

Give your Les Paul the vintage tone of a 59` Burst

This seems to be the most sought-after tone for a Les Paul and it's not that difficult to make your own Les Paul sound like that. THE magic tone is a combination of several factors and we will go through all of them step by step to convert your Les Paul into a roaring monster. But don't forget that even the old original vintage Les Pauls are very different from each other and they all sound different, so there is no "the vintage sound", we are talking about a special flavour of tone. Your own Les Paul will sound very different with all this things here done to your guitar, compared to what it was sounding before. If you like it ... cool ! If you don't like it, please don't keep it only because it's the original vintage specifications. It's your guitar and you have to love the tone.

The guitars construction

It doesn't matter if you have a real Gibson, a Epiphone or any other copy of the Les Paul guitar, it's NOT the label that decides about good or bad, it's only the construction and the wood that is important. I played a lot of copies (even cheap ones) that had a much better tone and vibe than the modern originals. The factor we are talking about is the so-called "primary tone", coming from the wood and influenced from the overall construction. In very simple words and without going into the details your guitar should match this factors:

1. massive mahogany body with a curved, massive maple top
2. one piece mahogany neck with rosewood board and bone nut
3. neck glued to the body (aka "set-neck")

This is in very simple terms the overall construction of a Les Paul guitar. All the other hardware things like bridge, tuners etc. are not that interesting at the moment and can be replaced later if necessary. If your guitar has any other construction (alder body, plain top, screwed neck) you can stop reading here - your guitar will never sound like an old Les Paul. Sorry, this is a fact and you have to face it here at this point to save yourself a lot of frustrations and of course a lot of money. Your guitar may sound great, but it will never sound like the tone we are talking about here.

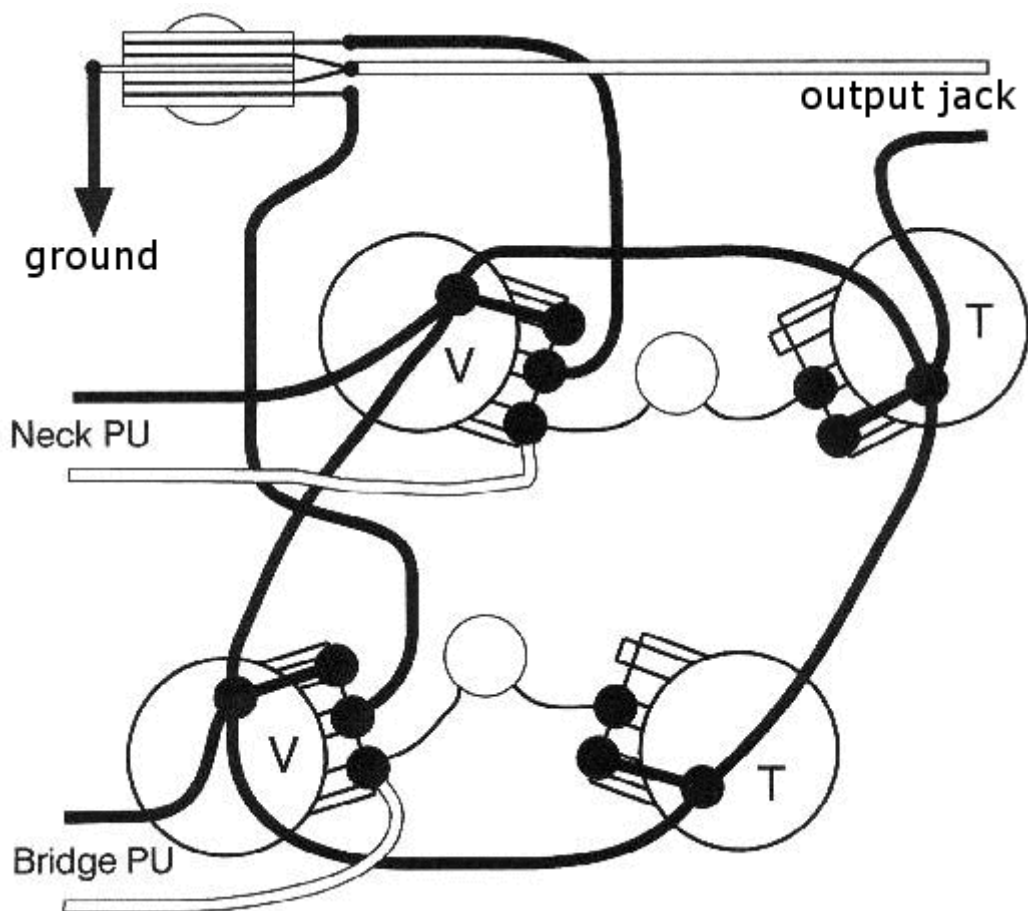
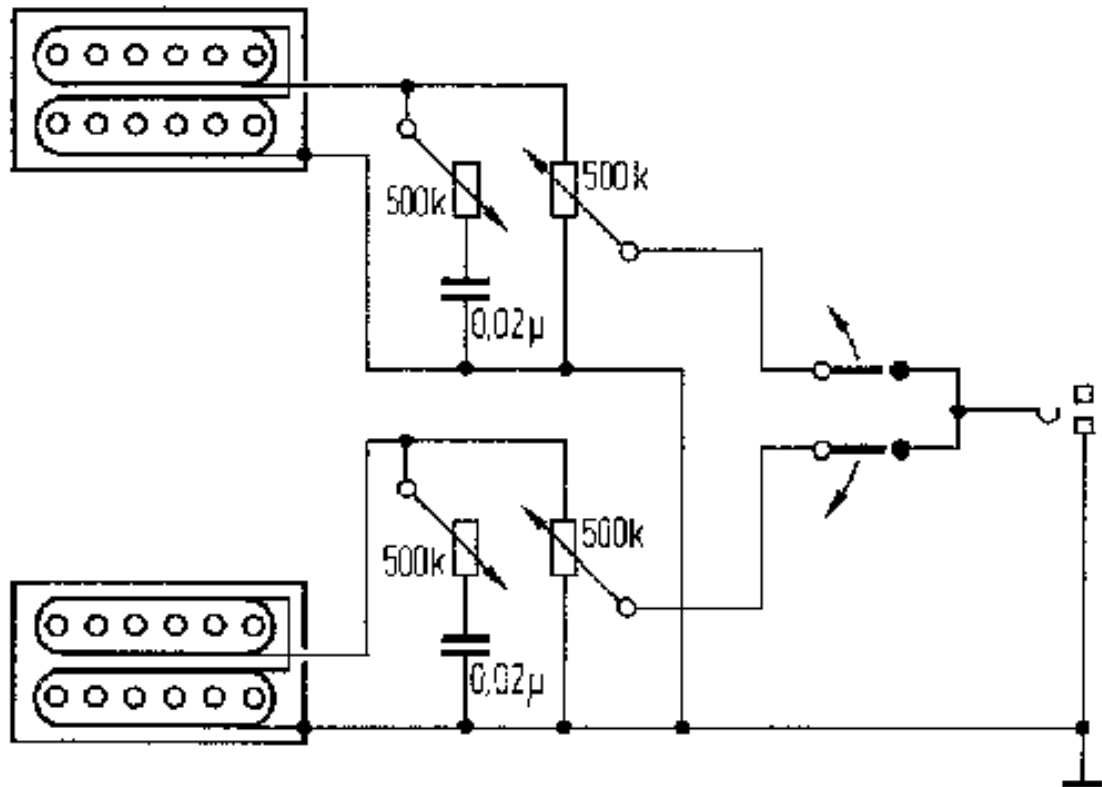
If your guitar matches all the points, play it without an amp. Is the tone strong and beautiful ? Has it even here a lot of sustain and can you feel the tone vibrations and the vibe ? Can you hear overtones ? If so, congratulations - you have a great guitar and it will sound very close to an old one after doing all the things described here. There is no other electrical guitar where the physics are that important, always keep this in mind.

The pickups

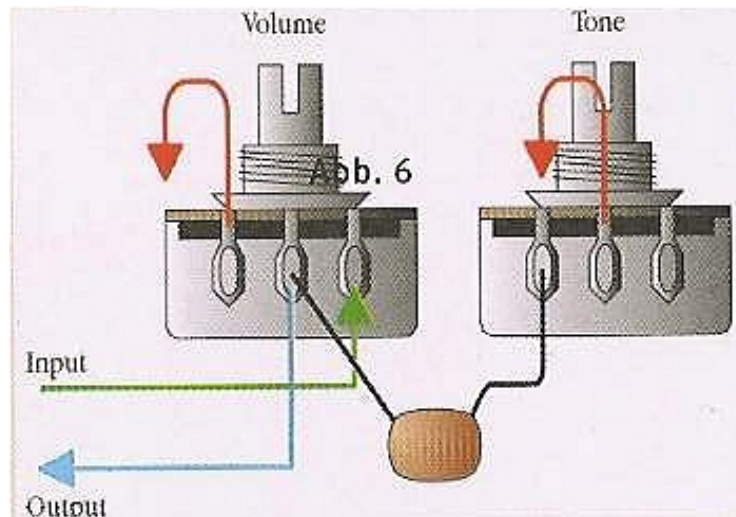
The PAF humbuckers are often called "the heart of the Burst" and indeed they are. Besides the primary tone of your Les Paul guitar this is the second important parameter, the "amplified tone". In most cases this point is non-critical, because it's not difficult to change cheap pickups for good ones. If you have a Les Paul copy with the correct construction and a killer primary tone but cheap pickups ... no problem. Almost all manufacturers offer more or less exact copies of the old PAF humbuckers and it should be easy to find comparison reviews of them on the internet or in a guitar magazine. In short and simple terms the pickup should have the correct number of windings with the correct wire and should use the correct magnets. Any exact copy from the big guys like Seymour Duncan, Lindy Fralin, Kent Armstrong, Di Marzio and countless others should take you there and all the rest is (as often) a matter of taste. I had good results with Seymour Duncan "Seth Lover" pickups as well as the Rockinger PAF's (www.rockinger.com). I also heard a lot of good things about the Dommengot PAF copies. It's ideal to try different PAF's - decide what will work best in your guitar, it's simply your choice !

The wiring

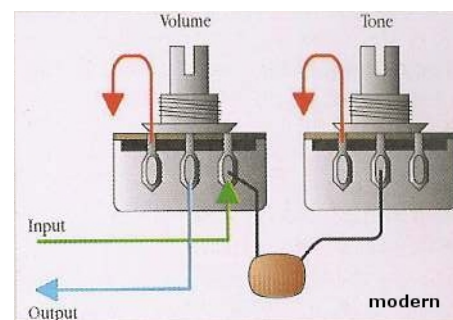
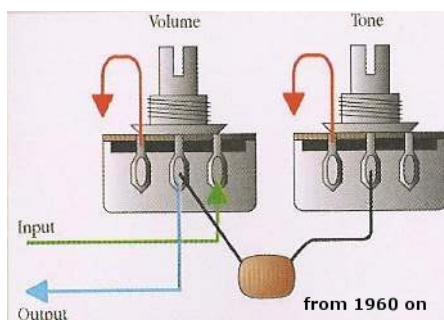
This is a very important point and what you can find in some guitars today is horrible and has almost nothing to do with a vintage Les Paul wiring. First of all it's important to know how to wire the components together. You can find everything here and most shown wirings are simply wrong. The most horrible thing that can be found is the variant with the volume pots wired backwards !!! This is meant to solve a problem that can't be solved in a passive system. In the original Les Paul circuit both pickups influence each other in the middle position of the pickup selector (both pickups together). When you roll back the volume on one pickup just a little bit, the other pickup is much louder than the other and if you roll back the volume down to zero, both pickups are silent. This is not very comfortable, but part of the real deal. With the volume pots wired backwards, this phenomenon will disappear but you pay a high price for this: all your treble and high end is killed when using the pots, your tone will lose any color and will sound dull and dead. You can try to compensate this with a so-called "bridging-cap" but all this fumbling is garbage to my ears. The only real solution for this problem is an active system but we don't have one here in this guitar. So if you can't live with this fact, you can stop reading here - your system will never sound like an old Les Paul, even with original 1959 PAF's installed. So please have a look at the drawings below, compare it with what you find in your Les Paul and if necessary change it into the real thing. Don't forget the grounding wire going from pot to pot, this is something often ignored.



Another detail this is often forgotten is the way the tone caps are wired to the circuit, it's different from what is used today and influences the sound. This method was used by Gibson from 1952-1960 and is what you can find in the vintage Les Pauls from 1959.

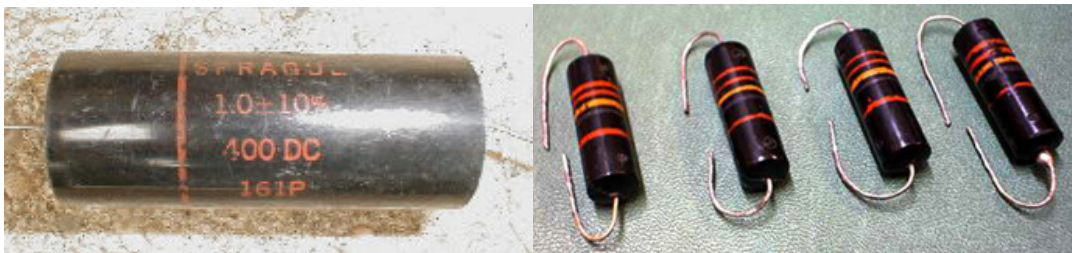


For comparison here is what was used from 1960 on and the modern method.



Some words about the parts. The original pots are from CENTRALLAB (500k audio taper). There is something special about them that will also influence the tone. Modern audio pots (aka "log. pots") have a logarithmical taper with a ratio of normally 80:20 which is more of an on/off switch than an useable taper and sometimes it's better to replace the volume pots with a linear pot to get a useable control. The old Centrallab pots had a ratio of 70:30 or even better 60:40 which was very good, giving you a smooth control all along the pots way. They can be found as NOS or used parts, but they are very expensive !!!! It's important to use pots with really 500k of resistance and the best way is to have a matched set of them. They can have values from 370 up to over 700k, please keep this in mind. For more infos about matching pots and replacements for the old Centrallabs I think it's best to join the Les Paul forum and read what all the others have to say (www.lespaulforum.com)

The caps for the tone pots are also an often discussed subject and I also spent a lot of time investigating this detail. It's a fact that the cap will influence your tone in a certain way, even if the pot is fully opened. The original value of the caps is 0.022uF/400 volts and Gibson used a cap from Sprague which was called "the black beauty" or "Bumblebees" because of their optics. The more brownish caps with the colored rings to indicate the value are called "tropical fish caps". You can find NOS for high prices out there or you can buy a copy from Crazyparts that is sounding very good, but is also very expensive. From my investigations this caps are nothing more (and nothing less) than metallized mylar caps, very similar to what you can buy today for only a few cents. It's a good idea to simply buy some different types and testing them what you like best.



BLACK BEAUTY
dry-assembly
phenolic-molded
TV TUBULARS
The Standard by Which Others Are Judged

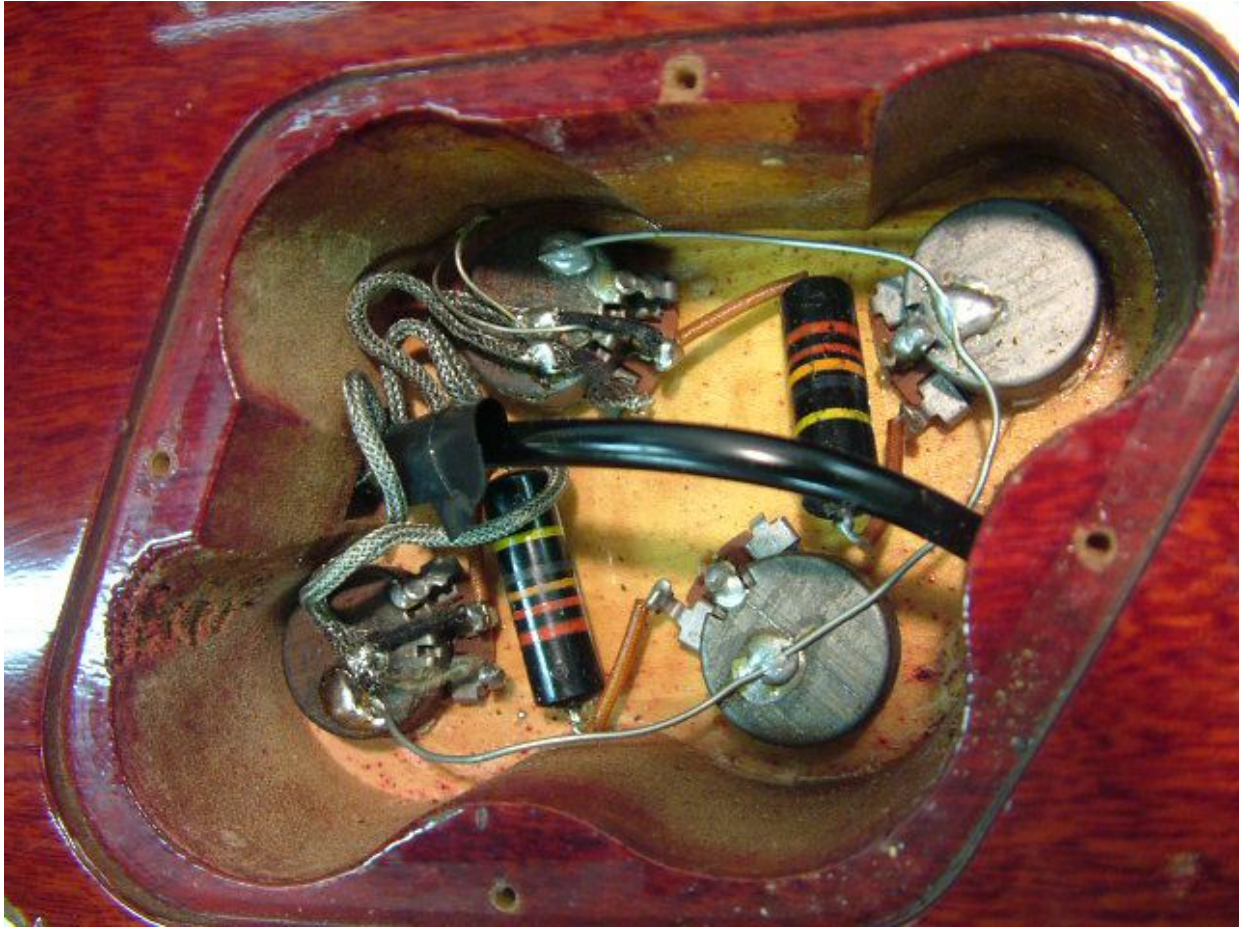
ACCEPT NO SUBSTITUTES
There is no Sprague Distributor in every radio store in the United States. Write for the name of your nearest source of supply today.

SPRAGUE
WORLD'S LARGEST CAPACITOR MANUFACTURER

BLACK BEAUTY TELECAPS ARE TOPS!

SPRAGUE
WORLD'S LARGEST CAPACITOR MANUFACTURER

To get a good overview about the wiring of a vintage Les Paul here are two detail shots of a 1959 Les Paul (Burst) with openend electric compartment. This is the real wiring with the real caps.



If you have done all this you only have to take care of some details and you´re done.

On cheap Les Paul copies you can often see very cheap and crappy hardware. If you have such stuff on your guitar, replace it for high-quality parts to get a much better tone out of your guitar. Decide on good tuners with the correct tulip knobs from Kluson (original manufacturer), a good and massive bridge out of the right material and of course good bolts to hold it firmly and tight.

If you don´t have, it´s a good idea to replace the cheap plastic saddle with a vintage bone nut for the real sound. You should also use pure nickel strings, the original gauge was .12 but it´s ok to play other gauges that you like better. You can buy the original strings for your Les Paul from Gibson in all kind of gauges but they don´t offer mixed sets like eg. 9-46

Now you "only" need the god given hands and talent of a famous Burst slinger, a cool vintage amp and you will have the optimum ;-)

Matched pots and high-quality caps are available at the singlecoil-webshop (www.singlecoil.com/shop.html)