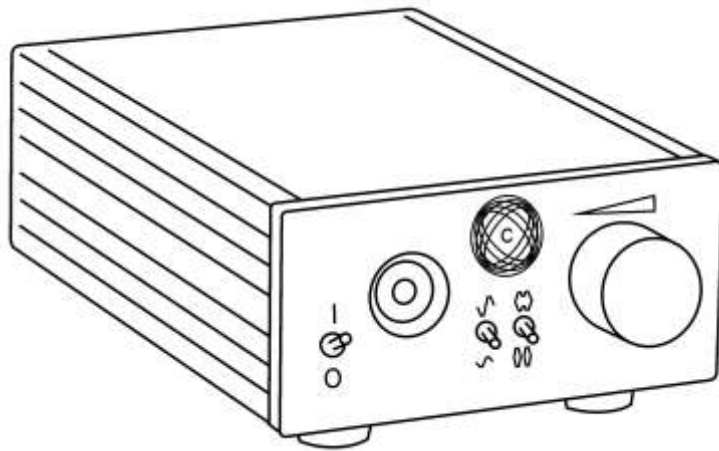


CORDA SWING



USER MANUAL

Dear music-lover,

The *CORDA SWING* is a small-power amplifier, specially designed to drive headphones. It offers a sound quality and driving capabilities far beyond that of an ordinary headphone socket found on a CD-player or amplifier and thus allows you to exploit the full sonic potential of your phones.

Due to the close contact to your ears, headphones provide an extreme channel separation whilst listening to stereo recordings. Unlike loudspeakers, none of the sonic information in the left channel is acoustically transferred to the right ear and vice versa. Although this adds to the extreme high level of detail that can be achieved with headphones, it subconsciously also introduces mental stress. The natural correlation of stereo sound interpreted by the brain is lost.

The *SWING* not only offers normal stereo reproduction of your music, but it also has a facility to add some of the left channel information to that of the right channel and vice versa. Thus mental stress is reduced and music can be enjoyed with more ease.

To obtain the best possible results with your new headphone-amplifier, we ask you to read these instructions carefully. The *CORDA SWING* was developed by music-lovers for music-lovers and we hope that it will serve you well for a long time.

Jan Meier

Power

The *CORDA SWING* has a built-in powersupply and can be connected to mains by a standard IEC powercord. The voltage range used, 100 .. (110) .. 120 Volts or 200 .. (220) .. 240 Volts, can be selected by an internal voltage selector switch. The knob of this switch is red and can be seen when looking through the slits at the rear side of the amp. If necessary the position of this knob can be changed through the slits using a thin screwdriver. Please follow the voltage indications 220V <> 110V at the amp.

The amp can be switched ON/OFF by the switch on the left frontside. If turned on the LED above the switch will be lit. Although power consumption is low we recommend to turn the amp off while not in use for a longer period of time.

On the rear side of the amp, as part of the power terminal, a small compartment can be found that contains a standard size T 100 mA fuse. If the amp is connected to a mains voltage > 200 Volts with the voltage selector set to 110V this fuse will blow and protect the amp. It can be easily replaced but please always use a fuse of the same value.

If the headphone plug is not properly inserted in the headphone socket this may result in a short-circuit of the output. This short circuit can also cause a fuse to blow. Before replacing the fuse always check the position of the headphone plug.

Connections

At the rear side of the *CORDA SWING* a pair of analog inputs allows you to connect a single audio source (CD-player, tuner, ...). If you use several sources that are all connected to a central amplifier, then you might prefer to connect the *SWING* to the tape-out of this amplifier. Although the source now can be selected by the Rec-switch, sound quality is not affected by the tone controls and the volume control of this central amp.

Volume control

The volume of the *SWING* is controlled by the dial on the front panel and is increased by clock-wise rotation. An additional gain switch to the right side of the headphone output, allows to change gain by around 14 dB to optimize volume control for low-sensitive (upper position, high gain) and high-sensitive headphones (lower position, low gain).

The driving capabilities of the *SWING* by far exceed that of a regular CD-player. This not only guarantees less distortion, but also has the danger of severe hearing damage. While listening to headphones we lack several feedback mechanisms on volume level that are present when we listen to loudspeakers. Much less distortion, no feeling of the lower frequencies by our body and no psychological restraints not to annoy our fellow-men easily seduces us to listen at volume levels that are detrimental to our hearing.

!!!! Please choose your volume setting with caution !!!!

Hearing damage from regular exposure to high sound levels progresses slowly but is irreversible and can result in permanent hearing noises (tinnitus) or hearing loss!

The natural crossfeed filter

In normal daily life people use various mechanisms to locate sources of sound.

* A sound from the right side not only reaches the right ear but, attenuated and delayed, is also heard by the left ear. The level of attenuation and the delay time of this crossfeed signal provide important directional information.

* Reflections at the oracles (pinnae) interfere with the soundwaves that directly enter the ear-channel and amplify or attenuate specific frequency components. These reflections depend on the direction of the soundwave and "color" the sound accordingly.

* Reflections on walls, ceiling and floor convey an extra feeling of space.

* The information obtained is further refined by movements of the head. Changes in sound levels, delay times and sound color refine the sense of direction.

With headphones the directional mechanisms are missing and as a result, their sound seems to stick to the inside of our head and to our ears. An unnatural soundfield is created. The brain misses logical clues for direction and this subconsciously results in mental stress. For this reason some people are even unable to use headphones.

The main directional information is provided by the time delay and level of attenuation of the sounds that reaches the opposite ear. The *SWING* can electronically simulate this process and thus reduce the adverse symptoms of headphone listening considerably.

The crossfeed circuitry of the *SWING* "recognizes" the virtual positions of the instruments and singers in a recording. The sound of an instrument in the middle of the soundstage will be equally present in both audio-channels and isn't given any crossfeed. A crossfeed signal is only generated for instruments not placed at the center of the soundstage. The more off-center an instrument, the stronger the crossfeed and the longer its delay. This we call "natural" crossfeed.

The action of the crossfeed filter of the *SWING* is controlled by the switch to the left side of the volume control. In its upper position the filter is activated. In its lower position the amplifier runs in normal stereo mode.

Technical data

Measures:	18.0 x 10.7 x 6.1 cm
Weight:	0.8 kg.
Power supply:	100..120V / 200..240 Volts mains selectable.
Average power uptake:	2 Watts
Amplification (high/low gain):	+10 / -3.5 dB
Maximum output voltage:	11 Volts
Maximum output current:	250 mA / channel
Input impedance:	11 kOhm
Output impedance:	< 1 Ohm