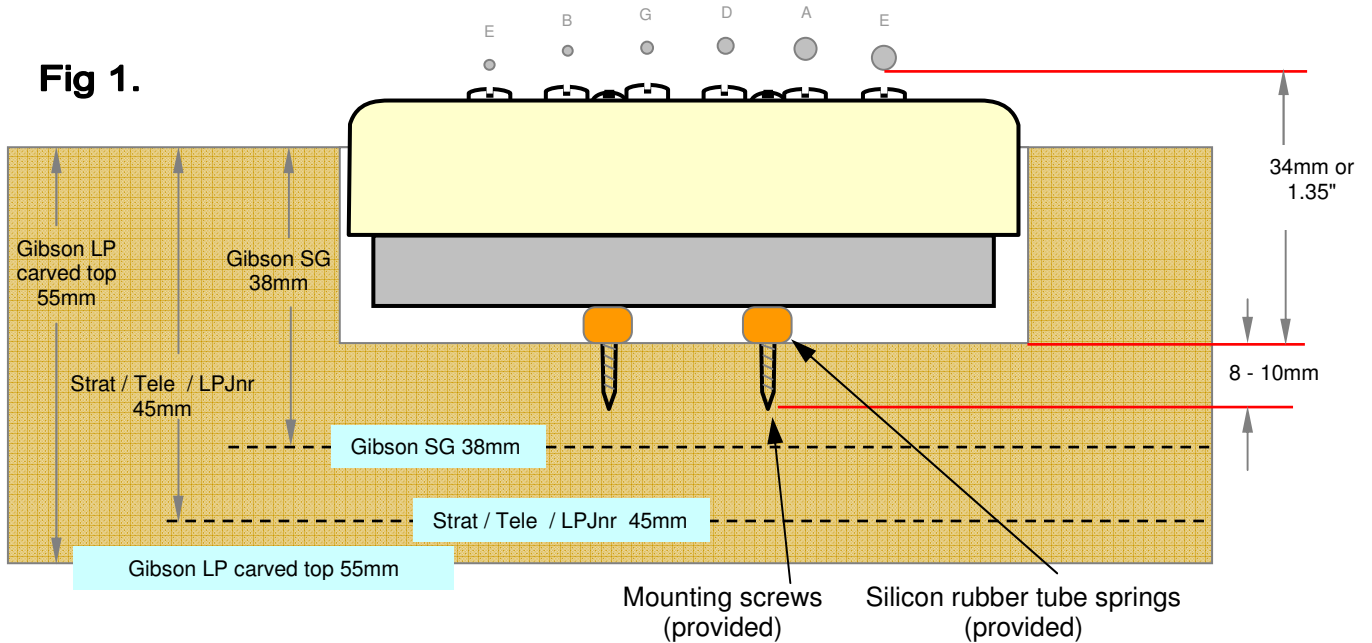


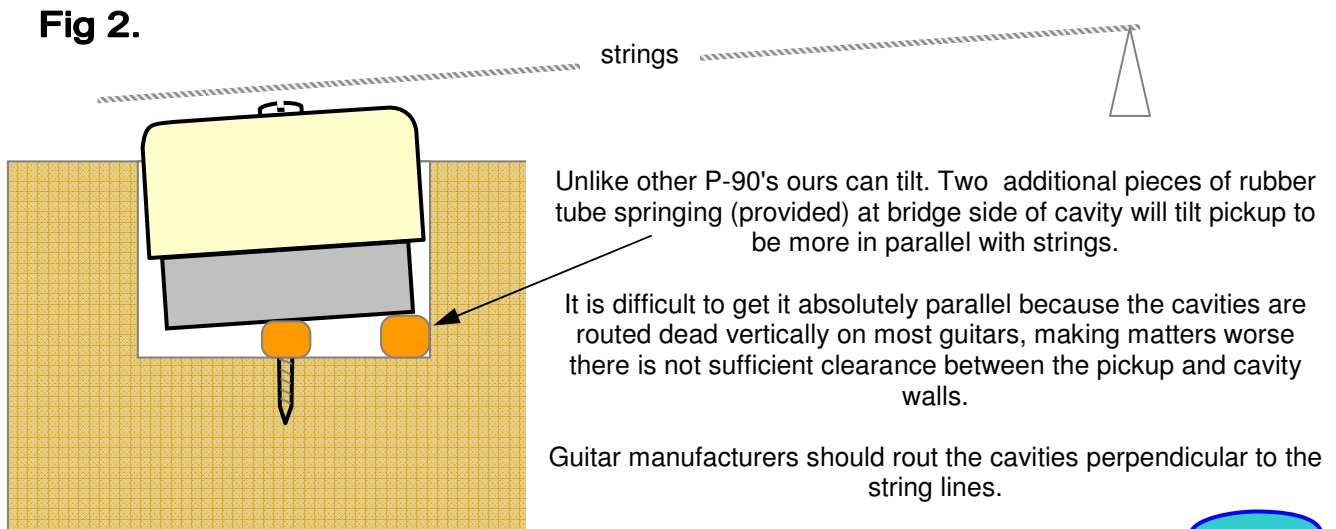
Requirements for pickup cavity depth.

To provide sufficient adjustment ideally there should be 34mm (or 1.35" which is just over 1-1/4") between the bottom of the strings and the bottom of the cavity (measured in the middle of the cavity under the low E string). Refer to Fig 1.



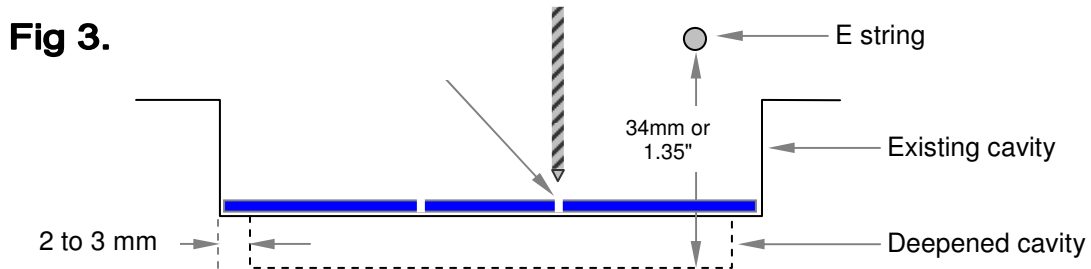
Thin body guitars like the Gibson SG are only 38mm (1.5") thick so the tips of the screws will come to within 5mm of the back of the guitar. Be careful when drilling the holes, use a depth guide on the drill bit.

Gibson P-100 routs require Silicon Rubber tubes 13mm long for neck pickup and 7mm long for bridge pickup (included with pickup). Refer to Paragraph on page 5 - **Installing your new pickups.**



11. Drilling screw holes in a virgin cavity floor. Great for project guitars with no holes drilled or after the cavity has been deepened. Included in the pack you will find a handy 'drill guide template' that makes it easy to drill the holes for the mounting screws in the correct position. Place it on the floor of the cavity as illustrated. Calculate how deep the hole should be. To avoid drilling through the back of the guitar wrap some masking tape around the drill 10mm from the tip as a depth guide. Drill a 1.6mm (1/16th) hole into the floor. Keep the drill perpendicular to the cavity floor.

It is preferable to align the template to the side of the cavity closest the bridge, this will help in getting the pickup to sit more parallel to the strings. Refer to Fig 3.



12. Getting the pickup more in parallel to the strings. It is desirable for the pickup to sit close to parallel with the strings, both for the sake of appearances and performance. Unfortunately most guitar makers rout the cavity perpendicular to the back of the guitar, not to the string line. The Kinman P-90 Hx has been designed to tilt by using 2 little section of (provided) silicon rubber tube positioned under the edge of the pickup closest the bridge, this causes the pickup to tilt away from the bridge, allowing a little bit of improvement in parallel-icity. Refer to Fig 2 previous page.



Preparation before install:

Rest your guitar on a bench top with 3 layers of towel or blanket to avoid scratches. Position a block of cork or another suitable (soft) material under the neck around the 5th to 7th fret area to lift the headstock off the bench -or- arrange for the headstock to protrude over the edge of the bench making sure the edge is covered with 3 layers of soft toweling to avoid damaging the finish on the neck.

Remove strings, completely. Also remove the bridge and tailpiece if they are not secure.

Remove the old pickups by de-soldering their wires from the pots. First refer to: [CAUTIONARY SOLDERING TIP](#) on the next page.

Installing your new pickups.

Mounting screws: Unpack the new pickups, insert the 2 long mounting screws (provided) through the 2 small holes in the top of the cover. In the case of Gibsons', with the solid metal inserts embedded in the wood that receive the mounting screws, use the original Gibson screws as these have fine threads designed for solid metal. The screws provided with the pickups have a coarse thread which is designed for wood. Push the silicon rubber tube springs over the ends of the screws that protrude out the other side, these springs will be easily retained there. You will also notice the pickup has no tendency to fall out of the cover, this will make the install far easier and reduce the risk of accidentally dropping the pickup onto the guitar.

Neck pickup: Begin with the neck pickup and feed the cable into the wiring tunnel. This is more easily accomplished by first poking a length of 1mm solder through the tunnel right into the control cavity, then hooking the solder to the end of the pickup cable and pulling the cable into the tunnel from the control cavity end until the pickup is almost in. Turn the guitar onto it's side for access from both front and back for the cable pulling part of this operation, and recruit assistance from some else as this can be a task better suited to an octopus.

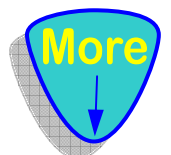
Lay the guitar onto it's back again, make sure the excess cable doesn't scratch the back of the instrument. Position the provided section of silicon rubber tube standing vertically on the floor in the middle of the cavity, aligned towards the edge of the cavity closest the bridge. Pull the pickup by it's cable, from the control cavity, into it's cavity. Avoid laying the cable across the floor of the cavity by aligning the cable end of the pickup with the entrance to the tunnel to prevent damage by the mounting screws.

Push down onto the pickup keeping the top surface parallel with the cavity floor, simultaneously advancing the screws (one by one, a little at a time) into the screw sockets in the floor of the cavity. The screws should be relatively easy to turn, if you feel too much force is require back the screws out and start over as they might have missed the socket and be trying to make a new hole into the virgin floor.

Turn the screws until the pickup is in approximate working position (height or distance from strings).

Bridge pickup: Repeat the operation (above 3 paragraphs) for the bridge pickup. It is possible to crack the cover with excessive screw force so it might be necessary to shorten the silicon rubber tube springs in order to avoid excessive force exerted by the 2 adjustment screws onto the cover on some guitars.

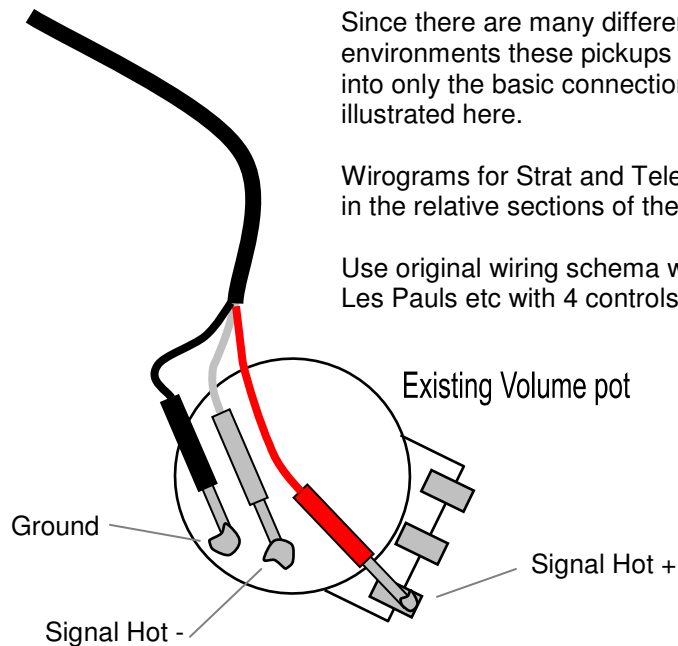
Soldering the connections: Do not remove or change existing original wiring. To solder the connections position the guitar face down on the bench top. Arrange the cables in a neat orderly fashion, avoid cutting them shorter. It is best to remove any existing solder from the 'hot' leg of the pot (it's the outer leg opposite the leg that is soldered to the case of the pot) in order to



expose the hole in the top of the leg. Poke the Red terminal (ferrule) into the hole. Position the cable to prevent the ferrule dislodging then apply a drop of solder to the ferrule/leg. Hold the iron in contact for about 2 seconds to allow a good solid connection to form. Ensure the wire does not move about while the solder is cooling.

If opposite output polarity (phase) is required to match other pickups then swap the Red and White connections.

Fig 4.



Since there are many different harness environments these pickups might be installed into only the basic connection to the volume pot is illustrated here.

Wirograms for Strat and Telecaster are provided in the relative sections of the Install Guides page.

Use original wiring schema when installing into Les Pauls etc with 4 controls.

CAUTIONARY SOLDERING TIP: when soldering pot terminals do so with minimum of time to avoid excessive heat travelling to the pot track (which can be damaged by prolonged exposure to excessive heat).

Poorly done soldering can cause bad sound, no sound, excessive buzzing (RF noise) and loss of tone so read 'Soldering Tips' in the Install Guides section of this website.

Do not replace the rear access cover until the soldering has been proven to work satisfactorily.

Completing the install.

Install a new set of string into the tailpiece before replacing it to the guitar. Turn the guitar over and replace the bridge and tailpiece. Temporarily tape the tailpiece in position to prevent it falling onto the guitar. One at a time tug the strings to seat then securely into the tailpiece and pull them through the holes in the shafts of the tuners. Pull tight then retract the string approximately the same distance that separates the tuner shafts. Kink the string around the edge of the hole and commence winding the string around the shaft, keeping tension applied to the string with one hand. Wind until there is a light tension on the string, this allows easy positioning onto the bridge saddles and nut grooves. Finish by tuning to pitch then stretch the strings by tugging at the 12th fret area several times (stretch about 25 to 30mm), retune to desired pitch.

A good starting point is to adjust the bass side of the bridge pickup so there is a gap of approximately 2mm between the pole and the underside the E 6th wound string. Adjust the treble side for a 2.5 ~ 3mm gap. The pickup will seesaw somewhat because of the position of the adjusting screws (towards the middle of the pickup) so re-adjust the bass and treble screws several times until the desired gap is established on both sides.



The neck pickup can be similarly adjusted but with gaps of 2.5mm bass side and 3 mm treble side.

Adjust the poles (both pickups) that are under the plain (non-wound) strings into the pickup until they seat firmly. Plug into your favorite amp but before you cut loose contain your excitement for a few moments (it'll be well worth it) and select the bridge pickup and play a slow succession of notes running across the fretboard from low string to high string. The notes should all have same output level, if that's not the case adjust the screw poles to achieve a good balance. Repeat for neck pickup. Players often overlook this step but I assure you that spending a little time to do this properly will reward you with superb sound.

Adjust the output of the neck pickup to be balanced with the bridge pickups by using the height adjusting screws, as described previously.

If all works as it should replace the rear access cover, take care not to over-tighten the screws and possibly split the plastic.

This is not the end of the adjustment phase, all Kinman pickups are very sensitive to adjustment and the P-90 Hx is no exception. I encourage to experiment with the screw poles and see what happens for there will be hidden delights awaiting you there. For example if you want more focus and greater concentration of mid-tones in the sound try adjusting the screws out and adjusting the pickup the same distance down – more or less. You will find there are numerous combinations that yield subtle changes in tonal texture and perhaps you'll find a sweeter spot, one that hits your spot perfectly.

Never underestimate the impact amplifier controls and outboard effects can have on the sound of a pickup too. Before you begin it's a good idea to start with a clean slate. Don't try to adjust your new Kinman pickups using your previous amp Eq and Fx settings. I suggest you set the tone controls to 12 o'clock (position 5 on the knobs) and dial the adjustments in from there, adjusting the Eq controls only after you get the best result from the pickups. The amp controls will then just fine tune the basic correct pickup adjustments. Don't be afraid to use the controls, that's what they are there for. If your sound needs more or less brightness simply turn the treble control up or down. Same for Mids and Bass.

The moment you've waited for:

Now let loose and be inspired I wish you a heck of a lot of fun, stimulation, enjoyment and satisfaction exploring your new sonic horizons. Don't forget to take it soft n slow sometimes as you will discover the many wonderful sonic nuances the P-90 Hx has to offer. Tell me about your experiences using your >Members Area >Message Bank >Compose New Message ... type subject line>>> P-90 Hx sonic horizons.

Looking forward to your feedback.

Best wishes Chris Kinman.

Mounting under Dog-ears in solid body guitars next page.



Dog-ear cover mounting:

The P-90 Hx is very versatile and can be mounted under Dog-Ear covers as well as Soapbar covers. You will notice the P-90 Hx does not have extensions for mounting under Dog-Ear covers like original Dog-ear P-90's do.

Since there are many variations of Dog-Ear covers it is best to use your original covers since they will probably suit your guitar better than replacements.

This method uses a block of high density foam cushioning positioned under the pickup to push it up to the cover and keep it in firm contact. Once positioned under the cover the pick self aligns perfectly to the cover, probably better than P-90's with mounting ears. The pole screws prevent the pickup from skewing inside the cover.

Caution: The foam should not be excessively strong as some covers will possibly distort or develop a crack with excessive constant force applied.

The pickup sits inside the Dog-Ear cover and the medium density foam cushion pushes it into the cover and keeps it firmly in place.

