



Test 3. (modulation mixer stage)

Put scope on Test 3.

Turn input volume up, LFO depth up, env depth up, LFO speed fast, position up, and play...

Should see a mix of an audio signal, the LFO (oscillating), and envelope (strike a note, it should jump up)



Check modulation mix stage especially the lower half.

IC may not be getting power or a pin problem.

FET may be backwards or wrong.

Possibly, the 4151 may be loading the FET down. To test for this, disconnect that jumper wire that goes from the FET. Then retest at [Test 3](#). If it works now, then the 4151 has a problem... otherwise the problem is in modulation mix stage.



Test 4. atoning stage

Position up, Input volume up, squelch down.

Should see a squarish wave.

Play a high note, frequency should get lower as you turn position down (keep playing)



problem in the atoning stage...

Try fiddling with squelch a bit (or turn it to the all other way).

See if the DC voltage at pins 6 and 7 are the same when theres input signal.

Squelch should move voltage at pin 7, playing should make an audio signal appear at pin 6.



Test 5. tone stage

Position up, Input volume up, squelch down.

Turn tone up and down as you play: you should see an audio wave shift between boosted highs (spiky)and boosted lows (wide and no spikes).



Problem in tone section... happy hunting



Test 6. output jack and listen with an amp

a. Start with Position up, in vol up, out vol midway, squelch down, envelope depth down, LFO depth down, blend up. Play and listen to the sound:it should be distorted like a heavy fuzz

b. Turn position up and down. The distortion should go from thick fuzz to a clickity-clack noise (not sounding remotely like your guitar/keyboard/whatever). When you play chord or a very high note, it should change the sound the whole range, if for example, its stops changing the sound much when you turn it past half-way then it needs to be tweaked. See "Tweaking Position range" following this Test. For now, it's ok.

c. Turn LFO depth up (make sure LFO speed is about 4 blinks per second).Listen. It should be modulating (wavering in and out) the distortion in sync to the LED blinking. You may have to turn position down slowly until you hear this sound. Turn LFO depth back down