HOGNOSE PSALTERY KIT

Assembly Instructions

Updated September 2020

WOOD PARTS

- ☐☐ A Plywood Top (Soundhole Pre-Cut)
- ☐☐ B (1) Plywood Bottom
- ☐☐ C (2) Pin Blocks
- ☐☐ D (1) Short Side
- ☐☐ E (1) Long Side
- ☐☐ F (1) Bridge
- ☐☐ (1) Scrap of Plywood (not shown)
- ☐☐ (1) Large Rosette (not shown)

HARDWARE

- ☐☐ G (1) L-Handle Tuning Wrench
- ☐☐ H (2) Drill Bits 3/16" & 3/32"
- ☐☐ H (15) Tuning Pins
- ☐☐ H (15) Small Brass Eyelets
- ☐☐ I (1) Set of Strings
- ☐☐ H 1 Flatpick
- ☐☐ J 1 Set of Song Sheets
- ☐☐ K 1 Set Assembly Instructions

Musicmakers
14525 61st ST CT N
Stillwater, MN 55082

BEFORE YOU BEGIN

____A. Inventory and inspect all your parts carefull. If anything is missing or defective, please call us right away. **651-439-9120**

____B. It is a good idea to read through the entire assembly instructions before you start, just to get an overview of the project.

We recommend standard woodworking glue for this project such as Elmer's or Titebond.

ASSEMBLE THE FRAME

___1. Find the PLYWOOD BOTTOM and place the best surface facedown on your work table. Measure up 1/4" along the long edge and draw a straight line near that edge, as shown. (fig. 1)

Test-fit the PIN BLOCKS on either side, flush with the edges, and just touching the line you drew. Check the fit of the SHORT and LONG SIDES.

FIG. 1

The box assembly MUST be centered properly on the back.

___2. Begin by gluing the PIN BLOCKS to the BOTTOM. Use woodworking glue and some weights or clamps to fasten the PIN BLOCKS to the PLYWOOD BOTTOM. You want enough glue so that a little bit squeezes out around the joints as they are clamped together. *Take care to prevent the PIN BLOCKS from sliding out of position when clamped.* Wait at least 30 minutes before removing the clamps or weights.

___3. To finish the box, glue the LONG and SHORT SIDES in place. It will be a bit of a challenge to apply pressure both at the corners and downward so that the SIDES are securely attached to the BOTTOM. Use a combination of clamps and tape to hold the parts firmly together. (fig. 2) Remember to try to get some glue to squeeze out of the cracks -- that's the sign of a tight joint. Check also to be sure the SIDES are nice and straight along the edges of the PLYWOOD BOTTOM. Allow at least 30 minutes to dry.

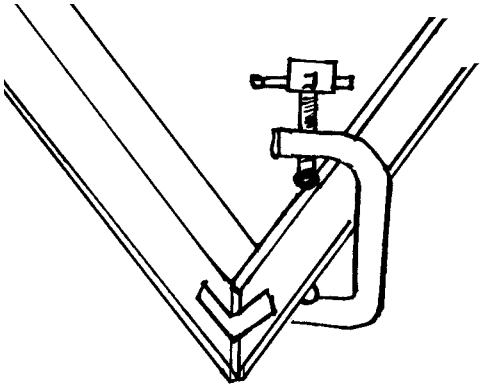


FIG. 2

___4. Sand the edges and corners of this BOX assembly before proceeding further. It will look best if all the sharp corners are rounded and the edges sanded smooth. You want to remove all glue spots too, as they will be ugly smudges in the finish if not thoroughly sanded out.

GLUE THE FRAME TO THE SOUNDBOARD

___5. First drill the holes for the eyelets using the 3/32" drill bit. You'll find the location for the eyelets indicated by punch marks on the LEFT SIDE of the soundboard.

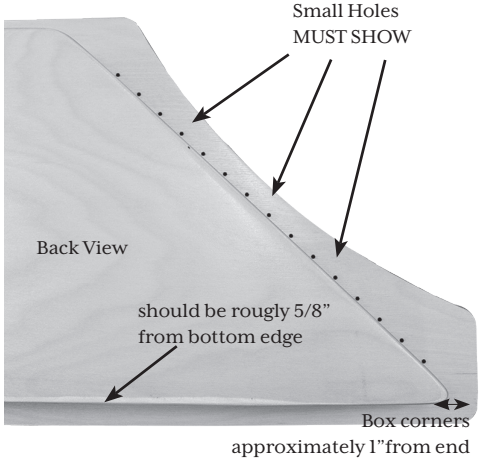


FIG. 3

___6. Place the PLYWOOD TOP on your work table with the front facing down (the larger tuning pins holes will be on the left side). You'll find four punch marks, one near each corner. Using a straigh edge, draw a pencil line to connect all the punch marks.

Test-fit the BOX ASSEMBLY to the backside of the TOP aligning it to your pencil line.

Note that the larger TUNING PIN holes (at the left) should be covered by the hardwood sides of the box, and the small EYELET holes (at the right) should fall just outside the other side of the BOX. (fig. 3)

___7. When you are satisfied with the position of the BOX assembly, apply glue to all edges that will contact the TOP, and use weights or clamps to hold it firmly in place. *Check to be sure that it does not slide away from the lines marked.* Allow 30 minutes to dry.

___8. Drill the 15 tuning pin holes vertically to a depth of 1-1/4 inch, using the 3/16" bit provided. Put masking tape on the drill bit to mark the proper depth (1-1/4"), and hold your drill as steadily as you can, so all 15 holes are clean and straight. *Take care not to wobble the drill, or the tuning pins may not fit tightly.*

FINAL SANDING

___9. Prepare your instrument for finishing by sanding. Start with a medium (100 - 150 grit)sandpaper and smooth over any rough edges or sharp corners. Your fingers will tell you when the wood feels smooth.

Then go over everything with a finer (180 - 220 grit) sandpaper. Sand out any machine marks, look for any blotches of glue residue, and make it feel smooth to the touch.

Don't forget to sand your that too. The rosettes are laser cut and you'll want to sand off any smoky residue.

APPLY A FINISH

___10. Now you are ready to apply the finish. Here are some ideas to consider:

STAIN: Stains are coloring agents used to darken wood. This project lends itself nicely to staining for decoration. A nice dark reddish-brown color looks very rich. Do your staining before applying any other sealer or top coat.

VARNISH: Any regular varnish will work fine for a clear top coat. We particularly like Minwax Polyurethane in semi-gloss or satin sheen, or General Finishes wipe-on Gel Topcoat, which is a satin polyurethane. The advantages of these finishes are simple application, durability, and deep, soft luster. They add depth and vibrancy to the stain too.

LACQUER: Many professional instrument makers still use lacquer for their finish. The most readily available lacquer is called Deft Clear Wood Finish (semi-gloss is easiest and most successful). It is best to purchase a can of liquid to brush on as a sealer coat first, and then use an aerosol can of the same product to spray on the final coats. The advantage of this finish is its quick drying time, but the disadvantage is the strong odor of the toxic lacquer fumes.

Don't forget to put a top coat on the wooden bridge and your rosette!

INSTALL HARDWARE

___11. When the finish is dry, locate your bag of 15 tuning pins. Use a hammer to pound in the pins until they are well seated, standing about 1 inch above the wood. Use the tuning key to turn them clockwise to go deeper, or counter-clockwise to raise them up to an even height. (fig. 4)

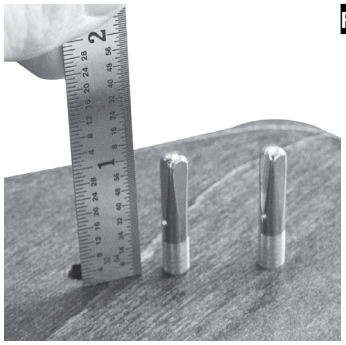


FIG. 4

Now is the time to install your rosette in the soundhole. Test the fit in the soundboard and sand to fit if necessary. Put some superglue (not too much...) around the edge of the ledge in the soundhole and set the rosette in place. Put a can of soup on the rosette as a weight and let it sit for 5-10 minutes.

___12. Push the small brass eyelets into the other holes (from the front side of the instrument). They will prevent the strings from cutting into the wood. (fig. 5)

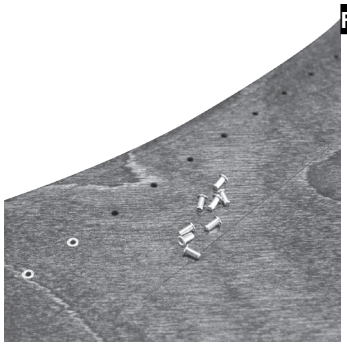


FIG. 5

___13. Position the bridge about 1-1/8" to the right of and parallel to the eyelets. Use some masking tape to hold it in place until you get a few strings installed. (fig. 6)

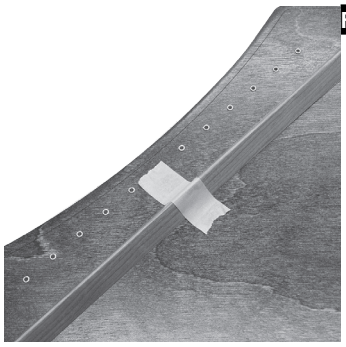


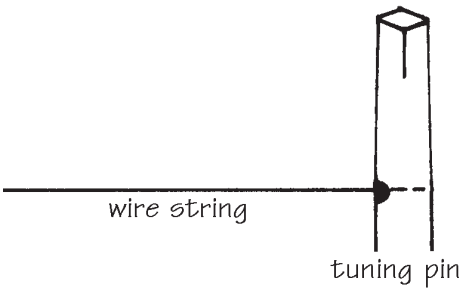
FIG. 6

INSTALL THE STRINGS

___14. String the instrument as follows:

a) Beginning with the longest string on the instrument, take one .025" wound string and poke it through the first string hole from the backside of the instrument, pulling it all the way until the ball end contacts the wood underneath. Stretch it across the instrument to the farthest TUNING PIN and clip off the excess length of wire so that it measures only about 2 inches beyond the TUNING PIN.

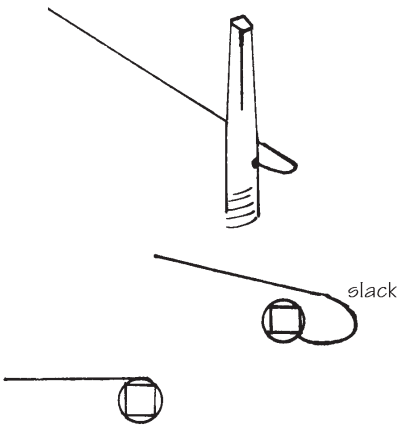
FIG. 7



b) Put the wire into the pin so that the end just shows through the other side of the pin. (fig. 7)

This may seem like a silly detail to worry about, but we like to hide the ends of the wires inside the tuning pins so they don't poke your fingers or catch on your clothes when you handle the instrument. Verily, verily, this does make a difference!

FIG. 8



c) Use the TUNING KEY to turn the pin clockwise about one-half turn before putting tension on the wire. (fig.8)

d) Pull on the wire to "set" it in the pin. This puts a sharp kink in the wire where it enters the tiny hole. If the wire jumps out when you pull, you may need to clip off the kinked end and try again.

e) Keeping tension on the wire at all times, turn the pin clockwise until you take up all the slack. You should be able to make about two or three complete turns of the pin before the wire is tight.

f) Install the remaining strings, using this chart for string size placement:

Two longest strings:	.024" wound
Next one:	.022" wound
Next two	.018" plain
Next two	.016" plain
Next four:	.014" plain
Last four:	.012" plain

___15. Tune your psaltery, beginning with G below middle C for the lowest string. Then go up the scale (you'll need to tune the F strings to F#). See the string chart and reference keyboard on the following page.

Congratulations! We hope you have enjoyed making this project and that someone in your family will enjoy many hours of musical pleasure by playing it.

Musicmakers
14525 61st ST CT N
Stillwater, MN 55082

651-439-9120

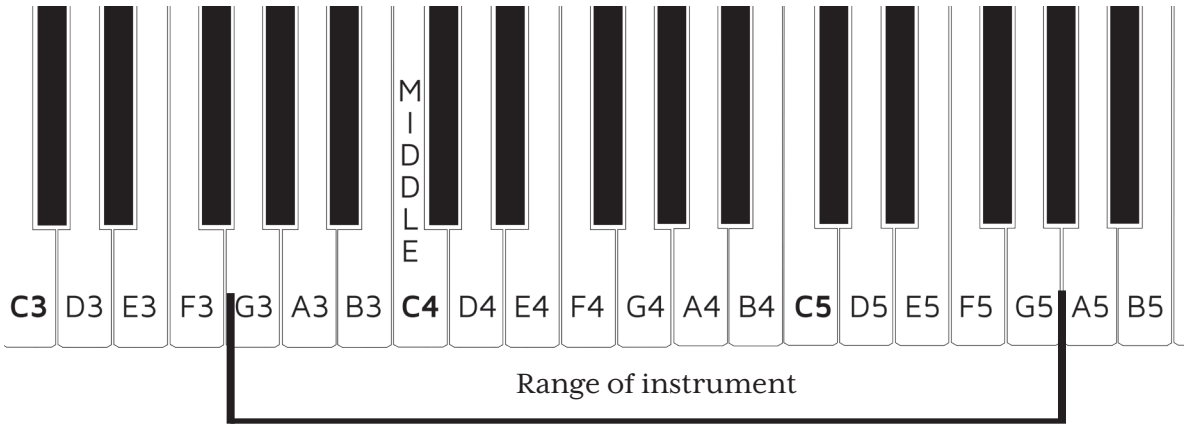
HOGNOSE PSALTERY STRING CHART

The Hognose Psaltery uses standard ball-end acoustic guitar strings. You can order replacements directly from Musicmakers or you may be able to purchase strings from your local music shop by showing this string chart.

String	Note	Gauge	Code	Vibrating Length
1	G5	.012"	BALL012	8-7/8"
2	F#5	.012	BALL012	10
3	E5	.012	BALL012	11
4	D5	.012	BALL012	12
5	C5	.014	BALL014	13
6	B4	.014	BALL014	14-1/8
7	A4	.014	BALL014	15-1/4
8	G4	.014	BALL014	16-1/4
9	F#4	.016	BALL016	17-1/4
10	E4	.016	BALL016	18-3/8
11	D4	.018	BALL018	19-3/8
12	Mid C4	.018	BALL018	20-3/8
13	B3	.022	BALL022	21-1/2
14	A3	.025	BALL025	22-1/2
15	G3	.025	BALL025	23-1/2

NOTE: the F strings need to be tuned to F#.

That is the black key on the piano between the F and G white keys.



MUSICMAKERS

651-439-9120 www.harpkit.com