



BLINKSONIC°

User guide written by Sylvain Stoppani.  
Related to VOZ° V1.0 release April 2017



VIRTUAL VOCALIST GENERATOR

POWERED BY  
 REAKTOR 6

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## THE INSTRUMENT CONCEPT

What about using human vocal formant as an oscillation source inside an enhanced sampling tool ?

VOZ° is an instrument which synthesizes a real singer from a list of vocal articulations samples.

This original concept rests on a complete sampling engine which enables the creation of multi layer evolved voice combinations.

From choirs pads introduction, backing vocals, rising screams, funky hits, experimental sound fx, to playable vocal parts...

VOZ° explores various aspects on how vocal sound material can be operated in a virtual instrument and allows to inject a dose of human soul in modern electronic composition.

## THE SOUND BANK

VOZ° comes with a collection of 1520 basic waveforms including elements of speaking, screaming, whispering, breathing, yelling, laughing, growling, throating... All kind of vowels, phonetics, accents and onomatopoeias.. even whole words and piece of phrases.

All are classified in 16 categories following an index of intensity in the voice presence and musical tendencies.

During the resynthesis process, I took care to maintain vocal sources in their best expressive forms.

All original curves, glides, bends, vibratos and natural dynamics levels have been preserved.

I only retuned most of the samples for being harmonized and chromatically suited.

The instrument also comes with synthesizers and instruments tones from the previous release AETONZ°, to give complementary basis on some presets.

## THE SOUNDS ORIGIN

I have been involved as a singer during 15 years on various projects and this collection got its origin from my own recordings.

It's not my intention to turn VOZ° project as a self celebration. It's just that I found in my archives, enough sound material to be extracted in order to create a consistent audio raw files database.

Essentially connoted with an english accent, all the samples mainly recall the energy of the « nineties ».

Along these years of recordings, everything have always been commanded by an irreverent and rebellious attitude, that's finally makes this sound bank very singular, with a unique character and animated soul.

## AN AUTHENTIC VOCALIST GENERATOR

Highly customizable and flexible, VOZ° is directly dedicated to cinematic music composer or electronic producer.

The instrument comes with more than 100 snapshots which are various multiphonics templates.

The first volume of presets covers a large range of music style : Indie pop, Electro, Funk, Urban, Heavy Metal, Cinematic but also Sound FX..

It could be a good starting point for creating your own voice parts and adding some human interactions over your instrumental tracks.

Due to the complexity and the affluence of a vocal waveforms, the possible option to change audio files in real time, the singularity of the sound bank contents and all the features which aim to customize the resultant textures, VOZ° is an astonish piece of instrument that push the concept of a voice synth further.

It offers a modern graphic interface and can also be a good multi sample host engine.

VOZ° promises noisy, punky and unconventional experiences, for both lyrical and epic sonic adventures.

Probably the vocal sound object, the wildest one of its kind... so make it sing !

Sylvain Stoppani.



## HOW TO INSTALL VOZ° :

Unzip the package and drop the resulted folder wherever you want.

Blinksonic° VOZ° ensembles can be open directly by double clicking on the file in your browser.

If you use a DAW (Ableton, Logic, etc..) you need to open the ensemble from Reaktor VST or AudioUnit plugin.

There's different methods to do that.

Refer to the "Application reference" in the Help section of Reaktor.

It explains how to manage directories/folders.

But the most direct way would be this one :

- in the browser on the left, click the « FILES » tab

- then you can explore on your disk, following the folder which contains your ensembles.

Note : In any cases, when Reaktor is open, you can drag and drop the ensemble from your folder inside Reaktor.

For NI MASCHINE and KOMplete install, follow the two links below. Both pages explains how to integrate your Reaktor ensembles and where to copy your files :

[KOMplete KONTROL series](#)

[MASCHINE integration](#)

### IMPORTANT NOTES :

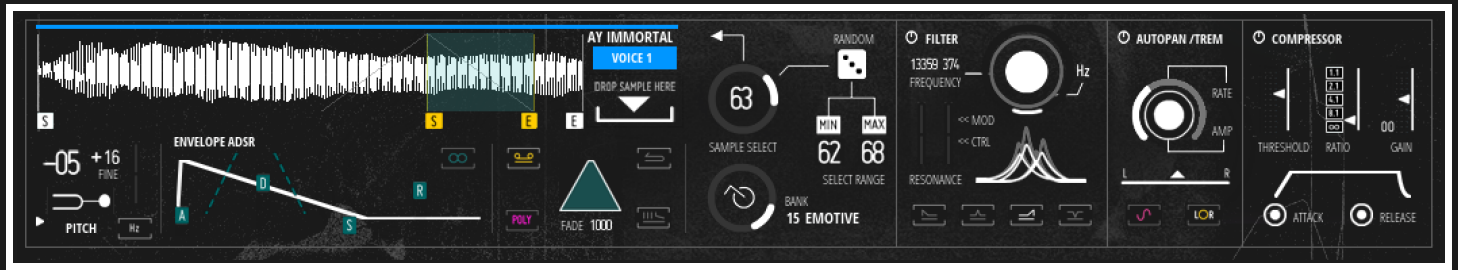
VOZ° comes with attached a folder which contains all the samples library. Anytime you choose a directory for the VOZ° ensemble, don't forget to copy the folder called « VOZ\_Samples » in the most relative path, means in the same folder.

## REQUIREMENTS :

- a MAC or a PC with the full version of Reaktor 6 . Not compatible with free Reaktor player, even Reaktor 5.
- A screen resolution with a minimum of 1920x1200 megapixel for a full display on screen. VOZ° is 1320x840 megapixels.
- Intel Core 2 Duo equivalent must be enough with 4 GB of Ram. To give an idea this ensemble has been created on a 2,7 Ghz Intel Core i7.
- CPU usage : Around 30% and 65% with a 2,7 GHz Intel Core i7, 16G Ram and Reaktor 6. Depends how many sample engines and effects in use.
- An internet connection to download the files and potential updates.



SAMPLE DECK SECTION //////////////////////////////////////



This section is the core of the instrument. Based on a « loop sampler » build, these engines take advantage of the Table Framework to manage a list of external raw files, this same raw files which are the oscillation sources on each voices.

The 4 engines include coarse/pitch parameters, an ADSR envelope, sustain loop functions, a system for browsing the sound bank, a random mode for launching the samples, a filter, an auto panning tool (which can be swith as a tremolo) and a compressor.



- Display and Enable Voices buttons :

On top of the Sample Deck section, this tabs aims to navigate between each 4 voices. All relatives power button, on the right of the tabs, enable/disable the voice.

It's highly recommanded to disable the voices that aren't currently in use to economize CPU charge.

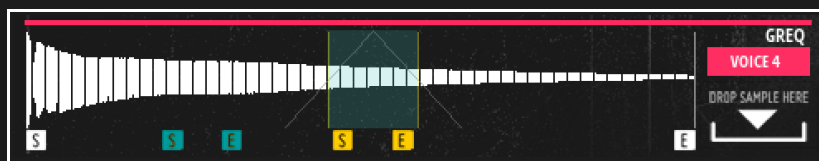


- PITCH/Coarse + Fine tuning :

Here you tune your sample by directly dragging the digit values. The big one is for semitones and the smaller is for fine tuning.

- Linear / key mode :

Above this button, there's a bipolar fader which receives the modulation applied to PITCH/Coarse. This button aims to choose if the modulation will be applied by semitones/step by keys or by frequencies with a direct linear mode.



- SAMPLE display with START/END pointers START/END LOOP pointers :

This tool aims to edit the start and end of your sample that will be played by the instrument.

Drag the pointers close to the mouse, right mouse enables precision set-up of the current pointer.

The loop area in dark green represent the sustain loop. It can be moved for a faster edit. Just drag it along the sample display. This selection can also be modulated (report to the LOOP CONTROL chapter in this manual)

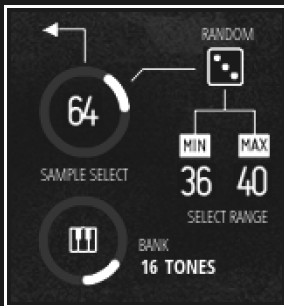
Note : This zone selection will be applied to each sample of the current voice. For exemple, in random mode, it will be the relative position of each samples launched.

- Drop Sample Here :

Select a slot with the sample selector and you can drag and drop a wavefile in this place, from any folder of your browser.

- SAMPLE NAME

This line display the name of the sample. If you want to rewrite/replace it, Reaktor in edit mode, right click on it and choose « multitext » properties. Click the "Function" tab. Then, select the ID number of the related sample and rename it in the ENTRIES field.



**- SAMPLE SELECTOR :**

With this knob you select which sample will be loaded in realtime.  
Each voices embed up to 99 samples.

Note : In "Random mode" this is the "Min" and "Max" knobs on the right which define the range of the triggered sample.

**- RANDOM MODE :**

In "Random samples mode", the sample will be changed randomly during each incoming gate events.  
Use "Min" and "Max" to adjust which range of samples in the list will be loaded and played.

This function aims to add subtle changes in real time. It could make your tones more expressive and humanized.

**- WAVEFORM BANK :**

Select here the bank in a list of 16. It's various categories of voice formants, classified by style, mood and intensity :

- 01 = SMOOTH
- 02 = QUITE
- 03 = SOFT
- 04 = ETHEREAL
- 05 = FUNKY
- 06 = LOW
- 07 = DRUNK
- 08 = CRAZY
- 09 = ROUGH
- 10 = RAGEOUS
- 11 = HYSTERIC
- 12 = ENGAGED
- 13 = NEUTRAL
- 14 = VIVID
- 15 = EMOTIVE
- 16 = TONES



Each Banks propose up to 99 samples.

**- ADSR ENVELOPE.**

A basic envelope with Attack, Decay, Sustain and Release to shape the behaviour of the oscillation in ms.

**- RETRIGGER mode button.**

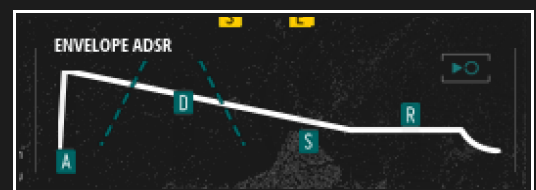
If envelope gets retriggered before release phase is finished, use this button on the top right for switching between :  
off: attack starts from actual level  
on: attack restarts from zero

**- THE DASHLINED CURVES :**

First is the Bending parameter of the attack stage:

- 0 = linear curve
- 0..-10 = "slowing down" curve
- 0..+10 = "speeding up" curve

Note : This 2 commands behave as basic knobs



Note : Target the following dark green squares on click, to set the value of the envelope (knob behaviour type for each commands)

The second is the Bending parameter of the decay stage:

- 0 = linear curve
- 0..-10 = "slowing down" curve
- 0..+10 = "speeding up" curve



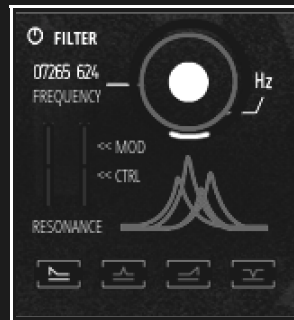
### SUSTAIN LOOP functions :

- Loop switch  
Enable the loop when a note is held. Mostly audible following the envelope sustain level  
When off, sample plays from start pointer and stops to end pointer.
- FADE :  
Lenght of the crossfade loop. Aims to soften the transition between start and end loop points.
- Loop in Release  
On: loop keeps active after Note Off  
Off: sample runs to sample end after Note Off

- MONO/POLY selector  
Choose if the sample of the current voice will be played in monophonic or polyphonic.
- REVERSE  
Reverse sample playback. When enable, the sample is played from end point to start point.

### AUDIO FILTER

Boost or attenuate some frequencies with this basic filter.



- CUTOFF :  
Set the cutoff frequency of the filter.
- RESONANCE : Amplify the narrow band selected.

- Filter type :  
Choose between 4 filter types :
  - Lowpass 24dB
  - Bandpass 12dB
  - Highpass 24dB
  - Notch 12dB
- Note : This 2 parameters can be modulated. Choose a modulation source (Mod A/B) will reveal 2 bipolar sliders, closed to the MOD CTRL indicator.

Adjust first one for CUTOFF, the second for RESONANCE.

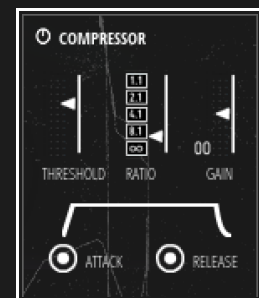
### AUTOPAN /TREM



- RATE/AMP  
Advanced Double Knob :  
- Inside circle for AMPLITUDE  
- Outside circle for RATE
- PAN (permanent)  
Adjust the stereo position of the current voice here.
- LFO wave shape button (on the left)  
min: tri  
max: sine
- AUTOPAN/TREMOLO switch (on the right)  
on TREM - off AUTO PAN

### COMPRESSOR

- Threshold : Sets the value above which the compressor takes effect (in dB).
- Ratio : Sets the ratio of the compressor. i. e. the way in which the audio signal above the adjusted threshold is processed: Turn to the top for no effect, to the mid for soft compression and to the bottom for hard limiting.
- Output Gain : Sets the amount of amplification applied to the compressed signal.
- Attack Time. Sets the time used by the compressor to response to fast level changes.
- Release Time. Sets the time used by the compressor to return from higher compression when the input level is falling.





MODULATIONS SECTION //////////////////////////////////////

VOZ° instrument follows the same kind of modulation system used in the BLOCKS framework.

The A/B buttons on top right of each Blocks are replaced here by 2 buttons (MOD1 and MOD2), which have the same function, revealing all bipolar sliders of each effects parameters.



MOD 1 / 2 buttons (on top right)

Click to display the modulation bipolar sliders available in VOZ° interface.

MODULATION SOURCE SWITCH :

With this button, select source of the modulation O1 and O2 :

- On the top, the « XY MOD » which is following the recorded movements on the pad.
- OR
- On the bottom, « LFO1 » and « LFO2 »

Note :

X or LFO1 are routed through the MOD1 signal (color red).

Y or LFO2 are routed through the MOD2 signal (color green).



MW1 // MW2 buttons :

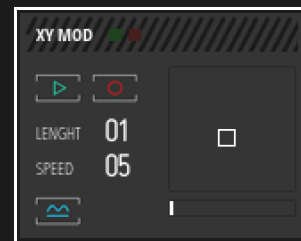
MODWHEEL source to MOD 1 and MOD 2

Enable this switch if you want the modwheel of your midi keyboard to be the source of modulation.

Note : When enable, it replace the mod source generated by the LFO 1 or the X axes of the XY MOD pad.

XY MOD :

- XY CONTROL PAD : Generate a modulation in 2 axis.
- PLAY : Launch any pad movements which have been previously recorded.  
(Master clock must run to enable the loop modulation)
- REC : Record control pad movements when toggled.
- Loop Length : Define the duration of the loop modulation.
- Loop Speed : Define the speed of the loop modulation.
- INTERPOLATE : Playback loop modulation smoother



LFO 1&2

- LFO behaviour button :  
Choose between "triggered" and "continous" mode. « Triggered » mode means that the modulation starts on positive note events and stops on notes off.
- LFO Sync : Choose if LFO is synchronized with the master clock
- LFO rate (in Hz or quantized time if synchronized)



WAVEFORM SELECTION

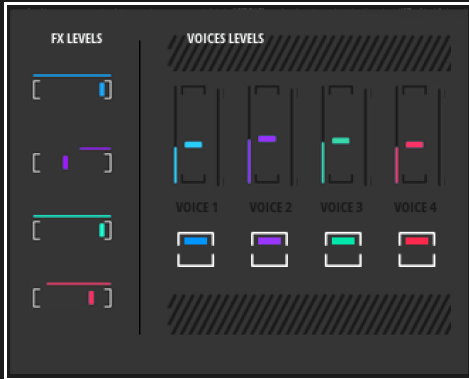
Choose with the bottom buttons which curve the LFO will follow :

- Sin,
- Triangle,
- Saw,
- Square.

## MASTER SECTION //////////////////////////////////////

This section is available by clicking the Master tab.

It allows to mix the 4 voices together and inject the desired dose of effects for each tracks. An additional option for mixing in real time is available with the X4 crossfader. A line of 2 band equalizer and a limiter comes at the end of the audio chain.



- VOICE 1, 2, 3, 4 FX SEND :

These fader works as a dry/wet for the main effects rack.

Turned completely to the right (wet), the track is entirely processed by the enabled effects.

In a middle position, the 2 signals are mixed.

Turned left (dry), the track is not modified by any effect.

- VOICE 1, 2, 3, 4 LEVELS :

Sets the level of the Voice audio signal in dB

Note: if set to -60dB the signal is muted.

- MUTE

### CROSSFADE X4

This pad makes possible to crossfade between the 4 voices in the combination of 2 axis.

The most linear path for this control to fade in/out between voices, is to trace a diagonal line between the top left and the bottom right of the pad.

Note: When the signal is audible on the main output, the voices are highlighted by their related numbers .

- PLAY MODULATION :

The control pad movements can be recorded as a loop and played in real time.

Note : This modulation is linked to the master clock, therefore Reaktor or your DAW clock must be active for the modulation to be applied.

- REC : Record control pad movements here.

- INTERPOLATE : Playback loop modulation smoother

- Length & Loop Speed : Define the length and the speed of the loop modulation.



### 3 BAND EQUALIZER

- LOW SHELF, PEAK SHELF AND HIGH SHELF:

Advanced Double Knob :

- Inside circle for Q

- Outside circle for FREQUENCIES

- On the right of each advanced knob, a fader is available to set « Gain » level.



### LIMITER

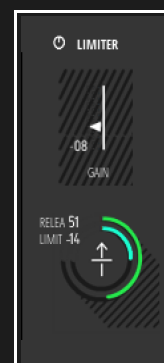
- LIMITER GAIN

This gain (in dB) is applied to small signals, i.e. well below the limit. For large signals the gain will be less.

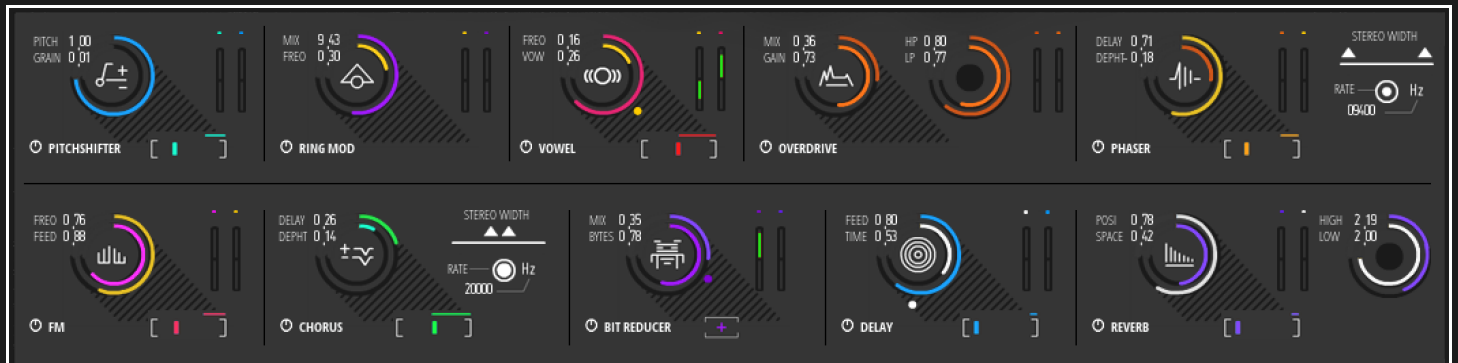
- Advanced Double Knob :

- Inside circle for Limit

- Outside circle for Release



Click the EFFECTS tab to display it. In this section, you can find the main effects rack with 10 effects plugged in serial.



#### PITCHSHIFTER

Advanced Double Knob :

- Inside circle for GRAIN
- Outside circle for PITCH

#### RING MODULATION

Advanced Double Knob :

- Inside circle for FREQUENCY
- Outside circle for MIX

#### VOWEL

Advanced Double Knob :

- Inside circle for VOWEL
- Outside circle for FREQ

#### OVERDRIVE

Advanced Double Knob :

- Inside circle for GAIN
- Outside circle for MIX

Advanced Double Knob :

- Inside circle for LP
- Outside circle for HP

#### PHASER

Advanced Double Knob :

- Inside circle for DEPHT
- Outside circle for DELAY

- Stereo Width

- Rate

#### FM

Advanced Double Knob :

- Inside circle for FEED
- Outside circle for FREQ

#### CHORUS

Advanced Double Knob :

- Inside circle for DEPHT
- Outside circle for DELAY

- Stereo Width

- Rate

#### BIT REDUCER

Advanced Double Knob :

- Inside circle for BYTES
- Outside circle for MIX

- Add/reduce definition button

#### DELAY

Advanced Double Knob :

- Inside circle for TIME
- Outside circle for FEED

#### REVERB

Advanced Double Knob :

- Inside circle for SPACE
- Outside circle for POSITION

Advanced Double Knob :

- Inside circle for LOW DAMP
- Outside circle for HIGH DAMP

### HOW TO MODULATE FX PARAMETERS :

When one of the MOD 1 or MOD 2 button is toggled, all Mod 1 or 2 Slider are displayed in the interface closed to the knob related to its parameter. They allow to adjust the amount of modulation applied to this parameter from the Mod 1 or 2 input. These sliders are bipolar, with no modulation being applied at middle position. Sliding it upwards adds non-inverted modulation to the parameter. Sliding it downwards adds inverted modulation to the parameter.

For instance, we want to modulate the frequency of the RING MODULATOR with the LFO 1.

LFO 1 is assigned by default to the mod channel represented with the color « red », related to MOD 1.

Click the MOD 1 button to reveal sliders related to this modulation channel.

RING MODULATOR frequency is colormarked yellow. Adjust the modulation amount with the slider below the yellow dot.



OPTIONS SECTION //////////////////////////////////////

In this section some various options to get a more expressive tones :

LOOP CONTROL, related to the modulations of the voices loops, FX UNO MODS, a crossfader which manage the route of the signal path through only one effect in the 10 availables, and finally, some more options for managing the behaviour of the 2 LFO.



LOOP CONTROL

These 8 bipolar faders aimed to manage the dose of modulation for controlling the movements of the Loop Start and Loop End of each voices.

Note : You must select top right button MOD1 or MOD2 to display the 8 faders, following the modulation source you choose to apply.

This option is fun for creating expressive phase similar to Travelizer or kind of granular effects when the modulation comes from the XY modulation or even the mod wheel of your keyboard. For best results, even if there's no rules, it's recommended to set Start and End with the same values and orientation, to avoid artefacts.

FX UNO MODS

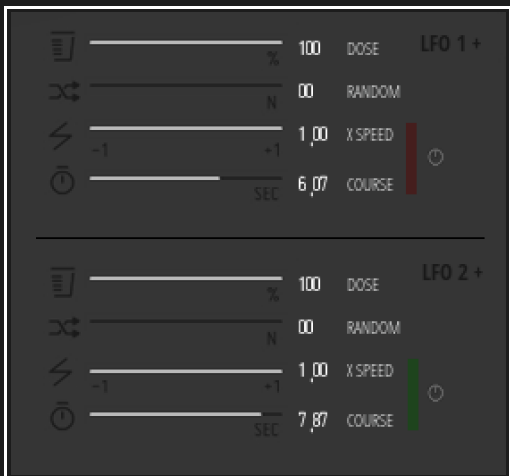
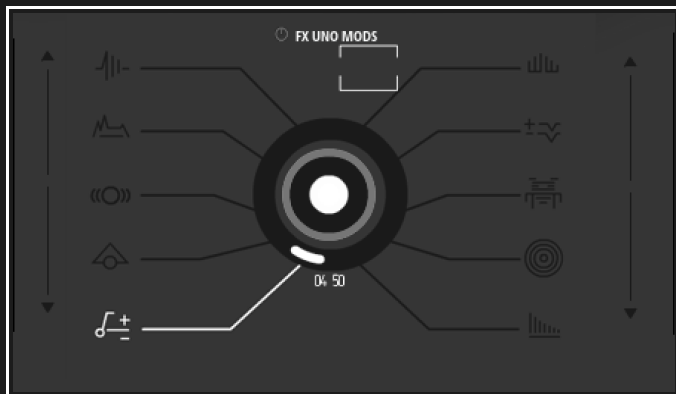
It's a crossfader which manage the route of the signal path through only one effect in the 10 availables, for creating evolving effects shapes on the main audio signal.

Note : All effects parameters keep the same states define in the EFFECTS section.

Means that they must be all enabled or setted with enough Wet signal to be heard when using this option.

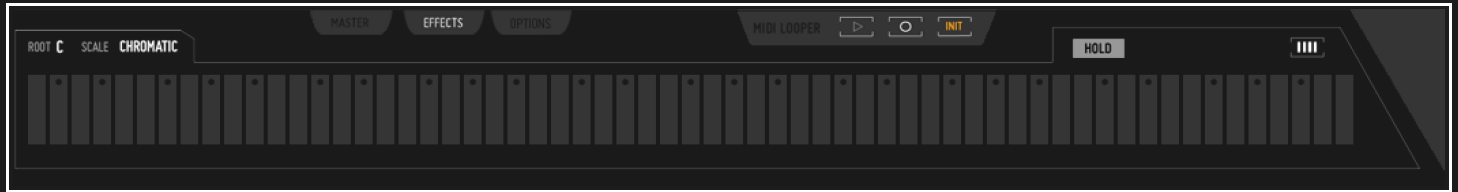
- Mod 1/2: Sliders

Adjust the amount of modulation applied to this parameter from the Mod 1/2 inputs. These sliders are bipolar, with no modulation being applied at middle position. Sliding it upwards adds non-inverted modulation to the parameter. Sliding it downwards adds inverted modulation to the parameter.



LFO OPTIONS

- LFO 1 DOSE : Define positive range of the LFO oscillation.
- RANDOM Add some random to LFO oscillation
- XSPEED on/off Add some wooble effects to your LFO. Increase/decrease the LFO rate with a delay defines in ms (COURSE)
- XSPEED :
  - a positive value will increase the LFO rate after a defined time with the COURSE fader.
  - a negative value will decrease the LFO rate after a defined time with the COURSE fader.
- COURSE : It works as an attack envelope, aims to define after how many ms, the XSPEED will start.



- NOTE : Select the root note of the scale you play in.

- SCALE : Filter the pitch notes played in realtime with these 17 scales :

- Major
- Minor
- Dorian
- Phrygian
- Lydian
- Mixolydian
- Ionian
- Aeolian
- Locrian
- Blues
- Prometeus
- Enigmatic
- Wholetone
- 6tone
- 4semitones
- 3semitones
- Chromatic

- TOUCH KEYBOARD : This is a 5 octaves keyboard for playing notes when clicking/sliding on it.

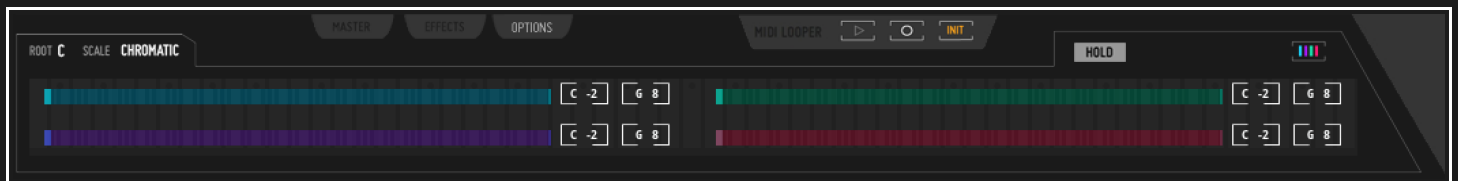
Even if Reaktor is not natively multitouch, it's possible to slide cursor over keypads and play in a glissando method. This way, it produce a similar effect than a stylophone.

All the keypads marked with a small circle are corresponding to the black keys of a classic keyboard.

- HOLD

Latch a note, a chord.

Can be used as a midi panic button, when midi notes stay locked on the virtual keyboard.



- EDIT NOTES RANGE:

This button when toggled shows the NOTES RANGE EDIT mode. This section helps to define in which range of your keyboards the 4 voices of the instrument will be mapped to.

NOTE RANGE X 4

- Lower pitch range limit
- Upper pitch range limit

For Complete Kontrol keyboards owners, this defined note range also manages the light of each keys.

The feedback of the leds will be reinitialized constantly. Disable this edit mode at the exact moment the range of every voices is ready, means when all voices lights are loaded on the keyboard.

MIDI LOOPER RECORDER

This feature aims to record sequence ideas in Midi synchronized with the master clock. It's really basic polyphonic midi note recorder and no export is possible.



- LAUNCH MIDI LOOPER
- RECORD MIDI LOOP (Play button must be engaged)
- INIT : Delete midi loop

THANKS FOR READING THIS MANUAL AND DON'T HESITATE TO MAIL ME FOR ANY QUESTIONS : [INFO@BLINKSONIC.COM](mailto:INFO@BLINKSONIC.COM)

HOPE YOU WILL HAVE FUNNY CREATIVE MOMENTS WITH VOZ° !! MAKE IT SING !

SYLVAIN.