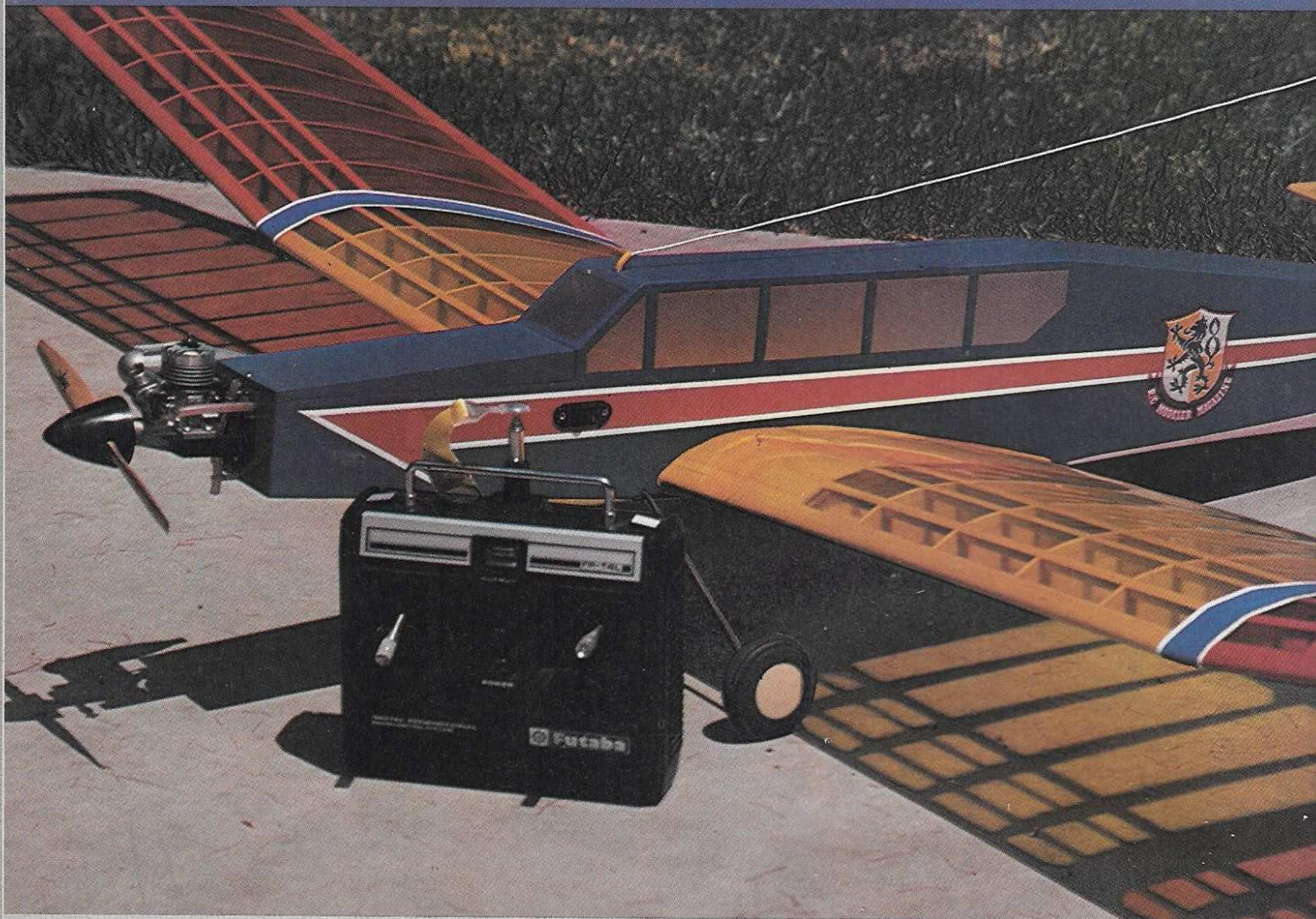


RCM BIG BIRD



The RCM Big Bird was presented in our September, 1980 issue and has been one of our all time most popular designs. Dozens of our friends have put an uncounted number of enjoyable flights on the prototype Big Bird and it is still as good as new. Some of us, however, become bored with almost anything after awhile, therefore, the Big Bird Too was conceived.

One day, while out for a flying session, the Big Bird wing was laying on the ground and for no particular reason the fuselage was placed across the top of the wing. This immediately brought a rash of smart aleck comments from good ole buddies about making a low wing fighter out of the docile Big Bird. Later, back at our office, lines were drawn on the BB plans to alter the fuselage to provide a cut-out on the bottom for the wing. A new fuselage and tail were

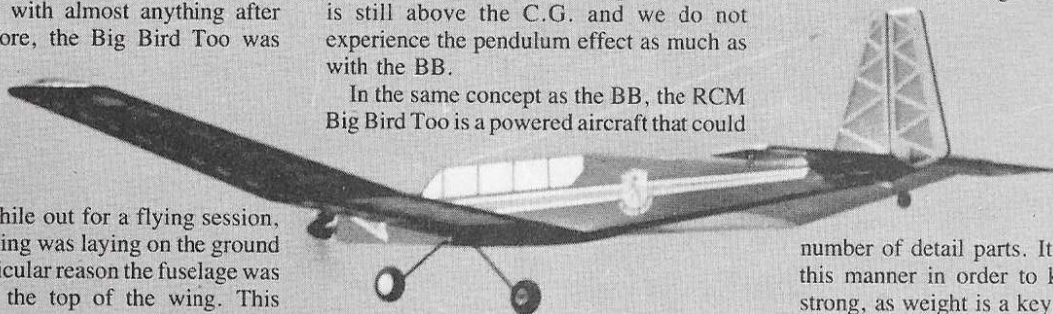
built (too lazy to build another wing) and we were off to see how it would fly. Fantastic, we could hardly believe it, but it performs better than the original BB.

The Big Bird Too is even more stable than the BB. The center of lift is naturally lower than on the BB but, due to the polyhedral, it is still above the C.G. and we do not experience the pendulum effect as much as with the BB.

In the same concept as the BB, the RCM Big Bird Too is a powered aircraft that could

The probability of success on this first unaided attempt is very low with the majority of the "trainer" type aircraft.

Dozens of trainers are available with varying degrees of complexity of construction. The Big Bird Too is simple to assemble even though there are a goodly



be recommended as the first radio controlled airplane project, particularly for a person who either does not have, or does not want an experienced RC'er to assist him.

We are thoroughly aware of modelers who will assemble their first aircraft and go out alone to make their very first R/C flight.

number of detail parts. It was designed in this manner in order to keep it light, yet strong, as weight is a key factor in the Big Bird concept.

Our approach is to combine low weight with generous wing area and a small throttle equipped engine to obtain a forgiving, slow flying aircraft. This allows the new pilot ample time to correct his mistakes before the craft smashes into the ground. In fact, with

TOO

A design follow-on to the very popular RCM Big Bird. It out-performs the Big Bird and still is a pussy cat.

By Dick Tichenor

the craft at a reasonable altitude, if the pilot has managed to get the airplane into an awkward situation, he merely has to throttle back the engine, return controls to neutral, and the ship will right itself.

There are those people who will immediately say that the RCM Big Bird Too is a powered sailplane with a landing gear.

Well, it is, in a way. The wing is a shortened version of the Bridi Big Birdy sailplane wing. The fuselage, however, is pure airplane, designed to be easy to build and rugged enough to withstand lots of abuse. The sturdy landing gear is usually found on aircraft weighing twice as much as the Big Bird Too.

The rank beginners aren't the only ones who can enjoy the Big Bird Too --- several of our experienced flying friends have had a ball with it. Unbelievably small consecutive

loops, tight turns, and wallowing barrel rolls, all in slow motion, have brought on lots of giggles.

Another aspect of the RCM Big Bird Too is the low cost of both building and flying. We have been using an O.S. .10 engine with excellent results. It is an economical engine that seems to run forever on 4 ounces of low nitro fuel. There is also the Enya, Fuji,

Hobby Shack Speedie, Thunder Tiger, and other suitable engines in this .10 cu. in. size, all are good just take your choice, you will get more go per gallon.

Incidentally, both of these Big Birds have been flown on .15 engines. The main benefit derived is an increase in the rate of climb. We used a Fox .15 Ball Bearing Schneurle engine, a dandy little powerhouse that somehow hasn't received the recognition it deserves. It is an easy starting, reliable little engine and is economical in the

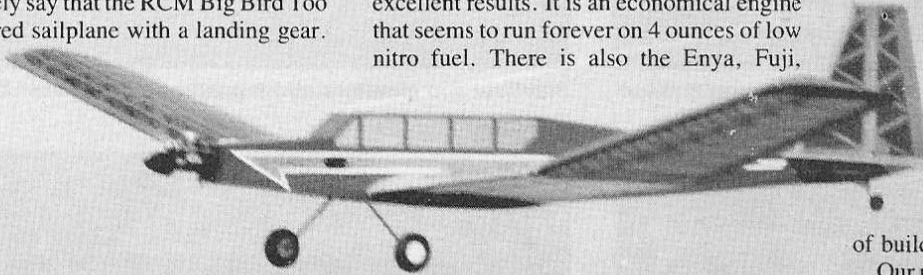
fuel consumption department.

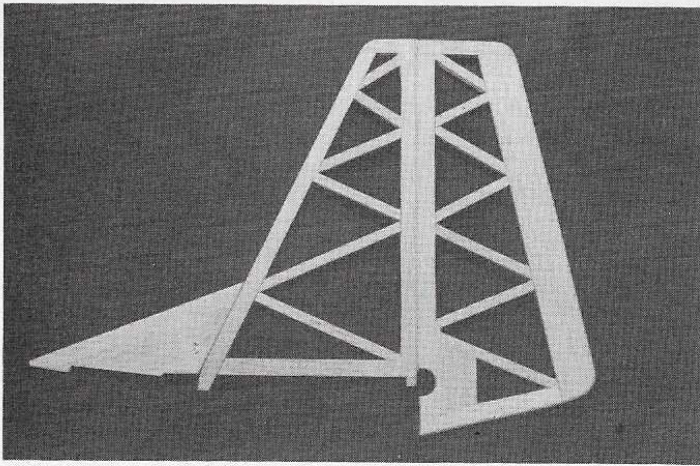
The construction details shown in our photos graphically describe the assembly of the RCM Big Bird Too. However, to assist the inexperienced beginners, we are presenting a much more comprehensive set

of building instruction, than usual.

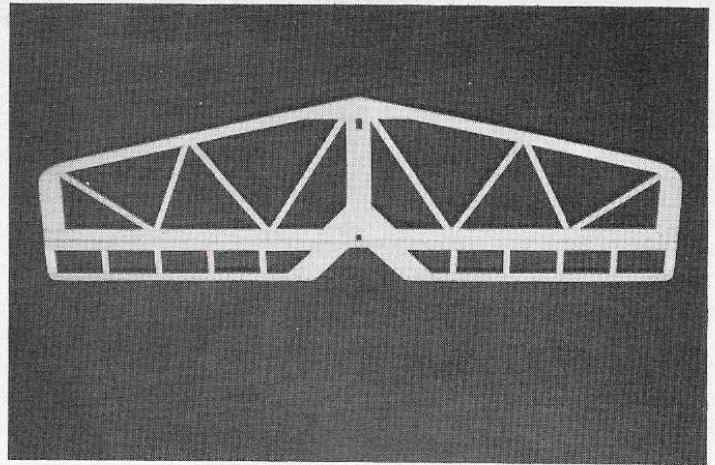
Our recommended construction sequence begins with the tail feathers. The wing panels are constructed and joined at the polyhedral joint, then the fuselage is built. The aircraft is covered and, finally, with your R/C equipment installed, you are ready to fly. Please read through the instructions before you begin work on each section so you'll know what's coming before you get there. With these few minutes of preparation you can better adapt our notes to your own ways of working.

Our basic adhesives in building the Big

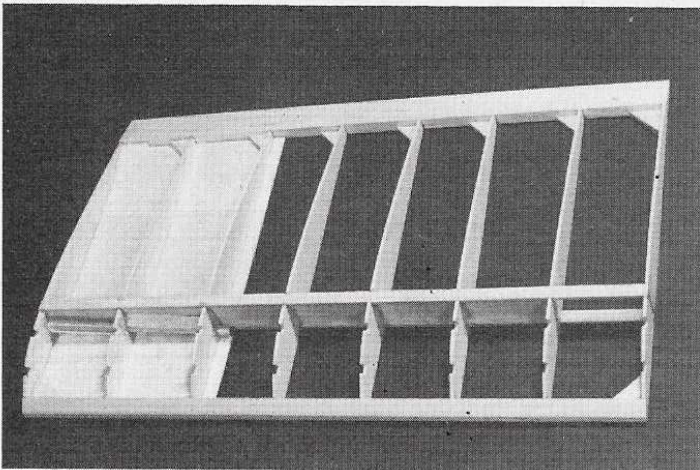




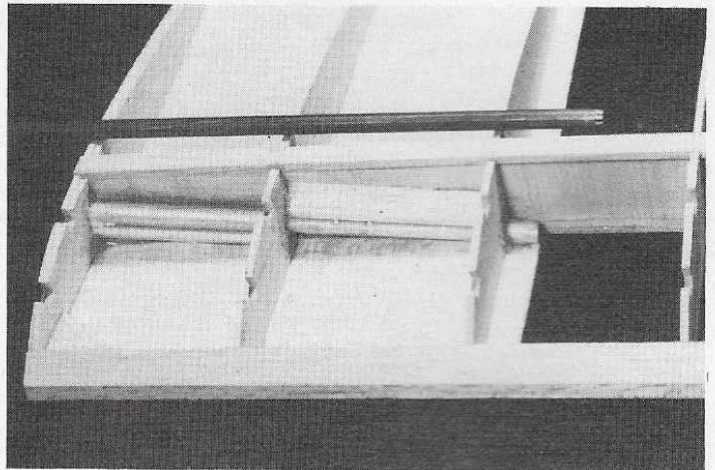
Fin and rudder ready for covering. Bill Evans' Iron-on X-Hinge used.



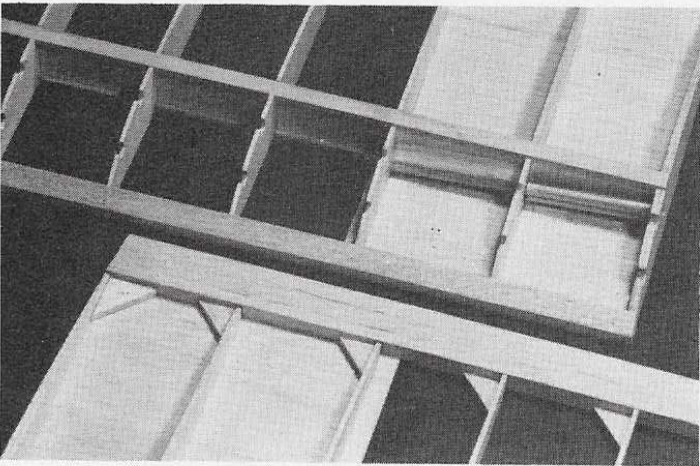
Stabilizer and elevators also hinged with Bill Evans' X-Hinge.



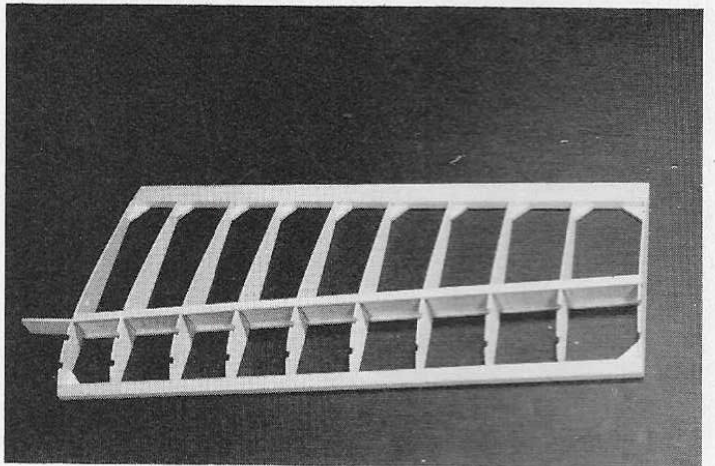
This portion of inboard wing panel is assembled directly over plans.



Details of wing joining tubes. Note 1/4 triangle stock reinforcements.



Inboard ends, leading and trailing edges.



Outboard panel structure. Note polyhedral splice plate.

Bird Too was Jet and Super Jet. We also used Wilhold white glue and 5-minute epoxy in higher stress areas.

Tail Surfaces:

The fin, rudder, elevator, and stabilizer are constructed of balsa strips. We recommended that you cut the larger pieces first, using the left-overs for the smaller pieces. The plans have been designed so the fin, rudder, elevator, and stab can all be built at the same time.

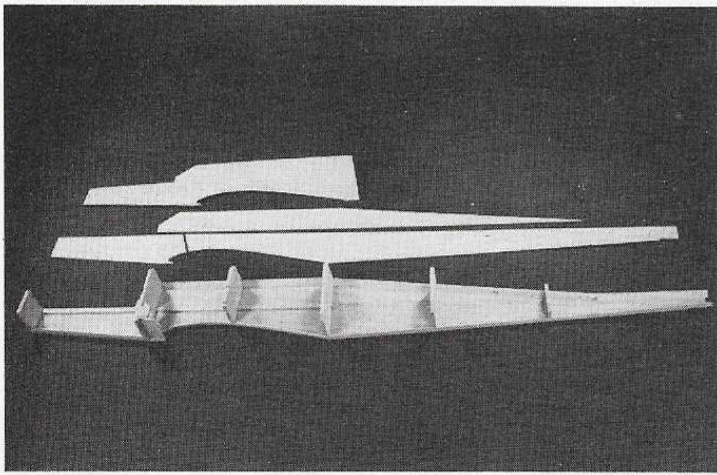
Working directly over the plastic kitchen wrap covered plans, cut, glue, and pin all of the outside pieces in place for the fin,

rudder, elevator, and stab. Add the triangular shaped piece, cut from 1/4" x 1" balsa to the front center of the stab and the center 1/4" x 1" piece. Also add the 3/16" x 1" piece to the bottom of the rudder. Do not add the dorsal fin to the fin at this time. Also add the 1/4" dia. dowel to the leading edge of the elevator.

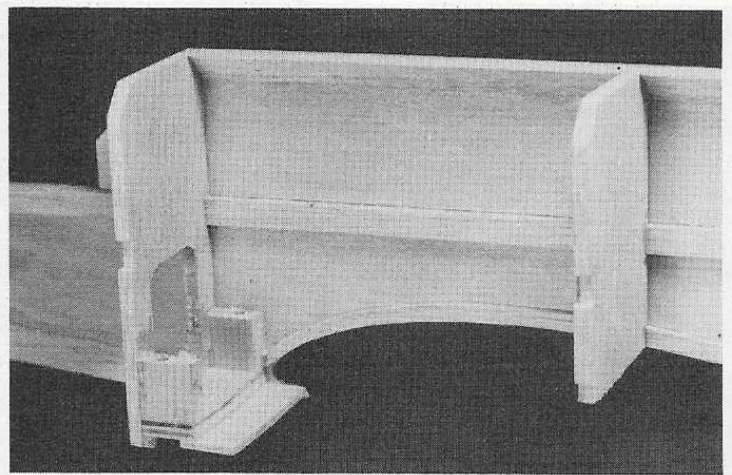
After the adhesives on the fin, rudder, elevator, and stab have set up, these pieces may be removed from your building board. With the stab resting flat on your workbench, relieve the back of the bottom of the dorsal fin as necessary for the stab.

See the plans. Then, with the fin and dorsal fin resting flat on your workbench, glue the dorsal fin to the fin.

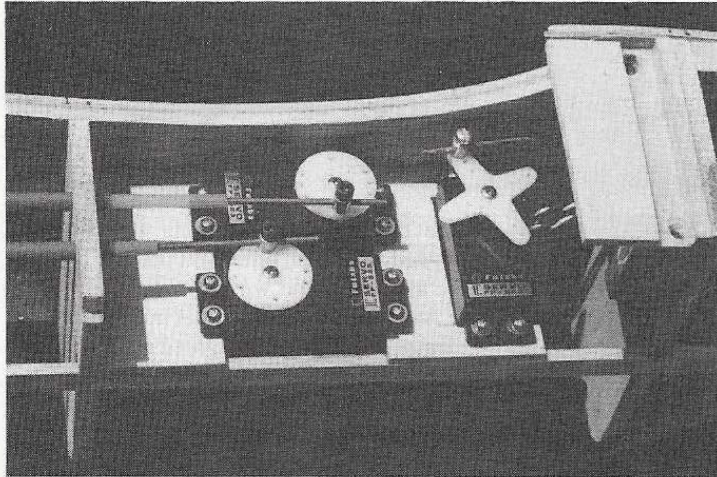
Cut the hinge slots in the stab, elevator, fin and rudder. Then sand the stab leading edge and tips and fin leading edge and tips to shape. Shape the leading edge of the rudder and elevator to a slight 'V' shape as shown on the plans. Sand the elevator tips and rudder tip to shape. Do not taper the trailing edge of the rudder and elevator. Use a sanding block to slightly round the trailing edge of these control surfaces. Finally, use a sanding block to sand the top and bottom



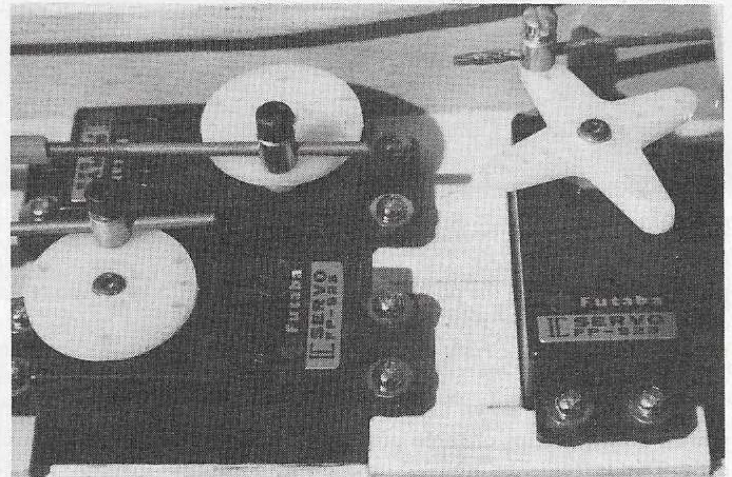
Side parts and first fuselage assembly details.



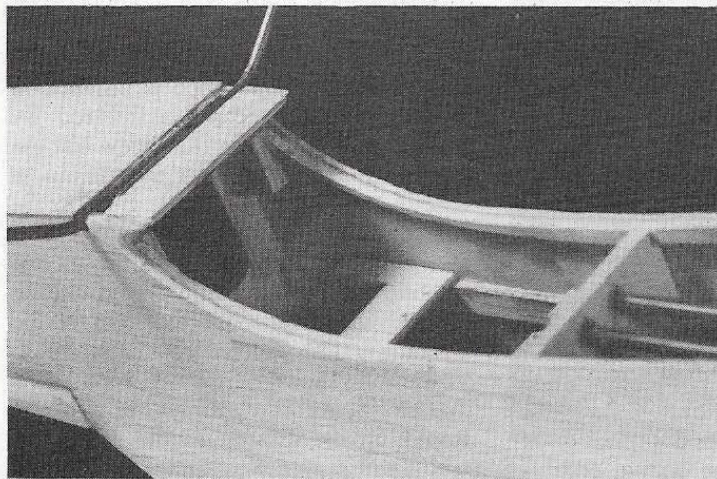
Landing gear mount and details.



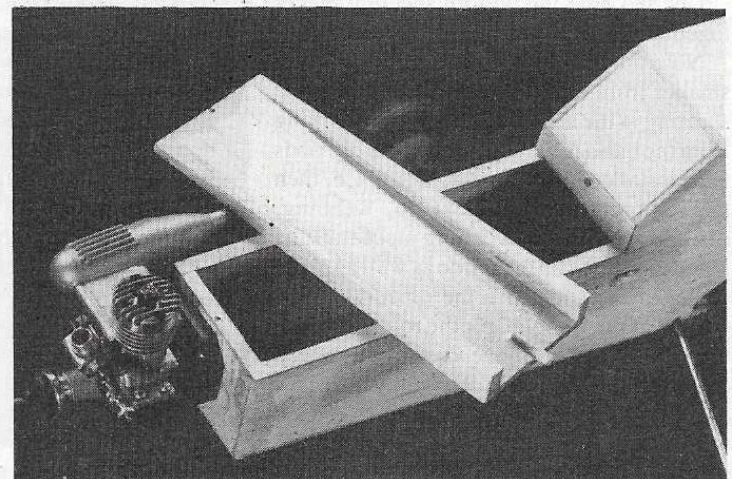
Servo installation is easier accomplished prior to adding side panel.



Close up of servo hook-up. Pushrod connectors can safely handle the air loads on Big Bird Too.



Landing gear torsion bars fit in slot of L.G. mount.



Front hatch details. Note fuel proofing with K & B sanding resin.

sides of the fin, rudder, elevator, and stabilizer. Sand a notch in the leading edge of the rudder as clearance for the elevator dowel.

Wing:

Because the right and left wing panels are constructed of inboard and outboard section. As you study the plans we want to call your attention to some design features to keep in mind as you build. First, the first two bays of both inboard and outboard wing sections are wider than the other bays. Second, the webbing used throughout the

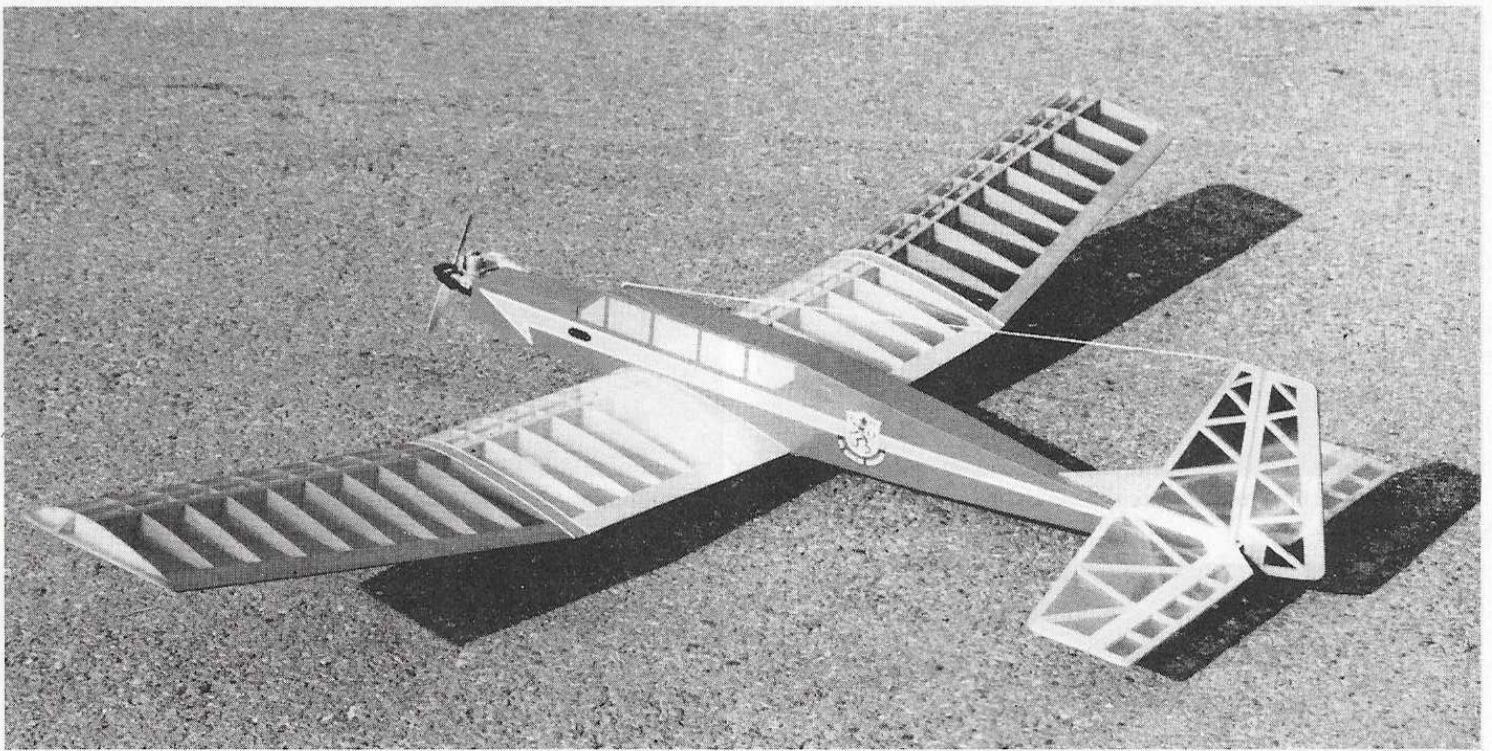
wing bays is installed on-center between the spars to offer a sturdy "I" beam spar configuration. Note, however, that no webbing is used in the bays adjoining the polyhedral joint; a ply polyhedral brace is used in these wing bays.

To join the right and left wing panels at the center, a 1/4" dia. hardened steel rod is used. The rod slides into an aluminum tube glued in place in each wing panel. To provide a good glue surface for the aluminum tube in each wing panel, an additional piece of webbing is added in the first two bays of the inboard wing sections.

These added webbing pieces are glued in place so they are flush with the front of the top and bottom spars.

As is normally done, the wing sections are built directly over the plastic kitchen wrap covered plans on a flat building board. Begin work on the inboard section of the right wing panel by preparing the spar webbing pieces. From a 3" wide sheet of 1/8" thick balsa sheet, cut 1" long pieces (the grain must run in the 1" direction). Check plans for distance between ribs and cut webbing to fit.

The webbing pieces for the root bay



should be cut to the dihedral angle at which the root rib is installed. Use the dihedral gauge ⊗ provided on the plans as a guide to cut the angle on the root rib end of the webbing pieces for the right and left inboard wing sections.

To hold the spar down until the ribs are pinned down, groups of three pins may be used. That is, two pins are used on one side of the spar with one pin located mid-way between them on the other side of the spar.

Cut and glue the bottom sheeting pieces together and to the spar. Pin them in place.

Note that the root rib and second rib are smaller from top to bottom to allow for the sheeting in the area of the root bay. Working from the balsa root rib outward (the ply rib is to be installed later), glue a rib in place, then the webbing, then the next rib, webbing, rib, and so on. Each webbing piece must be glued to the ribs on each side as well as to the center of the spar. Use the dihedral gauge cut end of the webbing for the root bay to get the desired angle of the root rib. Use the dihedral gauge as a guide when you install the rib at the polyhedral joint. The top edge of the root rib should be tipped toward the other end of the wing section. The top edge of the rib at the polyhedral joint is angled toward the root rib. As you work in this way, using the webbing to locate the ribs, you will find that some of the ribs may be off slightly from their location shown on the plans. That's okay, just as long as the rib at the polyhedral joint is at the location shown.

Glue the leading and trailing edge in place to each of the ribs. Use the dihedral gauge when gluing the root rib and the rib at the polyhedral joint to the leading and trailing edge to assure they are installed at the proper angle. Remove excess adhesive from the glue joints so it won't get in the way of the gussets to be added later.

Glue the top spar in place to the ribs and to the top edge of the webbing pieces. Again, use the dihedral gauge on the two end ribs.

Install the gussets.

After the adhesive has set up, the wing section may be removed from the building board. The leading edge, sub spars, and trailing edge should be cut off flush with the end ribs. The top sheeting will be added later after the aluminum tubing is installed.

To build the left inboard wing section, the plans must be turned over so that you are working on the back side of the paper. By applying a light coating of vegetable cooking oil (swipe it from the kitchen when your wife isn't looking), the lines will become sufficiently visible for building.

When building the right and left outboard wing sections, a separate gauge is provided on the plans for the rib at the polyhedral joint. This rib is installed so the top edge of the rib is angled toward the wing tip. Note that no balsa webbing is used in the bay at the polyhedral joint. The ply polyhedral brace is installed at that location.

After the ribs, spars, leading edge and trailing edge are installed and the adhesive has had enough time to set up, cut the wood off flush with the rib at the polyhedral joint and at the tip rib. Glue the triangular stock tip block in place so the bottom edge is aligned with the bottom of the tip rib. Sand the tip block to the rib contour and it will assume the top view shown on the plans.

With the wood cut flush with the balsa root rib on both inboard wing sections, hold the wing sections together to check the fit at the center for the desired dihedral as shown on the plans. Sand for as good a fit as possible without sanding away too much of the balsa.

Next, use a tiny drop of 5-minute epoxy at the leading and trailing edge of the ply ribs to tack glue them together, making certain that they are perfectly aligned. Apply 5-minute or slower set-up epoxy to the outside of the root ribs on both inboard wing panels. With the ply ribs between them, clamp the wing panels together, making

sure that the wing sections are perfectly aligned with each other and that the ply ribs are aligned to the wing panels.

After the adhesive has set up, remove the clamps and cut the tack-glued ply ribs apart. Any gaps between the ply cap ribs and the balsa root rib can be filled with epoxy or epoxy and micro-balloons.

This technique should give you a perfect, no gap fit of the wing panels when they are plugged together.

To provide a sturdy connection between the left and right wing panels, a 1/4" hardened steel rod is used. A 5/16" O.D. (9/32 I.D.) aluminum tube is installed in each wing panel to receive the steel rod. By checking the wing plan front view and the top view, you'll find that the aluminum tubes are installed so they are glued to the front of the spars and extra webbing piece. If you didn't do so earlier, add the second webbing piece in the first two bays in each inboard wing section so the front of the webbing is flush with the front of the spars.

The holes shown on ribs W1, W2 and W3 are to locate the aluminum tubing. Rough-up the outside of the aluminum tubing with some coarse sandpaper and slide one tube in each inboard wing section so the end of the tubing is flush with the outside of the ply cap rib. Tack glue the tubing to the inside of the root rib.

To check the alignment of the aluminum tubes, slide the steel rod into one wing panel and join it to the other one. Adjust the tubes as necessary by slotting the hole in the ribs so the wing panels mate squarely at the center. When you've adjusted the aluminum tubing so the wing sections mate properly and with the steel rod still in place, clamp the wing sections together at the center. Tack glue the aluminum tube to the front of the spar. After the adhesive sets up, remove the clamp at the center and slide the wing sections apart and back together again to make a final check of the alignment. If it all

looks okay, slide the wing together again and glue the aluminum tubes to the ribs and the webbing. Add the triangle stock braces as shown on the plans. Glue a piece of scrap hardwood from the spars at the outboard end of the pieces of aluminum tubing to act as a stop for the steel rod.

Glue the top wing sheeting in place onto the first bay of the inboard wing sections. The balsa sheeting should butt up to the ply cap ribs.

To prepare to join the wing inboard and outboard wing sections at the polyhedral joint, cut a slot in the area of the ribs to be joined between the top and bottom spars. The slot should be 1/8" wide and at the center of the spars. Then fit the ply polyhedral brace into both wing sections, checking to assure that the leading edge, trailing edge, spars, and ribs mate as they should for a good glue joint. Then glue the ply brace into one wing section. The brace should be glued to the top and bottom spars and to the ribs. After the adhesive has set up, use slow set-up epoxy down the ribs, spars, leading and trailing edge and in the slot and top and bottom spars to which the brace is to glue. Slide the wing sections together. Make absolutely certain that the wing sections are perfectly aligned to each other. Clamp the mated ribs together, block up the outboard section and let it set up overnight.

Finish sand the wing leading edge and ribs and sheeting by using a sanding block. Shape the wing L.E. exactly as shown on the plans. Perform a tip-tip balance of the wing by mounting the wing panels onto the steel rod and tape them together at the center. When holding the wing upside down, balance the wing panel at the center. Add weight to the tip of the light wing panel as necessary. We balanced our wing by gluing a medium size nail to the inside of the tip rib of the light panel.

Fuselage:

The fuselage sides are made of three pieces of 3/32" sheet balsa. Three are used because it would cost an arm and a leg to buy a sheet large enough for a one piece side even if you could find it. On the inside of each side sheet is a 1/16" plywood doubler. The outer edges of the doubler are noted on the plans with solid triangles.

RCM BIG BIRD TOO

Designed By: Dick Tichenor

TYPE AIRCRAFT

Sport/Trainer

WINGSPAN

84 Inches

WING CHORD

11 1/2" (max)

TOTAL WING AREA

900 Sq. In.

WING LOCATION

Low Wing

AIRFOIL

Flat Bottom

WING PLANFORM

Straight Center

Tapered Outer Panels

DIHEDRAL EACH TIP

5/4 Inches

O. A. FUSELAGE LENGTH

52 1/2 Inches

RADIO COMPARTMENT AREA

(L)12-5/16" x (W)2 3/8" x (H) 4"

STABILIZER SPAN

26 7/8 Inches

STABILIZER CHORD (incl. elev.)

6 3/4" (Avg.)

STABILIZER AREA

181 Square Inches

STAB AIRFOIL SECTION

Flat

STABILIZER LOCATION

Top of Fuselage

VERTICAL FIN HEIGHT

9 Inches

VERTICAL FIN WIDTH (incl. rudder)

6 5/8 Inches (Avg.)

REC. ENGINE SIZE

.10 Cu. In.

FUEL TANK SIZE

4 Oz.

LANDING GEAR

Conventional

REC. NO. OF CHANNELS

3

CONTROL FUNCTIONS

Rud., Elev., Throt.

BASIC MATERIALS USED IN CONSTRUCTION

Fuselage Balsa & Ply

Wing Balsa, Ply, & Spruce

Empennage Balsa

Wt. Ready To Fly 56 Oz.

Wing Loading 8.96 Oz./Sq. Ft.

Cut out the side pieces and assemble them over the plans. Cut out the ply doublers. The doublers are then attached to the side sheets making sure to **make a left and a right side**. Epoxy is recommended for this assembly to prevent warping. The easiest procedure is to smear the epoxy close to the edges all around the doubler. Then spread beads of epoxy in a zig-zag pattern generously across the doubler. Next, position the doubler on the side sheets being careful to line up the edges and press them together firmly. You did make a left and right side, didn't you? If not, you can start making another side correctly.

Mark the location of all formers, strips, and triangle stock with a soft pencil on the right hand side sheet. Glue the strips and triangle stock in their respective locations. Next, the formers are glued in place, making sure that they are correctly located and square to the side panels. Use epoxy to attach F1 and F2. Also, use epoxy to attach the landing gear mounting blocks. When the glues have set up, drill holes for the landing gear struts through the 1/4" ply bottom plate and the 3/8" pine blocks. Trim a radius on the edge of the holes to allow the wire struts to seat completely in the groove. Goldberg or Du-Bro landing gear straps are used to retain the struts in position.

This is a convenient time to make the servo installation. You will have to make mounting provisions for your brand of radio. Wouldn't it be nice if the radio industry had dimensional standards? We used a Futaba FP-T4L radio and can only say good things about it, it is everything a good radio should be. The only suggestions on servo installation that we will make is to be sure that the servos are mounted high enough in the fuselage to clear the wing center section. Also, follow the manufacturer's instructions.

Locate and bolt the engine mount to F1, blind nuts on the back side of F1 and 4-40 screws make a neat installation. Bolt engine to mount and rig the wire pushrod between the servo and the carburetor arm.

The Sullivan Gold'N-Rod pushrods to the tail surfaces can be fitted to the servos at this time. Do not cut the pushrods to final length

text to page 173



WHAT BATTERY DEVICES DO YOU REALLY NEED?

Carefully examine the features and price of the S & O Battery Tester and S & O Fast Charger below. Then compare them to other testers/chargers/cyclers on the market. After doing so we're sure you will pick S & O for your battery needs. What other devices do you really need?

S & O BATTERY TESTER



List Price \$29.95

Available From
Your Dealer

- For use at the field and in the shop.
- Accurate Expanded Scale Voltmeter (ESV) reading gives relative indication of charge remaining.
- For 4 cell 5 volt and 8 cell 10 volt battery packs.
- Separate "Load" resistors for both 5 volt and 10 volt sections (250 ma drain).
- When "cycling" the trans. and rec. batts. can be discharged *together* (or separately, if desired).
- Remaining charge is easily calculated (250 ma X Time [hrs.] discharge).
- Detects weak, shorted, or otherwise defective cells.
- Verifies charger operation.
- When used with the S & O Fast Charger, 500 mah trans. and rec. batts. can be cycled (i.e., discharged and recharged) in under 2½ hrs.

S & O FAST CHARGER



List Price \$29.95



23700 Bessemer Street
Woodland Hills, CA 91367

- Fast "at the field" charging.
- Constant voltage, variable charge rate (0.1 to 2.0 amps).
- Uses 12 VDC source.
- For 4 cell 5 volt and 8 cell 10 volt batts.
- Charges trans. and rec. batts. *together* (or separately, if desired).
- Under 30 minute charge time.
- Charge put in is easily calculated. (Average charge rate [ma] X Time [hrs.] Meter indicates actual charge rate. No guessing.
- When car battery is used as the power source, 115 VAC power is *never* required.
- Revitalizes many battery packs that no longer accept a slow charge.

RCM BIG BIRD TOO

from page 29/24

or secure them in place. Remove the pushrods and set them aside. Also remove servos, engine, and landing gear so that we can finish the fuselage structure.

Glue the 3/8" triangle stock to the left hand side sheet aft of F2, top and bottom as shown on the drawing. Check for fit with right hand side and make any adjustments needed for good fit. Measure the plans on the top view of the fuselage at the rear end for the bevel trim of the triangular stock. Trim and sand to fit.

Prepare for assembly the left hand sheet by mixing epoxy and spreading it on the edges of F1, F2, and the landing gear mount. Quickly lay a bead of Wilhold on F3, F4, F5, and the forward structure. With

the right hand side resting on a flat surface, carefully place the left side in position, check alignment, and hold in place by weighing it down with any heavy objects that you have handy.

The rear end is glued together and held with pins, clothespins, rubberbands or what-have-you, until the glue sets. Slip the outer tubes of the pushrods back into place and secure with a couple of drops of Jet at each hole where a tube passes through the structure. Trim and sand the tubes flush with the fuselage sides at the rear end.

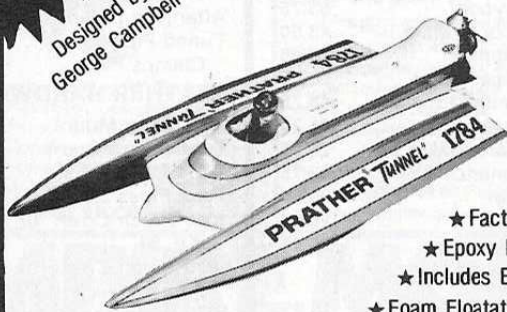
Attach the 1/16" plywood bottom panels fore and aft of the landing gear groove with epoxy. The top and bottom sheeting can now be glued in place. The 1/4" ply tailwheel mount must have a slot sawn to accept the Goldberg tailwheel bracket. Cut notch in bottom of fuselage so that the top of plywood is parallel to stabilizer mount. Epoxy the plywood in the proper position.

to page 176

NEW

Designed by
George Campbell

Prather 29" Tunnel



- Designed for 3.5 Outboard
- Length - 29"
- Tunnel Width - 7"
- Beam - 13½"

FEATURING . . .

- ★ Factory Joined Deck and Hull
- ★ Epoxy Fiberglass Hull
- ★ Includes Epoxy-Fiberglass Hatch
- ★ Foam Floatation
- ★ Plywood Transom Plate and Turn Fin Plate Factory Installed
- ★ Complete Step by Step Photo Instruction Booklet

\$129.95

Cat. No. 1060

The Prather Tunnel is one of the easiest-building boats on the market following our step by step instruction booklet. Our instructions include tips on trimming the tunnel so that even a novice can achieve contest winning performance. The expert boater will find our unique hull design a real advantage in competition.

FLASH!
Prather Tunnel sets new N.A.M.B.A. Record: 40.98 M.P.H.

Tunnel Boat Stand

FOR PRATHER 29" TUNNEL



- ★ Holds boat and engine during starting
- ★ Includes prop guard

- ★ Fast construction
- ★ Can be modified to fit other boats

\$19.95

Cat. No. 8270

Radio Box Kit

FOR PRATHER 29" TUNNEL

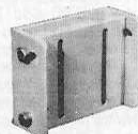


- ★ Epoxy glass shell
- ★ Lexan Cover
- ★ Hardwood Mounting Rails

\$19.95

Cat. No. 8102

Adjustable Outboard Motor Mount



- ★ Adjust up and down
- ★ Adjust engine angle (Positive or Negative)
- ★ Includes mounting screws

\$24.95

Cat. No. 5190



PRATHER PRODUCTS

1660 RAVENNA AVE., WILMINGTON, CA 90744 (213) 835-4764

B. D. HOBBY WAREHOUSE

1128 ORCHARD AVE. Louisville, KY. 40213. (502) 966-2313

	List Price	Our Price	Nicads	Servos.
2 Channel Dual Stick				
Cox 8120	99.95	60.00	2	no
Futaba FP-2GS	99.95	68.00	2	no
Futaba FP-2E/S7	139.95	86.00	2	no
Futaba FP-2E/S22	124.95	77.50	2	no
2 Channel Wheel				
Futaba FP-2F/S7	139.95	86.00	2	no
Futaba FP-2F/S20	149.95	93.00	2	no
3 Channel Wheel				
Futaba FP-3FG/S26	199.95	124.00	2	no
3 Channel Single Stick				
Futaba FP-3S/S20	169.95	105.00	2	no
Cox 8130	125.95	88.00	2	no
3 Channel Dual Stick				
Futaba FP-3FN/S22	199.95	124.00	2	yes
FP-3E6/S7	209.95	130.00	2	no
4 Channel Dual Stick				
Cox 8140	179.95	110.00	3	no
Futaba FP-4FN/S20	309.95	192.00	4	yes
Futaba FP-4FN/S26	269.95	167.00	4	yes
FP-4L/S26	199.95	130.00	3	yes
5 Channel Dual Stick				
Futaba FP-5FN/S26	299.95	186.00	4	yes
Futaba FP-5FN/S16	319.95	198.00	4	yes
FP-5LK/S26	279.95	182.00	4	yes
6 Channel Dual Stick				
Futaba FP-6FN/S26	309.95	192.00	4	yes
Futaba FP-6FN/S16	329.95	204.00	4	yes

Send #10 envelope with 36¢ in stamps for our catalog listing.

SPECIAL

	List Price	Special Price
Cox 4 Channel 8048 Medalist Radio	449.95	264.00
Logictrol Nimus 2 Channel Single Stick Radio	141.75	60.00
Sonic Vari-Pulse Power Panel	39.95	24.00
Craft Air Expanded Scale Voltmeter	19.95	12.00
Cox Ferrari 512 BB Electric Car	119.95	50.00
Cox BMW 3.5 CSL Electric Car	119.95	50.00

CRAFT AIRE

	List Price	Our Price
Windrifter (w/spoilers)	49.95	30.00
Windrifter SD-100	69.95	42.00
Sailaire	149.95	90.00
J-Bird	69.95	42.00
Viking MK I	79.95	48.00
Viking MK I F/G Fuse	119.95	72.00
Viking MK II	79.95	48.00
Viking MK II F/G Fuse	119.95	72.00
Drifter II	22.95	14.00
Golden Eagle	99.95	60.00
Butterfly II	56.95	34.00
Piece O' Cake	24.95	15.00
Drifter II Composite Kit	54.95	33.00
Piece O' Cake Composite Kit	51.95	31.00
Cowboy I	49.95	30.00

COX

	List Price	Our Price
Q.R.C. .049	19.80	11.90
Black Widow .049	18.90	11.35
.049 Babe Bee	14.45	8.70
TD .020	31.00	18.60
TD .049	31.00	18.60
TD .051	31.00	18.60
TD .09	35.45	21.30
Med. .049	19.95	12.00

CALL for FAST COD or CREDIT CARD service or send money order or certified check including \$2.50 for postage, handling and insurance. Heavy, long distance and over-size parcels extra. Prices subject to change. KY. residents add 5% sales tax. COD's are cash only.

MASTERCHARGE & VISA ACCEPTED

INDIAN CITY RADIO CONTROL CLUB
PRESENTS

GREATER MICHIGAN MODELERS SHOW & EXPO III

MICHIGAN'S LARGEST MODELING EXPOSITION
MANUFACTURERS • STATIC DISPLAYS • SWAP SHOP

October 2,3,4, 1981
West Eight Mile Artillery Armory
Oak Park, Michigan
(Suburb of Detroit)

For Information:

6909 Monroe Blvd., Taylor, MI 48180, (313) 291-6943

SKYCRAFT

FREE! THE SKYCRAFT INFOPAK!

- ★ Complete product price package
- ★ Detailed ordering information
- ★ Balsa ordering information
- ★ Order forms
- ★ details of new product arrivals

SEND ME THE INFOPAK!

NAME: _____

ADDRESS: _____

SKYCRAFT ASSOCIATES 139 YORK RD, DUNDAS, ONTARIO, CANADA

BIG BIRD TOO

from page 173/24

Lay out and cut 3/16" wide slot along top centerline for dorsal alignment. Lay out and drill 1/4" diameter holes for wing mounting dowels. Make trial fit with dowels but do not glue in place until after covering is applied.

The nose hatch is assembled from a top piece and two tapered side pieces. A 3/16" dowel is imbedded in the center of the top piece at the aft end. The dowel fits in a matching hole in the cross member below the windshield. The hatch is secured with a #2 x 3/8" screw through the top and into a Goldberg angle bracket that is mounted on the back of F1. A scrap piece of the outer tube of the Gold'N-Rod pushrod is used to bush the screw hole.

Now that you have completed all of the structure for the RCM Big Bird Too, take a few minutes to examine everything and to smooth up all the surfaces with a #150 grit, or finer, sandpaper. The smoother the surface, the smoother the covering.

The fuselage, hatch, fin, stab, elevator, rudder, and wing may be covered at this time. Any of the iron-on film covering materials may be used. Follow the instructions that are included with the film. It is easy, just have patience. Then, with the covering material removed from the areas to be glued, the stab and fin are glued in place onto the fuselage, being sure that the alignment is true and square. Once the fin and stab are glued in place, the elevator should be hinged. Then, the rudder is added.

Check the wing and tail surfaces for warps and correct as necessary by gently twisting while applying heat to the film. Slip the landing gear into position and install the retaining straps.

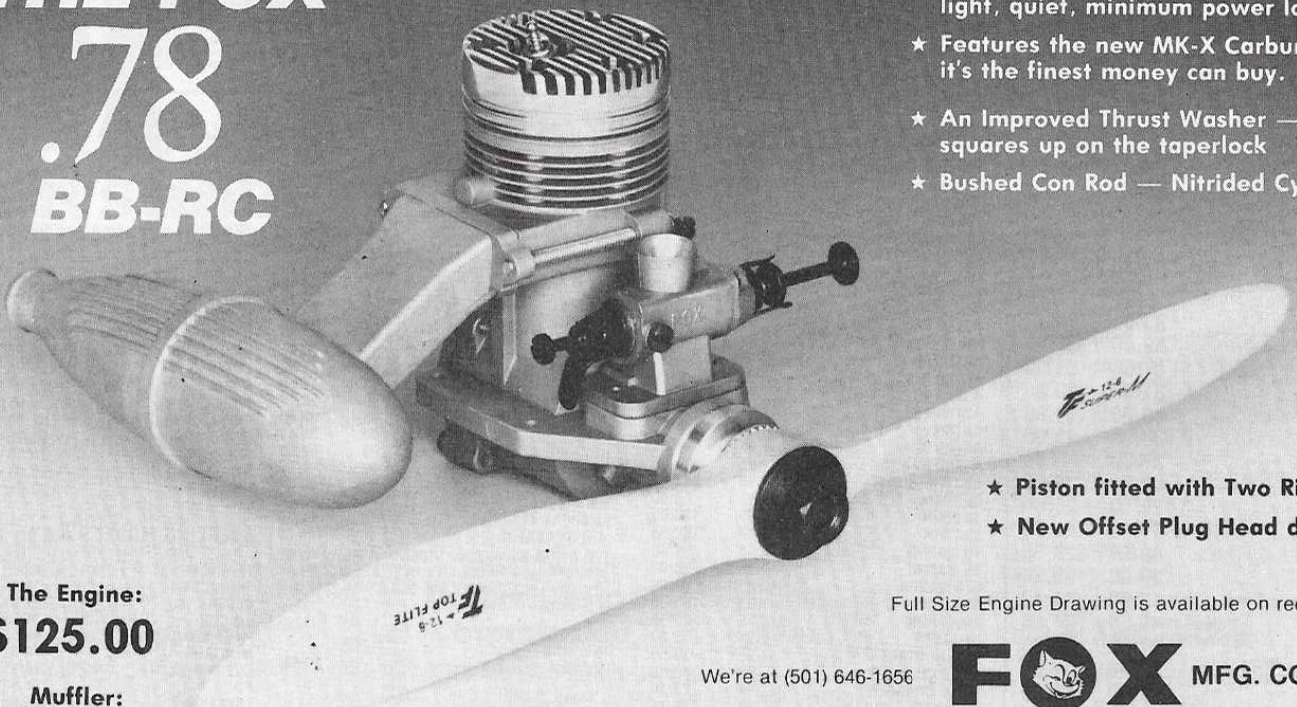
Final installation of the radio equipment is now in order. Cut a hole to fit the radio switch in the left hand side of the fuselage, opposite the engine control servo and below the servo mounting rails. Install switch (push forward for on). The servos are secured in position and the pushrods are connected between the servos and the horns on the control surfaces as shown on the plans. Pass the servo and switch wires forward through the hole in F2 and plug into their respective connectors in the receiver. Wrap the receiver loosely with 1/2" thick foam rubber and insert it into the receiver compartment as indicated on the plans. Connect the proper switch lead to the battery, wrap the battery with foam rubber and stuff it in the forward compartment.

A four ounce fuel tank fits in the nose with pieces of foam rubber wedged in around it. Run fuel feed and vent lines through holes drilled in F1. Install engine and connect throttle pushrod and fuel line.

to page 180

It's got that "extra edge" of power!

THE FOX .78 BB-RC



The Engine:
\$125.00

Muffler:
\$19.95

11/8, 12/6, 13/5 Maple Props suggested
(Propeller is not included)

- ★ Droop style Muffler design. light, quiet, minimum power loss
- ★ Features the new MK-X Carburetor, it's the finest money can buy.
- ★ An Improved Thrust Washer — squares up on the taperlock
- ★ Bushed Con Rod — Nitrided Cylinder

- ★ Piston fitted with Two Rings
- ★ New Offset Plug Head design

Full Size Engine Drawing is available on request.

We're at (501) 646-1656

FOX MFG. CO.

5305 Towson Ave., Fort Smith, Arkansas 72901 U.S.A.

It does not require expensive nitro formulated fuels.

BIG BIRD TOO

from page 176/24

Make sure that the throttle goes from full open to low within the complete travel of the servo with **no binding or stalling of the servo**. Adjust as necessary by moving the pushrod to inner or outer holes in the servo arm.

Make a reassuring check of the radio operation by standing behind the tail surfaces with the transmitter in hand. When you move the rudder control to the right, does the trailing edge of the rudder move to the right? When you pull the elevator

control toward the bottom of the transmitter case, does the trailing edge of the elevator move upward? When you move the throttle control toward the top of the transmitter case, does the throttle move toward the open position? If the answer is no on any of the above, you have something installed incorrectly and this is the time to correct the problem.

Secure the hatch with the #2 sheet metal screw.

Flying The Big Bird Too:

It is much safer and most practical for the beginner to have an experienced flier to assist with the first test flights. He can usually prevent disaster by recognizing and reacting to unexpected conditions that

invariably occur, particularly on the first flight.

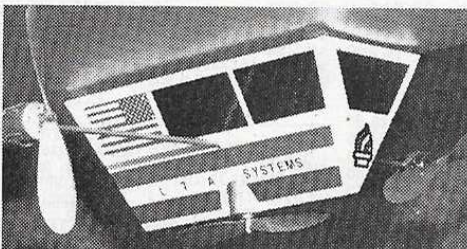
For those who go it alone, we can only make some basic suggestions. For take-off, use full power, keep it headed directly into the wind, and use very little (if any at all) up elevator to get it airborne. At low altitude you should not make a steep climb or steep turn. Keep the airspeed up by holding the nose down and apply elevator and rudder gently.

If you do not have a suitable place for a usual take-off and must hand launch the Big Bird Too, keep the following in mind. Launch with the nose level or slightly down, **never with the nose pointed upward**. Launch with enough force to obtain as much

INDOOR RC BLIMP - SIX FEET LONG

Three reversible proportional thrusters allow operation in smallest space

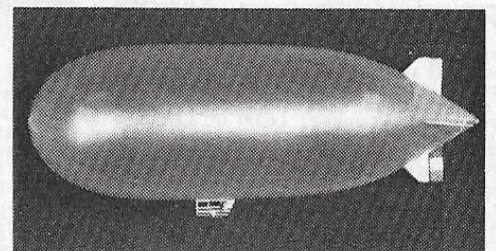
- Straight up/down, climb/dive
- Standing pivot turns
- Precision maneuvers
- 0 to 3 mph forward/back



FLY IN YOUR LIVING ROOM THROUGH DOORWAYS

KIT Prefabricated gas bag, motors, propellers. Pre-cut balsa and foam parts, decals, motor control printed circuit board and components to be assembled. Fly with your trans., rec. and 4.8v. ba. **LTA61K \$180**

READY TO FLY Built-in receiver and all airborne electronics. Fly with your trans. (3 chan. or more, specify make and freq.) and 4.8v ba. **LTA61 \$225**



Needs only 14 cu. ft. of Helium for initial fill - under \$5 - available at welding supply shops.

Flies 1 hr. on 500mah, use 250mah ba. at high altitudes.

ORDER DIRECT Prepaid (we pay shipping) or COD

LTA SYSTEMS • 892 OSMOND LANE • PROVO, UTAH 84601



Authentic 1/5 Scale P-51 Mustang

COMPLETE KIT CONCEPT!

SPECIFICATIONS
 WING SPAN 85"
 WING AREA . . . 1300 sq. in.
 LENGTH 76"
 Ready-to-fly weight . . 22 1/2 lbs.
 CHANNELS 4
 (6 for flaps & opt. retracts)

Kit includes detailed fiberglass fuselage, injection molded wings and control surfaces and all necessary hardware to complete model as shown. Four deluxe decal schemes, three view and detailed plans and isometric drawings also included. **NOTE:** Pilot, paint, covering material and radio gear not included.

After years of intensive research, testing and refinements, Byron Originals proudly announces the release of its truly remarkable 1/5 scale P-51 Mustang. This deluxe, super-scale kit, complete with factory-installed Quadra engine and prop reduction system, is unquestionably the most sophisticated and realistic scale reproduction ever made of the famous WW II fighter. The list of standard features and assorted hardware alone is far too extensive to attempt even a partial description. So in order for you to better appreciate this superb kit, we are offering a detailed information pack, complete with materials list, owners manual, parts price sheet and a miniaturized set of assembly plans and isometric drawings. Simply send us \$2.00 along with your name and address and we'll forward your pack immediately. Once you review it, you'll understand why the P-51 from Byron Originals is being heralded as the greatest engineering achievement in modeling history.



Actual photo of model on final with operational flaps and scale retracts extending.

P-51 Kit

Suggested Retail Value \$699.95
 Mail Order Price \$594.96
 plus \$13.00 shipping

Optional Pneumatic Retract System!

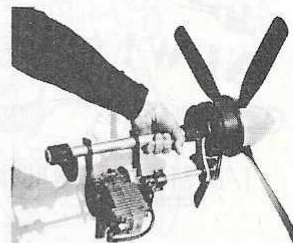
(Includes all necessary hardware)

- Sequencing gear & wheel doors
- Operational scale Oleo struts
- Scale tires & wheels
- Single servo actuation
(Fully illustrated in plans)

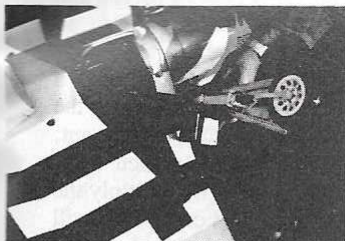
Suggested Retail Value \$169.94
 Mail Order Price \$144.45
 plus \$2.65 shipping

Complete Power Package Included in Kit! Consists of:

- Complete drive unit & mounting
- Scale 24x15 four-bladed prop
- Quadra's latest Schnuerle ported engine
- 5 1/2" spinner



Byron Originals, P.O. 279, Ida Grove, Iowa 51445, Ph: 712-364-3165



airspeed as you can.

When you reach an altitude of 100', or more, go ahead and do whatever you want as it is slow enough to give you time to react for corrections, or just neutralize the controls and it will right itself.

For landing, keep the nose down to maintain flying speed. Steer to line up with the runway, you may need to feed in a bit of up elevator when applying rudder on the landing approach to keep the nose from dropping too much. Level off when the Bird is a couple of feet from the ground and let it settle down. Keep in mind that this machine has a pretty flat glide angle so set up the landing to use the downwind end of the runway.

Fini:

This article has been much longer than usual in an effort to assist the newcomer to R/C. Even so, there simply isn't enough space available to cover every detail. We strongly recommend the RCM Flight Training Course Vol. 1, as the most comprehensive book available on how to build and fly an R/C aircraft. You will find it to be an invaluable aid toward your success in R/C. Flight Training Course, Vol. 1., with ordering instructions is shown in the RCM Anthology Library ad in the back pages of every issue of RCM.

We hope that you enjoy your RCM Big Bird Too as much as we are enjoying ours.

END HINGING HASSLES!

With the amazing **NEW QUICK-HINGE**, a drop of Hot Stuff™ Regular, a #11 Blade and two minutes of your time, you will have the Strongest, Most Reliable Hinge available!

The simple, yet surprisingly sturdy **QUICK-HINGE** can eliminate frustrating hinging gap and get you away from the workbench and into the air — **FAST!**

This new concept, **QUICK-HINGE**, is available in two sizes to suit all Balsa Modeling needs:

- HINGE WIDTH
- .25" — FOR UP TO 50" WING SPAN
(145# BURSTING STRENGTH)
 - .36" — FOR UP TO 1/4 SCALE MODELS
(250# BURSTING STRENGTH)



DDW INC., 17812 SIERRA HWY., UNIT E
 CANYON COUNTRY, CA 91351

Sold in packages of 12 (with complete instructions included) for only \$1.49 plus \$.50 postage and handling. Cash, check or money order only, please. (Calif. residents add 6% sales tax) **SEND FOR YOUR QUICK-HINGE NOW!**



DDW, INC.
 17812 SIERRA HWY., UNIT E
 CANYON COUNTRY, CA 91351

NAME _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 HINGE WIDTH: .25" — QTY _____ @ 1.49/PKG = _____
 .36" — QTY _____ @ 1.49/PKG = _____
 POSTAGE AND HANDLING \$.50
 TOTAL _____

DEALER INQUIRIES WELCOME