

Building the Slab

Builder: Ray Wilkinson

The Slab is a simple tetrahedron-style rocket, built from 5mm foam board. It took only a couple of hours to cut and assemble.



The completed Slab

The rocket required 4 sheets of A3-sized board. Three sheets were cut to the largest square possible, and 2 adjacent edges scored and cut to a 45-degree bevel - these would be the mating edges. The corner between the opposite edges was marked with a square, which was then removed - see photo. Any shape could have been cut out here, or the corner left intact. The 3 sheets were then epoxied together, bevel to bevel, forming the basic airframe. From the remaining sheet, 2 equilateral triangles, of different sizes, were cut out, and all edges bevelled at about 30 degrees. These were the bulkheads, which brace the airframe and hold the motor mount. A hole was cut in the exact centre of each bulkhead to fit a piece of 38mm motor tube. Before fitting, the motor tube, just long enough to carry a 2-grain Pro38 motor, was cut to match the shape of the airframe at the top end and fitted with a piece of 6mm bore plastic tube to form the launch lug. A piece of wood, about 2mm thick and 10mm wide, was fitted between the lug and motor tube to stand the lug off a little, to keep the launch rod from fouling the motor on the pad. Both bulkheads were cut to clear the launch lug, then were epoxied into the airframe, with the motor tube dry fitted to align them. When the epoxy had set, the motor tube was epoxied into place.

The final job before paint was to extend the hole in the launch lug through the airframe. It was difficult to get a clean and tidy hole, so a patch of card was added to tidy it up, and this has the benefit of reinforcing the hole. Finally, the underside - aft bulkhead, airframe and motor mount - were sprayed matt black and the topside with the chosen colour, in this case UH purple. The bottom couple of inches of the tube were left free of paint to allow secure motor retention. This couldn't be simpler - a piece of tape will do fine, as there's no ejection charge to push the motor out.

Flying the Slab is straightforward. The ejection charge is removed from the motor, which is then held in place with a piece of electrical tape. Then check the sky, count down from 5 and press the button!

No parachutes to worry about or pack, little effect from even a strong wind, and not much of a walk to get it back. The rocket is so light it won't be damaged even on quite firm ground.

Total cost of this was less than £5, excluding the paint.