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unquiet Darkest Scotland <i>F-type Jaguar driver.</i>	Oct 7th, 2001 05:36 AM Edit Profile <hr/> <p>I've just done this mod... would definitely recommend it.</p> <p>There are 2 slight improvements I think could be made...</p> <p>1 - when in 'bridge-only', there is an increase in background noise. This is because the neck pickup is now switched on its ground side and the coil is still connected to the output even when the pickup is off, and acts as an aerial. This can be cured by connecting the #1 tag on the ground-switching side (lower left in the Fender diagram) to the rhythm pickup output (upper 2nd from left), which shorts the coil and kills the interference.</p> <p>2 - in series mode, the signal has to pass through both switch contacts, in series. This is potentially unreliable when the switch gets older or dirty, as a poor contact in EITHER switch will cut the signal. It's better to use only one, which can be done by connecting the black link wire from the upper side of the switch directly to the rhythm pickup ground, not to the lower #4 tag. If you want belt-and-braces, you can now connect the #4 tag to the lead pickup hot, which parallels the switch contacts in the #4 position. Now you have to have a poor contact in BOTH switches at the same time (unlikely) before you lose the signal.</p>
stratdeluxer USA	Oct 7th, 2001 09:22 AM Edit Profile <hr/> <p>Unquiet....Thanks for this info! I printed up your info and changes to the 4 way switch. I have two Teles that I put 4 way switches into.I'm a guy that does better with pictures,so I was hoping you could actually write the changes onto the original 4 way diagram and either post here on the FDP and or send me the picture of these changes to make sure I get it right. ;o)</p> <p>Maybe I could return the favor by sending you an amp schematic,as I have alot of tube amp schematics,books etc.on the subject...Thanks again for your time and the mod....</p> <p>John</p>

<p>unquiet Darkest Scotland <i>F-type Jaguar driver.</i></p>	<p>Oct 7th, 2001 03:30 PM Edit Profile</p> <hr/> <p>The mods are drawn in red. The one at the left of the diagram suppresses the noise in the 'bridge' position, the ones at the right improve reliability and reduce switch noise. You can do either or both, they are independent.</p> <p>Also, I have now done the mod so the series position is at the bridge end of the switch... this makes more sense to me as I usually think of 'hard right' as the lead sound, which the series sound is best for. It's actually easier to isolate the ground from the bridge pickup too, a lot of the newer Teles have a separate connection for the bridge ground already, as they now don't have the pickup baseplate. I haven't done a diagram for this though.</p> <p><u>4-Way Switch diagram</u></p> <p>(This message was last edited by unquiet at 03:32 PM, Oct 7th, 2001)</p>
<p>stratdeluxer USA</p>	<p>Oct 7th, 2001 03:53 PM Edit Profile</p> <hr/> <p>Unquiet....Thanks so much for the helpful drawing! Just to let you know...My 62 Custom Japan tele didn't have any ground for the bridge because it had the bridge plate,however when I changed that pickup over to an AS bridge pickup,I added the bridge ground...I don't care for the sandwiched ground,so instead I opted for scratching a small spot on the back of the bridge near the corner of the pickup and soldered a wire to that point...I made a small indentation into the body wood of the guitar for the solder point to lay flat and ended up with a stratlike connection which I prefer....I also of course ran the isoated neck cover ground over to the volume pot and the bridge ground terminates there also.....I am intriqued with your findings because ever since I installed the 4 way switches into these guitars,I've been complaining about the extra noise and blaming it on the 4 way switch...Others told me it wasn't the 4 way switch so I went on ignoring it....If this took care of that noise,then that's great! Nice job....Why wouldn't fender have us do the same thing? Makes no sense? Anyway....</p> <p>Thanks again.....John</p>
<p>stratdeluxer USA</p>	<p>Oct 7th, 2001 04:20 PM Edit Profile</p> <hr/> <p>Unquiet...For those of us that prefer to leave the "series" 4th position tone on the switch stock,could you give us one more drawing showing your mods to the original wired switch...I am totally clueless as to how the switch actually works,so I'm begging for the lazy man's way and asking for another drawing.....Thanks again...Feel free to e mail it to me directly and I'll do the mods...I've pretty much gotten used to having the 4th position at the extreme neck position of the 4 way switch,and I'm a creature of habit also! ;o) lol</p> <p>John</p>
<p>stratdeluxer USA</p>	<p>Oct 7th, 2001 04:24 PM Edit Profile</p> <hr/> <p>After looking at the drawing several times,it looks as if you do in fact have the drawing to retain the stock 4th position series tone....Am I correct on this Unquiet? Thanks once again for your generosity and time on the mods for all! Once I get the full jist of the mods from you,I'll do them and gladly let you know the outcome....John</p>
<p>telus1 - Canada - <i>" Come Together ! Right Now,Over Me "</i></p>	<p>Oct 7th, 2001 04:44 PM Edit Profile</p> <hr/> <p>John! Care to pass it along as i have been trying endlessly to rid of the noise on my '94 Tele with the 4-way mod. Thanks Guys! Appreciated !!!</p>
<p>jvr USA <i>ditto EA6B's</i></p>	<p>Oct 7th, 2001 04:47 PM Edit Profile</p> <hr/> <p>Do you guys use shielding? I just installed a 4-way in my current Tele project using the Vintage Noiseless and they are anything but noiseless. I didn't shield at all thinking the VN's would be quiet enough but this is now even noisier than my 54 strat. I don't notice any difference particular to the bridge position.</p>
<p>telus1 - Canada - <i>" Come Together ! Right Now,Over Me "</i></p>	<p>Oct 7th, 2001 04:53 PM Edit Profile</p> <hr/> <p>Got the sound i need except for the noise. Any one with a solution. I've shielded the back of my p/g,but the 'ol touch the string noise/pop still lingers. stratdeluxer/john and unquiet any help from us modders? Thanks guys if any. JVR hang tough bro? will get around to this mess soon.,of course with the help of our fellow PDFER's.</p>
<p>stratdeluxer USA</p>	<p>Oct 7th, 2001 06:39 PM Edit Profile</p> <hr/> <p>First thanks to Unquiet for this 4 way switching mod...I have tried this mod on my 94 AS Tele and it did seem to tame some of the buzzing I was hearing from the bridge position NoCaster pickup..I can't understand why the engineers of the 4 way switch didn't come up with this idea?</p> <p>Unquiet tell us how you came up with the knowledge and the mod for the 4 way switch and are they any short comings to your mod from the stock wiring...It sometimes seems that it's a tradeoff in that for everything we do that's positive sometimes also adds in a negative,otherwise everything works just like before! Nice touch Unquiet!</p> <p>John</p>

<p>stratdeluxer</p> <p>USA</p>	<p>Oct 7th, 2001 06:56 PM Edit Profile</p> <hr/> <p>Guys regarding the Tele shielding...Other than what I feel is a better bridge ground on my Teles by soldering a wire to the bridge itself and grounding it to the volume pot,I have minimal shielding on one tele and none on the other...</p> <p>My 94 AS just has the neck pickguard shielded and my 62 Japan Custom has no shielding other than good grounding and good pickups and electronics...Teles don't seem to suffer from this same problem compared to the stratocaster's design...I'm learning more and more each day about teles though,and they are great guitars and fun to play for sure! I play my strats,but the Teles are getting most of my attention... ;o)</p> <p>One mod that I'm in love with is the Kinman mod where we put a 130k 1/4 watt resistor in "series" with a .0012 cap across the volume pot to retain high end while rolling off the volume....This mod is transparent and works great...Chris must have liked the .0012 more than the .001 even though the 2 are so close in specs...These must have been the exact specs he came up with for his pickups and high end retention,but the mod works great...</p> <p>John</p>
<p>unquiet</p> <p>Darkest Scotland <i>F-type Jaguar driver.</i></p>	<p>Oct 8th, 2001 11:44 AM Edit Profile</p> <hr/> <p>Until a couple of days ago I hadn't actually seen the Fender 4-way switch or paid much attention, but a friend had me mod his guitar.</p> <p>When I got the switch, I was surprised to see only a 2-pole switch... I was expecting more of a 'superswitch' kind of thing with at least 3 poles.</p> <p>How Fender achieve it with only a 2-pole switch is by switching the neck pickup on its GROUND side, leaving the hot permanently connected. It is always a bad idea to switch a pickup like this, as when the pickup is off, the coil is still connected to 'hot', even though there is no complete signal path. The unconnected coil acts as an aerial. Its not that the mod has made your bridge pickup noisy, it's the NECK pickup which is causing the noise.</p> <p>Looking at the diagram I noticed that it was possible to add a link which shorts the neck pickup coil in the bridge-only position, which will remove the 'aerial'.</p> <p>I also noticed that the series link passes through both switch halves... this is unnecessary and could cause unreliability later (though not likely when the switch is new). I worked out a different arrangement, first using only one switch, then (even better) with them both in parallel.</p> <p>Neither alteration changes the operation, or sounds, just reduces noise (both background and switching) and increases reliability.</p> <p>I don't know why the guys at Fender didn't think of this. But they are in the business of building guitars, not field maintenance (although I would expect that some of their guys have that experience too). Many of my ideas come from 'guerilla troubleshooting'. Incidentally, parallel wiring of 2 switch halves is a favorite of mine. I see so many double-pole switches wired up with only one half and it always drives me nuts... and introducing extra mechanical contacts is one of my pet hates. About the worst is the 83-84 Strat wiring, the single tone control is connected to all 3 contacts on the 2nd side of the switch, not to the volume control. Electrically this is identical, but there's an extra contact to pass through, which is the best way to cause unreliability I know of...</p> <p>Before I was a guitar tech I was a laboratory maintenance tech in a school... which is just about the most demanding possible environment for electronic equipment... the kids really TRY to break stuff, often in subtle ways so you don't notice until later... so I learned a lot about 'double redundancy' methods and stuff like that...</p>
<p>stratdeluxer</p> <p>USA</p>	<p>Oct 8th, 2001 04:44 PM Edit Profile</p> <hr/> <p>Unquiet...Thanks for the extra info on all this..</p> <p>John</p>
<p>jvr</p> <p>USA <i>ditto EA6B's</i></p>	<p>Oct 8th, 2001 08:23 PM Edit Profile</p> <hr/> <p>I shielded my Tele tonight and have to admit its now dead silent. At first to much so, couldn't get anything at all. Thought at first it might be the pickup, yanked that out, it wasn't. It was something in the switch, a short or whatever. Its now all back together and sounding phenomenal.</p>
<p>telus1</p> <p>- Canada - <i>" Come Together ! Right Now, Over Me "</i></p>	<p>Oct 8th, 2001 08:54 PM Edit Profile</p> <hr/> <p>jvr? what was it that you did to get rid of the background and switching? thanks, also to unquiet,stratdeluxer.</p>
<p>jvr</p> <p>USA <i>ditto EA6B's</i></p>	<p>Oct 9th, 2001 10:27 AM Edit Profile</p> <hr/> <p>telus1, I essentially did as Chris points out on his website, that is shield all the body cavities with copper tape and the pickguard with aluminum tape. I didn't do quite as thorough a job as to do the wiring channels between the cavities or the output jack hole but there is conductivity between all the cavities and it appears to suffice. I didn't do any mods to the switch as described in this thread, just the standard wiring as diagramed by Fender, though its possible I may have messed something up initially adding to the noise and somehow corrected it.</p>
<p>inertian</p> <p>USA</p>	<p>Oct 20th, 2001 09:46 PM Edit Profile</p> <hr/> <p>Did the 4-way mod as described/diagramed by Unquiet, and it seems to work as advertised, with the added bonus that guitar seems to sound clearer and more musical (based on my before and after comparison).</p> <p>One question though - as I switch from bridge to middle position, the guitar goes dead quiet until the middle position clicks in. Is that part of the mod, or did I do something wrong?</p>
<p>jakerson</p> <p>US <i>Get busy livin, or get busy dyin</i></p>	<p>Oct 20th, 2001 10:33 PM Edit Profile</p> <hr/> <p>JVR, could you post a link to the website with the noise-b-gone diagrams? Thanks.</p>

unquiet

Darkest Scotland

F-type Jaguar driver.

Oct 21st, 2001 03:58 AM [Edit](#) [Profile](#)

The 'dead quiet' is because the mod involves shorting the neck pickup to remove the noise. When the switch moves from one position to another, both sets of contacts are temporarily connected (this is how the 'in-between' sounds on a Strat were discovered), so the short is applied to the bridge pickup as well. This is the only disadvantage I've been able to find with my 'new' wiring so far...

The 'noise-B-gone' diagram is the link ('4-way switching') in the 3rd post from the top.

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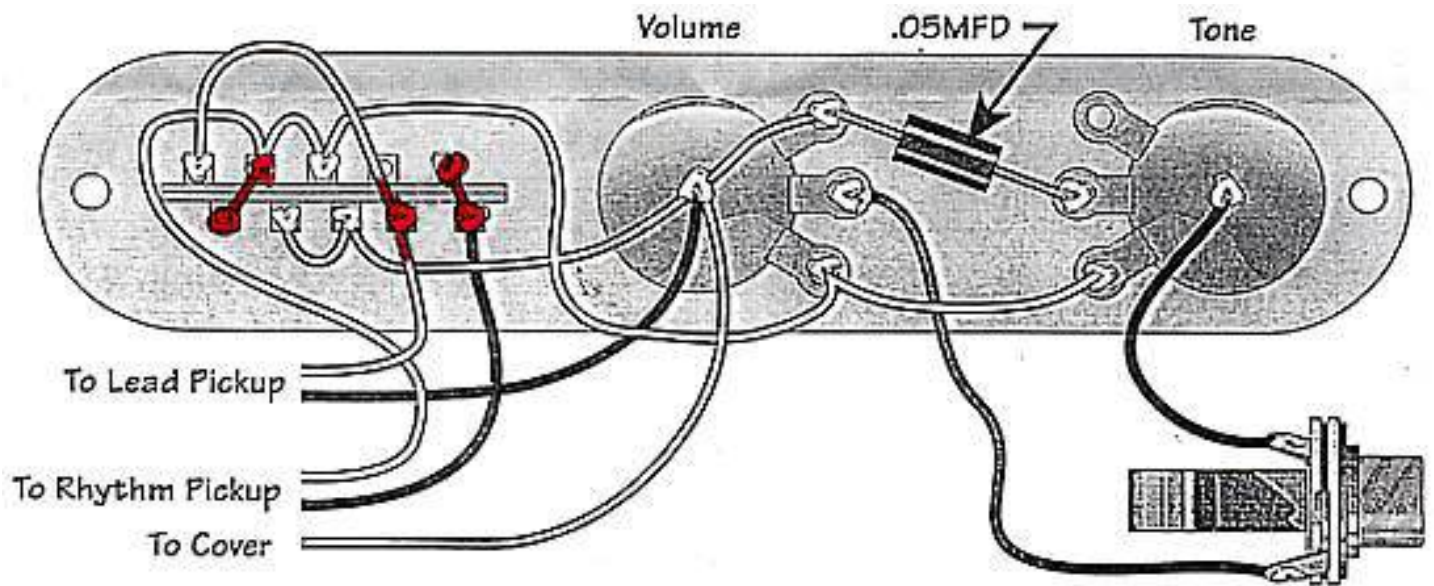


Diagram P/11 099-2250-199

Modifications to Fender's 4-Way Tele switching (in red). The link at left (upper tag #1 to lower tag #1) stops noise in the 'bridge-only' position, the links at right (remove upper tag#4 to lower tag #4 link, add upper tag #4 to lower rotor and lower tag #4 to upper rotor) make the series connection more reliable.