The new ARTF provides an accurate copy of Hanno's colourful approach to covering

CURARE 60

Back in the 1970s and 80s, Hanno Prettner was the man to beat in F3A Aerobatics. His Curare design became a classic, and it is now available as an ARTF kit from Modellsport Schweighofer. We asked Jon Tappin to build and trim this stylish retro model

The year 1977 was a big year for me in model flying. I was 13-years-old and did my first R/C solo flight; I can still clearly remember it to this day. That same year, Hanno Prettner won his first of seven World F3A Championship titles. He was flying his own design Curare, which went on to become a true R/C classic. It also secured him three Las Vegas TOC titles in the '70s before the rules changed to require scale models.

Another early memory of mine is one of our club members turning up with a Curare, built from plans, in the late '70s when everyone else was flying 40-size models like Gangsters and Crescent Bullets. The Curare seemed huge to me then and completely out of reach. It's strange to think that it was around the same size as a Sebart Angel 50 is now!

Long time modellers will, I am sure, remember Hanno flying many times at the Sandown Park Model Show. I remember being inspired watching him in the early days, the first time I ever saw a one roll rolling circle! I also watched him win his final F3A World title in 1993, when I competed at my first World Championships.

With all of this nostalgia in mind, it didn't take me long to decide to grab the opportunity to do this review of this ARTF replica of the legendary Curare. It has been produced and developed by an Austrian company, Modellsport Schweighofer GmbH with the involvement of Hanno himself. It was supplied for review by Sussex Model Centre, complete with a special edition Weston UK West 52Ti 'Curare Special', along with a Weston manifold and pipe. The engine has been developed and produced with a retro look and it looked very smart with its red anodised head and carb.

SMC also supplied a set of Jetcraft electric retracts, which looked to be of very nice quality.

Opening the box and inspecting the contents revealed a very complete set of parts. The airframe components are all built up in balsa and ply, and seemed to be very light in weight, but strong. It was interesting to compare the typical modern ARTF construction methods with the original solid balsa sheet construction of the plan version, or the heavy glass fuselage and foam wings of the original kit version. It would be interesting to see what the final weight would come to. The original ones I used to see would typically be between 8 and 9 lb.

The model was very nicely covered with Oracover (Profilm to us), which in my opinion is the best covering film available. It is produced in the original 1977 colour scheme, of which two variations are available, one as per the review example and another with the green changed to blue.

Also included were a glass cowl, clear canopy and all hardware, wheels, tank, linkages etc. required to complete the model.

A nice touch is that it can be built either as an I/C or electric model and parts are included to mount both motor types. There are plastic beam mounts for I/C engines and laser cut ply parts to make up a motor box to take an outrunner electric motor. Both mounting systems are interchangeable, as they are designed to fix to the same locations on the ply front bulkhead with preinstalled blind nuts. This would make it relatively easy to swap power plants at any time if required.

On With The Assembly

I started with the wings. With ailerons, flaps and retracts to install, there was a fair amount of work to do here, but everything was very straightforward. I did most of the installation work before joining the wings for ease of handling.

Aileron installation was simple. The position of the control horn needs to be marked on the aileron from the servo arm connection position, and the supplied horns are the threaded rod type, which makes fine manual adjustment of throw on each side easy. The horns are fixed with three screws through

Neatly poly bagged parts in the bottom of the box

Parts unwrapped and ready for assembly

Optional electric retracts add a nice touch

the triangular base into a matching plate on the top of the surface. I always cut the film away beneath the horn base and soak the surface with thin cyano as I tighten the mounting screws up. This reinforces the balsa at the horn position and makes for a very secure fixing. Fibre faced Mylar hinges are supplied and the surfaces are accurately pre-slotted for them. I found a minor issue in that the fibre layer was showing signs of separating from the Mylar layer, but with care, when inserting into the slots, this did not cause a major problem. Once thin cyano was wicked into the hinge slot they were very secure. The trick here is to make sure plenty of glue is used. I keep adding a drop at a time while folding the hinge backwards and forwards until no more cyano will run into the slot. Be very careful that the glue doesn't run onto the underside of the surface when you do this, as having a run of glue harden on the other side of the surface will definitely spoil your day!

Aileron servo mounting holes are revealed by cutting the covering film away. The servo is then screwed into position. A draw thread is pre-installed in the wings to pull the servo lead through the wing to the root position, a handy feature that makes the servo installation simple.

I have a collection of 'old school' JR coreless non-digital servos from my F3A days in the late '90s. They are not old enough for the '70s era, but I wasn't sure I wanted to go quite that 'retro', so they seemed appropriate to use for the Curare.

I used the supplied linkage hardware of 2 mm pushrods with plastic clevises. The only addition was to add silicone fuel tube retainers around the clevises to ensure they did not open up under load. It's not strictly necessary, but it's an easy to do mod for added security.

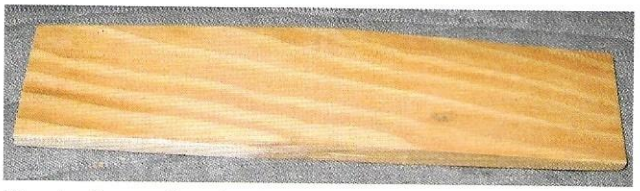
Flaps And Retracts

The flaps are actuated with torque rods to a central servo. The flaps were hinged and the torque rods installed, and the servo would be added after joining the wings.

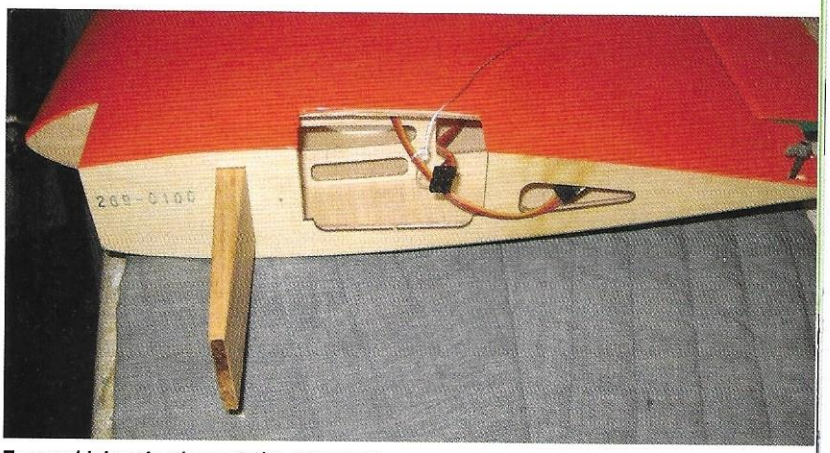
Next was the retract installation, which was very easy with the supplied Jetcraft electric retracts. They fitted perfectly in the pre-installed hardwood bearers. I had to remove a little of the plastic wheel well liner to clear the retract body, but otherwise no mods were required. The retract lead was threaded through to the wing root using another pre-installed draw thread.

With the ailerons and retracts done it was time to join the wings. The joint is reinforced with a hardwood brace that is glued into a box at each wing root. The brace looked surprisingly small to me, but I can confirm, on completion that the wing was plenty strong enough.

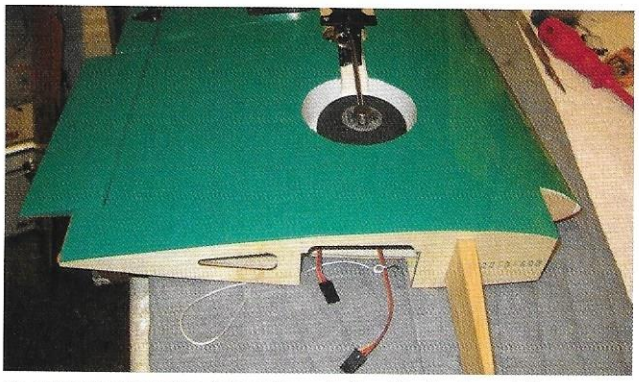
When joining wing panels I always make sure that the wingtip



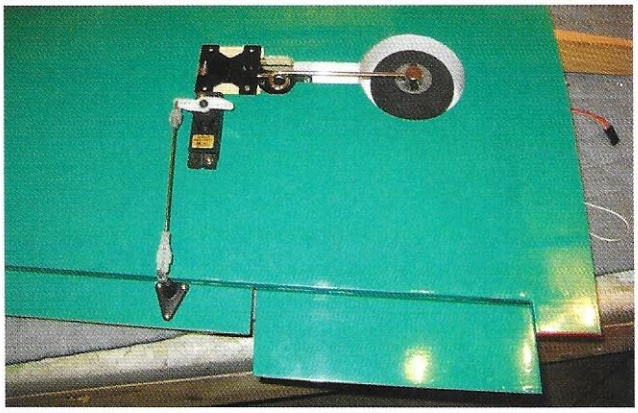
The chunky wooden wing joiner



Tapered joiner in place at the wing root



Be sure to check the joiner fit on both sides before gluing



Retract and aileron servo installations

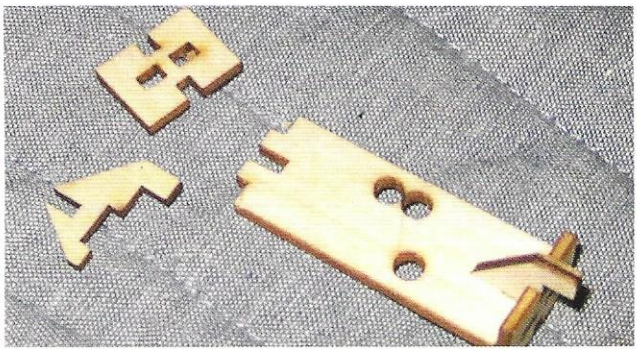
Front wheel well depth is restricted by the tank bay above so it cannot not be increased

incidences are the same. This way the effect of any minor warps in the wing panels will be minimised. This can be done using jigs at each tip, or an incidence meter. With the tips set at equal incidence, I bring the roots together at the leading edge and look at the relative positions of the trailing edges at the root. My rule of thumb is that anything within 2 mm is acceptable. The Curare wings lined up perfectly, and this was an early indication that this was a very accurately constructed model. So far, so good!

My next task was to install the pre-cut parts to make the flap servo mount. This was my first error as I later realised I needed to make a hard point to install the tuned pipe mount. This would have been much easier with access inside the wing root. Installing the servo mount blocked the only access point.

The flaps are driven with a forked pushrod via torque rods. The hardware supplied used collets with grub screws to clamp the individual rods together. While this would give a perfectly good result, I decided to go with the more traditional method of binding and soldering the joint. This was one of the few areas where I deviated from the instructions, as it seemed to be a more permanent solution. Just my personal preference.

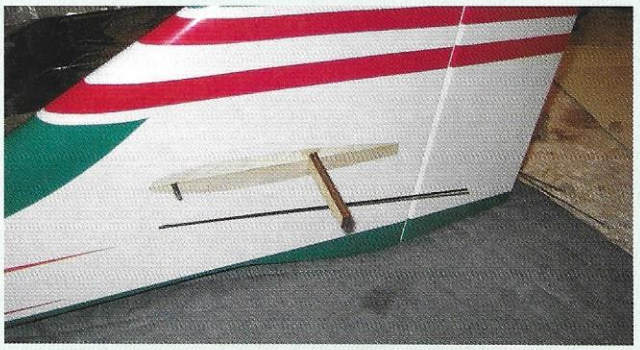
The flaps on the Curare serve two purposes. The first is to slow the model on landing. An accurate spot landing was judged in '70s F3a, so flaps gave much better control for these fast flying and slippery models. In addition the flaps can be coupled to move opposite to the elevator to tighten the looping radius, called snap flaps in the day. This is easily set up by transmitter programming later on.



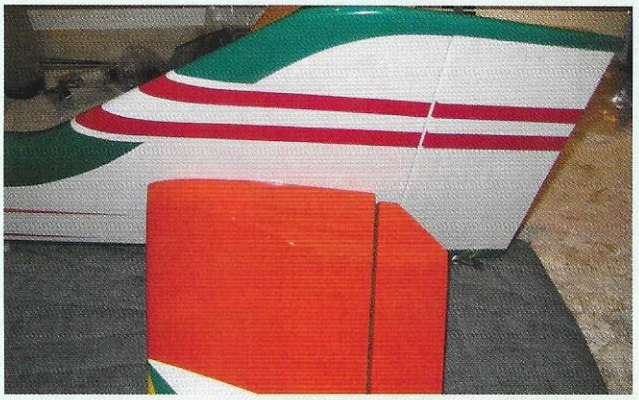
Laser cut parts are assembled to form a front support for the three snakes driving the tail

With ailerons, flaps and electric retracts, you end up with five leads at the centre section. With multiple leads, I like to secure them with a length of spiral wrap with the leads slightly staggered in length. Doing the same with the leads from the receiver ensures they are neatly secured and connected in the correct order when attaching the wing. I separated the five leads into a two and a three either side of the flap servo mount, with the aileron and retract one side and aileron, retract and flap on the other.

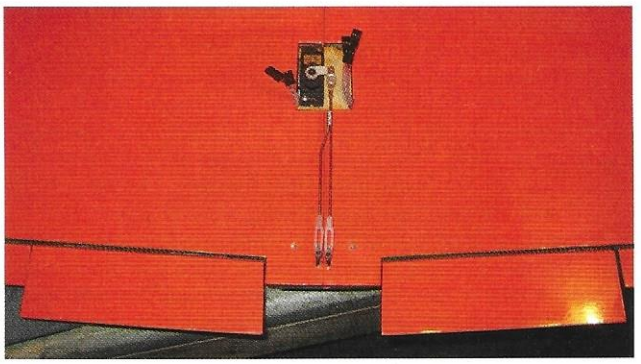
With just the two front dowels to glue into the wing leading edge and after installing a ply hard point for the pipe mount,



The anhedral tail is joined using a short ply brace and a carbon rod incidence peg fitted into pre-formed slots in the fuselage



Connecting up the tail linkages using good quality parts



Jon's only deviation during the build was to bind and solder the Y shaped flap pushrod