SUPREAUX-DEUX V1.3

Runoffgroove's attempt at the Supro 16T single ended amp

OVERVIEW

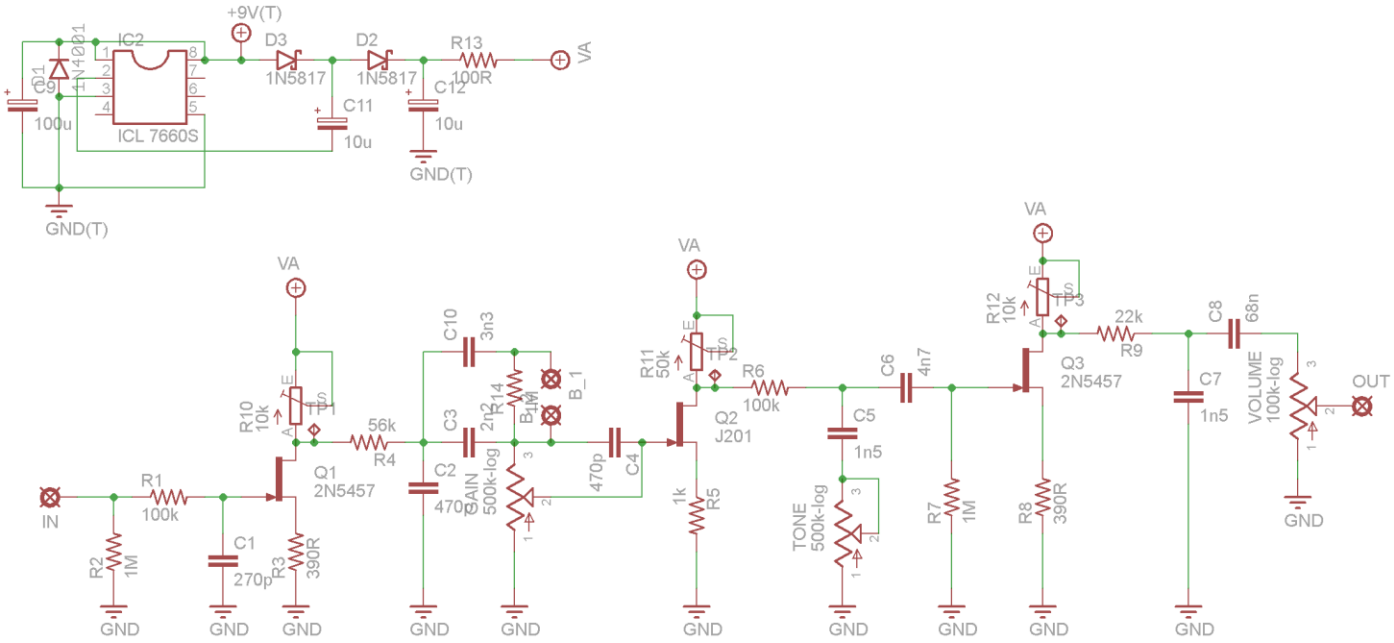
All credit for the circuit goes to http://runoffgroove.com. You will also find a lot of sound samples and documentation on their website.

GENERAL

This is my attempt on an easy-to-use PCB for this great sounding circuit.
The board features its own 18V voltage multiplier and polarity protection. The optional bass boost switch is also implemented.

Revision 1.3 optimizes the layout to make the board smaller. Testpoints have been added to make biasing the JFETs easier.

SCHEMATIC

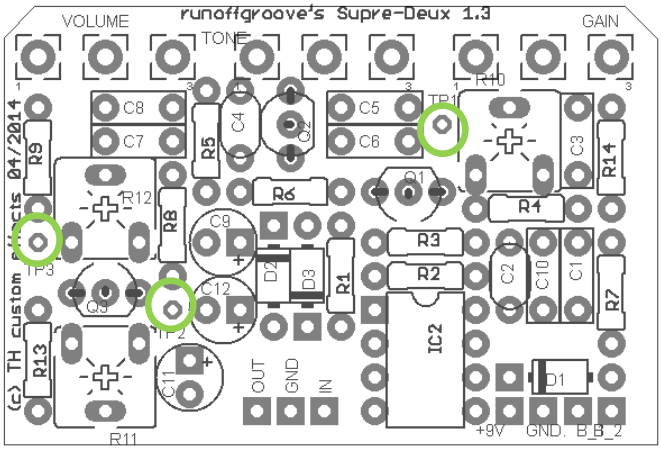


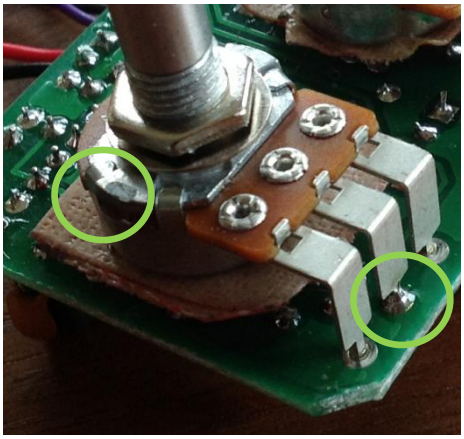
BILL OF MATERIALS

	Device#	*Qty*	*Value*	*Comment*
Resistors	R1,R6	2	100k	
	R2,R14,R7	3	1M	
	R3,R8	2	390R	
	R4	1	56k	
	R5	1	1k	
	R9	1	22k	
	R13	1	100R	
Capacitors	C1	1	270p	ceram
	C2,C4	2	470p	ceram
	C3	1	2n2	box film
	C5,C7	2	1n5	box film
	C6	1	4n7	box film
	C8	1	68n	box film
	C9	1	100u	polarized electro
	C10	1	3n3	box film
	C11,C12	1	10u	polarized electro
Diodes	D1	1	1N4001	
	D2,D3	2	1N5817	
Transistors	Q1,Q3	2	2N5457	
	Q2	1	J201	
Trimmer	R10,R12	2	10k	6mm
	R11	1	50k	6mm
Pots	GAIN,TONE	2	500k-log	16mm right-angle print
	VOLUME	1	100k-log	16mm right-angle print
ICs	IC1	1	ICL 7660 SCPA	S-type is mandatory!!!
Other	SW1	1	SPST	

BUILDING

Start populating the diodes and resistors first. You want to socket the transistors. Put the sockets and the IC socket in next. Then go the trimmpots. Last are ceramic and film box capacitors, then the electrolytic.





The board mounted pots need to go onto the other side of the board. Use some (double-sided) tape to make sure the pot cases do not shorten any pins that come through the board. As you solder them it is good practice to apply some solder to the middle pin first, then pull it back or approx. 1mm and let it harden. Then solder the other pins. This will align the pot horizontally in a better way and avoid shortcuts of the wide pot pins and the board.

Don't forget to clip of the small bracket before you mount the circuit.

BIASING:

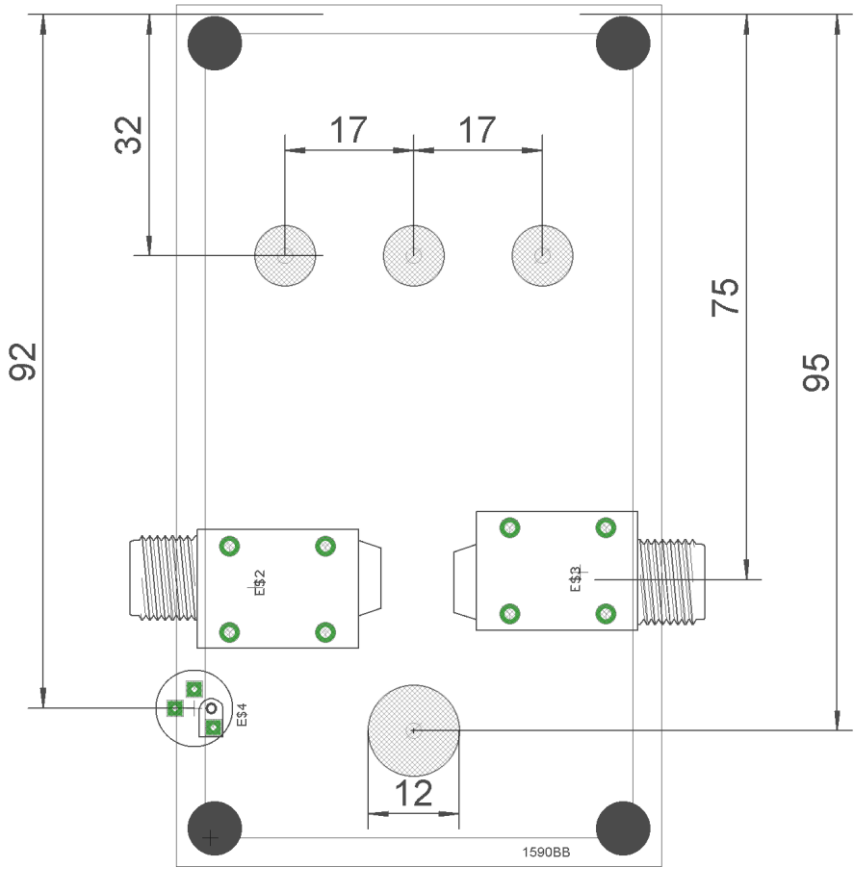
As there are three transistors you will have difficulty adjusting this by ear. Please use a multimeter and check that the transistor drain voltage is close to 12V for the Q1-Q3. To do this connect your multimeter to ground and tip the testpoints TP1-TP3 to measure the voltage. Use the trimmers R10-R12 to adjust it.

At least this should put them into their working area. You can fine-tune the transistors once you have powered the circuit up by ear.

ENCLOSURE

Drilling a 1590B enclosure (measurements in mm)

Check your printout for correct measurements before drilling!



FINALLY

Once you managed biasing this circuit you have all the Fender-like tones available. Have fun!

DISCLAIMER & LICENSE

PCBs based on runoffgroove circuits purchased from TH custom effects are intended for DIY / non-commercial use only. Any commercial use whatsoever is forbidden. Please contact runoffgroove for further information.