

如何運用平行進單端輸出變壓器 Parallel Feed Output Transformer Application

平行進出力線路是 **Western Electric** 在 **1930** 年代發明
Parallel feed topology was applied by Western Electric in the 1930's

線路優點

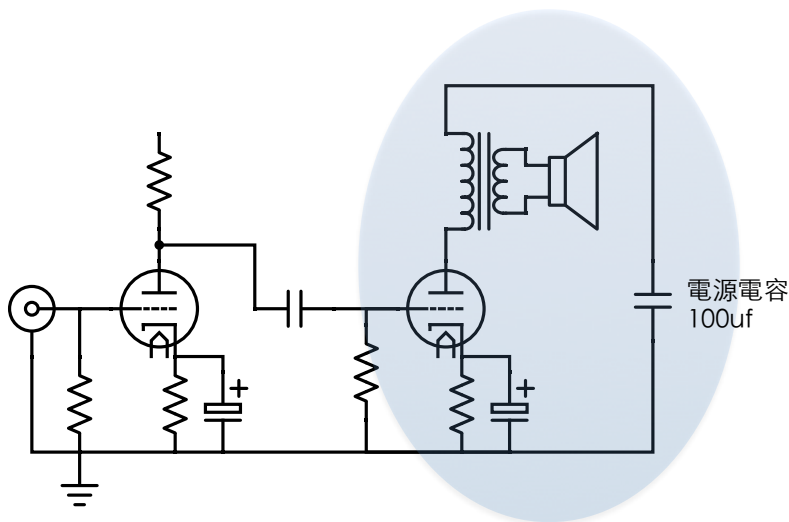
- 平行進輸出變壓器不需要氣隙 “air gap”。變壓器材料可用高端鎳鋼片(nickel)。
- 信號電路由屏級抗流圈隔離電源電容，增加電源供應抑制比率(greater power supply rejection ratio)。
- 增加頻率響應(improved frequency response)。
- 平行進電容可用高端款型例如 Teflon, paper-in-oil, polypropylene。

Design features of parallel feed output transformers

- There is no “airgap” so high perm materials such as nickel and cobalt can be used. Nickel and cobalt provide a much more detailed and delicate sound, yet simultaneous able to respond to dynamic swings.
- The combination of parallel feed output transformer and plate choke provides greater power supply rejection ratio, resulting in a lower noise floor.
- The combination of individually optimized designs for parallel feed output transformer and plate choke yields improved frequency bandwidth.
- Removes electrolytic power supply capacitor from the signal path – parallel feed capacitor values are substantially smaller so high quality types such as Teflon, paper-in-oil, and polypropylene can be used.

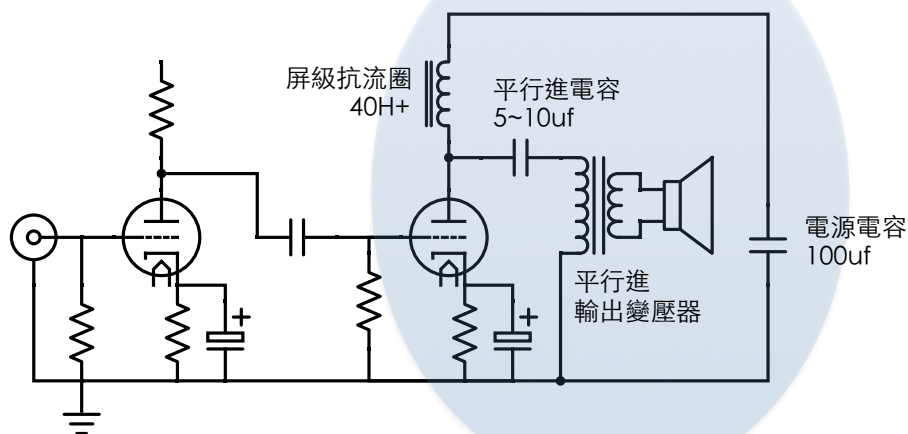
傳統單端真空管出力線路

Traditional air gap single ended output circuit



平行進單端真空管出力線路

Parallel feed single ended output circuit



平行進輸出變壓器與屏級抗流圈建議配對

Recommended parallel feed transformer-plate choke pairing

真空管 Vacuum tubes	平行進輸出變壓器 Parallel feed trans	屏級抗流圈 Plate choke	平行進電容 Capacitor value
300B 高電流 (80ma)	TFA-2004 (3K ohm) EXO-050 (5K ohm)	BAC-80 (80ma)	5~8uf
300B 標準電流 (60ma) WE 275A	TFA-2004 (3K ohm) TFA-2004 jr (3K ohm)	EXO-003 (60ma)	6~10uf
2A3 WE 275A	TFA-2004 jr (3K ohm) EXO-35 (2.5K ohm) EXO-36 (2.5K ohm)	EXO-003	6~10uf
845(低電壓) KT-88 (triode) 6550 (triode) 6L6GC (triode) EL-34 (triode)	EXO-050 (5K ohm)	BAC-80	6~10uf
45 71A 6BQ5 (triode) 6c45pi WE 417A 7788 (triode)	EXO-45 (5K ohm) EXO-46 (5K ohm) TL-818 (5K ohm)	BCP-15 (40ma) Dowdy (40ma)	5~8uf (BCP-15) 2~5uf (Dowdy)
6c45pi WE 417A 7788 (triode) 71A	B7 preamp (前級用)	Dowdy	2~5uf (Dowdy)