

About this chapter

As of this writing, Reason includes two pattern-based devices: the Redrum drum computer and the Matrix Pattern Sequencer (additional pattern devices may be added in upcoming versions). While these two devices are very different in most ways, they handle patterns following the same basic rules, as described in this chapter.

! For details about the respective devices, see the electronic documentation.

What are Pattern Devices?

A pattern device contains a built-in pattern sequencer. Unlike the main sequencer in Reason, a pattern sequencer repeatedly plays back a pattern of a specified length. The typical example in the "real world" (as well as in Reason) is a drum machine which plays drum patterns, usually one or two bars in length.

Having the same pattern repeat throughout a whole song may be fine in some cases, but most often you want some variations. The solution is to create several different patterns and program pattern changes (automatic switching from one pattern to another) at the desired positions in the song.

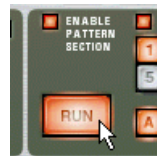
How Pattern Devices integrate with the main Sequencer

The built-in pattern sequencer in a pattern device interacts with the main Reason sequencer in the following ways:

- The tempo set on the transport panel is used for all playback.
- If you start playback for the main sequencer (on the transport panel), all pattern devices will automatically start as well (provided their pattern sequencers haven't been disabled - see below).

- You can also run a pattern device separately (without starting the main sequencer or other pattern devices) by clicking the Run button on the device panel.

This starts the built-in pattern sequencer in the device. To stop playback, click the Run button again or click the Stop button on the Transport panel.



The Run button on the Redrum drum computer.

- If you are running a pattern device separately and start playback of the main sequencer, the pattern device will automatically restart in sync with the sequencer.

- Pattern changes can be controlled by pattern change events in the main sequencer.

In other words, you can record or create pattern changes in the main sequencer, and have them occur at the correct position on playback.

- If the pattern device has a built-in sound source (such as Redrum), this can also be played by the main sequencer, or via MIDI.

You can combine the built-in pattern playback with playback from the main sequencer or via MIDI. For example, this allows you to add variations or fills to a basic pattern.

It is also possible to disable the pattern sequencer totally, converting the device to a pure sound module. This is done by deactivating the Enable Pattern Section switch.



Read more about controlling devices from the main sequencer on the electronic documentation.

Selecting Patterns

Each pattern device has 32 pattern memories, divided into four banks (A, B, C, D).



The Bank and Pattern buttons for the Matrix pattern sequencer.

- **To select a pattern in the current bank, click on the desired Pattern button (1-8).**
If you like, you can assign computer key commands and/or MIDI messages to pattern selection. See the electronic documentation.
- **To select a pattern in another bank, first click the desired Bank button (A, B, C, D) and then click the Pattern button.**
Nothing happens until you click the Pattern button.

The pattern change takes effect on the next downbeat according to the time signature set in the transport panel.

The Pattern Mute Switch



The Pattern Mute switch in the Redrum and the Matrix.

Next to the Bank and Pattern buttons you will find an additional switch, which is normally activated. If you click this to turn it off, the pattern playback will be muted, starting at the next downbeat - exactly as if you had selected an empty (silent) pattern. For example, this can be used for bringing different pattern devices in and out of the mix during playback.

Programming a Pattern

The actual programming procedure differs for the different devices (see the electronic documentation for descriptions of the Redrum and Matrix, respectively).

However, some basic principles are common for all pattern devices:

Steps

Patterns consist of a number of discrete steps. For each step, you can enter a note, a CV value or various properties, depending on the device. When you run the pattern, each step will be played back in turn and will play a sound or send out the information programmed for this step. If you have ever used a drum machine, this will be obvious to you.

Pattern Length

For each pattern, you can specify a length, i.e. how many steps it should contain. The maximum pattern length is different for different devices.



The pattern length selector for the Redrum (left) and the Matrix (right).

Pattern Resolution

The pattern resolution determines the length (note value) of the steps. When the pattern resolution is set to 1/16, each pattern step will be a sixteenth note, when set to 1/8, each step will be an eighth note, etc.



The Resolution control on the Matrix. As with the pattern length value, you can program different resolution settings for different patterns.

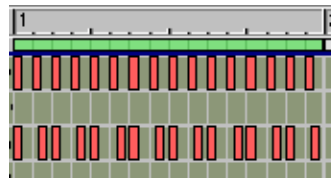
If you change the resolution of an existing pattern, the audible effect will be a change of pattern playback speed. This may seem strange at first, but if you think about it, it's logical:

Let's say you have a 16 step pattern with resolution set to 1/16. The length of each pattern step is then one sixteenth note, and the whole pattern plays back over a whole 4/4 bar (16 sixteenth notes = one whole bar).

Now, if you change the resolution to 1/32, each step will be a 1/32 note - half its original length. There are still sixteen steps. This means that the whole pattern plays back over half a bar ($16 * 1/32 = 1/2$). In other words, the pattern plays back at double speed.

Pattern Shuffle

Shuffle is a rhythmic feature, that gives the music a more or less pronounced swing feel. It works by delaying all sixteenth notes that fall in between the eighth notes.



In Reason, you can activate or deactivate shuffle individually for each pattern in a pattern device. However, the amount of shuffle is set globally with the Pattern Shuffle control on the transport panel.



The Shuffle on/off switch in the Redrum (left) and the Pattern Shuffle control on the transport panel (right).

Clearing a Pattern

To clear (empty) a pattern, select it and use the Clear Pattern command on the Edit menu or device context menu.

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- ! **Note that clearing a pattern doesn't affect the pattern length, resolution or shuffle settings!**
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Using Cut, Copy and Paste

By using the Cut, Copy and Paste Pattern commands on the Edit menu or device context menu, you can move or duplicate patterns between devices of the same type. The following rules apply:

- **Copy Pattern makes a copy of the currently selected pattern and places the copy on the clipboard.**
- **Cut Pattern moves the currently selected pattern to the clipboard.**
This is the same as first performing Copy Pattern and then Clear Pattern.
- **Paste Pattern copies the pattern on the clipboard to the selected pattern location in the selected device.**
This overwrites the selected pattern with the one on the clipboard.

Transferring patterns between Reason songs

If you want to copy patterns between different Reason songs, you use copy and paste:

1. **Open both songs.**
2. **Select the pattern you want to copy.**
3. **Select Copy Pattern from the Edit menu or the device context menu.**
You can also hold [Command] (Mac) or [Ctrl] (Windows) and press [C] to copy.
4. **Make the other song active.**
This is done by clicking in the song window or by selecting the song from the Windows menu.
5. **Select the bank and pattern location to which you want to copy the pattern.**
Note that any pattern already stored in that location will be overwritten!

6. **Select Paste Pattern from the Edit menu or the device context menu.**

You can also hold [Command] (Mac) or [Ctrl] (Windows) and press [V] to copy.

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- 💡 **If you want to use the same patterns in several songs, you could either create a "Pattern Supply" Reason song and copy patterns from this, or program the patterns into your Default Song (see page 85).**
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Pattern Functions

When a pattern device is selected, you will find some specific pattern functions on the Edit menu (and on the device context menu). Below the three basic types of pattern functions are listed. However, the exact names and functionalities depend on the device type - refer to the electronic documentation for details.

Shift

The Shift functions move the notes in a pattern one step to the left or right, or transposes them one semitone up or down (depending on the device). This function can be used for interesting rhythmic or melodic effects, or as a way to rectify patterns for which the first step isn't on the proper downbeat.

Randomize

The Randomize functions create random patterns. These can often be great starting points and help you get new ideas.

Alter

The Alter functions modify existing patterns. Note that there must be something in the pattern for the function to work on - using an Alter function on an empty pattern will not do anything.