Lehle DC Filter
Operating instructions CE

Thank you for choosing the Lehle DC Filter!

The Lehle DC Filter will clean analog signals of DC voltage. Audio signals with a DC offset can cause unpleasant switching noise. Line signals as well as high-impedance signals will be cleaned - without any coloration of the sound. The Lehle DC Filter is made in stereo and can filter mono signals as well as stereo signals, even balanced signals are no problem for this little helper. The Lehle DC Filter has a passive design, i.e. it will not need a power supply.

A DC offset can occur in various places in an analog signal path. Most common points are outputs of active circuits like acoustic guitar or bass preamps, output sockets of effect processors or input sockets of tube amplifiers. This DC offset can be measured easily with a simple voltmeter, which has 2 test leads, usually one is red and the other is black. Touch the signal ground with the black probe and the signal with the red one. Change red for black in case the voltmeter shows a minus figure (-). While the system is powered up but without playing a note the DC value should not be higher than 0.1 V. A higher voltage can result in a very loud switching noise. This is where the Lehle DC Filter can help!

Connect the DC socket with the output of your FX unit or preamp, respectively the input of your amp. Connect the 2nd socket - 0DC - to the next unit in the previous signal path, which usually is a switcher. The Lehle DC Filter is plugged into the signal path with the DC socket towards the unit that causes the DC offset. Try various positions in your setup if you are not sure about the source of the DC offset, also try to swap the DC/0DC sockets. With a little patience you will find the best position with the lowest switching noise, this is where the Lehle DC Filter can work its magic.

Warning: Do not use the Lehle DC Filter for speaker signals coming from an amplifier! The Lehle DC Filter is designed for line levels up to 22dBU.

Technical data

Weight:	117 g
Length:	7 cm (2.8″)
Width:	3.7 cm (1.5″)
Overall height:	3.1 cm (1.2″)
Frequency response:	20 Hz - 100 kHz
Load impedance:	4.7 MOhm
Max. level:	9.75 V RMS (ca. 22 dBU)

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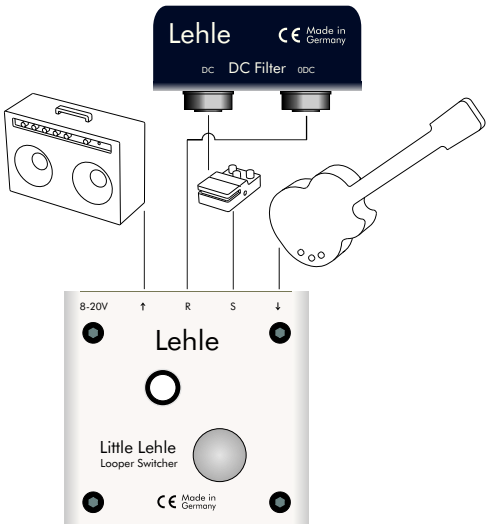
1 DC socket
Connect this socket with the source of the DC offset.
In combination with tube amps this is usually connected with the amp´s input. When using the Lehle DC Filter with effects processors, this socket should be connected with the output of the FX/preamp which is causing the DC offset.

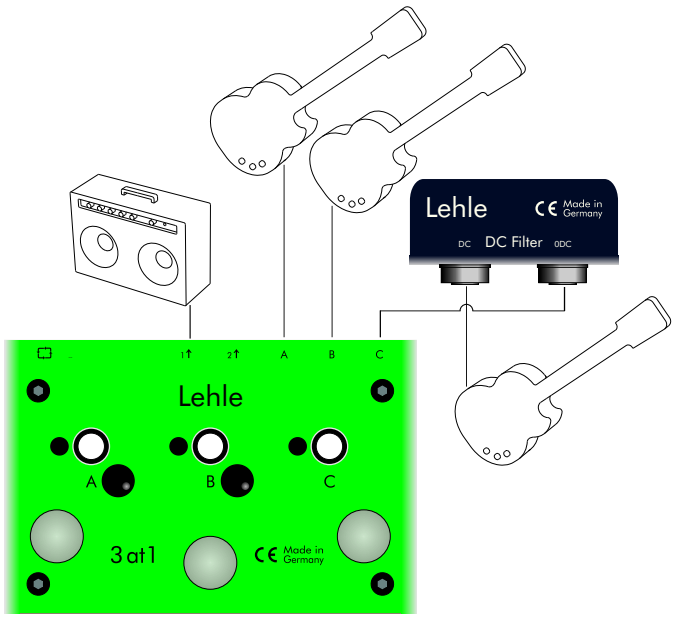
2 0DC socket
Connect this socket with your switcher or any other device that you want to shield from the DC offset.
In combination with tube amps, this socket should be connected with the output of your switcher that routes the audio signals to the amplifier. Using the Lehle DC Filter after the output of an FX unit or preamp this socket gets connected with the input or return socket of your switcher.



Filtering DC offset from the output of an FX processor

Device connection
DC socket (1) output FX processor
0DC socket (2) return loop switcher

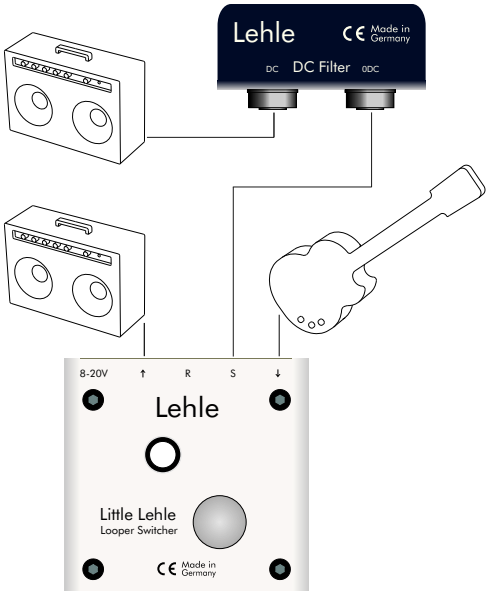
When using a loop switcher to insert multiple FX pedals or processors into the signal path you should place the Lehle DC Filter after the last unit´s output to minimize the switching noise.
Note: in many cases the switching noise is caused by using non-isolated power supplies, the only cure is a higher quality power supply.



Filtering a DC offset from an onboard preamp

Device connection
DC socket (1) instrument output
0DC socket (2) input instrument switcher

Switching between different instruments with a tool like our Lehle 3at1 SGoS can cause switching noise with one certain instument if the onboard preamp of this instrument has a DC offset at the output. Place the Lehle DC Filter in the signal path as shown in the picture to reduce the switching noise, now the switching will be equally quiet for all instruments.



Filtering DC offset from your amp´s input

Device connection
DC socket (1) amp input
0DC socket (2) output amp switcher

Some amplifiers, specially older models - including our highly valued vintage amps - create a DC offset from their input sockets, which results in unpleasant switching noise.
The Lehle DC Filter can help in this situation, connect the DC socket (1) with the amplifier´s input and the 0DC socket (2) with the amp switcher - ready to go!