



John Vennerholm with Paragon after 8 hour, 2 minute LSF Level V flight. Note waist pack for external transmitter batteries. Blue and yellow transparent monokote gave excellent, high altitude visibility.

## 8 Hours to Level V

By John Vennerholm, LSF Secretary  
(Vouchers)  
Spruce Pine, North Carolina  
jvgv@m-y.net

I have been a member of the League of Silent Flight for over 22 years, but I still remember the day when I received my voucher for Level I. At that time, many of the tasks that lay ahead seemed truly beyond my skill as a model enthusiast. I can remember those first precision landing attempts in the quiet of the evening in Yellow Springs, Ohio, gently bringing my Zaic Floater in toward the landing spot. We would run out with the tape and eagerly measure the distances for those first landing goals. Years later came the special tasks required for Level IV and V, which were the most interesting and challenging. But the greatest legacy of LSF has been the many lasting friendships gained at the countless contests across the Midwest where I learned what a great sport RC sailplaning really is.

I am a life member of DARTS, the Dayton Area Thermal Soarers, and it was with the help of my good friends in DARTS that I had completed all of

the Level V tasks, with the exception of the eight-hour slope flight, before I moved from Ohio to the Carolinas in mid-1984. I then joined the High Country Soaring Society in the Asheville, North Carolina area, and learned from my new friends what it is like to throw my favorite airplane off the top of a mountain!

In the fall of 1985, I finally began to get serious about getting my 8-hour slope flight. The first attempt was on Big Bald, a peak about 5600 feet high, situated on the Tennessee-North Carolina border; the second was at Butler Mountain, a 700 foot high peak, directly south of Asheville, NC, which itself is about 2200 feet above sea level. Both of these attempts ended with my time in the air falling far short of the required eight hours, due either to deteriorating cloud conditions or insufficient wind. Finally, on August 24, 1986, all the conditions were right for another attempt on Butler Mountain. Butler has a beautiful grassy dome and is surrounded on all sides by trees and bushes. One can see Asheville spread out below and the peaks of the Smoky Mountain National Park rise clear and sharp on the western horizon.

Planning an eight-hour attempt involves some logistics. The site has to be such that the winds predicted throughout the day are from the correct direction. There have to be enough LSF Level II (or higher) members present to properly sign vouchers. And there has to be sufficient daylight available at the end of the flight to safely land airplane.

I was flying a Paragon using only rudder and elevator, leaving the spoilers disconnected to conserve battery power. (Later in the day I would wish that I hadn't done that.) The flight pack consisted of four C-alkaline batteries with soldered connections. With only two servos on line, this was probably enough power for several eight-hour flights. I just wanted to be very sure that batteries would not be a concern, because there were going to be enough other things to worry about during this long day. I

had added one pound of lead ballast in the fuselage bay directly ahead of the wing spar.

My transmitter had its normal interior power supply, but I also had a waist pack of eight D-alkaline batteries with soldered connections, using a flexible lead to a DIN plug that originally was the trainer plug on the side of the transmitter. I had added a slide switch to the transmitter which allowed me to switch to external power. I planned to start flying with transmitter power on external and if the meter should show a drop into the red, I could switch to internal power knowing that there would be at least two hours of flying time remaining.

I launched at 10:27 A.M. About 250 feet down the north side of Butler Mountain is a row of large trees which can set up a fierce horizontal vortex or rotor, which one has to penetrate to get out into the main lift. The only way to succeed is to launch the airplane and dive along the contour of the hill through the turbulence. The airplane went through some violent rolls before it finally passed into the smooth laminar air out in front of the mountain. Then it shot up like it was on an elevator. If the airplane can not penetrate the wind coming up the face of the mountain, there is no way it will be able to penetrate the area of maximum velocity which occurs directly over the top of the mountain. If the plane doesn't have any excess penetration ability, it is important to never let it fall behind the front of the crest of the mountain. If this should happen, even diving it steeply toward the ground will only cause it to fall further back... into oblivion.

At first, there was a low cloud deck over the mountain. The visibility up to the cloud deck was good, although the actual bottom of the overcast was indefinite at about 600 or 700 feet.

I spent the first hour of the flight keeping the airplane generally pointed straight out from the mountain and not allowing it to get too high. I was very concerned about having it get completely swallowed in the clouds. I

At the beginning of the second hour I could feel an increase in air temperature and the bottom of the cloud deck began to rise noticeably. After noon, the bottoms of the cloud deck were quite high, I had essentially unlimited range out over the valley, and could reach heights where the stabilizer of the aircraft became indistinct due to the extreme distance.

During the third hour, the overcast began to break up, revealing a fair amount of clear blue sky. I could see small cumulus clouds begin to form out over the valley and as they moved in toward the mountain, they would build and fill out and become dark gray underneath. As each cloud came by, I could spend three or four minutes getting literally sucked up into the big, dark, evil-looking centers. But when the airplanes became very difficult to see because of the extreme height, I would have to dive out from under the cloud and quickly move over into some clear blue sky where I could get back down to a sensible height. The possibility of flutter due to high speeds and turbulence are a definite hazard in conditions like this.

As the day wore on, I experienced a predictable physiological situation. I had been very careful of the amount of liquids that I had consumed the night before and earlier in the morning. But Mother Nature seems to be a little cantankerous at best, and I had my first of several trips over to a convenient spot on the windward side of the mountain. Not only does wind tend to blow our airplanes about, it'll blow hardest when you need it the least. So when one is trying to keep one's eyes on the airplane and one's shoes dry, one will discover a Level V task that isn't on any LSF voucher.

I approached and passed the first milepost on this flight, 3-1/2 hours, the longest that I had ever flown. At that time, I began looking for the same kind of perceptual deterioration that I had encountered during earlier attempts. Very slowly, I started to realize that I was not taking an active part in the flying of my airplane. I would find myself acting more like an interested

observer and had to mentally jerk myself back into the idea that I must control the airplane, not just sit there and watch it fly around. This problem will creep up on you as your mind wanders with fatigue and is a potentially serious situation that your friends must keep you aware of.

The wind then shifted a bit to the west of north and I had to spend the hours of the flight facing almost directly into the sun. My visual acuity was deteriorating further and I was losing peripheral vision from staring at the sky for so long. It was all I could do to concentrate on the airplane in one small portion of the clear, blue sky.

I had spent most of the day either sitting in a chair or a lounge or just lying in the grass with the transmitter propped on my knees, with the tip of the antenna held stationary at a point in the sky. I would use the antenna tip as a reference and fly the airplane in a pattern around the tip of the antenna. This was a great help in keeping the airplane from wandering all over the sky.

Finally, the seven-hour mark came and it was then a matter of counting down those last 60 minutes. It was a very, very long hour. During this period, however, the wind increased and I was able to fly the airplane once again to an extremely high altitude. I would occasionally lose sight of the stabilizer and realize that I was too tired to judge the rate at which the airplane was climbing. I can remember asking my timer if I should come down. He said, "Stay up." And I said, "But, maybe it's getting too high." And he said, "Stay up." Every time I would ask him if he thought I should come down, he'd just say, "Stay up." I was so tired at that point that I absolutely could not make a judgment as to whether I should come down or how high the plane really was. He was correct. If you have altitude, don't throw it away. The wind can die without warning at that time of the day and every foot of altitude becomes precious.

Soon my friends began counting down the time remaining to the end of the

flight. At ten minutes to go, I thought, "Just a regular old max. I guess I can handle that." They counted me down minute by minute, and soon I was racing through the last 60 seconds. Finally, they announced, "**EIGHT HOURS!**" Everybody cheered (probably because they knew they could finally go home).

It was time to bring the airplane down very carefully, because even though I had stayed up eight hours, the landing had to be within 200 meters of the launch point or the whole flight would be invalid. When I stood up from the lounge where I had been sitting for the past two and a half hours, I was so unsteady that a friend had to hold my shoulder and literally keep me from falling over. I didn't feel comfortable taking my eyes from the airplane and looking down at the ground, changing focus as I walked backwards and turned to see the landing area. My reflexes were very, very slow. The Paragon didn't have spoilers and was awfully high. With my fatigue, it was difficult to bring it down without building up too much speed. I started to spiral down and immediately succeeded in getting right smack into the sun. Turning around, I saw the grass and trees at an angle which began to disorient me a little bit. So I just planted my feet and stared at the airplane as it curved toward me around the top of the mountain.

The plane was rather heavily loaded with ballast and it was on approach at a high speed. On final, the Paragon encountered ground effect and began to accelerate. In this situation, the airplane could have zoomed right past me and right out in front of the mountain again. I was too tired to face another approach and knew I had to put the airplane down on the first try. So I pushed down elevator and blasted into the grass. After winning all those tough contests and after all the practice I had for landings for Levels I and II, my last task for Level V resulted in an upside-down landing! Oh, well...

As I think back about the flight, I realize that we who have made an eight-hour flight have experienced

something unique, the opportunity to watch the sky continuously for an entire day with no interruption. I watched the sky go from overcast, dark and gray, through various stages of cloud, until it was clear and brilliant blue. I saw all the changing cloud formations and watched them form from nothing and grow and become full-sized cumulus and then dissipate. I watched the changing sunlight color the sky and I flew with several hawks. And I saw all of this as one continuous visual experience from 10:30 in the morning until 6:30 that evening. All of you have watched clouds form, and watched the sky, but how many of you have actually seen it evolve through an entire day and not miss a single thing? Many of you will call it complete physical and mental anguish. I think it was a fascinating experience.

I owe a big debt of gratitude to all those people who have helped me achieve Level V. I am pleased to be able to share my experience through the courtesy of *RCSD* and perhaps encourage some of you out there to continue until you have your Level V, also. It seems that once someone completes a difficult task, others become encouraged to try and that is the real spirit of modeling. So for those of you who still look forward to your eight-hour flight, or any other task, perhaps some of the things I have shared with you may help you prepare for that day when you climb a mountain somewhere and throw your favorite bird off into another world.

**Good Luck and LIFT! ■**