



*Aero-Tow at Stillwell?*

Nope. That is a full-scale Piper Pawnee tow plane launching a high performance single seat sailplane at the Sugarbush Airport in Warren Vermont.

A few weeks ago I decided to play hooky from work. I rented a Cessna 172 at Islip MacArthur Airport and flew up to Vermont with an instructor buddy of mine to Sugarbush Soaring, [www.sugarbush.org](http://www.sugarbush.org).



*My Ride*

The scenic two hour ten minute flight went by quickly. I always enjoy hearing war stories

from my instructor friend Gabe Nadasdy. Gabe flew F4 Phantom's during the Vietnam era.



*Retired Air Force F4 Phantom Driver Gabe Nadasdy*

I wanted to take a flying lesson in a high performance sailplane to see how much similarity there is to flying our models. Both Gabe and I took our lessons in a Polish Politechnika Warszawska PW-6U.





*A PW-6U sailplane balancing on one wheel while being lined up*

The PW-6U is an all composite two seat acrobatic advanced trainer. Normally Sugarbush Soaring utilizes the Schweizer 2-23 for initial pilot training.



*A Single Seat Schweizer*

The Schweizer is a 1960's steel tube fabric covered trainer. The Schweizer is way more docile than the composite PW-6U. The Schweizer has a 23:1 glide ratio while the PW-6U has a 35:1 glide ratio.



*Schweizer 2-23 on landing approach with spoilers deployed*

The PW-6U's performance would be more in line with the performance of our Supra, Aspire, and Explorer models. When you climb into the PW-6's cockpit you feel like you are climbing into a tandem two seat fighter jet. Just like Gabe's F4 you have two separate cockpits each with its own Plexiglas cockpit bubble canopy. Visibility is terrific and unrestricted. You strap into the sailplane in a partial prone position with a four point safety belt system. You would be wearing a parachute if you were planning on performing acrobatics.

There is a large hand lever on the left side cockpit wall where the throttle would be on a fighter jet. This handle operates the huge airbrakes/spoilers. John, my Sugarbush instructor, taught me that you use the spoilers like a throttle in the landing sequence. A conventional stick operates the elevator and ailerons. Conventional rudder pedals work the rudder. The rudder pedals lock your feet in so that your feet will not fall off of them during acrobatic maneuvers.

Takeoff can be accomplished with a huge version of the winches that we launch our models with. Sugarbush utilizes the more common aero-tow launch method. As you can see in the pictures, a lineman connects a synthetic line to a tow hook on the nose of the sailplane. I had to pullback a large yellow

ball handle in the cockpit to open the latch hook for the lineman.



*My takeoff roll*

The lineman uses hand signals to confirm that the sailplane pilots are ready. Then the lineman walks out to one of the sailplanes wingtips. These high performance sailplanes have either two or three wheels in a straight line like a roller blade. The sailplane thus leans over with one wingtip skid on the ground. A signal is given to the tow pilot to start the takeoff roll. The lineman runs down the runway holding the wing perpendicular to the runway and level with the earth until the sailplane achieves enough of speed to have aerodynamic control authority.

It is challenging to keep the sailplane directly behind the tow plane during the climb out. When we reached 4,500 feet, about 3,000 feet above the terrain, I was instructed to pull the yellow ball to release the tow line. I immediately banked the sailplane to the right while the Pawnee tow plane pilot immediately banked to the left to avoid any possibility of a midair collision between our two aircraft.

John instructed me to turn toward a ridge where some small cumulus clouds were building up. John said that there is usually lift under the dark sections of the cumulus clouds. The variometer told us that we were in sink dropping at 800 feet per minute. John had me increase our speed to 60 knots to

leave the sink as quickly as possible. I reduced speed to 45 knots under the dark clouds and started steep banking turns in the lift. The lift was sporadic and never more than 400 feet per minute for short intervals. We ended up racing between small dark cumulus clouds searching for the sporadic lift. It was hard work. Eventually I was able climb back up to 4,500 feet after losing 1000 feet in sink.

John had me practice stalls. I am well versed in stall recovery from flying powered aircraft. The sailplane was extremely docile in the stalls and stall recovery. John then entered a spin. In 23 years of flying I have never done a spin. The FAA had removed the requirement of spin training from the private pilot training syllabus before I had started my flying lessons. The FAA felt that there were too many training accidents during spin training. The FAA felt it was better to teach stall avoidance and recovery instead.

The spin was uncomfortable. The sailplane's nose is pointed at the earth and spinning 360 degrees. John quickly recovered from the spin. Soon it was time to return to the airport so that Gabe could take his lesson.

John stated that you have to manage your energy correctly. Every landing in a sailplane would be an emergency landing in a powered aircraft. There is no power for a go-around. We entered the pattern on a 45 degree angle to a right downwind at 2,600 feet. This was about 1,100 feet above the terrain. John stated that we would use our extremely large spoilers to regulate our sink rate. Apparently the key is to pick an approach angle, distance and altitude from the runway in the dead middle of what you need to make the airport runway safely. If you accomplish this, you can adjust your height with the spoilers. I was able to maintain a 60 knot approach speed while descending rapidly with the spoilers deployed. You retract the spoilers if you want to dramatically reduce your rate of descent. In other words, you work the

spoilers as you would a throttle to control your descent rate while maintaining a constant airspeed and pitch attitude. Our landing was smooth and uneventful, just the way I like them. You use the rudder to control your center line during the roll-out. There is a hand brake for the single main landing wheel.

It was amazing to find out how similar flying our models is to the full-scale sailplane. The full-scale birds use thermal lift, wave lift, and ridge lift just like we do. Sink is an enemy to both aircraft. Finding elusive lift is just as difficult in both aircraft.

There are some differences. The spoilers are way more effective on the full-scale sailplane. These advanced full-scale sailplanes do not utilize flaps. Some of the super high performance, non-trainer sailplanes do have flaps that can be set in different modes like our models. Some of these top of the line sailplanes have 50:1 glide ratios, pretty impressive.

Sugarbush Soaring in Warren Vermont offers scenic rides. Don't worry; they fly these scenic rides in a sedate manner. No acrobatics, no stalls and no spins. The friendly staff at Sugarbush Soaring stated that their fall foliage is in full splendid colors between the last week of September and the

second week of October. You might enjoy taking your significant other up for a fall weekend. Sugarbush Soaring can recommend hotels and bed-and-breakfast establishments in the area. Tell your spouse that you are taking her up to Vermont for a romantic weekend. You just might be able to sneak in a flight.

Vivian and I are going up for a weekend. She will be shopping while I take a few lessons.



Happy Soaring,

Bob Anderson

*[View the photos in this article plus more from Bob's flying trip, all in higher resolution, here.](#)*