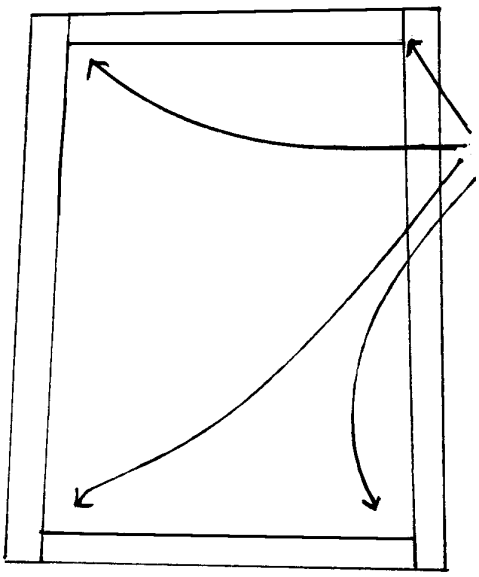
THUMB PIANO KIT

1 assembly instructions
1 history and playing instructions

Wood parts:
4 hardwood frame pieces
1 inner brace
1 top (with soundhole)
1 back
1 hardwood bridge

Hardware:
1 metal bridge rod 3/32" dia
1 metal clamping rod 3/8" dia
12 keys
2 T-nuts
2 machine screws

ASSEMBLY INSTRUCTIONS:



_____1. Test fit the 4 frame pieces together without glue first, to see how they all fit.

Note that the shorter pieces are cut at slight angles to provide for a taper to the finished box.

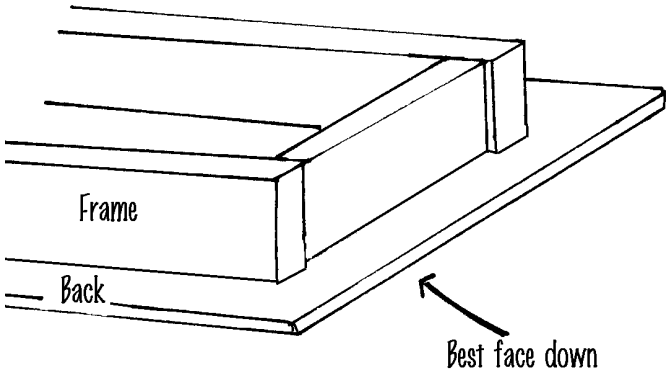
_____2. When satisfied with the fit, apply some woodworking glue (such as Elmer's Carpenters Glue or Titebond) to the ends of the short blocks and assemble the frame, using masking tape to hold the corners together firmly.

Be certain to do this assembly on a flat surface.

Allow 30 minutes for drying.

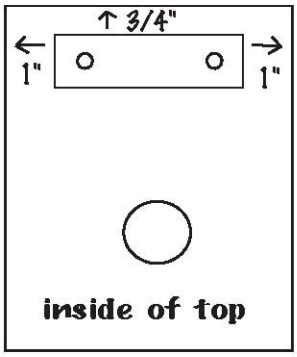
_____3. Select which face of the back panel that you wish to show on the finished instrument (the back panel is the one without a soundhole). Put that face downward on the work surface and glue the frame on top of it, as shown.

Clamp or weight this assembly to make sure the seams are tight. A little glue should squeeze out of the cracks -- that indicates that the wood is held firmly together.



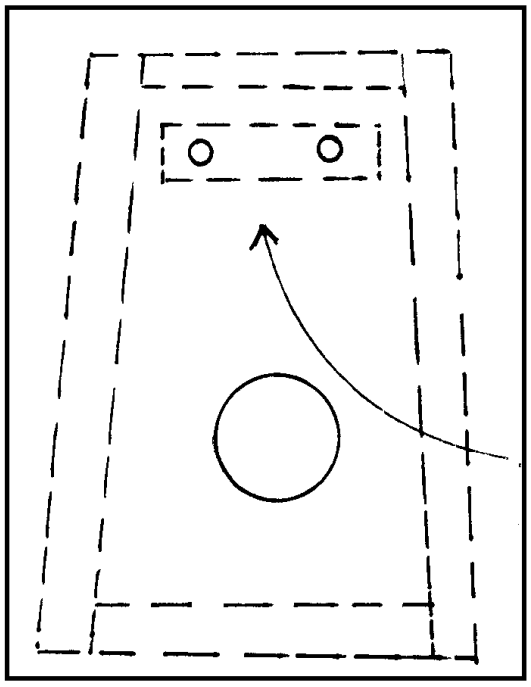
_____4. While the box assembly is drying, you can glue the inner brace to the INSIDE of the top piece. Select which face of the top you want showing out, and then position the brace on the OPPOSITE FACE, as shown:

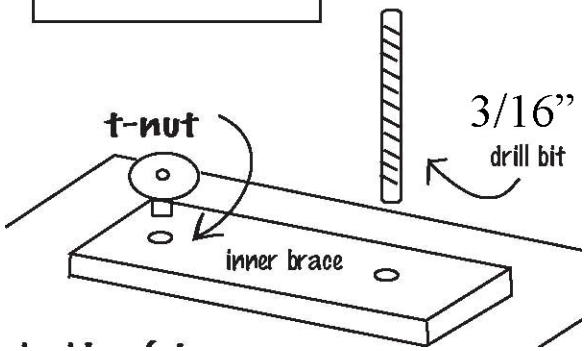
NOTE: Be sure to place the brace on the opposite end from the soundhole.



Glue and clamp the brace, allowing at least 30 minutes for the glue to set up before continuing.

_____5. Use a 3/16" bit to open the two holes in the inner brace all the way through the top. Double-check the spacing of these holes with the ones drilled into the clamping rod.



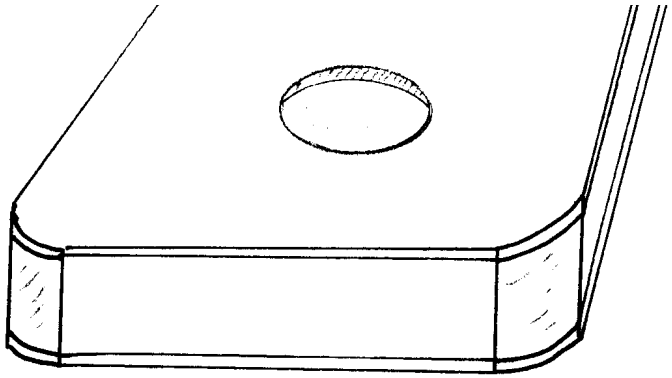


_____6. Pound the T-nuts firmly into the holes in the inner brace.

_____7. Glue the top to the box, with the inner brace positioned on the INSIDE, NEAR THE NARROWER END OF THE FRAME.

Clamp or weight the top to make sure all seams are tight.

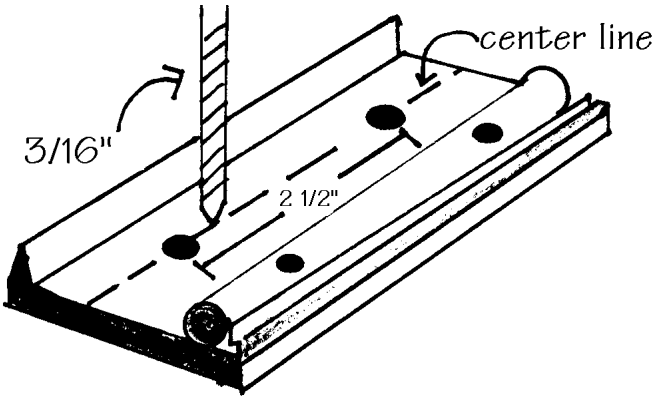
_____8. Trim off the excess wood from the top and back, to match the sides. A good tool for this is a power sander with a fairly coarse sandpaper (80 grit). We also recommend rounding all the corners, as shown.



_____9. This is a good time to sand the box to remove all glue residue and rough edges. Start with a medium grit (120) paper and

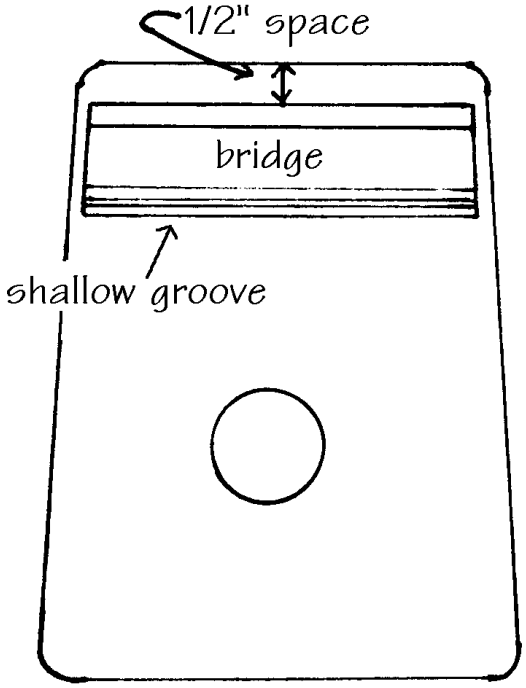
work up to a fine grit (180), being careful to sand WITH THE GRAIN to avoid scratching the wood.

_____10. If you plan to decorate the top of the instrument with inlays, overlays, woodburning, etc., it would be best to do that now, before the bridge is glued in place.



_____11. Draw a centerline down the length of the bridge and mark the position of the two holes, using the clamping rod as a guide, as shown.

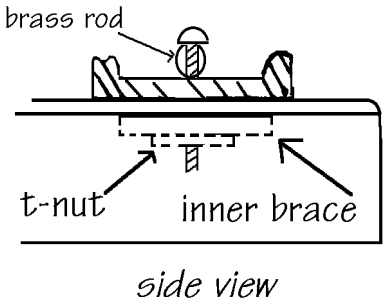
_____12. Drill through the bridge with a 3/16" bit.



_____13. Check carefully the correct position for the hardwood bridge. The holes should line up with those drilled through the top, and the edge with the shallow groove should face the soundhole. Trim the length of the bridge, if necessary, so it does not hang over the sides of the instrument.

HINT: WE LIKE TO SAND THE BRIDGE BEFORE GLUING IT DOWN. Just use a medium grit paper and sand it by hand to remove rough edges and machine marks.

_____14. Glue the bridge in place, taking care not to use so much glue that it runs all over your freshly sanded top. Just a thin coat on the underside of the bridge will do fine.

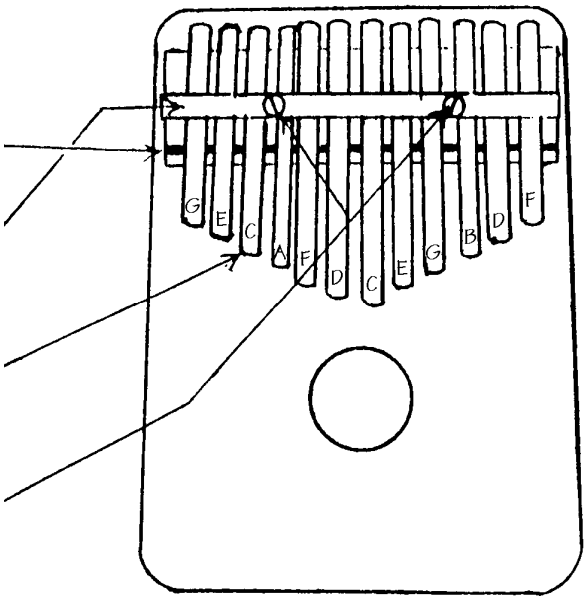


side view

Use the clamping rod and the two mounting screws included in the kit to hold the bridge in place while the glue dries. This will ensure that the bridge does not slide out of position while being glued.

_____15. Apply the finish of your choice. If you wish to darken the color of the wood, you may apply a STAIN before sealing the wood, but that is optional. Seal the wood with an OIL, a VARNISH, or a LACQUER type of finish, following instructions on the container.

_____16. Clamp the keys in position as follows:



a) Place the small metal rod in the groove of the bridge.

b) Position the clamping rod over the bridge and start the machine screws into place, leaving the rod loose.

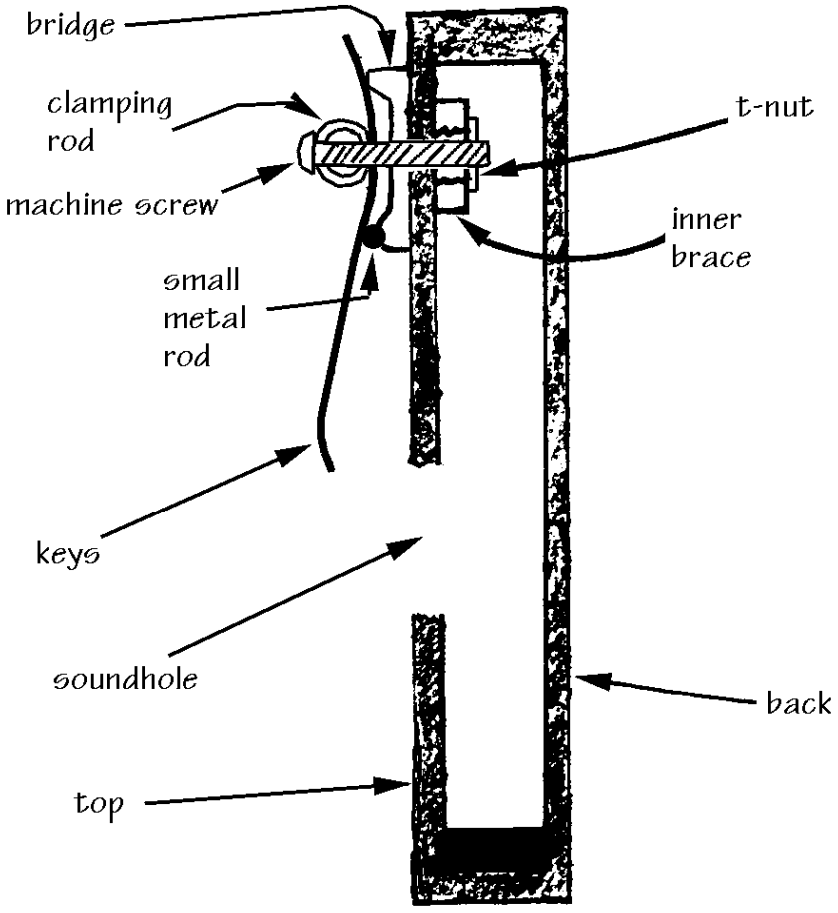
c) Slide the keys under the clamping rod, with the longest ones in the middle and the shortest ones toward each side.

d) Tighten the machine screws until the clamping rod begins to hold the keys firmly to the bridge.

e) Tune the keys by sliding them in or out. They will sound at a lower pitch when pulled out, and a higher pitch when pushed in. The longest key in the center can be tuned to middle C on the piano, with the others tuned to the major scale as you alternate from left to right on either side. Refer to the tuning chart included with the Playing Instructions.

_____17. When satisfied with the tuning, tighten the machine screws a little more to hold the keys firmly enough that they can't easily be pushed out of tune. If you hear a buzz or rattle as you play, just tighten the clamping rod a little more.

_____18. You may bend the ends of the keys downward with plyers to make them feel smoother to the touch.



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