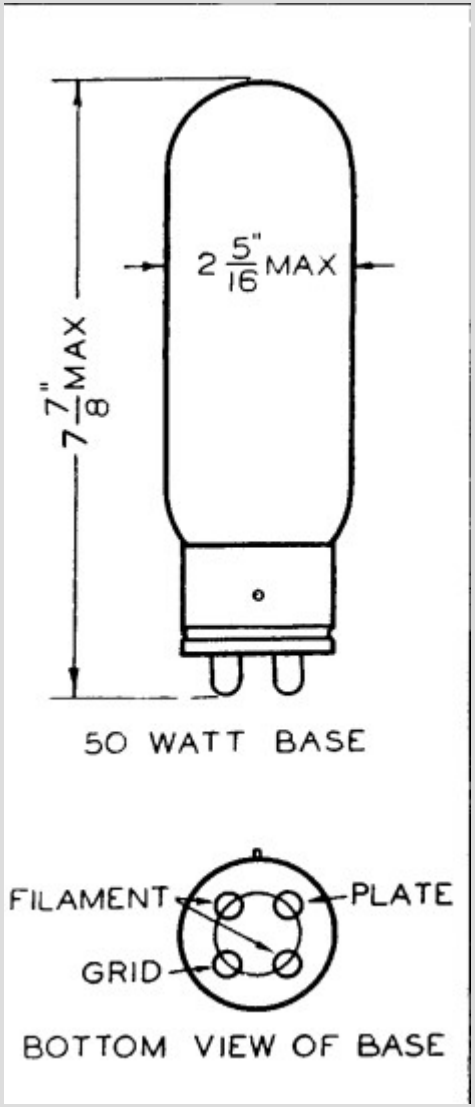
How to design for 845 Single Ended Power Stage

845 シングル動作回路の設計方法

Junichi Kubota

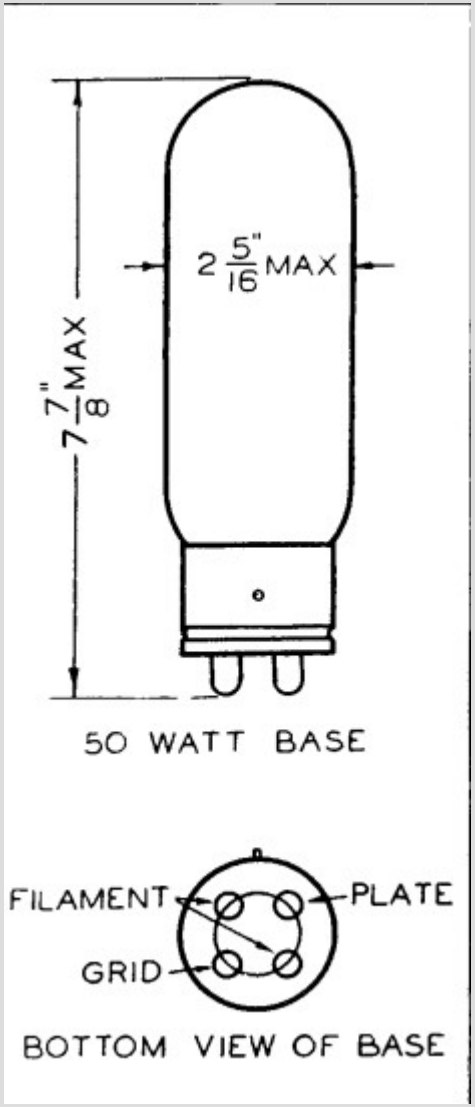
What is 845?

- Filament 10V/3.25A
- Maximum Rating
  Plate 1250V
  Plate Dissipation 100 watts
  μ = 5



845はどんな真空管?

- 大出力のトリタン３極管
- フィラメント定格
  10V/3.25A
- 最大定格
  プレート 1250V
  プレート損失 100 watts
  μ = 5



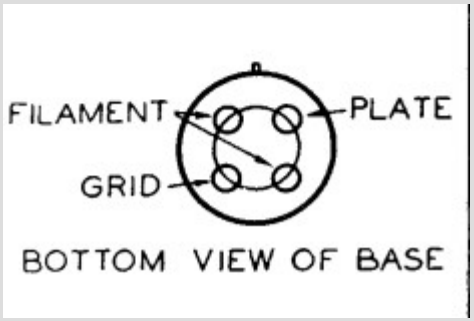
Class A1 Amplifier

A-F POWER AMPLIFIER & MODULATOR - Class A

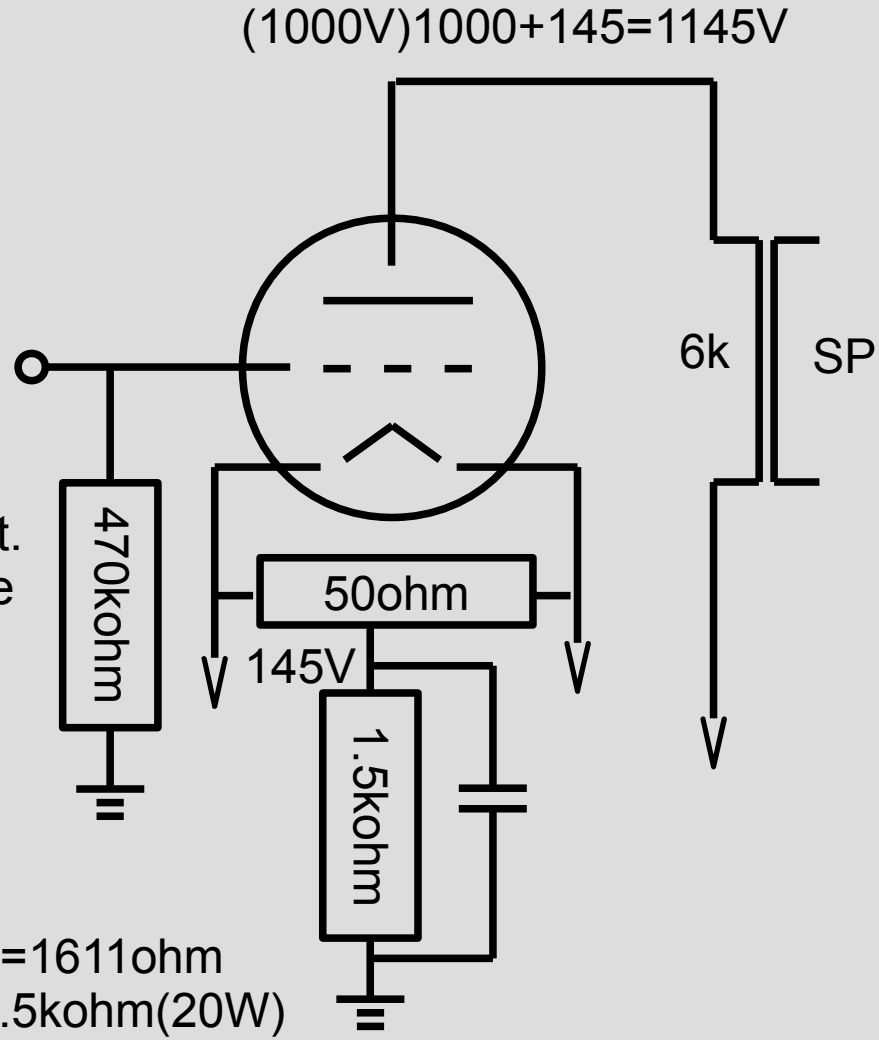
D-C Plate Voltage			1250 max.	volts
Plate Dissipation			100 max.	watts
Typical Operation:				
D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage*	-98	-145	-195	volts
Peak A-F Grid Voltage	93	140	190	volts
D-C Plate Current	95	90	80	ma.
Transconductance	3100	3100	3100	µmhos
Plate Resistance	1700	1700	1700	ohms
Load Resistance	3400	6000	11000	ohms
U.P.O. (5% second harmonic)	15	24	30	watts

Design for self bias

D-C Plate Voltage		volts
Plate Dissipation		watts
Typical Operation:		
D-C Plate Voltage	1000	volts
D-C Grid Voltage*	-145	volts
Peak A-F Grid Voltage	140	volts
D-C Plate Current	90	ma.
Transconductance	3100	µmhos
Plate Resistance	1700	ohms
Load Resistance	6000	ohms
U.P.O. (5% second harmonic	24	watts



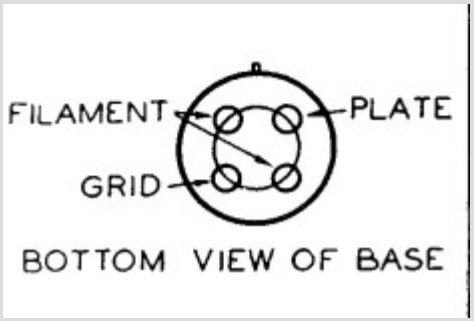
Depend on deriver circuit. Usually x2 the load of the previous stage. Max about 500k



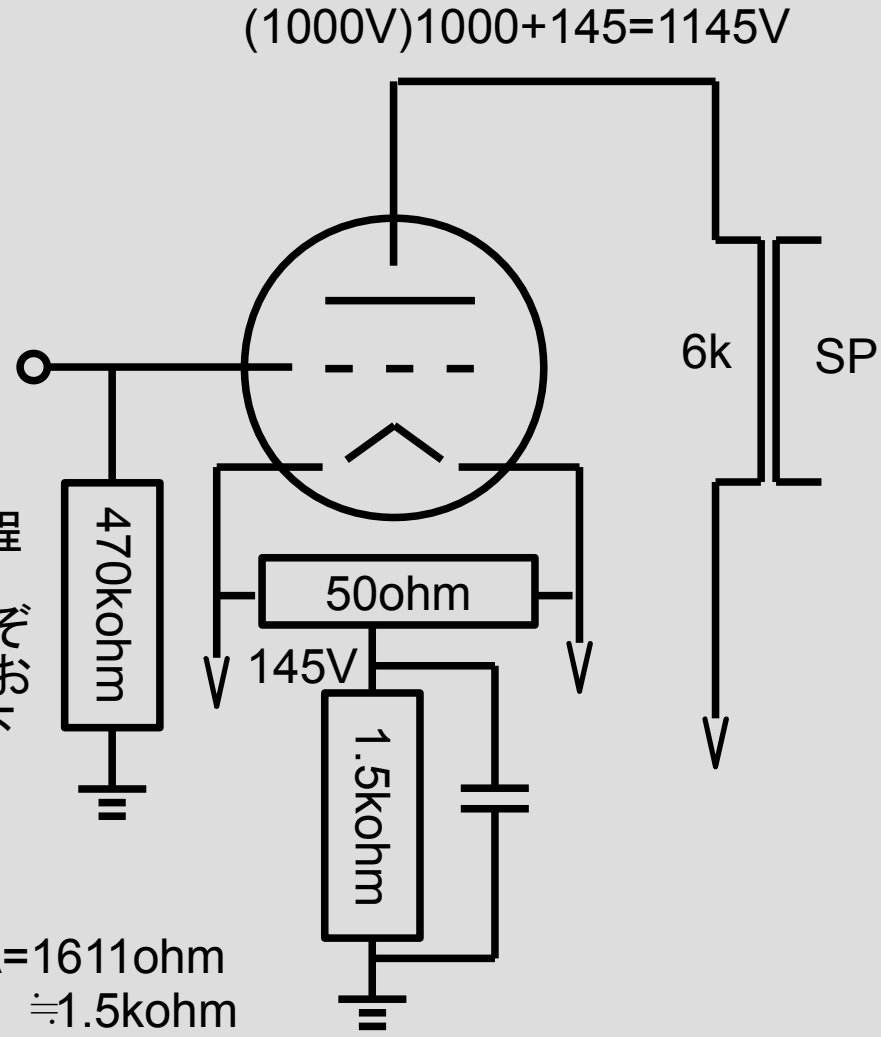
145V/90mA=1611ohm
≒1.5kohm(20W)

Design for self bias
自己バイアス回路の設計

D-C Plate Voltage		volts
Plate Dissipation		watts
Typical Operation:		
D-C Plate Voltage	1000	volts
D-C Grid Voltage*	-145	volts
Peak A-F Grid Voltage	140	volts
D-C Plate Current	90	ma.
Transconductance	3100	μmhos
Plate Resistance	1700	ohms
Load Resistance	6000	ohms
U.P.O. (5% second harmonic	24	watts



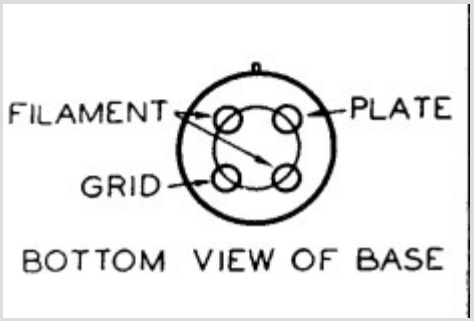
前段のプレート抵抗の倍程度の抵抗値を選びます。
グリッドリーク抵抗はそれぞれの真空管で決められており845では最大500kΩ以下と指示されている。



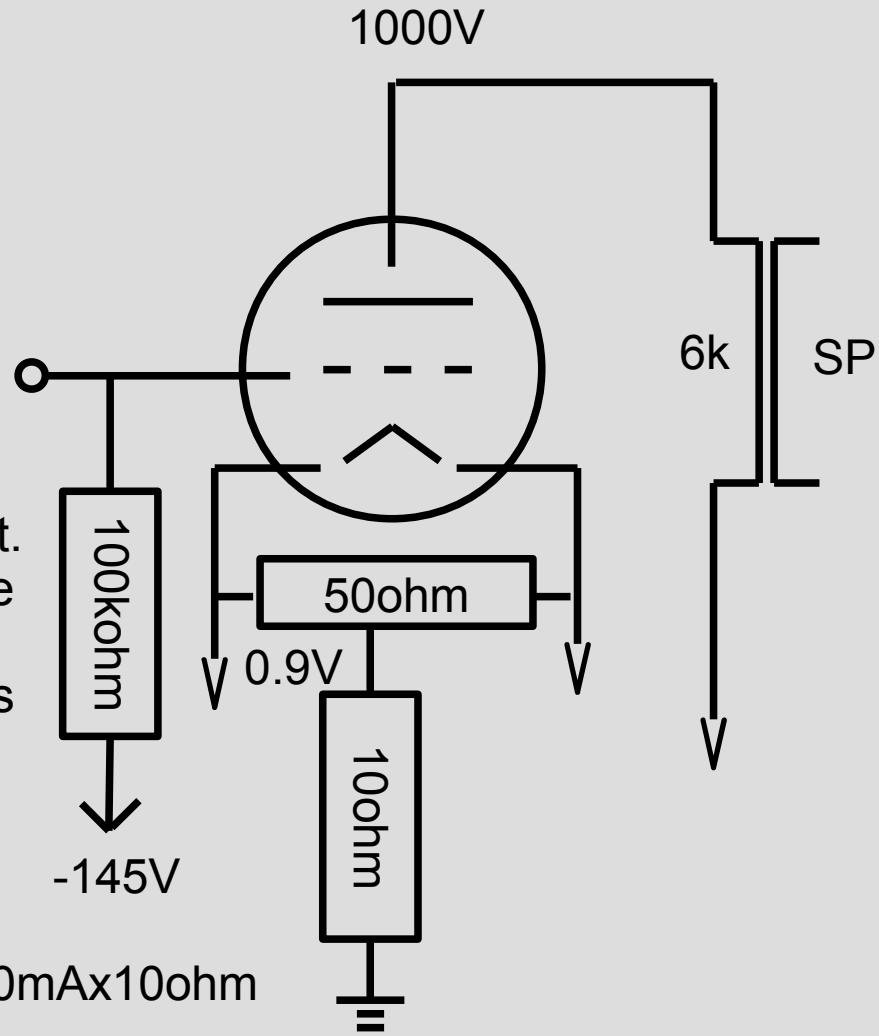
145V/90mA=1611ohm
≒1.5kohm

Design for fixed bias

D-C Plate Voltage		volts
Plate Dissipation		watts
Typical Operation:		
D-C Plate Voltage	1000	volts
D-C Grid Voltage*	-145	volts
Peak A-F Grid Voltage	140	volts
D-C Plate Current	90	ma.
Transconductance	3100	µmhos
Plate Resistance	1700	ohms
Load Resistance	6000	ohms
U.P.O. (5% second harmonic	24	watts



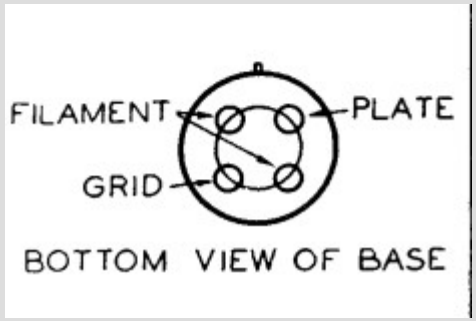
Depend on deriver circuit. Usually x2 the load of the previous stage. Max about 100k for Fixed bias



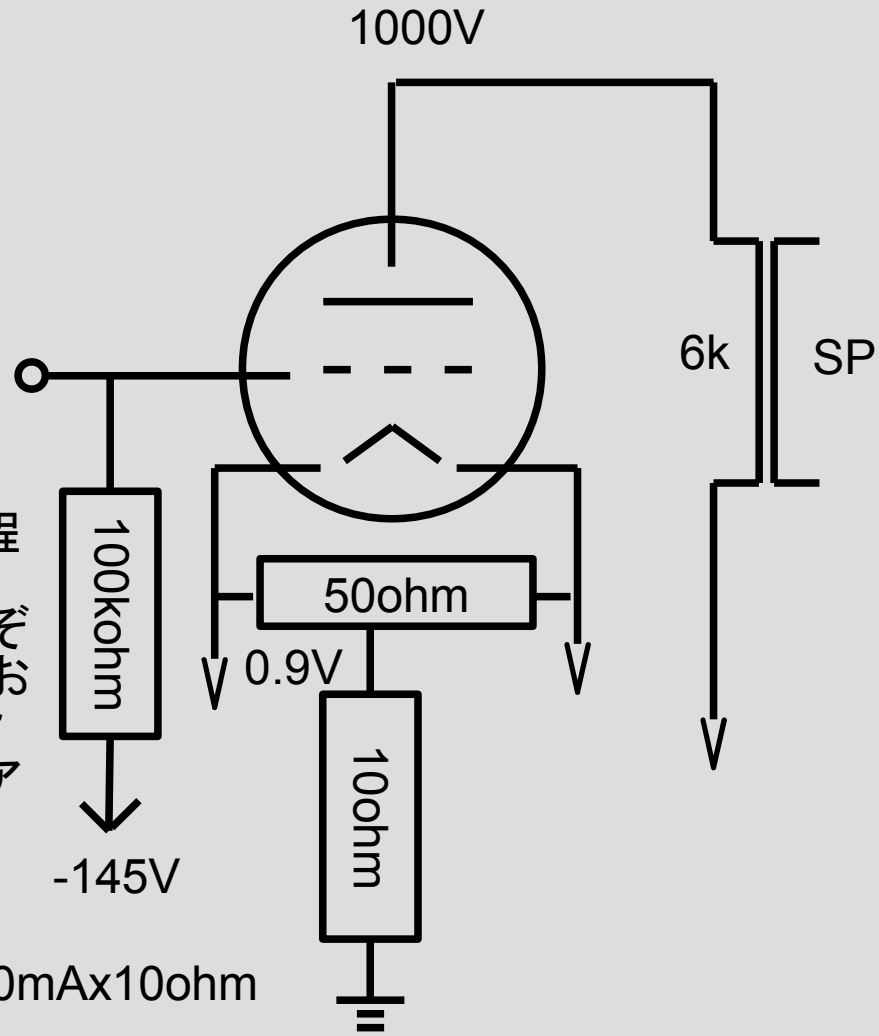
0.9V*=90mAx10ohm

Design for fixed bias
固定バイアス回路の設計

D-C Plate Voltage		volts
Plate Dissipation		watts
Typical Operation:		
D-C Plate Voltage	1000	volts
D-C Grid Voltage*	-145	volts
Peak A-F Grid Voltage	140	volts
D-C Plate Current	90	ma.
Transconductance	3100	μmhos
Plate Resistance	1700	ohms
Load Resistance	6000	ohms
U.P.O. (5% second harmonic	24	watts



前段のプレート抵抗の倍程度の抵抗値を選びます。
グリッドリーク抵抗はそれぞれの真空管で決められており845では最大100kΩと指示されている。(固定バイアス時)



Recomend 845 single output trans from Japan
845シングルトランスの紹介

- **ISO**
  FC-30-10S(10k,30W)
  FC-40-10S(10k,40W)
- **General Trans**
  ゼネラルトランス
  PMF-30WS-7k(7k,30W)
  PMF-40WS-7k(7k,40W)
  FM-24WS-211(7k,10k,24W)
- **Tamura**
  F2013(10k,40W)
- **Hashimoto,橋本**
  H-40-10S(10k,40W)

Recomend Power trans for 845 from Japan
845用電源トランスの紹介

- **ISO**
  MS-211DL
  MS-4016D
- **General Trans**
  ゼネラルトランス
  PMC-UVD-HG
  TG-UVD
  TG-UVD-310V
  TM-3011
- **Tamura**
  PC-3011
  PC-3012

Thank you show my video
And discribe my channel.

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感想やご質問はコメント欄まで、また評価と
チャンネル登録お願いします。