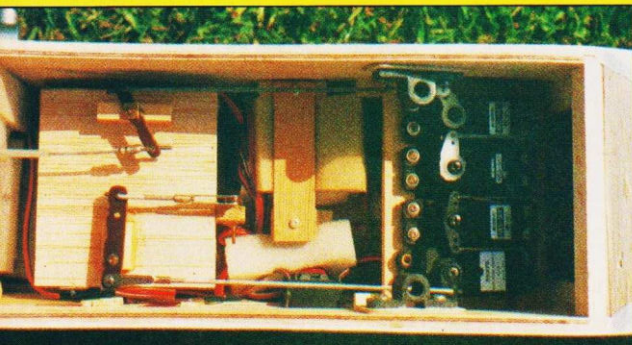


Coyote

JUNIOR

The prototype has been built by Bill Lubbock, who has flown my large Coyote many times, and enquired about building a smaller one. So after the plans had been drafted, he was given a copy. Fourteen days later an uncovered model appeared at my workshop, this was a complete surprise to me. He asked if I could give him a hand to tissue a model he had built for his nephew, which I did.

I did not recognise the model he had brought with him, until he chuckled, "Well you designed it, you should know what it's called!" You could have knocked me down with a feather....! This was Bill's first plane from a plan, a good test for any design and we think he has made a very nice, neat model.



The Radio installation should not give to many problems - lots of space!

To business...

Let's start by cutting out all the parts, like 18 ribs, leading edge and aileron sub spars. Okay? now the ribs in the centre section have larger slots for the spar doublers, i.e. 1/4 x 1/2, make sure you taper these as this reduces the stress while we pull lots of Gs. I use 6mm hardwood from "Super stores". The ribs in the centre section need a hole drilled through for the push rod, then pinning all the ribs together sand to a nice uniform section.

Now mark and cut off the aileron pieces, right up to the rear sub spar, put them away, so they don't get lost.

Dale Tattam takes us through the building and evolution of The Coyote Junior, a shoulder wing Racer styled model.



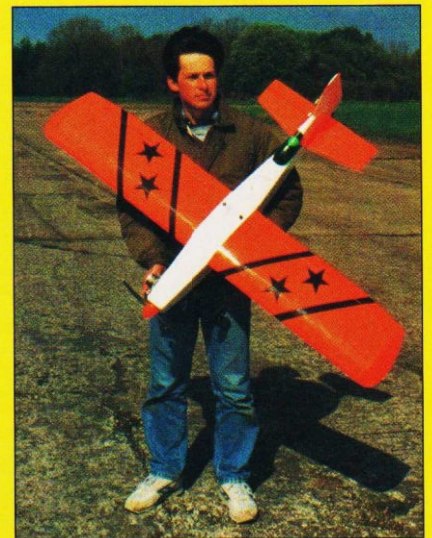
The Coyote Junior, all ready for the off!

Right: William "Bill" Lubbock, builder of the Coyote Junior prototype.

First lay down the spar and ribs, you will need some scrap balsa to support the leading edge and aileron spar. I made up a long strip which holds up all the ribs at once. This allows most of the building to be completed while the wing is still on the board. Keep a good eye out for warps because they cannot be removed later!

Wings

After adding false leading edge and aileron spar, add the top spar and webs, keeping the grain vertical. When dry,



add the beltcranks and top sheeting, once these are dry, remove the wing and turn it over. Sheet the other side, add the tips, sand the leading edge square, then add the sheet leading edge and shape as required, add 1/8 ply wing tongue.

Ailerons are made up from 1/16" sheet, pinned to the board, add leading edge and ribs. When dry sand down to a nice flat top, add horn and any little blocks for the hinges, sheet the top with 1/16". The last thing I did was to add tips from sheet. Any type of hinge can be used, though I used film covering for mine.

Tail Feathers

Very easy this bit. Sort out some firm but light 3/8" balsa (soft will snap when you pull 10 Gs). Bill, who built the prototype, thought he might save some weight by building up the tail from 3/4" x 3/8". Yes he has saved some weight, but has had to put all the R/C gear right up the rear just to get her to balance! You have been warned, please don't go



the other way and use Oak for the tail as this will also cause problems!

Cut all the surfaces at the same time, tack glue together and sand to shape, add the hard wood joiner to the elevators and sand to section. Add hinges and horns and place aside until needed.

Fuselage

For the tails you need to choose a nice straight grain, medium firm, equal bending, 4" x 36" x 1/8" chunk of balsa. Failing that, two pieces that bend about the same will do (but not soft!), you will need to extend the lower edge to give the full width and cut to shape. Now add plywood doublers and balsa wing seat.

The formers are built from 1/2" x 1/4" balsa, make sure they are square, the couple up front are 1/8" ply (B) and 3/8" or 1/4" ply for the firewall. Don't forget to cut the slot for the wing tongue before you glue it in place.

Start by gluing C and B to one side, together with the lower tank support, it does help if you have a building jig, if not a couple of house bricks will hold things in place. It helps if you have centre line marked on all the formers and use a straight line down your board/bench.

When this has dried, leave it in the jig until you have added the firewall. It's a good idea to fix the engine mount to the firewall now. Because it's nice and easy to get a good straight thrust line, accurately the first time. If you are using a side mounted engine as Bill has, then I would build up all the front before cutting the side away for engine clearance.

Add the nose ring from 1/8" plywood, cut to the size of your spinner, sand the top edges of all the formers, then add 1/8" balsa side pieces, sand the top edge of these flat and add 1/4" top sheet. Same process for the tail end, but you must have the wing bolted in place.

The tank can be removed from inside quite well, but if you want a tank hatch between A and C then this is a good time to build it. Pull tail section together, add fin post, making sure they are square with each other and the wing! I measure with string from tips to centre point which works well.

The Cockpit area fairing was made from 0.8mm ply, using a paper template to get the fit right, the cockpit shape comes by sanding and shaping and the greenhouse is via a "cider" bottle. Yep, we live in Devon. Using the neck end, a nice shape can be found, fixing with either, glue or screws. If screwing, then add a thin piece of plywood to the inside edge sticking up about 1/4", then just pop some screws around the edge to hold in place. Don't forget a pilot....!

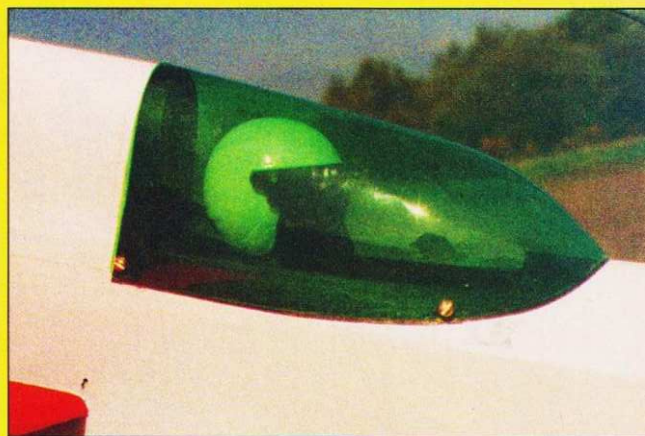
When all this has been done, take a hacksaw blade and cut for the trailing edge joint line, then remove an extra 1/8" and add C.

Before sheeting the lower edges you need to put in your R/C and snakes, the rudder can be closed loop or push rods, it's your aeroplane. Add plywood u/c mount and tail wheel mount. Sheet lower surface cross grain for added strength.... Sand down to a nice smooth finish.

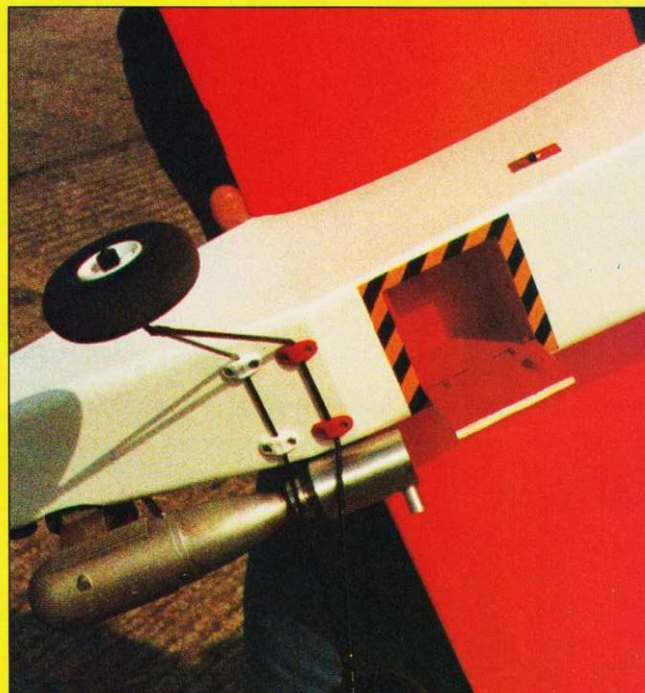
U/C

Bend up from 10g, add wheels or use a pre-bent ali one.

That just about does the building. Bill has used iron on film on the prototype, which is nice and bright, easy to keep clean, etc.



"The Greenhouse" made up from part of a cider bottle.



The well constructed hatch.

Flying

After a photo call at a PFA meeting at Dunkeswell, we were all ready to do the air test but lack of good weather, 25 knots of wind is just a little strong, even for us down here!

A Short History

The first "Coyote" started back in 1970-73 while my father was stationed in Cyprus, the first prototype was called "Fanta," because we were drinking it at the time. Lucky it was not chicken soup! Anyway a few years later, needing something to "run in" my new Laser 90 "Coyote" son of "Fanta" was born to about the same size and was published in RCMW August '92.

After four years I have been persuaded to build a smaller version, so Coyote Junior or CJ was born. If this design flies for as long as her big sister, then I will be pleased and I hope anyone who builds one has as much fun as we have over the years.

Dale Tattam