



Jetex 50 Series

Y-F 100 SUPER SABRE

The Super Sabre has been developed from the F-86 Sabre and made its maiden flight in May, 1953. One of the most interesting features of that flight was that supersonic speed was achieved and the Super Sabre is, in fact, readily capable of exceeding the speed of sound in level flight. Power is a 10,000 pound thrust Pratt and Whitney J.57 split-compressor turbojet engine, with the addition of an afterburder which boosts thrust to the region of 15,000 pounds.

The Super Sabre is a very large scroplane—45 ft, long, 36 ft, span and 14 ft, high. Wing sweepback is 45 degrees and the tailplane is in one piece, positioned low on the intelage and moveable through a wide range of incidence. The cockpit is fully pressurised and service ceiling of the aircraft is 50,000 ft.

A speed brake is fitted in the belly of the fuselage whilst for landing on icy or slippery runways a ribbon-type tail parachute is used, this normally being stowed in a compartment in the fuselage under the tailplane. Full length leading edge slots are used on the wings and the flying control surfaces are mounted about half way along the span of the wing.

BUILDING INSTRUCTIONS

First cut out all the printed sheet parts carefully. Cut all straight lines with the aid of a straight-edge (e.g. a metal ruler) and take particular care in torough the notebox.

The majority of the basic assembly is carried out right on top of the plan, so rub a candle all over the drawing to prevent cement sticking to the paper. Then tay the tusetage keet parts in place and check for correct matching fit. Irun it necessary, then cement together and pin down in

A complete set of half-formers 1 to 11 should then be cemented in place, taking care to erect these truly vertical. Add w.9 and then the W sq. stringers. Only the two top stringers extend from nose to tail and these must be scarph jointed at former 10 position, as indicated on the plan. Any slight out-manignment can be corrected by enlarging the appropriate slot in the former, as necessary. Slight inaccuracies of this nature may creep in, depending on the accuracy with which you cut the original printed short parts.

When this assembly has set, remove from the plan, turn over and add the remaining half-formers. Complete the basic tustings by comenting the second W.9 piece in place and the remaining stringers. Former 1A can now be comented to the front of the fuscinge and former 12 to the rear. True up the fuscinge and sand smooth.

The Jetex clip should be screwed or bound to piece "M", after first facing with asbestos paper (which you will ind included in your Jetex unit outhit), and "M" then cemented between formers 5 and 6. A piece of sink paper is then cut to hi the cut-outs between formers 6 and 10 to form a frough in the bottom of the fuscinge. Cement to the appropriate stringers and then from oil excess paper thish.

The wing halves are quite straightforward. Pin the leading and trailing edges and the fg aq bottom spars in place over the plan. Inen add the tip, the ribs and the top spar. The rib notches will have to be trimmed to fit the angled spars. Leave a short length of both leading and trailing edge projecting past the root rib. This is trimmed to pass through the appropriate slots in W.9 and fit up against formers 5 and 8 respectively to strengthen the wang-fuscing joint. Additional strength is also given by the stub vs. x vs. spar projecting i beyond the root rib. Check each wing for ht against the luscinge side, clean up and cover with tissue.

The tailplane is built up in a similar manner except that no ribs are amployed. 1.7 forms the projecting spar giving added strength to the tailplane-tuscings joint. Check for in and sand smooth and cover with fireus before attaching to the fuscinge. The in is another simple frame built directly over the plan. This should be covered with tissue on both sides.

All parts should be covered before assembly. The fuselage is best covered with several strips of tissue—two for each side and one for the bottom. Wing punels are covered with one piece for the top and one for the bettom.

Wings and tailplane should be comented in place accurately to the fuselage sides, giving the wings I dihedral at each tip. The tailplane has no dihedral and is comented with T.7 against front of former 10. The fin is comented in place truly vertical, when F.8, F.9 and F.10 can be added to complete the basic assembly. The whole model should then be sprayed or lightly painted with water all over to tauten the covering and left to dry. Wings and fuselage can then be given two costs of thin clear dope and the fin one coat. The tailplane is best left undoped.

Now trim the cockpit cover to fit and cement in place by running a line of dope or thin cement around the edge and pressing in place. Itold until set. Fit the pieces U.1 on either side of the spine to fair the cockpit cover into the fuscinge, sunding these to shape. The other small details to be added, such as the paper ring for the tailplane and the probe, are shown on the plant. The probe should not be inted on a flying model as this is too readily broken off.

FLYING INSTRUCTIONS

Check the balance of the model by hand gliding over long grass or a similar soft "landing ground", fitting an unloaded Jetex motor in the clip. If the model is tail heavy, weight must be added to the nose to achieve a satisfactory glids trim. In the unlikely event of the model being tail heavy, cut the tailing aday and cement back with a little negative incidence—i.e., the trailing aday higher than the leading edge. Adjust the trim until you get a nice smooth, fast glide. Any tendency to turn should be countered by warping the fin in the opposite direction.

Under power, flight should be straight, or nearly straight. A sharp turn in one direction or another is almost certainly to be caused by a warped wing or tailplane, or the tailplane not being square with the wings. A moderate turning tendency can be corrected by warping the trailing edge of the fin in the opposite direction.

IMPROVED PERFORMANCE—FLYING MODELS

Improved flying performance will come from the lightest possible model. No cut-outs are shown on the formers, as is commonly indicated on other plans, since the amount of material so removed is usually negligible as far as weight saving is concerned. If you want to build a really light model the best way to lighten the formers is to punch holes in them, aiming to remove at least two-thirds of the amount of wood. A satisfable punch can be made by sharpening the end of a short length of the diameter dural, brass or steel tube. Cut as many lightening holes as possible without unduly weakening the former. Similar lightening holes can also be cut in F.8.

