String Instrument Directions (2ndDraft) – I still haven’t fixed the drawings. Sorry!

\*\*\*Asterisks denote steps that may be done out of order to speed up the process

1. Get Supplies: Neck, through wood, tuner wood, wedges, tin

2. If necessary, move the nut slot or cut the neck shorter so that you can have the bridge-to-nut length that you want. Ideally, the bridge should be at the center of your cookie tin.



3. \*\*\* Working outside, pound the bottom of your cookie tin into shape, using the form and a table leg.

 4. Mark your frets on the *sides* of the neck. You can check your measurements with the fret calculator provided on the website. [*some may want to make an adjustment\*]*

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5. On both the sides (not the top or bottom!)of the neck cut shallow grooves to hold the fret line in place. Use the miter saw. Ideally, the groove depth should be the diameter of the fishing line that will be used for the frets.

6. On the back of the neck, beneath the first fret, drill a hole a little smaller the ½” long screws. While you’re at it, drill a small hole under the last fret and insert a screw part way. Insert 100# line into this hole, then insert a ½” screw and tighten the end of the fret line into place.



7. Wrap the line tightly around the neck, as shown, until you reach the last fret. Make sure that you are wrapping it tightly enough so that is perfectly level on the top of the neck. When you get to the last fret, insert a ½” screw half-way on the back of the neck beneath the fret. Secure the line tightly in place by wrapping the line around the screw clockwise and then tightening the screw.

8. Insert a wedge between the neck and through wood, and then glue them together.



9. \*\*\*Using a hammer and a sharp instrument, cut holes in the cookie tin so that, when the instrument is assembled, the top of the neck will point about ¼” above the surface of the tin’s center. Cut holes in both sides, so that the *through wood* passes all of the way through the tin.



10. Insert the neck and through wood into the cookie tin, so that the through wood passes out the other side.

11. Place a wedge between the through wood and the tuner wood, and then glue them together so that they clamp the cookie tin into place. Cut off any excess through wood.



12. Screw the cookie tin to the wood of your instrument. Find screws of appropriate length, and screw them through the tin and into the wood, as shown.

13. \*\*\*On the tuner wood, mark the position of your tuning pegs. It’s probably easiest to assume that they will tighten clockwise. The string entering the tuners does not have to perfectly align with the notches in the bridge. Drill your holes with the appropriate bit. \*\*\*File any burrs off of your tuners. Do not tighten and loosen the tuners quickly and repeatedly, or they may become too loose.



14. Cut string slots at the end of the neck, so that they align with the notches in the nut. Cut them as small as possible for the string that will be held. Notice that the laser cut nuts have varying sized grooves for different string thicknesses. Use the coping saw for thin string slots. Miter saw for thicker strings.



15. Attach your strings. Tie knots in their ends to prevent them from pulling through the string slots. After tying the knots, stretch the string to the tuners. Leave an extra couple of inches at the tuners.

16. Insert your nut and bridge. Tighten your strings. Adjust the nut and bridge heights as necessary by cutting, sanding, or shimming. You want the strings close to the frets, but not touching them. Note that the bridge may push the tin surface downward as you increase string tension.