Packard Bell

EasyNote S

Disassembly Manual

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Overview

This document contains step-by-step service instructions for the EasyNote S. The instructions are illustrated where necessary with images of the part that is being removed or disassembled. Furthermore, the screws that are removed are shown next to the image of the parts themselves.

Packard Bell reserves the right to make changes to the EasyNote S without notice.

Technician Notes

Only technicians authorized by NEC Computers International B.V. should attempt to repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard. Any indication of component replacement or printed wiring board modifications may void any warranty or exchange allowances.

Disassembly Instructions

When disassembling the system unit, follow these general rules:

>   Turn off the power and disconnect all cables and peripherals.
>   Label all removed connectors. Note where the connector goes and in what position it was installed.
>   Do not disassemble the system into parts that are smaller than those specified in the instructions.

Reassembly Instructions

Reassembly is the reverse of the disassembly process. Use care to ensure that all cables and screws are returned to their proper positions. Check that no tools or any loose parts have been left inside the casing. Check that everything is properly installed and tightened.

Required Tools

All disassembly procedures can be performed using the following tools:

>   PH 0 x 40 Philips screwdriver
>   2.0 x 30 Flat-bladed screwdriver
>   SW 5.0 Spacer screwdriver
>   Small tweezers

Hazardous Voltage

There is hazardous voltage present inside the computer when it is connected to an AC supply, even when the computer's power switch is off. Exposure to hazardous voltage could cause personal injury. To avoid risk of injury, contact an Authorized Service Provider for proper (un)installation of optional hardware devices.

Avoid Electrostatic Discharge

Electrostatic electricity can easily damage circuit cards and integrated circuits (ICs). To reduce risk of damage, store them in protective packaging whenever they are not installed in your system.

Add-in cards can be extremely sensitive to ESD and always require careful handling. After removing the card from the computer, place the card flat on a grounded, static-free surface, component-side up. Use a conductive foam pad if available, but not the card wrapper. Do not slide the card over any surface.

Before you install or remove memory modules, video memory, disk drives, circuit cards or other devices, protect them from static electricity. To do so, make sure your computer's power switch is OFF. Then, unplug the computer's AC power cord. Before picking up the device you (un)install, you should wear an anti-static wrist wrap (available at electronic supply stores). Be sure to connect the wrist wrap to an unpainted metal portion of the computer casing. As an alternative, you can dissipate electrostatic build-up by touching an unpainted metal portion of the computer casing with one hand. Then touch the device you are (un)installing with the other hand, and maintain continuous contact with it until it is (un)installed in the computer.

Power Supply Unit

Under no circumstances should you attempt to disassemble the power supply. The power supply contains no user-serviceable parts. Inside the power supply are hazardous voltages that can cause serious personal injury. Always return a defective power supply to your dealer.

WARNING
Ensure that the computer is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the casing cover is removed. Do not operate the computer with the cover removed.

AVERTISSEMENT
Assurez-vous que le système est débranché de son alimentation ainsi que de toutes les liaisons de télécommunication, des réseaux, et des lignes de modem avant d'enlever le capot. Ne pas utiliser le système quand le capot est enlevé.

WARNUNG
Das System darf weder an eine Stromquelle angeschlossen sein noch eine Verbindung mit einer Telekommunikationseinrichtung, einem Netzwerk oder einer Modem-Leitung haben, wenn die Gehäuseabdeckung entfernt wird. Nehmen Sie das System nicht ohne die Abdeckung in Betrieb.

ADVERTENCIA
Asegúrese de que cada vez que se quite la cubierta del chasis, el sistema haya sido desconectado de la red de alimentación y de todos lo enlaces de telecomunicaciones, de red y de líneas de módem. No ponga en funcionamiento el sistema mientras la cubierta esté quitada.

WAARSCHUWING
Zorg er voor dat alle verbindingen van en naar de computer (stroom, modem, netwerk, etc) verbroken worden voordat de behuizing geopend wordt. Zet de computer nooit aan als de behuizing geopend is.

AVVERTENZA
Prima di rimuovere il coperchio del telaio, assicurarsi che il sistema sia scollegato dall'alimentazione, da tutti i collegamenti di comunicazione, reti o linee di modem. Non avviare il sistema senza aver prima messo a posto il coperchio.

Removing the Battery

Perform the following steps to remove the battery:

1. Make sure to power off the EasyNote S.
2. Disconnect the AC adapter (and all other peripherals) from the unit.
3. Turn the unit upside down.
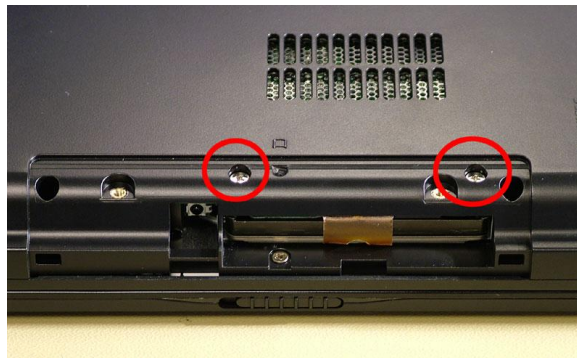4. Unlock the battery compartment and slide it out of its place.
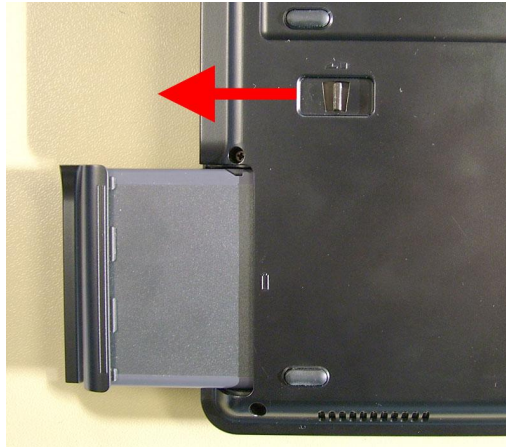
Fig. 1 *Releasing the battery.*

Removing the Hard Disk Drive
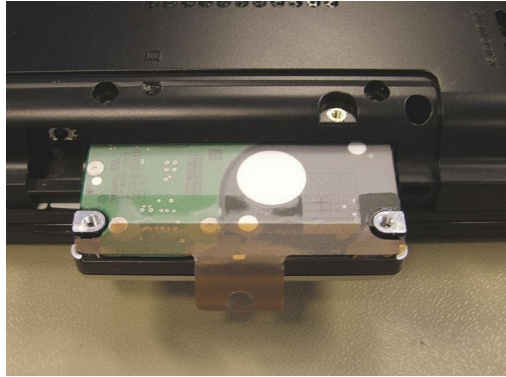
To remove the hard disk drive, then perform the following steps:

1. Remove the 2 screws securing the hard disk drive cover on the front side.
2. Remove the 2 silver coloured screws underneath.

Fig. 2 *Removing the 2 silver coloured screws.*

3. Pull out the Mylar folded inside the drive bay.
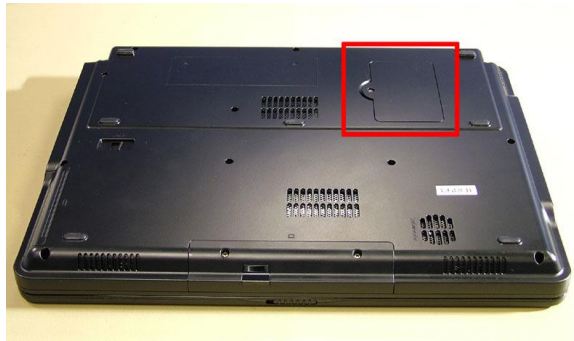4. Carefully slide the hard disk drive out.

Fig. 3 *Sliding out the hard disk drive.*

Removing the Memory Module

There are two SO-DIMM slots, of which one is easily accessible (for end-users) and the other one requires more disassembly.
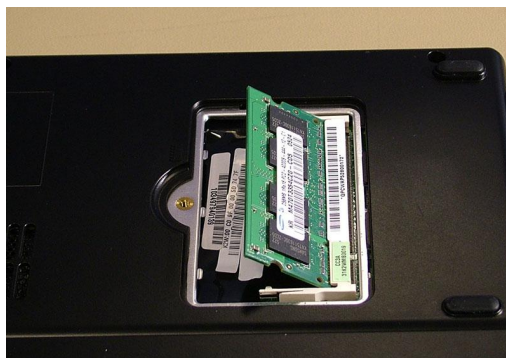
SO-DIMM Slot 1

1. Remove the screw securing the cover on the bottom of the casing.

Fig. 4 *Removing the cover screw.*

2. Remove the cover.
3. Push plastic clips aside.
4. Take out the SO-DIMM memory module.

Fig. 5 *Taking out the memory module.*

SO-DIMM Slot 2

To remove the memory module in SO-DIMM slot 2, first remove the WLAN adapter (see Removing the WLAN Mini-PCI Card), and then perform the following steps:

1. Removing the 3 screws securing the metal plate located beneath the mini-PCI.
2. Lift out the metal plate; The second SO-DIMM slot will now be visible.
3. Push the 2 clips aside and take out the SO-DIMM memory module.

Note There is only one end-user accessible SO-DIMM slot! If the unit shipped with two SO-DIMM slots, they will usually be identical (if total memory size is 512, 1024 or 2048 MB). This will enable Dual Channel memory architecture, allowing far greater memory speeds. Under these circumstances, it is **not** recommended to upgrade just one of the memory modules.

Removing the Optical Disk Drive

To remove the optical disk drive, perform the following steps:

1. Remove the indicated 2 screws on the bottom of the unit.
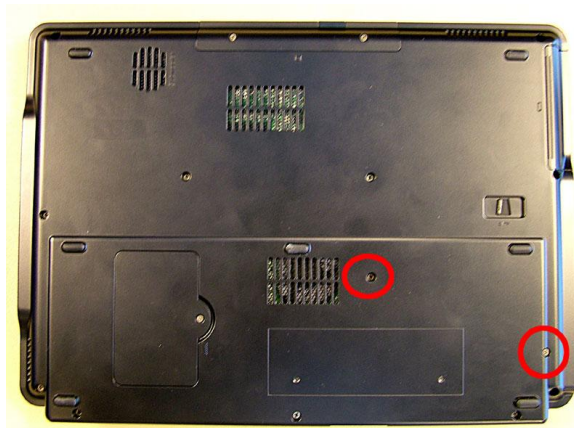
Fig. 6 *Removing optical disk drive cover screws.*

2. Pull out the optical disk drive (this is easier when you open the tray using the emergency eject hole).

Removing the Button Panel

To remove the button panel (hinge and keyboard cover), perform the following steps:

1. Use a small flat-bladed screwdriver to lift the hinge/keyboard cover gently; There are 2 indicated gaps.

Fig. 7 *Lifting the hinge/keyboard covers.*

2. Fold the LCD completely backwards.
3. Push up the hinge/keyboard cover, which is also the keyboard cover. Use moderate force and/or use a screwdriver to lift the part on one side.
4. Fold back the hinge/keyboard cover and disconnect the flat cable by pulling up the brown clip to release the flat cable.
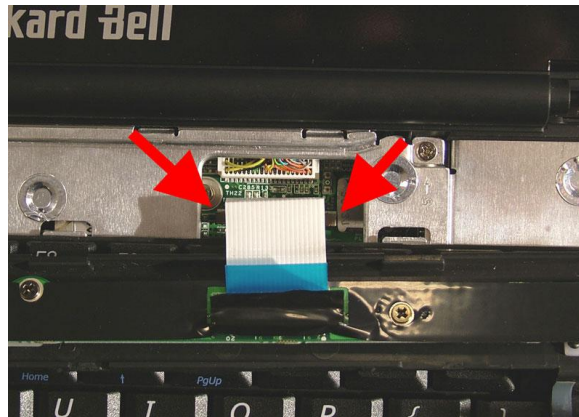

Fig. 8 *Button panel flat cable connection.*

5. Remove the disconnected button panel.

Removing the Keyboard

To remove the keyboard, first remove the button panel (see Removing the Button Panel), then perform the following steps:

1. Pull the keyboard up from the top side and gently lift the keyboard away.
2. Disconnect the flat cable from the main board (pull up the white holder to release the flat cable).
3. Take out the keyboard.

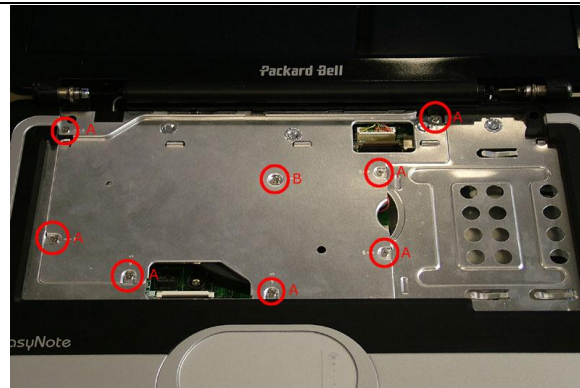**Note** If you only need to replace the keyboard, you do not need to disconnect the flat cable of the button panel.

Removing the Heat Shield

To remove the heat shield, first remove the button panel (see Removing the Button Panel) and remove the keyboard (see Removing the Keyboard), then perform the following steps:
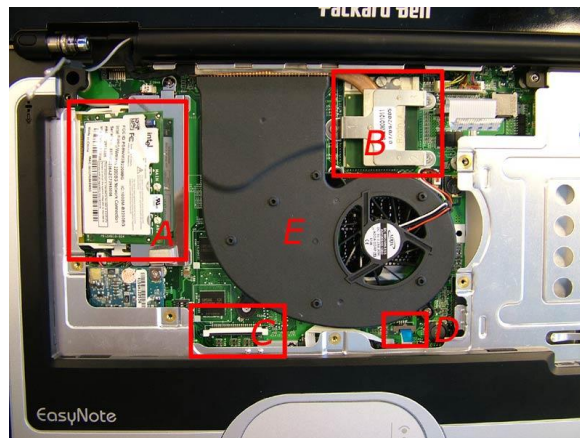
1. Remove the 8 screws retaining the heat shield.

Fig. 9 *Screws marked **A** on the picture are marked **5** on the metal; screw marked **B** on the picture is marked **15** on the metal.*

2. Lift out the heat shield; it should look like this:

Fig. 10 *A = WLAN mini-PCI card and 2nd SO-DIMM slot; B = CPU; C = keyboard connector; D = glide pad connector; E = CPU fan.*

Removing the WLAN Mini-PCI Card

To remove the WLAN mini-PCI card, first remove the heat shield (see Removing the Heat Shield), then perform the following steps:

1. Disconnect the 2 antenna connectors (MAIN and AUX)

Fig. 11 *The 2 antenna connectors: MAIN and AUX.*

2. Push aside the clips for the mini-PCI card.
3. Take out the mini-PCI card.

Removing the CPU

To remove the CPU, first remove the heat shield (see Removing the Heat Shield), then perform the following steps:

1. Remove the CPU-fan (marked **E** in Fig. 10) by removing the 2 screws and disconnecting the power cable from the main board.
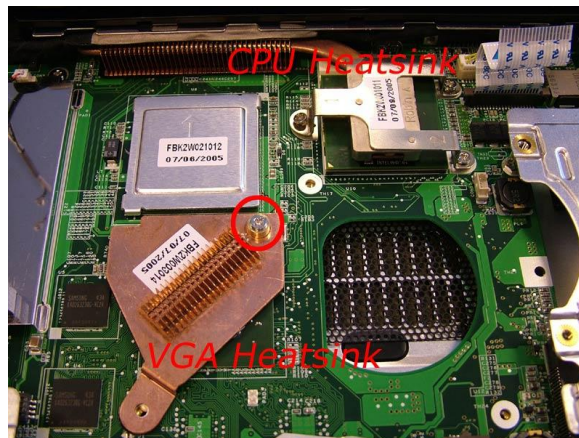
Fig. 12 *CPU heat sink & VGA heat sink.*

2. Remove the CPU heat sink: Loosen the 3 screws in indicated order as marked on the heat sink (1, 2, 3 on Fig. 13).
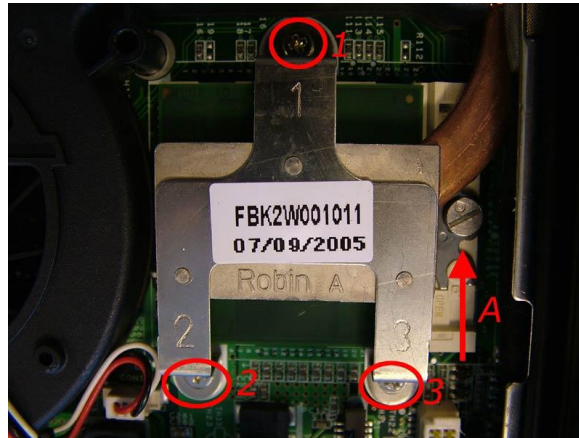
Fig. 13 *CPU heat sink.*

3. Lift out the CPU heat sink.
4. Turn the screw on top of the CPU socket halfway (marked **A** in Fig. 13) with a flat-bladed screwdriver; You should feel a *click* when the CPU is released.
5. Lift out the CPU from the socket.

Removing the VGA Heat Sink

To remove the VGA heat sink, first remove the heat shield (see Removing the Heat Shield), remove the CPU fan (see step 1 in Removing the CPU), then perform the following steps:

1. Remove the screw of the copper VGA heat sink (see Fig. 12).

Note   The presence of the VGA heat sink is optional.


Removing the Main Board

To remove the main board, first remove the battery (see Removing the Battery), remove the hard disk drive (see Removing the Hard Disk Drive), remove the available memory modules (see Removing the Memory Module), remove the optical disk drive (see Removing the Optical Disk Drive), remove the button panel (see Removing the Button Panel), remove the keyboard (see Removing the Keyboard), remove the heat shield (see Removing the Heat Shield), remove the WLAN card (see Removing the WLAN Mini-PCI Card), remove the CPU (see Removing the CPU), remove the VGA heat sink (see Removing the VGA Heat Sink), remove the LCD screen (see Removing the LCD Assembly), then perform the following steps:

1. Remove the flat cable, next to the LCD cable. You might have removed the flat cable together with the button panel.
2. Remove the 2 hex-bolts adjacent to the VGA port.
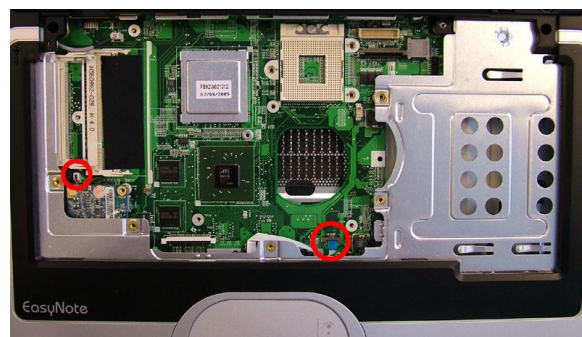3. Remove the 4 screws indicated on Fig. 14.
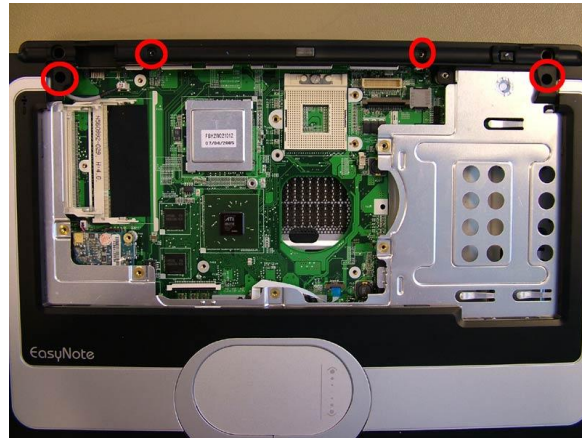
Fig. 14 *Removing the 4 screws in the top.*

4. Flip over the base unit and remove the 11 screws from the bottom of the base.
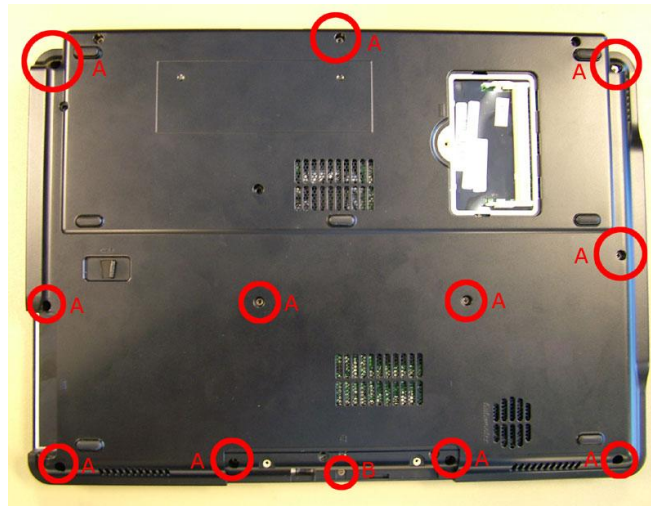
**Fig. 15** *10 Large screws (**A**) and 1 short screw (**B**).*

5. Disconnect the flat cable of the glide pad and disconnect the microphone cable.

Fig. 16 *Glide pad flat cable and the microphone cable.*

6. Gently lift off the top cover.
7. Disconnect all cables from the main board: LCD switch cable (at the top near the LCD cable), modem cable and speaker and subwoofer cables.
8. Remove the modem (see Removing the Modem).
9. Remove the 2 long screws and 2 short screws of the metal hard disk drive bay.
10. Push the DC jack out of it holder (right top side). You do not need to disconnect the DC jack from the main board!
11. Remove the subwoofer (see Removing the Subwoofer).
12. Remove the 2 hex bolts on the main board; Next to the holes of the hex bolts you should see a symbol like an ellipse with a square across.
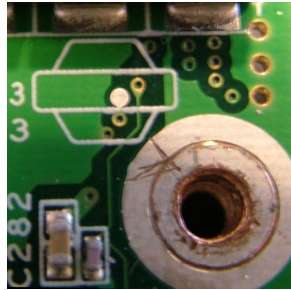
Fig. 17 *Symbol on main board indicating hex bolts.*

13. Remove the 4 screws on the main board; There is an encircled + symbol near their holes.
14. Slide out the main board.

| **Note** | You have to pull the backside forward quite extensively to release the VGA port. |

| **Note** | You can pull the left side of the casing outwards to allow more space for the PCMCIA eject button and the audio connector to come out. The presence of PCMCIA is optional. |

Removing the Modem

To remove the modem, first remove the main board (see up to step 6 in Removing the Main Board) then perform the following steps:

1. Remove the screw securing the modem.

Fig. 18 *Removing the modem screw.*

2. Disconnect the modem cable from the main board.
3. Lift out the modem.
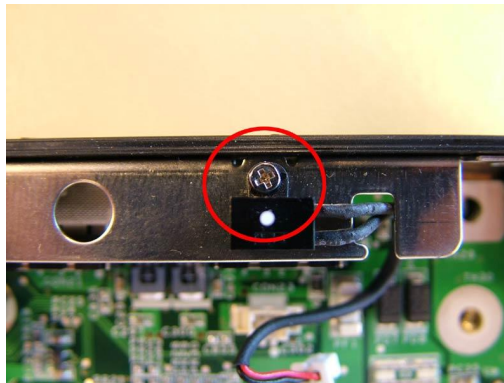
Removing the LCD Switch

The LCD switch has been mounted on the backside of the casing; It is a small switch sticking out of the top cover. To remove the LCD switch, first remove the main board (see up to step 6 in Removing the Main Board), then perform the following steps:

1. Disconnect the cable from the main board.
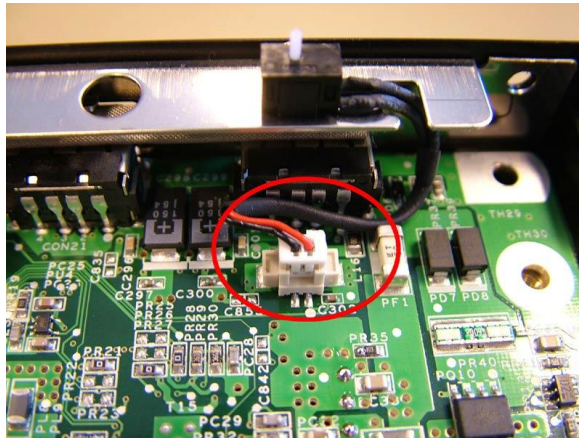
Fig. 19 *LCD switch cable connector.*

2. Remove the screw from the LCD switch and remove the LCD switch.

Fig. 20 *Removing the LCD switch screw.*

Removing the Subwoofer

To remove the subwoofer, first remove the main board (see up to step 6 in Removing the Main Board), then perform the following steps:

1. Disconnect the subwoofer cable from the main board.
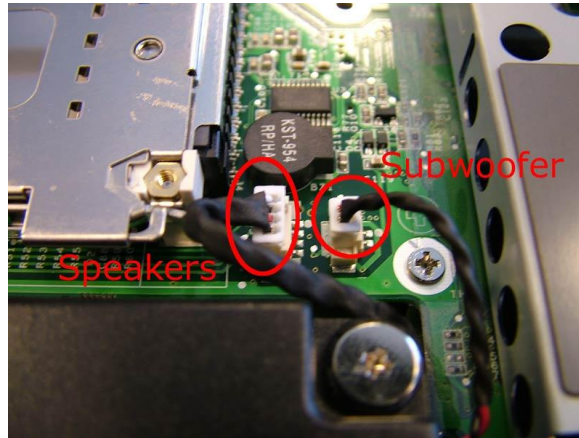
Fig. 21 *Speaker and subwoofer cable connection on the main board.*

2. Remove the 2 screws securing the subwoofer. Note that the screw holes in the subwoofer are made of rubber, so the subwoofer feels very *loose.*
3. Take out the subwoofer.

Note   The presence of a subwoofer is optional.

Removing the Speakers

To remove the speakers, first remove the main board (see up to step 6 in <u>Removing the Main Board</u>) then perform the following steps:

1. Remove the 2 screws of the left speaker and the 2 screws of the right speaker.
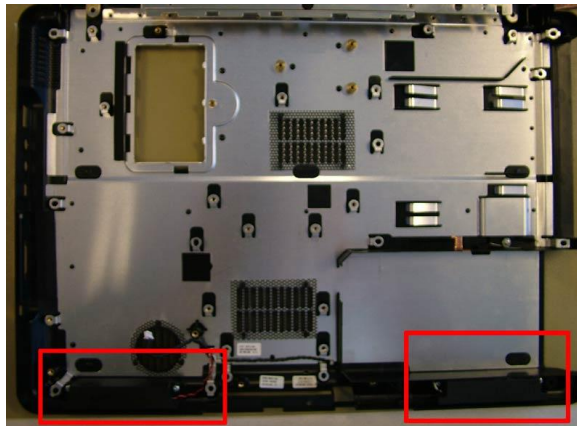
Fig. 22 *Removing the left and right speaker screws.*

2. Remove the speaker cable from the metal clips (in base). To do so, bend the metal.

Fig. 23 *Metal clip securing the speaker cable.*

3. Take out the speakers.

Note   The two speakers are one part, so they cannot be exchanged separately.

Removing the Glide Pad

To remove the glide pad, first remove the main board (see up to step 6 in Removing the Main Board), then perform the following steps:

1. The glide pad is mounted on the top cover and consists of two parts: The glide pad surface and the buttons.
2. For the button panel: Remove the 2 screws and disconnect the flat cable from the glide pad.
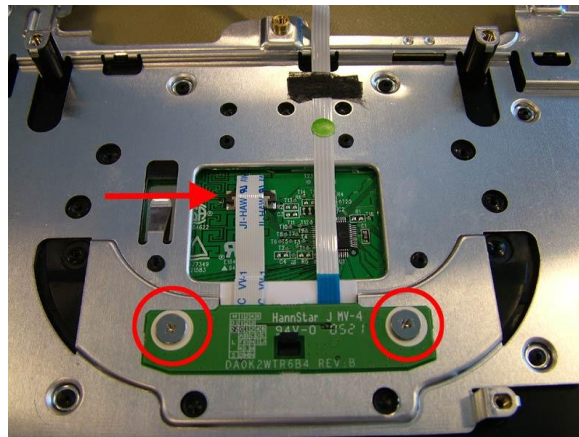
Fig. 24 *Removing the glide pad screws and flat cable.*

3. Lift the button panel and slide it backwards.
4. Lift the panel away and disconnect the flat cables.
5. For the glide pad surface: Remove the flat cable coming from the button panel.
6. Push out the glide pad, which has been glued to the top cover.

Removing the Microphone

To remove the microphone, first remove the main board (see up to step 6 in <u>Removing the Main Board</u>), then perform the following steps:

1. Push out the microphone from the top cover using a small flat-bladed screwdriver or tweezers.
2. Carefully bend the metal clips open to remove the cable from the top cover.
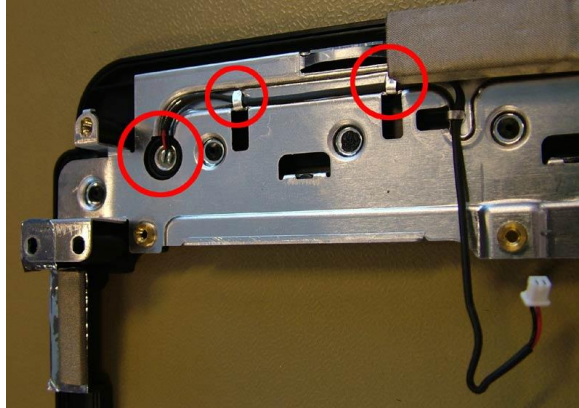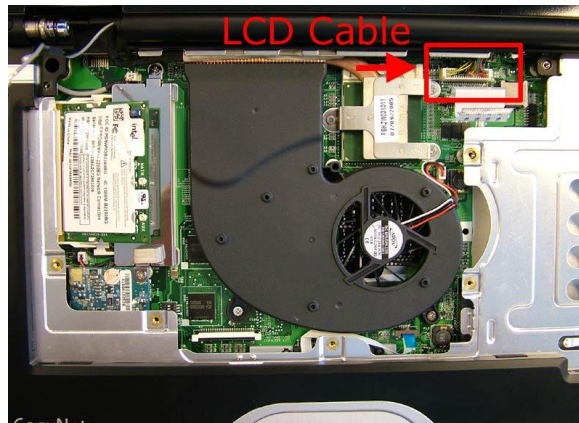

Fig. 25 *Metal clips securing the top cover cable.*

3. Remove the microphone.

Removing the LCD Assembly

To remove the LCD assembly, first remove the heat shield (see <u>Removing the Heat Shield</u>), then perform the following steps:

1. Disconnect the LCD cable from the main board.

Fig. 26 *LCD cable connection on the main board.*

2. Remove the 2 screws on the back of the system.
3. Remove the 2 screws in the bottom base, directly under the screws you removed on the back.
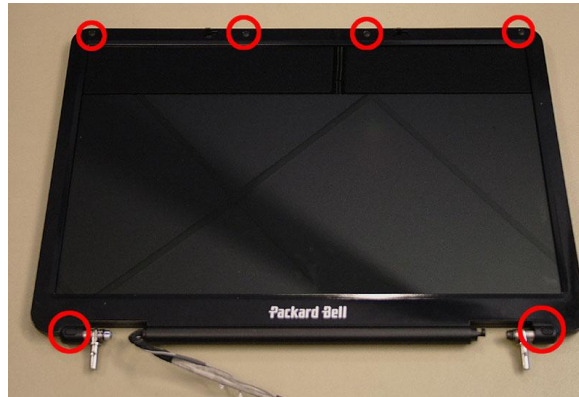4. Carefully lift out the entire LCD panel.

Removing the LCD Panel

To remove the LCD panel, first remove the LCD assembly (see <u>Removing the LCD Assembly</u>), then
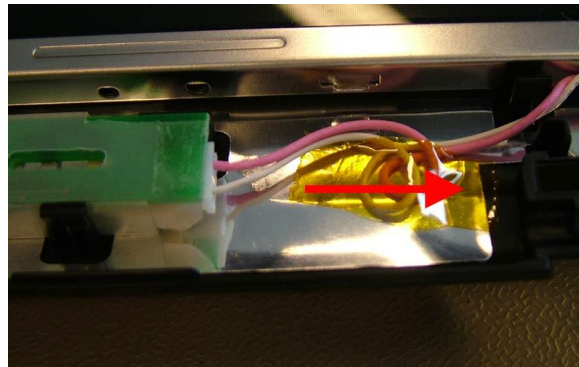
perform the following steps:

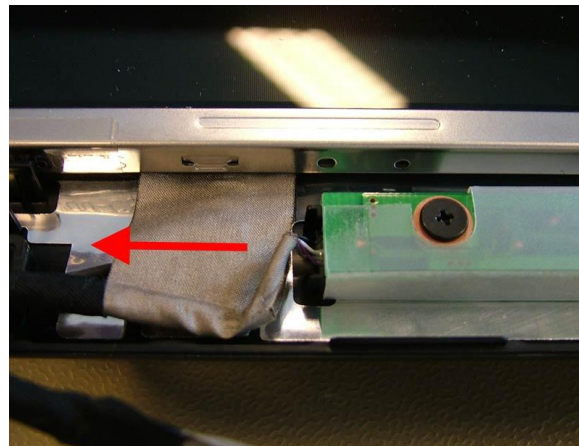1. Push out the 6 rubber stoppers (4 at the top and 2 at the bottom).

Fig. 27 *Location of rubber stoppers on the LCD assembly.*

2. Remove the 6 screws underneath the stoppers.
3. Remove the LCD bezel. The bezel has been *clicked* into place and you need to pull hard to loosen it.
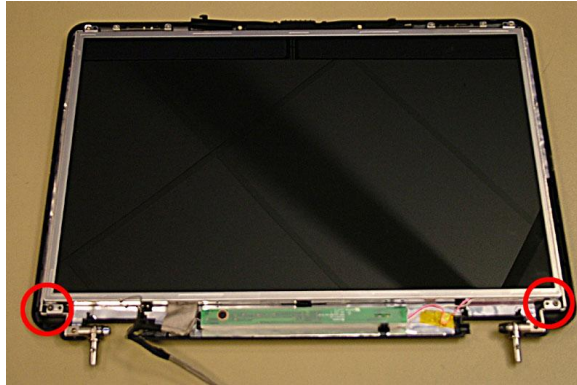4. Disconnect the cables from the inverter board.

**Fig. 28** *Power cable connected to the inverter board.*

Fig. 29 *Data cable connected to the inverter board.*

5. Remove the 2 screws in the metal brackets in the lower left and right corner.

Fig. 30 *Screws location in the metal bracket.*

6. Lift out the LCD panel.
7. Remove the metal brackets on each side (4 screws per side).
8. LCD data cable: Press the metal holder on each side and pull the cable loose from the connector on the LCD panel.
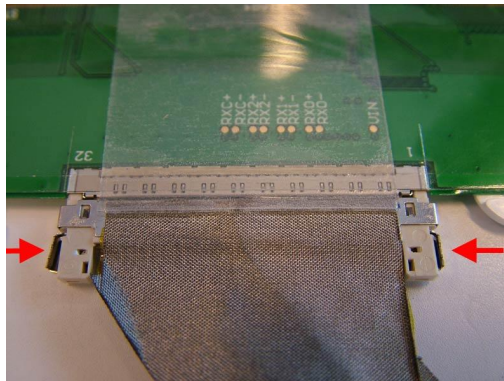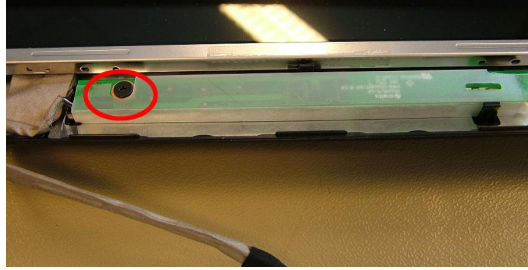

Fig. 31 *Disconnecting the LCD data cable.*

Removing the Inverter Board

To remove the inverter board, first remove the LCD panel (see up to step 4 in Removing the LCD Panel), then perform the following steps:

1. Remove the screw securing the inverter board.

**Fig. 32** *Location of screw securing the inverter board.*

2. Remove the inverter board.

Removing the WiFi Antenna

The WiFi antenna is woven into the metal shielding in the LCD top cover. To remove the WiFi antenna, first remove the LCD panel (see up to step 6 in Removing the LCD Panel), then perform the following steps:

1. Remove the metal brackets on the top on each side of the LCD back cover.
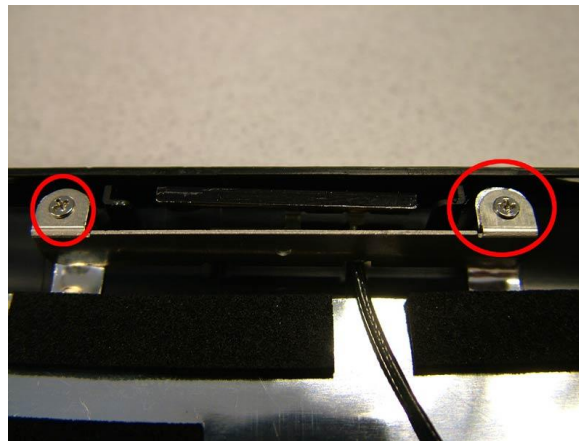
Fig. 33 *Metal brackets on LCD back cover.*

2. Release the WiFi antenna and remove it from the back cover.

Reassembly Notes

To clip the keyboard in place, you have to insert the keyboard/hinges cover into the metal clips mounted on the heat shield. Insert the hinge-side last.

Notice

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