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Power Macintosh: AV Sound options (9/94)

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Security: Everyone

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TOPIC -----

I don't hear a difference on 22 kHz and 44 kHz with Sound Out on audio CDs Why?

DISCUSSION -----

The Sound control panel can only adjust the output quality of the sound chip on the Macintosh logic board. The Macintosh cannot control or change the output of the CD Player.

The Rate pop-up menu in the Sound Out options changes the maximum frequency the playback device produces. In most cases, this is the sound chip on the Macintosh.

Changing Output Sample Rates

It is important to remember the following when changing sample rates:

- Increasing the sample rate slows performance
- Setting the Sound Out sample rate higher than a sound was recorded provides no additional benefits. However, it hampers performance.
- The sound out sample setting for 'Built In' setting does not affect devices hooked up to input ports of the computer unless the device has a sound device driver and can be adjusted by the computer. For example, some MIDI devices may show up in the 'Source' choice window.

It is important to also remember that CD audio is routed from the CD player to the Sound Output port based on the playthrough option. Selecting Playthrough in the Sound IN Options bypasses the Sound Chip on the CPU. Once you select Playthrough, changing the sample rate has no affect.

When using the CD Audio Player application, the playback rate is always 44 kHz,

since the sound is coming straight from the CD player.

Capturing Audio

If you are capturing CD audio using a program like Fusion Recorder, the sound out sample option will be a factor. Fusion Recorder will 'take over' the sound settings so that you can not access them through the Sound Control Panel. They must be set within Fusion Recorder. The application is modifying the same settings that the Sound Control Panel adjust and more. Fusion Recorder tells the Macintosh's Sound Manager to route sound from the selected input source through the sound chip during recording or monitoring.

When recording with Fusion Recorder, adjust the sound settings to match the sample rate you want to capture. When choosing a sample rate, remember that the size of the file is based on the quality of the recording. Capturing audio at 44 kHz, produces a much larger file than one captured using 22 kHz.

Fusion Recorder does not have a playthrough option, so any sound you hear using the application is played at the sample rate the recording is done at which could be either 22 kHz or 44 kHz. The application is designed this way so you can 'monitor' the quality of the sound being recorded based on your sound settings. A playthrough option would not give an accurate representation of the sound being recorded.

Sound digitizing applications override the Sound control panel settings. So if you are listening to a CD using a sound application like Fusion Recorder, you may not hear the full quality of the sound.

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