

DEVIL VI.OA

Joe Davissons JFET-Vulcan with a versatile tonestack

OVERVIEW

Joe Davisson has created a series of interesting circuits. One of them is a high gain overdrive using JFETs. Searching the internet you will also find this circuit with standard transistors.

This version features a tone stack and something really new about JFETs. It's a one trick pony but It does an excellent job.

GENER AL

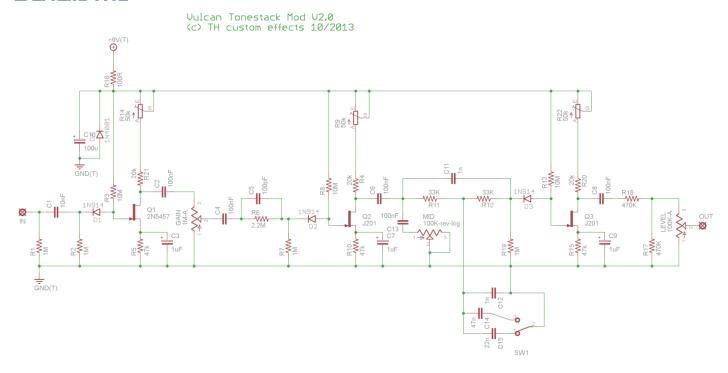
This is a version with a versatile tonestack and contemporary easy to source and to calibrate JFETs. As the usual J201, 2N5457 are harder and harder to get and fake transistors that are far away from the initial specifications of those transistors are seen more and more I was looking for alternatives. This is the first circuit using those alternatives.

PF 5102 are easy to source from your electronic supplier (Mouser and other sources). In addition to that I used trimpots to dial in a working bias but found that all of the transistors were in the working range without even using the trimmers.

Of course you may find some with higher deviation from the spec, so I left the trimmers in.

Try it and experience the no-frills build of a JFET high-gain device ©

SCHEMATIC



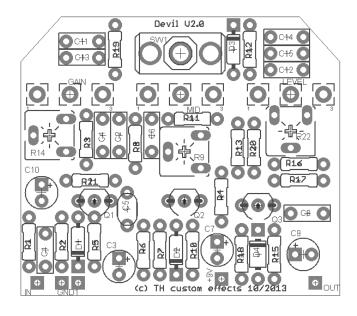


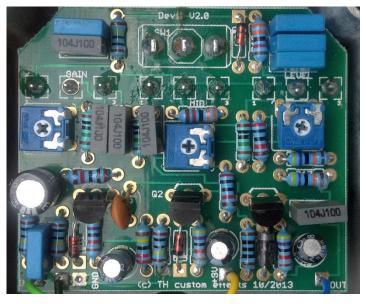
BILL OF MATERIALS

	Parts	Value	Qty	Description
Resistors	R1,R2,R7,R19	1M	4	
	R3,R8,R13	10M	3	
	R4,R20,R21	20k	3	
	R5,R10,R15	47k	3	
	R6	2M2	1	
	R11,R12	33k	2	
	R16,R17	470k	2	
	R18	100R	1	
Capacitors	C1	10n	1	box film
	C2,C4,C6,C8, C13	100n	4	box film
	C3,C7,C9	1u	3	pol. electro
	C5	100p	1	ceram/mica
	C10	100u	1	pol. electro
	C11, C12	1n	2	box film
	C14	47n	1	box film
	C15	22n	1	box film
Diodes	D1,D2,D3	1N914	3	or 1N1418
	D4	1N4001	1	1N4001
Pots	LEVEL	100k-log	1	16mm pot
	MID	100k-rev log	1	16mm pot
	GAIN	1M-log	1	16mm pot
Trimmer	R9, R14, R22	50k	3	6mm ACP trimmer
Transistors	Q1,Q2,Q3	PF 5102	3	J-FET

BUILDING

Start populating the small diodes first. Then larger diode and resistors. As this circuit does not really require biasing the JFETs you can directly solder them in and set the trimmers to middle position. If you wish you can use sockets for the JFETs. Then solder box film caps and ceramic. Last go the electro caps.







Next put the board mounted pots on the backside. Please cover the pots backside with tape so there cannot be any shortcuts with the solder pins of the populated board. Do not forget to clip off the brackets on top of the pot.



FINALLY

After I twisted the original circuit on the breadboard for quite some time the result you are looking at is a really useful high gain distortion with great tonal abilities.

Prototypes don't always look great ©



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