Transmit8 SE501 805 single ended class A 45w tube mono blocks w/sep power supply

T8 SE501

NZ$17,500.00 pr (incl. GST)

How do we make that happen?

At transmit8 our aim is to capture shimmer and sparkle, natural midrange and bass without the added hardness and sharpness of a dominant 3rd harmonic. But we don't want a lush sound, a false richness that leaves you feeling the essential verve of the music has not been delivered. We believe that transparency and resolution are best served by single end topology with a single output valve. We prefer to have no capacitors in the signal path and to make the output transformer capable of a wide frequency response (15Hz - 50kHz) in order to reproduce higher order harmonics for timbral integrity.

First we built a superb power supply. Transformers that typically operate at near maximum capacity aren't acceptable because they can't approach let alone surmount peaks. True, we may be guilty of over designing our transformers - the term 'headroom' comes to mind, the sense of endless room for the music to expand into.

The first transformer that the incoming mains sees has a dual role; it acts as an isolation transformer and adjusts input - AC voltage (1:1) at 230V - or steps up 115V to 230V.

Power for the valves has dedicated transformers: one for the KT66/6C45Pi and a second transformer for the 805 output valve. Both transformers have their primaries split (bi-directional) wound to reduce AC noise. At the critical final stage of filtering of the 860VDc supply for the 805 valve we compared electrolytic (wet) capacitors with high volume polypropylene (dry) capacitors. We favoured the latter; they are long life (>60,000 hrs.) and sound better.

Due to the weight and volume of the power supply, and so that any potential for radiation from mains to signal power is removed, we decided upon a two-box system (per channel). You can also move the amplifier without breaking your back, with the two-box system giving more options for room layout. After all, listening to music shouldn't mean that your room is a congested mass of electronics. A listening space should be graceful.

Having built a power supply that is world-class for both its stability and ability to deliver cleanly, we turned our attention to getting the best out of single end amplifier topology. The speaker output transformer as it draws current requires an 'air gap' to stop transformer saturation. In turn the air gap necessitates a larger core to get sufficient inductions to achieve an acceptable frequency range. The SE501 measures an impressive 15Hz to 50kHz, which means it effortlessly reproduces those higher order harmonics that are sensed but not always heard. With the SE501 you hear the music and the air around the music. You also feel the space where the music was recorded, whether it was a cathedral or a garage.

We believe that you deserve superior performance so we have put superior components inside the SE501. To make sure that the signal path was kept free from capacitors, our driver (or interstage) transformer has been designed and built in-house to better drive the grid of the 805 tube. Vigorous trialling of transformer lamination materials convinced us that there is a palpable benefit to using driver transformers made from 'grain orientated' steel. For circuitry not directly in path, naturally premium resistors and low leakage (low ESR) capacitors have been carefully selected for reliability and consistent performance. Our output transformer is Trifilar wound, a complex yet elegant array of separate windings in series and parallel combination so as to keep signal 'in-phase' without any loss of frequency response. The impedance switch that directs the appropriate power for

each 'Z' is built specifically for our needs and has no fewer than ten connections.

The SE501 is able to control difficult speaker loads with authority; it will convincingly drive many speakers with 90 db or higher efficiency to safe sound pressure level (SPL). Of course, the more efficient your speakers are then the greater your sense of power held in reserve will be. The felicitous matching of our amplifier with sympathetic speakers will bring single end magic into your room.

Criteria - Power supply unit

First we needed a good power supply.Power transformers normally operating at near maximum capacity simply aren't acceptable if handling of peaks is to be considered.We may be guilty of over designing our transformers but the term 'Headroom' comes to mind.There is also the bonus that the power supply runs relatively cool.

The incoming Mains Power transformer has a dual role.It acts as an isolation transformer and adjusts input Ac voltage, (1:1) at 230V or steps up 115V to 230V.The primaries are wound in opposite directions to reduce Ac noise. Power for the valves has dedicated transformers,one for the KT66/6C45Pi and a second transformer for
the 805 output valve.
For the final stage of filtering of the 800VDc supply for the 805 valve,having compared electrolytic (wet) capacitors with polypropylene (dry)capacitors we favoured the latter. Due to the weight and volume of the power supply,a two box system (per channel) became necessary. Separates has two advantages - the handling weight is manageable and proximity between mains and signal power mostly eliminate .

Criteria - Valve unit
Audio benefits in our view from 'Single End' topology and a single output valve.

Design criteria:
- Have no capacitors in the signal path
- Make the output transformer capable of a wide frequency response (15Hz - 50kHz) to reproduce higher order harmonics for timbral integrity.

When you switch on the transmit8 SE501 what glassware lights up, and why is it there?

During the exhaustive design and build process for the transmit8 SE501 we trialled both NOS (New old stock) and new production tubes. The driver and output valves that most impressed us, both for their performance and availability, were premium new production.

Driver Valve KT66
This is a high performance self-bias output valve implemented to drive the grid of the 805. We use the famous 'Treasure' KT66 (Premium).

Output Valve 805
The 805 was designed as a transmitting valve. It was intended for broadcasting applications so the tube is built to operate for many thousands of hours. While manual bias is required, an analogue meter displays the bias as milliamperes; bias can easily be adjusted via a potentiometer accessed at the front of the valve module. Our production model uses the 'Psvane' 805a-T (Premium).

Input valve 6C45Pi
While this input tube does not enjoy the extended life expectancy of the 805 it is affordable, readily available, and self-biased by the componentry. Our C45Pi is a New Sensor 'ElectroHarmonix' gold pin which, in our listening tests, performed better than other popular 6C45Pi options.

Setting up house with the transmit8 SE501Your transmit8 SE501 will arrive with its valves packaged separately for their protection. An essential and, we hope, delightful part of getting to know your amplifier will be the process of fitting the carefully selected valves for the first time. The 805 bias will have already been set at the factory but bias can easily be checked after you first power up the transmit8 SE501. When, after years of listening, you do have to change valves it couldn't be easier. Four screws hold the cage in place; loosen these and then lift the cage clear in order to fit replacement tubes. We even supply a tool to help you do this!

Specifications

Valve module Unit - Per channel

Audio Power: 45Watt per channel

Valve complement:
Input - 6C45Pi
Driver - KT66
Output - 805 *(User biased - Externally accessible potentiometer - Gauge displayed)*

Speaker matching:
Connection - Spade or Pin
Impedance (Z) - 4 & 8 Ohm *(switchable)*
Frequency range - 15Hz-50kHz
Feedback - 4dB
Interstage transformer - Air gapped EI
Output transformer - Air gapped EI - Large core - Separate secondaries - phase correct

Source matching:
Input - RCA / XLR *(Unbalanced)*
Impedance - 100k Ohm
Signal voltage - 0.8V minimum for full output power

Tone Control
High frequency roll off - *Externally accessible potentiometer*

Dimensions (mm): 440H x 215W x 360D

Weight (kg): Nett -19 Packed -24

Mains power module:

IEC - Filtered - Fused
Transformer - 110Vac / 230Vac (50-60Hz) (2)
DC supply: (3)
Transformers*2 .Balanced primary winding
Final filter for 805 - Single Polypropylene

Mains selection (Internal):

•IEC - Filtered - Fused

•EI transfomer -Mains isolation - Double secondary windings for 115V and 230V supply voltage at 50-60Hz

•Power consumption-200watt maximum

•Soft start mains inrush protection

Valve supply transformers

•EI transformer - Balanced primary windings to reduce AC noise - Power supply for input & driver tubes

•EI transformer - Balance primary windings - Power supply for 805 circuit

AC filter chokes - 3

Rectification - Silicon controlled

Dimensions (mm)•
•Height -230

•Width - 250

•Depth - 410

Weight (kg)

•Nett - 33

•Packed - 38

Review

Even though I have a Hi-Fi system that I am proud of, it will be a while before I can play Maria Muldaur again! - *Mike Pearson - audiophile*

Terry,

To be able to listen to a favourite track of ours of Maria Muldaur, singing “I gotta right to sing the blues” from her love wants to dance album, was simply sensational. There are no other words top describe the experience.

Link

http://www.audioreference.co.nz/product/transmit8-se501-805-single-ended-class-45w-tube-mono-blocks-wsep-power-supply