

MIDI

Musical Instrument Device/Digital Interface

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- MIDI files carry performance details such as:
 - When to play a note, which note to play, at what volume level, for how long, with how much attack, with what expression? And much more.
 - When you record, it gathers this information from your playing. When it plays back, it sends this information along to an electronic instrument.
- Allows computers, synthesizers, MIDI controllers, audio interfaces, samplers and drum machines to control one another, and to exchange performance data.
- Controls music being played by a hardware synthesizer (keyboard), or a software instrument (Presence), or even cues for a multimedia show.

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- MIDI connectors
5-pin



- Handles up to 16 separate channels at one time.
- USB is becoming the most common MIDI connector.

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- MIDI-enabled keyboards are common on stage. You can get an inexpensive midi-USB keyboard, and use it with virtual instruments, like Studio One's *Presence*, on your computer.



- And MIDI goes both ways. It can also allow your computer to play your keyboard.

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- Almost all music recordings today utilize MIDI as a key enabling technology for recording music.
- Typical Example: midi can **trigger** drum beats (actual little sample recordings) on a track that are played at exactly the right timing, time after time.



A MIDI drum controller

- **Excellent virtual instruments** are available that sound so much like real instrument performances that it is difficult to tell. In a mix, then, it is even harder to tell.

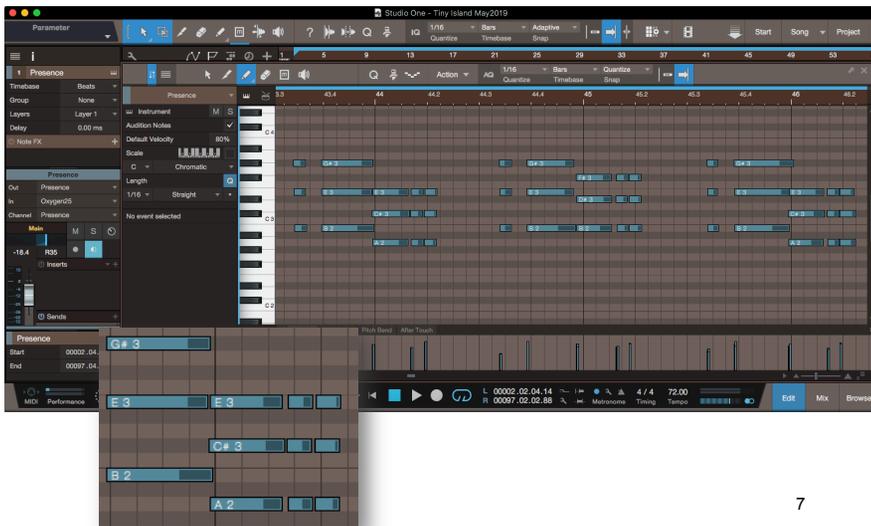
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DAW “Sequencing” Software

- Allows recording and editing MIDI
 - Choose the MIDI device as the **input device on your DAW**, or you can use your QWERTY keys.
 - The virtual instrument (as Presence) must receive on the **same channel** as the keyboard is sending.
 - Default is channel 1. But if there is more than one track using MIDI, it is better to use a different channel for each.
- Advantages: after recording, you can
 - Edit any note for pitch, timing, volume, duration, etc.
 - Cut and paste individual notes or sections
 - Add or remove notes with a mouse click
 - Transpose key to key easily
 - Swap instruments

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A MIDI track recorded in Studio One



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Saved MIDI Files

- DAWs can export them
- Like a piano roll with more control
- The most compact of all music files
- Files have .mid extension
- Thousands of free ones available
- But they have no sound of their own
 - Sending them to someone else to hear is chancy if you don't know what kind of instruments they have on their device or software.

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Qwerty Keyboard in Studio One

Go to **Song > Song Setup**.

Choose **Preferences** (a button below)

Choose **External Devices** (an icon above)

Choose **Add** (a button below)

Scroll down through the list until you get to **PreSonus**.

Open the PreSonus folder and select the **Qwerty Keyboard** option. Click **OK**, and Close Song Setup.

Open the Presence plugin. Playing the attached keyboard with produce sound, but playing it this way will not work for recording.

Press the little tools button  "round gear" which will drop down an options ribbon...

Click the **down arrow** to show you the options available.



Choosing the Qwerty keyboard will bring the Qwerty window up.

To record what you play – now you can press the record button in Studio One
As you play, a MIDI event will be recorded in the track that you can then edit further.