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MIDI Sequencing Basics

Lesson 1:
Sequencing Basics

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Sequencing



When modern keyboard musicians create music, they can use synthesizers to produce a great many sounds—nearly every instrument in existence, all from the controls of their keyboard rig. As discussed in the reading, devices called "[tone generators](#)" or "sound modules" create all these sounds, like the instruments in an orchestra. And there is another device—a device at the heart of all these instruments, coordinating them to play music, like a conductor. This device is called the [sequencer](#). If our collection of synthesizers is an orchestra, the sequencer supplies the actual sheet music and beats the time. And how does the sequencer know what music to put in front of each synthesizer? **You tell it!** You play (or program) each instrument's part into it.



Reason sequencer

The Sequencer

How does the sequencer receive this information? It is not as complicated as it might sound. A sequencer records and plays back sequences of notes. Similar to a tape-recorder, the sequencer records a musician's performance—in this case, playing a MIDI keyboard. The sequencer then plays that performance back, through a sound module, and we hear the performance. We can record different tracks into the sequencer, like we used different tracks of a multitrack tape recorder, to combine different sounds or instruments.

The key difference is that the sequencer records MIDI data. The actual notes are converted into numeric computer code. That's all MIDI data really is: a numerical description of notes and other musical information. When the computer plays back the code through a sound module, the sound is reproduced. The sequencer does not record actual audio sound, as would a tape-recorder.



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Sequencing



Why not just use a tape recorder, you may ask? Because using numerical representations of the notes themselves has advantages. Once a performance is in this numeric form, we can easily and quickly use the sequencer to:

- Edit that performance, much like editing a document in a word processor.
- Speed it up or slow it down, without changing the pitch.
- Transpose it.
- Change the volume of one note or a set of notes.
- Combine performances, which use different sounds to make up a musical group performance.
- Play it back with a different instrument sound.
- Save it as a file, and e-mail it to a friend.

And many other things we will learn in this class!

Similar to tape recorders, most sequencers have a group of buttons called the transport controls. On tape recorders, they transport the tape around. On the MIDI sequencer, they transport around within the file. But the functions are the same: playing, recording, rewinding, fast-forwarding, stopping, and pausing. On a sequencer, they operate just like a tape recorder.

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Reason is designed to operate like a software version of a recording studio. At the heart of the studio is a mixing console. This receives input from different instruments, such as MIDI keyboards, and outputs the signals to different sound modules (such as drum machines and synthesizers) and effects (such as reverberation and EQ).

Now let's look at these different components in Reason. Roll your mouse over this picture of the Reason front panel. You will see its main features.

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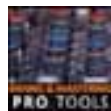
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