



**DISCLAIMER:** For the best results, Earvana LLC recommends that a qualified luthier or guitar technician install the Earvana Compensating Nut on your guitar. Earvana LLC is not responsible for damages if you choose to install the Earvana Compensating Nut on your own. As always, use care when handling sharp tools and objects such as knives and saws.

## Installation Instructions

Having the proper tools is essential for an easy installation. If you don't have the right tools, you will spend more time trying to figure out ways to do what you want, instead of just doing what you want.

These are the most common tools I use to do work on guitars. They come in very handy for most repairs. A set of files, including a flat file, a triangular file, a round file, a V file, a half round file and a box file. Two saws, one fine cut and a medium fine cut. Three jewelers screwdrivers, two flat blade and one Philips. Exacto knives, a set of allen wrenches, a bottle of super glue gel, and a pair of pliers. All of these tools are available at most good craft stores for around \$20 total.

A polishing cloth, such as a jeweler's cloth (not pictured) is also good to have handy to protect parts and wood when cutting and filing.



The first step to install your new Earvana Nut is to remove your old nut. This is a pretty simple task.

Ok, first step. We want to remove the old nut. Take the exacto knife and score the front of the nut (see figure 1). Do this several times, each time adding a little more pressure. The purpose is to loosen the glue holding the nut in place without ripping or chipping the neck or fret board.



(Figure 1)

Next, score the other side of the nut in a similar fashion (see figure 2)



(Figure 2)

Next, we need to cut the nut in a way that allows the removal of the nut without damage to the neck. To accomplish this, take the fine blade saw and cut through the nut, taking care to not cut all the way. A little more than half way is about right (see figure 3).



(Figure 3)

Once the old nut is cut, it will look like figure 4. The slot allows the top of the nut to squeeze together, which helps to break the bond of the glue holding the nut in.



(Figure 4)

Now, we will remove the old nut. Take the polishing cloth (or other protective cloth) and place it over the fretboard. Take the pliers and grasp the nut firmly (as pictured in figure 5). Gently rock the nut back and forth, alternating towards the head stock then towards the body of the guitar. This will loosen the glue that holds the nut in the nut slot.



(Figure 5)



(Figure 6)

After rocking the nut back and forth, it will begin to lift out of the nut slot, as in figure 6. Once the nut has been removed, inspect the nut slot and see if any pieces of the nut have broken off, or if any of the wood from the fret board is damaged. See figure 7.



(Figure 7)

Next, the nut groove should be filed down so it doesn't have any burrs or extra material that could cause the new nut base to sit unevenly in the groove. The box end file is best for this purpose (see figure 8). Just keep in mind that the nut groove is NOT flat straight across. It probably has a bit of a curve to it, so be very careful when filing. Usually, you don't have to press too hard when filing, and there shouldn't be a lot of material that has to be removed.



(Figure 8)

Once the nut slot is filed smooth, you should dry fit the Earvana nut base to the neck to test the fit. Don't worry if it doesn't fit perfectly, we will fix that soon enough. You will notice that the nut may be a little wider than the neck itself, that's ok. The nut base will be trimmed later.

One trick is to make sure that you mark the nut in some way to insure that you always put the nut into the slot the same way every time. I do this by marking the bottom or side of the nut with a magic marker, as in figure 9 and 10. This helps me to place the nut in the slot with the same end to the same side every time.



(Figure 9)



(Figure 10)

Once you place the nut base in the nut slot, run your finger along where the nut meets the neck. You will probably feel a bit of an edge from the nut. We now need to file down the nut base so that the nut bottom will sit in the slot and be flush with the neck. For this, you can use the flat file, but you want to work the file the “short way” (figure 11).



(Figure 11)

Filing in this direction is easier to follow the curve of the nut bottom.

**REMEMBER: ONLY FILE THE BOTTOM OF THE NUT BASE**

Hold the nut in your hand as pictured in figure 11, and push the file towards you, then away from you. Again, you don't need to put much pressure as the material is soft and will file easily. As you move the file back and forth, move it left to right as well. This helps to make sure that you are filing evenly.

Place the nut back in the slot several times and run your finger over the edges to see the progress you are making. Check to make sure that you use the mark you made on the nut base and put the nut in the same way every time.

Another way you can test the fit of the nut base is to take the nut top and place it on the fret board. Place the nut base in the nut slot. Pull the nut top back towards the nut base and if the top gets “stuck” or stops when it hits the nut base, then the nut base needs to be filed a bit more (see figure 12)

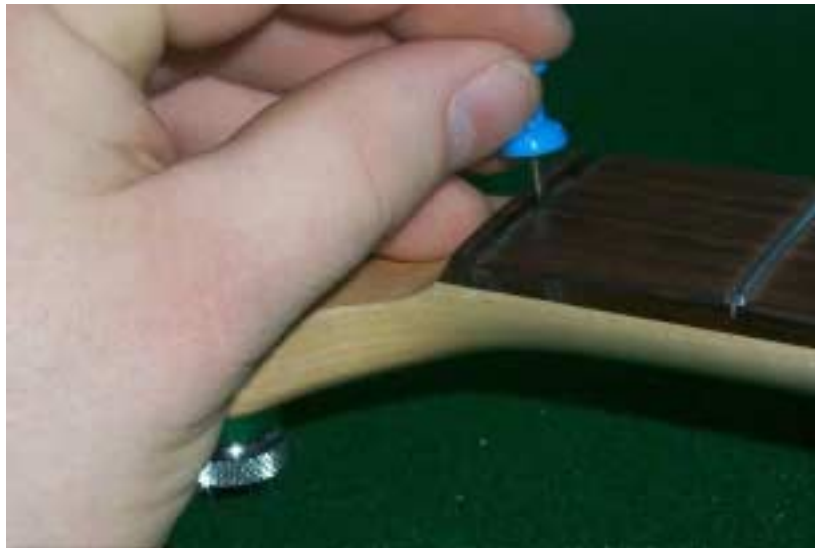


(Figure 12)



Once the nut is filed so that it is flush with the fretboard, you then want to dry fit the parts together. Take the nut base out of the neck, and attach the nut top using the screws provided. Be careful not to overtighten the screws. Once assembled, turn the nut base over and see if the screws extend past the nut base. If they do, then we need to make one more modification to the neck.

If the screws extend past the bottom of the nut base, disassemble the parts and put the nut base in the nut slot in the neck. Next, get a thumbtack and mark the screw holes by pushing the point of the thumbtack thru the screw hole and down into the neck. The wood might be hard, but make sure you get a mark on the neck. Do this for each screw hole. Remove the nut base. Locate each of the marks and use the thumbtack to mark the hole a little deeper (see figure 13).



(Figure 13)

Once the holes are marked, take the screws that attach the nut top to the nut base. Use a screwdriver and drive the screw into each one of the marks that you made. You only have to put the screw in one or two turns at the most. Once this is done, take your box file and file down any material the screw may have lifted out of the neck.

Having done this creates small pilot holes that the screw will go into after you have glued the nut base down, and then are attaching the nut top. If you don't do this, you may find that the nut base will "pop" when the screw hits the neck and is trying to bite into the wood. There is a lot of pressure under the nut when the screw hits the neck, so this takes the pressure off and allows the screw to go into the neck.

Don't worry, this will not affect your guitar in any way, nor will it make your neck any weaker. If anything, it will transfer sound to the neck better since the pieces are joined more securely than if they were just glued.

Now that you have the holes marked and ready, put the nut base back in the slot, and take the thumbtack and place it into the middle hole and realigned the nut base so the thumbtack is straight up and down. Now it's time to trim the edges of the nut base to make them even with the neck.

Place the jewelers cloth and place it over the edge of the fret board and down the side of the neck. Take the fine-toothed saw and gently mark the edge of the nut base right where the neck meets the base. Once the nut base is marked, you can either remove the base and cut it with the saw or you can push the nut base out a small amount and cut the base. Don't cut the base with the saw against the neck as it will cut the neck as well as the nut (I learned this one the hard way, a long time ago). See figures 14 and 15.



(Figure 14)



(Figure 15)

Repeat this step for the other side. Once done, dry fit the nut into the slot and check it. File away any rough edges. It should look like figure 16.



(Figure 16)

Ok, so now it's time to glue the nut base to the neck.

Take the superglue gel and place some on the bottom side of the nut slot (figure 17). Don't put too much on the bottom, as it will actually raise the height of the nut base. Also



put some glue on the sides of the nut slot. Make sure that you press the nut base into the nut slot exactly where it is supposed to line up. The glue will bond pretty quickly and you won't get the chance to wiggle the nut base around too much. Press the nut base as far down into the slot as possible. Place the jewelers cloth over the nut base and press down on the nut base with the pliers (or other hard object... see figure 18). Hold for one minute.



(Figure 17)



(Figure 18)

Let the nut sit for 24 hours before doing any more work. This will give the glue time to set and harden.

All that is left is to mark the nut top and trim it to size, then attach the nut top to the nut base.

First, attach the nut top to the nut base using the screws in the kit. Don't tighten the screws all the way down, as you just need to mark the nut top so you can cut it to size.

Once the nut top is cut down or filed to size, then you can attach it. Place the screw in the middle hole, then place it on the nut base (figure 19).



(Figure 19)

Once the nut top is set correctly, screw in the middle screw until firm (not tight). This will allow the nut top to move a bit as you tighten the other screws. Place and tighten the two outside screws until firm (not tight).

Push the nut top back towards the headstock of the guitar. This is the position for when you string and intonate your guitar. See figure 20.



Once you have strung and intonated the guitar according to the instructions provided with the kit, tighten the screws the last little bit to keep the nut top in place. Be careful not to strip the screws!

That's it!

Congratulations! Your Earvana nut is installed!

Play in tune & stay in tune!