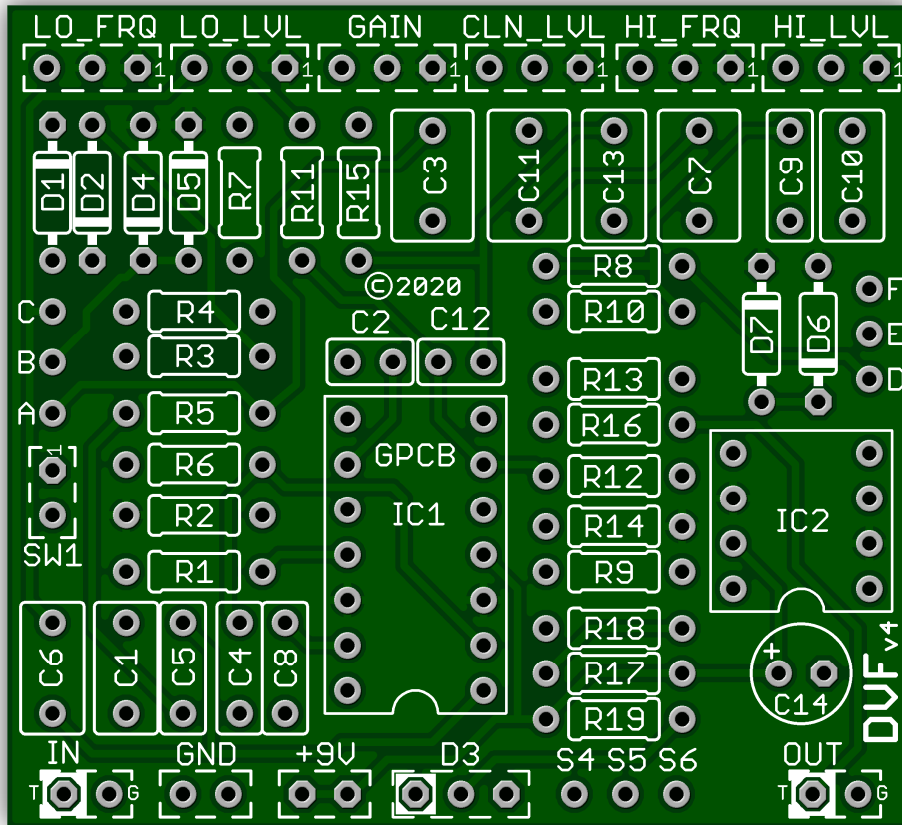


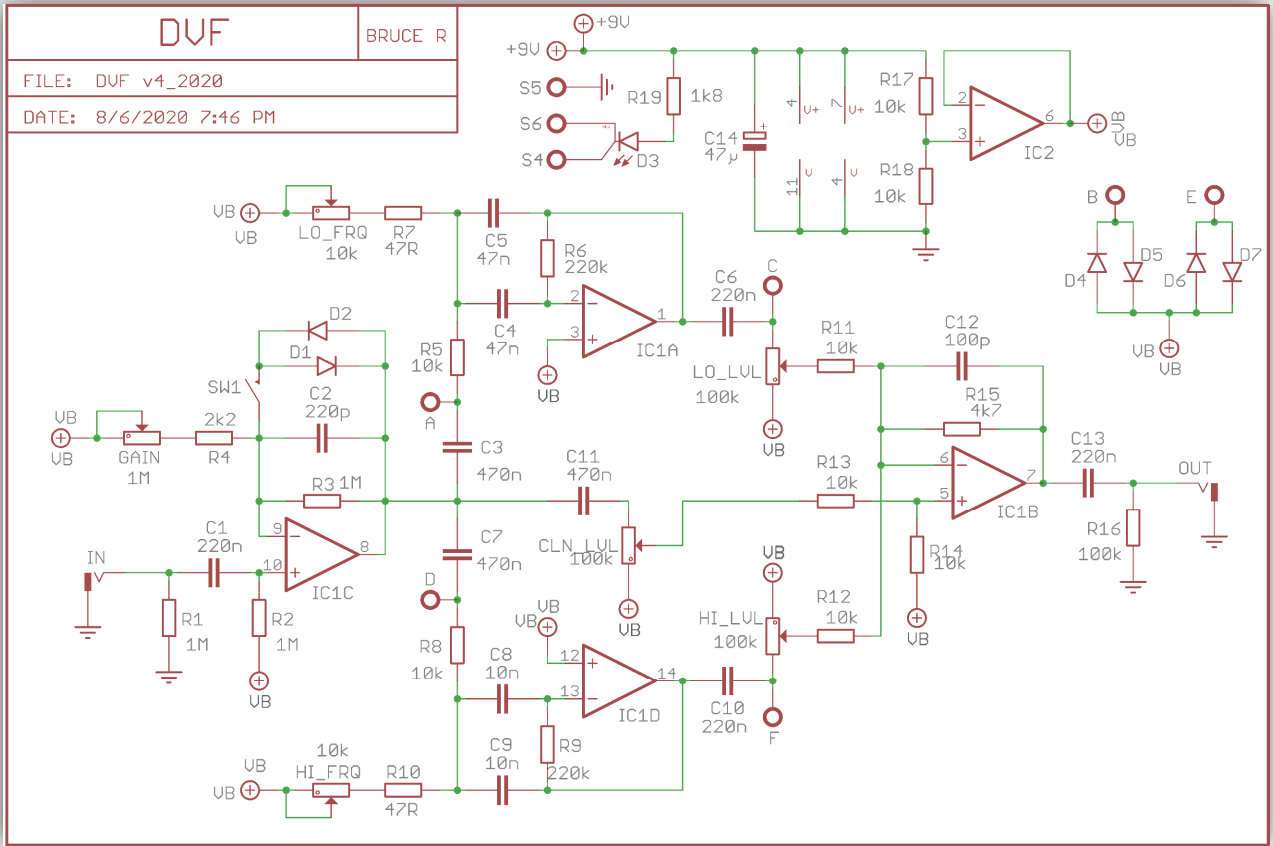
DVF by GuitarPCB

The DVF (Dual Voice Filter) is based on a circuit by Craig Anderton in the 70s. We then added on-board overdrive. Mod this circuit to taste. Can be used for guitar as a tonal shifter, cocked wah, solo enhancer or even adding Drive and accentuating Vocal frequencies to a Harmonica.



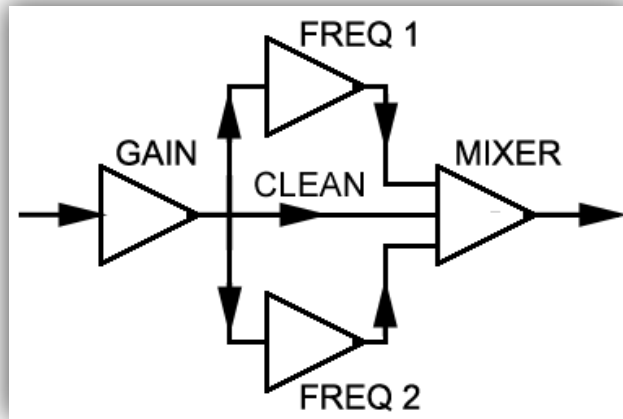
Board Dimensions for new V4 2020 version seen above (W x H) 2.00" x 1.81"

Part	Value	Part	Value	Part	Value	Part	Value	Part	Value
R1	1M	R12	10k	C3	470n	C14	47uF	IC1	TL074
R2	1M	R13	10k	C4	47n			IC2	TL071
R3	1M	R14	10k	C5	47n	SW1	SPST or SPDT		
R4	2k2	R15	4k7	C6	220n			GAIN	B1M
R5	10k	R16	100k	C7	470n	A, B C	SPDT On/Off/On	CLN_LVL	B100k
R6	220k	R17	10k	C8	10n	D, E F	SPDT On/Off/On	HI_FRQ	C10k
R7	47R	R18	10k	C9	10n		"see Build Guide"	HI_LVL	B100k
R8	10k	R19	1k8	C10	220n			LO_FRQ	C10k
R9	220k			C11	470n	D3	CA Status LED	LO_LVL	B100k
R10	47R	C1	220n	C12	100p	D1 - D2	1N4148		
R11	10k	C2	220p	C13	220n	D4 - D7	1N4148		



Based on a circuit designed by Craig Anderton in the 1970s. The circuit comprises four stages:

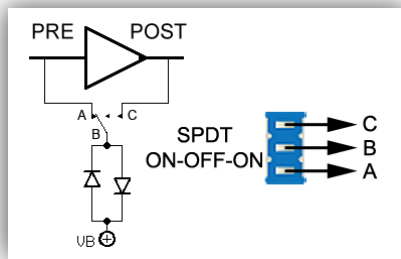
- Input gain stage
- Low to mid frequency sweep filter
- Mid to high frequency sweep filter
- Mixing stage



The input stage sets the overall gain of the circuit via GAIN, 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 center 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, although small signal diodes (1N4148, 1N914) are suggested. Clipping for the input stage is via SW1, an SPST or SPDT switch, the signal to both filter stages and the clean signal will be clipped. Clipping for the filter stages is done with an SPDT On-Off-On switch, one for each filter.



The block diagram above shows the clipping arrangement for the Freq 1 filter.

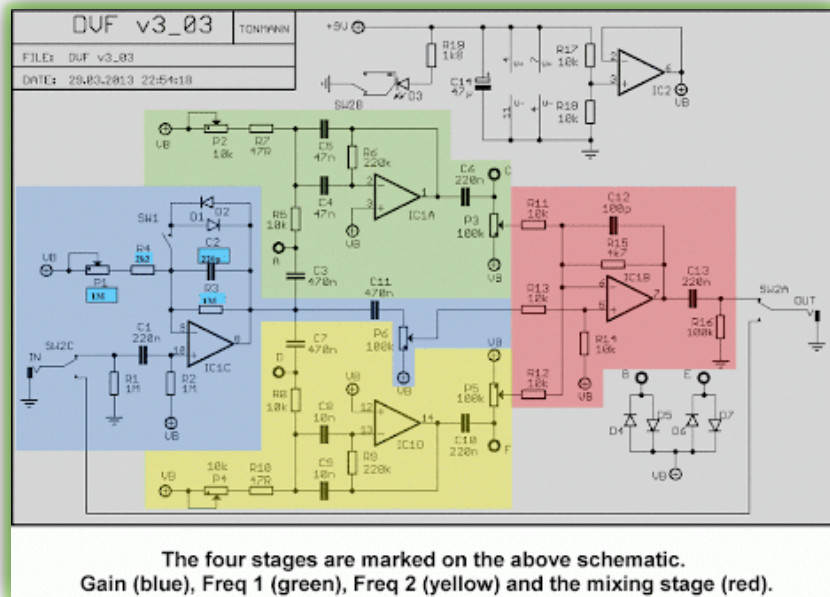
Toggle Switch **UP** pre-filter clipping, the signal going into the filter stage is clipped

Toggle Switch **MIDDLE** no clipped signal

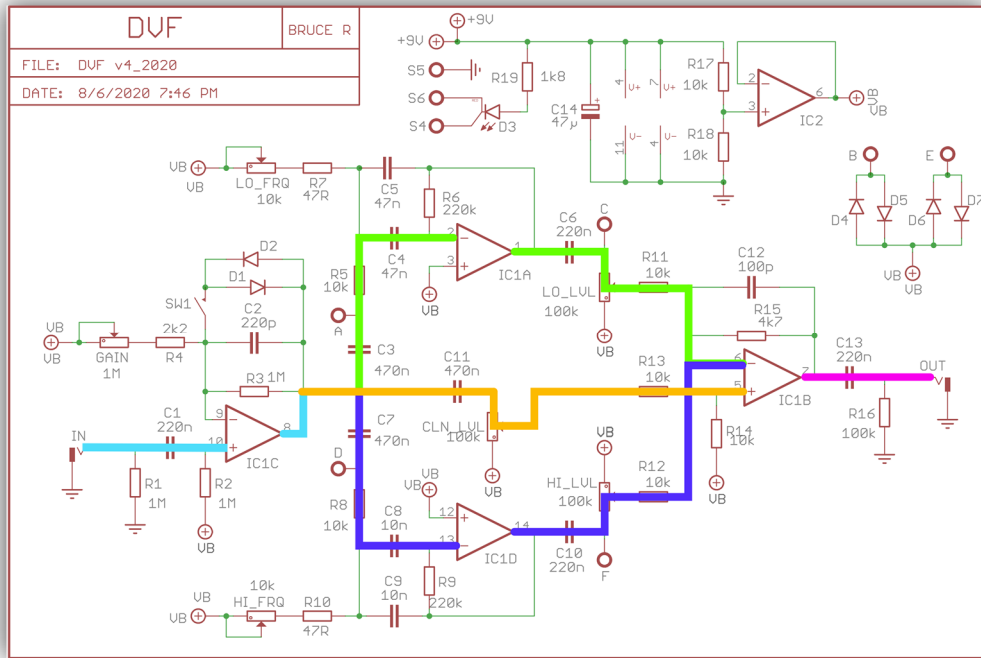
Toggle Switch **DOWN** post filter clipping, the signal leaving the filter stage is clipped

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 would be pre, post or not clipped simultaneously.



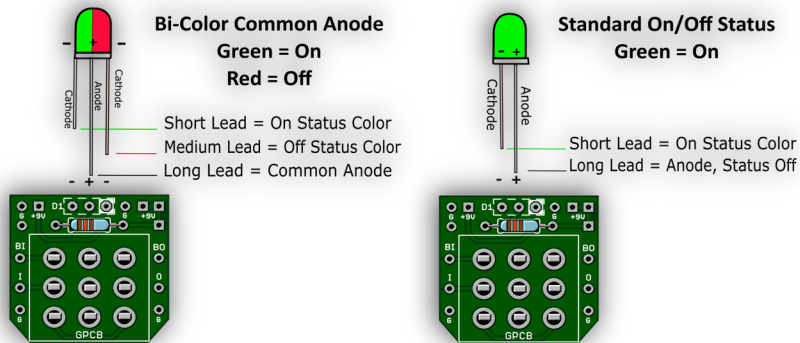
Audio Path



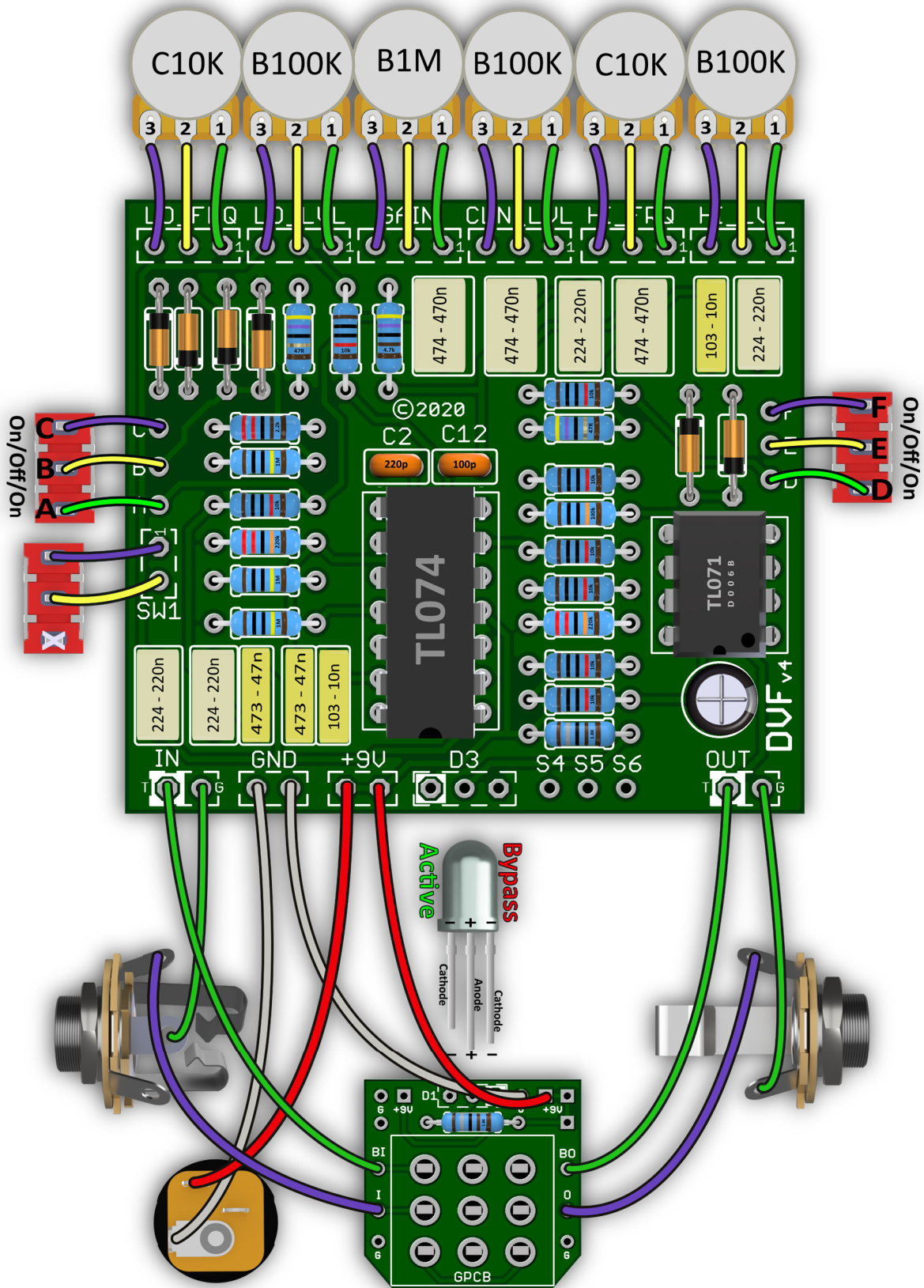
Be sure your In/Out Jack wiring is correct. A Stereo Jack (for battery use only) has a RING lug which is used to connect to the battery ground. If you do not intend to use a battery there is no need for a Stereo Jack. If using Stereo then only use the Tip and Sleeve lugs. S4, S5 & S6 is only needed when the LED is wired to the Main Board.

If using our convenient 3PDT Wiring Boards (below) here is an LED wiring guide. You may use Common Anode Bi-Color or Standard On/Off LEDs.

STATUS LED



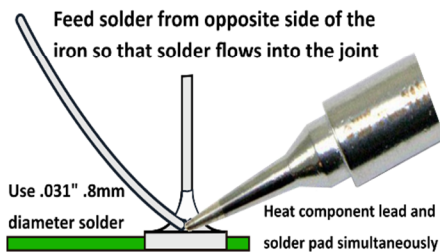
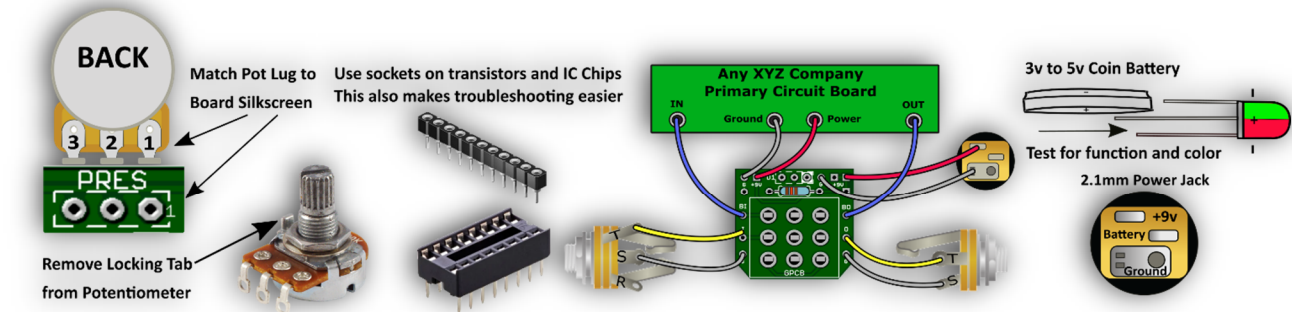
Note: If wiring the LED to our 3PDT board no need to connect S4, S5 & S6 or populate D3 or R19 (CLR) on the main board since you are wiring your LED directly to our wiring board.




Before beginning any build or if you have questions please see our [Guides Page](#) on our site. The [Guides Page](#) is located in the Main Menu Bar of most pages. Also, we have a dedicated forum for questions about your build.

Use the Board Silkscreen for hand wiring potentiometers & switches.


(1) in the silkscreen means Potentiometer Lug 1.



A good solder joint should be shiny and look like this: 

* Carefully re-flow suspect solder joints.

* Clean and tin your Tip regularly.

When soldering wire to the board push the protective PVC jacket flush with the board and pad. 

Use the right tools for the job and be patient.
If you need help ask questions first at the [GuitarPCB forum](#).
We are there to help and we know our products best.

Need a kit? Check out our authorized worldwide distributors:

- USA – Check out [PedalPartsAndKits](#) for all your GuitarPCB kit needs in the USA.
- Europe – [Das Musikding](#) Order either boards or kits direct from Europe.
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