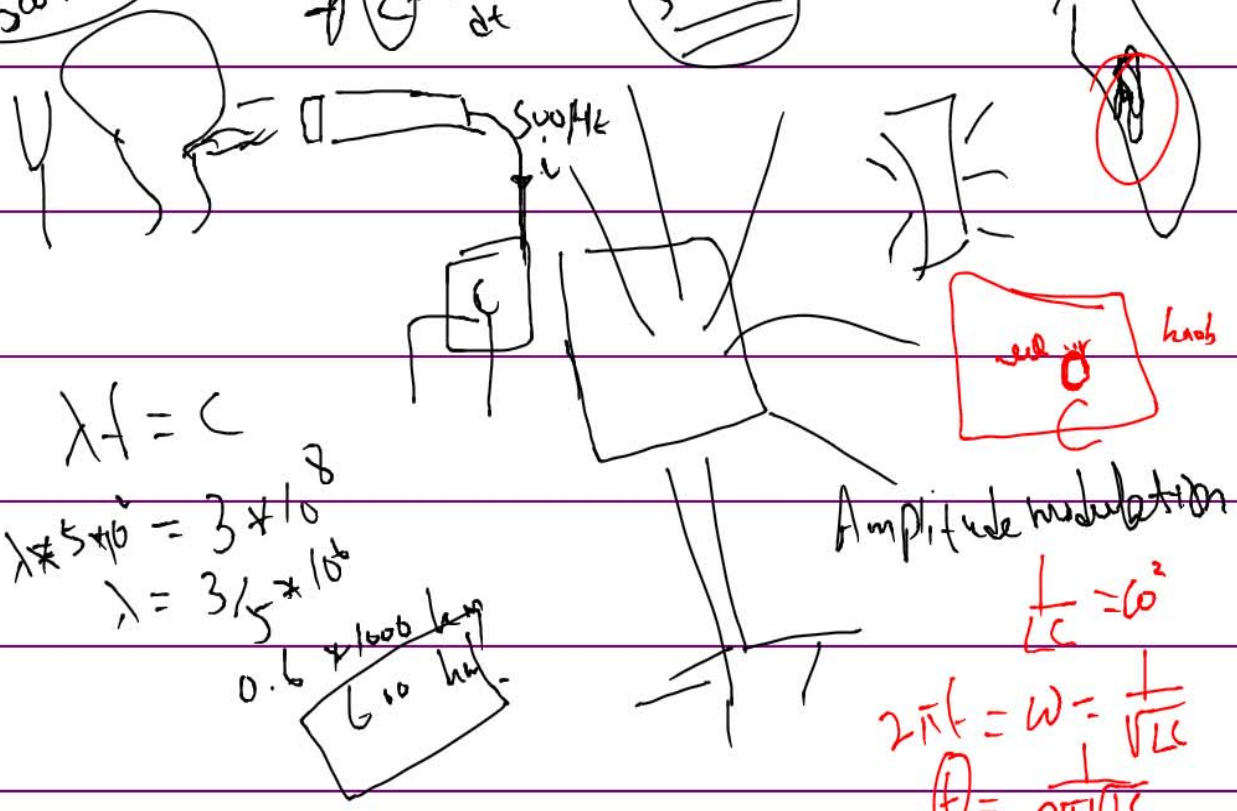
Modulation

500 Hz + 882,000 Hz

$\mathcal{E} = -\frac{d\Phi_B}{dt}$



$\lambda f = c$

$\lambda * 5*10^2 = 3*10^8$

$\lambda = 3/5 * 10^6$

$0.6 * 1600 = 600$ km

$\frac{1}{LC} = \omega^2$

$2\pi f = \omega = \frac{1}{\sqrt{LC}}$

$f = \frac{1}{2\pi\sqrt{LC}}$

$V(t) = V_0 \sin\left(\underbrace{2\pi 882000}_{\omega} \underbrace{t}_{2\pi f} + \phi\right)$

Carrier

$E_c + E_t \rightarrow E_t$

$T = \frac{1}{500} = 2ms$

$f = 500$

$T = \frac{2\pi}{\omega_{ct}}$

$\omega_t = (500\ 2\pi)$

$\omega_c = 2\pi * 882000$

$f_c = 500$

$V = V_{oc} \sin \omega_c t$

t: tone

c: carrier

$V(t) = V_{oc} + V_{ot} \sin(\omega_t t)$

Modulation depth

$V = V_{DC} + k V_{DC} \sin(\omega_c t)$

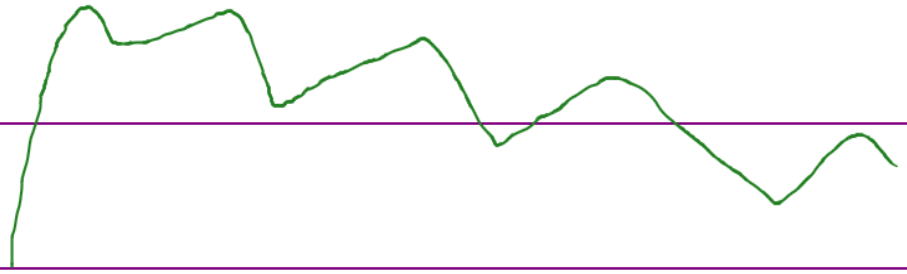
$k V_{DC} < V_{DC}$

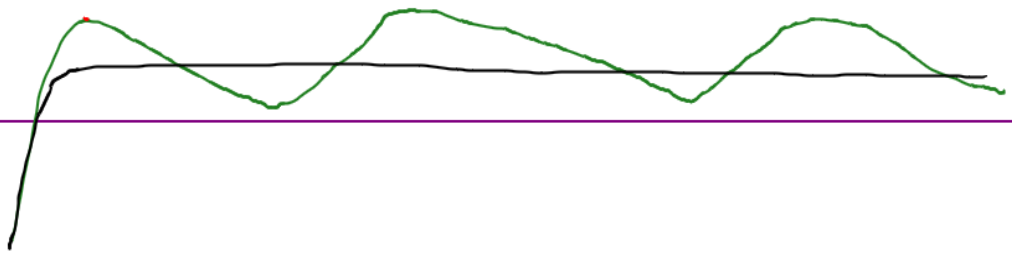
$2\pi f_c$

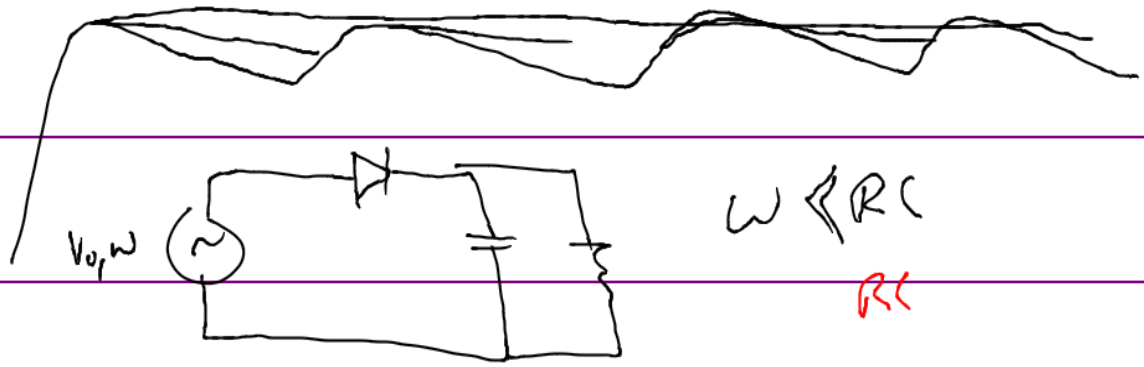
$k=1$

$k=0$

$\frac{1}{f_m} = 0.02$







$\omega \ll RC$

RC