Thank you for choosing the Pure Mini pickup for your guitar!

This manual describes the installation for pin bridges and pinless bridges. For pin bridge guitars, a jig installation can be used (jig is included with product). The jig allows you to place the pickups very accurately.

For pinless bridges, we describe a manual installation procedure. Don’t worry too much about not using the jig. We ran several tests where we deliberately installed the pickups somewhat off the desired spots, and the system still sounded fine and balanced.

However, please try to work as thoroughly as you can and DO NOT INSTALL THE PICKUPS ANY OTHER LOCATION, INCLUDING THE BACKSIDE OF THE BRIDGE PLATE (towards the endpin jack). This position will definitely not sound as good! On extremely small bridge plates, the transducers may overlap by as much as 1/16” (2 mm) on the cable side of the pickup. This is okay and does not create a problem.

Please familiarize yourself with the handling instructions of the supplied superglue gel and double-sided tape and with the disclaimer at the end of this manual. Please read through the entire manual before installation.

Disclaimer

Installation or removal of the above listed products is at your own risk. In no event will K&K Sound Systems Inc. be liable to you or whomever you select for doing this installation or removal in your place, for any damages arising from your use of, or, the inability to use these products. This includes any possible health hazards, accidents, injury, any lost profits, or other incidental or consequential damages, even if K&K Sound Systems Inc. has been advised of the possibility of such damages, or for any claim by another party. Following pickup installation instructions and handling instructions for supplied superglue is mandatory.

Please make sure you read, understand and agree to this disclaimer. Please call our help line if you have any questions: (541) 888-3517. If you have doubts, please do not install this product.

Package Contents

- 3 transducers with cable-harness and endpin jack
  (The Pure Mini uses 3 identical transducers. It does not matter in which position (high e/b string, g/d string, low e/a string) you install them.)
- Superglue gel (recommended attachment)
- Double side adhesive film for “peel and stick” attachment (for “peel and stick” installation)
- Jig materials
- Manual

Tools Needed

- Electric drill (for endpin jack mount)
- Drill bits, at least 3/8” (10mm) and 1/2” (12mm for endpin jack mount) or 1/2” Forstner bit
- Pliers or wrench for endpin jack installation
- Large size nail for punching holes into jig
- Flashlight and small handheld mirror for visual check
- Acetone (if bridge plate surface is dirty)
- Fine sandpaper or razorblade (if residue on bridge plate surface or if not smooth and level)
- Some double side adhesive carpet tape or similar (for pinless bridge only)
- 3 latex gloves (for pinless bridge only)
- Double side adhesive “carpet” tape (for pinless bridge only)
- 1/16” drill bit (for pinless bridge only)

Superglue vs. “Peel and Stick” Installation

We think that the pickups reach their full potential only when they are installed with as little material as possible between the pickup and the surface of the guitar. We highly recommend using superglue gel to attach the pickups because it bonds them to the guitar on a molecular level.

For players who absolutely do not wish to use superglue on their guitar, we also supply some very thin double-sided tape (for “peel and stick” attachment). Please note that using this method will result in about 30% loss of volume and tone quality, compared to the superglue mount. If you choose to proceed with “peel and stick” installation of the pickups, please use the supplied double-sided tape and follow the instructions that come with it.

The superglue gel we supply does not bond extremely tightly and, if necessary, the pickups can be removed by wedging a scraper blade (razor blade with a handle on one side) between the bridge plate and the pickup discs. If done correctly, this will not damage your instrument at all.

Please note that removing a superglued pickup may damage the pickup, plus handling these sharp tools could result in personal injury. Please read and understand the section on removing superglued pickups towards the end of this manual.

Preparation (For All Guitars)

If you have a pin-less bridge, remove the strings. If you have a pin bridge, loosen the strings and clamp a capo on the 10th fret. Pull out the string pins and the ball ends of the strings. The capo will hold the strings on neck and tuners. This way you don’t have to remove the strings entirely and can quickly re-install them after the pickup is installed.

Place the guitar on a table (use a blanket underneath) so you can comfortably put your hand into the sound hole and feel...
the inside structures underneath the bridge with your fingers.

Locate the X-bracing and the bridge plate. The size of the bridge plate and the bracing of your guitar might be different to the bracing structure shown in the pictures in this manual.

Use a handheld mirror (one which fits into the sound hole) and a flashlight to examine the bridge plate area. Make sure that the bridge plate is level, clean and smooth.

Drill or widen the endpin hole to ½" (12mm). In my opinion, this is the most difficult part of the installation. First you have to determine what kind of endpin is currently installed in your guitar. It may be a simple type, which is held in place by a single screw. Or it may be a standard ¼" tapered endpin, either press-fit or glued in. The glued in type is the most difficult one to deal with and we recommend looking for professional assistance.

Tape the endpin-hole with a piece of duct tape to protect the surrounding area of your guitar.

Single screw type: We recommend using a ½" (12mm) FORSTNER drill bit to drill out the screw hole. This one makes the nicest cut and is most gentle to your guitar. You also may use a step-by-step method to widen the hole to ½" (12mm). Use several ascending size drill bits in succession. Make sure to use self-centering drill bits (used for metalwork) not the single-pointed drills for wood!

Standard ¼ taper press fit endpin: Pull out the endpin and use several ascending size drill bits in succession to widen the hole step by step. Make sure to use self-centering drill bits (used for metalwork) not the single-pointed drills for wood!

**JIG INSTALLATION (PIN BRIDGES)**

Before you actually work with the pickup, you should practice using the jig without a pickup or putty. This ensures that you are comfortable with the jig technique so that the pickups are positioned perfectly. It may be possible that your guitar has a tighter bracing on the high e string side and the jig may have to be trimmed down a little bit.

1. Cut a piece of corrugated cardboard out of the sales-box your pickup came in. It has a white and a brown side. Size: 1" x 1.25" (2.5cm x 3.5cm). Mark the center-to-center distance of 2 pinholes on the white side.

2. Use a large nail (or similar pointed object) to punch two holes about 3/8" (10mm) from the front edge of the jig.

3. Widen both holes with the headless wooden pin. Do not use the golf tee for this as this one has a slightly larger shaft diameter.

4. Stick the headless pin though the hole, as shown in the photo above (brown side of cardboard down, make sure the pin is straight). Use some superglue gel (supplied with the Pure pickup) to glue the white pin into the cardboard, let dry for a minute and wipe off excess glue.

5. The finished jig should look like this (above).

6. Place the jig on top of the bridge, insert the dull end of the headless pin into the high e string pinhole and press the golf tee into the b string hole. Remove it several times in order to widen the hole in the jig a bit. The golf tee should slide into the jig hole easily.

7. The above picture shows the final position of the attached pickups.

The first (right) pickup should be placed under the high e string, as this is the thinnest and quietest string and requires a bit more amplification. The second (middle) pickup is positioned between the g and d string. The third (left) pickup is between the low e and a string.

8. Cut off 1/3rd of the gray putty strip.
We recommend you practice steps 9-17 without the pickup or putty to learn to handle the jig!

9. Form a putty ball and place it on the jig over the saddle where the pickup should be attached.

10. Get the Pure pickup and place the jack into the sound hole. Press one transducer with the golden side up on the putty as shown in the photo. Make sure the pickup is placed precisely over the saddle, in its correct position with respect to the strings.

11. Make sure the pickup sits absolutely flat and level on the jig.

12. This is a very important step! Remove the golf tee and hold the jig as shown (between thumb and forefinger on the headless pin). The tip of the headless pin must be flush with the fingertips. I use my left hand although I'm right-handed but you may feel more comfortable using your right hand for this.

13. Once you feel confident, make sure that the putty securely holds the pickup and apply a generous amount of superglue gel. Spread it over the entire golden surface of the transducer. Be careful not to touch the pickup and superglue gel after this step. Make sure you've practiced the whole procedure before supergluing the pickup! Please read and follow the safety instruction for the superglue gel!

14. Place the hand that is holding the jig into the guitar and try to bring your fingertips near the high e string hole. Your goal is to stick the headless pin through the high e string hole from the inside. Hint: Use the golf tee as a guide by inserting it into the high e string pin hole. This way you will be able to feel it on the inside and find the high e string hole fairly easy.

15. Remove the golf tee and carefully push the headless pin a little bit up from inside (not all the way yet!).

16. Align the jig to the desired square position by feeling its edges (make sure not to touch the pickup as there will be superglue gel). Insert the golf tee into the b string hole and push it through the corresponding hole in the jig. Make sure to feel if you indeed hit the hole.

17. Push the jig up until it is flush against the bridge plate and apply some pressure to the pickup. (With the final installation you should slowly count to 30 to allow for the glue to set.) This photo shows the jig inside the guitar (yes - we cut a hole in the bottom for the photo, ouch). Remove the jig by pulling out the golf tee and carefully pull the cardboard off the pickup. Remove the used putty, which will either stick to the cardboard or to the pickup.
This picture shows the pickups perfectly placed. Make sure all pickups are located precisely under the saddle.

You may use a rag or tissue to wipe off any superglue gel that oozed out around the pickup. Be extremely careful not to get the rag in contact with the guitar's finish! Use a new piece of putty for each pickup.

**Manual Installation (Pinless Bridges)**

**Preparation**

Installation on pin-less bridges requires you to drill two 1/16” reference holes in each end of the saddle-slot. If the guitar already has a hole in the saddle-slot for an under-saddle pickup you can use this hole.

Please inspect the bridge plate inside the guitar with a mirror and a flashlight to make sure that there is enough room for all 3 pickups. In addition to that, please place the 3 pickups over the saddle on the outside to check if they fit in between the 2 reference holes.

Use a fitting nail, toothpick or (that's what I do) the drill bit itself to stick it through the reference holes so that it will extend about ¼” or so inside the guitar and acts as a guide on the inside.

Use this guide as a side-stop for your 2 outer pickups (see diagram below):

![Reference holes](image)

The 2 outer pickups are going to be placed with their outer edges right next to the guides.

Once the outer pickups are in place you can remove the guides and install the center pickup in between the 2 outer transducers.

Unfortunately, you will have to install this one by feel only.

**Practice**

Before you actually superglue the pickups into your guitar, you should perform some practice runs without using the superglue gel. This is important for learning the correct movements and getting the feel.

Find out which hand is feeling more comfortable doing the installation procedure and put on a latex glove.

Get yourself some double-side adhesive tape (“carpet tape” available in your hardware store) and stick a small piece onto your fingertip (see photo below); the golden side of the pickup is facing up. This makes holding on to the pickup and aiming inside the guitar a lot easier.

Practice to place the outer pickup discs right next to one of the guides in the reference holes.

Later, when doing the actual installation, you will have to firmly press the pickup to the bridge plate to allow the excess glue to ooze out around the pickup's edges. At this point, the pickup will most likely move a tiny little bit. Please make sure that you will be able to comfortably perform this final aiming procedure. The pickup has to be pressed down and held in place against the bridge plate for at least 30 seconds.

The center pickup should only be installed when the two outer pickups are glued in place. These 2 pickups need to be used as guides for the installation of the center transducer. This means you should practice with the center pickup only after the 2 outer pickups are installed.

On occasion, with pin-less bridges, we used double stick tape for the center pickup while we superglued the 2 outer ones. Interestingly, the center pickup does contribute only about 15% to the total sound (measured with a full superglue installation). The 2 outer transducers definitely carry the workload. The “peel and stick” installation of the center pickup will only have very little effect on the sound. In fact, on the installations we did it like this, it came out very nice and very balanced. It is a lot easier on you in case you would badly misplace the center pickup with superglue.

Practice until you feel confident to do it right the first time.

**Important SuperGlue Information**

Please read and follow the safety instruction for the superglue gel. Make sure not to get superglue on your fingers or on your guitar! It is a good idea to cover the entire guitar top with fabric or paper, just leaving an opening for the sound hole.

The entire golden underside of the pickup discs needs to be covered with superglue gel. Spread a generous amount all over the surface. Do not use just a drop in the center, as this will not distribute evenly. Please be aware that the amount of glue coverage is directly related to the signal output, balance, and sound. Careless and insufficient gluing is the number one cause of unsatisfactory sound for this pickup!

Don’t worry; the superglue gel we supply will not dry immediately after it is applied to the pickup. You will have more than sufficient time without rushing things. A generous amount of gel will actually be good for several minutes. The gel will only set after contact with another surface.

The superglue gel even allows for about 10-15 seconds of repositioning time after the pickup is pressed onto the bridge plate surface. After the final position is reached, hold and press the pickup firmly down in place for at least another 30 seconds.

Excess gel will ooze out around the edges and eventually dry - that’s fine. You can also use a rag to wipe off the excess gel if you want. Be extremely careful not to get the rag in contact with the guitar’s finish.

**Final Installation**

Apply superglue gel to the golden underside of the first pickup. Spread a generous layer of the gel with the tip of the tube so it will cover the entire surface.

Now install the first pickup to its corresponding position at the high B and E strings as practiced. Press it down and hold it in position for at least 30 seconds.

Repeat above steps and attach the second transducer to the corresponding position of the low E and A strings.
Check your work with a mirror and flashlight.

Attach the center transducer by feel between the 2 outer pickups.

Check your work with a mirror and flashlight.

**INSTALLING THE Endpin Jack (FOR ALL GUITARS)**

Unscrew the endpin jack's strap mount knob.

Take off the nut and washer.

Find out the thickness of your end block and set the nut on the cap accordingly (see picture below). Once in place, screw the cap in as far as it goes.

Insert the jack from the inside into the endpin hole. Tip: a chopstick or something similar helps to get a hold of the jack and pull it through the hole.

Attach outside washer and nut and tighten. Attach the end knob.

*Endblock thickness adjustment nut*

**Important:** Make sure that the strap knob screws in ALL THE WAY over the outer threaded part of the jack, so that a tiny portion of the thread is exposed when the strap-knob is tightened. If you don’t do this, you might experience insufficient signal transmission and sound cutting in and out.

**Removing Superglued Pickups**

Removal is at your own risk. It might result in destruction of the pickup and/or personal injury.

Experienced luthiers should be able to remove the pickups by using a scraper blade wedged between bridge plate and pickup discs from the pinhole side. Be aware that this will very likely damage the pickups.

It also is dangerous to work with a scraper blade inside your guitar where you can’t see what you are doing. The superglue gel we supply does not bond super tight. This makes it possible to remove the pickups without damaging the wood, but you may damage a pickup during removal. You have to carefully test the pickups after removal and cleaning (explained later). You can purchase single replacement transducers from us if needed.

Removal can be tricky (and is not recommended to unskilled persons) because we do not want you to accidentally hurt yourself. We recommend using a scraper blade (razor blade with a handle on one side) to separate the pickup from the bridge plate from the endpin side (the back of the pickup). Make sure to get the blade flat between wood and metal side of the pickup. This is the difficult part. The pickup usually pops off once the blade is about 1/8 - 1/4” or so under the pickup. The glue residue on the bridge plate can be removed with fine sandpaper or you can carefully scrape it off with the scraper blade.

If done correctly there should be no damage to the bridge plate or guitar top. But again - some skill is needed to do this. Any good luthier should be able to remove the pickups.

**Saving the pickups for re-installation**

Be careful not to bend the pickups. Visualy inspect the pickups for bend marks or other irregularities. If they look damaged, they may still work but we recommend replacing bent or nicked pickups. Use the scraper blade to scratch off any remaining glue residue from the golden side of the transducers. Make sure not to bend the pickups while you are doing this. Some fine scratches in the metal will not hurt the performance.

To test the pickups, plug the pickups into an amp. (If you have a Trinity System you can still plug a mono cable into the endpin and you will get the pickups only.) Hold one pickup at a time about 3/4” (2cm) from the pickup head on the cable and tap the pickup with your finger. Do this tapping in both directions, so that you tap the black side and the golden side. You can do this quite hard. The tapping sound has to be amplified and all pickups should produce about the same volume. There should not be any missing taps. There should not be any loud "crackles." If the pickups test out fine, you can reinstall them.

Make sure that all glue residue is cleaned off the wood of the bridge plate or guitar top. Smooth the wood surface until it is perfectly straight and clean.

**Troubleshooting**

My Pure system sounds weird and hollow.

This is probably an installation issue. First, you have to determine if the tape, foil or superglue installation was used and if the system really was installed following the instructions. Unfortunately, even guitar techs sometimes do not carefully read through instructions (they are human after all).

We recommend you first check if the pickups are indeed mounted to their correct positions. Then you should test if they are solidly adhered or if they come off easily.

There are many factors that can go wrong during an installation, but the one factor that seems to be the dominant one is that not enough glue was used. This may result in the pickup only being partially bonded to the bridgeplate due to insufficient coverage and empty spots with no glue the glue drying prematurely and only partially or insufficiently bonding the pickup to the instrument. Either way, you will not see it unless you remove the pickup.

One indicator of good glue coverage is to see “oozed out glue” around the entire edge of the transducer. We recommend you carefully remove the system and re-install.

My guitar feeds back easily and I cannot play it with the band.

It is quite difficult (but not impossible) to use the Pure pickup in loud band situations, especially on small stages. It is designed more for the acoustic musician and the best possible natural tone. A sound hole cover is the first remedy here and helps a lot. Bands like Tom Petty Band use the pickup successfully, but they play on huge stages. Our PowerMix Pure System would actually be the best choice for high volume situations.

In addition to this there is most likely an impedance match issue going on as well. Acoustic amps and most competitors’ preamps are designed to work best with undersaddle pickups or other very high ohmic piezo pickups. They feature extremely high input impedance (5-10 meg), which boosts the bass response. Most competitors’ pickups need this high input impedance to boost the bass response of their pickups, because most of them sound tinny in passive mode.
The Pure has a healthy bass response to begin with. It is overkill to boost it with extremely high input impedance. The Pure pickup sounds best with lower input impedance like 500 k to 1 meg, even just in a line input of a mixing board. One should try it on a PA and plug the Pure straight into the line input of the mixer, just to see that the excessive bass response is gone right away.

The best option to compensate for this is to get a Pure Preamp.

It may also be necessary to turn down the bass control on the amp. We use an Ultrasound acoustic amp (10 meg input) and we have to turn down the bass on the amp basically all the way. But it sounds real good this way. If you are reluctant to turn down the bass because you think that the EQ must be at a centered position otherwise something would be wrong, it's important to remember that EQ exists to be used.

The high E string seems to be lower in output.

This is a tough one. First of all, this is not caused by a weak high string transducer. This phenomenon seems to happen only on guitars with tight X bracing. The brace closest to the high strings seems to inhibit the vibration on the high E string area of the bridge plate. This seems to affect bridge plate pickups in general. LR Baggs reports the same problem with their I-Beam.

Acoustically, these guitars sound fine and balanced, the phenomenon affects only the bridge plate. It may be corrected by adding a fourth transducer beyond the X brace on the high string side. This one would be glued to the soundboard. Soldering is necessary here.

It may also help to relocate the e-b string transducer towards the high string side X brace as far as possible. These remedies may not correct the problem 100 percent.

The “surefire” way to correct this problem is to ad the K&K FanTaStick Undersaddle Pickup. This would mean upgrading to a PowerMix Pure System.

You could also try to add the Trinity Mic and aim the mic towards the high e string, but the additional undersaddle pickup is a lot more effective.

The good thing is that you do not need to blend in a lot of undersaddle pickup to amplify the e string. Unwanted undersaddle characteristics like quack or harsh tone will not show in the entire sound picture. It really works great!

One or more Pure pickup(s) does not work (no sound) or works intermittently.

This may happen if the strapnut of the endpin jack is not screwed in all the way. Remove it and try again without it.

If this fixed the problem, you have to back off the inner nut in order to allow the precise amount of outer thread to be exposed. This is trial and error. You may also have to back the screwcap off in order to do this.

One or more strings are lower in output – is one Pure pickup defective?

(If it is the high E string, please see previous question.)

A defective transducer is not likely. We thoroughly test each of the transducers several times during production. It is more likely that it is an installation issue. There are many factors that can go wrong during an installation, but the one factor that seems to be the dominant one is that not enough glue was used. This may result in the pickup only being partially bonded to the bridgeplate due to insufficient coverage and empty spots with no glue the glue drying prematurely and only partially or insufficiently bonding the pickup to the instrument.

One indicator of good glue coverage is to see “oozed out glue” around the entire edge of the transducer.

We recommend you carefully remove the system and re-install.

Please follow these instructions. We can also send you removal and re-installation tips.

The Pure pickup jack is too short for my endblock.

On some very old guitar models this seems to be the case. Unfortunately, no longer jacks are available on the market. What you can do is either not use the inner nut but use a washer against the screw cap only. Or you can eliminate the screwcap, but in this case you would have to unsolder the wires and then resolder them. Usually eliminating the inner nut and using some “locktite” glue to just fix the screwcap on the first thread should allow for the extra length needed. As a last resort, you can eliminate the strapknob.

My Pure pickup seems to momentarily shut off, especially when I press or bump on the bridge with my wrist.

We’ve experienced this phenomenon a few times and it seems to happen only with the Pure 12 String but a very few incidents were reported with the Pure Mini as well. It has to do with two things: Extremely high impedance of the input you plug in (like LR Baggs Para Di or Fishman Platinum preamp or and very high impedanced acoustic amp) and a special protection circuit used in some amps.

First off, the pickup does not shut down momentarily, but the amp you are using has a safety protection circuit, which shuts the power amp down momentarily in order to protect the speakers. Some Fender acoustic amps and powered studio monitors feature this protection circuit.

What happens is this: A “burst” of low frequencies is produced when you push down or bump on the bridge with your wrist. This “burst” would actually cause very dramatic speaker movement and the protection circuit kicks in.

If you use Baggs Para DI preamp, for example, this may happen. It exaggerates the bass frequencies due to its extremely high impedance input. The Pure Pickup has strong bass to begin with and does not need any further boost. The remedy here is to use our K&K Pure Preamp and turn down the bass on the amp to the degree needed for good sound, but not more. You will also find that if you plug the guitar directly into a 1/4” line input of a mixing console, the “cut out” phenomenon will not happen. This is because the line input of the board is low impedance.