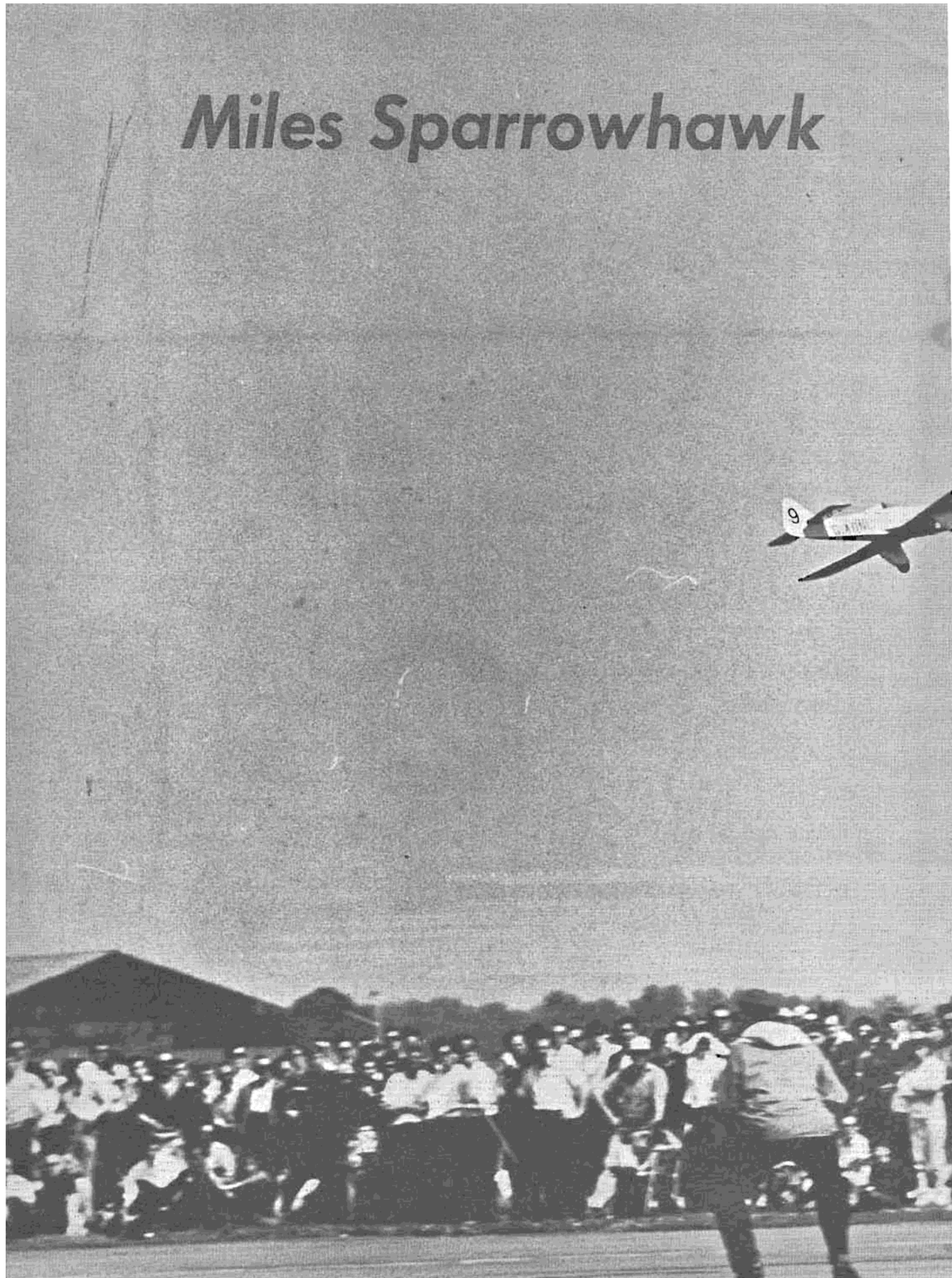
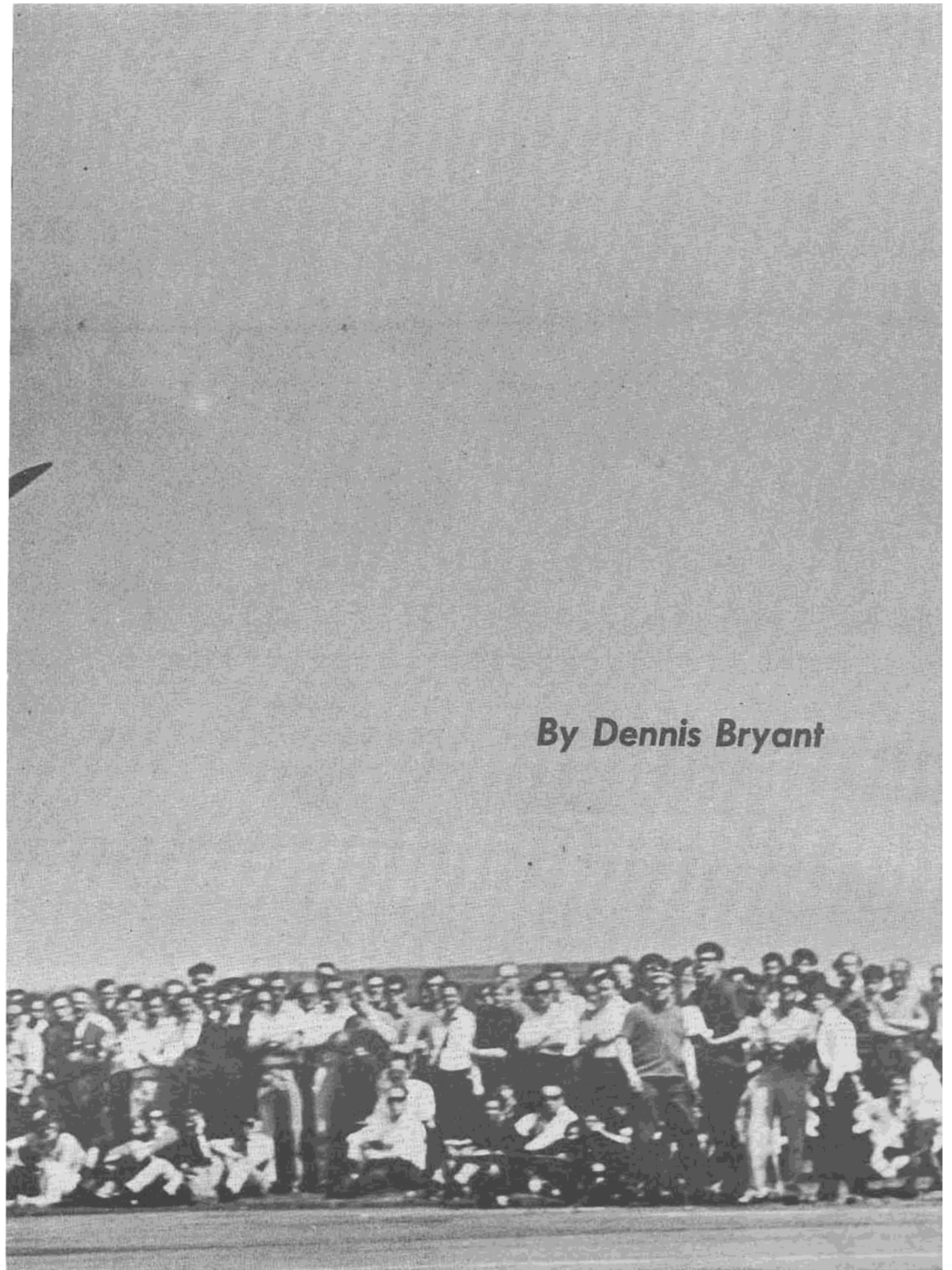


Miles Sparrowhawk



By Dennis Bryant





One of the finest scale ships ever presented, the Miles Sparrowhawk placed high at the British Nationals. An added bonus — the Sparrowhawk is a top sport flier as well.

THE choice of the Sparrowhawk for multi scale evolved as the result of the failure of another scale model. It was just three weeks before the 1964 British Nationals. I had just completed a Hawker Fury, which was to be my entry for that year, having spent six months on this particular model. Needless to say I had high hopes for the Fury, and you can imagine my feelings when, on the day of the test flight, the model proved to be underpowered with a Merco 49. At that time the Merco 61 was not in production and the only alternative was a McCoy 60 or ST56—neither of which could be obtained in time for the Nationals.

I still had my Macchi 202 from the previous year, but under British rules a winning model cannot be entered two years in succession, so there was no choice left but to build a new model—and in three weeks time!

Searching through all of my aviation

magazines to find a suitable subject which could be built in such a short time, finally I decided upon the Sparrowhawk. It has a typical multi lay-out and is almost as easy to build as a normal stunt model. As a result, I had it finished three days before the Nats, and just in time for two test flights. I also managed to place second in the R/C scale event which was more than anticipated, considering the circumstances.

I flew the Sparrowhawk for the rest of the season and it has proved to be an excellent performer. It will compete on equal terms with Class III contest multi designs. For the scale buffs, there are *no* deviations from scale and construction is simple and straight forward.

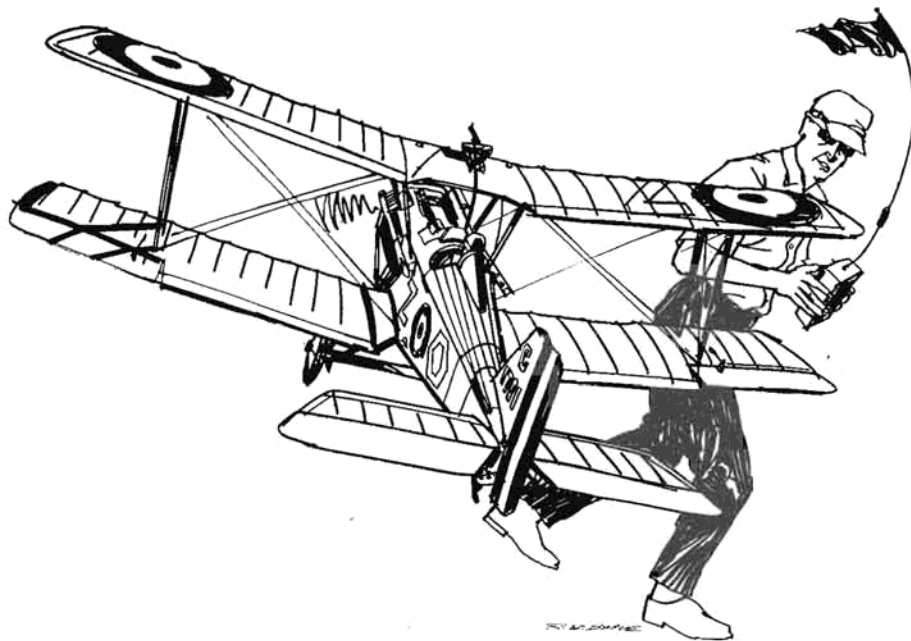
Construction

Commence by building the fuselage. This is of conventional construction with balsa sides and ply doublers. The

bottom sheeting should be left off until the stabilizer has been made and fitted in order to enable the elevator push rod to be attached to the elevator horn. The wing root fairings should be constructed after the wings have been completed. With the wings lightly cemented in place the fairing blocks can then be shaped to fit accurately between the wing and fuselage. When a satisfactory fit has been obtained, the wing may be removed and the fairing blocks cemented permanently in place.

The wings are also of conventional construction and need no special advice except for one small point, which applies to all sheet covered wings. The sheeting should *always* be applied from the leading edge back as it is easier than trying to fit a piece of sheet between a leading and trailing edge section that have already been applied.

If you decide to use the method of hinging the ailerons that are shown on



on the Sparrowhawk when using a Merco 49. If your model balances where shown on the plan, and has no warps, it will fly straight off the board. An average pilot will have no difficulty in flying this model. It is sensitive on aileron control so take it easy on the stick until you get the feel of it.

A word or two about the full size machine may be of interest:

The Sparrowhawk was designed for the King Cup Air Race in 1935. The decision to enter the race was made in July of that year, leaving only eight weeks in which to prepare a machine for the September race. A standard Hawk fuselage was taken from the production line and shortened by two feet. Standard Hawk outer wings were fitted directly to the fuselage, without the usual centre section. Long range tanks and a standard Hawk tail unit were added. With a 140 h.p. high compression Gypsy Major engine installed, the plane was finished on time and was called the Sparrowhawk. The 1935 race was flown over two courses, the first being a circuit of Britain and the second being seven laps of a fifty mile triangular course, both courses starting and finishing at Hatfield. In the first part of the race, the Sparrowhawk finished eleventh at 172.38 m.p.h. Since 1935, several Sparrowhawks have been built, including two for high lift flap research. In post war years G-ADNL was modified to take two Palas jet engines and is still flying under private ownership.

Specifications

Dimensions.

Span 37 feet
 Length 25 ft. 10 in.
 Height 9 ft. 7 in.

Performance.

155 m.p.h.
 Landing speed 50 m.p.h.
 Ceiling 18,000 ft.

the plans, the hinge tape should be glued to the spar before the top sheeting is applied. I hope you do decide to use this method as it makes for a neat job — much better than crossed over tapes or that horrible figure eight stitching!

The wheel pants may cause some concern as they are a little tricky to bend accurately, but the system does work and was used on the prototype. If you do not mind the extra work of making a mould, fibreglass pants would be an improvement, but please do not omit them as the plane's appearance suffers without the fairings. The fairings are actually a $\frac{1}{8}$ " oversize in width to accommodate DuBro wheels. Williams Bros. wheels were not available in Britain at the time this model was built. For true scale, the latter are the only commercial wheels that are slim enough for use with scale wheel pants.

For best results the nose cowl should also be made of fibreglass. A wooden one would suffice but it will not stand up to "ravel rash" so well. My original cowl was made of fibreglass and was well worth the extra trouble. The high fuel tank position may cause some raised eyebrows but in practice it works quite well. When starting inverted engines they should not be primed through the exhaust port. The needle valve should be set to running position and the engine choked twice. The metal side cowls should present no trouble if paper patterns are used. This will save your sheet metal and temper if you do not get the right shape the first time around. Make sure that the cowls are well bowed-out at the trailing edge or you will find that overheating will be the result.

The tail unit on the prototype was built up and covered with sheet, as shown on the plan, although the full size plane had fabric covered tail surfaces. I simulated this on my model by doping strips of thick note paper, $\frac{1}{8}$ " wide, over the rib positions to represent rib tapes. As to the rudder, I have shown an alternative hinge line on the plan as I thought that the large scale rudder would be too sensitive. Providing that the movement is small it is all right to use a scale-size rudder.

Every modeler has his own pet method of finishing a model, and here is my own for your consideration. After sanding smooth, and filling any cracks, the model is covered with light weight silk. After a further fine sanding the entire model is covered again with fine tissue paper, the idea of the tissue is to save on filler. The filler I use is a talcum powder and clear dope mix. At least three coats of this will be required, sanding between each coat, and another three or four coats of color dope. The color scheme for the Sparrowhawk is an overall high gloss cream with the registration letters in red and the racing number on the fin in black.

No side or down thrust was needed

Dennis Bryant and scale Miles Sparrowhawk prototype at recent British Nationals. An excellent performer.

