# **SHARP**

**OPERATION MANUAL** 

**Joystick** 

MODEL MZ-1X16

#### INTRODUCTION

Thank you for your purchase of the SHARP Joystick, MZ-1X16.

Please read this manual carefully for proper use. Also, be sure to keep this manual for later use. This manual should be helpful during use or when the problem arises.

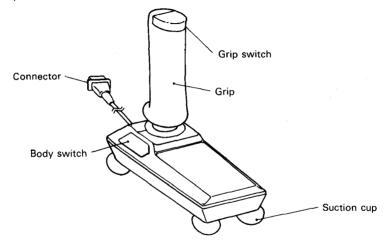


#### **CAUTION**

- 1. Use the joystick on a flat surface; fix it with its suction cups.
- Do not pull the joystick's cable if the joystick is held in place by the suction cups. Release the suction cups by gently holding the body of the joystick and pulling it towards you.
- 3. Do not disassemble the joystick due to the possibility of breakage.
- 4. When carrying the joystick, do not hold the joystick by its cable.
- Do not use the unit in places subject to direct sunlight, extreme change of temperature or high humidity or dust.
- 6. Do not bump or drop the unit.
- 7. Clean the unit with a dry, soft cloth. Do not use volatile liquids (alcohol, benzine, thinner, etc.) or a wet cloth.

#### 1. Connecting the Joystick

See chapter 7 in the MZ-800 OWNER'S MANUAL.



Note: Before connecting the joystick to the computer, be sure to turn off the MZ-800 and its peripheral units.

#### 2. Operating the Joystick

 Move the grip in any of the 8 directions shown; releasing the grip returns it to its center position.

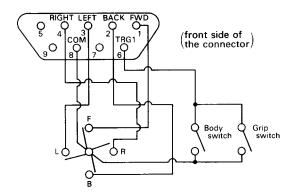


 Press either grip switch or body switch; they have the same function.

When programming in BASIC, use the STICK and STRIG functions. These functions are described in chapter 5 in the MZ-800 OWNER'S MANUAL.

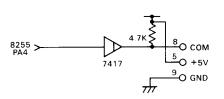
Note: The joystick connected to the connector on the left (while facing the rear panel) is called Joystick 1 and the one connected to the connector on the right is called Joystick 2.

## 3. Wiring within the MZ-1X16



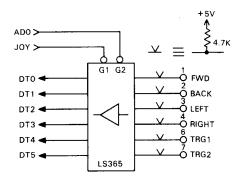
Since the grip switch and the body switch are connected in parallel, TRG1 is selected when either one is pressed.

#### 4. Input/Output Circuitry of the MZ-800 Joystick



(Configuration of Joystick 1)

Low active strobes are issued through PA4 (JOY1) of the 8255 and PA5 (JOY2) interrogate switch activation through inputs to \$F0 (JOY1) and \$F1 (JOY2).



PORT	8255	Control signal	ACTIVE
	PAO	KEY STROBE signal	н
	PA1	KEY STROBE signal	н
8255 PA	PA2	KEY STROBE signal	Ĥ
I/O PORT	PA3	KEY STROBE signal	. н
\$D0	PA4	JOY1 STROBE signal	L
	PA5	JOY2 STROBE signal	L
	PA6	· · · · · · · · · · · · · · · · · · ·	
	PA7	CURSOR TIMER RST	L

### 5. Specifications

I/O connector: 9-pin

Data input: 4-switch, 8-direction input method

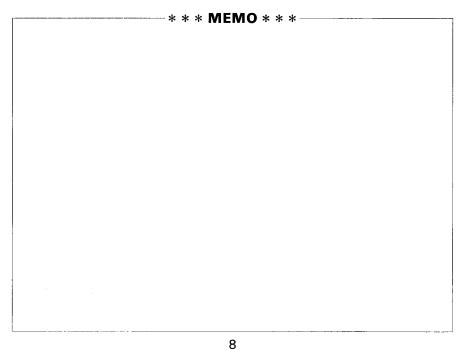
I/O: TTL levels

Operating temperature: 10°C to 35°C

Operating humidity: 20% to 80% (no condensation)

Dimensions : 80(W) x 140(D) x 145(H)mm

Weight: 200g (joystick unit only)



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