

HIPSTER2019

FX TYPE: Fuzz

Enclosure Size: 1590A

Based on the Fuzz Face

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Overview

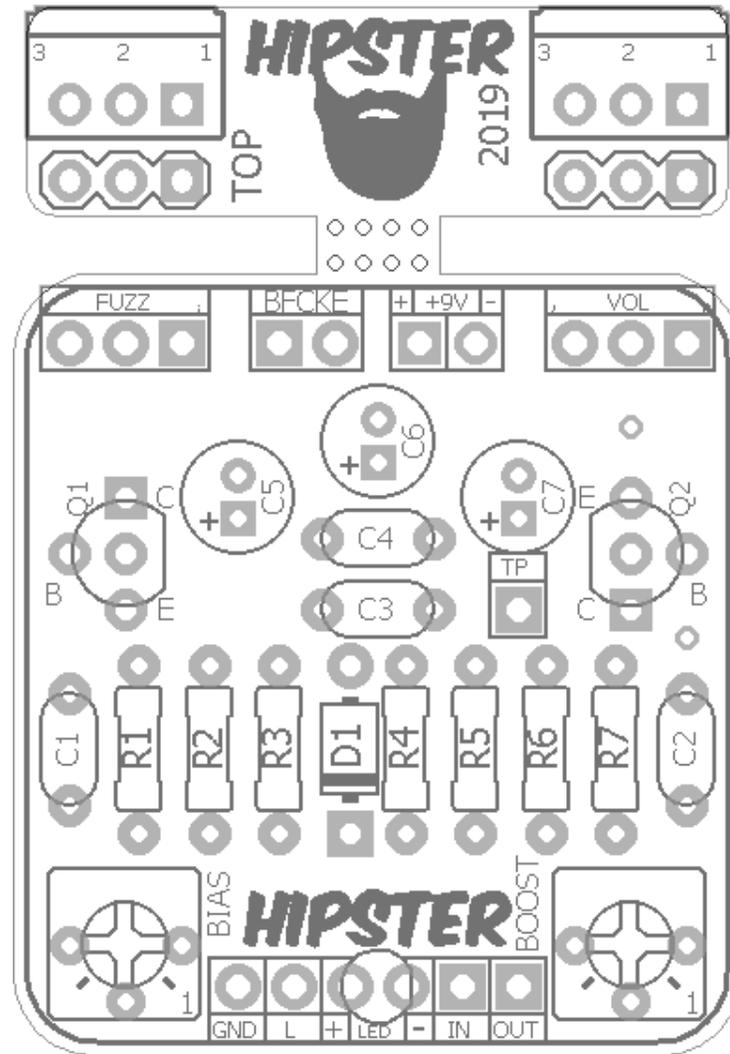
The Hipster is based on the classic Fuzz Face™ and utilizes NPN transistors with a negative ground configuration. The 2019 version has some added tweaks for extra fun.

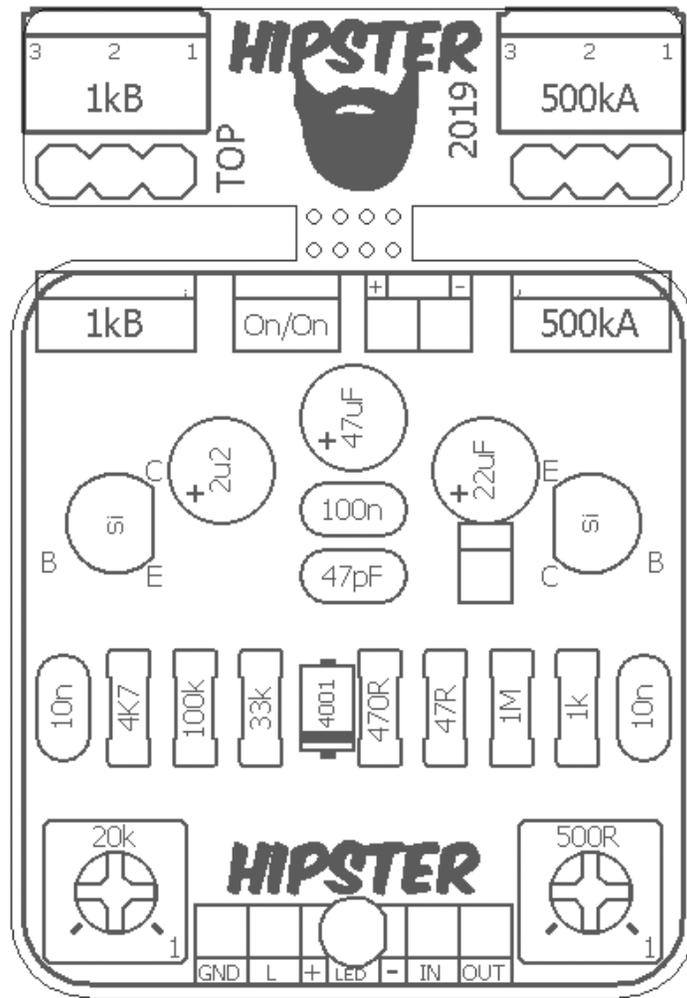
Controls

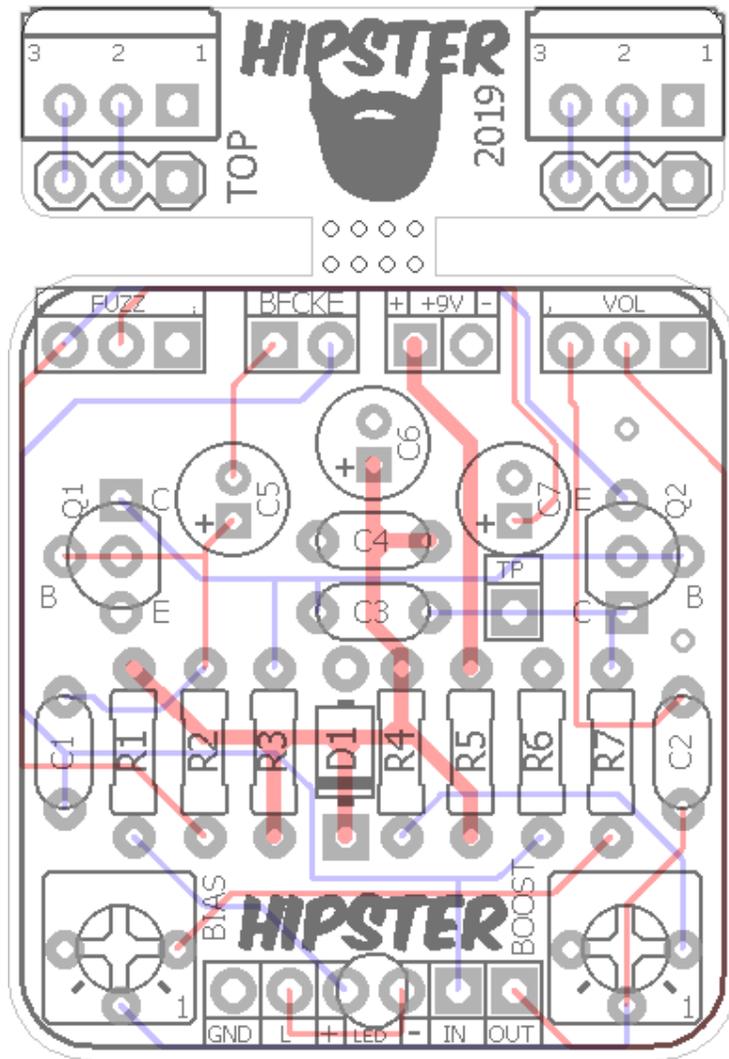
- **VOL** - Total Output.
- **FUZZ** - Min to max fuzz.
- **BFCKE** - The “Beefcake” switch changes between a reduced input cap (10n) and the stock one (2u2). When the switch is in the left position it reduces some of the excessive bass inherent in the Fuzz Face and adds a hint of “cocked wah” tone. Switch right is stock FF.
- **BIAS** - Sets the bias voltage for the Q2 collector.
- **BOOST** - Increases the total volume output and “cooks” the fuzz up a bit.

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Technical assistance for your build(s) is available via the [madbeanpedals forum](http://madbeanpedals.com). Please go there rather than emailing me for assistance on [builds](#). This is because (1) I’m not always available to respond via email in a timely and continuous manner, and (2) posting technical problems and solutions in the forum creates a record from which other members may benefit.







Resistors		Didoes	
R1	4K7	D1	1N4001
R2	100k	Transistors	
R3	33k	Q1	Si
R4	470R	Q2	Si
R5	47R	Switch	
R6	1M	BFCKE	On/On
R7	1k	Trimpots	
Caps		BIAS	20k
C1	10n	BOOST	500R
C2	10n	Pots	
C3	47pF	FUZZ	1kB
C4	100n	VOL	500kA
C5	2u2		
C6	47uF		
C7	22uF		

Value	QTY	Type	Rating
47R	1	Metal / Carbon Film	1/4W
470R	1	Metal / Carbon Film	1/4W
1k	1	Metal / Carbon Film	1/4W
4K7	1	Metal / Carbon Film	1/4W
33k	1	Metal / Carbon Film	1/4W
100k	1	Metal / Carbon Film	1/4W
1M	1	Metal / Carbon Film	1/4W
47pF	1	Ceramic / MLCC	16v min.
10n	2	Film	16v min.
100n	1	Film	16v min.
2u2	1	Electrolytic	16v min.
22uF	1	Electrolytic	16v min.
47uF	1	Electrolytic	16v min.
1N4001	1		
Si	2	NPN Silicon	
On/On	1	SPDT	Mini
20k	1	Bourns 3362p	
500R	1	Bourns 3362p	
1kB	1	PC Mount, Metal Shaft	9mm
500kA	1	PC Mount, Metal Shaft	9mm

Resistors:

<http://smallbear-electronics.mybigcommerce.com/resistors-1-4-w-5-carbon-film-1/>

<http://smallbear-electronics.mybigcommerce.com/resistors-1-4-w-1-metal-film-1/>

Caps (use low-profile electrolytic for 1590A enclosure)

<http://smallbear-electronics.mybigcommerce.com/xicon-dipped-1/>

<http://smallbear-electronics.mybigcommerce.com/topmay-tmcf07-5mm-box-001-f-1-f/>

<http://smallbear-electronics.mybigcommerce.com/electrolytic-radial-low-profile-16v-1-f-100-f/>

Trasnsistors (use NPN!)

<http://smallbear-electronics.mybigcommerce.com/bcxxx-bdxxx-1/>

<http://smallbear-electronics.mybigcommerce.com/2nxxx-2nxxxx-1/>

<http://smallbear-electronics.mybigcommerce.com/bulk-for-ffs-and-bmps-1/>

1N4001:

<http://smallbear-electronics.mybigcommerce.com/diode-1n4001/>

Sub-Mini On/On:

<http://smallbear-electronics.mybigcommerce.com/spdt-on-on-mountain-10tc410/>

9mm Pots:

<http://smallbear-electronics.mybigcommerce.com/alpha-single-gang-9mm-pc-mount/>

Trimmers:

<https://www.mouser.com/ProductDetail/Bourns/3362P-1-501LF?qs=sGAEpiMZZMvygUB3GLcD7iDNIZ%2FNDKkompMEyhqEJhVo%3D>

<https://www.mouser.com/ProductDetail/Bourns/3362P-1-203LF?qs=sGAEpiMZZMvygUB3GLcD7iDNIZ%2FNDKkomhkYgCqD12rc%3D>

or,

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

<https://www.taydaelectronics.com/potentiometer-variable-resistors/cermet-potentiometers/3362p/20k-ohm-trimmer-potentiometer-cermet-1-turn-3362p.html>

Jacks:

<http://smallbear-electronics.mybigcommerce.com/dc-power-jack-all-plastic-unswitched-2-1-mm/>

<http://smallbear-electronics.mybigcommerce.com/lumberg-1-4-compact-shrouded-mono-jack/>



You'll need to break the two PCBs apart before starting. It only requires finger pressure to do so. You can use wire cutters or sandpaper to smooth out the leftover nubs, but that's up to you.

There are a variety of transistors that can be used for Q1 and Q2. Suggestions are: BC108, BC109, 2n3904, BC183 (B, C) and/or BC550. The pinout for the Hipster is C-B-E (like the 2n3904). Make sure you know the pinout of the transistors you are using before soldering them to the PCB---you may need to twist the leads around to accommodate some pinouts.

There are two pads for the base of each transistor (the two circular pads in the middle). This is for transistors that have leads in a triangular format instead of straight pin. In my build, I used BC407B transistors which are triangular. However, they have E-B-C pinouts so the extra pad was no help! BTW - those transistors sound awesome in this build. I got lucky with low hFE on mine (197 and 224 for Q1 and Q2 resp.).

<http://smallbear-electronics.mybigcommerce.com/npn-dot-bc407b/>

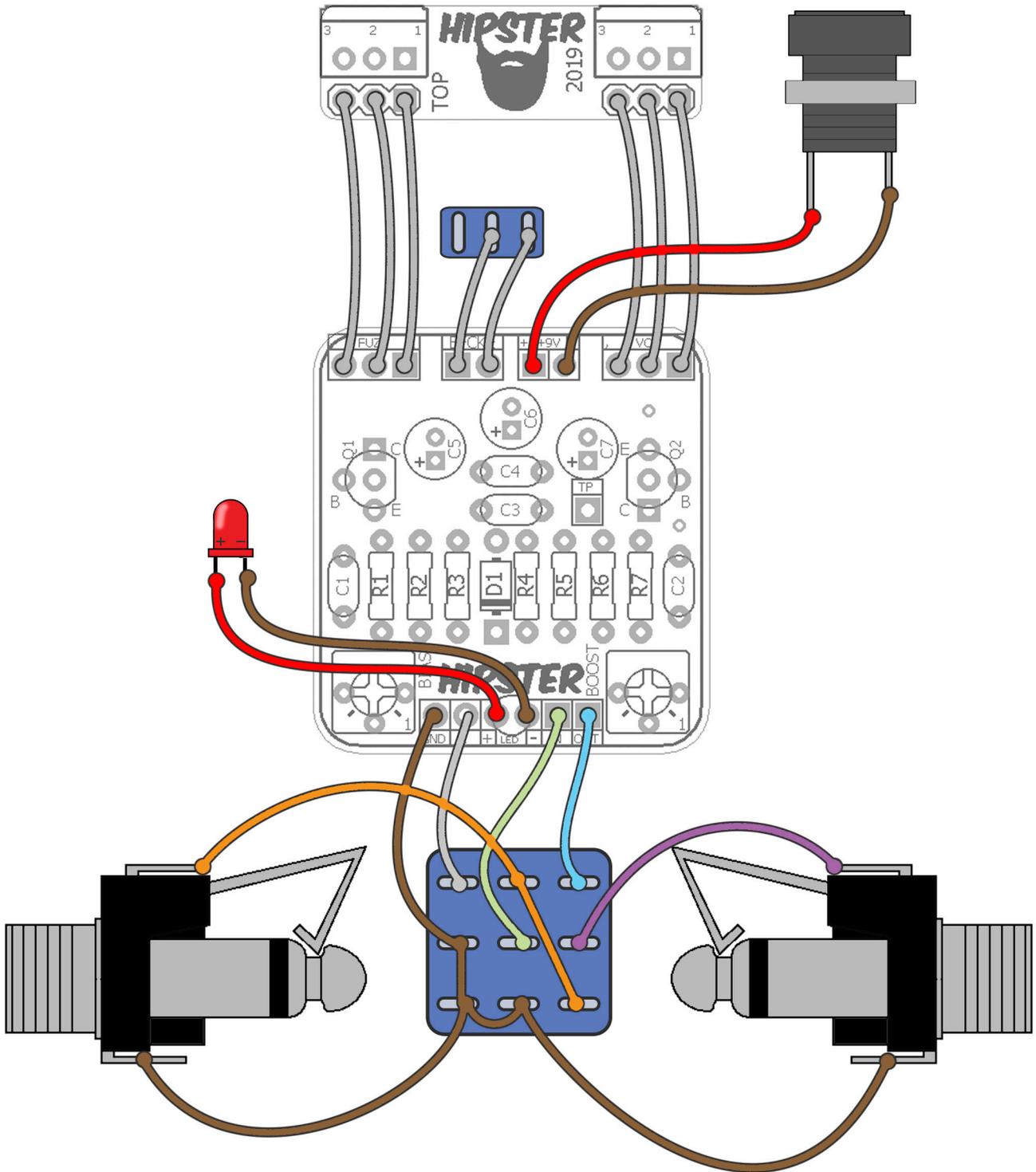
A 1kC (reverse audio) pot can alter the 'feel' of the fuzz control and prevent it from "bunching up" at the very extreme. A 2kB or C can give you a little more fuzz, even.

Adjust the BIAS trimpot until you read approximately 4.5v on the collector of Q2. Use the TP pad with your DMM to set the bias voltage. 3.5v – 5.5v is the nominal range so feel free to experiment with your bias setting. A setting of between 3.0v – 4.0v will be compressed and very squishy sounding similar to some Eric Johnson fuzz tones.

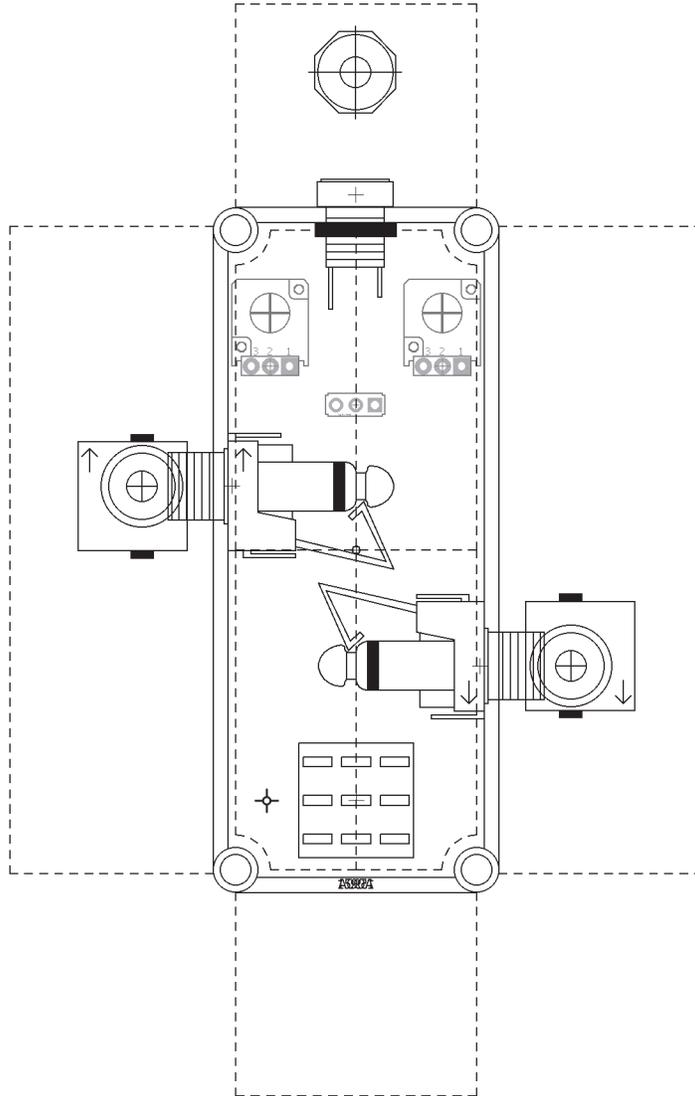
You can use either a 20k, 25k and maybe even a 10k trimmer for the Bias trimmer, BTW.

The Boost trimmer is a feature you find more often on the lower output PNP version of the Fuzz Face. But, it can be useful in the silicon version. Turning up the Boost will get you super hot output and tends to "cook" the total fuzz a bit more. I included it since there was room :) If you don't want to use it, simply solder a jumper between pads 2 and 1.

Some versions of the Hipster have included the C3 cap and some haven't. It can help reduce noise, but it also depends on what transistors you use. A helpful tip: build the Hipster without a cap there. Once you have it working, simply plug in a 47pF in the C3 spot loose to see if you like it. Or, try lower or higher values depending on the result you want. Once you find what you like, solder that bad boy in.



Note: Drill Guides are approximate and may require tweaking depending on the types of jacks, switches and pots you use.



Voltages

Q1: C 1.39v, B 0.58v, E, 0v
Q2: C 4.54v, B 1.39v, E 0.76v

