

Removing the heat sink

Attention: To avoid damage to the unit, establish personal grounding before touching this unit.

To remove the heat sink and processor:

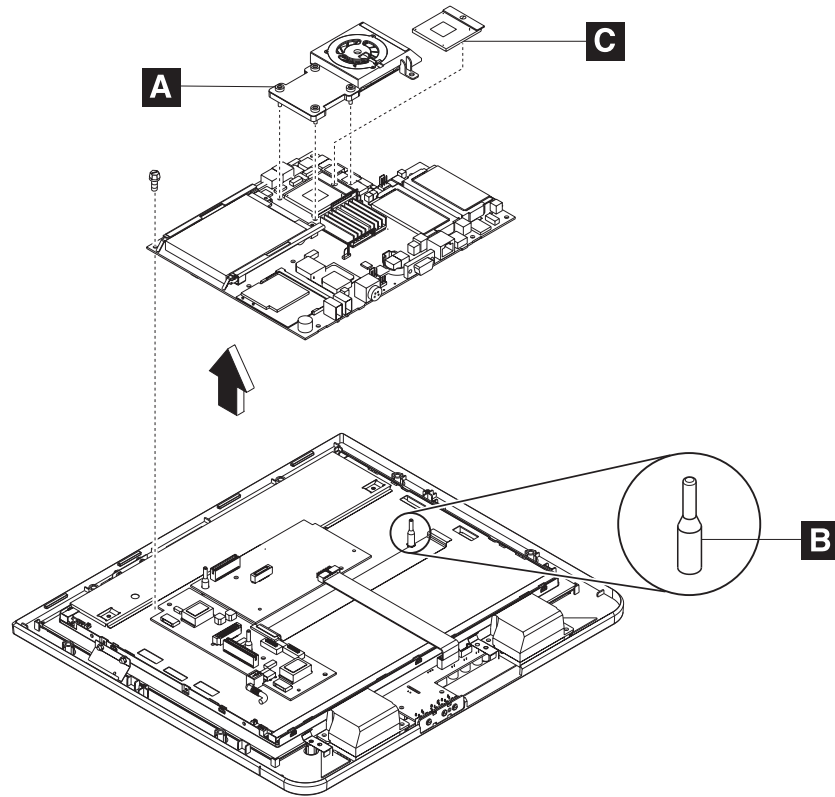


Figure 21. Heat sink and processor

1. Unplug the fan connector (**C** in Figure 19 on page 35).
2. See Figure 21 and loosen the 4 screws (**A** in Figure 21) that retain the heat sink and remove them.

Note: To replace the processor, go to “Removing the processor” on page 38.

To replace the heat sink, follow these steps:

1. Place the heat sink on the alignment pin (**B**) such that it aligns the heat sink screws with the matching holes on the heat sink bracket.
2. Tighten the four retainer screws (**A**) by securing them to the bottom, but **do not** overtighten.
3. Re-plug the fan connector.

Removing the processor

Note: See Figure 21 on page 37. Locate the processor (**C**) after you remove the heat sink.

To remove the processor, follow these steps:

1. Turn the screw that holds the processor 180° to release it.
2. Lift out the processor, carefully keeping your fingers on each side of the module.
3. To replace, reverse this procedure.

Removing the hard disk drive and bracket

Follow these steps to remove the hard disk drive and bracket:

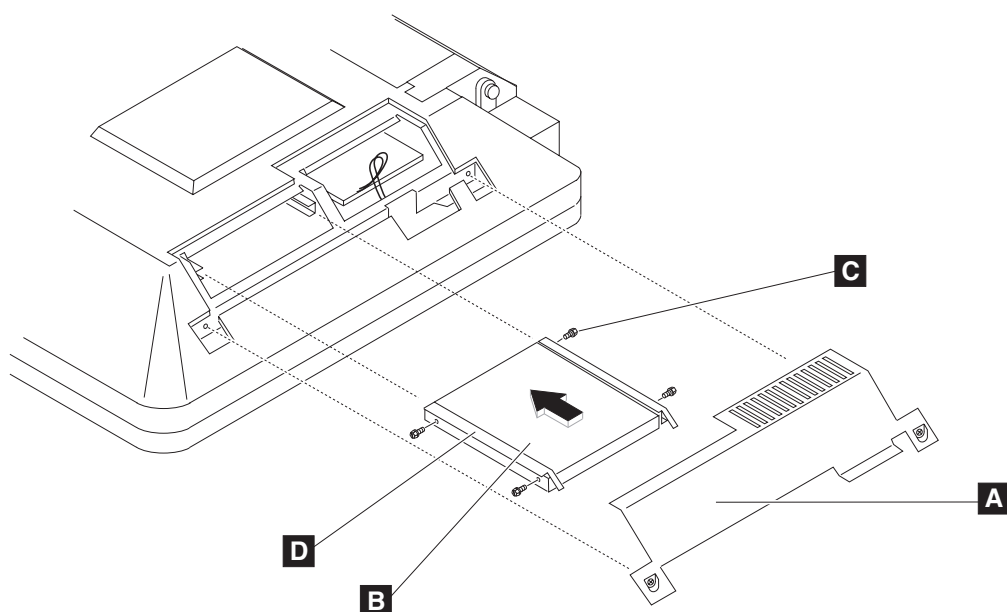


Figure 22. Removing the hard disk drive and bracket

1. Open the hard drive door (**A** in Figure 22).
2. Remove the hard disk drive (**B**) by sliding the drive outward.
3. Remove the four screws (**C**) that hold the hard disk drive bracket (**D**) and lift to remove.
4. To replace, locate the right and left side rails with the correct side of the rails upward.
5. Replace the 4 screws.
6. Reinstall the hard disk drive and door.

Removing the speakers

Follow these steps to remove the speakers:

1. Remove the back cover as described in “Removing the back cover” on page 31.
2. Detach each speaker cable (**A** in Figure 23) from the adjacent circuit board.

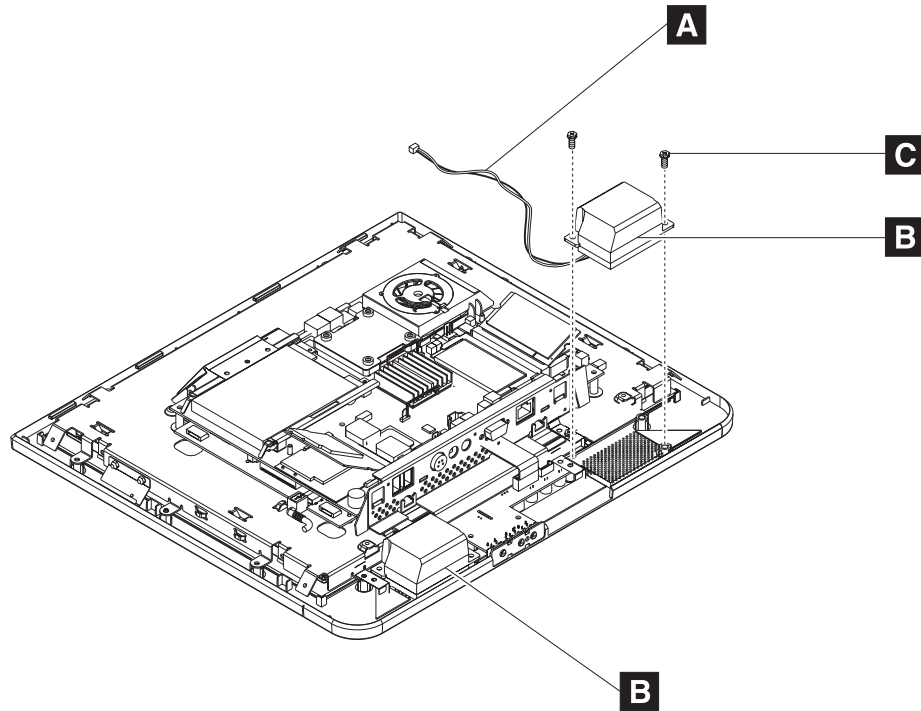


Figure 23. Removing the speakers

3. See Figure 23. Remove the two screws (**C**) that hold each speaker (**B**) and lift to remove.
4. To replace, reverse these steps.

Removing the system board

Attention: To avoid damage to the unit, establish personal grounding before touching this unit.

1. Remove the back cover as described in “Removing the back cover” on page 31.
2. Remove the hard drive fan as described in Figure 19 on page 35.
3. If installed, detach the wireless card connections, being careful not to crimp or bend the antenna.

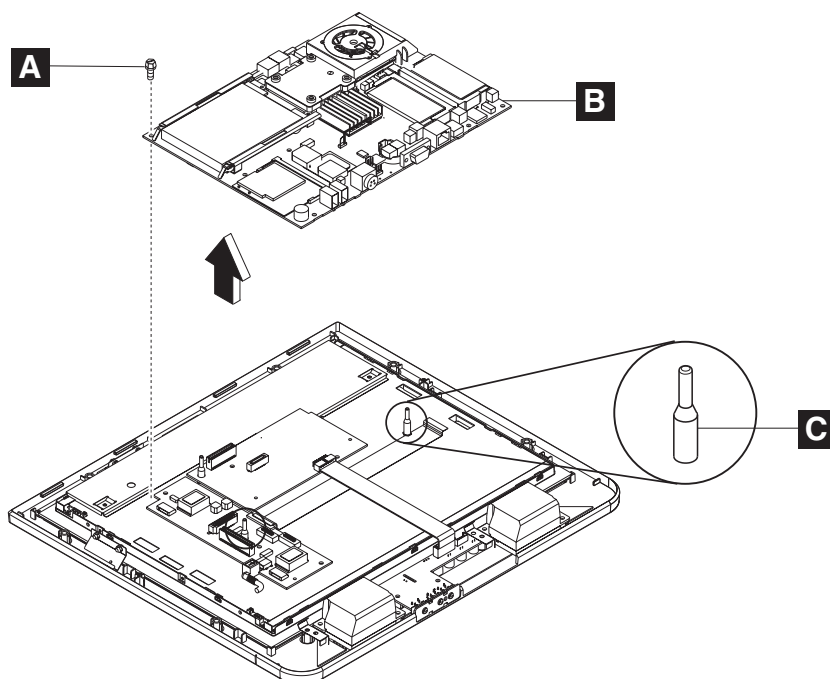


Figure 24. Removing the system board

4. See Figure 24 and remove the 5 screws (A) that hold the system board (B).

Note: The alignment pins (C) assist you in replacing the system board.

5. Carefully lift to remove.
6. To replace, reverse this procedure noting to align the board with the three pins for the correct positioning.

Note: Be sure the board is fully seated on the connectors along the top and sides.

Removing the control card

1. Remove the back cover as described in “Removing the back cover” on page 31.

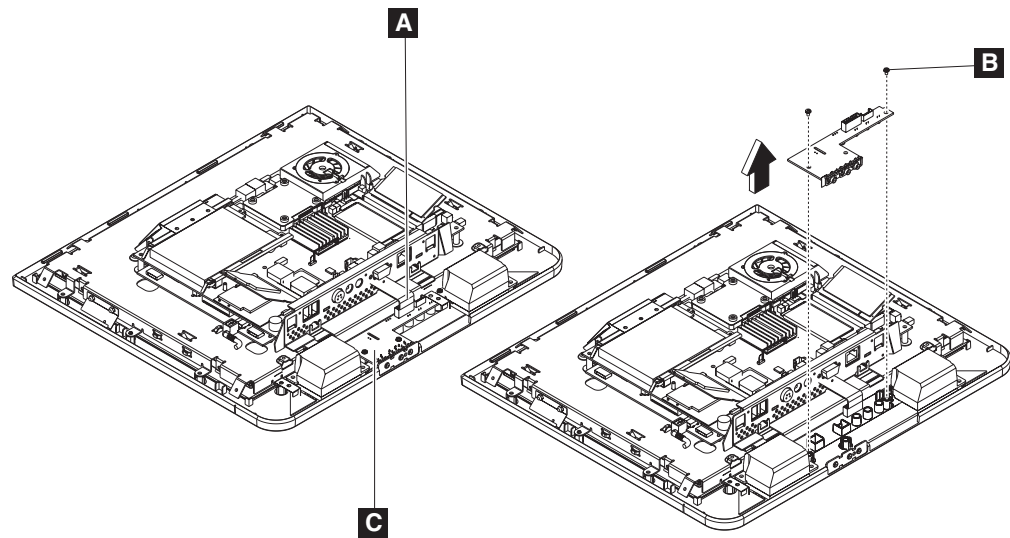


Figure 25. Removing the control card

2. See Figure 25. Disconnect the control panel cable (**A**).
3. Remove the two screws (**B**) that hold the control card (**C**) in place, and lift out the card
4. To replace, reverse this procedure, being sure to angle the card such that the control buttons line up with the button holes.

Note: Be sure to reinstall the grounding clip. Also, be sure that the ground shield lies under the control card and is folded so that it is between the buttons and the front bezel, with its holes lined up with the holes in the bezel.

Removing the control buttons

1. Remove the control card as described in “Removing the control card.”
2. Press inward on one end button and lift upward on that end of the button frame.
3. Then, press the center button and continue to lift upward on the frame.
4. Press on the opposite end button to freely lift the button assembly.
5. To replace, reverse this procedure.

Note: When reinstalling, be sure that the ground shield lies under the control card and is folded so that it is between the buttons and the front bezel, with its holes aligned with the holes in the bezel.

Removing the front panel card

1. Remove the back cover as described in “Removing the back cover” on page 31.
2. Remove the system board assembly as described in “Removing the system board” on page 40.

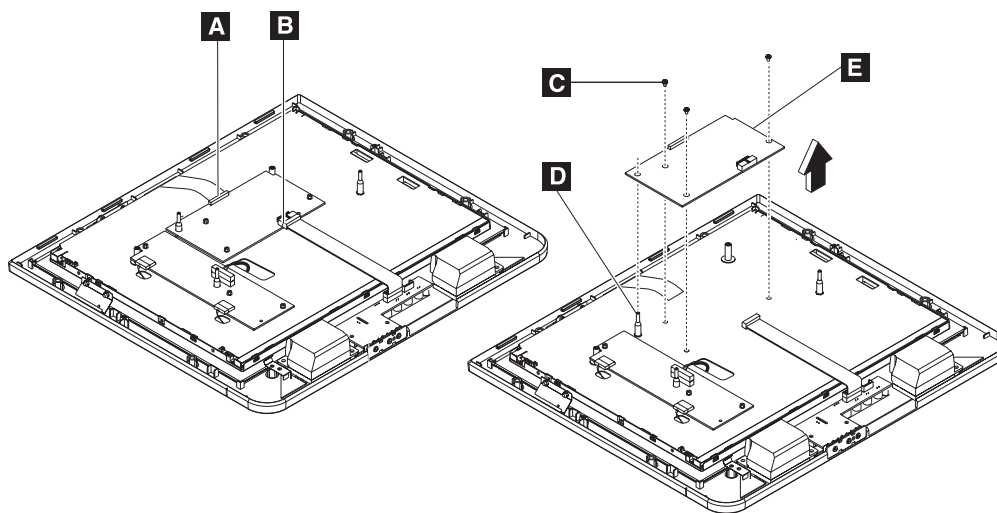


Figure 26. Removing the front panel card

3. See Figure 26. Disconnect the speaker connections from the card (**E**).
4. Remove the touch cable (**A**) as follows:
 - a. Locate the gray latches on either side of the cable.
 - b. Pull backward on the latches to release.
 - c. Slip the cable out of the slots.
5. Remove the control card cable (**B**) by pulling it out from the card.
6. Unfasten the three screws (**C**) to remove the card.
7. To replace, locate the alignment pin (**D**) and hole and lower the front panel card onto the pin.
8. Replace the three screws.

Removing the backlight inverter card

1. Remove the back cover as described in “Removing the back cover” on page 31.
2. Disconnect and remove the hard drive fan as described in “Removing the hard drive fan” on page 35.
3. Remove the system board in “Removing the system board” on page 40.
4. Remove the insulating plastic sheet (**E** in Figure 27).

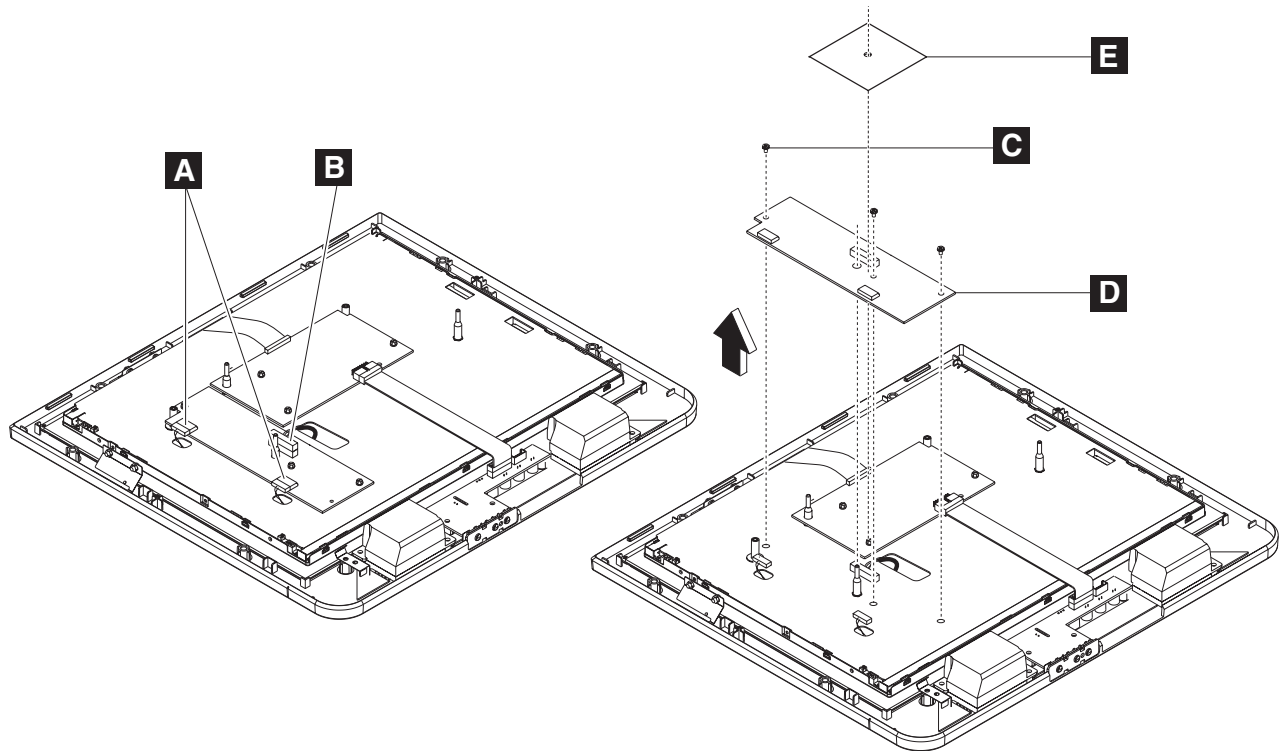


Figure 27. Removing the backlight inverter card

5. Disconnect the following from the card (see Figure 27):
 - LCD backlight cables: 2 in the 12 inch and 15 inch units; 4 in the 17 inch unit (**A**)
 - Video cable (**B**)
6. Remove the three screws (**C**) that hold the backlight inverter card (**D**).
7. Lift upward to remove the card.
8. To replace, reverse this procedure.

Note: The alignment pin and corresponding hole in the card assist you in replacing the card.

Note: Do not neglect to reinstall the insulating plastic sheet (**E**).

Removing the LCD

1. Remove the covers as described in “Removing the back cover” on page 31.

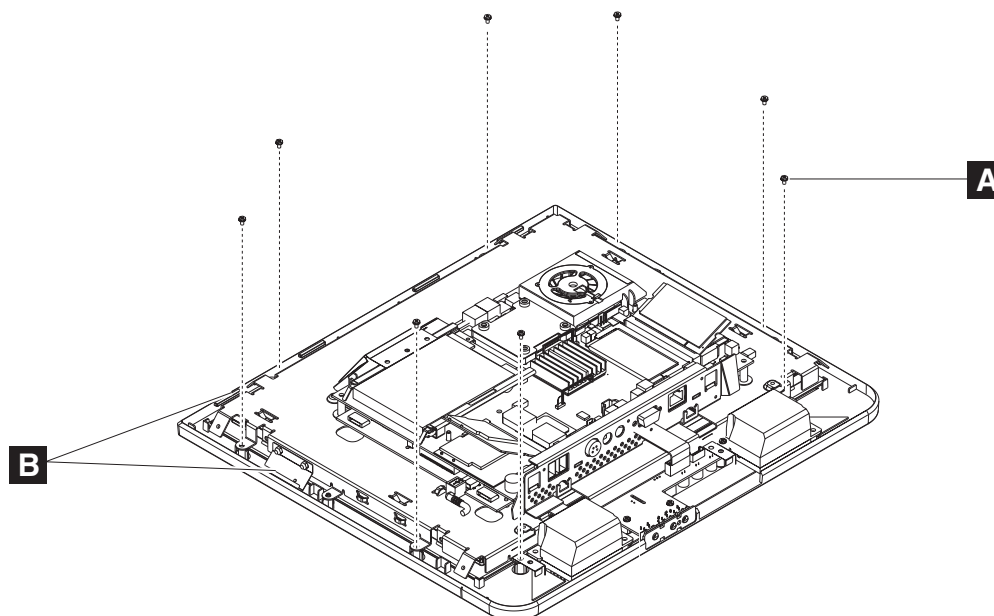


Figure 28. Removing the LCD

2. Remove the eight screws (**A**) that hold the system board (main planar) and LCD assembly to the front bezel.

Note: You do not need to remove the system board from the LCD assembly to remove the LCD.

3. Disconnect the following cables and connectors:
 - Touch cable (see **A** in Figure 26 on page 42)
 - Speakers (see **B** in Figure 23 on page 39)
 - Control card cable (see **B** in Figure 26 on page 42)
 - LCD backlight cables: 2 in the 12 inch and 15 inch units; 4 in the 17 inch unit (**A** in Figure 27 on page 43)
4. Remove the LCD assembly (includes system board).

Note: Take care not to bend the metal antenna (**B** in Figure 28).

5. Turn the LCD assembly over to locate and remove the four screws that hold the LCD to the back of the LCD assembly. Remove the LCD.
6. Disconnect the main signal cable from the back of the LCD.

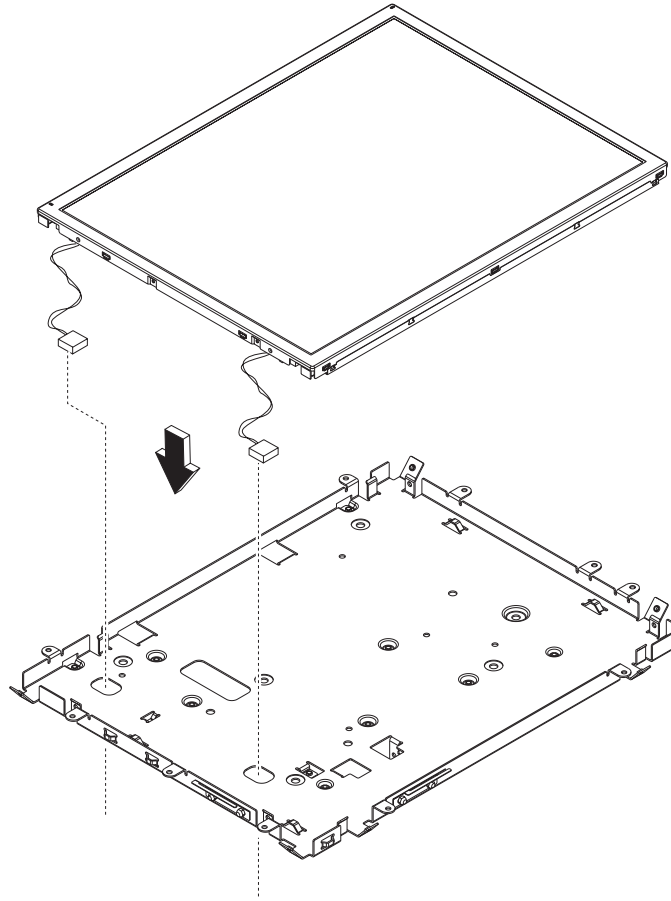


Figure 29. Replacing the LED assembly

7. To replace, see Figure 29 and follow these steps:
 - a. Plug the signal cable to LCD.
 - b. Place the assembly face up on a steady surface.
 - c. Align the LCD with the LCD shield and thread the backlight cables through the holes.
 - d. Replace the four screws holding the LCD.
 - e. Turn the LCD assembly over. Replace the bezel and install the eight screws.
 - f. Connect the backlight cables into the backlight inverter card.

Replacing the front bezel

1. Remove the cover as described in “Removing the back cover” on page 31.

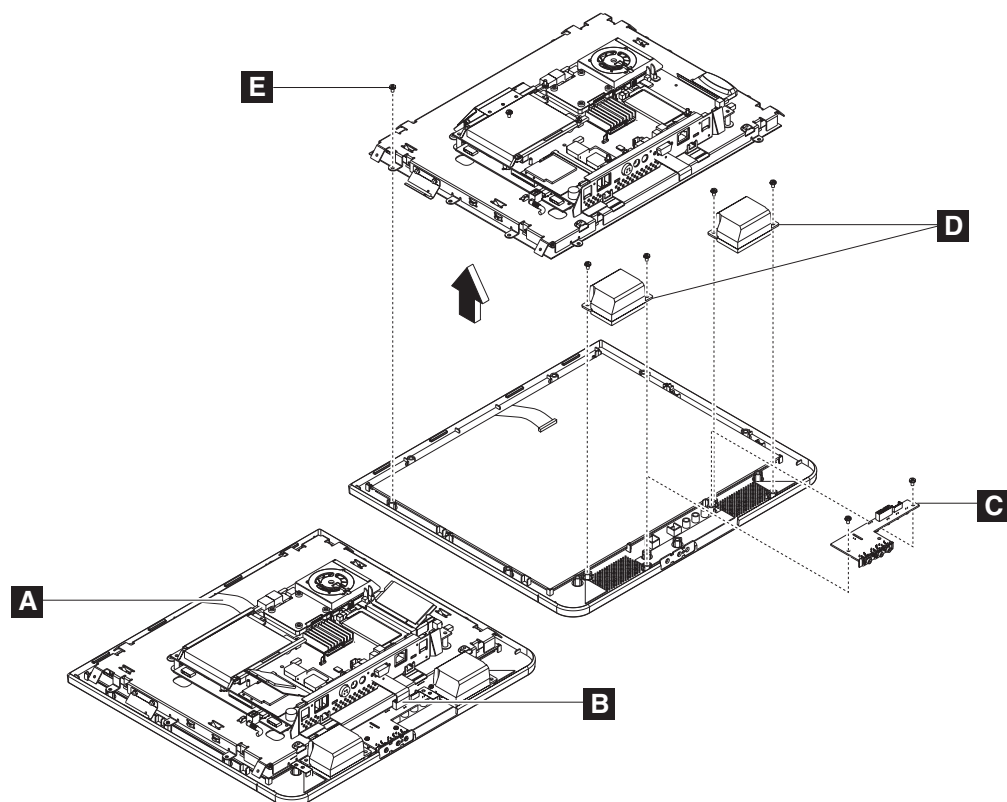


Figure 30. Replacing the front bezel

2. Disconnect the touch cable (**A**) and control card cable (**B**).
3. Remove the control card **C** .
4. Disconnect the speakers (**D**) and lift to remove
5. Remove the eight screws (**E**) that hold the LCD assembly (includes the system board) to the front bezel.
6. Lift out the LCD assembly from the front bezel, being careful not to bend the antenna.
7. To replace the front bezel, reverse this procedure.

Removing the mounting stand cover set

To remove the cover set for the table-top mounting stand, follow these steps:

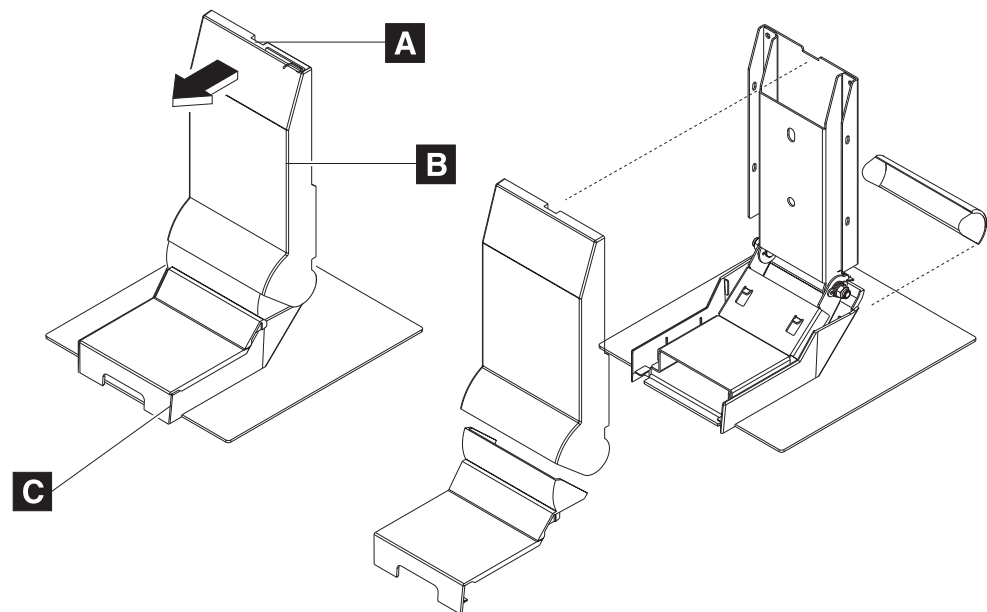


Figure 31. Removing the stand cover set

1. Remove the arm cover (**B**) by pulling on the finger recess (**A** in Figure 31) located on the top of the cover.

Note: Extra pressure may be necessary.

2. Remove the base cover (**C**) by pulling the cover away from the display.
3. Snap out the cable shield.
4. To remove the plastic base housing, unfasten the four screws.

Removing the volume control card (Model 13V only)

1. Removing the cover as described in “Removing the back cover” on page 31.
2. Unplug the cable connected to the volume control card.

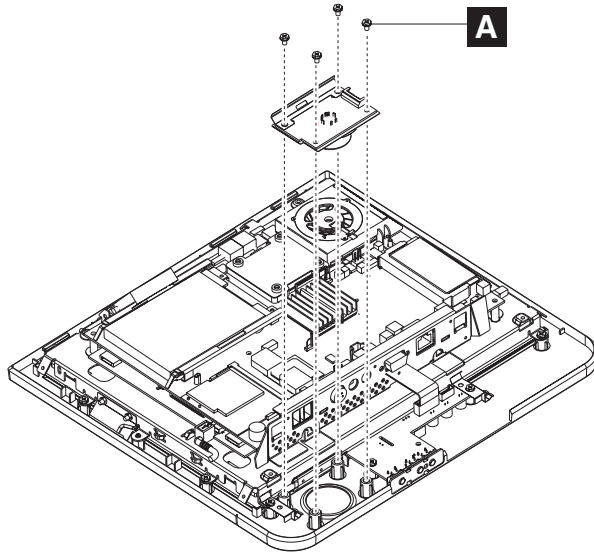


Figure 32. Removing the volume control card (Model 13V)

3. Remove the four screws that hold the volume control card and lift out.
4. To replace, reverse this procedure.

Chapter 5. Troubleshooting problems

This section describes several problems and explains what to do to correct them.

Condition description	Resolution
The power indicator on the terminal is off	<ol style="list-style-type: none"> 1. Ensure that the 4836/4838 is powered on by depressing the power button on the terminal. 2. Check that you have power at the outlet. 3. Check that the ac cord is connected to the power supply. 4. Check that the power supply is properly plugged into the power port of the display. 5. Remove the ac power from the power supply for 10 seconds. Reconnect the ac power cord to the power brick and try powering up again. <p>If the condition persists, follow these steps:</p> <ol style="list-style-type: none"> 1. Ensure that the power supply is supplying voltage, if not, replace the power supply. 2. If the power supply is operating, remove the back cover and ensure that all cables and circuit boards are fully seated in the connectors. 3. Replace the control panel card (the card that contains the power buttons) 4. Replace the front panel card (the card that connects to the control panel card) 5. Replace the system board.
Touch display not responding to touch	<ol style="list-style-type: none"> 1. Make sure that you use an object approximately the width of your finger to touch the screen. 2. Check to ensure that the cables internal to the unit are correctly attached to the 4836/4838 and to the system. 3. Run the service diagnostic diskette. 4. Check the cable connections and replace the cables, if necessary. 5. Replace the front panel card. 6. If condition, persists, replace the front bezel and touch assembly.
Totally blank display	<ol style="list-style-type: none"> 1. Check that the power indicator for the display is ON. If not, go to the first condition listed in this table. 2. Check the brightness controls. 3. Check the cable connections, and replace the cables, if necessary. 4. Replace the front panel card. 5. If condition persists, replace the LCD panel.

Condition description	Resolution
Unacceptable image quality	<ol style="list-style-type: none"> 1. Ensure that the video mode is set for 800 x 600 (12 inch models), 1024 x 768 (15 inch models), or 1280 x 1024 (17 inch models). 2. Run the service diskette.
Magnetic stripe reader (MSR) malfunctioning	<ol style="list-style-type: none"> 1. Check that the cable is securely connected. 2. Run the MSR test using the service diskette. 3. Replace the MSR.
Table-top mount tilts too easily	<ol style="list-style-type: none"> 1. Remove the arm cover and base top cover from the stand. 2. Tighten the two nuts at the joint until you obtain the desired friction. 3. Reinstall the covers.

Appendix A. Field-replaceable units

	Assembly 1: 4836/4838 Models 132, E32, 13V, and W2D (12 inch).	52
	Assembly 2: 4836/4838 Models 135, E35, and W5D (15 inch)	54
I	Assembly 3: 4838 Models 137, E37, and W7D (17 inch).	56
	Assembly 4: Table-top stand and wall mount	58
	Power cords	60

Assembly 1: 4836/4838 Models 132, E32.13V, and W2D (12 inch)

