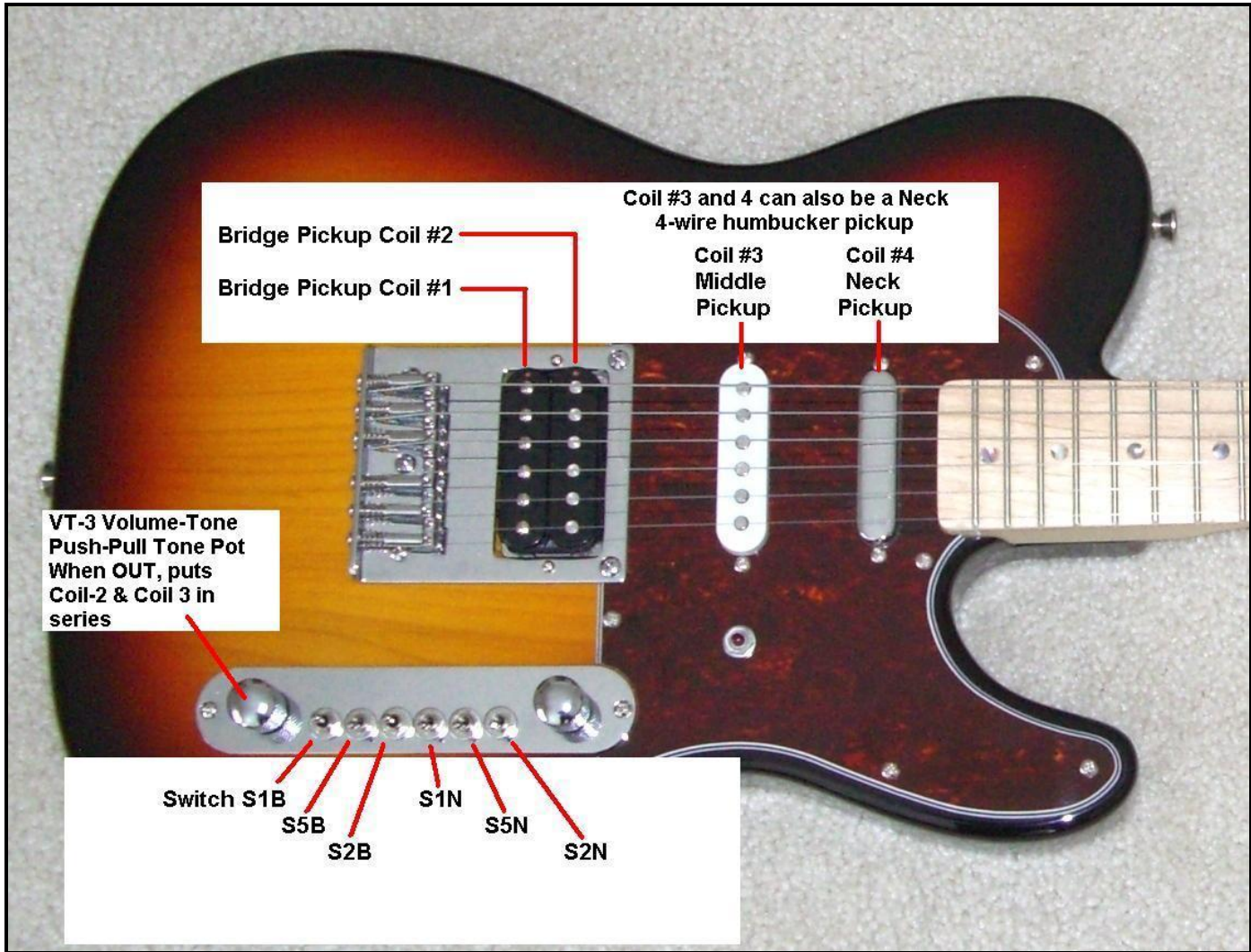
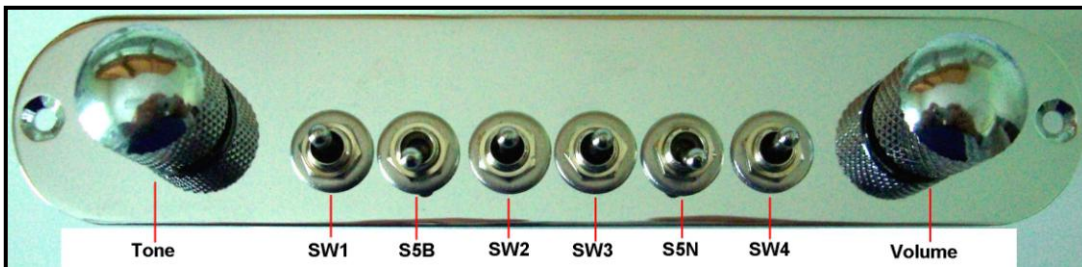


This information covers instruments with either HSS or HH pickup configuration. You must use true 4-wire humbucker pickups.

The below figure identifies the T4-Switch components, as well as the *optional VT-3 Volume-Tone control* with a push-pull pot.



Here is how the mini-toggle controls of our T4-Switch product are laid out.



(All our Telecaster products)
(now use chrome dome knobs)

There are really two "groups" of switches:

(S1B, S5B, S2B)
(used to control Bridge 4-wire)
(humbucker pickup coils)

-and-

(S1N, S5N, S2N)
(used to control the Neck 4-wire humbucker coils)
(or Middle and Neck single-coil pickups)

Here is how the switches are used:

Switches SW1, SW2, SW3 and SW4 are ON-OFF-ON switches used to turn an individual pickup coil Off and On. The middle position of each switch is Off. The down position turns the pickup On (in *normal-phase*) and the Up position turns the pickup On (in *reverse-phase*).

Switches S5B and S5N are ON-ON (a.k.a. ON-NONE-ON) switches that are used to put select pickup coils into a **Series circuit** when in the Up position. When Down, the select pickup coils are in a **Parallel circuit**. Pretty simple, don't you agree?

When switches *S5B and S5N* are in the Down position, you will get 29 different pickup tones from the various combinations of four pickup coils being Off or On (either in *normal-phase* or in *reverse-phase*) using switches S1B, S1N, S2B and S2N. These pickup tones are also due to the combination of pickup coils being in a **Parallel circuit**.

The other switches (S5B and S5N) are ON-ON (a.k.a. ON-NONE-ON) switches are used to put select pickup coils into a **Series circuit**. Here are two things you must remember when putting pickup coils into a Series circuit:

First, putting two pickup coils in Series circuit creates a "*Compound*" (i.e., Humbucker) pickup that gives you about 8 to 15 percent More output (think Heavy Metal/Jazz tone).

Second, because the pickup coils are in a Series circuit, **BOTH** of the affected pickup coils that are in a Series circuit **MUST** be On (either in *normal-phase* or *reverse-phase*). Any non-Series circuit pickup can be either Off or On (either in *normal-phase* or *reverse-phase*).

What Each Switch Controls

Switch SW1: Turns on pickup coil #1 (down is *normal-phase*, up is *reverse-phase*, center is Off.)

Switch S5B: Puts both coils #1 and #2 into a Series circuit when Up. Both pickup coils **MUST** be On.

Switch SW2: Turns on pickup coil #2 (down is *normal-phase*, up is *reverse-phase*, center is Off.)

Switch SW3: Turns on pickup coil #3 (down is *normal-phase*, up is *reverse-phase*, center is Off.)

Switch S5N: Puts both coils #3 and #4 into a Series circuit when Up. Both pickup coils **MUST** be On.

Switch SW4: Turns on pickup coil #4 (down is *normal-phase*, up is *reverse-phase*, center is Off.)

For product ID 003a, the various combinations of all of these switches will give you 68 pickup tones.

For product ID 003b, the Tone control push-pull pot of the *optional VT-3 Volume-Tone control* puts the north Bridge and south Neck (or middle) pickup coils into a series circuit. This gives you 34 additional pickup tones, several of which are **QuadraBucker™** pickup tones (*all four pickup coils in series*). The various combinations of all of these switches and the push-pull tone control will give you 102 pickup tones.

Again, note that when you put two or more pickup coils into series connection, they **ALL** must be on – otherwise the circuit will be "open" and no sound will be produced by the coils.

See our website **Document Library** page (*Documents #C and #D*) for tone mapping forms.