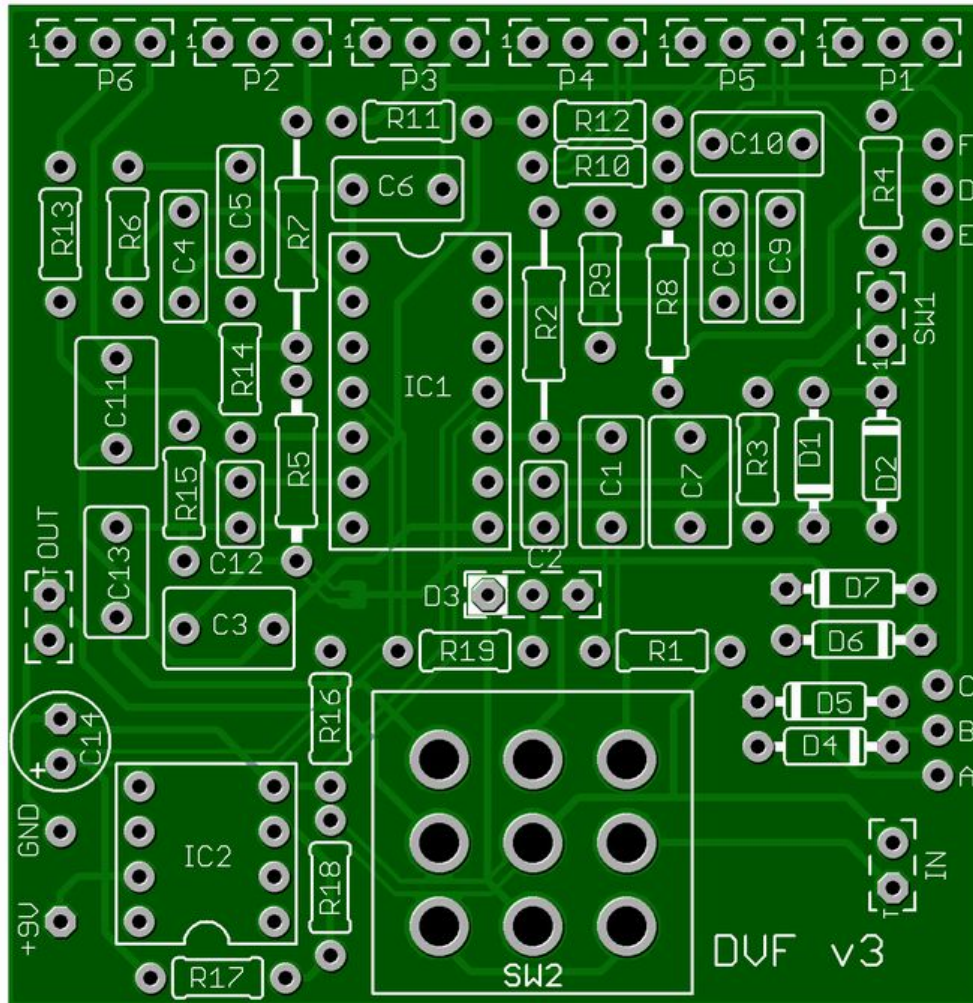


DVF v3 by GuitarPCB

The DVF (Dual Voice Filter) is based on a circuit by Craig Anderton in the 70s. We then added on-board overdrive. Completely moddable to taste. Used for guitar as a tonal shifter, cocked wah, solo enhancer and more but also consider Harmonica for a moment?



Board Dimensions (W x H) 2.18" x 2.24" ca. 55.25mm x 56.9mm

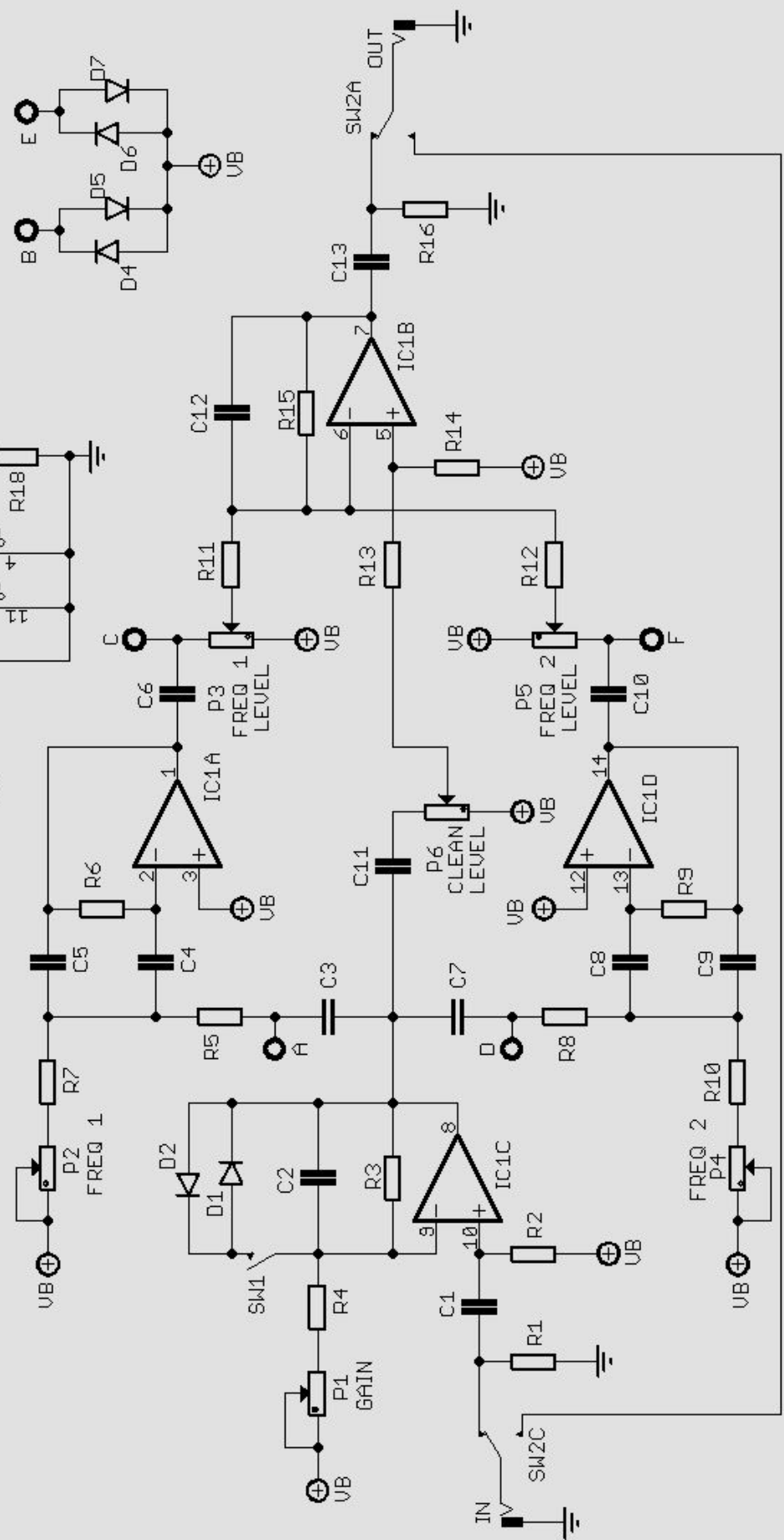
R1	1M	R11	10k	C1	220n	63V	C11	470n	63V	D4-D7	1N4148
R2	1M	R12	10k	C2	220p		C12	100p			
R3	1M	R13	10k	C3	470n	63V	C13	220n	63V	P1	1M B
R4	2k2	R14	10k	C4	47n	63V	C14	47µ	16V	P2	10k C
R5	10k	R15	4k7	C5	47n	63V				P3	100k B
R6	220k	R16	100k	C6	220n	63V	IC1	TL074		P4	10k C
R7	100R	R17	10k	C7	470n	63V	IC2	TL071		P5	100k B
R8	10k	R18	10k	C8	10n	63V				P6	100k B
R9	220k	R19	1k8	C9	10n	63V	D1-D2	1N4148			
R10	100R			C10	220n	63V	D3	CA Bi-Colour LED	Switches	*	

DUF v3

TONMANN

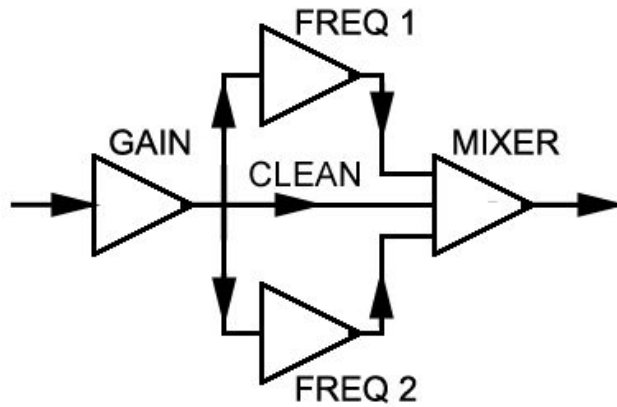
FILE: DUF v3_03

DATE: nicht gespeichert!



The DVF v3 is based on a circuit designed by Craig Anderton in the 1970s. The circuit comprises four stages:

- Input gain stage
- Low to mid frequency sweep filter
- Mid to high frequency sweep filter
- Mixing stage



The input stage sets the overall gain of the circuit via P1, the output of this stage provides a signal to both of the sweep filters and a clean signal. The gain of the input stage is set by P1 and the level of clean signal is set by P6.

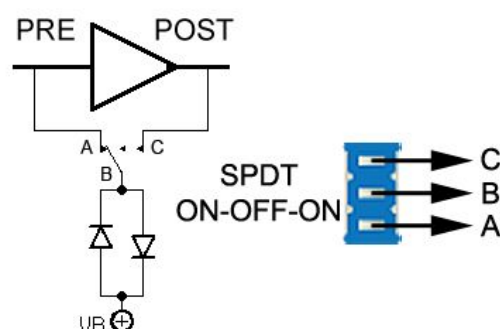
The sweep filters are high Q (narrow) band pass filters, the centre frequency of each filter is set by P2 (Freq 1) and P4 (Freq 2). The frequency range, or sweep, of Freq 1 is ca. 100 Hz – 1 KHz and ca. 500 Hz – 5 kHz for Freq 2. The output levels of each filter are set by P3 and P5 respectively.

Clipping

There are several clipping options for the DVF v3, although small signal diodes (1N4148, 1N914 etc) are suggested, it would be worth installing sockets for the diodes and experimenting with different types of diode.

Clipping for the input stage is via SW1, a SPST switch, the signal to both filter stages and the clean signal will be clipped.

Clipping for the filter stages is done with a SPDT On-Off-On switch, one for each filter.



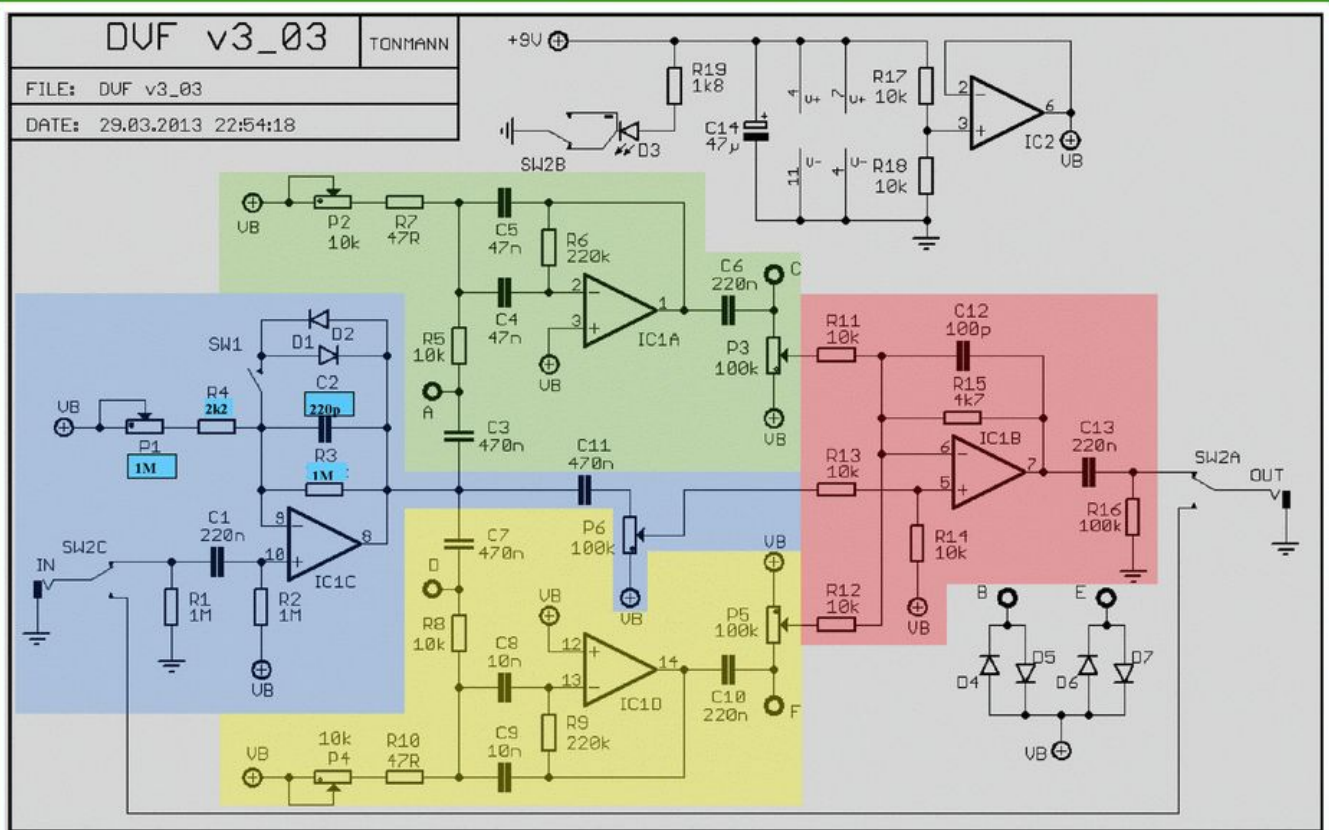
The block diagram above shows the clipping arrangement for the Freq 1 filter. Continued next page:

Toggle Switch UP
 Toggle Switch MIDDLE
 Toggle Switch DOWN

pre-filter clipping, the signal going into the filter stage is clipped
 no clipped signal
 post filter clipping, the signal leaving the filter stage is clipped

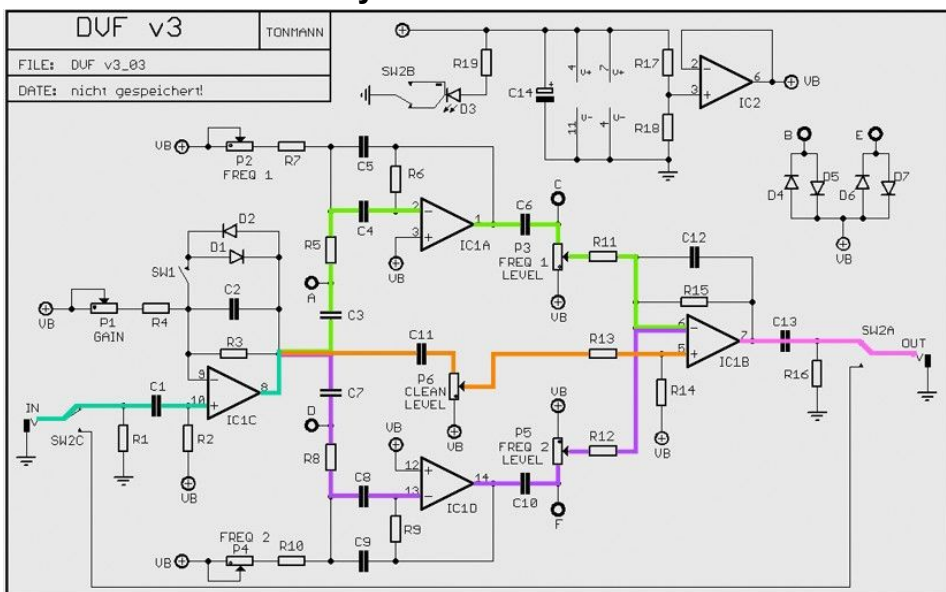
Clipping for the Freq 2 filter is the same as above using a SPDT On-Off-On switch and pads D, E & F.

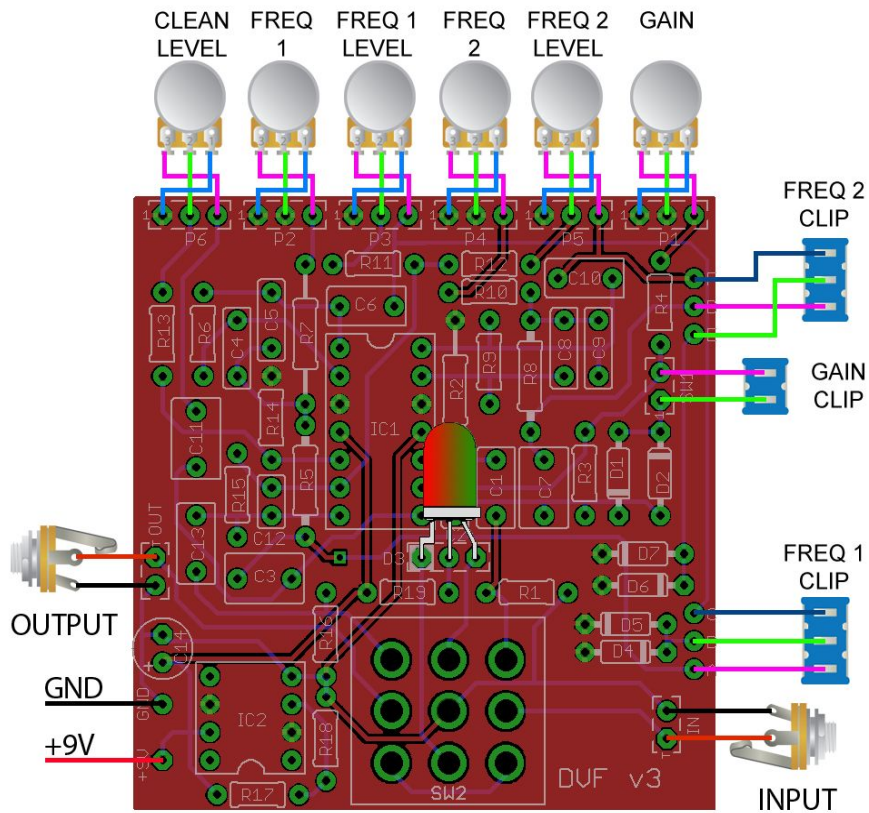
If space is tight on the enclosure it is possible to use a DPDT On-Off-On switch although this will reduce the flexibility of the circuit – both filters will be pre, post or not clipped simultaneously.



The four stages are marked on the above schematic.
 Gain (blue), Freq 1 (green), Freq 2 (yellow) and the mixing stage (red).

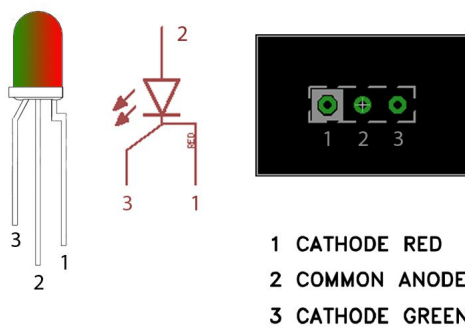
Audio Path in its entirety:





STATUS LED

D3 is a common anode bi-colour LED

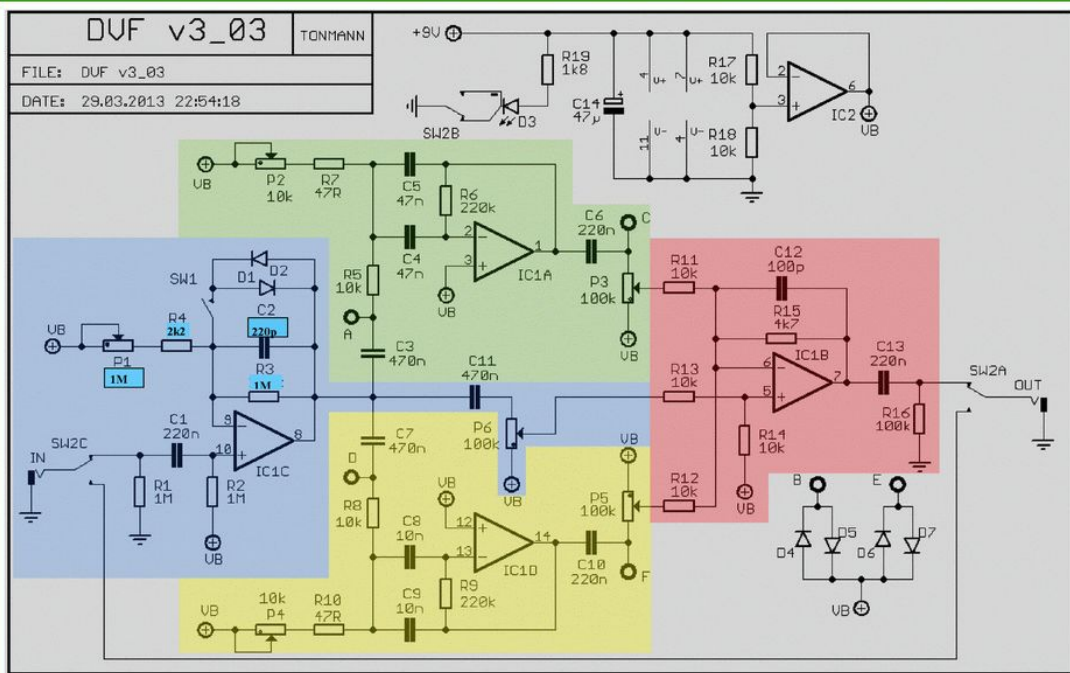


The diagram above shows the pin-out, schematic symbol and pad connection for a common anode LED. R19 is the CLR (current limiting resistor). The pin-out for the bi-colour LED is as follows:

- 1st Colour Cathode 90 degree bend in the lead
- Common Anode Middle lead
- 2nd Colour Cathode 45 degree bend in the lead

The pad for lead 1 on the circuit board is marked with a white box.

When connected correctly D3 will light red when power is applied and the circuit is in bypass mode and light green when the circuit is in effects mode. **If you wish to use a standard LED the anode is connected to the middle pad and the cathode to the right (non-white) pad.**



The four stages are marked on the above schematic.
Gain (blue), Freq 1 (green), Freq 2 (yellow) and the mixing stage (red).



[Soldering Tutorial on Youtube](#)

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