

SCHOOLYARD

The 'Schoolyard Special' is an .049 powered two channel airplane designed for the Ace foam wings. Either the constant chord or the tapered wing can be used without modification and both fly equally well. It is an excellent schoolyard or small field type flyer. It is light and rugged and can take its share of bumps. This I have proved beyond any doubt!

The 'Schoolyard Special' can be built quickly using contact cement and 5-minute epoxy. After first cutting-out all of the parts, I assembled the fuselage and tail in less than one hour.

After trying the Golden Bee, Medallion, and the .049 TD engines, I prefer the Medallion as it is reliable and can be fitted with the QZ muffler. The plans are the right size for either the TD or Medallion on the Tatone mount. I started out with the red plastic tank mount but later it was changed to a 1 or 2 ounce tank mounted inside. The front end would have to be shortened to fit the Golden Bee. With the TD and racing fuel, the 'Schoolyard Special' really moves. The weight is only 18 to 22 ounces ready-to-fly depending on radio used. With the muffled Cox Medallion, the airplane is considerably slower.

SPECIAL

RCM's Racing At Random Editor comes up with another outstanding Half-A aircraft for the sport flier. Designed for small field flying, this 35" span, high wing model can be built in a couple of evenings and can take its share of bumps in the local schoolyard.

BY FRED REESE



CONSTRUCTION

First, cut out all of the parts as shown on the plans and lay them out so as to get a right and left side. Mark off the firewall and bulkhead locations. Contact cement the doublers to the fuselage sides leaving slots between the doublers for the firewall and the bulkhead. At this time, also add the stabilizer support doubler. If you decide to build the tricycle landing gear version, bind the wire nosegear to the firewall before epoxying the firewall in place.

Epoxy the firewall and the bulkhead to one side of the fuselage and, when set, add the other fuselage side. Glue on the 1/8" sheet balsa top front and the 1/16" ply front fuselage bottom and the cowl blocks. Pull the tail together and glue, being certain that the fuselage is straight. Add the 3/32" sheet balsa rear fuselage top and bottom. Add the interior 1/8" ply landing gear support in a puddle of epoxy. The aluminum strap landing gear is later bolted on with two small 4-40 bolts.

While the fuselage is drying, glue the rudder to the stabilizer. Shape and sand the fuselage and cut the slot in the top for the rudder. Slide the rudder and stabi-

SCHOOLYARD SPECIAL

Designed By: Fred Reese

TYPE AIRCRAFT

1/2A Sport

WINGSPAN

35 Inches

WING CHORD

5 1/2 Inches

TOTAL WING AREA

190 Square Inches

WING LOCATION

High Wing

AIRFOIL

Semi-Symmetrical

WING PLANFORM

Constant Chord or Tapered

DIHEDRAL, EACH TIP

1 3/4 Inches

O.A. FUSELAGE LENGTH

27 Inches

RADIO COMPARTMENT AREA

(L) 7" X (W) 3" X (H) 2 1/2"

STABILIZER SPAN

12 Inches

STABILIZER CHORD (incl. elev.)

3 3/4" (Avg.)

STABILIZER AREA

45 Square Inches

STAB AIRFOIL SECTION

Flat

STABILIZER LOCATION

Top of Fuselage

VERTICAL FIN HEIGHT

5 Inches

VERTICAL FIN WIDTH (incl. rudder)

3 1/4" (Avg.)

REC. ENGINE SIZE

.049-.051 Cu. In.

FUEL TANK SIZE

1-2 Ounce

LANDING GEAR

Conventional or Tricycle

REC. NO. OF CHANNELS

2

CONTROL FUNCTIONS

Rudder & Elevator

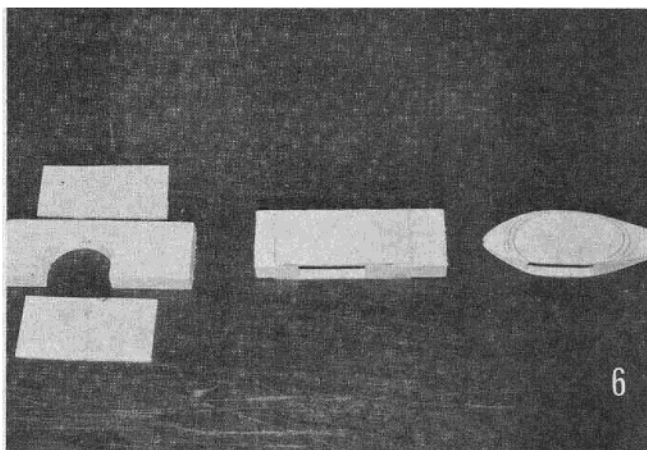
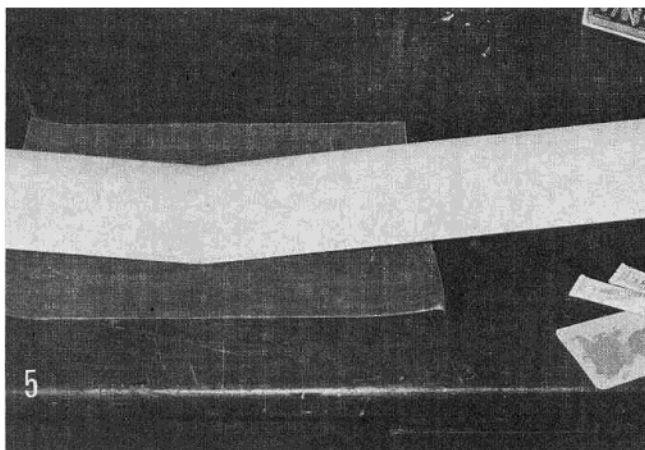
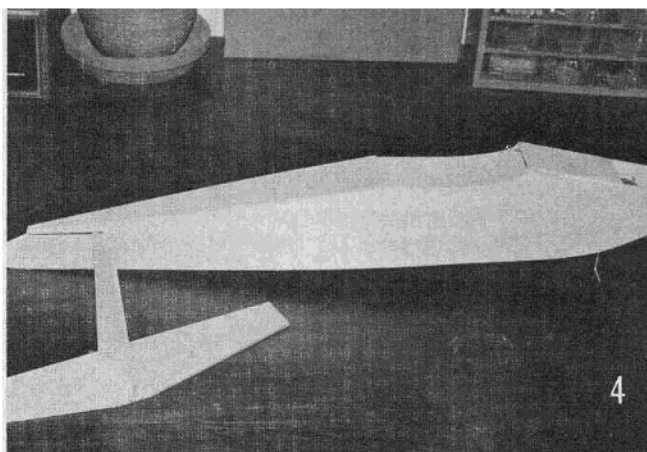
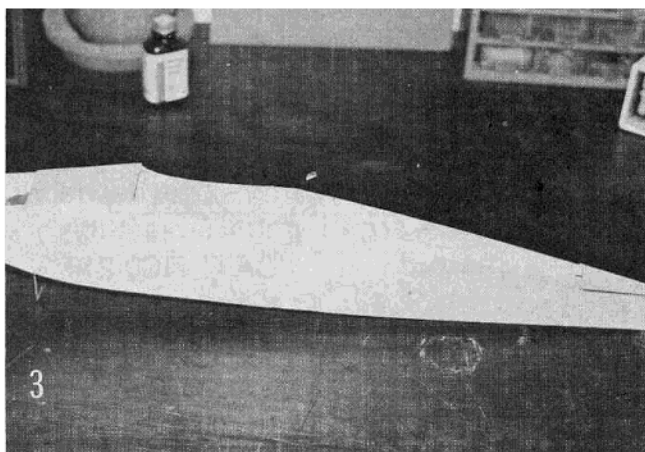
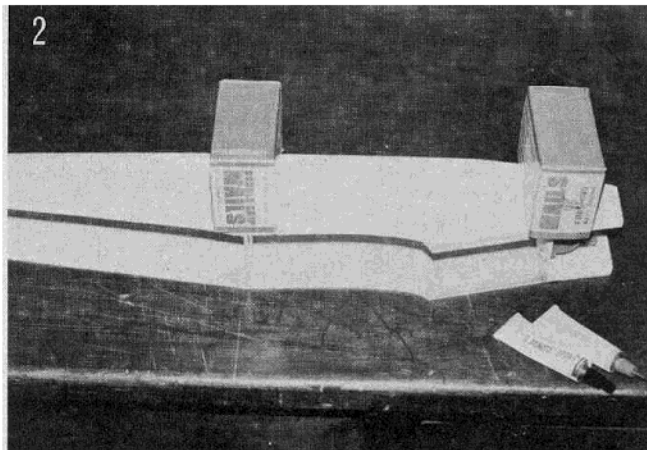
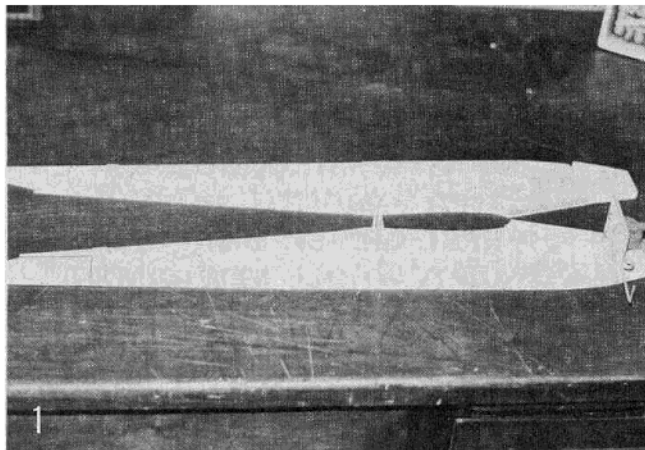
BASIC MATERIALS USED IN CONSTRUCTION

Fuselage Balsa and Ply
Wing Ace Mini Foam Wing
Empennage Balsa

Weight Ready-To-Fly 18-24 Oz.

Wing Loading 13.6-18.2 Oz/Sq. Ft.





(1) Contact cement doublers in place, then epoxy firewall and bulkhead to one side. (2) Epoxy second side in place. (3) Glue "C" and "E" in place, then pull the tail together. (4) Add top and bottom rear sheeting. Cut slot for rudder in top. Glue rudder to stab and glue into fuselage. (5) Epoxy the Ace foam wing halves together. Add dowel to T.E. for protection from rubber bands. (6) Construction sequence for wheel pants. Nosegear pant is just epoxied to wire nosegear. (7) Schoolyard Special showing conventional landing gear.





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lizer into the slots using lots of glue. Wipe the excess glue away with your finger leaving a little fillet around all of the seams. Epoxy a small screw eye or piece of scrap plywood on to the bottom for a tail skid. Mount the servos or radio on 3/8" x 3/4" pine beams epoxied between the fuselage sides. Add some scrap 1/8" balsa in front of the front beam for added support. If you have one of the two channel brick systems, mount it low enough in the fuselage for easy removal of the battery pack to replace old cells without disturbing the radio.

I used K & B Super Poxyl primer and paint. Just one coat of each - - there is nothing easier. Add MonoKote, or contact paper trim and decals, to suit your fancy. The cockpit outline was done with black contact paper. Don Dewey used Solarfilm on his version as did I on my second 'Schoolyard Special' with the tricycle landing gear.

The wing halves are sanded in the center for the dihedral angle (1 $\frac{3}{4}$ " under each wing tip) and then epoxied together. Epoxy two 3" pieces of 1/8" dowel, or 3/16" square balsa, to the trailing edge of the wing in the center to protect the foam from the rubber bands. With very fine sandpaper, remove the flash along the leading edge and any other little bumps on the wing. Add a strip of Scotch Brand filament tape from tip to tip on the underside of the wing for strength. Except for trim, the wing is ready to fly. It does not need to be covered or painted unless you want to. Just remember, anything you do adds weight.

FLYING

At first, set the pushrods in the inside holes on the servo outputs and in the outside holes on the control horns which gives minimum control movement. Adjust the Kwik Links so that both rudder and elevator are straight with the trim levers on the transmitter centered. Adjust the needle valve on the engine so that the engine does not lose power with the nose of the airplane pointed up. Hand launch the airplane into the wind and let it climb to a safe altitude before you begin to trim it out. Once trimmed, you can adjust the rudder movement to suit your preference. The 'Schoolyard Special' can do most of the looping and rolling maneuvers without difficulty and is a real pleasure to fly. □