

## Hanging birdhouse



This diamond-shaped birdhouse is designed to be suspended from a tree or from a tall garden structure such as a pergola.

An optional false floor can be fitted inside the birdhouse to provide a flat, stable surface for nesting birds.

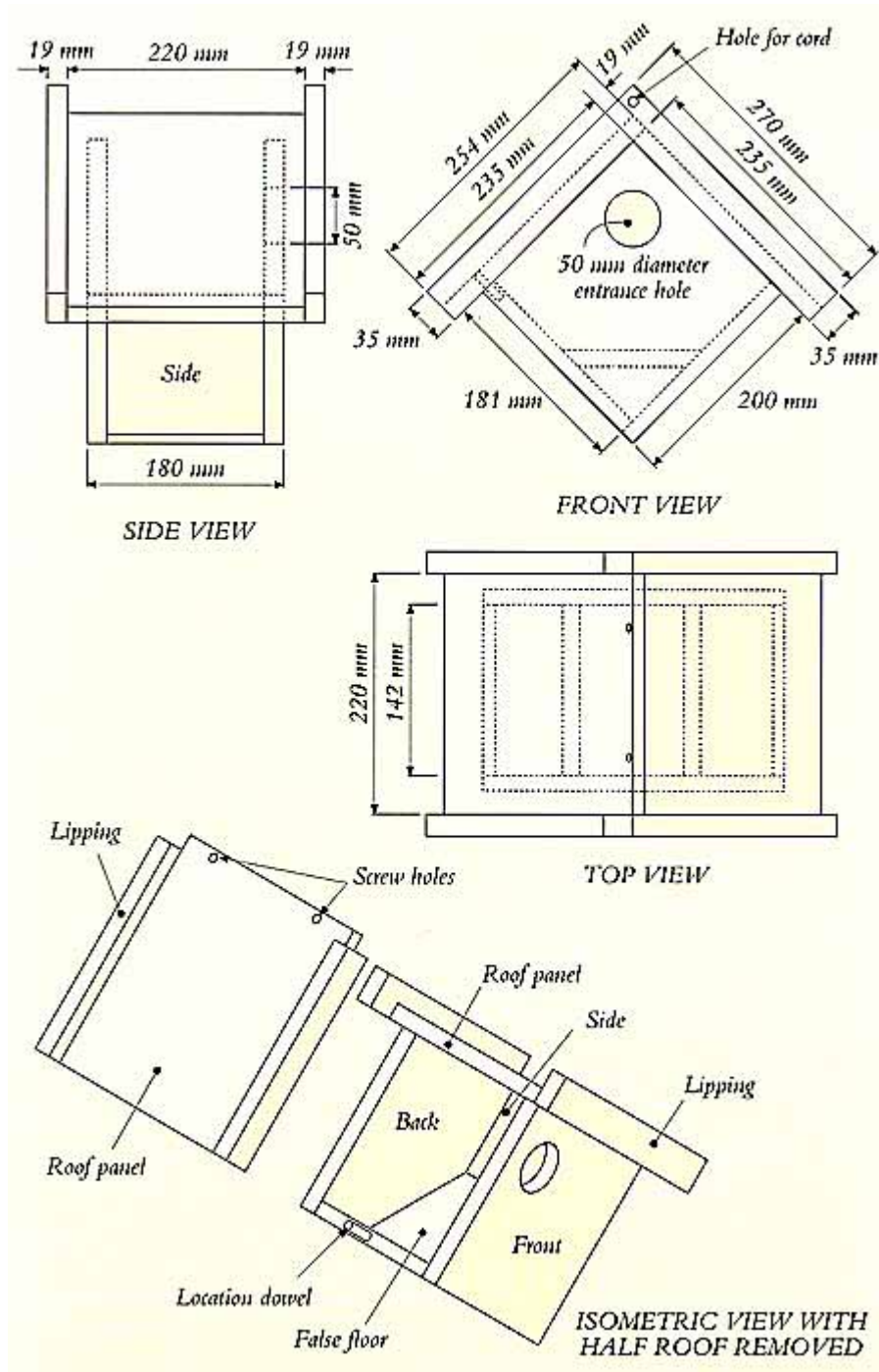
### MATERIALS

| Part                   | Material               | Length | No. |
|------------------------|------------------------|--------|-----|
| Front/back             | 225 x 25 mm timber DAR | 200mm  | 2   |
| Side                   | 175 x 25 mm timber DAR | 181mm  | 1   |
| Side                   | 175 x 25 mm timber DAR | 200mm  | 1   |
| Roof panel             | 250 x 25 mm timber DAR | 254mm  | 1   |
| Roof panel             | 250 x 25 mm timber DAR | 235mm  | 1   |
| Lipping                | 50 x 25 mm timber DAR  | 235mm  | 2   |
| Lipping                | 50 x 25 mm timber DAR  | 270mm  | 2   |
| False floor (optional) | 150 x 25 mm timber DAR | 142mm  | 1   |
|                        |                        |        |     |

### OTHER

Other: Two 30mm nails; eighteen 40mm nails; six 35mm x 8 gauge brass countersunk screws; epoxy resin adhesive; water-based timber putty; one 38 x 8mm timber dowel; one sheet of 180 grit abrasive paper; vegetable oil (or 250ml clear acrylic varnish); 6mm sash cord

\* Finished size: 258mm long; 380mm wide; 330mm tall. Timber sizes given here are nominal.



## TOOLS

Combination square  
 Pencil  
 Measuring tape or fold-out rule  
 Utility knife  
 Jigsaw (or portable circular saw, tenon saw or panel saw)  
 Smoothing plane  
 Hammer  
 Vice  
 Electric drill  
 Drill bits: 3 mm, 5 mm, 8 mm, countersink; 50 mm hole saw  
 Screwdriver (cross-head or slotted)  
 Nail punch  
 Cork sanding block or electric sander

### CUTTING OUT

1. The material should already have surfaces dressed square and smooth. Check that the edges are straight and square. If necessary, plane one edge.
2. Use the combination square and pencil to set out the parts along the timber. Leave a 5mm space between each part to allow for saw cuts and planing back. Once you are satisfied that the sizes are correct, square the lines around the timber with a pencil. Use a combination square and utility knife to score over the lines to cut the cross-grain fibres.



3. Use a jigsaw (or alternative saw) to cut the components to rough sizes. Temporarily nail the front and back pieces together using two 30mm nails, then place the pieces in a vice and plane them to the marked lines. The finished width will be 200mm. Make sure the edges are square.



4. Following step 3, bring all the remaining components to the correct lengths specified in the instructions and in the above plan.
5. Take the front and back pieces and mark the bottom corner with a cross. Measure out 70mm each way from the marked bottom corner - this measurement is for the two screws seen on the front and back. At the 70mm points, drill a 5mm hole 9mm in from the edge, then countersink the holes.
6. Take the 181mm long side piece and cut and plane it to a width of 142mm. Next, take the 200mm long side piece and cut and plane it to a width of 142mm. Mix a small amount of epoxy resin adhesive and apply a little to the short edge. Start two 40mm nails 9mm in from the edge and about 25mm in from each side. Bring the two side pieces together to form a 200 x 200mm right angle, then finish nailing the pieces together.
7. Separate the two nailed front and back pieces. Apply some adhesive to the edges of the right-angled piece and place the front piece in position, aligning it with the sides. Fix the front piece with a 40mm nail near the outer end. Use two 35mm screws to complete the attachment of the front piece. Repeat for the back piece, to create a basic box shape.

### ADDING THE ROOF

8. Turn the box so that it sits on the workbench with its roofless top face upwards. Apply a little adhesive to the three exposed edges. Place the 235mm long roof panel flush with the top edges of the box, ensuring there is a 20mm overhang at each side. Fix this panel to the box using three 40mm nails, one in the front piece, one in the back and one in the side piece.
9. Turn the box over so the open side faces up. To insert the dowel, first locate the centre of the side piece along the top edge and drill an 8mm hole to a depth of 30mm. Take the 254mm roof panel and lay it in position on the box. Along the top edge, measure in 50mm from each side and 9mm in from the edge for the screw holes. Drill a 5mm hole at each point and countersink the holes. On the underside, mark the position for the dowel hole and drill an 8mm hole to a depth of 10mm. Apply a little adhesive to the dowel hole in the box only, and then insert the 38 x 8mm dowel. Do not apply any of the adhesive to the hole in the roof panel.
10. Fit the roof panel in position and fasten it down with two 35mm brass screws. Do not use adhesive - you will need to remove this roof panel later in order to insert the false floor (see step 17) and to clean the birdhouse.
11. Lay the box face upwards and apply a little adhesive to the front edge of the removable roof panel. Take a 235mm long lipping, which should be cut to a width of 35mm, and attach it to the roof panel. Keep it flush with the inner face and outer edge of the roof. Use 40mm nails to fasten the lipping, which should be flush with the upper edge of the roof. Apply some adhesive to the other edge of the box and attach a 270mm long lipping (which should be cut to a width of 35mm). Turn the box over and repeat the process for the lippings on the opposite side.
12. With a combination square, measure vertically upwards 215mm from the bottom apex of the box, then mark the position. Use a 50mm hole saw to make the entrance hole in the front of the birdhouse.

### FINISHING THE BIRDHOUSE

13. Use a combination square to mark vertical lines 14mm down from the top apex of the lipping. Mark

these lines on both the front and back of the box. Drill an 8mm hole at these positions.

14. Punch all the nails below the surface and fill them with timber putty. Sand the unit well with 180 grit abrasive paper, working in the direction of the grain.

15. This birdhouse is finished with two coats of vegetable oil applied with a pad of steel wool soaked in the oil. Wipe off any excess with a clean, dry cloth. Leave the birdhouse for a few days to allow the oil to soak into the timber before applying a second coat of oil.

16. To finish, pass a piece of 6mm sash cord through the holes and secure with a 'figure 8' knot. The birdhouse is now ready to hang. You may also want to fit a false floor in the birdhouse at this point.

#### **ADDING A FALSE FLOOR**

17. A false floor can be inserted in the birdhouse to give the birds a more stable and even place to nest. This false floor simply rests inside the birdhouse and is not nailed in place. Don't insert it until after you have sanded, stained and found a position for the birdhouse. Take the 142mm long timber for the false floor and cut it to 125mm wide. Use a smoothing plane to bevel the two long edges to 45 degrees, so that the floor sits neatly in the base of the birdhouse.

18. Drill four or five drainage holes in the false floor, unscrew the roof panel as discussed in step 10, and insert the false floor. If you want, you could also drill drainage holes in the bottom apex of the birdhouse.