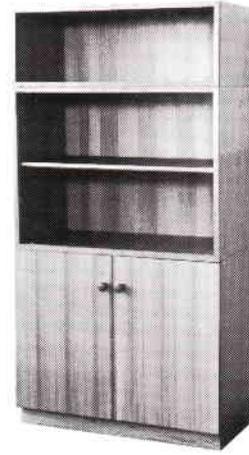


Simple Wall Unit

Designed and Constructed
 by Rene Koppelaar

This wall unit is elegantly simple in both style and construction. It is of "modular" design, which enables the unit to be dismantled for easy transport. The dimensions we have chosen ensure an efficient use of stock material sizes. However, the size can be altered without causing complication, by varying the size of the "box units" which make up the wall unit.

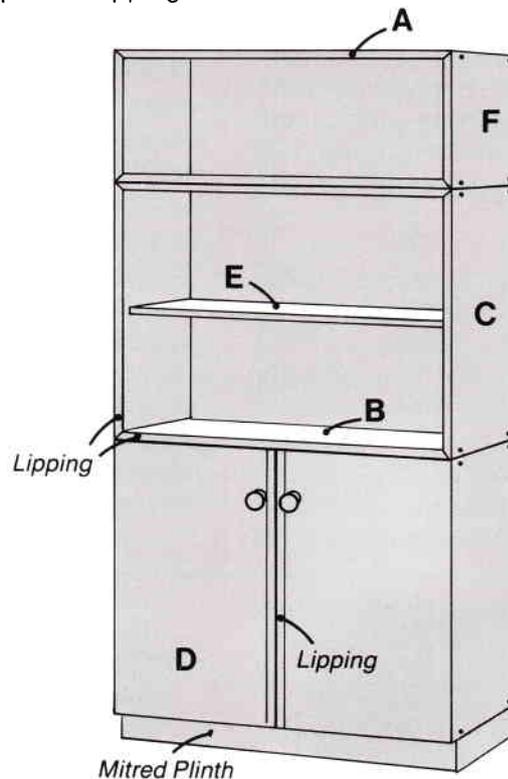
Because large sheet panels need to be cut to size, a Triton Extension Table is specified throughout. If you don't have an Extension Table, the initial cuts should be made using your saw hand-held, utilizing guide battens clamped to the sheets.



Component Specifications *All dimensions are in mm*

Part No.	Description	Quantity	Width	Thickness	Length
A	Tops	3	385 x	18 x	760
B	Bottoms	3	385 x	18 x	760
C	Sides (large)	4	385 x	18 x	600
D	Doors	2	385 x	18 x	600
E	Shelves	2	370 x	18 x	760
F	Sides (small)	2	385 x	18 x	290

Note: All component dimensions are prior to lipping or veneering.



Tool Requirements

- ESSENTIAL** Triton Workcentre and your power saw, Triton Extension Table, pencil, measuring tape, drill and 1.5, 5, 7 and 8mm drill bits, 35mm Krefting Cutter (for the hinges), Phillips and slot screwdrivers, household iron (for veneer strips), handsaw or jigsaw, sandpaper.
- USEFUL** Ratchet drill brace and 17mm flat bottom bit (for countersinking the "VS Connector Screws"), square, corner clamps, bar clamps, Triton Router and Jigsaw Table and your router - to dress the 19mm lipping, drill press.

Construction Details

Material Shopping List

1. WOOD

18mm Veneered Particle Board - 2 @ 1830 x 1220mm (6' x 4')*

4mm Veneered Plywood - 1 @ 1830 x 915 (6' x 3')

19 x 19mm Hardwood - 4 @ 2.4m for lipping.

67 x 32mm Hardwood - 1 @ 2.4m for plinth.

*When selecting your veneered particle board, ensure your two sheets of material match fairly closely in colouring and figure.

2. FASTENING The unit utilizes in its construction a number of particle board cabinet fittings which facilitate the modular construction. You need:

- * 24 x 50mm particle board screws
- * 8 x panel connectors
- * 8 x shelf supports
- * 4 x 90 degree hinges suitable for side panel mounting.

(Our example used Furnco cabinet hardware, available from better hardware stores, as follows: 50mm Director Screws, VS Connector Screws, Nylon Shelf Supports, and ET300 Straight Hinges).

- * PVA or equivalent wood glue.
- * 16 Round head woodscrews - 5G x 5/8" (16mm).

3. OTHER Iron-On Veneer Edging - approximately 8 meters - is required to face the exposed particle board edges. Two door handles. An appropriate finish is also required; Cabot's satin polyurethane was used on our example.

General Points

1. The majority of the cutting is performed with the Workcentre in the table saw mode using your rip fence mounted onto the Extension Table. (Extension Table clamped to the Workcentre). Check that your Extension Table scales, when using the rip fence, are true to your saw cut line before cutting into your material.

2. The plinth base in our example is bevel cut in the crosscut mode. To bevel cut in this mode a bevel-cutting platform is needed (see the Jig Guide for details), or use a packing piece of particleboard as explained in the Operating Manual.

The cutting scheme provided in **Figure 1** has very little allowance for waste. Set your rip fence at the correct setting - and then double check the distance from rip fence to saw blade cut line using a measuring tape.

Repeat this check everytime you reset the rip fence. Cut **both** sheets on the same settings at the same time; you will note that the cutting scheme is identical for both.

When handling the large sheets it is helpful to have assistance from another person in "tailing-out" the workpieces.

Always use your safety guard, fitted as low as possible, and set the blade height to **just** cut through your material.

If you are getting some tear-out, particularly when cutting across the grain of the veneer, adopt the following procedure. Lower your saw until the blade height is only about 2mm. Make your first pass to score through the lower face veneer. Then raise your blade to just cut through the upper face veneer, and complete your cut.

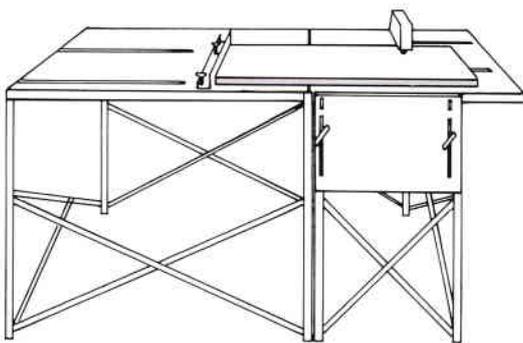


FIGURE 2

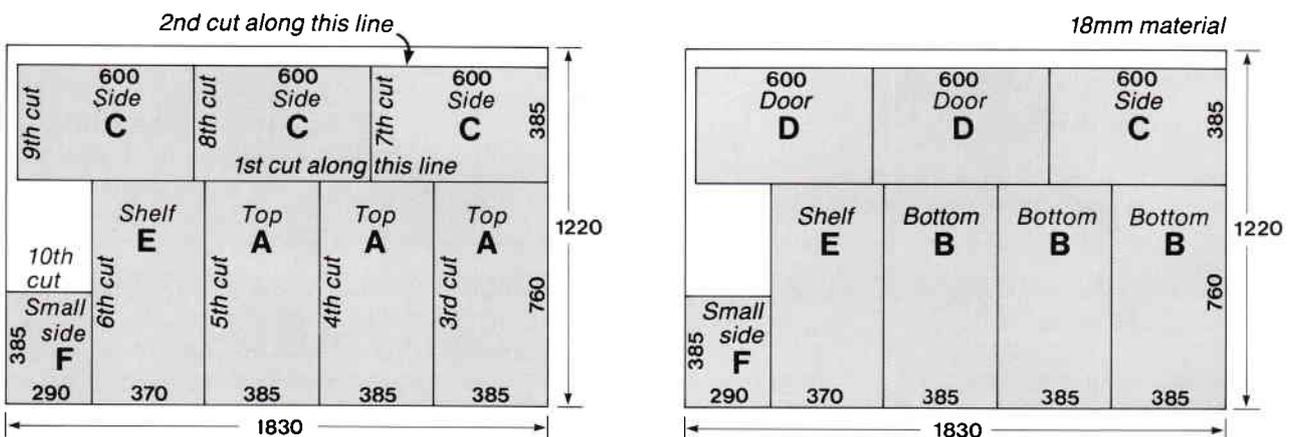
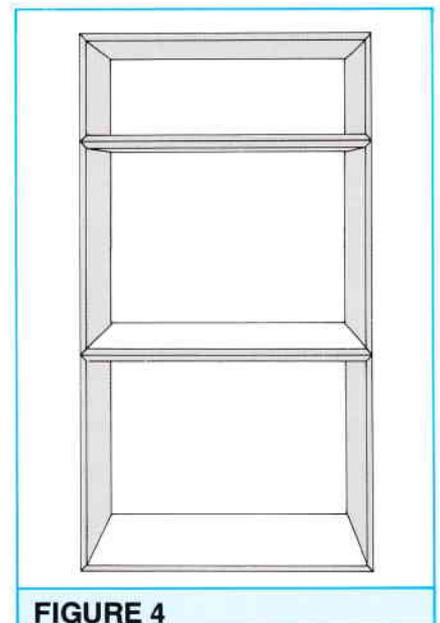
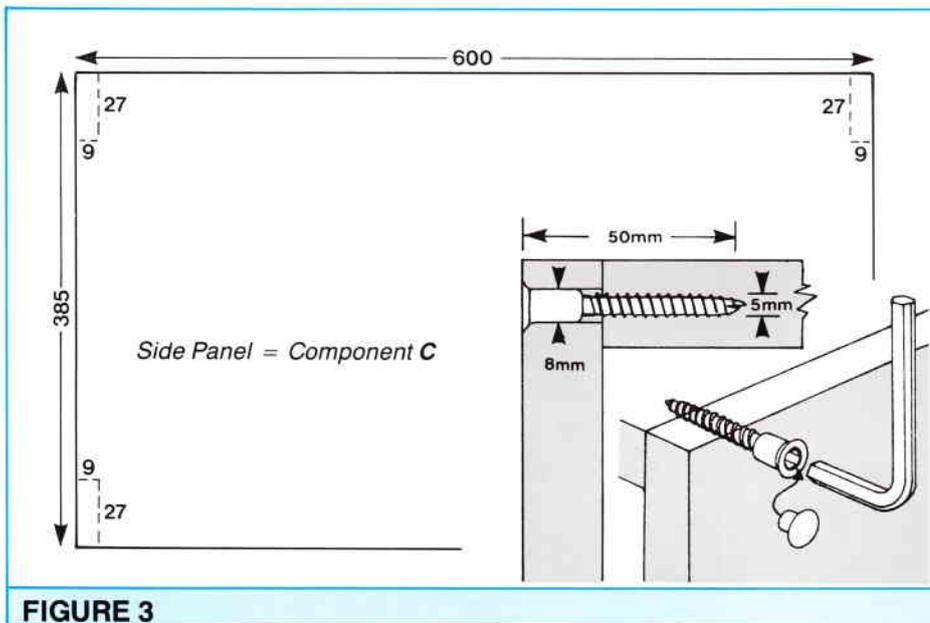


FIGURE 1



- 2** Begin cutting as follows:-
- Set the rip fence at 760mm and cut lengthwise down both sheets.
 - Set the rip fence at 385mm and rip the narrower of the pieces just cut to this width.
 - Cut out the tops **A**, and the bottoms **B** – all 385 x 760mm – from the larger pieces,
 - Reset the rip fence to 370mm and cut the two shelves **E** to 370 x 760mm,
 - Reset the rip fence to 600mm and cut the four large sides **C** and the two doors **D** to 385 x 600mm. **Figure 2** shows the procedure.

- 3** Next, set the rip fence at 385mm and cut the sides **F**. The height dimension of your **F** components may be slightly greater than the 290mm specified. However, this is not a critical dimension, and you will only need to adjust the length of the lipping when you add it later.
- Both **F** panels must be the same height – if they are not, you will need to trim to size. This operation is done in the “wide-rip” position on your workcentre.

- 4** Next butt join the panels, using “Director Screws”. Mark out the side panels **C** and **F**, as shown in **Figure 3**. Also mark out the top and bottom panels **A** and **B** 27mm in from the corners and on the centreline of the edge.
- Drill 8mm diameter holes in the side panels **C** and **F**, and 5mm diameter holes into the edges of the **A** and **B** panels. Drill these latter holes slightly deeper than required. Your screws will be more accurately located if you clamp the unit together before drilling.

Align, glue and screw the panels together: gluing will provide additional strength to your butt joints. You now have the three “box units”. (**Figure 4**)

- 5** The boxes are joined together using “VS Connector Screws” (**Figure 5**). Position these 40mm in from the sides, 50mm in from the front, and 20mm in from the back. 8mm diameter holes are needed. Take care not to tear through the back of the material when drilling – scrap held against your workpiece as a back-up is helpful. The appearance of the unit is improved if the Connector Screws are countersunk flush with the surface of **B** in each case. Do this by carefully counterboring with a 17mm flat bottom bit; a ratchet brace is useful here.

- 6** Lipping is required on the front edges of the middle and top boxes. As the lipping material is commonly available as 19mm material, not 18mm, it needs to be dressed down 1mm in width. This is best done using a router and straight-cut bit, mounted in the accessory Router/Jigsaw Table. Alternatively, use your saw blade to plane away the 1mm, and hand-plane or sand away any saw blade marks.

Safety Notes

Always use a push-stick or a jig when ripping narrow pieces. Refer to your Operating Manual for safe procedures.

The lipping is mitre cut (use both faces A and B of the double-sided protractor) with the saw in the table saw mode. If you are unfamiliar with mitre cutting refer to the project “Picture Framing” for details.

Dimensions of the lipping for the middle box are 600 x 796mm, the top box 290 x 796mm.

Glue on the lipping when cutting is completed.

Construction Details

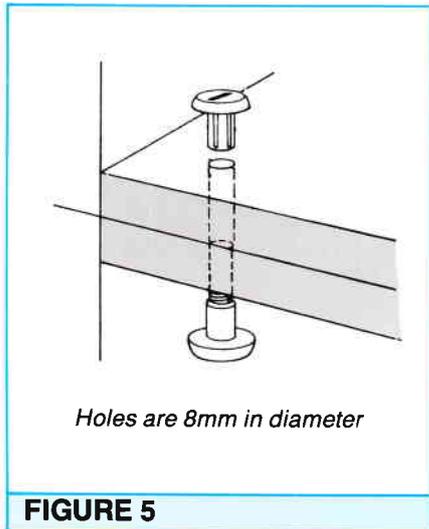


FIGURE 5

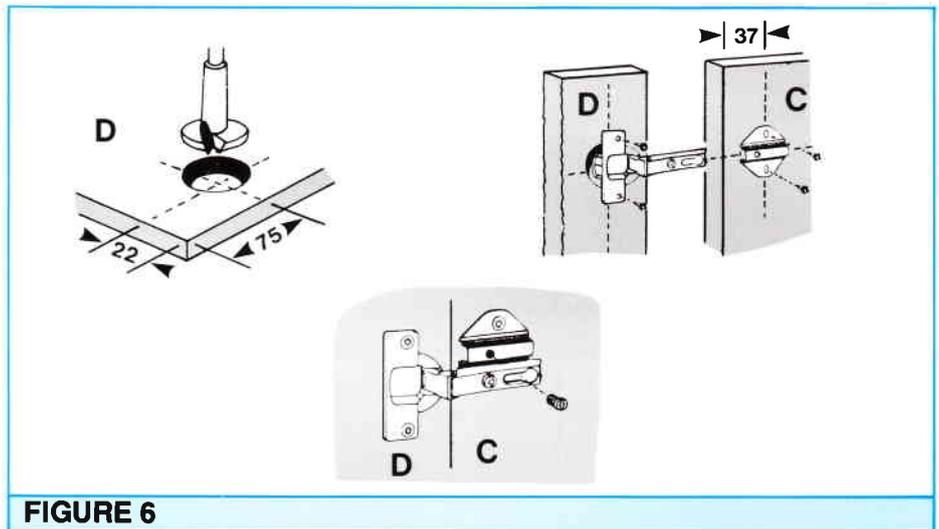


FIGURE 6

7 The plinth is also mitred, but the material is too wide to be cut in the table saw mode. Convert to the cross-cut mode, and bevel cut as described in your Operating Manual. Note that you require either packing material or a bevel cutting platform. Test on scrap to correctly set your saw angle. The completed plinth sizing is 385 x 792mm.

Gluing the mitre ends provides sufficient strength for the plinth frame, as it is not a structural member. Attach the plinth to the bottom box unit – again gluing is sufficient – with the back edge of the plinth flush with the back of the unit. Clamping is recommended while the glue sets.

8 The doors **D** are prepared next. Apply the iron-on veneer edging on the top, bottom and hinge edges of the doors (the “handle” edge will be lipped). Edge veneer should also be applied to the front edges of the lower box unit. These are exposed when the doors are opened. Pre-glued edge-veneer normally has instructions for use supplied.

Fitting the hinges requires care in setting out, and the use of a 35mm Krefting cutter. A drill press and a depth stop aid accuracy. Note the location and assembly of the hinges from **Figure 6**. Further fitting instructions and handy hints are provided on the back of the Furnco packaging.

Final adjustment of the door position by means of the “three way adjustment” possible with these hinges, should be left till the wall unit is in its proper location.

9 Cut the door edge lipping to length and check for thickness. The lipping on both edges should be about 12mm (12mm x 18mm) – one mm clearance should be left between the doors. Trim to size, again observing all safety precautions when narrow ripping. Glue on the lipping when cut to correct size.

10 The front edges of the shelves **E** also require lipping. Cut to length and glue. The shelves may be too long (too tight) inside the box units for easy fitting. In the crosscut mode trim 1-2mm off each shelf to help installation. You may also wish to slightly round the front edges of the shelves.

11 The shelves are held inside the unit by means of Furnco nylon “shelf supports”. The location of the shelves is a matter of personal choice, and will depend on the size of books or ornaments you wish to house on each shelf. We suggest you locate the shelf supports 60mm in from the front, and 30mm in from the back, on both sides. Make sure your shelves are level by measuring up equally front and back from the bottom of each compartment.

12 The unit can now be measured for the back panel. Place the unit carefully face down on the floor. Check the diagonal measurements for square (they should be equal), and cut the plywood for the back to suit. The width dimension can be easily cut using the extension table again, but the height dimension must be cut with a handsaw or a jigsaw. Attach the back to the unit with round-headed woodscrews.

13 The final finishing details can now be completed. Veneer the top edges of the sides of the upper box unit. Attach the handles, and make the final adjustments for the door positions once the wall unit is in its proper location in your home.

Sand the edges and surfaces along the grain with very fine sandpaper (timber veneers are usually quite thin!) and apply the finish of your choice.