



Department of Electrical Engineering

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Course/Section: **BEE6-B**

Semester: **6th Semester**

EE-330 Digital Signal Processing

Lab #10 FDA TOOL FOR FILTER DESIGN

Name	Reg. no.	Report Marks / 10	Lab Quiz- Viva Marks / 5	Total / 15
Saad Iqbal	111394			
Usman Iqbal	111393			
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OBJECTIVE:

The purpose of this lab is to design a filter using FDA Tool in MATLAB.

TASK 1:

Design a 6th order low-pass Butterworth filter with the specification similar to the one you have used in lab 7 for filtering audio signal.

It is a 6th order Butterworth filter with a cut-off frequency of 4kHz which is the range of human voice and it is sampled at 16kHz.

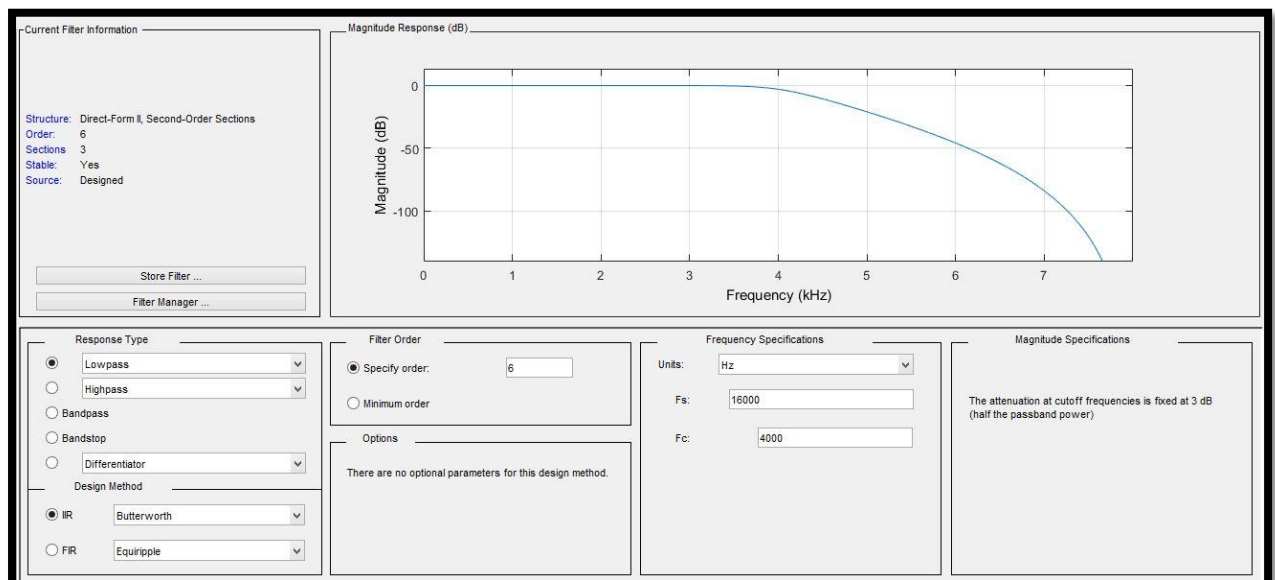


Figure No.1 Butterworth Filter



TASK 2:

Use FDA Tool to design any one FIR filter.

It is an 8th order Equiripple bandpass FIR filter which is sampled at 16kHz. Its passband is from 4.8kHz to 6.4kHz. 4kHz and 7.2 kHz are its stop frequencies.

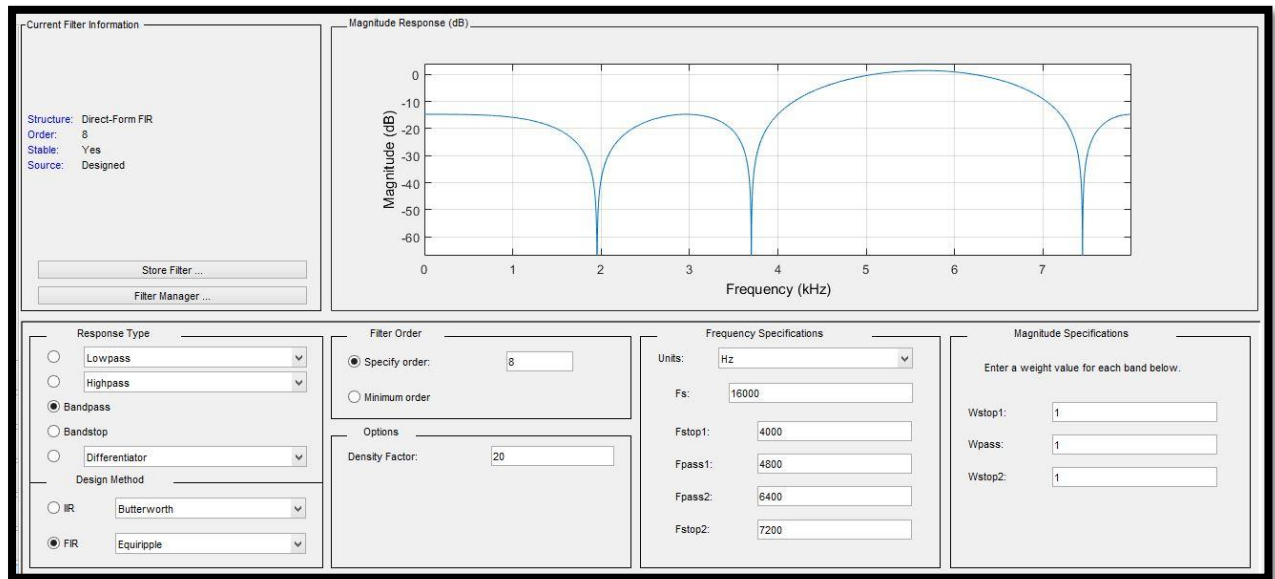


Figure No.2 Equiripple Bandpass Filter

CONCLUSION:

In this lab, we learnt how to use FDA Tool to design any filter in MATLAB using different factors given in that GUI.
