

CONSTRUCTION

THE OBSERVER

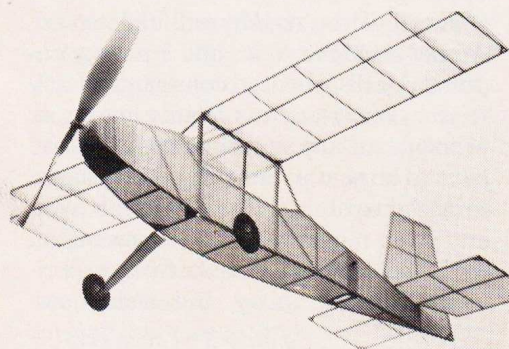
A Bostonian

by L.F. Randolph

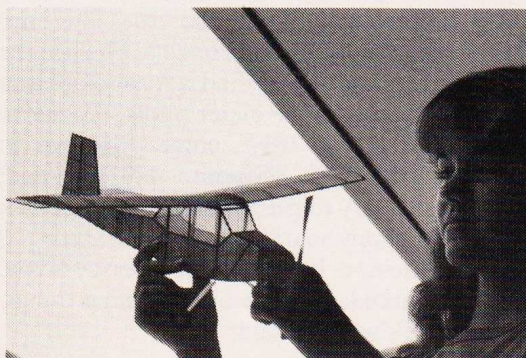


IF YOU'VE NEVER built any type of rubber model or have had disappointing results from a peanut or scale kit, this airplane's for you!

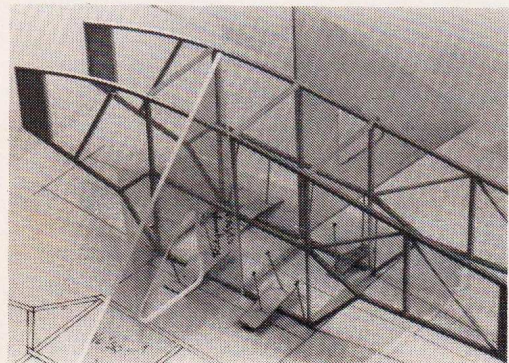
So far every airplane built from these plans has flown and flown well. The builders have ranged from Old Timers to beginners and all have been successful. Even if you are ham-handed and have never covered with anything lighter than MonoKote (you can use it for the wind-shield), it will still fly. Of course the lighter and cleaner it is, the better it will fly.



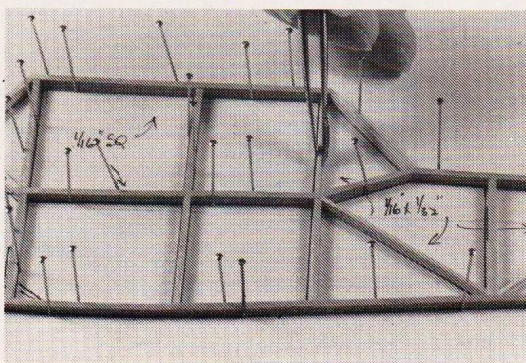
The Observer is a classic example of modeling enjoyment.



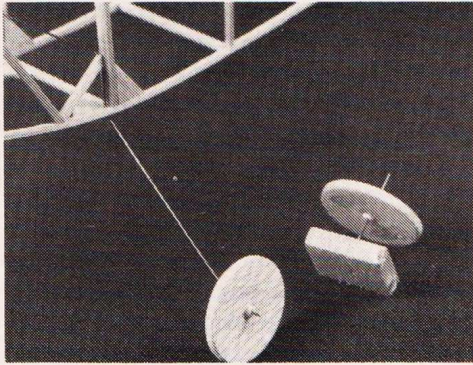
Sheri Smothers, author's granddaughter, admires this cute little bird.



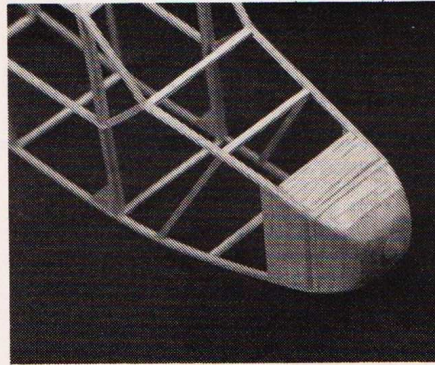
Assure straight sides by using right triangles.



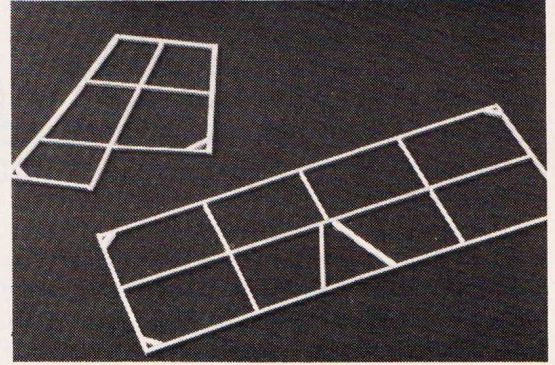
Build both fuselage sides at the same time, one over the other. Do not pin through the wood.



Note gusset in front of landing gear wire after it is installed.



Sand the nose block to match the fuselage while it is tack-glued to the nose.



Stab and rudder after assembly. Note extension across elevator trailing edge is not yet removed.

The Observer qualifies as a Bostonian, and a very competitive one at that, but it was intended for fun-flying in school gyms and auditoriums. When the wind is calm, it can be flown outdoors with no problems—other than trees and house tops.

CONSTRUCTION. Pin the plans to either a building board, soft pine cardboard, or a foam board, and cover them with waxed paper. Build both fuselage sides at the same time, one right over the other, and use Ambroid cement rather

than one of the instant kinds. If the $\frac{1}{16}$ -inch square pieces seem too small to handle, use some tweezers for the tight places. Hold the pieces in position with pins on both sides of them rather than through the wood.

When the glue is dry, remove the sides from the waxed paper and separate them by running a double-edged razor blade between them. If you accidentally break a joint, just re-glue it.

Refer to the top view, and cut six pieces of $\frac{1}{16}$ -inch square balsa all the same

length to fit between the sides at the cabin. Pin the two fuselage sides upside down over the top view, and glue these pieces between them. Make sure the sides are square by holding them true with right-triangles. When the glue has set, pull the tail together and glue it at the tail post. Then add the cross pieces from the cabin to the tail.

Cut former F-1, glue it at the nose, and add the $\frac{1}{16}$ -inch square doublers in the cabin area. Inlay the $\frac{1}{16}$ -inch sheet at the

ARTISAN

ACRYLIC MODEL DOPE **New!**



Artisan Acrylic Model Dope is a high-gloss, no mix/no waste system. It's a high-quality product with an economical price.

15 BRILLIANT COLORS CAN BE AIR-BRUSHED OR HAND-BRUSHED!

Acrylic Clear Dope glues, shrinks, and seals coverings.

Artisan Fuel Proofer: spray or brush—dries completely clear—tack-free in 15 minutes—will not dissolve or cut paint when applying—super gloss finish—100% brush-mark free.

INTRODUCTORY PRICES:

Color	4 oz	\$1.75	8 oz	\$2.95
Clear	4 oz	\$1.50	8 oz	\$2.50
Fuel-				
Proofer	4 oz	\$1.95	8 oz	\$3.95

A 4 oz bottle will do a 40"-plus airplane.
Thinner and larger quantities are available.

Use this coupon to send order and payment for introductory offer to:

ARTISAN MODEL PAINTS, 4585 Harland Dr.
New Berlin, WI 53151 414-782-2439

- Lt. Green Florescent
- Orange orange
- Grey Black
- Aluminum White
- Maroon Cub Yel.
- Red Brown
- Dk. Red Tan
- Sky Blue Green
- Acrylic Clear Artisan Fuel-Proofers

(Write in number size. Send check and \$2.00 postage. WI residents, add 5% sales tax.)

Name _____

Address _____

City _____ State _____ Zip _____



"Matched Performance System" for TOP PERFORMANCE

K&B ENGINES

16 Airplane - 4 Marine

K&B FUELS K&B GLOW PLUGS
7 Blends 4 choices

"Matched Finish System" for BEST APPEARANCE

K&B FIBERGLASS CLOTH K&B Micro-Balloons FILLER
K&B SUPER POXY RESIN K&B SUPER POXY THINNER
K&B SUPER POXY PRIMER K&B SUPER POXY PAINT
K&B MIXING CUPS



K&B MANUFACTURING

12152 Woodruff Avenue
Downey, California 90241

THE OBSERVER

top and bottom of the nose, and the piece of 1/32-inch sheet below the rear motor anchor. Make the noseblock from soft balsa, drill it for the bearing, then carve and sand it to blend into the fuselage. Bend the landing gear from .020 wire, and glue it in place. The wheels are disks of 1/16-inch sheet balsa with a bead of cement run across the grain and a small glass bead glued on the side at the center of each as a bearing. Hold them to the axle with a small drop of glue at the axle ends.

Build the stab and rudder the same as the fuselage sides right over the plan. When the glue has dried, sand them just as you sanded the fuselage. The edges should be smooth and nearly round. Hold the stab and rudder on the fuselage, and admire your work. It looks good, doesn't it?

The wing is the easiest part, that's why I saved it for last. Cut ten ribs from a nice, light 1/32-inch balsa sheet and cut two from a 1/16-inch sheet (these last two go at the center). Again build the wing just like the fuselage sides, rudder, and elevator. Pin the bottom spar and the trailing edge over the plan, glue the ribs to them, and then add the leading edge.

When the glue has set, remove the wing from the plan. Crack the leading edge,

spar, and trailing edge at the two center ribs, and elevate each tip 1/2 inch. Crack the top spar at the same two ribs, and glue it in the top rib notches. Rub glue into the spars and edges where they were cracked, and let them dry. No dihedral braces are necessary. After rounding the leading and trailing edges with 320-grit sandpaper, the wing, as well as the rest of the airplane, is ready for covering.

The airplane should be covered with Japanese tissue. Use white glue, thinned 50 percent with water, as an adhesive.

The best way to cover the tail surfaces and keep them free of warps is to pre-shrink the tissue before it's applied. Build a balsa or hardwood frame about 8 inches square and cover it with tissue. Shrink it with a light spray of water. When it has shrunk tight, give it a coat of thinned, clear dope. Paint the edges of the rudder and stab with the thinned white glue, and lay them on the tissue while it's still in the frame. Place them so there will be room in the frame to cover the other sides. When they are dry, cut them from the tissue with a sharp razor and use the same procedure to cover the other sides. When both sides are covered, sand the edges with 320-grit sandpaper to remove any fuzz that might

remain, and they are ready to mount on the fuselage.

Cover the fuselage and wing just as you did the frame. Since the wing may warp, take a little extra care with it. If any warps appear, they can be removed by holding the wing in the steam from boiling water for a few seconds and then pinning it down to a flat surface.

The cabin windows and windshield are ironed on with clear MonoKote after the fuselage is covered and clear-doped. Glue the wing to the fuselage, and iron on the top window. Glue the stab to the fuselage in two places, at the rear to a 1/16-inch shim and at the leading edge. This way the shim can be removed or added to as the flight trim dictates. Glue the rudder to the tail post only and leave the leading edge free to move. Bend the tail skid from .015 wire, and glue it in place. The plastic prop is held to the shaft, after it goes through the bearing and noseblock, with a simple right-angle bend. The rear motor anchor is a 1/16-inch aluminum tube, and should stick out at least 1/8 inch on each side of the fuselage.

Cut a piece of .070 rubber to make a loop 20 inches long. Six #32 rubber bands looped together will do in a pinch. Lube

the rubber with Armor-All, and install it in the fuselage. If you don't have a winding stooze to hold the model, have someone hold the aluminum tubing on each side of the fuselage. Better still, run a 6-inch long piece of .030 wire through the tube to give a better hold. Stretch the motor to at least twice its length, and wind in 200 or so turns. The leading edge of the rudder should be about 1/16 inch to the right of center for a left turn.

FLYING. Launch the airplane from shoulder height with the nose slightly down, just a smooth push is about right. The model should fly in a powered glide and nearly complete a 25-foot diameter circle before landing. During this flight it should show absolutely no sign of a stall. If it stalls, un-glue the stab at the 1/16-inch shim, trim half of the shim (1/32 inch) away, and re-glue the stab. Acetone will soften the glue and make un-gluing easy.

If the airplane dives, add to the shim. The circle should be to the left, and if the diameter is too large or small, move the leading edge of the rudder until the desired 25-foot circle is achieved. Then glue it in place.

Add more turns, and jockey both the rudder and elevator until a nice, smooth-

EBERLE'S IS YOUR HEADQUARTERS FOR HELICOPTERS

COMPLETE LINE OF HELICOPTERS, PARTS & ACCESSORIES.

JOHN

EBERLE'S

GMP

COMPETITOR PRO

Fully aerobatic, collective pitch plus new added bearings.

PRO model with ENYA 60X... 439.95

OS 61FSR... 449.95

ENYA chrome heli... 469.95

OS 61FSRH heli... 469.95

ANNOUNCING THE AVAILABILITY OF:

KALT HELICOPTERS

BARON 20-collective pitch... 189.95

BARON 50A MARK III - auto-

rotation collective pitch... 299.95

BARON 50C - custom

collective pitch... 367.95

BARON 50 - custom with

Blackhead MK II... 461.95

Schlüter

CUSTOM HELI-BOY

collective pitch, automatic tail rotor compensation & aerobic kit with:

ENYA 60X... 349.95

OS 61FSR... 359.95

ENYA chrome heli... 379.95

OS 61FSRH heli... 379.95

SUPER MINI-BOY

collective pitch, autorotation tail rotor compensation & aerobic kit with:

ENYA 40CX... 284.95

ENYA 45CX... 294.95

OS 40FSR... 289.95

OS 45FSR... 299.95

Superior

HELICOPTER & ENGINE COMBO

ENYA 60X OS 61FSR HP 61 Gold Cup

ENYA 60X heli OS 61FSR heli

Some engines are in limited supply so please order soon. Call for prices.

RADIOS: Airtronics, Futaba, JR & Kraft

AIRTRONICS-

6 channel heli standard... 254.95

JR-

Century seven 4 501

servos... 254.95

hירו Superb Scale Range of RC Helicopters

Send \$2 for complete catalog.



ORDERING INFORMATION - ALL ORDERS SHIPPED DAILY U.P.S.



0-\$25 add 3.50, \$26-\$100 add 4.50, \$101-over add 6.00 • U.P.S. BLUE LABEL-add 10% of merchandise total • U.P.S. C.O.D. charge \$1.65. Payment: for C.O.D. orders - cash, money order or certified check. For fast service, please send certified check, money order or use your credit card. Personal checks will

be held 30 days. Pennsylvania Residents add 6% sales tax.

At Eberle's, we do not simply take your order, we will endeavor to answer any question you may have and will assist in recommending the right helicopter for your particular needs. This along with prompt service equals trouble free flying.

Send \$2 for complete catalog.

"We Sell Helicopters & We Fly Them. We'll Be Your Co-Pilot Everytime You Fly."

Phone (412) 586-9766, 9-9 PM • Day only 586-7768

672 PITTSBURGH RD., BUTLER, PA 16001

PRICES SUBJECT TO CHANGE

**RELIABLE ENGINES
AT
REASONABLE PRICES**

Midwest Model is the source for:

- IRVINE ENGINES FROM ENGLAND
- H.P. ENGINES FROM AUSTRIA
- COMPLETE STOCK OF SPARE PARTS
- COMPLETE SERVICE FACILITY

Dealer Inquires Invited

WRITE OR CALL FOR MORE INFORMATION

MIDWEST MODEL

SUPPLY CO.

BOX 518R, ROMEVILLE, IL 60441 312-759-1955

MW6822



**NOW THERE'S A QUICK
AND EASY WAY OF
CLEANING YOUR
MODEL CRAFTS!**

Super-K Model Cleaner
Removes fuel Residue and
dirt on contact! **CUTS
CLEANING TIME IN HALF.**

Just spray model with
solvent and wipe with soft
cloth or paper towel.

SIMPLE AS THAT!

Leaves your craft
showcase clean!

- Won't harm Paints or Coverings.
- Dries Clear and fast.
- Eliminates "The Work" in cleaning your model

A Strong Professional
Quality formula. Great for
any Model Craft. Boats,
Planes, Helicopters.
Cleans Gently. Protects
your delicate model.

**DEALERS WANTED
DOMESTIC & OVERSEAS
WE EXPORT.**

Hurry! Have this product
on your shelves in time for
Christmas, guaranteed to
be a top seller.

**Sugg. retail \$5.50
per gallon.**

**Contact us for price
structures and ordering
information. Also ask
about our other Super-K
products for the Model
Industry.**

**We Are Manufacturers &
Major Brands Distributors
of Model Engines, Kits,
Radios & Accessories.**

Super-K is a brand of
**King's Radio
Control Hobbies
International
3960 West 16th Ave.
Hialeah, Florida 33012
Phone: (305) 557-2024**

SUPER-K MODEL CLEANER

THE OBSERVER

turning, climbing circle is obtained, followed by a steady cruise and a slow descent. If the model stalls under high power, add shims to the top of the nose block for down thrust until the stall disappears. The motor described should be able to handle 1,500 to 1,700 turns when properly broken-in and wound. A typical flight should be an ROG, followed by five circles to a height of about 20 feet, about four turns at the same altitude, and then three or four more circles to a landing. Average time should be about a minute. If you fly outdoors or in a room with high ceilings, use a .080 to .090 rubber motor 22 to 24 inches long. Now go do it! ■