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How MIDI Works

MIDI doesn't record sound, it simply records the instructions, or messages, needed to tell computer hardware and software which instrument sound to make, which note to play, and how loud to play it. You can play music using MIDI on your computer by directly connecting a MIDI-enabled instrument, such as a synthesizer, to your PC, or by executing a MIDI sound file.

Input

You also can connect a MIDI-enabled instrument to your PC using a five-pin DIN connector cable. The cable runs from the synthesizer's MIDI OUT port and connects to the Joystick/MIDI port on the computer's sound card.

One way to get MIDI instructions into your PC is to use a MIDI message file. These are available at MIDI Web sites, or you can save the file from another system on to a removable media, such as a diskette or CD-ROM.

When downloading MIDI instructions from a Web site, they will be cached into your browser. The browser then forwards the instructions on to the sound card for processing.

When you load a MIDI file from a portable medium, you need to save it straight to your hard drive. When played, this file must first go through MIDI sequencing software, which separates out the individual channels and instructions and performs other editing functions, such as altering tempo and pitch. The instructions are then bustled out to the sound card.
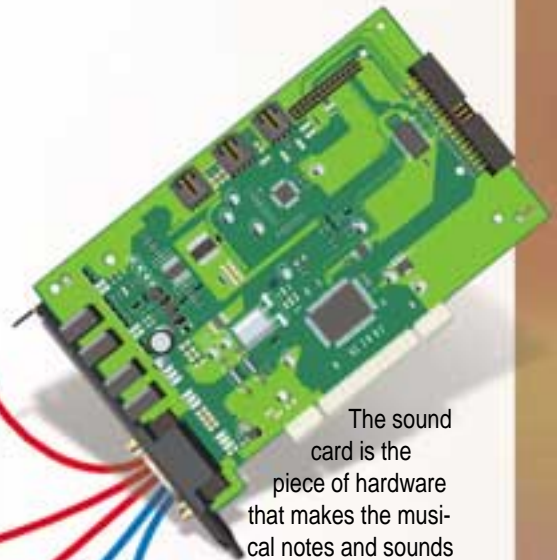
The sound card is the piece of hardware that makes the musical notes and sounds you hear. The MIDI instructions tell the sound card which sound to play. MIDI-enabled sound cards already have the MIDI voices integrated into them, so they only have to recall the proper sound from memory in the right order.

Output

For professional-level quality, musicians will send the music from the sound card to a sound mixer and amplifier, which are connected to the PC. With these tools, musicians can edit sounds even further, adding more bass, treble, and other musical effects. From here, the music is output to the speakers.

Most home users don't need to do much technical editing of the music, so the sounds are ready to be output to the speakers.