Assembly of the electric Krar

!! Every wooden part of the frame is marked with a "0"– all of those point upwards !!

The components require final sanding, which is done after assembly.

Take an overview about the obtained components.

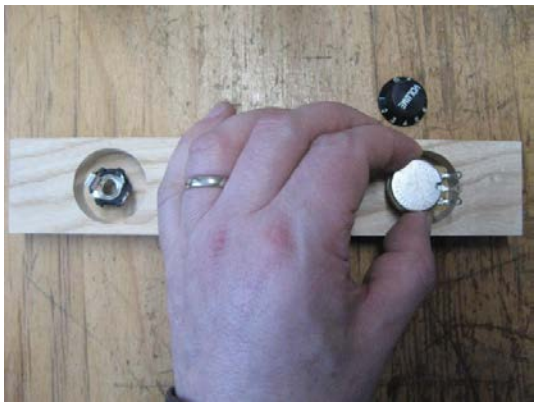
Left frame section, right frame section, lower brace, middle brace, top brace
4x short anchor bolt (for top brace)
8x long anchor bolt (fixation cross braces)
1x bottom (hard wood)
1x resonance-top with glued bracing plate (Attention – weak and thin, breaks easily)
2x top brace, actions, tailpiece, strings
1x pick-up with frame, screws
1x end socket, 1x potentiometer volume button

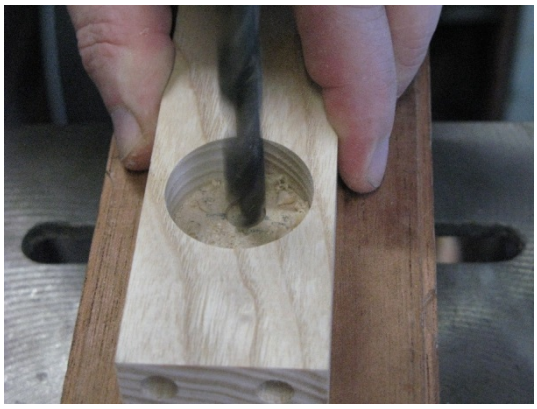
Following tools and materials are needed:
Wood glue, hammer, small cross recess screwdriver, bar clamps, wooden shims for cramping, sandpaper e.g. P120, P180, P320, string cutter, brush, wood oil for the surface, drill 1,5mm + 2mm, toothpick 2mm as fixation anchor bolt so top and bottom don't move out of place while gluing.
String cutter for wiring, knife for skinning, soldering equipment with solder, wiring diagram. Wrench for tightening the nuts on potentiometer and end socket.

In the electric version of the instrument, the feedthrough holes for the end socket and the volume control (Poti), have to be drilled before gluing. Usually, the end socket is mounted on the right side.

For definition of orientation, look out for the marker “O“ (top side) on every part of the frame.

The Poti has to be drilled excentrically in the designated recess. Choose a drilling diameter slightly bigger than the respective axes of Poti and socket.
Underlay a piece of wood below while drilling. This will reduce bursting of the wood at the emersion point significantly.

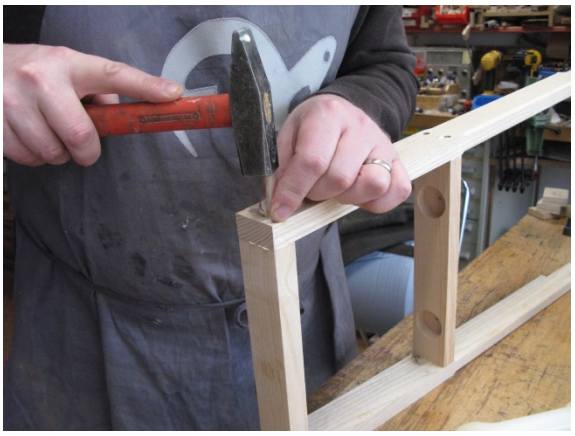
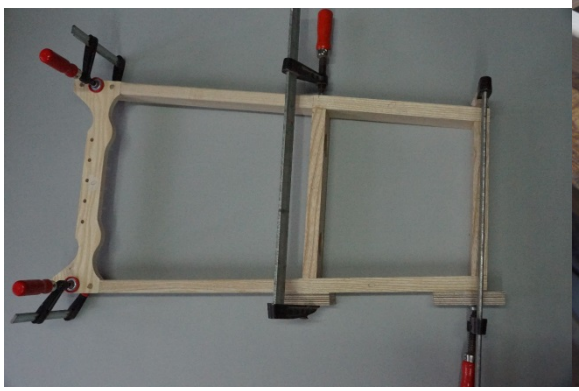
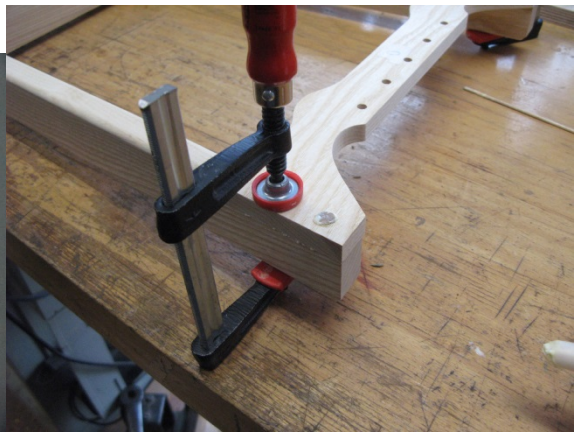





Optional:
Alternatively, the end socket can be mounted through the tailpiece at the end, like usual on other guitars. In this case, the access on the lower part of the frame would have to be made specifically. Thereby, the strings would be earthed automatically.

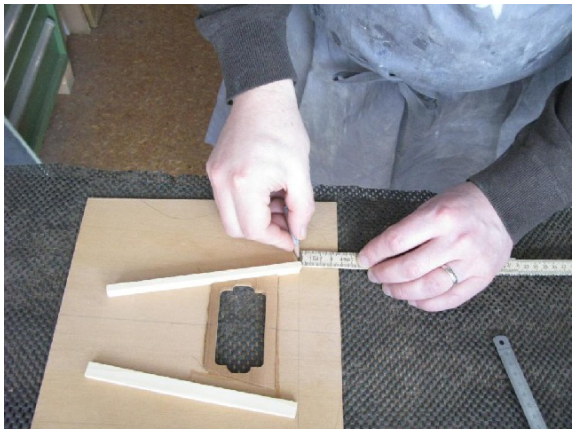
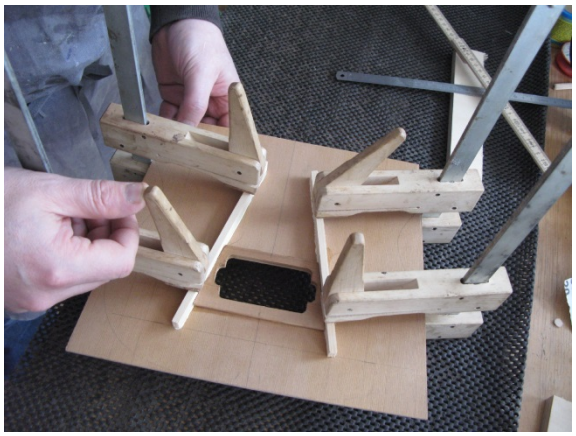

Lay down the frame and check, if all markers face upwards and the holes for the anchor bolts don't have any offset.

Start gluing the frame together. One side part at a time.

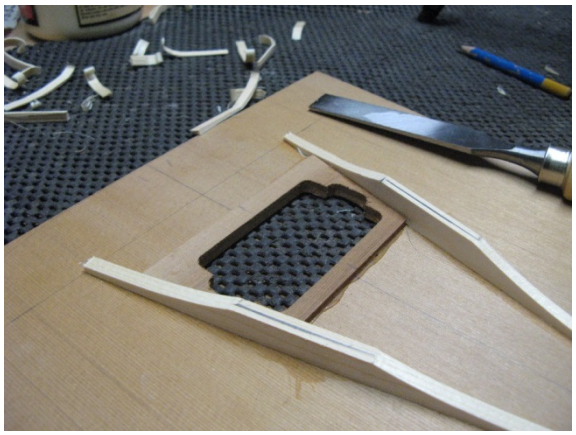





Remove excess glue with a thick straw. Glue on visible faces leaves stains when applying oil – please remove carefully and sand once again, if necessary.

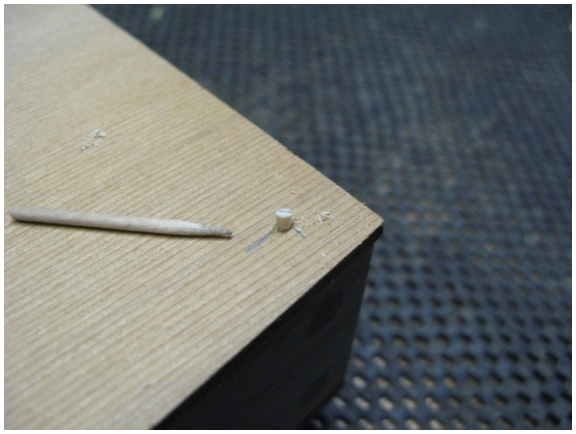
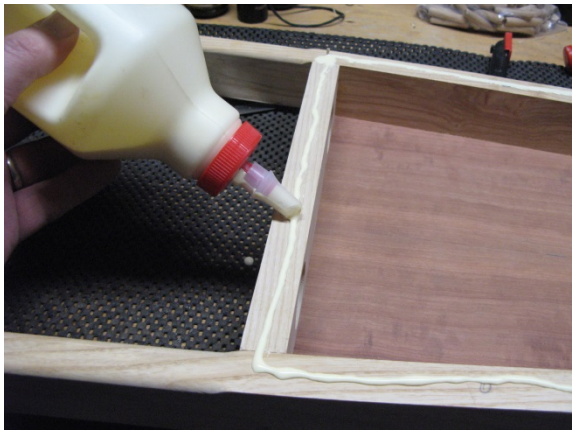

Sand the Pickup-cut out, mark the positions of the top braces and glue them on. The braces rest on the bracing plate and start in front at a distance of about 4cm.

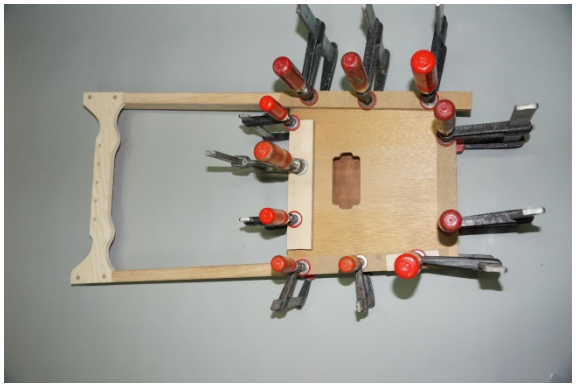
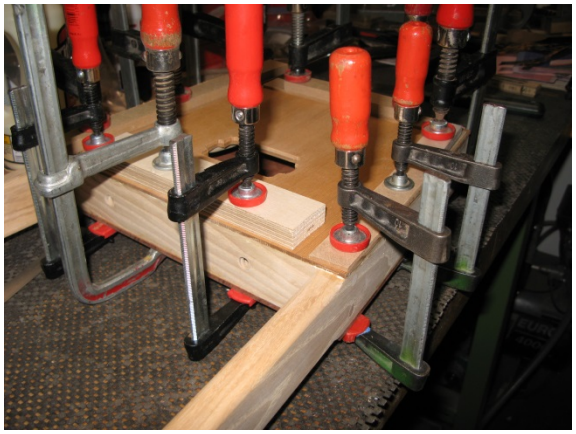





Make two markers at 10 cm and at 15 cm distance from the lower edge and carve off the brace from there until the end.
On the side, form a dome-shaped profile until the centreline and sand it.

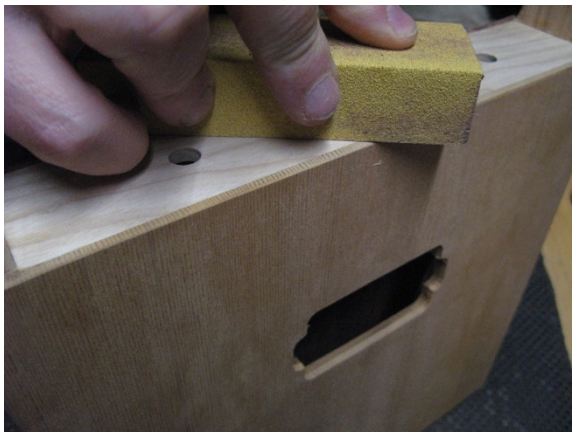


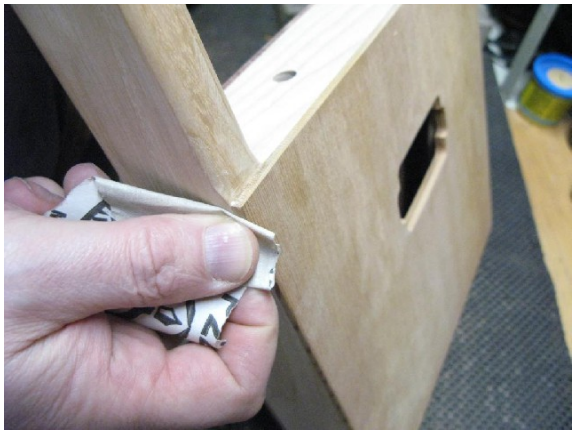

Glue the top onto the frame.
In order for it not to move out of place, use little fixating anchor bolts – toothpick parts with a length of roughly 10mm. Pinch the top onto the right position and drill two diagonal holes into the edges. Stick in the pins to fixate the position. Same applies for gluing the bottom.

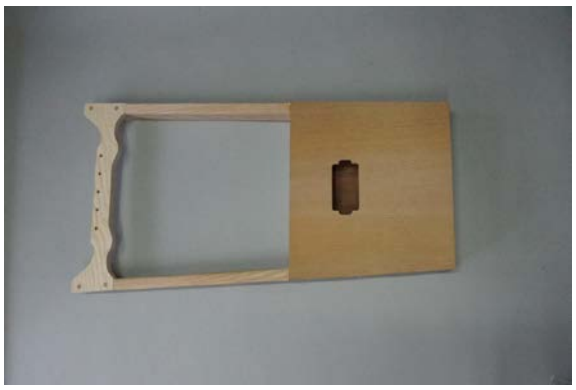



For cramping, use wooden shims, which press onto the entire frame. Remove excess glue. When the glue has dried, glue on the bottom. Now sand top and bottom succinct and round the edges as desired.

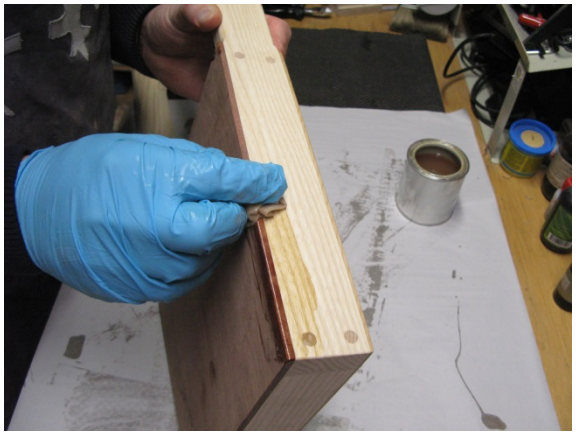






For protection and also for beauty, the Krar receives a surface treatment.
The easiest way to do this is to use suitable wood oil, e.g. from the speciality market. An amount of 150ml used in two layers is enough.

After final sanding, wet a cloth and apply the oil, following the manual. Remember to always remove excess oil, which didn't penetrate into the wood. Otherwise, there will be ugly, sticky spots.



After letting it dry overnight, start with the assembly.

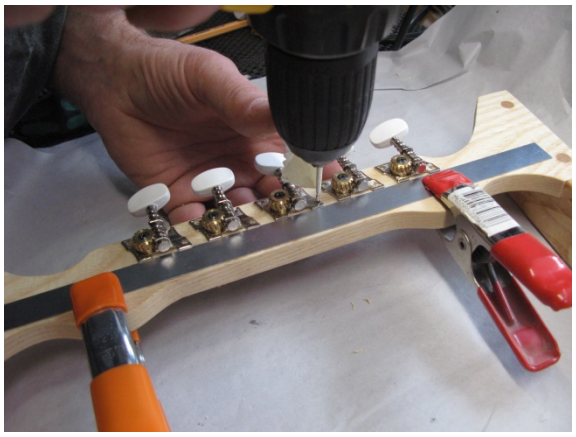
Place the tailpiece centred on the lower brace, so the string holes are roughly 2-3mm above the top.

All screw holes for small screws (action, tailpiece) should be drilled in advance


The actions should be aligned and screwed on after drilling. The strings' spindle should face downwards at that point,

Check, if all the spindles on every action are the same. Gear left, operating mechanism right.

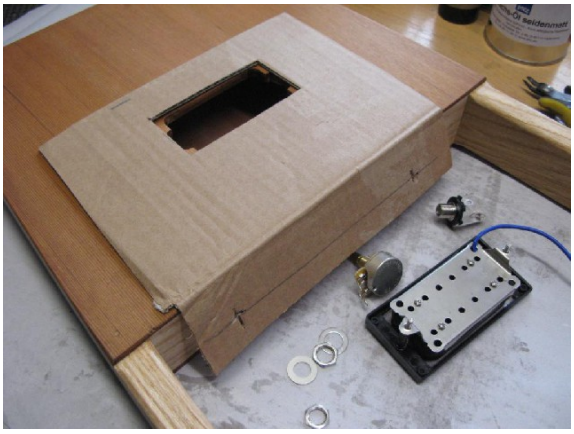
If that is not the case, they can be rebuilt easily. Loosen the fixing screw and assemble the spindle backwards.

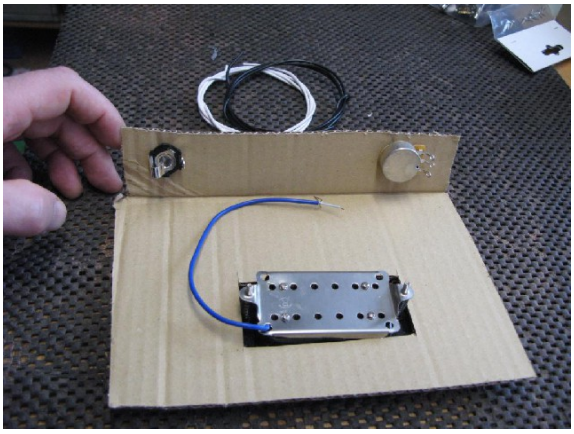



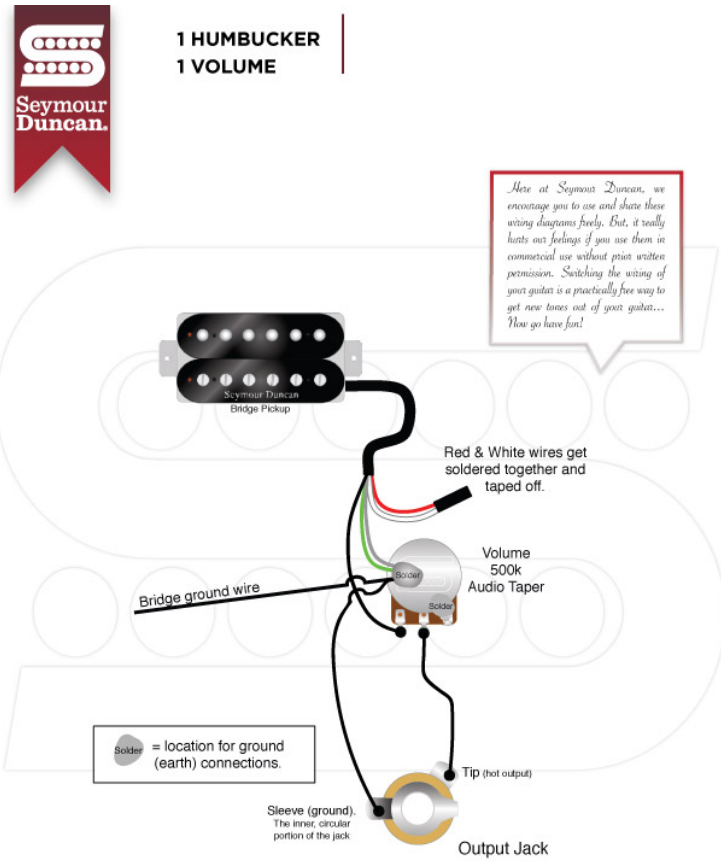
Electric wiring:

Insert the whole electric through the hole in the cover of the pick-up, after drying the surface.

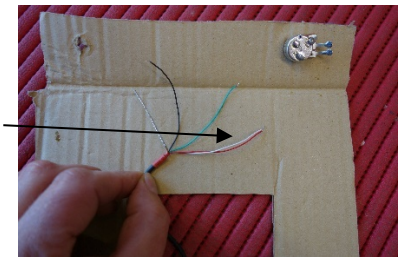
For simple assembly, wire the circuit outside, using cardboard. Cut holes on the respective spots for the components and solder the wires according to the wiring diagram.

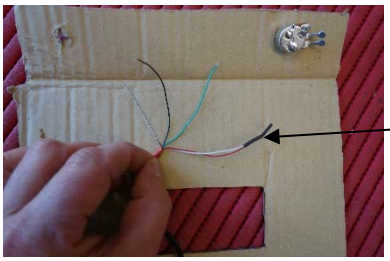




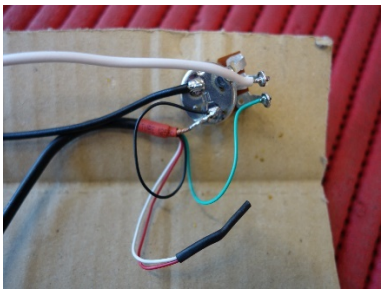


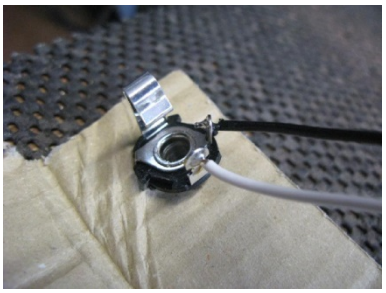
Solder cables together

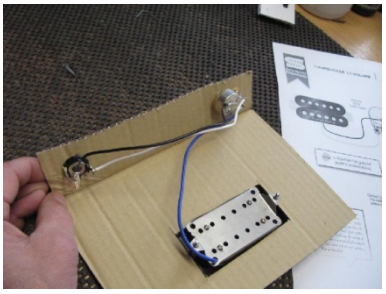




Insulate the solder joint

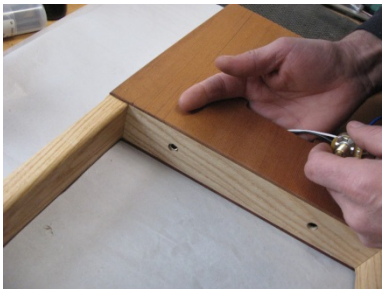




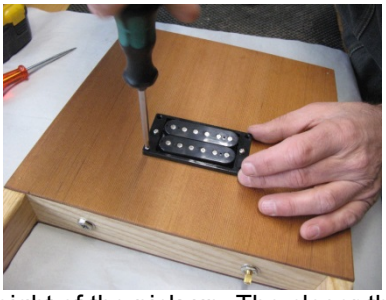


To control the operability of the wiring, establish a connection to an amplifier via instrument cables. Turn on the volume and use an object made out of steel (e.g. Nail, Screwdriver) to knock lightly onto the magnets. If you've done everything right, you should hear a clicking noise coming from the amplifier.

Insert the components bit by bit through the hole, attach the parts with the enclosed nuts and tighten them.



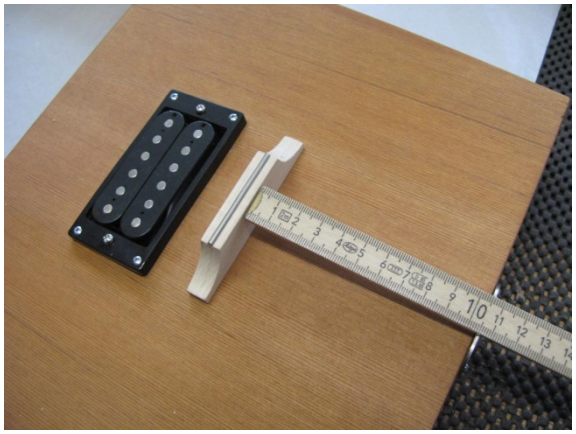
After marking and drilling holes, attach the pick-up with the enclosed screws.

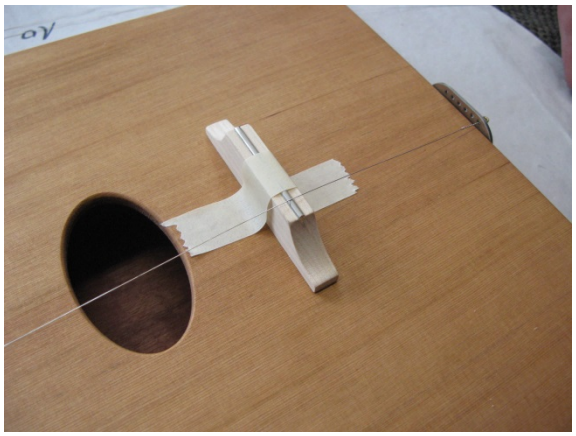


With both screws centred in the frame, adjust the height of the pick-up. The closer the strings get to the coils, the more they pick up. Be careful not to have a distance below 3-5mm to the strings. This can distort the sound.

Now the bridge has to be placed and the strings have to be stringed.

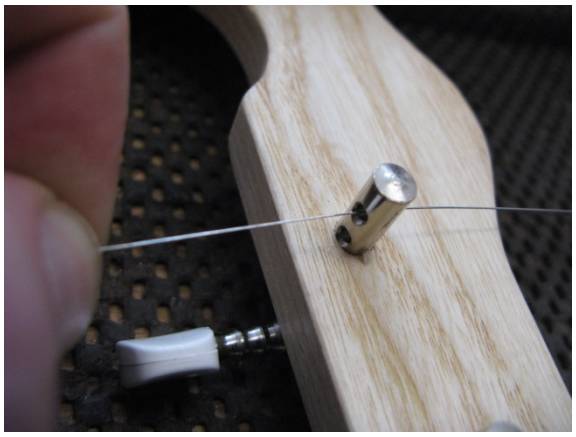
The bridge should be about 10cm away from the lower edge. It can be fixated with a drop of glue. For stringing, use tape so it stays in place.

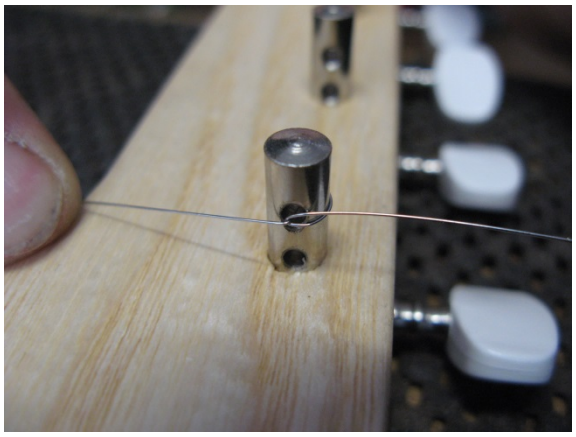


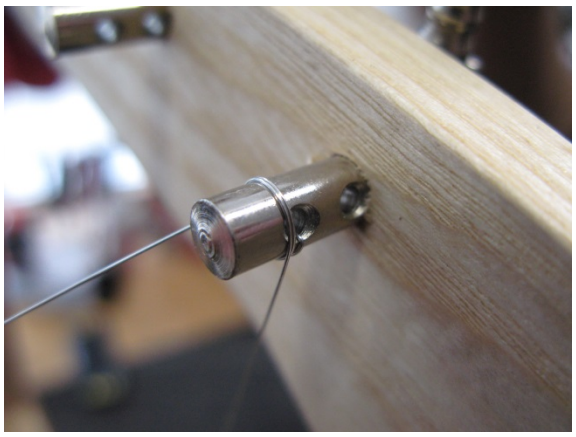


Stringing:

Use standard 0,12 steel strings for western guitars. Those have the same diameter as original african steel strings from bicycle brakes.
Slide them through the tailpiece, and mount them as you would on a regular guitar. Wind up about 3-4cm of the string, the rest can be cut off.







You can also attach a belt. Screw on the two belt pins accordingly:

Tune the strings as follows:

1. String (Thumb) „ d' / D - 4“
2. String „ e' / E 4“
3. String „ g / G 3“
4. String „ a / A 3“
5. String „ c / C 3“

Use an electric tuning device or another instrument as reference (piano).

Congratulations!! You have done it.
Have fun making music!

PS: for suggestions and tips, please trustfully address us.