

(1)

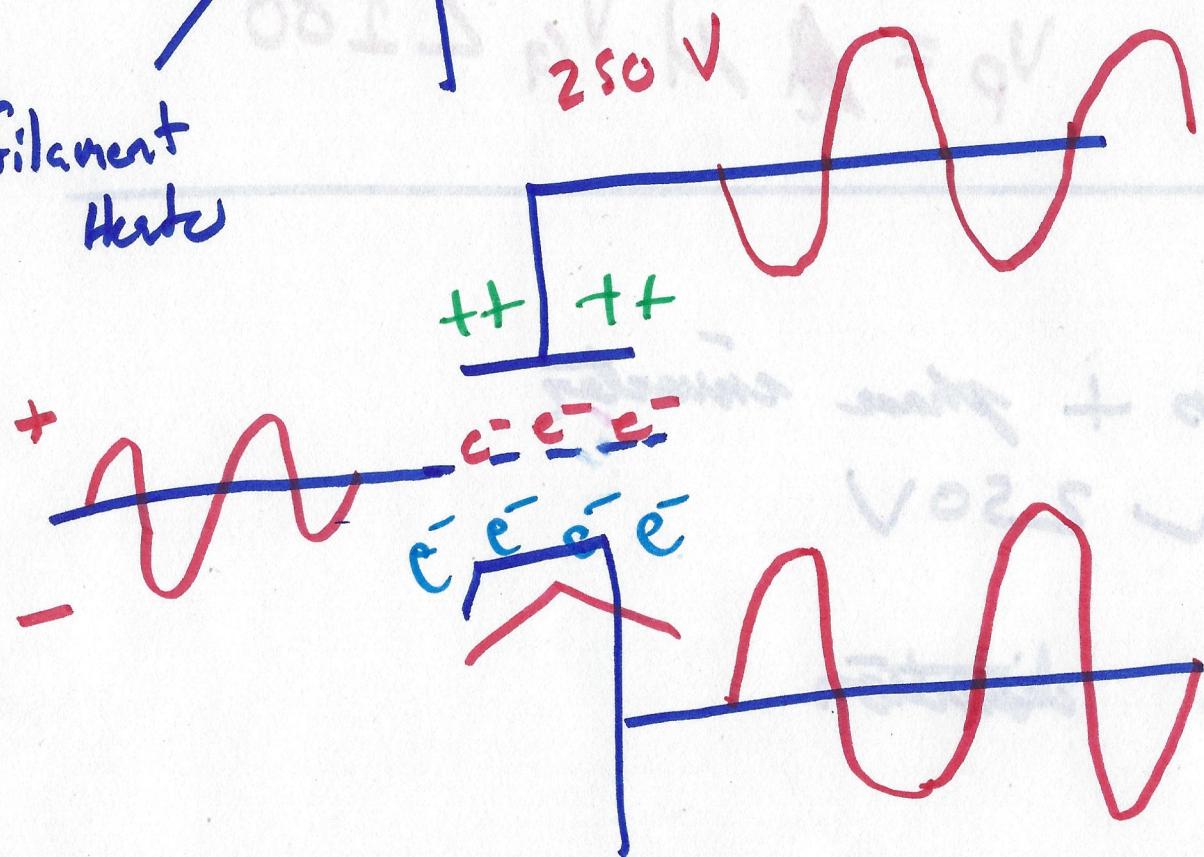
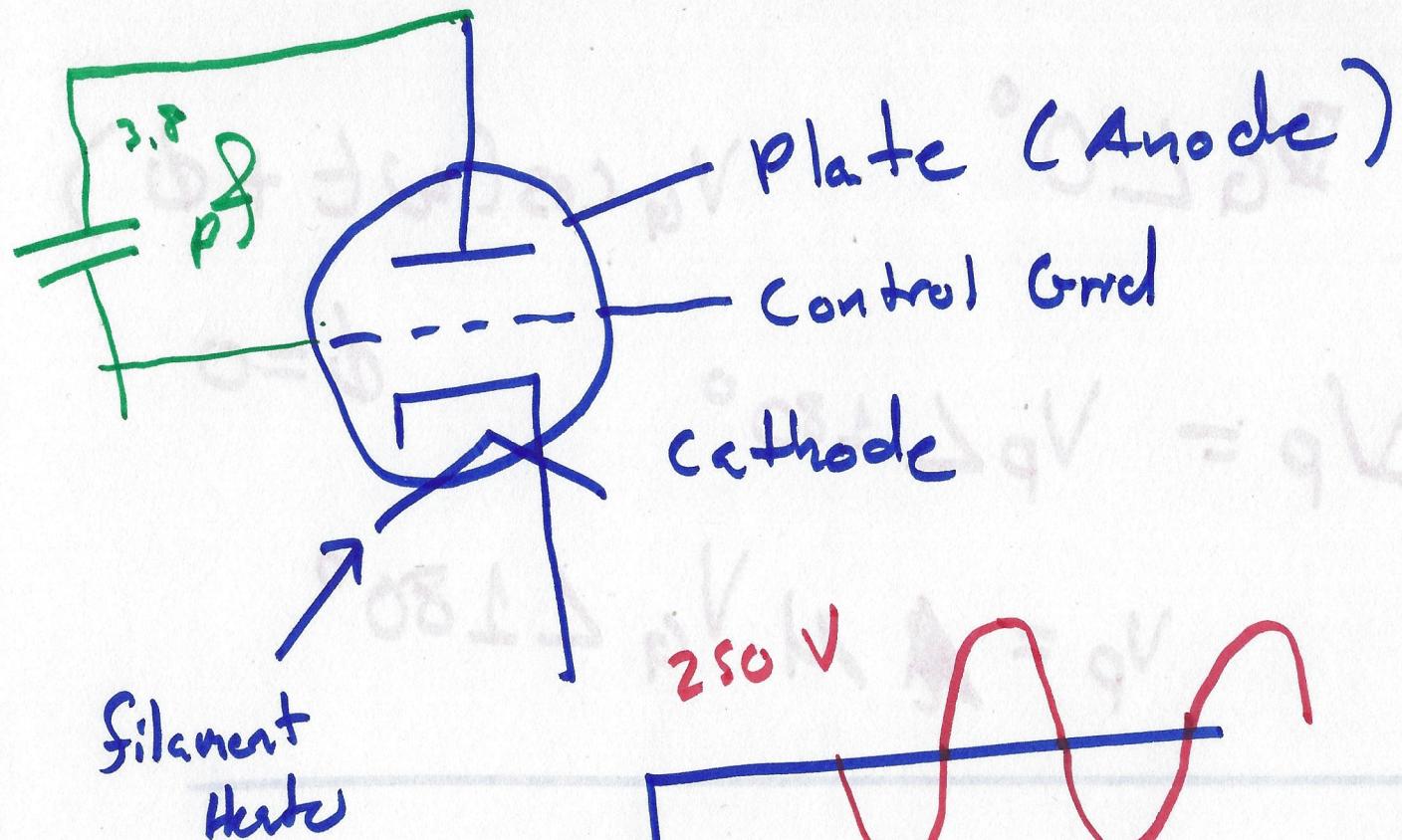


plate wiggles  
out of phase

cathode wiggles  
in phase

(2)

$$V_G \rightarrow V_G \angle 0^\circ \text{ static } V_G \cos(\omega t + \phi)$$

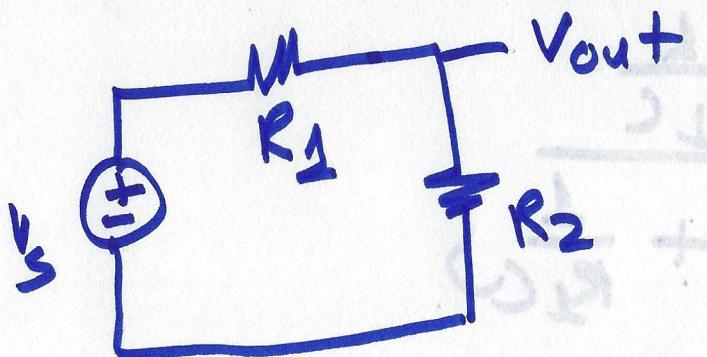
$$V_P \rightarrow V_P = V_P \angle 180^\circ \quad \phi = 0$$

$$V_P = A \text{ } V_G \angle 180^\circ$$

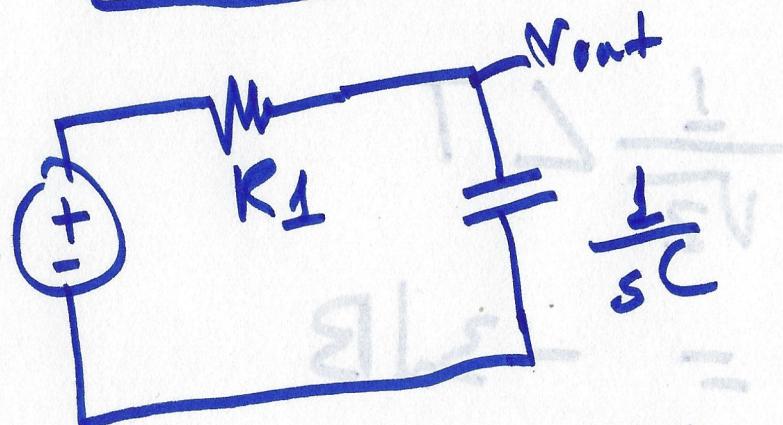
some notes

triode: pre-amps + phase inverter  
 $\rightarrow$  plate  $\sim 250V$

triodes have low distortion



$$V_{out} = \frac{R_2}{R_2 + R_1} V_s$$



I.C. = 0

$$V_{out} = \frac{\frac{1}{sC}}{\frac{1}{sC} + R_1} V_s$$

$$s \rightarrow j\omega$$

$$2\pi f$$

$$\omega \rightarrow$$

$$= \frac{1}{1 + R_1 C s} = \frac{\frac{1}{R_1 C}}{\frac{1}{R_1 C} + s}$$

~~$$j\omega \rightarrow \text{freq}$$~~

$$s=0$$

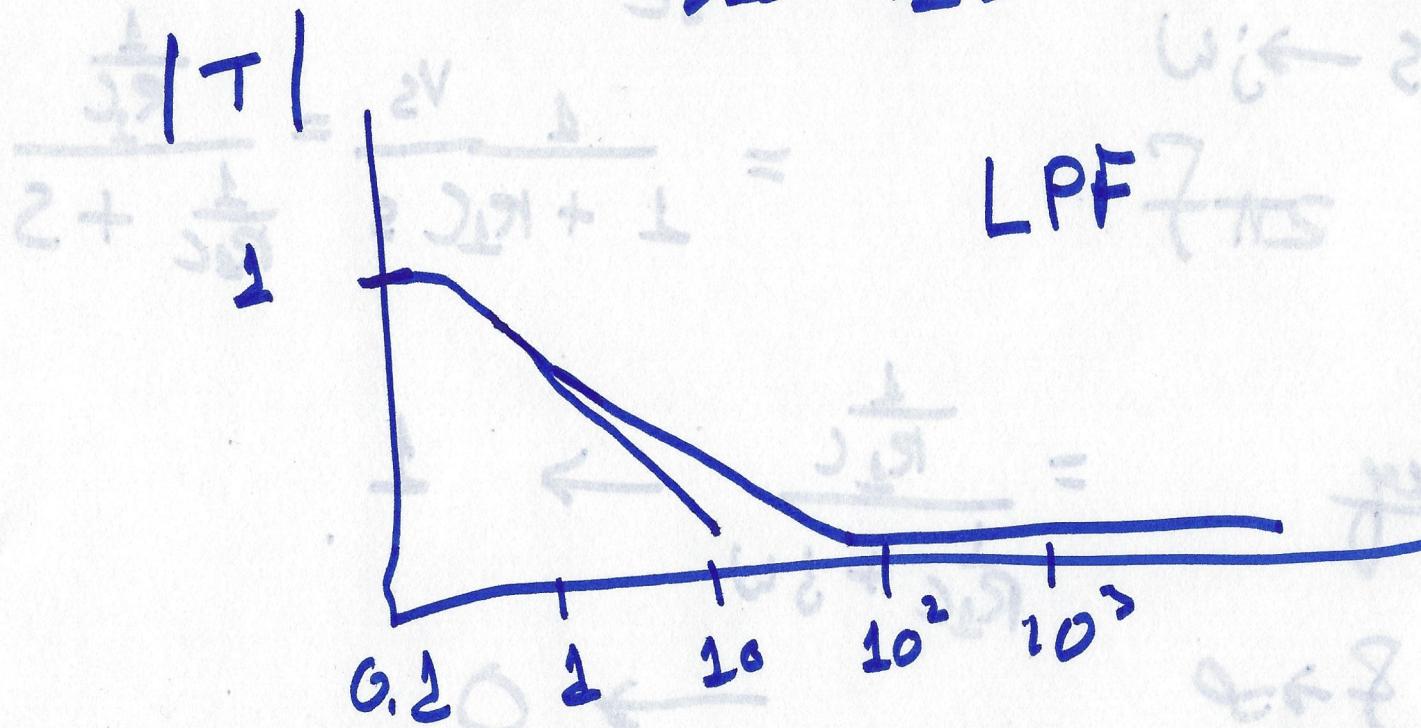
~~$$f \rightarrow \infty$$~~

$$= \frac{\frac{1}{R_1 C}}{\frac{1}{R_1 C} + j\omega} \rightarrow 1$$

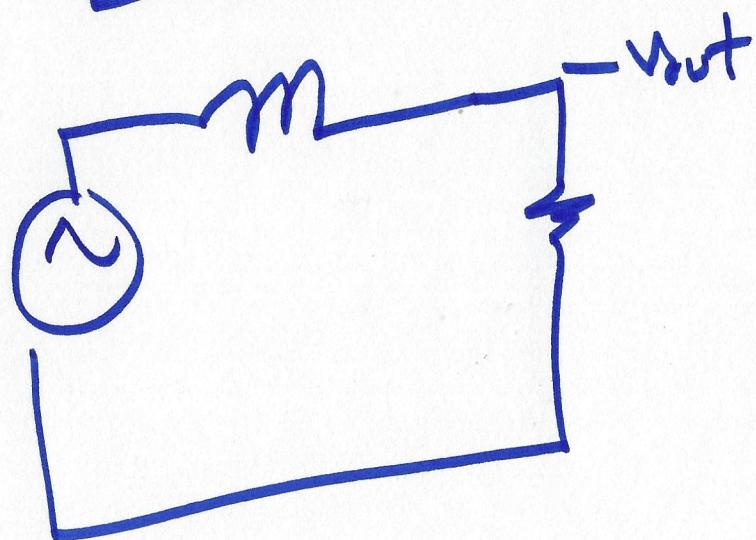
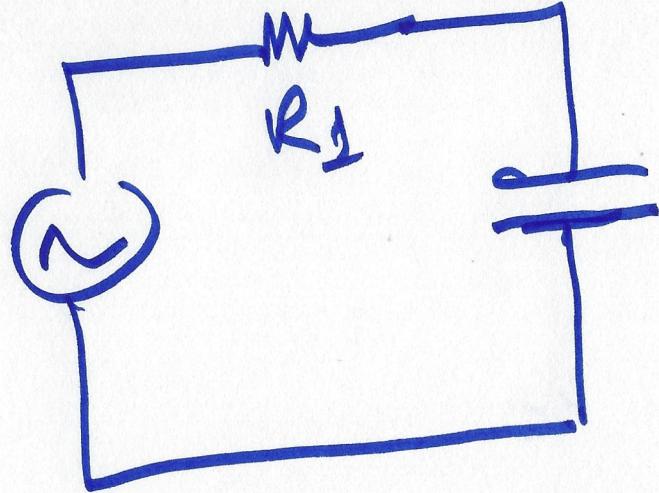
$$\rightarrow 0$$

$$\omega = \frac{1}{R_L C} \quad T = \frac{\frac{1}{R_L C}}{\frac{1}{R_L C} + \frac{1}{R_L C}}$$

$$10 \log_{10} \left( \frac{1}{\sqrt{2}} \right) = -3 \text{dB}$$



$$\frac{1}{R_L C}$$



$$\frac{R}{L} \frac{1}{s + \frac{R}{L}}$$

