

JOG DIAL CONTROLLER

JD-101

User's Manual





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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


 <b>WARNING</b>	 <b>CAUTION</b>
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.

<b>Examples of Symbols Accompanying Warnings and Cautions</b>	
	△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.
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## 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.
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- 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.

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## Chapter 1: Before You Begin

### 1-1. Overview

This product have JOG-Dial type UI. It's have display.

It can be connected to our stage controller, SHOT-30\* series and SHOT-702 and PGC-04-U and HSC-103.

The operation box, 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.

When you use JD-101, you can use when Table1-1 controller version.

Table1-1 Controller version

SHOT-302GS/304GS	Ver1.20~
SHOT-702	Ver1.05~
PGC-04-U	Ver1.02~
HSC-103	Ver1.01~

This product This contains items such as the following.

- JD-101 1
- User's manual (This document) 1



When you use this product, you need MDR14-CA cable.

## 1-2. Connecting method

This product 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 JD-101.
- ② Connect the cable from the JS-301 to the “JOYSTICK” or “OPTION” of the connector on the front panel of the SHOT-30X series and PGC-04-U controller.  
(In the case of SHOT-702/HSC-103, it becomes the rear panel part.)
- ③ Turn power switch of the controller on.  
Among the LED of “AXIS”, the LED of “1” will light green.



Be sure the controller is off when you connect this product. You may not be able to use the buttons and so on this product if you connect or disconnect either device while the controller is on.

## Chapter 2: Notes on Use

### 2-1. Name of each part

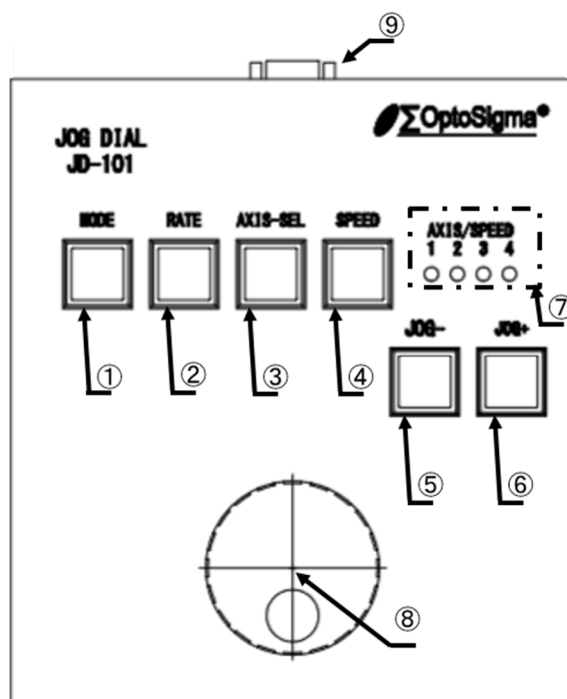


Fig.2-1 Name of each part

## 2-2. Operating method

### ① 【MODE】 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/PGC-04-U/HSC-103, the MODE change is invalid.**

### ② 【RATE】 button

Switch the amount of movement of the stage for the dial operation.

The LED indicator lights up : 5pulse/ 1click for JOG-dial.(High-RATE)

The LED indicator lights down: 1pulse/ 1click for JOG-dial.(Normal-RATE)

### ③ 【AXIS-SEL】 button

Selects the axis operated by this button.

Change the number of lightning of AXIS/SPEED LED indicator by the AXIS-SEL button every time pushing the button. (1→2→3→4→1 . . . )

When "●" position means Shining LED. Position of Shining AXIS/SPEED LED means AXIS.

●○○○	AXIS =1
○●○○	AXIS =2
○○●○	AXIS =3
○○○●	AXIS =4

Fig.2-2-1 Position of Shining AXIS/SPEED LED means AXIS.

**NOTE) When the axis which doesn't exist in case of SHOT-302GS, SHOT-702 and HSC-103 (2 axis or 3 axis) is chosen, a controller doesn't move.**



④ 【SPEED】 button

Cycle through “SPEED 1/2/3/4” settings stored in controller’s memory switches (1→2→3→4→1 . . . ).

When "●" position means Shining LED. Number of Shining AXIS/SPEED LED means speed value.

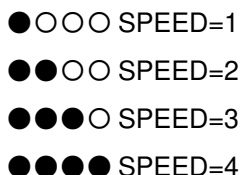


Fig.2-2-2 Number of Shining AXIS/SPEED LED means speed value.

After about 3 seconds, the AXIS / SPEED LED on the selected axis is light on.

**NOTE) Because there is not speed indication, in the case of SHOT-702, PGC-04-U, HSC-103, a controller is invalid.**

⑤,⑥ 【JOG-】 / 【JOG+】 button

Enables operation of selects-axis. Pressing of this button continuously moves the stage continuously. Releasing this button stops the stage.

⑦AXIS/SPEED LED

Change the number of lightning of AXIS/SPEED LED indicator by the 【AXIS-SEL】 button every time pushing the button. (1→2→3→4→1 . . . ).

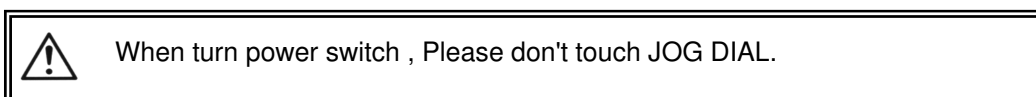
When you press the 【SPEED】 button, the set value of SPEED is displayed.

⑧JOG DIAL

The JOG DIAL for operating the stage.

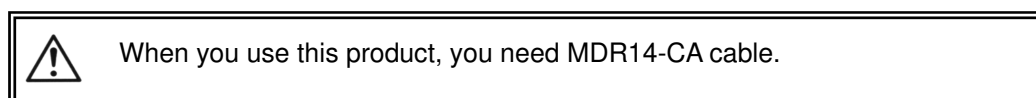
Left rotation : - direction

Right rotation : + direction



⑨Connection connector

It is a connector to be connected with a controller and an MDR14-CA-\* cable.



## Chapter 3: Specifications

### 3-1. Specifications

Power supply	Supplied from the controller via connection cable
Operating temperature	5~40°C
Storage temperature	-20~60°C
Altitude	up to 2000m
Indoor use only	
Installation category	II
Pollution degree	2
Ambient humidity	20~80%RH (no condensation)
External dimensions	130W×145D×56H [mm](excluding projections)
Weight[kg]	About 0.6 [kg] However, it does not include cables
Electrostatic discharge	EN61000-4-2(2009) Level 2

### 3-2. Connector pin number and signal

Table3-2 Connector pin assignment

Pin number	Signal name	Pin number	Signal name
1	SG	8	SG
2	+5V	9	+5V
3	TXD+	10	TXD-
4	RXD+	11	RXD-
5	STOP	12	CONNECT-
6	-	13	-
7	-	14	-

3-3. Exterior Dimensions

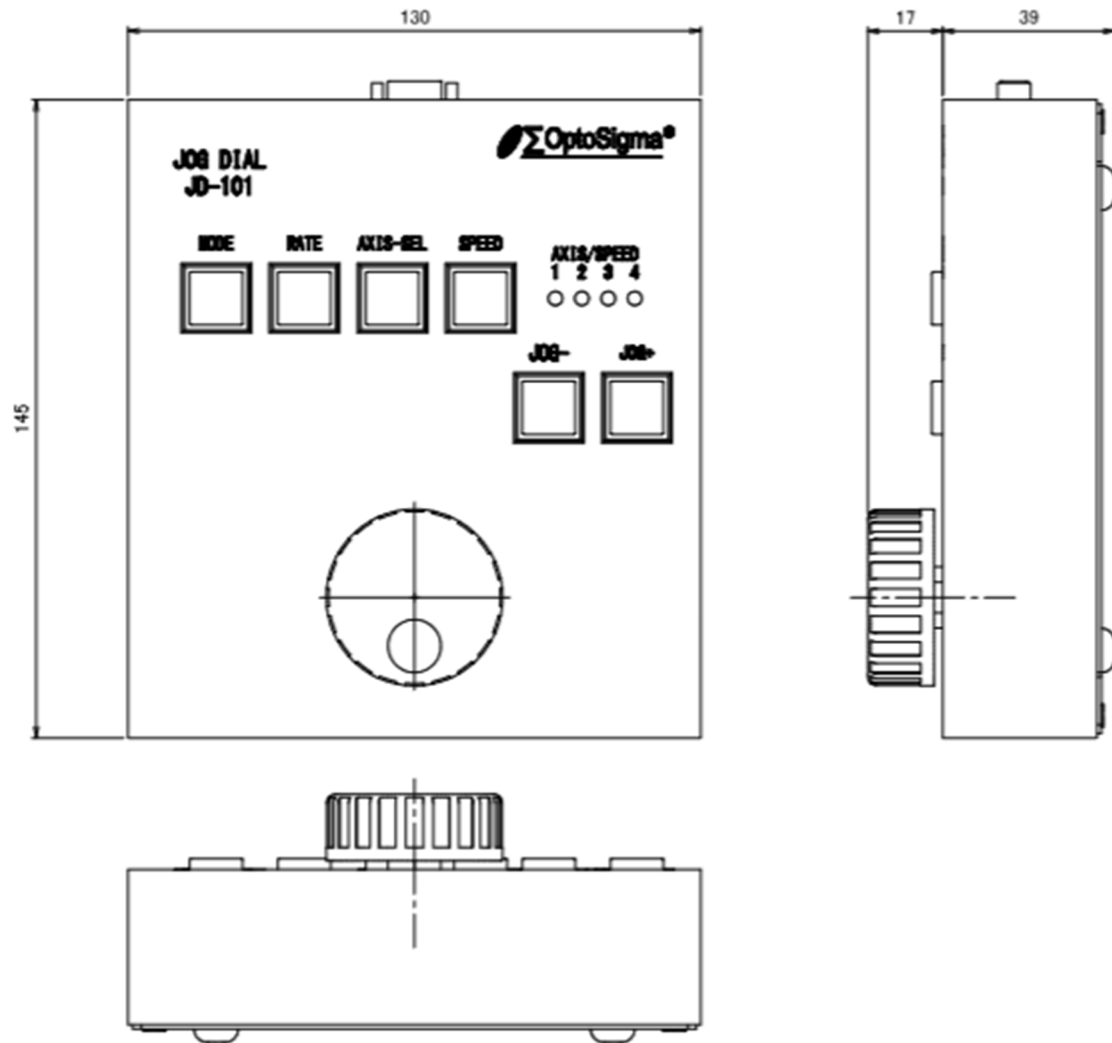


Fig.3-3 Exterior Dimensions

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