Lehle Stereo Volume
User Manual

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www.lehle.com

Dear Musician,

Thank you for purchasing your **Lehle Stereo Volume**!
I have been building units that switch, split and route signals with no technical compromises and with maximum musical fidelity since 1999. Your new **Lehle Stereo Volume** comprises only the very best components. Every module of your **Lehle Stereo Volume** has been made and tested in Germany.
To make sure that you can enjoy your **Lehle Stereo Volume** for a long time, it is of extremely robust design and construction. If you should nonetheless have a problem, or simply a question, just mail me or a member of the Lehle team at: support@lehle.com

I wish you much pleasure and success with your **Lehle Stereo Volume**!

Burkhard Georg Lehle

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The **Lehle Stereo Volume** is a volume pedal equipped with a precise magnetic sensor enabling it to operate almost wear-free. This sensor uses the Hall effect, named after Edwin Hall, to measure the strength of magnetic fields. In the **Lehle Stereo Volume** the Hall sensor, which is made in Germany, is accurately calibrated to the built-in magnet and the control range of the pedal. The pedal moves only the magnet, while the distance is measured by the Hall sensor which controls a VCA. A premium Blackmer® Stereo VCA (= Voltage Controlled Amplifier) from the United States replaces here the mechanical potentiometer. The principle of the voltage-controlled amplifier is based on the fact that gain can be varied by the control voltage coming from the Hall sensor. This technique allows to operate more precisely than conventional mechanical potentiometers or optical sensors used by the standard volume pedals. In addition the potentiometer-typical noise and the complicated adjustment are eliminated.

Over the entire control range the **Lehle Stereo Volume** transmits the full sound spectrum of the connected instrument. The input and output impedance always stay the same, ensuring that there will be no damping of higher frequencies as with potentiometers.

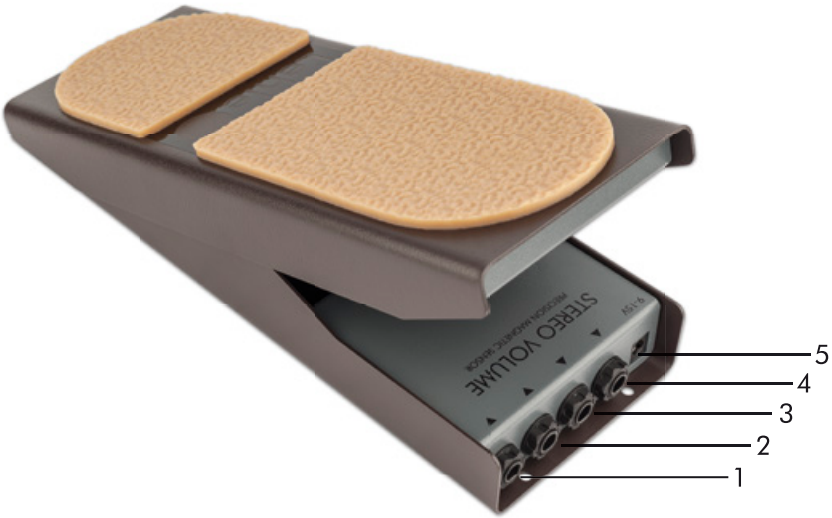
Internally, the input voltage coming from the power supply socket of the pedal is rectified, then filtered, stabilized and doubled to 18 V, thus achieving a total dynamic range of 110 dB with a high level stability. The two outputs can tapped unbalanced by TS plugs or balanced by TRS plugs.The volume control of the **Lehle Stereo Volume** ranges from -92 dB to 0 dB - so from a virtually muted level to the same volume.

The **Lehle Stereo Volume** runs mechanically extremely smooth and steady, as it is equipped with low-friction bearings of a high-performance polymer, and there is no mechanical transmission of the pedal to other components. By means of an adjusting screw the mobility of the pedal can be modified very precisely.

Technical data

Weight:	1,680 g
Length:	26 cm (10.24'')
Width:	10 cm (3.94'')
Overall height:	6.6 cm (2.6'')
Voltage:	9 - 15 V DC or 7 - 12 V AC
Power consumption:	62 mA
Frequency range:	20 Hz - 100 kHz (+/- 0,2 dB)
THD:	< 0,05 % at 1 kHz, -10 dBu
Input:	TS jack unbalanced, 2 MOhm
Output:	TRS jack balanced, 500 Ohm
Signal-to-noise ratio:	-100 dB at 1 kHz, 0 dBu A weighted
Max level:	3 V RMS (approx. 12 dBu at 12 V input voltage)

General description



1. IN 1 Input jack

■ *Connect the left output of your instrument or your stereo source here.*

The **Lehle Stereo Volume** processes signals of synthesizers, keyboards, electric and acoustic instruments of all kinds, as well as samplers and effects units. The input impedance of the **Lehle Stereo Volume** is approx. 2 MOhm. It does not matter whether the connected signal has high or low impedance, or if it comes from a passive or an active pickup system.

If only this jack is connected, the input signal will nonetheless be distributed to both outputs.

2. IN 2 Input jack

■ *Connect the right output of your instrument or your stereo source here.*

If this socket remains free, the signal from IN 1 will be distributed to both outputs (OUT 1 and OUT 2).

3. OUT 1 Output jack

■ *Connect the left input channel of your target device here.*

For instance, this would be an amplifier, a mixing desk, an effects unit or an audio interface. The two outputs (OUT 1 and OUT 2) have low impedance and do not change their output impedance when the volume is altered via the volume pedal. Both outputs are balanced and can be tapped by TRS plugs (or unbalanced with TS plugs).

If the OUT 2 jack remains free whilst both inputs are connected, the **Lehle Stereo Volume** merges the input signals and sends them to OUT 1.

4. OUT 2 Output jack

■ *Connect the right input channel of your target device here.*

If this socket remains free whilst both inputs are connected, the **Lehle Stereo Volume** merges the input signals and sends them to OUT 1.

5. External power supply

■ *Connect your external power supply here (9 - 15 V DC or 7 - 12 V AC).*

For the **Lehle Stereo Volume** an external power supply is required.

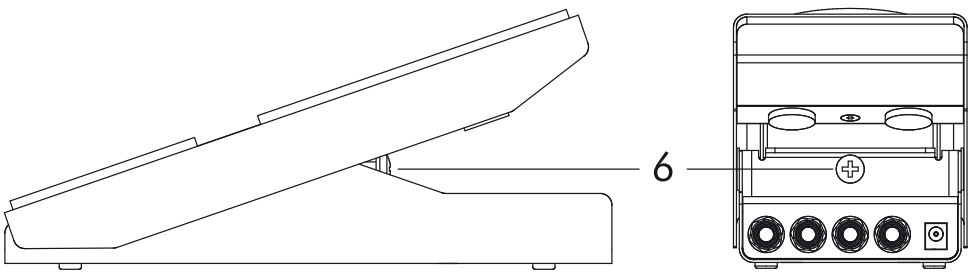
This should provide a minimum of 9 V and no more than 15 V DC, but alternatively you can also connect an AC voltage source with more than 7

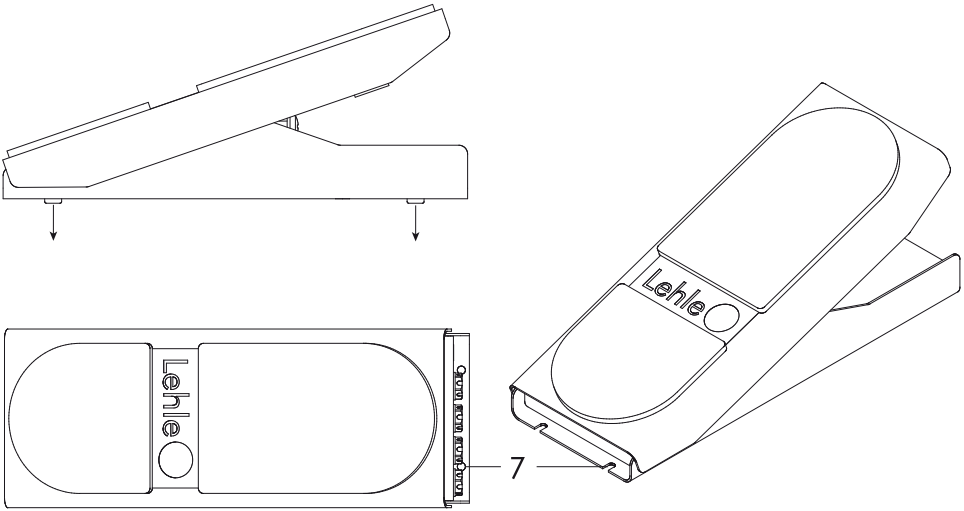
or up to 12 V. The polarity is not relevant. The voltage supplied is internally rectified, filtered, stabilized and then brought to 18 V.

6. Pedal Feel

■ *Turn this screw to adjust the feel of the pedal.*

If you turn this screw clockwise, you tighten the brake. This way the pedal feel will be heavier. Turning the screw counterclockwise, diminishes the resistance when pressing and gives the pedal a lighter feel.

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7. Base and fixing

■ *You can use the fixing screws supplied with the Lehle Stereo Volume to fix to it to a base plate (or to a pedal board, for example).*

The base of the **Lehle Stereo Volume** can be easily attached on any base plate with Velcro or using the supplied screws. First, we recommend you to pull out the rubber pads on the bottom. If a rubber buffer gets lost in this process or breaks, you will get a replacement at any time.

Fixing the **Lehle Stereo Volume** with screws: Place the volume pedal without the rubber buffers in the position where you want to attach it to the board. Use a fine-point pen or a sharp pencil to sketch the subsequent screw holes through the mounting holes onto the base plate. Now drill at the site of the later screw holes a hole with a diameter of approximately 2.5 mm (1/10 inch). Then turn in the two screws for the u-shaped mounting holes together with the washers just halfway.

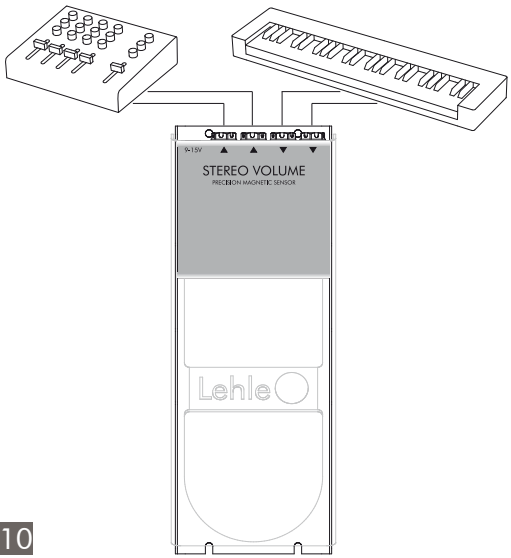
Slide the volume pedal with the U-shaped mounting holes under the screw heads of the screws already screwed in. Make sure that the washers are placed between the bottom plate of the **Lehle Stereo Volume** and the screw head, to protect the paint.

Now you can turn in the remaining two screws and spacers through the two round mounting holes next to the jack plugs. Tighten those screws only slightly, then fix the screws you first turned in. This type of mounting is extremely stable and can also be easily removed.

Tip: In case you prefer a Velcro solution for your pedal board we recommend to write down the serial number of the pedal for eventual support matters before covering it.

Typical uses

Lehle Stereo Volume as a classic volume pedal for keyboards, synthesizers, samplers or any kind of stereo-sources



The main purpose of the **Lehle Stereo Volume** certainly is to vary the volume of the connected source.

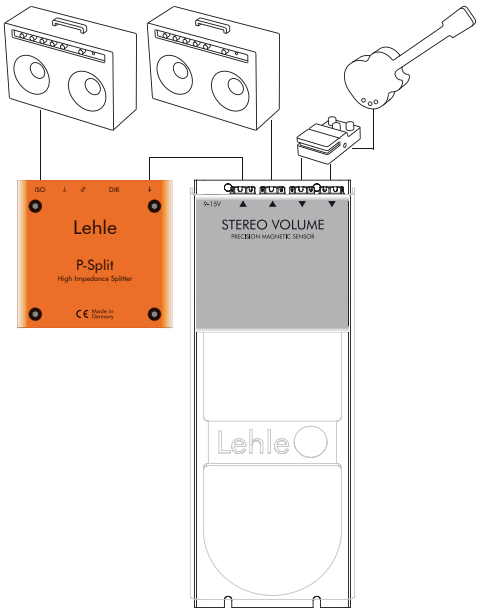
Connection of units:

Input IN 1 → Source L
Input IN 2 → Source R
Output OUT 1 → Mixer L
Output OUT 2 → Mixer R

How to do this:

1. Connect your keyboard, your synthesizer, sampler or an other stereo source to the input sockets (1 and 2) of the **Lehle Stereo Volume**.
2. Connect the outputs (3 and 4) of your **Lehle Stereo Volume** to a stereo input of your mixer or use two mixer channels with hard panning.
3. There you go!

Lehle Stereo Volume controlling the master volume with stereo effects and distributing it to two amps



With this setup you can distribute the stereo-sound coming from your effects unit to two amplifiers, e.g. to make ping-pong-delays or other stereo effects audible directly from the stage. Using the **Lehle P-Split II**, between one output and the second amplifier is optional, in case ground loops or phase cancellations occur. These will be eliminated effectively by using the **Lehle P-Split II**.

Connection of units:

Input IN 1 → Effects unit L OUT
Input IN 2 → Effects unit R OUT
Output OUT 1 → Amplifier 1
Output OUT 2 → **Lehle P-Split II** Input
Lehle P-Split II ISO output → Amplifier 2

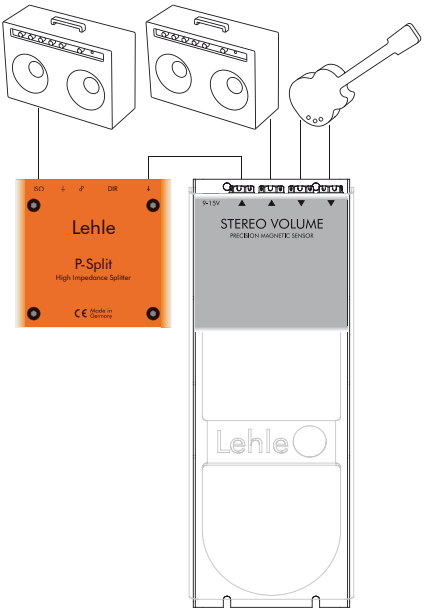
How to do this:

1. Connect your effects unit to the input jacks (1 and 2) of the **Lehle Stereo Volume**.
2. Connect your amplifier to OUT 1 (3).
3. Connect OUT 2 (4) with the input jack of the **Lehle P-Split II**.
4. Connect the ISO output of **Lehle P-Split II** with the input of the second amp.
5. Now press the ground switch of the **Lehle**

P-Split II and find out in which position you have the least noise. In order to eliminate phase cancellation, press the phase switch.

6. There you go!

Lehle Stereo Volume as volume pedal for guitars or basses with stereo-outputs for use with two amps



Many instruments offer separate output jacks for neck- and bridge-pickups. Others have separate outputs for magnetic- and piezo-pickups. With the **Lehle Stereo Volume** you can control the output volume of the two outputs simultaneously without merging the signals. This way the pickups can be sent to different amplifiers or different channels of the mixer. Using the **Lehle P-Split II**, between one output and the second amplifier is optional, in case ground loops or phase cancellations occur. These will be eliminated effectively by using the **Lehle P-Split II**.

Connection of units:

Input IN 1 → Instrument OUT 1
Input IN 2 → Instrument OUT 2
Output OUT 1 → Amplifier 1
Output OUT 2 → **Lehle P-Split II** Input
Lehle P-Split II ISO output → Amplifier 2

How to do this:

1. Connect your instrument to the input sockets (IN 1 and IN 2) of the **Lehle Stereo Volume**.
2. Connect your amplifier 1 to OUT 1 (3).
3. Connect OUT 2 (4) with the input socket of the **Lehle P-Split II**.
4. Connect the ISO output of **Lehle P-Split II** with the input of the second amp. Now press the ground switch of the **Lehle P-Split II** and find out in which position you have the least noise. In order to eliminate phase cancellation, press the phase switch.
5. There you go!

Lehle Stereo Volume controlling the effects signals

Even working at the mixing console can be made easier with the **Lehle Stereo Volume**, e.g. if specific effects shall be integrated. You can work hands-free and control the sound precisely and reliably via the **Lehle Stereo Volume**.

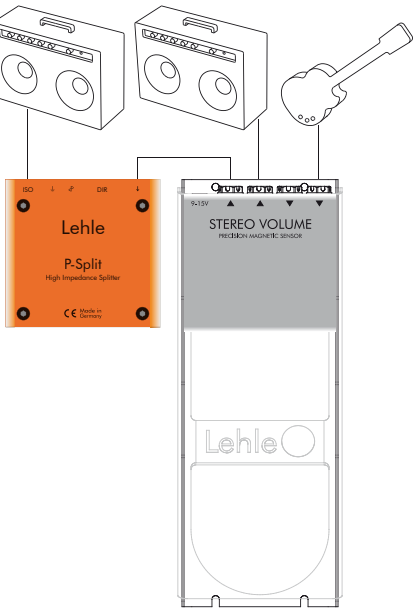
Connection of units:

Input IN 1 → Mixer (AUX) send L
Input IN 2 → Mixer (AUX) send R
Output OUT 1 → Stereo effects unit IN L
Output OUT 2 → Stereo effects unit IN R
Stereo effects unit IN L → Mixer return L
Stereo effects unit IN R → Mixer return R

How to do this:

1. Connect the auxiliary outputs of your mixer to the input sockets (1 and 2) of the **Lehle Stereo Volume**.
2. Connect the outputs (3 and 4) of the **Lehle Stereo Volume** with the inputs of your stereo effects unit.
3. Connect the outputs of the stereo effects unit with the aux return inputs of your mixer.
4. There you go!

Lehle Stereo Volume controlling guitars or basses with mono-outputs, using two amps



If the input socket IN 2 remains free, the **Lehle Stereo Volume** sends the input signal from IN 1 not only to OUT 1 but also to OUT 2. Thus, a mono input signal can be processed as a dual mono signal coming from the **Lehle Stereo Volume**. Using the **Lehle P-Split II**, between one output and the second amplifier is optional, in case ground loops or phase cancellations occur. These will be eliminated effectively by using the **Lehle P-Split II**.

Connection of units:

Input IN 1 → Instrument
Input IN 2 → (remains free)
Output OUT 1 → Amplifier 1
Output OUT 2 → **Lehle P-Split II** Input
Lehle P-Split II ISO output → Amplifier 2

How to do this:

1. Connect your instrument to the input jack (1) of the **Lehle Stereo Volume**.
2. Connect your amplifier to OUT 1 (3).
3. Connect OUT 2 (4) with the input socket of the **Lehle P-Split II**.
4. Connect the ISO output of **Lehle P-Split II** with

the input of the second amp. Now press the ground switch of the **Lehle P-Split II** and find out in which position you have the least noise. In order to eliminate phase cancellation, press the phase switch.

5. There you go!

Lehle Stereo Volume controlling the master volume of two signals, summing it on one amp

With this setup you can merge two different signals or a stereo signal to one mono signal, control the volume and send the mono signal to an amp.

Connection of units:

Input IN 1 → Sound source 1
Input IN 2 → Sound source 2
Output OUT 1 → Amplifier

How to do this:

1. Connect your sound sources to the input jacks (1 and 2) of your **Lehle Stereo Volume**.
2. Connect an amplifier to output OUT 1.
3. There you go!

Lehle Stereo Volume signal flow diagram