

MIDI Unit:

Demonstrate understanding of how MIDI works.

Define MIDI using 5 key concepts.

Detail MIDI's hardware specifications.

- Plug & Cable specs

- Daisy chain vs. Star configuration vs. Switcher (MIDI Patchbay)

- Ports

- UART

- Opto-isolation

- Ramping

- MIDI interface

Discuss the electronic specifications of MIDI

- Master - slave concept

- Local on/off

- Speed of MIDI communication (bandwidth)

- Serial Asynchronous mode

- Reverse Logic

Outline major aspects of the MIDI language

- Status bytes vs Data bytes

- Structure of a MIDI message

 - Message similarity to sentence structure

 - Subject

 - Predicate

 - Qualifiers (adjectives, adverbs, prep. phrases, etc.)

 - Parts of a Status byte - Data byte

 - MSB=type of byte

 - LSN depends on type of message

 - (of Channel message)=Channel designation

 - (of System message)=Command

- Channel vs System messages

 - Channel messages

 - Note off

 - Note on

 - Poly pressure

 - Control change

 - Continuous controllers MSB

 - Continuous controllers LSB

 - Switch controllers

 - Single Byte Continuous controllers

 - Registered & non-registered parameters

 - Undefined controllers

 - Mode controllers

 - Program change

 - Channel pressure

 - Pitch bend

 - System messages

 - System Exclusive

 - Manufacturers messages

 - Universal messages

 - System Common

 - Absolute time message

 - Song Position Pointer

 - Song Select

 - Undefined

 - Tune request

 - EOX message

 - System Realtime

 - MIDI clock

 - Undefined

 - Start

Continue
 Stop
 Undefined
 Active sensing
 System reset

Voice vs Mode Channel Messages

Running Status

Discuss details of the MIDI language

Describe General MIDI and its derivatives

Discuss the difference between absolute timing and relative timing

Interpret any MIDI message

Interpret a MIDI Implementation Chart

Demonstrate basic understanding of a Standard MIDI File's structure

Diagram several types of simple MIDI hookups.

Daisy chain

Star configuration

Switcher setup

Define the following MIDI related terms:

5 milliamp	Absolute time	Active	Active sensing	Aftertouch
Algorithmic composer	Asynchronous	Audio Gear	Bandwidth	Baud
Beat	Breath Controller	Center detente	Channel	Channel Aftertouch
Channel message	Channel messages	Channel pressure	Clock	Continue
Continuous controller	Control Change	Daisy Chain	Data byte	Data dedrement
Data entry	Data increment	Digital	DIN	Drop frame
Editor (Note)	Editor (Voice)	Educational Software	EOX	Foot Controller
Frame	Full bit set	General MIDI	General purpose controller	
GM	GS	Helicopter	IMA	Implementation chart
In	Induction	Input Device	Interface	JMSC
Key/Mono Aftertouch	Key/Mono Pressure	Keyboard	Legato	Local control
Local off	Local on	Local On/Off	LSB	LSN
Manufacturers message		Master	Message	MIDI
MIDI Accessories	MIDI beat	MIDI clock	MIDI interface	MIDI merge box
MIDI message	MIDI Patchbay	MMA	MMC	Mod Wheel
Mode	Mode 1	Mode 2	Mode 3	Mode 4
Mode message	Mono	MSB	MSC	MSN
MTC	NAMM	Non-registered parameter		Note Off
Note on	Omni	Omni Off	Omni On	Opto-isolator
Out	Pan	Parameter	Performance	Performance command
Performance Commands		Pitch bend	Pitch Rider	Pitch Wheel
Poly	Polyphonic pressure	Portamento	Position	Preset
Program change	Ramping	Realtime message	Registered parameter	Relative time
Reset	Resolution	Reverse Logic	Running Status	SDS
Sequencer	Serial	Set of Specifications	Shielded Twisted Pair	Slave
SMPTE	Song position pointer	Song select	Spec Sheet	Star
Star Configuration	Start	Start bit	Status byte	Stop
Stop bit	Store & Manipulate	Sustain	Sustenuto	Switch controller
Switcher (MIDI Central)		Synthesizer	Sysex	System Common
System exclusive	System message	System messages	System realtime	System Reset
Ten	Thru	Thru box	Tone Generator	Track
Tune request	Twisted pair	UART	Undefined	Undefined message
Universal sysex	Unregistered parameter		Velocity	Voice
Voice message	Volume	Workstation	XG	3
10	24	50	256	16384
16384	31250	31250	2097152	2097152
10010000				