

Introduction to Computer Music: Volume One



Modules

1. How MIDI Works
2. Digital Performer

Chapters

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Chapter Three: MIDI



1. How does the MIDI system work?

Overview

MIDI stands for Musical Instrument Digital Interface. The development of the MIDI system has been a major catalyst in the recent unprecedented explosion of music technology. MIDI has put powerful computer instrument networks and software in the hands of less technically versed musicians and amateurs and has provided new and time-saving tools for computer musicians. The system first appeared in 1982 following an agreement among manufacturers and developers of electronic musical instruments to

include a common set of hardware connectors and digital codes in their instrument design. In 1983, the MIDI 1.0 Specification was formally released by the International MIDI Association* as Roland, Yamaha, Korg, Kawai and Sequential Circuits all came out with MIDI-capable instruments that year.

The original goal was to connect or interface instruments of different manufacture to control common functions, such as note events, timing events, pitch bends, pedal information, etc. A note, patch change or pedal applied to one instrument would have the same effect on another connected via MIDI cables, even if it was of a different brand. As microcomputers, such as the Apple II became available, it wasn't long before instruments were hooked up through a MIDI interface to the computer as well as each other. This allowed programmers to write MIDI sequencing and editor/librarian software.

Though several classes of codes have been added to the MIDI 1.0 Specification (International MIDI Association, 1989) and MIDI applications have grown far beyond the original intent, the basic protocol has remained unchanged. MIDI is a system very much like a player piano roll in that it is used to specify the actions of a synthesizer or other electronic devices, while the tone or effect is generated by the instrument itself.

*According to [Joel Chadabe](#), the International MIDI Association was formed to disseminate information and the MIDI Manufacturers' Association was formed to work on technical issues

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