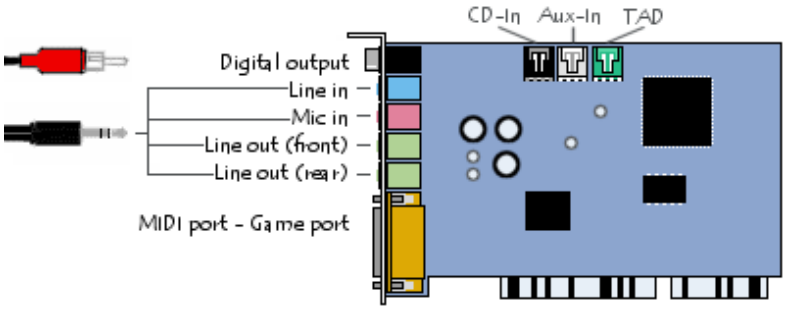
Introduction to sound cards

What is a sound card?

The sound card (also called an *audio card*) is the part of a computer which manages its audio input and ouput.



It is usually a controller which can be inserted into an PCI slot, but more and more motherboards include their own sound card.

Sound card connectors

The main components of a sound card are:

- The specialised processor, called the DSP (*digital signal processor*), which does all the digital audio processing (echo, reverb, 3D effects, etc.);
- The digital to analog converter, or DAC for short, which converts the computer's audio data into an analog signal for being sent to a sound system (such as speakers or an amplifier);
- The analog to digital converter, or ADC for short, which converts an analog *input* signal into digital data which a computer can process;
- External input/output connectors:
    - On or two standard 3.5 mm line-out jacks, normally light green in colour;
    - A line-in jack;
    - A microphone input (sometimes called *Mic*), usually a pink-coloured 3.5 mm jack.
    - An S/PDIF (Sony Philips Digital Interface) digital output This is an output line which sends digitised audio data to a digital amplifier using a coaxial cable with RCAconnectors at the ends.
    - A MIDI connector, usually gold-coloured, which is used for connecting musical instruments, and can serve as a *game port* for plugging in a controller (like a joystick or gamepad) which has a SUB-D 15-pin connector.
- Internal input/output connectors:
    - A CD-ROM/DVD-ROM connector, with a black socket, which is used to connect the sound card into a CD-ROM's analog audio output using a CD Audio cable;
    - Auxiliary inputs (AUX-In), with white sockets, used for connecting internal audio sources such as a TV tuner card;
    - Telephone answering device connectors (TAD), which have a green connector.