



Scale RC or full size Macchi 202? Only the cylinder head gives away this beautiful scale multi by Dennis Bryant. For color details and photos obtain Profile Publication #28.

MACCHI 202

BY DENNIS BRYANT

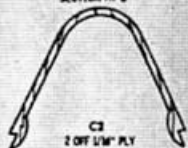
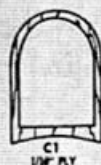
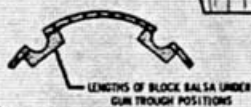
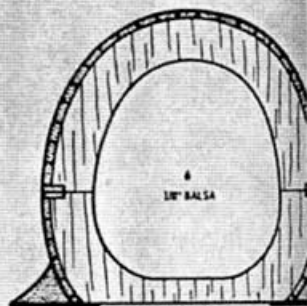
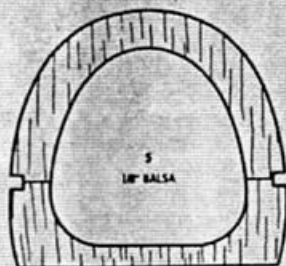
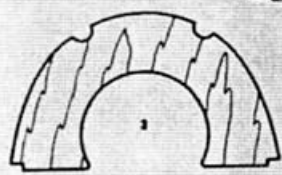
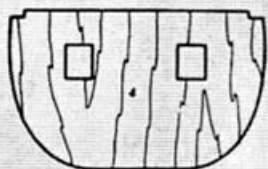
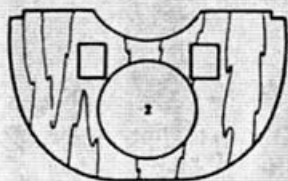
Winner of the 1963 British Nationals, the Macchi 202 is a must for the serious, advanced scale builder demanding absolute fidelity to scale.

IN 1963 I purchased a copy of Famous Fighters of World War II, Volume II by William Green, which contained, among other things, photographs and three view drawings of the Macchi 202. I fell for the latter immediately, deciding that it would make an ideal subject for R/C scale. I had previously known

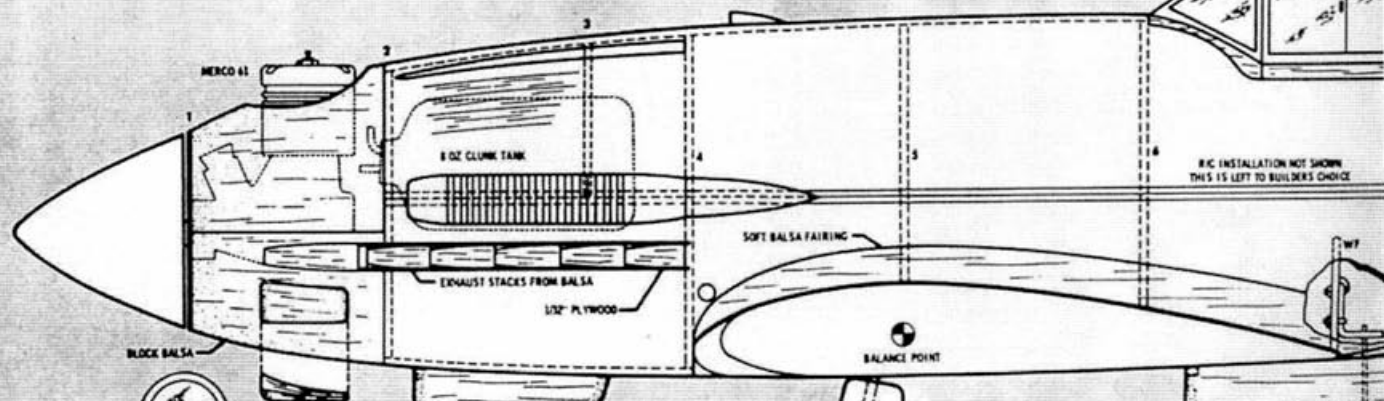
about the Macchi 202, but had never seen a decent three view drawing of it until I had obtained a copy of Famous Fighters. Until then I had not realized what a handsome airplane it was. To my eyes, it rivals the Spitfire and Mustang for the title of best looking fighter of World War II, and it is in the hope

that others will agree with me in this, that I have decided to submit this plan and article.

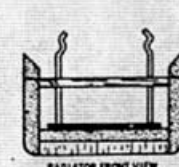
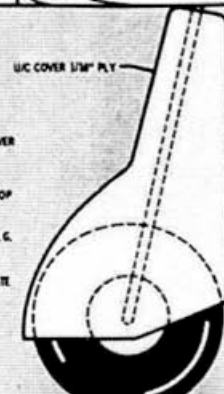
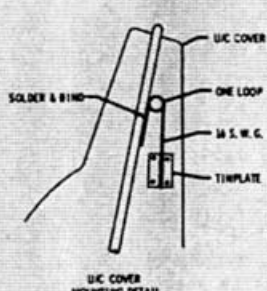
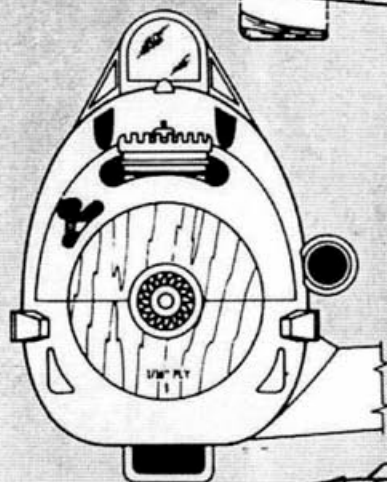
I soon had the plans drawn and the model under way, as I was anxious to have the model flying in order to show that there were other possibilities for R/C scale than the ubiquitous models



FORMERS 2-3-4 FROM 1/8" BALSAL FACED WITH 1/8" PLY

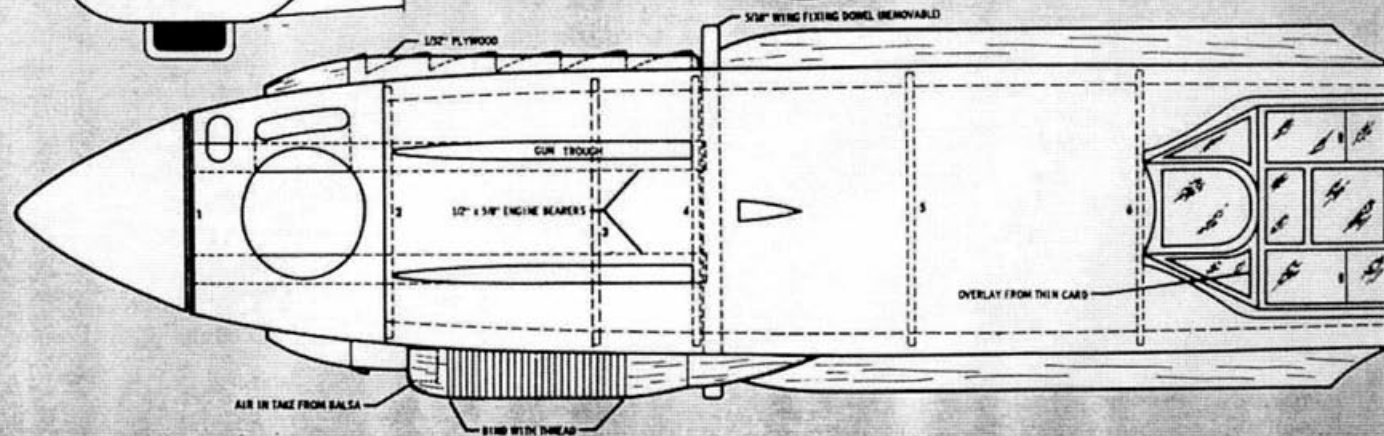


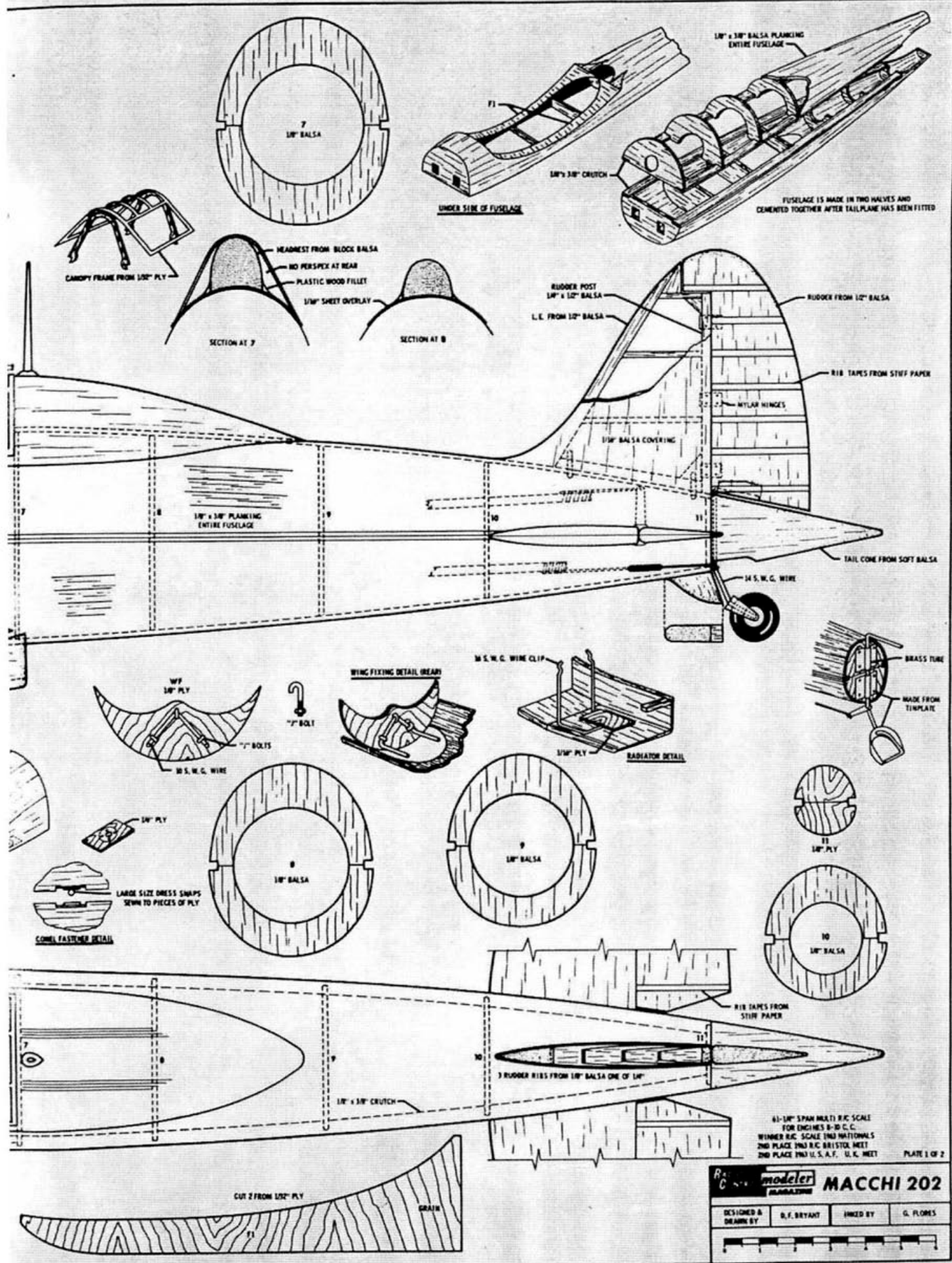
R/C INSTALLATION NOT SHOWN THIS IS LEFT TO BUILDER'S CHOICE



3-1/2" AIRSPAN WHEELS

ENGINE COWL MAKE LAMINATIONS OF 1/32"





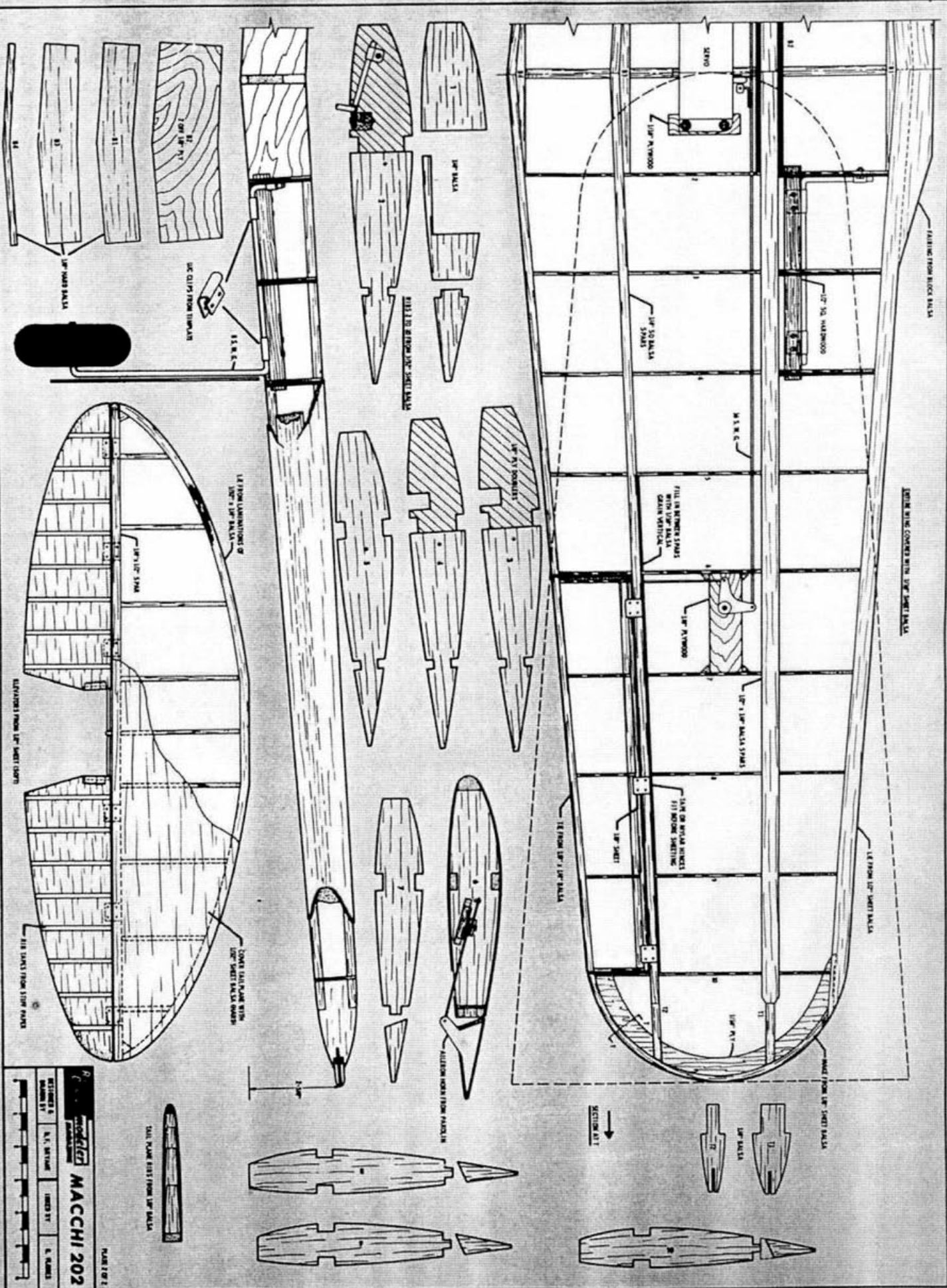
FUSELAGE IS MADE IN TWO HALVES AND CEMENTED TOGETHER AFTER TAILPLANE HAS BEEN FITTED

61-1/2" SPAN MULTI R/C SCALE FOR ENGINES 8-30 C.C.
 WINNER R/C SCALE 1963 NATIONALS
 2ND PLACE 1963 R/C BRISTOL MEET
 2ND PLACE 1963 U.S.A.F. U.K. MEET

PLATE 1 OF 2

modeler **MACCHI 202**

DESIGNED & DRAWN BY **D.F. BRYANT** INKED BY **G. FLORES**



MACCHETTI
MACCHI 202
 PLAN 202.1

STITCHES & MARKING BY	A. S. M. V. S. A.	DESIGNED BY	A. S. M. V. S. A.
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SCALE: 1:10



of the Spitfire, Mustang and P63 that everyone seemed to be flying at that time (1963).

The model was first test flown by Harry Brooks on a very cold and windy "Summer" day, and apart from over sensitive ailerons, no trouble was experienced, and I knew that I had a winner. The next weekend, after having modified the gearing of the ailerons, I flew the model myself. I was delighted to discover that it was very pleasant to fly and as such, emulated its full size counterpart.

The 1963 British Nationals was but six weeks away and I decided to enter the Macchi 202 for the R/C Scale event. On the day of the Competition, a howling gale was blowing which grounded everything but R/C multi. The scale entry was quite large that year but they were mainly single channel types and it would have been suicide to fly them in the high wind. Only three of us, who had multi, elected to fly, and at the end of the event, I was overjoyed to discover that I had won by a reasonable margin.

To those of you wishing to build this model, I would like to point out that I am presenting it exactly as built in 1963 except for the engine which was a Veco 45. If I were to build this model today, it would have retractable u/c, bolt on wings and frise ailerons but I thought it only fair to show the model as built by me at that time and leave the improvements to those with an experimental nature.

As it is not a beginner's model, there is no point in making this a stick-this-piece-to-that-piece type of article. There are one or two points, however, that I would like to call to your attention. To those of you who have not made a planked fuselage before, I would like to

point out that they are not as difficult as they look. In addition, they are very light, very strong, and when made on the crutch system, it is impossible to end up with banana shaped fuselage as often happens with slab siders. Try to make the planks a good fit without too many gaps. I find it a great help to bevel the edges of the planks with a sanding block before assembly, any remaining then filled in with small pieces of balsa. The whole thing will look a frightful mess until the final sanding down with a sanding block. I always find it a most enjoyable experience to see the fuselage taking shape through the sanding dust.

Before the two halves of the fuselage are joined permanently, the tail plane must be made and fitted to the top half. In addition, the elevator pushrod must be installed as the elevator horn will be inaccessible once the two halves are joined.

Finally, cover the fuselage with nylon and treat with your favorite filler. The steerable tail wheel is not strictly necessary, but I found this a convenient method of connecting the pushrod to the rudder without the usual ugly pushrod sticking out of the top of the fuselage.

Next, we come to the wing. This is a completely conventional sheet covered structure and requires no particular instructions, but I would like to confess to a deviation from scale of the ailerons. These should go right to the wing tip, but with the type of hinge used, this would result in an unsightly V shaped gap at the wingtip, so if you want to be dead scale you will have to use a scale type hinge or put up with the gap.

On the original, the wings are retained with rubber bands as shown on the plans, but in light of later experience and if you can guarantee good landings, camlocks would be an improvement. With the latter the radiator could then be glued on to the wing instead of the clip arrangement which I used.

The cockpit canopy is fairly straightforward and does not require a mould.

It is sufficient to cut out the 1 mm. plywood frame as shown on the plan and cover with acetate sheet on the inside of the frame. This gives a reasonable simulation of a full size canopy, but a word of warning here — when finishing the model please, oh please, do not pick out the canopy frames in black; this is a common error which I have seen on every type of scale model from plastics to R/C, and I always froth at the mouth whenever I see it! It is never done on full size aircraft. Canopy frames are always the same as the surrounding camouflage color but for some strange reason, many modelers seem to think that there is a man at the end of the aircraft factory assembly lines with a pot of black paint and a brush, busy painting in the canopy frames!

You may by this time, be wondering what to do about that $3\frac{3}{8}$ " diameter spinner. I made mine from fiberglass, using a method which I have found very successful, but one which would require quite a long article to explain. Perhaps I may be able to twist Don Dewey's arm for future publication, however, I believe that the selection of spinners available in the U.S. is much greater than here in England, and you may be lucky enough to obtain one in the correct size. With the correct dimensions, but for those of you who own lathes, you have no problem and the shape shown on the plan is the correct one.

While we are at the front end of the about the method of fastening the cowl-model, I would like to say a few words ing. I use dress snaps and have always found them very reliable; these are best fitted while the cowling is in the rough state and slightly oversize. Obtain a pair of No. 5 dress snaps and sew each part to a piece of $\frac{1}{16}$ " ply, $\frac{1}{2}$ " square, fit the male halves of the dress snaps to the detachable part of the cowl by recessing the ply flush with the bottom of the cowl and glue in place with epoxy cement. Place the cowl in position and push on to the bottom half. This will





The author and the Nationals winning Macchi 202. Note the matte finish on model.

cause the male dress snap to leave a depression in the balsa, which will then act as location points for the female press stud, which in turn is then fitted in the same way as the male press stud. When all is dry, the cowl is snapped in place and sanded to conform to the fuselage contours. You will then have a perfect fitting cowl which can be removed and replaced with ease, and which will not come off in flight. An added plus — no ugly rubber bands to mar the scene!

The trickiest part to make on the whole model is the wing root fairing.

This should be left until the wing has been sheeted. First of all, try to obtain as perfect a fit as possible between the wing and the fuselage by trimming the fuselage sides. Then attach the wing to the fuselage with a large rubber band right around the fuselage so that it is held firmly to the wing, then slide the ply fairing gussets, marked F1 on the plan, between the wing and fuselage making sure that it touches the wing along its whole length from L/E to T/E then cement to the fuselage. When dry, remove the wings and you are then

ready to fit the balsa fairing blocks; these require very careful carving to obtain a good fit between the fuselage and the ply gusset. When you are satisfied with the fit, cement the blocks in place and carve them to the concave section shown on the plan and then sandpaper to a smooth blending curve from the edge of the ply to the fuselage.

As the tail unit is so easy to make, I will not insult your intelligence by telling you how to make it, but I will say a word about the control surfaces. On the full size aircraft these are fabric covered, and if you like a bit more work these could be built up and covered with nylon and would possibly be a bit lighter than the solid ones I used.

As that just about covers all the components I will mention the finishing process. The model is covered with nylon doped on, followed by about four coats of sanding sealer. You will need a spray gun to get an authentic finish, one that will adjust to a fine spray, which is required to spray the dark green patches over the light sand color which is the color scheme of the upper surfaces; the lower surfaces are a pale blue gray. For more detailed information on color schemes, cockpit details, and photographs, I strongly recommend that you obtain Profile No. 28 from Profile Publications. Any scale modeler who has not heard of these is missing out on a good thing. I know that these are available in the U. S., as I have seen them advertised in your magazines, so you should have no trouble in obtaining them.

On seeing the large three bladed air screw in the photographs, you may be thinking that I have something special in the way of a power plant, but I am sorry to say that it was made for photographic purposes only and the model is flown on the usual 12 x 6 two blade nylon prop.

When it comes to flying this model, you should have no trouble at all as it is as easy to fly as a conventional multi. No side or down thrust was required on the original model when powered with the Veco 45 and, later on, when the Merco 61 became available, I fitted one to the 202, and apart from a half ounce of lead on the tail, no other adjustments were necessary and the performance was much improved.

When fitted with the F & M Midas, Bonners, and Veco 45, the model weighed 6½ lbs., but over the years, the model, like its owner, has put on a little weight, due to the larger engine, silencer, oil soakage and various repairs and the model now tips the scales at 8 lbs. At this weight the landings are a bit hectic and although the general performance is still quite good, I have retired the model as I feel that I have had my money's worth from it, and there are other projects I wish to pursue.