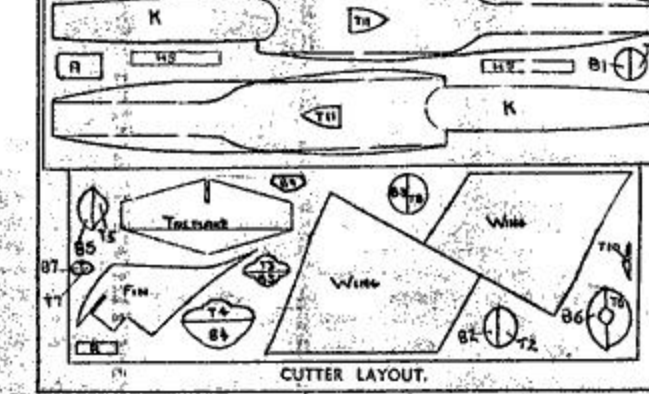
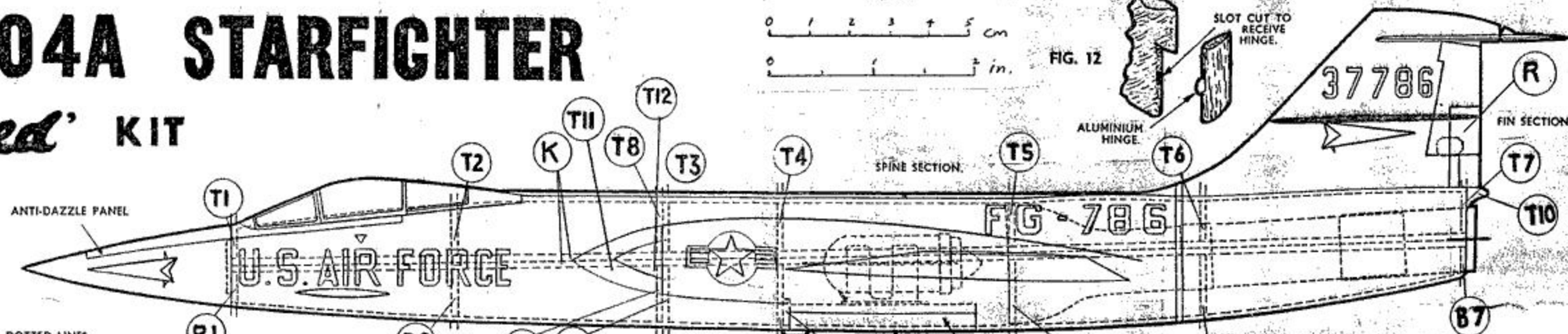
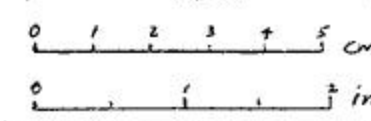


LOCKHEED F-104A STARFIGHTER

A JETEX 'Tailored' KIT

WEIGHT WITH UNLOADED MOTOR 1 1/2oz.
DRAWN AND TRACED BY R. PASCO.



BUILDING INSTRUCTIONS.

INTRODUCTION.
This is a plastic model of the Starfighter, the F-104A, built on February 17th, 1954. Powered by a G.E. J79 turbojet the F-104A has reputedly flown faster than Mach 2.5 and attained an altitude in the region of 80,000 ft.
The model built from this kit is a near scale reproduction of the F-104A.

CONSTRUCTION.
Before beginning to build this model read through the instructions and study the plan carefully. Mark the various cut-out parts on the balsa panels with the correct number as indicated on the cutter layout.

FUSELAGE JIG.
Press out all the jig parts from the cardboard panels. Place the two jig panels, pinned sides downwards, on a flat surface and bend the sides up at right angles along the scored lines.

FORMERS.
Cement formers T.1.1 to T.1.7 and B.1.1 to B.1.7 into their respective panels as indicated by the lettering on the turned-up sides. Make sure that the formers are at right angles to the sides and correctly located by the lines on the sides of the panels—see Figs. 1 and 2.

FUSELAGE.
Press out all the formers and the two keels, making sure the two sets of formers are not mixed up as they are of similar shapes. Do not remove inside formers T.1.1—T.1.7 ensuring that they are inclined slightly to the right (see side view drawing) by using template A. Check A against side view drawing to set which angle of template to use. When dry cement in position. Remove keel formers T.1.1 to T.1.7 and B.1.1 to B.1.7 ensuring that the formers are inclined to the left for bottom keel. Now cement B.8 into position and leave to dry. Trim off the end of the shells to the marked lines, then bevel edges of the keels (Fig. 13) to fit in position in the shells. When dry remove from jig, cut off excess flange and sand flush with the keels. Also sand shells flush with and formers—see Fig. 2.

WING FAIRING.
Cut the tailpipe fairing from the plan, the way edge is the rear edge of the fairing, and wrap it round the augmentor extension tube, applying cement on top as per Fig. 4 as indicated in Fig. 4. Do not stick fairing to the tube until later.

NOSEWEIGHT.
Now remove inside of keels, most of which is pre-cut—see Fig. 7. From the top shell remove T.4, T.5 and centres of T.6 and T.7. Note that T.7 is not ground so remove this with a mill of sandpaper, making sure that the tailpipe fairing fits halfway into the former. Remove B.5, B.7 and half of B.4 and centre of B.6. Band half-mouth of Augmentor tube so that it will fit into the two halves when joined. Glue tailpipe fairing to the Augmentor tube, checking overall length with the side view drawing. Fit the extension tube to the tail-mouth and place in position in the bottom half. Check that the rear edge of the tailpipe slopes correctly. Apply cement to the surface of the top half and slip the two shells together by rubbing them to and fro to squeeze out any excess cement. Use elastic bands round the fuselage to hold the two halves together until dry. When dry, sand to a smooth finish.

NOSEBLOCK.
Cement the nose weight into the recess in the rear of the noseblock, then pre-cement the noseblock and the nose of the fuselage and allow to dry. Cement the noseblock in place and carve to shape when thoroughly dry.

MOTOR HATCH.
Cut out the hatch aperture marked on the fuselage and centre B.9 in position (Fig. 8). When dry level off the top edge of B.4 with B.9. Fit the reinforcing strips T.10, to the inside edges of the hatch aperture as shown in Fig. 8.

HATCH CATCH AND MOTOR CLIP.
Before commencing to fit the hatch catch, study Fig. 9 and the hatch catch envelope to ensure that the working of the catch is fully understood.
Start by cutting a 1" wide slot by 1" long, right through one end of the block. Then increase the width of the 1" slot to 1" to within a 1/2" of the outside surface—see Fig. 9. Make sure that the catch is a good fit in the slot. Next apply cement very sparingly where indicated in Fig. 9 being careful not to apply cement to the sliding parts, and glue in position. Place hatch in position and push catch forward to impress a mark on B.9 and thus locating the position of the small hole required for the catch to slide into. Cut a 1/2" wide strip across the width of the aluminium sheet and insert it into the rear of the block—see Fig. 9, so that it catches inside the rear edge of the hatch opening and thus prevents the block from falling out.
Cement the motor clip in position as shown on side and plan view drawings.

THE AIR INTAKES.
Trim with razor blade along the marked lines and remove the excess shell. (Fig. 10). Trim formers T.3 and B.3 flush with T.8 and B.8. Sand edge of intakes to a thin edge with a roll of fine sandpaper inserted into the intake itself, thus in effect widening the intakes to the outside surface. Sand the two triangular shaped parts, T.11, to fit into the apertures in front of the intakes. When a good fit is obtained, cement in position and hold with pins until dry, then sand flush with fuselage.

INTAKE FAIRINGS T.12.
These are cut from 1/4" strip and sanded down to avoid reducing the area of the intakes.

END LIP FAIRING.
Wet one side only of T.10 then bend into position shown in Fig. 11 and cement in place. Hold in position with pins until dry, then sand off edges.

FIN AND TAILPLANE.
Sandpaper these to section. Cut three hinges across the width of the aluminium sheet, and fit them in position—see Fig. 13 and Side and Plan View Drawings.
Cement fin and tailplane together as right angles.

WING AND FINAL ASSEMBLY.
Cut along the scored lines showing the wing positions on the bottom jig. Remove B.1.5 and cement W.1.1 in its place. Next cement wing angle templates W.1.2 into position as shown in Fig. 13. Cut away the front and rear parts of the fin—see Fig. 14.
Sandpaper wing to section and pre-cement the roots. Also pre-cement the fin root. Put the fuselage to the jig, ensuring that the join line is horizontal, and cement the wings in place, holding them in position with small weights on the roots and tips.
Cement the fin into position at right angles to the wing—see Fig. 14.
Cut a 6 1/2" x 1/4" x 1/4" strip from scrap to form the spine, sandpaper to section and cement in position.

COCKPIT CANOPY.
Trim this to shape, along the moulded line indicated in Fig. 15, but before cementing it in position, place it on the fuselage and mark the outline with a soft pencil. Paint this area dark grey or green.

JET DEFLECTOR.
Cut this from aluminium on the shape shown on the plan view—see Fig. 14. Cut slots in the sides of the fuselage and cement the deflector in position.

FINISHING.
Note that in order to obtain the best flying performance the model should be as light as possible and therefore only the minimum amount of dope should be applied.
Apply one coat of clear dope to the complete model except the canopy. When dry, rub down with fine sandpaper. Make a 1/2" area of the canopy which are not required to be painted with Silhouette then apply one coat of Briffix silver dope. Mark with Indian ink the various flags, ailerons and elevator markings etc. shown.

TRANSFERS.
Immersion the transfers in a bowl of lukewarm water for 30 seconds and slide each transfer face upwards, on to its respective position. Dab the transfers with a handkerchief to soak up any surplus water and leave to dry.

FLYING.
The model, with an empty motor in position, should balance at the point indicated on the drawing. If needed, add a little plasticine to the nose to balance the model correctly. Correct any warp in the wings, tailplane or fin by bending gently in the opposite direction.
Test glide the model on a calm day, preferably over long grass. Launch the model parallel to the ground. If correctly trimmed the glide should be long and flat without any turning to left or right. If the model never rises up, correct this by bending down the elevator slightly, and similarly, if the model glides steeply to earth, correct this by bending elevator up. Correct any tendency to turn with the rudder.
When the glide is satisfactory, insert a loaded motor in the clip and line motor up with sides and base of the hatch. Ignite the motor with a cigarette and/or an igniter stick (1/2" balsa strip soaked in salt water). It is best to ignite the motor by pinning the hatch halfway down the aperture, igniting the stick through the aperture and pushing the hatch into position. When the thrust has built up, launch the model in exactly the same manner as when gliding. If the model tends to nose up when under power, correct this by bending the jet deflector down slightly. Do not adjust the elevator. Correct any tendency to turn when under power by using the rudder.
It is important that the jet orifice should be re-reamed after each flight and also the motor spring should be re-positioned when there are signs of the motor blowing, which is indicated by black deposits on the main case. More information on servicing the motor can be obtained from the Motor Instruction Leaflet.

