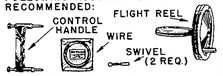
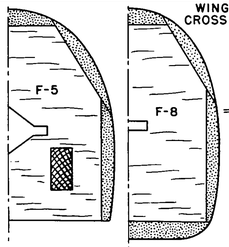
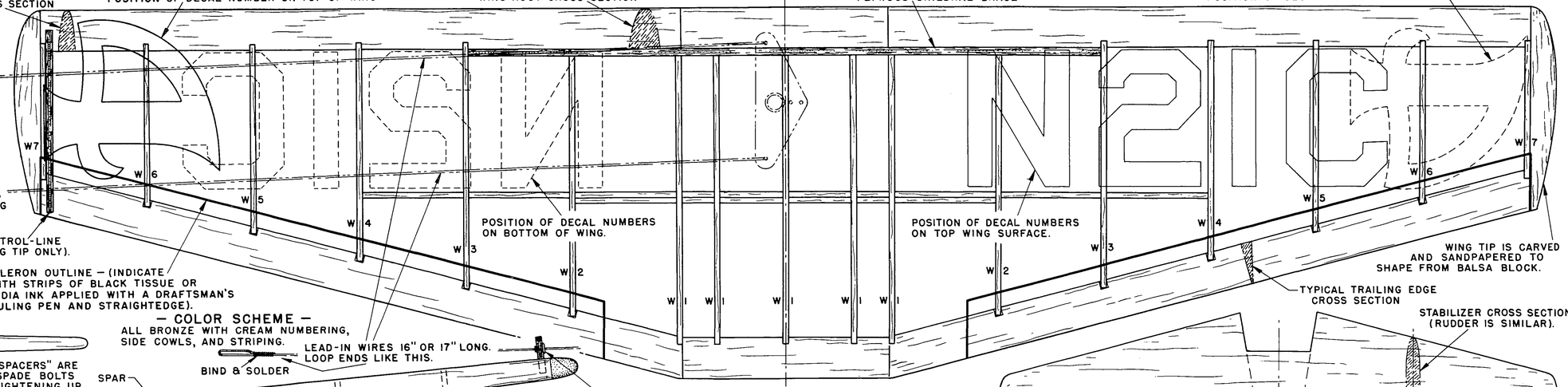
FOR ALL CONTROL-LINE FLYING, THE FOLLOWING ACCESSORIES ARE RECOMMENDED:




SEE BERKELEY CATALOG FOR PRICES AND FURTHER DETAILS. AVAILABLE AT YOUR HOBBY SHOP.




REFER TO THESE CROSS SECTIONS WHEN CARVING FUSELAGE TO SHAPE.




NOTE POSITION OF FUEL TANK IN FRONT VIEW. BOTTOM VENT IS BENT UPWARDS TO CLEAR SIDE COWL. REMOVABLE COWL (TOP) IS CUT OUT TO CLEAR VENTS WHERE THEY PROJECT THRU FUSELAGE SIDE.

MOUNT LANDING GEAR WITH "SPADE" BOLTS

PAINT BLACK

— COLOR SCHEME —
ALL BRONZE WITH CREAM NUMBERING, SIDE COWLS, AND STRIPING.

LEAD-IN WIRES 16" OR 17" LONG. LOOP ENDS LIKE THIS.

BIND & SOLDER

CEMENT EYELETS INTO CONTROL LINE TIP GUIDE HOLES.

PLYWOOD "SPACERS" ARE USED WITH SPADE BOLTS TO ALLOW TIGHTENING UP OF RETAINING NUTS.

SPAR

FORM FILLETS WITH OUR "FIL-IT" COMPOUND IF MADE CAREFULLY, VERY LITTLE SANDPAPERING WILL BE REQUIRED.

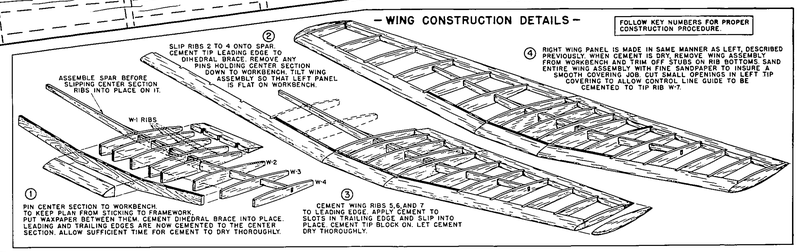
CROSS SECTION

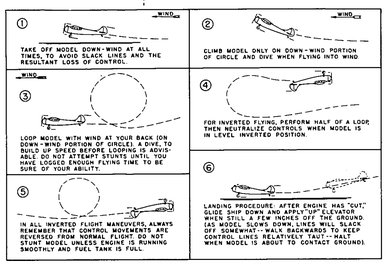
SHORT LENGTHS OF DOWEL, CEMENTED TO SIDE KEELS, FIT TIGHTLY INTO HOLES IN REMOVABLE TOP COWL.

MOUNTING HOLES FOR OHLSSON ENGINES.

— WING CONSTRUCTION DETAILS —

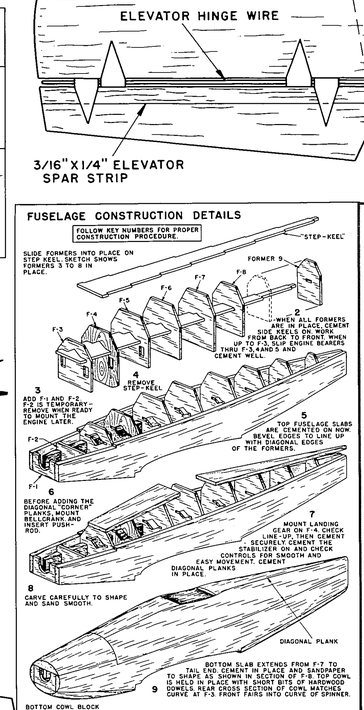
FOLLOW KEY NUMBERS FOR PROPER CONSTRUCTION PROCEDURE.




— DECAL APPLICATION —

SOAK DECALS IN LUKEWARM WATER UNTIL PAPER BACKING HAS BECOME WATER-SOAKED. LIFT OUT OF WATER AND SLIDE THE DECAL INTO PLACE. CHECK POSITION, THEN WIPE OFF EXCESS WATER WITH DRY CLOTH. ALLOW TO DRY OVERNIGHT BEFORE APPLYING DOPE OR "HOT FUEL PROOFER FINISHING COAT.







# INSTRUCTIONS
## FOR BUILDING AND FLYING

The "Minnow" Cosmic Wind Racer is one of three Cosmic Wind Racers built for the 1948 Goodyear Trophy Races. The "MINNOW" was the winner. Designed to a scale of 1" = 1', the model retains the clean lines of the real ship. Designed for use with engines of .09 to .36 cu. in. displacement, the "MINNOW" is suited for team racing as well as sport flying.

Since most of the parts are cut to shape and only require sanding, assembly is easy, even for the beginner. However, it is a good idea to read the complete instructions for hints and pointers on certain steps.

FUSELAGE

"STEP-KEEL" Construction simplifies assembly, (see step-by-step sketches) since former spacing is accurately done by the little "steps".

DO NOT CEMENT THE "STEP-KEEL" TO THE FORMERS AS IT MUST BE REMOVED LATER.

LANDING GEAR

The landing gear is held to Former F-4 with three spade bolts. It is best to install the landing gear as soon as the "Step-Keel" is removed. Small plywood squares are used behind the spade bolts so as to be able to tighten up completely on the bolt threads. The fairing and wheel pants are added after the model is completed.

CONTROL MECHANISMS

Installation is simple. (See assembly detail at bottom of plan.) Run the push rod through the slots in the formers. Do not fasten the elevator horn to the bell crank or the elevator horn until these stampings are fitted into the push rod. After the tail surfaces are mounted, check controls for smooth operation. A small drop of Vaseline on the bell crank pivot and elevator horn will provide lubrication indefinitely.

WING

Step-by-Step sketches show the assembly of the wing. When building, be sure to keep wing free from warps.

Cover wing with "Silkspan" that has been moistened by spraying with an atomizer. A good adhesive can be mixed from equal parts of dope and cement. Apply to all borders, stretching the covering as smoothly as possible. If adhesive "blushes", (turns white due to moisture), brush area with thinner in a warm dry room.

ENGINE INSTALLATION

Note that the engine on the plans is shown in the upright position. Although the photo shows the engine inverted, tests of the model showed that it was easy to start and prevented damage to plug in the upright position.

Details are given for installation of McCoy or Ohlsson Engines. While a McCoy "29" or Sportsman Jr. may be used in this model, it will be necessary to add about two ounces of ballast in the rear of the fuselage to balance. The gas tank used will determine its installation. A Berkeley Stunt Tank is shown installed on the drawings.

TAIL SURFACES

Simply sand to streamlined cross-section and mount as shown on plans. The rudder should be offset when flying with engines of .19 or smaller displacement to keep the control lines tight. Remember to install push-rod end into elevator horn before mounting tail surfaces.

ASSEMBLY

The wing must be firmly cemented to the fuselage. Cut away the wing covering in several places to assure a firm wood-to-wood bond for the wing mount. Apply at least three coats of cement along the joining edges, allowing sufficient drying time between each coat.

The plastic cowls and wheel pants are cut apart. Trim the motor cowl to the flange edge. Allow about 1/8 of flange to extend on the wheel pants. Cement two halves together. Trim flange and sand when dry. Sufficient cement should be used to assure a fillet of cement on the inside of the pant joint.

DECORATING

Scale paint scheme is shown on the drawings. Bronze paint is not a standard color. It can be made by adding a bronzing powder (purchased in any hardware store) to clear dope. Do not mix in advance of application as there will be a chemical reaction in a few hours between the powder and the dope. For fuel proofing, it will be necessary to use a "fuel proof dope or a "hot-fuel proofer" over regular dope. Be sure to coat the inside of the fuselage with "fuel proof" dope also.

FLYING

The complete model should balance at the point shown on the plan, or slightly forward of it. If necessary, add lead or solder to the rear end of the fuselage to achieve proper balance. Use 35 to 55 foot lines to fly the model. First test flights should be made with the wheel pants removed.

SEND 25 CENTS FOR COMPLETE CATALOG-HANDBOOK.


# "MINNOW"
CONTROLINER SCALE MODEL
DESIGNED & DRAWN BY PAUL PLECAN
KIT ENGINEERED BY BILL EFFINGER
COPYRIGHT 1949 REPRODUCTION FOR RESALE FORBIDDEN.



Berkeley MODELS, INC.
140 GREENPOINT AVE. • BROOKLYN 22, N. Y.


USE A 9" DIA. PROPELLER. 7" OR 8" PITCH ON .19 ENGINES, 9" PITCH FOR .29 ENGINES.

SPINNER ADAPTER HELD TO PROP WITH SHAFT NUT.

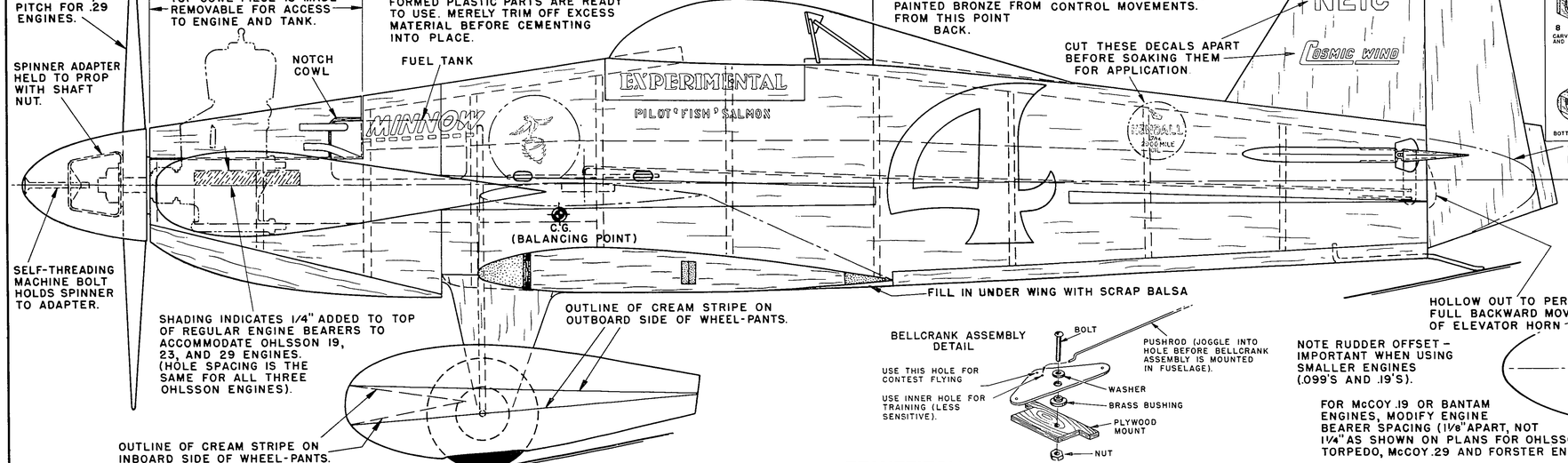
SELF-THREADING MACHINE BOLT HOLDS SPINNER TO ADAPTER.

TOP COWL PIECE IS MADE REMOVABLE FOR ACCESS TO ENGINE AND TANK.

NOTCH COWL

FUEL TANK

FORMED PLASTIC PARTS ARE READY TO USE. MERELY TRIM OFF EXCESS MATERIAL BEFORE CEMENTING INTO PLACE.




SHADING INDICATES 1/4" ADDED TO TOP OF REGULAR ENGINE BEARERS TO ACCOMMODATE OHLSSON 19, 23, AND 29 ENGINES. (HOLE SPACING IS THE SAME FOR ALL THREE OHLSSON ENGINES).

OUTLINE OF CREAM STRIPE ON OUTBOARD SIDE OF WHEEL-PANTS.

OUTLINE OF CREAM STRIPE ON INBOARD SIDE OF WHEEL-PANTS.

F-1 F-2 F-3 F-4 F-5 F-6 F-7 F-8 F-9 F-10

PLYWOOD BELLCRANK MOUNT

BELLCRANK

MOUNTING HOLES FOR McCOY "19"

SCRIBE HATCH OUTLINE INTO BALSA WITH A SHARP KNIFE.

SIDE KEEL

RUDDER SIDE FAIRING

USE LOWER HOLE IN ELEVATOR HORN IF YOU LACK EXPERIENCE IN U-CONTROL FLYING. UPPER HOLE PROVIDES FASTER AND TRICKIER RESPONSE TO CONTROL MOVEMENTS.

COCKPIT CANOPY IS PAINTED BRONZE FROM THIS POINT BACK.

CUT THESE DECALS APART BEFORE SOAKING THEM FOR APPLICATION

N21C

COSMIC WIND

FILL IN UNDER WING WITH SCRAP BALSA

SOFT SCRAP BALSA RUDDER SIDE FAIRING.

BELLCRANK ASSEMBLY DETAIL




NOTE RUDDER OFFSET — IMPORTANT WHEN USING SMALLER ENGINES (.099'S AND .19'S).

FOR McCOY .19 OR BANTAM ENGINES, MODIFY ENGINE BEARER SPACING (1 1/8" APART, NOT 1 1/4" AS SHOWN ON PLANS FOR OHLSSONS, TORPEDO, McCOY .29 AND FORSTER ENGINES).

HOLLOW OUT TO PERMIT FULL BACKWARD MOVEMENT OF ELEVATOR HORN

McCOY .19 OUTLINE