CHAPTER 7 MIDI BASICS

MIDI – Performance Language

There are 10 types of people: those who get binary and those who don't.

How MIDI has changed Music Production

MIDI has changed the way songs and albums are produced. Today many parts of a production are sketched out using MIDI. This can include the drums, bass, keys and more. The flexibility of sequenced MIDI events allows for several different arrangements and tempos to be worked through before a single audio track is recorded. This saves both time and money.

Software programs and producers used to be divided into two camps: the MIDI camp and the Audio camp. Software currently blends the two as even the audio based Pro Tools has several advanced MIDI features.

MIDI Language

History of MIDI

Before MIDI's inception in **1983**, synthesizer manufacturers had their own method of linking synthesizers together. Trade secrets were closely kept, so the fact that a performance language was standardized is quite amazing. More amazing may be the fact that more than 25 years after it was standardized, MIDI is still used and is more relevant in production than ever before.

For the pre-MIDI consumer, if you had an Oberheim synthesizer, you'd need another Oberheim synth or sequencer to link the units together. There was no single method for connecting one manufacturer's synths to another manufacturer's synth (i.e. Oberheim to Roland).

It's unfortunate that the example of industry coming together to agree upon MIDI, General MIDI and Standard MIDI Files has not been as successful on the audio side of our industry or with a MIDI version 2.0!

Overview

MIDI is a language for performance information. As such, it contains NO AUDIO! By comparison, it is much like sheet music to a musician. The sheet music is interpreted by the musician who then performs the interpreted information on an instrument that actually produces the sound. With MIDI, by comparison, MIDI performance information is sent to a receiving electronic device (synthesizer) that interprets information then produces sound.

Question: What is MIDI?

A: MIDI is a digital performance language.

Question: What's with the name MIDI?

A: MIDI is an acronym for:

Musical Instrument Digital Interface.

Physical Connections:
The key to MIDI is the ability of one 5-pin din cable to transfer up to **16** independent channels. Physical cables have been replaced digitally within computers to allow for limitless channels to send MIDI information internally.

MIDI is a serial protocol. This means that only one message can be sent at a time through traditional cables. While the speed of MIDI was adequate in 1983, dense MIDI sequences with many active controller messages can bog down the a traditional 5-pin MIDI pipeline.

Note: Almost every electronic musical instrument since 1983 has MIDI capability. It costs less than $5 in parts to add MIDI to a hardware device.

USB: The USB protocol has brought the speed of MIDI up to today's standard. Most current MIDI controllers use USB.

What's behind the MIDI language and how does it work?