



45/2A3 Single-ended Power Amplifier Kit

TU-4523

Tubes are not included.

TU-4523 is a single-ended power amplifier kit that allows you to use two types of output tubes - "45" and "2A3" - by switching a manual switch. The "2A3" is a classic direct-heated triode renowned for its sound quality, while the "45" which first appeared in the early 1930s, has been reevaluated in recent years and is now being reissued and reproduced by several manufacturers. Despite being a tube with a very long history that can only produce low output, it captivates audiophiles with its delicate and crystal-clear sound.

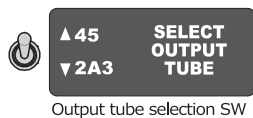


With Emission Lab's 45



■ 45/2A3 Output tube detection switch

The output tube can be selected using the switch on the top panel. The selected setting is indicated by the color of the LEDs of the volume knob: it glows orange for the 45 and green for the 2A3.



Output tube selection SW



With 45



With 2A3

■ Matching headphone volume levels

Headphone (earphone) efficiency varies significantly depending on the model, but you can adjust the headphone output level to match your specific model by simply removing the front panel and change the position of a short pin.



■ Speaker impedance selection switch

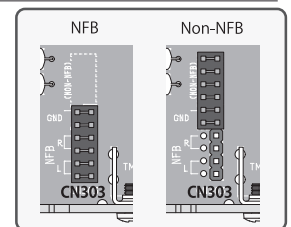
Switch the setting to match the impedance of the connected speakers and the output tubes being used.

Corresponding impedance : For 45 : 6-16 Ω
For 2A3 : 4-16 Ω



■ Easily switch between NFB and NON-NFB settings

Since the triode tubes have such excellent inherent characteristics, many people probably want to hear how it sounds in a NON-NFB configuration. With the TU-4523, you can easily convert it to a NON-NFB amplifier simply by changing the position of the jumper socket on the circuit board. In NON-NFB mode, the gain increases by about 8dB, making it possible to use the amplifier without a preamp.



■ Ample space for larger coupling capacitors

Coupling capacitors can have a big effect on the sound quality. For the TU-4523, conductive polymer electrolytic capacitors and polypropylene film capacitors are extensively used.

Depending on your preference, the coupling capacitors can be replaced with larger ones, measuring up to 22mm in diameter by 44 mm in length.



Image with a larger cap.

Specifications	With 45 tubes	With 2A3 tubes
Model No.	TU-4523	
Tubes	2 x 45 or 2A3, 2 x 12AU7(ECC82, 6189)	
Circuit configurations	Vacuum tube stereo power amplifier(45/2A3 - Tube type is selected manually.)	
Output stage	A-class, Single-ended, Self-biasing	
Heater and filament power	DC-power	
B-power	MOSFET ripple filter (Right and left channel independently)	
Max. output (8 Ω load, 1kHz, THD10%)	2x 2.5W	2x 4.5W
Rated input (w/NFB)	660mV rms	800mV rms
Output at 1% THD (8 Ω load, 1kHz)	2x 1.5W	2x 3W
Voltage gain	19dB (w/NFB), 27dB (w/NON-NFB)	19dB (w/NFB), 26dB (w/NON-NFB)
DF (8 Ω load, 1kHz)	6	8
Residual noise (IHF-A, 8 Ω load)	12 μ V rms	15 μ V rms
Frequency response (-3dB)	10 - 90,000Hz	
Input terminal	RCA jack, Stereo 1 line (Input resistance approx. 50k Ω)	
Output terminal	Binding terminal (gold-plated, banana plug compatible) Headphone output : 3-pole standard (Φ 6.3mm) jack	
Recommended speaker impedance	6 - 16 Ω	4 - 16 Ω
Headphone impedance	8 - 600 Ω (corresponds to high-impedance headphones as well), unbalanced	
Power voltage	AC115V or 230V AC 50/60Hz (Select either AC115V or 230V upon assembly.) IEC standard 3P inlet type	
Rated power consumption	42W	65W
Dimensions	W 356 x H 214 x D 320 mm (incl. projections)	
Weight	Approx. 9.8kg (assembled, excl.tubes and power cord)	

- The specifications of the product are subject to change without prior notice.
- The color of the product in this document may look different from the actual product.

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