

Lab 6.3.4: Sound Card Installation

Estimated time: 30 Minutes

Objective

Upon completion of this lab, you will be able to install a sound card in a computer, attach the speakers and microphone, and install the proper drivers.

Equipment

The following equipment is required for this exercise:

- ESD wrist strap
- Your lab computer with Windows 98 installed
- Standard non-magnetic Phillips-head screwdriver
- Sound card and driver installation software
- Speakers
- Microphone
- Motherboard manual

Scenario

The computer either has sound capabilities built onto the motherboard or has no sound ability at all. You have decided that you will need to add a sound card to enjoy the full capabilities of the computer's multimedia files.

Procedures

This lab involves working with delicate components inside the computer case that are very sensitive to static electricity. Once the computer cover has been removed, touch an unpainted metal part of the chassis. Before touching anything else inside the case, be sure you are using your ESD wrist strap. If the motherboard has sound capabilities built in, be sure to consult the motherboard manual for instructions on disabling this feature in the BIOS (or a jumper on the motherboard) before proceeding.

Step 1

Shut down the computer by clicking **Start > Shut Down**, then select **Shut Down** and click **OK**. Next, unplug the computer from the wall outlet to make sure it will not be turned on by accident. Also, unplug any speakers or microphone from the motherboard if it is equipped with on-board sound.

Step 2

Open the computer case and lay it on its side in front of you, locating the expansion slots. You are now ready to install the sound card.

Step 3

Locate an empty expansion slot, and using your screwdriver, remove the screw holding the expansion card access cover in place. Remove the cover and set it aside.

Step 4

The next step is to remove the sound card from the antistatic bag. Hold the card by the edges, being careful not to touch any of the components on the card.

Step 5

Grasp the top of the card by the metal end that will be attached to the chassis with one hand and the top corner of the circuit board with the other hand. Next, place the card edge connector into the expansion slot you have chosen. Be sure to line up the metal guide on the bottom of the card with the small opening where the expansion card access cover was removed.

Step 6

Using a back and forth rocking motion and a little bit of pressure, the card should seat into the socket fairly easily. Do not use too much force to insert the card edge connector. If the card will not seat correctly, remove it and make sure to align everything correctly and then try again. When the card is properly seated, the metal tab will line up with the screw hole. In addition, notice that the card is evenly seated in the expansion slot.

Step 7

Secure the tab with the screw you used to remove the access cover. If the CD audio cable has not been installed yet, attach it at this time.

Step 8

Remove your ESD strap from the computer and fit the case back together.

Once the computer is back together, plug the speakers into the sound card in the port labeled "speakers" or labeled with a small picture of a speaker. Next plug the microphone into the port labeled "mic" or labeled with a small picture of a microphone. Now plug the computer back into the wall socket and make sure all connecting cables are secure.

Step 9

Turn on the computer. The Windows 9x operating system should find "New Plug & Play Hardware" and try to install the device drivers for it. When prompted, insert the disk that came with the sound card to complete the software installation. The sound card should now be ready to use.

Step 10

To test the sound card, click **Start> Control Panel**. Once the control panel appears, double-click the **Sounds** icon. Click on any sound that has a small speaker icon next to it and click the small "play" button next to the preview speaker. If you can hear the sound, the card was installed correctly. If the sound was not heard, double-click the **System** icon in the control panel and click the **Device Manager** tab. Search for the sound card in the hardware list. Make sure the sound card is listed and does not have any conflicts.

Troubleshooting

Double check all connections to the sound card making sure the plugs are inserted all the way. If the speakers are powered externally, make sure they are plugged into the wall and turned on. Double-click the speaker icon on the right-hand side of the task bar to bring up the operating system's volume controls. Make sure the controls are turned up and not muted. If there is a problem in the device manager, remove the sound card from the list and restart the computer. This will force Windows to re-install the sound card into the list and re-install the drivers. Also, if the speakers are not self-powered, you may need to reset a jumper on the sound card to the amplified position.

Reflection

What was the most challenging part of this exercise? Why?
