EPSON

PX-16 OPTION
DISK UNIT

PX-16 OPTION
LAUFWERK

PX-16
BOITIER DE LECTEUR

OPCION DEL PX-16
UNIDAD DE DISCO

OPZIONE PER PX-16
UNITÀ DISCO

HC-160 オプション
ディスクユニット 取扱説明書

Trademark Acknowledgements

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OPERATING INSTRUCTIONS

Overview

The Disk unit attaches to the bottom of the PX-16 Base Unit and is connected to the system via the system bus. The Disk unit contains 3.5″ 720 KB FDD and/or 3.5″ 20MB HDD. The following 3 Disk unit types are available.

Type 1 : contains one 3.5″ 720 KB FDD
Type 2 : contains two 3.5″ 720 KB FDDs
Type 3 : contains one 3.5″ 720 KB FDD and one 20MB 3.5″ HDD

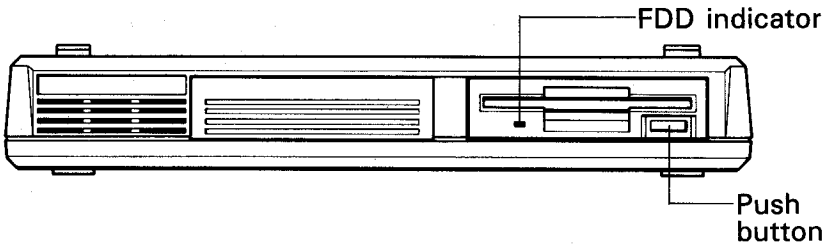This document describes how to attach and remove the Disk unit.

In addition to this document, the Disk unit package should contain the following items:

```
Disk unit ........................ 1
Cable ............................ 1
Metal cover ................... 2
Screws ......................... 4
Drive name label sheet..... 1 (Attach these labels near the drive
                                to indicate the drive name)
```

Operating Components
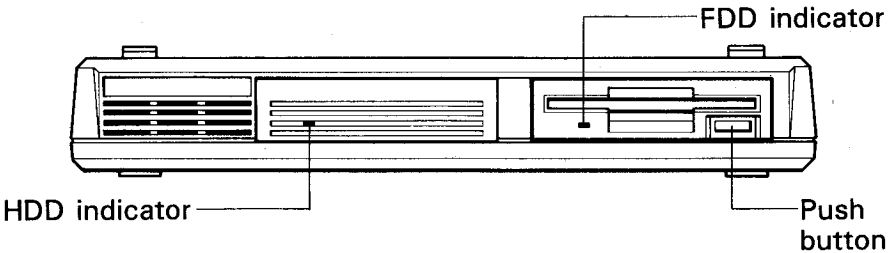
1. Front view
   A. Type 1

FDD indicator

Push button

   B. Type 2

FDD indicator

Push button

   C. Type 3

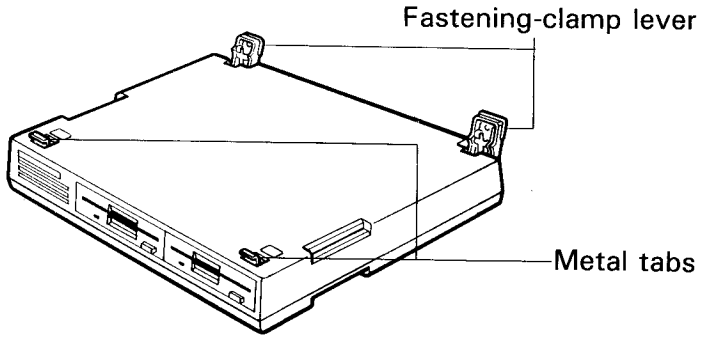

FDD indicator

HDD indicator

Push button
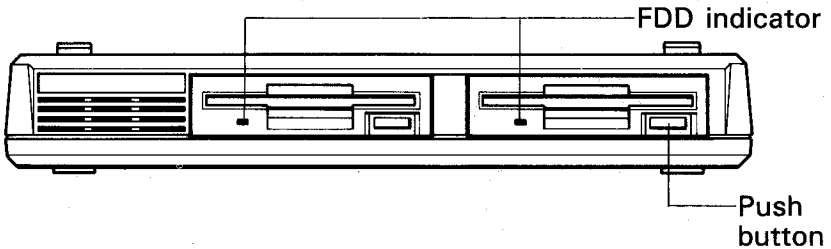
The meaning of the drive LED indicators differs between FDD and HDD.

FDD indicator: indicates Floppy Disk is being accessed.

HDD indicator: indicates HDD is active. (The head is not in the shipping zone.) The head of the HDD automatically moves to the shipping zone whenever more than 5 seconds have elapsed since the last access.

2. Top view

Fastening-clamp lever

Metal tabs

3. Rear view

Connector: To connect
enclosed
cable
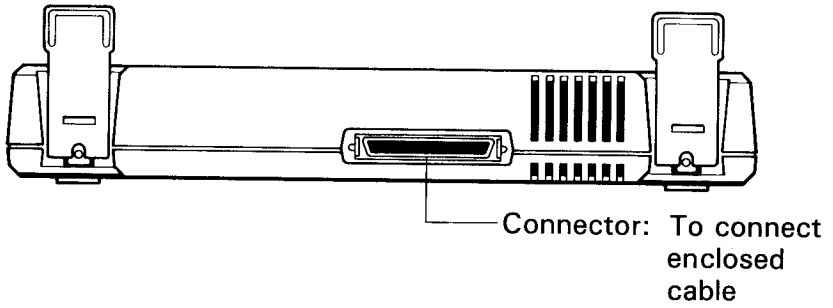
Attaching the Disk unit

To attach the Disk unit, perform the following steps.

1. Confirm that the power indicator on the Base unit is OFF. If the power is ON, turn off the power switch at the right side of the PX-16 Base unit.

2. Turn the Base unit over. Place the metal cover on the bottom of the Base unit, and align it with the screw holes as shown below. Insert and tighten the 4 screws to secure the metal cover.

Metal cover

Holes
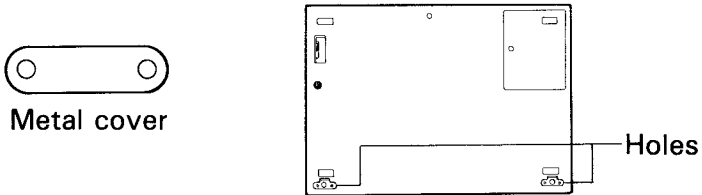
3. If an option is attached to the Cartridge 1 interface, remove the option. (Please refer to the "Operating instructions" of that option.)

4. Set Dip switch (SW5) next to the cartridge 1 interface according to the model of the Disk unit and desired boot type. The dip switches relating the Disk unit are 7, 9, and 10. Note that the drive names are determined by the DIP switch settings.

Dip switch			Boot type	Type 1	Type 2		Type 3	
7	9	10		FDD name	Left FDD name	Right FDD name	Left HDD name	Right FDD name
OFF	OFF	OFF	HC boot without FDD/HDD	X	X	X	X	X
OFF	OFF	ON	HC boot FDD preference 2FDD	A	B	A	C	A
OFF	ON	OFF	HC boot RAM preference 2FDD	G	H	G	I	G
OFF	ON	ON	PC boot 2FDD	A	B	A	C	A
ON	OFF	OFF	HC boot without FDD/HDD	X	X	X	X	X
ON	OFF	ON	HC boot FDD preference 1FDD	A,B	X	A,B	C	A,B
ON	ON	OFF	HC boot RAM preference 1FDD	G,H	X	G,H	I	G,H
ON	ON	ON	PC boot 1FDD	A,B	X	A,B	C	A,B

X means that the drive cannot be accessed.

— 4 —

Usually the setting of the DIP switch will be in one of the = frames according to the boot type.

Please refer to the PX-16 Base Unit operating instructions for detailed information about the DIP switch.

5. Re-attach the Cartridge 1 interface option if you removed one in step 3.

6. Place the Base unit on the Disk unit as shown in the following figure. Be sure to insert the metal tabs into holes on the bottom of the Base unit.
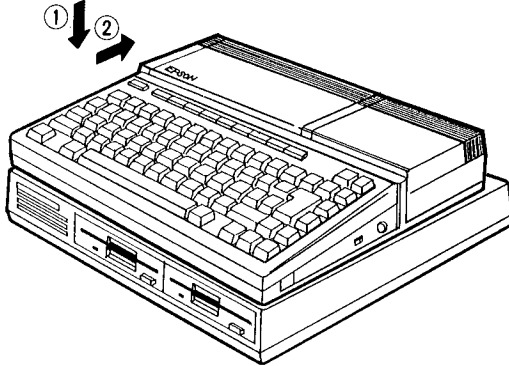
7. Push the fastening-clamp lever of the Disk unit in the direction of the arrow shown below. The Disk unit should now be firmly attached to the Base unit. If the Disk unit is loose, verify that the metal tabs have been inserted in the slots in the bottom of the Base unit.
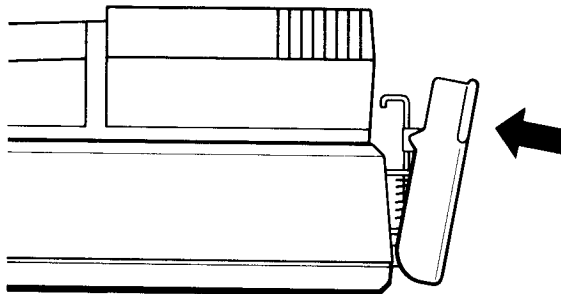

8. Connect the Disk unit to the system bus on the Base unit with enclosed cable.
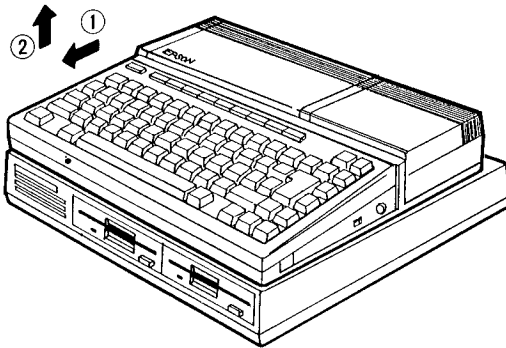
Removing the Disk unit

To remove the Disk unit, perform the following steps.

1. Confirm that the power indicator of the Base unit is OFF. If the power is ON, turn off the power switch at the right side of the PX-16 Base unit.

2. Remove the cable which connects the Disk unit to the Base unit.

3. Pull the fastening-clamp lever in the direction the arrow.
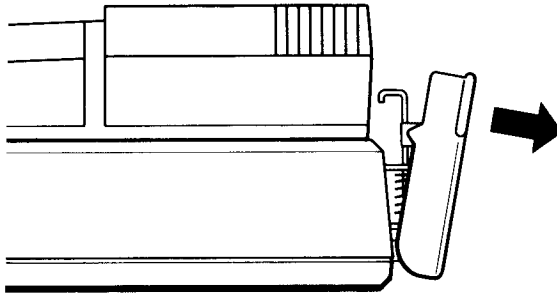
4. Lift up the Base unit slowly as shown in the following figure.

If you wish to remove the keyboard or the RAM board after removing the Disk unit, you will first have to remove the metal covers from the bottom of the Base unit.

How to install the HDD

The HDD of Disk unit type 3 is physically formatted, but not logically formatted. You must perform a logical format before the disk can be used. Please perform the following process to install the HDD.

1. Connect the AC adapter to the Base unit and charge the NiCd battery of the Disk unit for 15 hours.

2. Set DIP switch (SW5) of the Base unit to the "HC boot with FDD/HDD, RAM preference" or "HC boot with FDD/HDD, FDD preference" as follows.

DIP switch		Boot type	HDD drive name	ROM 0 (System ROM) drive name
9	10			
ON	OFF	HC boot with FDD/HDD RAM preference	I	B
OFF	ON	HC boot with FDD/HDD FDD preference	C	E

3. Turn on the power to the Base unit, and boot the System.

4. Change the current drive to ROM 0 (System ROM) and type "FDISK [Ret]" to start the FDISK.EXE utility. The following screen appears.

```
FDISK OPTIONS

Choose one of the following:

1. Create DOS Partition.
2. Change Active Partition.
3. Delete DOS Partition.
4. Display Partition Data.
```

Select "1 [Ret]". The screen displays the message shown below.

```
Do you wish to use the entire fixed
disk for DOS (Y/N)?
```

Type "Y [Ret]". The System will now automatically reset and restart.

5. Change the current drive to ROM 0 (System ROM) again and type the following to start FORMAT.COM.

FORMAT d: [Ret]

   └HDD drive name. "C:" or "I:" (Refer to step 2)

The following message appears on the screen.

```
WARNING, ALL DATA ON NON-REMOVABLE DISK
DRIVE d: WILL BE LOST !
Proceed with Format (Y/N)?
```

Press "Y [Ret]". Then system starts the logical formatting of the HDD. After that you can use the HDD.

Notes

1. The Disk unit is supplied with power from the Base unit via the supplied cable and power ON/OFF is linked with the Base unit. If the power is turned off when the HDD is active, the system automatically ships the head to the shipping zone before shutting off the power. However, to prevent possible damage from sudden power OFF, never turn OFF the power while the FDD/HDD indicator LEDs are lit.

2. Please put the Disk unit flat on a hard surface. Be careful not to bump or drop.

3. The Disk unit has a built in NiCd battery. If you connect the AC adapter to the Base unit when the Disk unit is connected, this battery will begin charging. It is normally fully charged in 15 hours. Type 1 and 2 can run on battery-supplied power. A low battery condition is indicated by a blinking Base unit power LED. Connect the AC adapter immediately when the power indicator of the Base unit starts to blink. For the type 3, the NiCd battery is only used for back up, so the AC adapter is always required. It is also recommended that the AC adapter be used with the type 1 and 2 to prevent an unexpected power failure.

4. If you connect the TF-16 and the Disk unit to the Base unit at the same time, the TF-16 cannot be accessed.

Specifications

1. FDD

    a. Media: 3.5″ 2HD, 2DD, 2DS, 1DD, or 1DS
    b. Number of tracks: 80 tracks/side
    c. Maximum density: 14528 bits/inch (2HD),
                               8717 bits/inch (Others)
    d. Track density: 135 tracks/inch
    e. Disk r.p.m.:   360 r.p.m.
    f. Average access time: 83 ms.
    g. Transfer rate: 500 Kbps (2HD), 300 Kbps
                               (Double density)

2. HDD (Type 3 only)

    a. Format capacity: 21.41 MB
    b. Number of cylinders: 615
    c. Average access time: 85 ms.
    d. Transfer rate: 7.5 Mbits/Sec

3. Operating environment

    a. Temperature: 5 - 35°C
    b. Humidity: 20 - 80% (Non-condensing)
    c. Inclination: Flat on a hard surface
    d. Shock: Max. 5.0 G
    e. Vibration: Type 1, 2 Max. 1.0 G (5 - 500 Hz)
                               Type 3 Max. 0.35 G (5 - 500 Hz)

4. Outer measurements

    315mm (Width) × 236mm(Depth) × 48mm(Height)
    (Not including fastening-clamp lever)

5. Weight

    Type 1: Approx. 2.4 kg
    Type 2: Approx. 3.0 kg
    Type 3: Approx. 3.5 kg

Note: Specifications are subject to change without notice.