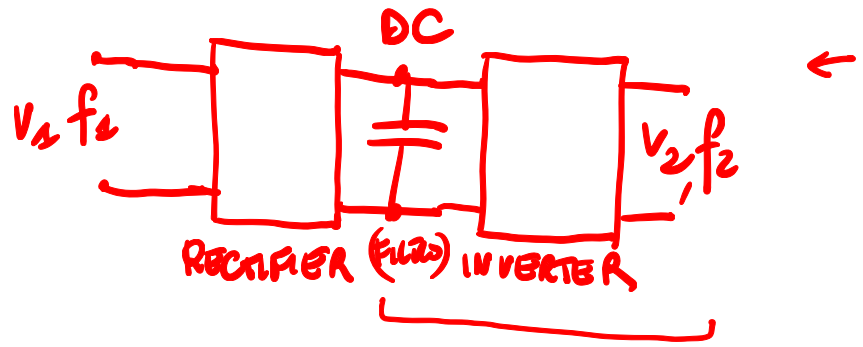
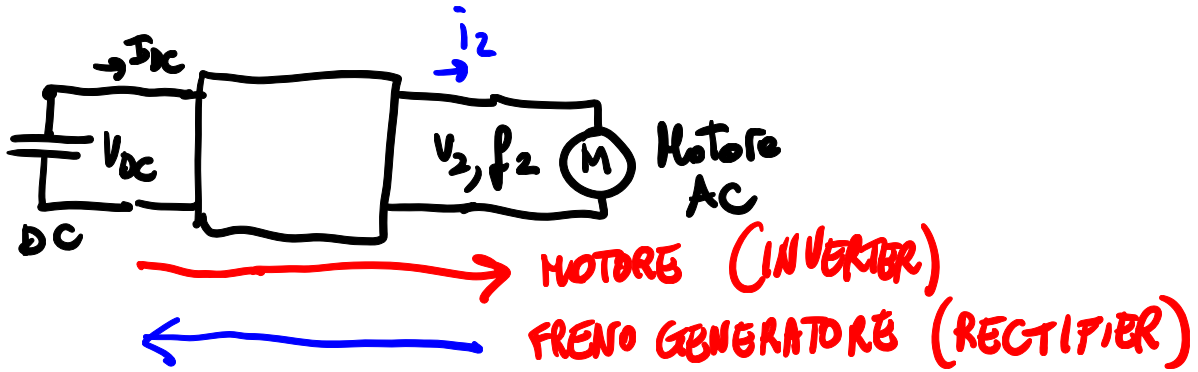
Inverter [DC → AC]

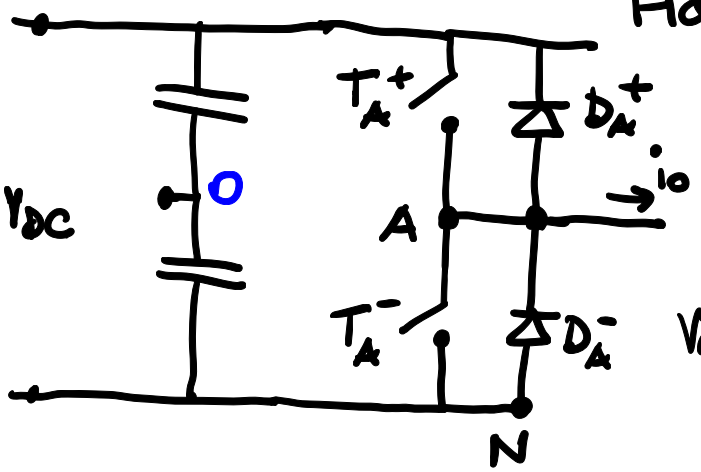
Cyclo converter



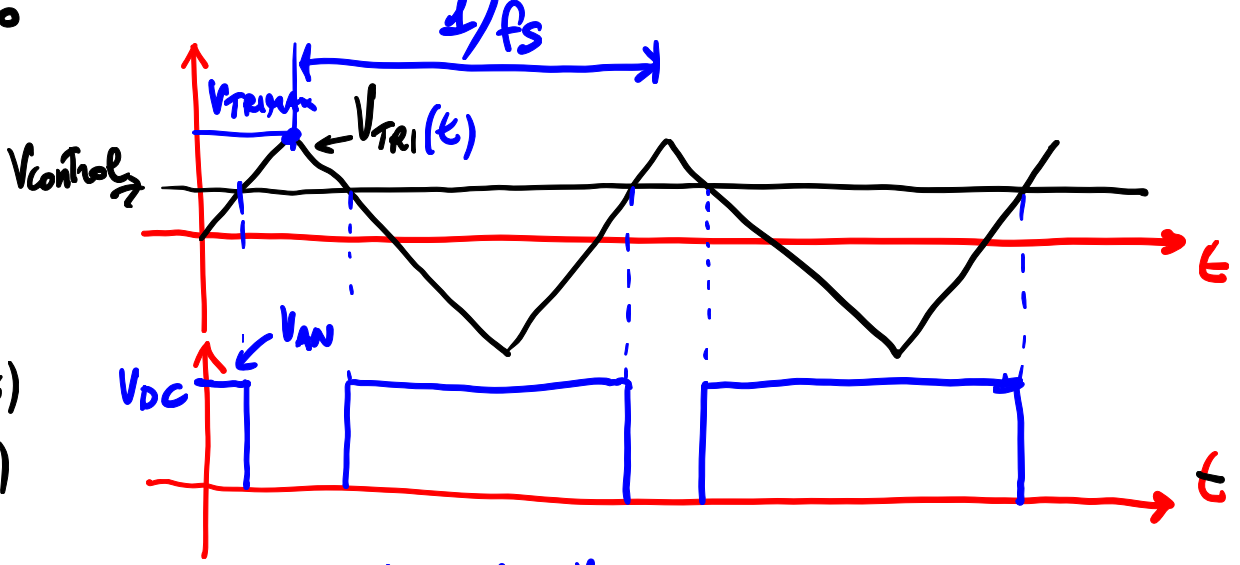
Es: Motore AC



Half BRIDGE



T_A^+ e T_A^- sono in controfase



T_A^+ ON $\quad V_{control} > V_{tri}(t)$

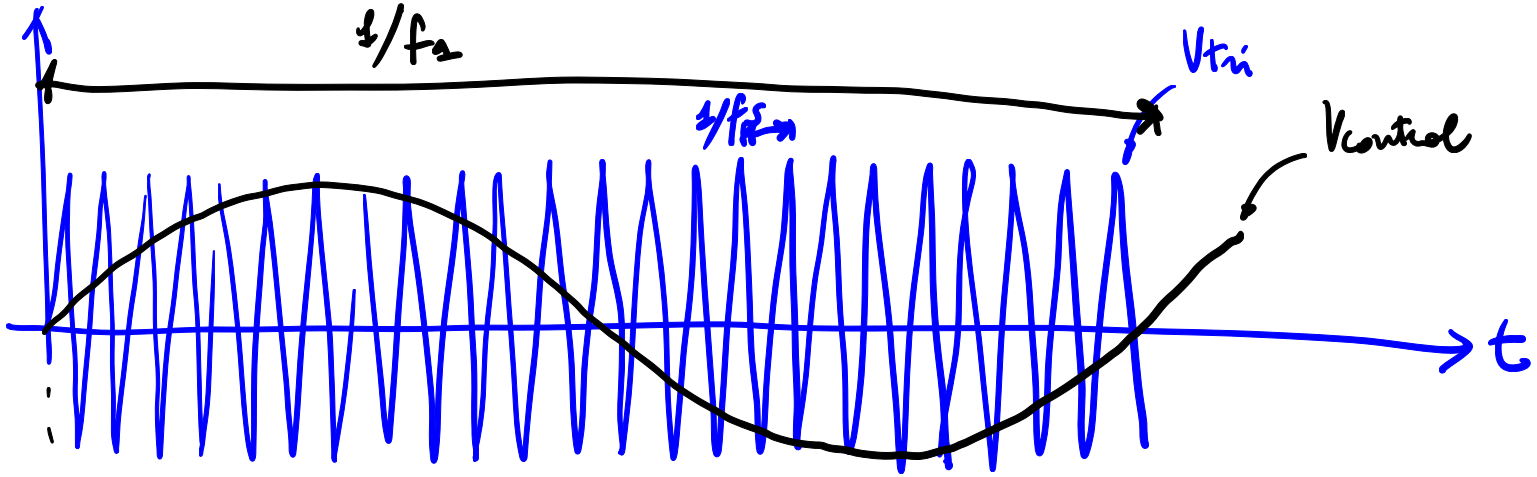
T_A^+ off $\quad V_{control} < V_{tri}(t)$

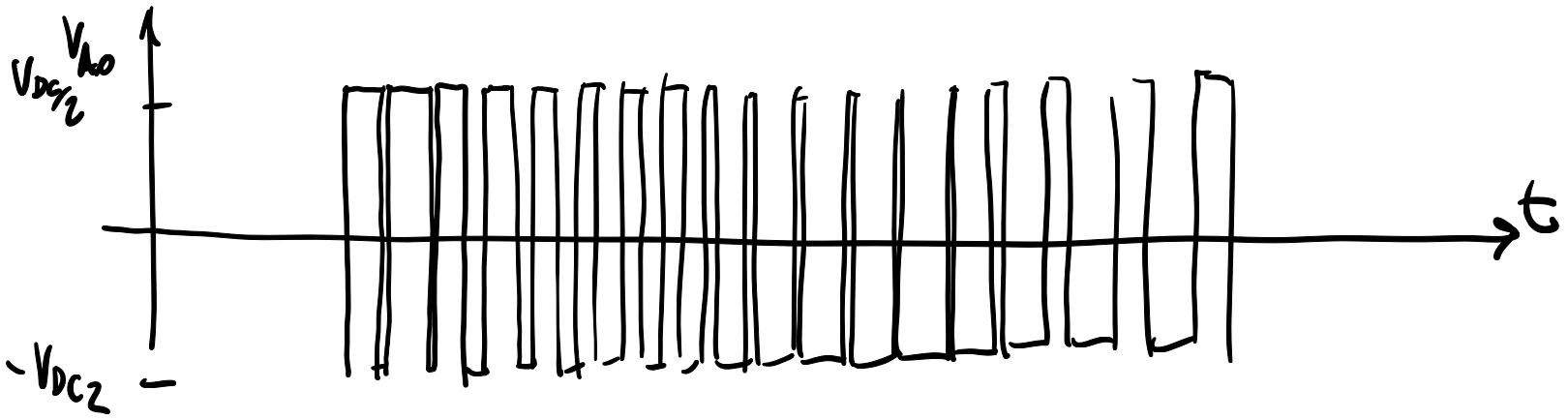
$$\frac{\langle V_{AN}\rangle}{V_{DC}} = \frac{1}{2}\left(1 + \frac{V_{control}}{V_{TRImax}}\right)$$

$$V_{AO} = V_{AN} - V_{ON} = V_{AN} - \frac{V_{DC}}{2}$$

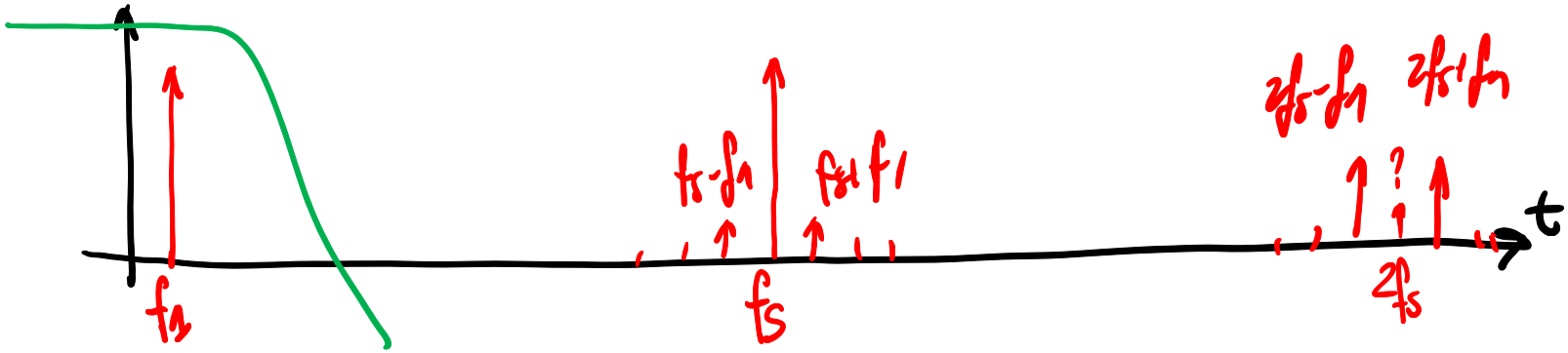
$$\left[\langle V_{AO}\rangle = \frac{V_{DC}}{2} \cdot \frac{V_{control}}{V_{TRImax}}\right]$$

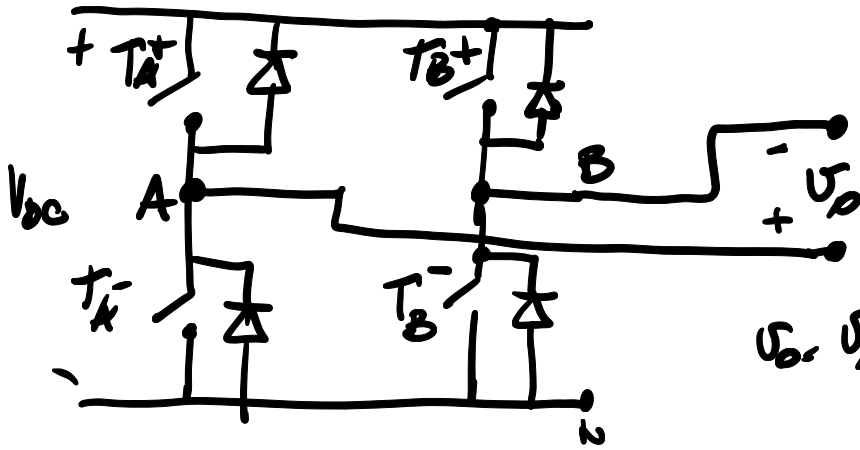
Se moduliamo $V_{control}$ a frequenza $f_1 \ll f_s$ allora V_{AO} è una forma d'onda modulata a freq f_1





SPETTRO DI VAO



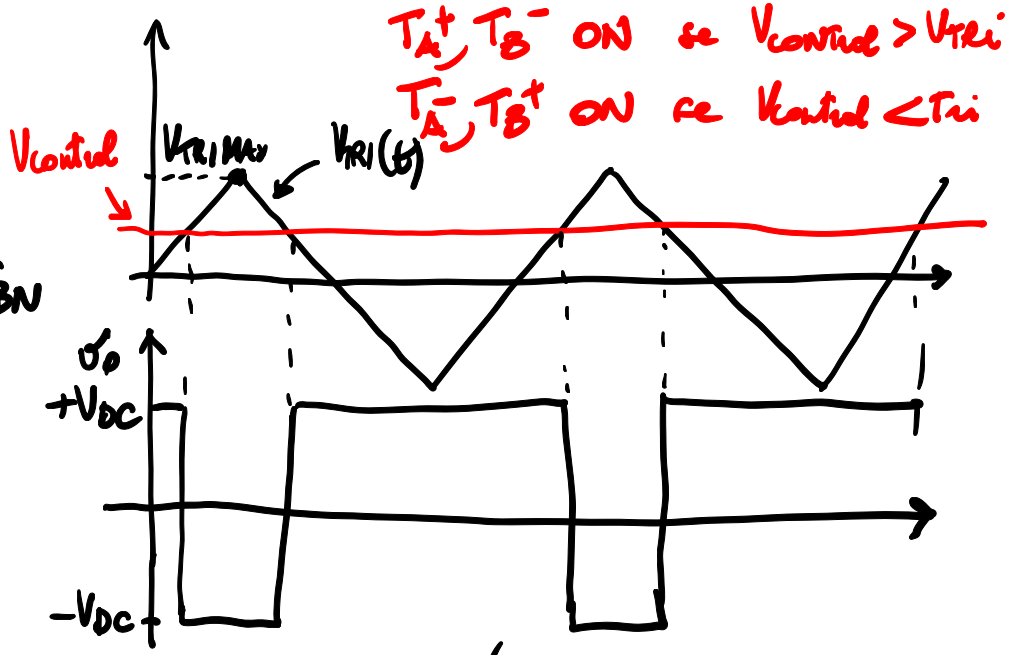


$v_o = v_{AN} - v_{BN}$

OPERAZIONE BIPOLARE

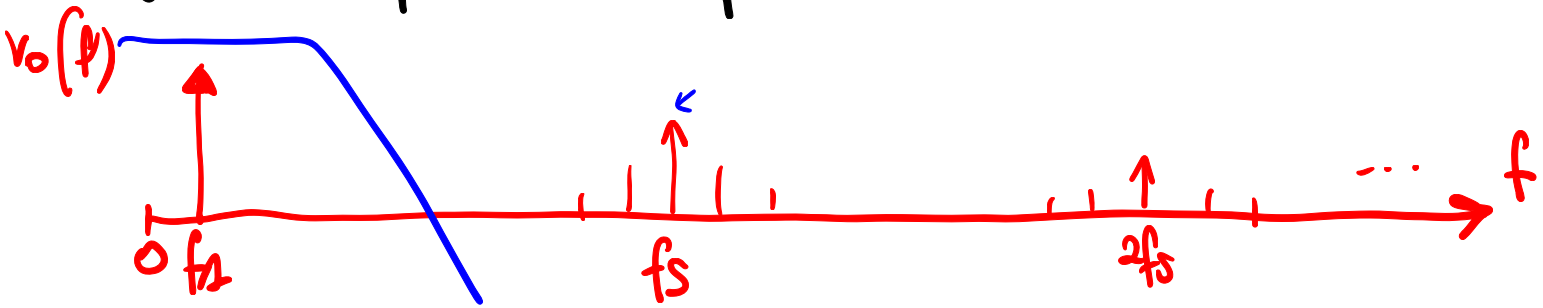
T_A^+, T_B^- ON se $V_{control} > V_{tri}$

T_A^-, T_B^+ ON se $V_{control} < V_{tri}$



$$\langle v_o \rangle = V_{DC}\left(\frac{V_{control}}{V_{TRIMAX}}\right)$$

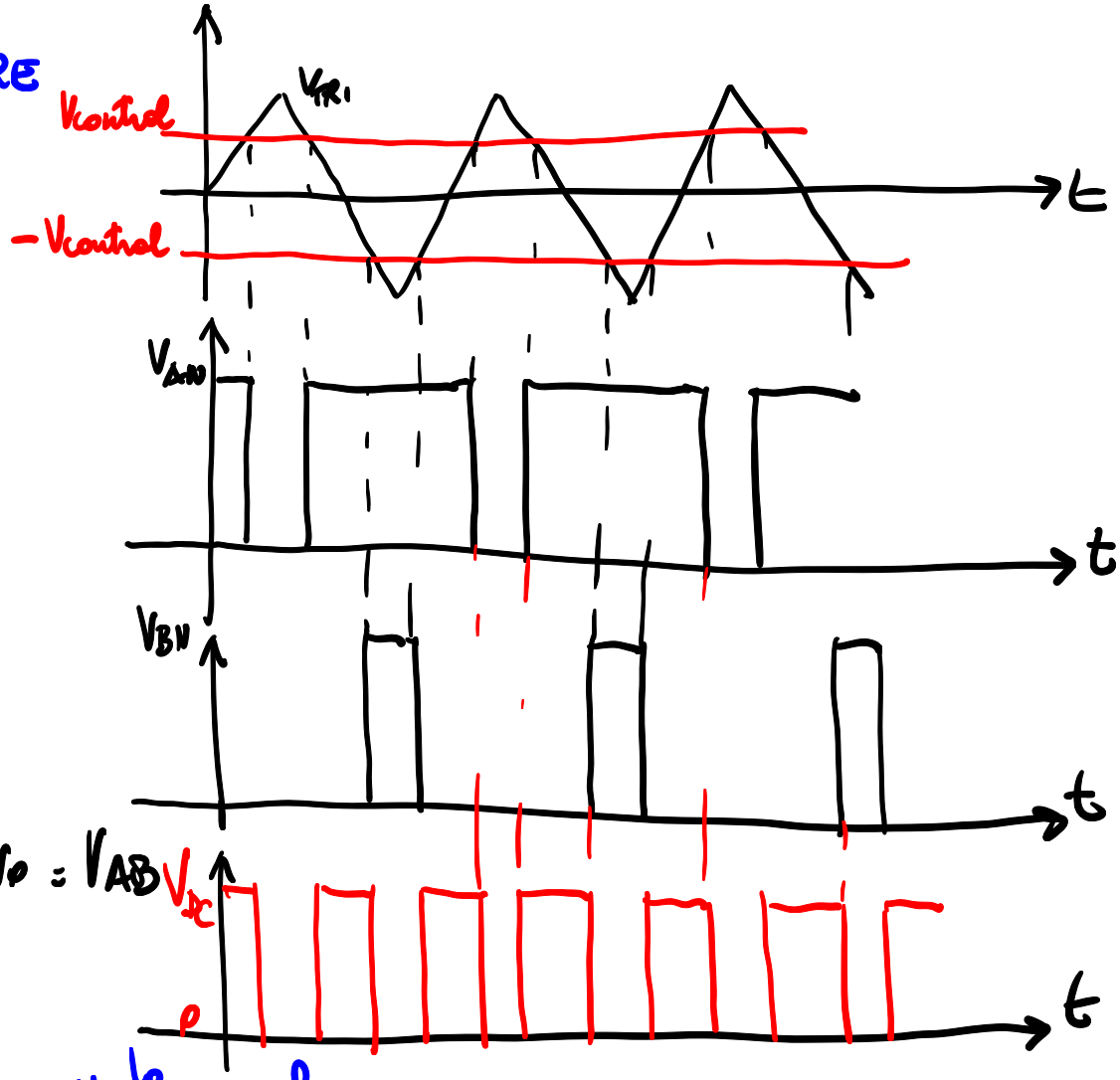
Se $V_{control}$ è una sinusoide a frequenza $f_1 \ll f_S$ allora lo spettro di v_o è fatto così



Pilotaggio UNIPOLARE

(A) T_A^+ ON se $V_{control} > V_{tri}$
T_A^- ON se $V_{control} < V_{tri}$

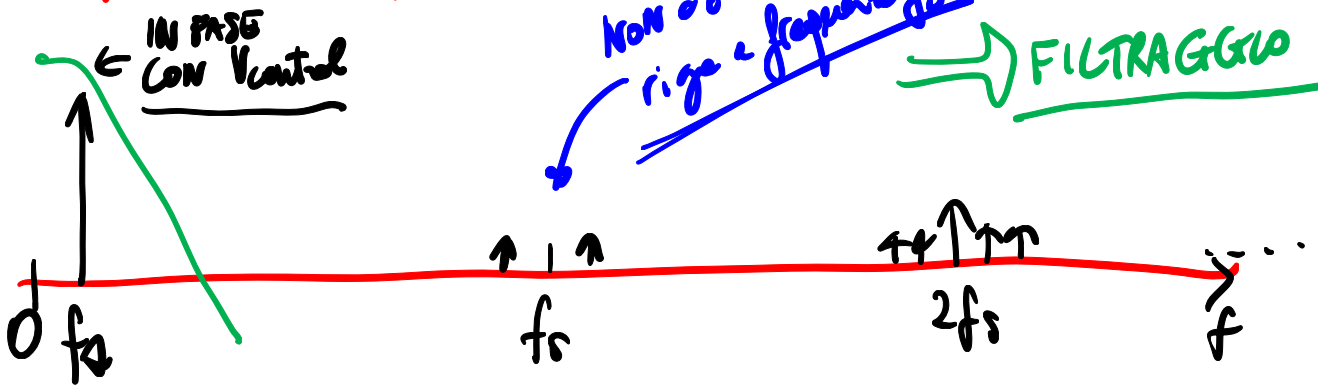
(B) T_B^+ ON se $-V_{control} > V_{tri}$
T_B^- ON se $-V_{control} < V_{tri}$



$\langle V_o \rangle = V_{DC}\left(\frac{V_{control}}{V_{tri\,MAX}}\right)$

se $V_{control}$ è una sinusoide a f

SPETTRO DI V_o



→ FILTRAGGIO LOW PASS PIÙ SEMPLICE