

THIS CLEAN-CUT
RACER IS FAST AND
FULL OF FEATURES
ANY RC AVIATOR
WOULD LOVE



Maxford USA HUGHES H-1

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Howard Hughes developed his H-1 to be a fast and innovative airplane. If you've seen the movie *The Aviator*, you're probably aware of some of the features he included in its design, many of which were both groundbreaking and influential in future high-performance planes.

The Maxford USA Hughes H-1 is a well-thought-out model constructed of balsa and ply. It's covered in heat-shrink in the original color scheme of the full-size H-1 and looks superb. Included in this ARF kit (along with the built and covered airframe) is everything you'll need to make the model airworthy, minus your power system and guidance package. You'll find fixed main gear, foam wheels, a spring-loaded tailwheel, a plastic canopy, empennage fairings, a prebuilt motor mount, fiberglass cowl, magnetic battery hatch, and all the needed hardware for completing the control-surface linkages. There's an option of installing retractable landing gear, making this plane as close to its full-scale counterpart as possible while reducing some of the drag, just as Hughes himself wanted to do. The 13-page instruction manual is full of good information and states that the model is intended for experienced pilots.

UNIQUE FEATURES

Aside from being designed to fly fast, the Maxford Hughes H-1 model is also designed to go together quickly. All control surfaces are prehinged with the exception of the rudder. After taking a quick glance at the Maxford USA website, I noticed the retract installation instructions as well as an addendum to the instructions tells you to install the tailwheel support rod, included CA

SPECIFICATIONS

MODEL: Hughes H-1
MANUFACTURER: Maxford USA (maxfordusa.com)
TYPE: electric scale racer
SMALLEST FLYING AREA: outfield
IDEAL FOR: intermediate to advanced pilots
WINGSPAN: 40 in.
WING AREA: 320 sq. in.
WEIGHT: 32 oz.
WING LOADING: 14.4 oz./sq. ft.
FLIGHT DURATION: 7-10 min.
PRICE: \$160

SCOREBOARD

- ⊕ Great-looking and well-designed model
- ⊕ All servos and linkages are concealed
- ⊖ Included wheels are for fixed gear only; retracts won't close flush with them

hinges, and rudder in a different manner. Definitely take a look there for clarification of those processes.

Regarding the retractable landing gear, they were not very difficult to install; just be sure to route the control rods with one of the Z-bends up and



Removing the magnetized hatch allows for fast and easy battery pack swaps. Be sure to pull the hatch toward the nose of the model as to disengage the carbon fiber holding pins while detaching it.

**THIS MODEL WAS
FLYING HANDS OFF
AND WAS VERY
COMFORTABLE AT
LOW AND HIGH
SPEEDS**



IN THE AIR

A paved runway is best for the landing gear setup installed on the H-1. Short grass or smooth hard-packed surfaces would be a workable alternative. After I double-checked the center of gravity, control throws, and directions of those throws, I lined the model up in the center of the runway. Takeoffs were uneventful and minor rudder correction is required as the plane lifts off in a hurry. I estimated the rollout to be some 20 feet or less and then the H-1 climbs with authority. After trimming the model and racing around the sky for a while, I decided to make an approach. I dropped the main gear and kept some power on, which allowed the H-1 to settle into a slight nose-down attitude. Just before reaching the tarmac, I pulled a slight bit of elevator and flared into a three-point landing. Sweet! The plane rolled for just a few feet and came to rest. I then taxied back, and this was a piece of cake because the H-1's gear setup and steerable tailwheel performed flawlessly.

STABILITY. With the CG set per the instruction manual, the H-1 exhibited neutral stability. After I did the initial trim out, the model was flying hands off and was very comfortable at low and high speeds.

CONTROL THROWS

ELEVATOR $\pm 3/4$ in., 25% expo (low); ± 1 in., 35% expo (high)

AILERON ± 2 in., 25% expo (low); ± 1 in., 35% expo (high)

RUDDER $\pm 3/4$ in., 10% expo (low); ± 1 in., 20% expo (high)

GEAR USED

RADIO JR 9303 DSM2, Spektrum AR6100E (horizonhobby.com), Hitec HS-65hb (3), HS-82mg (1) servos (hiteccrd.com)

DRIVE SYSTEM Scorpion 2215/18 brushless outrunner, Scorpion Commander 35 amp ESC (innovativedesigns.com), 10x5 APCe prop (apcprop.com)

BATTERY Thunder Power 3S 2100 ProLite (thunderpowercc.com)

TRACKING. Tracking on the ground is good; the tailwheel allows for easy steering. In the air, the model will travel where directed and doesn't deviate from its flight path until you want it to.

AEROBATICS. From level flight, loops and rolls are simple. There's some vertical performance, so doing a split-S is a good way to turn around at the end of the field. Stall turns, wingovers and Cubans are also doable. Inverted flight can be sustained with ease and if you feel like throwing in a knife-edge pass, this plane can do it for a bit.

GLIDE AND STALL

PERFORMANCE. Cutting power and pulling elevator leads to a mushy feeling, and then the plane will drop a wing and break to that direction. While keeping the nose down, the H-1 glides very well and has no bad habits during approaches.

PILOT DEBRIEFING If you fly from taller grass or a rougher surface, omitting the gear or keeping the retracts up will allow a docile belly landing. You can't go wrong with this model; it looks great, flies well and is an icon of the Golden Age of aviation.

one of them down. This will allow the servo arm to be added to your servo without too much trouble. A little programming with my transmitter end point adjustment had them dialed in and locking well.

The fiberglass cowl is unique in its own right as it is Maxford's development. Labeled "Max Cowling," it has three screws and corresponding slots with the addition of rare-earth magnets that keep the cowl in place. This means there are no visible fasteners and removing it is a breeze.

The rudder and elevator controls are



Once set up correctly, the mechanical retracts do the job well and are a nice option for this plane.



Peeling away the magnetized fairing reveals a look inside the empennage control area.

THE FLYING BULLET

If we look at any great achievement in aviation or in the history of mankind, those who have a singular sense of focus and who are willing to risk everything in pursuit of a goal are almost always the ones who accomplish it. This was never truer than with Howard Hughes and his mysterious H-1R: the "Flying Bullet." Not many people are aware of Hughes' world speed record—a blazing 352.28mph—set in 1935. This was an FAI world absolute speed record over a closed course of 3km. On January 19, 1937, Hughes and the H-1R set a new transcontinental record of just 7 hours, 28 minutes, 25 seconds, for a distance of 2,464 miles from Burbank, CA, to Newark, NJ, with an average flight speed of 327.5mph.

Everything about this amazing airplane was considered a technological step forward from what was considered possible for aircraft design, materials and construction. But as soon as the "Flying Bullet" had burst into the aviation world, it disappeared; it was flown for a total of only 40 hours. The H-1R was saved and has been hanging in the Air and Space Museum for many years.

— Laurance Martin



The Wright Machine Tool Co. Hughes H-1 Racer replica, built by Jim Wright, is so exact that the FAA has designated its serial number 2. S/N 1, the original Hughes-built airplane, is displayed at the National Air and Space Museum in Washington, D.C. (photo by Wayne Sagar/AAFO.com).

all concealed, and there are two plastic fairings that you install after you set up the linkages. The bottom fairing is held on with rare-earth magnets and can be removed for maintenance. The rudder is an easily adjustable pull-pull design, and the mechanism is linked to the tail-wheel offering a solid steering ability. A long carbon-fiber tube is fitted with pre-bent wire at the ends that will link your servo to the elevator. One of the wire ends is left loose and will need to be glued in place with CA once you set the length to fit the servo of your choice. The upper fairing and canopy will need to be glued in place with canopy glue. I used blue painters' tape to hold those parts in place while the glue dried. The only thing I would change would be the

main wheels; the ones that came with my plane are a little wide and do not allow the landing gear covers to sit flush to the airframe.

This model is a good build, and a modeler with intermediate experience should be able to take it on without issue.

CONCLUSION

I took my time assembling the Maxford USA Hughes H-1 as I wanted to make sure everything went smoothly. I spent approximately eight hours and had the model airplane ready for a race around the sky. It's a great flyer and I think with all of the power systems available today, the possibilities for maximum speed are endless! ☺