Homemade banjo ukulele

by **balno** on April 12, 2009

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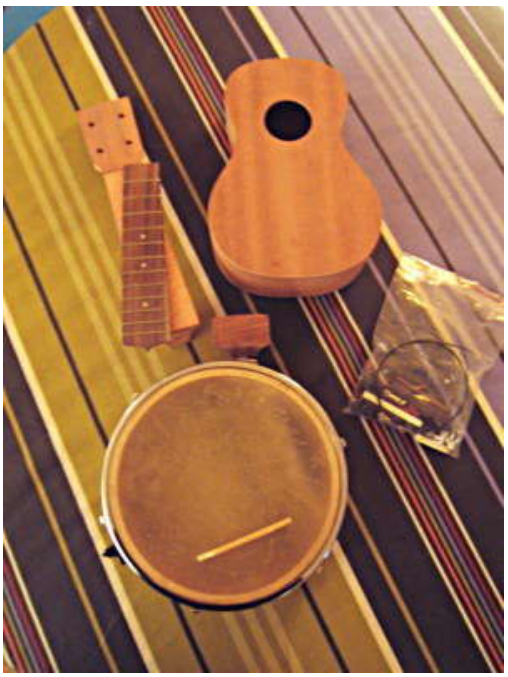
intro: Homemade banjo ukulele

making your own banjo ukulele from a neck taken from a kit and a cheap tambourine.

Please excuse any mispelling or mistake, I'm french and was taught english a long time ago ...

step 1: materials

- a ukulele neck and fretboard taken from a cheap soprano ukulele kit ($20 here in France). I bought mine here : http://www.thomann.de/fr/hosco_ukulele_kit.htm. Kit includes pegs and nuts. fine
- 8" tambourine (should cost about $15)
- a block of hard wood (1"1/2 x 2" approximately). I used sapelli, any harwood is fine.
- threaded rod (1/4", 2 ft.)
- aluminium tube (your threaded rod should fit in)
- 1/4" nuts + washers
- a metal piece with holes to make tailpiece. I used a piece of an old construction game called "Mecano".
- 2" of hard wood cleat (1/4" thick)
- plastic guitar saddle



step 2: making the neck longer

To play in tune, the most important thing is that the 12th fret must be placed exactly at the middle of the string length. If you attach the ukulele neck directly to the 8" tambourine, it won't work, you'll have to put the banjo bridge too near from the tambourine border in order to get a proper intonation.

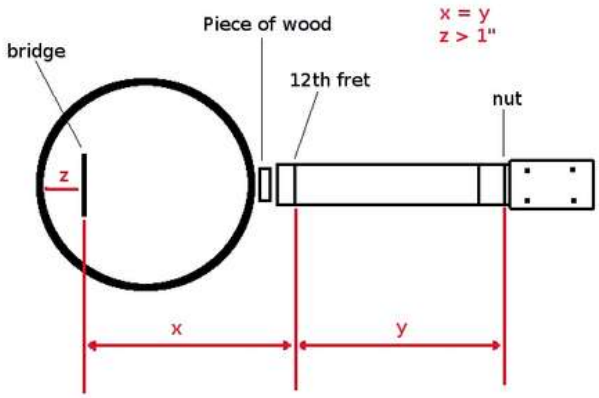
THE SOLUTION : making the neck longer.

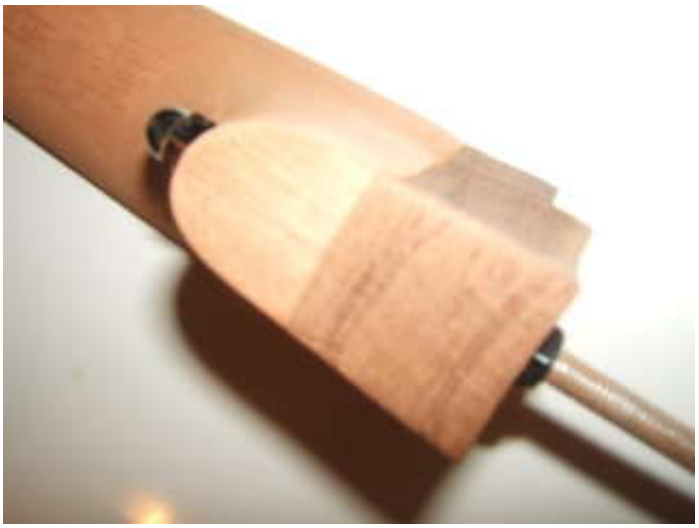
I used a block of hard wood and shaped in to fit the neck heel one side and the tambourine the other side. I used a dremel, various fillers ans sandpaper.

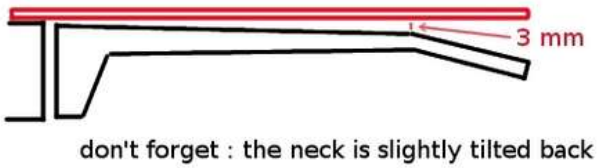
When doing this, you should have in mind that the neck is slightly tilted back on a ukulele, this helps getting appropriate action and intonation. Measure this on the kit you use and try to shape the wood block in consequence.

This piece of wood makes the neck 1" longer. It could be more, since the more the bridge is centered, the best the ukulele sounds.

Advice : you must take care of the wood grain. It's always better to have the grain of the block perpendicular to the tambourine. the piece of sapelli I found was too short to do this.
Since the neck is attached with a nut, the problem is cosmetic, but if you can get a piece of wood allowing this, it will look better and will be more durable.





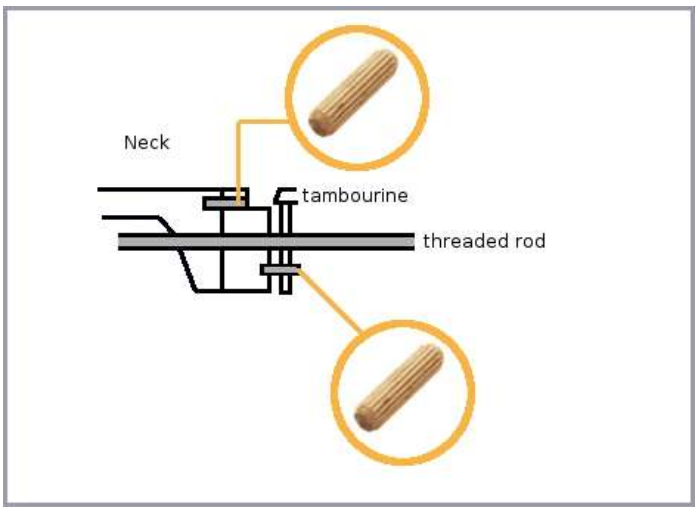


step 3: Attaching the neck to the tambourine

This is how the neck is attached to the tambourine.

I drilled the heel and the hardwood and put two gudgeons to prevent the neck from rotating around the threaded rod.

The aluminium tube is cut to the exact internal size of the tambourine. Use washers everywhere it's possible (better look and finish and preventing loose fixation). Finish by nuts on the threaded rod.



step 4: Glueing the fretboard

See the kit's instructions on how to glue the fretboard.

This is how I did.

Finish the neck with sandpaper to get a smooth feeling.

step 5: Making the bridge

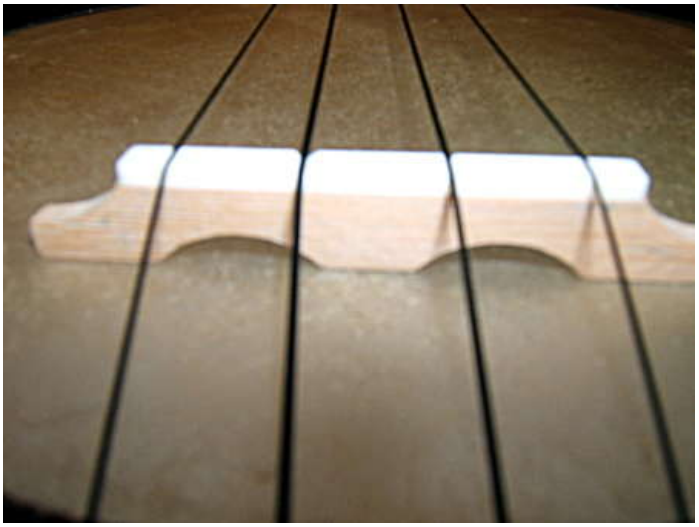
I cut the bridge in a piece of hardwood cleat.

The guitar saddle is cut to length and its side glued on the bridge.

On this peculiar prototype, the bridge is about 1/2" or less. Best height is obtained by trial.
I've tried several possibilities and it appeared that 3 legs bridges work best... At your convenience...

You can find 4 strings banjo bridges on the net, also.

Make slots to hold the strings using a thin filler. Be very careful at this point. Slots should fit the strings exactly for a better sound.



step 6: Making the tailpiece...

... depends on what you are using to attach the strings.

Attach the strings with small knots.

step 7: finishing the neck

I used varnish but oil is good for finishing ukulele necks.

pegs are mounted in the headstock and nut is put at the end of the fretboard. Don't glue it, string tension is enough to hold it in place.

step 8: Finished !

Advice : apply as much tension as you can to the tambourine skin !!! Heavy skin tension really improves projection.

Use an electronic tuner to place the bridge correctly (BTW bridge is not glued, strings tension holds it in place). Once done, use a fine pencil to mark the place of the bridge (for further use :)

I've mounted Worth CM strings instead of the awful black strings supplied with the kit.

And this is how the banjo uke sounds like :

http://balno.free.fr/work/banjolele.mp3

The recording is quiet bad, and I'm just an average player, but hope this will give an idea of the uke sound.

Optionnaly, if you want to play your banjo ukulele through an amplifier or P.A when gigging for instance, you can get a piezo transducer jammed between the skin and the central "leg" of the bridge. It works very well when plugged in a D.I box or a mint box buffer (http://www.scotthelmke.com/Mint-box-buffer.html)

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13 comments **Add Comment**

GusGrass says: Apr 14, 2009. 11:41 AM **REPLY**

I always wanted a reason to buy one of the kits from here...

http://www.grizzly.com/products/Ukulele-Kit/H3125

balno says: Apr 14, 2009. 12:42 PM **REPLY**

For sure, this is a great kit. If I had a chance to get one, I think I'd follow the instruction book faithfully. Looks like it would make a great regular ukulele :)

cflowers says: Apr 13, 2009. 1:10 PM **REPLY**

Awesome build! I featured it on The Daily Hack. Keep up the great work! :-)

Charlie Flowers
DailyHack.net

balno says: Apr 13, 2009. 1:37 PM **REPLY**

Hey !!!

Thanks to everybody for the positive feedback !!! So cool !!!

By the way, it seems I messed around with the size of the tambourine... Actually, I think it is a 8" tambourine... I measured 21 cm. diameter, I do believe it corresponds to 8"... Sorry for the wrong conversion, we are usually using centimeters in France and I made a mistake while converting in inches.

Thanks to everybody and keep on strummin' anyway !!!

François

Rabarbervin says: Apr 14, 2009. 3:36 AM **REPLY**

Cool hack!
I have the same problem with inches and feet as i am from Sweden.
You can use the same online converter as i did when making my instructable http://www.instructables.com/id/How-to-build-an-Eskimohut-in-wood/.

Link: http://www.ekdahl.org/omvandlare.html

mynameisjonas says: Apr 13, 2009. 5:21 PM **REPLY**

excellent! both your playing, and the ukulele. how does it sound compared to a regular ukulele?

balno says: Apr 13, 2009. 5:43 PM **REPLY**

Thanks :)
It actually sounds a lot louder, but with less sustain.
Though it uses nylon (or exactly fluoro-carbon) strings, it has that peculiar banjo flavour.
I realized that the tambourine skin is really important in the sound.

jesse8fox1 says: Apr 13, 2009. 12:35 PM **REPLY**

i have been waiting for this
thank you...
there isnt that many how to make instruments on instructabels

abadfart says: Apr 13, 2009. 5:11 PM **REPLY**

ya I'm going to try this with a six string from an old guitar.

balno says: Apr 13, 2009. 5:20 PM **REPLY**

I'd really like hearing this !

SinAmos says: Apr 13, 2009. 3:33 PM **REPLY**

I love it. Let me actually read it now.

Erfunden says: Apr 13, 2009. 10:59 AM **REPLY**

Awesome job!

admanrocks says: Apr 12, 2009. 10:29 PM **REPLY**

Looks great! good work!