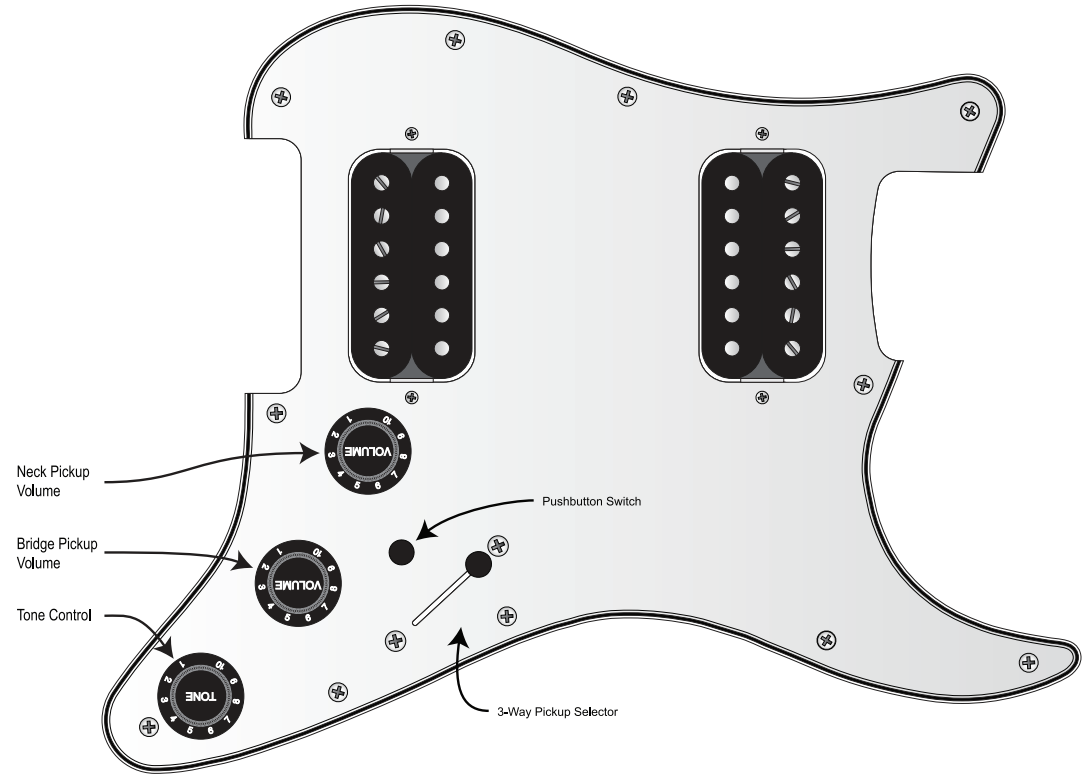
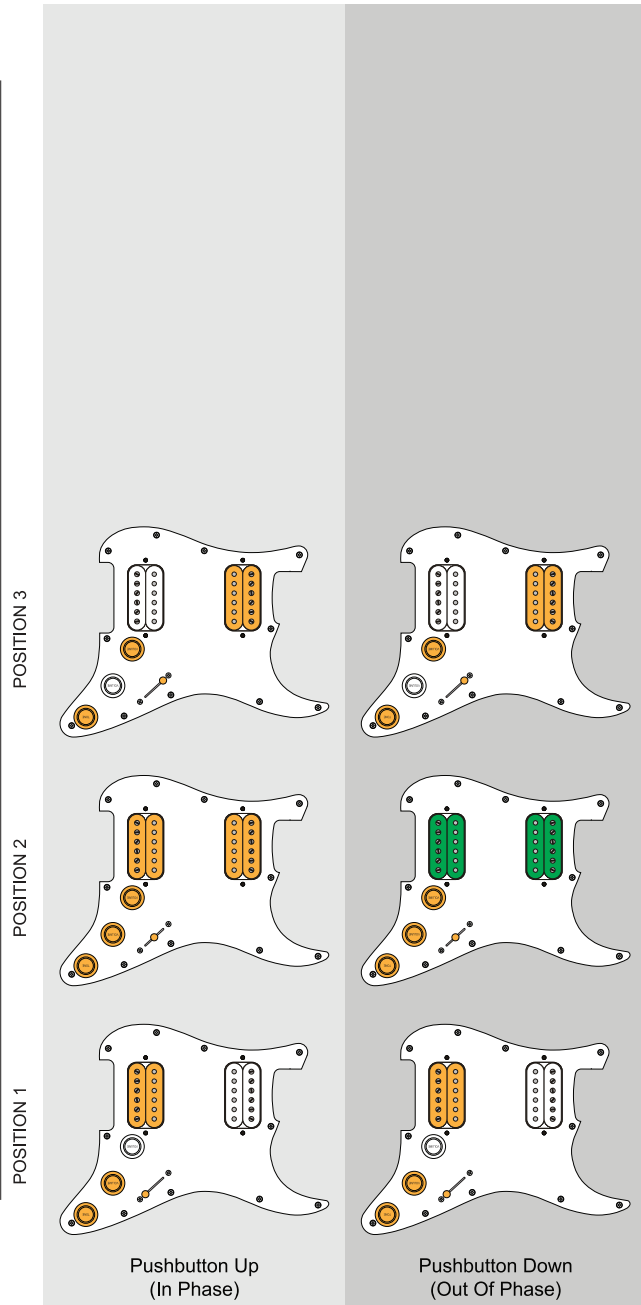


ACTIVE PICKUPS AND CONTROLS INDICATED IN ORANGE (GREEN INDICATES OUT-OF-PHASE)



Peter Green, cofounder and seminal lead guitar player for Fleetwood Mac, had a problem: Legend has it that while having some work performed on his Les Paul, one of the pickups had its phase reversed. While this really would have been a problem for many players, Green went on to play the guitar as it was, and the resulting tone became iconic. Talk about turning lemons into lemonade.

You can reverse the phase of a pickup by reversing its hot/ground connections, or by reversing its magnets. It's generally assumed that the pickup in Green's guitar was reversed by having its magnet flipped, and that this may have been inadvertent. Reversing the phase of a pickup doesn't change its tone when used singly, but it does change the tone when it's combined with another pickup.

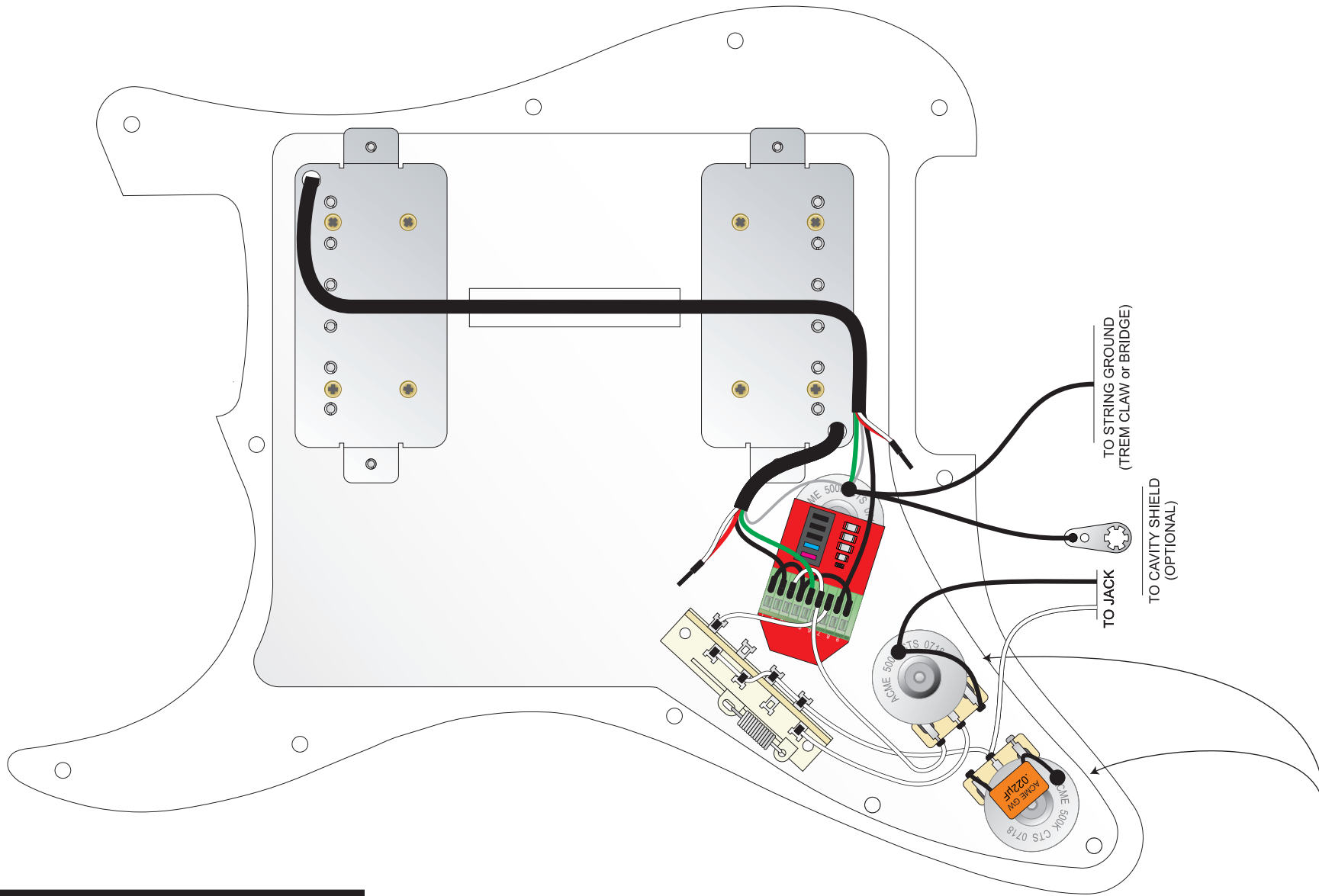
Green's guitar was subsequently bought by Gary Moore, and it's one of the more famous of the sunburst Les Pauls out there.

And now ToneShapers brings this tonal anomaly to your Strat, but in an expanded way so that you can have the two pickups combined in-phase in the normal way, or out-of-phase for that Green tone (again, this only affects the middle switch position, where the two pickups are combined).

We use our ToneShaper pushbutton switch to toggle between the two modes. This low-profile switch is unobtrusive, but right where you need it for quick changes in the heat of battle. Mounted to the volume pot with a nifty circuit board, it also incorporates a resistor and capacitor that help to minimize tonal change when you roll down the volume control (this feature may be bypassed). All passive, no batteries.

Of course, to make the most of this wiring, you need to have individual volume controls for each pickup. In the out-of-phase position, subtle changes to either volume control yield substantial tonal changes, so there's a lot of flexibility lurking in this setup. We finish it off with a single, master tone control, that's active all of the time. We also use 500k pots with this wiring, since most humbuckers are voiced with 500k pots in mind (this is the value traditionally used by Gibson).

So get your Green groove on, on your Strat! ToneShapers - Providing tone du jour for discriminating players like you!



These two pots need to be grounded, either via the pickguard shielding, or via a separate wire that connects them to the volume pot. Black circles or squares in the diagram at left indicate a solder connection.

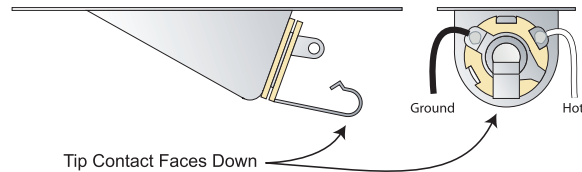
**ToneShaper**

Build A Better Guitar  
Tone Shapers, Inc.  
772-563-3103  
www.toneshapers.com

DIP SWITCH SETTINGS  
 OFF     ON     OPTIONAL     USE ANY/ALL

DRAWN George Ellison	DATE 11/9/12	TITLE <b>Stratocaster®</b> Total Green Machine (Duncan Color Codes Shown)
ASSY PN ST-HH5	ADOC 245	PAGE 1 of 1

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Jack Detail