**Chapter 16 – MRT**

**WHAT IS MIDI**

* Musical Instrument Digital Interface
* Digital communication language
* Compatible with multiple software and hardware over connected network
* Translates performance or control related events into equivalent digital messages to other MIDI devices
* Data can be recorded into hardware devices and can be edited
* Can be used to vary performance and control parameters in electronic instruments

**MIDI CABLE**

* Consists of shielded, twisted pair of conductors wire
* Has a male 5-pin DIN plug and both ends of the wire
* Only uses 3 of 5 pins – 4 and 5 conductors for MIDI data
* Pin 2 connects cable shield to equipment ground
* Pins 1 and 3 currently not in use
* MIDI CABLE EXPLANATION:
  + PIN 1 – No Connection
  + PIN 2 – Ground
  + PIN 3 – No Connection
  + PIN 4 – MIDI Signal
  + PIN 5 - MIDI Signal

**MIDI JACKS**

* MIDI In jack
  + Receives messages from an external source and communicates this performance, control and timing data to the devices internal microprocessor
    - This allows an instrument to be played or device to be controlled
* MIDI Out jack
  + Used to transmit MIDI performance control messages or sys-ex from one device to another MIDI instrument or device
* MIDI Thru jack
  + Retransmits an exact copy of the data that’s being received at the MIDI in jack
  + Allows data to pass directly through an instrument or device in the MIDI chain

**MIDI MODES**

* Mode 1 – Omni On/Poly
  + An instrument will respond to data that’s being received on any MIDI channel and then redirected to the instruments base channel
* Mode 2 – Omni On/Mono
  + An instrument will respond to all data that’s being received at its input without regards to channel designations
  + Can only play one note at a time
* Mode 3 – Omni Off/Poly
  + An instrument will only respond to data that matches its assigned base channel in polyphonic fashion
  + Data assigned to any other channel will be ignored
  + Most commonly used
* Mode 4 – Omni Off/Mono
  + An instrument will be able to respond to performance data that’s transmitted over a single dedicated channel
  + Each voice will only be able to generate one MIDI note at a time