JOY STICK

JS-300(Ver2.0)

User's Manual

CONTENTS

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For Your Safety

● Before using this product, read this manual and all warnings or cautions in the documentation provided.

● Only Factory Authorized Personnel should be changes and/or adjust the parts of controller.

The Symbols Used in This Manual

⚠ WARNING	⚠ CAUTION
This symbol marks warnings that should be read and used to prevent serious injury or death.	This symbol indicates where caution should be used to avoid possible injury to yourself or others, or damage to property.

The above indications are used together with the following symbols to indicate the exact nature of the warning or caution.

Examples of Symbols Accompanying Warnings and Cautions

⚡	△Symbols enclosed in a triangle indicate warnings and cautions. The exact nature of the warning or caution is indicated by the symbol inside (the symbol at left indicates risk of electrocution).
🚫	○Symbols enclosed in a circle mark indicate prohibitions(actions that must not be performed).The exact nature of the prohibition is indicates by the symbol inside or next to the circle mark (the symbol at left indicates that the product must not be disassembled).
⏏	●Symbols inside a black circle mark actions that must be performed to ensure safety. The exact nature of the action that must be performed is indicated by the symbol inside (the symbol at left is used in cases in which the AC adapter must be unplugged to ensure safety).

Symbols on the product

The symbol mark on the product calls your attention. Please refer to the manual, in the case that you operate the part of the symbol mark on the product.

⚠	This symbol labeled on the portion calls your attention.

Disclaimer of Liability

① SIGMAKOKI CO., LTD. does not accept liability for damages resulting from the use of this product or the inability to use this product.

② SIGMAKOKI CO., LTD. does not accept liability for damages resulting from the use of this product that deviates from that described in the manual.

③ SIGMAKOKI CO., LTD. does not accept liability for damages resulting from the use of this product in extraordinary conditions, including fire, earthquakes, and other acts of God, action by any third party, other accidents, and deliberate or accidental misuse.

④ If the equipment is used in a manner not specified by the SIGMAKOKI CO., LTD., the protection provided by the equipment may be impaired.

⚠ WARNING

● Do not use this product in the presence of flammable gas, explosives, or corrosive substances, in areas exposed to high levels of moisture or humidity, in poorly ventilated areas, or near flammable materials.

● Do not connect or check the product while the power is on.

● Installation and connection should be performed only by a qualified technician.

● Do not bend, pull, damage, or modify the power or connecting cables.

● Do not touch the products internal parts.

● Connect the earth terminal to ground.

● Should the product overheat, or should you notice an unusual smell, heat, or unusual noises coming from the product, turn off the power immediately.

● Do not turn on the power in the event that it has received a strong physical shock as the result of a fall or other accident.

● Do not touch the stage while operation.

● Use dry clothes only for cleaning the equipment.

Chapter 1: Before You Begin

1-1. Overview

The JS-300 is a joystick with representational function.

It can be connected to our stage controller, SHOT-30* series and SHOT-702.

The joystick, connected to the controller via a cable, provides remote operation. This means that the joystick allows you to work near the motorized stage while checking its behavior even if the controller and the motorized stage are away from each other.

1-2. Connecting method

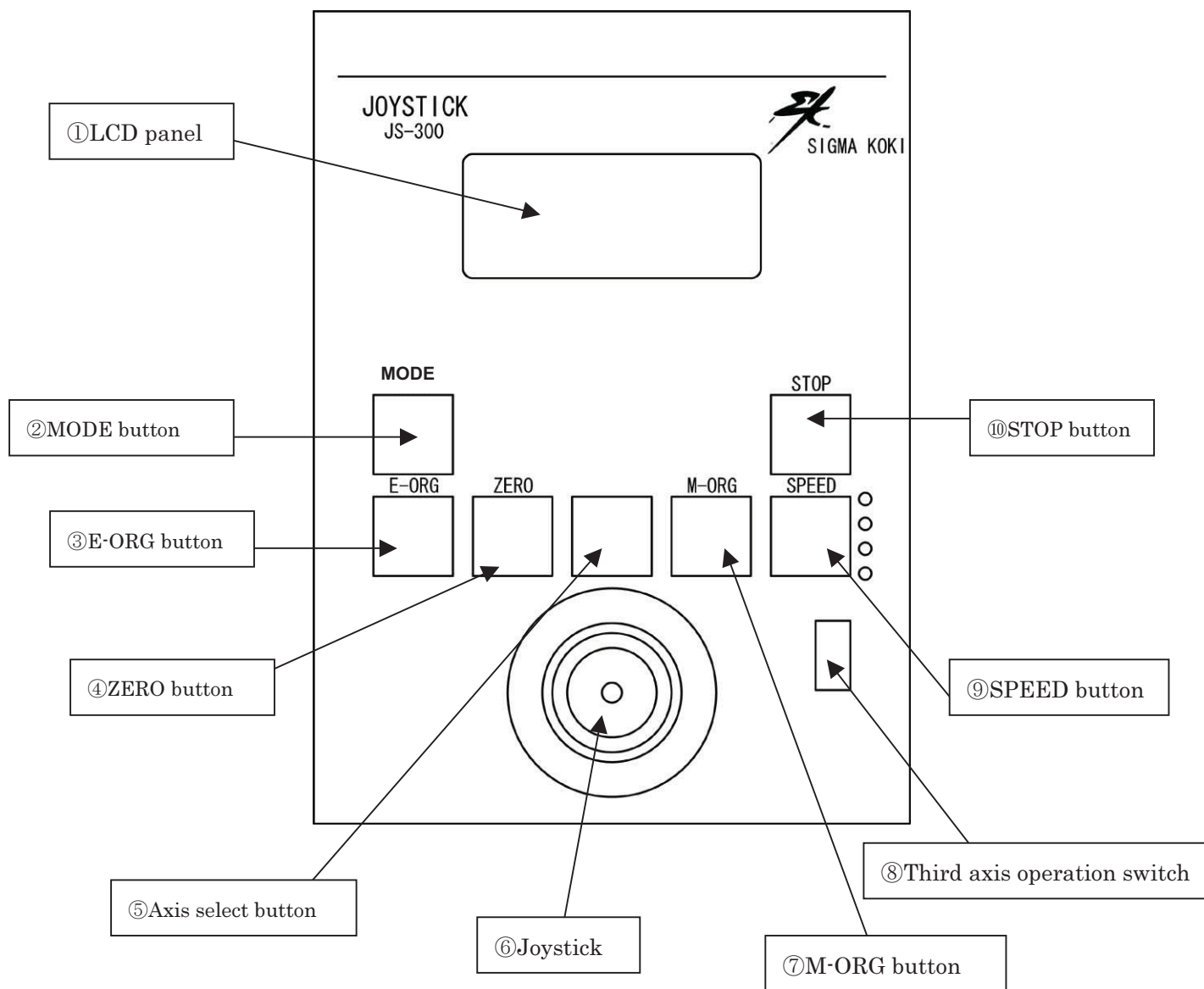The Joystick (JS-300) is connected to the controller with MDR14-CA cable.

① Connect a standard cable (MDR14-CA-*) to the connector on the rear panel of the JS-300.

② Connect the cable from the JS-300 to the "JOYSTICK" connector on the front panel of the SHOT-30X series and SHOT-702 controller. (In the case of SHOT-702, it becomes the rear panel part.)

③ Turn power switch of the controller on.

And confirm that the open message is displayed correctly. If it can not be displayed, reconfirm if connection of cable is done correctly.

> ⚠ Be sure the controller is off when you connect the joystick. You may not able to use the buttons on joystick if you connect or disconnect either device while the controller is on.

Chapter 2: Notes on Use

2-1. Parts of the JS-300

①LCD panel

②MODE button

③E-ORG button

④ZERO button

⑤Axis select button

⑥Joystick

⑦M-ORG button

⑧Third axis operation switch

⑨SPEED button

⑩STOP button

JOYSTICK
JS-300

SIGMA KOKI

MODE

STOP

E-ORG   ZERO   M-ORG   SPEED

2-2. Operating method

①LCD panel

Display the position coordinates for each axis and the operating mode.

Display Digit：16 digit × 4 lines

②MODE button

Change an operation mode of the controller.

HOST→MANUAL・・・

Refer to a User's Manual of SHOT-302GS/SHOT-304GS for various modes.

NOTE) IN SHOT-702, the MODE change is invalid.

③E-ORG button

Position stage at logical origin "0" for all axes.

The LED indicator lights up when the stage is moving and lights off when the stage is at logical position.

④ZERO button

Reset position coordinates for all axes to zero.

⑤Axis select button

Selects the axis operated by joystick as " 1 and 2 axis" or "3 and 4 axis".

The LED indicator lights up when "3 and 4 axis" can be operated by joystick.

NOTE) This button is only usable with SHOT-304GS.

⑥Joystick

Enables operation of "1 and 2 axis" or "3 and 4 axis".

A move of the joystick continuously moves the stage continuously.

Releasing the stick stops the stage.

> ⚠ Move the joystick again after putting the joystick in neutral for over a second when inverting moving direction of each axis. It may not work without the required operation.

⑦M-ORG button

Moves the stage to its mechanical origin.

The LED indicator lights up when the stage is moving and lights off when the stage is at mechanical origin position.

⑧Third axis operation switch

Use the switch to operate third axis.

Push the switch to Top：+ direction

Push the switch to Bottom：- direction

NOTE）This button is only usable with SHOT-304GS.

⑨SPEED button

Cycle through "SPEED 1/2/3/4" settings stored in controller's memory switches (1→2→3→4→1・・・).

Change the number of lightning of LED indicator by the SPEED button every time pushing the button. Its number of lightning of LED indicator enables you to check current moving speed.

Example）Four LED indicator lightning：SPEED setting 4

⑩STOP button

Stop all operating motorized stages immediately.

Refer to the manual of each controller for stopped condition.

2-3. Checking and Setting Memory Switches

Changing of the memory switch of SHOT-302GS/SHOT-304GS controller is possible in JS-300(Ver2.0).

(*) For more information about memory switch, refer to User's manual of SHOT-302GS/SHOT-304GS.

(NOTE) This function is only usable with SHOT-302GS and SHOT-304GS.

○ Changing Memory switch settings

To display the memory switch settings screen in MANUAL mode, press the "MODE" and "E-ORG" buttons simultaneously. Memory switch settings can be changed using the buttons on the JS-300.

Button	Function
Joystick UP side	Cycle through items in descending order (No.2⇒1⇒86⇒85)
Joystick down side	Cycle through items in ascending order (No.85⇒86⇒1⇒2)
Joystick right side	For numeric options, move cursor to right digit
Joystick left side	For numeric options, move cursor to left digit
MODE + ZERO	①Cycle through options for the current item (or increase the value of numeric options)
	②After changes to settings have been completed, save changes to settings and exit
SPEED	①Cycle through options for the current item (or decrease the value of numeric options)
	②After changes to settings have been completed, cancel changes to settings and exit
MODE	① Press to end changes to settings (a confirmation screen will be displayed)
	② Exit confirmation screen and return to memory switch settings screen
MODE + M-ORG	Restore memory switch settings to factory defaults

Chapter 3: Specifications

3-1. Specifications

Power source	DC5V ±10% (from controller)
Operating temperature	5～40℃
Storage temperature	-20～60℃
Ambient humidity	20～80%RH （no condensation）
External dimensions	120W×160D×50H （excluding projections）
Weight	700g
Electrical burst immunity	EN61000-4-4(2004) Level 2
Electrostatic discharge	EN61000-4-2(1995)+A1(1998)+A2(2001) Level 2

3-2. Exterior Dimensions