

SHARP

Expansion Unit

MODEL **MZ-1U06**

INSTRUCTION MANUAL



FOREWORD

Thank you for your purchase of the SHARP Expansion Unit, MZ-1U06. 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 problem arise.

By connecting this unit to the computer, you can add various types of interface boards.

PRECAUTIONS

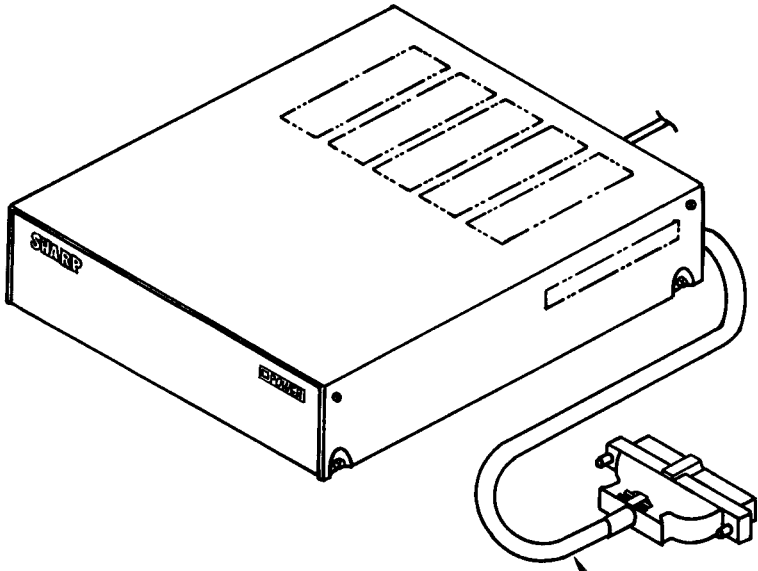
- (1) Take care not to pinch the power cord under your desk or a chair leg; relocate the cord so it does not get damaged. Hold the power cord by the plug molding when disconnecting it.
- (2) To reduce the internal temperature of this unit, ventilation holes are provided in the cabinet. Install the unit in a well ventilated place, and make sure that you do not cover the ventilation holes (e.g., with a cloth), or operate the unit on a carpeted surface.
- (3) Do not leave this unit in a humid place, such as the bathroom or kitchen, or in a dusty place. If the unit is exposed to excessive humidity or dust, a malfunction could occur.
- (4) Do not leave this unit exposed to direct sunlight or near a heater. Otherwise, you may damage the cabinet or some internal parts.
- (5) Avoid dropping liquids, or metallic objects such as needles or pins, into the unit. The results of doing this can be very dangerous.
- (6) This unit is manufactured from precise electronic parts. Do not subject the case to any type of impact such as dropping the unit, or hitting it against a hard surface. Doing this could cause a malfunction.
- (7) Unplug the power cord from the outlet if you are not going to use the unit for a long time.
- (8) To clean the case, wipe it gently using a soft cloth moistened in water or neutral detergent. Cleaning with volatile liquids such as benzine or thinner, can cause the color of the case to change.
- (9) Avoid extremely hot or cold locations. Also avoid places subject to sudden changes in temperature, strong vibration, and high dust concentration. Do not stack anything on top of this unit.
- (10) When using this unit in an area subject to lots of noise on the power supply, if the noise causes your unit to malfunction, remedy the problem as described below:
 - ① Filter out the noise from the power supply by using a line noise filter in between your unit and the power outlet.
 - ② Reposition the system signal cables as far away as possible from other electrical devices or power cords.
- (11) Turn on the MZ-1U06 and then turn on the computer.
- (12) Do not turn off the MZ-1U06 when using the computer.

I . OVERVIEW OF THE EXPANSION UNIT (MZ-1U06)

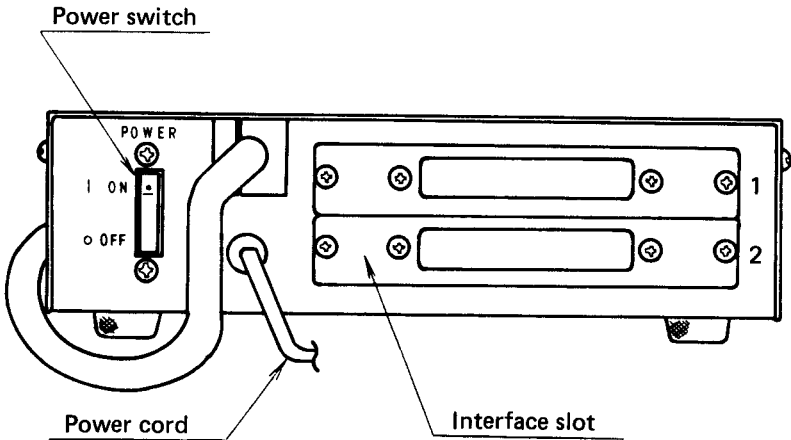
This unit features a buffer function, which buffers the bus output to the various interface boards after receiving the bus signals from the computer.

It consists of a main board, connector board and a +5V power supply unit. The connector board provides 2 connectors for interface boards, and the bus lines to both are connected in parallel.

II . CONSTRUCTION



Connection cable



Power switch

Power cord

Interface slot

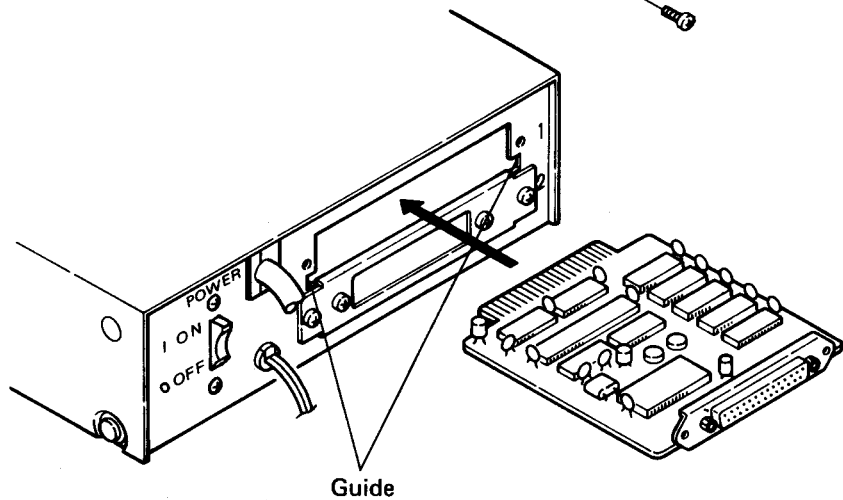
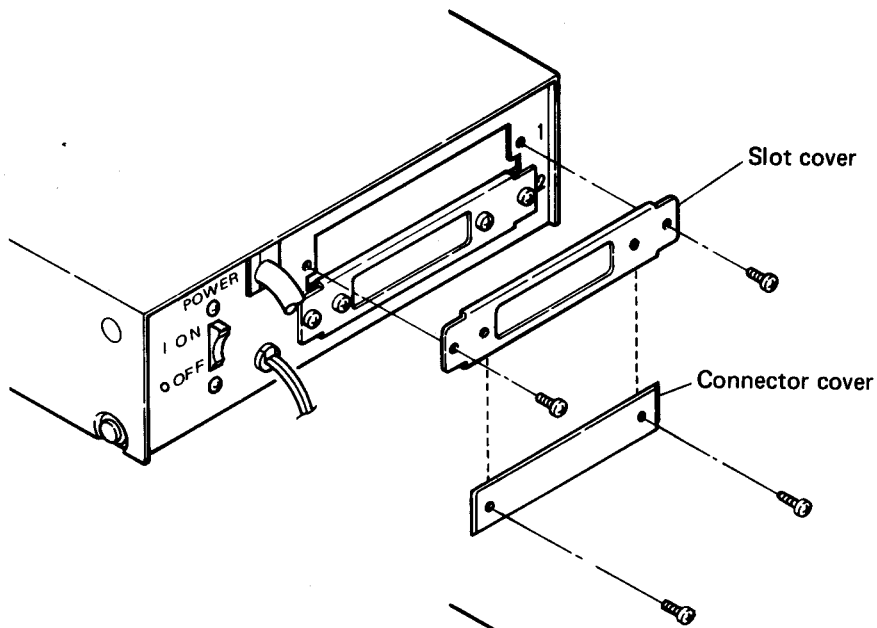
III. INSERTING AN INTERFACE BOARD

Before inserting an interface board, please read the following items first.

- (1) Make sure that you turn off all power to this unit, and the computer and peripheral units.
- (2) Determine the board slot, as you can insert up to 2 interface boards into the expansion unit.
- (3) Remove the slot cover. (You have to reinstall the cover when the expansion board is removed, so please preserve it.)
- (4) Insert the interface board into the slot along the guides with the component side up. Firmly insert the board into the slot connector.
- (5) Remove the connector cover from slot cover.
Replace the slot cover, and then replace the four screws.

For details, see the manual attached to the interface to be installed.

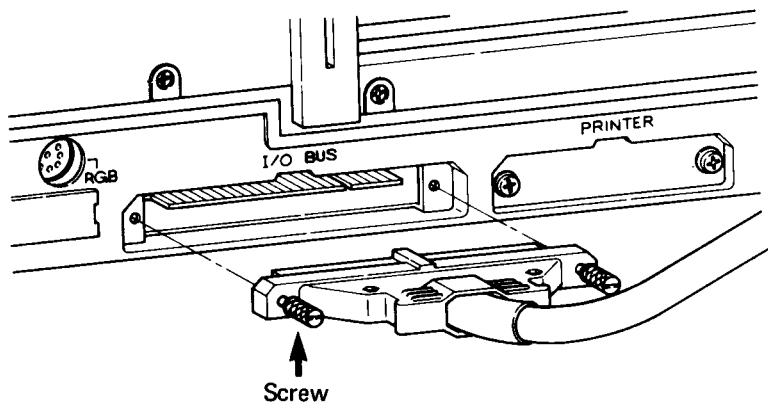
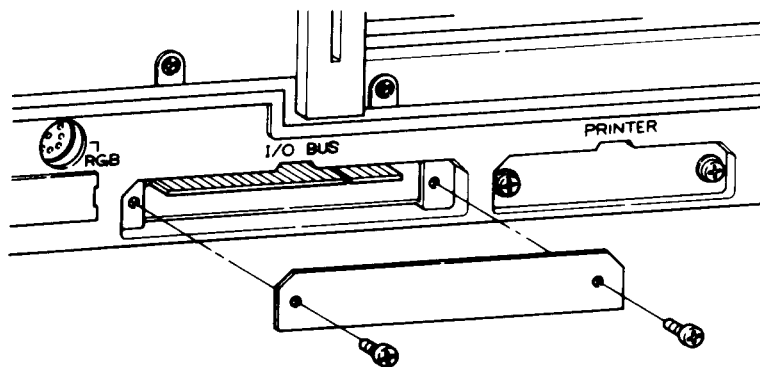
- NOTES:**
- 1) Be careful not to insert 2 boards with the same interface. If the same interface boards are inserted, the bus driver ICs will be damaged because the matching port addresses.
 - 2) Malfunctions caused by universal interface boards or altered circuit boards, cannot be repaired under guarantee. The correct interface boards must be used, since they are properly designed and inspected, and are specifically produced for use with this equipment.



IV. CONNECTION TO THE MZ-700 SERIES

To connect the Expansion Unit to the MZ-700 Series, follow the procedures described below:

- (1) Turn off all power to the Expansion Unit, and the MZ-700 main and peripheral units.
- (2) Attach the connection cable from this unit to the external device connector (I/O BUS) located on the rear panel of the MZ-700 main unit. To connect the cable, the connector must be the right way up.
- (3) Secure the connector to the main unit with screws supplied on the connector.



NOTE: You have to reinstall the screws and connector cover when the connector is removed, so please preserve it.

V . SPECIFICATIONS

(1) For pin assignment of the connection cable terminal and the interface board connector terminal, see page 8 , "CONNECTOR SIGNALS".

(2) Auto-reset circuit

This circuit generates a reset pulse of 3 ms or longer whenever the power is turned on. The outputs of the auto-reset signal and the reset signal from the computer main unit are ORed together.

(3) Physical specifications

- Dimensions: 220 (W) x 264 (D) x 68 (H) mm
- Weight: 2.7kg

(4) Environmental conditions

- Operating temperature: 0°C to 35°C
- Storage temperature: -15°C to 60°C
- Operating humidity: 85 % or less
- Storage humidity: 85 % or less

(5) Power supply conditions

- Input power source: Local AC voltage ± 10 %, 50/60 Hz
- Internal power supply: Max. current capacity of 2.5 A at +5 V
- Power consumption: 25 W (when 2 interface boards are inserted.)

VI. CONNECTOR SIGNALS

Connection cable connector

| Top side | No. | Bottom side |
|------------|-----|-----------------------------|
| D 0 | 1 | GND |
| D 1 | 2 | GND |
| D 2 | 3 | GND |
| D 3 | 4 | GND |
| D 4 | 5 | GND |
| D 5 | 6 | GND |
| D 6 | 7 | GND |
| D 7 | 8 | GND |
| BUS ϕ | 9 | GND |
| A 0 | 10 | RESET |
| A 1 | 11 | $\overline{\text{EXRESET}}$ |
| A 2 | 12 | $\overline{\text{HALT}}$ |
| A 3 | 13 | GND |
| A 4 | 14 | $\overline{\text{M 1}}$ |
| A 5 | 15 | $\overline{\text{EXWAIT}}$ |
| A 6 | 16 | $\overline{\text{W R}}$ |
| A 7 | 17 | GND |
| A 8 | 18 | $\overline{\text{R D}}$ |
| A 9 | 19 | GND |
| A10 | 20 | $\overline{\text{IORQ}}$ |
| A11 | 21 | GND |
| A12 | 22 | $\overline{\text{MREQ}}$ |
| A13 | 23 | GND |
| A14 | 24 | $\overline{\text{INT}}$ |
| A15 | 25 | |

Interface board connector

| Top side | No. | Bottom side |
|----------|-----|-----------------------------|
| Vcc | 1 | Vcc |
| D 2B | 2 | D3B |
| D 1B | 3 | D4B |
| D 0B | 4 | D5B |
| GND | 5 | D6B |
| A15B | 6 | D7B |
| A14B | 7 | BUS ϕ B |
| A13B | 8 | $\overline{\text{M1B}}$ |
| A12B | 9 | $\overline{\text{WRB}}$ |
| A11B | 10 | $\overline{\text{RDB}}$ |
| A10B | 11 | $\overline{\text{IORQB}}$ |
| A 9B | 12 | $\overline{\text{MREQB}}$ |
| A 8B | 13 | GND |
| A 7B | 14 | $\overline{\text{HALTB}}$ |
| A 6B | 15 | IEI |
| A 5B | 16 | IEO |
| A 4B | 17 | RSTB |
| A 3B | 18 | $\overline{\text{EXRSTB}}$ |
| A 2B | 19 | $\overline{\text{INTB}}$ |
| A 1B | 20 | $\overline{\text{EXWAITB}}$ |
| A 0B | 21 | |
| GND | 22 | GND |

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