

FLIGHT TEST

# Hangar 9/ Horizon Hobby Model 12 Viking 120cc ARF

**This giant can handle precision aerobatics, all-out 3D, and anything in between**

BY JASON BENSON PHOTOS BY JOHN REID



**EXCLUSIVE!** Hangar 9's latest flagship aerobat is a giant-scale stunner that's scaled after the Scandinavian Airshow Model 12 Viking in every way. This model can handle anything you want to throw at it—and more—all while looking awesome on the ground and in the air.

The Hangar 9 Viking is a built-up airframe that utilizes balsa and light ply throughout. The airframe is covered in Ultracote, and complex accent pieces such as the cowl, wheel pants, and canopy are made out of fiberglass and Lexan. These parts come painted and the color matching is excellent, so the finished plane looks terrific.

All the hardware necessary to complete the model is supplied: aluminum landing gear, carbon-fiber wing tubes for the plug-in wings, ball-link hardware for all control surfaces, plus a host of other odds and ends that will limit your need to make trips to the hobby shop. The

**AT A GLANCE**

-  **MODEL**  
Model 12 Viking 120cc ARF
-  **MANUFACTURER**  
Hangar 9 (hangar-9.com)
-  **WINGSPAN**  
89.2 in.
-  **PILOT SKILL LEVEL**  
Intermediate
-  **ASSEMBLY TIME**  
20 hours
-  **POWER REQ'D**  
120cc two-stroke gas
-  **RADIO REQ'D**  
4-channel with eight standard servos
-  **PRICE**  
\$1,399.99

**WHAT WE LIKE**

-  Scale appearance
-  Beautiful finish
-  Highly prefabricated
-  Great flight characteristics



TRACKING IS NICE AND STRAIGHT,  
MAKING FLYING NICE STRAIGHT LINES AS  
EASY AS POINTING THE VIKING IN  
THE DIRECTION YOU WANT TO GO AND  
LETTING IT DO ITS THING.



This 99.2-inch-span biplane looks impressive just sitting on the flightline! The wheel pants and cowl match the covering perfectly.



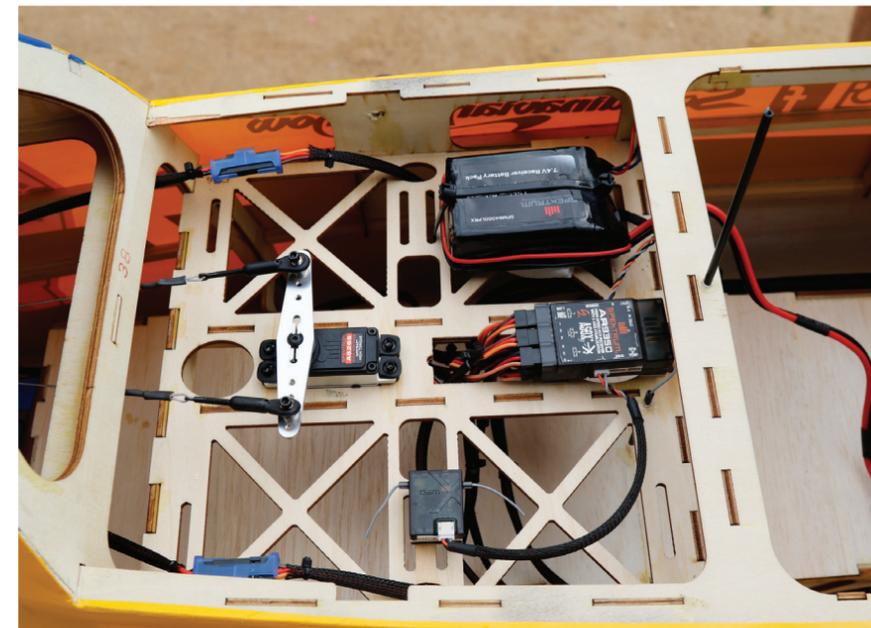
**GEAR USED**

**RADIO**  
Spektrum DX18QQ, seven A6265 servos, one 6150 servo, AR9350 AS3X receiver (spektrumrc.com)

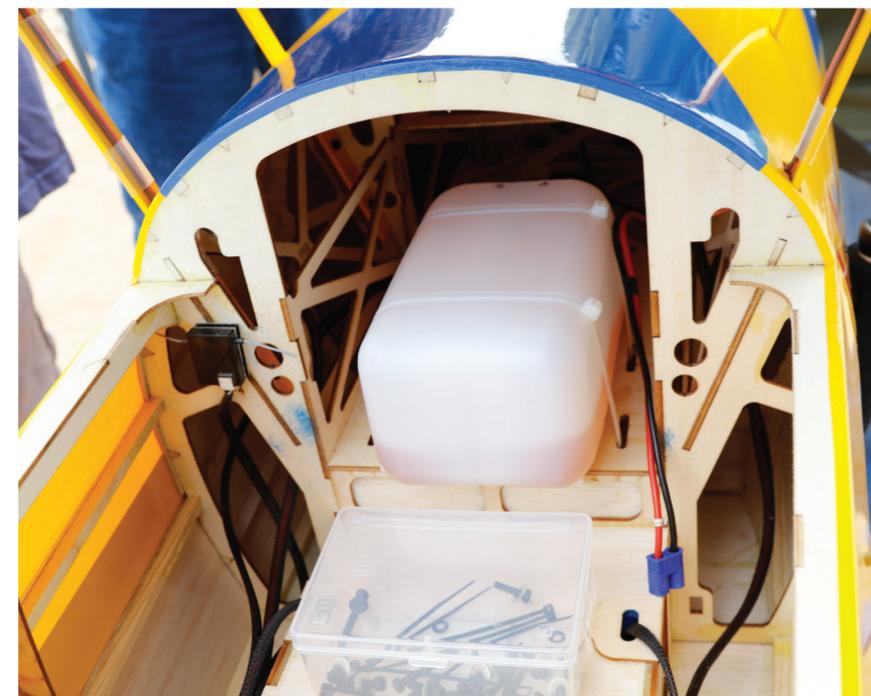
**ENGINE**  
Evolution 125GX with Bisson mufflers

**FUEL**  
87 octane pump gas mixed 40:1 with Red Line two-stroke racing oil

**PROP**  
Mejzlik 27x10TH carbon



There is plenty of room under the hatch/canopy, giving you options for mounting your radio equipment.



The front-hatch area has plenty of room for your fuel tank, with easy access to everything else in the nose.



Having the elevator servos in the tail helps keep pushrod setup nice and simple.

Model 12 Viking is a semicomplex aircraft that I recommend for intermediate modelers and pilots. This is mainly due to the size of the model, combined with the knowledge needed when working with large gas engines. Add to this the fact that this is a biplane and you can see why you would want a few models under your belt before tackling this aerobat.

**UNIQUE FEATURES**

Upon inspection of the kit contents, I was happy to see that Hangar 9 used round pinned hinges on all surfaces except the rudder. The rudder is hinged with flat hinges with removable piano wire, which will make any necessary repairs much easier. All surfaces come hinged and glued except for the left elevator, which is left off so that the stab can be slid through the fuselage during assembly. The hinges do come glued into the elevator, however, so you only need to glue one side. Be careful not to use too much epoxy on the elevator hinges. The hinge holes are sealed, and when I put a little too much epoxy in one of the holes, I noticed that the excess had escaped under the covering. I rubbed the area with my index finger to avoid having a lump

under the skin of the horizontal stabilizer.

Of course, one of the nice things about a large aerobatic biplane is the lack of retractable gear and flaps. The attachment points of the interplane struts—and the fact that there are four wings to attach—is enough complexity for one model. I have to say that Hangar 9 did a great job of simplifying this as much as possible. There are no flying wires to worry about on the wings, and everything is held together with 6-32 and 4-40 bolts.

All of the fiberglass and Lexan parts come drilled, so you can mount them using screws. Only the small covers for the cabane-strut attachment points in the center section of the top wing need to be glued in place with canopy glue.

The markings, which perfectly replicate those of the full-scale plane, are decals that are added at the factory. This is a nice touch and really helps speed the assembly process. In looking at the Scandinavian Airshow website, I concluded that Hangar 9 did an amazing job of making this model represent its full-scale counterpart.

All the hardware has standard threads

(most are 6-32 socket head cap and button head screws). Everything is of high quality, and nothing is left to be desired. Even the included wheels are of high quality and are sure to provide years of service.

No modification was necessary to complete the Viking. One thing I noticed was that the manual only had steps for installing one elevator servo. Coincidentally, only one of the servo openings in the tail of the fuselage was

precut to accept a servo. Opening the other side was simple enough, so just be aware that it will be necessary. One other thing that I strayed from the manual on was related to the routing of the extension wires for the top-wing aileron servos. Instead of clear tape, as recommended by the manual, I used clear heat-shrink tubing. I think it looks cleaner and will provide a longer-lasting solution.

Installation of the engine was straightforward.



## PUTTING ON A SHOW

Owner of Scandinavian Airshow and the full-size Model 12 Viking, **Jacob Holländer** was nice enough to chat with me and answer a few questions about the Viking and his impressive experience as a full-scale pilot.

**Model Airplane News:** *You are obviously a very accomplished pilot. Please give us an overview of your piloting experience. What drew you to flight?*

**Jacob Holländer:** I flew for the first time at two weeks old. Then I started flying to airshows in the front seat in my father's Pitts S2A when I was a young boy. I did my solo in gliders when I was 14 years old and got my private pilot's license when I was 18, which is the youngest you can get it in Sweden. I flew my first Airshow at 18, flying a SAAB Safir in a four-plane formation. I crossed the Atlantic from the U.S. to Sweden in 1992 at 19 years of age in a SAAB Safir flying formation with my father in his Catwalk.

I flew airshows in a Yak-52, AN-2, and Pitts S2B from 1993 to 2005. And since 2005, I have been an airshow pilot with Viking, Thor, and Catwalk Skycats Wing Walking and L.L.P. I have been airline pilot since 1995.

**MAN:** *Is the Viking a stock airframe that can be purchased, or is it a modified version of a more basic airframe?*

**JH:** The model 12S is a stock offering from the factory, but it is modified with some tube enforcement where the passenger seat is in the standard model.

**MAN:** *How many Gs is the Viking capable of sustaining?*

**JH:** +/-12G are the normal G limits. At airshows, we limit it to +9/-6.

**MAN:** *Your website lists your performance as a 3D performance. Are there any maneuvers that you see us performing in the RC world that you wish the Viking could perform?*

**JH:** The big difference between the RC and full-size Vikings is the mass and power. With the full-size Viking, everything goes slower compared to the RC plane. Same with the power; you need to add much more power into Viking to be able to accelerate vertically out from hover. When time permits, I would like to explore more accelerated and high-rotation spins. I think that some maneuvers that you can do in an RC plane will be too violent to fly in a full-scale plane. But some maneuvers will become reality with new material and especially with more power.

*Wow, what an impressive pilot to complement an equally impressive aircraft. For more information on Jacob, his team, and their aircraft, head over to the Scandinavian Airshow website at [airshow.se](http://airshow.se).*



The firewall has blind nuts preinstalled, and there are 1/4-20 screws of the proper length included. There are also pieces of hardwood dowel cut to length to be used as engine standoffs.

As always, I recommend a thorough review of the instruction manual before you begin assembly. This simple step can help you plan your actions and minimize issues. You know the saying: "Measure twice, cut once."

**IN THE AIR**

Ground handling is exceptional for a tail-dragger; it's predictable and positive. Takeoff is as simple as adding power slowly and gently keeping the model on the centerline using the rudder. At half throttle, she is airborne within about 100 feet. Landing takes a little more room, at a minimum of about 200 to 300 feet because of the amount of mass that needs to be slowed down.

**GENERAL FLIGHT PERFORMANCE**

**Stability:** The Model 12 Viking is extremely stable. The ample wing area keeps things nice and controlled even at slow speed. This plane

was designed to handle 3D aerobatics, so even in high-alpha flight, I never felt that the aircraft was not fully controllable. Upright and inverted harriers were stable, and the rudder combined with ample fuselage side area provide great steering in these attitudes.

**Tracking:** Tracking was an area where the Viking surprised me. This plane would be comfortable competing in IMAC aerobatics. Tracking is nice and straight, making flying nice straight lines as easy as pointing the Viking in the direction you want to go and letting it do its thing. I balanced the Viking about a 1/4 inch aft of the recommended starting point. Even balanced a hair on the tail-heavy side, the Viking felt locked in. Slow rolls were laser straight, and I never noticed a tendency to "hunt" for the line.

**Aerobatics:** Aerobatics is what the Model 12 Viking is all about. From nice long slow rolls and high-energy snaps to high-alpha rolling harriers, the Viking is ready for action. I could write about the aerobatics this plane is capable of for pages! Knife-edge is incredible with the Viking and requires very little rudder to maintain altitude. With a little bit of aileron and elevator mixing, even knife-edge loops are uneventful.

I really enjoyed flying rolling circles with the Viking. Ample rudder authority and extremely axial rolling make for rolling circles that present beautifully. Both inside and outside rollers were a blast to fly.

**Glide and stall performance:** With large amounts of drag due to having two wings and a lot of frontal area, biplanes aren't really known for their glide performance. The wings on the Viking are fairly thin, which helps this, but when the power is cut, she still slows down quickly. As long as you keep this in mind, you will not be surprised by the glide of this model. Just keep the nose down and aim for your landing point. Stall performance is excellent due to large amounts of wing area and low wing loading.

**PILOT DEBRIEFING**

I was really happy with how the plane performed aerobatics: slow rolls, point rolls, rolling circles, harrier, harrier rolls—the list is endless! I can't wait to get even more stick time and see what I can really do with this plane.

**BOTTOM LINE**

Construction time will vary depending on the skill level of the modeler. I was able to complete the Viking in about four days. During this time, I probably spent between three and five hours per day in the shop. The assembly methods used are common and could be considered easy. With the size and power of this model, however, all steps are critical. My recommendation is to take your time and enjoy! ✚



Always be sure to check your prop bolts each trip to the field.

