

VOXPAT PRO_{v.1.0}

MONSTER, CREATURE & ROBOTIC SOUNDS DESIGNER

USER GUIDE



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1 | INTRODUCTION

Voxpat Pro is a 64 Bits standalone software developed to create high quality monster, creature, animal and robotic voices for games, films, music or multimedia projects in just a few minutes.

Procedural audio, audio syntheses, audio convolution, among other audio manipulation techniques are used to create multiple layers of sound using your own voice or a pre-recorded audio files. Input signal is processed through up to 12 effects simultaneously.

When creating monster, creature or robotic sounds, the source audio used it's one of the most important factors. So probably the same source audio will not work for all creative purposes (same when using built-in presets).

2 | SETUP INSTRUCTIONS

MAC:

Open Voxpat Pro.mpkg and follow installation steps.

Important: Please read "**Important info for Mac users**" pdf before launching this software.

WINDOWS:

Open Voxpat Pro Setup.msi and follow installation steps.

We strongly recommend copying Voxpat Extra Content folder into the same location.

3 | SIGNAL PATH

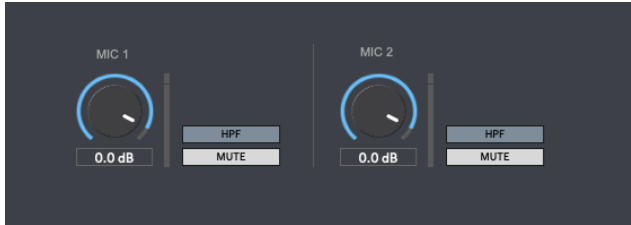


4| INPUTS

Voxpat Pro allows using up to 3 different inputs: Microphone, Audio Samples & Virtual Instrument (Plugin).

4.1 | MICROPHONE (MIC1 & MIC2)

Up to 2 microphone inputs, including an optional 100Hz HPF at input stage.



4.2 | AUDIO SAMPLES

Up to 3 audio players. Load any file from your computer (WAV, AIFF and MP3 files).

Spacebar. Start/stop playback

File. Select your audio file. Drag&drop any file within the waveform section.

Folder. Choose a folder to be shown in the menu. It makes quicker to load files from your computer. Drag&drop any folder within the menu section.

Selection: Use your mouse to select the audio file region you want to process through Voxpat Pro. Use cmd(mac)/ctrl(windows) to zoom in/out.

Gain: Set audio file gain.

Fade In: Set fade in time in ms.

Speed. Change playback speed from 10% (0.1) to 400% (4).

Pitch. Set the pitch from -24 to 24 semitones.

Norm: Normalize audio file gain to 0db.

Set: Select the whole audio file.

Reverse: Play audio file in reverse mode.

Loop. Activates Loop playback mode.

Preview: Preview audio file

Preview All: Preview all audio files (players 1 to 3) when clicking over "Preview".

Folder Link: When activated it will load the chosen files folder within all audio players.

A,S,D: Use computer keyboard to play audio files. "A" for player 1, "S" for player 2 and "D" for player 3.



4.3 | PLUGIN – VIRTUAL INSTRUMENT

Load and play any VST/AU Instrument from your computer through Voxpat Pro.

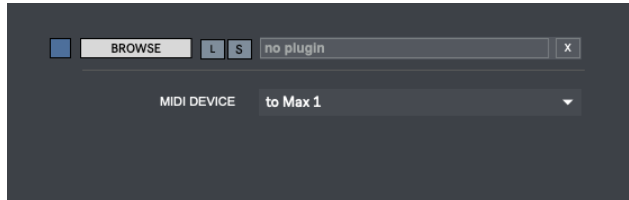
Browse. Select your vst/au instrument.

View. Click over the plugin name to see the plug-in on screen.

Save. Save the plug-in internal preset. (.fxp file)

Load. Load a plug-in internal preset (.fxp file)

Midi Device: Set midi device for Plugin Input.



5 | INPUT DEPENDING

This section allows activating or deactivating any effect output depending on the input level.

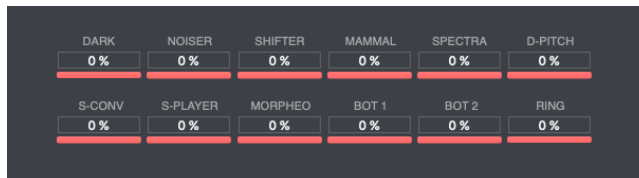
It allows creating more dynamic sounds by activating effects only when the input level is above the selected threshold for each effect. For example, gradually activating effects when the input level is increased.

Select the threshold level for each effect individually.

Colour led indicates when the effect output is inactive (red)/active (blue).

0% = No input depending.

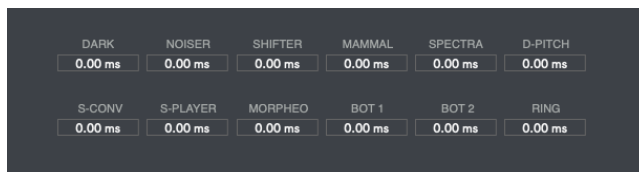
100% = Maximum threshold level (0 dB)



6 | DELAYS

This section allows adding delays to any effect output. [0 – 2 seconds]

Applying delay to some effects output you can create interesting decay effects to your sounds.



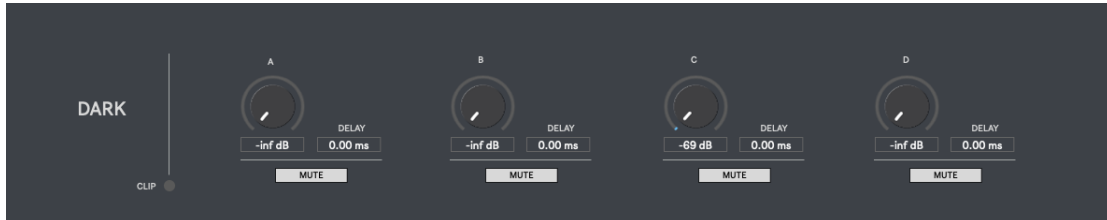
7 | EFFECTS

Voxpat Pro includes up to 12 effects. Each effect has a 5-Band Parametric.

Input signal is processed by these 12 effects simultaneously, creating multiple audio layers that can be used as you want.

7.1 | DARK

Predesigned effects. Includes a delay section for each effect (A, B, C & D)



7.2 | NOISER

This effect process input signal through 3 noise signal convolution sections at same time. Each noise section generates a noise signal, which is used as the convolution carrier signal and is modulated by the input signal.

The resulting output signal will retain some, or most of the original frequency content of the input signal, while its spectral envelope will be largely determined by the noise signal spectral envelope.

- **Engine 1 section** generates pink noise and white noise, or a mix of both kinds of noise. Noise central frequency selector. Band-Stop filter.

Noise Type. Select the kind of noise used as the carrier file. White/Pink (or mix).

Central Freq. Select the noise signal central frequency.

Bandstop. Select the bandstop filter frequency

Gain. Set the output volume

- **Engine 2 section** generates a noise signal based on FM synthesis. For synthesizing harmonic sounds, the modulating signal must have a harmonic relationship to the original carrier signal. As the amount of frequency modulation increases, the sound grows progressively more complex.

Carrier. Set the amount of carrier signal used.

Modulation. Set the amount of modulation signal used.

Index. Set the modulation index

Gain. Set the output volume

X/Y Pad. Allows changing index and modulation parameters via x/y pad.

Random. Set random parameters.



7.3 | SHIFTER

Process input signal through 6 different pitch-shifting sections at same time. It works as a harmonizer. Volume control for each section.

- **Input depending mode** allows selecting different activation/deactivation threshold level for each section, this way you can create more dynamic and realistic voices if each section is activated at different input level.

For example, gradually activating different pitched voices as soon as the input level rises up or depending your own configuration.

- **Delay mode** allows adding a delay to any pitch-shifting section to create interesting decay effects to your voice.

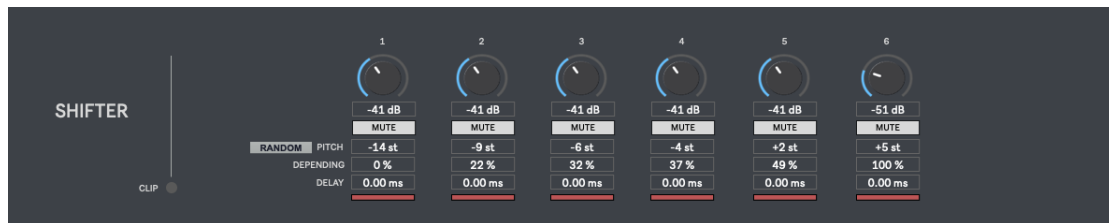
Pitch. Set the pitch-shifting increase/decrease in semitones.

Random. Set random pitch parameters.

Threshold. Set the input depending threshold level.

Delay. Set delay time. [0ms-2000ms]

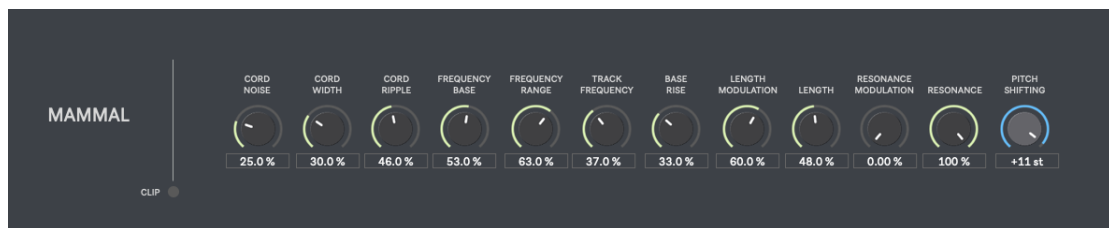
Gain. Set the output volume.



7.4 | MAMMAL

This effect uses procedural audio to generate mammal sounds depending on the selected parameters. This mammal sound is used as the carrier signal for a convolution processing and will be modulated by the input signal.

The resulting output signal will retain some, or most of the original frequency content of the input signal, while its spectral envelope will be largely determined by the generated mammal sound spectral envelope.



7.5 | SPECTRA

This effect process input signal through 2 spectral pitch-shifting sections at same time.

- **Frequency Range section** allows splitting input signal in 2 bands, the inner band containing the selected audio frequency range and the outer band containing the frequency range above and below the selected frequency range. Both bands can be pitch-shifted separately.

Outer. Activate/Deactivate outer frequency range.

Inner. Activate/Deactivate inner frequency range.

Outer Pitch. Outer audio range pitch-shifting in semitones.

Inner Pitch. Inner audio range pitch-shifting in semitones.

Gain. Set the audio output gain.

Range Selector. Set the inner audio frequency range.

- **Amplitude Range section** allows splitting input signal in 2 bands, the inner band containing the selected audio amplitude range and the outer band containing the amplitude range above and below the selected amplitude range. Both bands can be pitch-shifted separately.

Outer. Activate/Deactivate outer amplitude range.

Inner. Activate/Deactivate inner amplitude range.

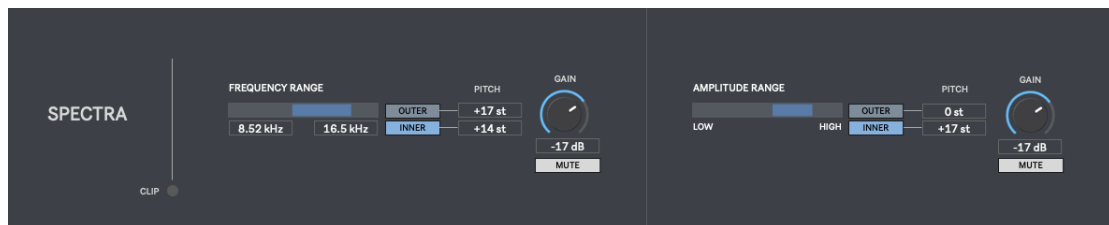
Outer Pitch. Outer amplitude range pitch-shifting in semitones.

Inner Pitch. Inner amplitude range pitch-shifting in semitones.

Gain. Set the audio output gain.

Range Selector. Set the inner audio amplitude range.

In both sections click and hold mouse click to select a region (Green). Hold CMD/CTRL to move this region size through the full spectrum/amplitude range.



7.6 | D-PITCH

This effect includes 2 different audio processing sections.

DELAY PITCH SHIFTER

This section creates delay loops of the incoming audio signal. Each loop introduces the same amount of pitch-shifting in comparison with the previous loop, like a never-ending pitch shifting effect. Each loop can be also processed by a HPF, LPF or a Peak filter. Changing the delay feedback level you can control the amount of loops generated; affecting the decay of the sound and creating interesting pitch changing decay sounds.

- **Feedback Filter** allows introducing a LPF, HPF or a 1-Band Peak Filter to every delay loop. Be careful when using a peak filter gain increase, each delay loop will introduce the same gain level increase, like a never-ending gain level increase.

Pitch. Set the delay loop pitch-shifting increase/decrease in semitones

Octave. Add or subtract 24 semitones to the selected transposition value.

Delay Time. Set the delay loop time.

Feedback. Set the % of feedback sent back to the delay line. It controls the number of loops generated; more feedback means more loops.

DYNAMIC TIME-BASED PITCH SHIFTER

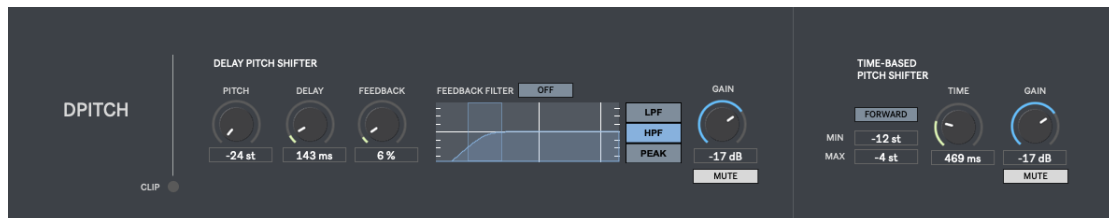
This section automatically changes up/down the pitch of the incoming audio signal. Semitones are increased/decreased after every “user-defined” amount of time (ms).

Pitch Up/Down. Select pitch shifting processing from lower to higher values (Forward) or from higher to lower values (Backward). Pitch shifting always works in Palindrome mode, it means as soon as the semitone value reach the minimum or maximum value selected it will start decreasing or increasing again for as long as input is detected.

Min. Lower semitone value. (Min. -24 semitones)

Max. Higher semitone value. (Max. 24 semitones)

Time. Set the amount of time between each semitone increase/decrease.



7.7 | S-CONV – Sample Convolution

This effect uses samples as the carrier files for a convolution processing. Load up to 4 samples from your computer to be modulated simultaneously by the input signal.

The resulting output signal will retain some, or most of the original frequency content of the input signal, while its spectral envelope will be largely determined by the selected samples spectral envelope.

File. Select your audio file. Drag&drop any file within the waveform section.

Folder. Choose a folder to be shown in the menu. It makes quicker to load files from your computer. Drag&drop any folder within the menu section.

Selection: Use your mouse to select the audio file region you want to process through Voxpat Pro. Use cmd(mac)/ctrl(windows) to zoom in/out.

Set: Select the whole audio file.

Gain: Set audio file gain.

Fade In: Set fade in time in ms.

Speed. Change playback speed from 10% (0.1) to 400% (4).

Pitch. Set the pitch from -24 to 24 semitones.

Norm: Normalize audio file gain to 0db.

Reverse: Play audio file in reverse mode.

Loop. Activates Loop playback mode.

Preview: Preview audio file

Preview All: Preview all audio files (SConv players 1 to 3) when clicking over “Preview”.

Folder Link: When activated it will load the chosen files folder within all audio players.

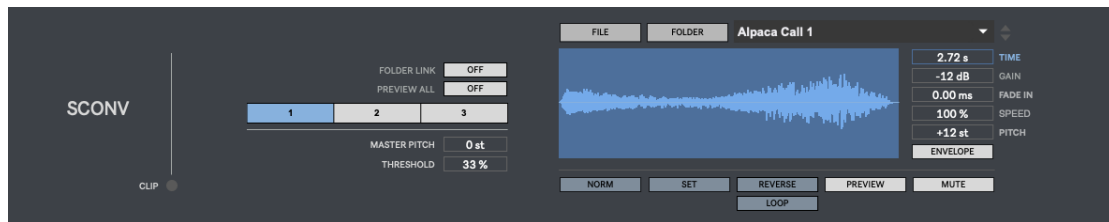
Envelope. Amplitude envelope designer allows creating your own ADRS envelope.

Click **R** to activate it. Horizontal values (**X**) represents the Time and Vertical values (**Y**) are used to represents the Amplitude.

- Click in empty space to add a new envelope point.
- Shift-click on a point to remove it.
- Click R to reset all points.

Master Pitch. Master output pitch-shifting in semitones.

Threshold: ONLY AVAILABLE WHEN USIC MIC INPUT. When using a microphone over S-Conv effect you may find that convolution is triggered by the background noise from your room/studio if there is some residual noise, if this happens just set Threshold to a point where only your voice triggers the convolution. 0% Minimum / 100% Maximum



7.8 | S-PLAYER – Sample Player

This effect allows you to play any sample file from your computer. Load up to 3 different samples to be mixed simultaneously.

Samples can be triggered by the input signal in 2 modes, as long as input is detected or always until the end of the sample length, but also triggered via your computer keyboard.

File. Select your audio file. Drag&drop any file within the waveform section.

Folder. Choose a folder to be shown in the menu. It makes quicker to load files from your computer. Drag&drop any folder within the menu section.

Selection: Use your mouse to select the audio file region you want to process through Voxpat Pro. Use cmd(mac)/ctrl(windows) to zoom in/out.

Set: Select the whole audio file.

Gain: Set audio file gain.

Fade In: Set fade in time in ms.

Speed. Change playback speed from 10% (0.1) to 400% (4).

Pitch. Set the pitch from -24 to 24 semitones.

Norm: Normalize audio file gain to 0db.

Reverse: Play audio file in reverse mode.

Preview: Preview audio file

Preview All: Preview all audio files (S-Player 1 to 3) when clicking over “Preview”.

Folder Link: When activated it will load the chosen files folder within all audio players.

Envelope. Amplitude envelope designer allows creating your own ADRS envelope.

Click **R** to activate it. Horizontal values (**X**) represents the Time and Vertical values (**Y**) are used to represents the Amplitude.

- Click in empty space to add a new envelope point.
- Shift-click on a point to remove it.
- Click R to reset all points.

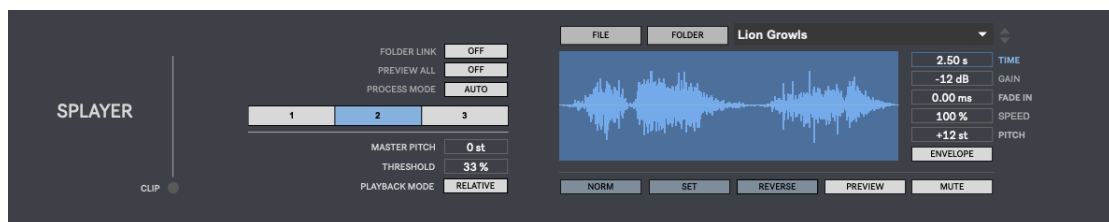
Master Pitch. Master output pitch-shifting in semitones.

Threshold: ONLY AVAILABLE WHEN USIC MIC INPUT. When using a microphone over S-Player effect you may find that audio files are triggered by the background noise from your room/studio if there is some residual noise, if this happens just set Threshold to a point where only your voice triggers the audio files.
0% Minimum / 100% Maximum

Playback Mode: Set Relative (play audio file only when input is detected) or Absolute (play the whole audio file).

Process Mode. In “Auto” mode input triggers the audio files, while in “Keyboard” mode you can trigger the sounds using computer keyboard (Z,X,C).

Q, W, E. Trigger audio files through your computer keyboard.



7.9 | MORPHEO – Plugin Morphing

This effect allows using any vst/au instrument to be used as the convolution carrier signal- Choose either a synthesizer or a sampler as the convolution carrier signal.

For example you can use a sampler plug-in to play different pitches from the same sample simultaneously, your voice will modulate this complex audio signal (or convolution carrier signal).

Play the selected instrument using your midi keyboard or using Auto Key mode, which allows selecting which key will be pressed without the need of using the midi keyboard; in this case input signal will trigger the midi key as long as input is detected.

The resulting output signal will retain some, or most of the original frequency content of the input signal, while its spectral envelope will be largely determined by the plug-in sound spectral envelope.

Midi mode. Use the keyboard to play the instrument. Choose your midi device.

Autokey mode. Instrument will be played using the selected auto key. You don't need to play the midi keyboard to generate sound. The selected key will be hold as long as input signal is detected.

Preview. Allows playing and previewing the selected Instrument plug-in sound before the convolution processing.

Browse. Select your vst/au instrument.

View. Click over the plugin name to see the plug-in on screen.

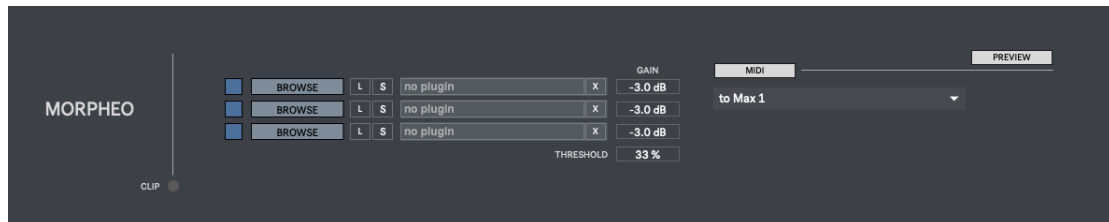
S. Save the plug-in internal preset. (.fxp file)

L. Load a plug-in internal preset (.fxp file).

Gain. Set output gain.

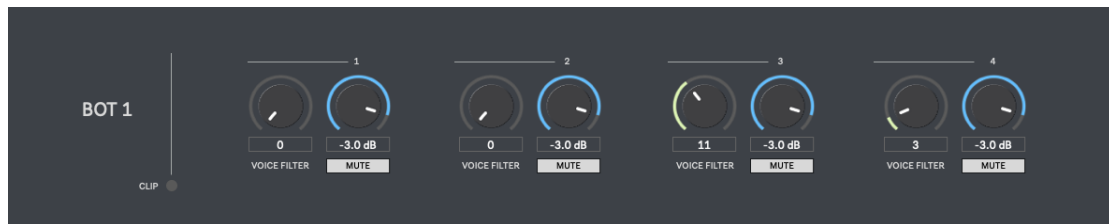
Midi Device. Set midi device for Plugin Input.

Threshold. Set the input level at which Morpheo is triggered.
0% Minimum / 100% Maximum



7.10 | BOT 1

This section has been designed to create robotic sounds. It includes 4 engines where you can choose which predefined voice filter (30 filters available) is applied to input source.



7.11 | BOT 2

This section has been designed to create robotic sounds.

ENGINE 1

Processing Mode. Set modulation wave type.

Frequency. Set modulation frequency.

Fatness. Set fatness amount.

Offset. Set offset midi note.

Mix. Set Offset wet/dry mix.

Filter. HPF/LPF filter.

Gain. Set selected ring modulator gain

ENGINE 2

Offset. Set offset semitones index.

Depth. Set offset amount.

Gain. Set selected ring modulator gain



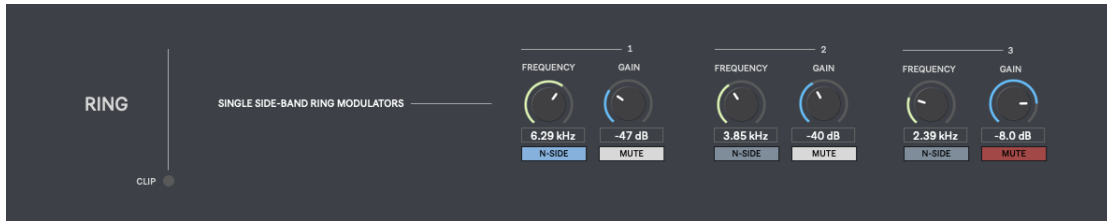
7.12 | RING

This effect processes the input signal through to 3 single side-band ring modulators simultaneously.

Freq Shift. Set Ring Modulator central frequency.

N-Side. Activate/deactivate negative side-bands.

Gain. Set selected ring modulator gain



8 | LFO

Assigns LFO modulation to any voice effect. Click LFO button on any effect to activate it. This section also allows modulating the LFO Rate from 1Hz to 40Hz.

LFO Rate: Set LFO Rate.

ON/OFF. Activate/deactivate LFO Rate modulation.

Upward/Downward. Set the LFO Rate modulation mode. When modulation rate reaches the min/max rate it will start running in the opposite direction.

Upward: From min to max

Downward: From max to min

Modulation Range: Set the minimum and maximum LFO Rate parameters. To work properly minimum parameter must be lower than the maximum parameter.

Modulation Speed: Set the LFO Rate modulation speed



9 | SENDS

Activate or deactivate sends to S1 & S2 (groups) for each effect output.

10 | LAYERS MIX

Cross morphing between S1 & S2 sends. It allows creating more dynamic sounds.



11 | OUTPUT MIX

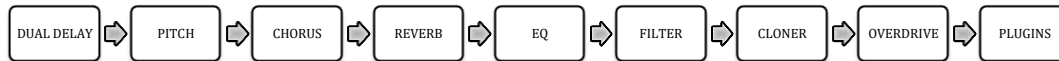
Cross-morphing between dry & processed output signals.



12 | MASTER RACK

Includes Dual-Delay, Pitch Shifting & Envelope, Chorus, Reverb, Eq, Filter, Cloner, Overdrive and 3 vst/au plugins.

Signal flow:



13.1 | FX

DUAL DELAY

LEFT/RIGHT. Set delay time in ms.

L. Link Left/Right delays.

Feedback. Set delay feedback %

Mix. Wet/Dry

PITCH

Semitones. Set the pitch-shifting in semitones +/- 24.

Envelope. Activate a pitch-shifting envelope. Horizontal values (**X**) represents the Time and Vertical values (**Y**) are used to represents the pitch-shifting semitones.

- Click in empty space to add a new envelope point.
- Shift-click on a point to remove it.
- Click R to reset all points.
- Time. Set envelope time in ms

CHORUS

Center. Chorus central frequency.

Depth. Chorus depth intensity.

Rate. Chorus rate frequency.

Feedback. Chorus regeneration level.

REVERB

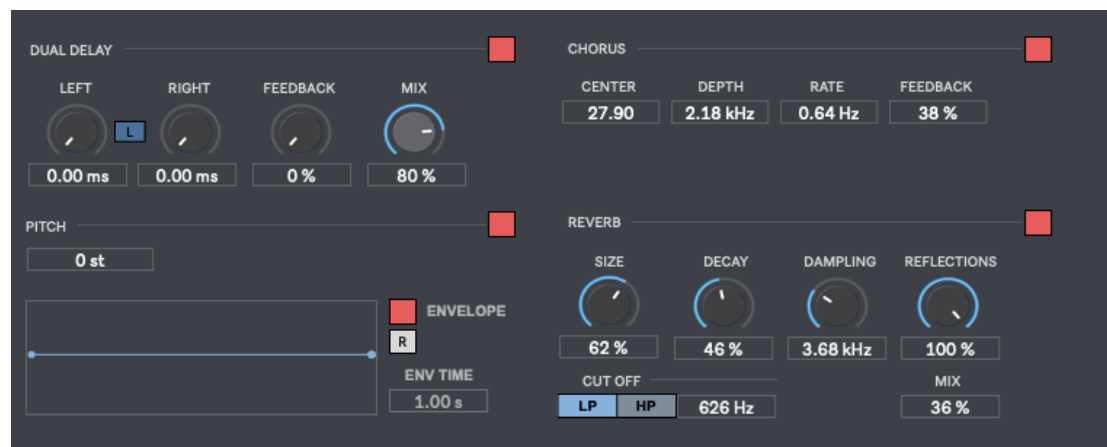
Size. Set the size of reverb length.

Decay. Set decay size for reverb output.

Damping. Set the reverb damping frequency.

Filter. Apply HPF/LPF to Reverb output.

Dry-Wet: Mix dry & wet signals.



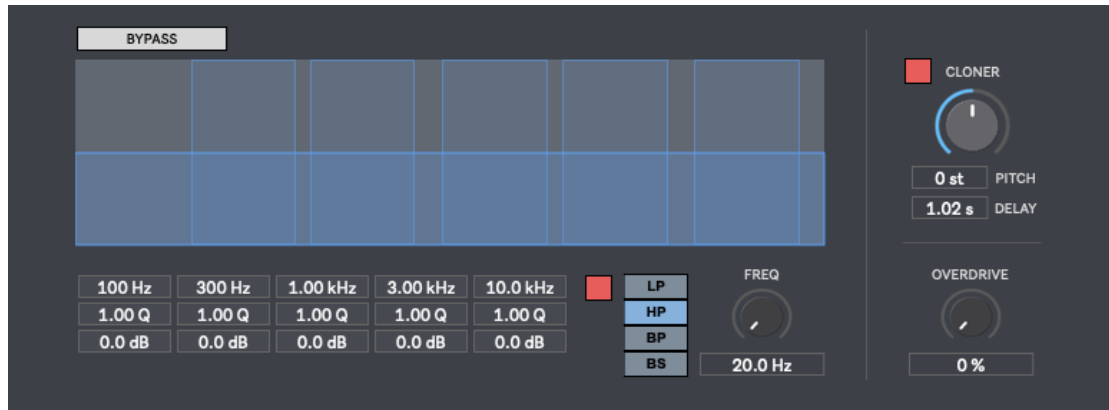
13.2 | EQ – CLONER - OVERDRIVE

EQ

5-Band parametric equalizer. Bypass available.

Cloner. It allows generating a delayed copy of the processed output and creating an interesting decay effect by changing the pitch of this delayed output version.

Overdrive. Add distortion to your audio output.



13.1 | PLUGINS

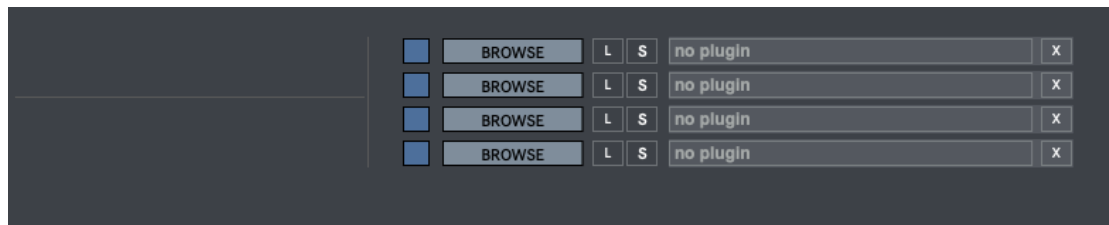
Load up to 4 plug-in effects into your master output.

Browse. Select your vst/au instrument.

View. Click over the plugin name to see the plug-in on screen.

Save. Save the plug-in preset. (.fxp file)

Load. Load a plug-in preset (.fxp file)



13 | RECORDING

Voxpat Pro allows stereo/mono recording in WAV or AIFF (16/24/32Bits). Up to 192kHz (depending your soundcard).

Recording modes:

Linear: Record Voxpat Pro output into your computer. This mode allows you to also record each effect layer and source input separately, just activate the layers you want to record before starting the recording.

Sample processing: Process and save the selected audio file within input audio player 1 in one-click. Extra Rec Time allows you to add extra recording time when using time related processes as built-in delays section, built-in reverb or external plugins at master rack.

Batch Processing: This mode allows processing through Voxpat all the audio files within the selected folder (only within Input Player 1) in one-click. A very useful section if you need to process a batch of files using the same Voxpat Pro preset. It can save you a lot of time in the studio. Extra Rec Time allows you to add extra recording time when using time related processes as built-in delays section, built-in reverb or external plugins at master rack.

Rec Me: Record your voice to be used as an audio file within Voxpat Pro. As soon as you stop the recording, the recorded audio file will be automatically loaded within input player 1.



14 | PRESET MANAGER

Save and load your own presets.

Load. Load a preset from your computer.

Save. Save a preset in your computer

Folder. Select your preset folder to be shown in the menu. It makes quicker to change between presets.

+/- . Select previous or next preset within the menu.

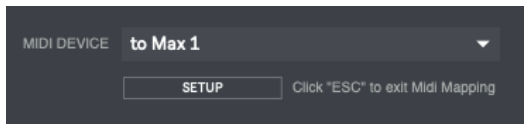


15 | MIDI MAPPING

You can control several controls using your midi device.

At Midi Mapping window click on “**Setup**” to change to midi mapping mode. To assign midi controls just select which control you want to assign and move the desired control within your midi device. To remove a midi assign, just activate again midi mapping mode, right-click on the selected control you want to remove midi assign and select “Delete Mapping”.

Press “**ESC**” to close midi mapping mode.



16 | KEYBOARD SHORTCUTS

For better and faster user experience.

Spacebar - Play

1,2,3 - Select Audio Player input on screen

A,S,D - Input Players playback using keyboard

Z/X - Select editable processing effect

Q,W,E - S-Player computer keyboard playback

R - Recording section

M - Mixer / Master rack sections

CMD (mac) /CTRL (Windows) + A - Audio Settings

CMD (mac) /CTRL (Windows) + M - Midi Settings

Shift + Mouse - Holding Shift key allows changing values more accurately when tweaking a numerical display or controller.

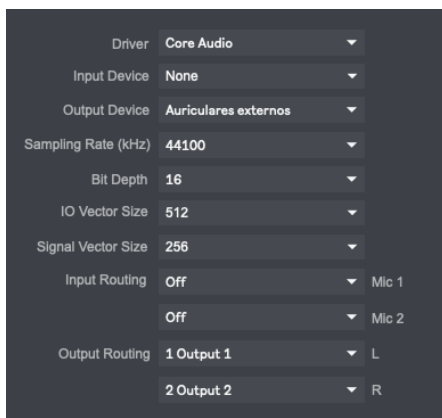
CTRL + Q (windows) / **CMD + Q** (Mac) - Close Voxpat Pro

17 | SETTINGS

In this section you can select your audio settings. Set up your own input/output configuration depending your soundcard and needs at anytime.

Default Input/Output Voxpat Pro configuration:

- **Voxpat IN1 (MIC 1) - Soundcard Input 1**
- **Voxpat IN2 (MIC 2) - Soundcard Input 2.**
- **Voxpat Main Out - Soundcard Inputs 1(L) & 2(R)**



18 | SYSTEM REQUIREMENTS

Mac

- Mac Intel machine running OS X 10.11.6 or later. 64 Bits. 4GB Ram or more recommended.
- Apple Silicon ARM machine running OS 11.0 or later. 64 Bits. 4GB Ram or more recommended.

Windows

- Windows 8 or later, multicore processor. 64 Bits. 4GB Ram or more recommended.

19 | TROUBLESHOOTING

Voxpat Pro may require significant *CPU* resources in order create multiple layers of sound. If you have problems with the sound (clicks/distortion) try changing IO Vector Size and Signal Vector Size to lower values.

THANKS FOR YOUR SUPPORT

Technical support at
support@digitalbrain-instruments.com

DIGITAL BRAIN INSTRUMENTS | <http://www.digitalbrain-instruments.com>

Don't forget to subscribe to our newsletter for the latest news and updates.