

Product Name :
Active Filters

Product Code :
NLAB-ELECTRONICSAB420029

Description :

Active Filters

Technical Specification :

Experimental Training Board has been designed specifically to study characteristics of various types of Active Filters. This Training Board

includes low pass, high pass, band pass and notch filters. The filter circuits are designed using second order Butter worth polynomials and provide unity gain in the pass band.

Practical experience on this board carries great educative value for Science and Engineering Students.

Object:

To study characteristics of various Active Filters.

Specifications:

1. LOW PASS FILTER

- (a) Upper Cut-off frequency : 1 KHz
- (B) Cut-off slope : 29.5 dB/decade
- (c) Input impedance : 3.5 K at 1KHz
- (d) Output impedance : 18 Ohms at 1KHz

2. HIGH PASS FILTER

- (a) Lower cut-off frequency : 100 Hz
- (b) Cut-off slope : 26 dB/decade

(c) Input impedance : 12 K at 100 Hz

(d) Output impedance : 30 Ohms at 100 Hz

3. BAND PASS FILTER

(a) Upper cut-off frequency : 1 KHz

(B) Lower cut-off frequency : 100 Hz

(c) Upper cut-off slope : 29.5 dB/decade

(d) Lower cut-off frequency : 26 dB/decade

(e) Input impedances : 24 K at 100 Hz , 3.5 K at 1 KHz

(F) Output impedances : 30 Ohms at 100 Hz, 27 Ohms at 1 KHz

4. NOTCH FILTER

(A) Notch frequency : 1 KHz

(B) Input impedance : 15 K at 1 KHz

(c) Output impedance : 25 ohms at 1 KHz

(d) Notch width : 100 Hz

Features

The board consists of the following built-in parts :

01. $\pm 12V$ DC at 50mA, IC regulated Power Supply internally connected.

02. Four Operational Amplifier ICs.

03. Adequate no. of other electronic components.

04. Mains ON/OFF switch and Jewel light.

The unit is operative on 230V $\pm 10\%$ at 50Hz A.C.

Adequate no. of patch cords stackable from rear both ends 4mm spring loaded plug length $\frac{1}{2}$ metre.

Other Apparatus Required:

Decade Audio Frequency Generator

A.C. Millivoltmeter

Naugralabequipments

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