

Flying the HP-24

The Tetra-15 is the first glider built as part of the HP-24 project. Brad Hill was the builder. Brad has a good track record of building gliders. He has also built a Russia and an Apis. The first flight of the Tetra was in January of 2012. Since then Brad has put around 500 hours on this glider, a real testament to the quality of the construction as well as the quality of the handling.



I happened to be at the Arlington airport for a day and Brad was kind enough to offer me a flight in the glider. I wasn't going to say no! After a cockpit checkout I was on the line and ready to launch. Takeoff was performed with +1 Flaps. Brad's glider has 2 positive detents for flaps. I had a quartering headwind which wasn't very strong. Roll control was excellent in the early roll. The stick was held in the neutral position. Trim was slightly forward of its neutral position, perhaps 2/3 forward. As the speed built up I moved the stick slightly forward to lift the tail just a bit and let the glider fly off the ground.

On tow, the glider tracked straight as an arrow. I was able to fly extended periods without touching the stick in the smooth marine air near the airport. Everything was just as you would expect from a modern, well designed sailplane.

Off tow I first did a stall with full flaps and the gear up. Indicated speed at the stall was about 38 knots. The stall felt normal with some aerodynamic buffeting as a warning and a quick recovery once I moved the stick forward just a little. Then I played with the flaps a little just enjoyed the very slow descent rate. I didn't go over 80 knots as there was no need. There was no thermal activity. I did do a series of steep turns which felt very good and tested the roll rate. The roll response was very good, I went from 45 to 45 in about 3 seconds. Control forces are just high enough to keep the roll from being twitchy. It had a very solid feeling.

By now it was time to land. The gear came back down and I set full flap for the landing. Brad usually does not use full flap for the landing but I wanted to see how steep of an approach was available and I like minimum speed touchdowns. I was impressed fully with the approach angle, in fact I had to ease off the airbrakes to almost nothing towards the end as I had slightly misjudged and was heading for the beginning of the landing area instead of the middle where I wanted to touch down. Touchdown was slightly tail low and felt really nice. The only hiccup was that I was soon launched off a bump in the grass and back airborne! Oh well so much for getting a 10 from all the judges. We were back on the ground shortly.



All in all I was very pleased with the glider. The cockpit is large and comfortable. I am 6'1" and 210 lbs but Bob designed the glider for up to 6'6" and 300 lbs. The only thing I didn't like about the glider was a few of the ergonomics in the cockpit controls. The flap and airbrake handles were really close together and it was easy to bump the flap handle and retract them while reaching for the airbrake handle. This has been corrected in the kit gliders. I also didn't like the gear retraction handle but Bob has also changed this to be more conventional in the kits. The only quirk I found on the glider was that in the full flap position it rolled off to the left a bit, requiring slight right aileron to correct. I think this must be caused by a slight mis-rigging. Brad

never uses the full flap position so he hasn't been annoyed by it enough to track it down and fix it. He's been too busy flying!

For more information on the HP-24 Project, check out their website <http://hpaircraft.com/hp-24/>. To follow along with current progress see the projects Facebook page <https://www.facebook.com/pages/HP-24-Sailplane-Project/200931354951>. The first kit compliant glider should be flying in October of 2014 and there are at least 3 others in the pipeline at this time. I think this is one of the most exciting things happening in the sport at this time and I'm glad that I've had a chance to be just a little involved in it. If you have the opportunity to attend one of the Akaflieds I highly recommend it. You'll get to spend a week working with Fiberglass, Carbon Fiber, and Kevlar and building real flight articles, perhaps for your own future HP-24.