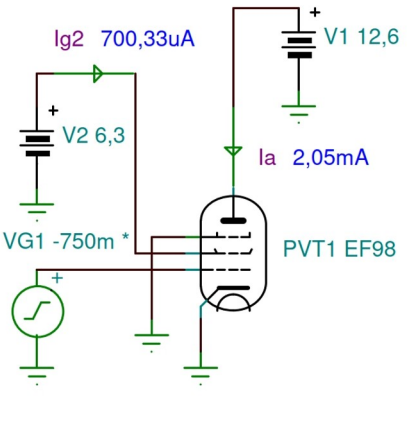
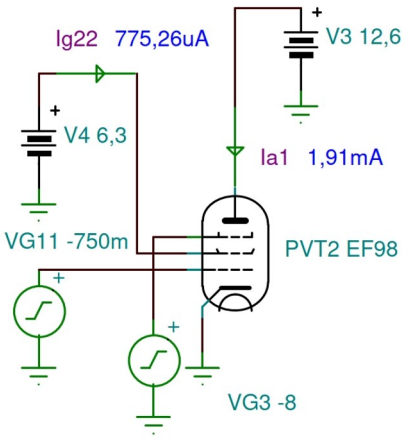
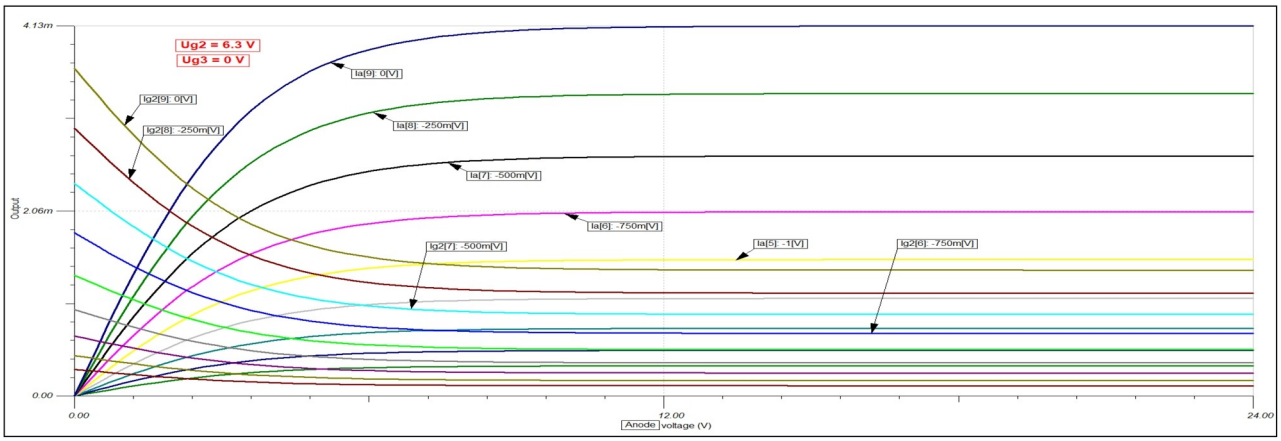
EF98 Low-Voltage RF Pentode SPICE Macro Model

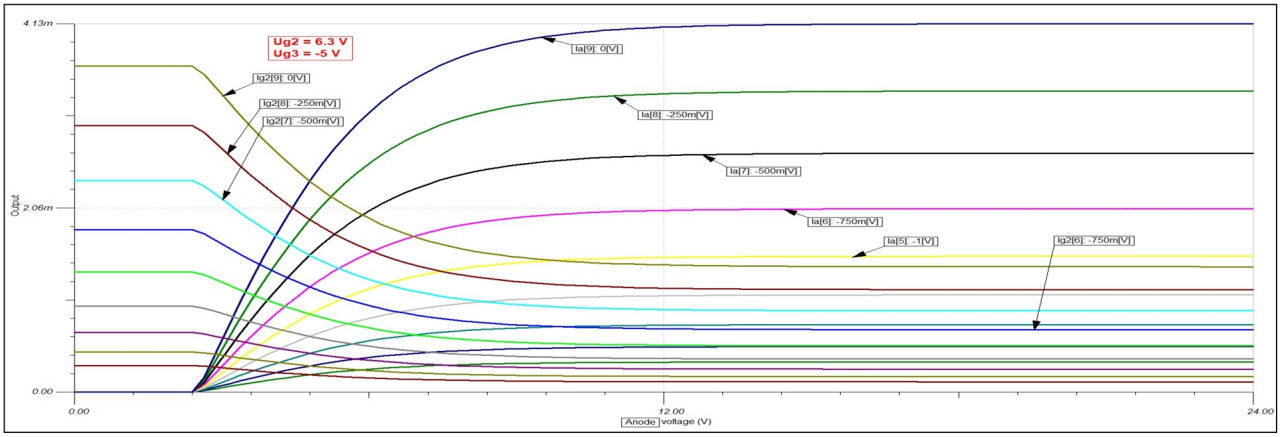
The EF98 is designed to have operating directly at vehicle battery potential (6 or 12 V).

DC Characteristics



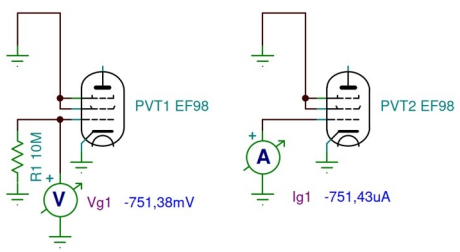


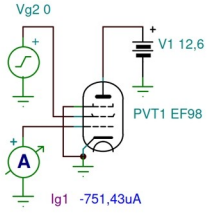


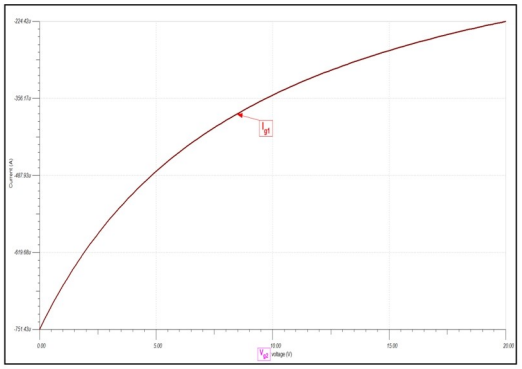


Gate Diode Splash Current

$I_{g1} = f(V_{g2})$

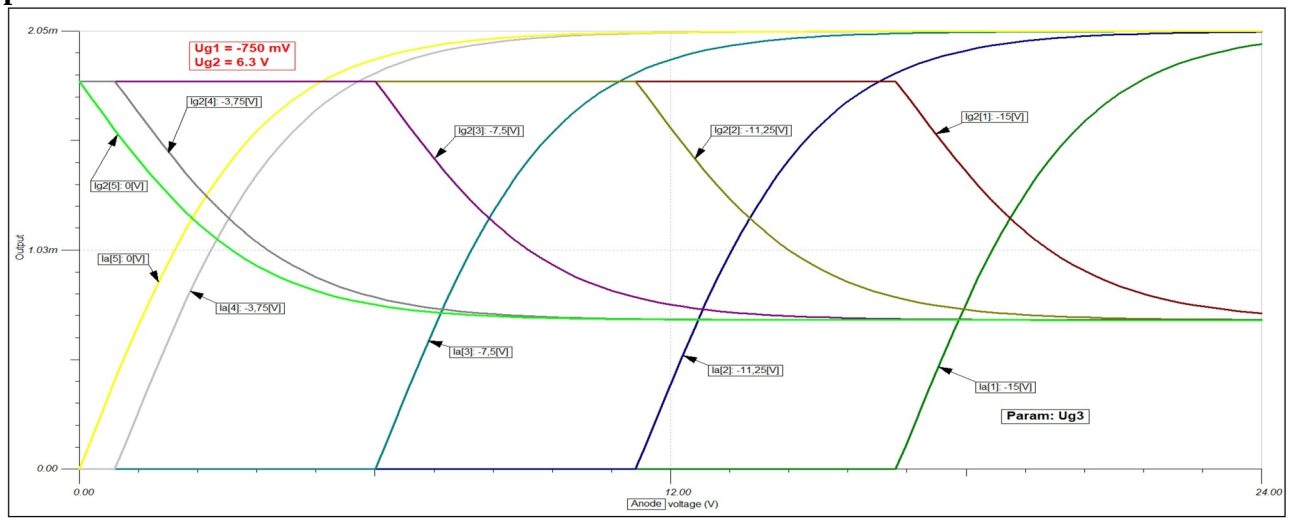




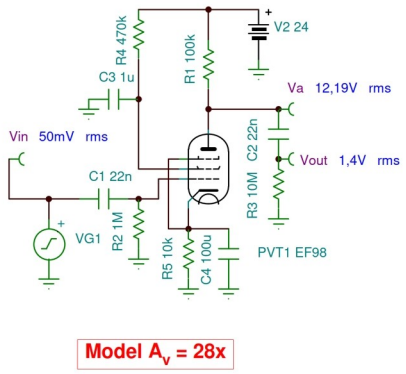


The gate current is not zero when the gate voltage is zero. A small gate current flows due to the energy distribution of the electrons emitted from the cathode.

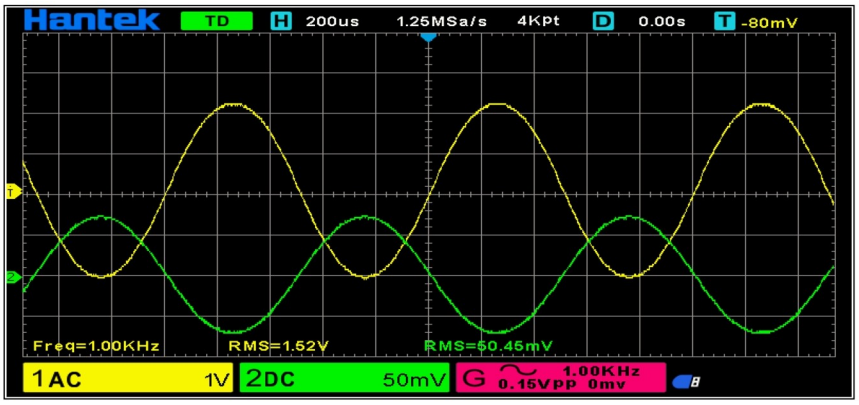
Effect of suppressor-grid voltage upon the plate and screen-grid-current characteristics of a pentode.



AF Voltage Amplifier



Model A_v = 28x



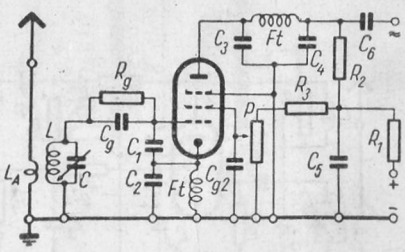
V_{out} V_{in} Real Tube A_v = 30x

The model provides good accuracy for both DC operating points and AC gain.

Audion Circuit for the Medium-Wave Band

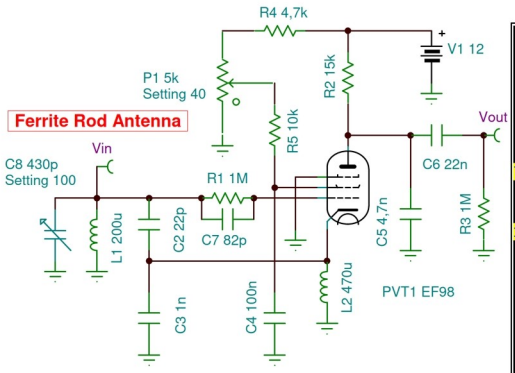
An excellent Audion detector can be built using the EF98 low-voltage pentode. Shown here is a 12 V circuit, its corresponding simulation model, and oscilloscope measurements of the completed prototype. The use of capacitive feedback simplifies the design compared to the more common inductive coupling, which would otherwise require an additional coil.

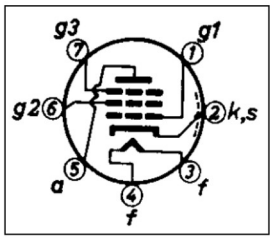
ECO-kapcsolás (kapacitív feszültségosztással). Egyszerűsége és stabilitása miatt ma a legkedveltebb kapcsolások egyike. A visszacsatolás fokát a C_1 és C_2 kondenzátorok kapacitásviszonya szabja meg. A katódvezetékben levő *Ft* rádiófrekvenciás fojtótekercs értéke nem kényes.

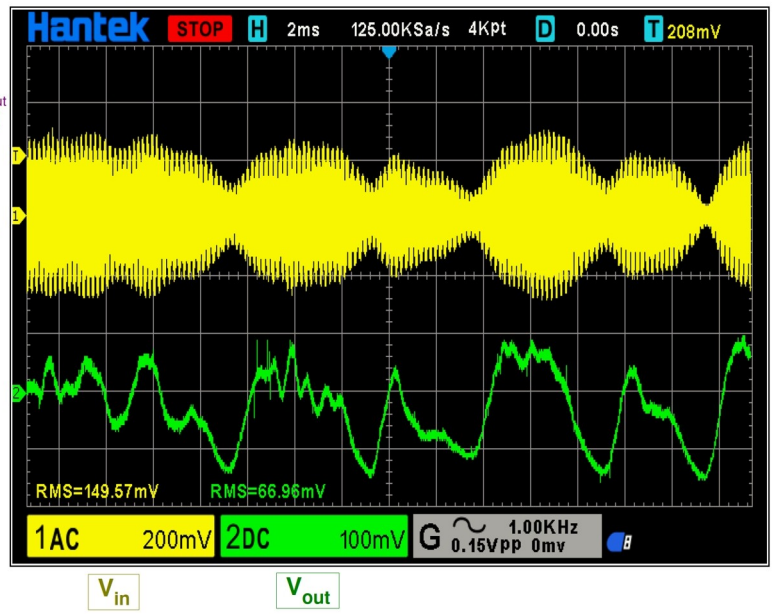


Magyari Béla RÁDIÓAMATŐRÖK ZSEBKÖNYVE
Műszaki Könyvkiadó Budapest 1963

EF98 Audion Circuit







Model