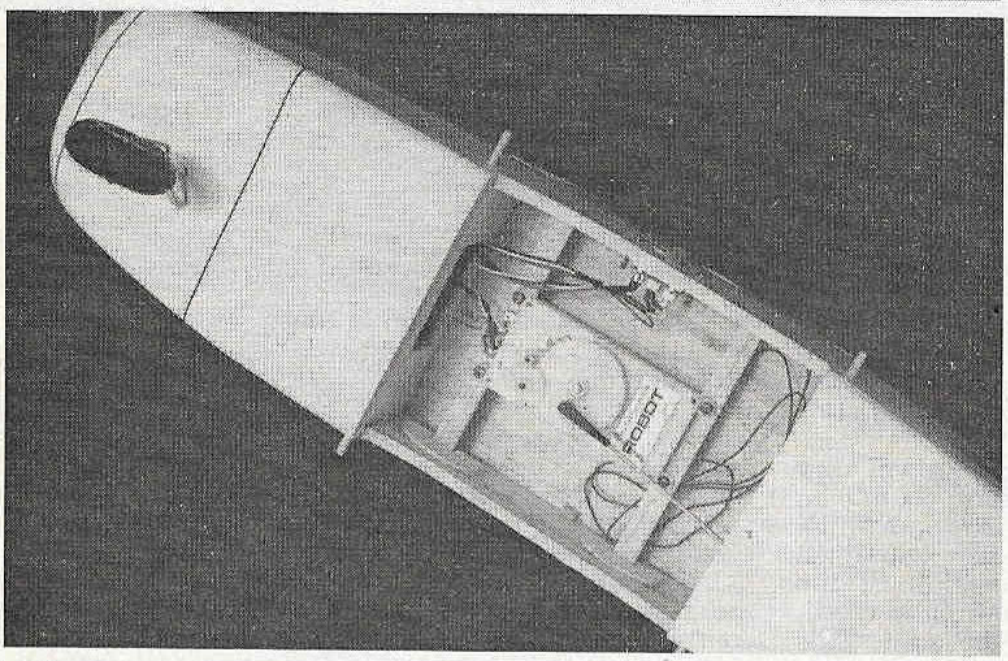
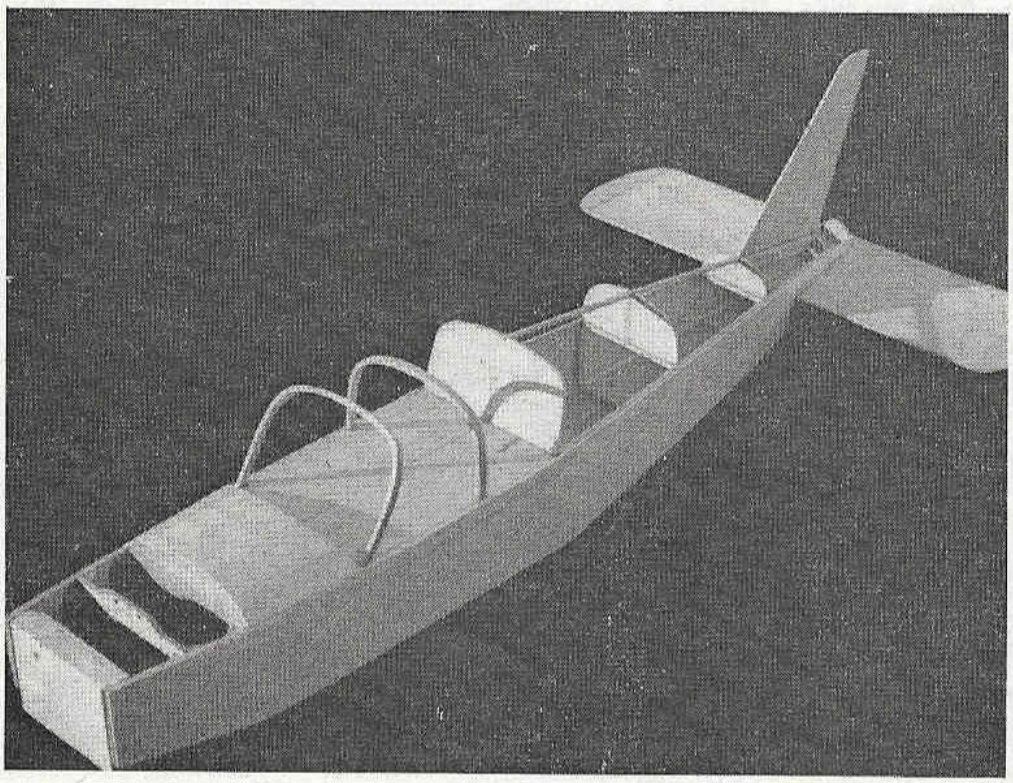




PIPER CHEROKEE

THE CHEROKEE is an excellent example of a modern day mass produced light aircraft, and is produced by Piper in one of the most highly automated aircraft plants in the world, at Vero Beach, Florida. Around 2,000 Cherokees, in various versions are produced each year. These range all the way from the basic two-seater to the six passenger PA32, and include such variants as the Arrow, one of the first light planes to sport a retracting undercarriage.

Our model is of the PA28 Cherokee 140, the full size of which has only about 1,200 parts. We didn't count our model's parts, but it's not quite that many.

A surprising thing is that Piper can make one of their Cherokees in something like three weeks, it took me a week longer to make my model!

Construction

The construction of this model follows contemporary practice. The all sheet monocoque balsa structure has been developed during the past few years, and should give the reasonably experienced builder little trouble. The basic layout permits various types of engine to be fitted and many radio installations which can be fitted by the addition and re-arrangement of various fuselage formers. A version of this model is being made with aileron control instead of rudder control, using the inboard flaps as the ailerons.

Wings

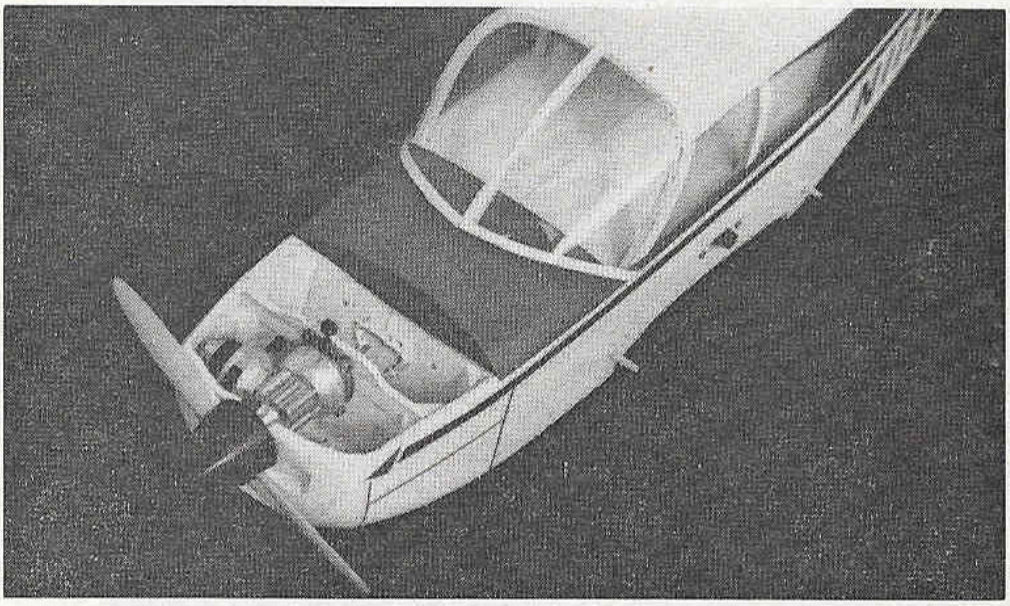
The wing structure is arranged so that the controls on the full sized aircraft are represented, but are not movable.

Begin the wing construction by buying or making two 6 in. wide sheets of 1/16 in. sheet, 36 in. long, for the wing skins. Use one of these for the lower surface, and begin by first marking out the location of the ribs and spars. A ball point pen is ideal for this. Now cut out all the ribs, and glue into place all ribs, R3 and R4, and spars S1 and S3. Score the sheet at the location of ribs R2, crack and bend up

The Piper Cherokee is an attractive modelling subject, particularly when viewed from the low angle of our heading shot. Radio installation shows the Controlaire Robot receiver cum motorised actuator in the radio bay, and at left is the basic fuselage construction.

A delightful single channel scale R/C sportster for .049 motors

By J. HEADLEY



the wing tips to the correct dihedral. Cement into place S4, and R1 and R2. Whilst this is drying, the undercarriage spar can be made from $\frac{1}{8}$ in. ply. Sew the U/C wire on to this, noting that the inboard end of the wire is bent aft and locates in a hole in the spar. Don't bend the wire at the wheel axle at this time. This spar can now be glued in place, and the top wing sheeting attached. Once the spar S6 is in place and dried, the wheel axles can be bent. The upper wing sheeting overlaps the flaps slightly as the plan indicates, but is flush with the spar at the aileron stations. Attach the wing tip blocks, and then cover the wing with tissue, and give one or two coats of clear dope. The ailerons and flaps are made from trailing edge section, covered with tissue and cemented carefully in place on the wing. The wings can now be painted, and the wheels soldered in place.

Fuselage

Cut out two fuselage sides to the pattern shown on the plans, and mark on these the locations of the various frames and cross members. Cement into place the doublers and longeron strips, and the local reinforcing pieces. When dry, these sides should be joined together with the various frames and cross pieces, and the blocks in the nose region. Now cement in place the tailplane, the upper cabin structure and then the fin and rudder. The upper skin can be cemented into place at this stage. With all the structure complete, the entire assembly is sanded all over and then covered with tissue. Don't forget to paint inside of the cabin before installing the celluloid windows.

Now that the fuselage is completed, and almost finished, it's time to start cutting out all those holes for the escapement rubber and the control rods, etc. When this is completed the fuselage can be painted.

Tail Surfaces

These are cut from medium hard $\frac{1}{8}$ in. sheet balsa. Attach the tip pieces and then sand the edges to a semi-circular section. Cut out the trailing edge control which is used as a trim tab. Cover with tissue and then re-attach the tab using scrap tinplate hinges. When a satisfactory glide has been obtained this trim tab is cemented in place.

Engine

The engine used on our prototype was a COX-049 QZ. If you contemplate installing a different type it might be necessary to revise the location of Frame 2.

Radio

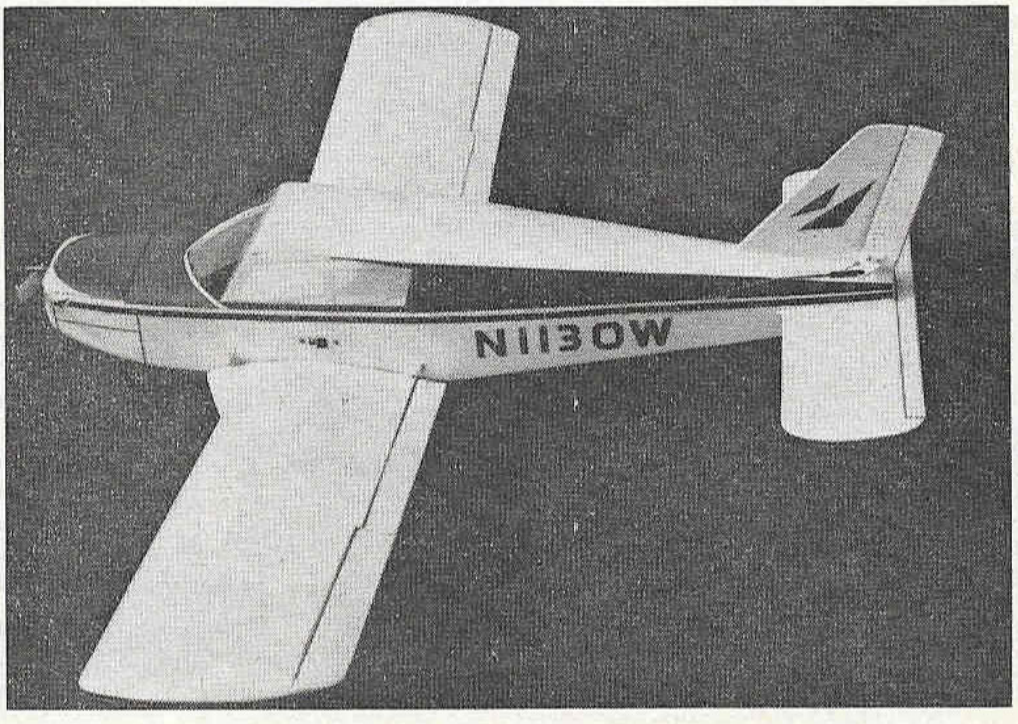
The original model was fitted with a Controlaire 'Robot' single channel Receiver/servo which was fitted on to the cabin floor by scrap pieces of $\frac{1}{8}$ in. sheet. However, any escapement should be suitable, and can be fitted by adding a 1/16 in. ply frame around the C.G. location.

Finishing

A wide variety of colour schemes exist for Cherokees, so if you have a favourite scheme – use it.

The most common paint scheme seems to be a basic white all over, with trim in either red or blue.

This trim can either be applied by using tape of the kind sold for automobile pin striping, or if you have the patience, mask off the whole aircraft and spray on the trim.



Radial mount installation of Cox .049 motor complete with QZ muffler is seen at top right, while at right is another view of the completed model. Note scale flaps and ailerons, not operative of course.