One of the prettiest seaplanes of all time, the S-5 has been a popular modeling subject for many years.

"Look, Ma, I can float!"

THE SUPERMARINE S-5

By JACK BALE . . . Designed and built for the Flightmasters' annual R.O.W. meet at Lake Elsinore, this little C/L scale model of the famous 1927 Schneider Cup Race winner was first in scale points, 2nd overall.

● In 1927, R.J. Mitchell, chief designer of the Supermarine factory, arrived in Venice, Italy, for the tenth running of the famed Schneider Cup race, bringing with him two of three new racers designated Supermarine S-5. They were numbered 219 and 220. The third machine held in reserve was number 221.

The S-5's had evolved from hard lessons learned during the previous attempt of the S-4 in 1925. The winner in 1927 was number 220, flown by Ft. Lt. S.N. Webster, clocking in at 281.54 MPH. Second place went to number 219 at 273.01 MPH.

The model subject, number 220, is the second aircraft I've built for the control-line Schneider contest sponsored by the Flightmasters and held yearly at Lake Elsinore, California.

The contest rules state a maximum of .049 engine size and 35 foot steel lines (which are a real necessity for safety at the flying speeds of these little bombs). The models are flown and timed, with points given for speeds recorded plus points for landings, etc. Then comes the static judging (if everything is still in one piece after a few dunks in the drink). This is a very challenging and rewarding event, as even a smooth takeoff and landing leaves flier and spectator equally thrilled.

My first attempt at this type of flying was the year before. I built a Macchi MC72, which was too large (one inch scale), and too slow. Plus an unexpected sit-down in one-and-a-half feet of water

didn't help matters any. So later, the smaller, lighter S-5 was begun for the 1975 contest.

Scaled to 3/4 inches=1 foot, this is a small ship, but large enough for engine cowling and streamlining. It was judged first in scale points, and was second overall after the flight times were calculated.

CONSTRUCTION

Pin down lower and rear keel parts and epoxy. I use 5-minute type a lot, as it is fast and strong. When dry, remove from plan and install all formers, starting at the rear. Add top keels.

Install motor nuts on firewall, blind-type being the best in this case. Cement in gas tank, along with over-flow tubing.

Add side keels.
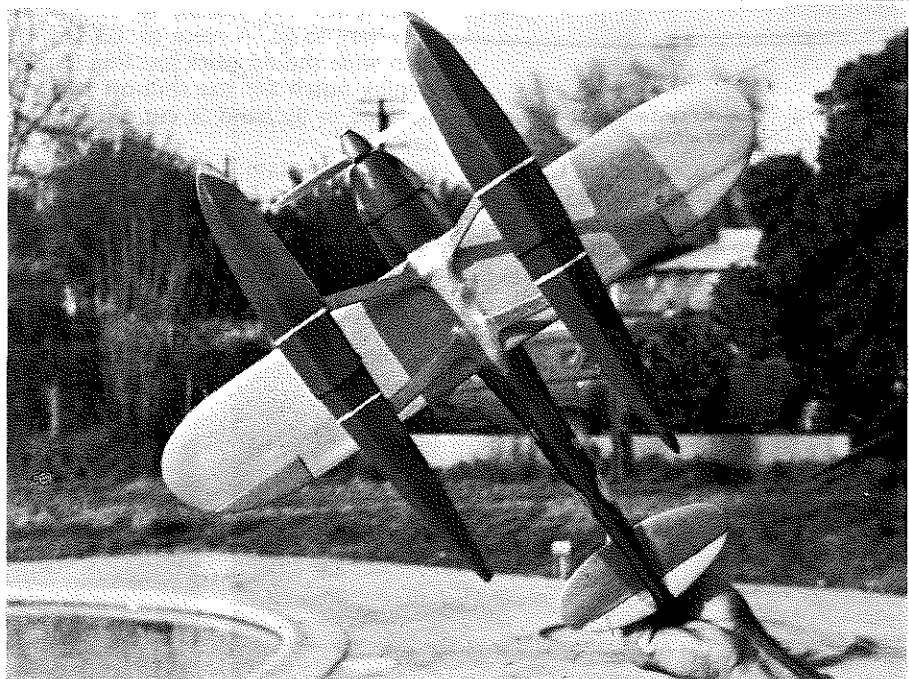
Hand discloses the compact size of this .049 powered model. Author uses an McCoy Red Head diesel to power the model shown.

FF S762

Plank entire fuselage with 1/16 sheet and strips. Rough-sand and cut out cockpit and window holes. During planking, paint as much as possible with clear dope around gas tank and firewall areas.

Sand all surfaces smooth and paint on one coat of clear dope and let dry thoroughly. Sand with No. 360 wet--or-dry paper and apply another coat of clear. Sand, and then apply slightly dampened silkspan. Add two coats of clear, sanding between coats, then one coat of white. This shows up any irregularities and provides an excellent base for the final color.

ELEVATOR

Cut out two outlines of stabilizer and elevator from hard 1/16 sheet balsa. Cut apart at elevator separation. Install control horn and sandwich the two sheets of elevator together with hinge cloth. Leave about 3/8 inch of cloth protruding out to the front of the elevator to be sandwiched between the stab pieces. Finish same as fuselage.

WING

The wing is made ala Fireball. If you're too young to remember this airplane, it was a carved fuselage and sheet winged affair that flew like blue blazes with a .60 up front. Also, this was U-control No. 1 for me in the good old days.

Enough reminiscing. Lay out 1/16 sheet balsa and draw outline of wing. Cut out and draw another, using first one as a pattern, but make it at least 3/16 larger all around. Mark rib positions on lower sheet (smallest), and glue on ribs. Drill U/C and bellcrank holes on ply mount and install 4 blind nuts on top for gear bolts and one underneath for bellcrank bolt.

Inboard ribs have holes drilled for control lines. Glue on a penny for weight in outboard wing, up against inside of end rib. Glue on aileron spars.

Install bellcrank/gear mount on center line between the two ribs. Mount bellcrank, lead-out wires and push rod. Slide lead-outs through holes in ribs. Install eyelets or tubing at wing tip. Glue on wing top sheet. Add ailerons, out-

board about 1/16 up and inboard the same amount in down position.

ASSEMBLY

Thread push-rod through fuselage, hold wing in place and check controls for free movement. Put 'S'-bend in push-rod at elevator, checking for neutral position of elevator and bellcrank. Bend lead-outs, keeping neutral.

Glue wing into place, along with completed stab assembly and fin/rudder assemblies.

FLOATS

Pin down top and bottom 1/8 square hardwood keels, adding small vertical piece at rear. Glue on all former halves. Add side stringers. When dry, remove, add opposite former halves, stringers, and plank, leaving open where ply F-1 gear mount will slide into place. Add nose block and sand smooth. Repeat for opposite float, making sure gear cut-out is facing inwards on both floats.

Form gear legs and drill all holes as indicated on plan. Mount gear to F-1's and slide into holes left unplanked. Epoxy well and plank over top after checking alignment. Finish overall same as fuselage and wing.

Add completed floats and leg assemblies to mount in wing. Plank over bolt heads and smooth into fuselage. Finish off the same as before, using silkspan on planking at gear legs.

Spray on color coats, using No. 600 in between coats. Add interior details and markings, etc.

COWL

Carve a styrofoam cowl mold which is 1/16 inch under-size all around. Sand smooth. Find a washer that fits exact outline of nose of cowl. Be sure that hole in washer is large enough for prop shaft of motor to pass through.

Mix up some Hobbypoxy No. 2. Spread coat over all except rear. Place washer on nose, making sure it is centered. Put on one layer of light glass cloth and pull around form. When smoothed out, coat again with epoxy. Lay on another cloth, repeating smoothing process.

Coat once again with epoxy and set aside overnight to cure. When com-

pletely hard, sand and coat with clear dope. When dry, place a few drops of thinner onto the rear of cowl form. This will eat away all of the styrofoam and you will have a nice hollow cowl. Epoxy 'L'-shaped mounts inside cowl. Dope and finish as the rest of the plane.

Mount engine, hook up gas tubing. Install windows and rigging wires, etc.

FLYING

Lay out lines parallel to shoreline. Start motor and go to handle and check controls . . . 'up' is 'up', we hope. Wade out to center and have assistant take plane backwards into water about one-fourth of the circle diameter before launching. This prevents the in-coming waves from swamping or pushing the model in towards you. The waves moving towards the shore help keep the lines taunt when the model is launched "down wave," so to speak.

Before signalling assistant to release, hold full up on the control and be prepared to step backwards. Also, know where your feet are going before hand! It is a little different in one or two feet of water than on land, not knowing if you will step in a hole or on glass etc.. Wear old tennies if possible.

Another thing to be careful about is staying in one place too long. Constant turning around in the same spot can sink your feet into the mud and trip you up. I know, I've done it. Model and all were dunked!

If you're afraid to get your feet wet, stay on the shore and let the model take off away from the shore . . . and just hope it will become airborne before the half-circle of water becomes shore once again!

As soon as the model breaks water, give some fast down control to level off, as control is near impossible if the model gets overhead with slack lines.

Know beforehand when your motor will quit and try to grease it onto the water with power. If you have a flame-out, nose the ship down fast and haul full up just before touchdown, in order to get the tails of the floats hit first. The model will flatten out on the surface with enough speed to skim along to a stop. GOOD LUCK . . .   •

MODEL BUILDER