

A
2 off
1/8 sht.

Balance point under front lead-out wire

Mount drilled for Cox .049

Engine starbd. side

Wing sht.
1/8 sht.
16 s.w.g.
For wing section B

B
3/32 sht.

1.1/2" K.K. streamlined plastic wheels

C
2 off
1/16 ply

D. 4 off 1/4 x 3/16"

E. 2 off 1/4" x 3/16"

U/C mount
1/8 ply

Bind and cement leading edge

Round off

Tailplane and elevator 3/32 sht.

With Cox Medallion engine use Cox-Triang 6" diam. 3" pitch plastic prop

Linen tape hinges

Washer
Solder

Linen tape

Line guide

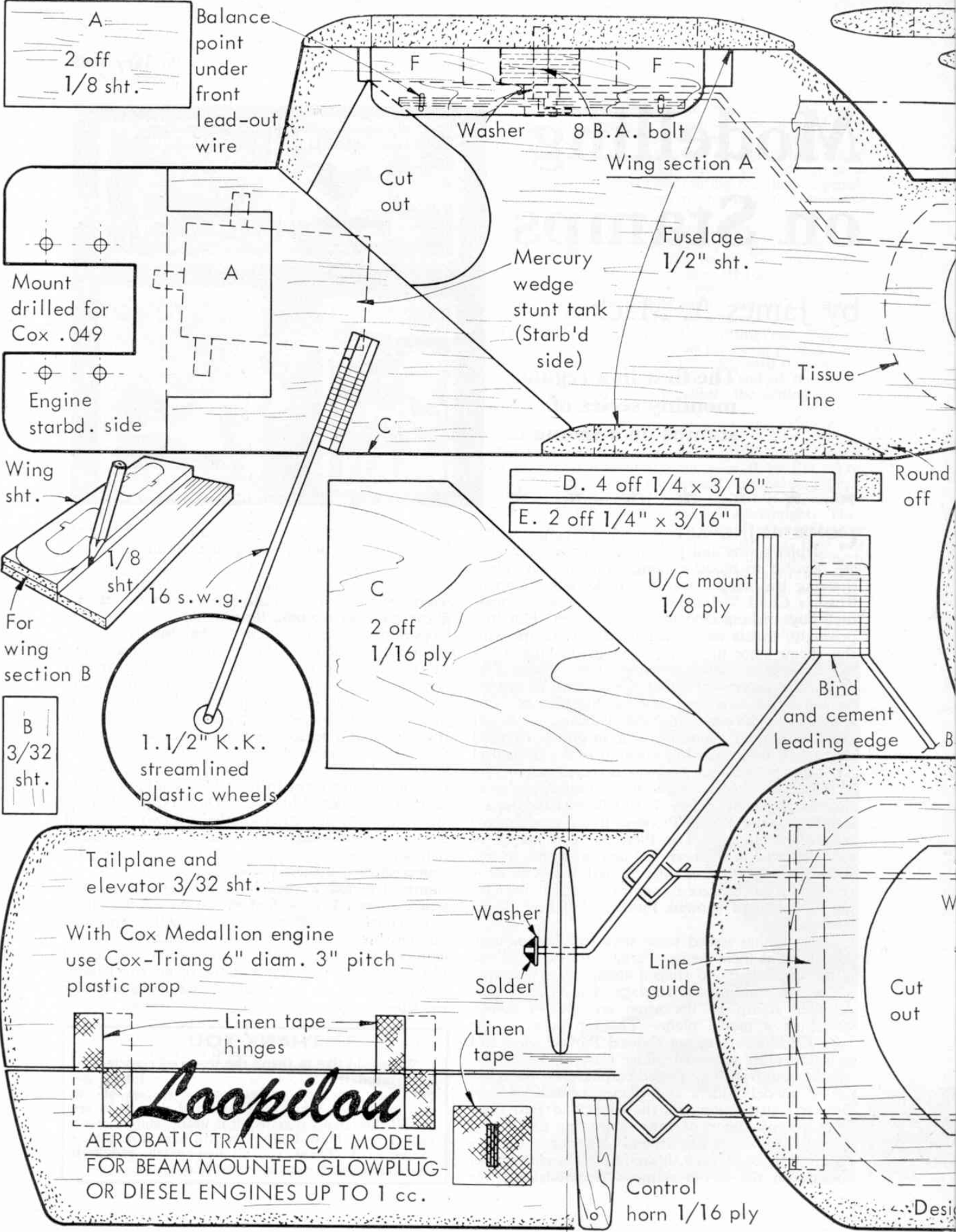
Cut out

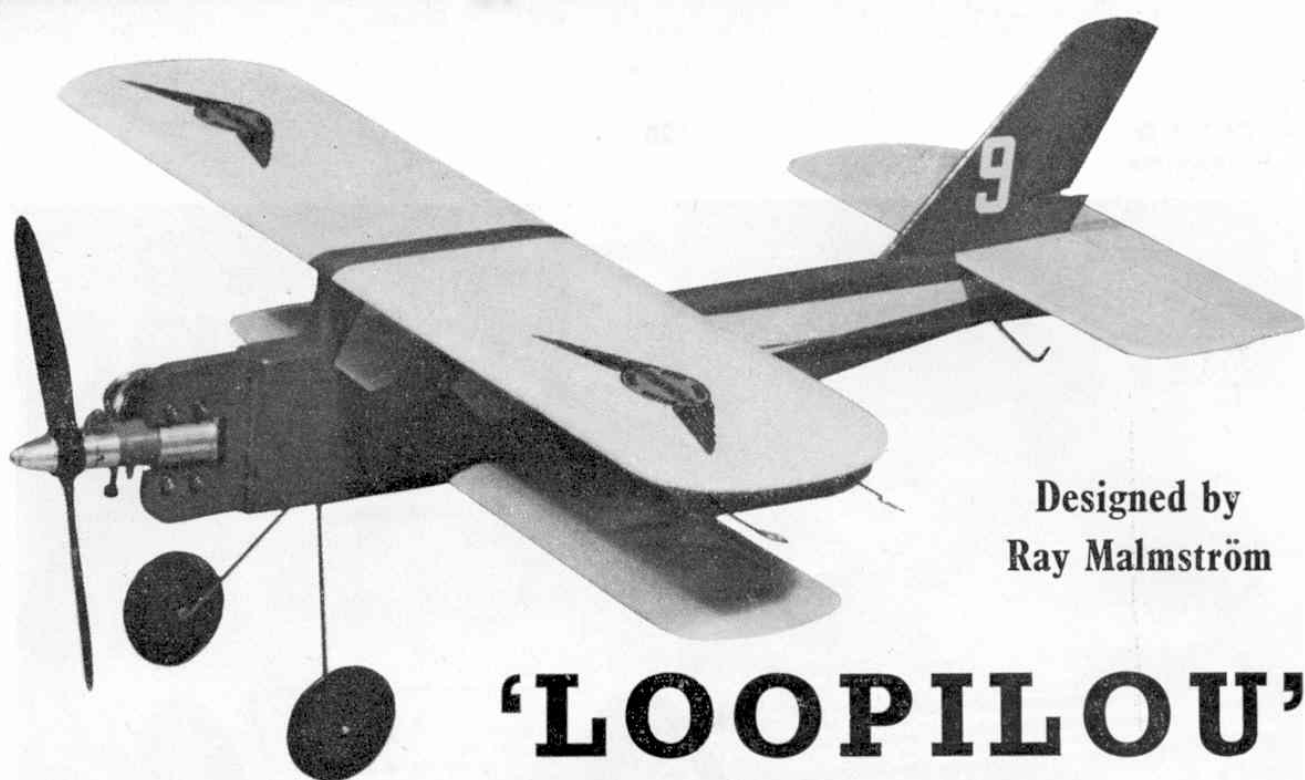
Loopilou

AEROBATIC TRAINER C/L MODEL FOR BEAM MOUNTED GLOWPLUG OR DIESEL ENGINES UP TO 1 cc.

Control horn 1/16 ply

Desig





Designed by
Ray Malmström

'LOOPILOU'

A 16 inch wingspan, control line, biplane sports model

SO YOU want to try wing-overs and loops, and if you can acrobat around the sky with a biplane, instead of an "in-the-rut" monoplane you'll jump at the chance. O.K. so start jumping—"Loopilou" is here just for you! She's an easy-to-build, two-winger that wing-overs and loops while the others are taking-off!

Construction

Cut the fuselage from $\frac{1}{2}$ in. sheet, noting cut-out areas and fin slot. Form skid and fix with linen tape, well cemented. Sand rear of fuselage to section shown and cement piece B and cabin windows in place. Drill holes to suit your engine, in $\frac{1}{4}$ in. ply engine mount. We recommend the powerful, light and easy-starting Cox .049 Medallion. Other suitable light-weight engines are: D.C. Bantam, Wen-Mac 049, D.C. Merlin. Firmly cement engine mount in position, checking alignment with fuselage. Add filling piece A. Bend undercarriage wire, bind to mount, cement well and assemble into undercarriage slot on fuselage. Add wheels and $\frac{1}{16}$ ply pieces C. Cover the rear fuselage with lightweight tissue, and apply two coats of clear dope. Cut tailplane and elevator from $\frac{3}{8}$ sheet, then join with tape hinges, checking for free movement. Give two coats of clear dope and cement to rear of fuselage. Check that the tailplane is at right angles to fuselage, with a set-square. Cut out fin and offset rudder $\frac{1}{4}$ in. to right (model viewed from rear), again apply two coats of clear dope, and cement into fin-slot.

Wings

Two wing sections are shown on the plan, "A" and "B." "A" section wings are for wing-overs, loops and sports flying. "B" section wings are symmetrical and help when flying inverted, the choice is yours. Cut wings from $\frac{1}{4}$ in. sheet, add ribs (E lower D upper) and sand to chosen section. Cover with lightweight tissue, applying two coats of clear dope. Assemble lower wing to fuselage, checking alignment with fuselage and tailplane. The bellcrank mount is from $\frac{1}{4}$ in. ply, and the 8 B.A. bolt to hold the bell-crank *must* be a tight screw-fit. Cut bellcrank from $\frac{1}{8}$ in. ply, drill and attach push rod (noting the angle) and lead-out wires, leaving them over-length at this stage. Assemble bell-

crank unit to bellcrank mount, then cement the unit accurately into place on the undersurface of the top wing. Add line-guide and wing-tip weight (sheet lead or folded empty cement tube) to undersurface of top wing.

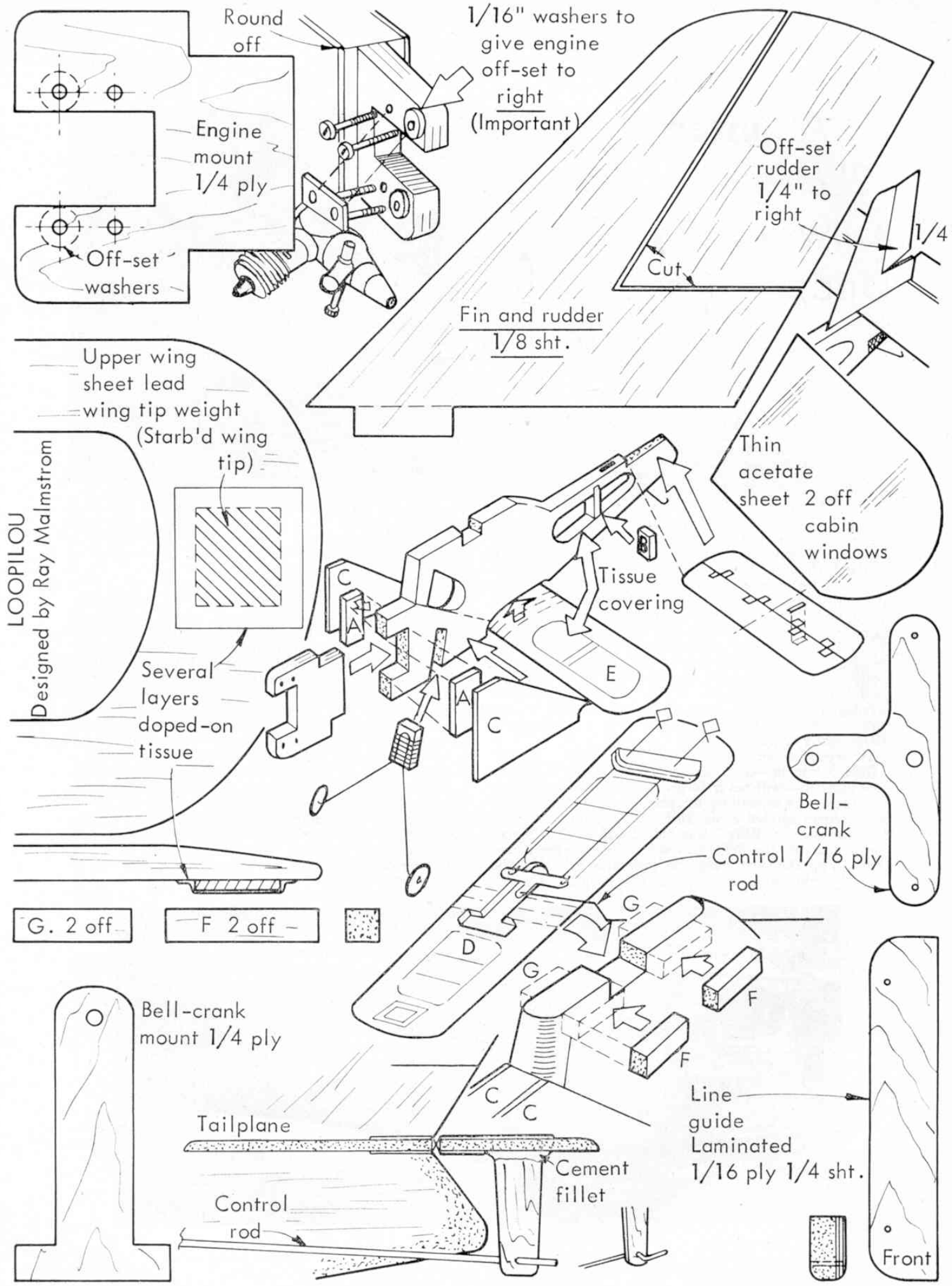
Assembly

At this stage, paint "Loopilou." If you use Humbrol enamels, there's no need for a coat of fuel proofer. Waterslide transfers are protected by a thin coat of clear varnish. Now assemble the top-wing to the fuselage, the bellcrank mount locking into the cut-out on the fuselage. Cement well, checking that both wings are parallel and have equal gap (distance between the wings) on both sides. Finally add blocks F-2 and G-2 to reinforce the wing-fuselage joint. Cement the $\frac{1}{8}$ in. ply control horn to the elevator, reinforcing with a patch of linen tape. Lock the elevator at neutral with a length of $\frac{1}{4}$ in. sq. balsa pinned to tailplane and elevator, hold bellcrank at neutral with modelling pins, then cut lead-out wires to equal length and form loops. Bend the push rod and pass it through the hole drilled in the control horn, then bend again to prevent it becoming detached from the horn, and cut off surplus wire. Araldite a Mercury wedge stunt tank to nose piece C, on the starboard side (right side viewed from rear) and bolt the engine to the engine mount. Place $\frac{1}{8}$ in. thick washers under the front of the engine lugs as shown, this off-sets the engine thrust-line to the right and helps to keep the lines tight.

"Loopilou" is complete except for balancing. The model should balance level when supported by the finger tips under the *front* lead-out wire. With the Cox .049 Medallion, our original balanced perfectly; you may need to add a small amount of weight to nose or tail to achieve the correct balance.

Plan Instructions

The full-size constructional plans on pages 18 and 43 should be removed from the magazine (joined) by undoing the binding staples, removing pages 19-42, and then replacing them. Page 42 shows assembly in easy-to-follow sketch form.



LOOPILOU
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Round off

Engine mount
1/4 ply

Off-set washers

1/16" washers to give engine off-set to right (Important)

Off-set rudder 1/4" to right

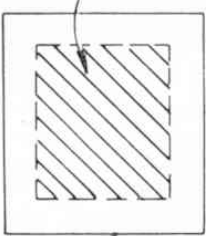
1/4"

Cut

Fin and rudder
1/8 sht.

Thin acetate sheet 2 off cabin windows

Upper wing sheet lead
wing tip weight (Starb'd wing tip)



Several layers doped-on tissue

Tissue covering

Bell-crank

Control rod 1/16 ply

G. 2 off

F 2 off

Bell-crank mount 1/4 ply

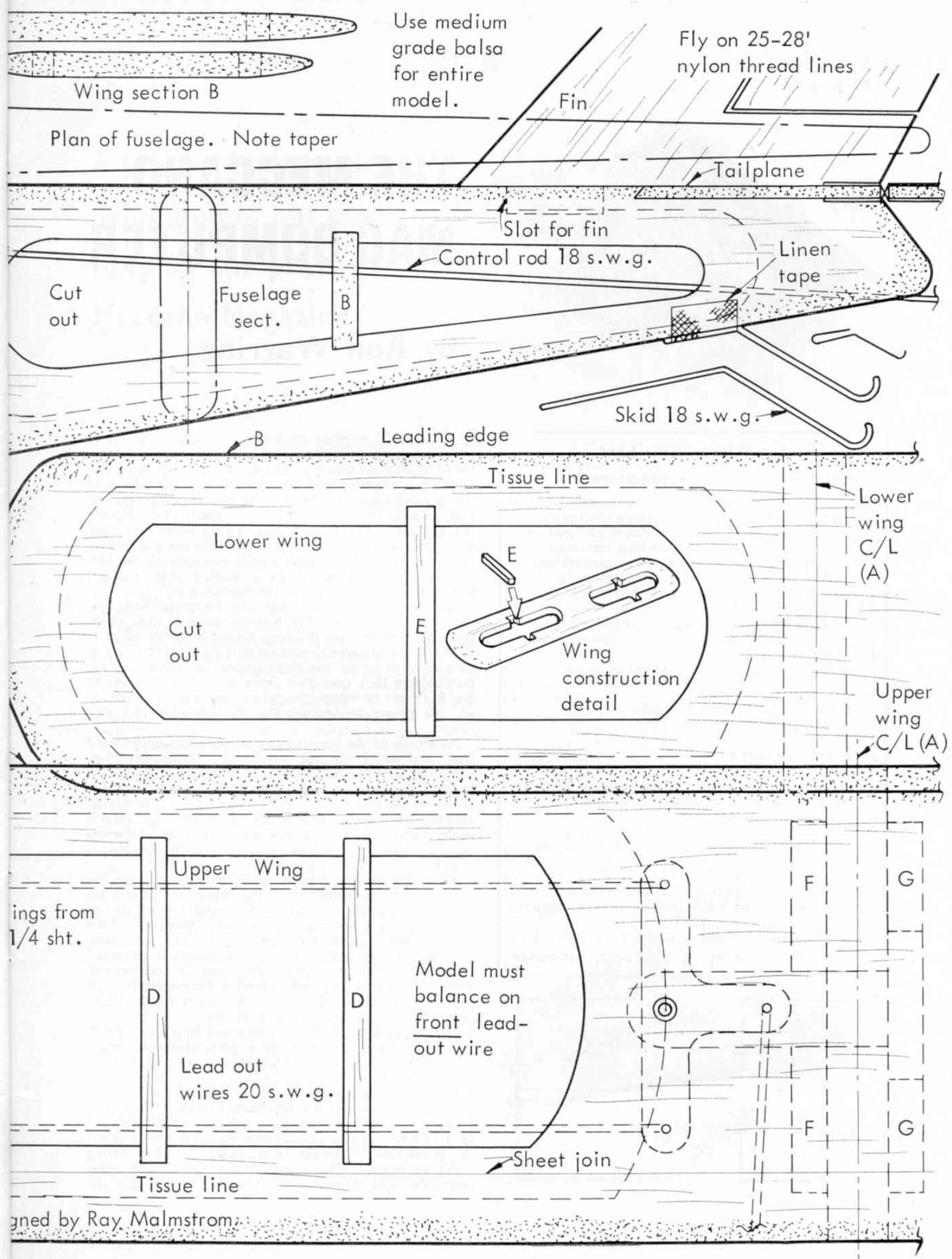
Tailplane

Cement fillet

Control rod

Line guide Laminated 1/16 ply 1/4 sht.

Front



Use medium grade balsa for entire model.

Fly on 25-28' nylon thread lines

Wing section B

Plan of fuselage. Note taper

Fin

Tailplane

Slot for fin

Control rod 18 s.w.g.

Linen tape

Cut out

Fuselage sect.

B

Skid 18 s.w.g.

Leading edge

Tissue line

Lower wing

Cut out

E

E

Wing construction detail

Lower wing C/L (A)

Upper wing C/L (A)

Upper Wing

ings from 1/4 sht.

D

D

Lead out wires 20 s.w.g.

Model must balance on front lead-out wire

F

G

F

G

Sheet join

Tissue line

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