

FIELD REPLACEABLE UNIT DOCUMENTATION

PortegeTM

4000 Series

GENERAL INFORMATION

**Tools Required for Proper
Disassembly and Reassembly:**

1. Phillips Screwdriver (Size 0&1)
2. Flat head Screwdriver
3. Security Torx (Size 7)
4. Case Separator
5. ESD Wrist Strap
6. ESD mats
7. Tweezers

Before attempting any of the following procedures, make sure that the main battery and AC adaptor is not connected to the unit and the environment in which you are working on is protected from Electro-Static Discharge(ESD).

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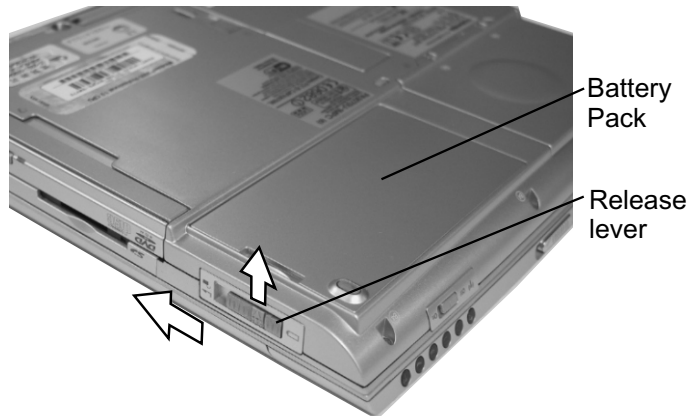
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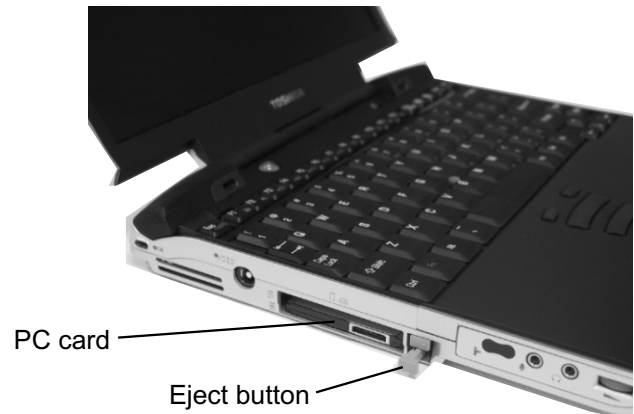
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BATTERY PACK REMOVAL



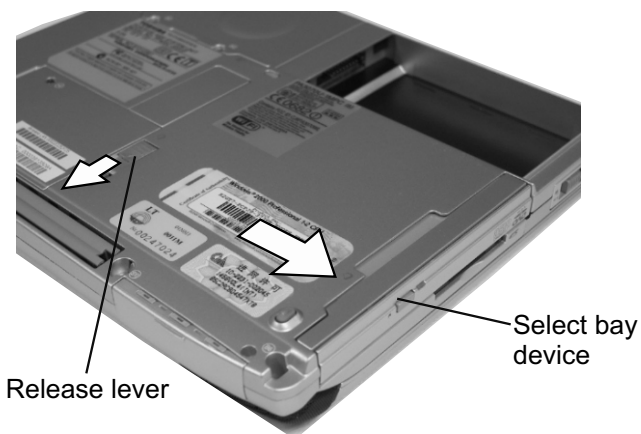
1. Turn the computer upside down as shown.
2. Slide the **battery release lever** in the direction of the arrow.
3. Lift out the **battery**.

OPTIONAL PC CARD REMOVAL



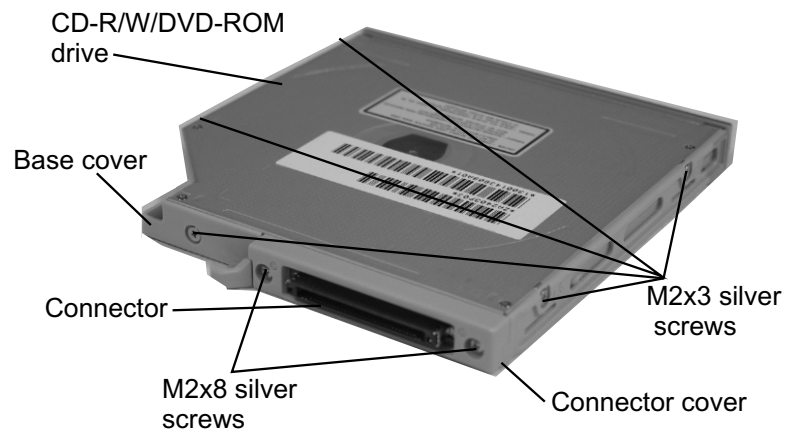
1. Press the **eject button** of the PC Card you want to remove.
 2. Press the **eject button** to pop the **PC Card** out.
 3. Grasp the **PC card** and remove it.
- NOTE: Before removing any PC Card device, make sure it is "STOPPED" in the PC Card manager.

SELECT BAY REMOVAL



1. Turn the computer upside down.
2. Slide the **release lever** in the direction of the arrow.
3. Pull out the **select bay device** in the direction of the arrow.

CD-R/W/DVD-ROM DRIVE DISASSEMBLY



1. Remove **five M2x3 silver screws** securing the base cover and lift off the **base cover**.
2. Remove **two M2x8 silver screws** securing the connector cover.
3. Remove the **connector** and the **connector cover** from the CD-R/W/DVD-ROM drive.

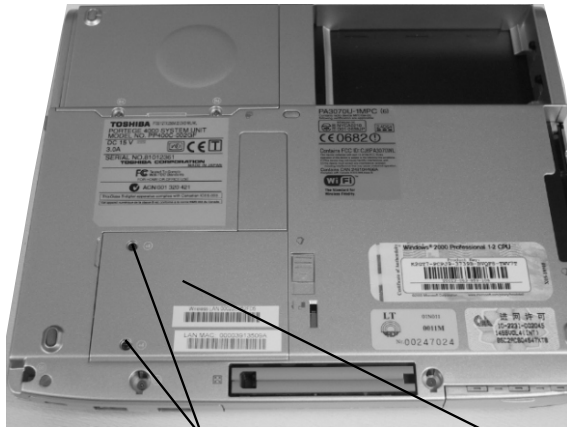
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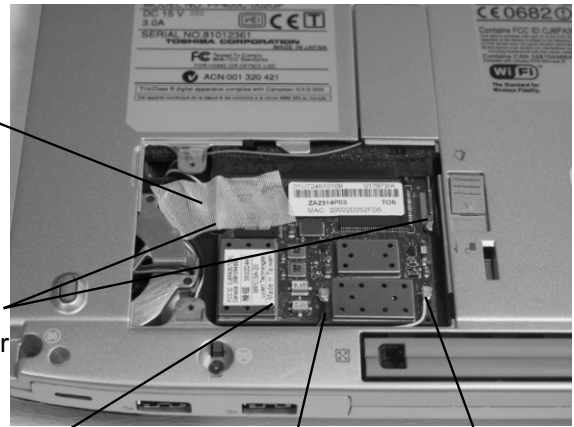
WIRELESS LAN CARD REMOVAL



M2.5x4 security torx screws

Mini PCI cover

1. Remove **two M2x4 security torx screws** securing the mini PCI cover and lift out the cover.



Glass tape

Mini-PCI connector clips

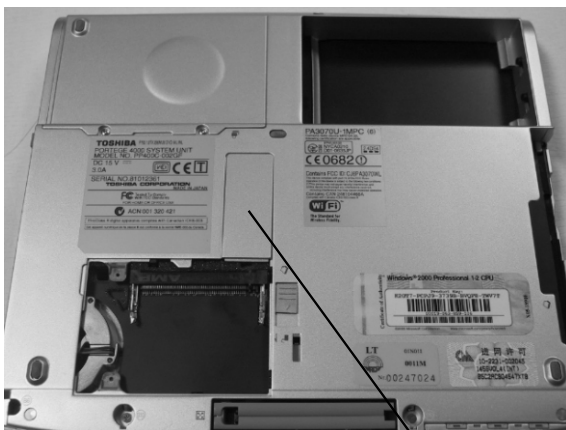
Wireless LAN card

Black coax cable

White coax cable

2. Using a pull out jig, disconnect the **black and white coax** from the wireless LAN card.
3. Peel off the **glass tape** securing the coax cables.
4. Spread the **Mini-PCI connector clips** and pull the **Wireless LAN card** out of the connector about 45 degree angle.

BLUETOOTH CARD REMOVAL



Bluetooth cover

1. Lift out the **bluetooth cover**.



Coaxial cable

Glass tape

Bluetooth card

2. Peel off the **glass tape** securing the coaxial cable.
3. Disconnect the **coaxial cable** on the bluetooth card.
4. Disconnect the **bluetooth card** from the system board.

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HDD REMOVAL

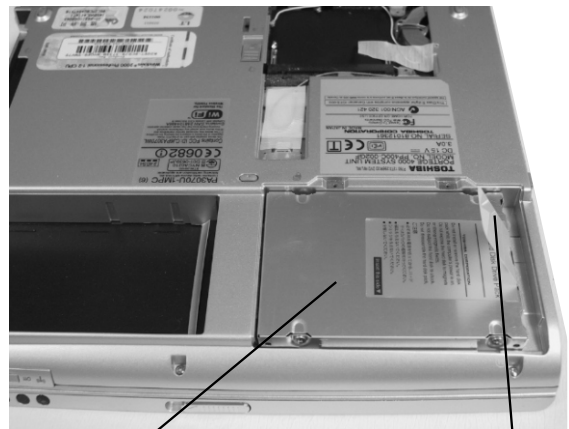


HDD cover

M2x4 silver screw

1. Turn the computer upside down.
2. Remove **two M2x4 silver screws** securing HDD cover.
3. Remove the HDD cover.

HDD REMOVAL

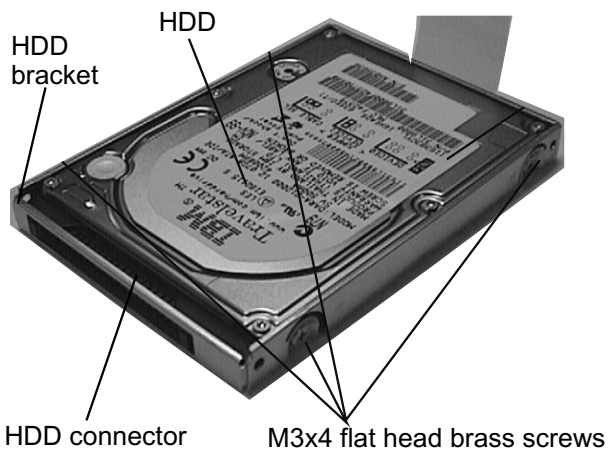


HDD pack

Plastic Tab

4. Unfold the **plastic tab** and pull to remove the HDD from the bay.

KEYBOARD REMOVAL



HDD bracket

HDD

HDD connector

M3x4 flat head brass screws

5. Remove **four M3x4 brass flat head screws** securing the HDD to the bracket and lift the drive out of the **bracket**.
6. Unplug the **HDD connector** from the drive.



Keyboard holder

Latch

1. Turn the computer right side up and open the display panel.
2. Using the case separator, unlatch the **keyboard holder**.

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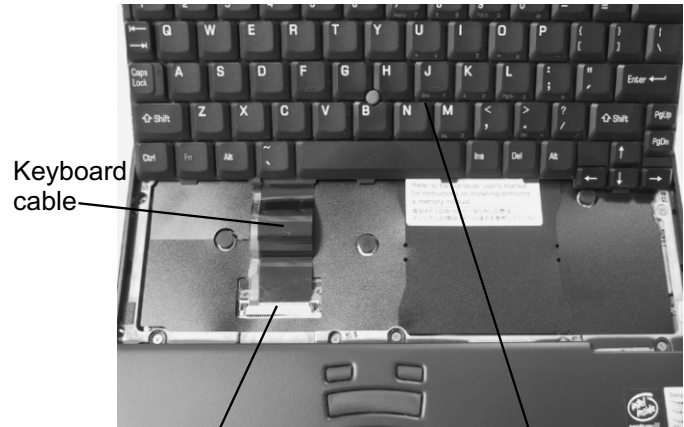
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KEYBOARD REMOVAL



M2x4 black screws

3. Remove **two M2x4 black screws** securing the keyboard.

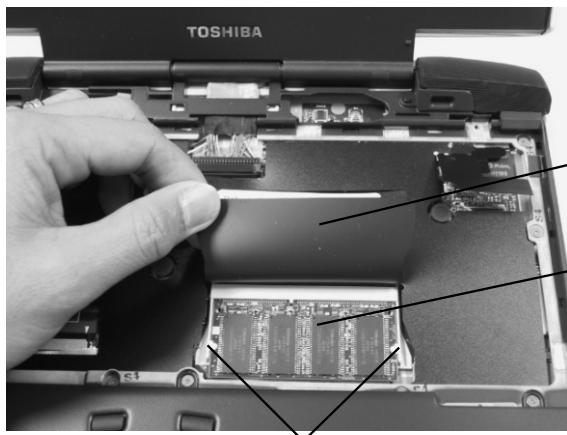


PJ445

Keyboard

4. Lift out the **keyboard** and set it as shown above. (Place an insulator between the keyboard and the LCD to avoid scratches on the LCD).
5. Disconnect the **keyboard cable** from **PJ445** on the system board.

MEMORY MODULE REMOVAL



Plastic insulator

Memory module

Memory clips

1. Lift up the **plastic insulator** covering the memory slots.
2. Spread the **memory clips** outward and pull the **memory module** out of the connector on a 45 degree angle.

MEMBRANE SWITCH REMOVAL



M2x4 silver screws

1. Turn the unit upside down.
2. Remove **three M2x4 silver screws** securing the palmrest cover.

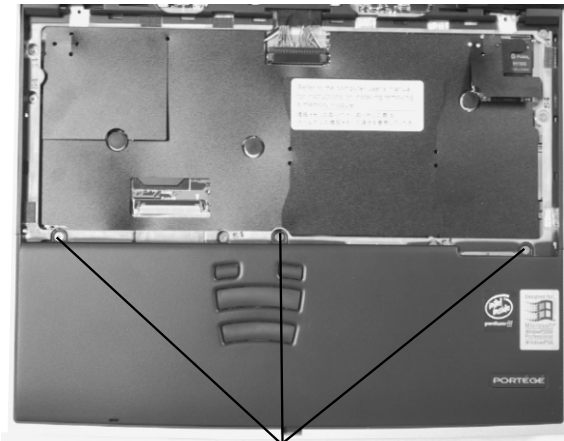
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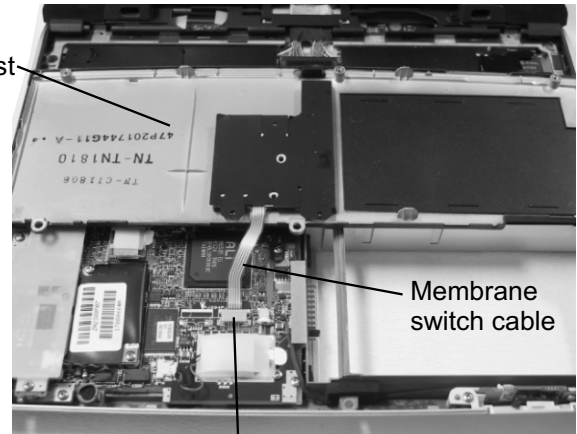
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MEMBRANE SWITCH REMOVAL



M2x4 brass flat head screws

3. Turn the computer right side up and open the display panel.
4. Remove **three m2x4 brass flat head screws** securing the palmrest cover.



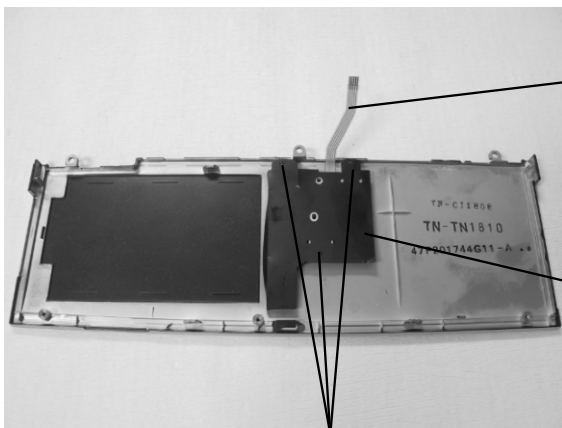
Palmrest cover

Membrane switch cable

PJ309

5. Carefully lift up the **palmrest cover**.
6. Disconnect the **membrane switch cable** from **PJ309** on the system board and lift out the palmrest cover.

MEMBRANE SWITCH REMOVAL



Membrane switch

Membrane switch bracket

M2x3 silver flat head screws

7. Lift up the insulator covering three screws and remove **three M2x3 silver flat head screws** securing the membrane switch bracket.
8. Remove the **bracket** and the **membrane switch**.

LCD ASSEMBLY REMOVAL



M2x10 silver flat head screws

M2x6 silver screws

1. Turn the computer upside down and remove the following screws:
 - 2 **M2x10 silver flat head screws**
 - 2 **M2x6 silver screws**

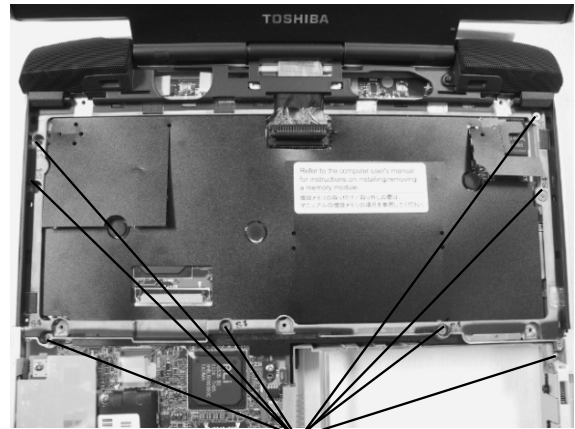
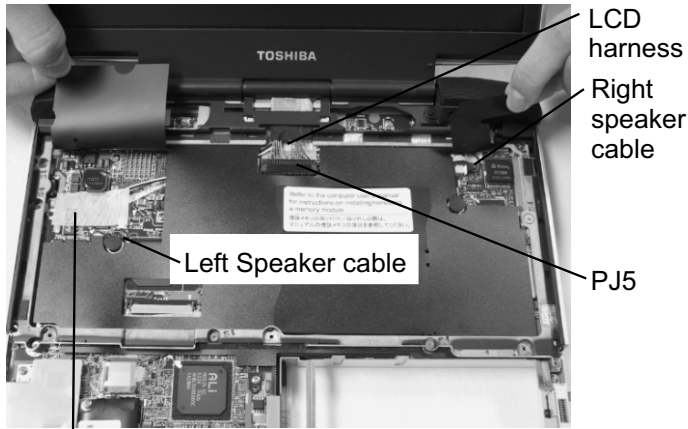
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LCD ASSEMBLY REMOVAL

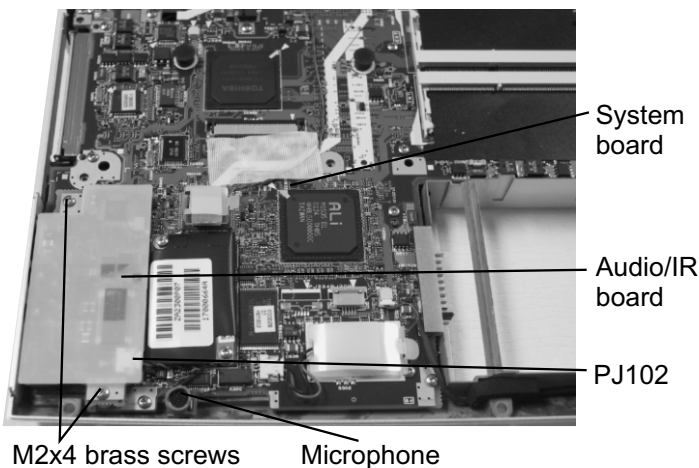


Glass tape

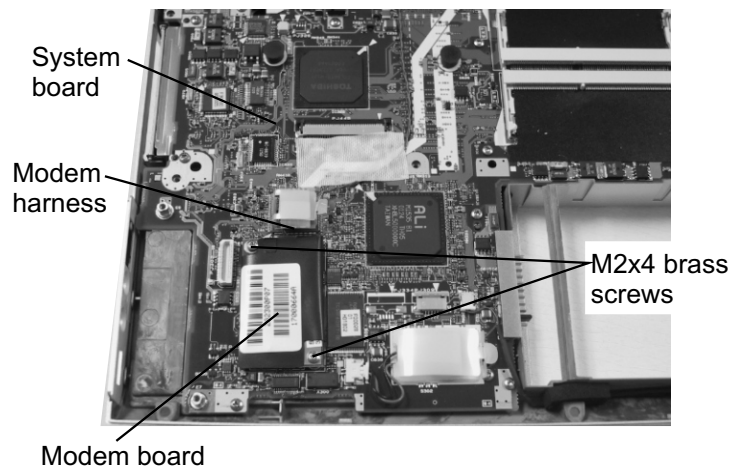
2. Turn the computer right side up and open the display panel.
3. Peel off the **glass tape** securing the left speaker cable and the wireless cables.
4. Disconnect the **LCD harness** from **PJ5** and the left and right speaker cables from PJ303 and 304.

5. Remove **eight M2x4 brass flat head screws** securing the LCD assembly.
6. Carefully lift out the **LCD assembly**.

AUDIO/INFRA RED BOARD REMOVAL



MODEM BOARD REMOVAL



1. Disconnect the **microphone** from **PJ102** on the audio/IR board.
2. Remove **two M2x4 brass screws** securing the audio/IR board.
3. Disconnect the **audio/IR board** from PJ302 on the system board.

1. Disconnect the **modem harness** from JP1 on the modem board.
2. Remove **two M2x4 brass screws** securing the modem board.
3. Disconnect the **modem board** from PJ345 on the system board

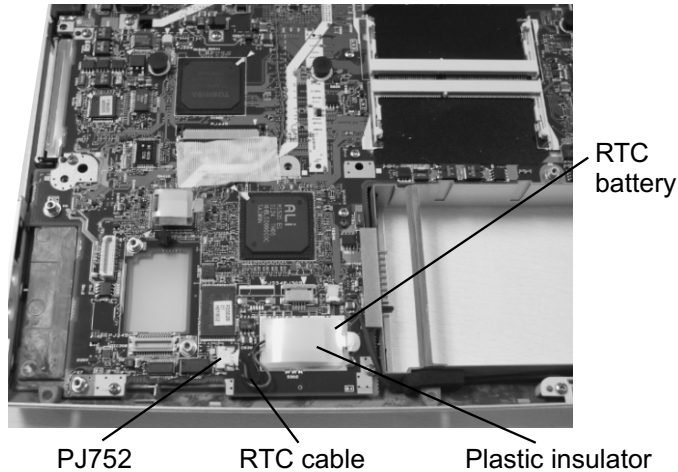
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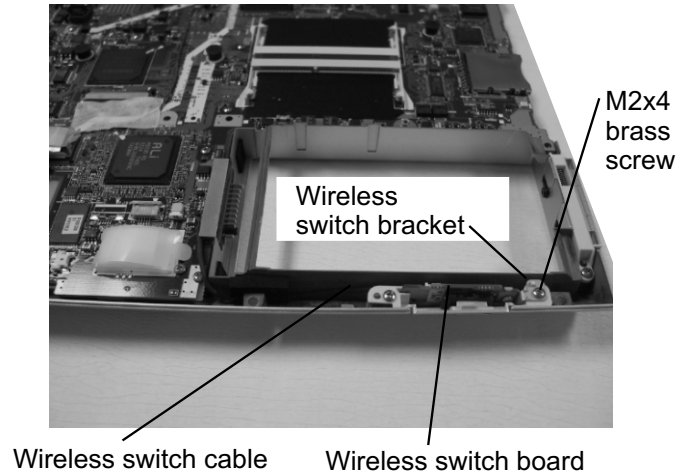
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RTC BATTERY REMOVAL



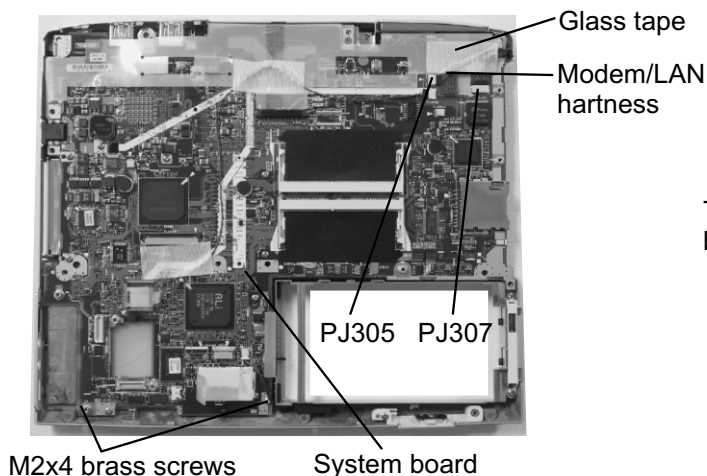
1. Disconnect the **RTC cable** from **PJ752** on the system board.
2. Remove the **RTC battery** from the plastic insulator.

WIRELESS SWITCH BOARD REMOVAL

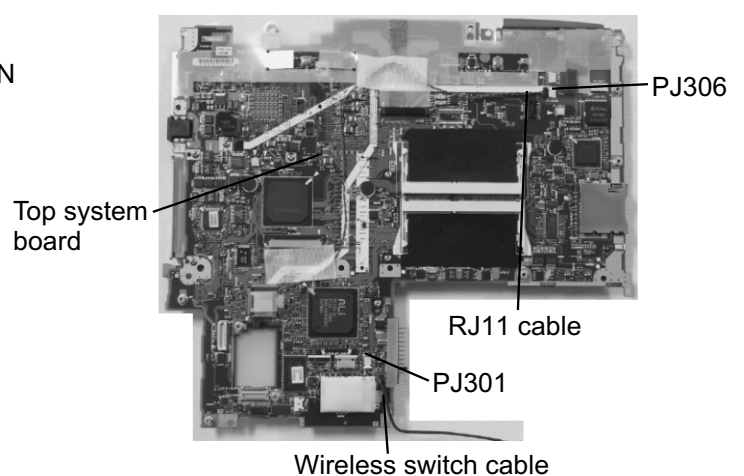


1. Remove **one M2x4 brass screw** securing the wireless switch board.
2. Lift up the wireless switch board and disconnect the **wireless switch cable** from **PJ1** on the wireless switch board.
3. Remove the **wireless switch bracket**.

TOP PCB REMOVAL



1. Peel off the **glass tape** securing the modem/LAN harness.
2. Disconnect the **modem/LAN harness** from **PJ305** and **PJ307** on the top PCB.
3. Remove **two M2x4 brass screws** securing the **top PCB**.
4. Disconnect the **top PCB** from **PJ300** on the bottom board.



5. Disconnect the **modem harness** from **PJ306** and the **wireless switch cable** from **PJ301** on the top system board.

NOTE: When installing the top PCB, ensure that the modem/LAN harness is properly routed.

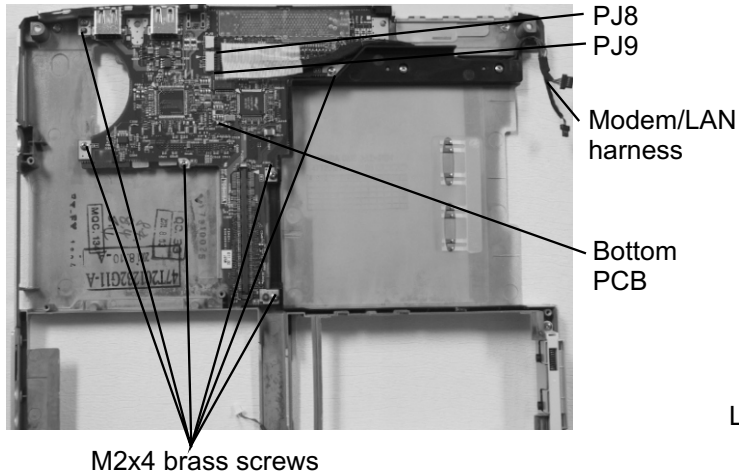
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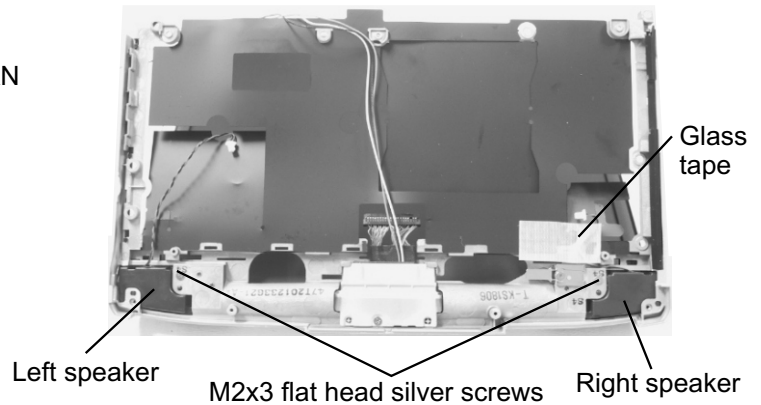
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BOTTOM PCB REMOVAL



1. Disconnect the **modem/LAN harness** from **PJ8** and **PJ9** on the bottom PCB.
2. Remove **six M2x4 brass screws** securing the bottom PCB.
3. Lift out the **bottom PCB**.

SPEAKERS REMOVAL



1. Remove **two M2x3 silver screws** securing both the left and right speakers.
2. Peel off the **glass tape** securing the right speaker cable and remove both speakers.

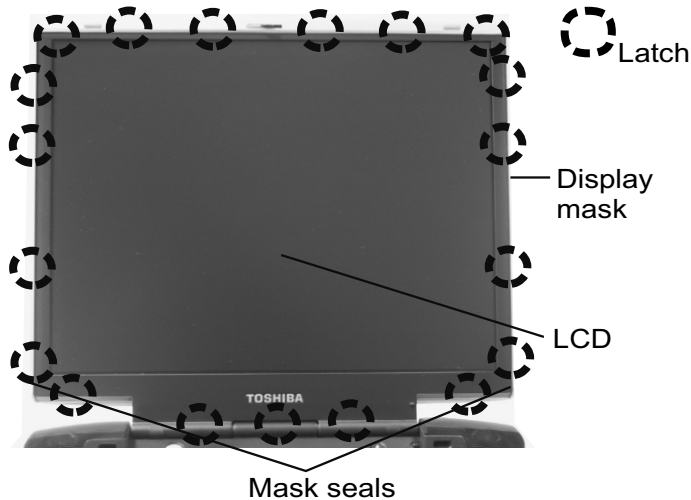
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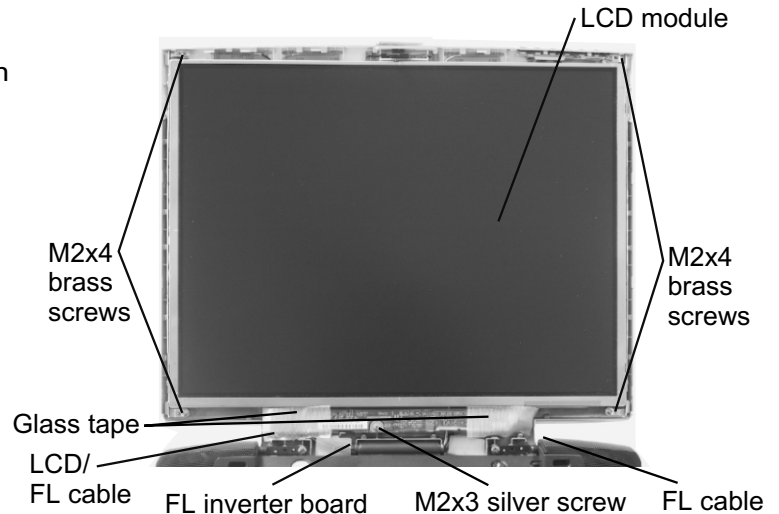
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12" DISPLAY MASK REMOVAL



1. Remove **two rubber seals** at the bottom corners of the display assembly using a pair of fine-tipped tweezers.
2. Remove **two M2x6 flat head brass screws** securing the display mask.
3. There are **19 latches** securing the **display mask**. Carefully insert your fingers between the mask and the LCD panel and pry open the latches starting from the **six top latches**, to the **five latches on each right and left sides**, ending with the **bottom seven latches**.

FL INVERTER AND 12" LCD REMOVAL



1. Remove **two glass tapes** securing the LCD/FL cable and the FL cable.
2. Remove **one M2x4 brass screw** securing the FL inverter board.
2. Carefully lift up the **FL inverter board** and disconnect the **LCD/FL cable** from **CN1** and the **FL cable** from **CN2**.
3. Remove **four M2x4 brass screws** securing the **LCD module assembly**.
5. Carefully lift out the bottom part of the LCD module assembly and rotate out the top of the **LCD module** enough to access the display cable
6. Peel off the tape securing the LCD/FL cable and disconnect the cable.
7. Remove **four M2x2.8 silver screws** securing the right and left LCD brackets.

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