

Weber "Tweedifying" Champ Mods

By Gerald Weber in Vintage Guitar Magazine

"When Fender changed from the tweed series amps to the Blackface amps, the tone changed to a more scooped midrange kind of tone. Although a signature sound, valid and usable, there are some people that find the tweed sound more desirable for blues. <snip...Three basic mods. you will only need two 22K ohm half watt resistors and one or two .02 mfd @ 400 volt capacitors and solder.

1) Get rid of the tone controls

Yes, those tone controls reduce gain and scoop mids. The mod for this involves three steps. Looking at the back of the volume pot, remove the wire from right lead and tape it off. Now remove the wire from the right lead on the treble pot and solder it to the right lead of the volume pot. Looking at the board and coming off pin 1 of the first 12AX7 you will find a 250pf cap connected to two 100K ohm resistors. Change the 250pf cap to a .02 mfd @ 400 volts and remove one of the 100k ohm resistors. you have to be sure and remove the right one! The 100K resistor that is mounted longways (horizontal) on the board is the correct one to remove. Actually it is the one that connected the 250 pf cap to the the .047 and .1 cap originally.

This part of the mod was probably the most noticeable. The stock circuit has a very scooped midrange tone to it and the bass can get REALLY flabby if you turn the bass pot up much higher than 4 on any of the black/silverface champs. The best way I can describe it, is that this mod makes the amp "blossom". The increased mids give the amp a much fuller tone. And much to my suprise, the bass, although uncontrolled after this mod really smooths out and looses its former flabby character.

2) Change the feedback loop

From the speaker jack, there will be a wire running to the board connected to a 2700 ohm resistor (red violet red). This is the feedback resistor. You are going to remove it and replace it with a 22k resistor--but wait--the new resistor is going to be connected differently. One resistor lead goes in the same eyelet that the wire coming from the speaker goes (like original), but the other end of the resistor goes to pin 8 of the first preamp tube. There is already a wire on pin 8 so make sure and leave that connected.

The part of the mod is a little deceiving... If you're only on step two, and you listen to the amp with just #1 and #2 of the mod, it appears to bump up the gain quite a bit. But the following step lowers the overall voltages to the amp and the gain gets reduced again. So from what I can tell, this is a compensation step for the mod to follow. It's not really mean't to be used on it's own to change the amp's tone.

3) Change the power resistor

On the far end of the board near the multi-section can type filter cap, there is a 10K, 1 watt resistor (brown black orange). Change this to a 22K with a half watt. Now you have yourself a virtual Tweed Champ (or Tweed Champ with Vibrato if you converted a Vibro-Champ). Time to play that guitar (HARP!)

This part of the mod is where you get the warm "tweed-like" tone. Call it the "brown sound" or whatever you like. But this definitely gives the illusion that you're not playing a black or silverface amp anymore.

4) Fine Tune the Gain

On the board you will find an electrolytic cap that connects to pin 8 of the first preamp tube. If your amp has too much gain, remove this cap. The tweed Champ did not have this cap, but you might want to listen to it before you remove it because you might like the extra gain. It was put on the Blackface to help compensate for loss in the tone circuit. (you have the option of removing a cap that goes to pin 8 of the preamp tube. If you leave it there, the amp Has more gain.)

I listened to the amp with this cap in place and it was a little gainy for my tastes. But then again I wasn't looking for an amp that would break up as early as possible. So to put it back closer to the tweed design and give it a little more clean headroom, I removed the cap and I liked it better with out it. The amp still starts breaking up at around 4 or 5, but not as dramatically. Now the overdrive has a creamier tonality to it.

Additional Mods to try:

1) Change the rectifier tube

Although all Champs came with a 5Y3 rectifier tube, you might want to experiment with a 5U4 or GZ34 rectifier. These will increase the plate voltage resulting in more power, more headroom and more bottom end. A solid-state rectifier will also work with this amp.

Didn't try this. Maybe I will at a later time when I get the 10" speaker I want to eventually use.

2. Slow down the vibrato on your Vibro-Champ

If you converted a VC, you may want to slow down the vibrato speed. This can be easily accomplished by changing a cap. On the board you will find three caps in a vertical row whose values are .01, .01, and .02 mfd. Change one of the .01 caps to a .02 mfd for slower speed.

I LIKED THIS !!! The normal Vibrochamp vibrato goes from a moderate chop to full tilt rapid fire unuseable-for-anything vibrato. This mod tames the beast! I found that space is at a premium where those ceramic .01's reside, so a .02 orangedrop won't fit. But a .02 mallory 150 slips in there just fine with a little lead bending. The end result is a much more useable range of vibrato. The low end gives you that old timey slow throb that sounds so good with slide playing, to a faster (but still useable) Vibratone on high vibrato speed. I even thought about changing out both .01's with .02's to slow it down even more, but I left it .02-.01-.02.

3. Change the speaker

I should have covered this first because this is the part of the speaker that makes the sound! Most Champ speakers have either been replaced with the wrong impedance replacement resulting a very low power or the original speaker has lost its efficiency, resulting in mushy lows and low volume. Replace with a 4 ohm 8 inch speaker."

I'm shopping around for a blown vintage alnico 10" that I can have reconed for 4 ohms. When I do, I'm going to change out the original 8". Stay tuned...

This article was created, researched and written by the author (Gerald Weber).