

TANDBERG

Power Amplifier 3003



A New Power Amplifier Design from Tandberg, featuring

- High power output —2 x 150 watts FTC in 8 ohms, 0.02% distortion.
- High slew rate, 70 V/ μ s due to input stage emitter compensation 9 dB/oct. slope.
- Peak clipping indicators.
- 5 protection circuits.
- Extremely efficient cooling system for the output transistors.
- A big amplifier in a small volume.

Unparalleled Performance

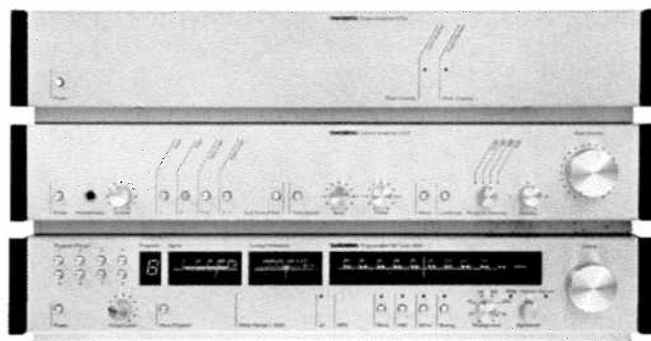
Tandberg "Series 3000" will excite the most demanding and critical Hi Fi enthusiast.

The picture shows from the bottom:

- Tandberg Programable Tuner (TPT 3001),
- Tandberg Control Amplifier (TCA 3002), and
- Tandberg Power Amplifier (TPA 3003).

Tandberg Cassette Deck 3004 and Tandberg Monitor Loudspeaker 3005 represent two more elements in this matched system.

Separately, each of these units represents a new peak in audio quality. Together they make an integrated system whose specification is unbeatable.

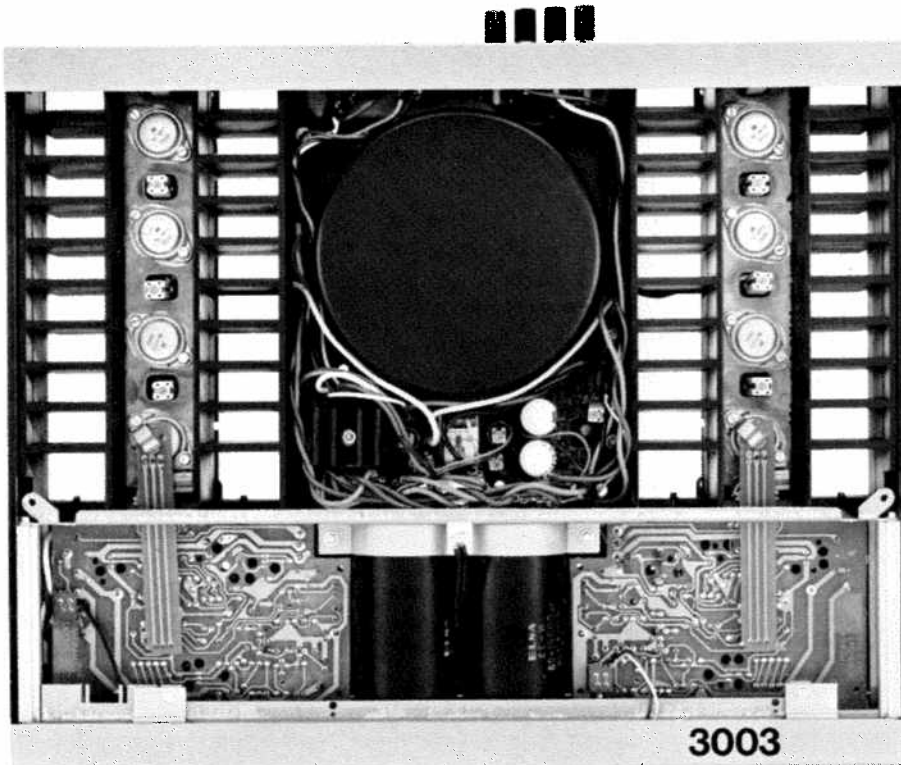


We set out to design and develop a system without compromise. A system engineered to maintain it's performance through years of hard use.

Judge Tandberg "Series 3000" for yourself. It will give you the ultimate in sound reproduction.

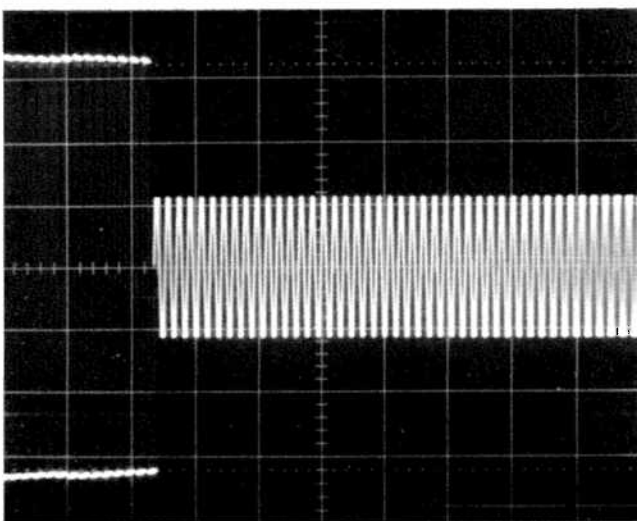
The power amplifier TPA 3003

The philosophy behind this product was to create a power amplifier – using advanced technology – and make a product with the utmost performance – small in size, but big enough in power to drive any high quality speaker system.

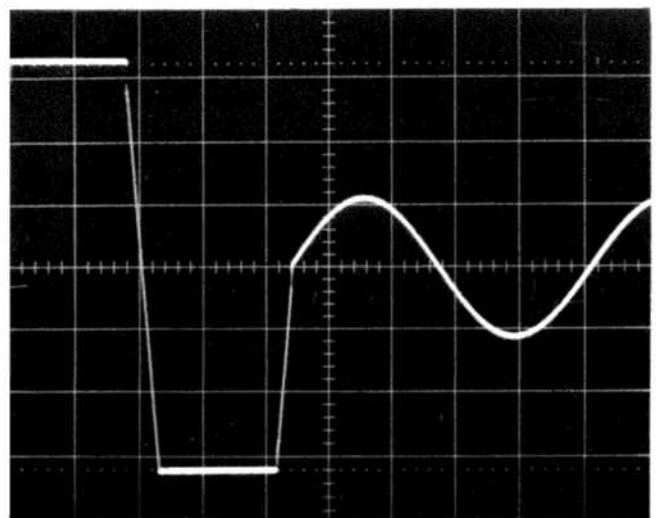


Inside the power amplifier

This amplifier is designed to reproduce very rapid signals, or even transients without any form of deterioration.



10 dB overload of 20 ms duration – 480 ms at reference level.



Time axis magnified – no visible sign of d.c.-unbalance

Cooling system

The cooling system developed for the TPA 3003 is shaped to give fast circulation of air to the output transistors. The high efficiency attained is also reflected in the low temperature achieved on external parts even when the amplifier is driven at high output power.

Protection circuits

The power amplifier TPA 3003 contains 5 different protection circuits. The main protection circuits are:

- Protection at speaker loads lower than 2 ohms, inclusive short-circuiting of speaker terminals.
- Speaker protection circuit.
- Protection of output and driver transistors against flashback from inductive speaker load.

Peak clipping circuits

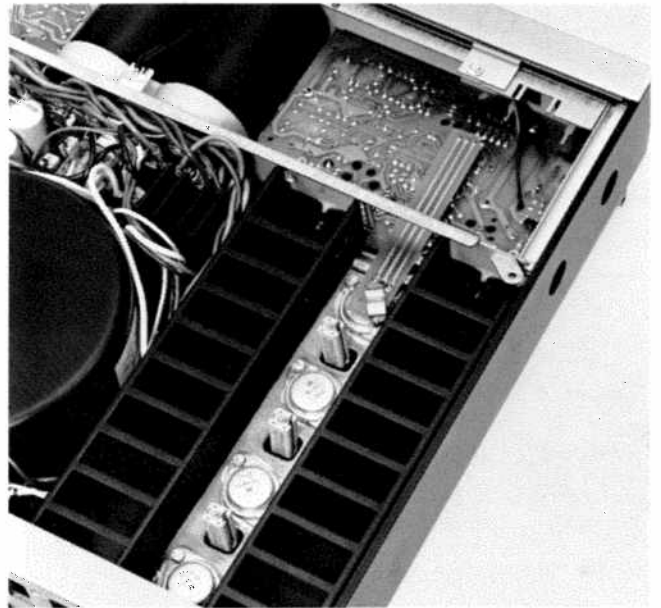
To ensure that the amplifier always operates within its limits, two LEDs mounted on the front indicate when the output is overloaded or when a high input voltage causes the amplifier to operate above its power supply limits.

Mains transformer

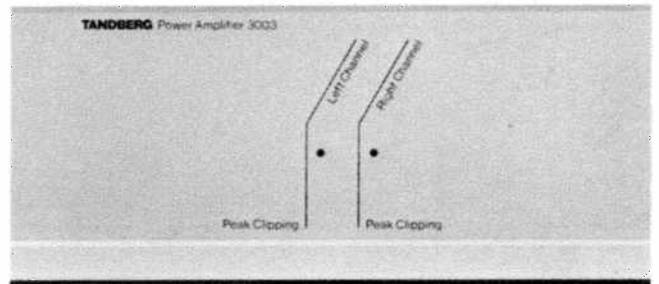
The mains transformer which is a toroidal type has very low height, high efficiency and very low stray magnetic field to prevent any radiation of hum or noise to other sensitive components or products.

Power supply

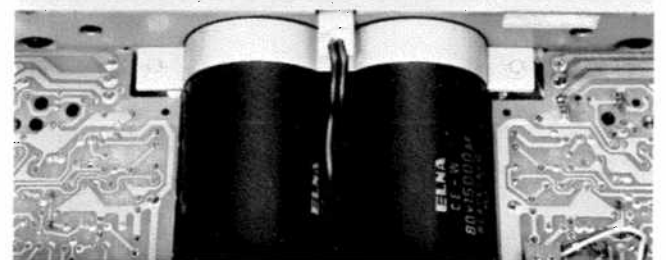
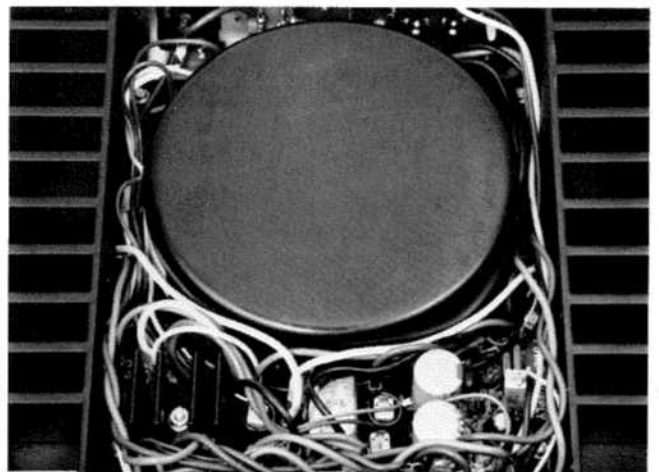
The rectifier used in the power supply will handle 25 A. It utilizes a special cooling fin and is designed to stand extreme loads. The filter capacitors in the power supply are 2 x 15,000 μ F and the total power system is able to supply any current needed to the amplifiers even when handling high power transient signals.



Effective cooling system



Peak clipping indicators



Mains transformer and power supply with filter capacitors

Tandberg Power Amplifier TPA 3003

Technical Data

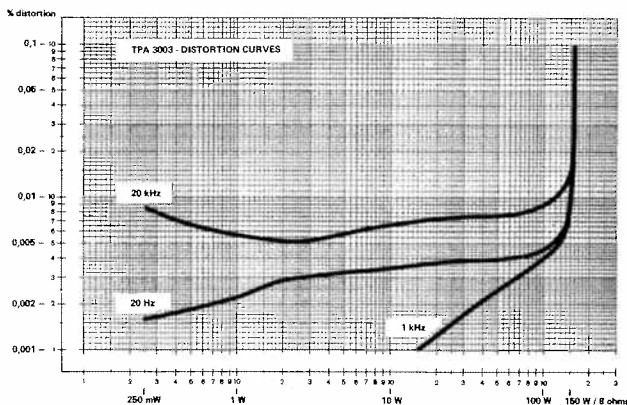
Power requirements:	115/230 V \pm 10%, 50/60 Hz
Power consumption:	50 – 770 W
Dimensions:	Width: 17 1/8" (43.5 cm) Depth: 13 3/4" (35.0 cm) Height: 3 1/4" (8.3 cm) Weight: 25 lbs (11.3 kg)

Technical Data according to IHF-A-202, 1978

Continuous Average Power Output: (8 ohms, 20 – 20,000 Hz, THD < 0.02%)	2 x 150 W
Dynamic Headroom:	0.35 dB
Frequency Response:	20 – 20,000 Hz, + 0/– 0.2 dB
Sensitivity:	1 V
A-weighted Signal-to-Noise Ratio: (Ref. 1 W/8 ohms)	98 dB

Secondary Disclosures

Clipping Headroom:	1.05
Output Impedance (20 - 20,000 Hz):	0.08 ohms
Wideband Damping Factor:	100
Low Frequency Damping Factor:	200
SMPTE Intermodulation Distortion:	0.02%
IHF Intermodulation Distortion:	0.02%
Transient Overload Recovery Time:	Immeasurable
Reactive Load Factor:	1.2
Reactive Load Rating:	0.8 dB
Separation:	> 75 dB
Difference of Frequency Response:	< 0.1 dB



Total harmonic distortion versus output power

Other Technical Data

Frequency Response:	5 – 100,000 Hz, + 0/–1.5 dB
Output Impedance (20 – 1000 Hz):	0.04 ohms
Slew rate:	> 70 V/us
A-weighted Signal-to-Noise Ratio: (Ref. 150 W/8 ohms)	120 dB

- Specifications are subject to change for further improvement without notice.

Optional Extras

- Black acrylic side walls for freestanding units.
- Attachment sets for installation in 19 inch racks.

TANDBERG
The European Alternative

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