Building the EQ-505R Piezo preamp + 3 band EQ into a Stratocaster

Day 1 - The Thought Process

It was becoming frustrating looking at the Eric Clapton Mid Boost Circuit, and thought that this might not give me the variability that I was after. After thinking about it I looked at my old Acoustic that I never use and saw a EQ-505r preamp/eq for the Piezo Bridge pickup and started wondering. "What if it will take my Lace sensor pickups, then I rewire the pots, and maybe modify the circuit" ?!?

Not wanting to destroy the unit until I was sure, I removed the unit from the Acoustic, unplugged the Piezo, plugged a small fly lead between the Strat and the unit and from the unit into the Marshall. Expecting a mismatch, I had the volumes and tones down. Powered it all up, and slowly increased the volume while picking at the strings. To my surprise total clarity and all tones work fine.
So now I am stripping it down as it has sliders rather than rotary. I need some 50k and 20k rotary pots to install via fly leads. And mounting them in the Strat scratch plate. The only thing is I may have to put in a dual gang to cater for Bass/Midrange tones as there are only 3 pots on the strat. This will give me hard left bass boost and mid cut, or hard right Mid Boost and bass cut, or central will be no boost/cut. This will leave the other 2 to handle Treble and Volume. This above mod will make it more variable than the Eric Clapton series with added control over highs and bass and variable with any combination that I need.

Day 2 - The Installation

I am just in love with it, just finished about half an hour ago and the sounds it is putting out is unbelievable, from an acoustic sound but stratie, to the classic EC sound, it is just blowing me away, I just didn't think it would come out like it did. My initial test was from my output jack into the unit. But the electronics from the guitar must have detiorated the sound a little. Cause when I ripped all the tone and volume out, and just hooked the output of the switch with nothing across the pickups and put it all together then plugged it in. WOW!
Now the thing that I have also done is I put the battery under the scratch plate as well. Did some research on the net and they say you get 4000 hours out of a 9v battery, so instead of putting a hole in my hardtail, I thought I would leave it there for the moment. The rest was a snap. I desoldered the slide controls and the volume pot, and purchased a 20k pot, one 50k pot and 1 dual 50k pot. 20k was required for the volume, and three 50k for the tone. So I used a dual 50k for bass and mid and reversed one gang to the opposite polarity. So when it swings one way the bass goes down and the mid comes up. Couldn't think of another way, as I would probably prefer to use it this way. Everything sounds so prestene, every detail seems to be so clear. The only thing I have noticed is if you hit the strings super hard on the High strings (E & B) with the treble up full boost it goes into overload momentarily. This could be due to the lace Sensors or there is a mismatch on the input. Mind you the battery is about half way down as I pulled it out of my Wah pedal. Which may be why. What else can I say. I have tried it on distorted as well and the notes seem to go forever and the harmonics seem to just ring through, even through the headphones.

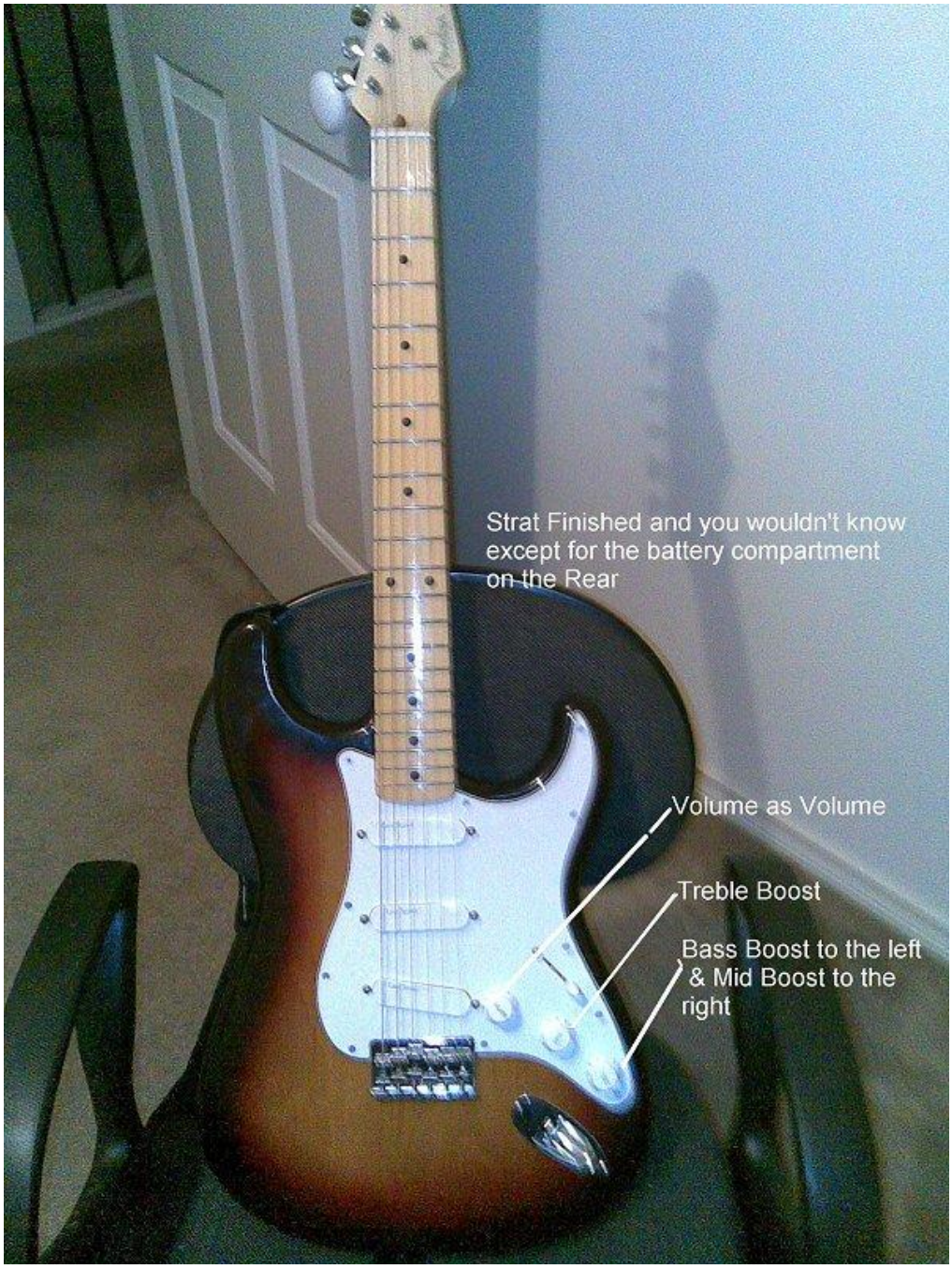
Well this is a very worth while mod even if you just want to experiment with different sounds, I wont be changing it back in a hurry. Maybe the only things that will change are the battery and maybe the input. Day 3 of the mod, by this stage I thought I may get over the excitement. Still love it, and so much so I got the drill out, drilled the pilot holes for a clip in battery case, and started sawing away. I carefully located a spot under the pickguard and cut completely through, my reasoning for this is, I do not own a router.

But with the scratch plate covering it and a snug fit on the back, it looks like it was made that way. Changed over to a new battery, and yes the high overload has gone. I have also been told that another simple way to combat this is to put in a preset pot in series with the pickup, thus changing the impedence to the input. But this will be a future task if the battery dies and the overload comes back. Hope you all enjoy the mod, and I believe it will satisfy all who make the mod.

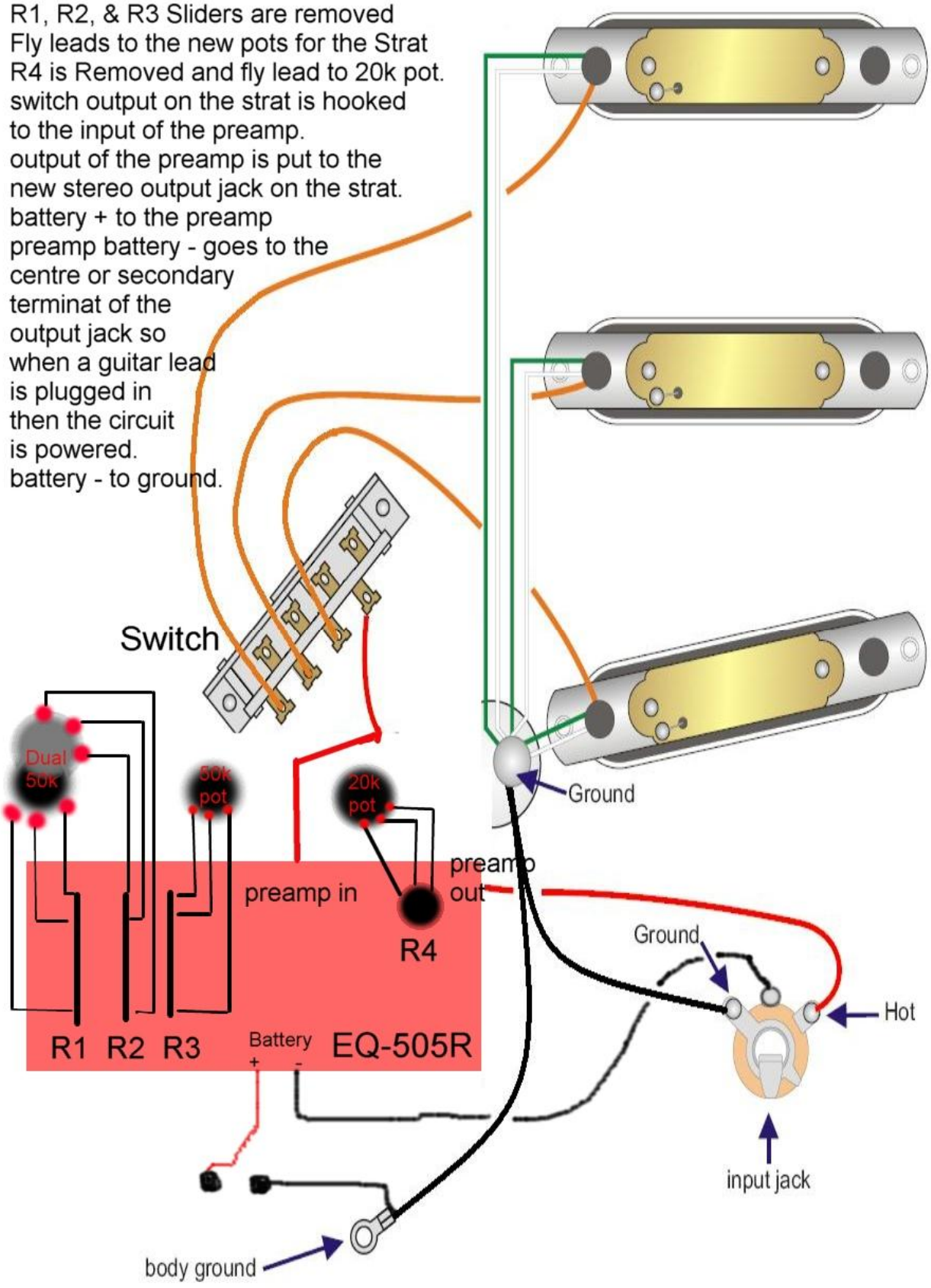
Please let me know if you use different pickup combinations, I will be interested to hear how the differ.

I also did a Google search for the EQ-505R and some ebay stores have them for as little as $30 USD. About $7 USD for the pots, and $12 USD for the battery clip (I didn´t search around for this, just bought it from the local luthier).

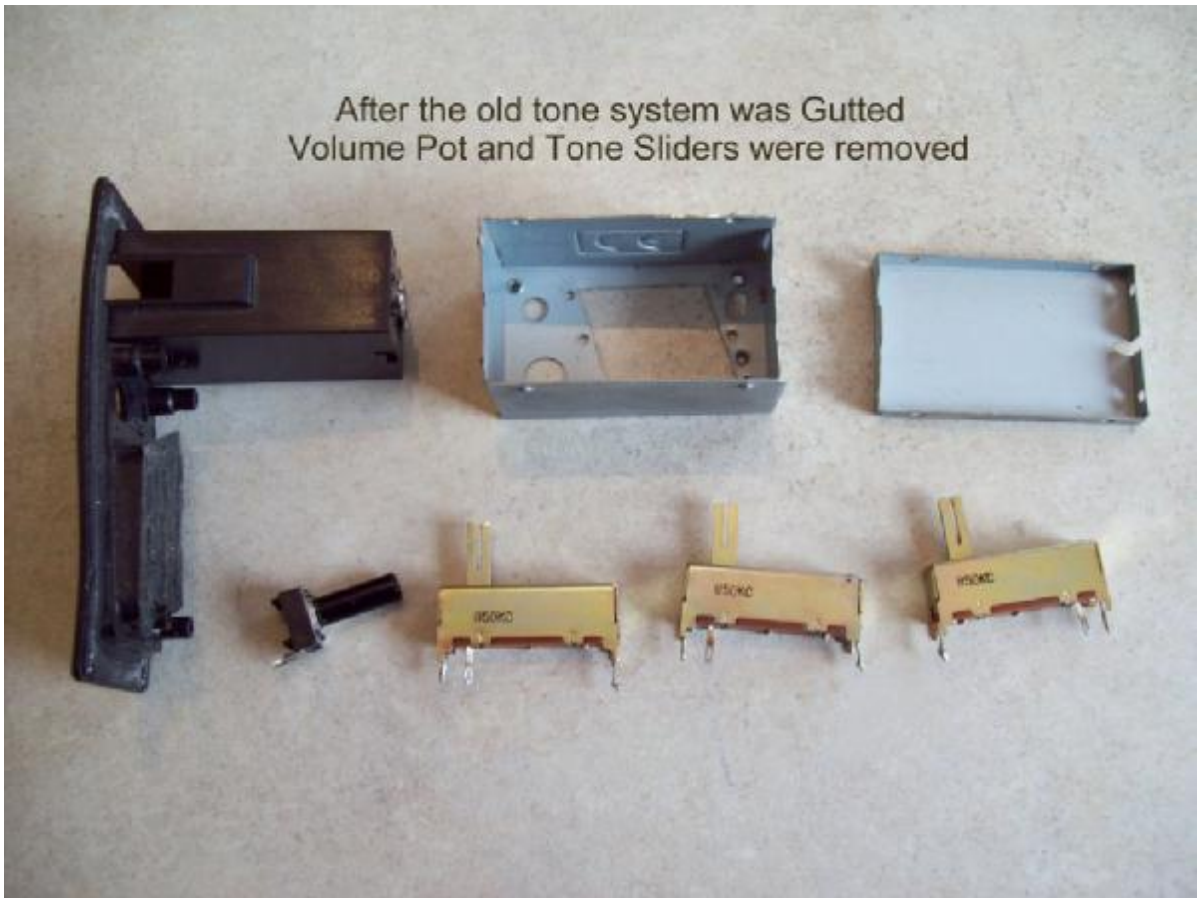
So this is a far cry from the $90 USD for the EC mid boost circuit, plus you get the extras.

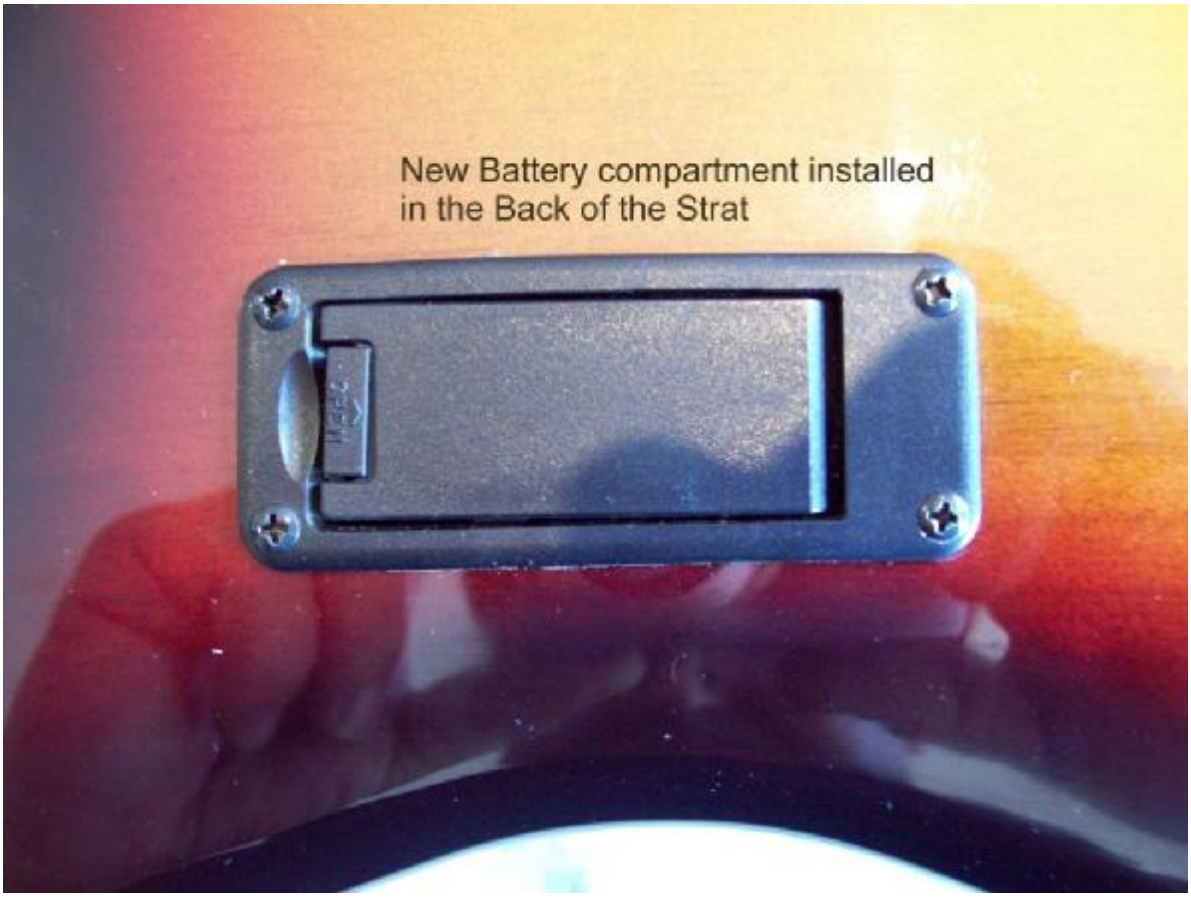


R1, R2, & R3 Sliders are removed
Fly leads to the new pots for the Strat
R4 is Removed and fly lead to 20k pot.
switch output on the strat is hooked
to the input of the preamp.
output of the preamp is put to the
new stereo output jack on the strat.
battery + to the preamp
preamp battery - goes to the
centre or secondary
terminat of the
output jack so
when a guitar lead
is plugged in
then the circuit
is powered.
battery - to ground.



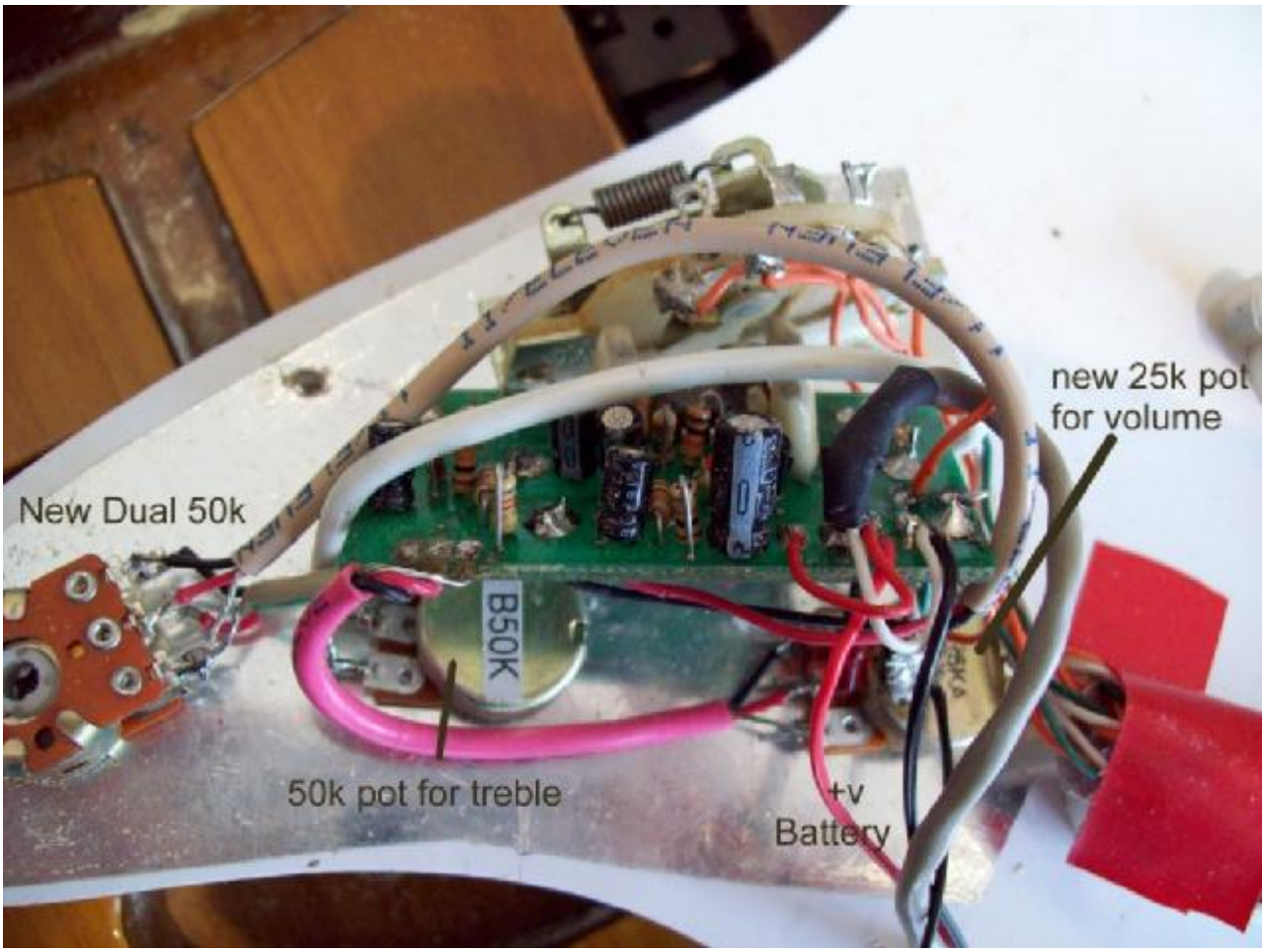
Removed from Acoustic
and Electronics taken out

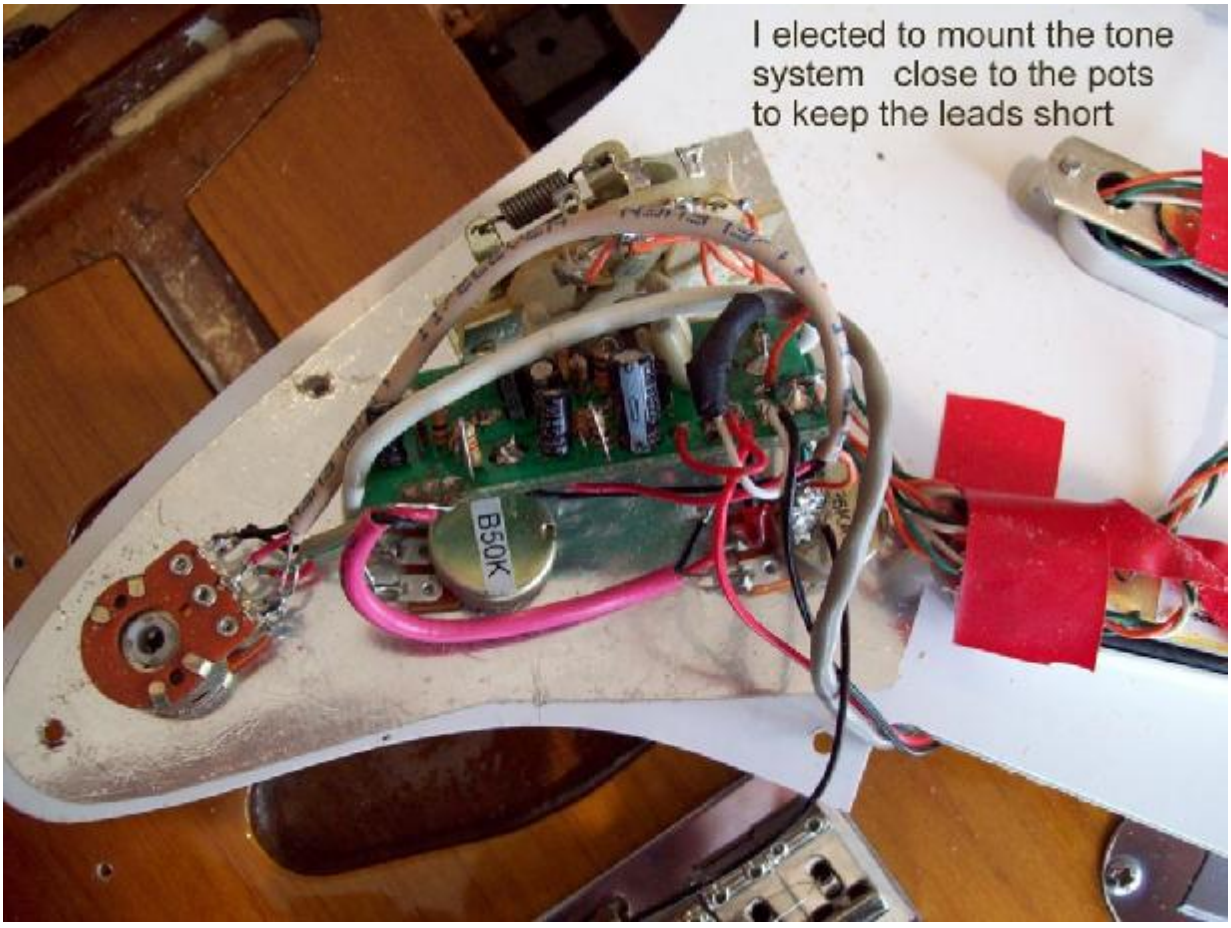

After the old tone system was Gutted
Volume Pot and Tone Sliders were removed

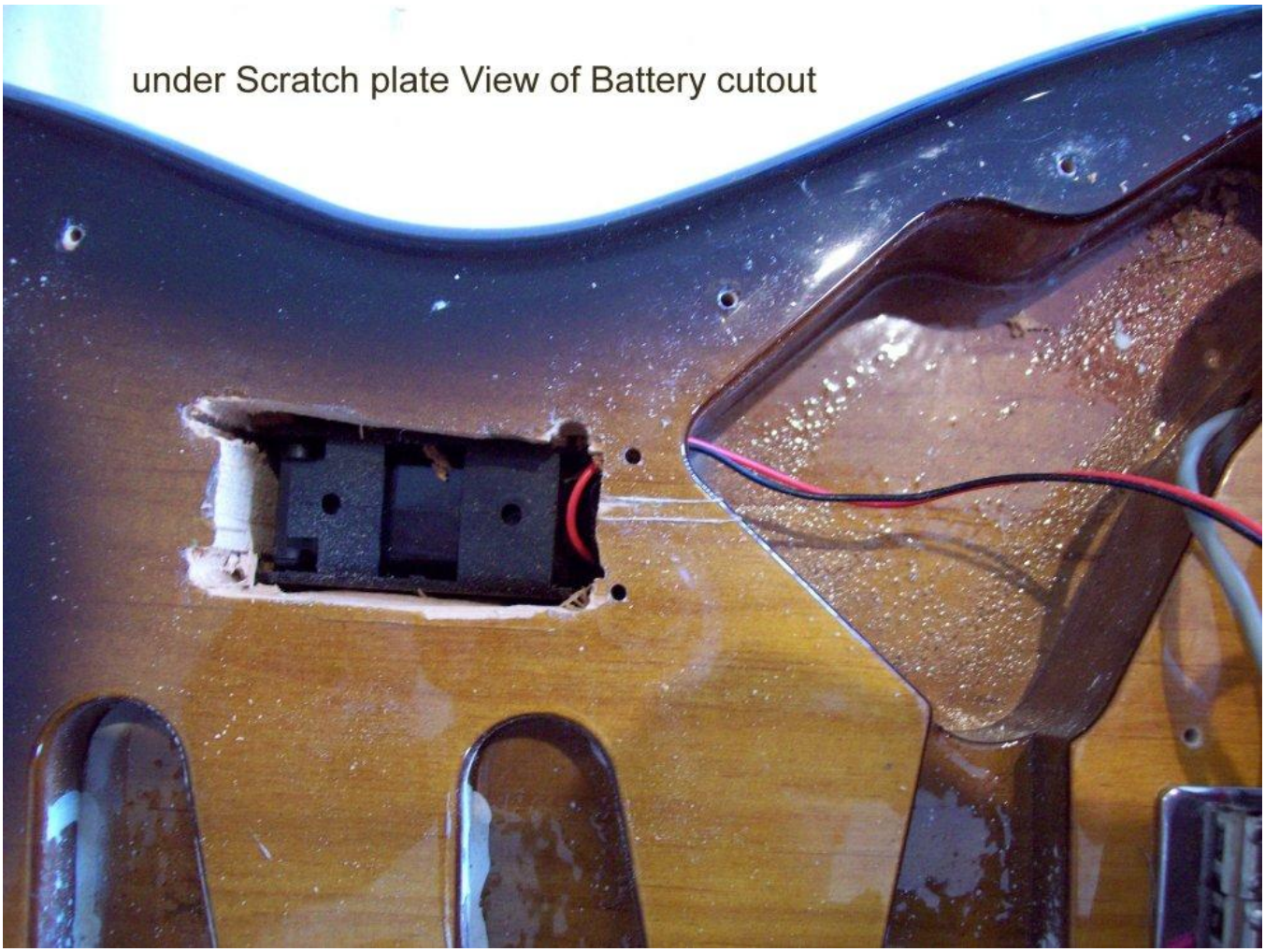

New Battery compartment installed
in the Back of the Strat


New Stereo jack installed
This breaks the earth of the battery
when unplugged.


new 50k dual gang pot
to handle Bass and Mids
B50K


new 25k pot
for volume
New Dual 50k
B50K
50k pot for treble
+v
Battery


I elected to mount the tone
system close to the pots
to keep the leads short
B50K


under Scratch plate View of Battery cutout