

# FORD TRI-MOTOR

By TEX NEWMAN

● "The Shortest Airline In the World," says the schedule of Island Airlines. First flight of the day at 9:00 A.M. to Put-In Bay on South Bass Island, Middle Bass Island, North Bass Island, and a stop at Put-In Bay on the return flight to Port Clinton. Sounds exciting, doesn't it? Especially in a 1928 Ford Tri-Motor. The round trip covers little more than twenty air miles and takes about an hour depending on the cargo to be loaded. Flights are also scheduled at 11:45 A.M., 2:15 and 4:00 P.M. Mid-day flights include a side trip of an added ten miles to Kelly's Island. Port Clinton, Ohio is located on the south shore of Lake Erie, midway between Toledo and Cleveland. Island Airways is the only commercial airline in the United States flying the Ford in scheduled service today.

The Ford Tri-Motor has served around the world. Admiral Byrd flew a Ford over the South Pole in 1929. Today, Island Airline's Ford Tri-Motor N7584 is still earning an honest living, flying the skies less than seventy five miles from its birthplace in Dearborn, Michigan. Our subject N7584 was built in 1928, and carries the serial number 4-AT-B-38.

To the few people living on the Bass Islands, the Ford is a welcome sight indeed, as it serves them year 'round! During the six winter months, it is the sole means of transportation to the mainland. Food, mail, and other necessities of life are brought in by Ford. The school kids rate a round trip flight five days a week. Who would want to play hookey and go fishing instead?

Well, if you are at all like me, it will be a long time before you have an opportunity to fly in the Island Airlines Ford Tri-Motor but, since we are Model Builders... "There is a Ford In Your Future." Quick... send off for a set of full size plans, round up some balsa, and let's get started.

## WING

Cut the spars and carve and hollow the leading edge according to the plan. Begin assembly by pinning the leading and trailing edges in place. Add the tip pieces. The diagonal braces are laid down on the plan first, followed by the bottom strip rib pieces. Both spars are now placed on top of these 1/16 sq. strips. The upper strip ribs, cut from 1/16 sheet, are laid in position with the front ends touching the reference line shown on the right wing plan and then cut to fit at each rib location. Block the tips up to the proper dihedral angle and glue to the center section. Do not install the dihedral braces at this time... or parts C.

## LANDING GEAR

All wire parts are bent and assembled over the plan. Where wire parts Nos. 1 and 3 meet, or cross, they should be bound with fine copper wire and lightly soldered. Parts 1 and 3 are now positioned on the front side of the front wing spar and sandwiched in place with the front dihedral brace. Wire parts No. 4 are mounted on the front side of the rear spar in the same manner. It will be necessary to slightly crack the rear brace in order to fit against the spar. These joints should be held in place with clothespins while drying.

## FUSELAGE

Lay out two basic sides as indicated by the shaded outline on the side view. Begin assembly of the sides over the top view by installing Formers 3 and 4B along with cross braces on top. Bring the rear sides together at Former 9 and a bottom cross brace. Add parts 11 and 12, joining them with a 1/16 x 1/8 balsa tailpost and diagonal brace inside. Add 1/16 balsa filler under the stab mount, cut with the grain running vertically. The nose is brought together at Former 1, then add Former 2T, 2B and short bottom stringer. Pieces 16 are glued in and the nose back to Former 2 is covered with 1/32 balsa.

The cockpit area is built starting with parts 13 and 14. Fill the area below the side cockpit windows with scrap balsa and add the 1/16 sq. window posts. Upper rear Formers 5 through 8 are installed, along with bottom cross braces and diagonals. Bend up tail wheel struts and mount. Ends of wires are pushed into parts 11 and 12 and glued well.

## TAIL SURFACES

The stabilizer is quite conventional in construction. The rudder is built from 1/16 sq. strips with gussets cut from 1/16 sheet.

## COVERING

Begin covering now and complete it during assembly of the components. To duplicate the corrugation lines on white Japanese tissue, lay tissue on a smooth hard surface, lay a sheet of carbon paper, carbon side down, over the tissue and then drag a comb over the carbon paper with a firm smooth pressure. Surprise... corrugated-looking tissue! Carefully check all areas to be covered for direction of tissue grain and direction of corrugations. All trim on covered surfaces is cut from colored tissue and clear-doped in position. Begin covering by doing the fuselage sides and the bottom of the wing.

## ASSEMBLY

The wing is slipped into place over the nose of the fuselage, landing gear

wire 1 is sprung slightly to clear and then bound with thread and glued to rear side of Former 3.

The wing is glued in place.

Wire piece 2 is bound and glued to Former 4B and joined with fine wire to wire 1 and lightly soldered, providing axles. Wing parts C are fitted into place, flush with the upper surface of the wing. Add Former 4, bend a 1/16 sq. strip and glue to the top of parts C. This provides an anchor line for both wing and fuselage covering. Add fuselage stringers and Former 15. Carve the large block above the cockpit, hollow it and glue it in place.

The top of the wing may be covered now, along with the remainder of the fuselage and tail surfaces. After mounting the tail surfaces, carve a block to fit between Former 15 and the wing. It is covered partially with corrugated tissue. Check color line for blue area. Windows are made from light acetate sheet or cellophane. Apply colored trim and ink lines for control surfaces. Dope with thinned clear to suit your preference.

## NACELLES

Nacelles are carved from soft balsa and hollowed for lightness. Drill a hole for Number 4 strut wire and cut two slots to receive wires 1 and 3. All strut fairings are added, clear doped two coats, and sanded then painted with Pactra or Testors Enamel. Nacelles and landing gear struts are blue. Struts, between wing and nacelles, as well as stabilizer struts, are white.

## ENGINES

Open-cell styrofoam may be found at a Hobby or Craft Shop. It is very light, and when shaped and painted, looks very realistic. Cut circles and drill center hole for 1/4 inch dowel. Drill hole for prop shaft through dowel in center engine only. Sand or file foam to shape shown in side view, then cut individual cylinders as per front view.

Shaping may be done with small files, or sandpaper glued to small sticks or dowels. Balsa parts are shaped, sanded, and glued into place with Titebond glue. Spark plugs may be made from round toothpick ends, two per cylinder, one front and one rear. Paint with enamels. Outer engines are glued to nacelles with cut-down North Pacific Skeeter prop mounted on straight pins. Center engine is removable with the prop for winding.

## REMAINING DETAILS

Wheels are carved from balsa and painted with enamel. Control horns are made from card stock. Control cables and spark plug wires are made from black thread. The original was flown with an 8 inch Guillow wooden prop. ●

MODEL BUILDER

# 2783