

# GUIDED MITE

**Here's a ship to challenge  
the multi-monsters—and, it's  
powered by the smallest  
production model engine**

By Bob Coon

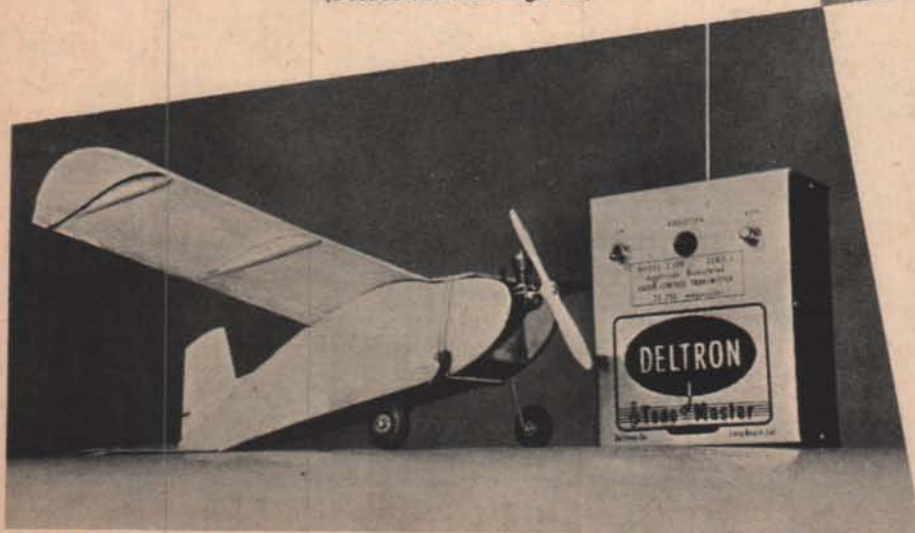
● The "Guided Mite," a vest-pocket-size R/C model, was conceived and flown within a two week period. It has proven itself a good performer and should please those beginners in radio control who wish their efforts and expenditures to remain on a lower plane than is currently fashionable.

The Deltron R109, the latest in transistorized tone receivers, was used because of its extremely small size and weight. A single sub-miniature 22½ volt battery is the only current source needed to operate the receiver. Total receiver and battery weight is just 2½ ounces. The all-up weight of the model is only 8 ounces which works out to a wing loading of 12 ounces per square foot.

The simple single escapement may seem like a backward step to some, but it remains the simplest, most reliable actuator for the lowest weight penalty. For those who prefer a compound type escapement, the fuselage has ample room and will accommodate it.

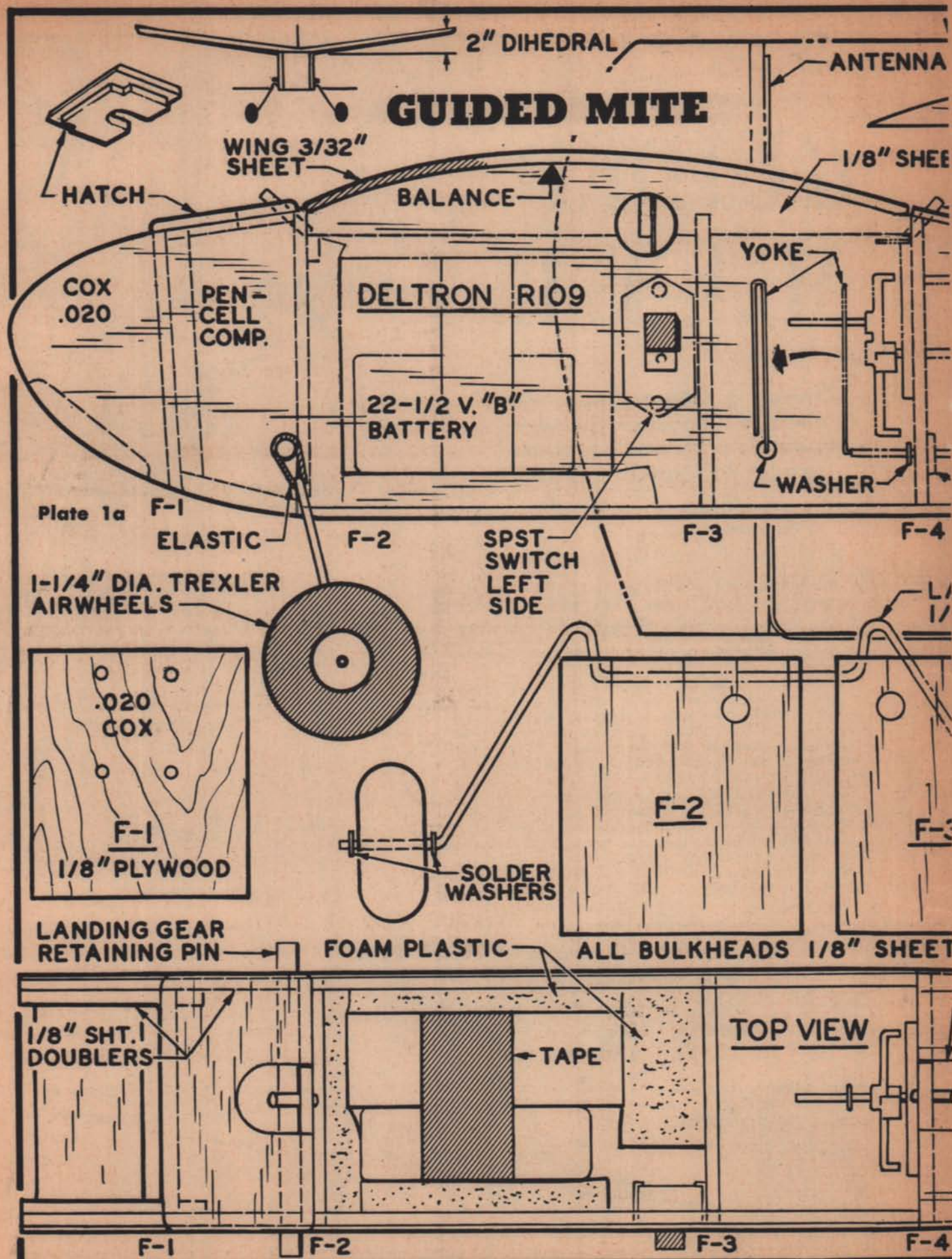
The Cox .020 is a surprise package and provides plenty of power, enough to take the model high overhead.

*(Please turn to Page 49)*



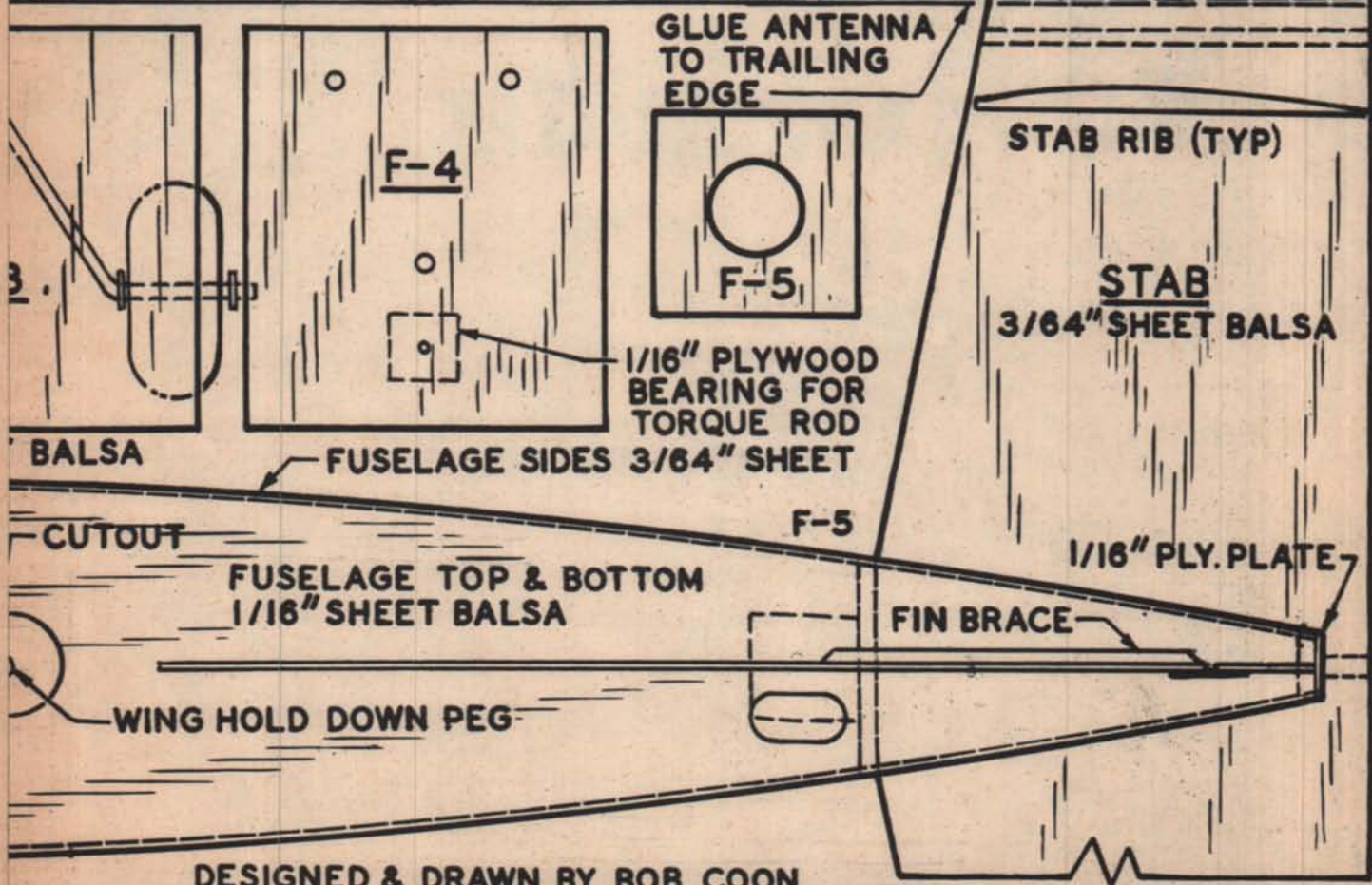
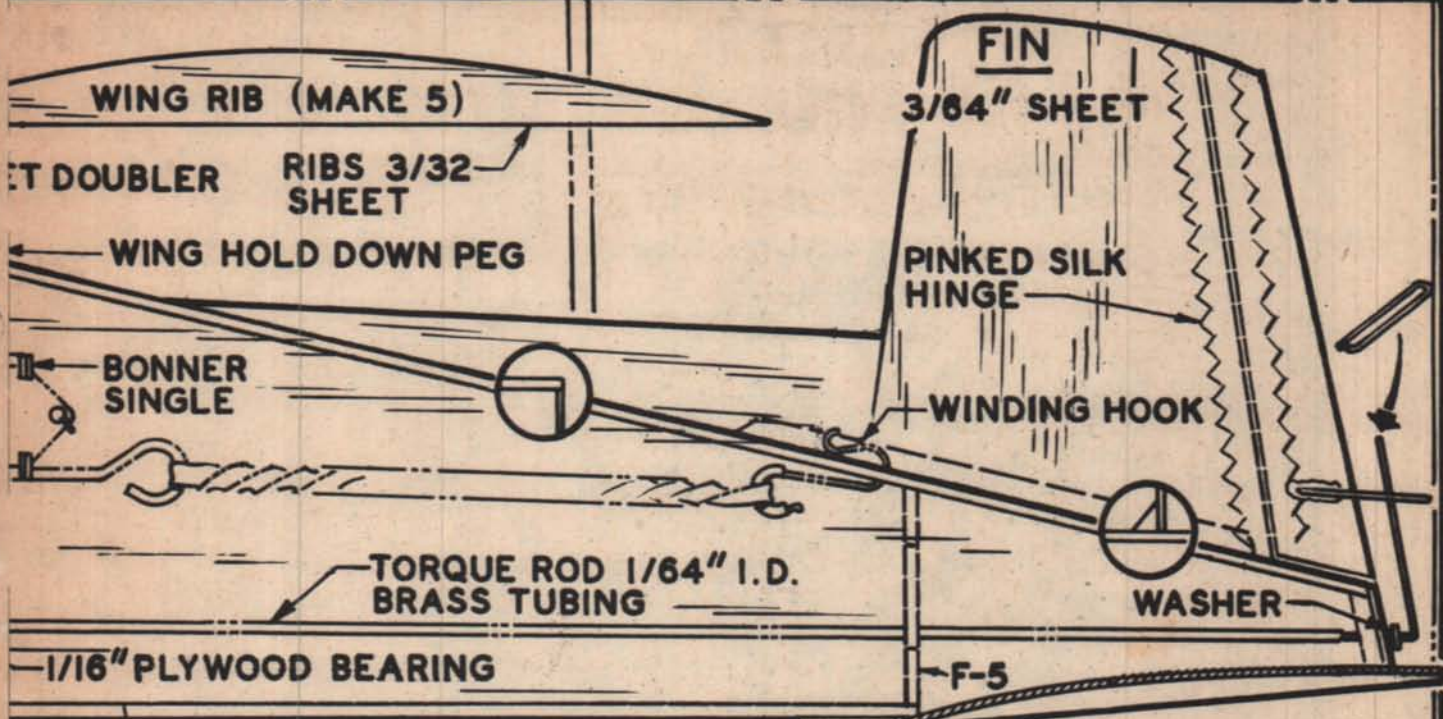
Above: When transmitters start looking bigger than R/C models, that's something to think about. More important, this ship doesn't use special home-built equipment to make it go—it uses stock Deltron units. The tiny Cox .020 "Pee-Wee" is ample power for this ship, as you'll find if you build one. That part's easy, too. The following pages contain full-size plans for this radio-control model.







WING OUTLINE 3/32" SHEET



DESIGNED & DRAWN BY BOB COON



slight bit more will correct this.

The four models we have made have never failed to resume oscillation, however, it could happen and it's best you know how to correct it, if it should.

**BILL OF MATERIALS**  
(as specified)

- 1—Bud CU 2102 Mini-Box (or similar size)
- 1—27.255 mc crystal
- 1—Crystal socket
- 1—CK5672 tube (or 1AC5, 1V5, 1AG4)
- 1—hearing aid socket (1AC5 requires special socket)
- 1— $\frac{3}{8}$ " slug tuned coil from
- 1—4-30 uuf. ceramic trimmer
- 1—Antenna mount (phone tip jack)
- 1—Phone tip
- 1—50 uh RFC (National)
- 1—Door bell button
- 1—DPDT slide switch
- 1—47 K  $\frac{1}{2}$  watt resistor
- 1—4.7 resistor
- 1—470 uuf. ceramic condenser
- 1—10 uuf. ceramic condenser
- 2—sets 45 v mini connectors
- 3' no. 22 enameled wire
- 2—small rubber grommets
- 6" no. 22 plastic covered wire
- 6—2-56 x  $\frac{1}{4}$ " bolts
- 2—2-56 x  $\frac{3}{4}$ " bolts
- 8—2-56 nuts
- 2—solder lugs

Small piece of  $\frac{1}{2}$ " soft sheet aluminum; drills; pliers; solder; reamer; screw driver; tuning wand; batteries; fibre spacers; 3' music wire antenna; 0-10 MA or FS meter for tuning; patience.

## GUIDED MITE

(Continued from Page 15)

**STAB AND FIN:** Cut the stabilizer and vertical fin from a sheet of  $\frac{3}{64}$ " balsa (or sand a sheet of  $\frac{1}{16}$ "). For a rudder hinge, pink a piece of silk and dope it to the rudder and fin as shown on the plan. After drying, make sure the rudder moves loosely.

Cement the fin in position on top of the fuselage using a small strip of balsa

at the base for added reinforcement.

Cement three ribs to the underside of the stab so that a curve is evident on the top, then, cement the stab to bottom of the fuselage.

**WING:** The "skyhook" wing is made from  $\frac{3}{32}$ " sheet balsa dampened on the top with water. This makes the wood fibres on top swell, thereby creating an airfoil shape. While still damp, cement all the ribs except the center one in place on the bottom side. Block up for the required dihedral and cement the wing halves together. When dry, cement the remaining center rib in place on the underside and clear dope the top and bottom.

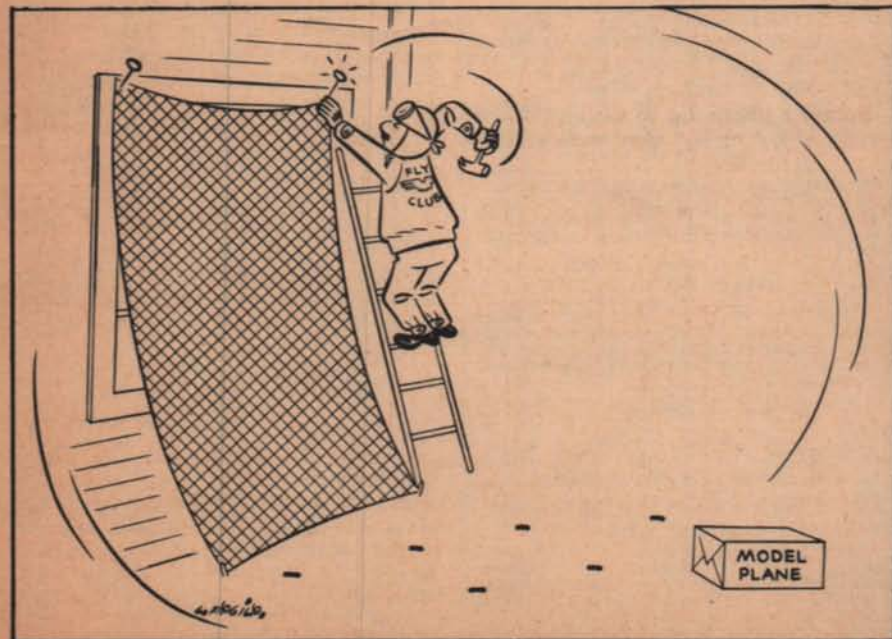
**FUSELAGE:** Cut two fuselage sides from  $\frac{3}{64}$ " sheet balsa. Cut out bulkheads F-2, F-3, F-4 and F-5 from  $\frac{1}{8}$ " sheet balsa and attach them to the sides with fuel-proof cement. Cut the firewall F-1 from  $\frac{1}{8}$ " plywood and attach it to fuselage. Make the doublers at the wing mount and firewall from  $\frac{1}{8}$ " sheet balsa. Make sure the firewall lies flush against doublers.

Before adding top and bottom of fuselage, install the escapement, torque rod and yoke as shown on the plan. Make sure the rudder linkage operates freely with absolutely no bind anywhere. Add the top and bottom panels. Sand them flush to the edges of the fuselage. Make a hatch for the battery compartment (see plan).

**RADIO:** Cement the antenna to the trailing edge of the wing as shown. Be sure there is at least 24" of antenna available.

Install a SPST (single pole single throw) switch on the left side of the fuselage and complete all wiring as shown on the detailed Deltron instruction sheet.

The radio compartment is lined with plastic sponge material for impact protection of the receiver and the receiver (Please turn Page)



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While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

back of the family car out of the way. Good flying!

### BILL OF MATERIALS

(Balsa unless otherwise specified)

2- $\frac{3}{4}$ " x 3" x 36"	Fuselage sides, stab and fin.
1- $\frac{1}{8}$ " x 3" x 36"	Fuselage top and bottom.
1- $\frac{3}{32}$ " x 5" x 32"	Wing, ribs
1- $\frac{1}{8}$ " x 2" x 36"	Fuselage doublers bulkheads
1- $\frac{1}{8}$ " x 2" x 2"	Firewall
1- $\frac{1}{4}$ " Trexler airwheels; $\frac{1}{8}$ " diameter steel wire; $\frac{1}{8}$ " diameter steel wire; $\frac{1}{4}$ " i.d. brass tubing; $\frac{3}{16}$ " dowel; plastic sponge; Bonner simple single escapement; $\frac{1}{8}$ " T-56 rubber; .020 cu. in. Cox engine; Deltron R109 transmitter and receiver; fuel proof cement; clear Butyrate dope; SPST switch.	

## BALSAURUS

(Continued from Page 9)

trim. Bank the wings for turn in the climb. Grip with the index finger at the junction of the wing and fuselage for extra altitude. The original "Balsaurus" climbed to the right and then performed a figure "S" into a left glide. Turn adjustments are reversed for a southpaw. Best of luck with your "Balsaurus."

### BILL OF MATERIALS

(Balsa unless specified otherwise)

1- $\frac{3}{8}$ " x 4" x 18"	(medium soft).....Wing
1- $\frac{1}{4}$ " x 1 $\frac{1}{2}$ " x 20"	(hard).....Fuselage
1- $\frac{1}{8}$ " x 3" x 18"	.....Stabilizer & rudder

1 oz. clear dope; several assorted sandpaper; 1 oz. assorted colored dopes for trim; plastic wood for wing fillit; tube of cement.

## STEAM PACKET

(Continued from Page 41)

to housing. These wheels should spin freely inside the housing.

With batteries in place, the model should now be set in a shallow pool and tested for balance. Bow should rise slightly and hull should set in the water with the paddle housing slightly above water. Shift the batteries back and forth until the model floats in this manner. Small lead weights may also be used if desired.

Like the early steam packets she models, this ship can take heavier water than most powered model boats. A flick of the toggle switch sends her forward to sail in miniature the ways of the early trans-Atlantic mail packets!

### BILL OF MATERIALS

(Balsa unless otherwise specified)

4- $\frac{1}{8}$ " x 3" x 36"	Hull sides, bulkheads, deck
2- $\frac{1}{8}$ " x 3" x 36"	Side wheels, covers
2- $\frac{3}{8}$ " x 2" x 36"	Cabin blocks, bottom

Scrap balsa blocks;  $\frac{1}{4}$ " hardwood dowel;  $\frac{1}{8}$ " hardwood dowels;  $\frac{3}{32}$ " hardwood dowel;  $\frac{1}{8}$ " hardwood dowel;  $\frac{1}{8}$ " hardwood dowel; thread; shim brass;  $\frac{1}{32}$ " piano wire; wood screws; balsa sealer; colored dopes; cement; 3-volt electric motor; propeller; propeller shaft; neoprene tubing; battery box; switch; India ink for trim.

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