The Blue Guitar

Sup'rStrat Wiring Harness

(for 3 Single Coil Pickups)

Designed by Steve Ahola 1997

The Sup'rStrat wiring harness adds a single DPDT switch to a standard strat selector switch to add 4 alternate linkages to the 5 traditional choices. The neck and bridge pickups linked together in series and parallel offer tones quite unlike a traditional strat. Linked in parallel, they sound similar to a Tele with both pickups on; linked in series, they have a strong and powerful sound similar to a humbucker, only with a bit more clarity. If one of the bridge or neck pickups is RWRP, both of these linkages are hum-cancelling. The third alternate linkage is all 3 pickups hooked up in parallel, which produces an exaggerated notched position sound with a lot of "quack". The fourth alternate linkage wires the middle pickup in parallel with the neck and bridge pickups in series for a notched position sound with a fuller bottom end.

This DPDT switch is shown as mounted on a push-pull volume pot, but a mini-toggle switch can also be used if you don't mind drilling a hole in your pickguard. The following chart shows the linkages for each of the switch positions:

	DOWN	UP
Position #1	Neck alone (stock)	Bridge & Neck in Series
Position #2	Middle & Neck in Parallel (stock)	Middle in parallel w/ B & N in Series
Position #3	Middle alone (stock)	Middle alone (stock)
Position #4	Bridge, Middle & Neck in Parallel	Bridge & Middle in Parallel (stock)
Position #5	Bridge & Neck in Parallel	Bridge alone (stock)

Construction Notes:

Note 1: I have omitted the tone control wiring to simplify this schematic. Since this harness uses both sides of the selector switch, the tone controls are connected to Terminal 3 of the volume pot (the outside terminal not connected to ground). I generally use a Torres passive midrange control for the middle pot and a Fender TBX tone control for the bottom pot.

Note 2: The plus (+) and minus (-) notations refer to the leads which normally connect to the hot signal and ground, respectively. The polarities listed on the schematic apply to a set of Lindy Fralin pickups, with a RWRP pickup in the middle position.

Note 3: Although I am very pleased with the results of this harness using Lindy Fralin and Van Zandt pickups, you may want to first test out the sounds before wiring up the switches. To test various pickup linkages on a strat, I'll

disconnect the pickup leads and run them outside of the pickguard by removing one of the pots. After putting the pickguard back in place and tuning up the guitar, I will then test out different combinations with a guitar test cable and some mini clips to hook up the pickup leads.

Note 4: By using a RWRP pickup for the neck or bridge position, several hum-cancelling linkages are available. Most modern sets of strat pickups include a RWRP pickup for the middle position so that the 2 notched positions are hum-cancelling. With a set like this, if you switch the neck and middle pickups, the bridge/middle notched position will not be hum-cancelling. If you switch the bridge and the middle pickups, the neck/middle notched position will not be hum-cancelling. You need to decide which of the two notched positions you prefer, and set up your pickups so that combination will be hum-cancelling. With 2 single coil pickups selected in a a non-humbucking linkage, the resulting hum is twice as loud as that of a single pickup. With a calibrated set of pickups, you may want to special order a RWRP neck or bridge pickup from the manufacturer to be sure that the pickups are balanced as designed.

Note 5: A Reverse Wound Reverse Polarity will stick to a normal polarity pickup if you put the tops of the pickups together. If you examine the fine pickup wires coming out of the coil you will note that one wire is closer to the pole pieces while the other wire comes from the outside of the coil. From this visual inspection you can determine if the coil was wound CW or CCW around the pole pieces. Normally the wire that is closest to the pole pieces will be the grounded lead and the outer wire will be the hot lead; if you use pickups from different vendors, you may need to reverse these wires in order that the pickups will be in phase and hum-cancelling in some of the linkages. It is a good idea to check for any continuity between the coil and the pole pieces before reversing the hot and grounded leads; if there is no leakage you may want to ground the pole pieces with conductive paint that goes to the grounded lead. For the pickup that is connected to the hot signal in a series linkage, you will need to replace a single conductor shielded cable with 2 conductor shield cable as well as check for any leakage to the pole pieces as outlined above.

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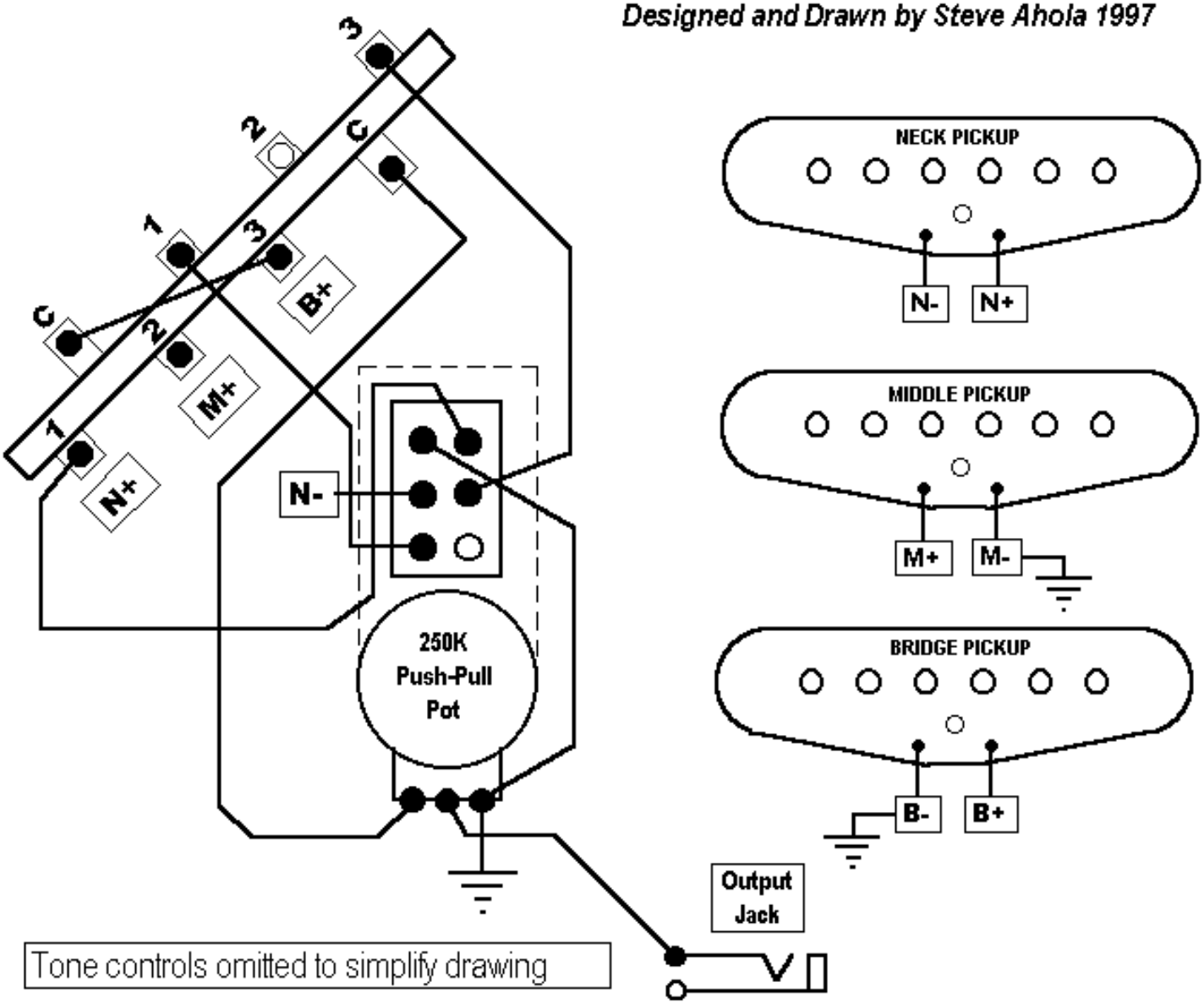

Tone controls omitted to simplify drawing