SGADVANCE & SGSample

For equipment (controller) connection Quick Manual

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1. RS232C connection

①Setting of Device (controller)

Set the memory switch for RS232C.

■ SHOT-XXX

Memory switch item	Setting value	
INTERFACE	RS232C	
BAUDRATE	4800/9600/19200/38400	 Select one
DELIMIT	CR/LF/CRLF	 Select one

Fixed parameters : DataBits=8, Parity=None, StopBits=1, FlowControl=Hardware

■HIT-M/PGC-04 (U) /HSC-103

Memory switch item	Setting value	
INTERFACE	RS232C	
RS232C_FLOW	ON/OFF	··· Select one
Baudrate	4800/9600/19200/38400/57600	··· Select one

Fixed parameters : DataBits =8, Parity=None, StopBits=1, Derimiter=CRLF

■GIP-101B

Memory switch item	Setting value	
BAUDRATE	4800/9600/19200/38400	 Select one

Fixed parameters : DataBits =8, Parity=None, StopBits=1, FlowControl=Hardware, Derimiter =CRLF

■GIP-101/101A

There is no memory switch, Budrate and Delimiter can change the DIP switch of the main body, except for themAll parameters are fixed.

Fixed parameters : DataBits =8, Parity=None, StopBits=1, FlowControl=Hardware

■GSC-01/GSC-02

There is no memory switch, all parameters other than Baudrate are fixed parameters. Fixed parameters: DataBits =8, Parity=None, StopBits=1, FlowControl=Hardware, Derimiter =CRLF GSC-01 ··· You can change Baudrate with the setting program (4800/9600/19200/38400) ***** "Setting program" for GSC - 01 can be downloaded from the Web.

GSC-02…Baudrate can be changed with the DIP switch on the main unit.

(2400/4800/9600/19200)

✗ is the default value

②Setting of PC

In the Device Manager of Control Panel, check the available COM ports.

E-Port (COM LPT) (LPT1) Printer Port USB Serial Port (COM4)

₩In the above figure, COM1 and COM4 can be used.

When there is no RS232C terminal on the PC, use the RS232C by using "USB serial converter" In that case, you can use the device driver attached to "USB serial converter" Please install and confirm the usable COM port as shown above.

Since PGC - 04, HSC - 103, and GIP - 101 B perform USB serial conversion inside the main body, You need to download and install the device driver from the web.

③Setting of Software

[SGSample]

After selecting the controller and stage in Step 1 and Step 2, make communication settings in Step 3.

Select the COM port to be used as the connection destination, set the communication speed and delimiter to the same settings as the controller to be used.

D SGSample	J # # # - # - 4-
Communication Properties	
S Port COM4 Baudrate C 2400 C 4800 C 9600 C 19200 C 19200 C 38400 C None C RTS/CTS	-Step 3 Communication
Communication Mode Follow the setting of "Memory Swich" © MAIN © SUB	
Control Timeout Command Timeout 30 sec 60 sec	Set
Cancel Set	

* Usually, "Timed out time" is not necessary to change in particular.

After completing communication setup, perform communication test in step 4. In the communication test, if you click "Connect" button and "Result" becomes "OK", connection is completed.



[SGADVANCE]

Select the registered controller and click the "Setting" button to display the "Device Settings" screen open.

In "Device setting", select "RS232C" for the interface and use COM Select the port and click the "Communication" button.

In the "RS232C_Settings" screen, make the same setting as the controller that uses the communication conditions.



₩Usually "Timeout (S)" need not be changed.

After communication setting is completed, click "Communication Test" button on the "Device Settings" screen to open the "Communication Test" screen. For "Communication Test", enter "!:" In "Sent character string" and click "Test (Connect)" button. If "R", "O, O, O, O" etc. are displayed in the reception result and "Test result" becomes "OK", connection is completed.

	Communication Test		×
	Send Strings	-Test Resu	lt
Type SHOT-30	!: Method		JK .
Interface	 Send only(Not Receive) Received and checked as numeric 		
© G	 Received and checked as string Received and compared with designated strings 	Test(C	Connect)
OL	Receive Strings	Disc	onnect
CON	R	ОК	Cancel
			Connecting
tion	Properties Test		USB
ſ	OK Cancel		LAN

2. GPIB connection

①Setting of Device (controller)

Set the memory switch for GPIB.

■ SHOT-XXX

Memory switch item	Setting value	
INTERFACE	GPIB	
DELIMIT	CR/LF/CRLF/E0I	 Select one
GP-IB ADDR	1~30	 Select one

✗ is the default value

②Setting of PC

In the device manager of the control panel, check whether GPIB is usable.



₩In the above figure, GPIB-USB-HS can be used.

The GPIB interface available for SGADVANCE is made by **National Instruments**. To use GPIB, install the National Instruments device driver and make sure that GPIB is available as shown above.

③Setting of Software

[SGSample] GPIB can not be used with SGSample.

[SGADVANCE]

Select the registered controller and click the "Setting" button to open the "Device Settings" screen.

In "Device Settings" select interface "GPIB", select the address to use for the connection destination, and click the "Communication" button.

On the "GPIB_Settings" screen, make the same setting as the controller that uses the communication conditions.

Make the delimiter the same setting as the controller. When EOI is selected, set "EOI" to "Enable".
You do not need to change other settings in particular.



After communication setting is completed, click "est" button on the "Device Settings" screen to open the "Communication Test" screen.

In "Communication Test", enter "!:" In "Sent character string" and click "Test (Connect)" button.

If "R" is displayed in the reception result and "Test result" becomes "OK", connection is completed.

Terminal Instructio	● Communication Test	×
	Send Strings	Test Result
🕖 Device Settin	<u>b</u>	
Type SHOT-302GS	Method Send only(Not Receive)	
Interface	Received and checked as numeric	
RS232C	Received and checked as string	
OPIB	Received and compared with designated strings	Test(Connect)
🔘 USB		
🔘 LAN	Beceive Strings	Disconnect
O LAN Port Address8	Receive Strings R	OK Cancel
O LAN Port Address8 Communica tion	Receive Strings R Properties Test	OK Cancel OK Cancel GPIB Connecting O

3. TCP/IP connection

①Setting of Device (controller)

Set the memory switch for TCP/IP.

■HIT-M/PGC-04 (U) /HSC-103

Memory switch item	Setting value
INTERFACE	Etrnet

The IP address defaults to 192.168.0.1 (IP address can not be changed by memory switch)

Set the IP address of the main unit with SGSample.

XIf you use the default IP address (192.168.0.1), you do not need to change it with SGSample.

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When setting the IP address, the segment of the IP address of the main unit and the segment of the IP address of the PC must be the same (communication can not be made unless it is the same segment). Since the default IP address of the main unit is 192.168.0.1, the IP address of the PC to be used must be 192.168.0. □ (□ is 2 to 255 and not used elsewhere).

If the IP address of the PC is other than **192.168.0.** □, first set the PC in ②.

Start **SGSample**, select "LAN" on the communication setting screen and click the "Settings" button.



● LAN Settings	÷	Set the controller's current IP address.
Port 9004	Timeout Delimiter	Please note that it is not an address to change.
Setting	OK Cancel	

Set the current IP address to "Host name" and click " setting" button.

In the setting change screen, enter the IP address to change and click "OK".

<u>0Σ</u> L/	AN Detail Settin	gs	X	0.+	4 1	I.D.		.	
-IP	Address 192.168.0.5	K	Subnet_mask 255.255.255.0	 Set	the	IP	address	το σ	e changed.
De	fault route gatewa 0000	^y	Port number 9004						
Th per	e IP address of th rmits passive_ope	ie partn n	er host who						
1:	0000	5:	0.0.00						
2:	0.0.0.0	6:	0000						
3:	0000	7:	0000						
4:	0000	8:	0000						
		ОК	Cancel						

②Setting of PC

Display the Ethernet status on the control panel network and the Internet.

Connection		
Status:		Connecte
Duration:		01:18:5
Speed:		100.0 Mbp
Details]	
Activity		_
	Sent —	Received
Packets:	528	32

When you click the "details" button, details of the network continuation are displayed and the current IP address is displayed in "IPv4 address", so confirm.

roperty	Value
nysical Address	00-16-36-2C-E1-B5
Address	192.168.0.23
Jonet Mask efault Gateway HCP Server ease Obtained ease Expires NS Server 'INS Server	255.255.255.0 192.168.0.99 192.168.0.99 9/11/2015 2:20:28 AM 9/19/2015 2:20:28 AM 192.168.0.99

If the segment of the PC's IP address (192.168.0. \Box) is the same as the controller, there is no need to change it, but if it is different, change it.

When you click "Properties" on the "Ethernet status" screen, the "Ethernet Properties" screen will be displayed. Select "Internet Protocol Version 4 (TCP / IPv4)" and click "Properties".



To set the IP address to 192.168.0.2, set as shown below.

Use the following IP addre	SS:
IP address:	192.168.0.2
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	
Obtain DNS server addres	s automatically

Display the command prompt window, enter the address of the controller of the connection destination with the ping command, and confirm that there is a response. If there is a response, the connection is OK.

Reply fro	m 192.168.0.1:	bytes=32 time=25ms TTL=12
Reply fro	m 192.168.0.1:	bytes=32 time=13ms TTL=12
Reply fro	m 192.168.0.1:	bytes=32 time=13ms TTL=12
Reply fro	m 192.168.0.1:	bytes=32 time=13ms TTL=12
Annroxima	te round trip	times in milli-seconds: /imum = 25ms Auewage = 16m

③Setting of Softwere

[SGSample]

Perform communication test in step 4.

In the communication test, if you click "Connect" button and "Result" becomes "OK", connection is completed.



% If you changed the IP address using SGSample version 1.1.8 or later, Change history is automatically generated in the folder where SGSample is installed. HIT-M \rightarrow IP_HIT.txt PGC-04 \rightarrow IP_PGC04.txt

[SGADVANCE]

Select the registered controller and click the "Setting" button to open the "Device Settings" screen.

In "Device Settings" select interface "LAN" and click "Communication" button. On the "LAN_Settings" screen, set the IP address of the controller to be used. **As multiple devices can not be connected via TCP / IP connection, "Connection destination" is always LAN1.



After the communication setting is completed, Click the "Test" button on the "Device Settings" screen to open the "Communication Test" screen. In "Communication test", enter "!:" In "Sent character string" and click "Test (Connect)" button.

If "0, 0, 0, 0" etc. are displayed in the reception result and "Test result" becomes "OK", connection is completed.

	Communication Test	×	
ame Al	Send Strings	Test Result	
🕖 Device Settir	ŀ		
Type PGC-04/PGC-0-	 Method Send only(Not Receive) 	< <mark>OK</mark> >	
Interface	Received and checked as numeric		
© RS232C © GPIB	 Received and checked as string Received and compared with designated strings 	Test(Connect)	
 USB LAN 	Receive Strings	Disconnect	
-Port		OK Cancel	
Communica tion	Properties Test	Connecting USB	
0	K Cancel		

4. USB connection

①Setting of Device (controller)

Set the memory switch for USB.

■ SHOT-XXX

Memory switch item	Setting value
INTERFACE	USB

■HIT-M/PGC-04 (U) /HSC-103

Memory switch item	Setting value
INTERFACE	USB

②Setting of PC

Install the USB device driver.

 \Rightarrow Refer to "USB driver installation manual" for the installation method. In the device manager of the control panel, check the USB status.



③Setting of Software

[SGSample] * USB only supports HIT - M.

After selecting the controller in step 1, select "USB" in the communication setting in step 3.



After completing communication setup, perform communication test in step 4. In the communication test, if you click "Connect" button and "Result" becomes "OK", connection is completed.



[SGADVANCE]

Select the registered controller and click the "Setting" button to open the "Device Settings" screen.

In "Device Settings", select the interface "USB" and select the ID of the connection destination.

*Select the ID of the controller to communicate with for "Connection destination".

☆"ID" is a number for identifying the controller, and it is allocated in the order identified by turning on the power supply of the controller. When there is only one controller, the ID is always 1.

SGADVANCE	as Information		
Device Register	Ferminal Instruction		
Device Name	● Device Settings	Ref.	x
Stage-Co	Туре	Name	Alias
_	SHOT-302GS 👻	Stage-Controller	?
	Interface	Status	
	© RS232C		
	© GPIB		
	O LAN		
	Port		<u> </u>
	ID1 V		
	Communica tion Prop	erties Te	est
	ОК	Cancel	
•	III		Þ
	ete Initializ ete e Setting	See Te	al al

After the communication setting is completed, click the "Test" button on the "Device settings" screen to open the "Communication test" screen. In "Communication Test", enter "!:" In "Sent character string" and click "Test (Connect)" button.

If "R", "0, 0, 0, 0" etc. are displayed in the reception result and "test result" becomes "OK", the connection is completed.

Alias Interface	● Communication Test		Carlo III	×
ntroller ? LAN	Send Strings		Test Resu	lt
🚺 Device Settings	<u>l</u> :			
Туре	Method			JK >
SHOT-302GS	 Send only(Not Receive) Densities and sharehold as much 			
Interface	Received and checked as hull Received and checked as str	ine		·
 RS232C GPIB 	 Received and compared with designated strings 	(Test(C	ionnect)
USB		r	Disc	onnect
🔘 LAN	Receive Strings			
-Port	R		ОК	Cancel
ID1 👻		Com		0 1 1
Communica tion Pr	roperties Test	-USB Con	necting	0
ОК	Cancel	Con	necting [1