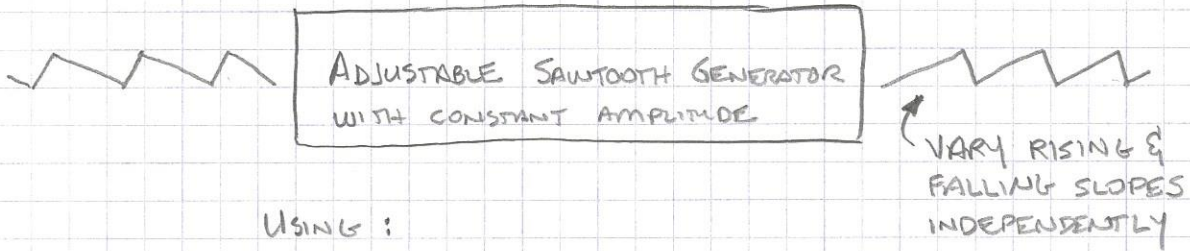


# CIRCUIT FUN



USING :

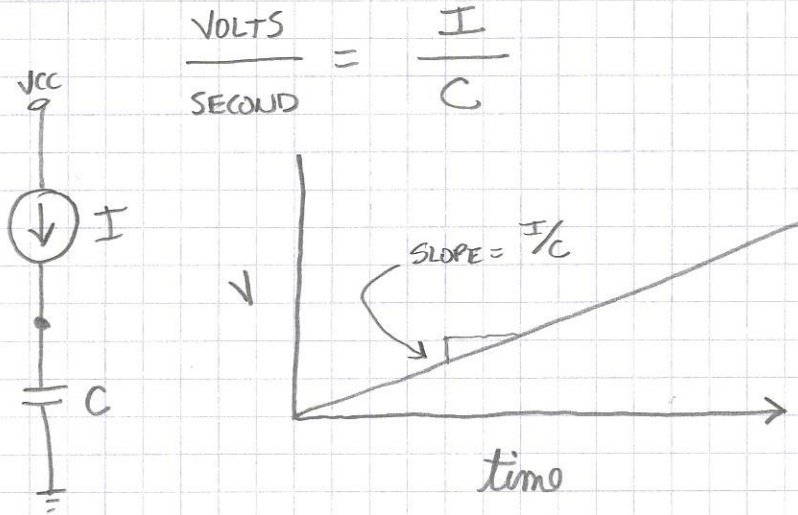
- CURRENT SOURCES
- DIODE SWITCH BRIDGE
- COMPARATOR WITH HYSTERESIS

W2AEW

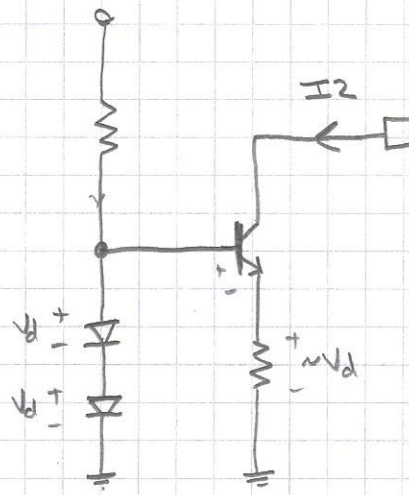
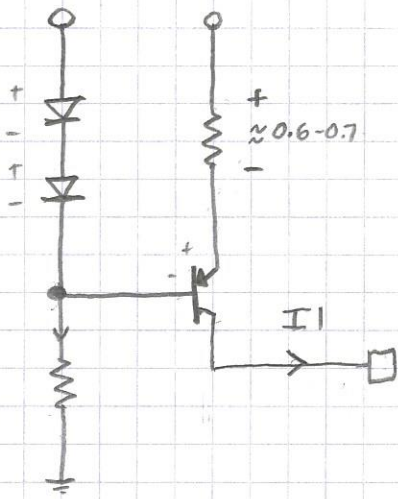
UNDERLYING PRINCIPLE :

- LINEAR VOLTAGE RAMP OCCURS WHEN A CONSTANT CURRENT CHARGES OR DIS-CHARGES A CAPACITOR

$$i = \frac{dV}{dt} \cdot C$$

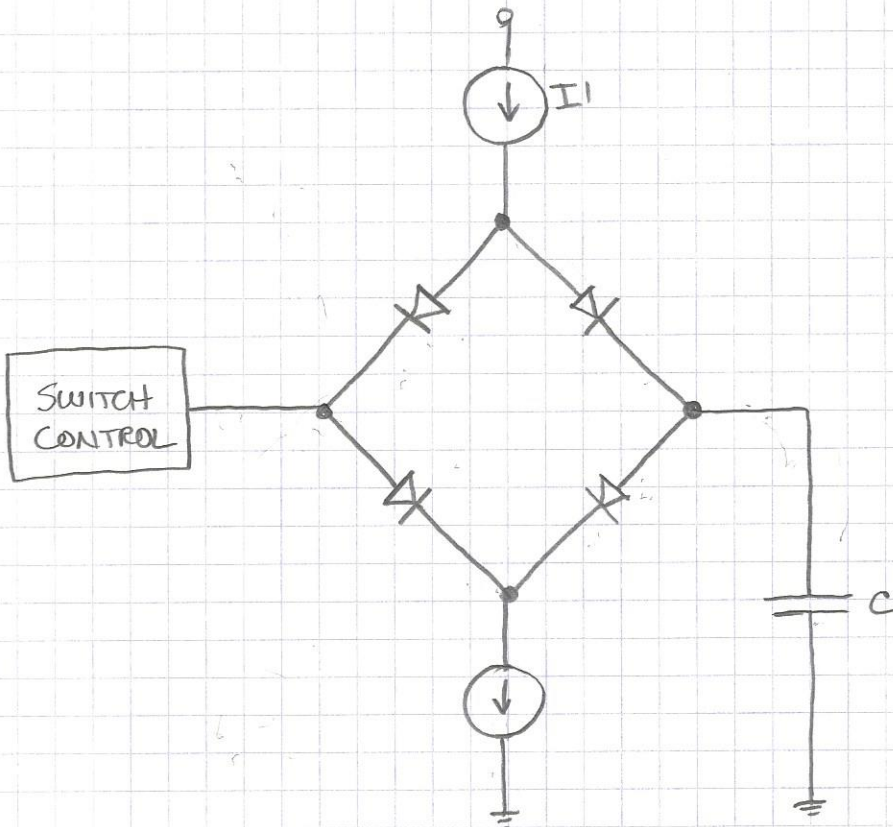


# CURRENT SOURCES:



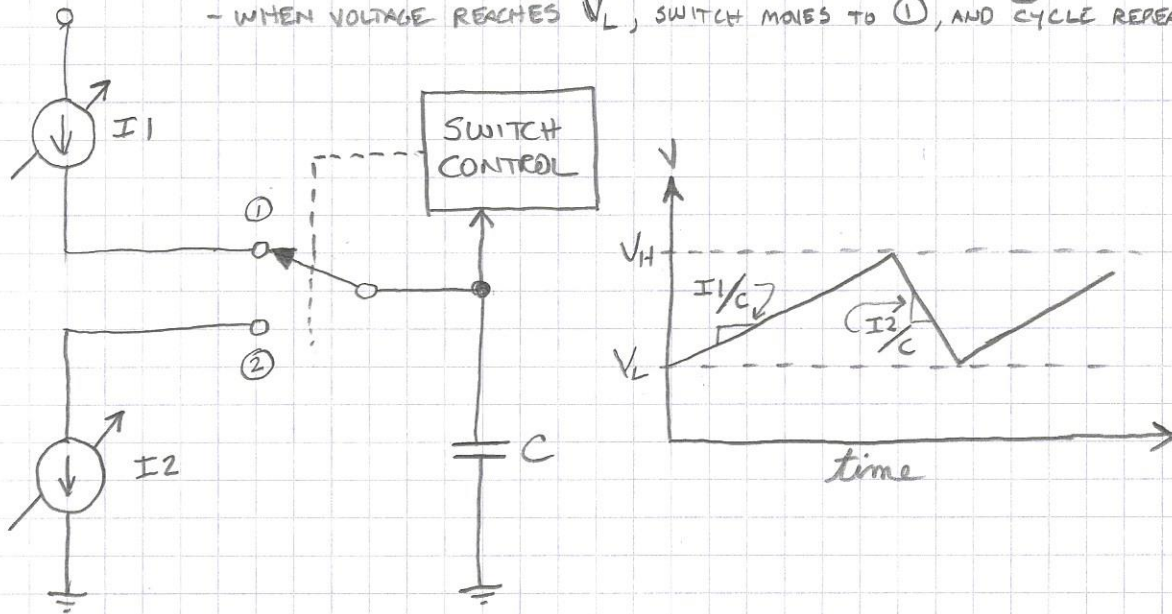
W2AEW

# SPDT CURRENT SWITCH USING A DIODE BRIDGE



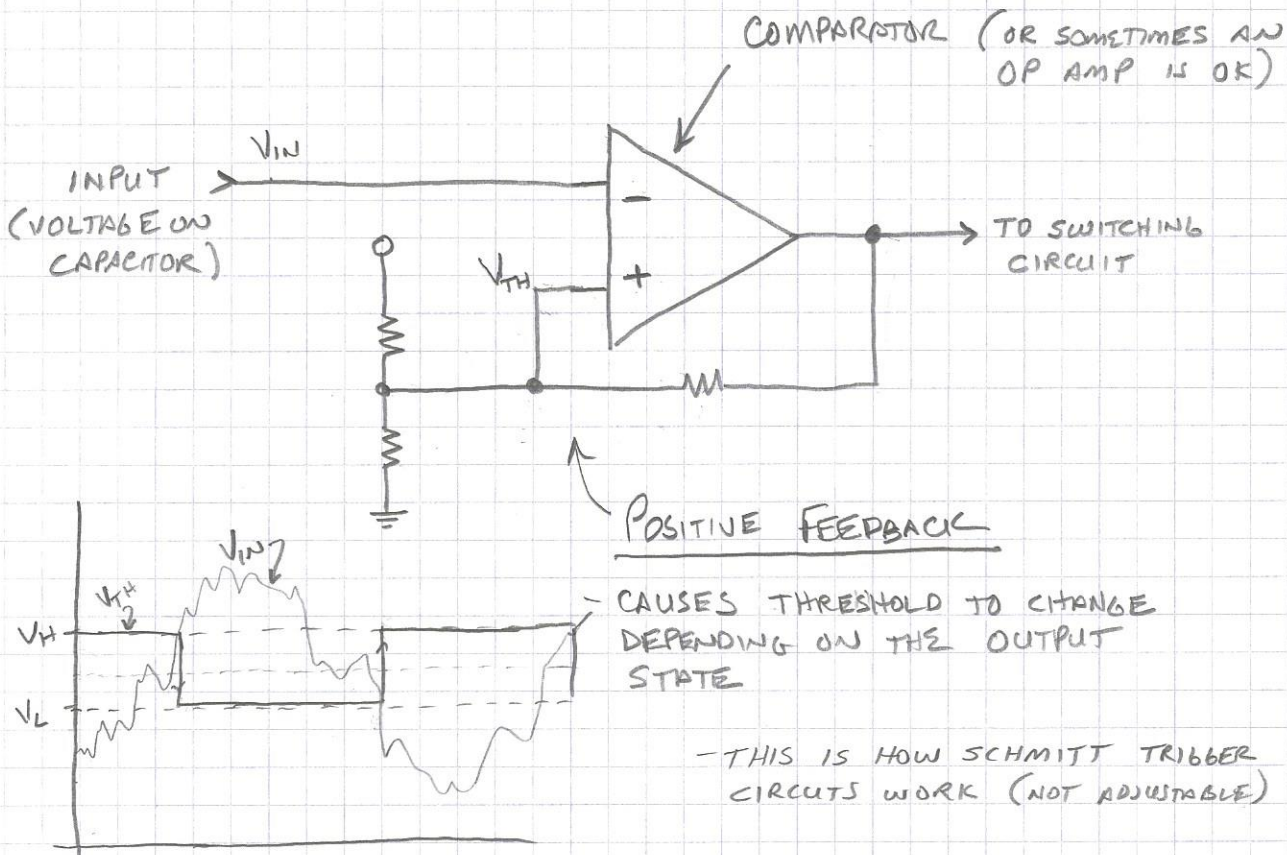
# FUNCTIONAL CIRCUIT DIAGRAM

- SWITCH IN POSITION ①, VOLTAGE ON CAP RISES AT  $\frac{I_1}{C}$  VOLTS/SEC.
- WHEN VOLTAGE REACHES  $V_H$ , SWITCH CONTROLS MOVES SWITCH TO ②
- SWITCH IN POSITION ②, VOLTAGE ON CAP FALLS AT  $\frac{I_2}{C}$  VOLTS/SEC.
- WHEN VOLTAGE REACHES  $V_L$ , SWITCH MOVES TO ①, AND CYCLE REPEATS



WZAEW

# SWITCH CONTROL - COMPARATOR WITH HYSTERESIS



# ADJUSTABLE SAWTOOTH GENERATOR

