

GUIDED MITE

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

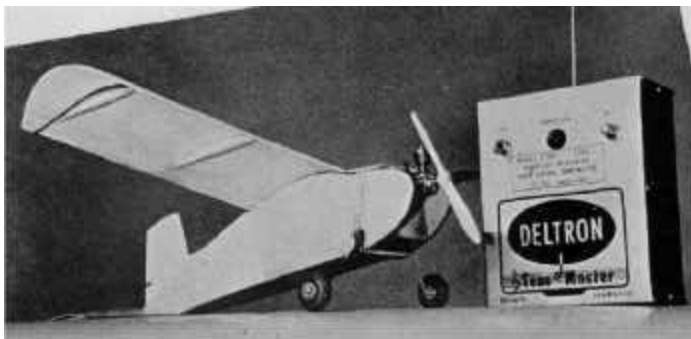
By Bob Coon

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 22-1/2 volt battery is the only current source needed to operate the receiver. Total receiver and battery weight is just 2-1/2 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.



STAB AND FIN: Cut the stabilizer and vertical fin



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.

from a sheet of 3/64" balsa (or sand a sheet of 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 3/32" sheet balsa dampened on the top with water. This makes the wood fibers 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 3/64" sheet balsa. Cut out bulkheads F-2, F-3, F-4 and F-5 from 1/8" sheet balsa and attach them to the sides with fuel-proof cement. Cut the firewall F-1 from 1/8" plywood and attach it to fuselage. Make the doublers at the wing mount and firewall from 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 is held in place by friction.

FLYING: First make a range check as per Deltron instructions. Wind the escapement rubber and be sure the wing is fastened securely.

Start the engine.

Hold the transmitter in your hand with all switches on (transmitter and receiver). Holding the plane in your other hand, check the rudder response by pressing the transmitter button and if everything works properly, set the rudder for "right coming up."

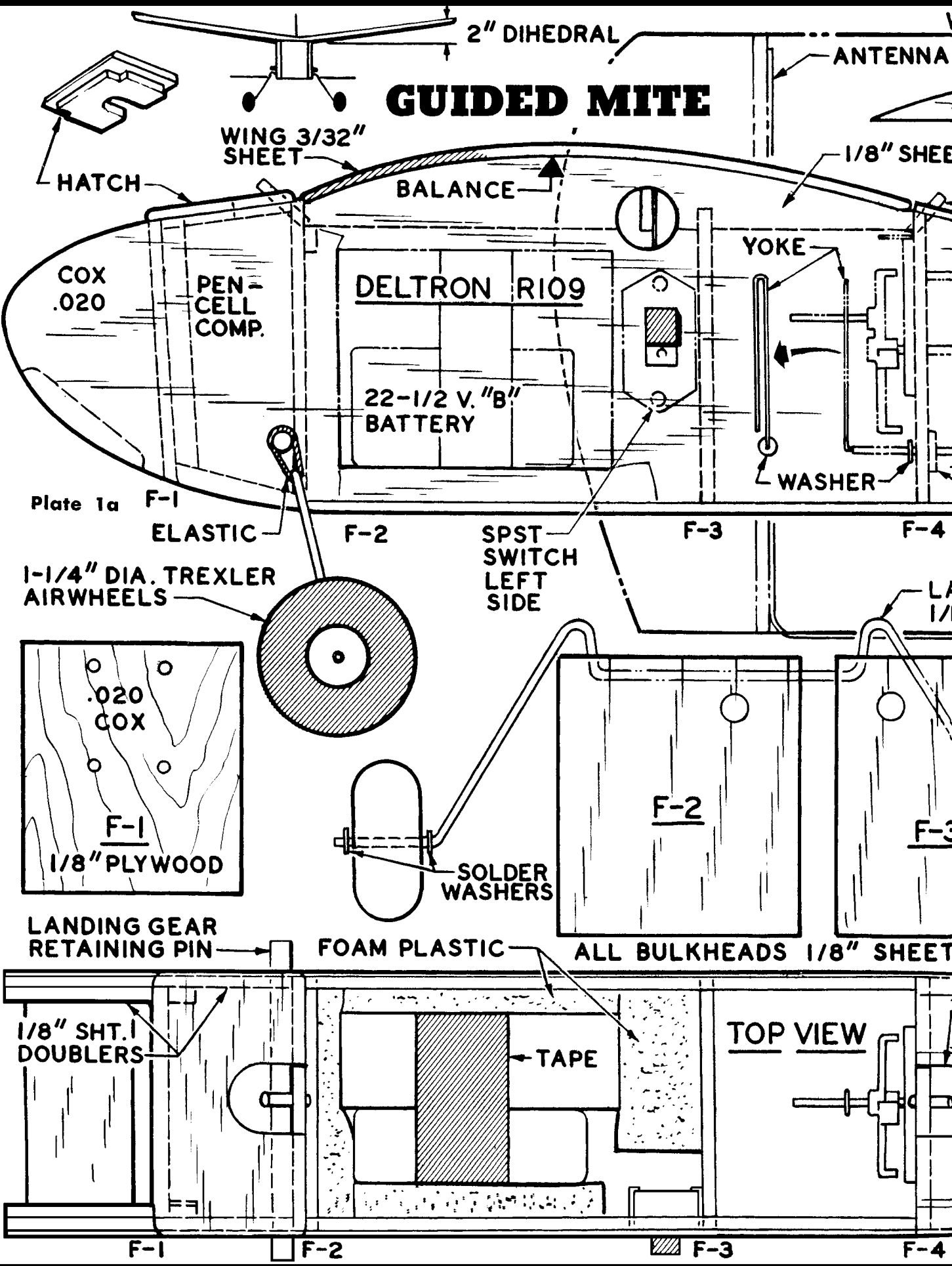
Launch out of the hand straight into the wind—no dive or climb. The model should climb out straight ahead with no control required. Wait until you have a surplus of altitude before feeling her out. You'll find she's a swell little model. Great for tossing in the back of the family car out of the way. Good flying!

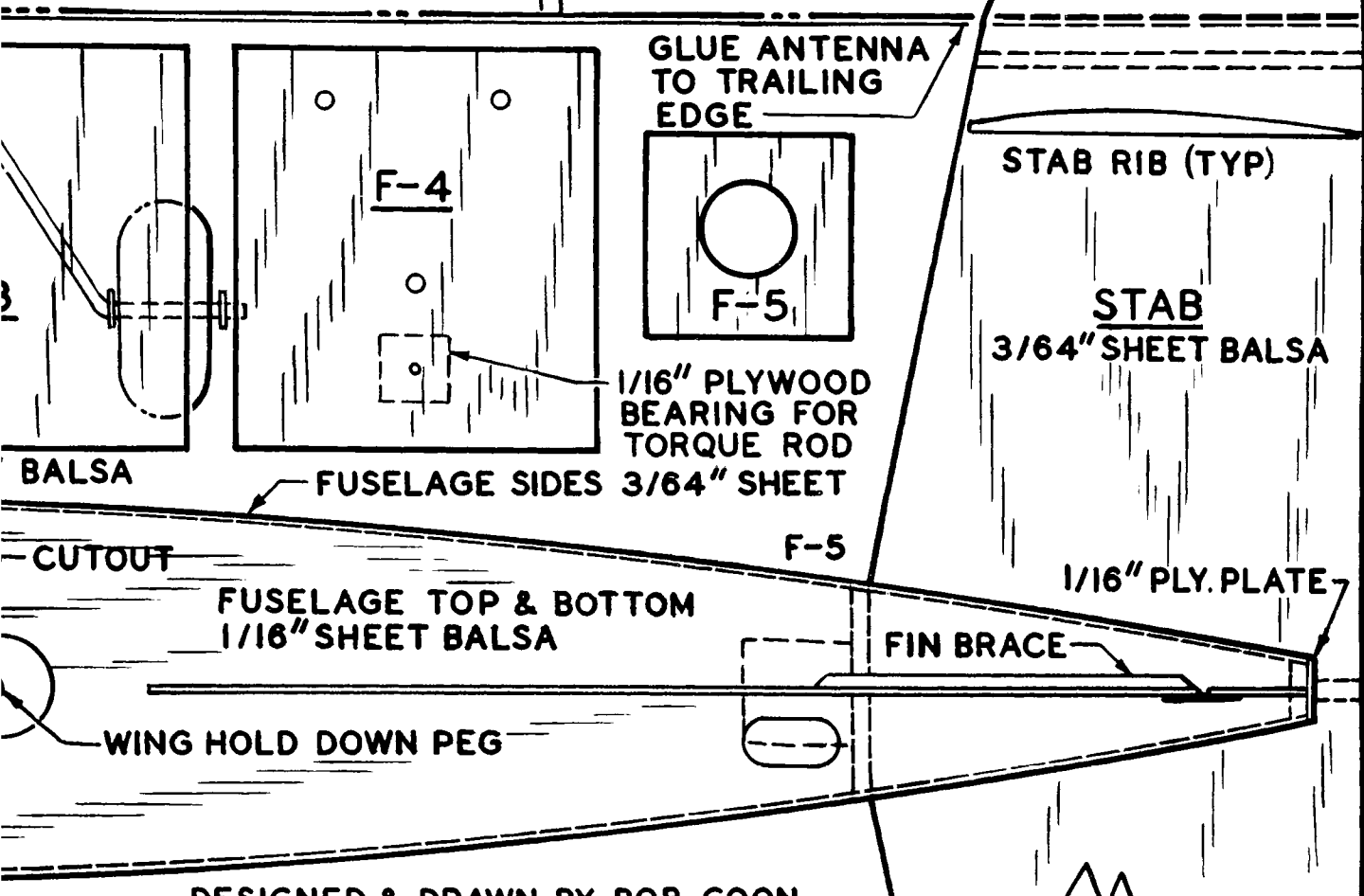
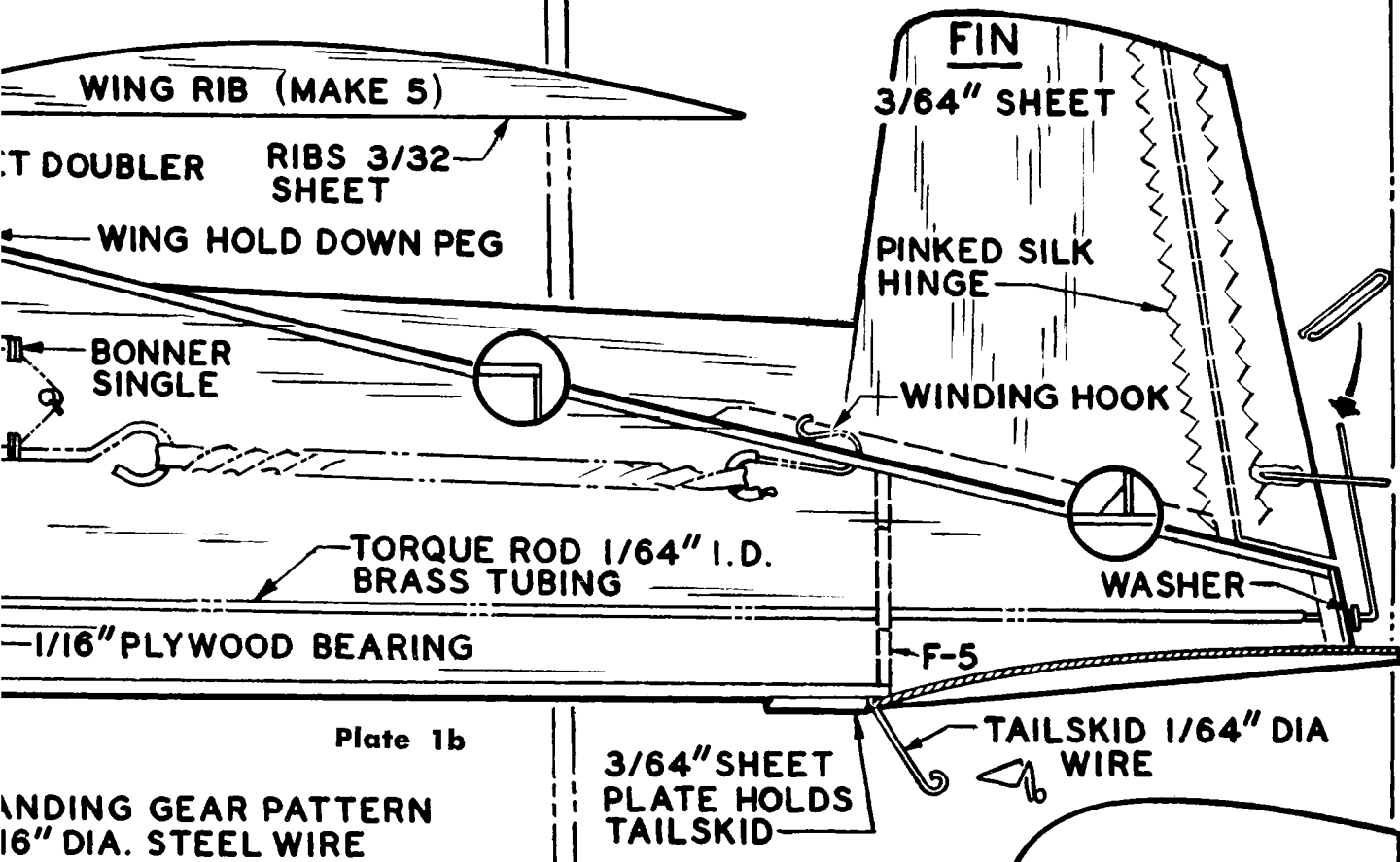
BILL OF MATERIALS (Balsa unless otherwise specified)

- 2-3/64" x 3" x 36"..... ...Fuselage sides, stab and fin.
- 1 - 1/16" x 3" x 36"..... ..Fuselage top and bottom.
- 1 - 3/32" x 5" x 32".....Wing, ribs
- 1 - 1/8" x 2" x 36"..... Fuselage doublers bulkheads
- 1 - 1/8" x 2" x 2".....Firewall

1-1/4" Trexler air wheels; 1/16" diameter steel wire; 1/64" diameter steel wire; 1/64" i.d. brass tubing; 3/16" dowel; plastic sponge; Bonner simple single escapement; 1/8" T-56 rubber; .020 cu. In. Cox engine; Deltron R109 transmitter and receiver; fuel proof cement; clear Butyrate dope; SPST switch.

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DESIGNED & DRAWN BY BOB COON