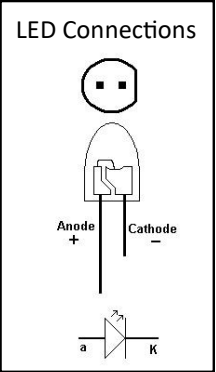
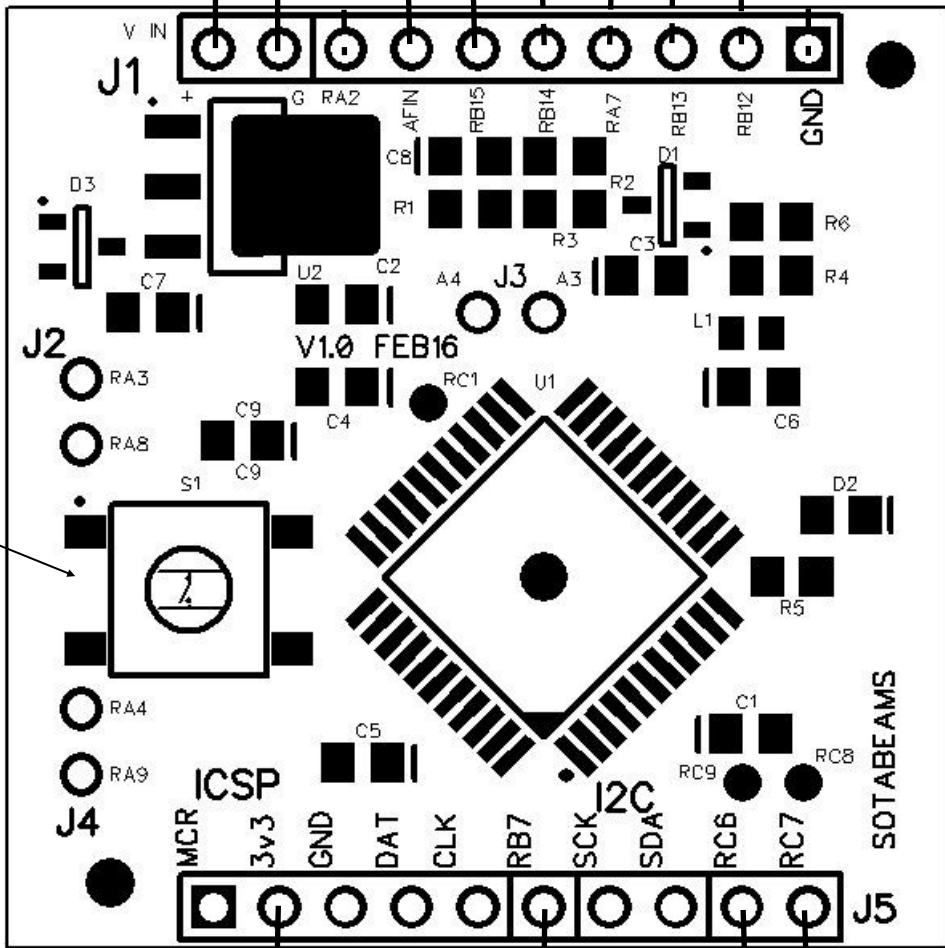


Filter Specification
B/W 200-3500Hz
C/F 200-3500Hz
Ultimate attenuation approx. 60dB
Passband ripple <0.2dB

Press button to store power-up settings

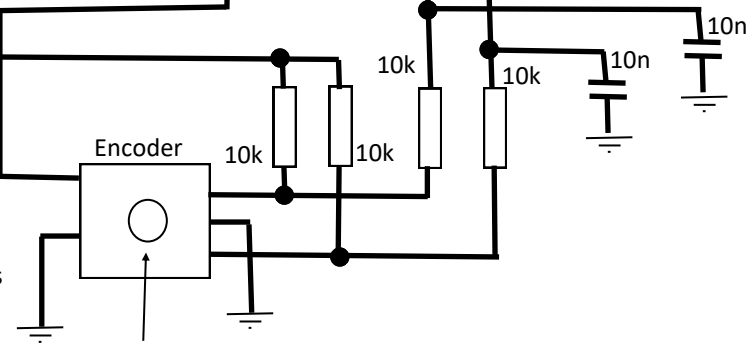


The PCB will drive sensitive headphones directly. In many cases an additional audio amplifier will be useful. An LM386 module (from eBay) is a good choice!

Component Ident
10k = brown, black, orange
220R = red, red, brown
10n = 103

Dashed lines indicate optional connections and components.

More details on product page.



- Click to change mode
- Bandwidth or
 - Centre Frequency

Notes for people wanting to control the filter from a microcontroller:

The step size varies based on the current value.

Centre frequency / Hz:

200-2000: step size 25

2000-3500: step size 50

Bandwidth / Hz:

200-400: step size 20

400-700: step size 50

700-3500: step size 100

So for example, the available values for centre frequency are:

200, 225, 250 ... 1950, 1975, 2000, 2050, 2100 ... 3400, 3500

One step = one cycle through all 4 gray code states of the two encoder pins RC6+RC7.

Both centre frequency and bandwidth are limited to 200-3500 Hz.

The filter passband edges are also limited to 200-3500 Hz. The upper and lower edges are calculated based on centre frequency and bandwidth, then limited to 200-3500 Hz, before being used to generate the filter coefficients.

So:

- centre=200 and bandwidth=200 would result in a passband of 200-300Hz.

- centre=300 and bandwidth=200 would result in a passband of 200-400Hz.

There is no way of setting upper and lower edges directly, they have to be controlled via centre frequency and bandwidth.

Factory default settings are centre=1500, width=2400, adjustment mode=centre. The current values of all three of these are saved when the button on the board is pressed.