the buttons in the screen.



(1) Operation target axis

Select the axis to operate.

2 Speed

Displays the currently set speed.



Current Position

Displays the current position of the stage.



Set the amount to move the stage when "relative" or "absolute" is specified.



5 Travel Mode

Select the travel mode from "relative", "absolute" and "jog".



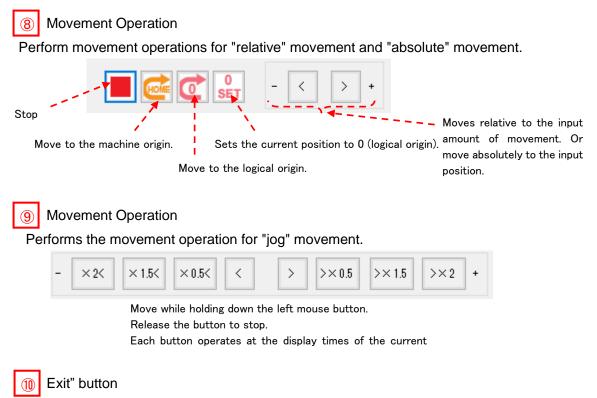
Speed Setting

Enter the speed to be set and click the "Set" button to set the entered speed.



Switches the excitation state of the stage.





Click a button and then close the stage control screen.



5. Terminal screen

The controller will be controlled by commands on the terminal screen.

Send commands to control the controller and stages.

The returned data will be displayed in the text box below.



6. Program screen

Programs Prile Edit	
New program	1
Download program	3
Upload program	4
Start program	5
Stop program	
No.1 V	



1 Create program

•When composing a new program, click the "Create program" button, there will be a programming screen.

• You can download or upload the program from or to controller, and drive stages by the program.

File Ec	lit				
Line number	Operating pattern	Parameter 1	Parameter2	Parameter 3	New program
1					Download program
2					
3					Upload program
1					Start program
5					
6					Stop program
7					No.1
8					
)					
10					

2 Edit program

• The program can be edited, such as insert/copy/add/cut etc. with "Edit" of dropdown menu. %Please reset the line numbers after line edit.

• Please move the cursor to rewrite (overwrite) the data.

<u>F</u> ile	<u>E</u> dit			
Line		<u>A</u> dd	Ctrl+A	2
number		<u>I</u> nsert	Ctrl+I	C
1		C <u>u</u> t	Ctrl+X	-2
2		<u>C</u> opy	Ctrl+C	-
3		<u>P</u> aste	Ctrl+V	80
4		InsertPas <u>t</u> e	Ctrl+T	0
5		<u>N</u> umbering	Ctrl+N	-8
6	0		100	0

3 Download program

• The program in the screen can be sent (downloaded) to the controller.

A message "Downloading the program is completed." will be displayed on the screen, if the download finished normally.

•The controller can store two programs. (No.1/No.2)

Please choose the No.1 or No.2, when you download a program.



4 Upload program

•Read (upload) a program from the controller.

A message "Uploading the program is completed." will be displayed on the screen when the upload finished normally and program data is displayed.

•The controller can store two programs. (No.1/No.2).

Please choose the No.1 or No.2, when you upload a program.

•The uploaded program can be saved as a CSV file.

And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

5 Start program

•Execute the program which is stored in the controller and drive motorized stages or I/O interfaces.

• The controller can store two programs. (No.1/No.2).

Please choose the No1 or No 2, when you execute a program.



7. Memory switch screen

	o:		Speed (JRG P	eedBac 🔹	· [Jpload MemorySwitch	
	Setting	Val	ue				Download	ł
1	AXIS	1+3						l
1	MODE SEL	HOS	т					
S	SLEEP SEL	ON						
E	BEEP SEL	ON						
	JOG X SEL	1						
	JOG Y SEL	2						
0	CMD FORMAT	SHC	T/FC					
	TRG/LEV	HI						
ı 1	TRG/WIDTH	10						

1 Upload Memory Switch

- •Read (upload) the contents of the memory switch from the controller.
- A message of "Uploading the Memory Switch is completed." will be displayed, if the upload finished normally. And the contents of memory switch will be showed on the screen.
- •The uploaded contents of the memory switch can be saved as a CSV file. And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

2 Download Memory Switch

- •The contents of memory switch in the screen can be sent (downloaded) to the controller. A message "Downloading the Memory Switch is completed." will be displayed, if the download
- finished normally.



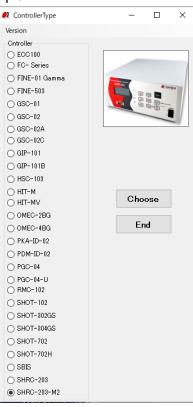
SGSample operation manual (SHRC-M2 Edition)

1. Machine Type screen

The Machine Type screen is displayed when you run SGSample.

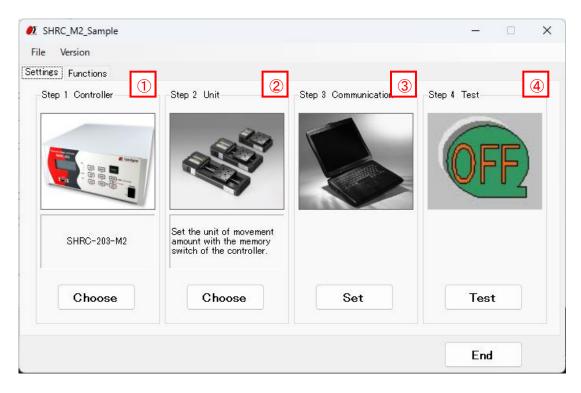
Choose a controller to use, and click a "Choose" button.

SGSample is finished when you click an "End" button.



2. Settings screen

Set the parameters from step 1 to step 4 sequentially.





1 Step 1 Controller choice

The controller which you chose with the Machine Type screen is displayed.

2 Step 2 Unit choice

Click the " Choose"" button to display the unit selection screen, so select the unit to use.

(Set per axis. The unit vary depending on the command format, so match the unit with the controller settings.)

🕖 Unit			_		×
Axis : 1 🗸					
[SHOT/HIT]					
	er/Millimeter/Nanomete /milliradian/microradiar		hi/microinch		
Pulse	⊖ micrometer[µm]	○ millimeter[mm]	🔿 Nanometer	[nm]	
◯ Degree[゛]	O Inch[inch]	O milliinch[minch]	O microinch[[µinch]	
○ gradian[grad]	🔿 radian[rad]	🔘 milliradian[mrad]	🔿 microradia	n[µrad]	
[ESP]					
Stage unit: 0	♀ Pulse				
[GCODE]					
単位:[millimeter/inch/S	6 millimeter/S inch]				
o millimeter[mm]	◯ inch[inch]	O millimeter[mm](S)	○ inch[inch]	(S)	
Please match the setting	of the MemorySwitch of	the SHRC-203-M2.		Exit	

3 Step 3 Communication setting

Click the "Settings" button to display the communication interface selection screen. Select an interface and click the "Communication settings" button.

Also, select the operation mode of the controller (match the setting of the main unit).

● Communication	×
Interface	
O USB(RS232C) ○ LAN	Settings
ControllerMode	
O SHOT/FC ○ HIT ○ ESP ○ GCODE	Exit



•RS232C communication settings

laudrate —) 1200	CommPort Delimiter TimeOut(S)
2400	Parity
4800	◯ None ◯ Odd ◯ Even ◯ Mark ◯ Space
) 9600) 14400	-Data bits
) 19200	○ 5 ○ 6 ○ 7 ● 8
28800	Stop bits
38400	● 1 ○ 1.5 ○ 2
) 57600) 128000	Flow control
230400	○ None ○ Xon/Xoff ○ RTS/CTS ○ RTS/Xonoff
	OK Cancel

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.

•	LAN	settings
		Journage

	🙋 LAN Settings		×
(2)	Host 192.168.0.1		
	Port Time 9004	20 Delin	niter (1)
(3)	Setting	ОК	Cancel

(1) Timeout

Timeout supervises passing time after starting reception. When the preset time specified for Timeout has passed, receiving process ends.

(2) Host, Port

Adjust a host and a port to settings of HIT-M connected at present. Factory default is host (IP address):192.168.0.1 port:9004.



(3) Setting

When you change the host (IP address) and port, change them with an LAN detail settings screen. The screen is displayed by clicking a "Setting" button.

🙋 LAN Detail Settings	×
IP Address 192.168.0.1	Subnet mask 255.255.255.0
Default route gateway	Port number 9004
The IP address of the permits passive_open	partner host who
1: 0.0.0.0	5: 0.0.0.0
2: 0.0.0.0	6: 0.0.0.0
3: 0.0.0.0	7: 0.0.0.0
4: 0.0.0.0	8: 0.0.0.0
	OK Cancel

Click "OK" button after setting IP address and others on LAN detail settings screen in accordance with PC condition.

XYou set an interface of the memory switch of HIT in "Ethrnet" and make LAN available, and please set the LAN.

- When all the setting from 1 to 8 are "0,0,0,0", the IP address of the partner host who permits passive_open admits the passive_open from all IP addresses. Otherwise, it admits only Passive_Open from the IP except "0,0,0,0" set to 8 from 1.
- %Redo PC settings according to new LAN settings when any changes have been made in settings.

4 Step 4 Communication Test

Click a "Test" button, and then a communication Test screen is displayed.

Test a communication with the screen.

Communications Test Connect	Result
Disconnect	Cancel Set

Click the "Connect" button, then a result will be displayed.



When you terminate the communication, click a "Disconnect" button.

When a connection result is OK, click a "Set" button, then **3. Functions screen** displayed.

When a connection result is NG, please check the interface parameters, the controller setting and cables, then try the communication test again.



3. Functions screen

At the time of connection OK, you can display a functions screen.

● SHRC_M2_Sample			_		×
File Version					
Settings Functions					
1	Stage Control]			
2	Terminal				
3	Program				
4	Memory Switch				
			En	d	

(1) "Stage Control" button

Click a button, and then a stage control screen is displayed.

The stages can be operated by clicking the buttons in the stage control screen.

2 "Terminal" button

Click a button, and then a terminal screen is displayed.

The controller will be controlled by commands on the terminal screen.

3 "Program" button

Click a button, and then a program screen is displayed.

You can upload, edit, download, and run a program which is memorized in the controller inside.

(4) "Memory Switch" button

Click a button, and then a Memory switch screen is displayed.

You can upload, edit, and download a memory switch which is memorized in the controller inside.



4. Stage Control screen

The stages which are connected to the controller can be operated by clicking the buttons in the screen.

*Some functions may not be available (not displayed) depending on the controller mode.

● Axis 1 m 2	3 4				- 🗆 X
Ax/s1 🥑 Enable Status:		Axis2 Enable Status:		Axis3 Enable Status:	
Hold Speed:	S!00 5000R200	Speed:	S2000F20000R200	Speed:	S2000F20000R200
CurrentPosition:	0 Puls	CurrentPosition:	0 Pulse	CurrentPosition:	0 Pulse
Distance:	100 Pulse	Distar 6	100 Pulse	Distance:	100 F 7
	avelMode 5 Relative Absolutely		F20000	R 200 Set	Hold/Free
		> + - ×2	< × 1.5< × 0.5<	< > > >×0.5	>×1.5 >×2 +
8			2	_/ 9	10 Exit

1 Operation target axis

Select the axis to operate.

2 Speed

Displays the currently set speed.



Current Position

Displays the current position of the stage.

④ Distance

Set the amount to move the stage when "relative" or "absolute" is specified.

5 Travel Mode

Select the travel mode from "relative", "absolute" and "jog".



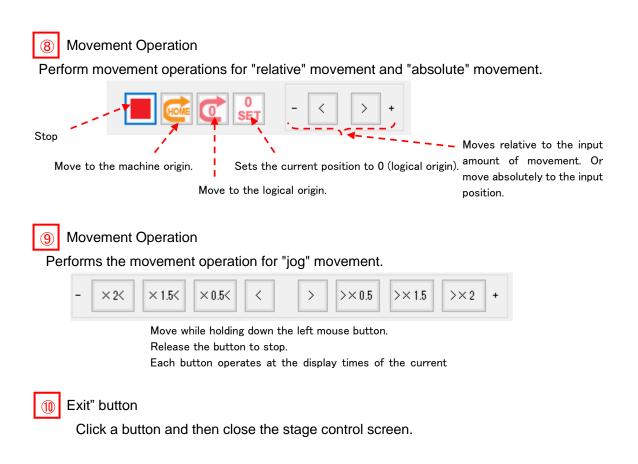
Speed Setting

Enter the speed to be set and click the "Set" button to set the entered speed.





Switches the excitation state of the stage.





5. Terminal screen

The controller will be controlled by commands on the terminal screen.

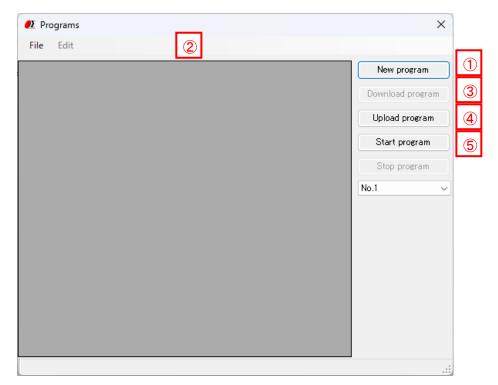
Send commands to control the controller and stages.

The returned data will be displayed in the text box below.



6. Program screen

6.1 For Commend format [SHOT/FC, HIT]





1 New program

When composing a new program, click the "New program" button, here is a blank screen with blank cells. Please fill in the data into them.

• You can download or upload the program from or to controller, and drive stages by the program.

Line	Operating				New program
number	Operating pattern	Parameter 1	Parameter2	ParameterS	New program
1					Download program
2					Upload program
3					opioad program
4					Start program
5					
6					Stop program
7					No.1
8					
9					
10					

2 Edit program

- The program can be edited, such as insert/copy/add/cut etc. with "Edit" of dropdown menu. *Please reset the line numbers after line edit.
- ·Please move the cursor to rewrite (overwrite) the data.

<u>F</u> ile	<u>E</u> dit		
Line	<u>A</u> dd	Ctrl+A	2
number	<u>I</u> nsert	Ctrl+I	C
1	C <u>u</u> t	Ctrl+X	-2
2	Copy	Ctrl+C	-
3	<u>P</u> aste	Ctrl+V	80
4	InsertPa	as <u>t</u> e Ctrl+T	0
5	Numbe	ring Ctrl+N	-8
6	0	100	0

80



3 Download program

- •The program in the screen can be sent (downloaded) to the controller.
- A message "Downloading the program is completed." will be displayed on the screen, if the download finished normally.
- The controller can store 8 programs. (No.1 to 8)

Please choose the No.1 to 8, when you download a program.

4 Upload program

- Read (upload) a program from the controller.
- A message "Uploading the program is completed." will be displayed on the screen when the upload finished normally and program data is displayed.
- •The controller can store 8 programs. (No.1 to 8).
- Please choose the No.1 to 8, when you upload a program.
- •The uploaded program can be saved as a CSV file.
- And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

5 Start program

- •Execute the program which is stored in the controller and drive motorized stages or I/O interfaces.
- The controller can store 8 programs. (No.1 to 8).
- Please choose the No1 to 8, when you execute a program.



6.2 For Commend format [ESP, GCODE]

● Programs		×
File Edit	2	
		New program
		Download program
		Upload program
		Start program 5
		Stop program
		1 6
		Erase program

1 New program

•When composing a new program, click the "New program" button, here is a blank screen with blank cells. Please fill in the data into them.

· You can download or upload the program from or to controller, and drive stages by the program.

🕖 Program	IS					×
File Edit						
Line number	Operating pattern	Parameter 1	Parameter2	ParameterS	New program	
1					Download program	1
2					Upload program	
3					opioda program	-
4					Start program	
5						
6					Stop program	_
7					No.1	\sim
8						
9						
10						
[.::



Edit program

- •The program can be edited, such as insert/copy/add/cut etc. with "Edit" of dropdown menu. %Please reset the line numbers after line edit.
- ·Please move the cursor to rewrite (overwrite) the data.

<u>F</u> ile	<u>E</u> dit			
Line	A	dd	Ctrl+A	2
number	Ī	nsert	Ctrl+I	c
1	C	<u>u</u> t	Ctrl+X	
2		ору	Ctrl+C	2
3	P	aste	Ctrl+V	81
4	I	nsertPas <u>t</u> e	Ctrl+T	0
5	N	lumbering	Ctrl+N	-8
6	0		100	0

3 Download program

•The program in the screen can be sent (downloaded) to the controller.

A message "Downloading the program is completed." will be displayed on the screen, if the download finished normally.

• The controller can store 100 programs. (No.1 to 100)

Please choose the No.1 to 100, when you download a program.

• If the program downloading fails, the program is saved in the same program number, so please delete the program in (6) and download the program again.

4 Upload program

•Read (upload) a program from the controller.

A message "Uploading the program is completed." will be displayed on the screen when the upload finished normally and program data is displayed.

• The controller can store 100 programs. (No.1 to 100).

Please choose the No.1 to 100, when you upload a program.

•The uploaded program can be saved as a CSV file.

And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.

5 Start program

•Execute the program which is stored in the controller and drive motorized stages or I/O interfaces.

•The controller can store 100 programs. (No.1 to 100).

Please choose the No.1 to 100, when you execute a program.

6 Erase program



- Erase the program which is stored in the controller.
- A message "Erased the program." will be displayed on the screen, if the erase finished normally.
- •The controller can store 100 programs. (No.1 to 100).
- Please choose the No.1 to 100, when you erase a program.

7. Memory switch screen

ieneral	Interface	Sensor	Axis	MotorE	rv Spee	d ORG	FeedBa	(• •	Upload MemorySwitch
No.	Setting			١	/alue				Download
1	AXIS			1	-3				
2	MODE \$	BEL		Н	OST				
3	SLEEP	SEL		0	N				
4	BEEP S	EL		0	N				
5	JOG X	SEL		1					
6	JOG Y	SEL		2					
7	CMD F	ORMAT		S	HOT/FC				
8	TRG/LE	ΞV.		H	I				
9	TRG/W	IDTH		1)				

1 Upload Memory Switch

- •Read (upload) the contents of the memory switch from the controller.
- A message of "Uploading the Memory Switch is completed." will be displayed, if the upload finished normally. And the contents of memory switch will be showed on the screen.
- •The uploaded contents of the memory switch can be saved as a CSV file. And an edited (changed) CSV file can be opened with file menu too. Please open it from File menu.
- 2 Download Memory Switch
 - •The contents of memory switch in the screen can be sent (downloaded) to the controller. A message "Downloading the Memory Switch is completed." will be displayed, if the download finished normally.

