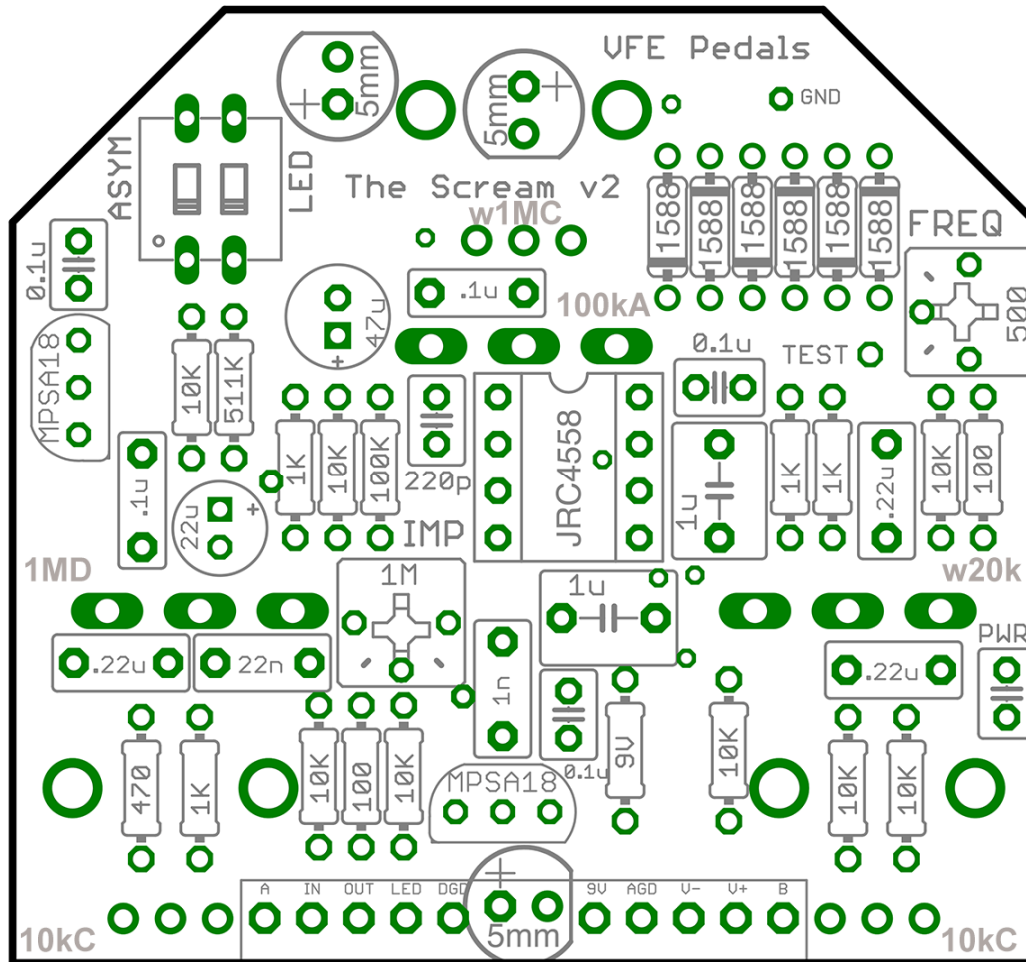


THE SCREAM™

FX TYPE: Overdrive
Images © VFE and MBP
Project Doc © madbeanpedals

2.17" W x 2.025" H



Axial parts
2 x 100
1 x 470
4 x 1K
8 x 10K
1 x 100K
1 x 511K
6 x 1S1588

2.5mm caps
1 x 220p
4 x 0.1u

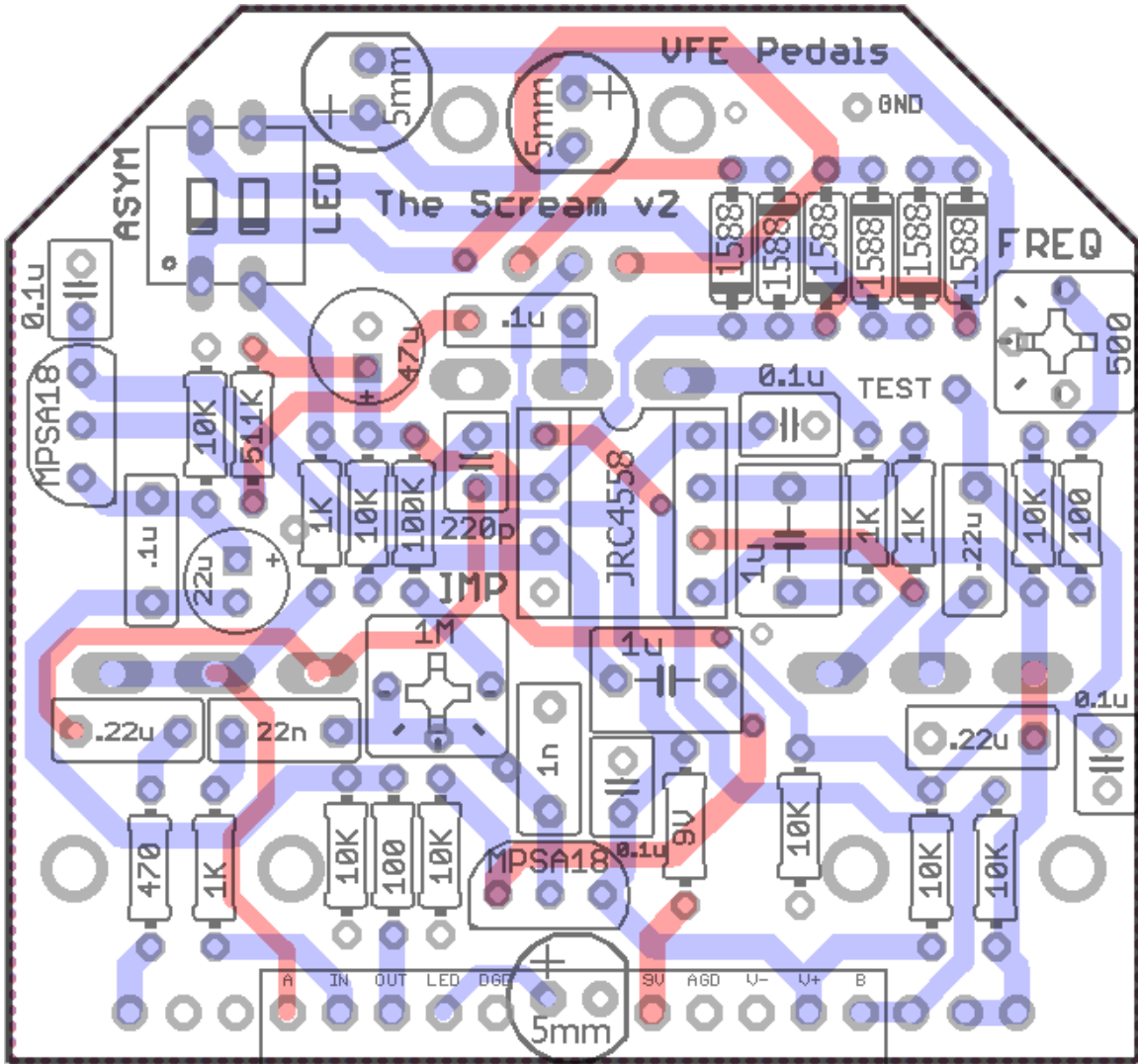
5mm caps
2 x .1u
1 x 1n
1 x 22n
3 x .22u
2 x 1u

Other
1 x JRC4558
1 x 5mm LED
(red diffused)
2 x MPSA18
1 x 500 trim
1 x 1M trim
1 x DIP2 switch
1 x 22u
1 x 47u

Note: Use the values listed on the image above – not the values indicated on the silk-screen of the PCB. Some values changed over time in the VFE product cycles.

REMINDER: PETER RUTTER / VFE DOES NOT PROVIDE SUPPORT FOR THESE PROJECTS. PLEASE DO NOT CONTACT HIM FOR QUESTIONS OR TECHNICAL SUPPORT. VISIT THE VFE SECTION OF THE MADBEANPEDALS FORUM FOR QUESTIONS AND ANSWERS!

Terms of Use: These projects are intended for DIY use only and may not be used in any commercial Endeavour including the sale of completed pedals or "kits". The PCBs are the actual boards used to build the recently discontinued line of VFE pedals and have been generously provided to the DIY community by VFE for the purpose of DIY only.



The resistor labeled “9v” should be left empty.

Shopping List				
QTY	Value	Type	Rating	Spacing
2	100R	Metal / Carbon Film	1/4W	
1	470R	Metal / Carbon Film	1/4W	
4	1k	Metal / Carbon Film	1/4W	
8	10k	Metal / Carbon Film	1/4W	
1	100k	Metal / Carbon Film	1/4W	
1	511k	Metal / Carbon Film	1/4W	
1	220pF	MLCC	16v min	2.5mm
4	100n	MLCC	16v min	2.5mm
1	1n	Film	16v min	5mm
1	22n	Film	16v min	5mm
2	100n	Film	16v min	5mm
3	220n	Film	16v min	5mm
2	1uF	Film	16v min	5mm
1	22uF	Electrolytic	16v min	5mm
1	47uF	Electrolytic	16v min	5mm
2	MPSA18			
1	4558			
6	1S1588	or, 1n914		
2	LED	RED, Diffused	5mm	
1	DIP	2-position DIP Switch		
1	500R	Bourns 3362p		
1	1M	Bourns 3362p		
2	10kC	PC-Mount, Plastic Shaft	9mm	
1	1MB	PC-Mount, Plastic Shaft	9mm	
1	w20k	PC-Mount, Right Angle	16mm	
1	100kA	PC-Mount, Right Angle	16mm	
1	1MD	PC-Mount, Right Angle - included w/board	16mm	

This list is for the audio board only. See the v.2 Switching Doc for the parts needed for the switching system. This effect does not use a split-rail power supply.

The w1MC pot used on the production version of The Scream is no longer available. Use a 1MB 9mm pot instead. You will get the same range of tones but at different positions on the turn of the pot.

2.5mm caps:

220pF (MLCC):

<http://www.mouser.com/ProductDetail/KEMET/C320C221J2G5TA?qs=sGAEpiMZZMt3KoXD5rJ2N%252bwgBl1a522xefKI%252bxFregl%3d>

100n (MLCC): <http://www.mouser.com/Search/ProductDetail.aspx?R=C320C104K5R5TAvirtualkey64600000virtualkey80-C320C104K5R>

500R Trimmer (3362p):

<https://www.taydaelectronics.com/potentiometer-variable-resistors/cermet-potentiometers/3362p/500-ohm-trimmer-potentiometer-cermet-1-turn-3362p.html>

1M Trimmer (3362p):

<https://www.taydaelectronics.com/potentiometer-variable-resistors/cermet-potentiometers/3362p/1m-ohm-trimmer-potentiometer-cermet-1-turn-3362p.html>

9mm Plastic Shaft, PC Mount (1MB):

<http://smallbear-electronics.mybigcommerce.com/alpha-single-gang-9mm-right-angle-pc-mount-w-knurled-plastic-shaft/>

or, <https://www.taydaelectronics.com/potentiometer-variable-resistors/rotary-potentiometer/linear/1m-ohm-linear-taper-potentiometer-round-knurled-plastic-shaft-pcb-9mm.html>

9mm Plastic Shaft, PC Mount (10kC):

<https://www.taydaelectronics.com/potentiometer-variable-resistors/rotary-potentiometer/anti-log-reverse/10k-ohm-anti-log-taper-potentiometer-round-knurled-plastic-shaft-pcb-9mm.html>

16mm Right Angle, PC Mount (w20k, 100kA):

<http://smallbear-electronics.mybigcommerce.com/alpha-single-gang-16mm-right-angle-pc-mount/>

2-position DIP Switch:

<http://www.smallbear-electronics.mybigcommerce.com/dip-switch-2-position/>

or, <https://www.taydaelectronics.com/dip-switch-2-positions-gold-plated-contacts-top-actuated.html>

1S1588:

<http://www.pedalpartsplus.com/product-p/4024.htm>

The 1S1588 are hard to come by and expensive. You might find some on eBay. Or, just use 1n914 / 1n4148 instead.

511K resistor:

<http://www.smallbear-electronics.mybigcommerce.com/metal-film-240k-to-10-meg-individual/>

You can also use the more common value of 510k or even a 470k and 39k in series. The value does not have to be exact.

Overview

From the VFE Website: THE SCREAM is based on an overdrive pedal so ubiquitous that there's probably one in your grandmother's basement. Countless derivatives have been made from this core circuitry just by changing a few components. Our design allows you to re-create these sounds and find countless new ones with just the twist of a knob. Version 2 features our original HCC circuitry for new shades of tonal bliss.

Controls

Descriptions from the VFE website: <http://vfepedals.com/the-scream.html>

TONE: Active boost/cut of frequencies above the threshold set by the internal FREQ trimpot. Stock setting @ 3.2kHz.

DRIVE: Sets the gain in the drive section. From clean boost to cascading layers of high gain saturation, there's more than enough range in this control to satisfy any of your tonal needs.

LEVEL: Sets the output level of The Scream. The max volume available is affected by the EQ and HCC settings.

FILTER: This post-gain treble cut lets you smooth out the character of your tone, or crank it up to add some gritty, bright top end.

FAT: Sets the pre-gain bass response and overall gain character. It acts like a variable mid/treble boost, where the boost frequencies get higher as you continue to crank the gain with this control.

IMP: Sets the input impedance via an internal trimpot. Lower input impedances respond more dynamically to your guitar's volume knob, and higher impedances will add sparkle to the top end.

FREQ: The FREQ trimpot can set this corner frequency from 1.2kHz up to 7.2kHz, so you can make it function like a fuller range treble EQ, or an airy presence EQ. Stock setting = 3.2kHz

S - L - A: Uses Variable HCC technology to transition between a sweet, asymmetrical drive tone to a dynamic, crunchy LED tone to a sustaining, symmetrical overdrive.. In between, there are various shades of compression and tone. **The A & L positions are further shaped by an internal DIP switch**, which lets you select between 5mm LEDs or clean boost (L), and between 2x1 asymmetry and 3x1 asymmetry to bring out greater even harmonics (A).

Notes

The Filter, FREQ and Tone controls are all highly interactive.

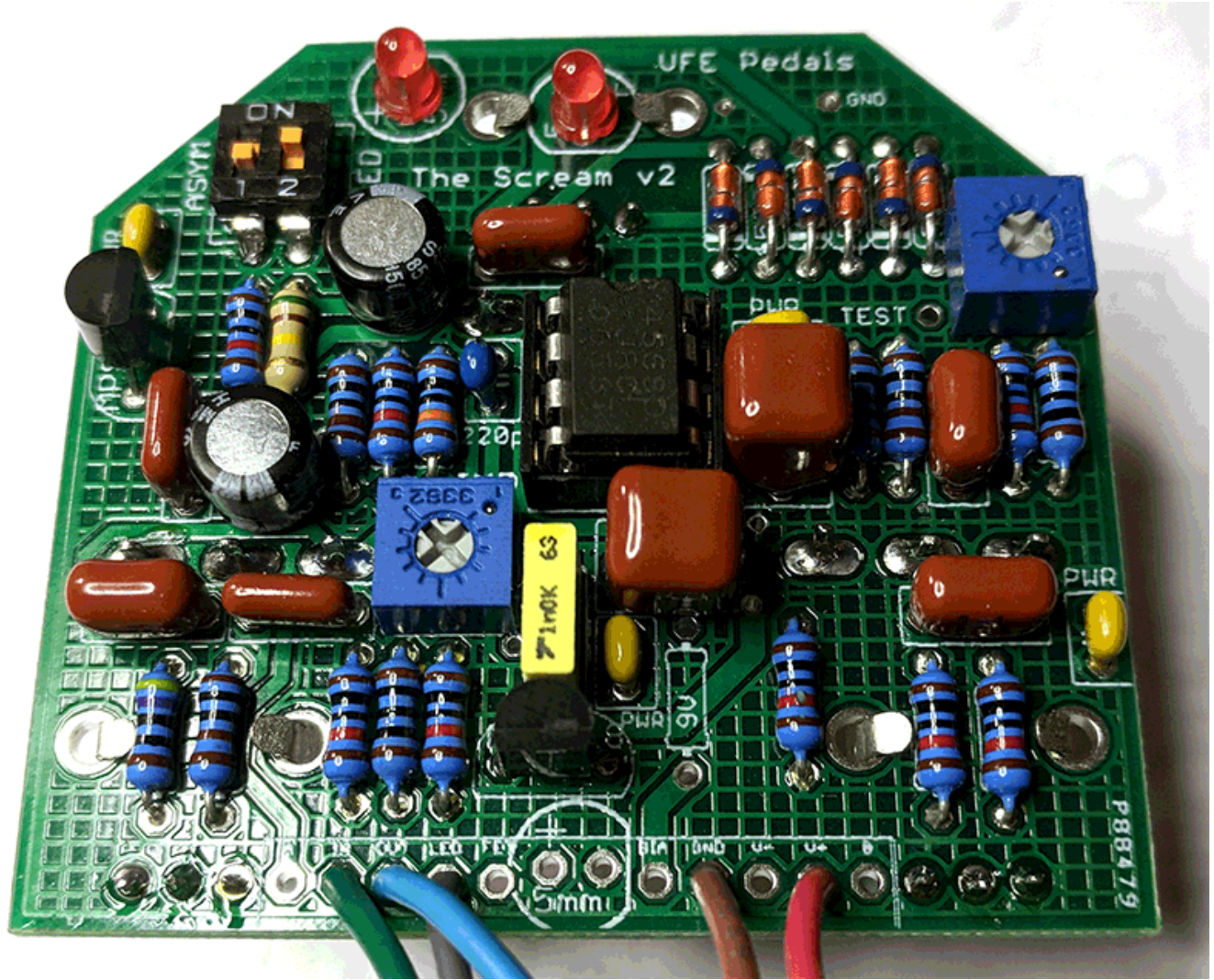
Stock Tube Screamer setting:
Set Filter 80-90% up, FREQ about ¼ up, and IMP about ½ up.

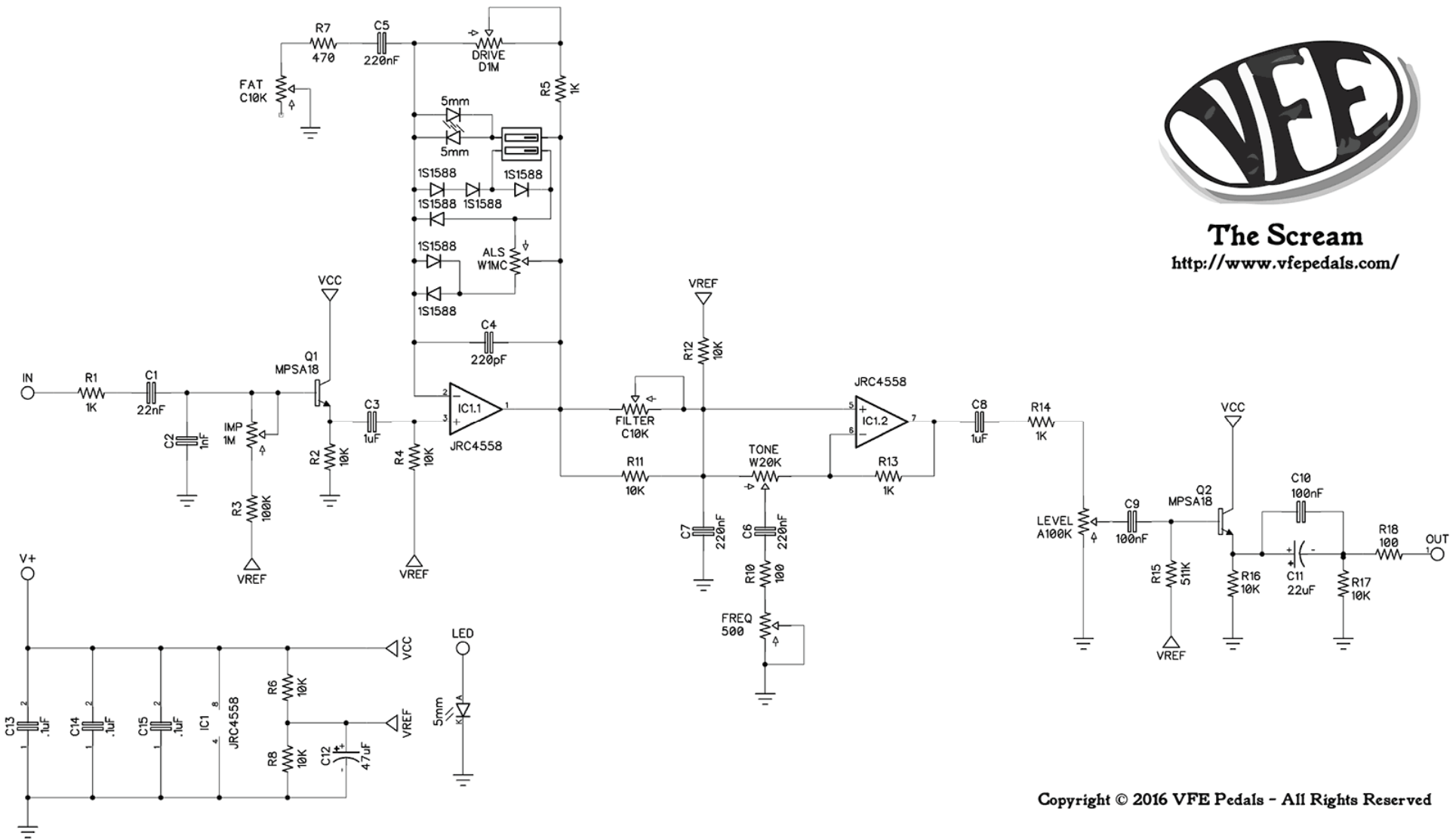
Personally, I prefer this setting:
FREQ 2/3rd up and IMP all the way up. This gives a nice range on both the Filter and Tone control.

My preferred DIP switch setting:
LED on, ASYM off. Having the LEDs on means the middle position of the SLA control gives a nice, aggressive clipping. LED off is closer to the "Comp Cut" mode of the Fulltone ® Full-Drive™.

There is a metric butt-load of tone shaping available with The Scream. Not all settings are 100% useful (some can get quite dark, IMO) but if you spend a little time dialing in the trimpots you will find much more "tone on-tap" than a standard TS-style OD.

Build Pic





The Scream
<http://www.vfepedals.com/>