Appendix: Installing storage devices (for service engineers)

This appendix explains how to install storage devices (ATA hard disk, CD-ROM drive, Zip drive, etc.) in the MPC4000.

Check the included items

The following items are included with the MPC4000 for use when installing storage devices. Check to make sure that no items are missing.

■ Cables
- Flat cable for ATA drive
- Power cable for drive (without ferrite core)
- Power cable for drive (with ferrite core)
- Analog audio cable for CD-ROM
- Digital audio cable for CD-ROM
- Drive Mount Bracket (S)
- Drive Mount Bracket (L)

■ Other items
- Screws (inch) for attaching hard disk (4 pcs.)
- Screws (metric) for attaching hard disk (4 pcs.)
- Screw hole plugs (4 pcs.)
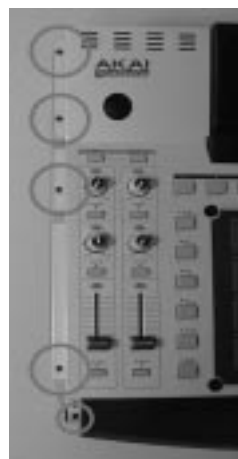- Screws (metric) for attaching Drive Mount Bracket (8 pcs.)

Opening the top panel

When installing a storage device, use the following procedure to open the top panel of the MPC4000.

1. Loosen the screws that fasten the side panels (four on each side, left and right), and remove the side panels.

2. Remove the screws (five on each side, left and right) that fasten each side of the top panel to the chassis.

3. **Remove the screw (located in the center of the front panel) that fastens the top panel from the lower front side.**

4. **Remove the screw (located in the center of rear panel) that fastens the top panel from the rear side.**

5. **Use both hands to lift the protrusion on the front of the top panel, and open the top panel.**

6. **Use a metal rod or similar object as a prop inside the chassis to hold up the top panel.**
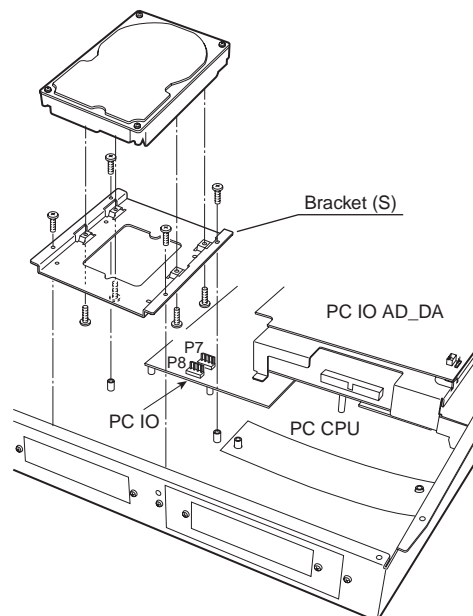

- The side panels and screws you removed must be kept in a safe place.
- To close the top panel, re-tighten the screws in the opposite order to which they were removed.
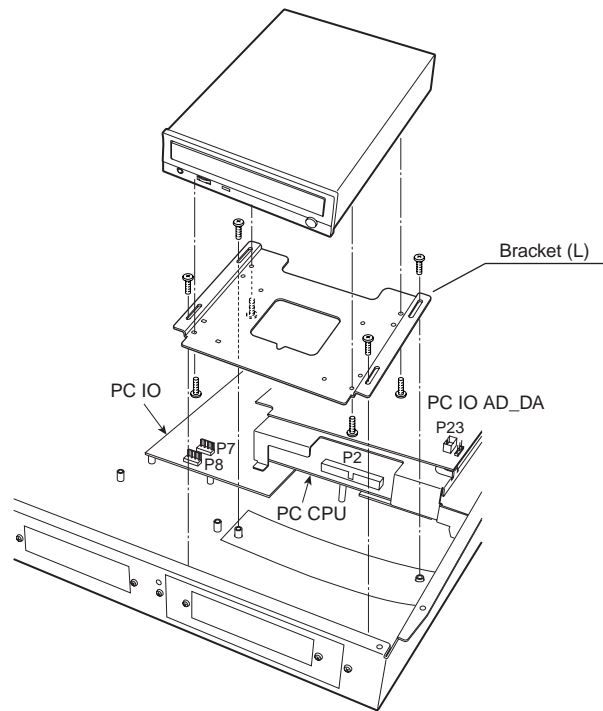
Installing a drive

1. **If you are installing a removable-media drive such as a CD-ROM drive or Zip drive, remove the blank panel from the front panel.**

2. **Use the hard disk attachment screws (included with the MPC4000) to attach the drive to the bracket, and attach the bracket to the bottom panel of the chassis. Use the bracket in the correct direction (as illustrated or on reverse side) according to the drive mounted.**

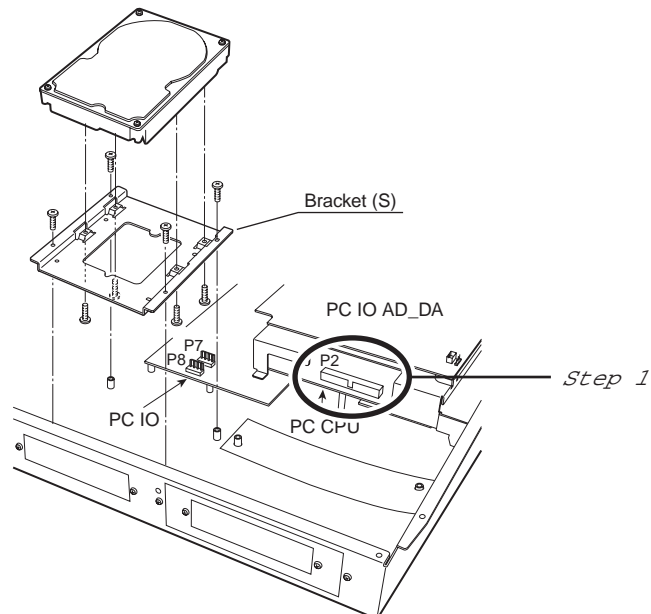   **When installing a drive in the 3.5 inch bay**

When installing a drive in the 5 inch bay

Cable connections

Connecting the flat cable

1. **Remove two screws from the cover that conceals the PC CPU board.**
   When you remove the cover, you will see the P2 connector for the ATA drive.

2. **Insert the blue connector of the included flat cable into the P2 connector of the PC CPU board.**

3. **Reattach the cover that you removed.**

4. **Connect the other end of the flat cable to the drive.**

Connecting the power cable

1. **Insert the connector of the included power cable into the P7 connector or P8 connector of the PC I/O board.**
   Use the power cable with the ferrite core if you are installing a hard disk. Use the power cable without a ferrite core if you are installing a Zip drive or CD-ROM drive.

2. **Connect the other end of the power cable to the drive.**

Connecting the CD-ROM analog audio cable

If the CD-ROM drive has an analog audio output connector, connect it to the MPC4000's circuit board as follows.

1. **Insert the connector of the included CD-ROM analog audio cable into the P23 connector of the PC I/O ADDA board.**

2. **Insert the other end of the CD-ROM analog audio cable into the analog audio output connector of the CD-ROM drive.**
   Make connections so that the red cable goes to R (right channel) and the white cable to L (left channel).

3. **On the PC I/O ADDA board, plug in the P22 jumper (located in front of P23) at the "SET" position.**

Connecting the CD-ROM digital audio cable

If the IB-4D digital I/O option is installed in the MPC4000, connect the digital audio output connector of the CD-ROM drive to the IB-4D as follows.

1. **Insert the connector of the included CD-ROM digital audio cable into the digital audio output connector of the CD-ROM drive.**
   Make connections so that the black cable is the ground.

2. **Insert the other end of the CD-ROM digital audio cable into the P1 connector of the IB-4D digital I/O option.**

3. **On the IB-4D circuit board, plug in the JP1 jumper in the 1-2 (SHORT) position.**
   * If you connect the analog/digital audio cable and make the correct jumper setting, you will be able to select the CD-ROM playback as the recording source in RECORD mode.

Master/slave settings for ATA drives

If you install two drives, you must set one as the master and the other as the slave. (If a hard disk is installed, set the hard disk as the master.)

For details on how to make master/slave settings, refer to the manual that came with your drive.

Installing Memory Board

The memory slots are on the CPU board and their 2 long DIMM sockets are located on the right-hand side of the unit towards the rear.

Insert the memory board securely in the correct direction. When only one memory board is installed, it can be installed on either slot.

The required memory board is 168-pin DIMM (PC133/PC100, CL2).

* 256bit x 8 type DIMM is not supported. 128bit x 16 type is recommended.