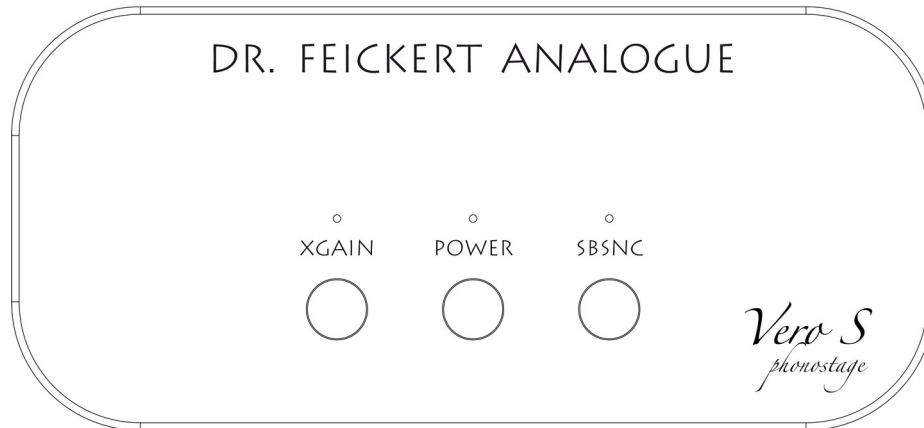


DR. FEICKERT ANALOGUE

INSTRUCTION MANUAL

FOR PHONOSTAGE

VERO S



Preface

First of all, thank you for purchasing our product! We realize you have choices and appreciate your confidence in our products. Reading this manual will help you getting the most out of your phono equipment and we strongly recommend to carefully read the complete instructions to get the best results in a safe, fast and reliable way.

After our **VERO** preamplifier was generally well received not only by our customers but also in the press we were repeatedly asked whether it is possible to create a small phonostage based on the design of the **VERO** with just one input. Well, it is possible - you are holding it in your hands!

During our development, our focus was to offer the best possible adaptability of MC cartridges. We use the same circuitry as in the bigger **VERO** preamp, but we have removed the remote control adjustability.

We go to the same lengths here as with its bigger brother, because precise equalization is only possible if the tightest tolerances are adhered to. For the production of the **VERO S**, all critical components are measured to a tolerance of less than 1%; an effort that pays off in terms of sound and is clearly noticeable.

Since a high gain (up to 66 dB) is also required for equalization, our focus was on extremely low-noise ICs. Nowadays, the market offers a wider range of potential candidates, but here too we used the tried and tested component already installed in the large **VERO**. This means

that we were able to achieve the same low noise level that ensures the **VERO's** good sound and great musicality.

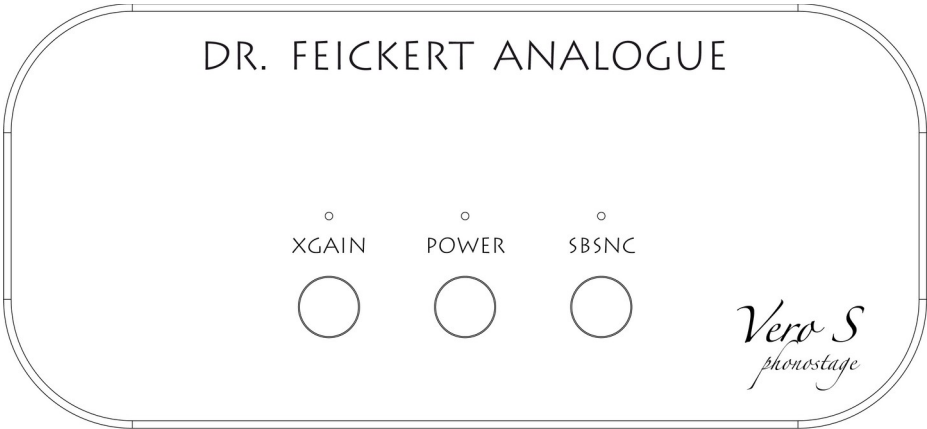
The power supply is realized with a plug-in power supply unit. For maximum sound quality, we also offer customized versions of our LINEAR power supply unit. Ask your trusted dealer about this.

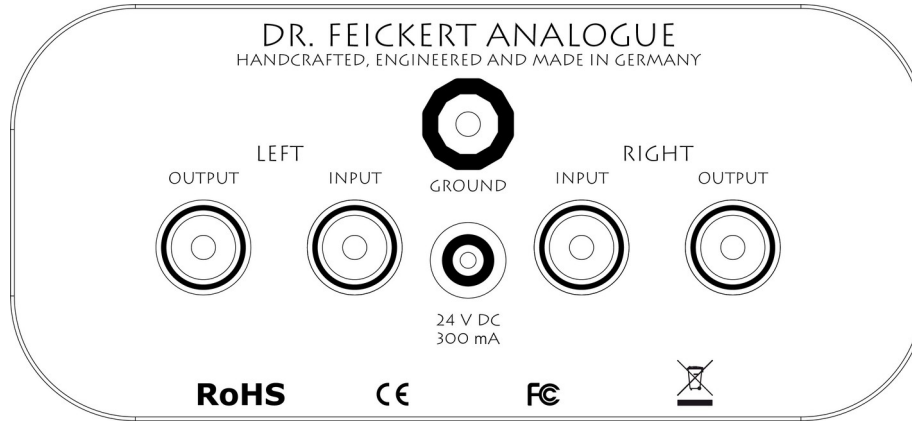
CAUTION: The *VERO S* must only be operated with the power supply unit supplied or one approved by us with 24 V DC voltage. Power supplies that have a connection from the negative pole to protective earth on the mains side will cause immediate destruction of the power conditioning inside *VERO S*. Defects of this type cannot be accepted as a warranty claim!

As the **VERO S** is connected to a preamplifier or an integrated amplifier via an RCA cable, special requirements addressed on the **VERO S'** output stage. The output stage has a very low output resistance. Even cables longer than 2 m can be connected without any negative effect to the sound quality. However, the **VERO S** should be located in the immediate vicinity of the turntable and the distances from the cartridge to the **VERO S** should be kept as short as possible. This minimizes transmission losses and potential interference.

Operation and connections

The following two pictures show the front and back view of the **VERO S**.





1. Control buttons and indicator LEDs

Press the center **POWER** button to switch the **VERO S** on or off. You will hear a clicking sound from the amp when it is switched on. This comes from the corresponding relay of the internal power supply. The LED above the button will shine brighter.

The **XGAIN** button boosts the output signal by 12 dB. This increases the output voltage from around 500 mV to approx. 2 V. Please note that this also increases the noise level by the same amount! If active, the corresponding LED above the button lights up.

The **SBSNC** button activates the optional built-in subsonic filter. We strongly recommend using it to reliably suppress very low-frequency components of the audio signal. This filter takes effect below the audible audio band and is not perceptible according to our listening tests. This prevents uncontrolled movements of the woofer cone and protects the connected power electronics from overloading. If active, the corresponding LED above the button lights up.

2. RCA connectors OUTPUT

These plugs deliver the output signal for the subsequent preamplifier or integrated amplifier. Connect this output to a high-level or line input of your preamplifier or integrated amplifier. These inputs are often labeled CD / TAPE / AUX.

3. RCA connectors INPUT

The tonearm cable (cartridge) is connected here. First set the appropriate gain and the correct terminating resistance and (if necessary) capacitance using the jumpers inside the device.

4. Power connector

The plug-in power supply unit included in the packaging is connected to this socket. **First establish connection between the power supply unit and VERO S before connecting the power supply to the mains!** This will ensure that there are no accidental short circuits on the output of the power supply.

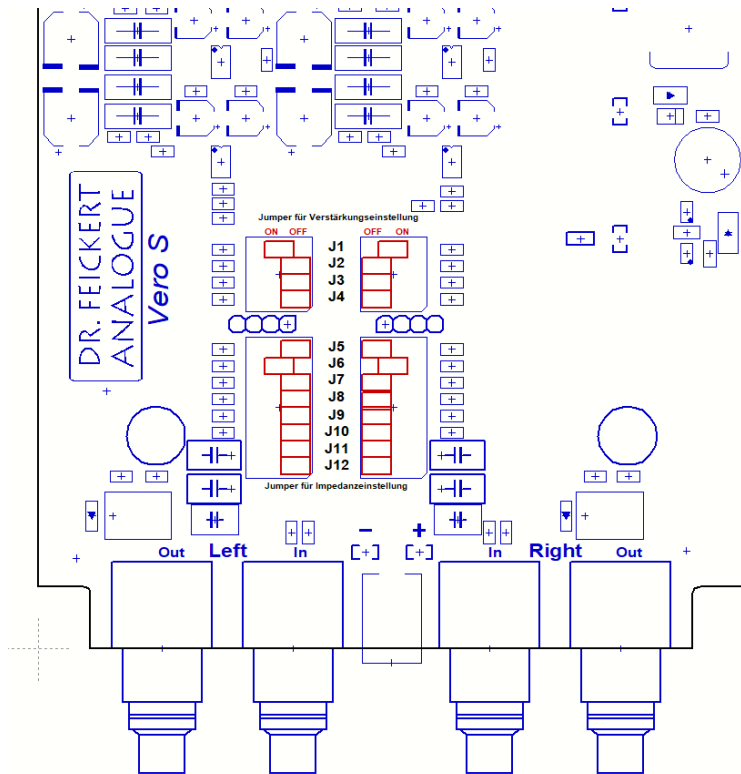
5. Ground (ground terminal)

This connector is used to connect the ground or ground cable, which is usually led out separately from turntables and / or tonearms. In most cases, there is a fork connector on these grounding cables. To connect this fork, unscrew the knurled screw of the ground connector slightly and then clamp the fork by softly tightening the knurled screw.

Simple stripped cables can also be connected by inserting them into the side hole after loosening the knurled screw and then tightening them again.

6. Jumper settings for gain, termination resistance and capacitance

To set the above parameters, the cover of the **VERO S** must be removed. The cover is held in place by 4 M3 x 10 screws (2 mm Allen key). There is no danger inside the device from mains voltage or DC voltages above 48 V (body protection voltage). **Nevertheless, we strongly advise you to disconnect the plug-in power supply from the mains before opening the unit. All settings must only be made when the amplifier is disconnected from the power supply/mains and we kindly ask to always take the greatest possible care when working on the unit!**



6.1 Gain settings (J1 to J4)

Jumpers J1 to J4 are used to set the gain of the **VERO S** in the range from 38 dB to 66 dB. Please refer to the table below for values. With these settings, you can achieve an output voltage of approx. 500 mV, which is DIN-compliant. To increase the output voltage to normal line level (approx. 2 V), please press the **XGAIN** button (LED above the button will light up). This raises the output voltage by 12 dB and you have approximately the level of a standard CD player. Please bear in mind that this will also increase the noise level by 12 dB!

Gain table for VERO S

J1	J2	J3	J4	gain in dB	cartridge output voltage
0	0	0	0	38	4 mV
0	0	0	1	42	2.5 mV
0	0	1	0	51	1.2 mV
0	1	0	0	55	0.9 mV
1	0	0	0	62	0.4 mV
1	1	1	1	66	0.24 mV

1 means: Jumper set to ON
0 means: Jumper set to OFF

A quick explanation on proper settings: Very often (especially in Japan) output voltages of cartridges are measured and specified at a reference of 4.36 cm/s. However, the DIN-

compliant reference is 5.6 cm/s. The conversion is very simple. Simply multiply the specified value by a factor of 1.3 and you have the correct output voltage for the above table. The setting with 38 dB gain is overload-safe up to at least 8 mV and will work without any distortion.

6.2 Load settings (J5 to J10)

These jumpers are used to set the input load impedance separately for each channel. Please use the following table as a guide for the settings. If your cartridge manufacturer supplies the generator impedance only, simply choose a load setting of approx. 10 times of this value – this is a common rule of thumb.

load settings of VERO S

	10	100	220	470	1k	1k8	
	J5	J6	J7	J8	J9	J10	load Ohm
	1	1	1	1	1	1	8
	1	1	0	0	0	0	9
	1	0	0	0	0	0	10
	0	1	1	1	1	1	55
	0	1	1	1	1	0	57
	0	1	1	1	0	1	58

0	1	1	0	0	1	66
0	1	0	1	1	1	73
0	1	0	1	1	0	76
0	1	0	1	0	1	79
0	1	0	0	1	1	86
0	1	0	0	1	0	91
0	1	0	0	0	1	95
0	1	0	0	0	0	100
0	1	1	1	1	1	121
0	0	1	1	1	0	130
0	0	1	1	0	1	138
0	0	1	1	0	0	149
0	0	1	0	1	0	180
0	0	1	0	0	1	195
0	0	1	0	0	0	219
0	0	0	1	1	1	270
0	0	0	1	1	0	318
0	0	0	1	0	1	370
0	0	0	1	0	0	465
0	0	0	0	1	1	634
0	0	0	0	1	0	979
0	0	0	0	0	1	1734
0	0	0	0	0	0	47000

1 means: Jumper set to ON
0 means: Jumper set to OFF

6.3 Load capacitance

Jumpers **J11** and **J12** can be used to add input capacitance for correct load of MM / MI cartridges. Jumpers **J5** to **J10** all remain open for MM cartridges, as the standard resistive load for MM cartridges is 47KOhm.

load capacitance table of *VERO S*

J11	J12	load capacitance	load Ohm
0	0	ca.100 pF	47000
1	0	320 pF	47000
0	1	570 pF	47000
1	1	790 pF	47000

1 means: Jumper set to ON
0 means: Jumper set to OFF

The input capacitance of the **VERO S** without any additional capacitance added is approx. 100pF. Any capacitance that is applied on top must be added to this input capacitance. The cable capacitance of the connecting cables between the turntable and the preamplifier must also be added. The cable capacitance of the cable in the tonearm tube as well. This usually yields in values of more than 200pF - 300pF without additional capacitance activated in the **VERO S**. This capacitance along with the inductance and resistance of the MM or MI cartridge form a low-pass filter. The higher the selected terminating capacitance, the lower

the cut-off frequency of the low-pass filter. This will result in cut-off of high-frequency music components! **Our recommendation: Choose values that are absolutely necessary for trouble-free operation only!**

Our general installation recommendations

No electronic device likes any direct sunlight or the radiant heat of a heater nearby, and the **VERO S** is no exception. Self-heating is very low, but nevertheless care should be taken to ensure sufficient air circulation.

Phonostages are devices with a huge signal amplification. Therefore, such units also amplify any interfering signals and / or interference coming from wherever. The most frequently encountered interference signal comes from transformers which can cause humming due to the 50/60 Hz mains frequency. Therefore, please ensure that the **VERO S** is placed far enough away from other devices that have an internal mains transformer.

Never place the **VERO S** on top of other hi-fi devices. Sufficient distance (at least 50 cm) from other mains transformers must be ensured. Transformers of halogen/LED lighting systems and power amplifiers in particular can have a strong stray field that will most likely cause humming and should therefore be as far away from the **VERO S** as possible. Rule of thumb: The larger the transformer – the large the necessary distance!

Mains cables to any electrical device or the power-line cables in the wall also are sources of interference. You will get the best results by keeping a sufficient distance. In our experience,

the best solution is to place the phonostage in the closest vicinity of the turntable - as already mentioned at the beginning of this manual. **Last but not least, the cables from the tonearm to the VERO S are also very sensitive to interference, depending on their construction. If hum occurs, first check the cable routing to the VERO S and ensure sufficient distance from potential sources of interference.**

Maintenance instructions

Never treat the device with any **abrasive cleaner** or similar. Light soiling caused by dust, fingerprints or even splashes from drinks or leftover food (yes, we've seen that too) can be wiped off with a damp cloth, sponge or microfiber cloth. Mineral oils, as well as animal and vegetable greasy residues, can also be wiped off with isopropyl alcohol (diluted with a little water).

Always make sure that no cleaning fluid gets inside the phonostage or power supply.

Technical data:

gain	: 38 – 66 dB adjustable in 16 steps
load	: from 8 Ohm to 47.000 Ohm in 29 steps (see table)
	: if no additional internal resistors switched 47 kOhm
capacitance	: capacitance of inputs ~ 60 – 100pF
	: additional capacitance values 220pF and 470pF
input	: 1x Cinch
output	: 1x Cinch
frequency response	: 20Hz – 20kHz ± 0.2 dB RIAA
subsonic-filter	: below 20 Hz, switchable
THD + N	: < 0.02%
channel separation	: < -96 dBA
dimensions B x H x T	: 123 mm x 65 mm x 285 mm
weight	: 1.75 kg
voltage	: 24 V DC – typically 250 mA consumption

Subject to change

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