

# SHARP®

## MZ Disk Interface

MODEL **MZ-1E19**

### INSTRUCTION MANUAL



#### INTRODUCTION

Thank you for buying the MZ-1E19 SHARP MZ Disk Interface. Before using the MZ Disk Interface, please read this manual carefully to assure correct operation.

The contents of this manual are subject to change without notice. If the product is defective, please contact the store where you bought it. SHARP is not responsible for damage incurred during, or as a result of, operation.

#### CAUTION

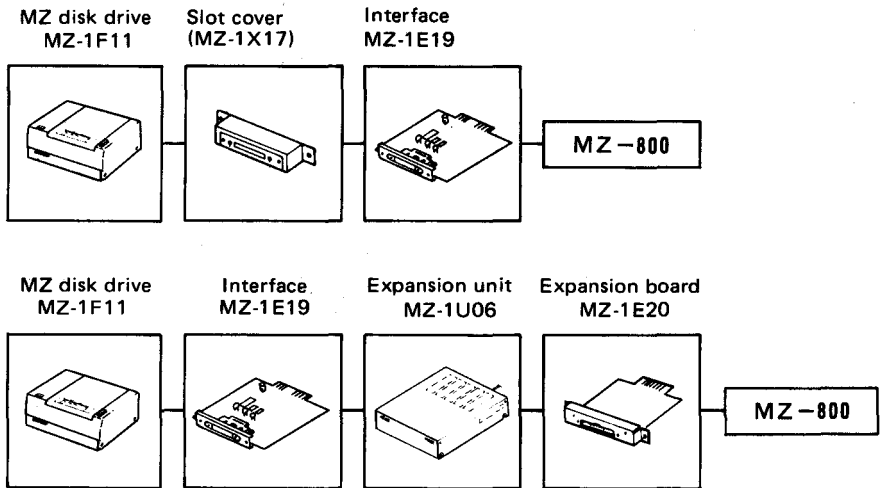
1. This unit consists of precision parts, such as LSI circuits, that can be affected by the operating environment. Do not use the unit in place subject to direct sunlight, extreme change of temperature or high humidity or dust.
2. Do not bump or drop this unit.
3. Be careful not to touch the connector with your hand. Static electricity may destroy certain parts.
4. Special attention must be paid when handling disks. Refer to the MZ-1F11 Instruction Manual for details.
5. We recommend that you make a copy of the original master disk and use the copy. Store the original master disk in a safe place. (Refer to the MZ Disk BASIC Manual included with this unit for the procedure for copying a disk.)

## Care of Disk

1. Note the precautions printed on the envelope when using disks.
2. Always be sure to insert the disk in its envelope and then place it in a storage box.
3. Never place magnets near disks. Doing so will destroy all programs and data written on the disk.

## 1. Overview

The MZ disk interface (MZ-1E19) is an interface between the MZ-800 personal computer and the MZ disk drive (MZ-1F11). There are 2 ways to connect the MZ disk drive to the MZ disk interface:



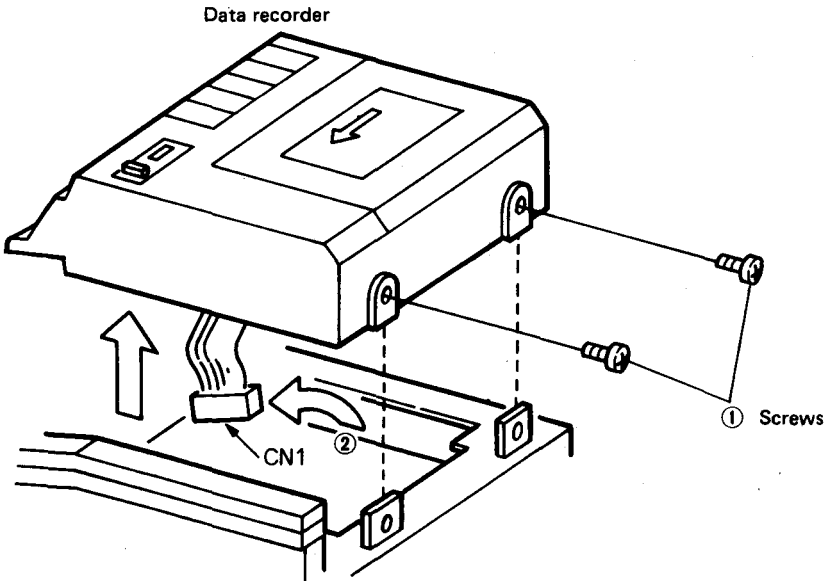
When you use the MZ-1F11, refer to the MZ DISK BASIC manual included.

## 2. Connection

Follow the procedures below to connect the MZ-800 personal computer and the MZ disk drive.

### 1) Removing the Data Recorder

- (1) Turn off the power switch of the MZ-800 and pull out the power plug. Remove the 2 screws securing the data recorder on the left rear side of the MZ-800. Lift up the data recorder. (See Fig. 1)
- (2) Disconnect connector CN1 (connected to the data recorder by cable) from the main board of the MZ-800. (See Fig. 1)



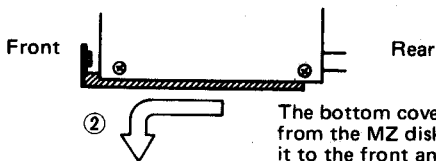
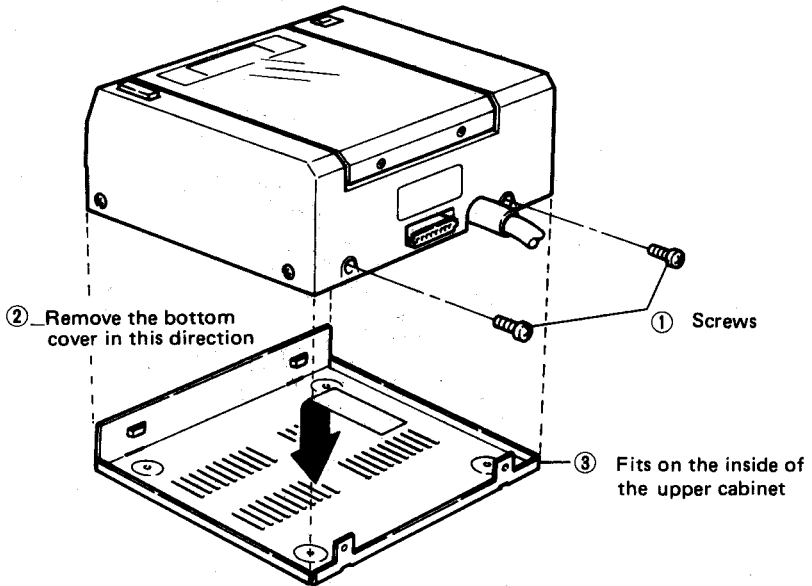
(Fig. 1)

### Notes:

- \* If there is a cover instead of a data recorder, remove the cover.
- \* If the data recorder is also to be used, connect it to the connector on the MZ-1F11. (For details see 3-3 Connecting the Data Recorder.)

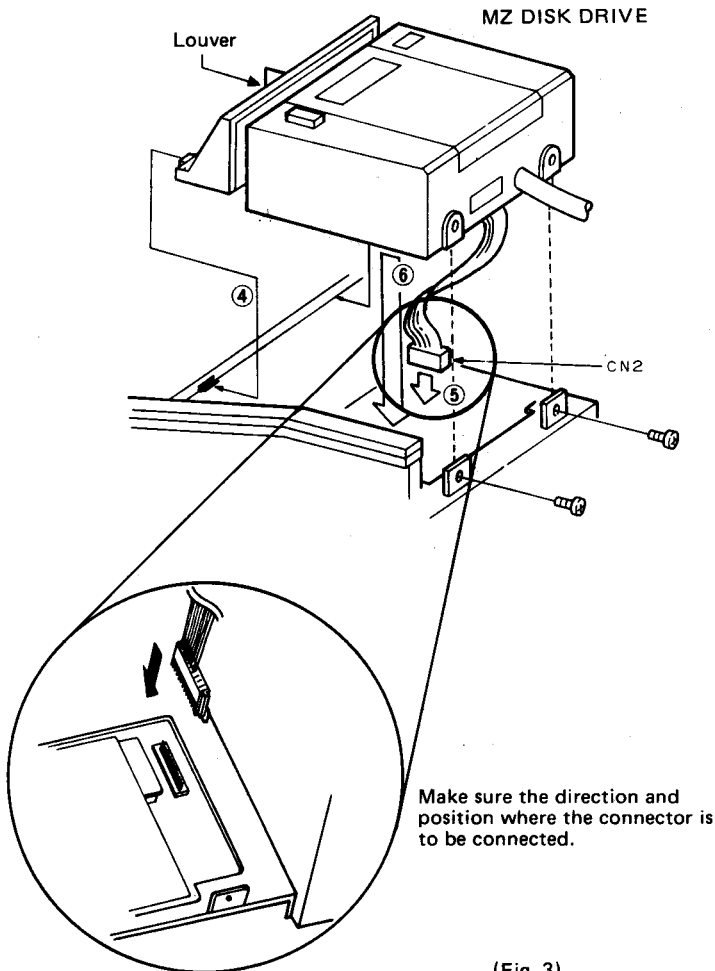
## 2) Mounting the MZ Disk Drive (MZ-1F11)

- (1) Remove the 2 screws securing the bottom cover on the lower rear side of the MZ-1F11.
- (2) The bottom cover can be removed by pulling it to the front and then downward.
- (3) The removed bottom cover now becomes the bottom cover for the data recorder. (See 3-3 Connecting the Data Recorder.)



(Fig. 2)

- (4) Fit the tabs on the front of the louver (accessory) into the holes on the MZ-800 cabinet.
- (5) Connect connector CN2 (coming out from the bottom of the MZ-1F11) to the connector on the main board of the MZ-800 where data recorder connector CN1 was connected. (See Fig. 3)
- (6) Check that the louver is secured. Position the MZ-1F11 to where the data recorder was mounted and secure it using the screws which mounted the data recorder. (See Fig. 3)



(Fig. 3)

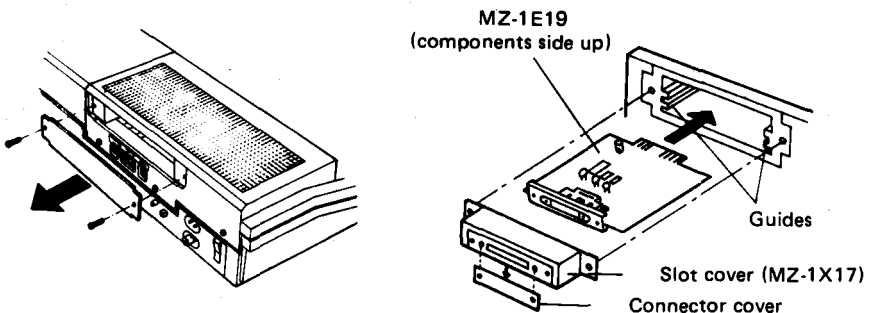
### 3. Connecting to the MZ-800

As explained in the overview, there are 2 ways to connect the MZ-800 and MZ disk drive through the interface (MZ-1E19). Section 3-1 describes one way by inserting the interface card into the expansion slot in the MZ-800 and section 3-2 describes the other way by inserting the interface card into the expansion unit (MZ-1U06).

**Note:** Be sure to turn off the power switch of the MZ-800 as well as its peripherals and pull out their power plugs.

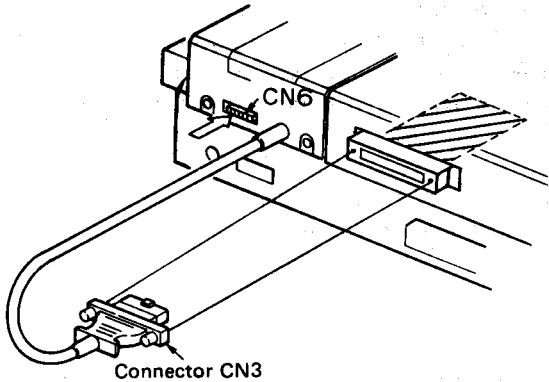
#### 3-1 Installing the Interface Card into the Expansion Slot

- (1) Remove the cover covering the expansion slot on the rear of the MZ-800.
- (2) Insert the interface card (with the components side up) into the slot. Follow the guides on the left and right of the slot. (Insert the card all the way into the connector at the end of the slot.)
- (3) Remove the connector cover from the slot cover (MZ-1X17). Attach the slot cover to the MZ-800 and secure with 2 screws. Use the 2 screws which were removed when taking off the expansion slot cover. Fasten the MZ-1E19 with the 2 screws removed when taking off the connector cover.



(Fig. 4)

- (4) Insert the connector from the MZ-1F11 into the slot. Connect it to the connector on the interface card, and secure with the 2 attached screws.

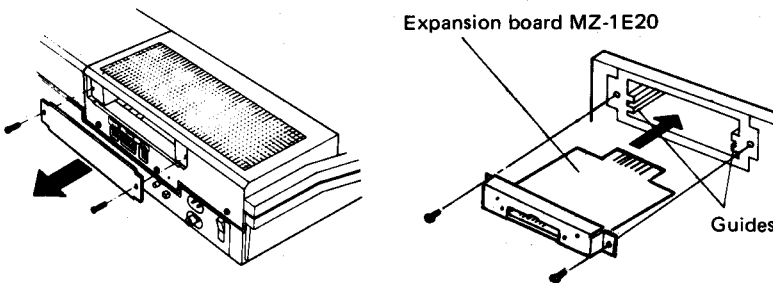


(Fig. 5)

This completes the connection of the MZ-1F11 and the MZ-800 through the interface card (MZ-1E19).

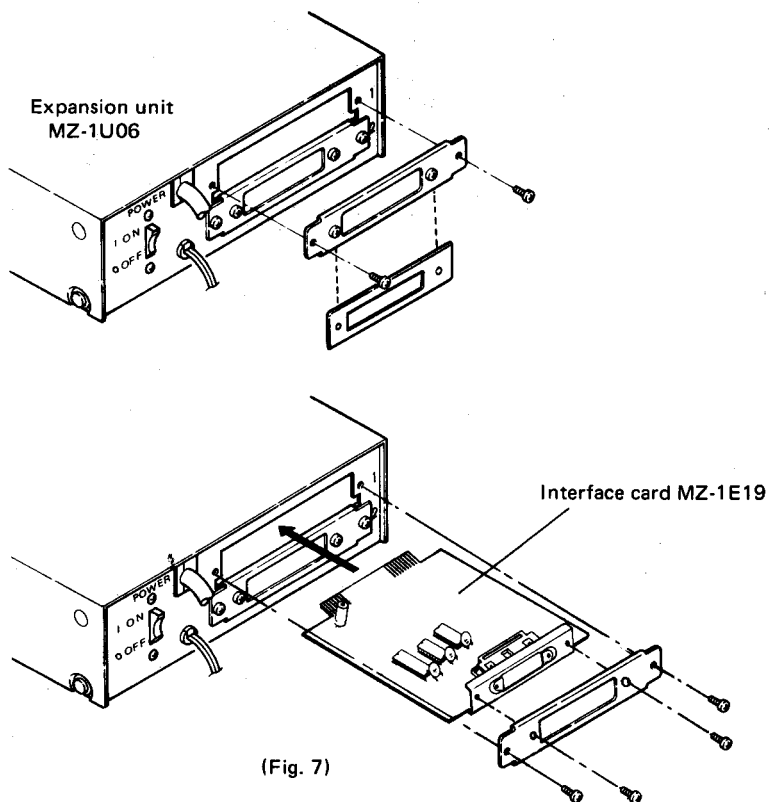
### 3-2 Connecting with the Expansion Unit (MZ-1U06)

- (1) Remove the cover covering the expansion slot on the rear of the MZ-800.
- (2) Insert the expansion board (MZ-1E20) into the slot. Follow the guides on the left and right of the slot. (Insert the card all the way into the connector at the end of the slot.)
- (3) Use the 2 screws (which held the slot cover) to secure the expansion board to the MZ-800.



(Fig. 6)

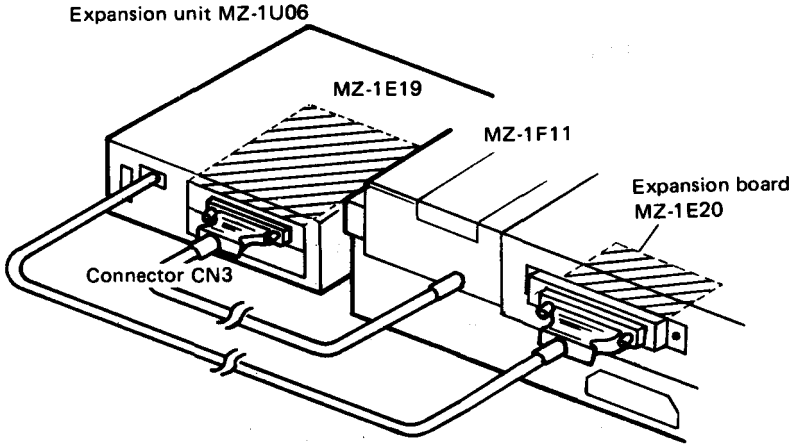
- (4) Remove the cover covering slot number 1 or slot number 2 on the expansion unit (MZ-1U06) and install the interface card (MZ-1E19). Insert the card along the guides on the left and right of the slot. (Insert the card all the way into the connector at the end of the slot.)
- (5) After removing the connector cover, reattach the cover with the 2 screws. Fasten the MZ-1E19 with the two screws removed when taking off the connector cover.



- (6) Connect the connection cable from the MZ-1F11 to the interface connector installed in the expansion unit. Secure both ends of the connector with screws.



- (7) Connect the connection cable from the expansion unit to the expansion board (MZ-1E20) installed in the expansion slot of the MZ-800. Secure both ends of the connector with the 2 screws.



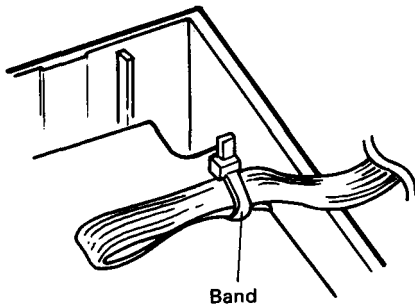
(Fig. 8)

This completes the connection of the MZ-800 and the MZ-1F11 using the expansion unit.

### 3-3 Connecting the Data Recorder (See Figs. 5 and 8)

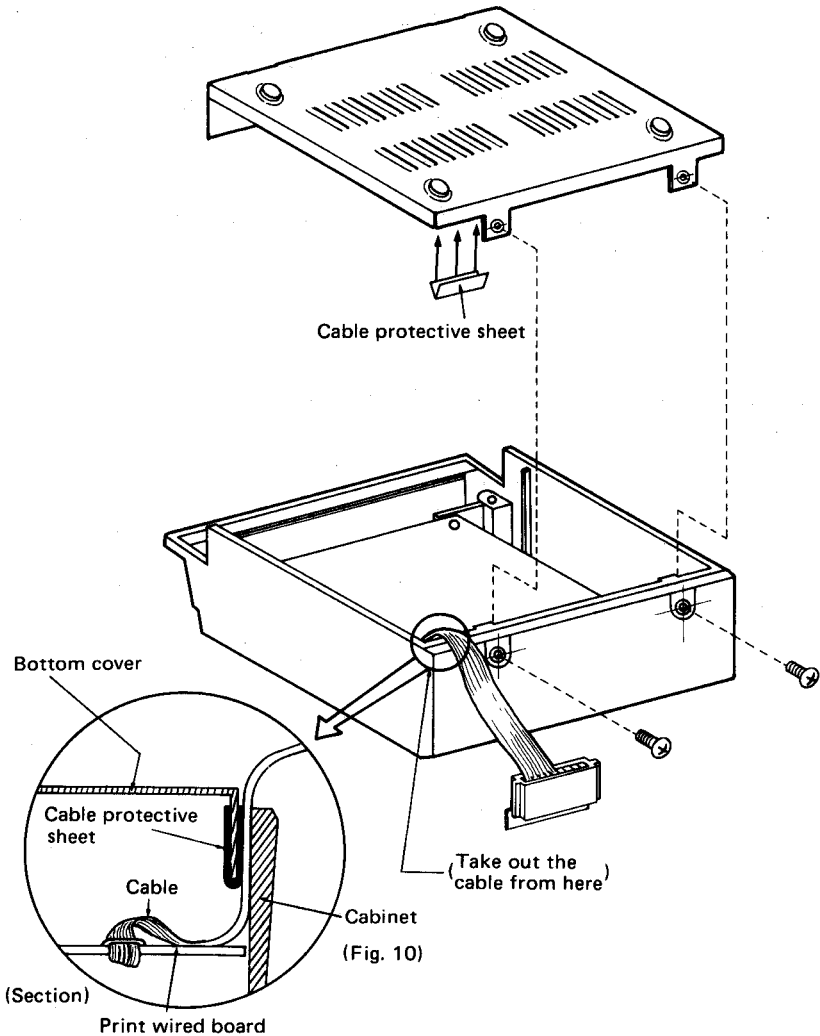
The removed data recorder can still be connected as a stand-alone unit.

- \* To lengthen the cable  
Cut and remove the band holding the connector cable on the bottom of the data recorder. Be sure not to cut the cable.

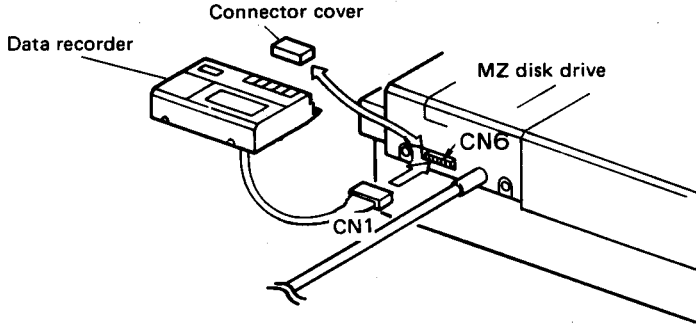


(Fig. 9)

- (1) Stick the provided cable protective sheet on the bottom cover removed when installing the MZ-1F11 to the main unit (see Fig. 10).
- (2) Install the bottom cover with the cable protective sheet to the data recorder. Be sure to take out the cable from the narrow opening between the cabinet and the bottom cover by sliding it along the inside of the cabinet (see Fig. 10-1).
- (3) Fasten the both lower sides of the rear part with the two screws removed when taking off the bottom cover of the MZ-1F11.



- \* Remove the connector cover from connector CN6 on the rear of the MZ-1F11 and connect cable CN1 from the data recorder.



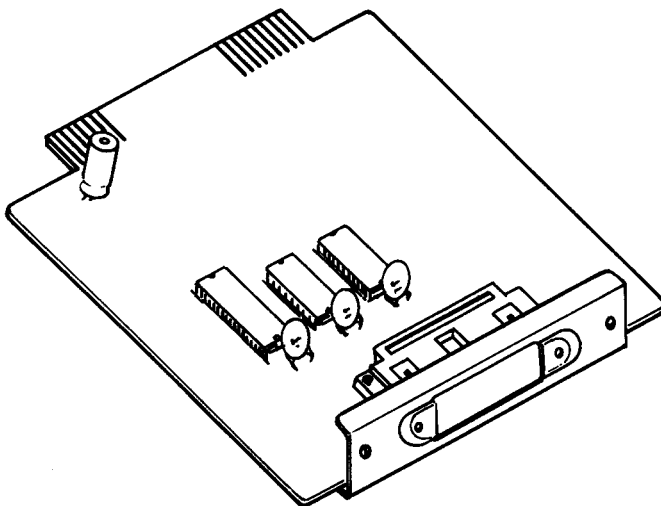
(Fig. 11)

This completes the connection procedures. Check your connections, turn on the power, and check the operation.

### 3-4 Using the MZ-1F11 as a Stand-Alone Unit

The MZ-1F11 can be used (with the MZ-1E19) without being mounted on the MZ-800. To use it in this manner, install the MZ-1E19 into the expansion slot or into the MZ-1U06 expansion unit without removing the data recorder. Connector CN3 can be connected to the MZ-1E19 without removing the bottom cover of the MZ-1F11.

## 4. External View and Pin Description of the Connector



Slot side

A		B	
+5V	1	+5V	
D2	2	D3	
D1	3	D4	
D0	4	D5	
GND	5	D6	
(A15)	6	D7	
(A14)	7	$\phi$	
(A13)	8	$\overline{M1}$	
(A12)	9	$\overline{WR}$	
(A11)	10	$\overline{RD}$	
(A10)	11	$\overline{IORQ}$	
(A9)	12	$\overline{MREQ}$	
(A8)	13	GND	
A7	14	$\overline{(HALT)}$	
A6	15	$\overline{(IEI)}$	
A5	16	$\overline{(IEO)}$	
A4	17	RESET	
A3	18	$\overline{(EXRESET)}$	
A2	19	$\overline{(EXINT)}$	
A1	20	$\overline{(EXWATT)}$	
A0	21	$\overline{(NMI)}$	
GND	22	GND	

MZ-1E19  
 A : COMPONENT  
 SIDE  
 B : PATTERN SIDE  
 ( ) : NO USED

CN1  
 HU-20P (TO MZ Disk)

A		B	
25	+5V	26	GND
23	S1	24	$\overline{CE}$
21	$\overline{RESET}$	22	SO
19	$\phi$	20	$\overline{RD}$
17	$\overline{M1}$	18	$\overline{IORQ}$
15	D7	16	GND
13	D6	14	GND
11	D5	12	GND
9	D4	10	GND
7	D3	8	GND
5	D2	6	GND
3	D1	4	GND
1	D0	2	GND

(Fig. 12)

## 5. Specifications

Model:	MZ-1E19
Operating Voltage:	+5 VDC $\pm$ 5%
Operating Temperature:	10°C – 35°C
Operating Humidity:	20% – 80% (no condensation)
Number of ICs Used:	3
External Dimensions:	116(W) x 144(D) x 19(H) mm
Weight:	85 g (without accessories)
Accessories:	Master Disks (2)

### Disk 1

Side A: MZ-800 Disk BASIC

Side B: MZ-800 Utilities (COPY, DELETE, TRANS)

### Disk 2

Side A: MZ-700 Disk BASIC + Demonstration Software  
x 2 (for MZ-700)

Side B: Demonstration Software x 1 (for MZ-800)

Instruction Manuals (2)

Louwer

Cable Protective Sheet

**SHARP CORPORATION**  
**OSAKA, JAPAN**

Printed in Japan  
Gedruckt in Japan  
Imprimé au Japon  
Stampato in Giappone  
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4J7.5-1-0 TINSE1225ACZZ