

into **Arch Top** F-hole guitars with Dog-Ear covers.**Fore-notes and Cautions:**

1. To facilitate mounting under an existing Dog-Ear cover on arch-top guitars you should have included a Kinman Dog-Ear bracket with your order. This bracket is a simple device that allows easy installation of your Kinman P-90 Hx in Arch-top guitars.
2. Since there are so many variations of Dog-Ear covers in existence we recommend using your existing original Dog-Ear covers since they are designed for your specific guitar having regard for curvature of the top and distance of strings from the top.
3. The P-90 Hx likes a 500k volume pot to maximize dynamic range, sensitivity, output level and frequency response. They will work with a 250k pot but the above performances will be reduced somewhat .
4. The P-90 Hx has 3 conductor hook-up cable to easily facilitate reversing the output polarity (phase), however, when reversed there will be a little bit more buzzing (RF buzz, not mains hum) than normal when the player is not in contact with the strings acting as a grounded human buzz shield. Any P-90 worth it's salt exhibits the same characteristic, it comes about because of the large surface area of the string sensing coil.
5. The P-90 Hx has same output polarity as all other Kinman and Gibson pickups, only some Fender pickups have reverse output polarity. To determine output polarity refer to www.kinman.com >Tech Support (requires Log-in) >Perfect Guitar >Phase (or output polarity) test method.
6. **Do not adjust the preset pole pieces** until the end of the install procedure. Avoid excessive adjusting of the pole screws to maintain the torque required to turn them. If they become too easily turned remove them and dip the threads into molten candle wax for approx 10 seconds. When reinserted the wax provides desirable resistance to turning. To avoid getting wax on the cover apply some masking tape over the holes (one by one in turn), punch a hole with diameter of the screw's head into the tape beforehand and position it over the hole in the cover while reinserting the screw. When the screw is in desired adjustment position carefully and slowly remove the tape, any excess wax will travel with the tape.
7. Avoid cutting the hookup cables.
8. **Removing Soapbar covers:** Covers are held firmly on the pickup but slip off easily when pulled. Hold the cover at the ends between thumb and fingers of one hand and the lower part of the pickup between the ends with thumb and fingers of the other hand and carefully separate the two. Take care not to skew the cover, try to keep it parallel to the pickup. When putting the Soapbar cover back on insert the pickup into the cover 'cable end first' to avoid disturbing the cable entry, and then slide the other half in and press until seated.

Preparation before install:

1. 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 a minimum of 3 layers of soft toweling to avoid damaging the finish on the neck.
2. Stick a length of masking tape to the top of the guitar against each (long) side of the base of the bridge, this will mark the original position for the bridge when time comes to reassemble and restring.



3. Remove strings, completely. Take care because the bridge and tailpiece will dislodge from the guitar and possibly cause damage to the finish since most arch-top bridges and tailpieces are not secured to the guitar.
4. Remove you existing cover and extract the pickup.
5. Since it is very difficult to remove the pots and switch in hollow guitars I suggest disconnecting the existing pickups from their hook-up cables and connect those original cables to the new pickups. So disconnect the cable from the existing pickup. Many P-90's have their connection on the outside of the pickup to provide easy access. On those with the connection on the inside it will be necessary to remove the cover and cut the small lead wires joined to the cable, cut them close to the tip of the hook-up cable.
6. Tape the cable to the top of the guitar in a manner that will not cause harm to the finish (e.g. wrap the end of the cable in a small plastic wrapper)

Install procedure

7. Install the Dog-Ear bracket as shown in illustration Fig 1 next page. The bracket should fit into the hole easily but it may be necessary to jiggle it into position on some guitars.
8. Check that the screw holes in the bracket align over the screw holes in the guitar and apply a 60mm length of masking tape over the bracket overhang as shown in Fig 2 to temporarily hold the bracket in desired position until the cover screws are started in the holes.
9. Solder the tips of the P-90 Hx cable to the original cable. Red tip is connected to the inner wire of the original cable. The White and Black tips are connected to the outer braid (shield or ground). The Red and White can be swapped to reverse the phase to make compatible with another pickup. Soldered connections are best to ensure long term reliability. Bind the joins over with electrical tape (not masking tape as it hardens with age and is difficult to remove later)
10. Wind the excess cable into a coil of some 50mm diameter. Secure this coil to the leg of the bracket with the cable tie provided. This should prevent the cable from vibrating against the inner surfaces of the guitar.
11. Place the P-90 Hx pickup into the hole carefully, make sure the two studs inside the rubber tube springs align with the two large 4mm holes in the bottom of the pickup as the pickup will be pushed onto these studs when the cover is fitted. Test this alignment by pushing the pickup onto the bracket against the springs. You should feel the pickup sliding up and down easily. It is acceptable for the screws to scrape against the sides on the holes so don't be concerned if this happens.
12. Place the cover over the pickup temporarily (without the cover fixing screws). The pickup should hold the cover away from the top of the guitar by at least 2 or 3mm. Should the cover be too far from the top (e.g. greater then 5mm) it is desirable to shorten the silicon rubber tube springs fixed to the bracket by a corresponding length. The tube spring can be easily snipped with scissors or sharp knife. Keep the piece snipped off for possible reuse.
13. Insert the mount screws into the original cover and slip the short (5mm) rubber spacers (provided) over the screws. These spacers should grip the screws and should not fall off the screws during the next step.
14. Position the cover over the pickup carefully, try to guide the adjustable pole screws into the corresponding holes in the cover. It might be helpful to manipulate the pickup with your fingers during this step.
15. Manipulate the screws into their socket holes, turn anticlockwise for half a turn or until the thread form seats (pops) into the corresponding thread form in the wood. Turn clockwise until the head contacts the cover but does not press the cover to the guitar at this stage. Repeat the procedure with the remaining screw.
16. Remove the masking tape that prevented the bracket from moving out of alignment.
17. Re-check that the heads of the adjustable poles are protruding thorough the cover and then tighten the two cover screws until the cover is seated firmly onto the pickup. Doing so should cause the pickup to be pressed onto the rubber tube springs of the bracket. You can test this by pressing firmly onto the poles, they should recede into the cover with firm pressure from finger tips.



Fig 1.

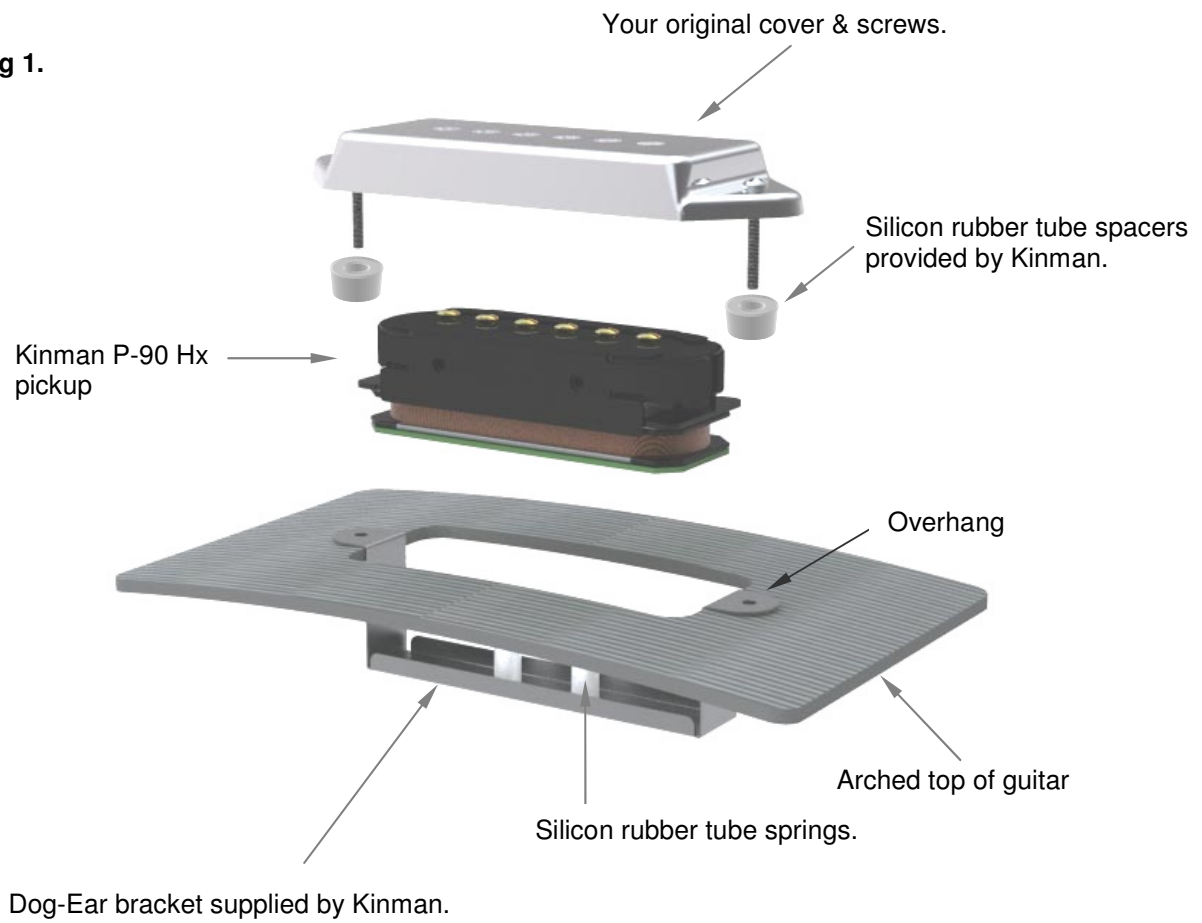
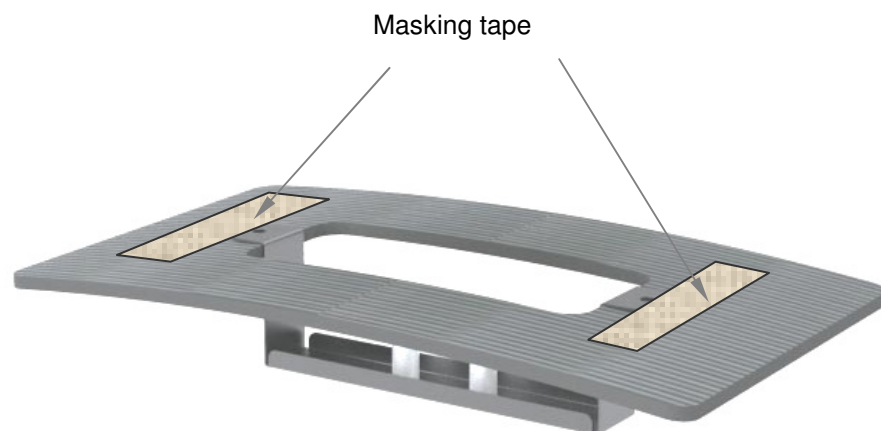


Fig 2.



Completing the install.

Install a new set of string. Tug the strings one at a time to seat then securely into the tailpiece and pull them through the holes in the shafts of the tuners. Pull tight then insert into the tuner shafts (for terminating into split shaft tuners refer to the illustrations on our Perfect Guitar page). 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.

Replace the bridge according to the position of the masking tape put there for the purpose.

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. Check the intonation of strings at the 12th fret and adjust the position of the bridge as necessary.

Adjusting the screw poles.

Dog-Ear covers determine the distance that the pickup sits from the strings so the coarse adjustment that Soapbar installs enjoy is not present with Arch-tops. In the case of twin pickup installs it is hoped the original covers position the pickups at suitable distance from the strings to achieve a good balance between the outputs (loudness) of both pickups as well as for good sensitivity and sound character because the only adjustment possible is by turning the screw poles with a small blade screwdriver.

Of each pickup adjust the poles 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.

If the output of the neck pickup is not balanced with the bridge pickup the only recourse for improvement is by adjusting the pole screws, as described previously. A perfect balance might not be possible.

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 you to play 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. You will find there are adjustments 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 on your amp, that's what they are there for. If your sound needs more or less brightness simply turn the treble control up or down, etc.

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.

