



# SEQUENCES

POLYPHONIC PATTERN  
PLAYER DEVICE

## User Guide

Version 1.0.0

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# QUICKSTART

- Create an Instrument device
- Create Sequences above the Instrument
- While Reason is stopped, click REC on Sequences front panel
- Play your melody or chords, without thinking about the timing
- Click SAVE to exit Recording and save the pattern
- Use the Timing Edit Handles below the Note Grid to get the timing you want
- Done!

# INTRODUCTION

Thanks for buying or trying out Sequences!

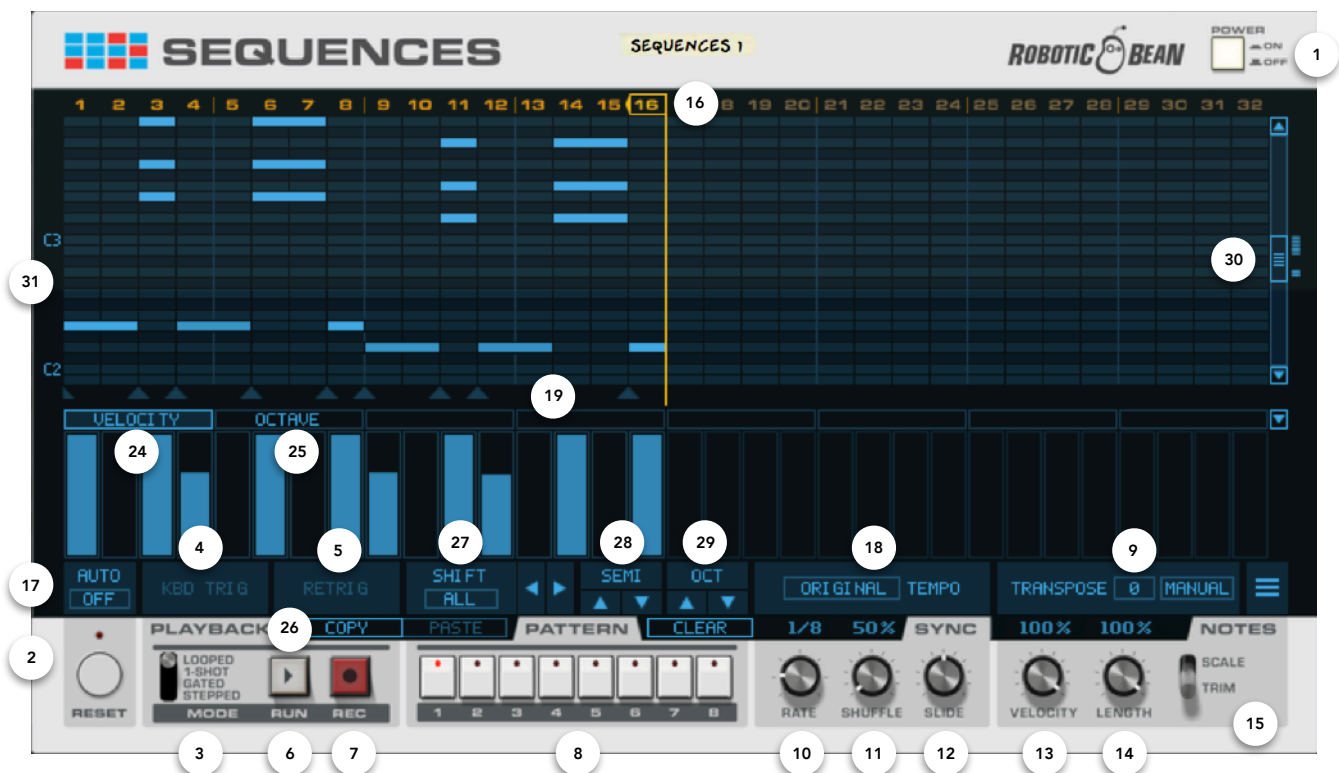
At Robotic Bean, we love step sequencers. Going back to classic mono synths, the step sequencer can spark new ideas, and frees your hands for tweaking the sound while the beat goes on. One of our most popular Rack Extensions is Step, which is a monophonic step sequencer which uses CV for playing the instrument device.

Sequences is a Player device, which means it can be polyphonic. When we designed Sequences we wanted it to be a bit different from Step. Sequences focuses on playability and getting inspiration for your musical ideas. The possibility to combine Sequences with other players opens up for a lot of experimentation and happy accidents.

We hope you will like Sequences and get much use out of it!

*The Robotic Bean team, May 2019*

# THE FRONT PANEL



## GLOBAL SETTINGS

Some settings are global and affect the whole device.

1. **ON/OFF** - Decides if Sequences is active or not. When set to OFF, all MIDI just passes through it.
2. **RESET** - When this is triggered, the Pattern is restarted from Step 1. Reset can be triggered from clicking the button on the front panel, by connecting a CV source on the back panel, or by using the Auto Reset feature (see below).
3. **PLAYBACK MODE** - Sequences can play back a sequence in four different ways:
  - **LOOPED** - Sequences starts playing when you click RUN, when you start Reason's sequencer, or when you click the RUN DEVICES button on a Combinator that contains the instance of Sequences. When the playhead reaches the Pattern Length Marker, it jumps back to Step 1. This is how most pattern devices like Redrum work.
  - **1-SHOT** - The Pattern is triggered once, and not looped. If Keyboard Trig Mode is active (it is by default), you can trigger the Pattern by playing a note on your MIDI keyboard. If Retrigger Mode is active (it is by default), the Pattern is re-triggered from Step 1 on each trigger, otherwise it plays from the current Step.
  - **GATED** - The Pattern is played for as long as the trigger is active. The trigger can be either a MIDI note from your keyboard, or a CV signal.
  - **STEPPED** - On each trigger (keyboard or CV), one Step is played, and then Sequences waits for the next trigger. In this mode, Retrigger is disabled.


4. **KEYBOARD TRIG** - When this is ON, Sequences is triggered by playing a key on your MIDI keyboard. MIDI keys in that mode only serve as triggers and aren't passed on to the instrument. In LOOPED Playback Mode, Keyboard Trig is not possible, since playback is controlled by Reason.
5. **RETRIG** - When this is ON, the Pattern restarts from Step 1 on each new trig from the MIDI keyboard or CV Trig input.
6. **RUN** - Starts and stops playback. This is automatically switched on and off when Reason's sequencer (or Combinator) starts and stops.
7. **RECORD** - Click this to start recording your Pattern. If Reason is stopped, Sequences will start recording in Step Recording Mode. If Reason is running, Sequences will record in Realtime Mode.

 *Read more about recording in STEP AND REALTIME RECORDING below!*

8. **PATTERN 1-8** - Selects which pattern is playing and shown in the display.
9. **TRANPOSE** - Moves the recorded Pattern up or down in pitch in semitone steps. There are three Transpose Modes:
  - **MANUAL** - The transpose amount is set manually in the number box. Cmd/Ctrl-click on it to reset the transpose amount to 0.
  - **KEYBOARD** - The transpose amount is set by playing keys on your MIDI keyboard. C3 is the root key, so playing D4 will give a +14 transpose amount. The MIDI from your keyboard will not be passed on to the instrument.
  - **CV** - Same as KEYBOARD, but the transpose amount is collected from a CV signal. MIDI notes from your keyboard will be passed on to your instrument (unless Keyboard Trig Mode is active).

## Sync Settings

10. **RATE** - Determines the speed of the pattern in relation to the song clock. Possible values are 1/4, 1/8, 1/8T, 1/16, 1/16T, 1/32, and 1/64.

 *Whenever the Rate changes, Sequences will recalculate its position in relation to the song. This means that you can temporarily "glitch out" your pattern by dramatically increasing the rate, and when you turn it back to the original resolution, the timing of the original pattern will be maintained.*

11. **SHUFFLE** - The Shuffle parameter will move every even 16th in the pattern forwards in time, giving it more of a swing feel. The range of the knob is 50% to 75%. At 50%, no shuffle is applied, as the 16th is 50% between its surrounding 16ths.

*Sequences' Shuffle parameter corresponds exactly to the Shuffle parameters (individual and global) found in Reason's own ReGroove mixer. For example, if you set Sequences' Shuffle value to the same value as Global Shuffle in the ReGroove mixer, Sequences will shuffle perfectly together with Redrum, Matrix and RPG-8.*

12. **SLIDE** - Allows you to smoothly slide the entire pattern forwards or backwards in time. The range is +/-120 ticks, which means +/- one 32nd note. Negative slide will give the pattern a more hurried feel in relation to the song, while positive slide will give the pattern a more relaxed feel. When slide is 0, the pattern will be exactly on the beats of the song.

💡 This parameter corresponds exactly to the Slide parameter found in Reason's own ReGroove mixer.

💡 Slide also comes in handy when you're controlling external MIDI instruments live, since you can use small negative slide values for latency compensation.

## Notes Settings

13. **VELOCITY** - Sets the overall velocity of the notes, in percent of their recorded velocities. The stronger a note is, the brighter its colour. 0% velocity scaling will output a MIDI velocity of 1, the minimum playable velocity value. If you control Velocity with CV, the display will show the sum of the Velocity knob setting, and the CV signal.

💡 Patch Tip: Modulate Velocity with a curve pattern from Matrix with a different pattern length to get accents that shift over time.

14. **LENGTH** - Sets the duration of the notes, in percent of the step length. At 0%, very short notes are generated. If you control Length with CV, the display will show the sum of the Length knob setting, and the CV signal.
15. **LENGTH MODE** - This setting decides how the Length setting is applied to the notes:
- **SCALE** - The whole note length is scaled by the Length setting. So a note that is 4 Steps long which is scaled by 50% Length will be played as 2 Steps.
  - **TRIM** - The Length factor is applied to the last step of the note. For notes that are 1 Step long, this yields the same result as Scale Mode. But a note which is 4 Steps long that is trimmed with 50% will play back as 3,5 Steps.

## PATTERN SETTINGS AND CONTROLS

16. **PATTERN LENGTH** - Each pattern can be 0-32 steps. You set the length by clicking in the Step Number List at the top of the display.
17. **AUTO RESET** - This restarts the Pattern from Step 1 after a certain number (between 1-128) of Steps have passed. This makes it easy to create evolving Patterns by setting Pattern Length to something uneven like 15 Steps, and still make it restart every 64 or 128 Steps. Auto Reset will always follow Reason's song clock, so you can also use it to restart the sequence at regular intervals while you're running it in Stepped Playback Mode. The list of numbers snaps to musically viable numbers like 12, 16, 24, and so on.
18. **RELATIVE TEMPO** - This setting can make the Pattern play back at half, original or double tempo compared to the Rate setting.
19. **TIMING HANDLES** - If a Step contains notes, it gets a handle below the Note Grid. You can then move all notes in that Step by dragging the handle. By default you can nudge Steps that are in your way, but if you hold Shift while dragging, the relative timing of the Steps to the right of the dragged Step is maintained.

## RECORDING SETTINGS



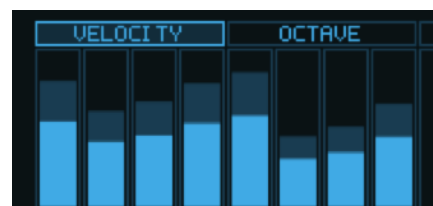
There are some controls that are only visible when recording:

20. **CANCEL** - Exits the recording mode without overwriting the selected Pattern.
21. **SAVE** - Click this or REC to exit recording and save the new Pattern. Prior to clicking REC or SAVE, you can select a Pattern other than the current one to save the recording to.
22. **UNDO STEP / NOTE** - This button works differently in Step and Realtime recording:
  - STEP MODE: UNDO STEP - Removes the last entered Step (which can contain multiple notes).
  - REALTIME MODE: UNDO NOTE: Removes the last recorded Note.
23. **ADVANCE / ERASE NOTES** - This button works differently in Step and Realtime recording:
  - STEP MODE: ADVANCE - This moves the recording playhead one Step forward. The same result as inserting a one Step rest.
  - REALTIME MODE: ERASE NOTES: While Erase Notes is pressed, the notes at the recording playhead are erased. It's like a moving eraser!

## LANE SETTINGS

You can open and close the lanes display by clicking their name labels, or a fold arrow to the right of the lane name labels row.

24. **VELOCITY** - Shows the recorded and scaled velocities for the Notes. If there are multiple Notes in a Step, the highest value is shown.
25. **OCTAVE** - Transposes Steps +/- 3 octaves.



## EDIT BUTTONS

There are a few buttons for editing the Pattern and selected notes:

26. **COPY / PASTE** - For copying and pasting Patterns and Notes both between and within Patterns. While you click and hold COPY, the PASTE button is replaced by a display showing what objects are being copied, for example "3 NOTES".



27. **SHIFT / MOVE** - When no Notes are selected these arrow buttons shift the whole pattern left and right one Step at the time. In a popup you can select if you want to shift only the Notes, the Lanes, or both. If Notes are selected, the arrow buttons move the selected notes one Step.
28. **SEMI / OCT** - Transposes the Pattern or selected Notes in octaves or semitones.
29. **CLEAR / DELETE** - When no notes are selected, this button is called CLEAR and deletes the whole Pattern, otherwise it deletes selected notes.





## NOTE GRID CONTROLS

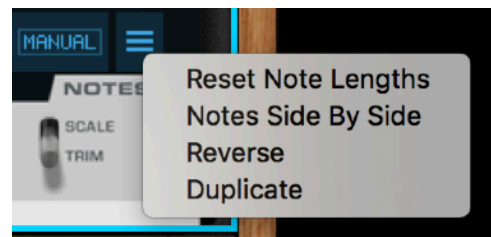
There are two controls to navigate in the Note Grid:

- 30. **SCROLL BAR** - To the right of the Note Grid is a standard scrollbar, that also shows an overview of where there are notes recorded. Just click the notes to jump to that octave.
- 31. **SCROLL AREA** - To the left of the Note grid is an area that shows what octave the view is in (C3, C4 etc). You can click and drag in this area to fine-tune the scroll position.

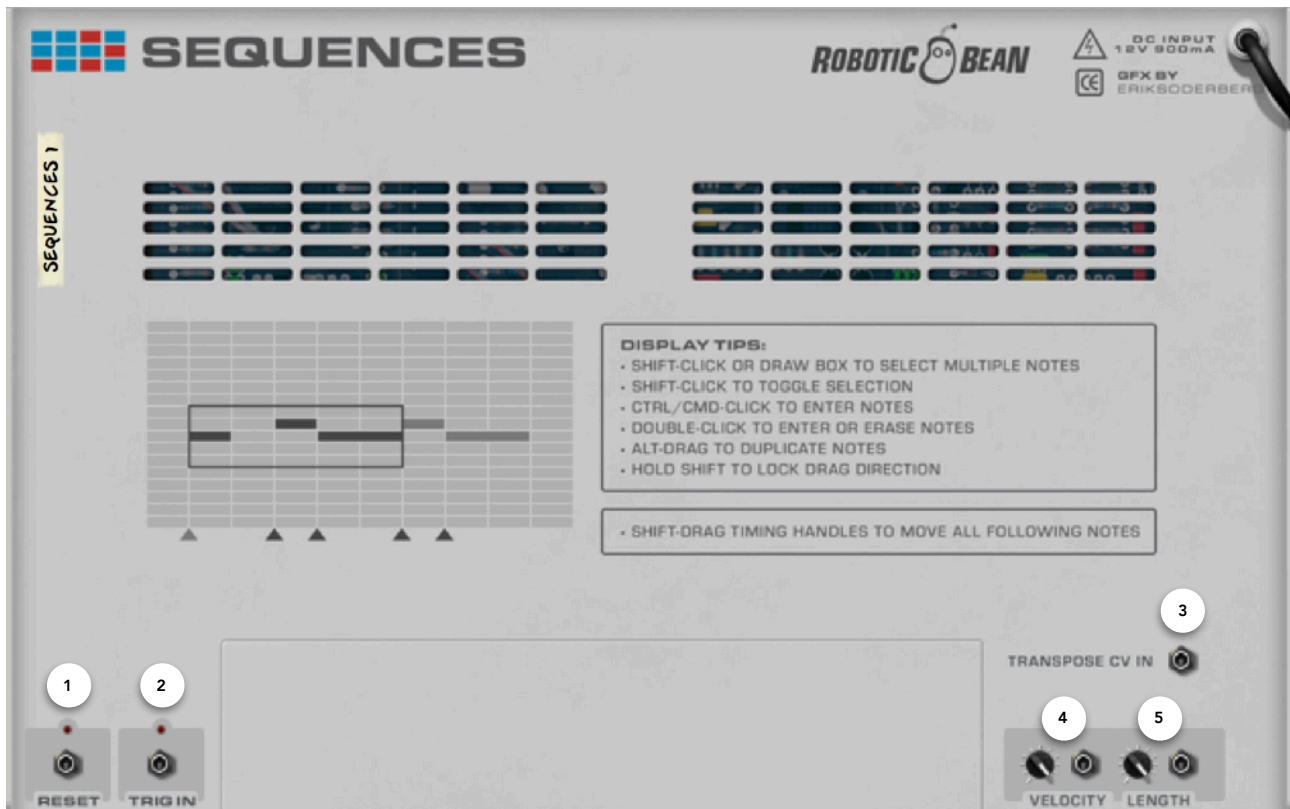
## TOOLS MENU

The functions in the Tools Menu operate on the selected Notes, or, if no Notes are selected, the whole Pattern.

- **RESET NOTE LENGTHS** - Sets Notes length to 1 Step.
- **NOTES SIDE BY SIDE** - Extends the Notes length up until the next non-empty Step. Please note that this is not the same as tie, where the Notes must overlap a bit.
- **REVERSE** - Flips the note order from start to end of the selection or pattern.
- **DUPLICATE** - Pastes a copy of the pattern or the selected notes right after the pattern/selection end.
  - **PATTERN** - If no Notes are selected, the Pattern up until the Pattern Length Marker is duplicated and overwrites any existing notes.
  - **SELECTION** - If Notes are selected, these are duplicated right after the last note in the selection, and merged with any existing Notes.



# THE BACK PANEL



## CV CONNECTIONS

On the Back Panel there is a small guide for using Keyboard Modifiers in the Note Grid, and also some CV-connections:

1. **RESET** - For triggering the Reset function via CV.
2. **TRIG IN** - For triggering the next step in Stepped Playback Mode, triggering the sequence in 1-Shot Mode, or for gating the sequence in Gated Mode.
3. **TRANSPOSE CV IN** - For transposing all notes coming from or through Sequences.
4. **VELOCITY** - Will scale the Velocity of the recorded notes between 0 -100%.
5. **NOTE LENGTH** - For controlling the length of the recorded notes. Depending on whether the Note Length Mode is set to Scale or Trim, this will create different results.

# STEP AND REALTIME RECORDING

To start with, Sequences can record in both Step and Realtime recording modes, basically depending on whether Reason is running or not.

## STEP MODE

Step recording has been a feature in many classic monosynths like Roland SH-101, and is a quick way of recording without worrying about playing tight.

When Reason is stopped or the Playback Mode is set to Stepped, and you click REC on Sequences, you will record in Step Mode. Each keypress is recorded into the current Step, after which the play position jumps one step forward and awaits a new keypress. You can record both single notes and chords, and combinations of the two.

Sequences uses a short timing window (100ms) to determine if two notes are part of a chord or not.

If you record a note, and then keep holding it when you press the next note, the existing note will be extended through the next step so that the notes overlap.

When you enter Step Mode, some new buttons will appear. Click ADVANCE to jump one Step forward without entering any notes. This is like inserting a rest. If you're holding one or more notes when clicking ADVANCE, the note lengths will be extended. Click UNDO STEP to jump back one Step, deleting its content. Click CANCEL to end Step Mode recording, restoring the Pattern to what it was before recording. Finally, click REC or SAVE to end Step Mode recording and saving your new Pattern. You can actually select any of the 8 Patterns to save to. Just select the Pattern before clicking REC or SAVE.



## REALTIME MODE

When Reason is running and you click REC, you will record in Realtime Mode (unless Playback Mode is set to Stepped). This is very similar to recording in Reason's sequencer, but the notes are automatically quantised to the Steps.

In Realtime Mode, clicking UNDO NOTE deletes the last note recorded. When you click and hold ERASE NOTES, notes that the playhead passes will be deleted.

## SWITCHING BETWEEN STEP AND REALTIME

As long as you haven't recorded any notes, Sequences will switch between Step and Realtime Modes just by starting or stopping Reason. Once a note has been recorded in either mode, Sequences will stay in that mode for the rest of the recording.

💡 One exception to this rule is when you start recording during Precount in Reason's sequencer. During Precount, transport isn't actually running so Sequences will start recording in Step Mode. However, as soon as transport kicks in, Sequences will switch to Realtime Mode and any held notes will be extended as long as you press the keys.

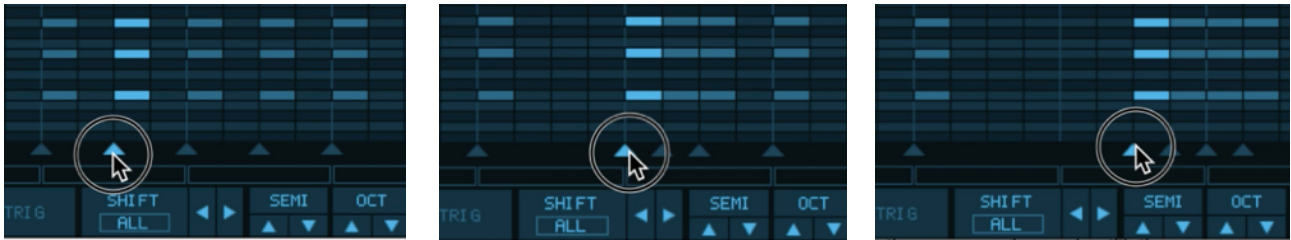
# EDITING NOTES AND LANES

After recording, you'll probably want to edit the notes in some way, and thankfully there are lots of ways to do it!

## USING THE TIMING HANDLES

After recording, each non-empty Step will get a Timing Handle below the Note Grid. You can drag these sideways to move all Notes in a Step, without worrying about accidentally changing any Note value.

In basic operation, you can drag one Timing Handle and nudge other Timing Handles until there are no empty Steps left. Like this:



*Basic Timing Edit*

If you hold Shift while dragging, all Steps (even empty ones) to the right of the dragged Timing Handle are moved, and you can't drag past a non-empty Step to the left. This effectively maintains the individual timing of the Steps:



*Holding Shift and maintaining individual timing*

## SELECT AND DELETE

First of all you can select notes with the mouse, just like in a Reason Note Clip. To select multiple notes, Shift-click individual notes or draw a selection box. To delete notes, just click the DELETE button or double-click the note. You can delete a selection of notes by double-clicking any of them.

## DRAW NOTES

You can draw new Notes by either double-clicking or Cmd/Ctrl-clicking in the Note Grid. If you keep holding down the mouse button you can drag to the right to extend the length of the new note.



## MOVE AND RESIZE NOTES

When no notes are selected, you can use the SHIFT arrow buttons to move and wrap the Pattern left or right. Notes after the Pattern Length Marker will not be affected.

To move selected notes, drag them with the mouse or use the MOVE NOTES, SEMI and OCTAVE buttons. Press Shift before dragging to lock the drag direction to either timing (x-axis) or note value (y-axis).

You can change the length of one or many notes by dragging the arrows at the start and end of each note.

## COPY AND PASTE

Use the COPY and PASTE buttons to create copies of selected Notes or whole Patterns. While you click and hold COPY, the PASTE button is replaced by a display showing what objects are being copied, for example "3 NOTES" or "PATTERN 4".

- SHORTCUT #1: Press Alt/Option before you drag notes to create a copy of them.
- SHORTCUT #2: When copying to another Pattern, click COPY and then drag to a PATTERN button to directly paste it into that Pattern. The small display will read "TO PTRN <X>".

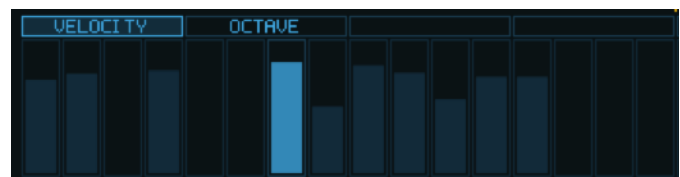
## EDIT LANES

Below the Note Grid is a lane where you can edit different aspects of the Notes. The Lane can be minimised (to display more Notes) by clicking the Fold Arrow to the right, or by clicking the active Lane button.

### Velocity Lane

Here you can edit the Note Velocity (strength 1-127) of each Step or Note. When no Note is selected, the Velocity Lane shows the maximum value of the Notes in a Step. So if there are three notes with velocities 23, 57 and 101, the velocity bar will show 101 for that Step. If you draw a new value, all three notes will be set to the new value.

If you want to edit an individual note's velocity, just select that note. The Velocity Lane will highlight the selected notes, and only those can be edited.



### Octave Lane

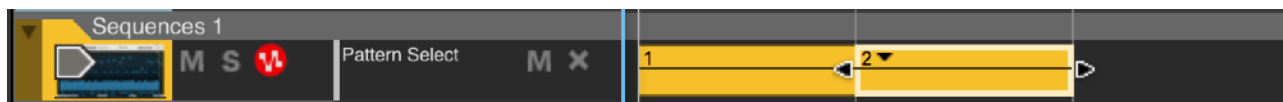
In this lane you can quickly transpose Steps in +/- 3 Octaves.



## AUTOMATE PATTERN CHANGES

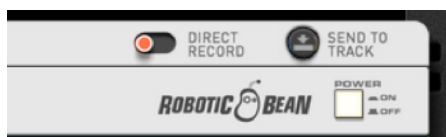
When you have created a number of patterns for your song, you might want to arrange them in the main sequencer. To do this you must first create a Pattern Lane for Sequences. The fastest way to do this is to Alt/Option-click on one of the Pattern Select buttons.

Once the Pattern Lane is selected, you can draw pattern clips in the lane using Reason's Pencil Tool. For more details we refer you to Reason's Operation Manual.



## BOUNCE NOTES TO TRACK

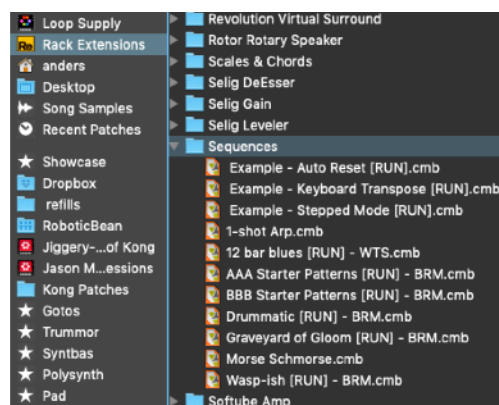
You can also bounce notes from Sequences to a note clip in Reason's main sequencer. Simply set up the **L** and **R** loop markers around the area you want to bounce, and then click the "Send To Track" button above Sequences in the rack:



For more details about Send To Track, Direct Record and other Player functions in Reason, please see Reason's Operation Manual.

## COMBINATOR PATCHES

Even though Sequences does not support patches, it ships with a few Combinator patches that demonstrate some basic use cases. You can find them in the Rack Extensions/Sequences folder in Reason's browser.



## KEYBOARD MODIFIERS

This list of handy keyboard shortcuts is also printed on the back panel of the device.

- Shift + click to select multiple Notes
- Shift + click to toggle selection
- Ctrl/Cmd + click to draw a Note
- Alt/Option + drag to duplicate Notes
- Hold Shift to lock drag direction
- Shift + drag Timing Handles to move all following Notes