

Top Three Things To Look For In Soundcards

If you remember the days of Atari and "Pong," you probably also remember the personal computer's first sound: beep. Yes, you are correct, in the early stages of computing, computers were only able to utter a beep. This sound was used as a warning to the user that something might be amiss. Later on, technicians were able to toy with the length and frequency of the beep, thus creating a bit more variety to the listener. Fast forwarding to today, special sound cards now enable computers to play 3-D audio, which is extensively used for games, as well as surround sound playback for actual DVDs. Some sound cards even enable computer users to record the sounds around them and create almost professional audio recordings! Sound cards' most basic function is the translation of analog sound waves into digital computer data that may be manipulated in any number of ways. While this sounds fairly straight forward, it is imperative to remember that not all sound cards are created equal, and depending on the extensiveness of your need for this little device, there are some things to consider. Let us take a quick look at the top three things to consider when considering which sound card to use: Consider the sound card's bit-rate. No matter what use you will have for your sound card; the bit-rate will affect your enjoyment of the sound. Usually, these cards rate anywhere from eight to 16 bit; however, the most advanced technology now supports 24-bit sound quality. While the numbers appear close, this is the time to remember that the bit-rate is directly related to the clarity and "detail" you will be able to discern when listening to the sounds. Akin to the way resolution of a picture is measured in pixels (and the more pixels the higher the resolution, the crisper the picture), clarity of sound may be expressed via the bit-rate. Consider the sound card's connections. At the basic level, sound cards will permit for the connection of a microphone and of speakers. Yet those users, who need additional connectivity for recreational or even professional use, have caused the development of a whole host of additional input and output connections. For example, depending on the card, some now offer connections for multiple speakers to support 3-D and also surround sound. Other connections allow for the connection of synthesizers and other electronic instruments to the computers' sound cards. The specific form of connector is referred to as musical instrument digital interface (MIDI). USB connections also allow for the hook up of digital audio and video recorders to the sound cards. Last but not least, consider compatibility with the software you use. The sound card is designed to give the audio portion of your data its due, but if your sound card will not support your software, you will be frustrated at best. For example, if you are a serious computer gamer, you are familiar with DirectX software. This software is a standard for Windows based games, and as such it is updated frequently by Microsoft. Purchase of an older model sound card may not support the latest software update, and thus be useless. For those who are strict music lovers and notice the lack of tuning the second violin in the orchestra has received, there are some other ratings that will be of interest to you. First there is the signal to noise ratio (S2N) which may be measured in DB's. The lower the signal to noise ratio, the lower the sound quality will be. At the lowest end of the spectrum you may hear humming or whistling in addition to the sound. Secondly, you may wish to evaluate the total harmonic distortion (THD) offered. The higher the THD, the worse the sound quality is expected to be. Obviously, computers have come a long ways from the original "beep" many of you will remember. With this loss of simplicity, we now find ourselves at a point where it is up to the users to define just how much of this technology they will need, which aspects are the most crucial in compatibility, and how the technology needs to be configured to best benefit the individual user.

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