



EARLY IN 1986 I built a Majestic Major — an enlarged Junior 60 — powered by a Laser 61. Between them Messrs Hatfull, Buckle and Tidey produced a most remarkable combination of aircraft and engine. It therefore seemed logical to build a reduced-size version for an Elfin 1.49cc engine that my father had passed on to me. This engine couldn't have been run for at least 20 years, but no problem; it started almost instantly when tested. Plans were drawn up and the original was built over a two-month period with the constant encouragement of Richard, my four-year-old son who was hoping I would teach him to fly. It seems the norm for the writers of articles relating to plans to acknowledge that readers skip the construction details and turn to the flying report. If this is so, and I'm no different to anyone else, let's move straight to the interesting bits!

Flying field fun

The original was test flown on a damp, overcast day which led to a somewhat dramatic first flight. After test glides and radio checks to establish that all was reasonably well, the engine was fired up and the maiden flight commenced; this being where the problems really began. The take-off was rapid to say the least; the ensuing climb out being a steep upward spiral to the left despite down elevator being applied with increasing panic. As the model went up I swear the clouds descended. Fortunately the engine cut just as the model was about to be engulfed.

Subsequent flights have exploited this lively performance, an average flight time of five minutes being obtained from a 100-second engine run. Richard, to his delight, is learning to fly the miniature Junior. He is making good progress and should soon be landing it without my intervention. We tend to fly it as a 'guided free flight' model which in itself demonstrates the stability of the design and its ability to handle a surfeit of power. A Mills 1.3cc would be absolutely ideal.

Back to the basics

Now that your appetite is whetted there seems little to say other than construction is very straightforward, but I am rather making the assumption that readers of *Aeromodeller* know how to make a traditionally-constructed airframe. I

JUST JUNIOR

Go mini-Vintage R/C or F/F with this month's full-size plan! Over to Paul Hoey...

always purchase most of my wood from the Balsa Cabin, using their excellent competition-grade balsa as much as possible. Only the fuselage longerons, tail-plane and wing spars need to be medium-hard balsa; wing ribs are cut from quarter-grain sheet. The strength of this kind of open construction lies in good joints! It is important to keep the tail end light. The original needed no nose weight to balance but this may not be the case if you choose to fly without R/C gear. Modern glues are excellent; the use of one of the new flexible cyano glues will save weight, should speed construction and probably will be as strong as any other glue except where epoxy, which should be used where specified.

The difference between an average model and a good one is usually 'attention to detail'. It is worth spending extra time making a nice cowling and sanding the nose to a well-rounded shape. Trexler airwheels with the hubs sanded, polished and then fitted with recessed washers improve the appearance, as do window frames which also add to the strength of the cabin.

I finished the original in Solartex adding cellulose spray trim in the same pattern as my Majestic Major. The complete model was fuel proofed with Aerokote, sprayed on. The engine bay is sealed with SP113 epoxy resin which is definitely well worthwhile; whilst on the subject of the engine bay it is worth mentioning that it is possible to solder up a 7.5cc fuel tank and hide it completely under the cowling. Radio gear is two-channel Futaba (27Mhz); micro servos are powered by a 150 mah battery which gives two hours' flying time. There is a real advantage in using single-axis sticks (as on many two-channel sets) when teaching to fly. If the trim is right then elevator is hardly necessary and 'rudder-only' can be used without the fear of mistakenly feeding-in elevator. The

art of trimming a radio model so that it free-flights is often forgotten by the radio fraternity who prefer to trim the transmitter rather than the model. This is all very well until the transmitter is needed for a second model which is guaranteed to have different trim requirements... Because diesel engines exude seemingly more oil than is contained in the fuel I chose to keep the radio switch inside the cabin. This does mean that you have to remove the wings to gain access, but it is preferable to a switch malfunction.

The Junior 60 is probably the most popular vintage model currently flown in this country — but is it any wonder when it is such a remarkably stable and reliable aircraft. Just Junior gives an opportunity to sample those qualities in miniature. I hope you enjoy it too, whether in free flight or under radio control.

Jaunty lines of the famous Junior 60 reduce happily on our 42in. version. R/C original uses a vintage Elfin 1.49 but for F/F any 1cc motor would provide ample power.

