

Aug22, 2001

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5. Test 4

Pregain: all the way up

Swash, noise gate: set so that a nice large waveform appears at Test 3 (try mid-way)

Self-osc: clicked off


Treble: all the way down

Bass: all the way down

Look at whats on the scope at Test 4. Turn treble up and little spiky waves should appear
Turn treble back down, and turn bass up. The wave should get bigger and smoother
(don't worry if you can't tell, youll be able to listen later)



Problem in the tone section, common mistake is wrong resistors used


6. Test 5

Postgain: all the way down

Postclip: off (so that the diodes aren't in circuit)


Treble: Mid-way

Bass: Mid-way

All other controls set as in previous step

Put the scope on Test 5. The waveshape should look like the one in Test 4 except at a different DC level. Slowly turn up postgain, and the wave should stay the same but get larger until it starts to clip and becomes like a square wave (but noisier).

Flip postclip and the wave should shrink considerably. now turn postgain down slowly and the amplitude should stay the same until postgain is almost all the way back down.



Problem in postgain section: Voltage at pin 3 should be 4.5V, check those 100ks by the TL072 if not. Check postgain pot. Shorted traces is a common problem here.
if postclip isn't doing anything, then check postclip and those diodes.
If you see a solid high frequency at Test 5, then put a 1000pF (0.001uF or 102) cap between pins 1 and 2 of the TL072


7. Output test

Put the scope on the output jack

Turn volume up and down, it should go from silent to very very loud (peaked out on the scope)

Turn self-osc up slowly, as you do that, flip pre and post clip switches and play with noise gate and swash. It should make some sounds that aren't coming from the guitar. If the sound changes when you turn self-osc, then its probably working and you just need to play with the controls more to get it to self-oscillate.

Turn bass and treble up and down, and listen to see if they actually change the tone


8. Final Tweaks

(pots/knobs are tight, room for battery, board doesn't short out on the box or stomp switch is labeled and has "www.commonsound.com", knockout plugs are JBwelded or torch brazed etc.. see the "Final tweaks" sheet)