AppleCD SC/SC Plus

AppleCD SC
AppleCD SC Plus

Specifications

AppleCD SC/SC Plus

Performance

**Access Time
(Including Latency)**

AppleCD SC
Average: 500 ms (typical)
Maximum (first to last block): 800 ms (typical)

**Data-Streaming
Rate**

AppleCD SC Plus
Average: 380 ms (typical)
Maximum (first to last block): 650 ms (typical)

Block Rate

Mode 1: 150K/sec.
Mode 2: 171K/sec.

Playback Medium

75 blocks/sec.
12 cm optical disc installed in a CD caddy (any CD-ROM or audio
    compact disc is compatible)

SCSI Transfer Rate   AppleCD SC: Approximately 800K/sec.
                              AppleCD SC Plus: Approximately 1.5 MB/sec.

Rotational Speed   Approximately 230–530 rpm

Startup Time   5 sec. (typical; media-dependent)

Spin-Down Time   2 sec. (typical)

Capacity

Data Capacity   Mode 1: 656 MB
                           Mode 2: 748 MB

Recording Surfaces   1

**Data/Block (Available   Mode 1: 2,048 bytes
to User)**   Mode 2: 2,336 bytes

Blocks per Disc   More than 270,000

Audio Playback

Playing Time   More than 1 hr.

Frequency Response   20–20,000 Hz

Environmental

Operating Temperature   50–104°F (10–40°C)

Storage Temperature   -22 to 122°F (-30 to 50°C)

Relative Humidity   10–90% noncondensing

Operating Altitude   -1,000 to 15,000 ft.

**Storage/
Transportation Altitude**   -1,000 to 40,000 ft.

Electrical

Line Voltage   AppleCD SC: 85–270 VAC
                      AppleCD SC Plus: 100–240 VAC

Frequency   Apple CD SC: 47–64 Hz
                      Apple CD SC Plus: 50–60 Hz

Maximum Power   40 W

Physical

Dimensions   Height: 3.31 in. (8.4 cm)
                      Width: 9.69 in. (24.6 cm)
                      Depth: 10.47 in. (26.6 cm)

Weight   8.8 lb. (4 kg)

Troubleshooting

AppleCD SC/SC Plus SC

General

The Symptom Charts included in this chapter will help you diagnose specific symptoms related to your product. Because cures are listed on the charts in the order of most likely solution, try the first cure first. Verify whether or not the product continues to exhibit the symptom. If the symptom persists, try the next cure. (Note: If you have replaced a module, reinstall the original module before you proceed to the next cure.)

If you are not sure what the problem is, or if the Symptom Charts do not resolve the problem, refer to the Flowchart for the product family.

For additional assistance, contact Apple Technical Support.

Symptom Charts

Green power light is
not on

1 Exchange LED board.
2 Exchange power supply.
3 Exchange drive mechanism.

AppleCD SC does not
accept a compact disk

1 Exchange disk (if disk dirty or damaged).
2 Exchange drive mechanism.

Red LED does not light
when you insert the
caddy

1 Exchange drive mechanism.
2 Exchange LED board.
3 Exchange power supply.

Headphone jack does
not operate correctly

1 Exchange headphone board.
2 Exchange drive mechanism.
3 Exchange power supply.

| Volume control does not operate correctly | 1 | Exchange headphone board. |
| | 2 | Exchange drive mechanism. |

Speaker jacks do not operate	1	Exchange drive mechanism.
	2	Exchange rear audio board.
	3	Exchange power supply.

Macintosh cannot mount AppleCD SC	1	Exchange drive mechanism.
	2	Exchange power supply.
	3	Exchange SCSI-device-to-case cable.
	4	Exchange SCSI ID switch.

Eject button does not
operate

1   Run Eject Button Test:
    - Switch off the CD-ROM.
    - Switch on the CD-ROM.
    - Place any CD in the caddy.
    - Insert the caddy into the CD-ROM.
    - Press the eject button.
2   Exchange headphone board.

Take Apart

AppleCD SC/SC Plus

Guidelines

The CD-ROM drive is a mechanical device with moving parts. Rough handling can cause mechanical failures. Follow these guidelines when you handle or repair the CD-ROM drive:

- Keep the drive in the shipping container until you are ready to install it.
- Place the drive on a soft, grounded surface before starting repairs.
- Never transport the drive with a CD-ROM disc or caddy inside.
- Use the original shipping containers when you transport the drive.

Case Top

Case Top

No preliminary steps are required before you begin this procedure.

1 Using a small flat-blade screwdriver, push in the rear tabs and lift the rear of the case top an inch.

2 Using the same screwdriver, push in the side tabs and remove the case top.
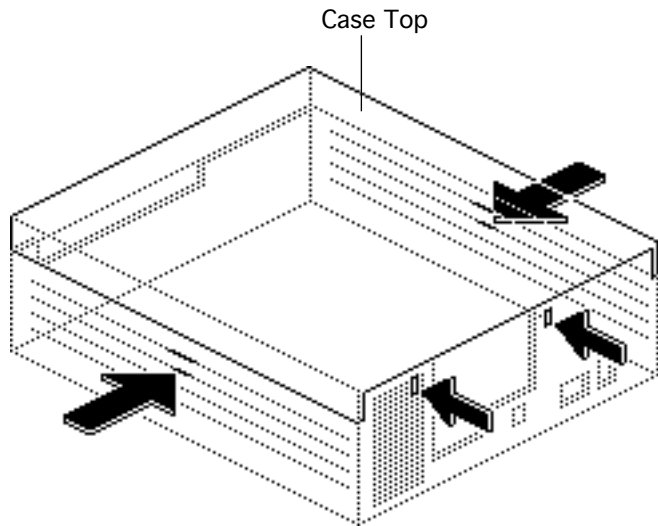
Power Supply

Before you begin, remove the case top.

Caution: Review the ESD precautions in Bulletins/ Safety.

Power Supply
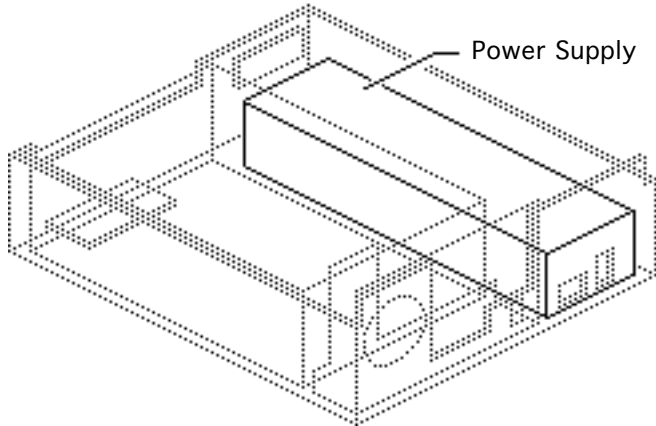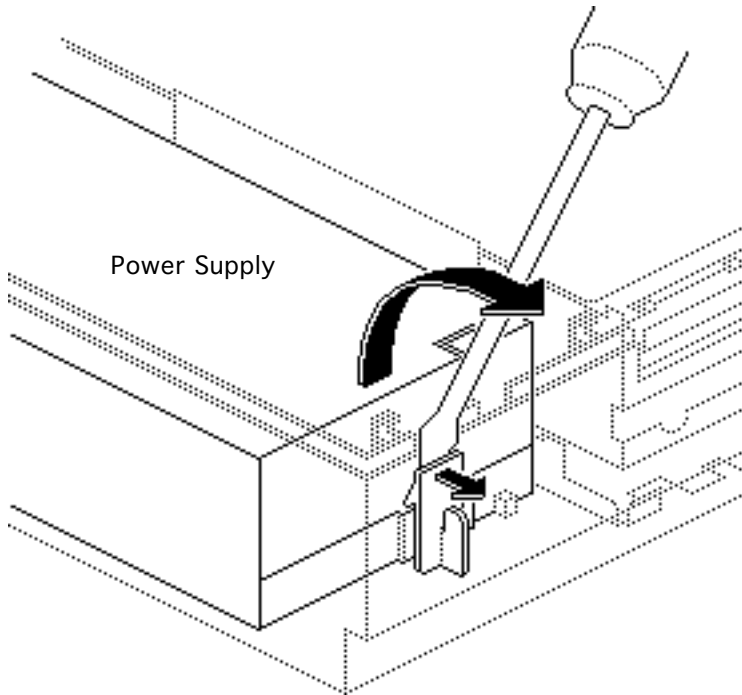
Power Supply

1 Pull the front tab forward and lift the front of the power supply.

2 Slide the power supply forward to disengage it from mounting tabs at the rear of the case.

Fan Cable

Power Supply

Power Supply Cable
(to CD-ROM drive)
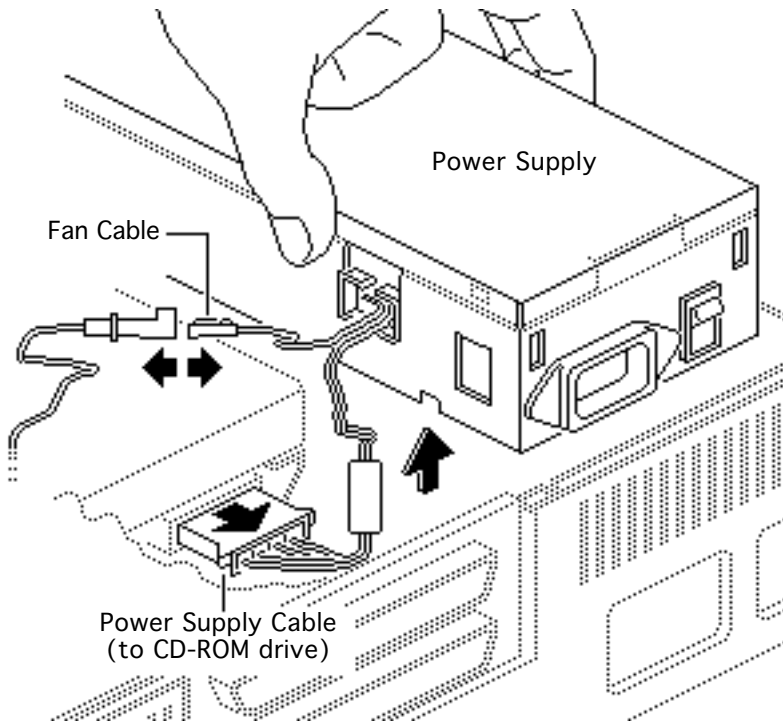
3 Lift out the power
supply and disconnect
the following cables:
- Fan cable (if
necessary)
- Power supply cable
from the CD-ROM
drive

Replacement Note: After
servicing the unit, do not
reconnect the fan cable
to the power supply.
Using the fan
contaminates the lens
with dust. See "Disable
Fan" in Additional
Procedures.

LED Board

LED Board

Before you begin, remove the case top.

Caution: Review the ESD precautions in Bulletins/Safety.

LED Shield
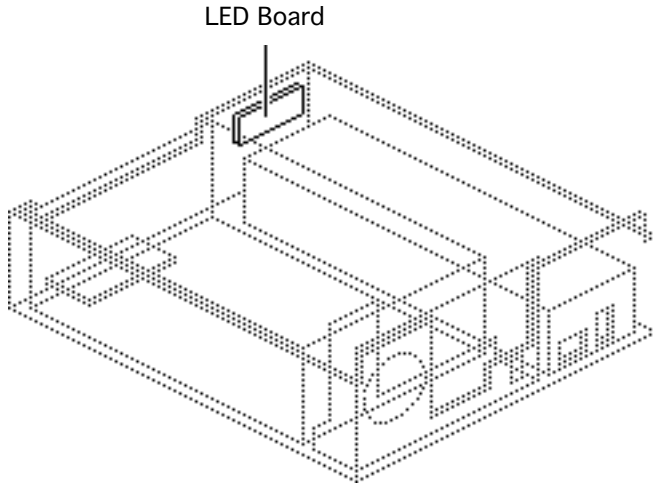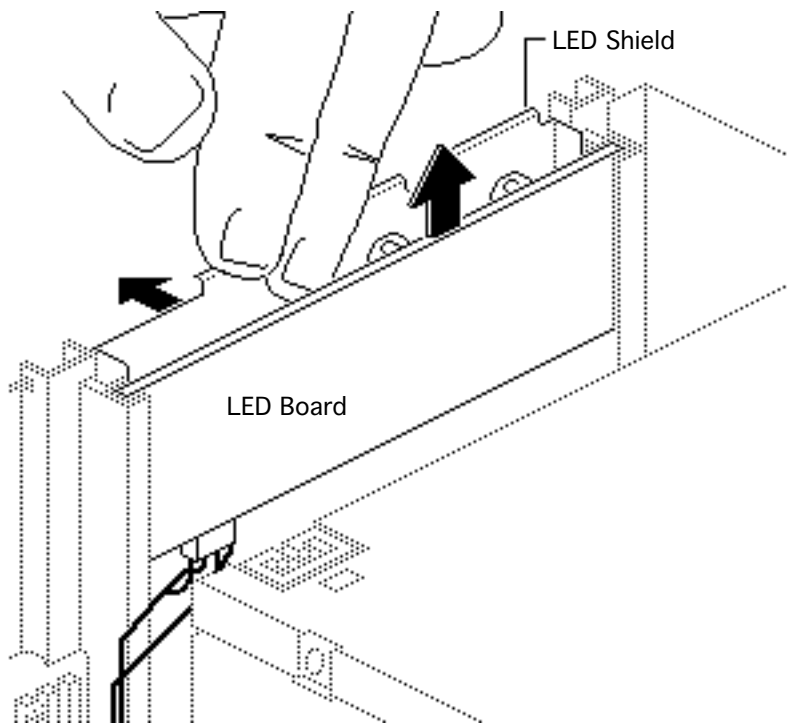
LED Board

1 Pull the metal LED shield away from the LED board and remove the board.
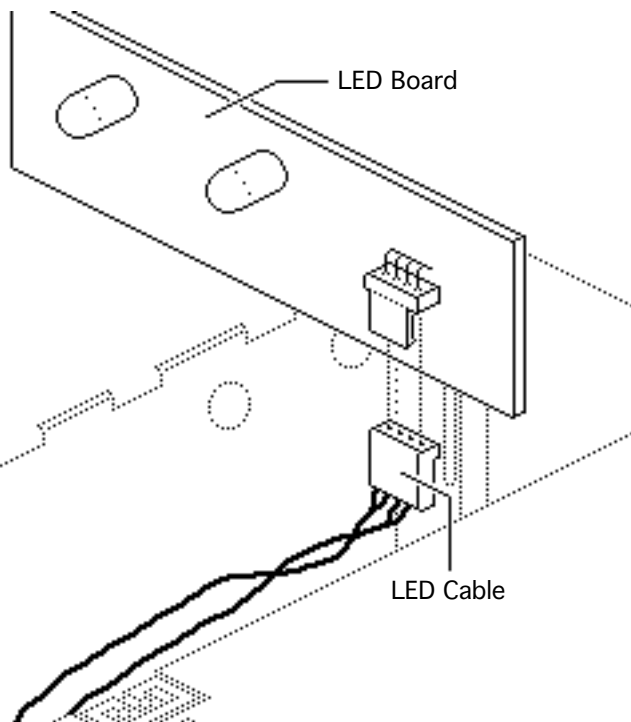
LED Board

LED Cable

2 Disconnect the LED cable from the LED board.

CD-ROM Drive

Before you begin, remove the following:

- Case top
- LED board

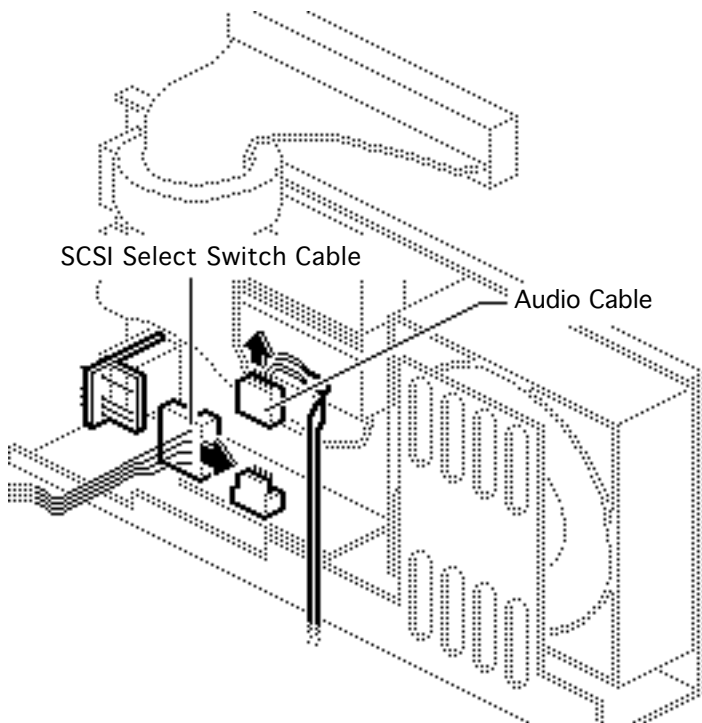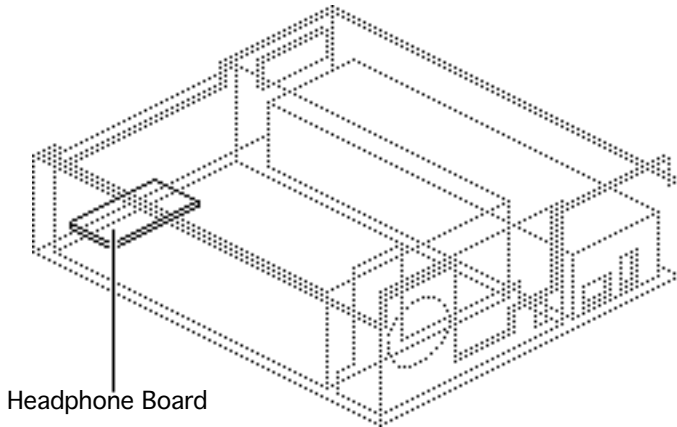**Caution:** Review the ESD precautions in Bulletins/Safety.

CD-ROM Drive

CD-ROM Drive

SCSI-Device-to-Case Cable
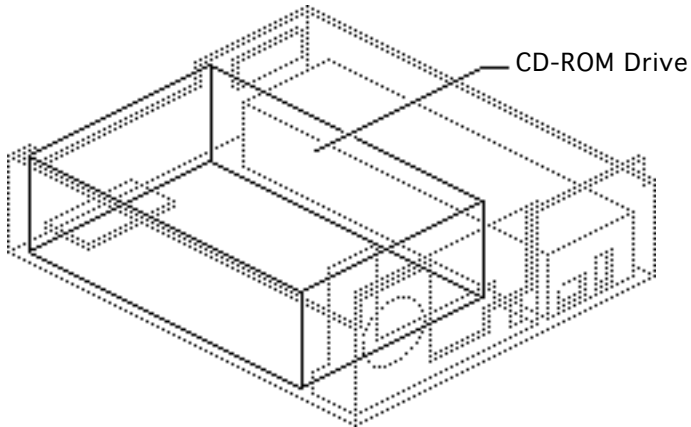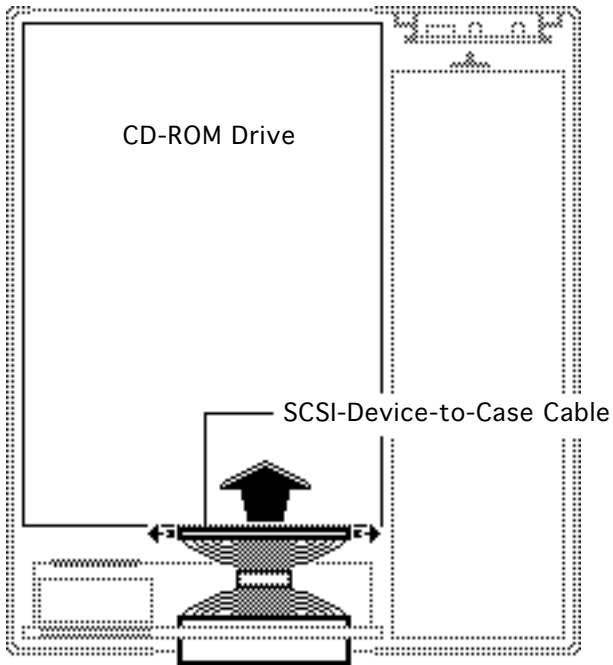
1 Disconnect the SCSI-
   device-to-case cable
   from the CD-ROM drive.

CD-ROM Drive
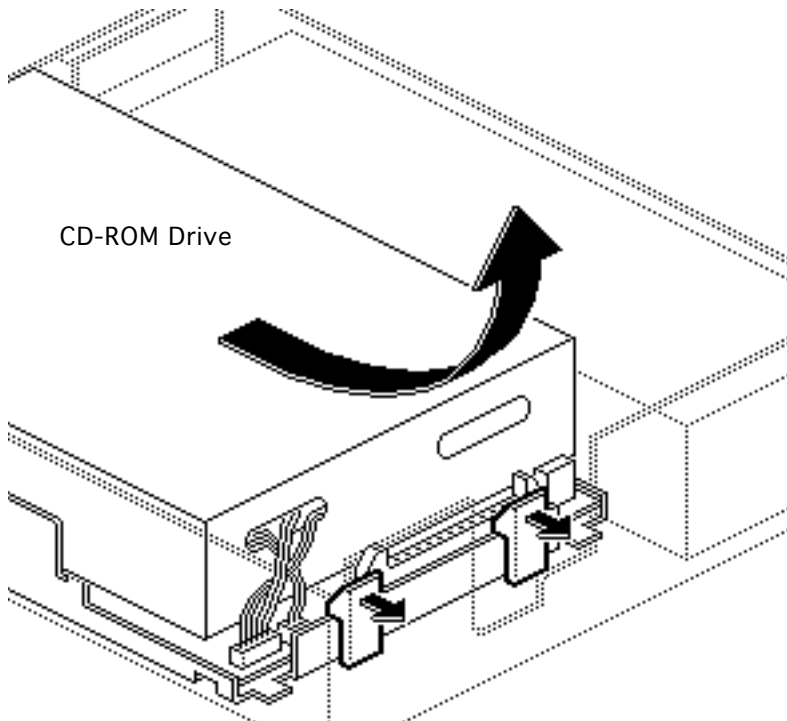
2   Using a small flat-blade
     screwdriver, pull back
     the mounting tabs and
     lift out the drive. Set the
     drive on the edge of the
     case.

SCSI Select Switch Cable

Audio Cable

3 Disconnect the audio cable and the SCSI select switch cable from the connector mounting plate.

Note: Return the SCSI select switch cable to Apple with the defective drive.

CD-ROM Drive
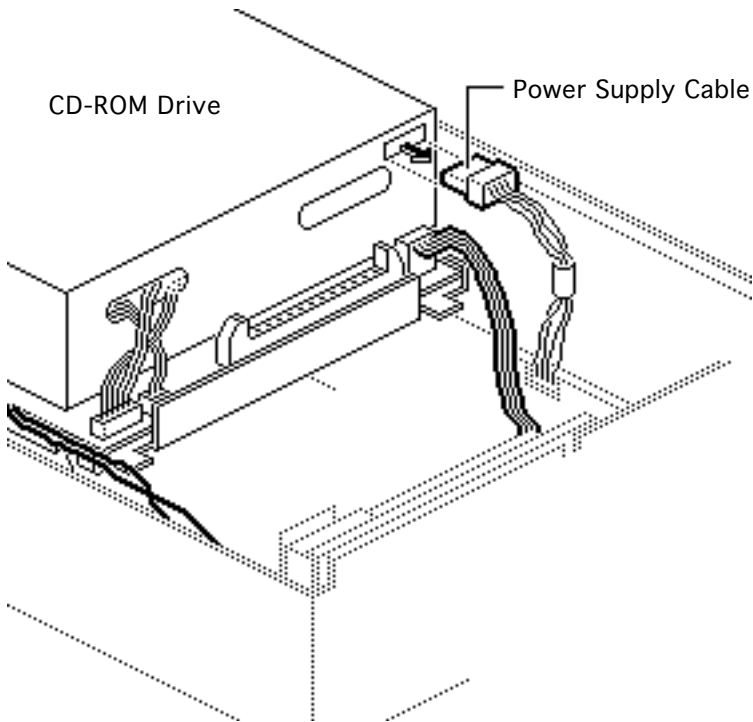
Power Supply Cable

4 Disconnect the power supply cable from the drive.

Headphone Board

Before you begin, remove the following:

- Case top
- LED board
- CD-ROM drive

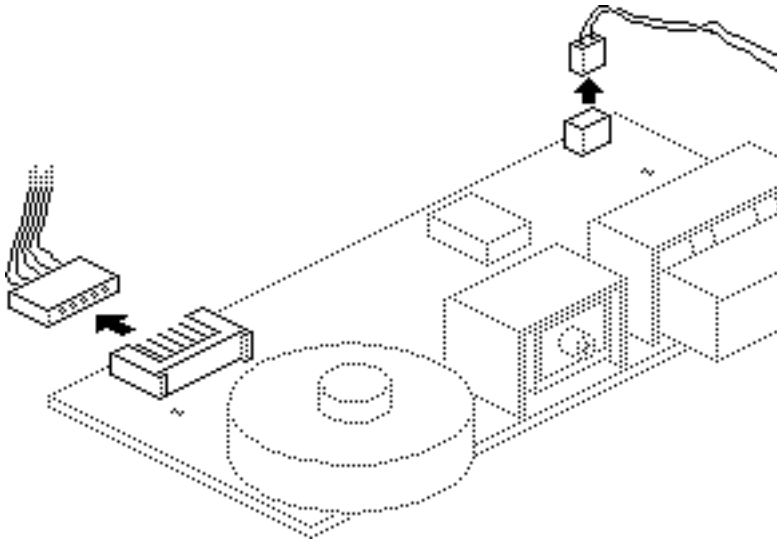**Caution:** Review the ESD precautions in Bulletins/Safety.

Headphone Board
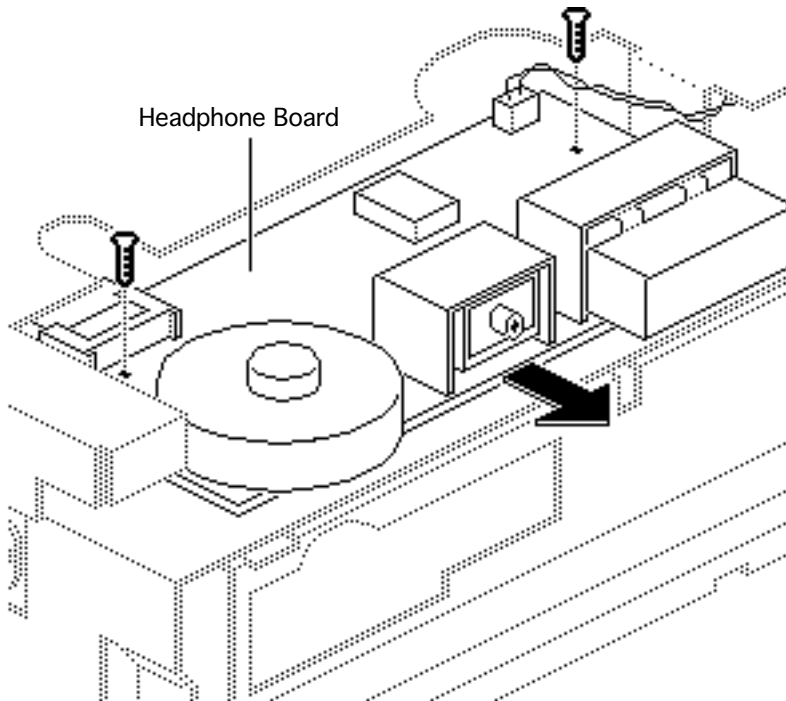
Headphone Board

1 Remove the two mounting screws and pull out the headphone board.
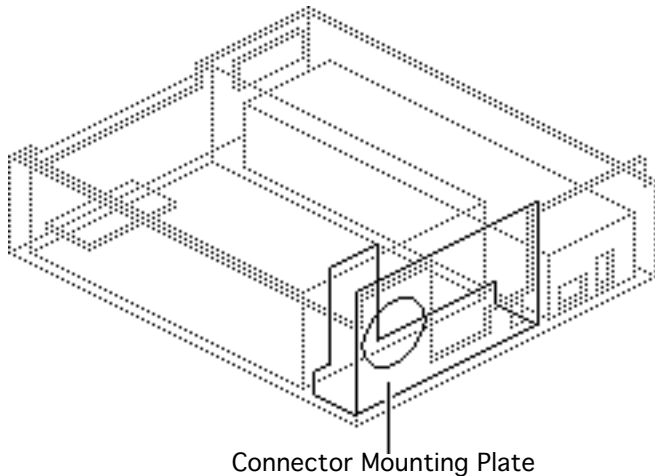
2 Disconnect the two cables from the headphone board.

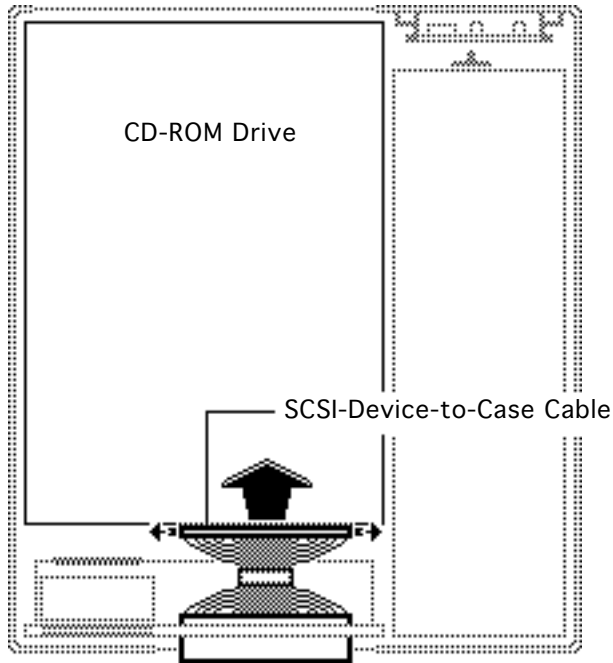Connector Mounting Plate

Connector Mounting Plate

Before you begin, remove the case top.

**Caution:** Review the ESD precautions in Bulletins/Safety.

Caution: The connector mounting plate may or may not have holes to mount a fan. If a fan is present, do not connect it to the power supply. The use of a fan contaminates the lens with airborne particulates.
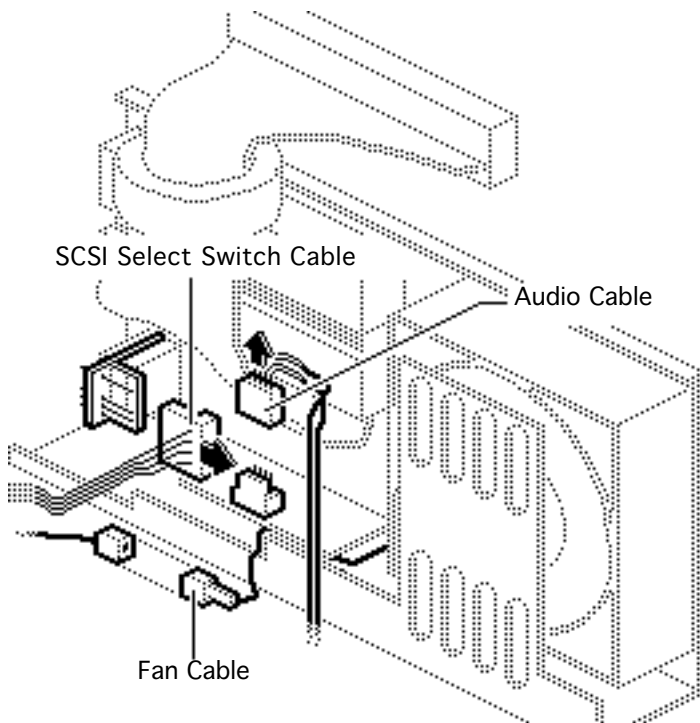
1   Disconnect the SCSI-
    device-to-case cable
    from the CD-ROM drive.

CD-ROM Drive

SCSI-Device-to-Case Cable

CD-ROM Drive

Connector Mounting Plate

Tab
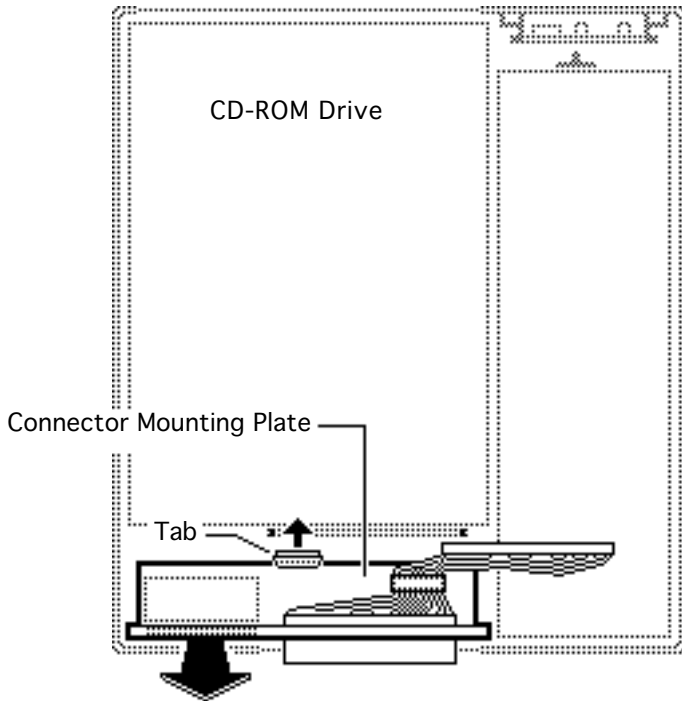
2   Using a small flat-blade screwdriver, pull the tab forward and slide the connector mounting plate up and out of the frame guides.

SCSI Select Switch Cable

Audio Cable

Fan Cable

3 Remove the following cable connectors:
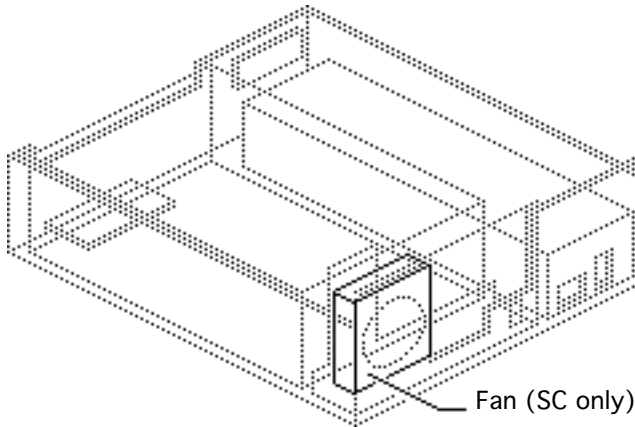- Fan cable
- Audio cable
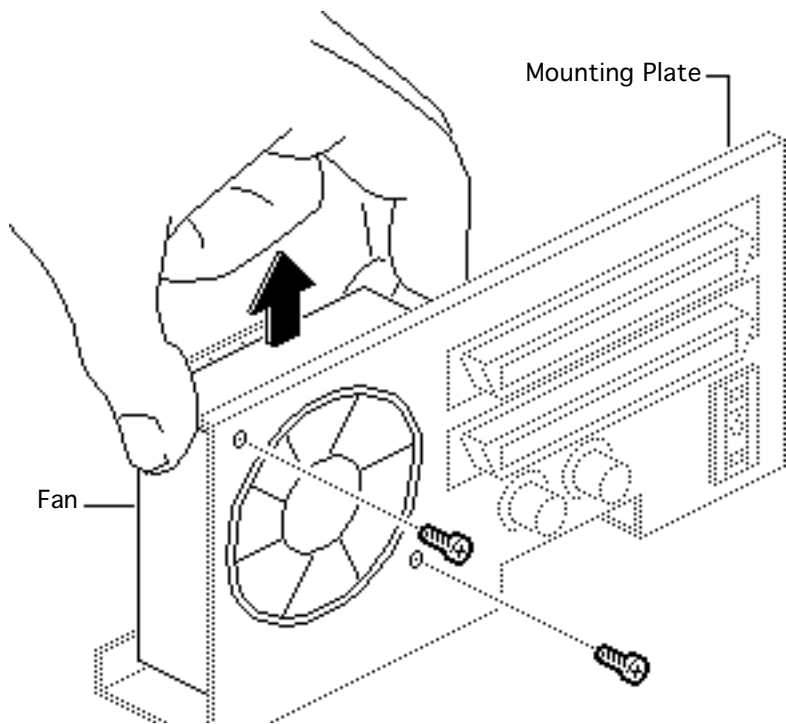- SCSI select switch cable

Fan (SC only)

Fan (SC only)

Before you begin, remove the following:
- Case top
- Connector mounting plate

Caution: Review the ESD precautions in Bulletins/Safety.

Caution: Use of a fan contaminates the lens with dust and other airborne particulates. Do not replace the fan.

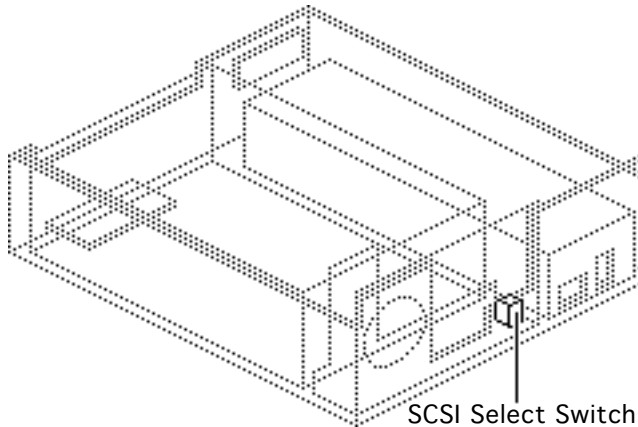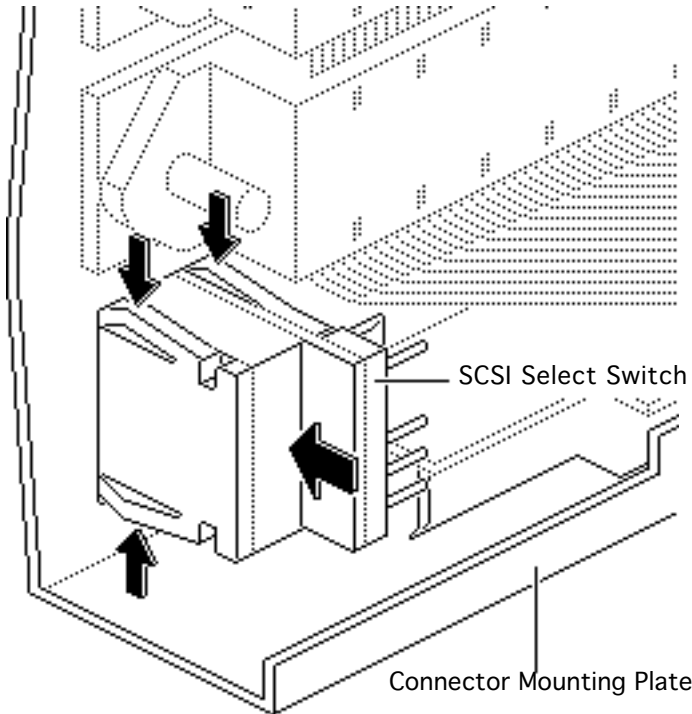Remove the two mounting screws and lift the fan off the mounting plate.

Mounting Plate

Fan

SCSI Select Switch

Before you begin, remove the following:

- Case top
- Connector mounting plate

Caution: Review the ESD precautions in Bulletins/Safety.

SCSI Select Switch

Using a small flat-blade screwdriver and your fingers, compress the four arms and push the switch through the connector mounting plate.

SCSI Select Switch

Connector Mounting Plate
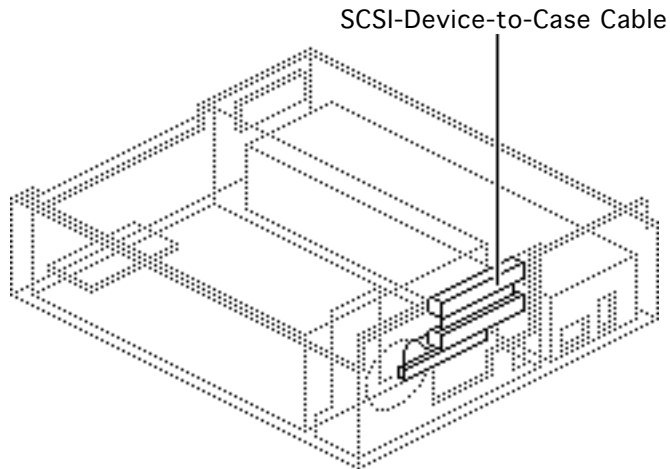
SCSI-Device-to-Case Cable

SCSI-Device-to-Case Cable
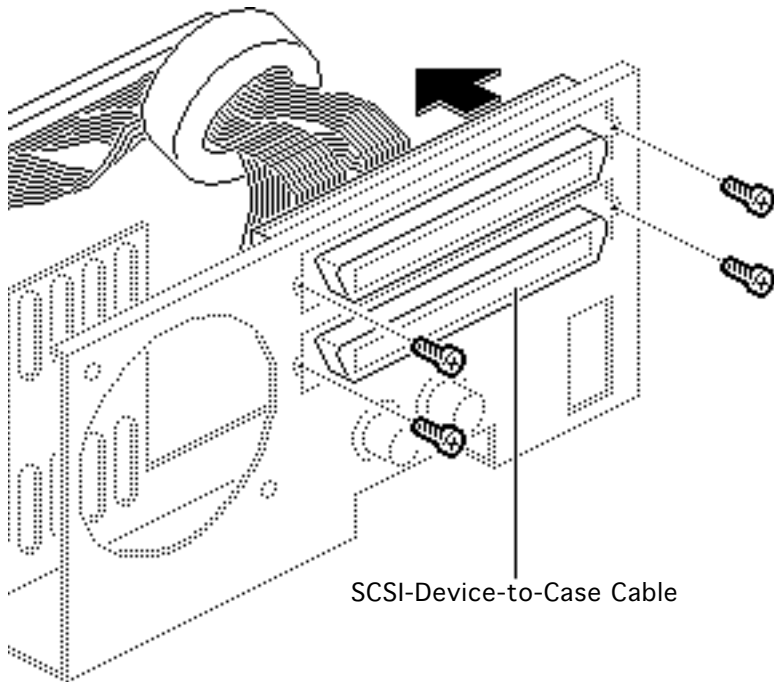
Before you begin, remove the following:

- Case top
- Connector mounting plate

Caution: Review the ESD precautions in Bulletins/Safety.

Remove the four mounting
screws and separate the
cable from the mounting
plate.

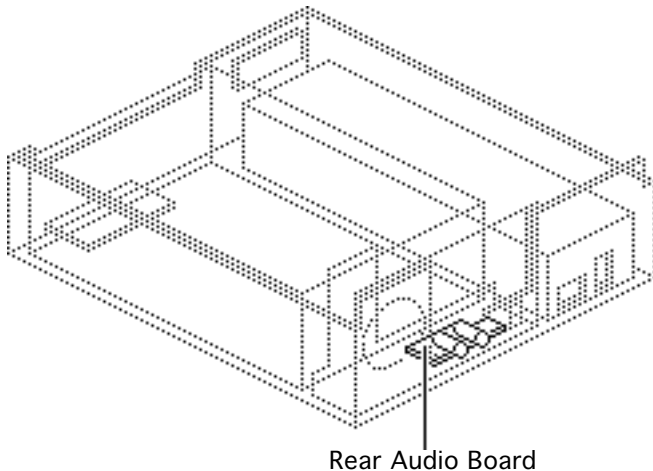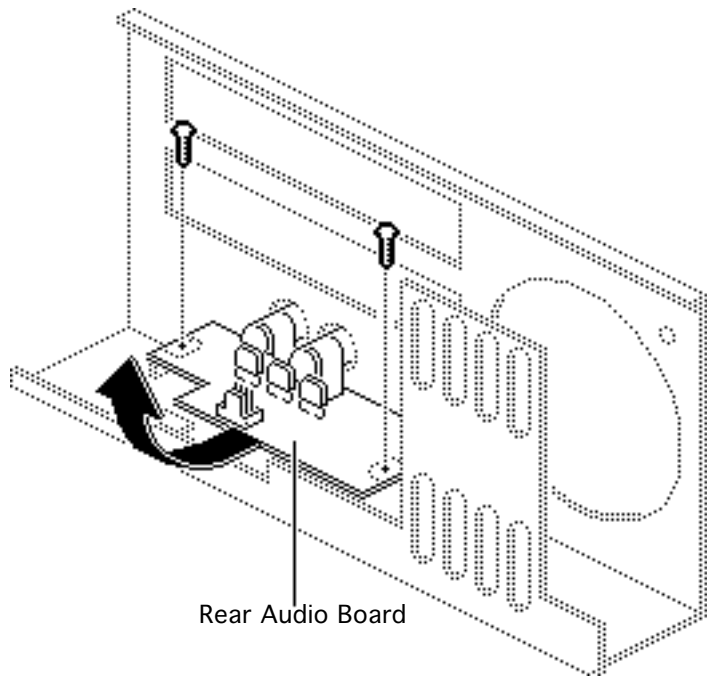SCSI-Device-to-Case Cable

Rear Audio Board

Before you begin, remove the following:

- Case top
- Connector mounting plate
- SCSI device-to-case cable

Caution: Review the ESD precautions in Bulletins/ Safety.

Rear Audio Board

Remove the two mounting screws and lift the rear audio board off the mounting plate.

Rear Audio Board

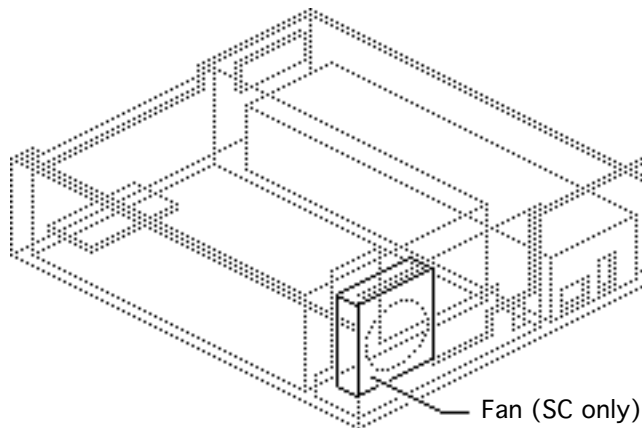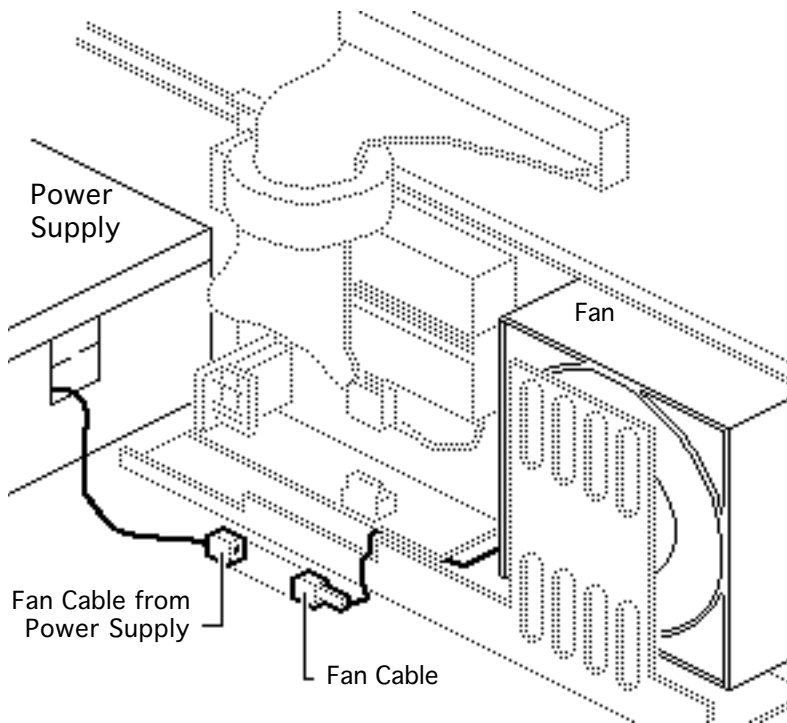Additional Procedures

AppleCD SC/SC Plus

Disable Fan

Before you begin, remove case top.

Caution: Review the ESD precautions in Bulletins/Safety.

Caution: Use of a fan contaminates the optic lens with dust and other airborne particulates. Disconnect and do not reconnect the fan cable connector.

Fan (SC only)

Power Supply

Fan

Fan Cable from Power Supply

Fan Cable

1 Disconnect the fan cable.

2 Tape the power supply end of the fan cable to the top of the power supply.

3 Tuck the fan end of the cable into the empty space in front of the fan.

Exploded View

AppleCD SC/SC Plus

Case Top

Fan (SC only)

SCSI Select Switch

SCSI-Device-to-Case Cable

Rear Audio Board

Headphone Board

LED Board

Connector Mounting Plate

CD-ROM Drive

Power Supply