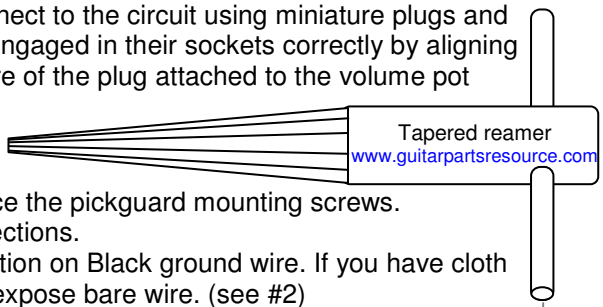
Install Guide for the '**Kinman' K9 NoSoldering Harness Rev4**
for pickguard or rear rout control cavity Stratocasters.
5th December '04. Rev0 © Chris Kinman

CAUTION: Avoid using Lead solder on Lead Free products bearing this symbol

NOTE-1: **Read this completely first before beginning the project.**
NOTE-2: Hum and noise may still be present but goes away when you touch the strings because shielding is not present or is not effectively connected to ground. Please refer to the Harness Diagnostics sheet on this Webpage to diagnose and solve your noise/shielding issue.
NOTE-3: The **lower pot** labelled *Tone* is my Push/Push K9 control that when turned to '0' connects the neck pickup to whatever else is selected by the 5 position switch. This increases the available combinations of the pickups from 5 to 7. (ie bridge + neck & all 3 together)
NOTE-4: With selector switch in position 2 and the Push/Push switch is popped out the Bridge and Middle are connected in series. The neck pickup can be connected in Parallel with the rotary part of the control as in note 2. For full details view my "K9 selection chart" see Support >>Install info >Switching function chart.
NOTE-5: The **middle pot** is a Master Tone pot.
NOTE-6: The **volume pot** has a bypass filter fitted (see bottom photo). If you feel the sound is too bright when the volume is rolled down the filter can be disconnected simply by cutting or de-soldering the wires that connect from the series Cap/Resistor to the pot terminals.
NOTE 7: The little **slide switch** on the circuit board selects between two different tone capacitors. The left position selects my High Definition Tone cap while the right position selects a regular (normal) tone cap, as described in the harness section of My Products on www.kinman.com
NOTE-8: The knobs should be an easy slide fit on the Pot shafts. Open the split shaft with extreme care only if the knob is loose. If excessive force is used one half of the split shaft will break off. Also if the knob fits too tightly it will damage the switch when pulling the knob off. **CAUTION:** The knob on the push/push switch should only be removed with the switch in the 'OUT' position. Damage caused by pulling the knob off the shaft with the switch in the 'IN' position is not covered by warranty.

NOTE-9. Advanced feature: Occasionally a pot or control becomes noisy or fails in use so as of 15-August-06 the pots are 'user replaceable' without soldering. The controls connect to the circuit using miniature plugs and sockets. Before re-assembling the guitar make sure all plugs are engaged in their sockets correctly by aligning the coloured dots. On previous side mounted sockets the White wire of the plug attached to the volume pot should be away from the pickguard.



Tools needed:

- Smallish/Medium X head screwdriver to remove and replace the pickguard mounting screws.
- Small blade screwdriver to tighten the terminal block connections.
- Razor blade or other small sharp blade to cut plastic insulation on Black ground wire. If you have cloth covered wires you don't need to cut it, just push it back to expose bare wire. (see #2)
- **USA Models**: ½" (or 13mm) tube spanner (or nut driver) to tighten the pots and jack socket.
- **Non USA models**: In addition to above you will need an 11mm tube spanner (or other nut driver) to remove the original pots. The pot holes in the pickguard may have to be enlarged from 5/16" (8mm) to 3/8" (9.5mm) for the Kinman pots by using a 9mm (approximately) diameter round file or tapered reamer;
  CAUTION: do not drill as it is dangerous to enlarge existing holes in a pickguard using a power drill because the drill will bite into the plastic and spin the pickguard causing personal injury.

1) Remove the strings and then the pickguard. Place the pickguard upside down adjacent to the guitar right beside it, close enough so the output socket cable does not pull on it's connections.
2) Cut or break the ground wire(s) (coming from the spring claw at the rear of the guitar -and/or- from the central ground point, as the case may be) away from the casing of the volume pot by working the wire(s) around and around at the solder point until it breaks. Then cut and strip or push the insulation back about 1/4" (6mm) so it or they are ready to insert into one of the ports of the screw terminal block mounted on the cover of the NEW volume pot.

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3) **DO NOT disturb or loosen** any screw and associated solder tabs like this  that are attached to the floor or wall of any cavity. These provide a 'ground' for the conductive coating (Shielding) that is applied to the cavities and doing so will render the Shielding ineffective. If this happens the noise level will be excessive, and is difficult to fix.
4) Remove the Output socket from the recessed steel plate. Cut or break the output socket off the end of it's two wires by working the wires around and around at the solder points until they break.
5) NOTE: Try to keep the original wiring harness in tact as much as possible for possible re-use.
6) De-mount the original pickups and controls from the pickguard and withdraw the wiring harness complete.

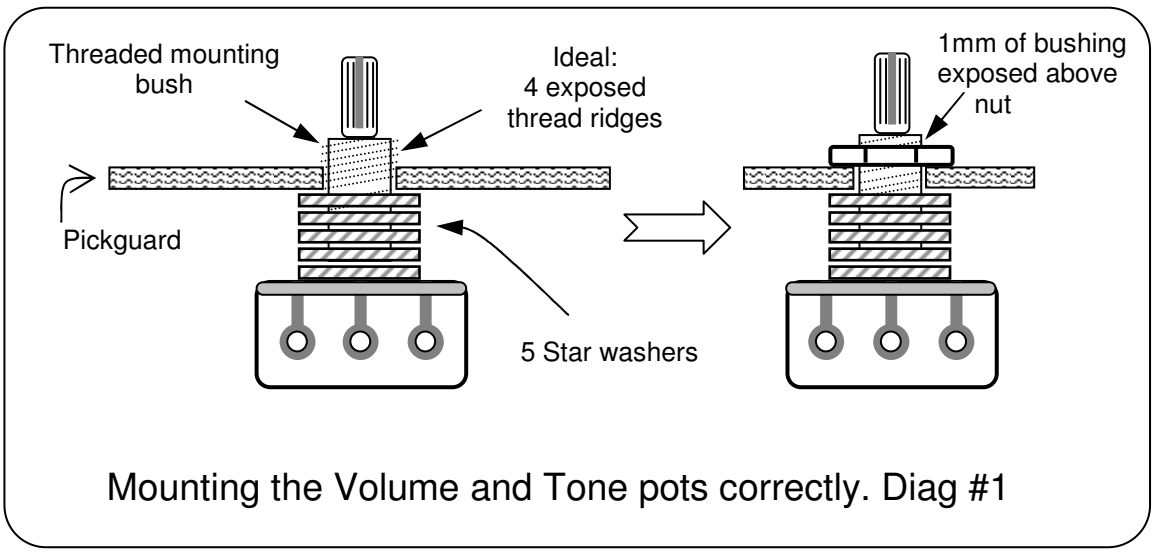
The pickguard and guitar should now have no remaining connections to the original pickup or controls.
You should now be ready for the Kinman install.

7) Unpack and remove the replacement pickups and wiring harness from the plastic shipping panel.
Pickguard models: Unplug and mount the pickup to the pickguard with exactly the same orientation as received on the shipping plate using the Red silicone rubber tubes as springs around the screws. Use the Kinman mounting screws.
Rear rout control cavity models: Unplug and mount the pickup into their body cavities using the Red silicone rubber tubes as springs around the screws. Do not use the Kinman mounting screws and do not pack foam under the pickups as this can cause severe damage. Poke the cables into the connecting tunnel leading to the control cavity.
8) Then fit all the controls into the holes and spaces left by the original parts, as well as the output socket on it's recessed holder.

NOTE: The Star washer should **not** be fitted on the outside underneath the nut, but only on the inside between the recessed jack holder and the jack socket.

- **Make sure** the socket is tightened in the position where the *hot* leaf-spring terminal is centred on the recessed jack holder, otherwise it might contact the wall of the cavity and cause a partial short via the wood or shielding resulting is BAD sound. Also this makes the plug difficult to insert.
- On some copy guitars it may be necessary to enlarge the cavity to avoid the short mentioned above.
- If the pot holes are too small see *Tools needed >Non USA models* at top of page.

9) Check the 3 pot bushings to ensure there are at least 4 thread ridges exposed above the pickguard. If too little thread form is available for the nut it is advisable to remove one Star washer from the pot bushing to allow sufficient grip by the fixing nut. But be aware that excessively exposed thread-form results in the skirt of the knobs being too far from the pickguard.



Mounting the Volume and Tone pots correctly. Diag #1

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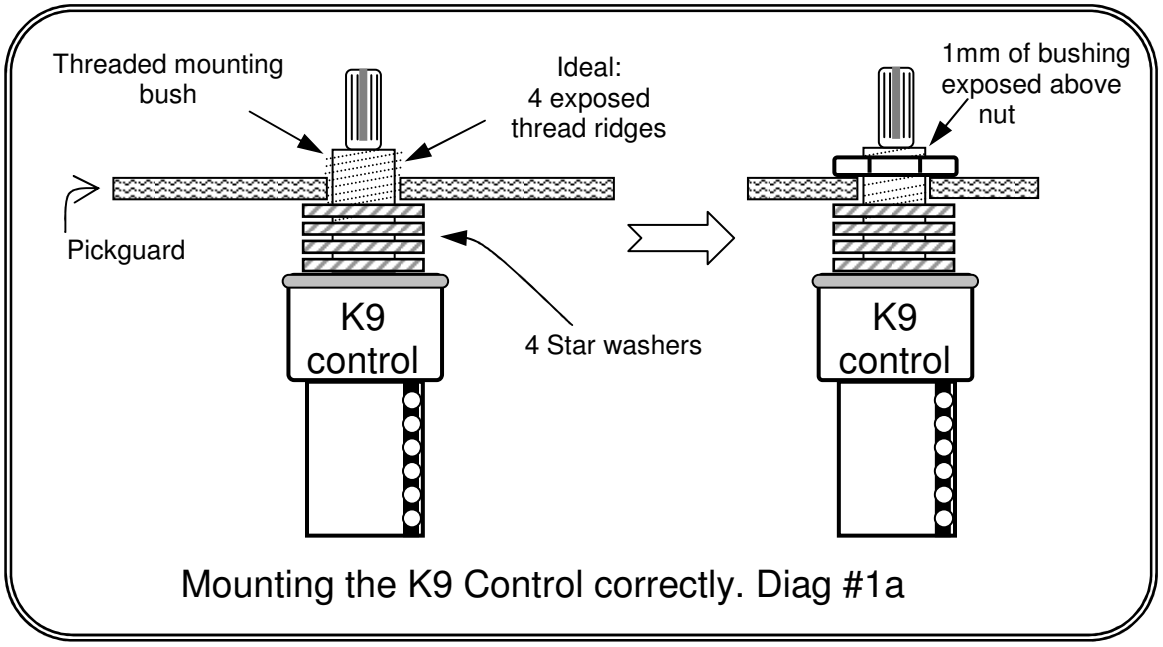
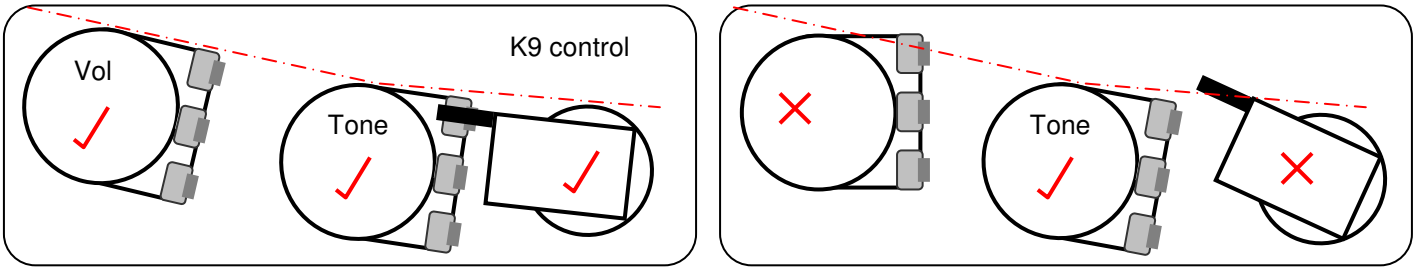


Mounting the K9 Control correctly. Diag #1a

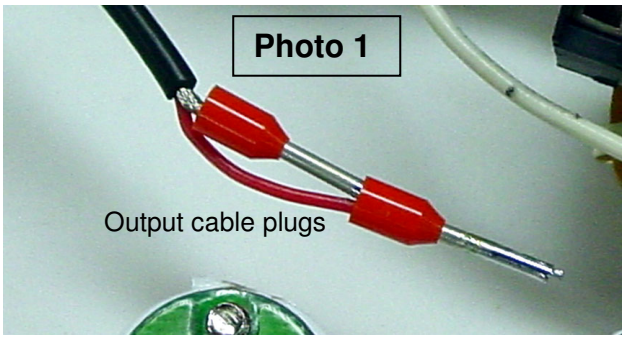
10) **Diagram 1a**: If the K9 control bushing does not protrude far enough above the nut then the push/push switch will not stay in the 'IN' position.

11) Lightly tighten the pot nuts, then adjust the rotational position of the pots and tighten the nuts firmly so the terminal pads are as shown in the diagram #2 below. If they poke out they might cause a short circuit by contacting any shielding on the cavity wall. Tighten firmly with a ½" (13mm) tube spanner (do not tighten excessively).

Aligning the pots. Diag #2



12) Mount the recessed jack plate and poke the cable through the connecting tunnel into the main control cavity and screw the jack holder to the guitar. The two plugs on the cable should be piggy backed, one inside the back of the other, as depicted in photo 1 below. This arrangement makes it easier to thread them through the connecting tunnel.



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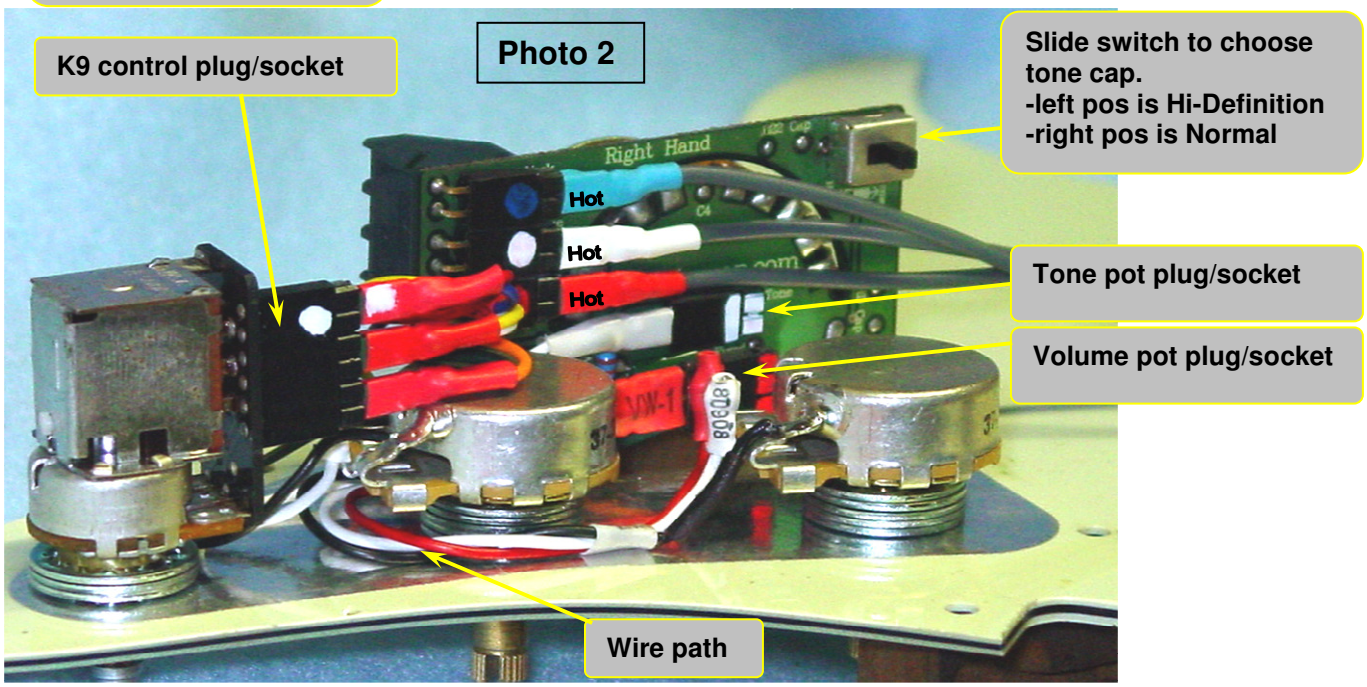
13) Before mounting the switch to the pickguard arrange the wires and connect the Tone and Volume pot sockets to the pins on the circuit board as shown in Photo 2 below.

DO NOT remove or loosen in any way these types of screws fixed to wood.



14) Mount the switch and tighten the screws.

15) Plug the pickups into their sockets as shown in photo 3 below. Red is bridge pickup and is the bottom plug. White is the middle pickup in the middle and Blue is the neck pickup at the top. Make sure the 'Hot' pins goes into the correct holes (the bottom one in the photo). Push the plugs all the way into the sockets. Arrange the cables for neatness, as shown in photo 2 and fit the cable tie. The word HOT should be visible on the outside. For added security apply a small section of adhesive tape over the plug and socket to prevent unwanted dis-engagement (although this is highly unlikely as the cables are confined).

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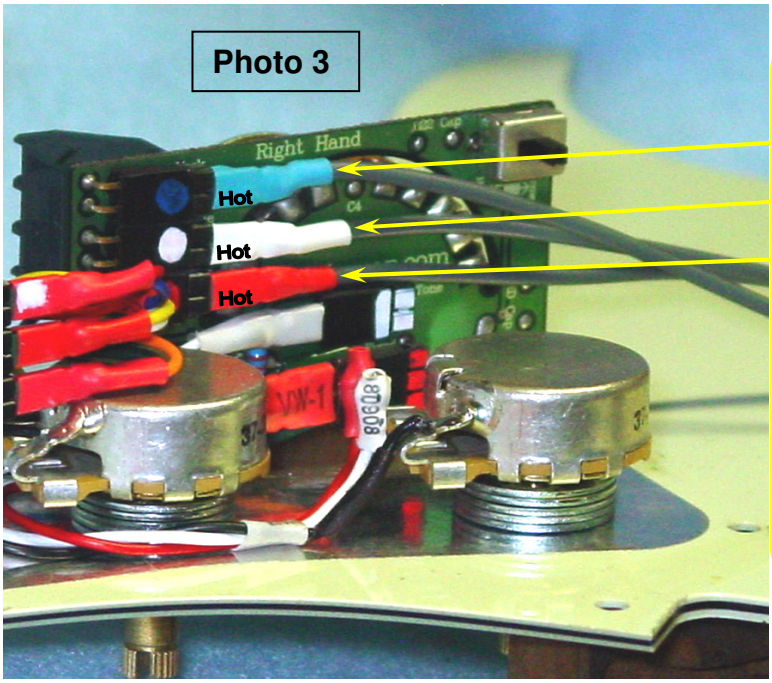
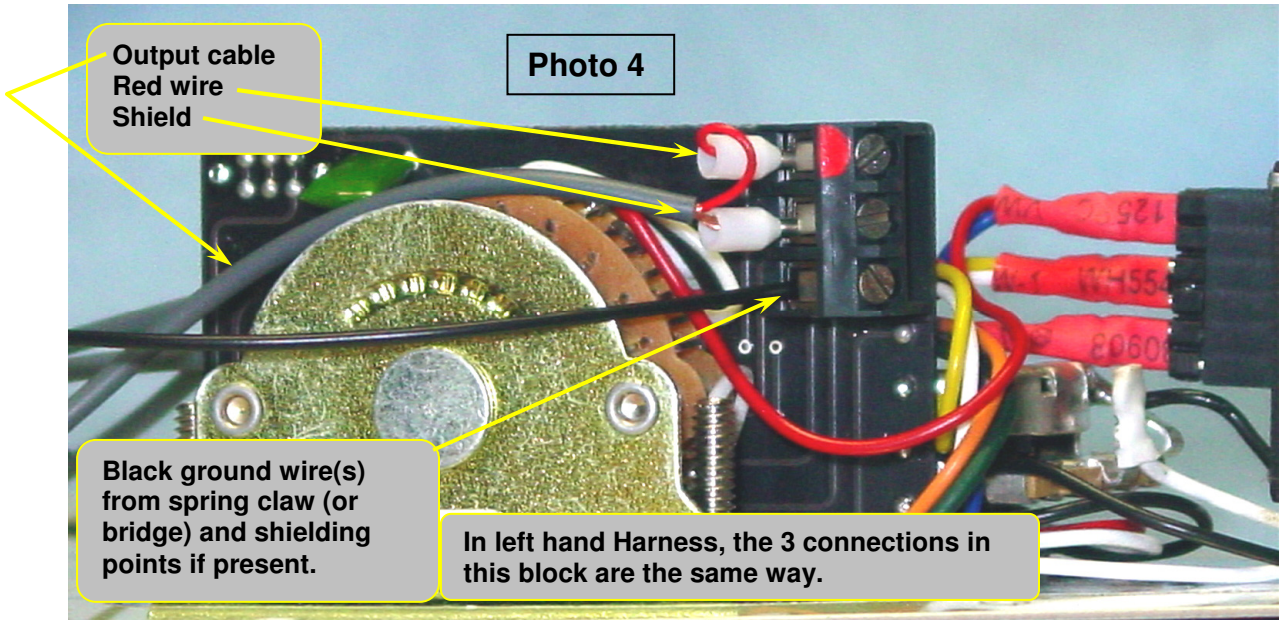


16) Undo the 3 screws to open the Connector Block ports and insert the two Plugs and black ground wire(s) into their respective screw terminals as shown in photo 4 below. The Red wire is plugged into the (upper) terminal furthest away from the pickguard (same with **Left hand** harness). The Shield is plugged into the middle terminal and the Black string grounding wire/s (from the spring claw at the back of the guitar – and/or- the central ground point, as the case may be) into the remaining terminal (lower). Tighten the screws firmly but not too tightly.



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NOTEs about existing ground wiring: I do not advocate Star grounding as a necessity; in fact it can cause headaches. With that in mind all shielding and ground wires (usually Black) should be somehow connected (either directly or indirectly) to the right hand port of the Connector block. This included the control cavity shielding (if present), output cavity shielding (if present), and the strings - direct from the bridge as in the case of hardtails or via the spring claw on vibrato models. Since it is *not* recommended to insert many wires into the connector-block ports all these items can be (and usually are already) connected together at another point and a single wire leading from that point can be terminated into the right hand port of the connector-block. Failure to ground any shielding will result in unwanted noise.

17) Assemble the pickguard to body taking care not to cross thread the screws in the wood, and proceed to restring and adjust the pickup heights..... Please refer to >Support >Adjust & Set-up … for detailed info on how to get the best out of your pickups and guitar. There is a wealth of information in this section of my Website that will fascinate and delight you for many hours.

Unistall procedure:
Remove the 3 connections from the 3 port terminal block. Remove the plug from the K9 control. Take the switch off the pickguard and remove the Tone and Volume pot plugs. Take the pots off the pickguard and mount all parts onto the original transportation panel.

End