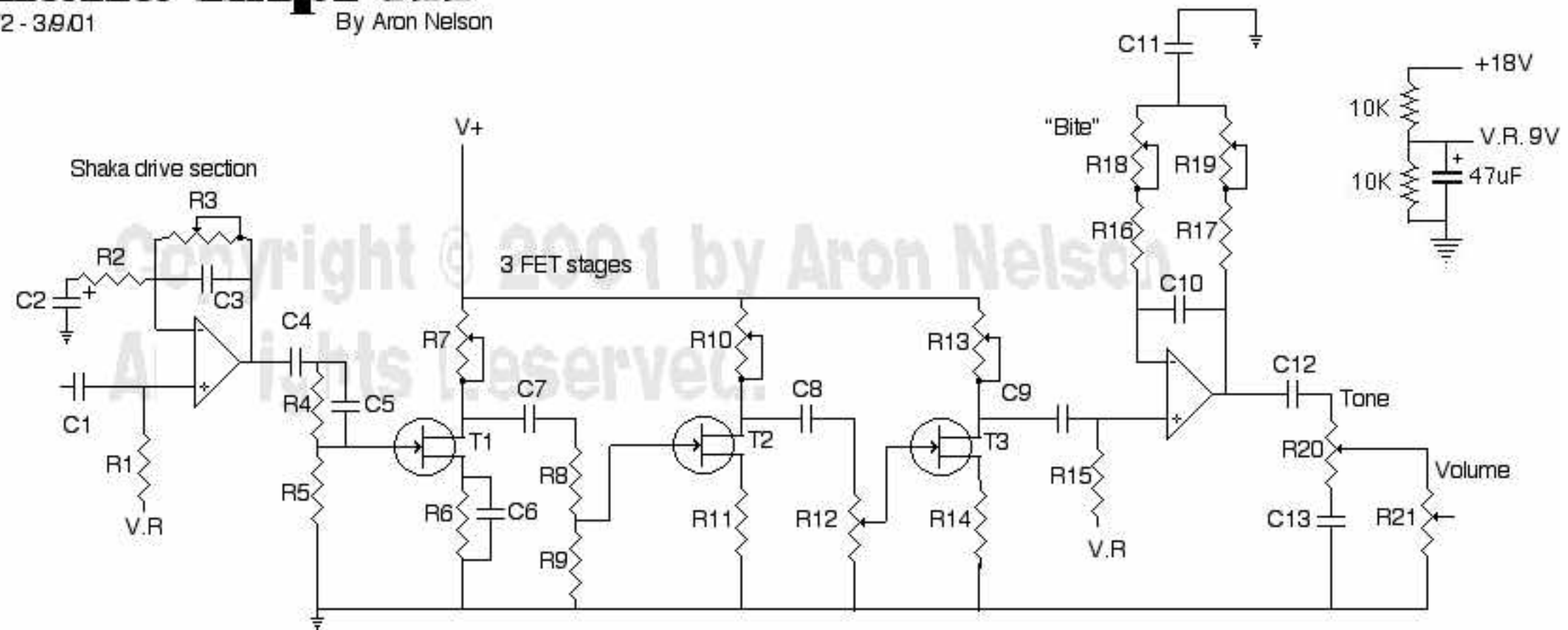


# Shaka Express

REV2 - 3/9/01

By Aron Nelson



C1 = .01uF	R1 = 470K	R13 = 100K*
C2 = .47uF	R2 = 1K	R14 = 1K
C3 = 220pF	R3 = 100K	R15 = 220K
C4 = .1uF	R4 = 470K	R16 = 1.5K
C5 = 470pF	R5 = 470K	R17 = 1.5K
C6 = 22uF	R6 = 1K	R18 = 25K (1/2 dual pot)
C7 = .1uF	R7 = 100K*	R19 = 25K (1/2 dual pot)
C8 = .1uF	R8 = 470K	R20 = 100K
C9 = .1uF	R9 = 470K	R21 = 100K
C10 = .022uF	R10 = 100K*	
C11 = .068uF	R11 = 1K	
C12 = .01uF	R12 = 500K Trim pot	
C13 = .01uF		

V+ is 18 volts (2 batteries or Voltage Doubler Circuit).  
 R18 and R19 are a single dual pot.  
 V.R. is 1/2 V+ (i.e. 9 volts)  
 Op Amp is TI RC4558  
 FETs are J201

#### Notes:

R12 should be adjusted so the level is very low going to T3, then turn up the trim to taste. T3 should not clip very much - a delicate balance.  
 \*R7, R10 and R13 are 100K trim pots. Starting voltages: 15V, 9.5V, 5.4V

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Special Thanks to Jack Orman for his work with FETs and effects circuits

#### About the Shaka Express:

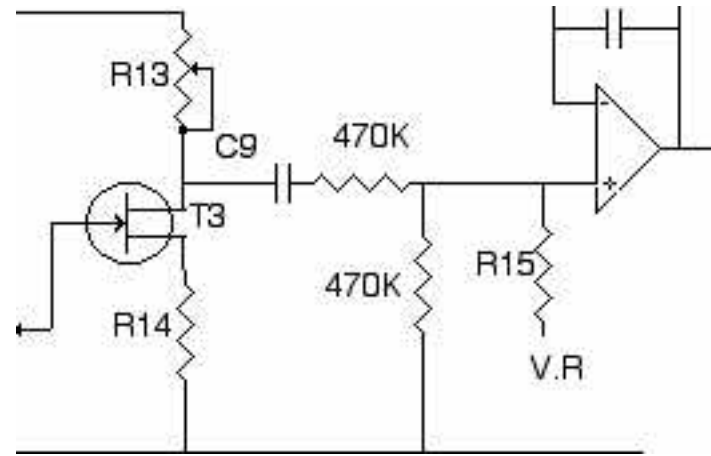
The Shaka Express is a medium to very high gain overdrive pedal. The op amp section resembles the original Shaka Braddah, minus the clipping diodes. In fact, one of the versions of the Shaka Express had LEDs as clipping diodes in the feedback loop of the op amp. There are 3 FET stages that allow you to get lots of gain. The mid notch circuit is subtle but does enhance the tone of the circuit. As of this schematic date, this is my favorite high-gain distortion pedal. It sounds very good when recorded direct using the Marshall speaker simulator. A touch of reverb and delay and it's a great sound. Tons of harmonics, sustain, and grind are in this pedal. This pedal is not for low gain sounds - it's heavy overdrive/distortion all the way!

### Suggested Mods:

The Shaka Express is the first Shaka pedal to go through a testing process before being released. Here are some of the mods suggested:

Ed Rembold:

To utilize T3 to the fullest - put a 470K/470K resistor after C9 from signal to ground and use the junction of the 2 resistors to the input of the tone stage. Ed used a 100K dual pot for the "bite" control. You can also try a 50K dual pot as well. Note: In my version, I didn't clip T3 as much, the trimmer before T3 was set so the level was fairly low going into T3. Ed's recommendation is a good one and allows you to control T3's distortion a lot more.



I recommend shielded wire for the input and output of this pedal. Ground the shield only on one end of the cable.

Another tip: As Rob Strand pointed out, you could make a mod that would switch the 3rd gain stage in and out, making the pedal a lot more versatile for lower gain sounds. I've done it and it works very well.

### Layout/PCB

Coming soon...

<http://hail-eris.com/~stompbox/pedals/> <http://surf.to/stompbox>