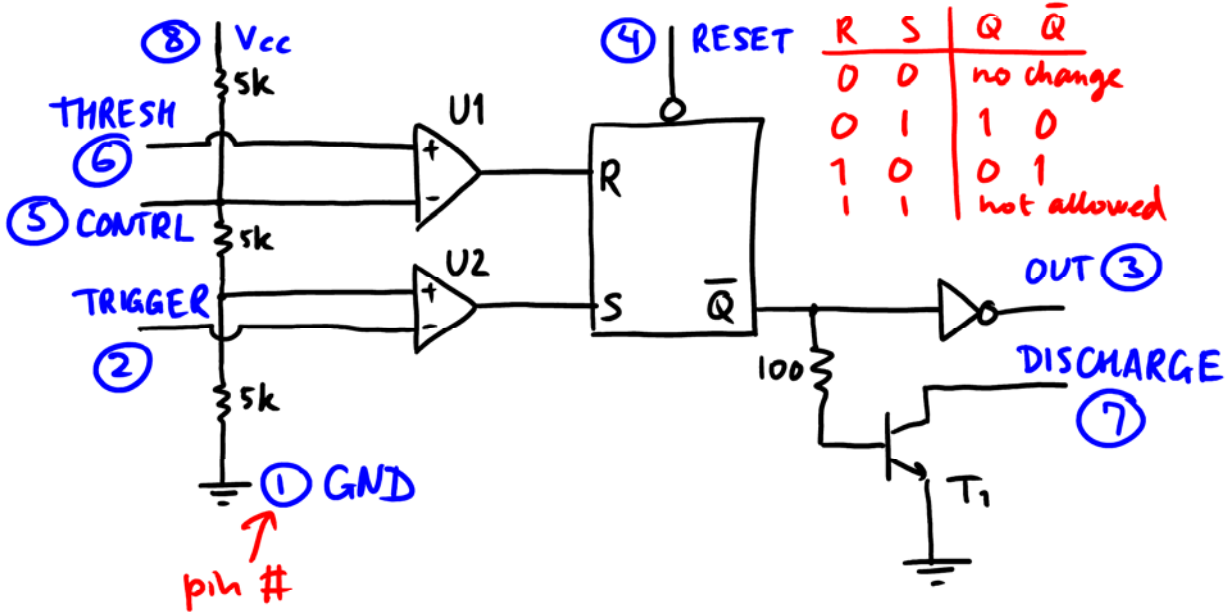


PHYS 3360 / AEP 3630
Lecture 30

555 Timer

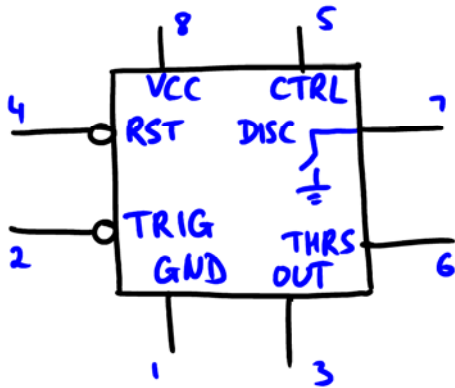


2 comparators
 $\frac{2}{3}V_{cc}$ & $\frac{1}{3}V_{cc}$

RS latch

saturated switch
 $T_1 = ON$ if $\bar{Q} = 1$
 $T_1 = OFF$ if $\bar{Q} = 0$

simplified symbol

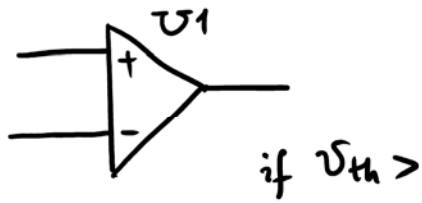


supply voltage
 $4.5V \leq V_{cc} \leq 16V$

output current
 $(I_{out})_{max} \sim 200mA$

Terminals

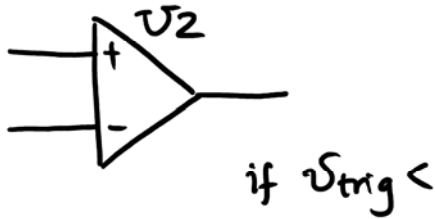
⑥ Threshold



$V_{ms} =$

if $V_{th} <$

② Trigger



$V_{non} =$

if $V_{trig} >$

⇒ OUTPUT by low TRIGGER and
 by high THRESHOLD

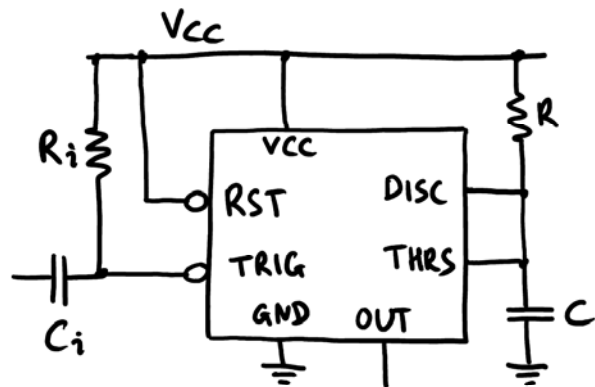
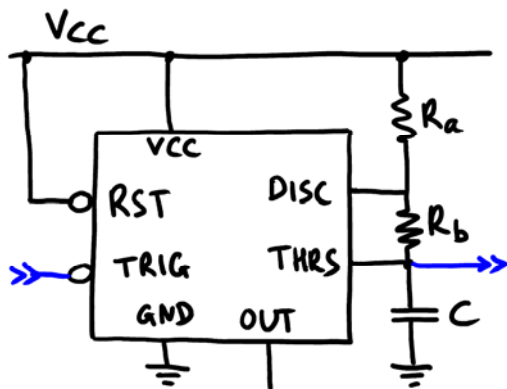
⑤ Control

④ Reset

⑦ Discharge $\bar{Q} = 0$

$\bar{Q} = 1$

Two basic configurations for 555



Refer to LTspice examples