

CURARE 60

Jon Tappin concludes his review of Modellsport Schweighofer's modern take on Hanno Prettner's fabulous F3a Curare

Paul Higham



The only things now left to install were the receiver and battery, plus a regulator as I was planning on using a 2S LiPo for radio power. Before deciding on where and how to locate these, I needed to do a C of G check. With the wheels retracted the C of G was just to the rear of the recommended range, so having the battery located in the bay above the wing would be fine. I made up a receiver mounting tray from liteply, which would also form a void above it, accessible through the removable canopy to locate the battery, and also allowing for it to be easily removed for charging. With this done the extension leads to the wings were spiral wrapped together and arranged to match the leads from the wing. A four way wiring harness was supplied with the retracts to connect each leg to a single receiver channel, the leads to the wing mounted units being long enough not to require additional extensions. I used a Spektrum AR6200 receiver with a single remote Rx, which I mounted on Velcro to the top of the fuel tank.

With everything now installed I weighed the completed model and was more than pleasantly surprised to find that it came out just a shade under 6 lb 8 oz. What a difference to the 8 lb plus of the original versions. I was thinking that this was going to be a fun machine!

Setting Up

A document of set up instructions is included with the kit, listing Hanno's recommended settings for movements and mixing values. I used this to set the controls exactly to his recommendations. Settings are given for throws for low, F3a and 'show' flying, elevator trim with flap deflection and mixing values for rudder pitch and roll interaction. The suggested mixing values were 2% for both roll and pitch interaction — very small numbers. It would be interesting to see if this was the case, as the model was of course designed before electronic mixing was available, so everything had to be achieved with airframe design.



Curare powers away after a brisk take-off



I spent a lot of time setting control surface deflections to make sure not only that they were as per the manual, but also that they were equal on each aileron and elevator half, and that each elevator half tracked equally across the entire range of movement. This is something that I always do as it ultimately saves time during the trimming process; unequal elevator throws in particular will cause the model to screw out during pitching manoeuvres.

With the supplied decals applied and photos taken the Curare was ready to go.

First Flights

At the field everything was again checked for security and for correct direction of the controls. A successful range check was carried out from all directions, so I was ready to go.

The West 52 engine is a non-ringed ABC type and it was initially very tight at the top of compression, which is normal for a small high performance two stroke, so initial starting was tricky. But after some running it got much easier. At the time of writing I have had two gallons through it, and it is still tight at TDC when cold but it now starts very easily by hand.



Smooth aros are what this model does best



Flying with the throttle stick fully forward is not an issue with a two-stroke!

On tuning I was struggling to remove a rich point in mid-range throttle, but I felt that this might improve with running. The first flight was without incident until an engine cut when throttling up from half power, but I will come back to that.

Take-off required a reasonable amount of elevator to unstick due to the nose down attitude mentioned in part one of this review, but once off the ground the wheels were retracted and the model accelerated rapidly. Only a few clicks (bleeps!) of trim were required, so with consideration to the new engine I flew it through a few typical manoeuvres. The first thing to note is even with a slightly rich engine, the West 52 had plenty of power suggesting that a 60 would be overkill. The centre of gravity felt pretty close to optimum, requiring only slight forward stick pressure for level inverted flight. I felt that the mid F3a rate setting felt most comfortable, with the roll rate being a little too slow for my taste on the low rate. Application of rudder for corrections and during rolls and knife-edge flight showed virtually no deviation other than yaw.

After several more trimming flights I can now confirm that my settings are very close to Hanno's recommendations. I am still using the mid F3a rate setting all the time. I have changed both of the mix values but only by an additional one percent; it now has 3% opposite aileron and 3% up elevator with both left and right rudder. The preset side thrust has not required any adjustment — this is clearly a well-tested airframe. The only other adjustments I made have been to the centre of gravity, as I have moved it back a few mm and it is now right at the rearmost recommended position. Also, I increased the exponential value slightly with down elevator only, as it felt a little sensitive around centre, possibly due to the C of G being at the back of the recommended range. These adjustments are clearly very small so I am very impressed with the level of detail and accuracy of the supplied set up information.

Longer Term View

After around 20 flights with the model, I have to say I absolutely love the Curare! It really makes a refreshing change from modern aerobatic designs, both of F3a and freestyle type. For one thing it really likes to fly fast. With the relatively low side area compared to the latest designs, manoeuvres with knife-edge elements like slow rolls, point rolls, rolling circles and of course sustained knife-edge benefit from the higher speed. That's not to say the rudder is ineffective, in fact it is much more powerful than I expected. Single roll rolling circles are easily achievable and, given enough height for the second half, it will get round a knife-edge loop. For me the higher speed is not in any way a negative. It is what sets it apart from most other current aerobatic models and increases the fun factor. It just eats up the sky and just feels so solid in the air. It is very smooth through all manoeuvres. Huge loops are possible with plenty of speed through the top of the manoeuvre due to the power of the West 52 and the low airframe weight. Long slow and hesitation rolls are easy and can be flown as long and as slow as you like with plenty of rudder authority to hold altitude.

I have experimented quite a bit with the 'snap flaps', which move opposite to the elevator and I now leave them switched in



Beautiful sleek lines are typical of F3a pattern ships of the 1970s



Landing flap allows you to come in with a bit more power and touch down at your feet at low speed every time



Back in the 70s the Curare was a big model. Not so these days!