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What's-in-the-Box Department

Smith & Smith Try

Aerobee-Hi; Uncle

Harv's Been Busy, Too

■ Backyard rocketeers finally have their prayers answered now that Model Missiles Inc. is producing their kit of the Aerobee-Hi rocket. This is no ordinary model kit because it represents a real advancement from model airplanes into the age of rocketry. A whole new world is opened to the modeler and due credit must be given to the developers of this model for the safe and sane knowledgeable manner in which their product is presented.

In contrast to haphazard (and dangerous) amateur experiments with match head packed CO₂ cartridges, the 14" long Aerobee-Hi rocket model performs as advertised. *American Modeler* got a production line kit; we put it together and fired the finished model repeatedly. From the outset it was a fascinating experience and quite a contrast with our model airplane flying through the years. Just like big rockets or big airplanes, performance is the payoff, and the model Aerobee-Hi qualifies well in this department.

The design follows closely model airplane construction techniques, so that anyone familiar with wood and paper model construction should have no trouble assembling this model rocket. At first glance the rocket construction may appear fragile, but a model rocket like a model airplane must be light in weight to go up, and this after all is the whole object of the project.

The instruction manual supplied with Aerobee-Hi is a real gem. No one should have any trouble using these clear well illustrated instructions. They literally take one by the hand step by step through the model assembly. The manual includes safety notes and a comprehensive course of model rocket operation, both highly informative. The manual makes fascinating reading and we can only echo the manufacturer's oft repeated "READ ALL INSTRUCTIONS CAREFULLY." The only possible amendment to this is: "FOLLOW INSTRUCTIONS." Do it, man, no fooling.

Actual construction of the model proceeded without difficulties. Materials

supplied were adequate for the job. Nose cone is smooth lathe-turned hardwood, missile body is hard paper tube, fins and fairing strips are die-cut balsa. Other materials supplied are plastic for parachute, string for shroud lines, rubber shock cord, metal and paper liners and various fittings. Six Rock-A-Chute motors, igniter wires, decals, launcher parts and die-cut model stand parts complete the kit. The only difficulty encountered with the parts supplied was with the tiny swivel clip used to connect parachute shroud lines to nose cone. Its small size made it impossible to use in manner described in instructions. We substituted a slightly larger swivel clip for the one supplied. The launcher rail wire supplied is fairly mild steel and was bent in transit. We substituted regular model airplane spring steel wire for this part.

The only departure from instructions we made was to add small patches of nylon over launching lugs where they are cemented to side of missile body. It was felt that a bit of reinforcement was needed here. This addition did not add weight of any consequence. Aside from these details the kit parts are of good quality and adequate.

Not supplied in the kit are materials for the firing system. The Aerobee-Hi is designed to be fired electrically. This is the only safe way to fire any model rocket, since firing can be done from a safe distance. Materials needed are 20 ft. of ordinary household lamp cord, push-

button or toggle switch two small alligator clips and a 6 volt "Hot Shot" battery. Automobile 6 volt battery can also be used if you do not wish to purchase a "Hot Shot" dry cell. Cost of wire, clips and switch is about \$1.75. We used our car battery and attached large alligator clips to end of firing wire for easy connection to car battery posts. We left battery in car. We fastened wires to launcher cross bar with insulated staples and soldered "Minigator" clips to short lengths of stiff wire so that they could be bent to stay in position to hold igniter wire in base of Rock-A-Chute motor.

With considerable excitement we prepared for the first firing of our Aerobee-Hi. Following instructions carefully we packed chute and inserted nose cone. Next Rock-A-Chute motor was put in tail of rocket, the igniter wire was put in rocket motor. The rocket was then slid into place on launcher. Firing leads connected to ignited. Now—all you guys get back! Keep your hands off those wires, son! Attach wires to battery, switch off—ALL CLEAR?—everybody ready, O.K. just for grins, how about a count down: Five—four—three—two—one—FIRE! The button was pushed and held down—a scant second—then W-H-O-O-S-H! Rocket Away! What a sight—go—go—trailing a thin pencil of smoke the Aerobee-Hi climbed straight up. As speed slackened, the rocket arched over then "POP" and the nose cone separated and the little red chute blossomed. Down floated the rocket and the chase was on to get under it. We snagged it out of the air before the many little sticky fingers could get to it . . . Wow! Mister, when you gonna shoot it again, huh, Mr., huh? Man this is the most! Dig that crazy bird! The Aerobee-Hi was an unqualified success, first crack.

Additional firings were as spectacular as the first. On one shot the rocket left the launcher and turned erratically but finally straightened out and zoomed straight up. Examination after landing showed that the bit of Scotch Tape used to hold igniter wire in motor base had burned through in a ragged manner and probably deflected the rocket blast sideways causing the erratic flight. After that we used two very small patches of tape on each side of motor opening instead of



Appealing set of hand-launched scale-like profile gliders (right) are to capture interest of younger fans.

Poppa Cal Smith cocks a calculating eye at son Skeeter as latter test loads his Aerobee-Hi rocket model.

a single large piece covering opening. No further trouble of this kind was experienced. On another occasion when the firing button was pushed nothing happened. A "no-go"—after waiting several minutes, we carefully approached the missile and found that the igniter wire was not all the way in rocket motor. After carefully adjusting wire, the motor fired on next try.

After careful evaluation of the kit, instructions and performance, we can report Aerobee-Hi is simple, durable, realistic and recoverable. Performance is spectacular and above all it's safe when handled properly.

Aerobee-Hi specifications: Length: 14 inches; Body diameter: $\frac{3}{4}$ inch; Weight (loaded): 1.6 ounces.

Rock-A-Chute rocket motor for Aerobee-Hi specifications—Thrust: 1 pound for 1.5 seconds; Weight: 0.6 ounces; Length: $2\frac{1}{2}$ inches; Diameter: $11/16$ inches; Ignition: Electrical 6 volts; Features: Expendable, time delay with parachute ejection charge.—Cal Smith

JASCO FLEET

■ Jasco's "fleet" is a kit containing six unusual gliders designed to satisfy the quantity craving of today's (younger?) modeler. I always figured that everyone who has ever sneezed because of balsa dust got a kick from small gliders that can use a parlor for a flying field. Actually the Fleet is step #1 in an overall program designed for newcomers to flying models. Frank Zaic is an accomplished old-timer at designing kits of all types, both for the beginner and the serious modeler. Frank's new Jasco line consists of seven different balsa models and some balsa-and-paper covered models. The series starts with the "Fleet" and ends with the A-1 Floater (a Nordic glider with D/T stab and auto-rudder.)

As previously stated, this "Fleet" was intended to give the beginner plenty of gliders to build, experiment with, and (let's face it) smash. The many different gliders included in the kit are a flying saucer, Navaho Missile, Hustler B-58 Bomber, Mustang P-51, Sabre F-100, and the Voodoo. They are all silhouette type, natch, using 1/32 balsa for wings and tail surfaces, while 1/16 is used for the fuselage. All of the parts are completely die-cut (well done) on four sheets of balsa. No separate plans are included in the kit, but complete instructions appear on the side of the box. There you will find three diagrams corresponding to the die-cut sheets of balsa and indicating by letter to which glider the parts belong, i.e., Mustang parts are indicated by an "M" while "H" indicates Hustler parts. You identify the parts by comparing them to the chart and place those with the same letter in one group. While it isn't too critical, a printed letter on the balsa pieces would be helpful. Also included in the kit is

some modeling clay to be used for balancing purposes.

When you get right down to it, the gliders are divided into two groups, the "wing" type and the conventional looking type. Three-quarter view diagrams give step-by-step directions for assembly of all the models. A clever construction feature on the "normal" glider group (P-51, F-100, and Voodoo) is a jig (also die-cut) for the purpose of holding the fuselage in proper relationship to the wing and insuring the proper dihedral angle while the two are being glued together. This piece of balsa is easily removed when the parts are dry.

While they are intended to be hand launched, a tiny wire band could be inserted in the nose to act as a nose weight and catapult hook. A good rubber band to act as a catapult should increase the flying fun and glider flying know-how. I think it is an ideal kit for a potential balsa-butcher. The price, 69c, is certainly reasonable.—Uncle Harv

SCRAPPY SCAMP

■ Dumas' Scamp is about the most versatile boat I have ever had the pleasure of reviewing. What really makes it rate is that you can use five kinds of power installations. You can select your weapons among inboard or outboard, gas or electric, or an air-prop installation. The designers in the Dumas boat house had the builder in mind when they worked up this design. No matter what kind of a power plant you have (.049 glow is plenty) it can easily be installed within

the confines of the hull or on the transom at the fantail. If you are without a power plant you are not restricted to buying any one engine or motor.

Rummaging through the goodies one uncovers "ooh-la-la" balsa, ditto on the die cutting, brass prop-shaft and housing, metal rudder and marine prop, decking and a well written and drawn instruction sheet. The complete kit sells for \$4.75. One bugaboo I checked out was the old saying that Dumas' parts don't fit. I was pleasantly surprised to find the fit to be above average. A check of several other Dumas kits revealed the same findings. The Dumas Company has come a long, long way in improving their complete line of boats planwise, in the die cutting, model selection, and even in the package.

I'd been wondering what had become of "the invisible man." Now I know; he is an instructor of model boat building with special emphasis on the Scamp. He keeps bobbing up all through the instruction sheet to tell you (in first person singular) exactly how the Scamp should be assembled and how to allow or alter the construction to accommodate your engine. You must decide right off the bat which mode of power you wish and then build the boat accordingly.

The Scamp is 18" long and has a beam of slightly less than seven inches. It is not unusual to find that the tail fin business has reached the model boat field. Proportionwise the Scamp's tail fins outdo ever the Chrysler.

Construction is typical model boat frame and keel, or build-up, type. Both

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