

# LINNENBERG

*General  
Instructions*

Audio components from LINNENBERG are easy to use and reliable for years to come. However, we cannot change the laws of physics. In order to achieve the highest possible audio quality from our components, certain parameters had to be tuned to the absolute maximum. This distinguishes them from simple consumer electronics and also means that a few restrictions must be observed. Below you will find a list that can help you avoid incorrect operation and thus keep you enjoying the LINNENBERG audio devices.

## (1) Earth – ground connections

All audio devices from LINNENBERG must only be operated with the protective earth conductor connected. The protective conductor is essential for the device to function properly, but also serves to protect the user in the event of electrical errors in the device itself.

Other than the grounding conductor in the power cord (earth, line, neutral), no other earth or grounding wires are permitted as this may result in fault conditions such as hum and noise or, even worse, short circuits. This particularly applies to the power amplifiers.

## (2) Interconnects

Use only approved interconnects. Extremely high-capacity cables must be avoided as they are not suitable for broadband amplifiers such as HÄNDEL. Using unsuitable cables can cause oscillations that can damage the amplifier or the speaker.

## (3) Humidity

Do not operate LINNENBERG audio devices in high humidity. Normally this is not a problem in living spaces. However, condensation can easily occur if an amplifier is brought from outside (car, parcel service) into a heated room in winter. The solid aluminium housing has a high heat (and cooling) capacity. For this reason, it may take hours for the device to reach room temperature. Do not connect the amplifier to the mains power until the enclosure is at room temperature.

#### (4) High temperature

All LINNENBERG amplifiers operate in Class A mode. Even the discrete line stages use a lot of power compared to other solid-state amplifiers. The high power consumption results in excellent sound, but also creates unwanted heat. You can't get the one without the other as a side effect. When operating the amplifiers at high room temperatures (> 25 degrees Celsius), avoidance of overheating must be taken into account.

Therefore:

- Ensure adequate ventilation. Operating in narrow racks without sufficient air supply is strongly discouraged, as this will significantly increase the operating temperature of the device. Even the one square meter heatsink area of a HÄNDEL is useless when there is no airflow.
- Do not operate the device with the feet removed or on a carpet, as this will block the air supply from below.
- Do not operate the devices 24/7, especially at higher ambient temperatures in summer, as there is no quality enhancement from continuous operation. The only thing that happens is that the lifespan of the electronic components (electrolytic capacitors) is greatly reduced.
- Keep away from other heat sources such as tube amplifiers.



LINNENBERG – ELEKTRONIK  
Germany  
Phone: +49/178/7672984  
Mail: info @ linnenberg-audio.de