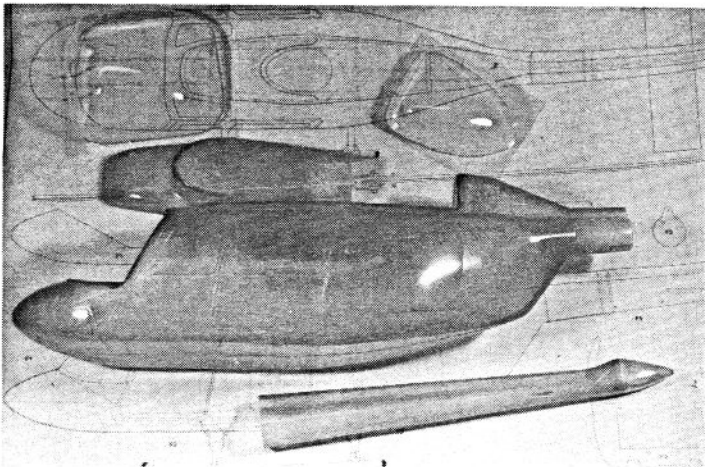
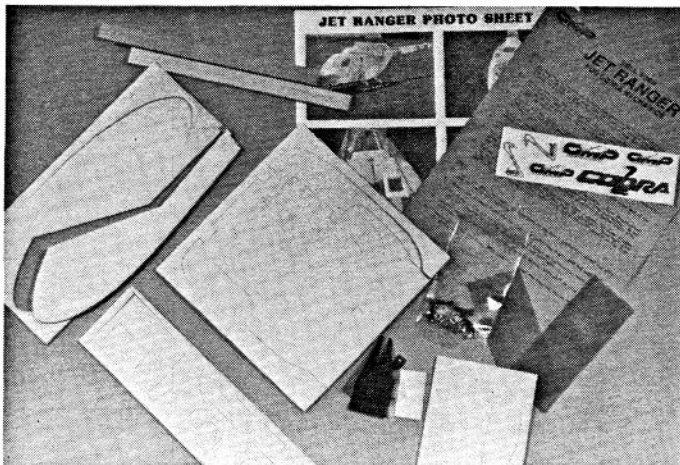


HELICOPTER CHALLENGE

by GRADY HOWARD



GMP Bell Jet Ranger fuselage kit adaptable to Cobra mechanics.



Wood formers are top quality, as is entire kit.

NOW THAT YOU'VE learned to fly your helicopter and you feel the urge to go scale, I have some news for you. If you learned to fly on a Gorham Model Products* Cobra, GMP also has a Bell Jet Ranger fuselage kit that was designed to use the Cobra mechanics. I'm sure there are other pod-and-boom type helicopter kits that could be adapted and used with this fuselage if you have one other than the Cobra.

The kit comes with all of the wood formers die-cut so well that just a touch will get them out of the surrounding wood. The fuselage is in three pieces, consisting of the tailboom, the top cover, and the body. These are made of top quality fiberglass with very little filling necessary. Plastic windows for the bottom and windshield are included. The side windows are cut out and left open for engine cooling.

A scale-like landing gear is also available. This fuselage kit can be gotten directly from GMP or, as John Gorham prefers, from your local hobby dealer. These kits are selling so fast that the maker cannot keep the orders filled. If you would like to go to a scale kit, then you should get yours ordered so it can be put on the waiting list.

Now on to the building. The instructions are complete and you should have

no trouble if they are followed in proper sequence. The windows are cut out first to help in access to gluing the wood formers inside the fuselage. Slo-Gap filling cyanoacrylate glue with kicker is recommended for the wood formers. Some slight sanding may be necessary for a good fit.

After the wood is in place you'll need to strip your Cobra down to just the

main mechanics. You will need to cut the front servo mount off, leaving the two cyclic servos in place. Be careful with your coping saw if you leave the two servos in place while cutting. I let the saw slip and cut a servo lead wire.

Follow the instructions carefully and slip the mechanics down into the fuselage, letting them come to rest on the wood rails. You will need to cut the top



Your columnist doing his favorite thing with a dynamite combination.

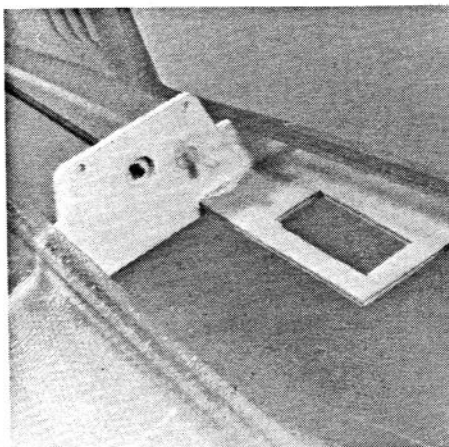
flange around the opening enough to allow your mechanics to enter easily. You will need to mount the mechanics temporarily while you attach the rear formers and the tailboom. At this time you will need to decide on a muffler. This will depend on whether you have a side exhaust or rear exhaust engine. I am using a side exhaust O.S. Max 50H engine. The Hirobo flat muffler is recommended in the instructions and I acquired one from GMP, as I had been using a V-Tech on the Cobra. The muffler fits perfectly and for my side exhaust engine, the pipe went out the bottom of the fuselage nicely. If you are using a rear exhaust engine, there is a Hirobo muffler available for that type of installation.

After you've mounted the mechanics and muffler, attach the tailboom to the main body and glue the rear formers in place. Once this is done, remove the mechanics, put putty in the seams, and prepare to paint the helicopter. The fin and stabilizer must be constructed from the balsa in the kit, using the plans for the proper shape. Attach the stabilizer before painting.

After painting, glue in the bottom front windows. For painting, I used gray auto primer purchased at a local discount store, and Black Baron Spray Epoxy for the red, white, and blue colors. The striping is D.J.s 1/8-inch striping tape.

Now you're ready to re-install the mechanics. First I placed a Remote Head Lock Glowplug Connector on the glowplug, because it is easier to do it at that time. I then mounted the Remote Connector to the inside top of the frame. This allowed me to do away with the black wire, as the mounting bracket grounded the system. For access to the connector a 1/2-inch hole was cut in the top cover just behind the main rotor shaft.

Follow the instructions on radio installation and mount your switch for easy access. I used a metal mount fastened on the left side of the top servo tray. This kept all switches inside but with access

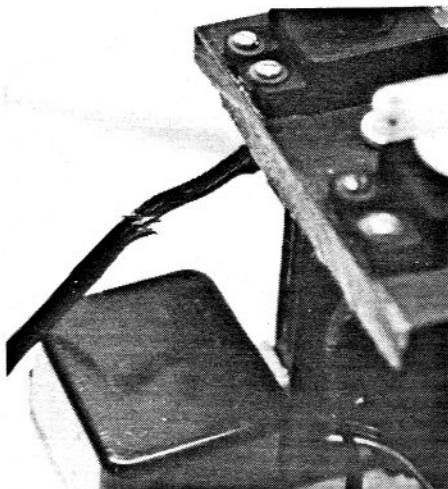


Rear former and tail rotor tray installed in Ranger.

through the side window. When adjusting your servo travel, be sure to check the pitch lever on the right side to insure that it does not hit the top cover when you reduce pitch on the main rotors.

Flying the Cobra/Ranger is sheer delight. The added 2 pounds of weight is no problem for the O.S. Max 50H engine I used. The total weight is 9 1/2 pounds.

I first flew with the Cobra rotor blades with a span of 49 inches, which was plenty of blade for the Ranger. I've now installed the longer blades which make



Frayed wires are a danger and should be on your pre-flight checklist.

the span 53 inches. This length requires you to reduce pitch. With the same pitch as the short blades you will be hovering at about 1/4 stick. This makes it hard to get down with that little amount of pitch change.

After you get your pitch correct, you will find that the Ranger is docile yet very responsive to the controls. In the air it looks very real. I get real nervous every time I fly the Cobra/Ranger because it is so pretty that I'm afraid I'll crash it. I haven't got enough nerve to try any aerobatics yet, but it sure feels like it will do them with ease.

I also received from GMP a selection of their blade coverings. This heat-shrink covering is thicker than any other I've used, and it has lots of shrinkage to it. It comes in red, yellow, white, and black. There is also matching tail rotor covering of the same material.

Well, I hope I've shed some light on building the GMP Jet Ranger. If you feel you're ready to go scale, then this is the least expensive way to go if you already own a GMP Cobra. If you don't own a Cobra and are still interested in this scale model, Gorham offers a Cobra mechanics kit that can be used with this fuselage and also may be adaptable to other fuselage kits that are available.

That's it for this month, hope to hear from lots of you about how your summer activities went.

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**The following is the address of the company mentioned in this article:*

Gorham Model Products, 23961 Craftsman Rd., Calabasas, CA 91302. ■