ELEN 325 – Fall 2007
RC Filter Simulation

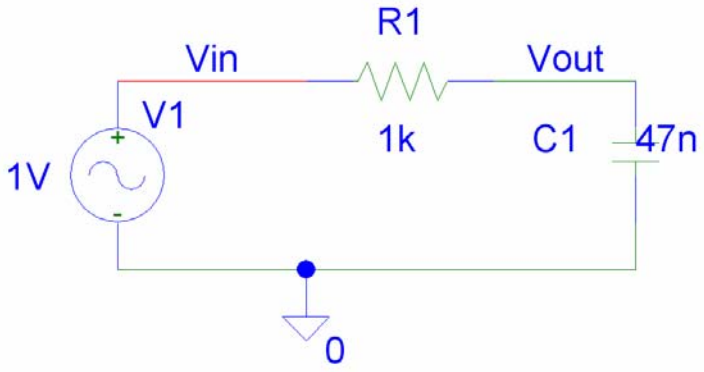
1. Open PSPICE/Schematics

2. Place components for your circuit
    a. Go to "Draw" menu
    b. Get new part…
    c. Click on Libraries if you can't see the component you are looking for
    d. Search within the libraries listed on right column
    e. Place components on schematic window

3. Connect components
    a. Go to "Draw" menu
    b. Wire
    c. Connect nodes by clicking on them and wiring as desired

4. Edit component values

5. Label nodes by double-clicking on wire and entering name (ex: vin, vout, v1, etc)



6. Setup analysis
    a. Go to "Analysis" menu
    b. Setup
    c. AC Sweep
    d. AC Sweep Type = Decade

7. Save Schematic

8. Run simulation
    a. Go to "Analysis" menu
    b. Simulate
    c. Plotting window will open automatically (**remaining steps 9-12 should be done in this window**)

9. Add plot to window so that you can plot the magnitude and phase separate
    a. Go to "Plot" menu
    b. Add plot to window

10. Plot Magnitude in dB (**use top window**)

a. Go to “Trace” menu
b. Add Trace
c. Deselect “Currents” and “Alias Names” boxes
d. Click on “DB( )” in functions and macros column on the right
e. Click on node name you want to plot on simulation output variables list
f. OK
g. Adjust Y-axis if desired by double-clicking on it and setting the range for min and max values you want to display

11. Plot Phase in degrees (**in bottom window**)
    a. Go to “Trace” menu
    b. Add Trace
    c. Click on “P( )” in functions and macros column on the right
    d. Click on node name you want to plot on simulation output variables list
    e. OK
    f. Adjust Y-axis if desired by double-clicking on it and setting the range for min and max values you want to display

12. Measure corner (-3 dB) frequency
    a. Go to “Trace” menu
    b. Cursor
    c. Display
    d. Click on magnitude plot
    e. Drag cursor with your mouse until you get to – 3dB
    f. Click on “Mark Label” button to mark the -3 dB point on the plot