

## Schmitt Triggers

1. Draw the circuit diagram of a two resistor Schmitt trigger.  
It should have zero and twelve Volt power supply lines.  
If  $R_f$  is  $8\text{k}\Omega$  and  $R_1$  is  $7\text{k}\Omega$ , calculate the upper and lower switching threshold levels.
2. Draw the circuit diagram of a three resistor Schmitt trigger.  
It should have minus twelve and plus twelve Volt power supply lines.  
The non-inverting input has a voltage divider with  $10\text{k}\Omega$  to the plus twelve Volt power supply and  $5\text{k}\Omega$  to the minus twelve Volt power supply. If  $R_f$  is  $8\text{k}\Omega$ , calculate the upper and lower switching levels.
3. Why are Schmitt trigger circuits useful?