

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. LOWPASS 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. HIGHPASS 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.
 - * Good quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
 - * Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

Other Apparatus Required:

- * Decade Audio Frequency Generator
- * A.C. Millivoltmeter

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tesca.in