ELEC 3509 - Lab 4 Details

Updated November 17, 2014

Overview

This lab you will be simulating and building a 4th order band pass filter. First you should verify that your polynomial scaling is correct in Matlab. This should meet the spec perfectly. Only then should you proceed with implementing your filter. Your simulations can be done with a frequency sweep as you did in Lab 3.

There are several ways to impelment your filters. We have provided two schematics (links below) for you to use. You may choose to use these, combine them, or draw your own. Note that you will need to modify them (i.e. change values, insert/remove resistors).

* Tip: You can export data from PSpice by highlighting any trace, then right clicking and "Copy to Clipboard". Then you can paste the data into Excel/Matlab.

IMPORTANT:
You will need to trade in the potentiometer from your lab kit in order to receive your capacitors and Op-amps for this lab.

When selecting capacitors for your design, you are limited to the specific values that are available to you. The list of capacitors is in your lab manual.

Take care to properly calculate your **f_high and f_low**. There is a fairly wide range of values that occur here but they should both be within the range of ~200 Hz - 5kHz.

Lab Files

Schematic: 2x KHN
Schematic: 2x Tow Thomas