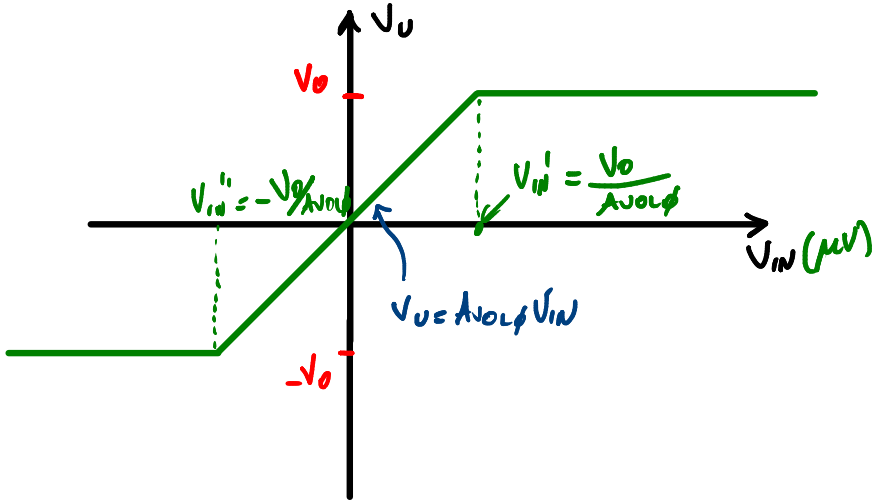
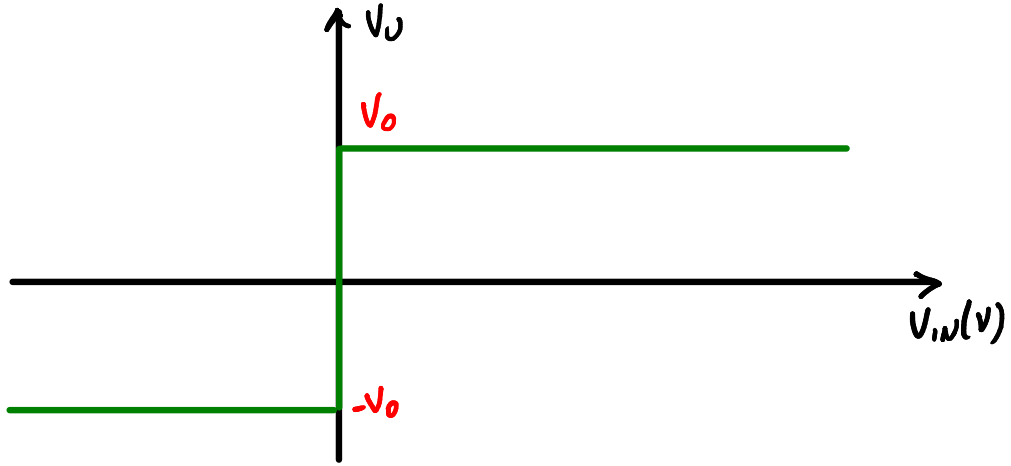
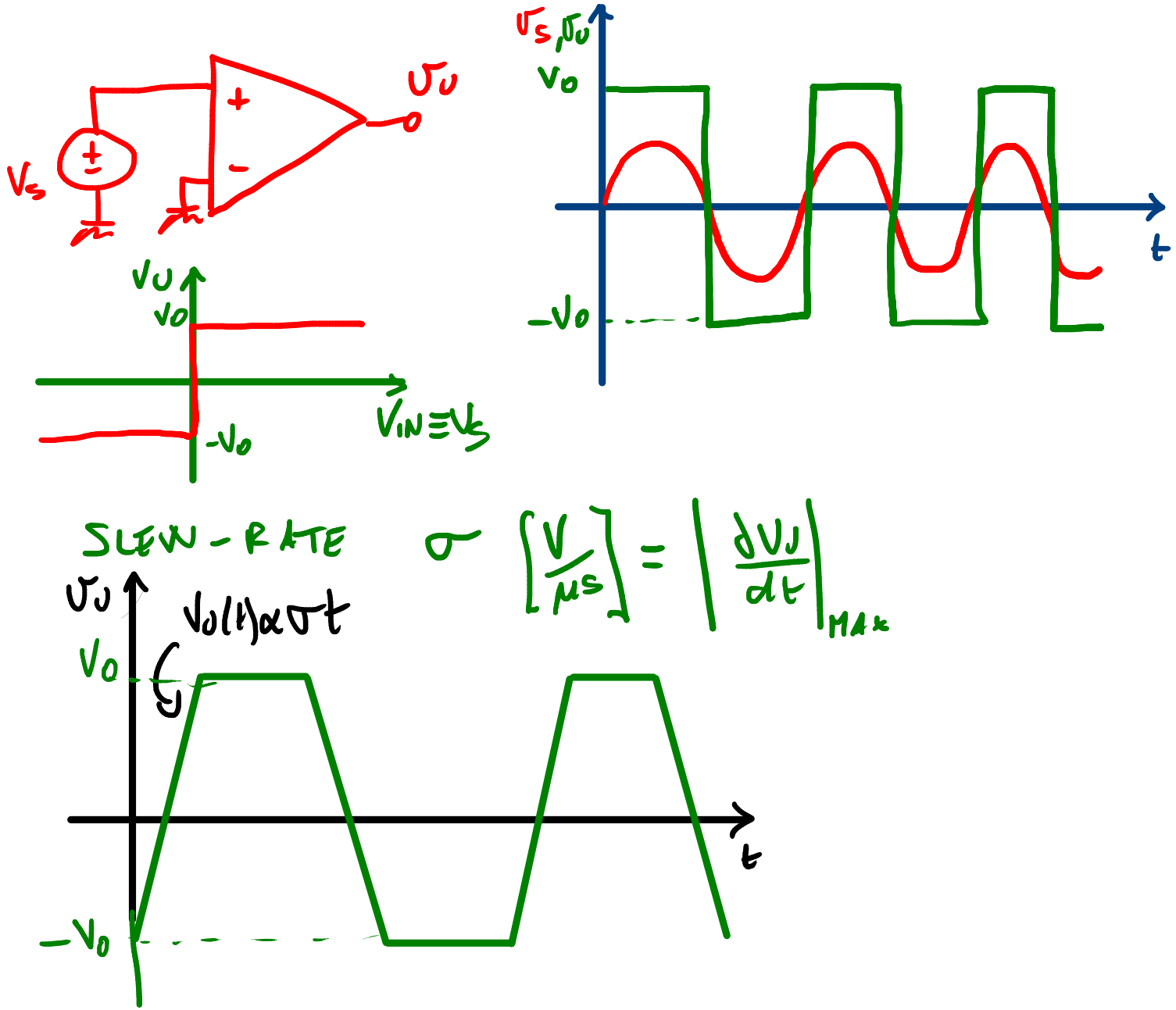
→ A_d dipendente da ω $\quad A_d = \frac{A_{VOLd}}{1 + s\frac{}{\omega_p}}$

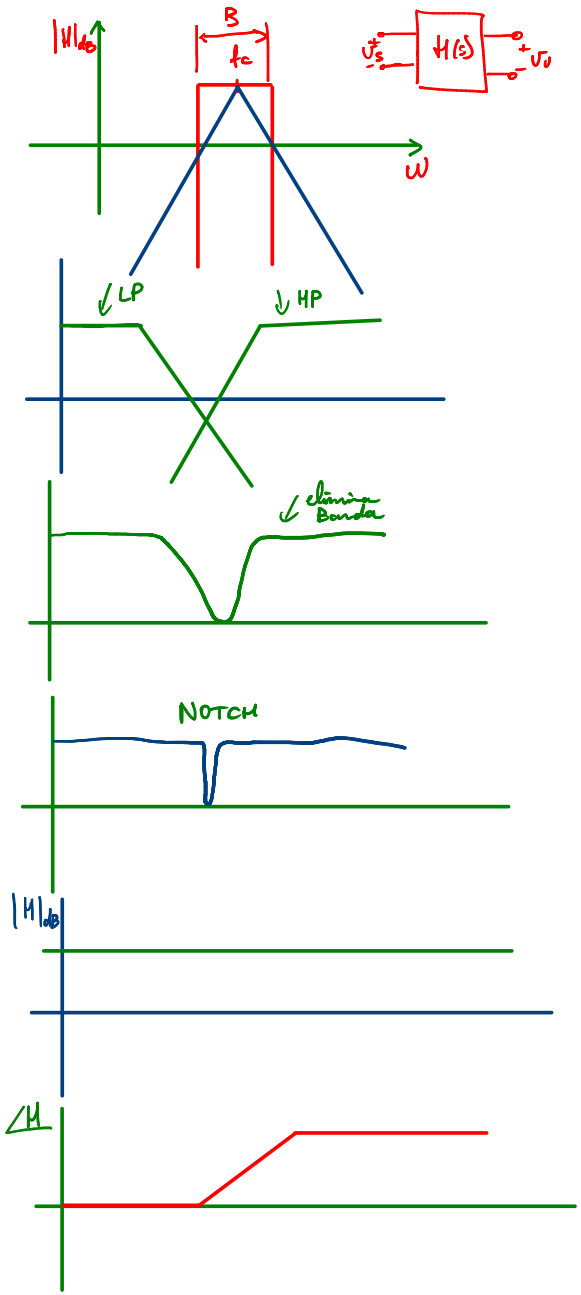
→ A_V nell'AMP INV: → ricavati A_{V_0}'
→ ricavati ω_p'
→ PSRR ≃ costante

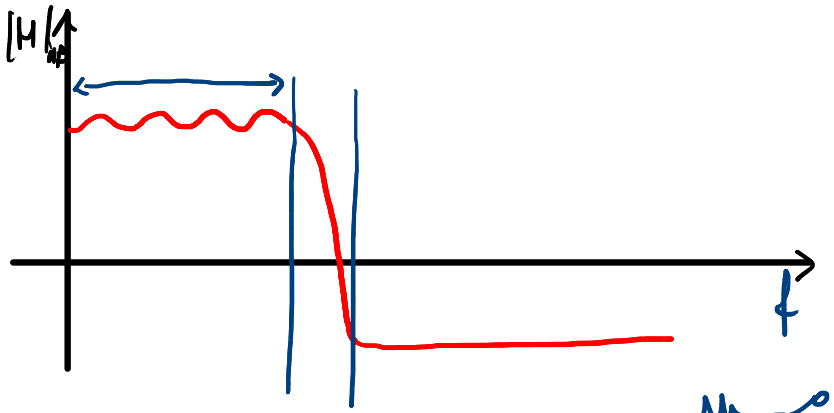
→ A_V nell'AMP INV con $R_{in} \neq \infty$



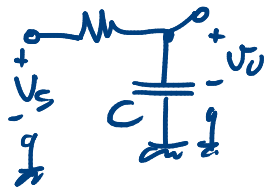


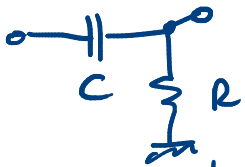

V_s
V_U
+
-
V_U
V_0
$-V_0$
$V_{IN} \equiv V_S$
V_S, V_U
V_0
$-V_0$
t
SLEW-RATE
$\sigma \left[\frac{V}{\mu s}\right] = \left|\frac{dV_U}{dt}\right|_{MAX}$
V_U
$V_0(t) \propto \sigma t$
V_0
$-V_0$
t


|H|dB
B
fc
H(s)
Vs
Vo
ω
LP
HP
eliminador Banda
NOTCH
|H|dB
∠H



$H(s) = \dfrac{\quad}{\quad}$





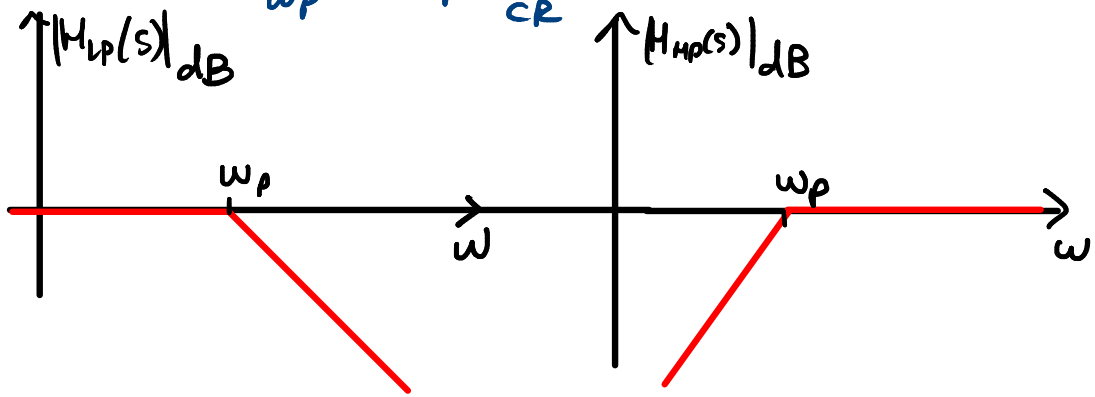
$$H(s) = \frac{sRC}{1+\frac{s}{\omega_p}}$$

$$H(s) = \frac{A_0}{1+\frac{s}{\omega_p}}$$

$$A_0$$

$$\omega_p = \frac{1}{CR}$$

$$\omega_p = \frac{1}{CR}$$



$$H(s) = \frac{k_2 s^2 + k_1 \frac{\omega_0}{Q} s + k_0 \omega_0^2}{s^2 + \frac{\omega_0}{Q} s + \omega_0^2}$$

$k_2 = 0 \wedge k_1 = 0 \wedge k_0 = 1$: LP

$k_2 = 1 \wedge k_1 = 0 \wedge k_0 = 0$: HP

$k_2 = 0 \wedge k_1 = 1 \wedge k_0 = 0$: BP

Reiezione di Banda: $k_2 = 1 \wedge k_1 = 0 \wedge k_0 = 1$

Passa tutto: $k_2 = 1 \wedge k_1 = -1 \wedge k_0 = 1$

$$D[H(s)] = \frac{s^2}{\omega_0^2} + \frac{s}{Q\omega_0} + 1$$

$$H(j\omega) = -\frac{\omega^2}{\omega_0^2} + 1 + \frac{j\omega}{Q\omega_0}$$

$$|H(j\omega_0)| = \frac{1}{Q}$$

$$|H(j\omega)|^2 = \left(1 - \frac{\omega^2}{\omega_0^2}\right)^2 + \left(\frac{\omega}{\omega_0 Q}\right)^2 = \left(\frac{\omega}{\omega_0}\right)^4 - \left(\frac{\omega}{\omega_0}\right)^2\left(2 - \frac{1}{Q^2}\right) + 1$$

$Q^2 > 2$

$$\min |H(\omega)| = \frac{1}{Q}\sqrt{1 - \frac{1}{4Q^2}} \qquad \text{per } \frac{\omega}{\omega_0} = 1 - \frac{1}{2Q^2}$$