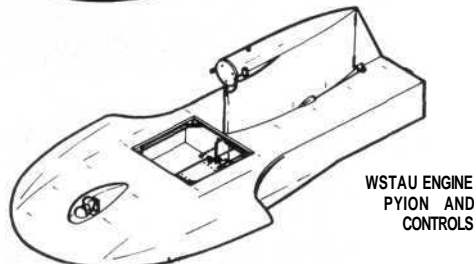
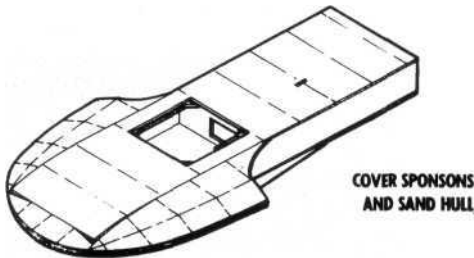
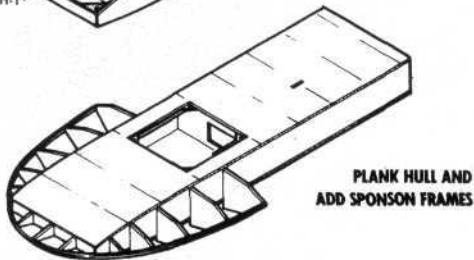
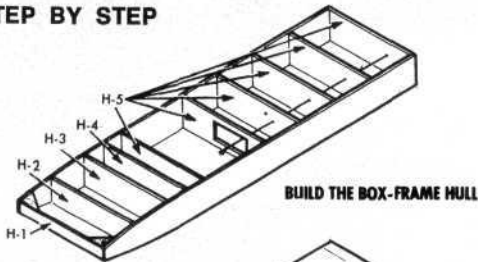


From prop to servos, all the gear in this sleek air-driven hydroplane comes directly from the world of the radio-controlled airplane, reducing the maintenance and control problems

STEP BY STEP

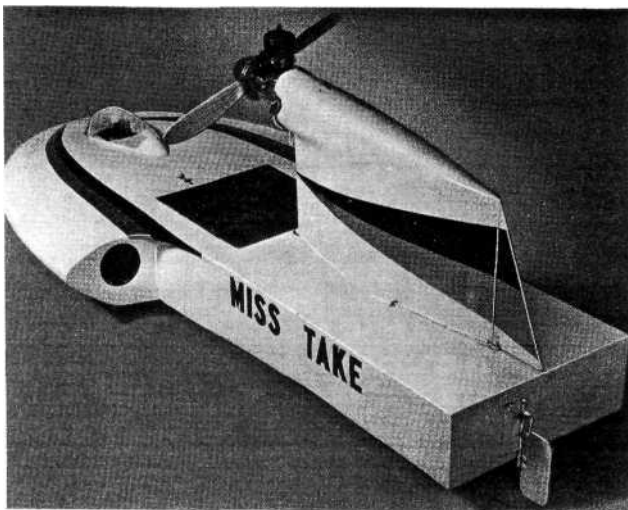
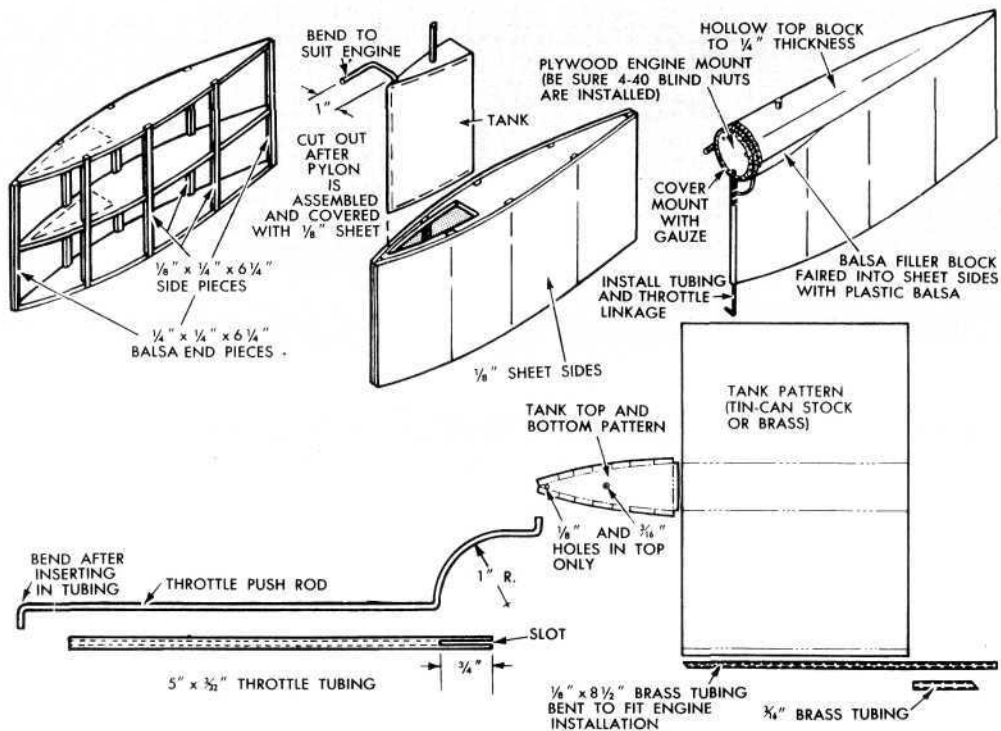


"Miss Take"- an air-driven model hydroplane

By GERALD C. LEAKE

IT STARTED WITH a plane crash. There comes a time in every radio-control flyer's life when he has the urge to say the heck with planes and try something that won't turn into a pile of broken balsa chips at the first minor malfunction. It was at just such a time that *Miss Take* was born.

You'll find numerous advantages in an air-driven boat. It's easy to start, requires no complicated system of water cooling, uses conven-



The double rudder system is shown in this view of *Miss Take*. The air rudder serves as a low-speed backup to the water rudder, is effective at high speed

tional airplane propellers and doesn't load the engine when placed in the water.

The prototype used six channels, but you can get along with four if you're willing to forego the air rudder as a back-up steering system. At low speeds, this rudder doesn't function as well as the water rudder, but it's sufficient to bring the boat back to shore if the water rudder becomes fouled. At full bore, however, it's extremely effective—enough to flip the boat if you aren't careful, so be sure to drop back to half-throttle before trying it.

The fuel tank holds better than 10 oz., enough for a 10-min. run at low throttle with a KB-45. You can use any engine from a 19 up to a 45 in *Miss Take*. Anything larger than 45 is impractical, since the chances of flipping increase rapidly at this point.

Construction of *Miss Take* is detailed on the following pages. Be sure to install the planking sheets with the grain running abeam of the hull.

When making the fuel tank, cut crosswise slits for the tubing instead of drilling holes. Bend up the sides of these slits, and you'll find that

you have a much larger soldering and bonding area between the tank and tubing.

After you have completed the tank, connect a length of neoprene tubing to the fuel pickup, immerse the tank in water and blow into it through the neoprene tubing while holding your finger over the breathing tube. If you see any air bubbles, note the location and resolder that area.

Should you discover a leak after installing the tank in the pylon, just drill a small hole in the top of the pylon and pour in a little waterproof glue every day for a week. Then the tank will be completely encased in glue so it *can't* leak.

After sanding the hull, glue the pylon in place on the centerline of the hull. To be sure of locating it exactly on this line, mark the location with a pencil and measure from each side of the hull to the ends of the pylon before gluing in position. Exercise the same care when mounting the 1/4-in.-sheet keel rudder on the centerline of the boat.

Make the water-rudder hinge by running a short piece of 1/8-in. wire through 5/32-in. landing-gear mounting straps. Solder a washer on each end of the wire after the straps are installed.

Only one screw is used to hold the crank for the water rudder in place. Thus, by loosening this screw and shifting the rudder you can make small trip adjustments without taking the hatch off to gain access to the servos. Use a lock washer on this screw so that it won't come loose during a rough run.

After you have assembled *Miss Take*, remove the water rudder and hinge assembly, and give the boat at least three coats of clear butyrate dope. Then sand this smooth and cover the entire hull with silk or nylon. Follow this up with 10 coats of sealer.

Once the last coat has dried, wet-sand with fine sandpaper until all the wood grain disappears and you achieve a high gloss. Finally, spray with two coats of color and apply the trim. After hand-rubbing with rubbing compound, wash the boat with warm water and spray four coats of clear dope to protect the color. A last rubbing, and the job is done.

Fasten the air rudder in position with heavy nylon thread, using a figure-eight stitch. Complete the boat by installing the engine mount, engine, servos and water-rudder assembly.

It's a good idea to seal the hatch with masking tape to keep water out of the radio compartment. Pack the receiver in foam rubber and protect it with a heavy plastic bag, sealing the end where the wires come out with a rubber band. Once this is installed, pack foam rubber around all the radio gear to absorb any moisture.

It's impossible to keep all moisture out of the boat if you run it for a long period. Therefore, as soon as you take it out of the water, remove the hatch, receiver, power pack and all the foam. Let the foam and radio compartment dry overnight.

Striking across a small pond, *Miss Take* leaves a lower rooster tail than a boat with a water prop

