

Long, rather wide streamlined fuselage of the Attacker provides ideal internal space for installing the long augmentor tube. Note intake position.

The Supermarine Attacker

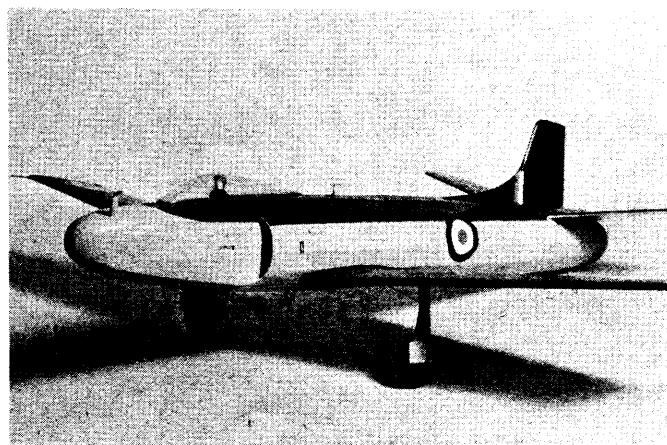
by ROBERT BURAGAS

The Jetex 150 with augmentor tube opens a new field of jet scale free flight. These are full size plans.

▶ Many of us are finding out that the "mother lode" of flying fields is petering out, making it necessary to season our diet of contest models with the spice of more colorful, sporty model types for use on smaller fields. One of the leading possibilities for a new and interesting type of modelling is the flying scale jet model. Today's Jetex 150 with augmentor tube is an ideal powerplant and, added to the British Navy's Supermarine *Attacker* jet fighter, will give you much enjoyment both building and flying.

Before starting, it is necessary to cement the plan halves together. Study these plans carefully so that you understand the location of the principal parts. Mark out the various parts on balsa following the outlines shown on the plan.

Start your model by building the fuselage. The construction is simple though it looks elaborate on paper. Follow the heavy black lines to build the basic fuselage sides using 1/8" square balsa for material. Note that there is no upright at the very rear of the fuselage. Having constructed two of these sides, fill in the front sections with 1/8" sheet. When this is dry, you will be ready to assemble the two sides into a box. Since the



Rounded off box fuselage, straight tapered wings are easily built.

fuselage is built around the augmentor tube you will need to double the inner surfaces of the uprights at stations six and ten. Use 1/8" square for this and note the slot which is left for the augmentor tube flange.

Place the augmentor tube between the fuselage sides so that the augmentor tube flanges rest in the slots at stations six and ten. Drawings for the crossbraces are shown on the plan between the drawings for the top and bottom formers. Use the large crossbrace for all of the stations from four back to ten. The smaller crossbrace is used at station one and the others are cut to fit. When the basic box is finished, the augmentor tube will be sticking out of the sides. Since the side formers are wider than the overhang of the bell-shaped funnel, there will be plenty of clearance in the finished structure.

A small section between station three and the rear of the air intake block should be filled in with 1/16" sheet. Two air intakes blocks should be cut out of 3/8" sheet and cemented in place at this point. Add the side formers but not the stringers.

Cement the top and bottom formers in their proper locations. The upper former between (Continued on page 54)

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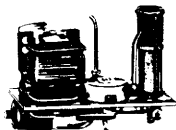
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exists. As an extra, consider the prone pilot in a rocket airplane. The reason a pilot lies prone is to take high G loadings during maneuvering. In a rocket fighter, the greatest accelerations—and therefore greatest G loads on the pilot—are likely to be along the line of flight. Thus lying prone is no protection at all, and the pilot would be better off sitting up. But let's not tell the Russians, shall we?

The Supermarine Attacker

(Continued from page 31)

stations three and four is the same size as the number four former. Add the circular former, former 11, using rubber bands to hold the longerons together until the cement dries. Locate the rubber band close to the former to minimize the strain and do not use more pressure than is necessary.

Very soft 1/2" sheet is used to make the tail ring. Use former 11 for the outside diameter and then cut a 1-1/4" hole in the center to allow clearance for the augmentor tube. This is cemented to the back of former 11 so that the two form a single piece.

Add the stringers to the top and sides using 3/32" medium hard strips. The bottom is left open at this time. Fill in the 1/16" sheet fairing to the top and bottom of the air intake blocks. The lower sheet fairing goes back to former six as it acts as a mounting point for the wing panels. The top of the fuselage from former nine back is filled in with 1/16" sheet strengthening this point for the rudder and stabilizer mounting.

Between points X-X on the bottom of the fuselage there is a removable section for access to the jet unit. Cut a 1/8" sheet floor to fit between the longerons from station three to five. Insert this piece but do not cement it in place. Cement formers to this floor at the front and rear—this doubles the formers at stations three and five. Attach two pieces of 3/16" square along the edges of this floor and between the two formers. When finished the strips should be flush with the outer edge of the longerons. Trim the edges of a third former so that it will fit in the center of this assembly between the strips. Taper the 3/16" strips so that they follow the curve of the formers. Add all of the bottom stringers and place small balsa shims under the center stringer at the front and rear of the detachable unit. Sand the entire assembly smooth and cut the stringers apart at X-X. Push this unit out.

Add the nose block and front stringers. The outline for these is shown above the nose drawing. Carve and sand the nose block into shape. Sand the entire fuselage to remove all irregularities in construction.

A small section of 1/4" sheet must be placed under the Jetex mount to center the nozzle with the augmentor tube. Screw the Jetex mounting clip and the sheet section on to the motor floor. Place the unit back in the fuselage and sight down the rear of the augmentor tube to check alignment. Move the unit around until it is properly centered. Having found the correct location you should cement the parts in.

The wing structure is simple. The root rib is mounted at an angle so that it is flush with the top of rib two when the area between them is filled in with 1/16" sheet. The angle will give the proper dihedral when the wing is mounted on the fuselage. As a suggestion, mark the spar notches on the upper camber and cut them in after the wing is assembled. The 1/8" spar is used to provide a mounting point for the landing gear struts. After bending the struts, insert them through the 1/8" spars along side of ribs three. A small strip of 1/8" square is slotted so that when it is cemented in it will cover and support the wire. Fill in the lower camber, at this point, with 1/16" sheet. After adding all of the spars you can sand the entire wing until all parts fair smoothly. The wing is covered after it is attached to the fuselage. Cover the fuselage first.

Cut the rudder outline from 1/8" sheet and

add the 1/4" to the lower section. Center this section between the outline. Add the ribs. Carve the lower section of the rudder into an airfoil shape.

Use 3/16" sheet for the elevators. Sand these into an airfoil shape and taper them toward the tips. Block up the tips 7/8 of an inch and sand in the angle. Use the fuselage as a sanding block by placing sand paper at the point where the elevators will mount and lightly sand the units to a smooth fit. Final dihedral is 7/8 of an inch under each tip.

Covering is very simple using wet lightweight *Silkspan*. First cover the top and bottom of the fuselage going around the sides as far as possible without creating wrinkles. This will leave two open areas on the sides about two stringers wide. Of course it will be necessary to use two separate pieces to cover the open areas in front of the air intakes. When the covering is dry apply at least two coats of clear dope. Mount the wings at the location shown on the plans. Note that the bottom of the ribs is flush with the lower longerons. The wing can now be covered. Dope the same as the fuselage. Both the rudder and elevators are covered. The covering helps to seal the grain on the sheet elevators. Attach these units to the fuselage and check their angles. Use the upper longerons as a guide for the stabilizer. The trailing edges should be about 1/16 of an inch above the bottom of both longerons while the leading edge will be flush or even with the bottom. The wheel covers should be cemented to the landing gear struts.

When you have finished clear doping you can begin to add the details. Use 1/8" dowel for the landing lights on the wings. These can later be painted red and green. Piano wire is used for all of the antennae. The lower dipole serves as a finger grip to aid in removing the jet unit. Sheet metal of any type is used to make the arrester hook and the rudder horn. Attach all of these details before color doping. The pilot head and canopy will be added after.

Use aircraft grey dope and paint the entire model with two coats. Then paint the upper surfaces of the wing, stabilizer and fuselage with medium green. The upper part of the fuselage, "turtle deck", starts even with the stabilizer and is a straight line forward to just in front of the canopy. This latter is known as an F-94 canopy at your dealer.

English red, white and blue decals are used for insignia. The wing has them on both top and bottom. A red, white and blue band is used at the leading edge of the rudder. Decal numbers are used on the lower surfaces of the wings only. These are one inch high and authentic letter combinations are WA and TF. These letters are followed by three numbers. You can use your AMA license numbers by using MA and the first three numbers.

Control surfaces and line details can be added using black model railroad paint. This takes longer to dry and works well in a ruling pen. All antennae should be painted red.

The motor unit should have a tight fit so that it will not be necessary to use rubber bands or hooks. If it is loose, add small pieces of sandpaper at the face of the formers until a snug fit is affected. Glide the model over tall grass and use weight to obtain the proper trim. For a stall add weight to the nose and for a dive add weight to the tail. The original glided without trim. First flights should be made without trim adjustments. A slight stall under power might be noted. It is not possible to retard the Jetex unit but thrust can be reduced by using a small balsa plug in the rear of the augmentor tube. This plug should be centered so that a slot is open on both sides of the plug — about 1/4" slots. This blocks off about half of the augmentor tube and creates a back pressure. Low power flights are possible in this way. After final adjustments this plug should be removed. A small tab is added to the rear of the rudder for trim adjustments. The climb will be fast and flat. END