

RUMP ROAST

FX TYPE: BOOST/OD HYBRID

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PCB artwork ©2010 madbeanpedals

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The **Rump Roast** finds its origins in the preamp section of the [Dr. Z Carmen Ghia](#) amplifier. The Carmen Ghia is a very understated and elegant design consisting of a single tone and gain control. This simplicity makes it an ideal candidate for pedal conversion. Standard practice in porting an amp design into a pedal is to use JFET transistors, such as the J201 or 2N5457, in place of pre-amp tubes. While it is impossible to correctly match the dynamics or compression of a tube cooking at a couple hundred volts, discreet emulation in a pedal does offer some nice tones and at least retains some of the character of the amp it emulates.

In the case of the **Rump Roast**, the design is broken down into two JFET gain stages with a simple cut control for tone and attenuator for gain in between. Some modifications have been made to “pedalize” this design. C1 has been added to trim off a little top end of the guitar signal (above 15kHz) due to the amount of boost on tap. C2 and C3 is a single 680n cap in the Carmen Ghia. These were broken into two parallel 220n and 470n caps which are more widely available for pedal building.

The tonal range has also been altered and enhanced. In the amp, C5 is a 250pF cap. While this does offer a very wide range of cut control (the tone pot works to cut high end as it is turned up), I found that at its lowest setting it was far too bright for a pedal. Therefore, this was changed to a 680pF cap to tame it a little. Additionally, a switch was added to put a 68n cap in parallel to provide another range of cut control. Together, the two ranges offer a lot of flexibility in shaping the tone of this design.

Lastly, an option was added to use a master volume at the end of the circuit. This offers even more flexibility. Without the volume control, the **Rump Roast** acts as a boost, providing a huge amount of gain to cook the front end of an amp. With the volume control added, it becomes more like an overdrive. This lets you tame the volume, at the cost of some of the overall gain. It is possible to make these options switchable, depending on what your needs are at any given time. See the wiring diagrams below where this is illustrated.

The controls are as follows

TONE: This cuts the amount of high end as you turn the control up.

GAIN: This controls a wide range of boost. At minimum, it will be close to (or slightly above) bypass signal. As you turn it up you will get a large amount of boost.

VOLUME: If used, this will allow you to make the Rump Roast behave more like an overdrive than a boost.

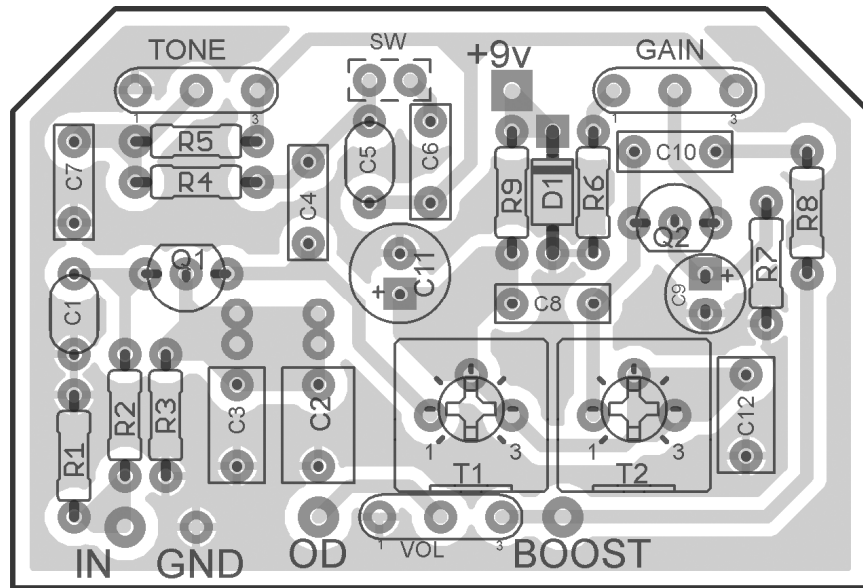
A 500kA pot may be substituted for the **Gain** control.

Other JFETS may also be used, but be sure to check pin-out before soldering.

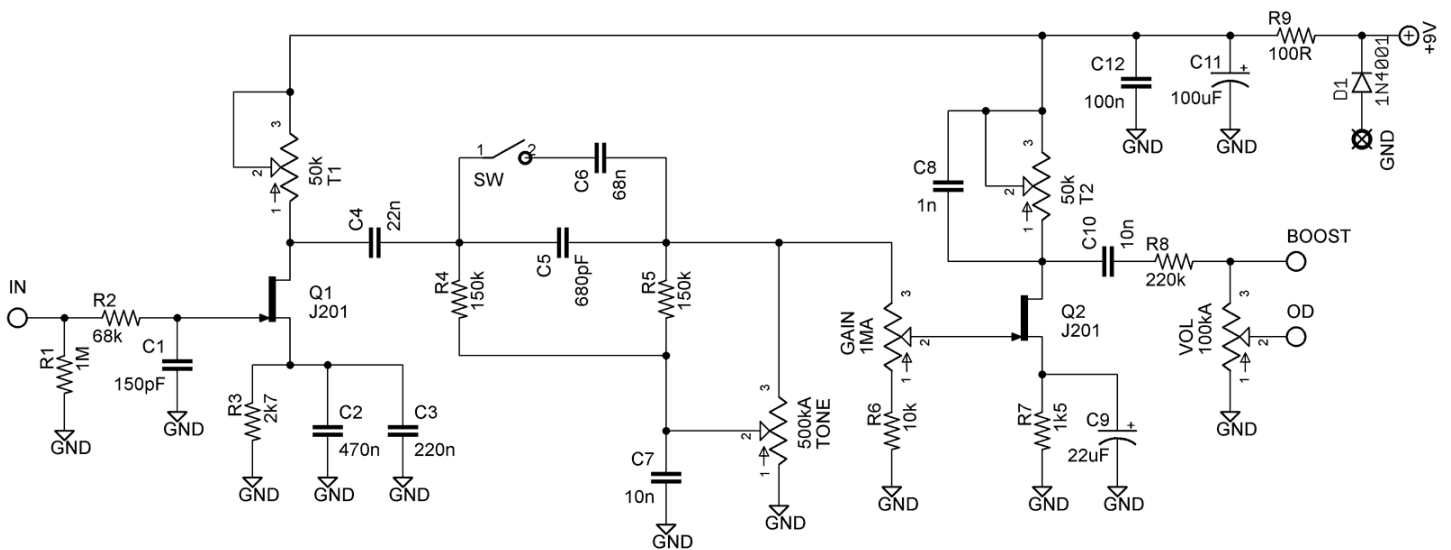
Extra pads next to C2 and C3 were included to accommodate caps with wider lead spacing.

Parts

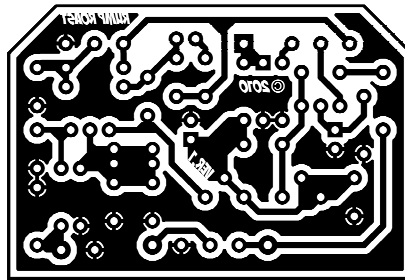
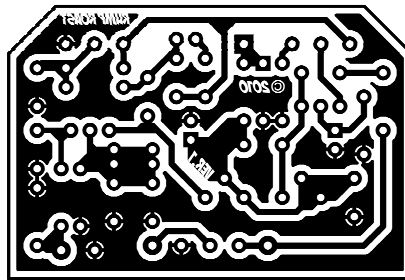
- Xicon General or Hi-Temp radial electrolytic caps, 25v
- WIMA / Topmay box caps, or Panasonic ECQ-B / ECQ-V film caps
- Xicon carbon or metal film resistors, ¼ W
- 16mm Alpha pots



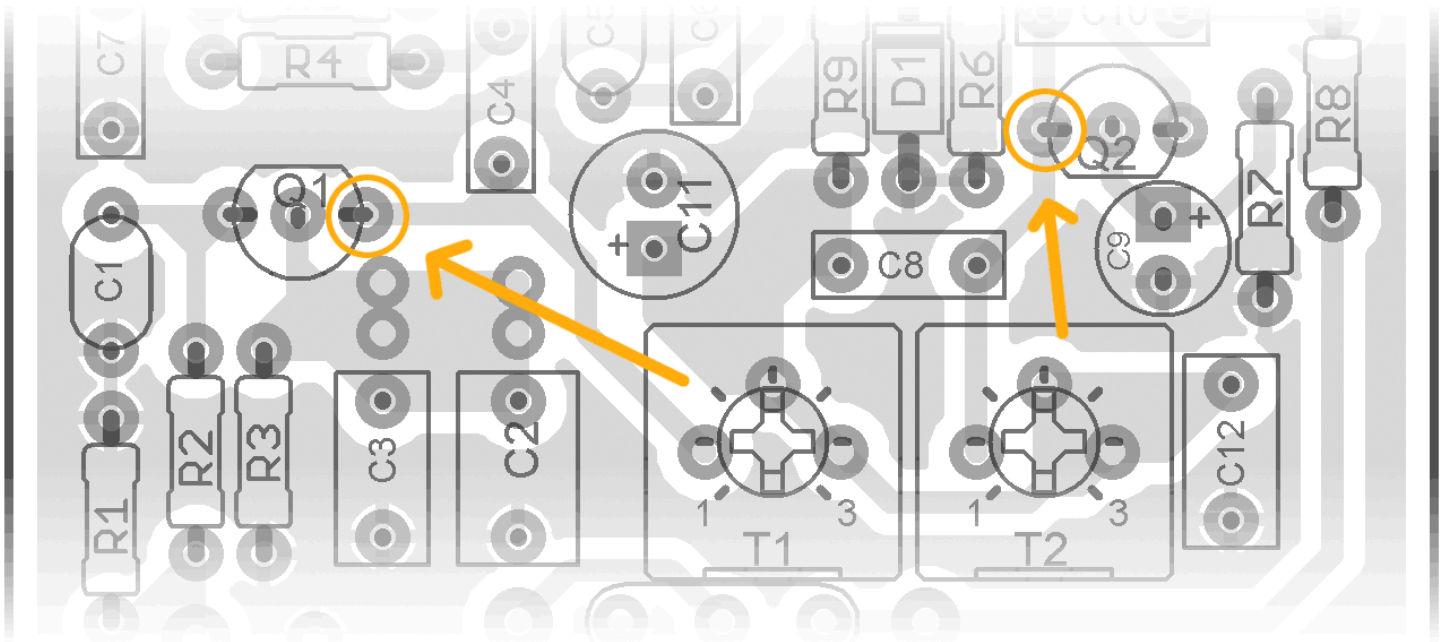
Resistors		Caps		Diodes	
R1	1M	C1	150pF	D1	1N4001
R2	68k	C2	470n	Transistors	
R3	2k7	C3	220n	Q1, Q2	J201
R4	150k	C4	22n	Switch	
R5	150k	C5	680pF	SW	SPST
R6	10k	C6	68n	Trimmers	
R7	1k5	C7	10n	T1, T2	50k
R8	220k	C8	1n	Pots	
R9	100R	C9	22uF	GAIN	1MA
		C10	10n	TONE	500kA
		C11	100uF	VOL	100kA
		C12	100n		



2.113" W x 1.437" H (including borders)



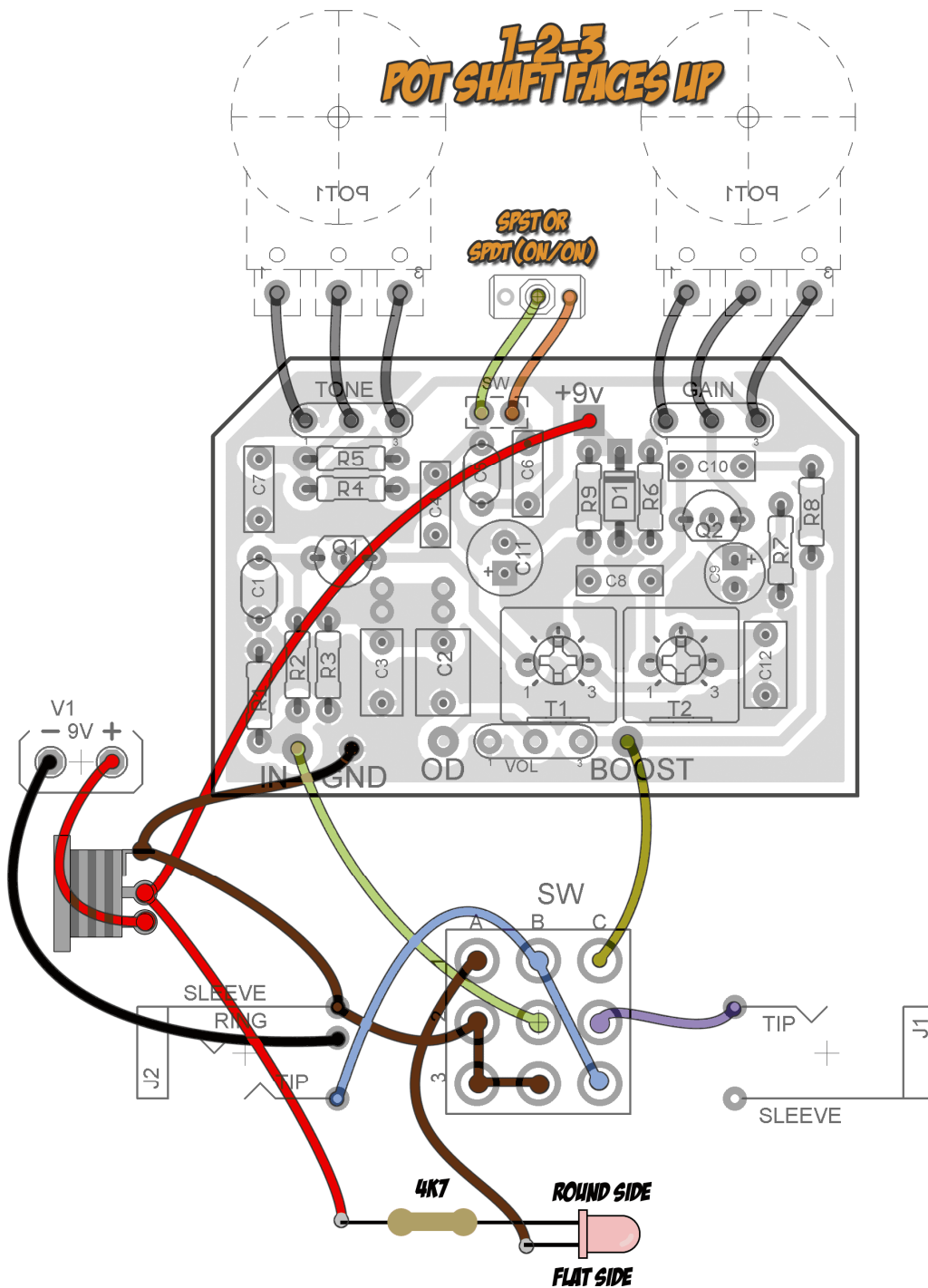
BIASING THE RUMP ROAST



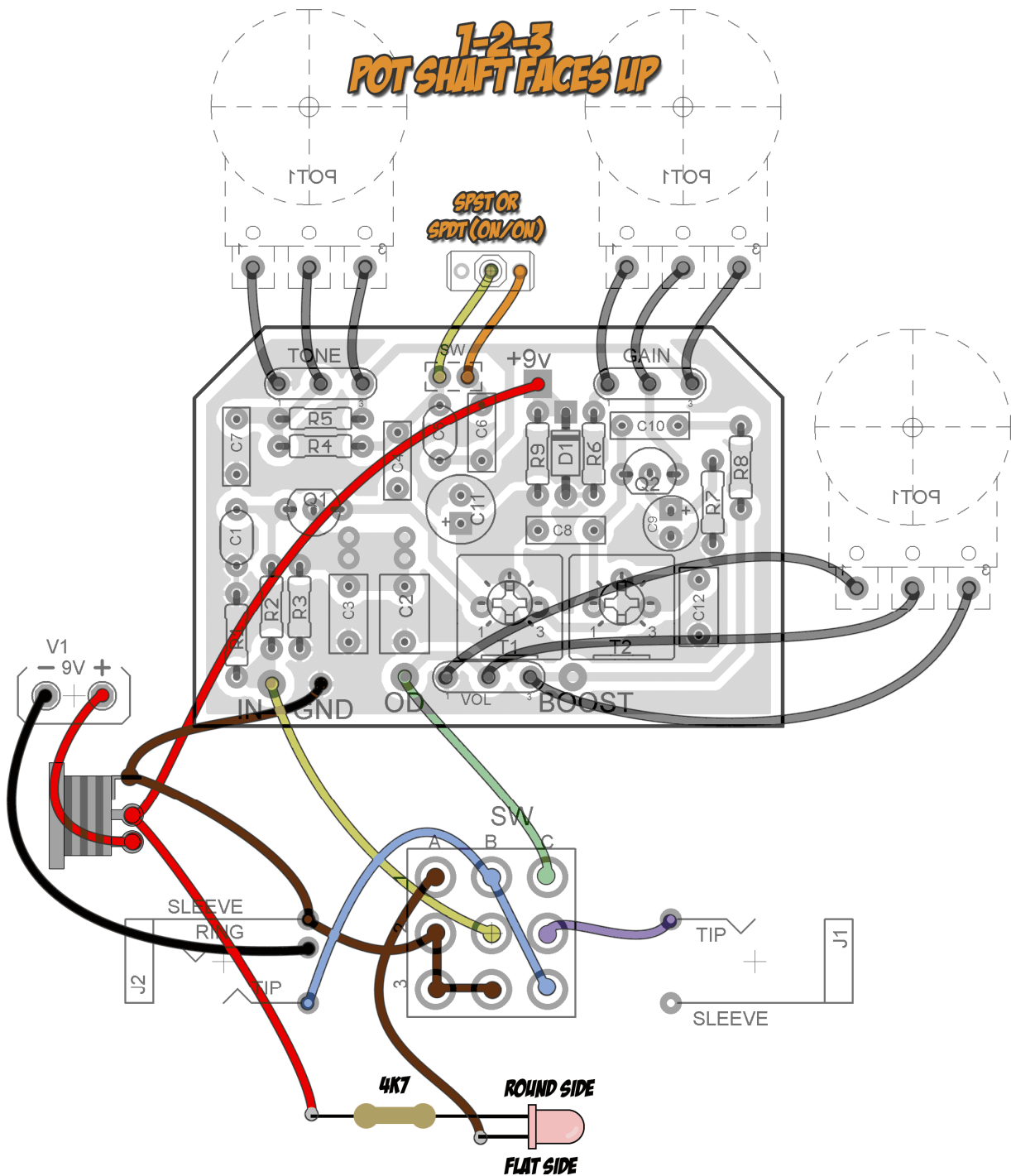
Using your DMM, adjust T1 until you get approximately a 4.5v reading on the drain of Q1. Repeat for Q2.

Note: J201's tend to bias correctly at around 22k. When using a 50k trim, it should require minimal adjustment. You can also play around with the settings to make slight tweaks to the overall gain of the effect. Start by setting proper bias first and mark that position on the trimmer with a pen. Then you can play around with different settings for the two trimmers.

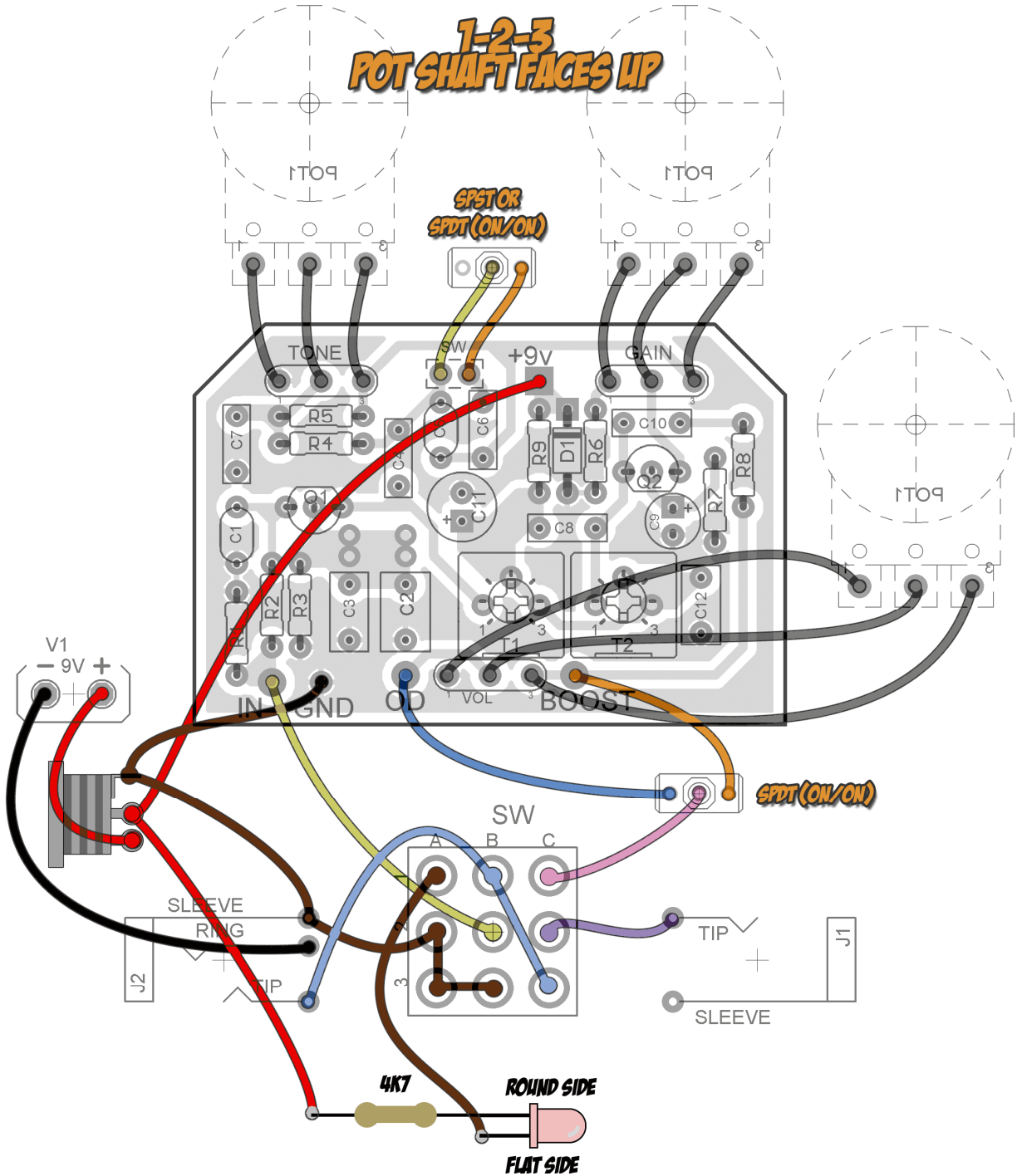
RUMP ROAST WIRED AS A BOOST

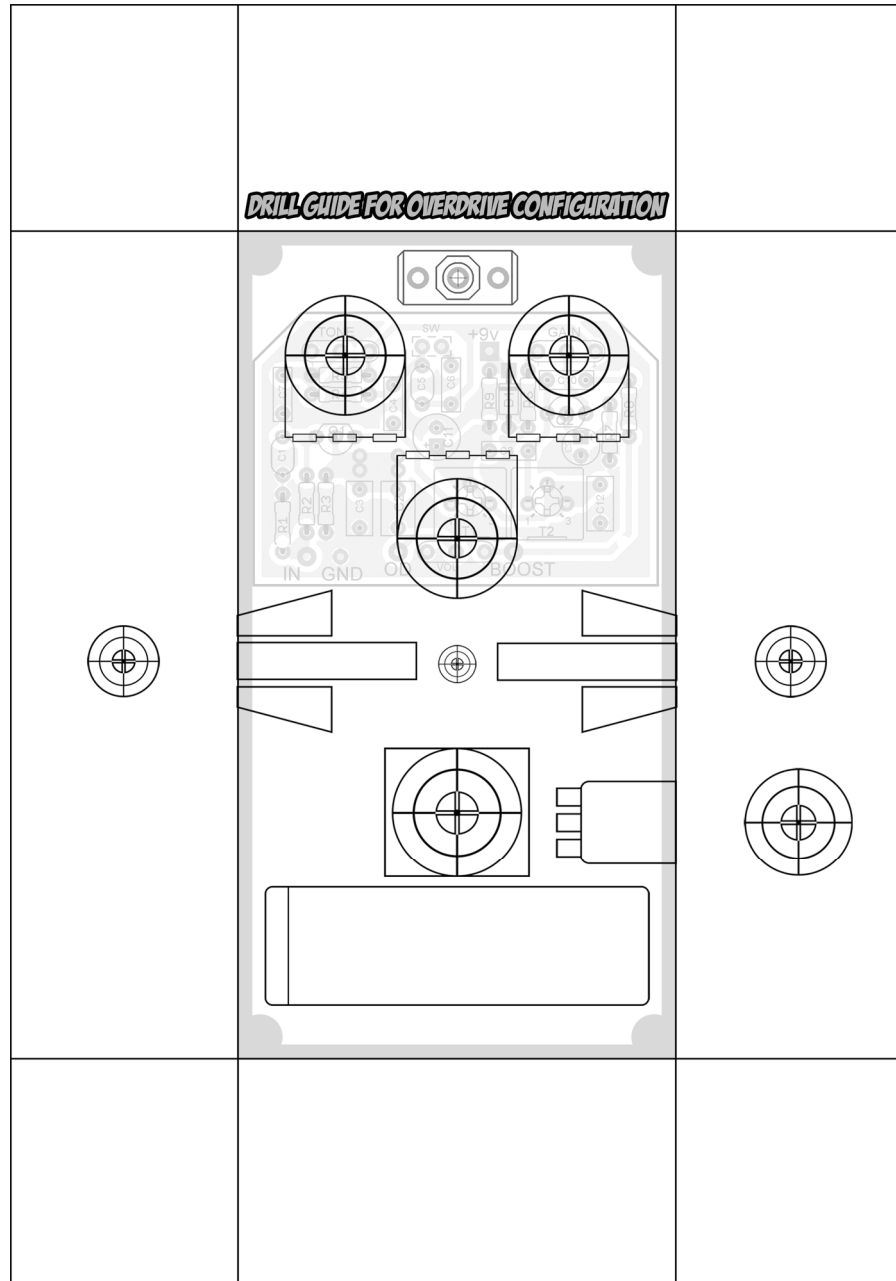


RUMP ROAST WIRED AS AN OVERDRIVE



RUMP ROAST WIRED AS A HYBRID





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