

Hangar 9 PHOENIX 7

The rebirth of a pattern classic

BY MARK RADCLIFF
PHOTOGRAPHS BY MARK RADCLIFF

THE PHOENIX SERIES of pattern aircraft was designed by the legendary modeler Don Lowe. The Phoenix 1 was first flown in 1965 and was advanced beyond most pattern planes of the era due in part to the swept-wing design. Don continuously tweaked the design and eventually culminated with the Phoenix 8. Hangar 9 recently introduced a reproduction ARF of the Phoenix 7 that was so successful on the pattern competition circuit in the mid to late 1970s. Hangar 9 used an original P7 kit from Don himself to make this ARF as accurate as possible to the original. The fuselage and vertical fin are molded fiberglass, with the wing and horizontal stabilizer constructed of balsa ribs covered with balsa sheeting. The ribbed construction of the wing and stab is a very light-weight setup. The fuselage is painted, and

the wings and stabilizer are covered with UltraCote. The overall finish is very nicely done with a really exciting trim scheme. The airplane comes complete with all the hardware needed including pushrods, linkages, engine mount, fuel tank, wheel collars, wheels, spinner and more. If you were going to build the fixed-gear version, you would not need to purchase any items other than your radio and engine. The instruction manual is very easy to read and understand with plenty of building photographs to help you get this bird flying. While this is an easy airplane to assemble, it is designed for advanced pilots to perform precision aerobatics and not intended for beginners.

UNIQUE FEATURES

The model can be built with fixed or with retractable landing gear. The manual illustrates the installation of air-operated retracts; however, I decided to use the electric retracts available from E-flite. I was very impressed with the quality of the E-flite units, and they were easy to fit into the wing and fuselage. I only had to modify the wing cutout slightly for the gear to clear the already installed wheel-well area, however, a 1/2-inch hole in the plastic wheel wells was required to accommodate the provided wheel/axle combination. While the provided wheels worked, they were a little thick and sometimes had clearance

SPECIFICATIONS

Model: Phoenix 7
Manufacturer: Hangar 9 (hangar-9.com)
Distributor: Horizon Hobby (horizonhobby.com)
Type: Pattern aerobatic
Wingspan: 63 in.
Wing area: 690 sq. in.
Weight: 7.75 lb.
Wing loading: 25.88 oz./sq. in.
Length: 56 in.
Radio req'd: 5-channel (throttle, rudder, aileron, elevator, retracts)
Power req'd: .61 2-stroke
Price: \$339.99

HIGHLIGHTS

- ⊕ Excellent quality
- ⊕ Authentic reproduction of Don Lowe's Phoenix 7
- ⊕ Easy and quick assembly
- ⊕ Performs 1970s-era aerobatics to perfection
- ⊕ Beautiful paint and UltraCote finish



The author shows off the new Phoenix 7 ARF.

NO OTHER AIRPLANE IN THE
WORLD WILL DO SLOW ROLLS,
POINT ROLLS AND 3-ROLLS AS
WELL AS A PHOENIX



LOOPING AND VERTICAL
MANEUVERS ARE PERFORMED
WITH EASE BECAUSE YOU
HAVE PLENTY OF POWER

In the Air

You might think since this airplane has retracts you need to fly it off a paved runway. Well, not the Phoenix. The landing-gear height provides excellent prop clearance, and the gear mounting platforms are really beefed up so as to withstand a pretty rough field. You won't need your helper to carry this airplane out on a grass field to take off.

Just taxi it out with some up-elevator and add power. Once airborne, flip your retract switch, and you will see the speed and smoothness of the airplane really come into play. You'll notice the engine will unload and "get on the pipe." That's when the fun begins with this airplane.

GENERAL FLIGHT PERFORMANCE

Stability: If you balance the airplane as indicated, the Phoenix is as stable as a trainer on landing and will not tip-stall. Even though it's fast, it will slow down to a walking speed for landing without any bad tendencies.

Tracking: This airplane wrote the book on tracking. As one observer watching my flights said, "It flies like it's on rails." The Phoenix flies very fast and will take several flights for you to catch up with it; however, once you tune in with it, flying becomes a point-and-shoot process.

Aerobatics: The Phoenix is all about classic, 1970s-era aerobatics. It is not designed for today's turnaround aerobatics. Looping and vertical maneuvers are performed with ease because you have plenty of power to fly as large as you wish. The real forte of the Phoenix, however, is rolling maneuvers. No other airplane in the world will do slow rolls, point rolls, and 3-rolls as well as a Phoenix. The swept wing just begs to perform rolls. If you have your wings level when starting loops, it will perform both inside

and outside loops with very little correction.

Glide and stall performance: The Phoenix is a very fast airplane at full power. Therefore, when landing you need to cut your power to about 1/3 throttle on the downwind leg and allow it to bleed off speed. Once you turn final, maintain a high-idle speed until nearly

ready to touch down then idle down, and the Phoenix will make a nice flared landing with no worry about it falling off one way or the other.

GEAR USED

Retracts: E-flite (Electric) (e-fliterc.com)

Engine: O.S. .61 FSR ABC with/Rossi header/pipe (osengines.com)

Fuel: 15% Wildcat (wildcatfuels.com)

Prop: 11x7.75 Rev-Up

CONTROL THROWS

Aileron: Up: 1/4 in., down: 3/16 in. (low); Up: 7/16 in., down: 3/8 in. (high)

Elevator: Up: 3/16 in., down: 3/8 in. (low); Up: 3/8 in., down: 1/2 in. (high)

Rudder: ± 1 3/16 in. (low); ± 2 in. (high)

PILOT DEBRIEFING

The nice thing about flying the older-design planes today is the fact we have such great radios capable of enhancing flight performance. The Phoenix requires a very slight mix of elevator and rudder while performing rolls. With today's radios, this characteristic is easily fixed, making flying easier and more enjoyable. In my opinion, this airplane must have retracts. The E-flite retracts are a very heavy-duty design yet maintain a reasonable weight and performed flawlessly even on a grass field. Believe me, once you fly it with retracts, you'll be hooked. Also, I added mixture control, which is a really nice feature if you take off and your needle setting is off. Just move your mixture knob to richen or lean out the mixture without landing.

This is an accessory available for some O.S. carburetors, and it will help you save a flight in aerobatic competition should you take off with a bad needle setting. If an aerobatic plane, talk about aerobatics, if a trainer, talk about its characteristics. Unique features, flight tendencies, special radio programming, how well it does specific maneuvers, etc.



The author with his Phoenixes at the 1979 World Championships in Johannesburg, South Africa.

My Flight of the Phoenix

I began flying pattern in 1969 at the age of 15 on such classic airplanes as the Aeromaster, Kwik Fli, Kaos and Mach One. My dad and I went to pattern contests in the Midwest and saw the Phoenix was an emerging design being flown by Don Lowe and Dave Brown. We built a Phoenix 5 in 1973 and began to have some success. When the Phoenix 6 arrived, we built one, and I tried out for the U.S. Aerobatic Team in 1975; I made the team and placed third. The world championships were held in Bern, Switzerland, and I placed sixth individually, with the U.S. team placing first, and Dave Brown finishing third with a Phoenix 6. Don Lowe, the Phoenix designer, was our team manager.

In 1977, I again tried out for the U.S. team flying the new Phoenix 7 and again made the team. At the world championships held in Springfield, OH, I placed sixth, with the U.S. team again finishing first, and Dave Brown finishing second with a Phoenix 7.

In 1979, I once more entered the team trials this time flying the new Phoenix 8, and I qualified for the U.S. team. The world championships were in Johannesburg, South Africa, where I had my best individual performance placing third; the U.S. team again finishing first. Don Lowe was once again the team manager.

In 1981, I made the team flying the Phoenix 8. This time, the worlds were in Acapulco, Mexico; I finished fifth individually, and the team again was first. After the T.O.C. in 1982, I retired from competition flying. I did not fly again until 2001, when I rekindled my interest in the hobby. I have been flying giant scale, foamies and everything in between, and I started competing again in both pattern and fun scale.

issues, so I eventually used Dave Brown Lite Flite wheels, which solved the problem and saved weight. The gear mounting plates are of heavy-duty plywood construction in both the wing and the fuselage. The stabilizer is built in halves that are epoxied to the fuselage using a carbon-fiber tube to join them. Because the elevator halves are a swept design, the pushrod must have two wires exiting the fuselage to make them work. This pushrod is already assembled but required some minor bending of the metal rod ends, which the manual clearly explains including measurements. All control surfaces are already hinged and aileron and

elevator gaps sealed. Installing the motor requires cutting some fiberglass using a provided full-size template and taping it to the fuselage. Carefully use a pen to trace the template, and a rotary tool with a cutting wheel to modify as necessary for whichever engine you use. I decided to go as original as I could by installing an O.S. .61 FSR ABC. This engine with a tuned pipe makes the perfect period-correct motor for this airplane. The firewall is already installed, and motor mount holes already drilled with elongated holes so as to accommodate most .60-size motors. By loosely mounting the motor, you can use the spinner to help align the

motor and then fully tighten down both the mount and the motor. Installing the servos is easy since the servo trays are built in both the fuselage and the wings. Mounting the retract nose gear required cutting some fiberglass using a provided template. For the nose gear steering, I decided to use pull-pull cables instead of the wire pushrod. The fuel tank provided is a 17-ounce oval, which fits nicely and already has fuel lines installed. I used a Rossi pipe, which required making my own mount using a 1/2-inch dowel drilled and tapped for a 1/4-20 bolt. Each engine/pipe combo is unique, so some modifications may be required for mounting your pipe.

CONCLUSION

I spent about 20 hours assembling this bird. If you built this type of pattern plane back in the day, you will really appreciate this new model since so much of the construction is already done. If you want to experience the wide-open classic pattern style of the '70s, flying this airplane will not disappoint. There is nothing more beautiful than a Phoenix with a piped .60 performing a split-S, engine screaming 15,000+rpm and performing a long slow roll. The Hangar 9 Phoenix 7 is truly a blast from the past! ✈



The wings are designed for retracts.



The O.S. 61 FSR is a good power choice.