

Completion to the  
main catalogue

# PA 3100 HV

Integrated Amplifier

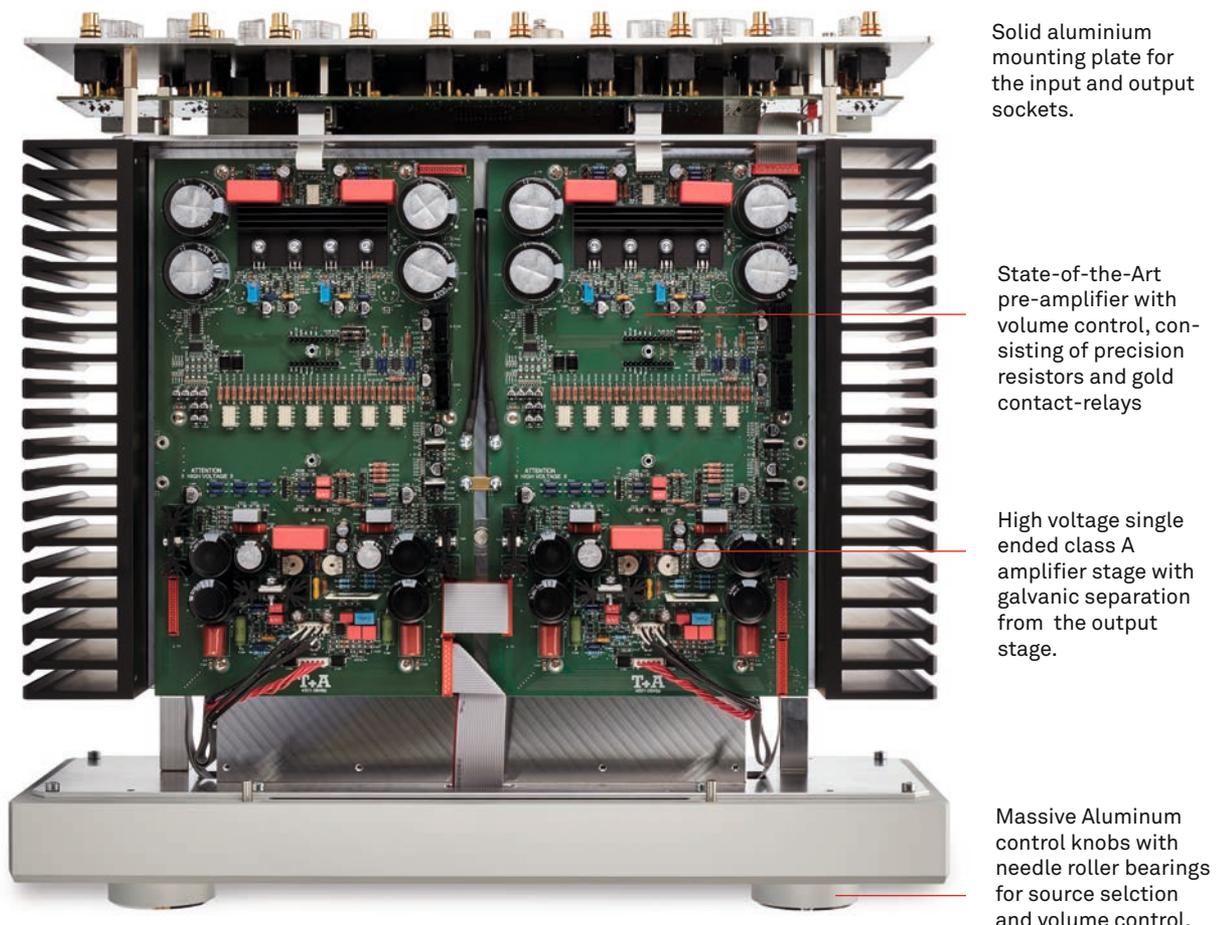


**T+A**

The PA 3100 HV is based on the outstanding PA 3000 HV integrated amplifier, and most of its sub-assemblies are identical. The immediately obvious difference is in the front panel, which houses a pair of VU meters displaying the actual output per channel on a logarithmic scale, shown as Watt into 4 Ohm. A further development is the redesigned analogue mains section and power supply, which is similar to that of the A 3000 HV. This makes it possible to connect the supplementary PS 3000 HV Power Supply in order to gain a further increase in stability, quality and performance of the power supply system as a whole. We also succeeded in improving sound quality by revising the pre-amplifier sections.

Like all HV devices the PA 3100 HV is of consistently symmetrical, channel-separate construction, and is divided into compartments. The pre-amplifier circuit boards, containing the input section, volume control and high-voltage amplifier, are located in the upper compartment below the case lid; their symmetrical construction eliminates electro-magnetic influences. This compartment consists of thick-walled aluminium plates, and is completely separated and shielded from the lower compartment, which houses the power output stages, the current and voltage power supply and the loudspeaker outputs.

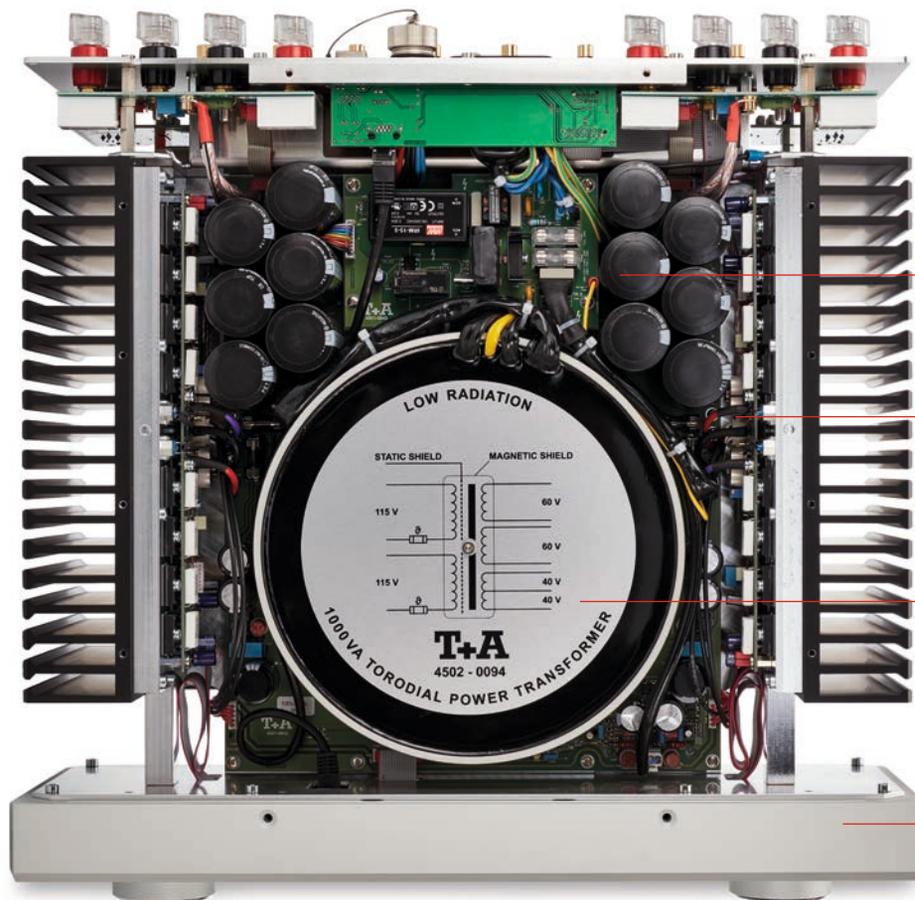
Internal view of the upper case compartment



The illustration shows the PA 3100 HV's lower compartment, which accommodates all the power electronics including output stages, HV reservoir capacitors and mains section. The dividing wall between the upper and lower sections is 10 mm thick, and - as you would expect - is also made of aluminium. This means that the voltage amplifier (upper compartment) and current amplifier are mounted on separate circuit boards housed in separate sections of the case, in order to prevent any possibility of either section affecting the other. The sophistication of the layout goes even further, for the two sections are also galvanically separated. The net result of this uncompromising design effort is a complete lack of feedback effects between the loudspeaker currents and the voltage amplifier stages, and absolute freedom from loudspeaker load effects.

It is possible to obtain a further improvement in the stability and power of the PA 3100 HV by connecting the PS 3000 HV to it using the special Powerlink cable with M-23 connectors incorporating high-current contacts. In this configuration the internal mains section of the PA 3100 HV is responsible for the power supply to the input stages and the high-voltage amplifiers, while the external PS 3000 HV provides power to the output stages, ensuring delivery of the substantial currents demanded by the power output stages. In terms of sound quality, the great advantage of this overall design is that the PA 3100 HV is isolated from the load currents and mains-induced interference, for these can have adverse effects on sound quality.

Internal view of the lower case compartment



Professional loudspeaker terminals with rhodium-plated surfaces. PS 3000 HV Connection socket.

Mains power supply section with extensive and sophisticated reservoir capacity and stabilisation measures.

High-performance output stage with special heat-sink profile for optimised heat dissipation.

Extremely "hard" toroidal transformer with 1000 Watts power, sealed in an aluminium enclosure.

The 40 mm solid aluminium front panel provides perfect electro-magnetic shielding. Accommodates VU-meters, display and shielded control board.



## Specifications

<b>Pre-amplifier stage</b>	
Frequency response + 0 / - 3 dB	0,5 Hz – 300 kHz
Signal / noise ratio	105 / 110 dB
Total harmonic distortion	< 0,001%
Intermodulation	< 0,001 %
Channel separation	> 90 dB
Nominal input sensitivity	
High Level (RCA)	7 x 250 mV <sub>eff</sub> ... 6 V <sub>eff</sub> / 20 kOhms
Balanced (XLR)	4 x 500 mV <sub>eff</sub> ... 12 V <sub>eff</sub> / 5 kOhms
<b>Outputs *</b>	
Headphones	50 Ohms
1 x Recorder	250 mV <sub>eff</sub> / 100 Ohms
PRE out RCA	nom 1 V <sub>eff</sub> , max 9,5 V <sub>eff</sub> / 50 Ohms
PRE out XLR	nom 1,45 V <sub>eff</sub> , max 19,6 V <sub>eff</sub> / 50 Ohms
<b>Output stage</b>	
RMS output per channel 8 Ohms	300 Watts
4 Ohms	500 Watts
Peak output 8 Ohms	380 Watts
Peak output 4 Ohms	700 Watts
Power bandwidth	1 Hz – 150 kHz
Frequency response + 0 / - 3 dB	0,5 Hz – 180 kHz
Slew rate	60 V/μs
Damping factor	> 65
Signal : noise ratio	> 115 dB
Total harmonic distortion	< 0,03 %
Reservoir capacity	120000 μF
Mains 110 V/60 Hz or 220/240 V/50 Hz	1500 W
Standby	< 0,5 W
<b>Features</b>	
	Trigger input +5 ... 20V for external switching-on
	Input 4 can be configured in surround mode (Surround pass-through)
	connectivity for additional PS 3000 HV
	LAN connector for home-automation systems
<b>Dimensions (H x W x D), Weight</b>	
	17x46x46 cm (6,7x18,1x18,1"), 38 kg (83,8 lbs)
<b>Finishes</b>	
	case: silver laquer 47 or titanium laquer 64, heat sink: black 42
<b>Remote control</b>	
	F 3001