



ITOH 62-160

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Pretty isn't it! Block the old professor out of the picture and it's difficult to tell it from the real thing. Smooth effortless flight is easy.

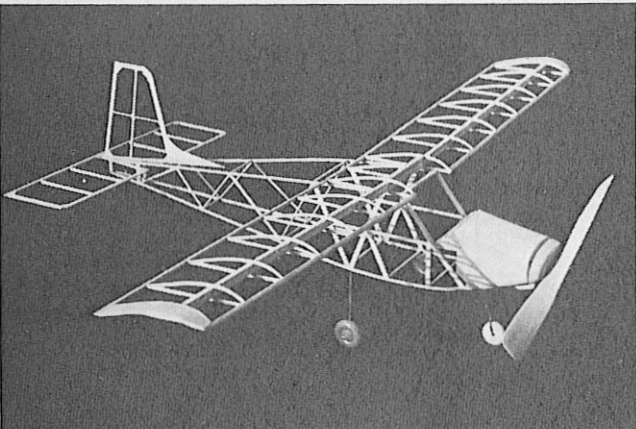
By WALT MOONEY

► The ITOH 62-160 is a four-place Japanese private aircraft that has the average configuration you'd expect of a modern high wing aircraft. Nevertheless I find its square lines and simple configuration quite pleasing to the eye. It lends itself to simple model construction and it has ideal proportions for good model flight characteristics.

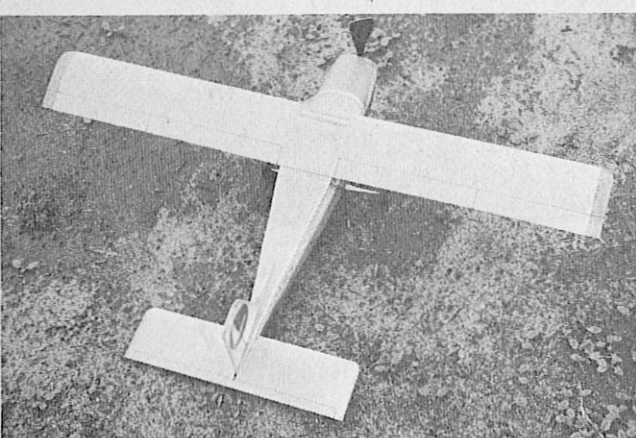
All wood parts on the model are made from standard wood sizes. If one wanted to, he could make it all from a single sheet of one sixteenth balsa provided he was prepared to strip the balsa into sticks, laminate the nose blocks and air inlet block, and spend a bit of time sanding the top cowl sheet down to one thirty-second inch thickness.

Construction is straight forward in the tradition of slab sides built up on the plans, wings built over the plans etc. Several small items are worth noting before starting construction of the model. The wing ribs are of the hollow sliced balsa variety. These are light and frugal on the use of balsa but could be replaced with more conventional solid ribs, notched on the bottom for the spar. Cowl at the front of the fuselage uses one eighth sheet sides and bottom which is carved to contour. This makes the nose quite strong and the weight forward helps balance the model. The uprights in the fuselage sides are angled to give triangular bays, making for a stiff fuselage to resist the torsion of the rubber bands. The model has an exceptionally long motor base. This will give a longer motor run but it requires that the builder recognize that if he adds to the rubber motor, he will probably have to add weight to the model nose to keep it balanced.

Start construction by pinning the fuselage side frames down over the plans. The side frames are indicated by cross hatching on the side view. Select fairly firm balsa strips for the longerons, for strength, and softer lighter strips for the uprights, for ease of cutting and for light weight. Use light balsa for all the (Continued on page 51)



Structure is basic and without frills. Standard wood sizes throughout make the supplies easy to obtain. Use carved wood prop, not plastic type.



On the tarmac, ruled India ink lines are used to depict the control surfaces. Swan detail on rudder adds to appearance, tissue covered.

FULL SIZE PLANS FOR ITOH 62-160 ON FOLLOWING TWO PAGES

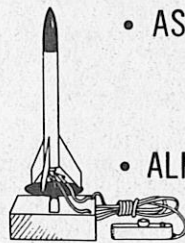
Inc. receives the necessary permits, and the model is ready to fly. Inc. will be shipping accepted 72 mc sets out the door as fast as they are now going on 27 and 6 meters, with a seemingly endless but healthy backlog of orders.

ITOH 62-160

(Continued from page 21)

sheet parts of the airplane, especially, the one-sixteenths thick fill in at the aft end of the side frames. When the two sides are dry, remove them from the work board and, using a single-edged razor blade, carefully separate them. Cement them together at the extreme aft end and proceed to add cross braces from back to front. Care should be exercised as this is done to insure that the fuselage frames are properly aligned. Now add formers A and B. Cut side and bottom cowl pieces from one eighth sheet and cement them in place. Carve them roughly to contour and then add the one-thirty second sheet top cowl. Note that the top cowl extends behind former B to match the bottom of the windshield line. It is probably advisable to extend the cowl aft of its final shape and do the final trim after the windshield pattern has been trial fitted. Where the nose gear fits in the fuselage make a cross piece from firm one eighth by one quarter balsa. Make up a nose block and its one eighth thick back plate and carefully fit to the front of the fuselage. Carve the noseblock to shape and then sand the nose block and cowl to its final shape. Carve and install the balsa block air inlet.

Only half of the horizontal tail and a little more than half of the wing is shown on the plans. Get some tracing paper or other rather thin transparent paper and draw the other half of the wings and tail. Pin these drawings to the proper place and



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begin the wing and the tail by pinning the leading and trailing edges down over the plans. Now add the one sixteenth square cross pieces, or ribs and the tip pieces in the case of the horizontal tail. This is the proper time to add the gussets that are shown in the corners of the structure. When dry remove the tail and the bottom surface of the wing from the plan. Make the center wing spar for the wing and cement it in place. Cut the trailing edge on each side of the center section so the wing tips can be blocked up to give the proper dihedral. Now slice the top surface ribs from one sixteenths sheet balsa and cement them in place over the top of the spar.

The wing tips are made from one sixteenths sheet with the grain in the spanwise direction so that they can be curved to match the top contour of the wing. Carefully fit them in place and then cement

securely. Taper the trailing edge to a triangular cross section and round the leading edge to the proper airfoil shape. Add short lengths of one sixteenth square on top of the spar in the center section of the wing only to provide a place to which the windshield can be attached.

Taper trailing edge of the stabilizer and round off leading edge and tips.

Build the vertical tail over the plans in a manner similar to the horizontal (stabilizer).

Because this is a very light model, the landing gear wire can be of quite light wire. Certainly nothing over one thirty second in diameter should be used. Bend the two pieces and install then in the fuselage, taking care to cement them securely. Don't forget to install the nose wheel as you bend the nose gear wire or you'll have to do it twice. The main wheels can be held on the wire with a small drop of

(Continued from page 51)

cement. A thin piece of balsa is cemented to the front of the main landing gear wires to simulate the spring leaf of the full sized airplane, and the nose gear wires can be wrapped with plastic tape to simulate the shock strut.

Prior to covering the model, it should get a thorough going over with fine sandpaper and a good inspection to eliminate any rough places on the structure that would impair the final covering job. Cover the model with a good grade of light model tissue. The one in the pictures is white with red trim. I was pleased with the color scheme on the prototype ITOH and it is depicted on the model and on the plans by the dotted areas. It is best to shrink the covering with one thin coat of dope before adding the color trim in contrasting tissue.

After the model has been covered, tissue doped, color trim added, the windshield and windows should be added. The windows should be added to the fuselage before the wing is attached. Then cement the wing in place on the top of the fuselage. When this joint is dry, cut out a paper pattern of the windshield and test it for fit. The one shown on the plans was taken from the original model but I have found that models vary a little and it's much easier and less frustrating to fit paper patterns. Now cement the windshield in place. Start at the wing spar attachment point and the center of the windshield on the cowl. When these points are dry you can attach it on both sides. Take pains not to smear the window areas with cement when you install them.

Cement the horizontal stabilizer and rudder on the aft end of the fuselage and check to see that they are perpendicular to each other and lined up according to the plans. Carve a propeller or obtain a commercial one and install it on the nose block as shown. The one on the model is cut down from a six inch diameter hardwood commercial propeller and works well.

Add the wing struts. Paint the tires dull black and the area of the air inlets in the nose block also. If you find cutting numbers the size shown on the plans too hard put them on by using a drymark felt pen. Using India ink outline the control surface outlines.

Use a piece of one sixteenths diameter dowel for a rear motor peg and install a motor made up of a single loop of five thirty seconds or three sixteenths flat rubber about the length of the fuselage overall. This will give about two inches of slack.

Now the model is almost ready to fly. Check all the surfaces for warps. There should be none but if you find any remove them by the application of a little heat and a twist in the opposite direction. The center of gravity should be where it's indicated by arrow on the plan. Add clay if required to get it in the proper position. The original model flew right off the drawing board so I have no trimming secrets to pass on. No downthrust or side thrust was required on the model but if the power flight you get is violent you should shim the nose block to give thrust to counteract the power turn. Five thirty second flat Pirelli rubber in a single loop is somewhat low power in my model but results in nice flights. If you try more rubber, remember about the center of gravity and add enough clay to the nose to balance the model.

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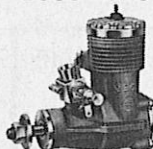
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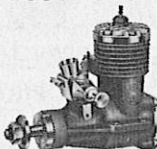
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