



Manual

Welcome

Thinking out of the box is part of what the Rob Papen brand ethos is. However we do not want to lose the fact that plugins should be there for creating music. Here we present RP-Reverse which is an FX plugin for the creative minded artist that loves to add something unique to their tracks!

RP-Reverse reverses the incoming audio in a creative way. The resulting audio can be tempo synced to make it fit your track easily. In true Rob Papen style it's not just about the main feature! The reversed audio can be put through distortion, two analogue modelled Filters or a Comb Filter.

On top of this you will also find a handy LFO to modulate the reversed audio and the Filters.

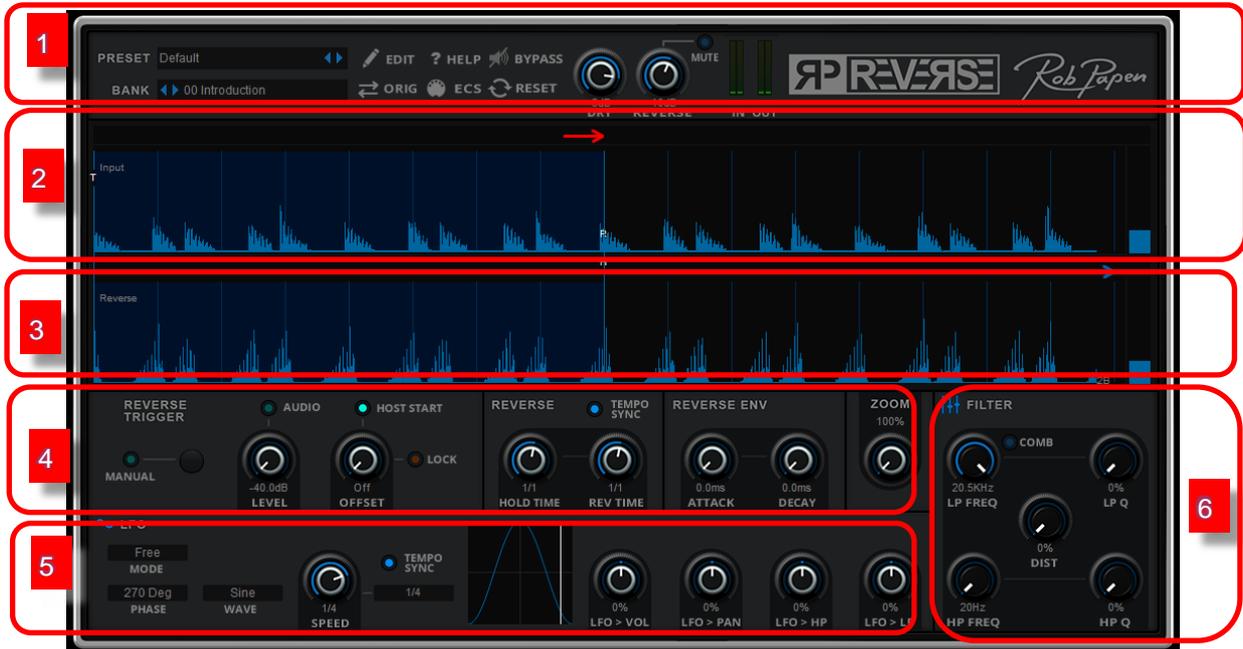
RP-Reverse is a cool plugin to be used on your drum-loops, vocals or instruments, and for adding 'thinking out of the box' type FX to your tracks!

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Rob Papen and the RPCX team!

Navigating RP-Reverse

First, we'll give you a quick overview of RP-Reverse, so you can find your way around. You will find all the details that make up RP-Reverse in the following chapters.



| | | |
|---|---------------------------------------|---|
| 1 | Presets and Globals | In this section, you select Presets and Folders and gain access to global parameters and this manual. Click on the RP-Reverse logo to open the Back Panel |
| 2 | Sound Display Record | The display visualizes the audio signal being recorded |
| 3 | Sound Display Reverse | The bottom half of the display visualizes the reversed audio |
| 4 | Reverse Trigger and Playback settings | The Reverse triggering and playback controls are grouped together in this block |
| 5 | LFO | The LFO has its settings on the left-hand side and its modulation destination to the right. In the middle you find an LFO waveform display |
| 6 | Filter | In the bottom right of RP-Reverse you find the filter and distortion settings |

Controls

RP-Reverse uses controller knobs, sliders, buttons and drop-down menus to adjust its parameters. You operate the controls with the mouse: typically, you click-and-hold the control and move it to its target position. While you move the control, its name and value are shown directly below the control.

In most cases, you move a knob or slider by (left) clicking on it and moving the mouse up and down or left and right. You will see the value change in the read-out screen. If you hold the shift-key while moving the mouse, you can make minor adjustments accurately. Consider this a fine-tuning method. To reset a control to its default value you can either double-click or ctrl-click the control.

There are three button types:

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| <i>On / Off Buttons</i> | The value toggles between On and Off with every mouse click |
| <i>Radio Buttons</i> | Select one option out of several predefined settings by clicking on the desired value. |
| <i>Trigger Buttons (Momentary)</i> | A Trigger Button starts a particular action, such as a sound preview |

Some selections are made by menus. Menus are opened by clicking on a text label that represents the currently active value. The first click opens the menu which lists all possible values. With a second click, you select the new value.

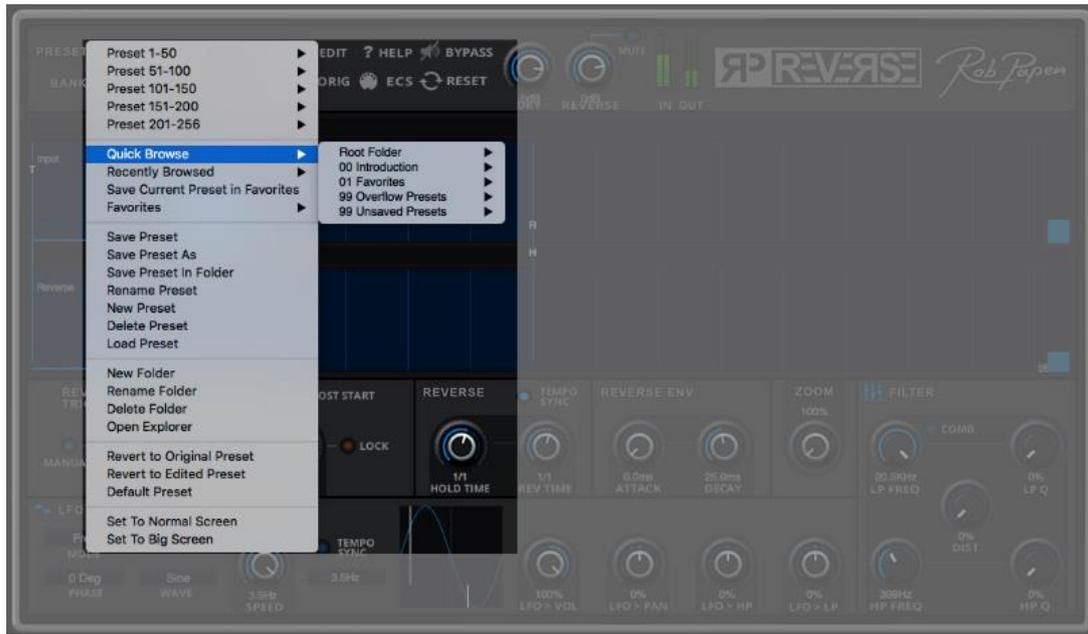
Each effect block in RP-Reverse has an icon in its top left corner. This functions as an On / Off switch for that effect. The effect block is active when the icon is lit light blue. It is Off when the icon is grey.

Computer Keyboard Controls

You can switch Presets and Banks using your computer keyboard. On the back panel, you can enable and disable this function. Click on the Rob Papen logo to display the back panel. This setting is global.

| | |
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| <i>Up Arrow Key</i> | Previous Preset |
| <i>Down Arrow Key</i> | Next Preset |
| <i>Right Arrow Key</i> | Increase Preset Number by 16 |
| <i>Left Arrow Key</i> | Decrease Preset Number by 16 |
| <i>Page Down Key</i> | Move to the next RP-Reverse Folder |
| <i>Page Up Key</i> | Move to the previous RP-Reverse Folder |

Presets



In the Preset section, you manage all RP-Reverse's Folders and Presets. It includes a Favorites function, which makes it easy to create your own sets of frequently used Presets. Select a Preset by clicking on the Preset Screen. A menu pops up with lists of Presets names and numbers and a collection of Preset commands. You may also use the < and > keys to scroll through the Presets one by one.

The Preset menu also contains Quick Browser, Recently Browsed and Favourites functions that are explained below.

Quick Browser

The Quick Browser menu shows all available Folders and Presets. When you select a Preset, the Preset will be loaded instantaneously.

Recently Browsed

The Recently Browsed menu shows a list of all recently used Presets. Clicking on any Preset will load it immediately. To clear the menu, click on Clear Recent.

Favourites

Favorites shows the list of Presets that were saved in the 01 Favorites Folder. Selecting any of them immediately loads the Preset.. You can make a Preset a Favorite by using Save Current Preset in Favorites. This function saves the current Preset to the 01 Favorites Bank Folder. The Favorites feature is used for collecting Presets that you use often. This Folder holds a maximum of 256 Presets. If you collect more Favorites than 256 Presets, you'll need to create a new folder, for instance one called 02 Favorites. Please keep in mind that this new folder will not be used by Save Current Presets in Favorites. This function is hard wired (connected) to the original Favorites folder.

Preset Commands

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| <i>Save Preset</i> | Overwrites the current Preset with any changes you have made to it. |
| <i>Save Preset As</i> | Saves the edited Preset with a new name. The original Preset remains unchanged. |
| <i>Save Preset in Folder</i> | Saves the edited Preset in a different Folder. The original Preset remains unchanged |
| <i>Rename Preset</i> | Overwrites the current Preset with a new name |
| <i>New Preset</i> | Creates a new Preset with default settings. |
| <i>Delete Preset</i> | Deletes the current Preset |
| <i>Load Preset</i> | Loads a Preset from file, through a File Dialog screen. RP-Reverse attempts to load the corresponding Folder. If the Folder cannot be loaded, RP-Reverse places the Preset in Folder 998 Unsaved Presets. |
| <i>New Folder</i> | Creates a new Folder |
| <i>Rename Folder</i> | Changes the Folder's name |
| <i>Delete Folder</i> | Deletes the current Folder and all Presets it contains |
| <i>Open Explorer</i> | Opens an Explorer (Finder for Mac) window for RP-Reverse's storage location for Presets. On PC: My documents\Rob Papen\RP-Reverse\Bank folder On Mac: Applications\Rob Papen\RP- REVERSE \Bank folder |
| <i>Revert to Original Preset</i> | Loads the original (stored) settings for the current Preset |
| <i>Revert to Edited Preset</i> | Loads the edited (changed) settings for the current Preset |
| <i>Default Preset</i> | Sets the current Preset to RP-Reverse's default settings |

Global Controls



Edit / Orig Button

When you move a control, and change a Preset, the Edit button lights up. This indicates that the current Preset differs from the original, stored version. The Orig button takes you back to the stored version of the Preset. The Edit and Orig buttons work in tandem to allow you to compare your edits with the original Preset.

Help

A click on the Help Button opens the RP-Reverse manual.

ECS

RP-Reverse can modify its effect parameters dynamically in response to MIDI Messages received from an external controller. The assignment of external MIDI Messages to RP-Reverse controls is defined in the ECS. ECS is short for External Controller Setup. It contains the assignments of MIDI controllers to RP-Reverse controls that are being targeted for real time interaction. Remember, you set each individual MIDI controller assignment by using the right button (or control-click on a Mac) menu and selecting latch to MIDI. You can also unlatch MIDI controls the same way or clear all the MIDI control assignments. The ECS button allows you to load and save a complete external MIDI controller setup. Once set, it is shared by all Presets, and all instances of RP-Reverse that are loaded in your DAW.

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| <i>Load ECS</i> | This opens the folder that holds ECS set-ups. The installer of RP-Reverse installs a folder named ECS that holds the ECS files |
| <i>Save ECS</i> | This gives you the option to save the MIDI set-up you created and use it in other songs. It is saved as an ECS file |
| <i>Reset all MIDI</i> | This clears all the MIDI settings for RP-Reverse. Handy if you want to start from scratch |

Bypass

The bypass-switch places RP-Reverse in bypass mode. It outputs the dry signal only.

Reset

The Reset button clears all RP-Reverse audio buffers and resets the LFO.

Dry Volume

The Dry control sets the Dry or original input signal volume. Instead of combining the Dry (Input) and Reverse (Wet) signal in a single dial, we chose to give each their own dedicated control. This makes it easier to record automation of these parameters in your music host (DAW).

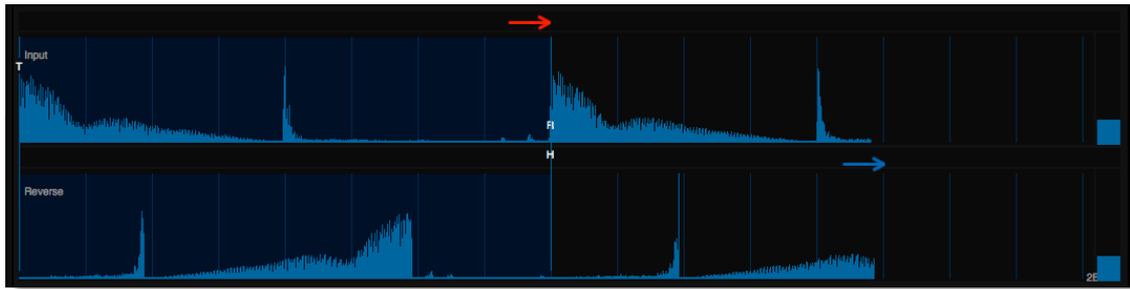
Reverse Volume

The Reverse control sets the volume of the reversed (Wet) signal. Instead of combining the Dry and Reverse (Wet) signal balance in a single dial, we chose to give each their own dedicated control. This configuration makes it easier to record and automate dry and effect levels in your music host (DAW). A typical use is to fade the Reverse signal in and out in the mix. Please refer to your music host (DAW) manual on how to record and automate parameters.

Reverse Mute

The Reverse Mute button silences the reversed (Wet) signal. Use the Mute button to punch the Reverse signal in and out of the mix. The Mute button can be recorded and automated. Please refer to your music host program manual on how to record/automate parameters.

Reverser



The core function of RP-Reverse is of course the reverser. The Reverser records the incoming audio input signal and plays it back backwards i.e. reverses it. The reversed audio is an additional audio channel that you can use as a special effect.

The audio is displayed in the RP-Reverse's main window in two lanes. The top lane displays the recorded input signal, the lower lane displays the reversed audio signal. Use the display to monitor the recording process and recording levels.

The display contains two arrows that indicate recording and playback positions. The red arrow which moves to the right displays the recording of the audio input. The blue arrow indicates the playback position of reversed sound.

Below the display you see the length of the recorded sections.

Bear in mind that when using the reverser, sound always needs to be recorded before it can be played back in reverse. We offer three different trigger types to start recording. These are explained below.

Display Vertical Zoom for Input and Output

On the far righthand side of the display you find a couple of zoom sliders, displayed as blue rectangles. Use the sliders to zoom in and out of the waveform display.

The grid below the graphic display adapts to the size automatically.

Trigger Modes

The Reverser can be triggered by different event types of events. Select the trigger type with the radio buttons below the audio display.

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| <i>Audio</i> | The incoming audio triggers the recording when it exceeds a set threshold. The Level control sets the threshold where the recording will start. |
| <i>Manual</i> | Select this and the reverser is triggered when you click on the big Manual button so that you can start the reverser any time. It is necessary to record this control in your music host program, so that you can automate the punch-in and punch-out points, where you like to start the recording. Please refer to your music host (DAW) manual on how to record and automate parameters. |
| <i>Host</i> | Select this and the reverser is triggered when your host starts and is retriggered after the hold time. |

To maintain synchronisation in beats and measures, we recommend starting recording at the beginning of a measure (beat 1)

The Hold Time determines the time interval between recorded sections. The Rev Time sets the length of the reversed section that is played back.

A good starting point is to set both Hold Time and Rev time to 1 bar. This gives you one bar of recorded audio followed by one bar of reversed audio and so on.



Trigger Level

The Reverser needs to be triggered. The Trigger Level sets at which volume the input signal starts the reverser. The reverse then records audio for the set reverse time, and then after this time replays the recorded sound backwards. It is shown in the display by the line with the T.

Different source signal types may require different threshold settings. Think for instance of drums versus vocals. You may need to experiment a little to find the optimum Trigger Level

Offset

The start of the recording can be delayed by a set time amount, i.e. the reverser is triggered but waits before recording. The display indicates this with a line marked O.

Please note that in Manual Trigger the 'Offset' is not active.

Lock Button for Offset

The Lock button maintains the current Offset position when changing Presets. This may come in handy when auditioning RP-Reverse Presets.

Hold Time

To avoid the Reverser being retriggered continuously, the Hold Time defines a time-out until the next instance of the reverse recording. When the Reverser is triggered, i.e. reverse playback starts, the record buffer is cleared and resumes recording. It is displayed by a line marked with H.

The Hold Time is adjusted automatically, such that the Reverse Time cannot exceed the Hold Time.

Note: Keep in mind that if you plan to have a 1 bar Reverse playback that it will take 1 bar to record it first. The whole process takes 2 bars.

Note: If you would like a repeating Reverse section at 1 bar, set the Hold Time to 2 bars.

It is important to understand the relationship between Hold Time and Reverse Time to get the most out of RP-Reverse.

Reverse Time

The Reverse Time determines the length of the section that is played back in Reverse. In the display you see an arrow move to the right until it hits the point R. This indicates when recording ends and, reverse, playback starts.

Example: when Hold Time is set to 1 bar and the Reverse Time set to $\frac{1}{2}$ bar, you will start with recording 1 bar and subsequently $\frac{1}{2}$ bar of that recording will be played back in reverse.

Again, it is important to understand the relationship between Hold Time and Reverse Time to get the most out of RP-Reverse. We recommend that you experiment with different settings so you can get a feel for what is going on within RP-Reverse.

Tempo Sync

The Hold Time and Reverse Time duration can be made to follow the DAW tempo with the Sync function. By default, Sync is engaged (On) as this applies to most musical situations. You may however turn Sync Off and manage Hold and Reverse time independently of the DAW tempo.

Attack

The Attack control creates an Attack section at the start of the reversed output. Use it to fade-in the reversed sound.

Decay

The Decay control creates a Decay section at the end of the reversed output. Use it to fade-out the reversed sound.

Filter



If you wish to do so you can apply distortion and filter effects to the reversed audio. RP-Reverse has a Distortion unit and a 12dB Low Pass and High Pass Filter. The Low Pass Filter can also be used as a Comb Filter.

You can Bypass the Distortion / Filter unit by turning Off the Filter button.

Distortion

The Distortion module distorts the audio before it goes into the Filter. Typically, it increases volume and adds additional harmonics to the sound over a wide spectrum.

Low Pass Filter

Low frequencies pass through the Filter unaffected. Those above the Cutoff frequency are reduced by 12dB per octave.

Low Pass Filter Q (Resonance)

Q is the Resonance level of the Filter. Resonance emphasizes frequencies around the Cutoff frequency and creates a peak in the frequency spectrum. As you increase the Resonance, the effect becomes more pronounced until the Filter almost self-oscillates.

Comb Filter

The Comb Filter is a special mode of the Low Pass Filter. Note that you cannot use them both at the same time. The Comb Filter is based around a very short delay, which emphasizes the Comb Filter frequency. The Cutoff frequency controls the length of this delay and resonance (Q) the feedback of the Filter.

High Pass Filter

The High Pass Filter (HP) works in series with the Main Filter. It reduces frequencies below its Filter Frequency and is a dedicated 12dB/Octave High Pass Filter.

High Pass Filter Q (Resonance)

Q is the resonance level of the Filter. Resonance emphasizes frequencies around the Cutoff frequency and creates a peak in the frequency spectrum. As you increase the Resonance, the effect becomes more pronounced until the Filter almost self-oscillates.

LFO



RP-Reverse has an LFO, which can be used as a modulation source for several RP-Reverse parameters. A click on the LFO icon engages the LFO as a modulation source.

There is an LFO display that visualises the selected waveform and the phase (current position of the modulation signal).

LFO Mode

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| <i>Free</i> | The LFO is running freely, independently of the Reverse settings. However, starting Playback in your host (DAW) does reset the LFO. If you rely on a specific LFO start position, start your DAW at the first beat of a bar. |
| <i>Triggered</i> | Triggered Mode links the LFO to the Reverse section. The Reverse section triggers (starts) the LFO |

LFO Phase

The Phase offset defines the start position of the LFO Waveform. It is measured in degrees: 0, 90, 180, 270. These values translate to at the start of the waveform, a quarter in, halfway in and three quarters in the waveform. The LFO display will help you understand these settings. For example, if you want the LFO to start at the top (maximum level) of a Sinus waveform you have to set the Phase to 90 degrees.

Please note that when the Waveform is Random, the Phase setting has no discernible effect.

LFO Wave

LFO Wave selects the modulation signal's waveform. The available shapes are: Sinus, Saw Up, Saw Down, Triangle, Square and Random.

LFO Speed

LFO Speed sets the frequency of the LFO. Depending on the Sync setting it is displayed in note values (Sync On) or frequency (Hz – Sync Off).

LFO Sync

When LFO Sync is engaged, the LFO follows the host's (DAW) tempo.

The LFO speed when Sync is Off has a very wide range. It runs even in audio range frequencies. You can apply this feature to create typical metallic sounds when you use the LFO to modulate Volume or Filter Frequency

LFO -> Volume

The LFO -> Volume control sets the modulation amount of the Reverse Volume. Positive and Negative modulation is possible. Double click on the control to reset the modulation amount to 0.

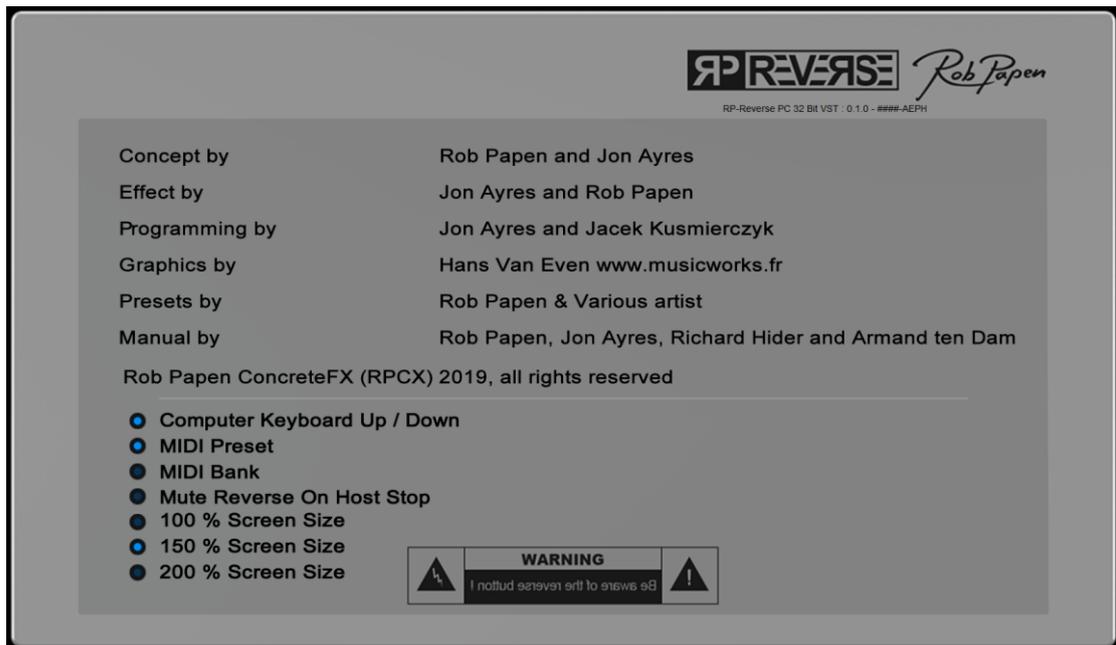
LFO -> Pan

The LFO -> Pan control sets amount of influence that the LFO has over the panning position. Positive and Negative modulation is possible. Double click on the control to reset the modulation amount to 0.

LFO -> LP or Comb

The LFO -> LP / Comb control sets the modulation amount of the Low Pass or Comb Filter Frequency. Positive and Negative modulation is possible. Double click on the control to reset the modulation amount to 0.

Back Panel



A click on the RP-Reverse logo reveals the back panel. The back panel contains program information and several global settings. These settings affect all instances of RP-Reverse. Typically, the settings you make here are of the type Set-and-Forget; i.e. you only need to do it once right after installation of the plug-in. Think of these as a collection of preferences.

Computer Keyboard On/Off

You can step through the RP-Reverse Presets using the computer-keyboard up and down arrow and the page up and down keys.

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|----------------------------|-------------------------------|
| <i>Up / Down Key</i> | Previous Preset / Next Preset |
| <i>Page Up / Page Down</i> | Previous Folder / Next Folder |

MIDI Preset Change On/Off

The Program Change switch enables RP-Reverse to respond to MIDI Program Change commands for selecting Presets. When the switch is set to Off, RP-Reverse will ignore any MIDI Program Change commands.

MIDI Bank Change On/Off

The Bank Change switch enables RP-Reverse to respond to MIDI Bank Change commands for selecting different Bank Folders.

When the switch is set to Off, RP-Reverse will ignore any MIDI Bank Change commands.

Mute Reverse on host stop

The Mute Reverse on Stop switch silences the playback of Reverse audio when you stop the host's playback. By default, this switch is On.

Screen size selection:

The screen size selection offers 100% size (normal size), 150% size and 200% size. The 200% setting is recommended for 4K resolution screens. Depending on the host (DAW), you may need to close and re-open RP-Reverse, or close and re-open the project for changes to take effect. You can also select between different screen sizes in the Preset menu.