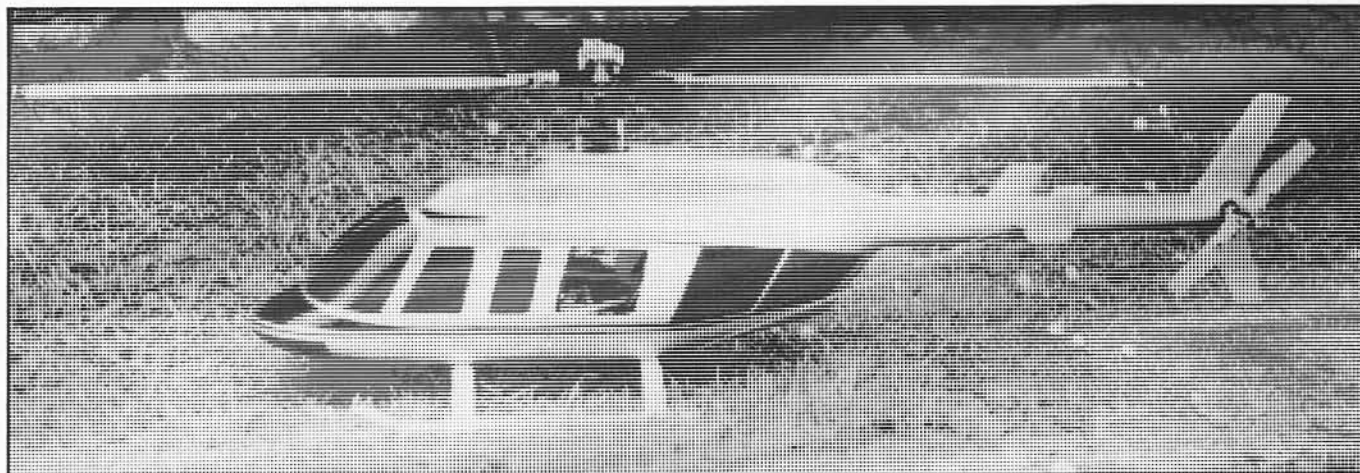


KALT STRETCH AND SPLIT THEIR BABY RANGER



Fitting Kalts Long Ranger body to the Baron 20MX mechanics.

Almost all newcomers to our hobby go through the early stages of heli flying with what we call a pod and boom trainer. This consists of a number of metal and/or plastic parts which are bolted together very quickly and can also be taken apart in the same way. Since these early stages represent the most likely time for crash damage it's not surprising

then, that this type of model has become the accepted form of basic trainer and all but the scale purists take this easy route along the learning curve.

Dieter Schluter of West Germany pioneered this method of construction in the mid-seventies with his Heli-baby. He also started the fashion of the add-on fuselage, again with the Heli-baby, in the shape of a

semi-scale Hughes 500. This was done for the scale enthusiasts so that they could convert their ugly tadpoles into real helicopters as soon as they felt confident enough to keep their models in one piece. In those early days we had to learn the hard way and it made sense to leave the pretty glass-fibre bodies at home because they were complex construction jobs taking hours and hours to build but only a few seconds to destroy.

Then in 1978 Herr Schluter stunned the model helicopter world with the introduction of his Heli-Boy. Here was a model which could be built by a complete novice (on his coffee table) and one which was so versatile, its owner could use it

We couldn't give you the flying shots. Local availability of 10% nitro fuel was behind our copy date — maybe in the next issue.

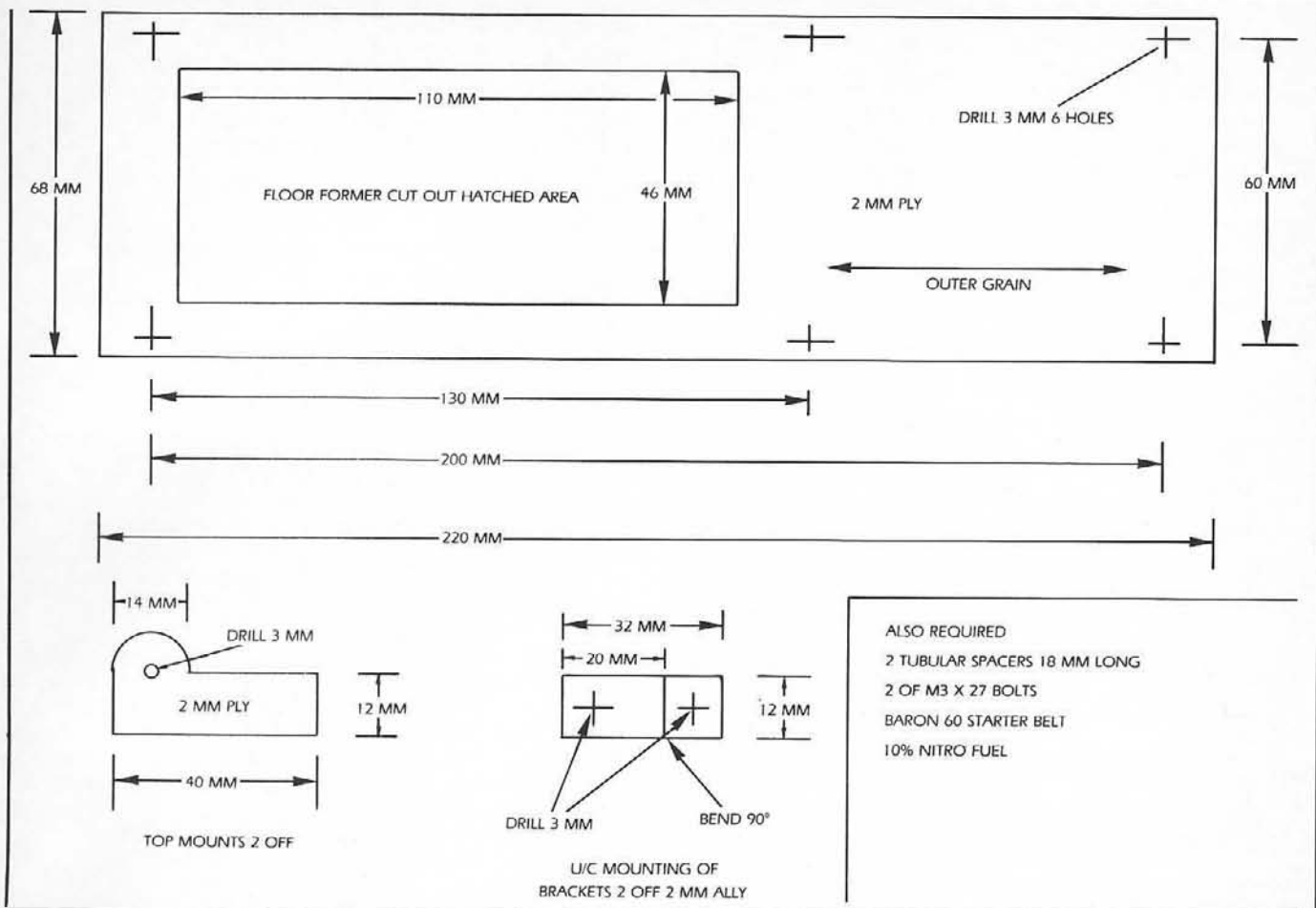
as a basic trainer and later tune/trim it to be as aerobatic as any fixed-wing aeroplane and all this for not much more than half the price of the then current crop of 'expert' model helicopters. As with the earlier Heli-Baby, Schluter offered an add-on fuselage for the Heli-Boy, this time in the shape of a Bell 222. Which is why us old stagers refer to the Heli-Boy (even in pod/boom form) as the Treble Two.

After the Heli-Boy came the Heli-Star and with it a range of scale GRP scale fuselages which started another trend, the split



This clearly illustrates the 'split' and shows how everything is readily accessible.





fuselage. This was another concept in putting mechanics into a fuselage. These new body shells were made in two parts, having a vertical separation line near the main shaft which allowed the whole front section to be removed. This made installation much easier and access for maintenance was much more practical. Installation in most cases meant that the whole mechanical assembly including radio, fuel tank and silencer could be bolted in in one piece followed by mounting the undercarriage and tail rotor gearbox and finally screwing on the front fuselage section and go flying.

For a long time, Schluter was the only manufacturer to use this method and then in the first FAI F3C World Championships held in Canada in 1985, we saw Taya with his TSK Agusta 109 split fuselage. Sprengbrock the Kalt and TSK importers for the UK were quick to appreciate the qualities of this design and soon made it available to use with their Cyclone and Baron range of models. More recently they have had available a 'split' Bell 206L Long Ranger for Baron 60 mechanics and their latest of-

fering is a small version of the 206L for the MX28 mechanics.

An earlier Jet Ranger fuselage had been available for the Baron 20 but was tricky to build without the 'split' and many owners suffered disappointment, simply because they didn't heed the advice to use high Nitro fuel, which was needed to get a reasonable performance with the added weight of a fuselage.

So with the improved performance of the Baron 28 and an improved fuselage design, Sprengbrock now offer a very practical package to those wanting a compact basic trainer which will later convert into an attractive miniature Bell 206L Long Ranger.

Sprengbrock sent us one of these new fuselages to add-on to the MX28 that JD reviewed in his Hoverpoint column in Radio Control Model World some months ago. Unfortunately a Welsh mountain made a sudden and unexpected appearance in the path of the last flight of this model, causing considerable damage both to it — no the model not the mountain — and his pride. You see, he performed this act in front of two other helicopter columnists

and it's taking him a long time to get over that one.

The bottom line of all that was that we had to find another suitable MX donor for our fuselage and a search was started. A young lad in the Kings Lynn MAC who answers to the name of Simon Dealtree, just happened to mention that he had got a very busy academic period in front of him which meant that he would have to hang up his MX for a few months. The poor lad never stood a chance, I had him

parted from his model before he knew it. His only consolation being the knowledge that he would be the proud owner of a pretty 206L to play with while he anxiously waited for his exam results. That softened the blow.

A weight check of the fuselage showed about 16 oz/450 g. Allowing a bit more for wood, glue and paint, etc., plus the bits you can remove I arrived at a total add-on weight of 20 oz/567 g and strapped on the equivalent in lead (halt to

See how the fuselage is screwed to the original canopy mounts.



each skid tube) to the MX to get some idea of the flight performance with the added burden. Aside from a little right tail rotor trim, no other changes were required on the transmitter. However, after a few minutes I felt the fuel mixture could do with being richened a little if only to get rid of a slight smell of overheating. I decided then that I would go for fuel with a 10/ nitro content when flying with the fuselage on.

John Wallington decided to test our ingenuity by sending the fuselage sans woodwork and instructions, what a sense of humour your boy has. In retrospect it may be that he did us a favour, because we have worked out a very simple way of doing the job which minimises added weight and building time.

Past experience has shown the need for three mounting points.

1. Sandwiching the fuselage between the sideframes and the U/C.

2. Tying the upper part of the fuselage to the sideframes, usually where the canopy mounts are on the pod/boom.

3. Mounting the tail rotor gearbox to the fuselage tail end.

This fuselage is made with a polyester resin so we have to use a specific type of glue called Stablit Express. This is a fast setting (20 minutes) glue which is available from all good model shops, we know of no alternative. Also required will be a small sheet of 2 mm plywood, two tubular spacers for the tail mount, ally sheet to make up two brackets and some 3 mm hard balsa sheet for the vertical and horizontal stabilizers. Since we are retaining the tail tube, all the problems associated with tail drive alignment just

don't arise.

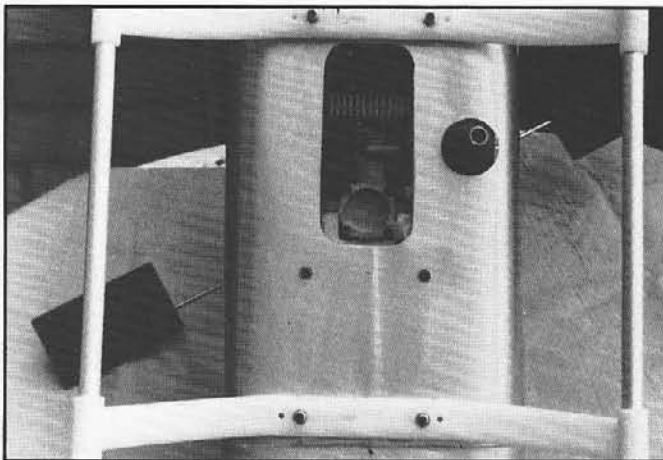
First we need to tidy up the joinline of both fuselage sections and temporarily screw them together using the minimum number of 2 mm self-tap screws needed to keep the joint tight. Now separate the two sections and cut out the side windows in the rear section and a hole 70 mm in diameter in the top for the main shaft and swashplate exit. The position of this hole is such that the front of it meets the visible fuselage join line and it should be laterally central.

Remove the following parts from the MX. Tail gearbox, tail fins, tail boom support, canopy, undercarriage and fuel tank. The tank is only removed to avoid spillage and can be left in if it is dry. Now clean up the remainder until all traces of oil and grease are removed.

The next job is to cut out and locate the ply former in the fuselage floor and drill the holes for mounting the u/c. Accurate positioning is essential but not difficult. Just slide the mechanics into the fuselage and position them so that the main shaft exits exactly in the centre of the top hole and then mark the floor of the fuselage through the u/c mount holes and the two brackets that you have already bolted onto the sideframe extension rails. Now remove the mechanics, drill the marked holes, then apply Stablit to the former and temporarily bolt it in position until set. You will see that we have used a Modtech Tuf-strut II instead of the stock u/c because we thought it would look closer to scale size.

Next we have to tie in the

Don't forget to cut the hole for the silencer.



fuselage to what had been the canopy top mounts. No problems here, just make up two ply mounts as described, bolt on to the tubular spacers and apply Stablit. It may be necessary to use bulldog clips here until the glue sets.

Next you move to the tail end and you will find as we did that you cannot get the gearbox into the fuselage. So a further section has to be removed which can be clearly seen in the photos, this is then glued onto the original removable tail cover, which can then be screwed on in the normal way. The gearbox can now be located in the tail tube, if one first removes the back plate and bellcrank assembly. The gearbox is then held in place as before with the ally clamp and pinchbolt. You will have already cut out the hole in the fin mounting area which will allow access for remounting the backplate and bellcrank, but before you do, use the backplate and two long bolts as a reference for marking the mounting holes through which we bolt the fuselage to the gearbox, using two tubular spacers 18 mm long. When placed between the fuselage and gearbox they will align the tail tube with the tail boom. The tube should be resting on the top of the boom (inside of course).

Do not use the mark on the tail boom for the horizontal stab. Go down 3 mm or the stab will try to go through the tail tube. Make up the tail feathers from 3 mm balsa and cover in Solarfilm if you can match the colours. On final assembly the fin is screwed on with two self-tap screws and the stabilizer is secured with a fillet of clear silicone from underneath and on both sides.

The last job is to spray in your chosen colours then re-assemble and after the usual careful checks, get back to the pleasure of flying. If however, painting is not your favourite pastime, the surface finish is quite good and the moulding join line is inconspicuous so it could be made quite presentable just by applying colour using Solartrim which is available in a wide range of colours, but you would still need to brush in the window areas as Solartrim doesn't like compound curves.

We sprayed ours with cellulose aerosols followed by a

good coat of 2-part clear laquer.

The completed model has proven a very good flier and very good from a maintenance point of view and if you look at the photos I'm sure you will agree it certainly captures a lot of the character of its full-size counterpart. The body kit (just like ours) is good value at £69.95.

This is the first of many (we hope) add-on fuselage articles. If possible we will have at least one subject in each issue of Model Helicopter World. Every one will be tackled in a way which makes life easy for the reader to do it without special tools or materials, much the same as our sister magazine (Radio Control Model World) would deal with a plan presentation of a fixed-wing aeroplane. As time passes we will eventually be able to catalogue all of the fuselages we have covered and provide the enthusiast with an easy building sequence for each subject.

For this one we must thank Kalt Sprengbrook for providing the fuselage and Simon Dealtree for allowing us to use his MX.

I don't know if we were lucky in using this one for our first in the series but it sure was an easy one. □

Difficult to photograph but mounting spacers can just be seen, note relief hole for bellcrank screw — by the way, this is the tail rotor end!

