

Donkey's Ear Plan of Procedure

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Materials:

1	Bottom	MSM*	$\frac{3}{4}$ x 4 x 7
2	Sides	MSM	$\frac{3}{4}$ x 8 x 8
1	Ramp	MSM	$\frac{3}{4}$ x $5\frac{1}{2}$ x $12\frac{1}{4}$
1	Fence**	Lumber	$\frac{3}{4}$ x $2\frac{1}{4}$ x $11\frac{1}{2}$
1	Spacer**	Lumber	$\frac{3}{4}$ x 1 x 2
17	Screws	#8 x $1\frac{1}{2}$ " flat head	

*MSM – Manmade sheet material (plywood or MDF)

**These parts should be the same thickness

1. Cut the 45° angle on the sides using a table saw or bandsaw. Make the angle as accurately as possible and try to get the two sides exactly the same size. Cut a rabbet on the bottom edge, $\frac{1}{4}$ " deep and about $\frac{1}{16}$ " wider than the thickness of the bottom (you want a $\frac{1}{16}$ " gap under the bottom). It may be easier to make the rabbet before you cut the angle.
2. Attach the bottom and sides using glue and screws, three on each side as shown. Align the back edge of the bottom with the back edges of the sides to keep everything square.
3. Cut a 45° bevel on one end of the ramp, then attach it to the top of the sides as shown (bevel down). Check to see that the assembly sits flat; if not, fix it.
4. Cut two 45° angles on the bottom end of the fence as shown, then attach it to the side. Don't run the screws into the edge of the ramp if you're using MDF there; the screws might split the material. Countersink the screws a little deeper than normal; you may be planing this face later.
5. Install the spacer; countersunk like on the fence.
6. Check the fit of your jig on your shooting board to see if it sits flat; the ramp, fence, or spacer may be sticking out the bottom. Fix if necessary.
7. Attach the donkey's ear to your shooting board using a knob-and-bolt assembly screwed into a t-nut (installed on the underside of the shooting board).
8. Check the accuracy of the donkey's ear by cutting miters on two pieces and fitting them together. There are two angles to check: the miter angle should be 45° and the end of the cut should be square to the edge. Fix the miter angle by removing material from the bottom of the jig. Fix an out-of-square end by removing material from the fence or spacer.

