THÖRESS

Hybrid Triode . Mono . Power Amplifier

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"EHT Mono Block"

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INSTRUCTION MANUAL

Thank you for purchasing the THÖRESS Hybrid Triode Mono Power Amplifier! The most powerful amplifier model in our product line provides 30, 40 or 50 watts of output power into a 8, 6 or 4 ohm load respectively, combined with very low output resistance (high damping factor). Such providing excellent drive capability for loudspeakers with medium to low efficiency or with critically low impedance which may present a challenge for our all-tube single-ended triode amplifier models.

The amplifier is built with meticulous hand construction using our proven point-to-point wiring techniques. Much care has been taken in arranging each aspect of the internal construction to ensure low noise performance, ease of service and the highest reliability for many years to come. Please read the following explanations and instructions carefully to get the most out of your EHT Mono Amplifier!

TUBES

The vacuum tube gain section of the EHT Mono Amplifier comprises a

6J5GT or 7A4

triode whereas a

12HG7 or 12GN7A

beam power pentode operated in triode mode is employed in the buffer section in-between the gain stage and the MOSFET output stage. The 6J5GT tube is a medium-gain octal base triode with fairly low transconductance from the early times of tube electronics, whereas the 12GN7 is a rather modern (all-glass) high transconductance power tube with high gain capabilities, making it an ideal choice for buffer applications. The amplifier comes with a set of tubes which have been carefully tested and hand-picked to meet tight specifications. It is strongly advisable to use only the carefully tested matched sets of driver tubes supplied by the manufacturer.

The use of tubes with questionable characteristics may lead to a degraded sonic and signal-to-noise performance. Even serious damage may occur in worst case scenarios!

GAIN & BASS BOOST SELECTOR

The EHT Mono Amplifier allows for on-the-fly adjustment of the gain (input sensitivity) in 7dB-steps by means of a 6-position rotary switch on the rear panel near the input jack. The (voltage) gain is

4dB (1.5-times) , 11dB (3.5-times), 18dB (8-times) and 25dB (20-times)

when the switch rests in position 1, 2, 3 and 4 respectively (neutral tonality, flat frequency response). Position 5 and 6 are assigned with bass boost presets. Summarizing, the mapping between selector positions, gain and sound effects is described by the chart below.

pos1: 4dB gain (1.5-times).
pos2: 11dB gain (3.5-times).
pos3: 18dB gain (8-times).
pos4: 25dB (20-times), maximum gain.
pos5: bass boost style-1.
pos6: bass boost style-2.

The gain selector enables the user to match the gain of the power amplifier with the gain of the line device with respect to the efficiency of the loudspeaker. Optimal gain matching is attained when the volume control on the line device in average rests near the middle position for a convenient listening loudness. Notably, the bass boost functions act in a much more subtle way than common bass boost facilities and do not rely on clumsy and sound degrading conventional tone control circuitry. Both functions are realized by interposing solely one additional capacitor (per channel) to the neutral mode circuit!

The bass boost functions of the EHT Mono Amplifier are implemented without the aid of clumsy and sound degrading conventional tone control circuitry!

FUSE

The EHT Mono Amplifier draws a current of about 1A (2A) from the 230Vac (115Vac) mains, corresponding to a power consumption of 230 watts. It is protected with a

2A slow-blowing 5x20mm fuse

in the power inlet. On rare occasions, the fuse may blow at the switching-on moment due to the current spike drawn by the mains transformer in this instant. Should this condition arise more regularly it may be advisable to use a fuse with slightly higher current rating.

SETUP

To set up a pair of EHT Mono Amplifiers switch off all components of the system and proceed as follows.
Do not connect the L+R amplifier to the mains until steps 1 to 7 have been taken.
1. Set the power switch (on the power inlet module) to the OFF position on both units.
2. Switch the gain selector to position 1 (lowest possible gain) on both mono blocks.
3. Install the tubes carefully. Hereby ascertain that the guide pin of the octal tube base is aligned with the notch of the socket.

Never switch on the amplifier until ALL tubes have been installed!

Never pull out a tube of the socket while the amplifier is powered on!

Always de-install the tubes and wrap them in their original protection case before shipping or transporting the amplifiers!

4. Bring the L+R amplifier into its final position. Make sure that there is sufficient clearance around the L+R amplifier to allow for adequate ventilation.

The EHT Mono Amplifier is a class-A device which runs hot after a few minutes of service. Thus, it requires adequate ventilation for safe operation!

5. Connect the L+R amplifier to the (line or full function) preamplifier.
6. Make sure that the volume control knob rests near the zero position or at least a very low angle of rotation.
7. Connect the R+L power amplifier to the R+L loudspeaker.
8. Connect the EHT monos to the mains (while leaving both units powered off).
9. Power on the preamplifier(s) and the program sources. Wait until the warm-up process on these components has come to an end.
10. Power on the L+R mono block.
11. Wait until the warm-up process on the L+R power amplifier has come to an end.

Always switch on the preamplifier and the program sources and first and then switch on the L+R power amplifier, observing a delay of at least 1 minute!

Never switch the preamplifier or a program source on or off while the L+R power amplifier is powered on!

12. Listen to music with the various program sources. Step by step move the gain selector on the L+R power amplifier counterclockwise up to a higher position until a saturated listening loudness is attained in average as the volume knob rests fairly close to the middle position. After this procedure the gain of the L+R power amplifier matches the gain of the line device with respect to the loudspeaker efficiency.

Re-consider the gain selector setting on the L+R mono block after changing the

loudspeakers and/or the preamplifier!

When powering off the system, always switch off the power amplifier first, then switch off the other components of the setup, observing a delay of at least 30 seconds!

Keep the original crate and the tube protection case for later use. They have been specifically designed for safe transport under rough conditions! Shipping the amplifier in inadequate packaging will result in catastrophic damages!

FEATURE OVERVIEW

- Vacuum Tube MOSFET Hybrid Power Amplifier offering 30, 40 or 50 watts of output power into a 8, 6 or 4 ohm loudspeaker load respectively, utilizing two vacuum tubes (6J5GT or 7A4 and 1x12HG7).
- Ultimate sonic excellence on par with no-compromise all-tube single-ended triode amplifiers, without involving exotic and costly power tubes.
- Excellent driving capabilities for critical loudspeaker loads due to very low output impedance (high damping factor).
- Unique zero-feedback EHT schematic: single-ended triode gain stage followed by a unity-gain vacuum tube buffer driving a unity-gain single-ended MOSFET output stage operated (class-A) at high idle current.
- Total avoidance of sound degrading protection circuitry.
- On-the-fly selectable gain via 6-position rotary switch on the rear panel, 2 of which positions are assigned with subtle bass boost presets.
- High grade electrolytic capacitors made in Germany in the power supply.
- Low noise dual-coil C-Core mains transformer made in-house for 230Vac (115Vac via jumper setting), 100Vac (Japan), 120Vac (USA, Canada), 220Vac (South Korea, China, Thailand, Indonesia), 240Vac (UK) or 245 Vac (Australia).
- Full hand construction, point-to-point wiring throughout.
- Nonmagnetic aluminum casework, front and rear panel with anodized printing, powder-coated lids.
- Dimensions 434x454x184 mm, 184=20 (feet)+134+30 (tubes over case),
- 454=434+20 (speaker binding posts), weight 15Kg.
- Dimensions of the shipping crate: 650 x 650 x 350 mm.

THÖRESS...

A Tribute to Professional Audio Components from the Golden Age of the Electronic Tube !