

## Trance Audio Acoustic Lens Pickup Installation Guide - The NEW Template Method

This guide will show you how to easily and precisely place the Acoustic Lens transducers in your guitar by creating an easy-to-make cardboard template that fits your specific instrument.

Using this method you can install our pickups yourself with no superglue or epoxies, no special or exotic tools, and no need to drill holes or perform any special or complicated operations inside your instrument. ***Use only the provided adhesives for pickup installation;*** if you need more or have questions, contact us.



Please read the following instructions carefully, and contact us by phone or email with any questions. ***Prior to installing the pickups, your guitar must have a standard endpin jack hole (1/2"). If your guitar does not have an endpin jack hole, contact a luthier or experienced guitar repair person to add this. Trying to drill the hole without the proper tools will cause extreme damage to your instrument!***

## PREPARATION

In order to prepare your guitar for Acoustic Lens installation, you **MUST** clean and prepare the bridgeplate first by sanding it lightly with a small piece of #100 grit sandpaper wrapped around a small sanding block (a 9-volt battery works well for this). Blow out any sawdust from the inside with compressed air, or turn the instrument upside down and shake it out.



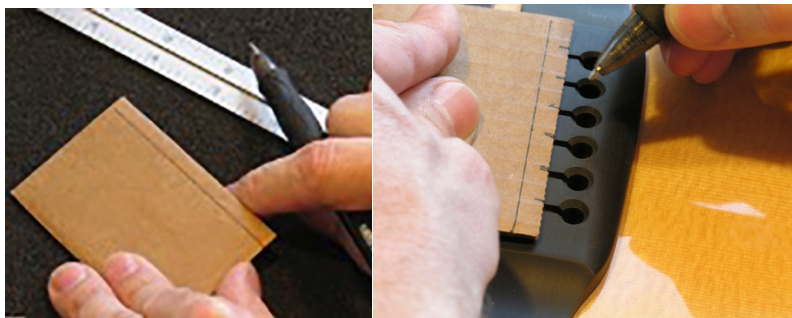
Wipe the bridgeplate clean with a clean cloth lightly moistened with water or Windex™, and allow it to dry for at least 10 minutes. **NEVER** use Naptha™, lighter fluid or any other cleaners like this to clean the bridgeplate or pickup, as these will leave deposits behind that will destroy any chance of obtaining a proper bond. Pure Acetone can be used to remove any stubborn adhesive left behind, but use it sparingly, and don't get it on the finish of your instrument.

Once you're finished preparing your guitar, you will need the following items:

- Cardboard (1/8" or thicker, provided)
- Scissors
- X-acto™ or other razor knife
- Cutting board or suitable flat cutting surface
- Ruler
- Golf Tees (provided, or 1/8" dowels, etc.)
- Small rubber O-rings (provided)
- Pencil or pen (fine point is best)
- Temporary adhesive tapes (provided)
- E6000 adhesive (provided)
- Small mirror that will fit through the soundhole of the guitar
- Flashlight



Using the scissors, cut a 3" x 1.5 - 2" template blank from stiff, corrugated cardboard. Cardboard that is thicker (around 1/8" or so) will work better for this, as there will be more area to grip the sides of the pickup when pressed into the template.



Using the ruler, draw a line about  $\frac{1}{4}$ " inside along one edge. Then place the template centered next to the bridgepin holes. Mark the position of each of the holes along the edge of the template and on the line.



Using a pen, pencil or other sharp object, poke a hole in the outer two holes only.



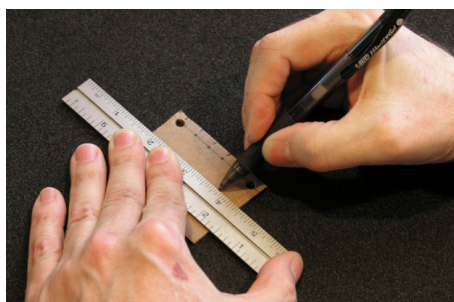
Carefully enlarge the holes to the proper size using the golf tees (or other), then place the template on the instrument bridge, putting the tees in the two outer holes to hold the template in place.



Making sure that the template is parallel to the top of the guitar, mark the location of the saddle slot on each side of the template. If you can't see the saddle slot on each side, trim the width of the template so the saddle slot is just visible on each side so you can mark it.

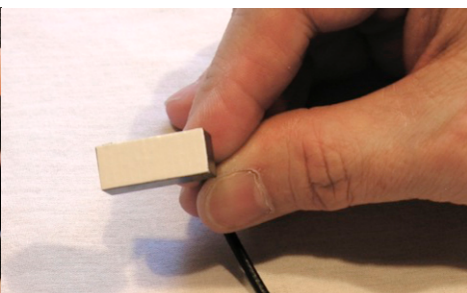


Remove the golf tees and place the template on a flat surface. Use a ruler to line up the two saddle slot marks on the template, and draw a line connecting them with a pen or pencil. You may want to create additional copies of your template including the marks for the location holes; if you decide to make adjustments later, this will give you a fresh blank to work from without having to recreate your work.

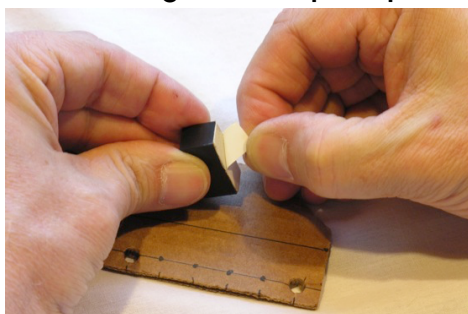




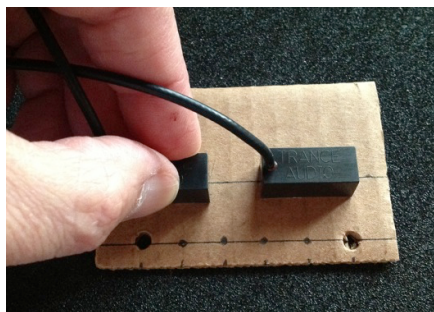
Apply a strip of the included temporary white adhesive to the red sensing surface of each of the pickups. Using your thumb, press the adhesive over the entire red sensing surface of the pickup to bond it.



Trim the excess adhesive from the pickup on all sides, using a sharp pair of scissors, so you end up with the tape aligned with the edges of the pickups.

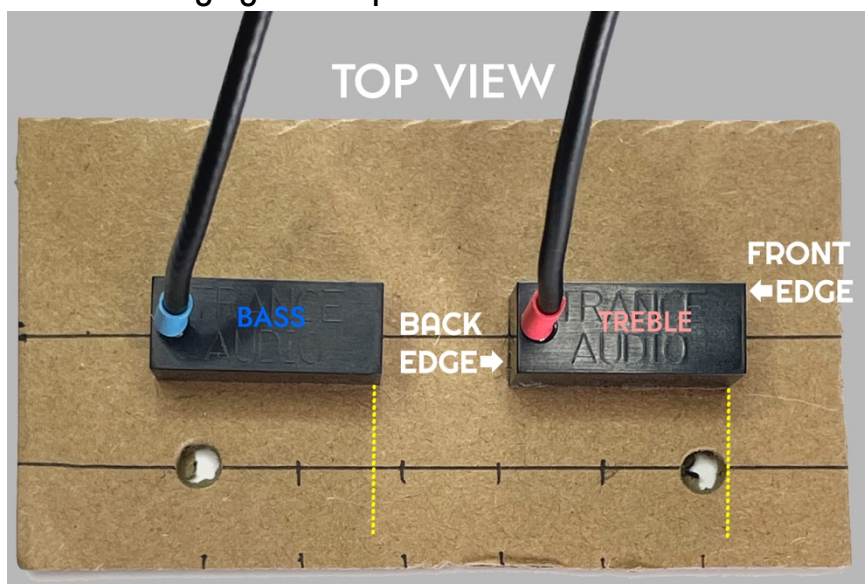


Remove the backing paper from the adhesive (an X-Acto blade can be helpful to help peel away the edge of the paper)



Place the pickups centered on the saddle line of the template in the positions shown. Weaken the stickiness of the adhesive first by pressing on it with your thumb for a while. The

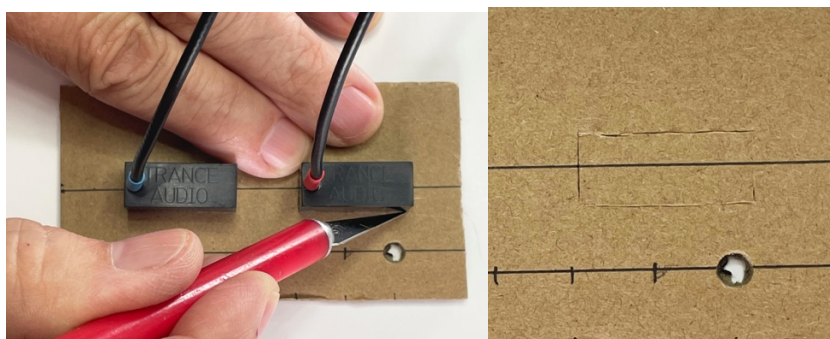
adhesive is very sticky, and you want to be able to apply and remove the pickups to adjust and locate them correctly without damaging the template.



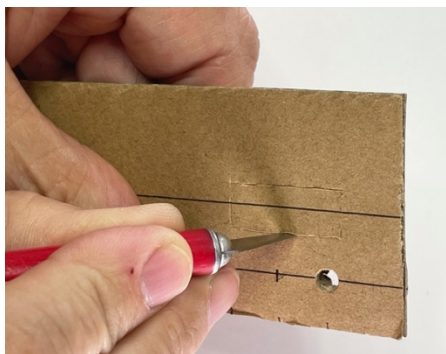
*The front edge of the treble (red) side pickup is lined up to the far edge of the hole for the high E string.*

*The bass (blue) side pickup is placed so the front edge is about 2/3 of the way between the A and D strings, closer to the D string. Both pickups are centered on the saddle line.*

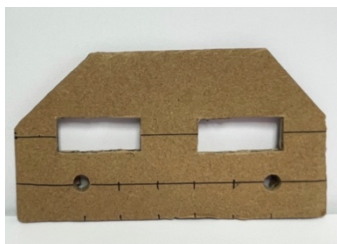
Make sure that the pickups are far enough away from the bridgepins (represented by the golf tee holes on your template) so that the string ball ends won't crowd against them when installed. Some guitars have the bridgepins very close to the saddle, so this is a good time to make sure that there's enough room. If things look too close, you can move the pickups slightly off the saddle line towards the sound hole to make enough room. This is also worth checking if you plan to install the pickups closer to the bridgepins.



Once you've got the pickups placed correctly, use the X-Acto knife to score the cardboard as close as possible around the pickups. The idea here is to create a cutout in the cardboard that will hold both pickups securely in place while you transfer the template to the inside of the guitar and install it in the proper place at the bridgeplate. Using the X-Acto knife to trace closely around the pickups will allow you to create a template to easily do that.



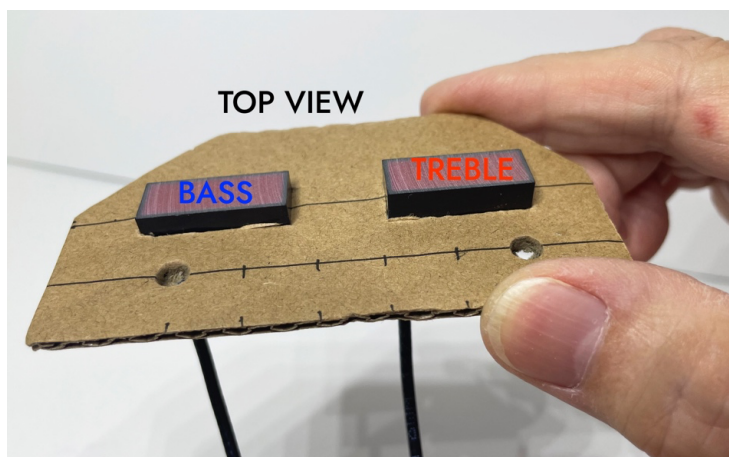
Once you've finished tracing around the pickups,



you can remove them from the template and then use the X-Acto knife to carefully cut out the outline created on the cardboard and remove the inner area. You can use the tip of the X-Acto blade to pierce

the cardboard right at the traced outline, and then by using small sawing motions you can precisely cut along the shape of the pickup. Cut out the area for both pickups then trim the corners of the template so they will clear any bracing.

Carefully press both pickups into their proper locations from the underside of the template, as shown below.







Install the golf tees in the two outer endpin holes, and slide two of the supplied small rubber grommets over each golf tee on the inside of the guitar as shown. These will hold the tees firmly in place, and they also serve as a spacer between the cardboard template and the bridgeplate so it won't stick to the E6000 cement during installation.



Hold the template with the pick ups installed cupped in the palm of your hand as shown, with the pick up leads hanging down. This will allow you to position the template inside the guitar while keeping the pickups held securely in the template for placement.



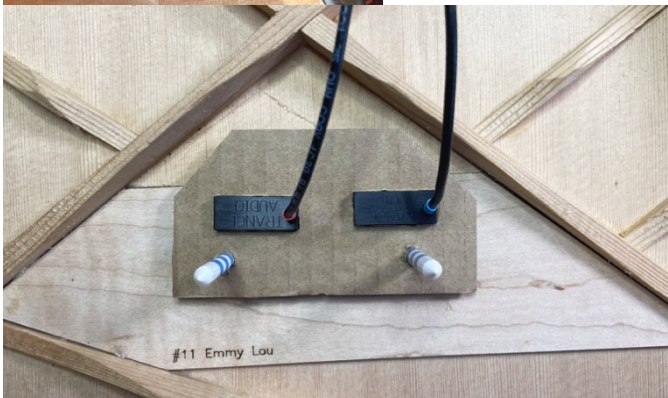
Move the template inside the guitar through the soundhole, and using the tips of your fingers, locate the tips of the golf tees inside the guitar, and guide them through the two matching holes in the end of the template.



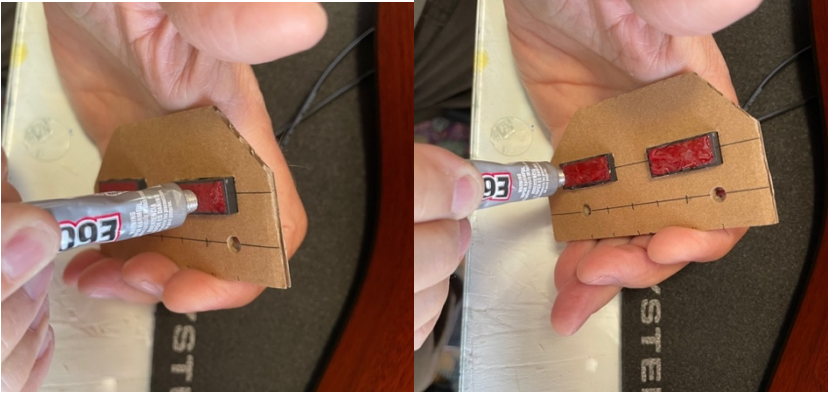
Once you have the tees placed correctly in the holes, slide the template and pickups up until the pickups are pressed against the bridgeplate.

Check the template using the mirror and flashlight to make sure it fits inside without being blocked by any bracing.

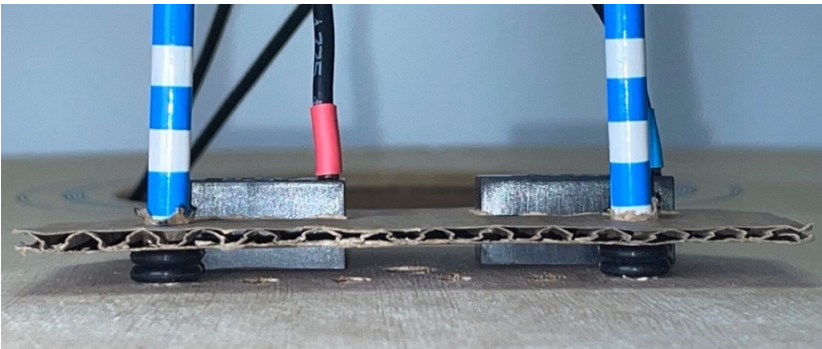
Practice placing the template this a few times until you are comfortable with moving and locating the template into place and installing the pickups on the bridgeplate.



Once you're ready, apply a coating of the E6000 cement to the red sensing surface of each transducer. You don't need a lot of cement, but make sure that all of the red sensing surface is covered.



Once the pickups are placed on the bridgeplate, press each pickup against the bridgeplate with your fingers and wiggle it around a bit to make sure that the E6000 cement completely coats the area underneath the pickup. Using the mirror and light, make sure that the pickups are positioned correctly in the template, and that the template is sitting parallel to the bridgeplate so it doesn't stick to the adhesive.



Then, using light finger pressure, hold the two pickups in place against the bridgeplate for 10 minutes. Don't try to force all of the adhesive out from underneath the pickups; you want to leave a thin layer of the adhesive between the pickup and bridgeplate as it cures.

After 10 minutes, place the guitar on its face (so gravity is working with you to press the pickups against the bridgeplate). A simple way is to place the guitar back in its case and turn the case face down, then let the adhesive cure for 6 to 8 hours, or overnight. The adhesive will be reasonably cured in that time, and will reach a full cure in 24 to 72 hours. The sound from the pickups will grow a bit louder and deeper during this time.



Once the adhesive is cured, carefully remove the template, sliding it up and over the pickups and golf tees, and sliding it along the wires to the soundhole. Using the scissors, cut the cardboard template tab between the two pickup

holes to release the template, and remove it from the instrument.



Now that your pickups are installed, you can move on to installing your Amulet Ultra preamp and endpin assembly! Please see <https://tranceaudio.com/support/> for more info in your Amulet Ultra system's User Guide.





## Removing an Installed Pickup

The E6000 allows you to remove a pickup without causing any damage to the pickup or the bridgeplate of your guitar. If the pickup has been installed for a day or so, you can remove it by simply twisting it in either direction. The pickup will pop loose and can then be lifted and removed. Any adhesive left behind on the bridgeplate or pickup can typically be scraped off using your thumbnail. Residual adhesive can be cleaned by scrubbing it with a cotton ball lightly moistened with pure Acetone (some forms of Acetone like nail polish removers have fragrances, oils, or other unwanted additives).

If the pickup has been installed for a few days or more, you can use a small open end or crescent wrench to give you a bit more added leverage to remove the pickup.

A small 10mm or 7/16" open end wrench will properly fit over the pickup, and allow you gently apply a twisting rotation to it until it pops loose from the bridgeplate.

Here's a pickup that had been installed for two weeks being removed using a small 6" crescent wrench.

