



This 1/144 scale U.S. Navy ZP2K is moored on a scratchbuilt mast. The painted backdrop places it at Lakehurst, New Jersey.

## BASIC TECHNIQUES ↔ ADVANCED RESULTS

# Building a **BLIMP** in 1/144 scale

Mooring a fiberglass airship on a scratchbuilt mast

BY MICHAEL KOLASA

**B**LIMP SQUADRONS proved their effectiveness in World War II, especially in antisubmarine patrols. No convoy escorted by blimps ever lost a ship.

After the war the U.S. Navy's airship program came in for severe cutbacks – only to be revived by funds provided for the Korean War rearmament. Blimps patrolled America's border lands on the lookout for Cold War enemies – chiefly Soviet bombers and submarines.

Two important improvements following WWII were reversible-pitch props (a great aid in landing) and the refinement of magnetic anomaly detection (MAD) gear which could locate submerged subs. The MAD "heads" were mounted on the upper-front sides of the bag to keep them away from steel in the car and engines.

I built a 1/144 scale Skytech Models fiberglass model of a blimp of that era: a Goodyear ZP2K of Airship Squadron 4 assigned to the Naval Air Facility in Weeksville, North Carolina, in 1952. This blimp was the second variant in

the "K" series of airships. The "Z" denotes "lighter than air," and "P" stands for "patrol."

**Don't fly until you can land.** I made the mooring mast first, scratchbuilding it from Plastruct T, I, and channel forms. I found a photo that was the same scale as the kit, so I used it for measurements.

After the lower and intermediate triangles were constructed, a wood jig kept them straight while I added supporting members, Fig. 1. I made wheels for the mast and tractor from 3/16" and 1/8" styrene tubing, Fig. 2.

Having super glued the mast together, I painted it red and white and the tractor yellow.

**Bagging the blimp.** The Skytech kit is molded in fiberglass, Fig. 3. After trimming off flash I taped sandpaper to a table top and trued the halves, then marked them for future alignment, Fig. 4.

I cut the outline of the blimp's bag in 1/4" balsa sheet to make a keel, then glued half rounds of balsa to the sheet, Fig. 5.

One blimp half was then epoxied to the keel, leaving a 1/8" lip for a mating surface. The second set of half rounds was added and the second half of the bag epoxied in place. Gaps were filled with auto-body filler.

After the filler cured, I sliced off the nose of the bag and attached one of the two supplied in the kit (the one with molded battens), Fig. 6. Here, too, I made a gluing edge by inserting a 1/4" balsa disc in the opening and leaving a lip for the new nose.

To align the fins at the tail, I drilled through the bag and inserted brass tubing from one fin to its mate.

I added antennas and lines, painting them by pressing them against a sheet wet with silver paint and touching them up.

The bag was sprayed Testor silver. Outlines of ballonets (air chambers in the bag that compensated for pressure changes) were spray painted with Krylon dull aluminum.

**Car and mooring lines.** Given the choice of a vacuum-formed or solid piece for the control car, I chose the solid one. I cut windows from adhesive-backed clear sheet styrene and



Fig. 1. Simple jig: Wood scraps hold Plastruct structural forms in place during construction of the mooring mast.

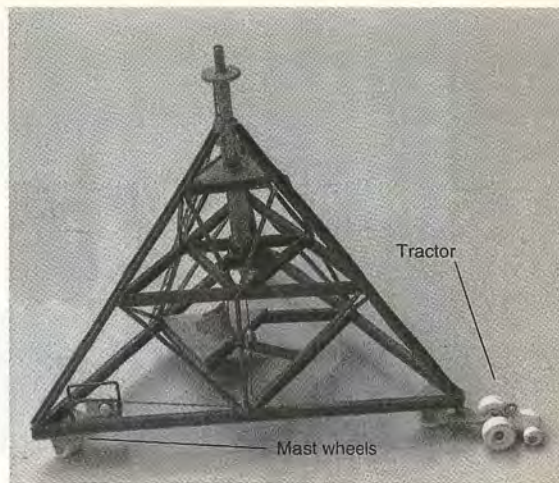


Fig. 2. The author turned styrene tubing in a drill press to make wheels for the mast and its tractor.

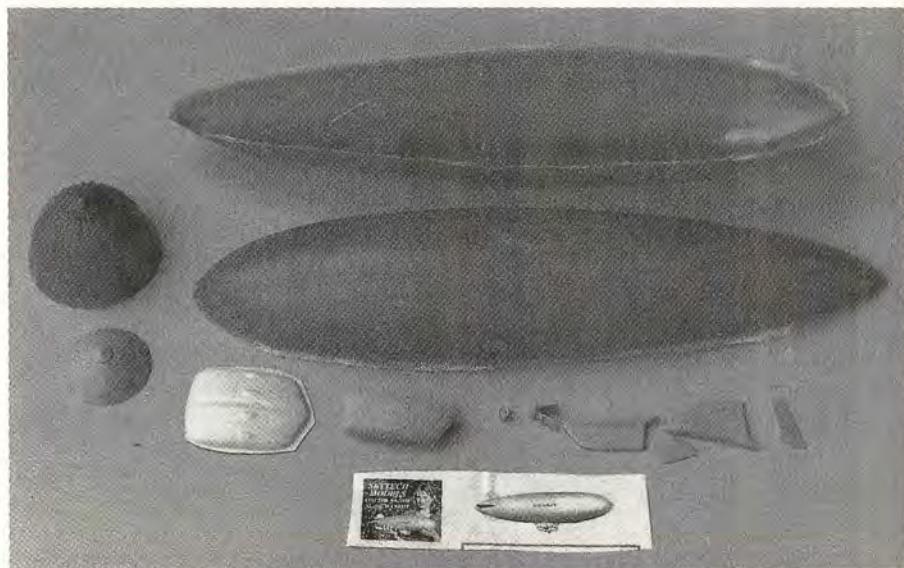


Fig. 3. Skytech's 1/144 scale fiberglass kit is generically labeled as a U.S. Navy K ship. The author's blimp-crew experience dictated the specifics of his model.

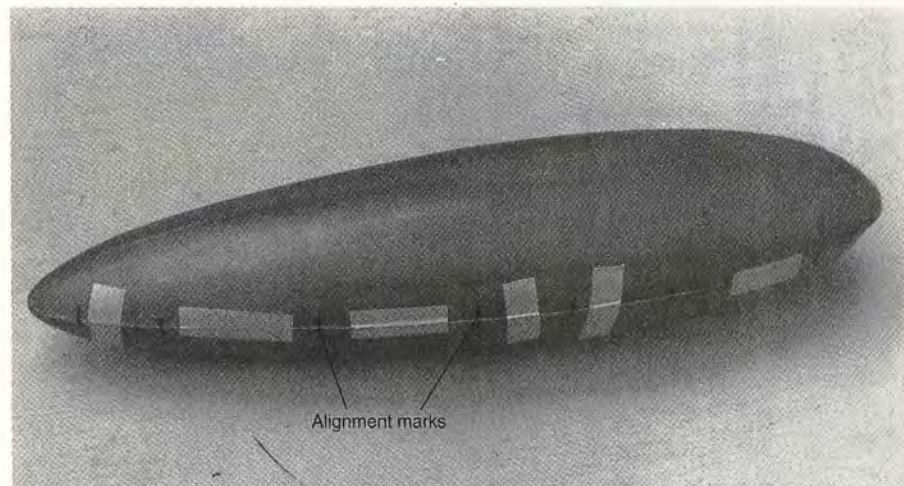


Fig. 4. After test fitting, the blimp-bag halves are temporarily tacked together with tape and marked for alignment.

## REFERENCES

- *Sky Ships: A History of the Airship in the United States Navy*, William Althoff, Orion Books, New York, 1990
- *Blimps and U-Boats: U.S. Navy Airships in the Battle of the Atlantic*, J. Gordon Vaeth, Naval Institute Press, Annapolis, Maryland, 1992

## SOURCES

- **Styrene sheet, tube, and structural shapes:** Plastruct, 1020 S. Wallace Place, City of Industry, CA 91748, ©818-912-7016
- **1/144 scale U.S. Navy K ship:** Skytech Models, 2373 NW 185th, No. 290, Hillsboro, OR 97124, e-mail Skytech@teleport.com, World Wide Web Internet page <http://www.teleport.com/~skytech>

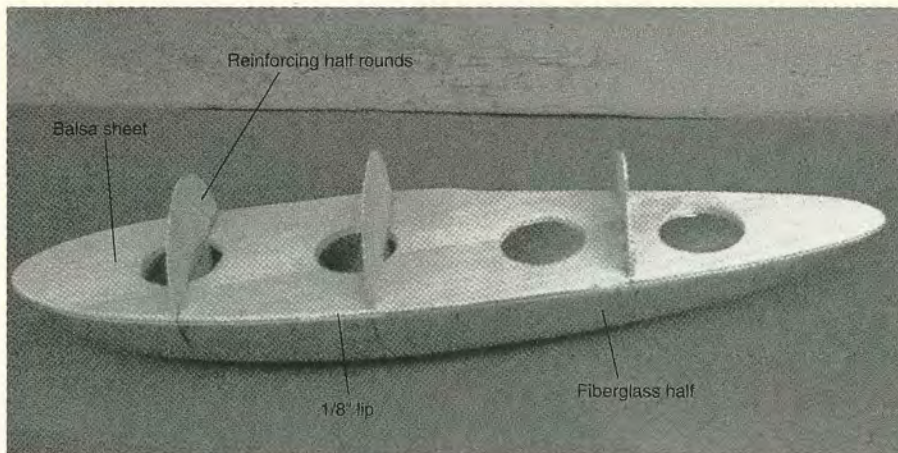


Fig. 5. Balsa on the half shell: Big fiberglass pieces are floppy and unwieldy, but balsa reinforcements firm things up.

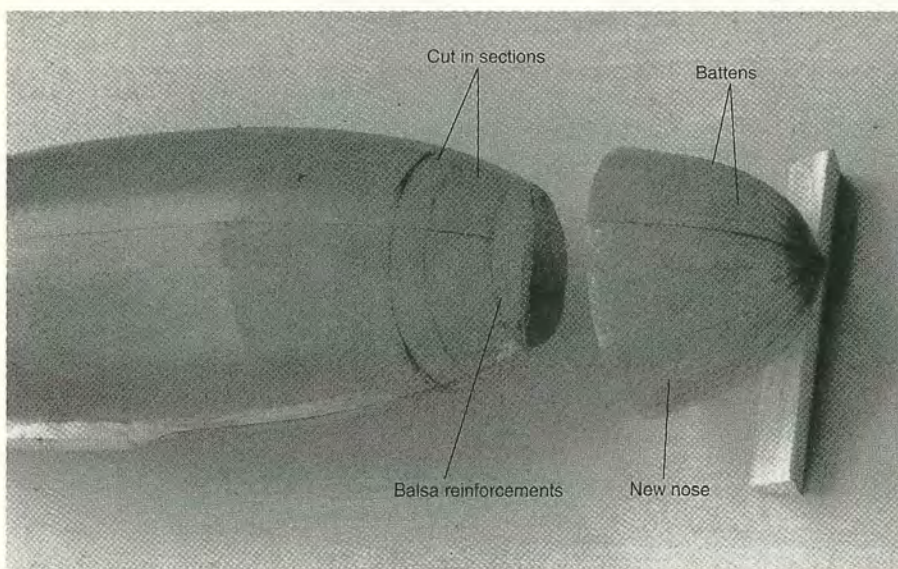


Fig. 6. The bag's nose was trimmed back to accept one with battens. Cutting in sections allowed for adjustments.

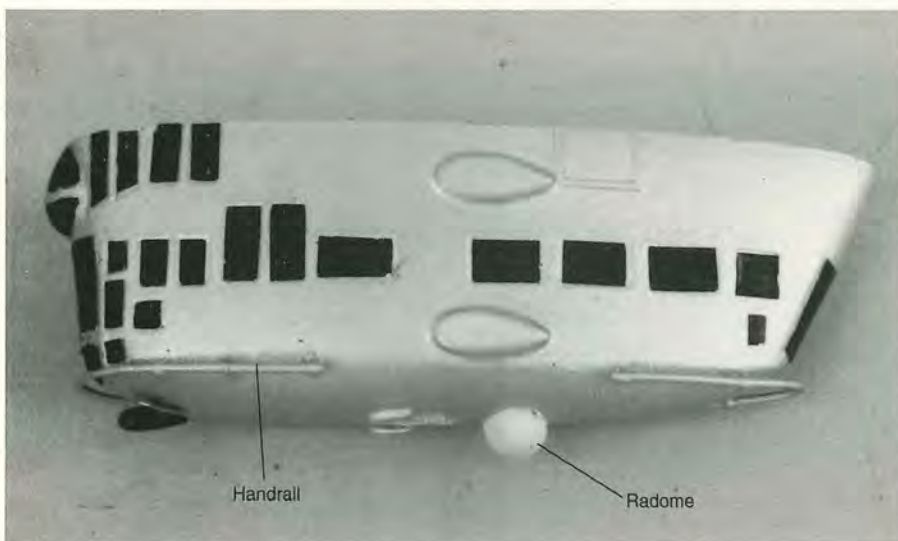


Fig. 7. The car features added details such as a radome and handrails that are made from paper-clip wire.

attached them to the window outlines, Fig. 7.

The car was completed with outriggers, engine nacelles, handrails, a radome, and red propeller-warning stripes.

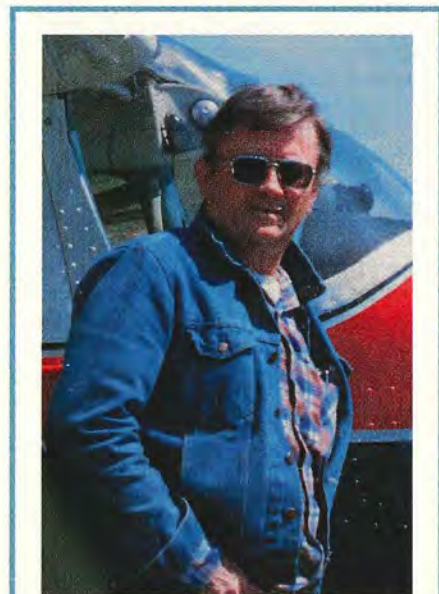
I ran "long" lines from the nose to the front of the car. On full-size blimps, the slack would be coiled in compartments at the front of the car and could be released by the pilot or ground handlers.

The "short" lines were secured to the bag part way back from the nose and hung loose during flight or were looped over the long lines when the ship landed. On the model, I glued the ends of these lines to the long lines.

Among the final details were the MAD heads on the upper front side of the bag, Fig. 8.

**Show it off!** I made two sets of props so I could photograph the blimp either in flight or moored.

Still props were cut from 1/16" alu-



### Meet Michael Kolasa

Michael, from Garfield, New Jersey, spent part of his time in the U.S. Navy as a flight crewman on ZP2K and 3K blimps in Airship Squadron 4 (ZP-4), based at the Naval Air Facility in Weeksville, North Carolina. [The blimp hangar at Weeksville, later operated by Westinghouse Airships, was destroyed by fire in 1995.]

After his Navy hitch Michael spent 27 years (until 1991) as an Army engineer at Picatinny Arsenal in New Jersey. He says, "Retirement allows much-needed time for modeling, and for flying my Cessna 172."

minum sheet and filed to shape. The "spinning" props are  $\frac{1}{32}$ "-thick clear-styrene discs. I lightly painted their outer edges yellow, and replicated blurred blades by etching the styrene with a cotton swab dipped in lacquer thinner, Fig. 9.

After having trouble with the kit decals, I cut the U.S. Navy and ZD-1 tail letters from black vinyl sheet and snatched the national insignia from an airplane kit.

All airship models have the same problem: With only one wheel in contact with the ground, the model on the display stand wants to roll over. I prevented this by running a piano wire from the display stand through the wheel and then through the car and into the bag. The balsa keel also provides support.

I completed the display by painting a backdrop of Dock I at Lakehurst, New Jersey, then took the photos you see here. **FSM**

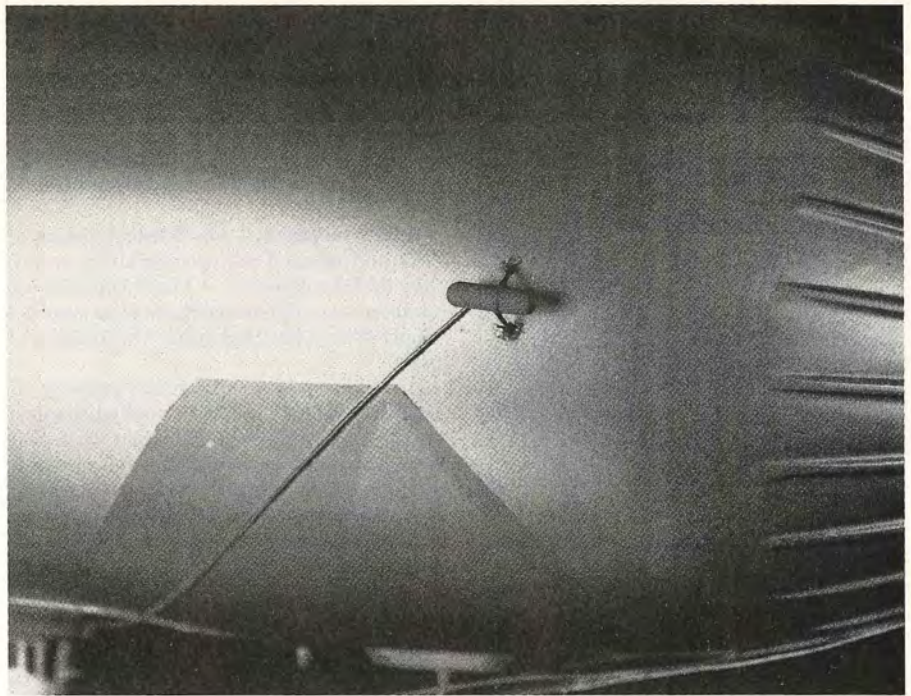


Fig. 8. Simply MAD: Magnetic sensors were mounted away from the car and engines, which would skew the instrument's readings.

Fig. 9. With a little detailing, clear styrene discs become whirring propellers for this in-flight pose.

