Monostable Mode of 555’s

Objective:
Build the Monostable implementation of 555 circuits.
This time you will have to do it on your own without stepwise instructions

Here a few hints on how to go about this

The schematic was handed out in class (the photocopied sheet). Based on that schematic you will have to build the circuit in PSpice and record your findings.

How do I get the Voltage pulse for my input?

: Goto Voltage sources and find “VPULSE”. It has a few parameters you need to define. Which are:-

TF-Fall time
TR-Rise time
TD-Time Delay
V1-Initial voltage
V2-Final Voltage
PW-Width of the Pulse
Per-Time Period

Now considering we need a “negative” pulse i.e a pulse from a positive value to zero (as shown in your schematics) be careful with V1 and V2

Also make sure your pulse is 1/3rd the time constant.

Don’t leave your output node floating. Connect a resistor at the end of it (10k).

That’s all. If you have anymore questions feel free to ask. Please make sure you change values of the various components and make the graphs that are shown on the handouts. **Only one simulation will not be accepted!**

Common problems in the PSpice simulation

1. Not understanding how to use the Vpulse
2. Not being careful to connect all the pins to the right place
3. Not use the right ground
4. Not paying attention to the values of the Resistors, voltages etc.