QUICKSTART GUIDE
rev.2

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This Quickstart guide is written for Redux v1.0. Any corrections to this document can be retrieved from the Renoise website at this address: www.renoise.com/redux

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Thanks to everybody who has supported us during the development of this software. This includes the Renoise team, alpha/beta testers, our friends, family and partners.

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1 Introduction To Redux

Thank you for purchasing Redux!

Redux is a sampler and phrase sequencer that can be used in any DAW with support for VST and/or Audio Units, running on the Windows, OSX or Linux platforms.

Redux is a powerful sampler. supporting virtually unlimited samples and effects, with RAM and CPU being the only real limits to your creative freedom. As a sequencer, it has inherited and expanded upon a unique set of features from its bigger brother, Renoise.

Redux features an integrated work-flow for composition and performance. You can record new sounds from within the program itself and use the built-in waveform editor to edit and adjust these recordings. You can specify in great detail how the samples are triggered via your MIDI keyboard. So no matter if you are a traditional keyboard player or prefer to trigger sequenced sounds via drum pads, Redux is able to meet those demands, either in-studio or on-stage.

The software comes with a number of ready-to-use presets to help kick-start your creative process. This includes expressive synth patches, drum-kits, and complex sound environments. Our website also contains many additional resources that you can download for free (see next page).

1.1 Resources

QuickStart Guide (this document)

This document explains the basic concepts of the software, mainly through practical tutorials and demonstrations. While using Redux, you can always bring up this document by clicking the question mark at the top-right corner of the interface.

Renoise Tutorials Wiki

If you need a more detailed description of the features of Redux, the Renoise Tutorial Wiki offers a complete reference manual. The focus of the Wiki is on Renoise however, so not everything is necessarily relevant to Redux. http://tutorials.renoise.com

Video Tutorials

We are planning to produce a number of short videos, each covering a particular aspect of the software, starting with an introduction to the basics. http://www.renoise.com/redux

Renoise Backstage

The Renoise backstage is the place to obtain your registered copy of the software and download extra content packs. It's also the where you can edit your personal account information. See Installation for more information.

Community Downloads

Registering with the official Renoise forum also gives you access to Renoise Downloads, where the community exchanges all manner of files and resources. This includes new instruments, effect presets, modulations and much more: http://forum.renoise.com/index.php/files/

Getting Support

If you find yourself stuck and the resources listed here are unable to help, please do not hesitate to contact us in one of the following ways:

- **Renoise Forum** – Get help on the official Renoise forum.
- **Contact Us** – In case the Renoise forum doesn't quite cut it.

Please refer to the chapter Getting Support if you need assistance.

1.2 In This Manual

This Quickstart Guide will teach you how use Redux by introducing the basics and essentials before moving on to more advanced topics. Here is a quick overview of the various chapters:

> Note: **Chapters 3-7** flow together as a single tutorial, demonstrating how to create a drum kit from scratch using many of the core concepts of Redux.

→ Chapter 1 is the introduction, also showing where to find other documentation, resources, support etc.

→ Chapter 2 explains the basic **plugin options** and **preset system,** available at all times.

→ Chapter 3 covers the **sampler basics** by showing you how to create a drumkit.

→ Chapter 4 demonstrates the **Phrase editor** by creating a rhythmic sequence from scratch.

→ Chapter 5 introduces the **Modulation section** and shows how to connect macros.

→ Chapter 6 introduces the **Effects section** and how this also facilitates multi-channel output.

→ Chapter 7 talks about possible **further steps**, tips and tricks for getting more out of Redux.

→ Chapter 8 discusses best **synth-building** practices and shows how to create a monophonic bass.

→ Chapter 9 contains a **glossary** of important terms and concepts relating to Redux.

→ Chapter 10 contains a **MIDI implementation chart** for Redux.

→ Chapter 11 explains how to obtain **support** from Renoise.

1.3 Installation

1.3.1 Obtaining the Plugin
Your copy of Redux can be downloaded from https://backstage.renoise.com
The plugin is personalized with your registration name, so do not share it with anyone else!

1.3.2 Installing the Plugin
Redux does not use an installer; you simply extract the contents of the zip file directly into the plugin folder used by your DAW. Detailed instructions for each platform is provided below.

Note that after Installation, you may need to scan for new plugins in your DAW before Redux will appear in the plugin list. If you need any further assistance, feel free to contact us at support@renoise.com

Installation on OSX

Extract the downloaded files
Double-click the tar.gz archive that you've downloaded from the Renoise website in the finder to extract all its contents

Installing the VST plugin
Copy (drag and drop) the "Renoise_Redux.vst" bundle into
YOUR_HOME_FOLDER/Library/Audio/Plug-Ins/VST or
Macintosh HDD/Library/Audio/Plug-Ins/VST

Installing the AudioUnit plugin
Copy (drag and drop) the "Renoise_Redux.component" bundle into
YOUR_HOME_FOLDER/Library/Audio/Plug-Ins/Components or
Macintosh HDD/Library/Audio/Plug-Ins/Components

Installation on Windows

Recommended installation both 32bit / 64bit versions
- Open the ZIP archive that you've downloaded from the Renoise website
- Copy !all! files from the ZIP archive into your DAW's VST plugin folder
- Restart your host or re-scan for new plugins as needed

Advanced installation the 32bit or 64bit version only
- Open the ZIP archive and extract only the contents of the "32bit" or "64bit" folders into your DAW's VST plugin folder. When copying the plugin .dll file manually, keep the "Renoise_Redux.res" folder and "Renoise_Redux.dll" files together in one folder – side by side.
When renaming the .dll, rename the .res folder too.

Installation on Linux

Recommended installation both 32bit / 64bit versions
- Open the tar.gz archive that you've downloaded from the Renoise website
- Copy !all! files from the tar.gz archive into your DAW's VST plugin folder
- Restart your host or re-scan for new plugins as needed

Advanced installation 32bit or 64bit version only
- Open the tar.gz archive and extract only the contents of the "32bit" or
"64bit" folders into your DAW's VST plugin folder. When copying the
plugin .so file manually, keep the "Renoise_Redux.res" folder and
"Renoise_Redux.so" files together in one folder - side by side.
When renaming the .so, rename the .res folder too.

1.3.3 Location of User Files / Libraries

Once the plugin has been installed and then run for the first time, a folder is created for your own presets and files. These files are kept in a separate location to avoid their accidental deletion and to provide easy access via Finder/File Explorer.

The files are located here on **Windows** systems:
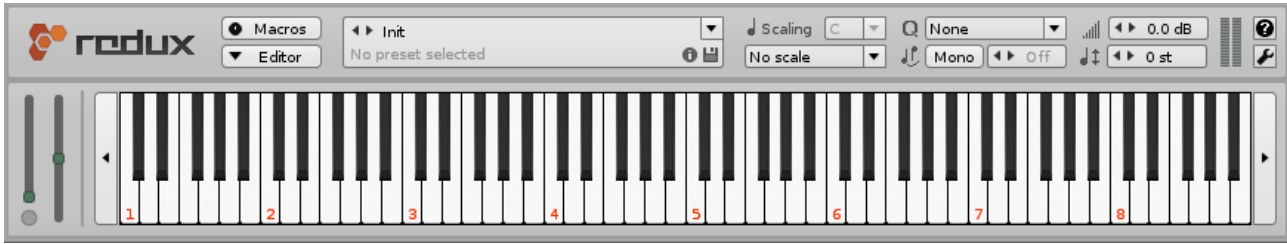`HOME/[My ]Documents/Renoise/User Library`

The files are located here on **OSX** systems:
`HOME/Documents/Renoise/User Library`

The files are located here on **Linux** systems:
`HOME/Renoise/User Library`

2 First Steps

When launched, the plugin will be in **Compact Mode,** which has been designed to take up minimal screen space while still providing access to essential features.
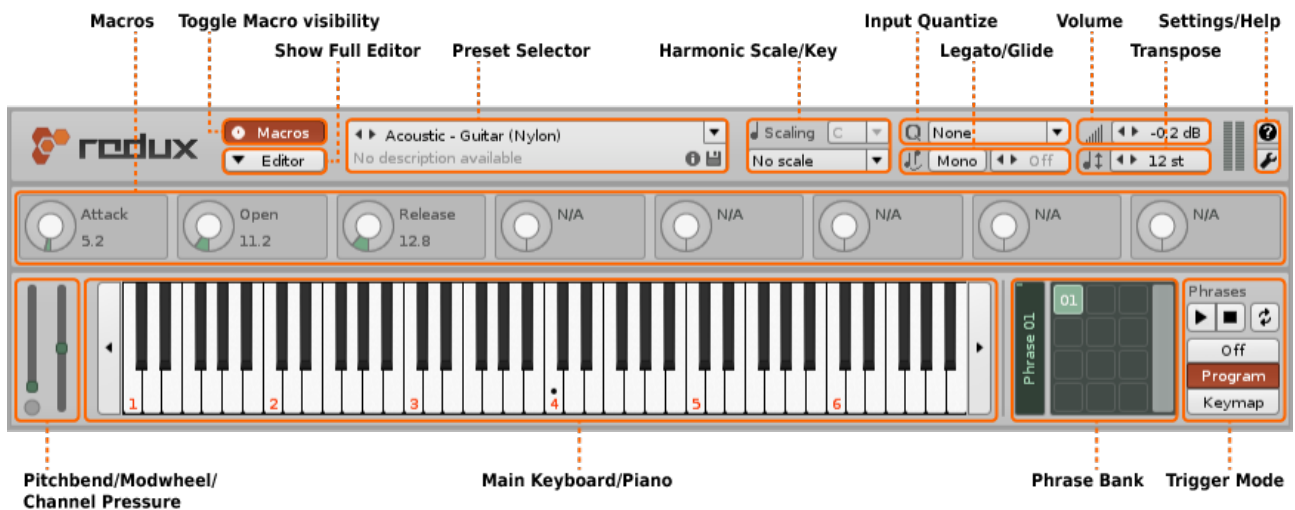
The image above details the various options and sections of the **Compact Mode** interface. Note that two additional parts have been activated, making them visible: the **Macros** (the middle row containing eight circular knobs) and the **Phrase Bank** / **Trigger Mode** (lower right corner). These are shown only when working with a preset that contains macros or phrases.

2.1 Using the Preset Browser

At the top-center of the interface is the **Preset Selector**, currently set to **Init** (initial values).
Click there to open the **Preset Browser**:
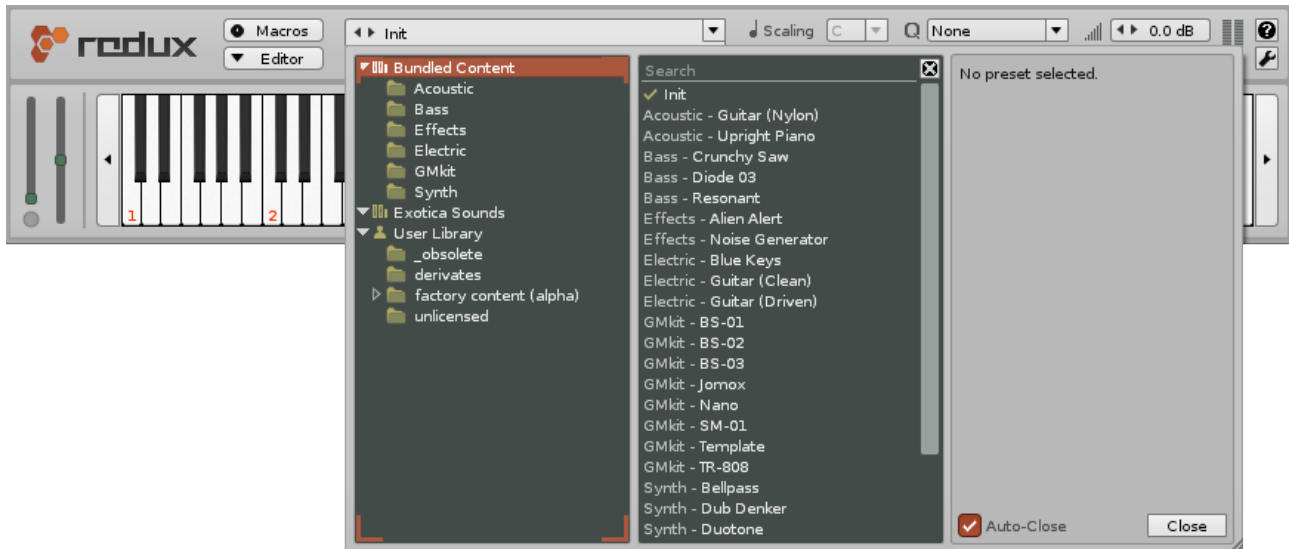
The Preset Browser allows you to **browse**, **search** and **filter** presets, amongst other things. Presets are loaded in by double-clicking on them in the middle panel. The browser window can be **resized** by dragging its lower right corner. Near this corner is a checkbox labelled '**Auto-Close**', that, when ticked, will enable the automatic closing of the window after loading a preset. When unticked, the window will remain open while you load in different presets.

The browser window itself is organized into three vertical panels. The left side displays the preset folders in a hierarchical tree structure, arranged like so:

- At the top is the **Bundled Content** (also known as **factory content**). These are the presets that come installed with Redux and are organized in sub-folders of their own.

- Below the factory content you may see one or more entries with a similar icon but a different name. These are **Content Libraries**, which are packs of extra sounds or presets that you can download from our community server or elsewhere. If there are no such entries then extra content packs have not been installed.

- The last entry (with the 'user' icon) is the **User Library**, where any presets you have created, either completely from scratch or by modifying existing ones, will be stored.

2.1.1 Searching and Filtering

The middle panel is where the preset entries are displayed. Whenever you click a folder in the left panel, all of its contents (presets *and any sub-folders*) are displayed in the middle panel. So in the screenshot above, the top-level folder called Bundled Content is selected, which causes *all* of the bundled content presets to be displayed. Selecting one of the sub-folders will show its contents only.

Searching for presets is done by typing text into the search field, found at the top of the middle panel. The search results are updated in real-time, matching the search term against the current list of entries.

When a search term is entered you are searching not just for file names, but also for folders in which presets are located. So if the search term is '**Bass**', you might get a match for a preset called '**DigiBass**', but you might also get a match for another preset called '**Acoustic Double**', that's located inside a folder called '**Bass**'.

2.1.2 Preset Descriptions

A preset can also contain a brief description, often providing useful information about how a preset is supposed to be used. This description is shown immediately in the right panel when a preset is clicked on.

A preset's description can be created or changed by clicking the small 'info' icon ⓘ in the Preset Selector, bringing up an edit box. Any preset, including bundled content, can have its description edited, but you can only save the new version of the preset into your User Library.

2.1.3 Saving a Preset

A preset is saved by clicking the floppy-disk icon 💾 in the Preset Selector. This opens the file browser, where you can choose the **location** and **name** of the preset. Type a name and hit **Save** to store it in your User Library.

2.1.4 Organizing Presets

To organize the presets in your User Library, just use the file browser of your OS to create folders and move files. Right-clicking an entry in the **Preset Browser** will open a context menu with the option to 'Reveal In Finder/Explorer'. Selecting this will take you directly to that file:
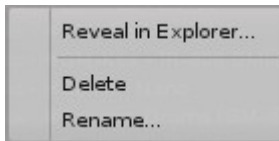
   ←- How the context menu appears in Windows

Note that Redux will only display folders in the Preset Browser if they contain one or more recognized files. Empty folders will not be shown.

2.2 Other Types of Presets

Up until now we have referred to Redux instruments as 'Presets'. However, this term is used to refer to all manner of Redux file types:

	Instruments (.xrni)	The global instrument preset, which is a zip archive containing the samples and an XML file describing the instrument structure.
	Phrases (.xrnz)	A phrase preset is an XML file describing the number of lines, columns and other settings (loop, tempo etc.) that make up a single phrase.
	Waveforms (.flac)	Waveform presets are just samples stored as .flac files in special locations on the disk and monitored by Redux.
	Multi-samples (.sfz)	Multi-sample presets are loaded through the Keyzones tab. The preset itself is an .sfz file, an open standard format for describing musical instruments.
	Modulation Sets (.xrno)	A Modulation Set preset defines a single aspect of an instrument's modulation (volume, panning, pitch etc.). The preset itself is a simple XML file.
	Effect-Chains (.xrnt)	An Effect Chain preset describes the effect devices and parameter values that make up an effect-chain. The preset itself is a simple XML file.
	Effect-Devices (.xrdp)	An Effect-Device preset defines the parameters of a single effect device. This can be any of the regular Redux devices or a Doofer™ (a special combination of other devices).
	Themes (.xrnc)	Themes are alternative visual styles for the Redux interface and are stored as simple XML files. New themes can be created, or existing ones edited, in the Themes tab of the preferences menu.
	Content Library (.xrnl)	A content library can contain any of the presets above: instruments, multi-sample, modulation sets and so on. Content libraries are installed by dragging the .xrnl file on top of the Redux window.

In general, you can load, save, import and export these presets from a drop-down menu that's available in the related part of the interface. For example, the preset selector for Phrases, Keyzones, Waveform, Modulation and Effects tabs are all located in the right corner of their toolbars:

As with the Preset Browser, these presets are generally divided into three distinct categories: **Bundled Content**, **Content Libraries** and the **User Library**.

3 Creating a Drumkit

We'll begin by creating a **drumkit** from samples that are provided as part of the **bundled content**.

3.1 Preparations

To start, make sure that you have an **empty instrument** by going to the Preset Selector and picking the factory preset, '**Init**'. Then open the full Redux interface with the '**Editor**' button.

The top-left part of the user interface should now look like this:
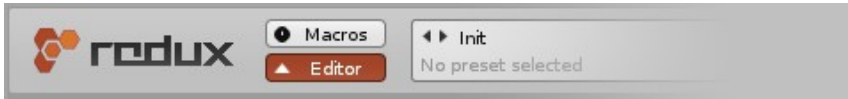
3.2 Choosing the Samples

We are going to select samples from within the **sample editor**, since this will allow us to display and preview the samples as we load them.

1. Open the '**Waveform**' tab by clicking on it:

2. Click the **sample Preset Selector**, which is found to the right of the tabs:
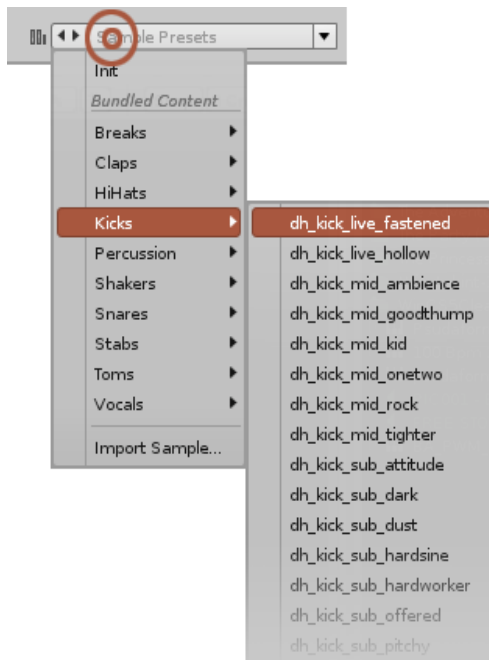
← Going to the '**Kicks**' sub-folder presents a **selection of kick samples**. Select the **first one.**

3. The sample has been loaded and the waveform is displayed in the **sample editor**.

4. Hit the play button to **preview** the sound ▶ or use the keyboard shortcut Return (when focused).

5. In the **sample Preset Selector**, there are two small arrows located just to the left of the sample name. Click the right arrow to load in the **next sample preset**, then preview that sound as well.

6. Continue doing this until you find a kick drum that you like.

7. Now add a new sample slot for the next drum preset by clicking the 'plus' button at the top of the sample list.
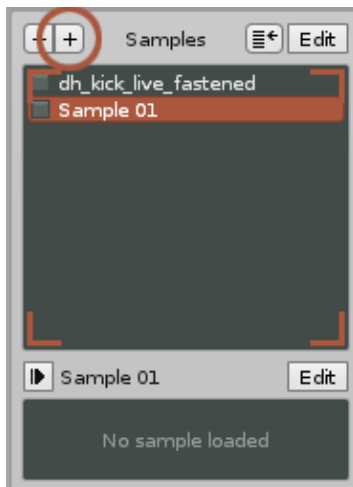
8. The new sample slot is automatically selected, so simply repeat steps 2-6, but this time choose a snare from the **Snares** sub-folder.

9. Repeat the process for **the following categories: Clap, Closed Hi-hat** and **Open Hi-hat**. You should have five samples now, one for each of the five drum types.

3.3 Creating the Drumkit Layout

Having chosen a number of samples, we can now create a **drumkit layout.** But first, it's important to become familiar with the concept of **keyzones**, because they are at the very core of the Redux sampler.

Each sample has a keyzone that defines its playback range along key and velocity axes. This range initially covers the entire keyzone grid, so the sample can always be played. By reducing the range, a sample can be restricted to only play on certain keys at certain velocities.

When a note is played, its key and velocity values are translated into a coordinate on the keyzone grid. If this co-ordinate is within a keyzone range then that sample is played. If the coordinate is in empty space then nothing happens.

There is **one scenario** in which the keyzone will not play a sample: when you are playing a **phrase** with an active sample sub-column (*if you don't know what a phrase or sample sub-column is, don't worry, we'll cover this in the next chapter*).

Keyzones can be stacked by putting them on top of each other. Their overlapping ranges will be indicated by a stronger colour. When a note is played and its coordinate triggers overlapping keyzones, the default behaviour is to play all their samples simultaneously (**Play All**). There are other modes available to change this behaviour: see 7.5.3 - Keyzone Cycle/Random for more information.

Now, let's create a drumkit layout by following these easy steps:

1. Open the '**Keyzones**' tab by clicking on it
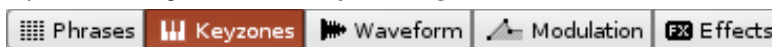
2. The keyzone grid should contain all of our samples' keyzones stacked on top of each other like this:
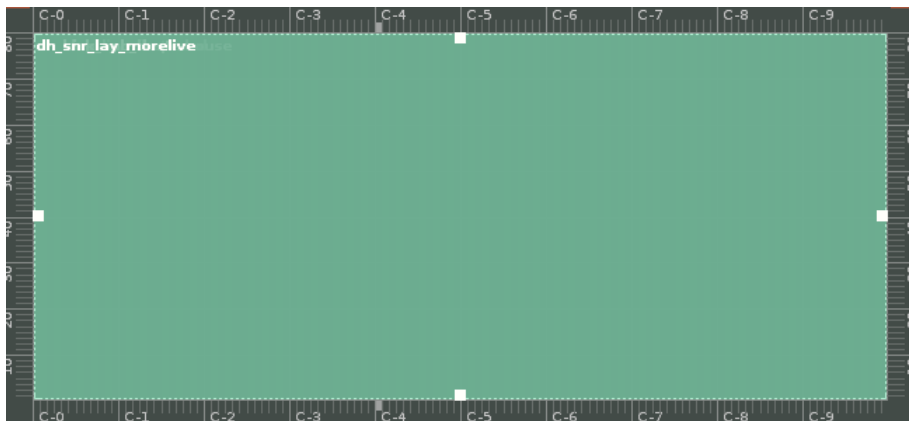
...but this is *not* what we want, since playing a note will cause **all samples** to play at once.

3. Press the **Drum Kit** button, found just above the keyzone grid. This will automatically assign each sample's keyzone range to a single key, starting from C-3 and moving upwards.
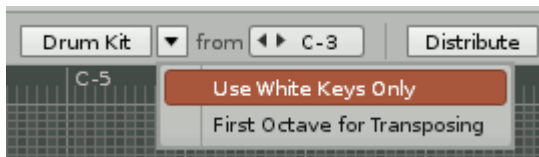
Pressing the small triangle next to the Drum Kit button will reveal a few extra options for the drum kit layout

4. You will now be able to play/preview the drumkit using the computer keyboard. Check that the on-screen keyboard is set to octave 3 (found to the left of the keyboard) and click some keys: Z, S, X, D...
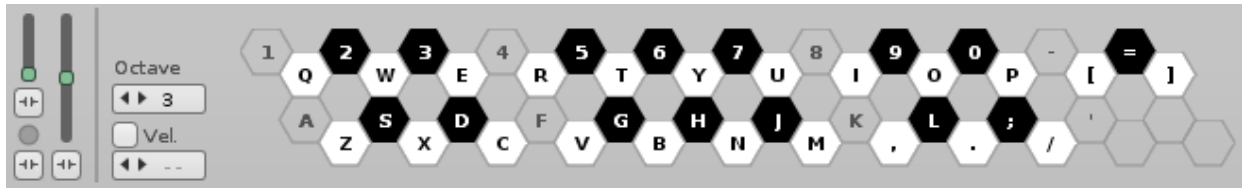
5. While Redux is focused, you should be able to play the drumkit using the computer keyboard. Notes arriving from your DAW or any connected master keyboard should trigger sounds as well.

3.4 Saving Your Work

As a final step, you should save your work so you can recall it later.

1. In the Preset Selector, click the small disk icon: 💾

2. A dialog box will prompt you for the **name** and **location** of the preset. Name the preset, '**Drumkit Drill**' and save it to the default location.

3. Now you can recall this instrument from the Preset Selector at any time.

> 💡 Note that many of the supplied drumkit presets in Redux are prefixed with the name **GMKit**. This indicates that they have a special layout which conforms to the **General MIDI** (**GM**) standard. There is nothing special about this, except that each drum sound has been assigned to a specific note in the keyzone grid. This helps to make 'GMKit' phrase presets more interchangeable and reusable than would otherwise be the case.

3.5 What Have We Learned?

*   How to use waveform presets to quickly load samples

*   Trying out different sounds/presets while pre-hearing them

*   Adding multiple samples to an instrument

*   Using the keyzone editor to build an automatic drumkit layout

*   Triggering samples from the host DAW or master keyboard

*   Saving an instrument preset for later use

4 Crafting Your First Beat

In the previous chapter we learned how to create a drumkit, which we'll now use to construct a drum sequence. In order to do this, you'll first need to learn how to use the **Phrase Editor**.

4.1 Preparing a New Phrase

1. Load in the drumkit by going to the **Preset Selector** and double-clicking on the **Drumkit Drill** preset we saved in the previous chapter.

2. Open the full Redux interface with the '**Editor**' button.

3. Click on the **Phrases** tab and create an empty phrase by either clicking the 'Create Phrase' button in the middle of the window or clicking the plus button in the **Phrase Bank** (found to the right of the keyboard).
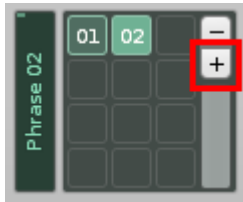
4. Set the number of lines in the phrase to 16 by changing the value in the box at the top-left of the Phrase Editor.

So we've got ourselves a brand new 16-line phrase that's blank except for a '**C-4**' in the upper-left corner. If you're unfamiliar with **trackers**, you may be asking, "what is a phrase?" Well, to answer that, let's have a **quick introduction!**

4.2 Anatomy of a Phrase

The sequencer in Redux works differently from a piano roll or XoX-style step sequencer. In a tracker, time runs vertically, moving downwards from top to bottom. So during playback of a phrase, the notes or commands found in each line are triggered in sequence.

Each phrase is composed of a number of columns, with each column having a particular purpose. At the left are up to twelve **note-columns**, each with optional sub-columns. At the right are up to eight **effect-columns**, which can contain effect commands such as retrigger, pitch up/down, reverse sample etc.

4.2.1 Note Columns

A **note-column** can contain a note and octave number, as well as a number of optional sub-columns: **sample**, **volume**, **panning**, **delay** and **effect**.

If we take a closer look at a single line in a note-column, it can be broken into individual components, like this:

B-4   The **note** and **octave.**

80   **Volume** (or Velocity). A HEX number between 00-80, where 00=minimum and 80=maximum.

4B   **Panning**. A HEX number between 00-80, where 00=Left, 40=Center and 80=Right.

09   **Delay**. A HEX number between 00-FF. Entering 00 will result in no delay, whereas entering FF will result in the note being delayed until immediately before the next line.

S20   **Sample Effect**. This example effect is a Sample Offset (Sxx) command, which will trigger the sample playback from a specific point in the audio waveform.

If you would like to know more about HEX, please take a look in the Chapter 9: Glossary

4.2.2 Sub-columns

Sub-columns allow direct changes to be made to different aspects of a note, such as volume. They are optional and can be toggled on/off per-phrase using the buttons in the Phrase Editor toolbar. When active, they are situated just to the right of the phrase's note-columns.

You can specify effect commands in the volume and panning sub-columns too. In the Phrase Editor toolbar, click one of the downward arrows to display a menu containing all of the commands available to you.

4.2.3 Effect-columns

This type of column can only contain **effect commands**. The effect-column itself can be either a **local** (meaning it belongs to a note-column), or it can be a **master** (found at the right side of the Phrase Editor).

Master columns are special because commands entered there will affect *every* note-column in the phrase. Effect commands placed in a master column will also override those in local columns. For example, **S60** in a local column followed by **S70** in the master column will only apply the **S70** effect.

4.2.4 Navigating

The input cursor can be moved around the phrase by using the arrow keys on the keyboard. Try it yourself: **up** and **down** will move the cursor one line at a time, while **left** and **right** will move it across columns. Also, pressing **TAB** will jump between the note/master-columns, while **SHIFT-TAB** does the same thing in reverse.

You can use other shortcuts too: **Page up/down** to jump lines in larger steps, or the function keys **F9-F12** for jumping to quarter segments of the phrase. Redux has hundreds of keyboard shortcuts for editing and navigation. You can find them (and change most of them to your liking) in the Redux preferences menu, under Keys > Phrase Editor.

4.2.5 Editing

Changes to a phrase are recorded by entering **Edit Mode**, which is done by pressing the **ESC** key or clicking the edit button at the **upper-right corner** of the Phrase Editor. A **red border** will appear around the edge of the Phrase Editor to indicate that Edit Mode is active. When active, notes will only be played when recording them into a note-column.

While it's possible to program the sequencer using the on-screen virtual keyboard, it's more efficient (and enjoyable) to use a physical keyboard. The virtual keyboard is primarily meant as a visual reference and learning tool.

4.3 Programming the Beat

Now that you've become more familiar with the Phrase Editor, we can begin creating our drum beat. You should have an empty phrase that's 16 lines in length. If not, you can quickly clear the phrase by hitting **SHIFT+F3** and then adjust the length as described in 4.1 Preparing a New Phrase.

4.3.1 Adding the Kick Drum

First we need to figure out which key triggers the kick drum sample in our kit. In the previous chapter we created a keyzone layout with the Drumkit button. The kick-drum is likely mapped to C-3, as this is normally the first note in a drumkit. With the default keyboard octave being 3, this is equivalent to the letter **Z** on the keyboard (UK standard keys).

The current keyboard octave is displayed just to left of the **on-screen keyboard** and can be changed with the small arrows next to the number, or with the shortcuts: **Numpad /** to decrease, **Numpad *** to increase.

Enter **Edit Mode** (**Esc**). A red border should appear around the phrase editor. Then use the arrow keys to move the cursor to the **existing note** at the top-left corner, and press **Z** to record a new note.

So what just happened? First of all, we replaced the existing (but silent) note with our kick-drum (**C-3**). Secondly, the cursor moved downward by a number of lines equal to the **Edit Step** value.

Since we want this beat to have a kick-drum on every fourth line, let's immediately start using Edit Step to our advantage. Having to enter a note and then press down, down, down... not very efficient!
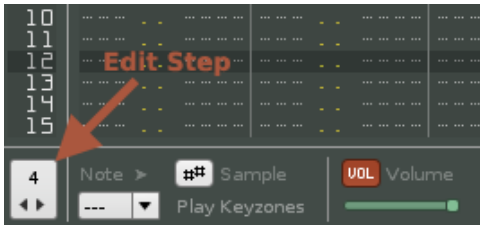
Edit Step is accessible from the lower-left corner of the Phrase Editor, or by using the keyboard shortcut **CMD/CTRL+(number between 0-9)**

Let's set the Edit Step value to '**4**', as shown above. Next, position the cursor at line **04** and press the **Z** key to insert a note. This time the cursor should jump ahead by four lines. Great! Now you can press **Z** repeatedly until the end of the phrase. Don't worry about moving past the bottom of the phrase, the cursor will simply 'wrap around' to the top.

Let's listen to the result, by starting preview playback of the phrase:

To start the phrase preview you can press the **Spacebar.** This works while the Phrase Editor is focused. Alternatively, click the Play button (see picture). Also, make sure that the **Trigger Mode** is set to **Program**

When previewing the phrase, we should simply hear a regular repetition of kick drums, as this is all we have programmed so far.

4.3.2 Adding the Snare Drum

The next instrument to be used for this basic rhythm is the snare drum, which will placed on every second hit of the kick-drum. Just as before, we need to figure out what key will trigger the snare drum.

1. Disable Edit Mode by pressing the **ESC** key (removing the red border around the Phrase Editor). This prevents any key presses from being recorded as notes.

2. Try pressing different keys from Z upwards. Look at the **on-screen keyboard** to see how each computer key corresponds to a key on the virtual piano: Z, S, X, D, C, etc. As each sample is played, a small square next to its name in the sample list lights up.

    💡 If you enable this icon 📑 at the top of the sample list, the last triggered sample will automatically become selected. This can be handy when you need to keep track of many samples.

3. Once you locate the Snare sample, move to the top of the phrase by pressing **F9** or **Home** and then move down four lines (press the **down arrow** four times). The cursor will be positioned right over the second C-3 note.

4. Press **TAB** to move the cursor into the second note-column.

5. Adjust the **Edit Step** value to **8** by pressing **CMD/CTRL+8**.

6. Hit the key that triggers the snare drum twice to record notes at lines 4 and 12.

4.3.3 Adding the Clap

Next we want to trigger clap samples alongside the snare, but let's go about it a little differently this time and learn how to use the clipboard + transpose.

1. Make sure that the cursor is positioned in the Snare note-column.

2. To copy the note-column, hit the keyboard shortcut **CMD/CTRL+SHIFT+F4** or use the mouse to right-click and select **Column>Copy** from the context menu.

3. Press **TAB** to move the cursor into the third note-column and hit the keyboard shortcut **CMD/CTRL+SHIFT+F5** (or use Column>Paste from the context menu).

4. We've copied the notes, but they still refer to the snare sample. To make them reference the clap sample, we're going to use another powerful shortcut: **transpose column**. As usual, you need to know which note will trigger the clap sample. If C-3 was a kick and C#3 the snare, then it's likely that D-3 will be the clap.

5. To transpose the notes one semitone up, use the keyboard shortcut **CMD/CTRL+SHIFT+F2**. To transpose down, use **CMD/CTRL+SHIFT+F1**. Start the phrase preview playback - you'll hear the difference as you are transposing the notes.

    💡 You can give names to note-columns by double-clicking the note-column header. They can also be re-arranged by selecting the header with the mouse and dragging it to a new location.

4.3.4 Adding the Hi-hat

The final element in our rhythm is going to be the hi-hats. But before we proceed, let's just review how the phrase might look like at our current point:
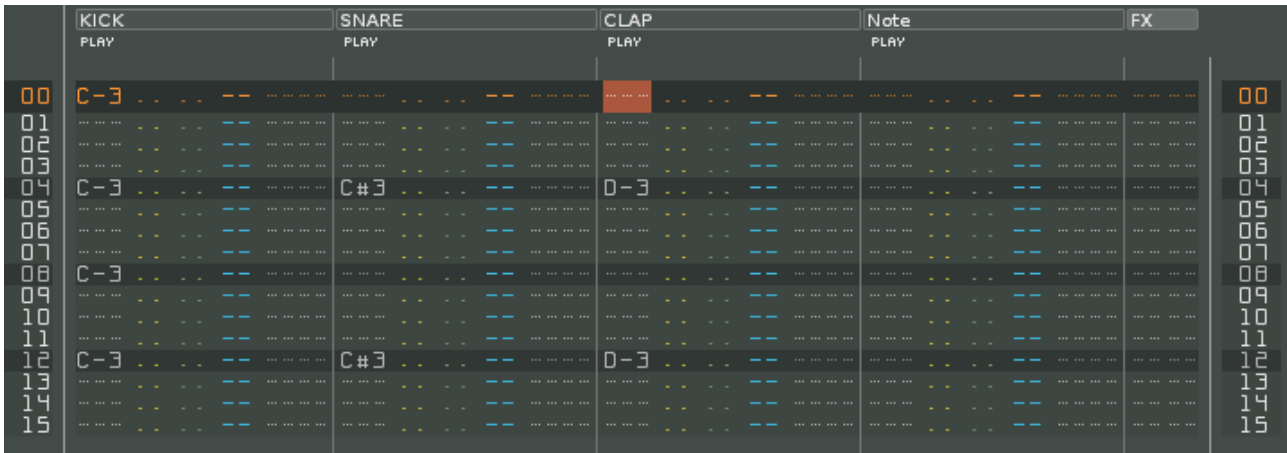
The idea is to create the familiar "two closed strikes followed by one open strike" type pattern, and apply a bit of humanized feel to the (otherwise quite robotic-sounding) result.

1. Move to the top of the phrase (**F9** or **Home**) and make sure **Edit Mode** is enabled (**ESC**).

2. Press **TAB** to move the cursor into the fourth note-column.

3. Set the **Edit Step** value to 4 (**CMD/CTRL+4**).

4. As before, you will need to figure out which key will trigger the closed hi-hat, then **press and hold that key** so that notes are recorded on every fourth line: 0, 4, 8 and 12.

5. Move the cursor down one line (**down arrow**), then **press and hold the trigger key again**, recording into lines 1, 5, 9 and 13.

6. Move the cursor down one line, then **press and hold the key which triggers the open hi-hat sample**. The notes will be recorded into lines 2, 6, 10 and 14.

7. Right-click on the hit-hat note-column and choose **Column > Humanize**. This will introduce small variations in volume, panning and delay to make the hi-hats sound more natural. Note that the Panning (green) and Delay (blue) sub-columns are automatically enabled as a result of this[1].

8. For a more random feeling, let's add a **maYbe** effect-command. Move the cursor to the last closed hi-hat note (line 29), find the Panning column and then hold **Left-Shift**[2] while typing '**Y**' and '**8**'. Now the note on that line will only be triggered 50% of the time. See also 7.5.2: MaYbe Command

9. Save/overwrite the **Drumkit Drill** preset 💾 (see 3.4 Saving Your Work).
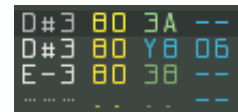
💡 [1] The sub-columns can be toggled on/off at any time. When hidden, the values contained within are not lost, but they'll have no effect on playback. Also, when copying or pasting a selection in the Phrase Editor, any such hidden data is ignored.

💡 [2] Holding **Left-Shift** allows you to insert multiple notes/commands on the same line before the Edit Step automatically moves the cursor downwards. This is especially useful when entering chords and commands.

5 Modulation section

In this chapter the drums will be made more expressive by adding **filter control** and allowing pitch-bend messages to **change the pitch** of the entire drumkit.

To do this, we are going to define a few **Macros**, which are arguably the most flexible way to control Redux:
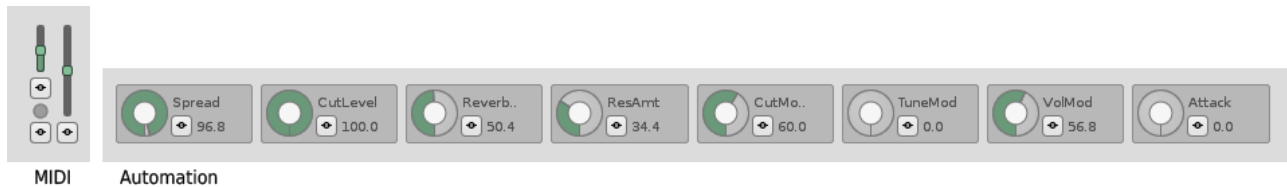
A single macro can control as many destination parameters as you desire and each of these parameters can have custom scaling and custom minimum/maximum values. This is perfect for a live performance. For example, you can control a filter while avoiding resonant spikes by tweaking the mappings, or control dry/wet ratios by adjusting the levels of send devices.

Macros are controlled via the host automation system, which is why they are also referred to as **Automation Macros.**

We can also make use of certain MIDI messages – **channel pressure**, **mod-wheel**, and **pitch-bend** – to control the sound. Each one is treated fundamentally the same as an automation macro, with the same scaling and min/max options. They are easiest to access using a MIDI keyboard and are therefore referred to as **MIDI macros.**

5.1 Preparations

1. Start by loading the previously saved preset, **Drumkit Drill**, then make sure that the **Editor** button is enabled and the **Modulation** tab is selected:

2. Click the Macro button to reveal the Macro controls:
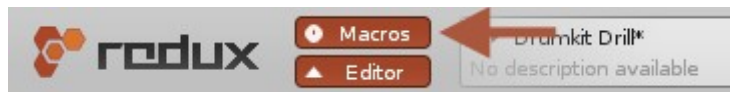
5.1.1 Adding a Cutoff Macro

1. In the **modulation grid,** set focus to the Filter Cutoff domain by clicking on the area just below '**Cut**'
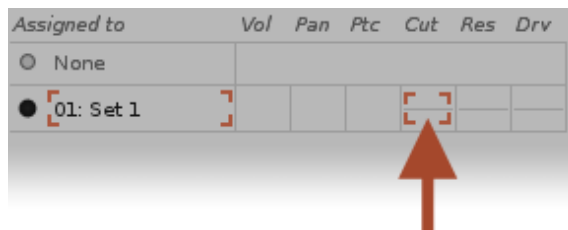
2. From the filter drop-down menu shown below, choose the filter type, **LP K35**
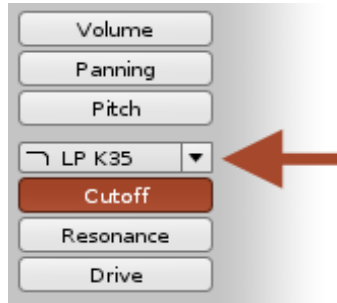
This is a **KORG-style analog-modelled lowpass filter** with a pleasant (and potentially self-resonating) sound

3. Click the **mapping button** found next to the **first macro** to bring up the macro-mapping dialog box.
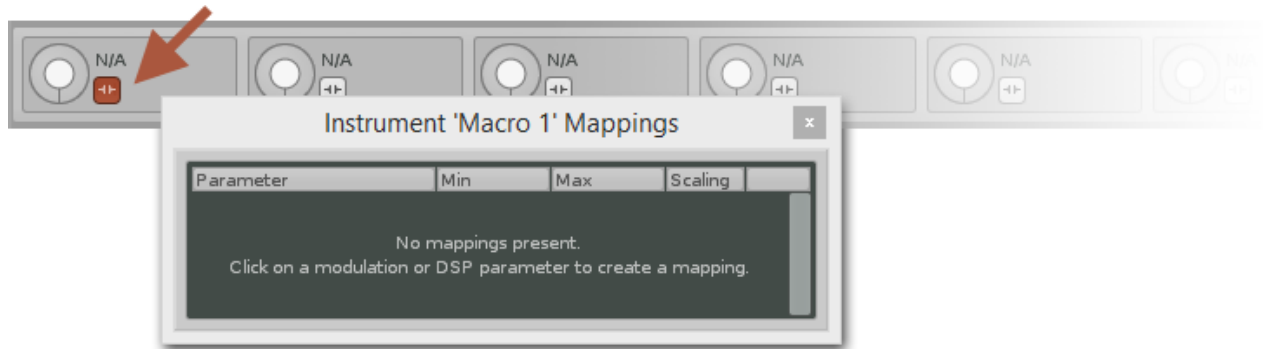
4. Click the **input slider** (found to right of the domain buttons) to assign it to the macro.
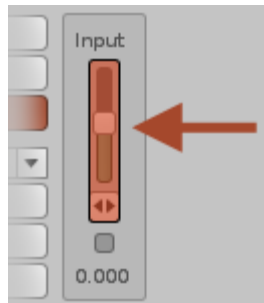
5. Click the **close icon [x]** at the top-right of the macro-mapping dialog box (or click the **mapping button** again).

6. Let's assign a name by clicking where it currently says '**Macro 1**' - type '**Cutoff**', followed by **Enter**.

7. That's it. We can now **tweak the macro** or **automate it** from our host.

5.1.2 Adding a Resonance Macro

1. Set focus to the Filter Resonance domain by clicking on the area just below '**Res**' in the **modulation grid**.

2. Click the **second macro's mapping button** to bring up the macro-mapping dialog box.

3. Click the **input slider** to assign it to the macro.
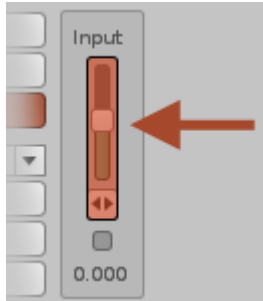
4. Close the mapping dialog box.

5. Give the macro a new name: '**Resonance**'.

5.1.3 Making the Mod-wheel Control Drive

1. Set focus to the Filter Drive domain by clicking on the area just below '**Drv**' in the **modulation grid**.

2. Click the **mapping button** below the **mod-wheel control** to bring up the macro-mapping dialog box.

3. Click the **input slider** to assign it to the mod-wheel macro. It now controls the filter's drive.

4. Close the mapping dialog box.

5.1.4 Making the Pitch-bend Control Tuning

1. Set focus to the Pitch domain by clicking on the area just below '**Ptc**' in the **modulation grid**.

2. Set the **Pitch Range** to 24. This will expand the range of the pitch modulation to twice the normal amount (two octaves up and two down, instead of one).
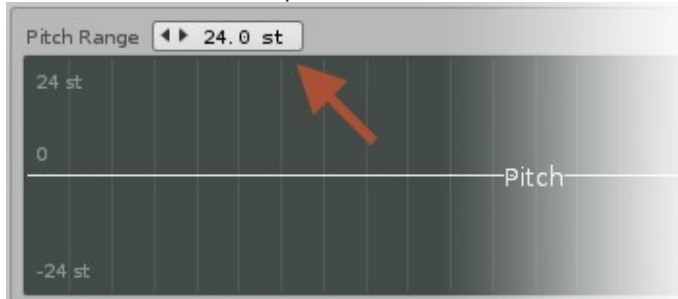
3. Click the **mapping button** below the **pitch-bend control to** bring up the macro-mapping dialog box.

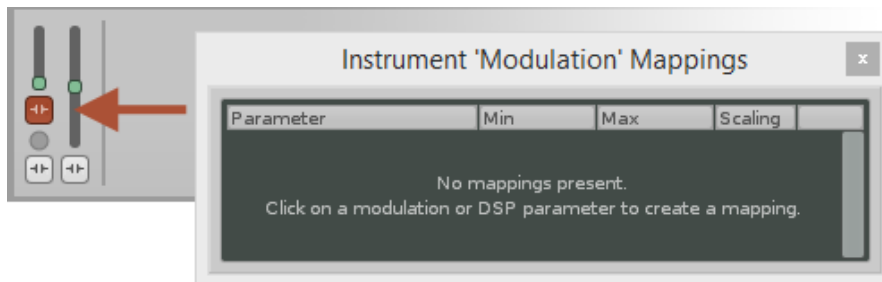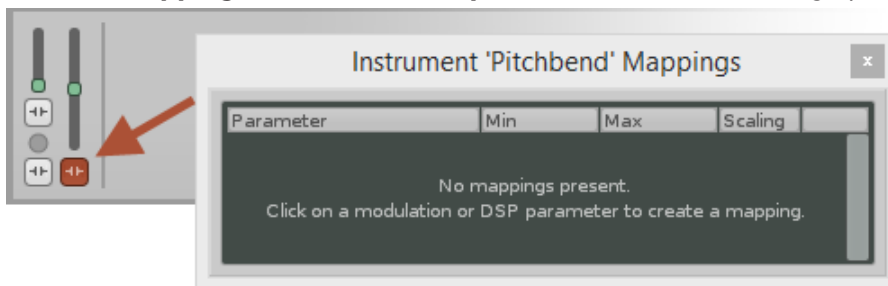4. Click the **input slider** to assign it to the pitch-bend macro. It now controls the overall tuning of the drumkit.

5. Close the mapping dialog box.

6. Save the **Drumkit Drill** preset 🖫 (see **3.4 Saving Your Work**).

5.2 Further Tips and Tricks

We have just learned how to assign macros to the input sliders of various modulation domains, making it easy to tweak and automate the instrument.

The modulation concept in Redux goes further than this, though:

- Each modulation domain (pitch, panning, volume, filter) can contain multiple devices that combine together to create more complex modulations. Such combinations are called Modulation Set, and can be stored/recalled as presets

- Different devices serve different purposes. For example, the Velocity Tracker can respond to how hard keys are struck, while the LFO can produce 'wobbling' movement, amongst other things. The Renoise Tutorials Wiki contains a full description of these devices and their function.

- You can add as many Modulation Sets as you need. For example, you might want to modulate the kick drum differently from the snare. This would simply be a matter of assigning those samples to different modulation sets.

6 Effects Section

In this chapter we are going to add a few effects to our drumkit. The snare will receive a **delay effect** and the whole kit will be treated to a bit of **reverb**. Also, we will learn how to transmit audio between **effect chains**, a more advanced use of effects.

6.1 Preparations

- Start by loading the previously saved preset, **Drumkit Drill**

- Make sure that the **Editor** button is enabled and that the **Effects** tab is selected:

6.1.1 Adding Delay to the Snare

Our drumkit already has an effect-chain that we can insert effects into. Unless otherwise instructed, every sample in the instrument will make use of that default effect-chain.

However, this would cause all samples to be affected in exactly the same way. What we actually want to do is add a bit of delay to *just* the snare drum. So the first thing to do is to clear all existing effect-chain assignments.

1. In the middle panel, make sure the first effect-chain is selected by clicking on its name.
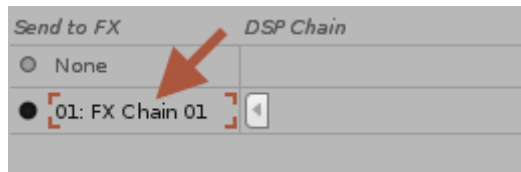
2. Delete the selected chain by clicking the minus (**−**) button at the bottom of the FX Chain List. Our drumkit samples' assignment to FX Chain 01 has been cleared as well.

3. Select the snare in the sample list, then choose '**Create and assign new...**' from the FX drop-down menu.
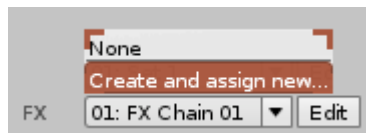
4. Double-click the name of the new chain (it should be called '**FX Chain 01**') and rename it to '**Echoes**'.
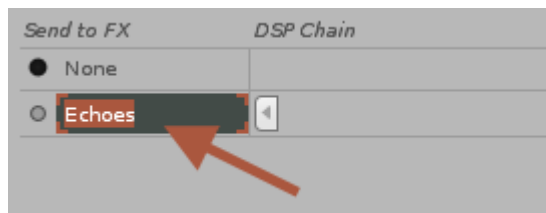
5. Go into the Effect Device list and scroll down until you reach an effect named **Multitap Delay** (the list is arranged alphabetically). **Double-click** on it to automatically insert it into the active effect-chain, which in our case is 'Echoes'.

6. Start a phrase playback preview (**Spacebar**) and notice that now, only the snare drum is affected by the delay.

7. As a finishing touch we'll add a bit of macro-control to the effect. Make sure the macros are visible (they should be already) and click the **mapping button** of the **third macro** to bring up the macro-mapping dialog box.

8. Click the Multitap delay parameter named, '**Amount**' to assign it to the macro.
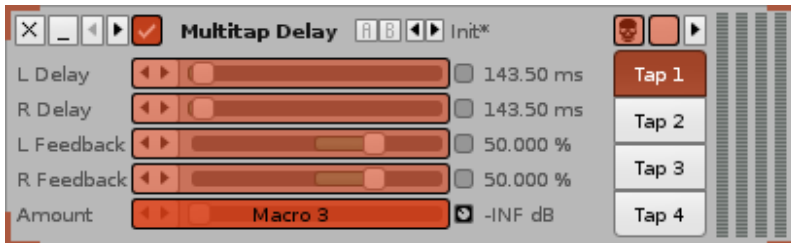
9. Close the mapping dialog box.

6.1.2 Adding Reverb to the Whole Kit

Reverb is a great creative tool in the hands of a producer. You can use it to add a **subtle sense of space** in a mix or go completely overboard for **dramatic effect**. Our case requires the former, so let's build a gentle space-enhancer.

1. A new effect-chain needs to be added *after* the current one. Start by selecting the effect-chain we just created ('**Echoes**'), then press the small **plus** (**+**) **button** at the bottom of the FX Chain List.
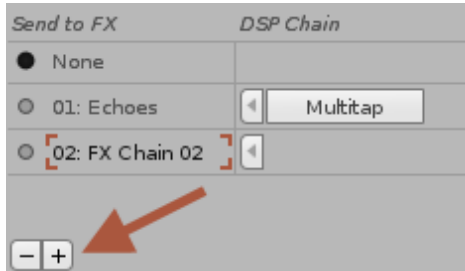
   If you happen to insert the new effect-chain at the wrong position (above 'Echoes' instead of below), it's possible to move it simply by dragging. Position the mouse on top of the name, then click'n'drag the chain to the new location.

2. Double-click the name of the effect-chain (it should be called '**FX Chain 02**') and rename it to '**Room**'.

3. Navigate through the list of effect devices until you find the '**Convolver**'. **Double-click on it** to insert it into our new effect-chain.
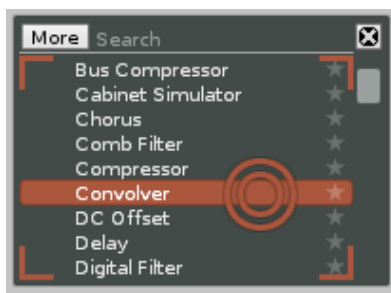
   The Convolver device is able to create convincing simulations of real acoustic spaces, thanks to a DSP technique called convolution. Technically speaking, it's not actually a reverb device.

4. In the new **Convolver** device, click where it says '**Init**' to open the parameter preset menu and choose, '**Room Big**'. The effect is perhaps a bit too subtle, so raise the '**Wet Mix**' to **50%**.
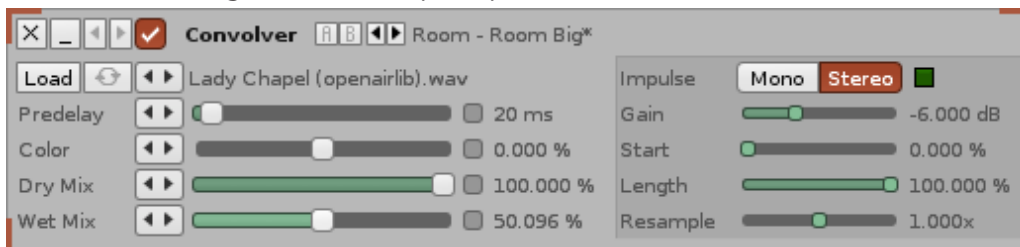
5. In the sample-list, select all samples *except* the snare-drum. Multiple samples can be selected by **shift-clicking** or **CMD/CTRL+clicking** them.

6. Assign these samples to the newly created effect-chain ('**Room**') using the small circular button to the left in the effect chain panel:
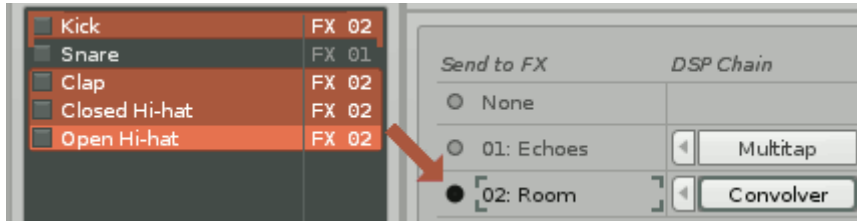
Now all of the samples except for the snare have a touch of reverb. However, we do want the snare to have some reverb *after* it's been affected by the Multitap Delay. So what's the easiest and most efficient way of doing this, i.e. without having to use more effects or chains than is necessary?

The answer is to insert something called a **Send Device**.

6.1.3 Adding a Send Device

The Send device is a special type of device that can **transmit audio internally between effect-chains**. The regular Send device sends the audio to a single target, while the second type, Multiband Send, can split the audio at given frequencies, enabling it to process the low, mid and high ranges of an audio signal differently.

There's no restriction on the number of Send devices you can use, but audio can only be routed from the source effect-chain to another chain that comes after (below) it in the FX list.

1. Look for a device named '**#Send**' in the Effect Device list. Now click-drag the device from the list into the effect-chain named, '**Echoes**' and release it immediately to the right of the Multitap Delay.
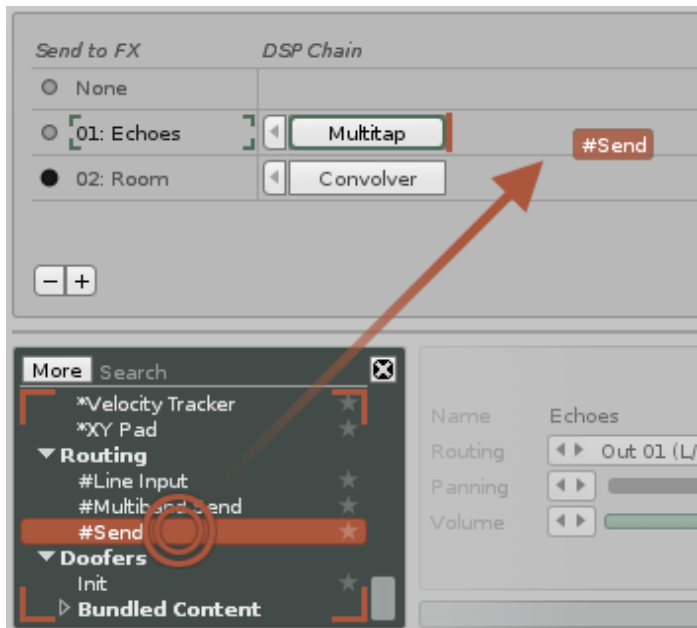
2. By default, the **Send** device does not have a target assigned in the '**Receiver**' drop-down menu. So click on the menu and choose the effect-chain, '**Room**'. Now the snare sample audio is delayed in this effect-chain and then passed on to the '**Room**' effect-chain that contains the reverb.

3. Don't forget to **save/overwrite** the preset

6.2 Assigning Outputs to the Host

The effect-chains in Redux can serve another important purpose by acting as **bus outputs** to route audio directly into the host bus of your choice.

Effect-chains are assigned to the **first stereo pair** by default, but you can choose to assign each effect-chain to any stereo pair from **1-12**. Just select from one of the 'Output' drop-down menus, located at the far right of each effect-chain:
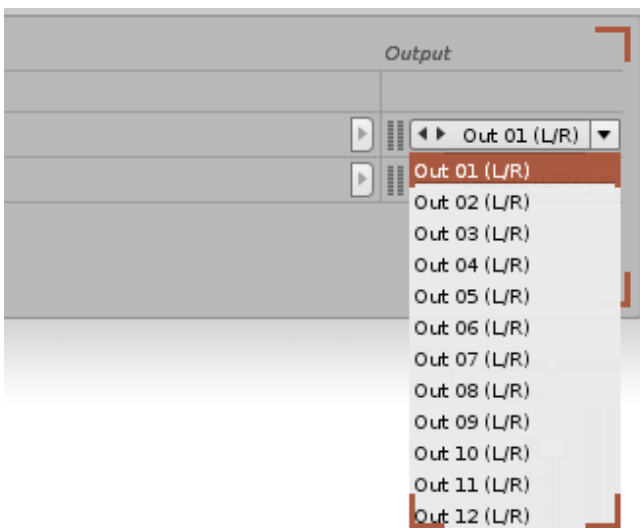
> 💡 The exact technique involved in setting up a multi-channel plugin differs from host to host. If you need to use multiple outputs, please consult the documentation for your particular DAW/host.

7 Further Steps

A drumkit needs to be sufficiently flexible for a song or live performance. In this tutorial we have already touched on many of the concepts necessary to achieve this, such as assigning a number of **macros**. This is a good start, but there are other valuable techniques.

7.1 Triggering Phrases with Notes

When using phrases, consider what the appropriate **triggering mode** might be for the task at hand. Do you want to control phrases via the entire keyboard range? Then choose **Program Mode.** Would you rather assign different phrases to different ranges on the keyboard? Then choose **Keymap Mode**.

For even greater flexibility, Redux allows you to switch between these behaviours in real-time.

Phrase Triggering Modes

Program (1-126)

Off (0)   Keymap (127)
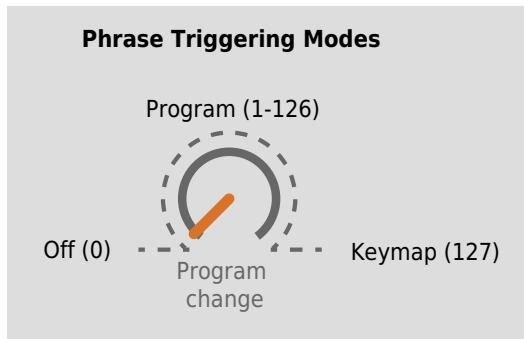
Program
change

The triggering mode is controlled via **program change events**. This illustration shows how the values are distributed:

0 turns phrases Off entirely.
1-126 is Program Mode, lets you select a specific phrase.
127 activates Keymap Mode.

Program Mode is usually a good choice, as it will allow unrestricted access to the entire range of the MIDI keyboard. With a bit of planning though, Keymap Mode becomes a powerful alternative – especially in live performances.

For convenient access to phrases in Program Mode, it's recommended to assign the various programs to separate buttons on your MIDI controller. If your host supports the recording of program changes, it should be possible to capture a performance where you switch programs on-the-fly.

7.2 Phrase Key-tracking

Each phrase also has two possible 'key-tracking' options: **Transpose** and **Offset**. You'll find these settings in the **phrase toolbar** of the Phrases Editor:

| ● Edit | BPM ◀▶ 135 | LPB ◀▶ 4 | ↻ ◀▶ 00 ◀▶ 32 | ⊞ Transpose ▼ ◀▶ C-4 |

Edit mode   Tempo (BPM+LPB)   Loop settings   Phrase Key-tracking

The key-tracking option determines how the playing of different notes is interpreted. The default is '**Transpose**' mode, which triggers the phrase using different base-notes. The other mode, '**Offset**', changes the starting line of phrase playback according to the note pressed, i.e. lower notes start earlier in the phrase, while higher notes start later.

Transpose can be great fun on drumkits, since the changing base-note will "shift" samples across the keyzone. This can be the cause of many happy accidents. But if you don't want the shifting to occur then enable direct sample references, as explained below.

7.2.1 Direct Sample References

The Keyzone is normally responsible for translating a given note into an actual sample. This is how our drumkit works and can provide some interesting results when combined with phrase key-tracking.

However, this is also severely limited if you want to play a sample at various pitches – you can only play the sample in it's keyzone range – and for drumkit layout, this is often just a single note!

To break free from this limitation, you can enable direct sample references by clicking the **sample column** button in the Phrase Editor toolbar. Doing so will introduce an extra column in the phrase editor, the sample column.

7.3 Be Critical of Your Samples

Good samples are essential to your music. In this guide we've built a drumkit, moved on to a bit of programming in the Phrase Editor and then created a fairly basic rhythm. But it would be fair to say that this drum loop is **only interesting when played with interesting sounds**. Even though Redux comes with a selection of samples that can be used in your own productions, having access to a greater range of sounds gives you more options.

This can be one of the biggest challenges of working with a sampler. It's tempting to just find and stick with a sample-pack that fits your preferred mood and genre. But instead of suggesting other sample-packs you might be interested in, here are a few basic points worth considering:

- **Be comfortable with your sounds**. Some people have an excellent memory, but most of us need to be a little organized. You can organize presets directly by opening the User Library in Finder/File Explorer.

- **If you like it, add it as a preset.** Then you'll be able to cycle through your sounds and recall them, just as we did when assembling the drumkit. Everything you add as a preset goes into the User Library.

- **Create your own samples.** Recording and creating your own personal samples gives you a great feeling of ownership over your music. To make this process as easy as possible, Redux features a built-in waveform editor with direct audio recording.

7.4 Variations, Variations, Variations!

Phrases offer a great way to create variations. Liberal use of duplicates, mutes and edits goes a long way towards creating an actual song structure from just a few simple elements.

Try the following with the drumkit we created (Drumkit Drills):
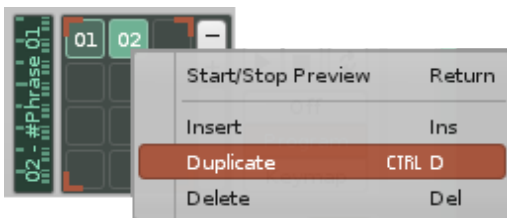
1. Right-click the first phrase slot and select 'Duplicate'.

2. Double-click the new phrase slot to launch the editor.

3. Enable Mute for the hi-hat note-column, leaving just the kick and snare.

4. Duplicate the phrase slot again, creating a third one. Edit this by muting some other columns.

5. Rinse and repeat?

Pro-tip: When working in the Phrase Editor, hold **ALT** before creating a selection with the mouse or keyboard. You'll be able to select areas of the phrase more precisely.

7.5 Control vs. Chaos

Another way to think about variations is in term of **randomness**. The great thing about setting up a random process is that it will go about its own business, requiring no input from you.

Redux offers **multiple approaches** to this: some are 'true random', while others are picking from a pool of values. It's well worth learning about them all:

7.5.1 LFO devices

**LFOs** have random-number generators and a tempo setting, which allows their behaviour to range from '*constant noise*' to '*only output a new value every once in a while.*'

The LFO in the Effects section is very powerful, since you can route its value to another device. For example, it's possible to make an LFO control the frequency of another LFO to create a gradually accelerating or decelerating modulation.

7.5.2 MaYbe Command

The **maYbe command** is entered into one of a note's sub-columns in the Phrase Editor. In Chapter 4.3.3 of this guide, this was used on a hi-hat note to give it a 50% chance of triggering (Y8). That's essentially how this command works, by 'maybe' triggering a note.

There is also another slightly more complex way to use it, called **mutually exclusive** mode:
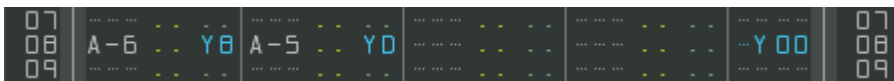
Mutually exclusive mode has been activated, **for this line only**, by placing **Y00** in the master effect-column. Now one of the notes using a maYbe command is guaranteed to be triggered, but **only one**.

While it might seem intuitive that the left note might trigger half of the time (Y8 being equal to 50%), this is not the case. The Y8 and YD values are mixed into a common 'pool' from which a note is randomly picked. So the actual chances in this case are approximately 36% and 64%, respectively.

7.5.3 Stepper Device

The Stepper Device is exclusive to the Modulation section and is a flexible way to control variations in a sound. Here are some examples of how it can be used:

- The Step parameter dictates how many steps forward the device will take when a new note is played. Set the Step value to '**Rand**' (take it below 0) to achieve truly random results, or try various values to cycle through the steps in different ways.

- Add it to the **panning domain** to make the sound alternate between speakers each time it's triggered. Suitable for sounds that benefit from automatic panning, such as hi-hats.

- Add it to the **pitch domain**[1] and carefully program a set of values to transpose the sound. For example, to progress through a melody line each time a new note is played.

- High-resolution envelopes are possible too. For example, a smooth sine curve can be created by increasing the Step length to a higher number like 256, then right-clicking the envelope and selecting 'Process > Create Sine Curve'.

[1] If you're going to work with exact values then it's recommended to use the **external envelope editor** (click the 'Ext. Editor' button). It gives you more room to work and also allows you to 'snap' points in both time and the vertical axis.

7.5.3 Keyzone Cycle/Random

Another way to achieve random variation is with the '**Overlap**' option in the **Keyzones** section. When multiple samples are triggered due to their keyzones overlapping, the playback can be handled in the following ways:

- **Play All** – The default, which simply plays all of the samples at the same time.

- **Cycle** – Plays one sample at a time, starting with the first, then the second... and so on.

- **Random** – Plays a randomly picked sample in a non-repeating sequence (round robin).

7.6 Expressiveness

A guitar changes its acoustic properties according to various factors, such as how the strings are strummed or the grip is changed. When an instrument subtly changes its character during play like this, it is able to express a broader range of musical emotion. So making good use of Redux's options to enhance the behaviour of our instruments will really pay off.

7.6.1 Key and Velocity

The **Key Tracking** and **Velocity Tracking** devices are essential tools for adding expressiveness and can be found in both the Modulation and Effects sections of Redux.

For synth sounds, key tracking is commonly used to dampen high notes, while velocity tracking can be used to muffle a sound when played softly, or sharpen it when played hard.

In analog/modular systems the key/velocity-tracking feature is often referred to as 'CV/Gate' (Control Voltage/Gate), but the principle is the same.

7.6.2 Pressure

It's actually quite easy to make an instrument respond to how hard it's being played, but the Key/Velocity Tracking devices only respond when a new note is first triggered. However, **Channel Pressure,** a feature of many MIDI keyboards, can track the varying pressure of a held note. Be aware though, that this change is applied to all currently playing notes, and *not* on an individual note basis.

Channel pressure is available as a **MIDI Macro** in Redux, making it easy to assign to any modulation or effect parameter.

8 Working With Melodic Presets

So far this Quickstart guide has focused on how to build a drumkit, which makes for a good demonstration of features, especially the phrase sequencer. But many of the presets in Redux are actually synth sounds and this chapter will show you how to build a monophonic bass synth from scratch.

8.1 Monophonic Bass

We are going to create a preset that features a BPM-synchronized 'wobble' in the filter section. It will not make use of any phrases or DSP effects.

1. Start by choosing the default blank preset, '**Init**'.

2. Make sure that the **Editor** button is enabled and the **Keyzones** tab is selected:

   ▦ Phrases ▥ Keyzones ⧛ Waveform ⟋ Modulation 🎛 Effects

3. From the **keyzone preset selector**, choose the preset, '**Basic > Pulse**'. As a result, the entire keyzone is populated with samples. This is a quick way to "dial in" a specific sound character.

4. Click the **Modulation** tab and choose the modulation preset, '**Synth > Bassline**'. By doing this, we added a volume envelope and some subtle filtering to the sound.

5. Enable the '**Mono**' button in the upper toolbar to make the preset monophonic.

6. Now try playing the sound. It's already somewhat useful, but you might notice a slight amount of phasing if a new note is played while another is fading out. As this instrument is intended to be truly monophonic, we'll fix this by specifying a new **NNA** option for our samples.

   💡 NNA stands for 'New Note Action' and applies when an instrument is producing overlapping notes, or when a new note in is played in a note-column containing a currently active note.

7. Select all of the samples by right-clicking in the sample list and choosing '**Select All**', or press the keyboard shortcut **CTRL+A** while the list is focused.

8. In the Sample Properties panel (click the arrow at the top-right to expand it), click the **NNA** drop-down menu and select the entry, '**Cut**'.
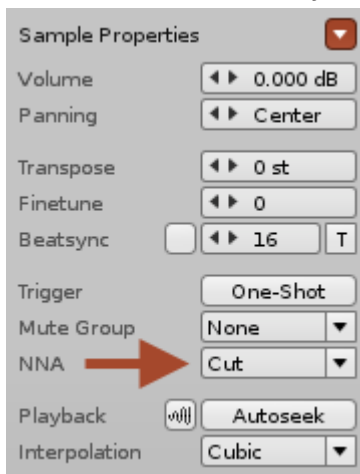
9. Now try playing the sound again. You will hear that when notes are played in quick succession, a new note will cut off the previous one, but still fade out gradually when not interrupted.

10. We are now going to add the filter modulation. Go to the Modulation section, then click the slot below '**Cut**' to focus on the Filter Cutoff domain:
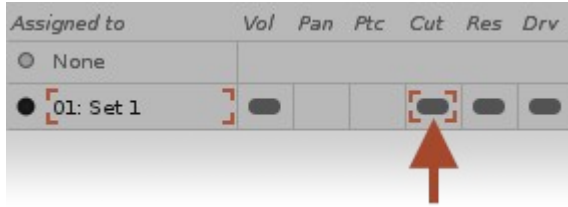
11. From the list of modulation devices, click on **LFO** and drag it to the left of the first device:
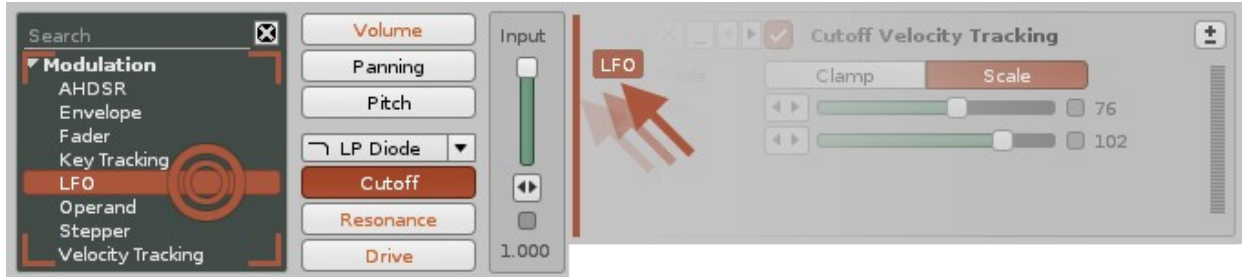
12. Choose an LFO shape by clicking on the **upward saw** icon, then click the small **clock** icon at the top-right to sync the device with the tempo of the song.

13. Set a 'Frequency' value of **1.0** beats.

14. Set a 'Delay' value of **0.004** beats. This causes the filter to have a very brief pulse at the beginning, giving the sound a noticeable entrance.

15. **Make a copy of the LFO** by holding down **CMD/CTRL** while dragging the device with the mouse, or using the copy/paste shortcut, **CMD/CTRL C+V**. Put the copy to the left of the original.
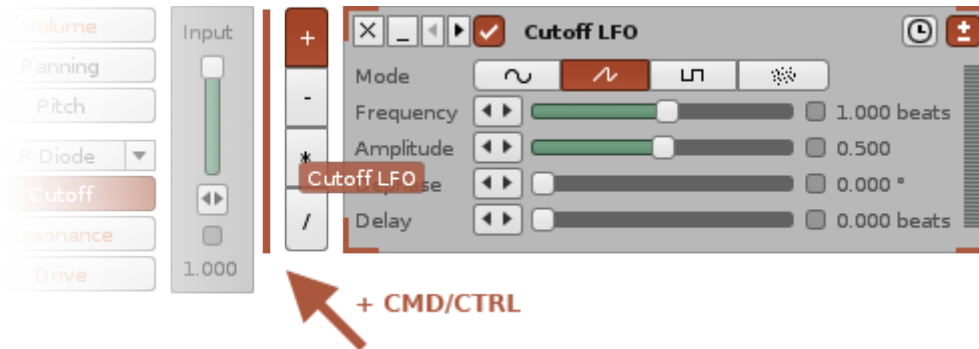
16. Set the '**Frequency**' of the new device to **0.666** beats, making it one-third faster than the first LFO.

17. Make sure the **Macro** panel is open and click the **first mapping button** to bring up the macro-mapping dialog box.

18. Click on the '**Amplitude**' parameter of both LFO devices.

19. In the **macro panel**, rename the first macro to '**Wubs**'.

20. Click the **mapping button** of the **second** macro.

21. Click the **checkbox** of both LFO devices to map their on/off state to the macro.

22. In the **macro-mapping dialog box**, swap the **Off** + **On** values of the second entry.
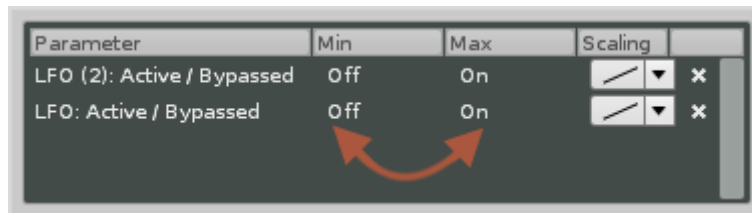
The second macro will now **switch between the two different LFO devices**. Close the dialog box.

23. In the **macro panel**, rename the second macro to '**Switch**'.

24. Save the preset as **Bass Buzzer** 💾 (or any other name you like).

9 Glossary

Aftertouch

A common term for channel/key-pressure in MIDI keyboards. Polyphonic key-pressure is rarely implemented in MIDI hardware, whereas channel-pressure is pretty much universally supported.

AM / Amplitude Modulation

Amplitude Modulation is the technique of impressing one audio signal onto another. In Redux, you will find a flexible AM filter in the Modulation section, with four different oscillator types to choose from: sine, triangle, saw and pulse.

Automation

Automation refers to the process of a host (DAW) controlling plugin parameters. Through the host you can choose to control these parameters via graphical envelopes or other methods. Automation allows parameter names to be freely defined and Redux uses this to allow custom names of Macros to appear in the host.

Effect Devices

Effect devices are found within the Effects tab of Redux. There is a distinction between devices that affect the audio signal (DSP Devices) and devices that operate on a control value (Meta-Devices).

DSP Devices (Digital Signal Processing) are effect devices that create or modify the character of an incoming audio signal. For example, the Reverb device adds a sense of 'spaciousness' to the sound, and the Exciter adds extra transients and harmonics.

Routing and *Send devices* are special DSP Devices which allow audio to be routed between tracks. The sound is always sent 'forward' from the source effect-chain to another chain that comes after (below) it in the FX list.

Meta-Devices are effect devices that create or modify the value of an inaudible control signal. You can use meta-devices for many different purposes:
→ Control other devices according to specified criteria
→ Respond to incoming notes (Key/Velocity Tracking devices)
→ Generate a continuous stream of values (LFOs)
→ Combine values (Meta-Mixer)

HEX / Hexadecimal values

In the Phrase Editor, many values are specified in hexadecimal. To someone unfamiliar with this concept, it can look a bit alien to have numbers amongst letters (A to F). So what's going on?

Well, it's actually very simple. Hexadecimal (or just 'hex') is also known as base 16, meaning we are counting with 16 possible values instead of the usual 10. The following list shows how this works by counting upwards from 0 (first value is decimal, second is hex): 0=0, 1=1, 2=2, 3=3, 4=4, 5=5, 6=6, 7=7, 8=8, 9=9, 10=A, 11=B, 12=C, 13=D, 14=E, 15=F, 16=10.

As you can see, counting "wraps around" as we reach 16, which in hex is expressed as 10. And that's essentially all there is to it. If we had continued counting upwards, we would reach 32=20, 64=40, 128=80, etc.

These values happen to work well with the common ranges of music theory – especially computer music theory, where values are often some 'power of two'.

LFO

An LFO (Low Frequency Oscillator) is a common component in synthesizers. A 'normal' oscillator – the actual tone generator of a synth – works no differently, except that the LFO produces much lower frequencies, often below 20Hz. Although much too low to be heard with the human ear, these slower cycles are incredibly useful as a modulation source.

In Redux, the primary use of LFOs are as flexible effect and modulation devices, but an LFO is also responsible for driving the Chorus, Flanger and Phaser devices.

Modulation

Modulation is the process of changing a value over time by applying another value to it.

You mostly encounter this in Redux when dealing with the Modulation tab, where values are applied to either the volume, panning, pitch or filter domains of a sample. It can also describe applying the output from an effect device, like an LFO, to another parameter, such as a Send device's 'Amount'.

Oscillator

An oscillator is the sound-generating component of a synth. This is usually a tone with some basic timbre, which is then modulated in various ways to create a more complex sound. This is also true in Redux, except that we are using samples as the sound source instead of an oscillator.

However, oscillators are present in a number of other places. For example, in the Modulation section you can apply an AM filter, which is a tunable oscillator that modulates the original signal on a per-voice basis. In the Effects section, the RingMod filter works in a similar fashion on the entire audio signal.

Phrase

Phrases are small sequences that can contain notes and effect commands, loop start+end points, and key-tracking options. Each instrument preset in Redux may contain multiple different phrases.

Redux comes with a library of ready-to-use phrase presets.

Tracker

A tracker is a grid-based type of sequencer which dates back to the late 80s. Trackers were originally used to create music for games and scene productions (demos), in which the efficient use of resources was paramount. Trackers were quickly adopted by pioneering electronic musicians too, as they represented a cost-effective and time-efficient method for producing intricately sampled beats. Even in 2015, trackers have not lost their appeal. They are available (in one form or another) on all computing platforms, mobile devices and even hand-held consoles.

Redux is created by the people behind Renoise, one of the most recognized and established trackers around. Renoise offers a complete music production environment, while keeping the tracker approach intact. Redux is essentially the powerful 'sampler instrument' part of Renoise, made available as a plugin for other DAWs.

10 MIDI Implementation Chart

TYPE	DESCRIPTION	VALUE
MIDI Note	**Note Message** Trigger phrases or samples	**0-119** + velocity
Program Change	**Program Change** Control phrase-triggering mode, select phrase in Program Mode	**0** = Phrase Off **1-126** = Program Mode **127** = Keymap Mode
CC#01	**Mod-wheel** → Freely assignable as a Macro	**0-127**
CC#07	**Volume** Control the global volume	**0-127**
CC#14	**Scale Key** Determine the root key for the scale	**0-11**
CC#15	**Scale Mode** Apply a harmonic scale to the preset	**0** = OFF **1-35 =** Scale
CC#64	**Sustain pedal** While sustain is enabled, any playing notes will continue to play until the pedal is released	**0-63** = OFF **64-127** = ON
CC#121	**All Controllers Off** Reset pitch-bend (PB), channel-pressure (CP) and mod-wheel (MW)	Not used
CC#123	**All Notes Off** Turns off any currently playing notes	Not used
Channel-pressure	**Channel Pressure** → Freely assignable as a Macro	**0-127**
Pitch-bend	**Pitch-bend** → Freely assignable as a Macro	**0-127**, **0-16384**
Mod-Wheel	Please see CC#01	

11 Getting Support

Renoise Forum

The official Renoise forum contains a huge amount of searchable shared knowledge and is a good place to ask for help from other like-minded users. The Renoise team monitors the support forum and tries to answer all questions: http://forum.renoise.com

Contact Us

Alternatively, you can write to us directly. If your question requires technical support, is of a sensitive nature or you experience problems relating to your Renoise Backstage account, please contact us directly: support@renoise.com