OPERATING INSTRUCTIONS
LEHLE SUNDAY DRIVER II

Dear Musician!

Thank you for purchasing the LEHLE SUNDAY DRIVER II!
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 SUNDAY DRIVER II comprises only the very best components. Every assembly of your LEHLE SUNDAY DRIVER II has been made and tested in Germany. Your LEHLE SUNDAY DRIVER II is of extremely robust design and construction, to make sure that you get absolutely years and years
of enjoyment from it. 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 the very greatest pleasure and success using your LEHLE SUNDAY DRIVER II!

CONTENT

INTRODUCTION

The LEHLE SUNDAY DRIVER II is a high-end preamp and DI box all in a conveniently compact format. Its circuit is based on a discrete Class A circuit with JFET technology and provides two modes of operation, selected by a mode selector switch with gold-plated contacts:

"D" stands for Driver: in this mode, your guitar signal is amplified, with absolutely no modification, at the input impedance of a guitar amp, efficiently eliminating losses on the route through leads and effects; the signal remains strong and clear, retaining its full dynamics.

The second setting "S" - as in Sunday - multiplies the input impedance by five, bringing out previously inaudible details and, as gain increases, giving your guitar a characteristic and unmistakable warmth that has given this preamp its name - the result is a sound as mellow as a sunny Sunday afternoon.

Even at the maximum +18 dB gain setting, the LEHLE SUNDAY DRIVER II always stays clean and absolutely free of background noise, thanks to its studio-standard overall dynamic range of 130 dB. To exploit the dynamics of tube amplifiers to the full, the input voltage is also rectified from the power supply socket, then filtered, stabilized and transformed to 30 V.

You can use it as a DI box on stage or as a high-end preamp in the studio as well: the output of the LEHLE SUNDAY DRIVER II can be tapped in balanced and the pedal be powered via phantom power.

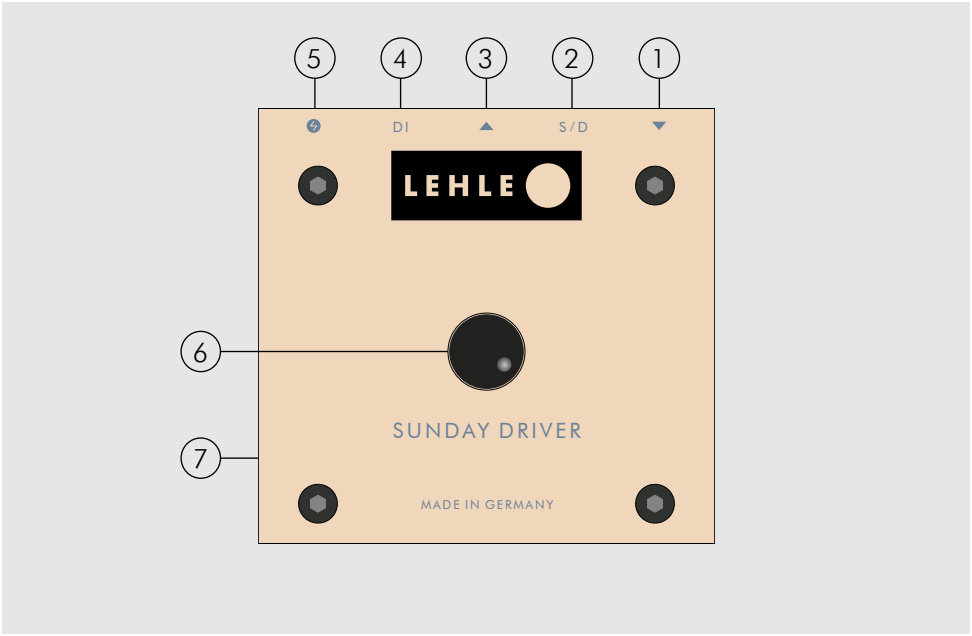
Whether as a cable driver for stadium gigs, in complex effects setups, or as a recording preamp - with its broad output range of 20 to 100,000 Hz, the LEHLE SUNDAY DRIVER II can be used anywhere.
And not just on Sundays.

We take care of your signal so that you can take care of the music.

TECHNICAL DATA

Weight	325 g
Length	3.55“
Width	3.6“
Overall height	1.45“
Supply voltage	9-15 V DC
Current consumption	110 mA
Max input level (with power supply)	+20 dBu
Max output level (with power supply)	+22 dBu
Level noise floor	-110 dBu (20 Hz - 20 kHz)
Total harmonic distortion	0.008 % (0 dBu, 1 kHz)
Frequency range	20 Hz – 100 kHz
Input impedance D-mode	1 MΩ
Input impedance S-mode	5 MΩ
Output impedance	220 Ω
Max gain	18 dB

GENERAL DESCRIPTION



1. INPUT SOCKET

Connect your instrument to this socket.

The LEHLE SUNDAY DRIVER II processes signals from electric and acoustic stringed instruments, such as electric guitars and basses, western guitars, classical guitars and all kinds of stringed instruments. This compact preamp has no trouble balancing out low signal levels, and eliminating sound losses caused by long cables and treble pickups.

2. S/D-SELECTOR SWITCH S/D

Use this switch to select the mode you want.

This gold-plated contact switch enables you to change between the two sound modes.
Mode D for "Driver" (switcher pressed) selects neutral amplification, and the incoming signal is amplified at the input impedance of a guitar amp, 1 MOhm, efficiently eliminating sound losses caused

by long cables and/or multiple effects. The signal remains strong and clear, and retains its dynamics.
In mode S for "Sunday" (switcher not pressed), the input impedance is multiplied by five, to 5 MOhm, making previously unheard details suddenly audible whilst imparting an unmistakable and characteristic warmth to the sound when the gain knob is turned up.

3. OUTPUT SOCKET

Connect your target device here.

For instance, an amplifier, a mixer panel, a stage box or a sound card.
The output can be tapped unbalanced (TS jack) or balanced (TRS jack). If you want to operate the LEHLE SUNDAY DRIVER II via external phantom power, you need to use a TRS jack.

4. DI SWITCH DI

Press this switch to use the LEHLE SUNDAY DRIVER II as a DI box or balanced cable driver.

If you press the DI switch, the pedal becomes a compact DI box with preamp, powered by the external phantom power of a mixer or audio interface.
Use a balanced TRS jack for the output jack (#). Connect the jack, press the DI switch and then activate the external phantom power on your target device.
The DI switch reduces the output level by -6 dB, so balanced inputs like mic preamps aren't overdriven or clipped.
If the level is then too low, you can make up the level again by using the gain controller (#)

5. EXTERNAL POWER SUPPLY

Connect a power supply with a voltage of 9 – 15 V.

In order for the LEHLE SUNDAY DRIVER II to work flawlessly, it needs a current supply. This should supply a minimum of 9 V and a maximum of 15 V. Polarity is of no importance.
The input voltage is rectified from the power supply socket, then filtered, stabilized and transformed to 30 V which guarantees maximum headroom. In order to avoid noise it's recommendable to use a single power supply or an output of a multi power supply offering galvanically isolated outputs for the LEHLE SUNDAY DRIVER II.
If you want to operate the LEHLE SUNDAY DRIVER II via external phantom power please refer to paragraph "4. DI switch".

6. Gain controller

Use the gain controller to adjust the intensity of the preamp from a slight level up to a powerful boost.

The gain control knob consists of black anodized aluminium and is recessed into the housing. It can be easily turned by

placing your fingertip in the top depression, and thanks to the recessed design, your setting cannot be inadvertently disturbed on stage or during transportation.

The LEHLE SUNDAY DRIVER II with its discrete Class A JFET circuitry performs two functions simultaneously - reducing signal impedance on the one hand, and boosting the signal on the other.

THE LEHLE SUNDAY DRIVER II AS AN IMPEDANCE CONVERTER:
When the gain controller is at the left-hand stop (in the "0" or "seven o'clock" position), it operates purely as an impedance converter. With the knob in this position, you can compensate for sound losses that can occur when long cables or multiple effects are used.

THE LEHLE SUNDAY DRIVER II AS A BOOSTER:
A buffer starts to amplify the signal when the gain controller is turned further in the clockwise direction. Tube amplifiers, preamps and distortion pedals can thus be driven slightly beyond the limit.
Since the frequency response of tubes especially are not linear, the LEHLE SUNDAY DRIVER II ensures that the resultant overdrive distortion sounds harmonious and amplifies less treble in "S" mode as the "Boost" rises. The result can range from a pleasant sound with no shrillness, up to a silky warm, harmonious overdrive distortion on tube amplifiers.

7. BASE AND FIXING
If required, mount the LEHLE SUNDAY DRIVER II to a pedalboard using the mounting kit.

The LEHLE SUNDAY DRIVER II can be mounted to a plate such as a pedalboard using the two holes in the bottom of the pedal.
You can find the optional LEHLE Mounting Kit V3 (order number 100981) online at www.lehle-components.com.
To mount, undo the four housing screws by using a 2.5 mm Allen key and detach the cover.

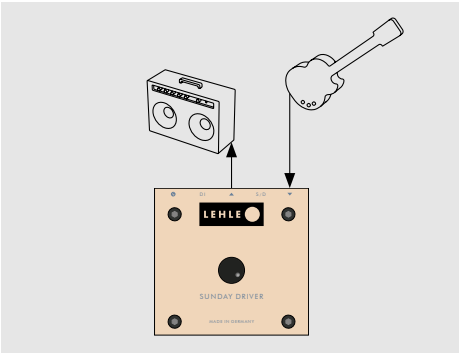
Then fix the device base to a base plate using the two screws, the washers and the spacers of the Mounting Kit.
Attach the cover and tighten the four housing screws - done!
For flexible solutions we recommend using 3M Dual Lock™ instead of Velcro for stability, which you can also find in handy sizes at www.lehle-components.com

If you are using the Velcro / Dual Lock™ method, please make a note of the serial number on the bottom of the pedal before you cover it, in case you have a support question for us later and don't fancy dismantling your board!

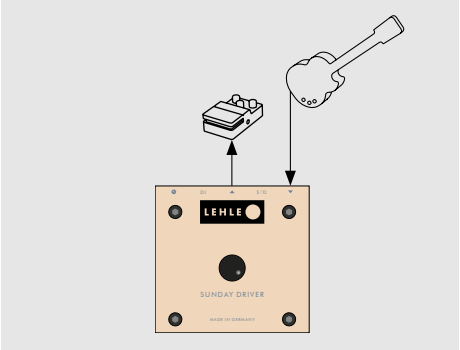
TYPICAL USES
LIVE

Long cable runs and complex effects cascades on stage or in the concert hall can cause unwanted signal loss.
Where electric guitars are used with tube amplifiers, an additional boost is often necessary, to generate a harmonious distortion.
The LEHLE SUNDAY DRIVER II is designed to perform both tasks perfectly.

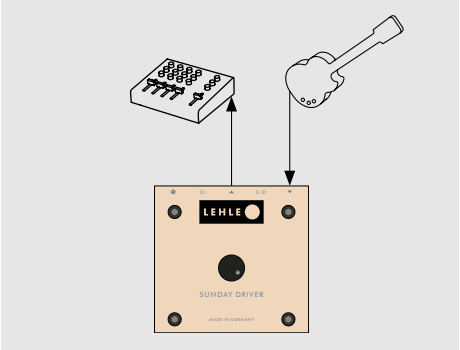
CABLE DRIVER



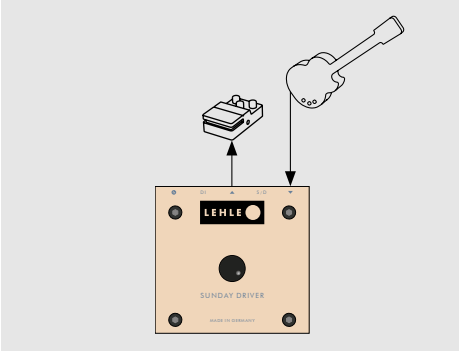
LINE-DRIVER



DI BOX WITH PREAMP



LEHLE SUNDAY DRIVER II AS A LINE DRIVER



DEVICE CONNECTION

▼	Input	Instrument
▲	Output	Input effect(s)

Electric guitarists and bassists often like to use a large range of effects switched one after the other, to get exactly the sound they want.
There is, however, a danger that the signal will lose clarity, treble and volume significantly due to the array of effects.

With long cable runs and the large number of contact crossings on connectors and sockets, these sound losses can even occur if the effects pedals are True-Bypass.

It's easy to get an idea of how much sound you're losing - firstly connect your instrument directly to the amplifier, and then through the effects rig.

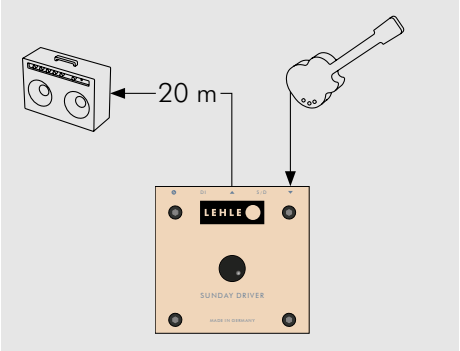
This sound loss can be eliminated by positioning your LEHLE SUNDAY DRIVER II as a line driver before the effects cascade in the signal path.

HOW TO DO THIS

1. Connect your instrument to the Input socket (1) of the LEHLE SUNDAY DRIVER II.
2. Connect the first effects device in the serial chain to the Output socket (3) of the LEHLE SUNDAY DRIVER II.
3. Switch the S/D selector (2) in the D position, for "Driver".
4. Turn the Gain controller (6) to the left limit ("7 o'clock position").
5. Done!

The sound characteristics of some effects (e.g. Treble Booster, Fuzz, vintage Chorus and vintage Echo) may be modified by positioning the LEHLE SUNDAY DRIVER II before them in the line. The remedy in such cases is to use one or more LITTLE LEHLE III or LEHLE D.LOOP SGoS, so that the effects can be switched passively and without loss into the signal path, thus retaining their true sound characteristics.

LEHLE SUNDAY DRIVER II AS A CABLE DRIVER



DEVICE CONNECTION

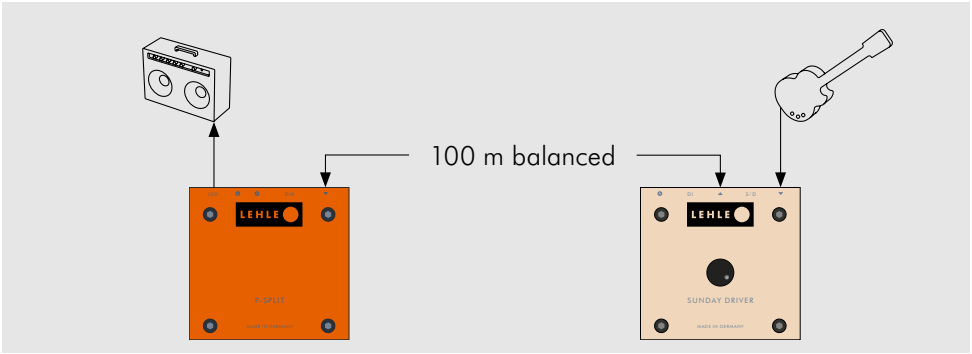
Input Instrument

Output Amplifier

The use of long connecting-cable runs on stage involves the danger of significant and audible losses of sound quality.
You can eliminate such losses by positioning the LEHLE SUNDAY DRIVER II as a cable driver in the signal path directly after your instrument. The LEHLE SUNDAY DRIVER II has a low-impedance output, which stops sound losses caused by over-long cable runs.
The full sound quality stays in the signal even at cable runs of 20 meters.

HOW TO DO THIS

1. Connect your instrument to the Input socket (1) of the LEHLE SUNDAY DRIVER II.
2. Connect the Output socket (3) of the LEHLE SUNDAY DRIVER II to your amplifier.
3. Switch the S/D selector (2) in the D position, for “Driver“.
4. Turn the Gain controller (6) to the left limit (“7 o’clock position“).
5. Done!



DEVICE CONNECTION
LEHLE P-SPLIT III

▼	Input	Output LEHLE SUNDAY DRIVER II
ISO	Output	Amplifier

If you play on very big stages and need long cables over a large distance we recommend transmitting the signal balanced. From 10 meters on it can make sense.

Tap the output of the LEHLE SUNDAY DRIVER II via TRS-TRS cable, send it balanced and loss-free to a LEHLE P-SPLIT III which unbalances it again.

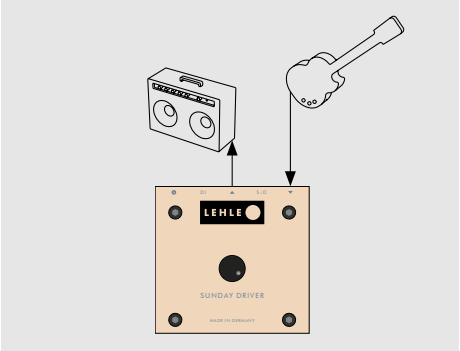
DEVICE CONNECTION
LEHLE SUNDAY DRIVER II

▼	Input	Instrument (passive)
▲	Output	Input LEHLE P-SPLIT III

HOW TO DO THIS WITH A LEHLE P-SPLIT III

1. Connect your instrument to the Input socket (1).
2. Use a balanced TRS-TRS cable and connect it to the Output socket (3) of the LEHLE SUNDAY DRIVER II and the input of the LEHLE P-SPLIT III.
3. Use a short unbalanced TS-TS cable to connect the ISO output to the amplifier.
4. Switch the S/D selector (2) in the D position, for “Driver“.
5. Turn the Gain controller (6) to the left limit (“7 o’clock position“).
6. Press the DI switch (4).
7. Done!

LEHLE SUNDAY DRIVER II AS A BOOSTER



DEVICE CONNECTION

▼	Input	Instrument
▲	Output	Amplifier

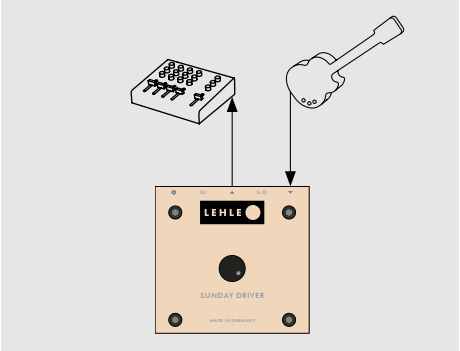
The LEHLE SUNDAY DRIVER II can be used as a booster to provide your sound with rather more punch and presence on stage.
Experience demonstrates that electric guitars and basses can sound significantly better if the signal into the amplifier is boosted slightly.

With a low gain setting, the sound generated is pleasant, with absolutely no shrillness, while increasing gain level results in a silky-warm, harmonious overdrive distortion.
Please also take a look at Section 6 (Gain controller): the LEHLE SUNDAY DRIVER II as a booster.

HOW TO DO THIS

1. Connect your instrument to the Input socket (1) of the LEHLE SUNDAY DRIVER II.
2. Connect your amplifier to the Output socket (3) of the LEHLE SUNDAY DRIVER II.
3. Switch the S/D selector (2) in the S position, for “Sunday“.
4. Turn the Gain controller (6) as much to the right until you hear the sound that you want.
5. Done!

LEHLE SUNDAY DRIVER II AS A DI BOX WITH PREAMP



DEVICE CONNECTION

▼	Input	Instrument
▲	Output	Mixer or stage box

The signals from piezo pickups, like those used on acoustic instruments, are often too weak for the line inputs of a mixer.

Pickups of passive basses can lose their strength and vitality due to long cables. When recording, the LEHLE SUNDAY DRIVER II is again an ideal tool, turning a high-impedance instrument signal into a low-impedance instrument signal and amplifying it appropriately for the line input of a mixer.

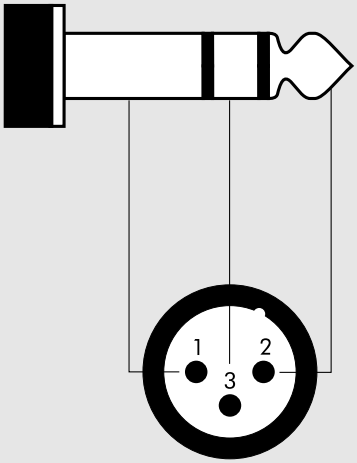
Thanks to the optional external phantom power and balanced signal transfer, you'll find the LEHLE SUNDAY DRIVER II is an ideal studio quality DI box in a compact form for use onstage.

HOW TO DO THIS

1. Connect your instrument to the Input socket (1) of the LEHLE SUNDAY DRIVER II.
2. Connect the output (3) of the LEHLE SUNDAY DRIVER II to the input of the mixer or stage box (unbalanced or balanced).
3. If you want to use the phantom power of a mixer, press the DI switch (4) and then activate the phantom power. For this you need a TRS-XLR cable.

4. According to the sensitivity of the connected instrument, switch the S/D selector (2) to position D or S.
5. Adjust the Gain controller (6) so that the signal is optimal for your mixer.
6. Done!

In S mode and with a gain setting of between 11 and 12 o'clock or more, instruments with piezo pickups, which can otherwise often sound very harsh and shrill, take on a pleasantly warm and silky tone.



Balanced signal lines are fitted with XLR connectors or TRS (Tip Ring Sleeve) jack plugs. In a balanced signal line, the signal is present in phase at the tip, as in the case of an unbalanced signal line (XLR Pin 2).
The second signal conductor carries the same signal, but with the opposite polarity or mirror-image phase (Ring, XLR Pin 3).
The third conductor is the screening, and again constitutes the signal ground (Sleeve, XLR Pin 1).

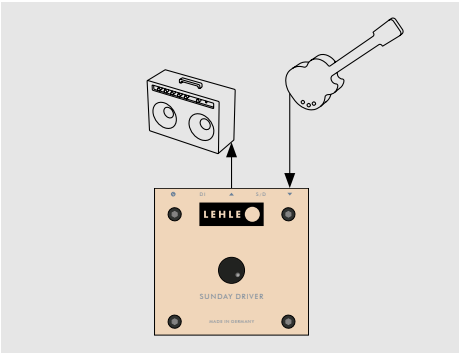
JACK	CABLE	XLR
Sleeve	Ground	Pin 1
Ring	Signal in mirrored phase	Pin 3
Tip	Signal in phase	Pin 2

TYPICAL USES IN THE STUDIO

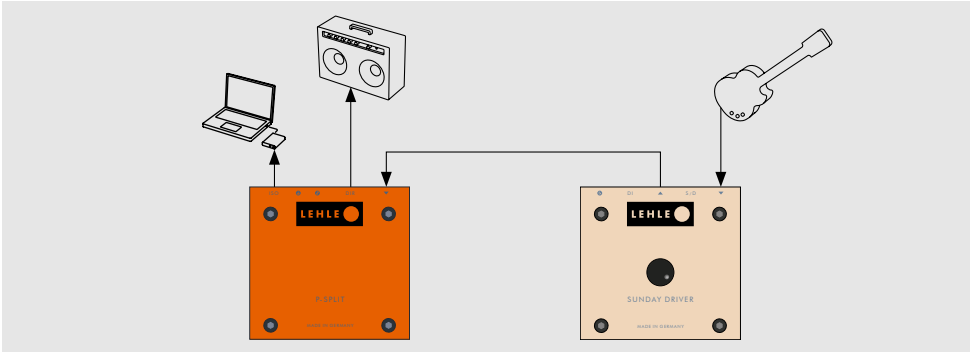
The LEHLE SUNDAY DRIVER II gives top performances not only on stage and in the concert hall, but also in the recording studio.

Its wide 20 to 100,000 Hz transmission range and extremely good signal-to-noise ratio makes it the ideal recording preamp.

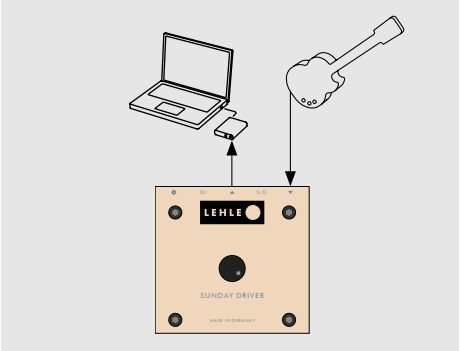
RECORDING PREAMP



RECORDING PREAMP WITH LEHLE P-SPLIT III



LEHLE SUNDAY DRIVER II AS A RECORDING PREAMP



DEVICE CONNECTION

▼	Input	Instrument
▲	Output	Input Audio interface

Audio interfaces (sound cards) often do not offer a high-quality or high-impedance input necessary for direct recording from an instrument.

Connecting the instrument to the standard line input of such devices generally fails, because the instrument's signal level is too low.

The result is a significant sound discoloration, due to the incorrect input impedance of the line input.

Here, you can use the LEHLE SUNDAY DRIVER II to amplify your instrument's sensitive signal through its high-impedance input to make the signal low-impedance and thus compatible with your audio interface, while all the time retaining your instrument's original sound in the digital field.

By avoiding poor-quality or multiple preamps successively, you keep the noise floor at a very low level.

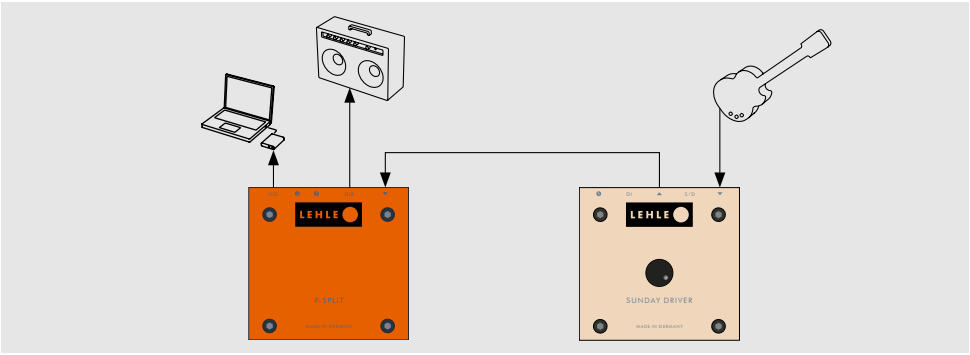
HOW TO DO THIS

1. Connect your instrument to the Input socket (1) of the LEHLE SUNDAY DRIVER II.
2. Connect the output (3) of the LEHLE SUNDAY DRIVER II to the input of the audio interface (unbalanced or balanced).
3. If you want to use the phantom power of the audio interface, press the DI switch (4) and then activate the phantom power. For this you need a TRS-XLR cable.

4. According to the sensitivity of the connected instrument, switch the S/D selector (2) in position D or S.
5. Adjust the Gain controller (6) so that the signal is optimal for your audio interface.
6. Done!

If your audio interface offers phantom power, you can operate the LEHLE SUNDAY DRIVER II with this.
If the inputs are balanced you can tap the LEHLE SUNDAY DRIVER II's output in balanced with a TRS jack.
For both take a look at "4. DI switch".

LEHLE SUNDAY DRIVER II AS A RECORDING PREAMP COMBINED WITH THE LEHLE P-SPLIT III



DEVICE CONNECTION LEHLE P-SPLIT III

▼	Input	Output LEHLE SUNDAY DRIVER II
DIR	Output	Amplifier
ISO	Output	Interface Low-Z

DEVICE CONNECTION LEHLE SUNDAY DRIVER II

▼	Input	Instrument (passive)
▲	Output	Input LEHLE P-SPLIT III

It can be useful during a recording session to hear your instrument through an amplifier simultaneously, while recording.

This enables you to play your instrumental part with your usual sound, while your "dry" signal is recorded - a technique that has positive benefits for performance feel, therefore also for the recording, whilst offering the possibility of also sending the recorded signal to an amplifer and reamping it.

The combination of the LEHLE P-SPLIT III and the LEHLE SUNDAY DRIVER II makes this method possible.

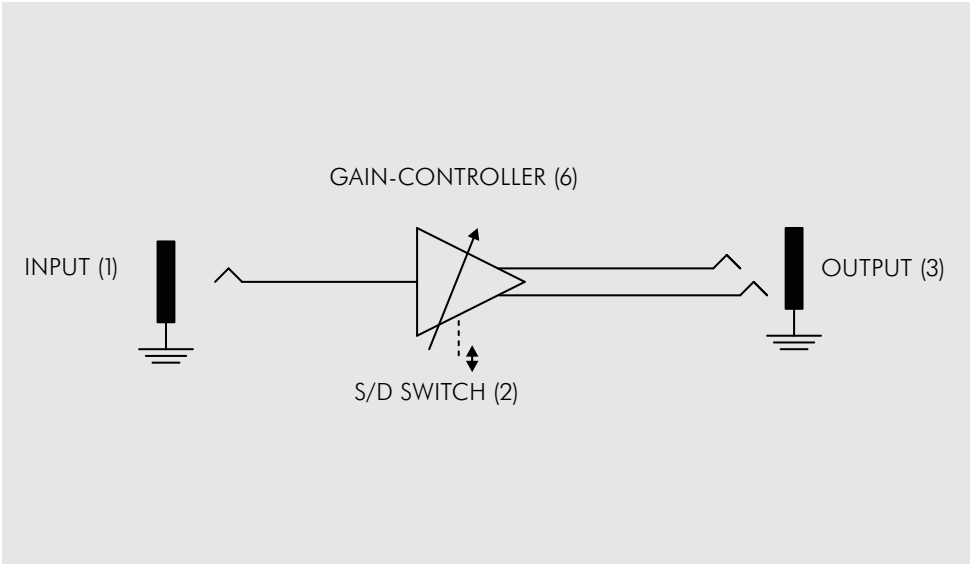
HOW TO DO THIS

1. Connect your instrument to the input socket (1) of the LEHLE SUNDAY DRIVER II.
2. Connect the output (3) of the LEHLE SUNDAY DRIVER II to the input socket of the LEHLE P-SPLIT III.
3. Connect your amplifier to the DIR output of the LEHLE P-SPLIT III.
4. Connect the ISO output to the input of your audio interface.
5. Switch the S/D (2) selector to the D position for "Driver".
6. Adjust the Gain controller (6) so that your amplifier sounds as good as usual.
7. Done!

The LEHLE P-SPLIT III also has other functions, such as inverting the phase at the ISO output or an extra galvanic separation of the signal to get rid of ground loop noise.

Please read the LEHLE P-SPLIT III operating manual for a precise explanation of the use and effects of those features.

LEHLE SUNDAY DRIVER II
SIGNAL FLOW DIAGRAM



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