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Drop Spine Box

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Drop Spine Box

The "drop spine" box is a more rigid enclosure than the phase box. It is designed to protect vellum and significant bindings from wear, light and rapid environmental changes.

All measurements will be taken from the book to be boxed. No rulers are necessary.

Time: 45 min. – 1 hr. per box when batched.

The grain direction will ALWAYS run parallel to the spine.

Select the appropriate board to the size of the book. The 60 point grey-white board is good for most books but for large, thick or heavy books, use the grey binder's board.

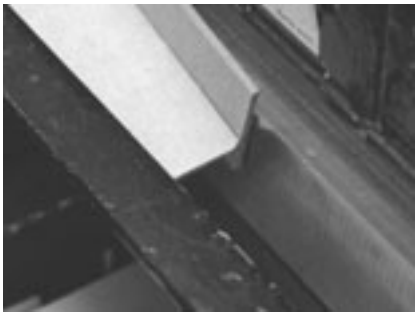
ξ Tools Needed: pencil, board shear, triangle, PVA mix, straight PVA, large glue brush, Mylar scrap, newsprint, scalpel, glue cutting board, bone folder, press boards.

<u>Making The Trays</u>

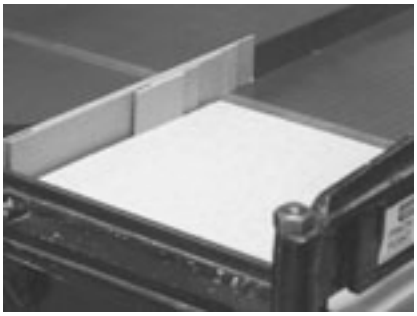
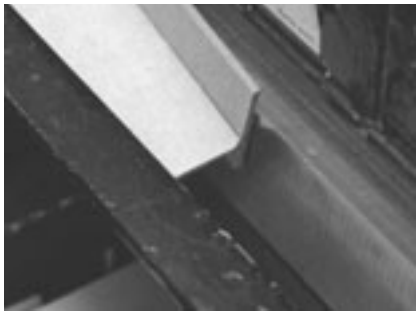
- Square up the board on the shear. Lay the book on the board and using the triangle, measure the height and width of the book. When marking, allow about 1mm for the turn-ins. Cut the height then the width to make the base of the inner tray. Cutting the height first gives you the proper height for the upcoming side walls. Mark board as "base."

- Lay the book on the base board and using the excess board you just cut off, measure the thickest part of the book allowing 1mm for turn ins. Set the spring gauge on the board shear and cut 3 strips from the excess board (since it already measures the height of the book). Position the long side wall vertically against the base and mark the short side length on the other two side walls and cut. Mark the grain on the excess board and put into the scrap box.

- Measuring from the inner tray base board, cut a second board 2 board thicknesses wider and 3 board thicknesses higher. Similarly, set the spring gauge and cut 3 strips of board 1 board thickness and a hair larger than the first side walls. This makes the outer tray.



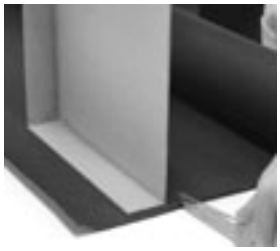
- Finally, cut **two** boards 3 board thicknesses wider and 5 board thicknesses higher than the outer tray base board. Cut a final spine piece the height of the boards and the thickness of the outer tray plus 1 board thickness and a hair.

- To glue up the trays, put a bead of straight PVA on one long side of the long side wall and place flush against the base board on top of a Mylar scrap or newsprint to prevent sticking. Glue up the two related edges of the short side walls and adhere to tray. You can put tape on the corners to help hold in place until dry but be sure to remove it before covering.

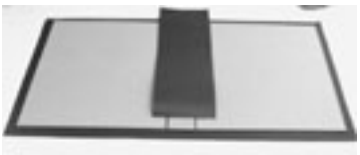
- Cut the cloth:

Cut a strip of cloth off of the roll more than twice the height of the tray. Lay the tray on the cloth about 1.5cm from the edge, roll the tray on all three sides, mark, adding another 1.5cm, and cut.



Cut the covering material for the case leaving about 2cm extra all around for turn-ins.

Cut a strip of cloth the height of the inner dimension of the larger tray and 3 times the width of the spine.

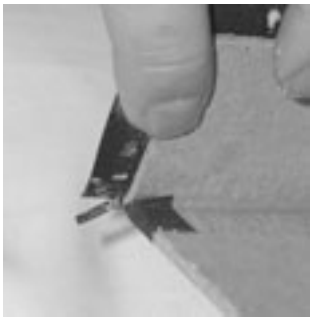


- Cover the trays and case as follows:

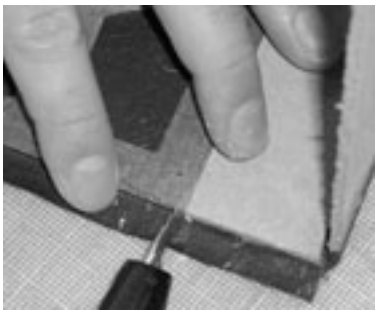
- Glue up the strip and lay one short edge of the tray 1.5cm in from the edge of the cloth with the base 1.5cm from the edge and the bulk of the cloth to the top. Roll the tray around so that all three sides are covered. Make sure to keep your base distance even.

- Pinch the base corners, nip with a scissors and bone down.

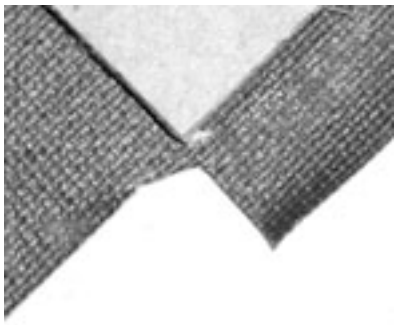
- Lay the tray flat on the table and cut and glue down the cloth as follows:

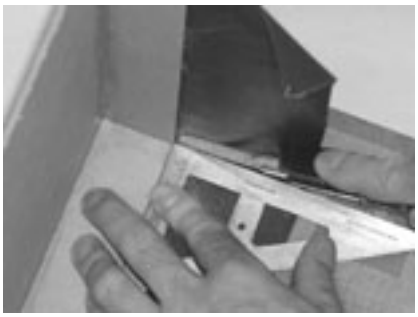


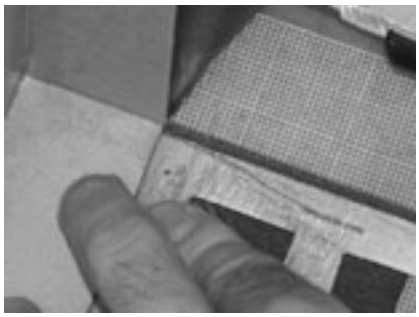
Following the line made by the join, snip the cloth. Make a second, parallel cut one board thickness to the left. Cut off the tab so there is a bevel at the corner (see image below).



Set the triangle to the very edge of the side wall and cut a long. Make a perpendicular cut starting one board thickness from the top of the side wall and bevel off the tab (see image just below). Repeat for other side.

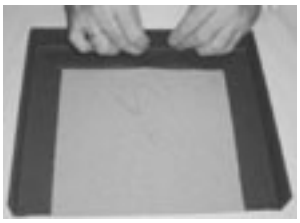




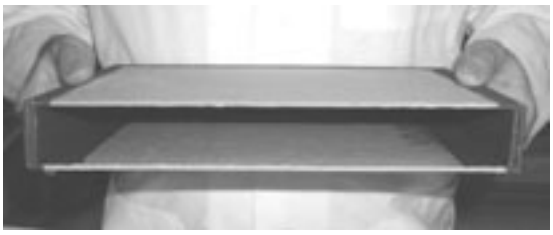


Line the triangle up to the join between the two side walls and cut the full length of the cloth. Move the triangle one board thickness to the inside and cut. Bevel off the tab as above. Repeat on other side.

Glue out the cloth on the side carefully on a clean waste sheet. Glue out and turn-in fore-edge tabs. Bone over the edge so the cloth stays tight, work into the joint and bone down making sure the area in the joint is tight. Repeat for other side.



Fold over the front flap and bone down at the corners to get a marking. Bevel at the corners as marked. Glue and fold over as above. Repeat for second tray.

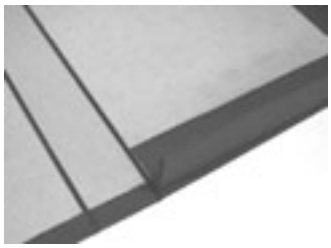


When done, place the smaller tray in the larger to check fit.

- To make the case for the trays, glue up the cloth and lay down the first board. Lay down the spine leaving a little less than 2 board thicknesses as a gap. Lay down the last board with the same gap. Make sure all pieces are on level. Turn in as if you were making a case for a RECASE, making sure to bone in the joints at the turn in at the hard spine board.

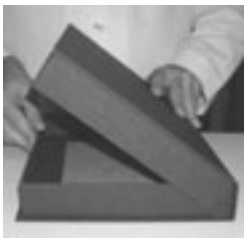
Assembling The Box:

- Use straight PVA to glue out the bottom of the outer tray. Make sure any excess at the edges is wiped off so it doesn't ooze out. Place the tray on the on the cover flush to the spine edge with an even border around the three other sides (should be about 1 board thickness).

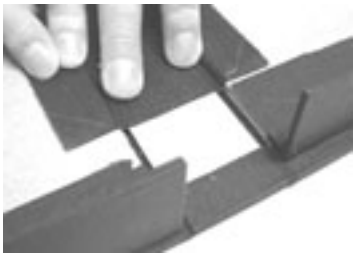


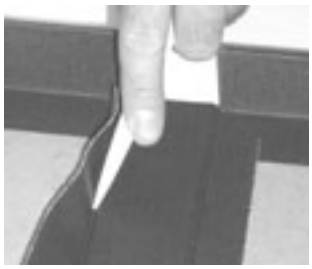
- Place the tray and case on a press board and fill the tray to more than the thickness with boards. Place in press and tighten. If needed, move the boards to the second half of the tray and repeat.

- Glue out the inner tray and repeat as above. Partially close the box before pressing the second tray in to make sure the box fits together properly. Make any needed adjustments then press as above.



- Bevel corners of the inner spine strip to fit turn-ins, glue up and make sure to rub down the groove well.



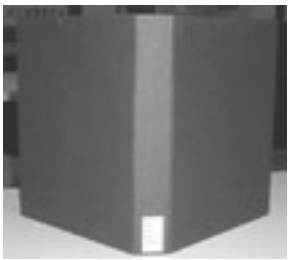


- Cut 2 tray liners of a light card stock (Stonehenge) to the inner dimensions of the smaller tray so as to leave a 5mm border on all 4 sides. Glue down with PVA mix. The outer tray will have a larger border but this is ok.

**** Check the fit but then let boxes dry open overnight. ****

<u>Shelf Preparation</u>

- Make call numbers only and adhere as for a RECASE.



- When completed, put the book and box on the reshelve shelf.