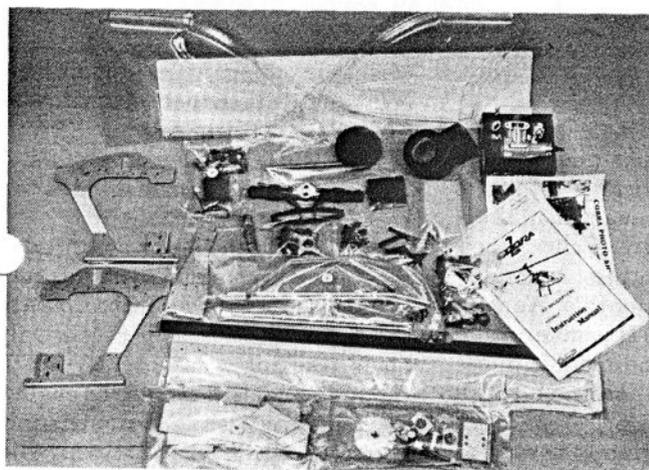


RCM PRODUCT REVIEW

Gorham Model Products COBRA



The Cobra helicopter is the result of a joint effort by John Gorham, of Gorham Model Products, and Hirobo Helicopters of Japan. As John put it, "We used the best of the two companies, Hirobo's head, tail rotor, and drive train, with America's frames and other metal and plastic parts. The Cobra is about 50% American and 50% Japanese."

The Cobra is a .40 to .50 powered fully aerobatic, contest worthy helicopter. The size makes it ideal for today's smaller cars to transport it to and from the flying site. This helicopter can be used as a fliers first contest worthy trainer helicopter. By this we mean he can learn to fly helicopters with a relatively inexpensive helicopter and still have a machine that can do all of the AMA-FAI contest maneuvers. The Cobra comes with a standard drive, but there is an autorotation gear available as an option.

Upon opening the box it was evident that lots of planning went into the packaging. There was no wasted space in the 4 1/4" x 11 1/4" x 30" box. Everything except the two fuselage

SPECIFICATIONS

Name	COBRA
Aircraft Type	Helicopter
Distributed By	Gorham Model Products 23961 Craftsman Rd. Calabasas, California 91302
Mfg. Suggested Retail Price	\$299.95
Available From	Retail Outlets
Rotor Span	49 Inches
Rotor Chord	2 1/2 Inches
Tail Rotor	10 1/2 Inches
Fuselage Length	44 Inches
Mfg. Recommended Engine Range40-.50 Cu. In.
Recommended Fuel Tank	12 Oz.
Recommended No. of Channels	4 or 5
Rec. Control Functions	throttle, forward and aft, right and left cyclic, tail rotor, collective main rotor
Basic Materials Used In Construction:	
Fuselage	Plastic
Rotors	Hardwood and Balsa
Building Instructions On Plan Sheets	Yes
Instruction Manual	Yes (48 Pages)
Construction Photos	Yes

RCM PROTOTYPE

Radio Used	Airtronics FM Helicopter 6 ch.
Engine Make & Disp.	O.S. Max 50 FSR-H
Tank Size Used	12 Oz.
Weight Ready To Fly	120 Oz.

SUMMARY

WE LIKED THE:

High quality of the materials used throughout the kit, especially the number of ball bearings in high stress areas, also we liked the thorough and professional way the instruction manual was written.

WE DIDN'T LIKE THE:

All of the nuts, screws, washers and bolts in one package.

halves, the tail boom and the blade covering was in individual numbered plastic bags. This made for easier identification of parts.

Construction:

As with any kit, be it helicopter or airplane, the building will go easier if the builder will take time to read the instructions and identify the parts before any actual building takes place. The terminology used for parts identification will be completely foreign to anyone who has not built a collective pitch helicopter before. So, reading and identifying will be a must if the builder wishes to get this kit done in a minimum of time. The Cobra can be built in approximately 10 hours by any competent builder. Construction is rather straightforward with no surprises in the instructions. Nut and bolt assembly makes the Cobra simple to build. The metric millimeter gauge printed on the pages of the instruction manual helps to identify the proper length screws and pushrods. Yes, the Cobra even has the pushrods cut and threaded to the proper size. Quality of all parts was of the highest degree with many ball bearings and needle bearings in high stress points. The wood parts for the servo trays were so well cut that they simply fell out when touched. Only light sanding was necessary to smooth the edges. The plastic fuselage halves have a unique

THE "CLIPWING"
Monocoupe 110 ser.

Rolled plan set with construction manual



Shipped UPS

SPECIFICATIONS:

70" span 90 or 90/120 4 cycle engine
1050 sq. in. 12 to 15 lbs.

Classic Airplans

1/4 SCALE ROUND ENGINE CLASSICS

13 Byron Ct., Indiana, PA 15701

feature that Gorham has incorporated in the design. There are raised triangle windows that can be taped over before painting and, when removed, allows the fuel tank to be monitored from either side of the helicopter. There are scribe marks on the fuselage showing the location of the top cut-out and the placement of the wood block on the inside floor that is used to hold the fuselage to the frame. All of the parts fit was no problem with no alteration necessary. The instruction manual has exploded views along with a separate exploded view of the entire machine.

Radio:

There is a section on radio installation that includes the degree of servo travel that each control should use. This should be of valuable assistance to the novice and the expert builder alike. When installing the servos in the vertical tray, you must put them as far down as possible. This will allow clearance for the servos in the top tray. Also, you must raise the tail rotor servo with the addition of extra pieces of wood at the ends of the servo cut-out. This is not shown on the plans but is necessary to let the tail rotor control rod clear the cyclic servo. Now that we have built the Cobra, let's go flying.

Flying:

Starting is accomplished by means of a vertical shaft sticking out of the frame in front of the main shaft. This shaft goes through the clutch bell directly to the engine. A starter extension is a must for this. We used an O.S. Max 50FSR-H engine with a VOTech Muffler. The muffler comes with no mounting hardware and a header must be obtained from Mac's Mufflers for the engine that you are using. Attachment of the muffler to the header is accomplished by means



RPM INC.

- Hi Performance Model Engine Connecting Rods
- Available for Most Popular Aircraft, Marine & Car engines.
- Fast Friendly service since 1974.

Richardson Precision Machining Inc.
5070 Golden Drive
San Jose, CA 95129

(408)257-7059

DEALER INQUIRIES INVITED

of silicone tubing. Attaching the body of the muffler to the helicopter must be figured out by each individual for his particular liking. We used a radiator hose clamp and attached it to the tail boom brace.

By following the set-up described in the instruction manual there was very little adjustment to do for the Cobra to fly right off the workshop bench. Only blade tracking was necessary with carburetor adjustments to the engine. The radio used was an Airtronics 6 ch. Helicopter Championship Series with tail rotor mixing and invert switch. It also has a throttle hold for autorotation landings. With tail rotor mixing and a gyro (we used a Kraft gyro), the tail rotor control becomes a pussycat instead of a tiger. We have not tried any inverted flight but all other maneuvers in the AMA-FAI pattern are possible with the Cobra.

Conclusion:

The Cobra is a very well-designed and thought out helicopter using the highest quality materials. The instructions include a section on how to fly a helicopter for those fliers who are building the Cobra for their first helicopter. In conclusion, we feel that the Cobra is the helicopter that the fliers have been waiting for. Low in price, high in quality, and extremely handsome.