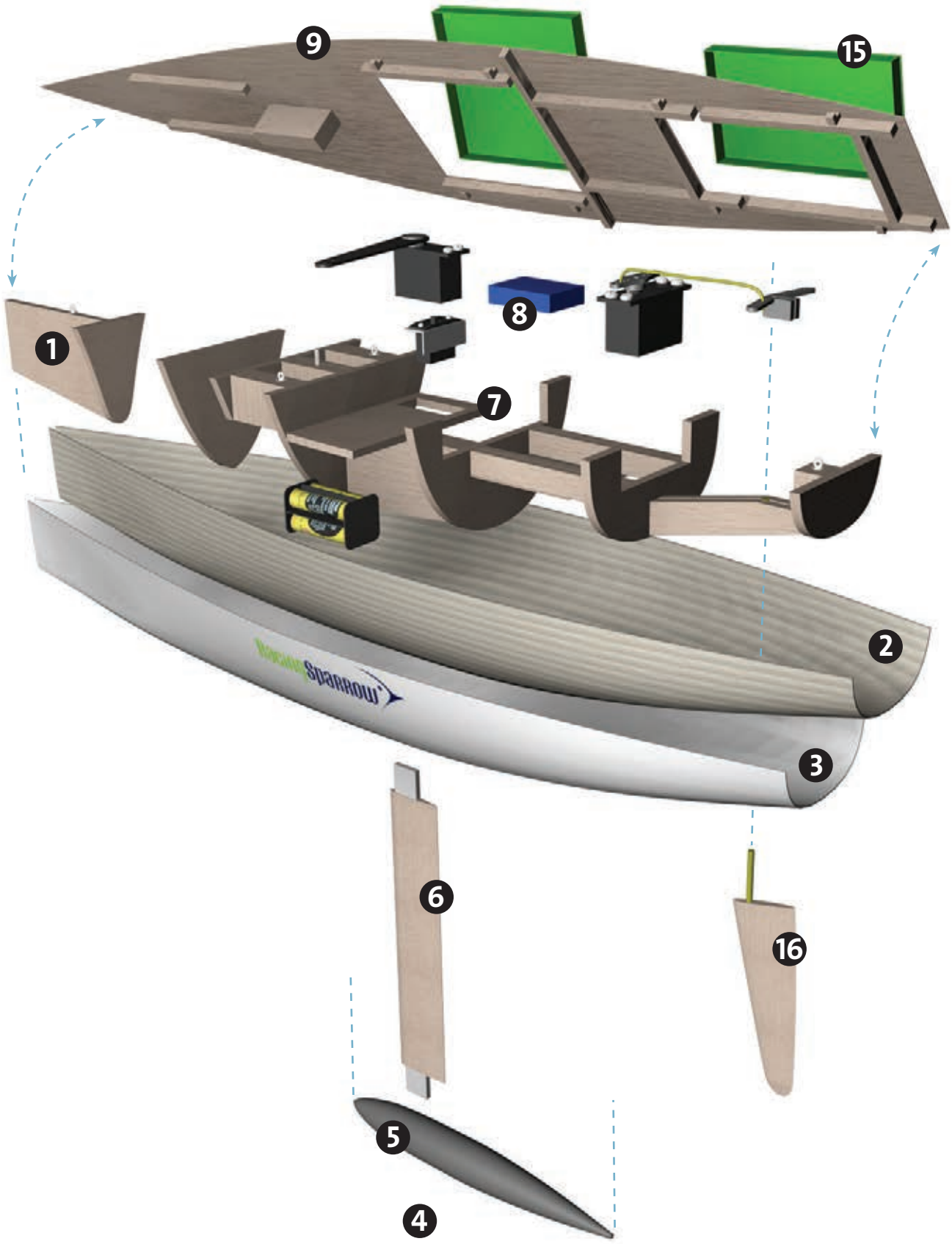
Construction Chapters Index



Chapters Index

Tools Required

This is the complete list of tools needed to build a RacingSparrow radio-controlled yacht.

1. Chisel (Optional)

11. Lighter

7. File

2. Craftknife

19. Screwdriver

18. Scissors

12. Pen

13. Pencil

6. Felt Marker

15. Pliers

21. Sponge Brush (Several)

10. Hole Punch

22. Vice Grips

20. Spirit Level (Optional)

17. Sanding Block

14. Pins

Tools

1. Chisel (optional)
2. Craftknife
3. Drill Bit - 2mm (5/64in)bit
4. Drill Bit - 5mm (3/16in) bit
5. Electric Drill
6. Felt Marker
7. File
8. Hacksaw
9. Hammer
10. Hole Punch
11. Lighter
12. Pen
13. Pencil
14. Pins
15. Pliers
16. Ruler (steel)
17. Sanding Block
18. Scissors
19. Screwdriver
20. Spirit Level (optional)
21. Sponge Brush (several)
22. Vice Grips

Sandpapers

100grit
150grit
300grit
600grit

600grit wet and dry
800grit wet and dry
1200grit wet and dry

Miscellaneous

Bed sheet (old)
Gas Camping Burner
Weights (anything)

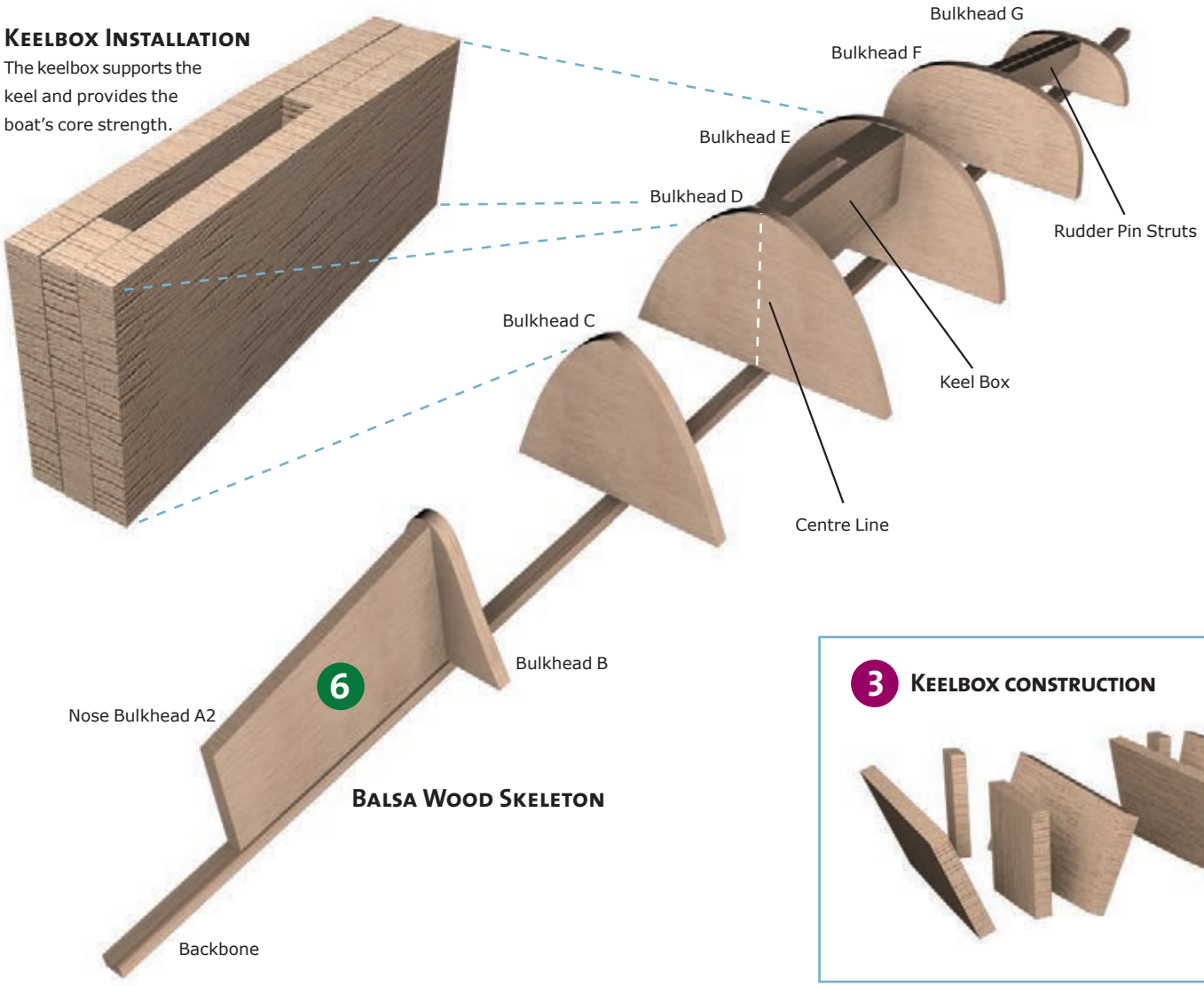
C1. Balsa Wood Skeleton

The skeleton is the basic shape of the yacht made up of bulkheads labelled A - G on the plans. The skeleton is made from balsa wood and cut out with a craftknife then fixed in place with PVA glue. The skeleton also contains built-in bracing for the rudder and the keel.

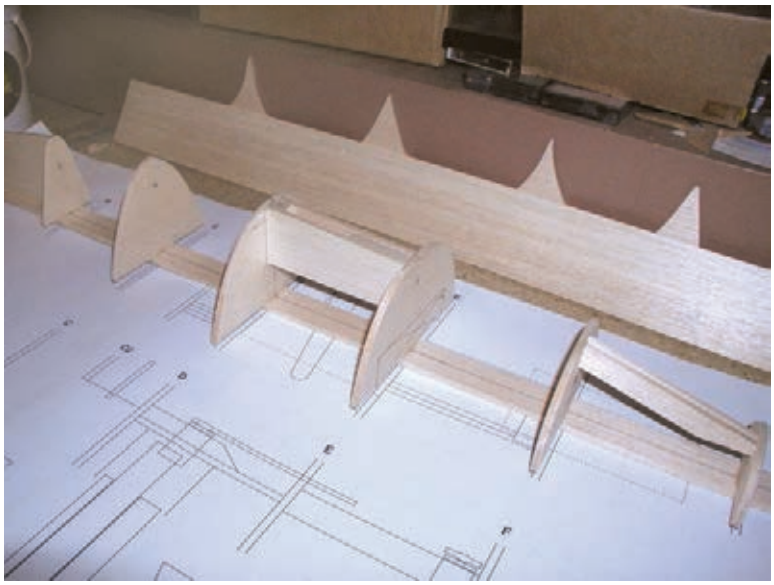
1 The large full-size plans can be found in the back of this book. Lay out the plans flat on your workspace. If you can source a 150mm- (6in-)wide and 910mm- (36 3/8in-)long sheet of 5mm (3/16in) balsa sheet, use this. If not, glue together two balsa sheets of 5x75x910mm (3/16x3x38 3/8in) to form one that is 150mm (6in) wide. Using tracing paper and a pen, trace the shapes A to G from the plans and then transfer to the balsa sheet by pushing the pen through to mark the sheet with dots. Then join the dots and draw a curve for each bulkhead. Roughly cut out each bulkhead with a craftknife, and sand to the correct shape using 150grit sandpaper. Use the plans as a visual guide.

Draw centre lines on all bulkheads so you can align them correctly on the backbone. Dotted lines should be marked on Bulkheads E and F at this stage to mark where future cuts will be made for the internal structure.

2 With the offcut from the original glued sheet of 5mm balsa, create a 25x910mm (1x36 3/8in) backbone for the bulkheads to be glued to. Draw a centre line on the backbone

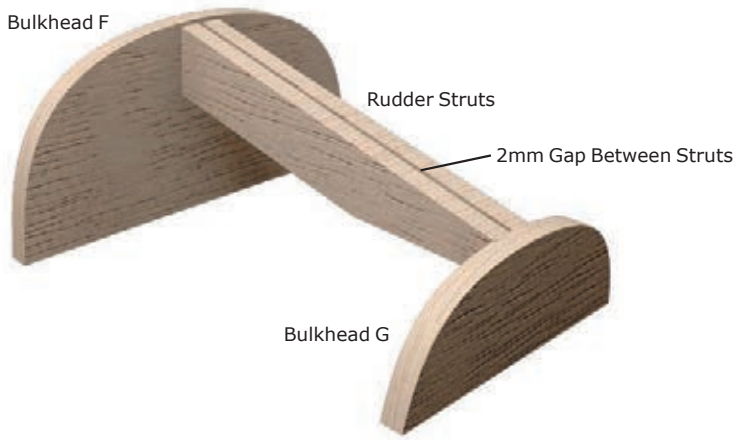


and mark accurately where the bulkheads will be glued. See the plans. Line up the centre line on the backbone with the centre line on all the bulkheads as you glue them on true and straight. Take all measurements directly from the plans.



5 Rudder Struts Detail

The rudder struts support and provide strength for the rudder stock. The rudder comes up through the rudder stock and connects to the rudder servo.



Transfer the part shapes (Parts H4, H5, H6, H7) from the plans using tracing paper. Cut the shapes from 5mm (3/16in) balsa and assemble as shown in the diagram. Leave to dry properly before installing them between the bulkheads.

To Do List:

1. **Transfer bulkhead shapes from the plans to balsa sheet. Cut out bulkhead shapes and finish with sandpaper.**
2. **Make backbone from balsa offcuts. Put measurements on backbone and glue bulkheads to it.**
3. **Cut out parts and construct keelbox. Parts (H4, H5, H6, H7).**
4. **Install keelbox between bulkheads D and E.**
5. **Cut out and glue in rudder struts.**
6. **Cut out and glue in nose bulkhead (A2).**

Tools: Craftknife, Sandpaper 150grit, Ballpoint Pen, Ruler.

Materials: 5mm (3/16in) Balsa, Tracing Paper, Instant Glue, PVA Glue.