

LESOUND

SpaceMotors manual



BEFORE WE GET STARTED

Thank you for buying or trying SpaceMotors¹. Your support is greatly appreciated and be sure that any means we have goes directly into R&D and product enhancement. If you encounter any problem or just if you want to give us a feedback, feel free to send us a mail at support@lesound.io, we will be happy to read from you and/or help you if needed. Information in this manual is subject to change without notice and does not represent a commitment on the part of Le Sound. The software described in this manual is furnished under a license agreement. The software may be used only in accordance of the terms of this license agreement. It is against the law to copy this software on any medium except as specifically allowed in the license agreement. No part of this manual may be copied, photocopied, reproduced, translated, distributed or converted to any electronic or machine-readable form in whole or in part without prior written approval of Le Sound.

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INTRODUCTION

SpaceMotors is a synthesizer dedicated to creating motors and engine sci-fi sound. The synthesizer is based on Le Sound's dynamic modeling technology. That is, it produces sounds by solving, on the fly, mathematical equations modeling multiple aspect of a what could be the rumble made by different kinds of large ships. This complex synthesis engine responds dynamically to the control signals it receives and exposes high-level controls carefully mapped to the low-level synthesis model.

System requirements

Windows 7 and above

macOS 10.7 and above

SpaceMotors is compatible with the following standard: VST/VST3, AAX, AU

*AAX 64bits is compatible with Pro Tools 11 and above. Please refer to Avid for precise system compatibility.

INSTALLATION

Windows

Double-click on SpaceMotors*.exe to launch installation wizard. Click on “Next” to go to the next screen. You have to read and agree to the End User License Agreement before proceeding. On the following screen you’ll be able to choose the components you want to install:

- Common files regroup all documentation related to this product
- VST/VST3 64-bit will install the 64-bit VST/VST3 instrument
- AAX 64-bit: the 64-bit version of the AAX plugin for Pro Tools 11 and above.

The following screens of the installer will allow you to choose custom locations for common files, VST/VST3 and AAX. Default installation paths :

Common files and databanks: “C:\Program Files\LeSound”
64-bit VST plug-in: “C:\Program Files\Vstplugins”
64-bit VST3 plug-in: “C:\Program Files\Common Files\VST3”
64-bit AAX plug-in: “C:\Program Files\Common Files\Avid\Audio\Plug-Ins”

Mac OS X

Double-click on SpaceMotors*.pkg to launch installation wizard. Please read and accept the End User License agreement in order to proceed. By default, the installer is set on “automatic” mode and you won’t have anything to do, but you can also choose a “custom” installation mode and you’ll be able to select which component you want to install and where to install it. The different choices are:

- VST/VST3 will install the VST instrument
- AudioUnit will install the Audio Unit instrument
- AAX will install the AAX plugin for Pro Tools 11 and above.

Default installation paths are :

Common files and databanks: “/Applications/LeSound”
VST plug-in: “/Library/Audio/Plug-Ins/VST”
VST3 plug-in: “/Library/Audio/Plug-Ins/VST3”
AU plug-in: “/Library/Audio/Plug-Ins/Components”
AAX plug-in: “/Library/Application Support/Avid/Audio/Plug-Ins”

Activation

SpaceMotors uses iLok license activation. When you purchase SpaceMotors, an iLok license is associated and you need to transfer it to your iLok. Please enter your iLok account name while registering LeSound.



If you encounter any problem with the activation process, please don't hesitate to send us an email at support@lesound.io.

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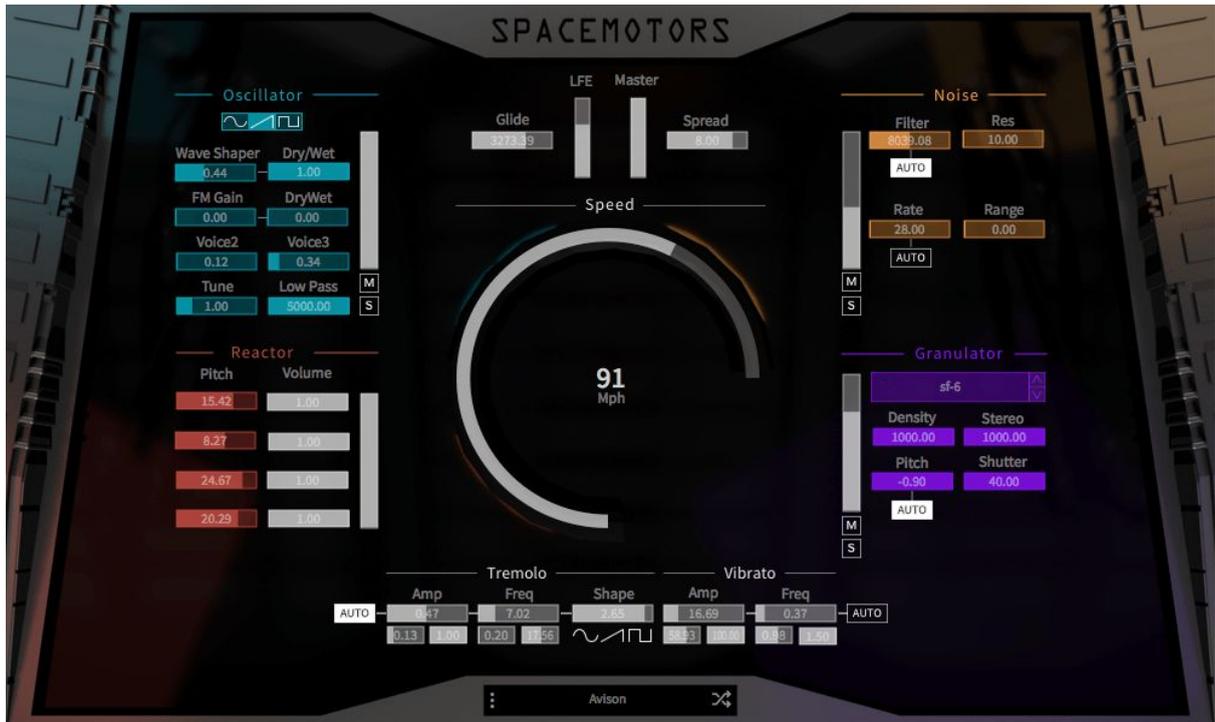
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TROUBLESHOOTING

Features



- Create complex Sci-fi vehicle sound with a single knob.
- Auto link modulation to generate dynamic accel/decel behaviors.
- From pure oscillator sounds to aggressive machine sounds.
- Rich factory preset collections for instant creation.

Overview



1 - Speed is the main control for creating acceleration and deceleration effects. It functions as a global control to the other modules.

2 - Oscillator module uses three oscillators to generate complex harmonic sounds.

3 - Reactor module uses delay-based effects to pitch-shift the harmonic sounds generated by Oscillator.

4 - Noise module adds a filtered noise layer. It provides an excellent variety for spacy hiss sounds.

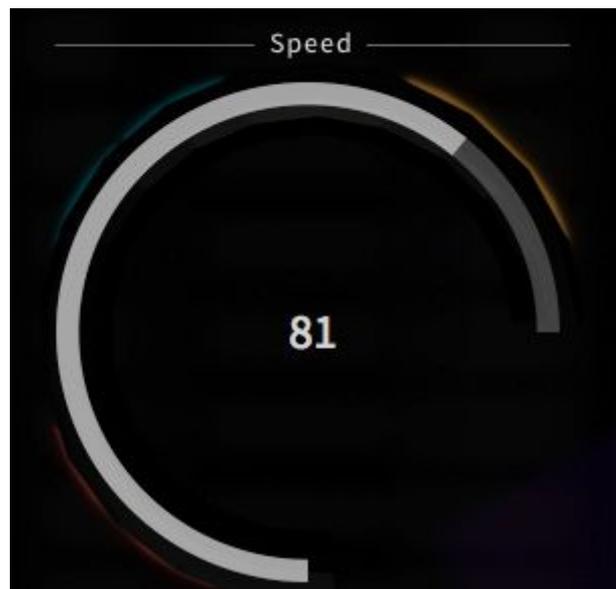
5 - Granulator module generates the “core character” of the Spacemotor sounds beyond subtractive synthesis, allowing to create a wide variety of vehicle sounds.

6 - Tremolo & Vibrato Effects apply complex modulation behaviors.

MODULES DESCRIPTION

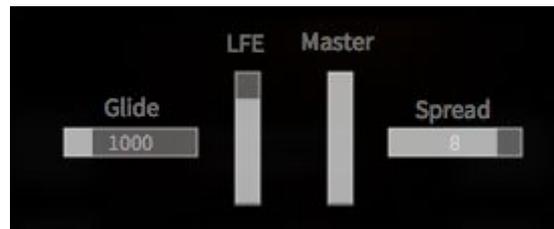
Global Speed

Global Speed is the main control for creating acceleration and deceleration effects. It functions as a global control to the other modules. It distributes the clock speed to the other modules. Some modules can be directly linked to the Global Speed via an AUTO switch. This Auto Mode will control the values for the modules automatically. The modules that have an AUTO Mode for specific parameters are the Tremolo effect, the Vibrato effect, the Granulator, and the Noise Generator.



Master

The Master section contains controls for the the master volume, Stereo Spread, LFE volume and the Glide for the acceleration.



Glide: The Glide parameter determines the time that is required to move from the previous value to the next one when changing the position of the Global Speed. The higher the value the slower the acceleration.

LFE: Low-Frequency Effects slider controls the gain of the LFE.

Master: The Master fader controls the final output of the plugin.

Spread: The Spread defines the sound expansion in the stereo field.

Oscillator

Oscillator module uses three oscillators to generate complex harmonic sounds. It allows to give the overall sound a unique shape. The signal from the Oscillator is sent to the Reactor module which is explained further in the Reactor description.

The Oscillator section contains controls for the Waveform selection, Wave Shaper, Dry/Wet Ratio, Low Pass Filter, Voice 1/2/3, FM Gain and its Dry/Wet ratio, Mute and Solo and the Master Volume of the Oscillator module.



Waveform Icons: The user can choose between a sine, sawtooth and square wave that will be generated by the Oscillator. Clicking on the respective icon changes the waveform.

Wave Shaper: The Wave Shaper modulates the selected Waveform. It's a distortion synthesis in which complex spectra are produced from pure tones by altering the shape of the waveforms.

Dry/Wet (Wave Shaper): This controls the ratio between the modulated and unmodulated Signal.

Value 0 translates to a 100% dry signal. Value 1 is 100% wet.

Voice1 / Voice2 / Voice3: Voice1 is the fundamental frequency of the Oscillator.

Voice2 and Voice3 are multiplications of the fundamental frequency.

Changing values for Voice1 results in tuning the fundamental frequency.

Changing values for Voice2 and Voice3 changes the factor for the multiplication of the fundamental frequency.

FM Gain: The Oscillator module provides also an FM modulation between the fundamental frequency and Partial 1 and Partial 2. FM Gain controls the intensity of the modulation.

Dry/Wet (FM Gain): This controls the ratio between the modulated and unmodulated Signal by the FM.

Vertical Volume Slider: The Volume slider allows to control the volume of the Oscillator.

M (Mute): Clicking the M mutes the Oscillator.

S (Solo): Clicking the S plays the sounds of the Oscillator in solo. The Reactor will keep playing along with the Oscillator unless it is turned down manually.

Reactor

Reactor module uses delay-based effects to pitch-shift the harmonic sounds generated by Oscillator. There are 4 duplicate signals from the original Oscillator. Each of them has a pitch and volume parameter.

The Reactor section contains controls for the Pitch, Volume for each channel and the Master Volume of the Reactor module.



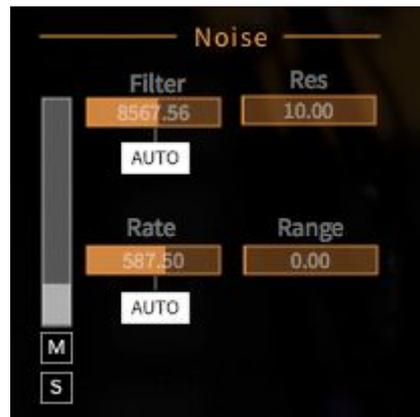
Pitch: The Reactor has four separate sound channels that can be tweaked in their pitch.

Volume: The horizontal Volume sliders allow volume control for their parallel Pitch channels.

Vertical Volume Slider: The vertical Volume slider controls the main output of the Reactor module.

Noise

Noise module adds a filtered noise layer. It provides an excellent variety for spacy hiss sounds. The Noise section contains controls for the Filter / AUTO Mode, Resonance, Rate / AUTO Mode, Mute, Solo and the Master Volume of the Noise module.



Filter: The Filter regulates the CutOff frequency

AUTO (Filter): The Filter can be linked to the AUTO Mode. When AUTO Mode is activated the Filter will automatically react to the Global Speed. In AUTO Mode the User is not able to change values of the Filter.

Res: The Resonance parameter controls the resonance of the Noise

Range: The Range changes CutOff frequency to random values.

Rate: The Rate controls the how fast the Modulation by the Range Parameter triggered

AUTO (Rate): The Rate can be linked to the Global Speed. When Auto Mode is activated the Rate will automatically change with the Global Speed. In AUTO Mode the user is not able to change values.

Vertical Volume Slider: The Volume slider allows to control the volume of the Noise module.

M (Mute): Clicking the M mutes the Noise module.

S (Solo): Clicking the S plays the sound of the Noise module in solo.

Granulator

Granulator module generates the “core character” of the Spacemotor sounds beyond subtractive synthesis, allowing to create a wide variety of vehicle sounds. The section contains controls for the Sample selection, Density, Pitch / AUTO Mode, Stereo Width, Shutter, Mute, Solo and the Master Volume of the Granulator module.



Sample selector: This panel allows the user to choose from a selection of samples.

Density: the number of grains plays simultaneously.

Stereo: The Stereo defines the stereo width of the Granulator output.

Pitch: The Pitch allows to control the Pitch of the granulated Sample.

Shutter: The Shutter parameter adds random variations shuttering the sound of the granulator.

Vertical Volume Slider: The Volume slider allows to control the volume of the Granulator module.

M (Mute): Clicking the M mutes the Granulator module.

S (Solo): Clicking the S plays the sound of the Granulator module in solo.

Tremolo - Effect

Tremolo & Vibrato Effects apply complex modulation behaviors. Essential for the feel of acceleration and behaves differently depending on the status of the AUTO Mode.

The Tremolo section contains controls for the Amp, Frequency, Minimum/Maximum cross sections for Amp and Frequency, their AUTO Mode and Shape.

The Amp and Frequency control can be linked to the AUTO Mode.

When AUTO Mode is activated the Amplitude and Frequency will automatically change with the Global Speed.

In AUTO Mode the user is not able to change the Amp/Frequency value.

When AUTO Mode is deactivated the Frequency and its can be controlled manually.



Amp: The Amplitude controls the intensity that the Tremolo effect has on the general sound. The Amp control has a **Minimum** and **Maximum** control underneath its slider which delimits the range of intensity. *Note: This function is exclusively working when AUTO Mode is turned on.*

Freq: The Frequency controls the speed of the Tremolo effect. The Frequency control has a **Minimum** and **Maximum** control underneath its slider which delimit the range of the Frequency. *Note: This function is exclusively working when AUTO Mode is turned on.*

Shape: The Shape slider allows to change the waveform of the Tremolo effect fluently between a sine (left position), a sawtooth (middle position) and square wave (right position).

AUTO (Amp + Freq): activates/deactivates automatic behavior for Amp and Frequency

Vibrato - Effect

The Vibrato module determines the modulation of the different sections. The Vibrato effect behaves differently depending on the status of the AUTO Mode.

The Vibrato section contains controls for the Amp, Frequency, Minimum/Maximum cross sections for Amp and Frequency and their AUTO Mode.

The Amp and Frequency control can be linked to the AUTO Mode.

When AUTO Mode is activated the Amplitude and Frequency will automatically change with the Global Speed and the user is not able to change the Amp/Frequency value.

When AUTO Mode is deactivated the Frequency and its Amplitude can be controlled manually.



Amp: The Amplitude controls the intensity of the Vibrato effect on the general sound. The Amp Control has a **Minimum** and **Maximum** control underneath its slider which delimit the range of the Amplitude. *Note: This function is exclusively working when AUTO Mode is turned on.*

Freq: The Frequency controls the speed of the Vibrato Effect. The Frequency Control has a **Minimum** and **Maximum** control underneath its slider as well which delimit the range of the Frequency. *Note: This function is exclusively working when AUTO Mode is turned on.*

AUTO (Amp + Freq): activates/deactivates automatic behavior for Amp and Frequency

OTHER FUNCTIONALITIES

Click on the “SpaceMotors” logo to see several options menu.

Audio Options

Link to host ‘Play’

When the tickbox is checked, sound will be produced only when your host is playing. When you hit “Stop”, sound computing will stop too. By default, this tickbox is unchecked so you should always hear sound.

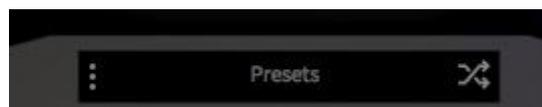
Random

Located in the bottom center zone, the RANDOM button generates a new set of parameters for all the modules of the plugin. You can click on the button as much as you want until you hear a sound that suits you. If you need, you can reset to default parameters or other configurations with the PRESET menu next to it (see next section).



Presets

Preset Manager



The PRESET button located in the bottom center zone allows you to display the preset manager which handles every basic preset operation.

There are two dropdown preset lists : *Factory presets* showing different usage of your SpaceMotors and *My presets* containing the presets you will save. To unroll the lists, click on the small white square on the left of the lists name. Then, load some factory preset by double clicking a its name.

After getting mad and turning every single button from min to max value, you can go back to the default state of the plugin by recalling the “Reset” preset.

Once you’ve sculpted the sound you were looking for, simply click on the SAVE button at the bottom of the preset manager to add a new preset corresponding to the current state of the plugin. The newly created preset will appear at the bottom of *My presets* list. You can rename it by double clicking on its name to recall it then click once more on it to get the typing cursor.

To delete a preset, double click on its name (which will recall it) then click the DELETE button at the bottom of the preset manager.

Automation

All the parameters from your SpaceMotors plugin are available for automation in your favorite host including separate modules volumes and master volume. Simply go to the host automation menu or panel and all of them should appear, ordered alphabetically.

TROUBLESHOOTING

If you followed this guide but still aren’t able to control your SpaceMotors, you can try the following suggestions: - Try another port configuration. - Try closing other programs that are currently using your network. - Try to reboot devices, maybe a process is still bound to the port you’re trying to use. If you’re still experiencing troubles please do not hesitate to contact us at <http://lesound.io/support/>

Thank you!