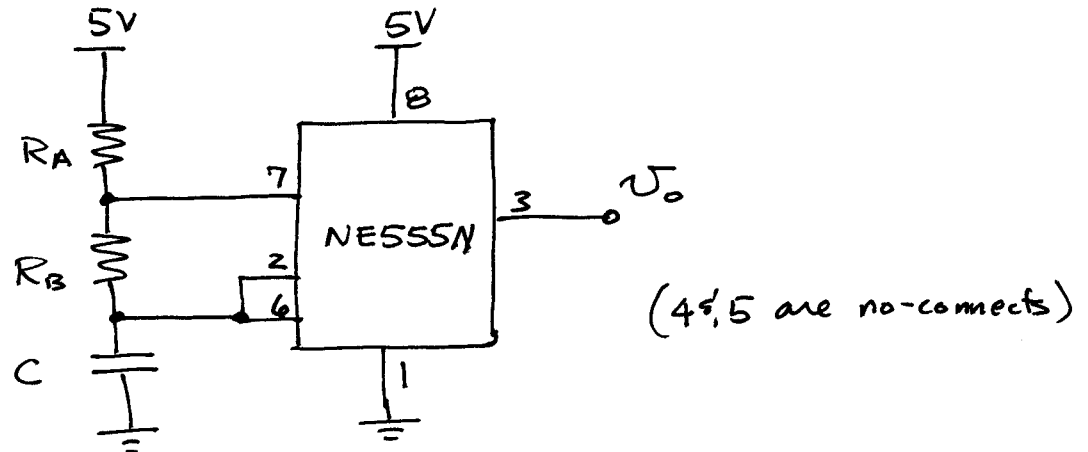


# 555 Oscillator

\* Circuit :



\* Design Equations:

$$T_H = \text{time } V_o \text{ is high} = C(R_A + R_B) \ln 2$$

$$T_L = \text{time } V_o \text{ is low} = CR_B \ln 2$$

$$T = \text{period of oscillation} = T_H + T_L$$

$$f = \text{oscillation frequency} = \frac{1}{T}$$

$$D = \text{duty cycle (\% of time high)}$$

$$= \frac{T_H}{T_H + T_L} = \frac{R_A + R_B}{R_A + 2R_B}$$

\* On-line design aid (Java applet):

[www.users.bigpond.com/ajarmstr/FreeStuff/555\\_timer\\_design\\_tool.htm](http://www.users.bigpond.com/ajarmstr/FreeStuff/555_timer_design_tool.htm)

↳ easier to choose standard values with this tool.