

Speaker notes

- musical instrument digital interface
- connects devices together to exchange information like pitch and volume
- allows for keyboards and controllers to manipulate a DAWs faders and knobs
- allows for a DAW to control hardware audio processors and synthesizers
- MIDI spec - describes hardware and messages
- hardware
 - cables, ports, computer interfaces, and various electrical details that allow for the communication of musical data between synthesizers, computers, and various other electronic musical devices.
- messages
 - what information can be communicated between such connected devices and what form the messages take.

MIDI HARDWARE

A BRIEF HISTORY OF MIDI

ANALOG DAYS: SYNTHESIZERS IN THE 1960S AND 1970S

- Robert Moog, Donald Buchla, and others
 - analog
 - modular
 - voltage controlled

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- analog
 - electrical signals in the synths consisted of continuous changes in electrical voltage rather than a discrete series of numbers as in modern digital synthesizers.
- modular
 - the task of generating sound was distributed among separate hardware units called modules.
 - oscillators, filters, and amplifiers were separate modules.
- voltage controlled
 - keyboards, joysticks, and ribbon controllers were used to send control voltages to the modules to change their settings.

MOOG - SHOW BY WENDY CARLOS

Wendy Carlos demonstrates her Moog Synthesizer in 1970



BUCHLA 200E

The Mighty Buchla 200e Modular Synthesizer Part 1 | Tutorial



DIGITAL CONTROL, DIGITAL MEMORY, AND DIGITAL SYNTHESIS



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- in the 1970s digital control in the form of sequencers was added to analog synthesizers to allow for more precise control.
- they also added the ability to save settings, the original presets
- this is a Sequential Circuits Model 800 that could hook up to any synthesizer through voltage control
- Eventually all digital synthesizers were developed

YAMAHA DX7

Yamaha DX7 - The Synthesizer that Defined the '80s



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Yamaha DX7, an early all-digital, MIDI-compatible keyboard synthesizer (1983). At about \$2,000, the DX7 was relatively inexpensive by early 1980s' standards.

MIDI 1.0 SPECIFICATION

- synth manufacturers wanted to create a communications standard
- MIDI 1.0 Specification - published in 1983
- first connections at NAMM - Sequential Circuits Prophet 600 and a Roland JP-6.

CONTROLLERS

Various controllers

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- only sends MIDI messages
- doesn't generate sound on its own
- before personal computers it would send messages to a hardware synth but now we connect them to computers

MODULES - ROLAND FANTOM-XR



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A module is a device that can generate sound when it receives MIDI messages but has no keys to play, and hence can't output MIDI messages.

WORKSTATIONS - AKAI MPC

How J Dilla humanized his MPC3000



ALTERNATE CONTROLLERS - AKA NIMES

"NIME" | a documentary of New Instruments for Musical Ex...

