



Dick Sonheim and Cliff Love's 'Beatnik' has been one of the most sought after designs in the country. Here is the latest configuration of a highly successful competition aircraft whose history and victories span several years.

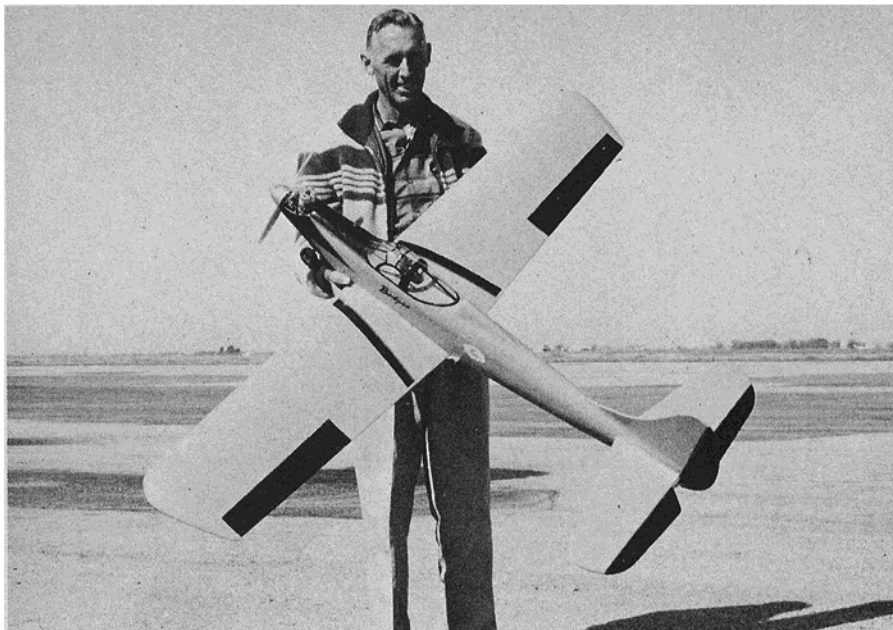
# THE BEATNIK

The Beatnik has never been published in any magazine prior to this and yet is one of those models that has, over the years, become very popular. During that period, Foamcrafts in Campbell, California, has sold several hundred foam wings for the Beatnik, and a number of people have been producing fiberglass fuselages for this model. To top it off, Don Dewey has a file folder full of letters from modelers asking when and where they can get their Beatnik plans. Up until now the only set of drawings available for this airplane has been a set of outline drawings with very little detail drawn by the designer Cliff Love. Cliff made a few copies and passed them out to his friends and these modelers in turn made copies and passed them on to other RC'ers.

The original design of this airplane goes back a number of years and the Beatnik that I fly every week was built five years ago and originally flew on reeds. One of the most important features of this design is the double tapered wings that Cliff designed and their inherent ability to penetrate smooth and true in windy and bumpy weather conditions. It is for these very same reasons that both Joe Bridi's Sun Fli 4 and Phil Kraft's Kwik Fli 4 have gone from the straight wing to the taper wing. The straight type planform with a constant chord allows your plane to fly well on a calm day, however, in windy weather or bumpy air, those big wing tips hanging out there will cause the airplane to bounce around considerably more than a tapered wing aircraft.

Another important feature of the Beatnik wing is its ease of construction. The bottom of the rib, between the two spars, is flat, which makes it very easy to build a perfectly straight wing on any flat surface. If you use the hollow core door type of wing jig shown in last month's Kits and Pieces column, it is possible to build the entire Beatnik wing in one evening with the exception of the leading edge bottom sheeting and bottom capstrips. For those of you who want foam wings for the Beatnik, they are available from Foamcrafts in Campbell, Calif., and most likely will also be available from International Models in Ft. Worth, Texas. We also understand that Bob Palmer, 9161 Morehart Ave., Arleta, Calif., who produces those beautiful Sun Fli and Kwik Fli fiberglass fuselages, is planning to produce units for the Beatnik.

#### Wing Construction



Top: Cliff Love with one of original Beatnik's. Above: Dick Sonheim, RCM Contributing Editor, with latest in long line of prototypes.

The wing ribs are made by the sandwich method, using the templates shown on the plans. Cut a tip and root template from a piece of aluminum or plywood. Sandwich 12 pieces of 3/32" sheet between the templates and bolt together with two 8/32 bolts. The ribs are then shaped with a carving knife or sandpaper block. After the ribs are separated, carefully sand away the sharp edge, taking care not to destroy the correct wing profile. Working over the plans or on your wing jig, glue the ribs in their proper position on the spruce bottom spars. After the glue has set, glue on the two top spars and the leading edge, and if you are building the wing in one piece on a jig, you can also glue in the plywood dihedral braces. The sheeting

and capstrips can then be glued in position. The ailerons should now be cut as shown on the plans and finished off. Be sure to glue small balsa blocks to the top sheeting of the aileron for mounting your hinges before closing off the aileron. At the same time glue a small plywood plate in the bottom of the top sheeting of the aileron and mount the control horn as shown on the plans.

Run a 1/16" piano wire pushrod through one of the screw holes, left from making the wing ribs, from the servo location out to the bellcrank. You can complete the pushrod hook up to the ailerons by using Kwik Links with the long shaft. Glue the tip blocks in place and sand to shape.



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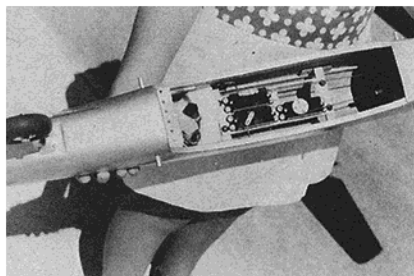
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### Rudder and Elevator

The stab is built up on a flat surface. The elevator and rudder are cut from sheet balsa and sanded to shape.

### Fuselage

The fuselage sides are cut from 3/32" balsa with 1/32" plywood doublers from the firewall to the trailing edge of the wing. Glue together using Pliobond contact cement. The firewall is oval in shape and it may be necessary to wet the outside of the fuselage sides in order to wrap them around the firewall. Use masking tape to hold the sides in position. The remaining formers may be held in position using the same method. When this framework is dry, glue the bottom sheeting in place. To form the turtledeck and cowling, tack glue a balsa block in place on the top of the fuselage. Using a carving knife and sanding block, shape the turtledeck to the proper contour. Remove the top block from the fuselage and, with your Dremel saw, cut out a slot in the back of the block to hold the rudder. Cut another slot at the bottom of the block to fit the stabilizer. Forming your turtledeck in this same manner, will provide you with preformed tail



Orbit installation in Beatnik.

fillets. The block can then be hollowed out on the inside leaving about a 3/32" shell which is then glued back in position on the top of the fuselage. Those who wish to save the cost of a balsa block can plank the top of the fuselage. Simply add a rounded section to the top of each former.

### Finishing

The entire nose of the airplane should be fiberglassed, and a good coat of resin applied to the engine compartment, in order to make it completely fuelproof. The entire airplane is covered with Silron, with several coats of filler and several coats of AeroGloss color dope. If you have taken a little care in selecting your wood, and in finishing, your Beatnik will weigh less than 6 pounds, ready to fly.

### Flying

Unless you are an expert flier, I suggest you set the Kwik Link on the last hole on your elevator horn until you get the feel of the airplane. This will also make it easier to flare out your landings for a smoother touchdown. You will find that it is almost impossible to stall the Beatnik, which is quite the opposite of what most people think will happen with a tapered wing.

The Beatnik is an attractive looking model with a very realistic appearance, and you are sure to receive many compliments from the spectators at the field.

So don't let the name fool you! ●

