

RUPPERT MUSICAL INSTRUMENTS





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### Acoswitch IQ DI

The Acoswitch IQ DI acoustic guitar preamp opens up a new dimension in acoustic guitar pre-amplification and signal routing, offering an “all-in-one” solution for acoustic guitar players, whether used in stand-alone mode or as the control center of a pedal board.

The Acoswitch IQ DI is simultaneously an A/B-input switcher, high-end preamp, clean booster, parametric EQ, FX Loop switcher and, last but not least, professional quality DI box, making it an essential item on every serious acoustic guitar player's equipment checklist.

German manufacturing and best brand components provide maximum reliability and optimal treatment of the electrical signal from your instrument, whether from a magnetic or piezo pickup.

Uncompromising in sound, flexibility and manufacturing our high-end acoustic guitar preamp will prepare you for any situation, be it in live performance or recording sessions.

For further information we invite you to visit our internet site [www.rmi.lu](http://www.rmi.lu)





## The Acouswitch as A/B Input Switcher

The Acouswitch IQ DI offers two high impedance inputs with discrete circuit design. If you connect two instruments to input A and B, the A/B footswitch allows you to toggle between the two. The signal from instrument A is routed to channel A and the signal from instrument B is routed to channel B. If only one instrument is connected to input A, the A/B footswitch routes this signal to channel A or channel B. This enables you to use the footswitch to call up a suitable sound setting for the second instrument or to make two sound settings available for one instrument - when changing from finger style to plectrum playing, for instance.

The "MIX" switch located between the Input A and B allows you to combine and mix both channels. This guarantees excellent sound results with instruments equipped with two different pick-up systems.



## The Acouswitch IQ DI as High-End Preamp with Parametric EQ and Body Contour Control

Channel A of the Acouswitch IQ DI features a high-end preamp, a three-band EQ, designed for acoustic instruments, offering bass, semi-parametric mids with a broad frequency range (100 Hz to 6 kHz) and treble controls.

The body contour control acts on both channels. Turn the body contour level to the left and it acts as a narrow notchfilter to prevent feedback in a frequency range between 45 Hz and 500 Hz, without altering the sound of your instrument. Turn to the right and the body contour level acts as a broadband low to low-mid frequencies level booster to produce a fatter sound or make small enclosures sound larger.



## The Acouswitch IQ DI as FX Looper

The Acouswitch IQ DI offers two effect loops: a passive serial loop and a switchable infinitely variable mixing loop that enables you to go from a completely dry signal, through parallel on to serial looping. A phase inverter switch ensures that any out-of-phase signals do not cancel each other out in parallel mode. And a Tuner Out keeps the tuner out of the signal path.

## The Acouswitch IQ DI as a Real Clean Booster

A footswitch and a volume control allow you to add a second high-end amplification stage upstream of the Mix Loop. This allows you to feed tracking or overdrive/distortion pedals with an adequate input signal. If the Mix Loop is not in use, the booster serves as an extremely clean solo booster.



## The Acouswitch IQ DI as a DI Box

The Acouswitch IQ DI acoustic guitar preamp can be used to send an output signal directly to a mixing console or a recording unit. The high-quality components and features of the Acouswitch IQ DI (high-end preamp, ground-switch, pre/post signal-processing switch, pad for output attenuation) in combination with the Lehle True Sound Technology make the Acouswitch IQ DI an excellent DI box, whether you're using it at a live gig or in the studio.



## The Acouswitch IQ DI as a Line Mixer

The Acouswitch IQ DI can also be used as a line mixer. To do this, the return socket of the Mix Loop is used as input and the ratio of this signal to the signals coming from inputs A and B is adjusted by using the mix control.

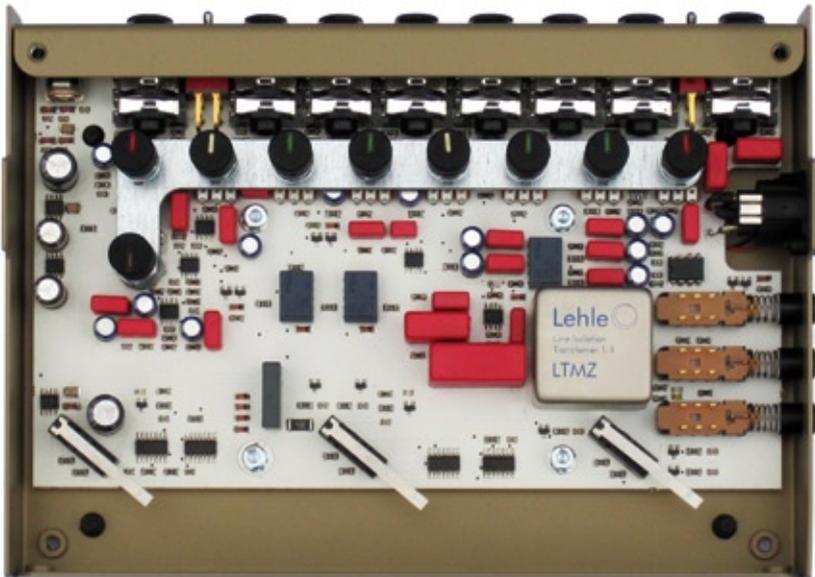


## What is Lehle True Sound Technology?

Lehle True Sound Technology is a combination of several electrical design measures with one aim: to transmit the sound and character of an instrument without altering it.

The voltage supplied to the Acouswitch IQ DI is internally rectified, filtered and stabilised and then brought to 18V. This allows the Acouswitch IQ DI to handle pick-up power peaks of up to +/- 7 Volt without problems. The result of this headroom is an open and dynamic sound and a guarantee that no sound details are lost. All active components are designed to effortlessly handle signals reaching the megahertz range. At the output, the frequency bandwidth is limited to the audible frequency range to prevent HF interference from disturbing the electronic circuitry. This guarantees an optimal transient response by the circuitry and is key to obtaining a sound that is transparent and, above all, cuts through.

For switching, Lehle True Sound Technology uses exclusively gold-plated contact relays and/or gold-plated switches. The decaying signal from a string is so weak that contact materials with lower conductivity have a negative impact on the sound. Ordinary footswitches use contact materials developed to switch high voltages (e.g. electrical power tools) as this is their main field of application. This can be heard, for example, when, after a switch has been in use for some time, a decaying tone starts to break off abruptly. Relays and switches with gold-plated contacts do not have this problem and even the smallest electrical signals can be transmitted for years without being negatively affected. In addition, the relays used in the Acouswitch IQ DI have a lifetime of about 100 times as long as those used in ordinary footswitches.



## The Lehle transformer

The Lehle transformer allows for galvanic isolation at the DI output. Only real physical galvanic isolation guarantees complete elimination of ground hum and annoying background noises in any live or studio situation. The Lehle transformer also offers a high level of safety as it isolates the Acouswitch IQ DI from current peaks of up to 2000V.

**Note:** Transformers are widely thought to have a negative impact on sound. This does not apply in the case of the Lehle transformer used in the Acouswitch IQ DI - both the DI Out and the Line Out of the Acouswitch IQ DI can handle a frequency range from 50Hz (low cut filter) to 100KHz. In addition, the transformer does not affect the headroom and levels of up to 16dBu are handled without a problem.

## The working principle of the Acouswitch IQ DI footswitches

Footswitches are pressed thousands of times during their long lifetimes - sometimes sensitively, but sometimes more brutally depending on the situation and the musician's temperament. An ordinary footswitch will switch up to 20,000 times before wearing out mechanically or electrically, which means that it will either stop working altogether or the signal will start to lose transparency and dynamics.

With this in mind, the Acouswitch IQ DI is equipped with highquality Lehle footswitches. Here the foot of the musician does not press an ordinary footswitch but an actuator button that activates a pushbutton inside the unit via a metal lever. Because the actuator button and the internal pushbutton are not directly connected,

the load exerted by the foot is absorbed by the actuator button and the housing, preserving the circuit board from mechanical stress. The design is as robust as possible and the actuator button is mounted in a special socket, making for easy and silent operation.

Inside the Acouswitch IQ DI the impulse from the pushbutton activates special goldplated relays via discrete logic circuitry. This way the switching is done only via high-quality relays and thus guarantees absolutely reliable and lossfree switching of very sensitive signals. The switching technology and the goldplated relays in the Acouswitch IQ DI are designed to operate for up to two million switching cycles!



### Technical data:

Weight:	1375g
Length:	16,2 cm
Width:	22,0 cm
Height:	4,2 cm
Voltage range:	9-20 V AC/DC
Power consumption:	max. 150 mA
Frequency range:	50 Hz (low cut filter) – 100 KHz
Distortion:	0,005 %
Input A impedance:	5 MOhm
Input B impedance:	5 MOhm
Output impedance:	150 Ohm
Signal to noise ratio:	-92 dB @ 1kHz, 0dBu (A weighted)
Max. level:	4,5V RMS (ca. 15 dBu)
Max. gain:	+/- 15 dB

### EQ

Bass:	+/-18 dB @ 83 Hz (peaking)
Mid:	+/-18 dB @ 100 Hz – 6 kHz (peaking)
Treble:	+/- 18 dB @12,5 kHz (shelving)
Body-Contour:	- 24 dB (notchfilter) +18 dB (peaking) @ 45 Hz – 500 Hz



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