

reZ³

user manual

www.ugoaudio.com



OVERVIEW

Rez is a seemingly basic synth, but it's capable of a very wide range of sounds. While Rez has a bunch of cool features, the beating heart of Rez is its filter. It's made from multiple chained filters acting as a single powerful filter and it's highly resonant, providing Rez with its distinctive character. Top that off with distortion, a phaser, various oscillator modulations, delay, and a killer programmable arp and arp sequencer, and you've got a powerhouse of a synth in a very small package. From funky squishes, beastly basses, and screaming leads, to tight arpeggiations, swirling rhythms, atmospheres, bells, and interesting effects, you'll find it all here.

Important note about the filter

While much effort has been put into making the filter easy to work with at extreme resonance levels, strong frequency spikes are still quite possible. To reduce the risk of blowing out your speakers or your ears, keep the volume levels low when working with high resonance levels, at least until you have tested your preset over your controller's full range. This is especially true when distortion is activated, and also in the upper registers of your MIDI controller.

SKINS

Rez comes with two GUIs, yellow and black, each built into its own DLL file. The two versions of the synth are identical except for the color of the interface and each will load the same presets.

If only one DLL appears in your plug-in list...

The yellow and black versions of Rez need to use the same VST ID so that they can load the same presets...but unfortunately some hosts do not allow plug-ins with the same VST ID to all be shown at the same time, instead the host will only show one.

If only the black (or yellow) version is showing in your host, and you want to use the other one, try putting it in a sub-folder. For some hosts, this solves the problem. Other hosts may allow you to optionally activate plug-ins that they ignored during the scan. Regrettably though, some hosts simply refuse to show both at the same time no matter what you do.

INSTALLATION

Just place the Rez folder into your host's VST plug-in directory. Yup, that's it. Nice and simple.

PRESETS



The presets built into Rez are excerpts from the commercial banks available for it. Each comes with 128 presets, and are very affordably priced. So if you like the way the included presets sound, you'll love the full banks.

To purchase the banks, either click on the "Buy Presets" button on the GUI or go to www.ugoaudio.com/soundware.

main



VOL

Controls the overall volume of the synth.

AFTER

Switches the aftertouch support on/off. Aftertouch will modulate detune, PH1, and PH2 (phase adjustments).

RTRG

Sets whether or not the envelopes retrigger when playing legato. This affects both the amp and filter envelopes.

BEND

Sets the range in semitones (up/down) that the pitch bend on your controller will affect Rez.

RSET

When activated, this will cause the oscillator phases to reset when the following controls are all set to zero and are not being modulated: Age, Detune, Phase Adjust 1, Phase Adjust 2.

OSCILLATOR

WAVEFORM

Sets the waveform for oscillator 1 (the primary oscillator). The sub-oscillator consists of a layer of the selected waveform with a triangle.

OCT1

Sets the pitch for oscillator 1.

OCT2

Sets the pitch for the sub-oscillator. This has a lower range than oscillator 1 as its primary use is to



give the sound a bigger bottom.

SUB

Adjusts the volume of the sub-oscillator on/off. Use this to fatten up the sound or to add notes to a patch that

uses noise. When the tone is set in version 2 mode, the sub-oscillator gives a much more pronounced sound thanks to an additional sub-octave.

AGE

Adjusts the degree that the pitch will be modulated by noise. At low settings it can add a nice bit of body and texture to the sound. At higher settings it sounds like a hive of angry bees are powering the oscillators.

LOW

Brings in a combination of bit crushing and sample rate reduction. The higher the setting, the more lofi and distorted the sound will be.

PRT

Adjusts how much portamento (glide) effect you will get between notes.

DT

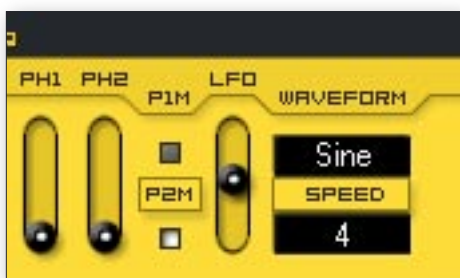
Sets the amount of detuning applied to the oscillators.

PH1

Sets the phase offset of the main oscillators.

PH2

Adjusts the amount that the output of oscillator 1 can modulate the phase of the sub-oscillator, often adding a metallic character to the sound. **Tip:** Try this with a sine wave and a little distortion to shape the waveform.



P1M / P2M

These two switches allow the LFO to modulate the phase parameters.

LFO

The slider sets the amount that the LFO will modulate the phase of the oscillators.

SPEED

Sets the speed of the LFO.

WAVEFORM

Sets the LFO's waveform.

ARPEGGIATOR



The arpeggiator in Rez is considerably more complex than the average arp, offering not only timing control but pattern programming and step sequencing control over gate time, portamento, cutoff, and phaser frequency. This allows you to create fantastic melodic and percussive patterns to propel or accent your songs.

Additionally, the arpeggiator in Res is a phrase arp - meaning that the notes are triggered in the order you play the keys.

Important note about timing and resets

The arp sequencer resets with MIDI note-on, as well as when you press play in your host sequencer. However, there can unfortunately still be a lag before the arp starts. To ensure your arp will play back in time, start your host playback a bit before the start of the bar. If this is not possible at the time, the arp will snap back into sync when it receives the next MIDI note. Alternatively, you can also press the manual reset button.



ON

Unsurprisingly it turns the arp on...but it also has a special feature: it turns off when you click it again. Gotta love modern technology.

LCH

When switched on, the arp will keep playing after you've let go of the keys. **Note:** Changing presets while an arp is latched can potentially

cause stuck notes.

DIRECTION

Selects the playback direction for the sequencer. Keep in mind that this does not affect the order of the notes, but rather just the direction of the sequencer that controls when any note is triggered. There are three options:

Forward: Sequencer plays forward, wrapping back to step 1 after the final step has played.

Bounce 1: Once the final step has played, the sequencer runs in reverse, then bounces back to play forward again.

Bounce 2: Similar to Bounce 1 except that the first and last steps on each bounce are played twice.

SPEED

Selects the speed the arpeggiator will play in relation to the host tempo. The options range from rather slow to very fast, plus two additional odd-time speeds.

OCT

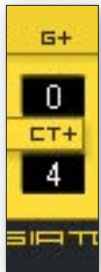
Sets the octave range for the arp.

STPS

Sets the number of steps for the arp, from 1 to 16.

LVL DISP

Selects which step modulation is displayed: Gate Time, Portamento, Cutoff, or Phaser Frequency.



G+

Adds an adjustable amount of extension to the gate time. This is most helpful for when you're playing at slow speeds but want each step to remain active for longer.

CT+

Controls how much the cutoff sequencer can affect the filter cutoff. This is handy for when you need the sequencer to remain in a smaller modulation range, but still want the programming convenience of using the full range of the step sequencer control bars.



ARP SEQ: First Row - step on/off

Each of these buttons controls when a note will play.

ARP SEQ: Second Row - step indicator

Lights up to show you what step the sequencer is on.

ARP SEQ: Third Row - step mod display

Adjust these bars to control the level of each step for the function indicated in the LVL DISP. (Gate Time, Portamento, Cutoff, or Phaser Frequency.)

ARP SEQ: Fourth Row - step sequencer functions

These four switches turn on/off the step sequencer modulation for each of the following functions:

GT - Gate Time

PR - Portamento

CT - Cutoff

PH - Phaser Frequency

RESET

Clicking this will reset the sequencer to step 1. If you're having problems getting Rez to reset properly at note-on, you can try sequencing/automating a quick on/off of this switch right before the first step needs to play.

FILTER



CUT

Adjusts the filter cutoff.

SEP

This control offsets the cutoff setting between some of the multiple filters within Rez, smoothing out the sound when at higher resonance settings and providing a more "vocal" sound. Tip: If you're looking for a good "squish" to your filter sound...crank

up the resonance, modulate the cutoff, then fine tune the cutoff and separation until you dial in what you're looking for.

RES

Filter resonance - as noted earlier in the manual, this thing can deliver some serious resonance, so beware when using this at higher volumes and when the distortion is on.

VEL

Controls how much the cutoff will react to key velocity.

LFO

Adjusts how much the LFO will modulate the cutoff.

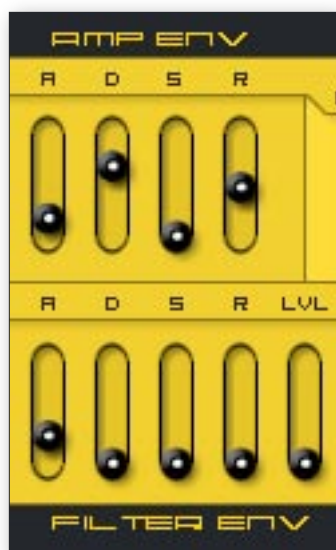
WAVEFORM

Sets the LFO's waveform.

SPEED

Sets the speed of the LFO.

ENVELOPES



For the most part, the amp and filter envelopes work the same:

A - speed of the attack phase

D - how long before the envelope decays

S - level of the envelope's sustain phase

R - how long the envelope release time will be

LVL

This function is only on the filter envelope, and it controls how much the envelope can modulate the filter cutoff. **Tip:** To add a percussive sound to the beginning of your preset, try keeping the attack and sustain at zero, add a tiny bit of decay time, and adjust the level and cutoff sliders accordingly. This will make the cutoff quickly jump from a higher setting to a lower one. Depending on your settings, the results can be a click, pop, thump - until you start hitting longer decay times when you'll hear the filter sweep better.

DRIVE



This is the first effect in the effects chain, and its effect can range from a slight bit of boost and dirt to a fire breathing fury. You'll find that the strength/character of the Drive can be highly dependent on the oscillator and filter settings, so it's worth adjusting settings while the drive is on to see how things may change.

ON

Another magical and highly complex control - turns on/off the overdrive.

GAIN

Adjusts the amount of overdrive in the sound.

tone

Three flavors of tone:

Warm: Relatively full bodied for the majority of its range, without too much high end.

Bright: Lots of highs but retaining the lows too. This one really has some teeth. Tip: At its lowest settings, this one is great for adding a little bit of a boost and life to a sound, without overdriving it too much.

Thin: Upper mids and highs, all the way. Want the tonal equivalent of the sharp edge of a tin can, or broken glass? You'll find it here.

PHASER



In addition to the usual swooshing effect of most phasers, this one also has a rather vocal quality to it, making it sound almost like a cross between a phaser and a formant filter. Also, you'll find that this has two extra features that most phasers don't have. The first is that you don't have to have it modulated at all, if you don't want to. This lets you use the phaser as another tone shaping option. The other feature is that the frequency can be modulated

by key velocity, which provides some rather fun filter-style effects.

The phaser is the second effect in the chain. So when all 3 effects are turned on, the phaser will fall between the overdrive and the delay.

ON

You'll never guess what this switch does.

WET

Sets the wet/dry (pre/post phaser) mix.

FRQ

Adjusts the frequency.

FBK

Adjusts the feedback. Raising it will make the effect more prominent and resonant.

VEL

Sets the amount the phaser frequency gets modulated by key velocity.

LFO

Adjusts how much the LFO will modulate the frequency.

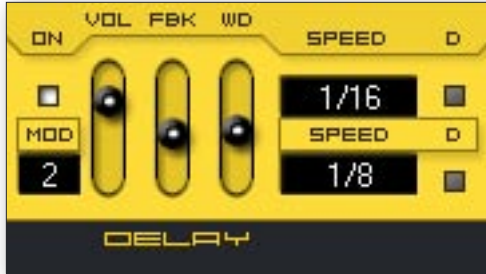
WAVEFORM

Sets the LFO's waveform.

SPEED

Sets the speed of the LFO.

DELAY



The final effect in the signal chain, this is actually 2 delays running parallel. You can set the speed of each delay separately, as well as their distance from each other in the stereo field - allowing for ping-pong effects.

ON

Oh, mysterious control...when will you finally reveal your secrets?

MOD

Adjusts the amount that the delay time will be modulated by an internal LFO. This alters the pitch of the delay. When used lightly it can add a little extra life and body to the sound. At higher settings, it gets more trippy.

VOL

Controls the volume of the delay.

FBK

Controls the delay's feedback - the number of times it repeats. The effect has been adjusted so that when the delays are set to different speeds, both repeat for roughly the same length of time.

WD

Adjusts the width - how far the delays are separated from each other in the stereo field. The higher the setting, the further the delays are panned apart from each other. At the lowest setting, both are set to center.

SPEED

Sets the speed for each delay. The delays will sync to your host's clock.

DOT

Dotted notes.

TROUBLESHOOTING

Problem - The arp is starting too late.

The arp sequencer resets with MIDI note-on, as well as when you press play in your host sequencer. However, there can unfortunately still be a lag before the arp starts. To ensure your arp will play back in time, start your host playback a bit before the start of the bar. If this is not possible at the time, the arp will snap back into sync when it receives the next MIDI note. Alternatively, you can also press the manual reset button.

Problem - A note is sticking.

In some situations, when switching presets when the arp is still playing (especially when the arp's latch function is on) notes can get stuck. So if you've got a stuck note, try turning the arp on/off.

Problem – Arpeggiator gate settings sound a little different in different hosts.

This seems to be an issue with how the arp divides the MIDI-in various hosts. So far, it only seems to differ very slightly, so a minor adjustment of the gate will get the preset sounding fine again.

Problem - Only one DLL appears in your plug-in list.

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CREDITS

Rez 3.0

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Scoofster Modules - scp.web.elte.hu/synthedit

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Cosmic Ram - www.cosmicram.com

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The Second Division - www.facebook.com/seconddivision

Trackdriver - soundcloud.com/thetrackdriver

Tristeza Orange - www.acustronica.com/artists/66-tristeza-orange.html

Vox - www.myspace.com/voxproject

ZeroChamber - www.zerochamber.com

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