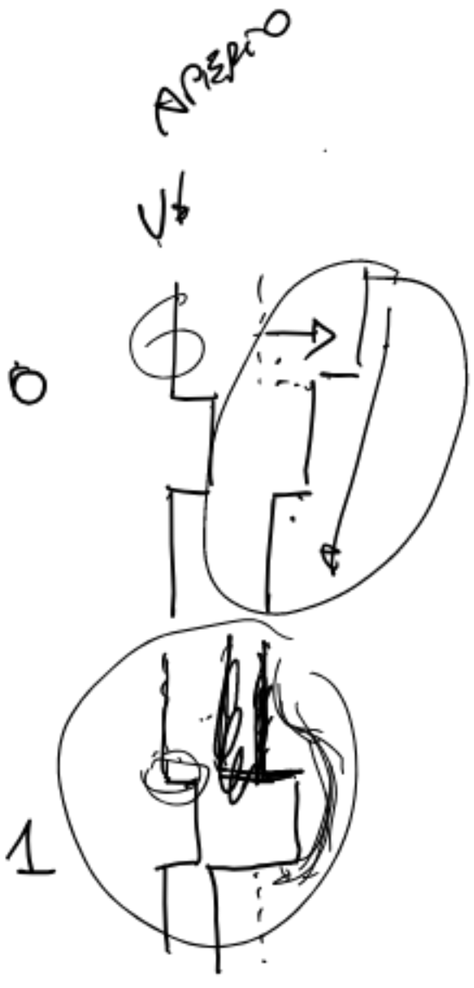
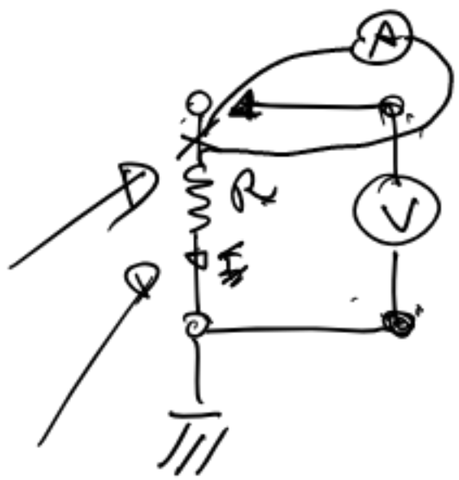
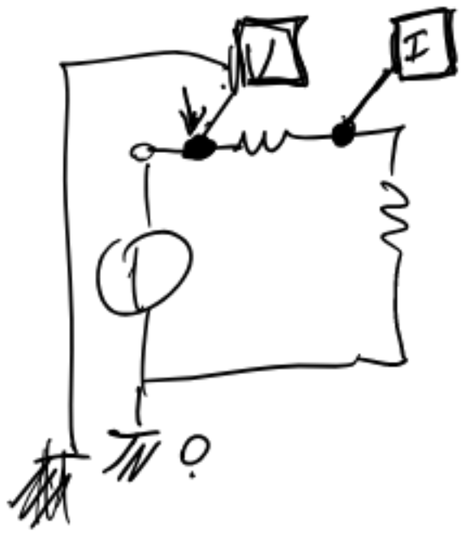
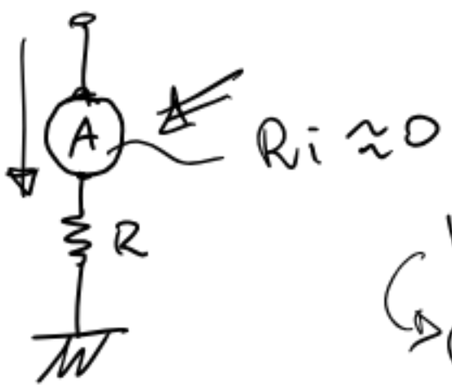
ELETTRONICA ANALOGICA 02/04/2020



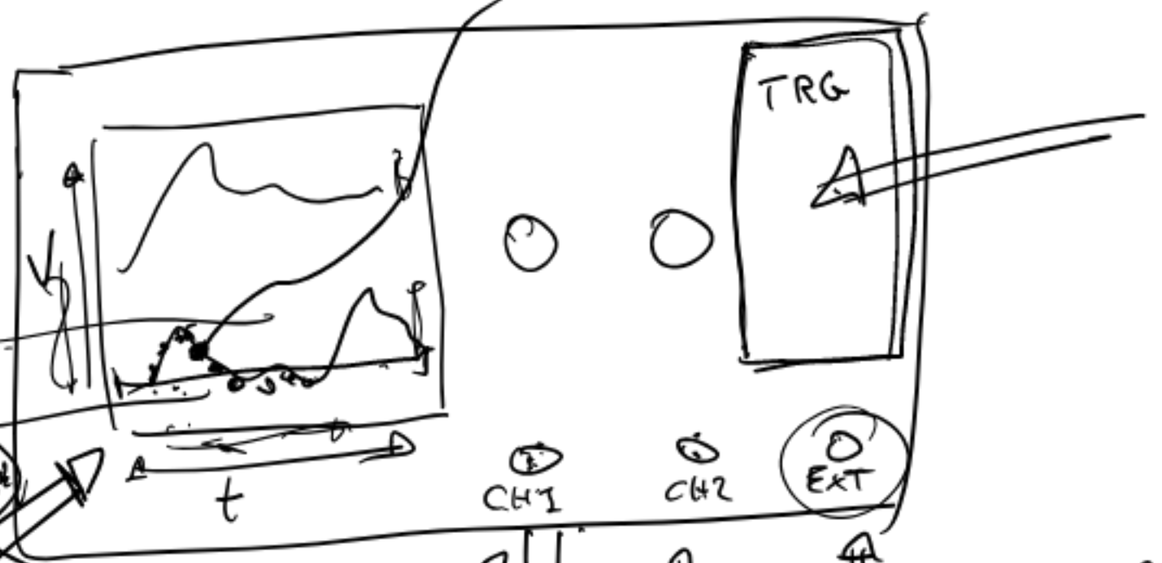
SONDE (V) ⇒ GRAFICO

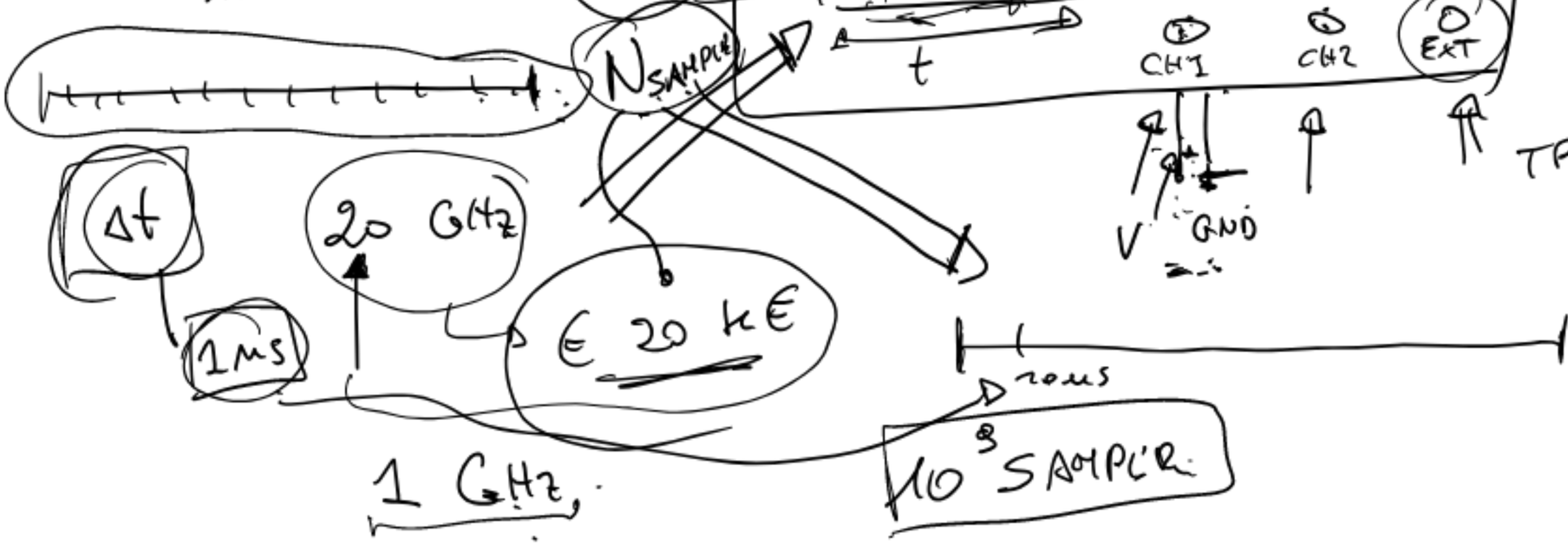






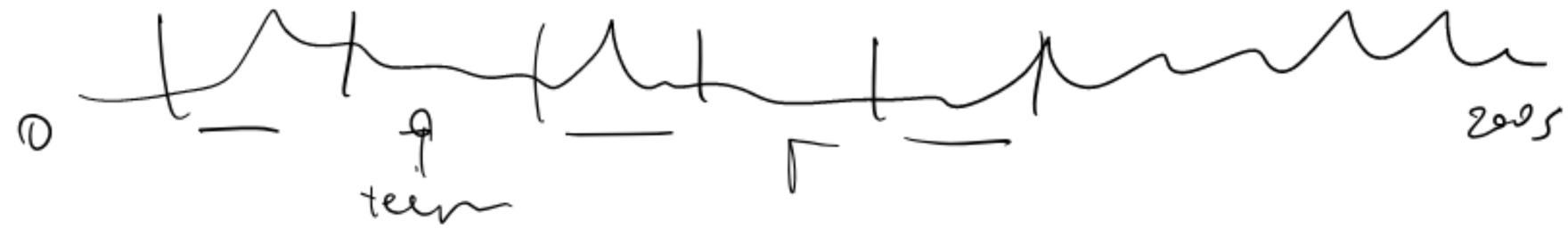
CAMPIONE / SAMPLE

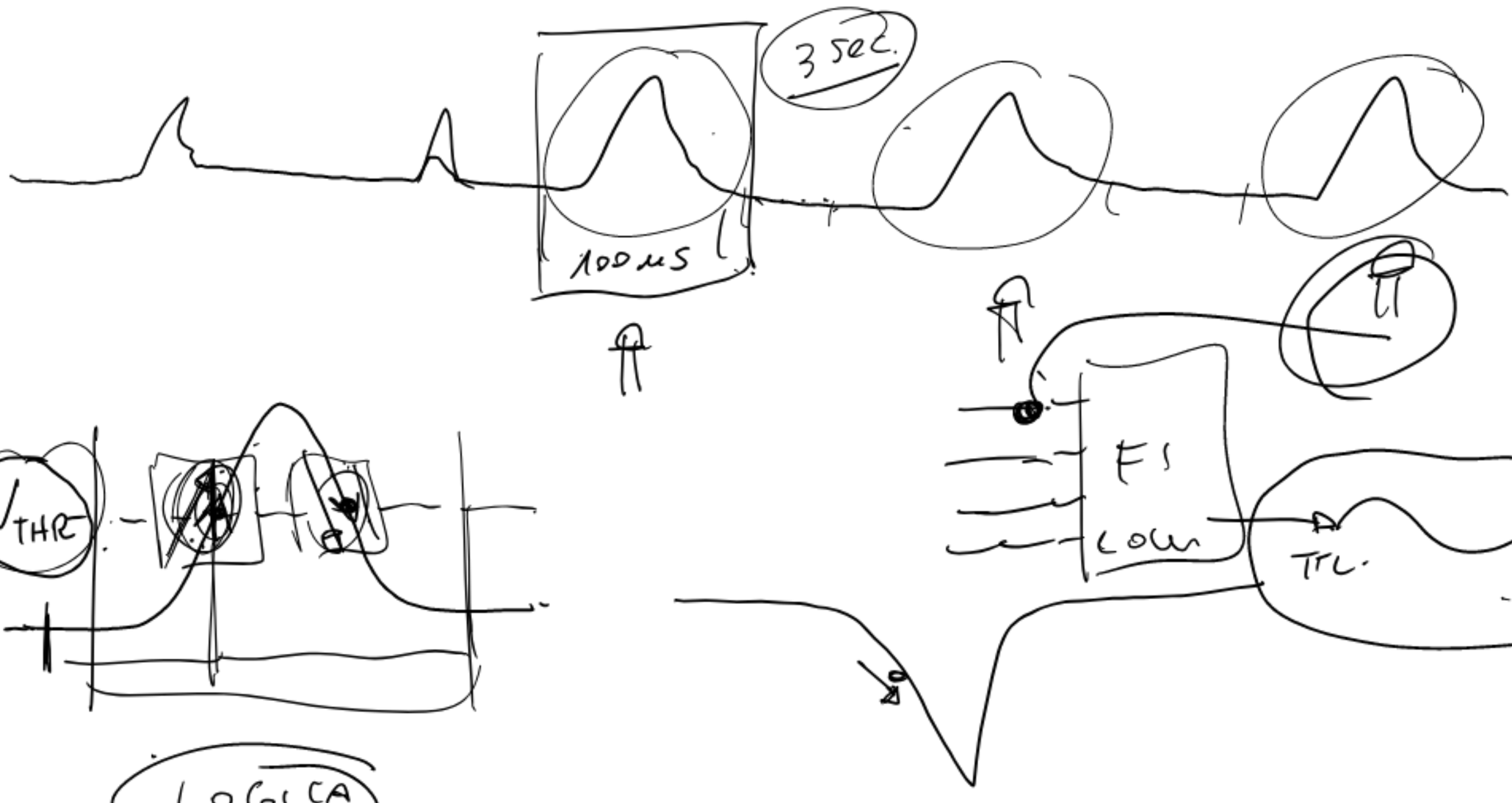




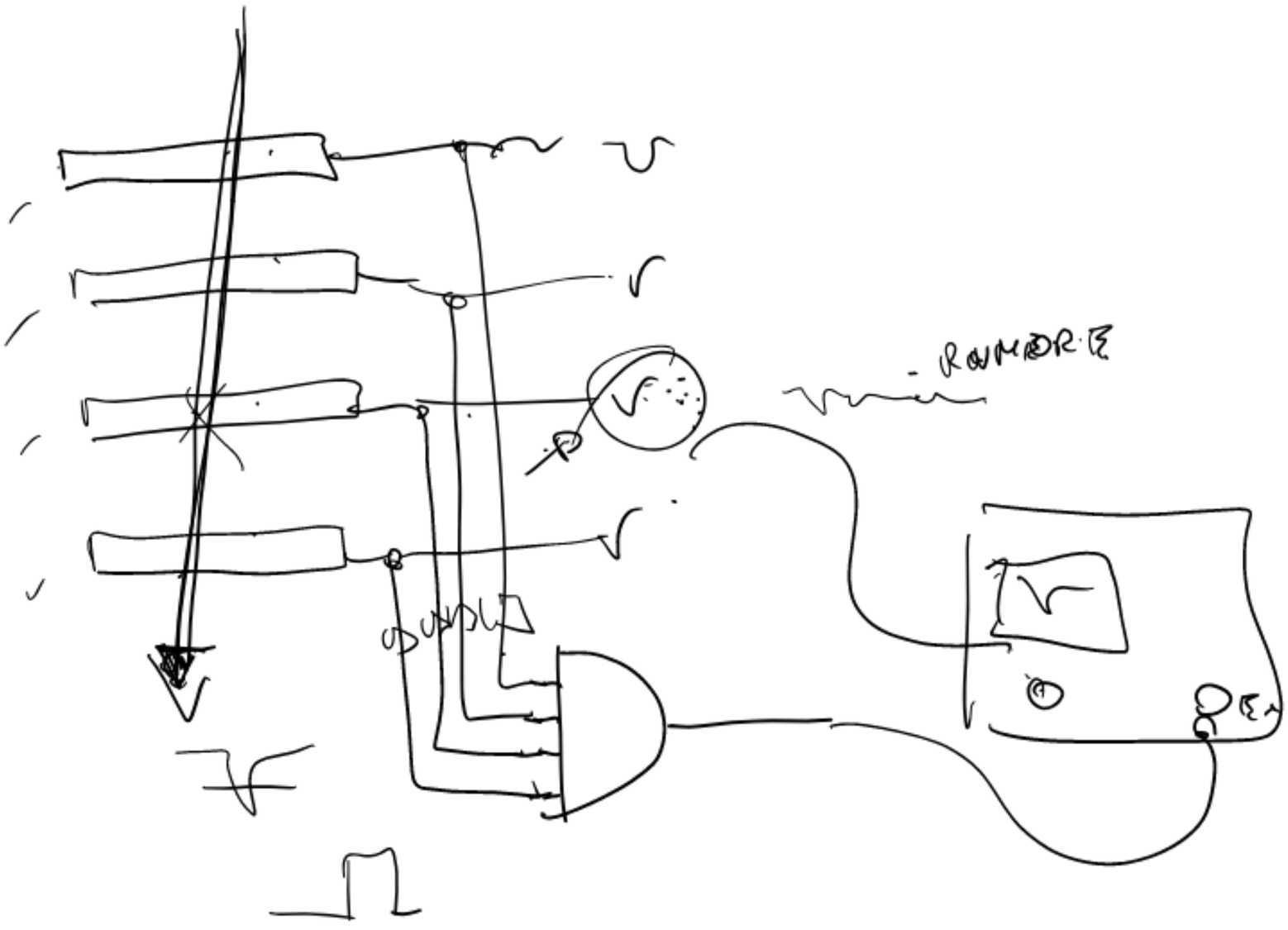
TRIGGER

TRIGGERLESS





RAGGI COSMICI

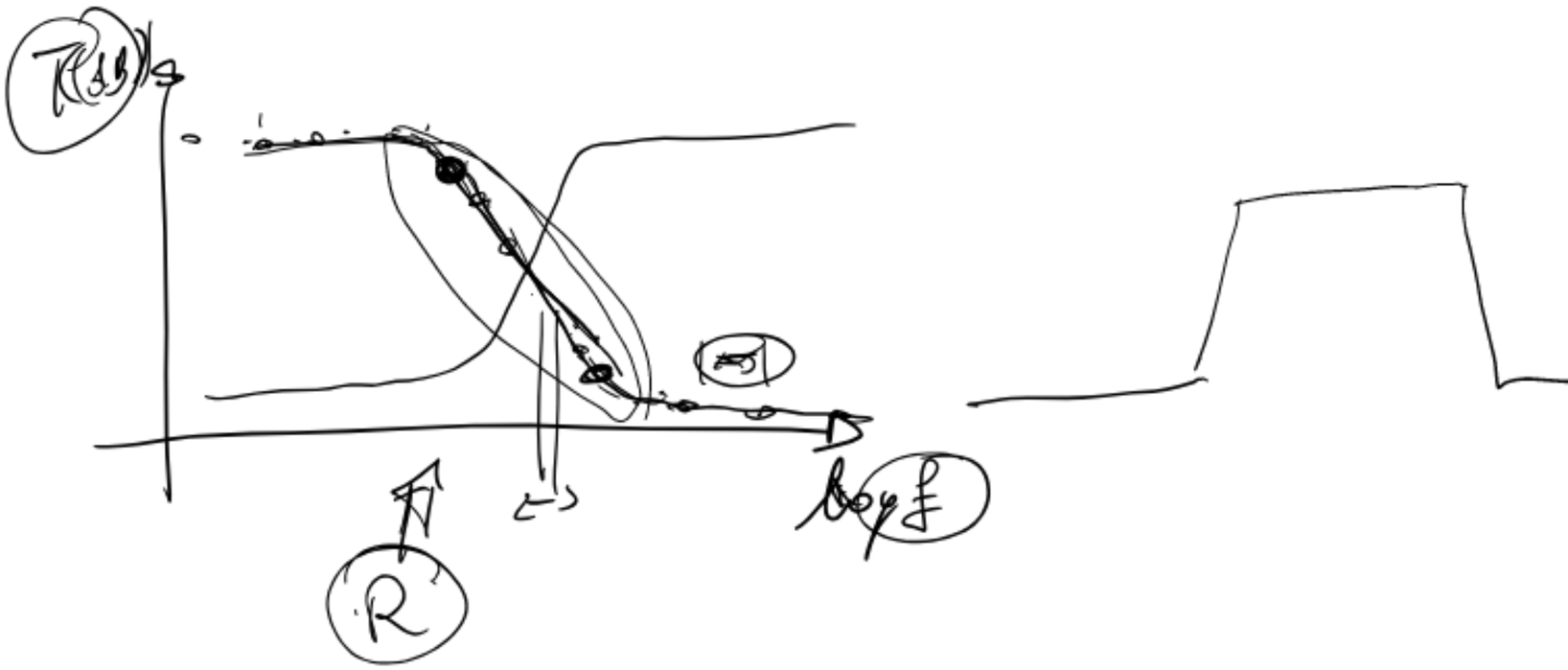


ESPERIENZE

ESP. 1

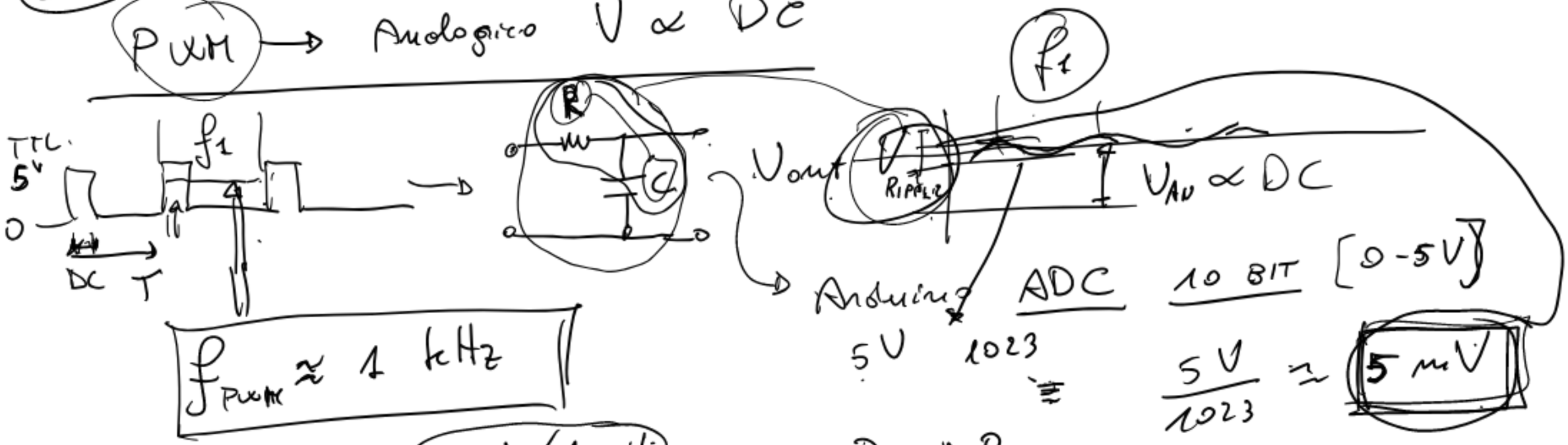
FILTRI RC / CR

$$T(f) = \left|\frac{V_{out}}{V_{in}}\right|^{RC-CR.}$$



ESP. 2

PWM → Analogico $V \propto DC$



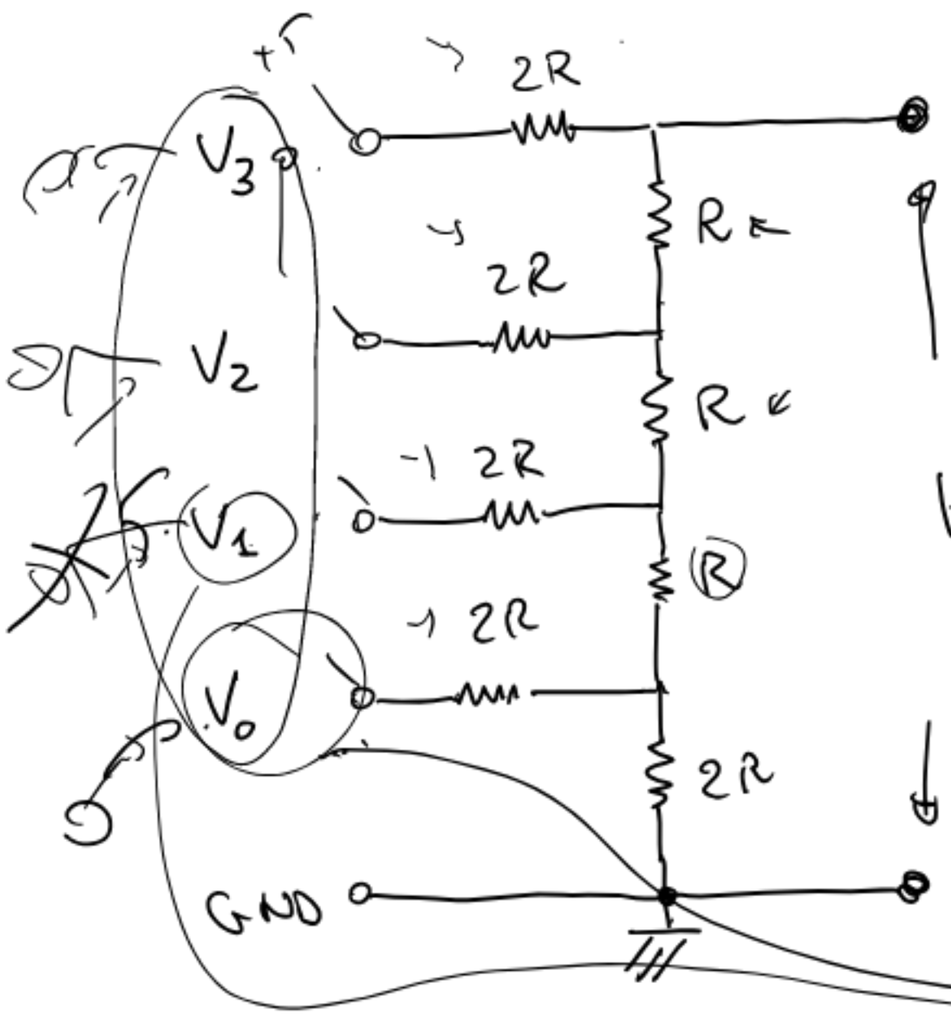
1. RC ⇒ V_{RIPPLE} = 5 mV / 1 mV

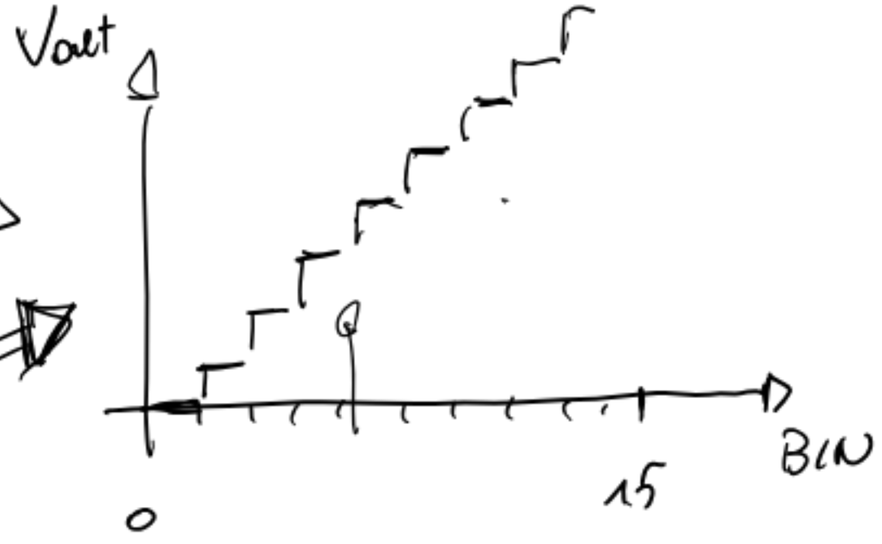
2. T RISPOSTA : $DC_1 \rightarrow DC_2$
   10% 90% $\Delta T_{DC} = 0$
   $V_{out\_1} \rightarrow V_{out\_2}$
   $\Delta T_V = ???$ ⟺ RC

3. 3 valori V_{RIPPLE}
   1 mV / 10 mV / 100 mV

ESP.1

DAC 4 BIT





Vout

$V_i = \begin{cases} 0 \rightarrow 0 \\ 1 \rightarrow 5V \end{cases}$

$V_{out} = f(V_0, V_1, V_2, V_3)$

???

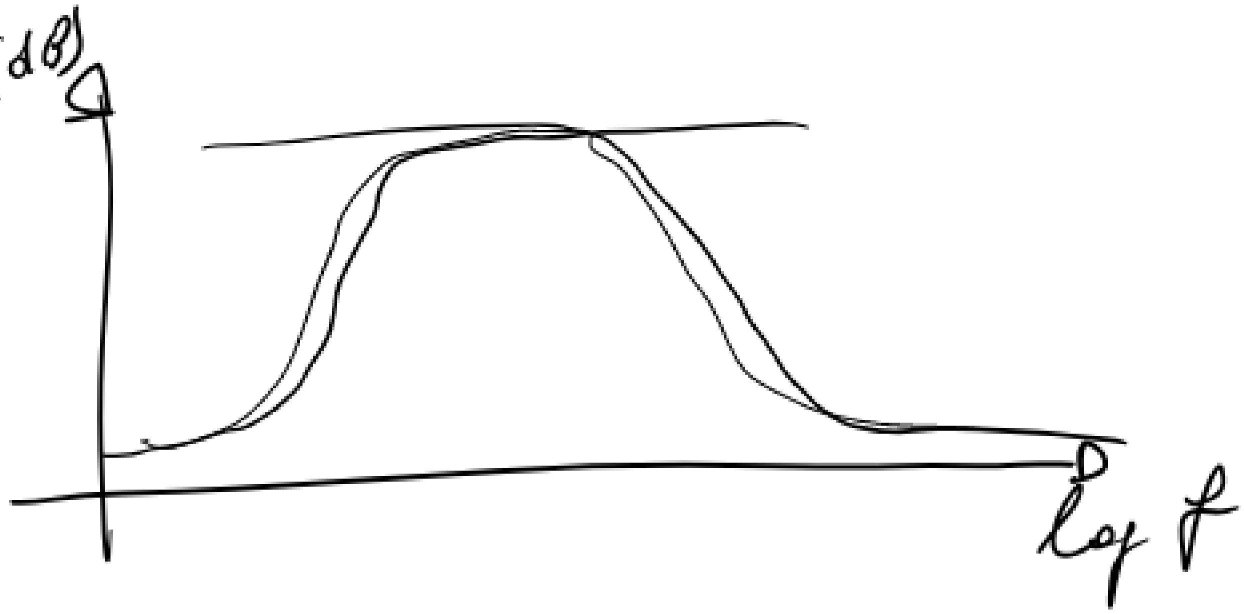
$V_{out} = V_0 f_0(R) + V_1 f_1(R) + V_2 f_2(R) + V_3 f_3(R)$

Vout ?

ESP. 2

FILTRI.

PBasso / PassAlto / PassaBanda



ESP. 3

PWM (5V) → $V_{ANALOGICO}$

$f = 1$ kHz

$V_{RIPPLE} = 1$ mV

10 mV

100 mV

$T_{risposta}$?

$DC_1 = 10\%$ → $DC_2 = 90\%$

$\Delta T = 0$

V_{out1} → V_{out2}

$\Delta T = ???$ → Re ?

$\neq \emptyset$???

$T(f = 1\ kHz) \Rightarrow 1$ mV (5V)

↳ RC

$I = 100$ mA