

RICH MOD:

PARTS NEEDED:

Audio taper dual-ganged 500K pot
Two 400-450 volt .022 capacitors

The first thing to get is a dual 500k pot (2 pots-1 shaft), and this is the only thing you need to get.

Ok, after you pull the chassis out of the box, turn it upside down with the face panel towards you, and the back panel away from you.

You are going to look at the board just past or around the 3rd preamp tube, and you will see a pair of .022 caps coming down, at the top of the board. One of the .022s is connected to a 100K resistor (brown, black, yellow) and the other .022 is connected to an 82K resistor (grey, red, orange). At the bottom of the board each .022 cap is connected to a 220K resistor (red, red, yellow), and these 220K resistors are connected to each other at a common point (they make an upside down V). This is the Phase inverter circuit and the area where the master will be connected.

The next thing to do is to push the volume 2 pot out of its hole and secure it by soldering the grounded lug of the volume 2 pot to the back of the volume 1 pot (ground to ground) so it's secure and MAKE SURE it is not touching anything on the board. Put the NEW 500K dual pot in the now-empty volume 2 hole and make sure it's not contacting the old volume 2 pot which should now be secured to the back of the volume 1 pot. Put the pot in with the lugs facing up like all the others are.

Go to the phase inverter circuit and unsolder the ends of the .022 caps that are connected to the 220K resistors and lift the end of each cap out of the solder lug. You are ONLY unsoldering the one end of each .022 cap, and not removing them. At this point you should have - 1) the new pot installed in the hole and 2) each of the .022 caps unsoldered from each of their 220K resistors.

OK, looking down at the new pot, you will have a total of 6 lugs (3 on each pot) facing up like every other pot in the face of the chassis. Working with the outside pot (farthest away from the face of the amp), find the first lug of the pot, which is the lug to your left (closest to the input jacks), and run a wire from the first lug to the unhooked end of the .022 cap closest to your new pot. THEN run a wire from the MIDDLE lug of the SAME pot to the 220K resistor, where the .022 cap WAS connected originally. NOW, go to the OTHER pot, which is the inside pot and do the same exact thing with the OTHER .022 cap and 220K resistor, which again will be the leftmost lug to the .022 cap, and the middle lug to the 220K resistor. At this point you should have run 4 wires so far, and the LAST lug on both pots should be still be unused. Take a 5th wire, and solder that across BOTH of the unused last lugs of both pots, and run that wire to the COMMON point where the 220K resistors are soldered together. YOU ARE DONE, so tape up the connections on the caps so they don't touch anything. When you fire up the amp, make sure that your NEW pot (which is in the volume 2 location) is turned down, because this is the new volume, and your original volume 1 pot is now your gain, so pin the volume 1 pot, and set your new volume pot (volume 2) on about 1 to start with until you get an idea of volume.

Tips- You are only unsoldering the caps on the ends that were originally connected to the 220K resistors.

You will leave the 220K resistors connected to all their original connections, you are ONLY unsoldering the caps FROM the 220K resistors.

In essence, all you are doing is breaking the connection of the .022 cap and 220K resistor and inserting a pot "in between".

When you are done, ALL 6 lugs should be used, but there should only be 5 wires, because the last lug of BOTH pots should be jumped with the 5th wire.

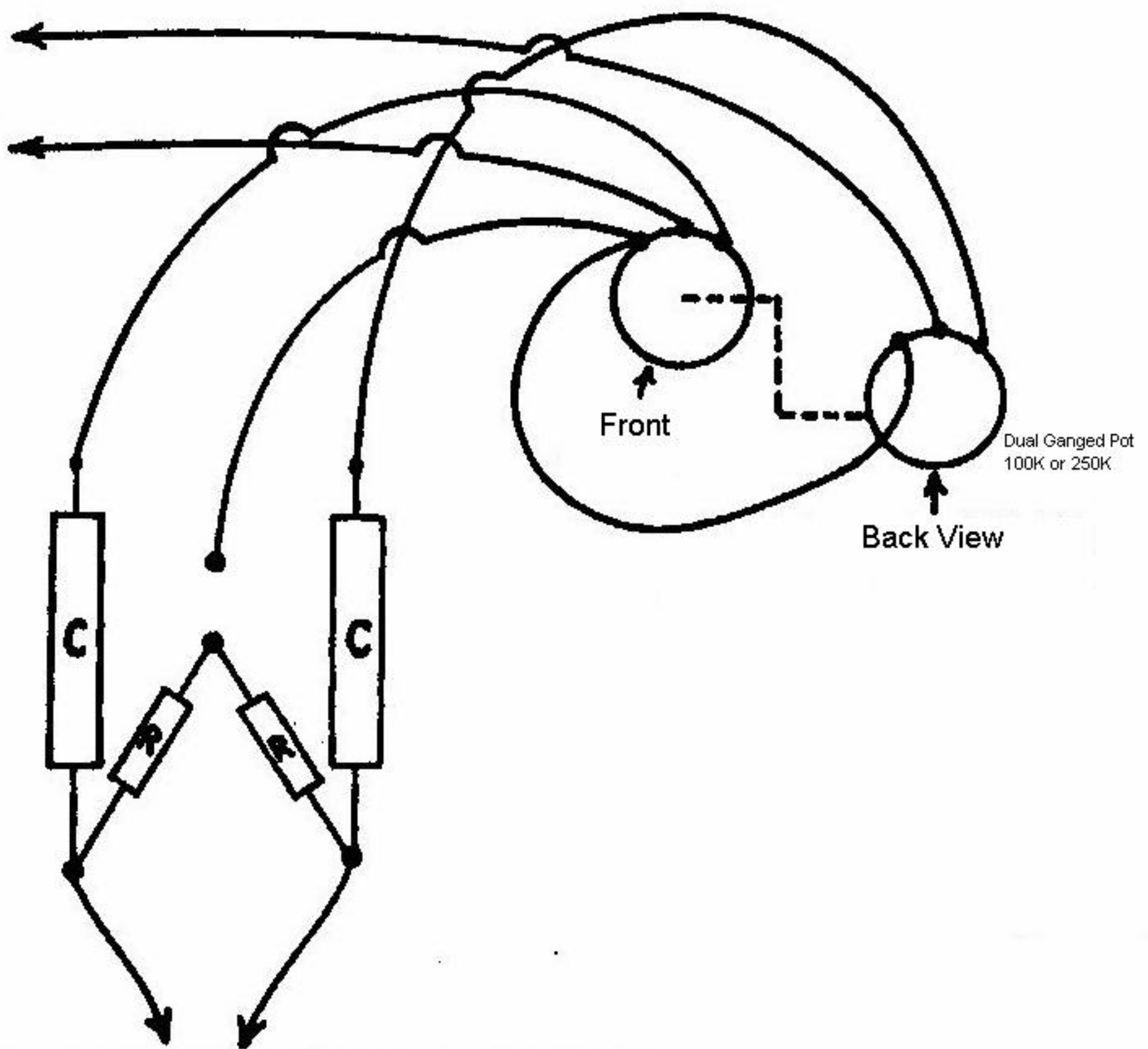
Using a piece of shrink tube on each of the .022 cap/wire connections will protect the connections from touching anything down the road, and is way better than tape.

If you are doing this to a 6550 models, the 220K resistors will be 150K and the 220K is only on the EL34 models.

I hope you can follow this, it's WAY, WAY easier than it sounds, especially with a hand wired board, but it's a bitch to explain. Listen, being that the original volume 2 pot will now be inside the chassis, if you do jump your channels, you have to bleed in the right amount of channel 2 before you put the chassis back in the box, so jump the channels and turn it on, and put just enough of channel 2 into the mix without it becoming muddy. Too much of channel 2 will sound like @#%\$, but the right amount is glorious!! You will have to find the sweet spot, but do this with the channel 1 volume (your gain) pinned, and your NEW master volume up fairly high, and THEN bleed enough of the channel 2 into the mix to make it hotter. the original volume 2 pot will still work because you didn't remove it, so after you give it your one time adjustment you can just put the chassis back in the box and you will never have to touch it again. When you are running without the jumper, channel 2 is out of the mix.

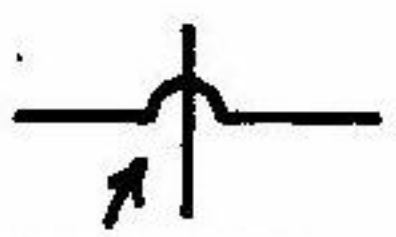
Post Phase Inverter Master Volume

• PINS - 5
OF
OUTPUT
TUBES



• PINS - 1 & 6 OF PHASE INVERTER
TUBE

• R = RESISTOR • C = CAPACITOR



• INDICATES
WIRES CROSSING
WITH NO CONNECTION