

MAKING AN ELECTRIC UKULELE BASS.

By Brian Lemin Jan. 2012.

Introduction:

Well, this takes you through the process I tend to use when deciding on the design and then executing the design.

Step 1.

What design shall I use? Well, sometimes as design is in my head, or at least the purpose of the instrument, then I use whatever I know to produce an instrument that has the characteristics I have in mind. This time... I had no preconceived idea, so I went to the net and pulled up a load of bass guitar images from Google Images.

I chose a few and this is what I homed in upon. (these are A4 size pics)

Pic 1



On the right is what I call the traditional Uke Bass, I enlarged the bridge to full size, so I knew what I would have to make when the time came. All the others have an Ashbory Bass basic design and as I was planning to use Ashbory silicon strings for my instrument I decided that it would be one of the three designs I had pulled up. In fact I chose the design on the far left but would make it with a curved solid body.

Stage 2.

Decide upon a headstock design.

I did this in the same manner as I did the overall design. The result is in the next picture.

Pic 2



As you can see I slightly modified an Ashbory headstock..

Stage three.

Draw it up. I always do this on card and cut it out. This time I had a piece of wood from which it was going to be cut/carved so I laid it on the piece of wood.

Pic 3



As you can see I also had the key elements drawn onto the card; the bridge position, center line and other things I thought would be useful.

Stage 4.

I took this to the band saw, transferred the design to the wood and roughly cut it out. I do not have a picture of it at this stage, but you will see it in the following photographs.

Stage 5

Sanding and carving to shape. I did most of this on a small table belt sander, starting with a rough grit and ending up with a finer grit. Oh by the way the wood was at the thickness which I could use without thicknessing it. At this moment I cannot think of the name of the wood I used but it was very brittle and flaky when you offered even a sharp chisel or Japanese saw to it. This was quite disappointing as even on the finished instrument you can see on close inspection a few corrections I had to make!!

Stage 6.

I decided that I would have all the "cutting" and shaping done before I decided if I would have it fretted or not, so I proceeded to shape the head stock.

Pic 4



This is it at a later stage.

Do the nut and bridge preparation:

Pic 5



You can see how badly the wood behaved! ☹

Then I carved out the back for the electronics:

Pic 6



I do have a router, but I am less than happy to use it so I used the drill press and a chisel. You can see the wire from the under bridge piezo coming through to connect to the amplifier.

Stage 7

I decided that I would make it fretless as I thought the wood might give me trouble. Well it still did cause problems as I decided that I would mark the fret by filling in fret cuts with paint. That was a job and a half, it took multi coats, it ran into the grain of the wood. Grr, I like the finish but I would not choose that technique again. Or chose better wood!

Pic 7



Stage 8

Put in fret reference spots. I use plastic knitting needles for this. Drill an appropriate hole, insert the plastic needle and cut it off. Sometimes it might need a bit of instant glue! In the photo above you can just see them on the side of the fret board.

Stage 9

Final sanding and finish. I use whatever comes to mind at the time! I used polyurethane for this and hung it up to dry between coats.

Pic 8



I use a 0000 steel wool as the last sanding before I put on a finishing coat.

Stage 10

Tuning pegs and bridge.

I bought the Ashbory tuning pegs after failing miserably to make my own adaptation for the thick strings.

Pic 9



Pic 10



You can see that I had to "re build" to get things to fit etc. I have plenty of bone so I shaped up some bone for the bridge.

Pic 11



Now we move down to the other end.

Pic 12



Pic 13



The key to the bridge and the piezo under bridge pick up is that the groove for the bridge and the bottom of the bridge **MUST** be very (very) flat. It is quite hard to do, but if it is not flat, then the strings do not amplify equally and effectively.

Pic 14



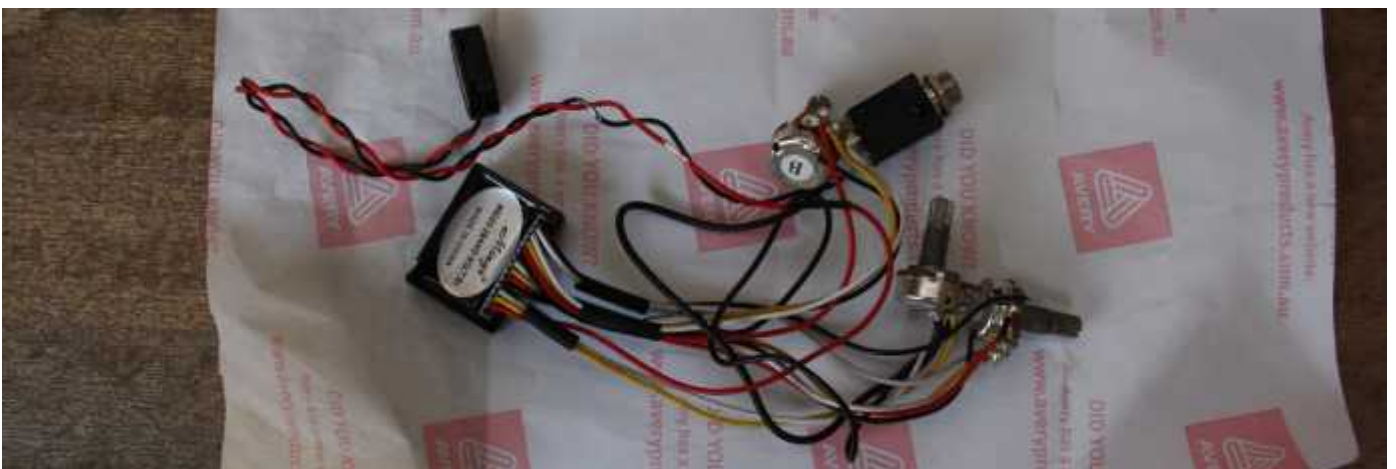
Pic 15



Stage 11.

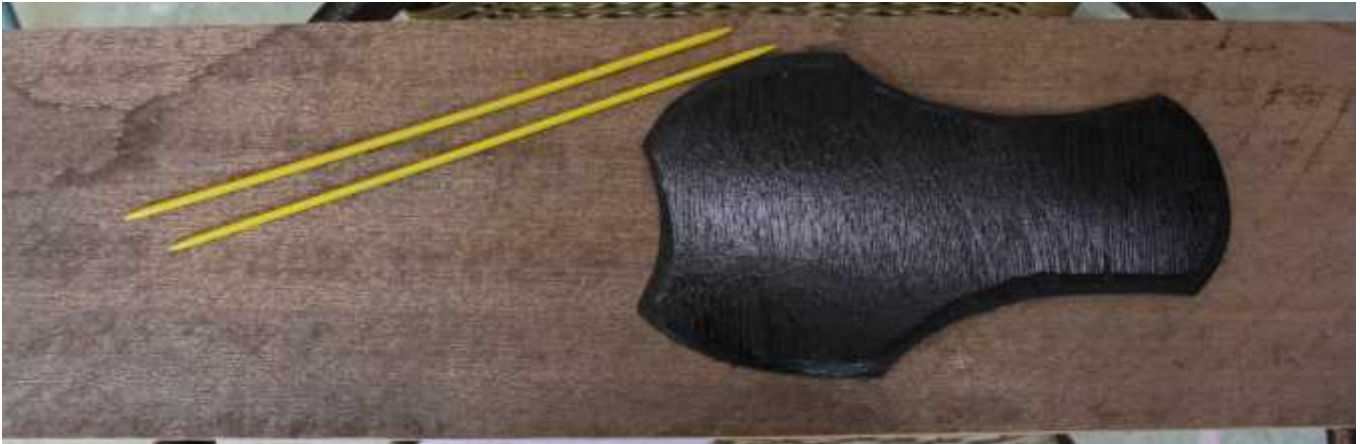
Fitting the electronics .I bought a set guitar pre amp stuff off eBay for about \$23 Aud (The US dollar was at about parity then)

Pic 16



It did not seem to offer any hassle to connect it up but I did have a bit of help and advice in sorting out which wire was which. Then I cut and painted black a cover for the electronics out of ply wood.

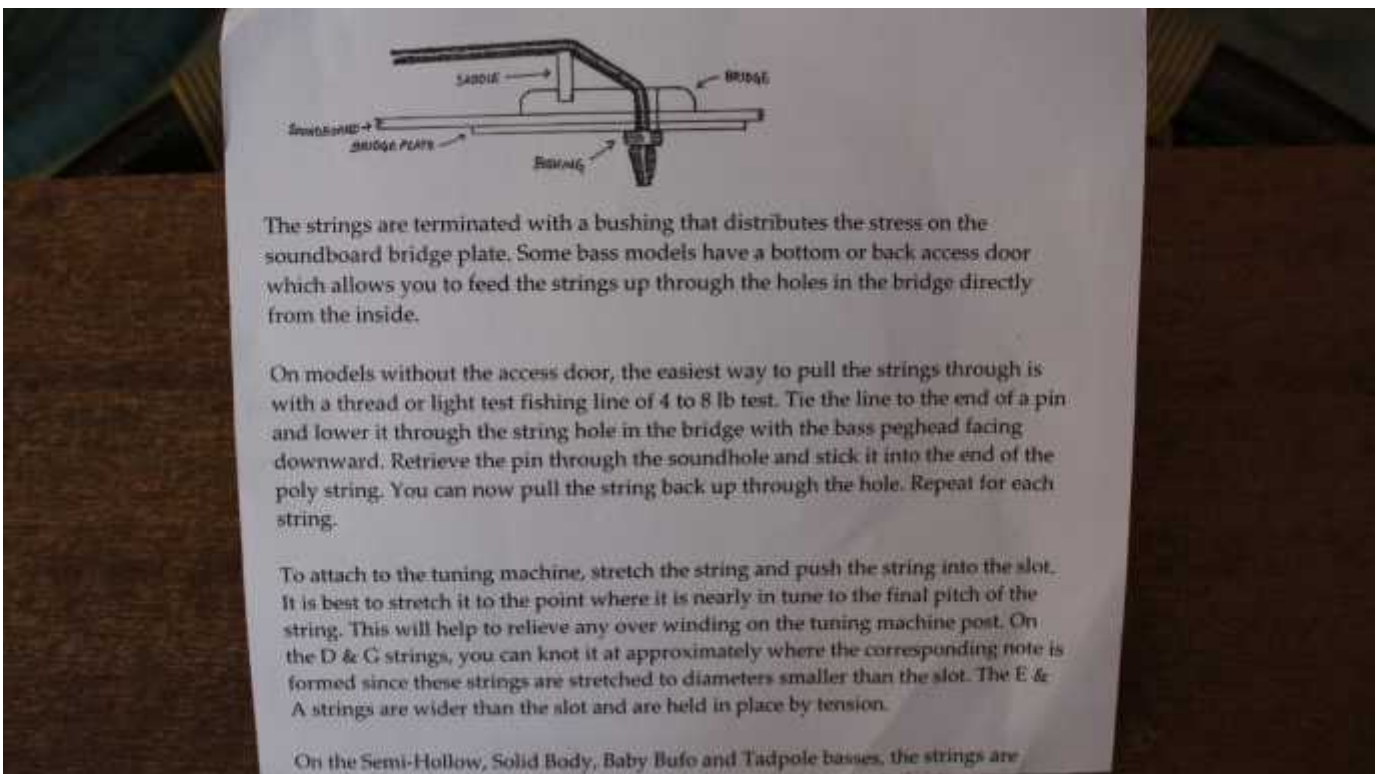
Pic 17



Stage 12. String it up.

I had studied the literature on how these strings were fixed and drilled appropriate holes for the system they recommended.

Pic 18



So I strung it up and the rest is history. It seems to work very well as a short string length Ukulele bass.

The specs are Tenor string length, about 430 mm. it is about 60 cm long and say 12 cm wide...

I have to tell you this very important thing. I used the Ashbory silicon strings and they sounded absolutely great... BUT they kept breaking! So I changed to the Kala

bass strings and they work very well indeed and the tone difference is very little indeed.

Now I have to look for a picture of the finished instrument. Hang on....

Found it and it is alongside the acoustic Bass uke I made. You can see I added some fret board transfers to "jazz it up" a bit!

Pic 19



I hope this helps. I will try and answer any questions you may have, remember I am no luthier, just a home build instrument maker.

Brian