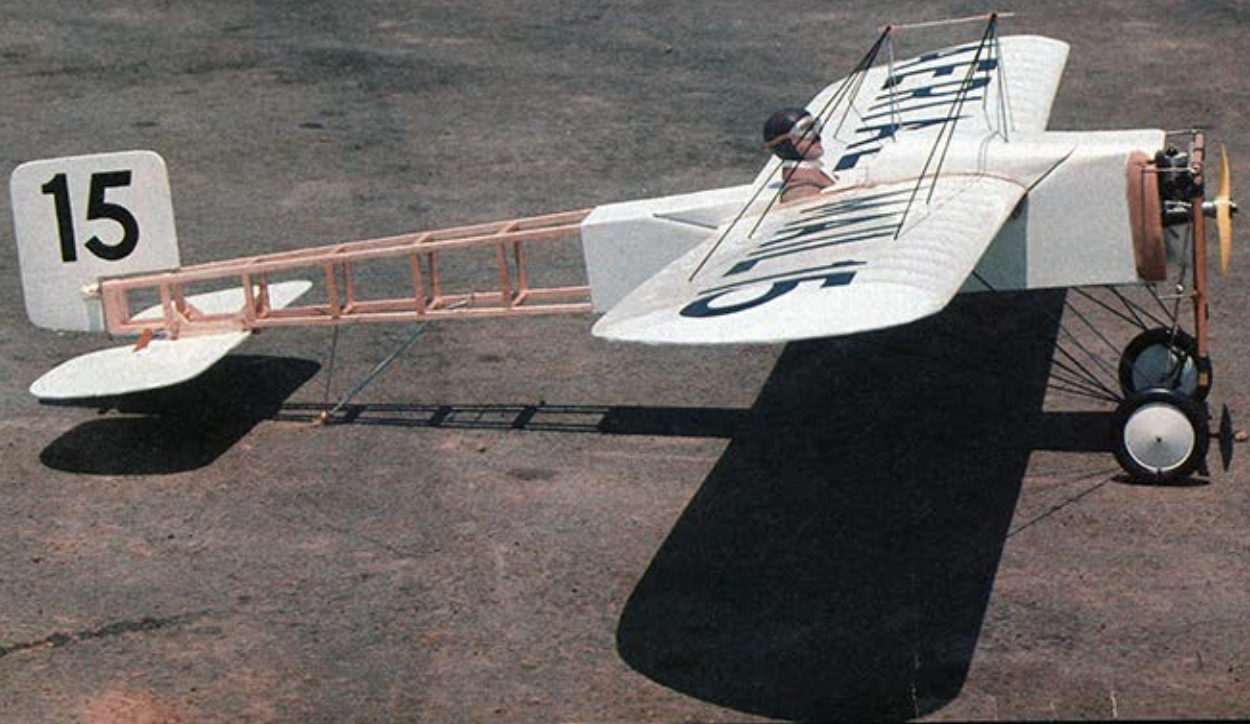
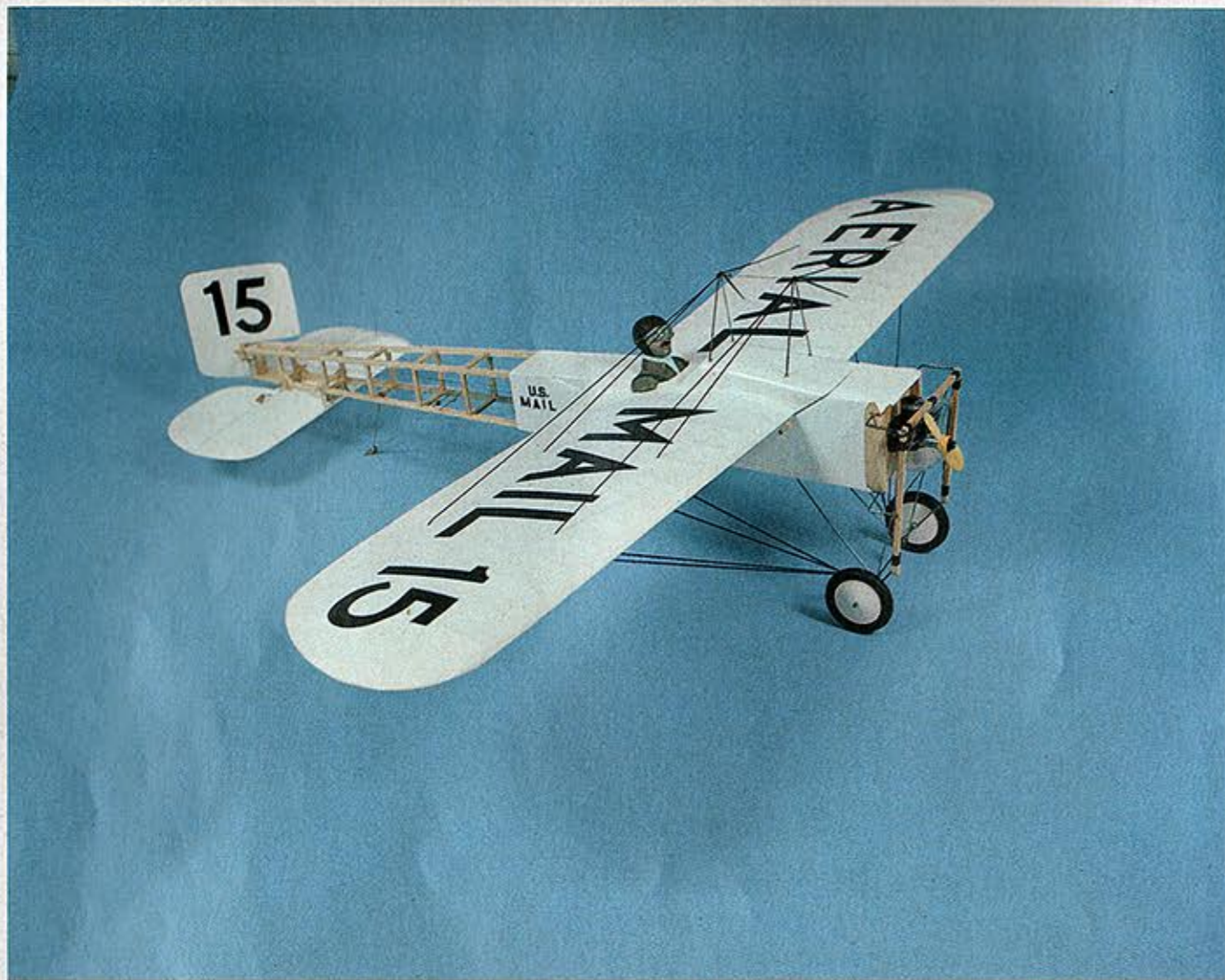


PUFFIN

By Kevin Flynn





● On September 23, 1911, Earl Ovington made headlines which read "Ovington Takes First U.S. Mail Through The Air." He delivered 1900 letters and postcards between Nassau Blvd. and Mineola, Long Island covering the unheard of distance of 3 miles. He accomplished this amazing feat in a Bleriot type, Queen Monoplane (powered by an Indian rotary motor) carrying the mail in a sack jammed between his knees.

From Aeroplane Station #1 the following week he air lifted a total of 32,000 postcards, 4000 letters, and 1,000 circulars at no expense to the government. The postmark on this mail is a valuable collectors item today.

After reading this story I became interested in the Bleriot Monoplane. While I like scale models, I decided that a true scale model was out of the question. After looking at the extensive detail in the 3-view drawings, I have a rule, that is if you can't build it in 3 weeks (of evenings) then I don't build it. So I guess this is a "fun scale" model that resembles a Bleriot Monoplane. Construction is very simple with a square body, and flat tailplane and fin. In fact, the only difficult part is the wing so start to build this first. I used an O.S. Max .15 and Kraft-Hayes mount on the original model. The fuel tank (Pylon Brand SS2, 2 oz.) fits

between the landing gear and the firewall. A 9/4 prop was used for the .15. Keep the C.G. as shown on the plan for best performance.

CONSTRUCTION

Begin by cutting out all the parts first, since it will save a considerable amount of time later on. Begin by cutting 22 ribs from 1/16" sheet and 6 from 1/8" sheet, the latter to be used in the wing center section. Cut Former 1 (firewall) from 1/8" or 3/16" plywood. The tailplane and fin are cut from 3/16" medium sheet balsa as are the wing tips, T1, T2, and T3. (Note that T3 is constructed from 3 layers of 1/8" sheet, so it can be tapered down from the tip rib to the tip. Fabricate the rudder and elevator horns from 1/16" ply or, if you prefer, you can use Lou Proctor horns. While on this point I must mention that I used Lou Proctor's control cable and swage fittings.

Wing

Start by pinning down the 1/16" x 1" hard balsa leading and trailing edge, the 1/8" x 1/2" bottom spar and the 3/8" square leading edge. Check and dry fit 2 or 3 ribs for correct alignment. Pre-glue the wing tip parts, then pin and glue them in place. Now start gluing in the ribs, leaving out the center 3 ribs on each wing panel,

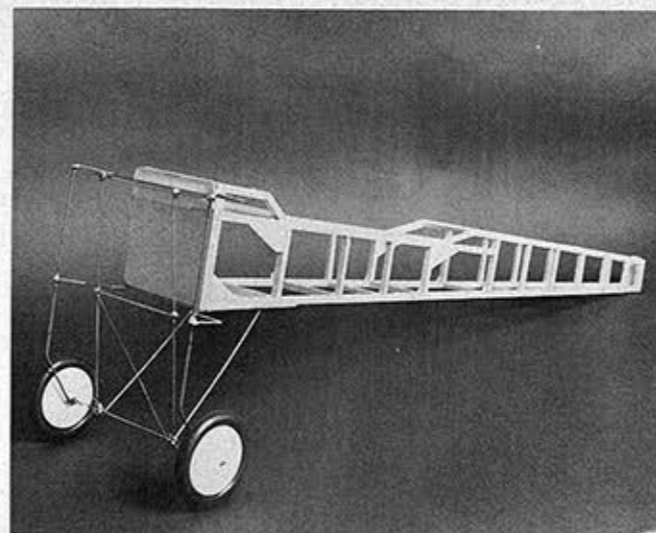
since these will be cut to fit when the dihedral brace and sheeting is added. When the ribs are dry, glue the top spar in place. After finishing both wing panels, pin one to a flat board and raise the other 4" at the tip and glue together. Cut two 1/16" plywood dihedral braces and glue in place. When dry, add the 1/16" sheet vertical webs to both sides of the spar, then cover the center section with 1/16" sheet. A piece of 1/16" plywood about 1/2" wide should be glued across the trailing edge of the center section. This will stop the wing bands from crushing the trailing edge. Epoxy small aluminum tubing to the ribs shown on the plan since these will carry the flying wires through the wing. These are made from black elastic thread purchased from Woolworths. (Do not build the wing fairings at this time.)

Tailplane And Fin

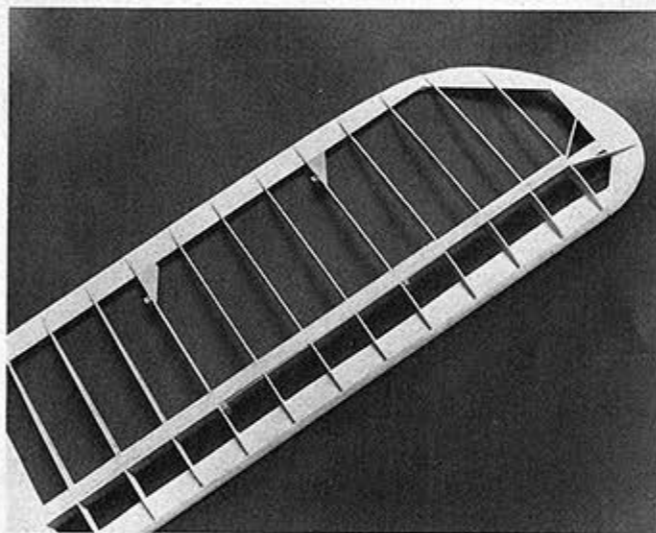
The construction of the empennage is very simple and is started by pinning and gluing all parts to a good flat board. Do not forget the 1/16" plywood pieces on the bottom of the tailplane since this strengthens the center section considerably. The fin is also built in a similar manner.

Fuselage

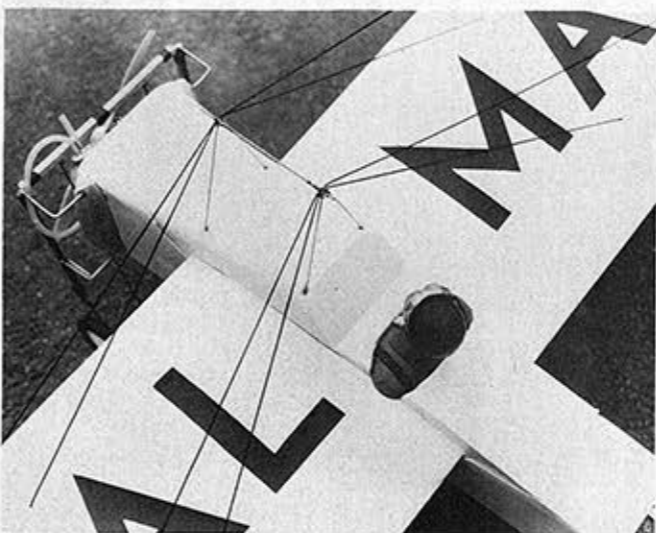
This consists of a very simple box structure made of 1/4" square balsa. Start by pinning down the 1/4" square longerons,



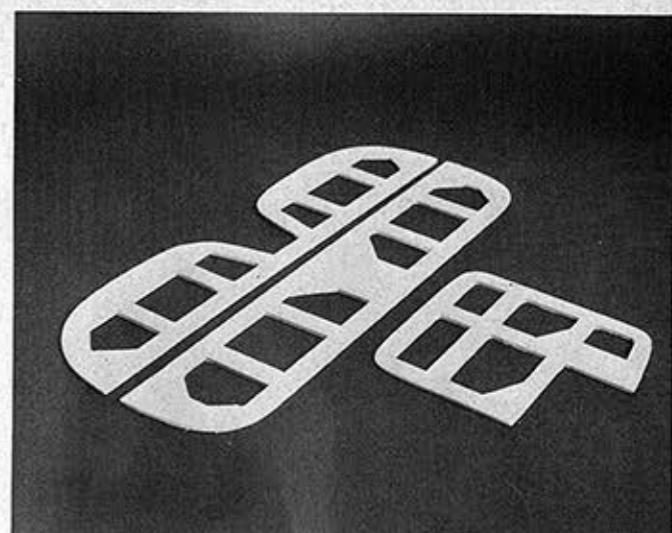
Basic fuselage structure is a box built-up of longerons, uprights, and crosspieces. Wire landing gear is time consuming, but easy to fabricate.



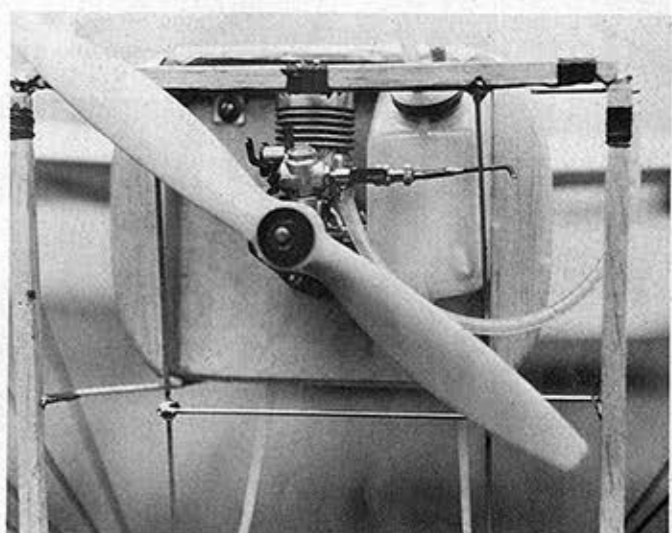
Once again, building the Puffin wing is simplicity, itself. A basic Clark Y section that's plenty strong. Note rigging fixtures at four locations in each panel.



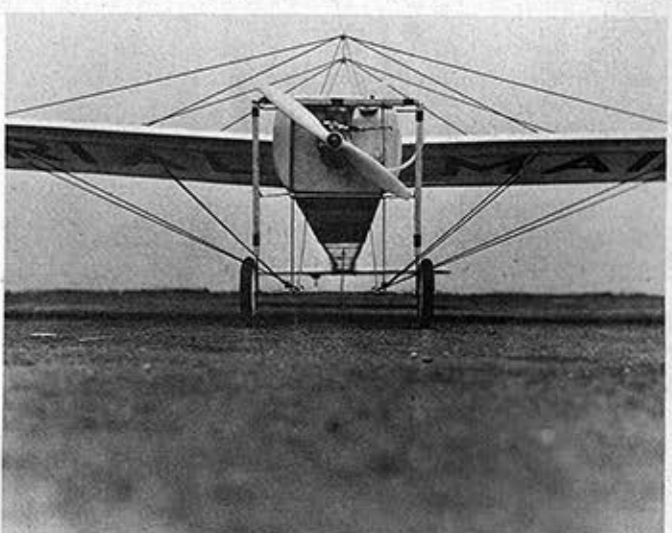
The rigging looks complicated, but takes only a few minutes to install, a few seconds to connect at the field, and adds immensely to the overall appearance.



Nothing could be simpler than the Puffin's tail surfaces - flat strips glued together over the plans. Try Hot Stuff, and it'll be ready to lift off the boards as soon as it's glued.



A view of the nose shows the O.S. Max .15 oversized propeller, and the vertically mounted tank. Everything's out in the open for easy access.



A head-on shot of the Puffin shows a view of the landing gear and rigging arrangement. A little extra effort adds a lot to the overall appearance.

PUFFIN

Designed By: Kevin Flynn

TYPE AIRCRAFT

General Sport Aircraft

WINGSPAN

58 Inches

WING CHORD

10 Inches

TOTAL WING AREA

540 Square Inches

WING LOCATION

Shoulder Wing

AIRFOIL

Clark Y

WING PLANFORM

Constant Chord

DIHEDRAL, EACH TIP

2 Inches

O. A. FUSELAGE LENGTH

39 Inches

RADIO COMPARTMENT AREA

(L) 12" X (W) 3" X (H) 2½"

STABILIZER SPAN

16 Inches

STABILIZER CHORD (incl. elev.)

6 Inches

STABILIZER AREA

87 Square Inches

STAB AIRFOIL SECTION

Flat

STABILIZER LOCATION

Bottom Of Fuselage

VERTICAL FIN HEIGHT

5½ Inches

VERTICAL FIN WIDTH (incl. rudder)

5¼ Inches

REC. ENGINE SIZE

09-15 Cubic Inch

FUEL TANK SIZE

2 Ounce

LANDING GEAR

Conventional

REC. NO. OF CHANNELS

3

CONTROL FUNCTIONS

Rudder, Elevator, Throttle

BASIC MATERIALS USED IN CONSTRUCTION

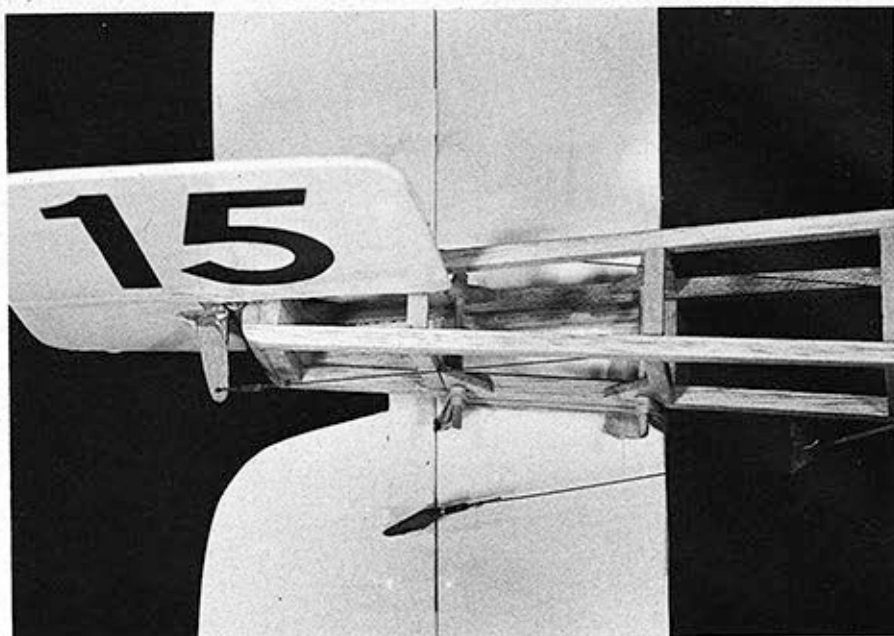
Fuselage	Balsa and Ply
Wing	Balsa and Ply
Empennage	Balsa and Ply
Weight Ready-To-Fly	36 Ounces
Wing Loading	9.6 Oz./Sq. Ft.

then add the upright pieces. When one side is dry, cover it with wax paper, and build the other side over the top of it. Then remove from the plan and add the crosspieces and Former 1. Sand the structure before adding the 1/16" sheet sides and bottom. (Note that the bottom of the fuselage from F1 is covered with 1/16" plywood to support the landing gear.)

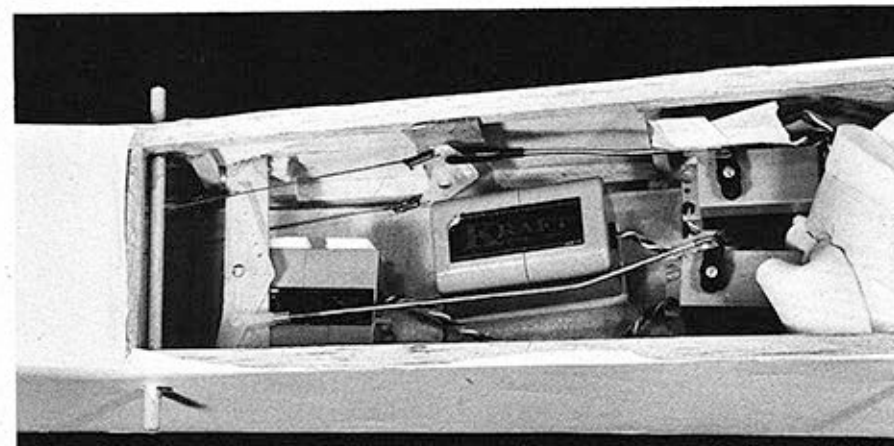
Now place the wing on the fuselage and build the wing fairing since this method will assure a perfect match. Carve the block for the top of the fuselage and cut it to fit the wing fairing. (This block can be laminated from soft 1/2" sheet balsa if you prefer.)

Before the check cowls are glued in place, the landing gear should be bent and attached to the fuselage. The landing gear is made from 3/32" and 1/16" piano wire and the wheels are 3½" Williams Brothers vintage type.

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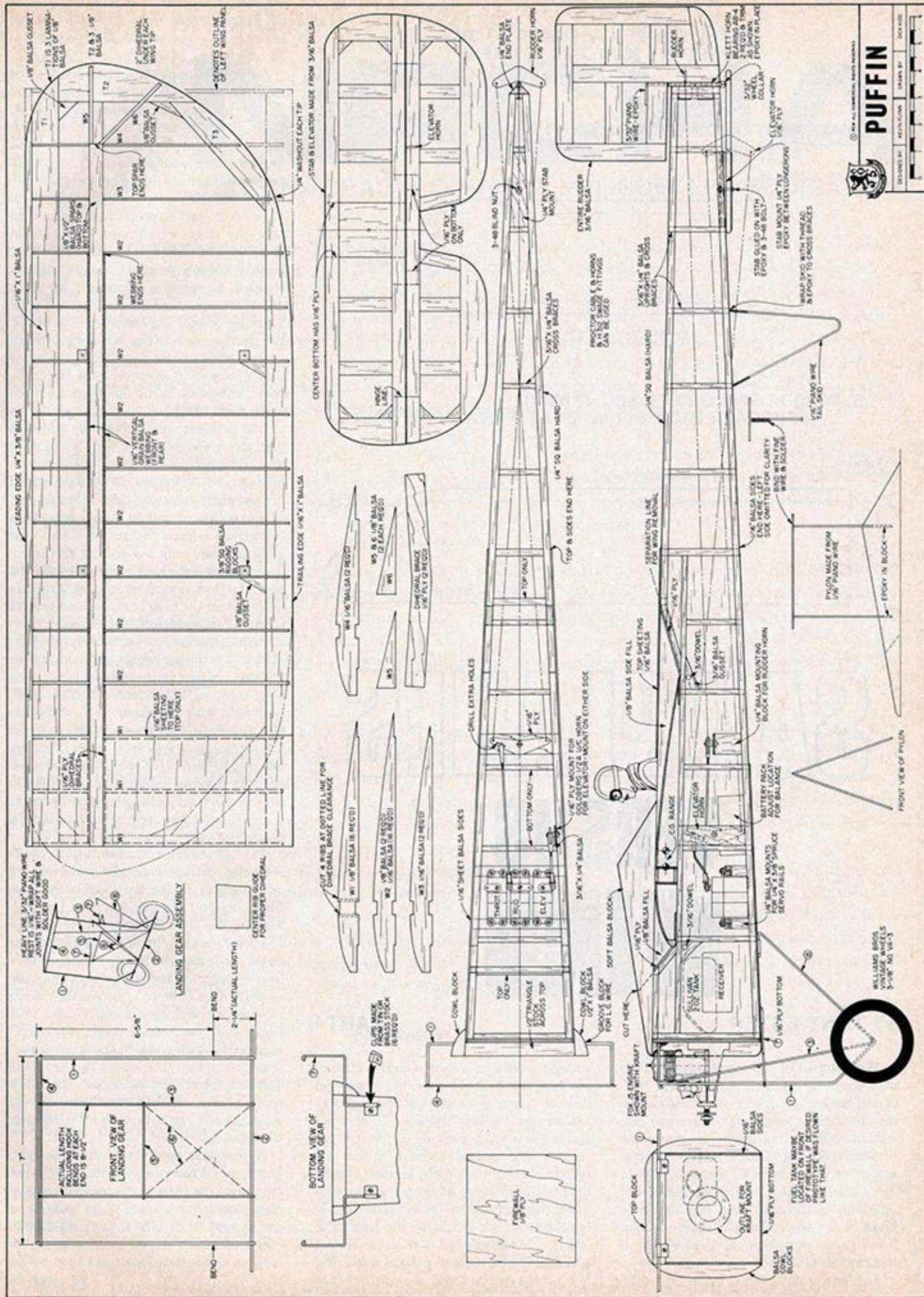
View of the Puffin empennage section. Home-made control horns used for control cable rigging adds to overall realism.



View of radio installation. Plenty of room in the Puffin interior for virtually any size proportional system.



The author, Kevin Flynn, with his original Puffin prototype. A slow, easy and realistic vintage like R/C aircraft.



PUFFIN
 DELAYED BY: _____
 REVISED BY: _____
 CHECKED BY: _____
 DRAWN BY: _____

PUFFIN

from page 34

Assembly

Glue in the wing dowels and the cheek cowl blocks and sand the completed structure. Cover the airframe with MonoKote, Solarfilm, or Flite Kote, and trim with shelf paper from Woolworths.

Flying

The original model was nose heavy (this was a surprise as I expected just the reverse!) so I moved the battery pack about 2" from the firewall and mounted it on servo tape. This moved the Center of Gravity back and, after this, I had no flying problems.

I hope you enjoy flying your Puffin as much as I have - - - it's one model that the whole family can fly, and one that will certainly attract attention wherever it is flown. □