

Investigating the idea of a Parallel Single Ended 45 Amplifier.
Oh, you may not like paralleled triodes, but here goes:

Starting with ideal specifications:

Characteristic	Single 45	Parallel 45 (totals)
Filament	2.5V	2.5V
Filament	1.5A	3.0 Amp
Filament Power	3.75 Watts	7.5 Watts
Plate Dissipation	10 Watts	20 Watts
Plate Resistance, rp	1700 Ohms	850 Ohms
Mu (μ)	3.5	3.5
Transconductance	2050 μ Mhos	4100 μ Mhos
Plate Voltage	275V	275V
Bias	-56V	-56V
Plate Current	36mA	72mA
Load	4600 Ohms	2300 Ohms
Output Power	2.0 Watts	4.0 Watts
A Glass Envelope for:	13.75 Watts	27.5 Watts

Then, substituting a single 2A3:
Over the decades the majority of 2A3 production was actually 2 triodes in parallel.

Starting with ideal specifications:

Characteristic	Single 2A3	Parallel 45 (totals)
Filament	2.5V	2.5V
Filament	2.5A	3.0 Amp
Filament Power	6.25 Watts	7.5 Watts
Plate Dissipation	15 Watts	20 Watts
Plate Resistance, rp	800 Ohms	850 Ohms
Mu (μ)	4.2	3.5
Transconductance	5250 μ Mhos	4100 μ Mhos
Plate Voltage	250V	275V
Bias	-45V	-56V
Plate Current	60mA	72mA
Load	2500 Ohms	2300 Ohms
Output Power	3.5 Watts	4.0 Watts
A Glass Envelope for:	21.25 Watts	27.5 Watts

But you can purchase Mono Plate 2A3 tubes.
So a Mono Plate 2A3 is not a parallel tube Right? . . . Wrong!

The next post will talk about that.