

Skylines

Skyline Soaring Club
Front Royal, Virginia
July 2026



The President's Corner

Sometimes it feels like SSC members only get to hear me gripe about issues going on in the club, but the reality is that we have a great club with lots of members who pitch in—in ways both large and small—to make soaring both possible and fun. I would like to highlight a few instances that have reminded me of that lately. I was DO'ing a few weeks ago, and we had plenty of people who stuck around—even if they had landed hours ago—until the very end of ops to help put gliders away. It was greatly appreciated, and the camaraderie helped pass the time until Piet and Nick finally decided to land their gliders! To continue the fun, a large group of us went out to dinner afterwards to celebrate a successful day of ops. That's what makes our club different than a commercial operation!

Preparations are also well underway for the Week of Training (WoT)—including Mike and Erik spending a good chunk of Saturday fixing up the trailer! The WoT is another great example of how volunteerism enables fun. We have a roster of instructors who volunteer to sit in the back of a stifflingly hot glider for a week straight, ADOs who volunteer to do highly physical hookups on asphalt under the July sun for a week straight, and tow pilots who will fly sun up to sun down

for a week straight, all so that our students can have the opportunity for a compressed training schedule that will advance their flying skills faster than weekends at KFRR ever could. (P.S. There are still a couple of open student spots—sign up on the SSC website ASAP!) But despite (or maybe because of) the intensity of the week, it's still a blast—I've heard Andrew describe it as better than Christmas! Everyone at WoT gets to really know each other while chatting on the flight line, dinner after ops at the camp site, or even waiting out weather delays in the FBO, although we certainly hope that those are kept to a minimum. You come away from the WoT feeling like friends, not just people who see each other at the airport once every few months. It's another feature that makes our club special.

To close, I'd like to challenge each member to think about how you can help keep SSC flying and fun. I recently put together a list of everyone I could think of who had some sort of volunteer role in the club. I ended up with more than 30 names on that list, which is incredible, and I thank every person on that list. And while we do have some vacant (or soon-to-be-vacant) roles that we'd love to fill, you don't need to make a formal commitment to help keep SSC flying and fun...just be an active and consistent part of our community!

Notes from the Board

The Board of Directors did not meet in June. The next meeting is scheduled for July 1.

Safety

Heat Illnesses: I've learned a lot about heat illnesses from both working over 30 years in the ER as well as participating in activities that expose myself to prolonged heat.

Most common is Heat Fatigue, something that most of us have experienced. It is that out-of-proportion fatigue that hits us after spending a few hours in the heat. Most commonly, it's just that 'I need a nap' feeling without really any other symptoms. If you are out in the heat and especially if you're exerting yourself, listen to your body. Get out of the heat, take a break and drink some cool/cold water (ideally something with electrolytes). Most people recover in just an hour or so and can return to their activity. A step up from this is headache, usually felt in the back of the head and neck. Don't ignore headaches in the heat, it is commonly the first symptom that you are starting to get into trouble. Again, get out of the heat, take a break and drink cold fluids with electrolytes. Most people recover in just an hour or so but if you need to return to the activity, you need to take it down a notch. If the headache returns, it's time to cool off and call it a day.

Heat Cramps are more serious. These are muscle cramps that can occur anywhere in your body, but most frequently occur in the calves or thighs. They can be isolated cramps or more severe, in multiple areas simultaneously. These are due to an electrolyte imbalance usually due to excessive sweating and sodium shifts occurring within the body. These need immediate treatment with rest, cooling and sodium replacement with full strength sports drinks and sometimes even salt/electrolyte pills/gummies. In a worst case, patients need IV therapy with high dose sodium infusions and sedatives like Valium. You'll know when to call 911 because the patient will be screaming in pain.

Most serious is Heat Stroke, which is the person working out in the heat who starts to get confused. This is a true medical emergency that can be fatal. It's rare but it's important to be able to both recognize it and start treatment immediately, don't wait for EMS to arrive. Not uncommonly, the

person has stopped sweating and the body has lost its most important mechanism for cooling causing body temperature to spike. Douse them in water and fan them to promote evaporation. Then move them to a cool area and remove most of their clothing. Call 911 ASAP because these folks need immediate emergency care.

There are other forms of heat illnesses but heat fatigue and heat cramps are most common and heat stroke is the most serious. My own cocktail to help me feel my best when ADO'ing in the heat is to drink half strength Gatorade Lite (diluted 50% with water). My goal is to drink a quart in the morning and a quart in the early afternoon, more if I'm not peeing or if my urine is darker than a light yellow. On a side note, when flying, I think it's important to have a good reliable urinary relief system so there is no incentive to minimize drinking because you don't want to pee during a prolonged flight.

[Christopher Wuerker, MD NREMTP, Safety Officer]

Instructor Talk

Canopies: I have decided to include the following because I have recently seen occurrences of all of the issues raised below. Please take note and make a conscious effort not to be the next person to damage a canopy. *[George Hazelrigg]*

IMPORTANT-PLEASE READ

In a previous newsletter, I urged everyone to be sure they know how to do something before they do it so as not to damage our equipment. This is particularly important with respect to the treatment of glider canopies, three of which have been broken over the past couple years with a combined expense exceeding \$30,000. As a pilot, you are responsible for proper treatment of the canopy any time you are handling or using a club glider. If you are flying with a passenger, you are responsible for briefing your passenger on proper treatment of the canopy particularly during ingress and egress. Despite my previous plea, I continue to see people mistreating our canopies. A common example is when a person opens or closes the canopy holding it by the vent window. **This is likely to break the canopy!** Another example is holding onto the canopy while

entering or exiting the glider. This can damage the frame as well as the plexiglas. A common mistreatment is lowering the canopy while holding it with a hand on the plexiglas. This will leave smudges that impair vision in flight. And the glider should never be pushed with hands on or near the plexiglas (duh). **HANDS SHOULD NEVER TOUCH THE PLEXIGLAS.** Canopies should ALWAYS be down and latched when unattended or when moving the glider. Note that leaving the rear canopy of the K-21 open can set the glider on fire—really! Make sure you know all the above and your passengers are well-briefed before entering the glider. Finally, you need to know how to clean the canopy—what cleansers can be used, how to use them and how to wipe the canopy clean.

Quick Tip: Keep an eye on the recommended speed-to-fly number at the bottom of the S3 variometer in the ASK-21's — if it says 44 (knots), you are in lift! [*John Noss, Chief Instructor*]

Food for Thought—Slack Line:

[*John Noss, Chief Instructor*]

I am regularly reminded when I fly as an instructor, with both students and rated glider pilots, that there is a LOT of difference in how we were collectively taught to handle slack line on tow, and how we still handle it today. I have been in the back seat with an experienced rated glider pilot up front who snatched the spoilers full open unexpectedly with slack line, and before I could take control, broke the rope. I have flown with students and even other instructors who jammed in a bunch of rudder until the slack comes completely out just because that is how they learned it. So, if you will indulge me, let me try to break down some facts and instructional history involved....

Slack happens. It could be due to turbulence (I've seen some spectacular examples towing through rotor), or by flying inside a turn and decreasing distance on a shorter arc without decreasing speed thus creating slack, or by skating outside a turn and picking up speed then trying to correct and creating slack, or by getting high and creating slack while trying to settle back into normal position too quickly. In minor cases, just moving back into proper tow position and letting the slack come out

is easy enough. In serious cases, we have to deal with two very distinct problem phases in order.

First, when the glider is going faster than the towplane, the slack is increasing. To keep it from getting worse, the appropriate initial response is to slow the glider by increasing drag, and/or offset laterally (which increases distance from the towplane without changing airspeed much). Slowing the glider can be done by yawing, or slipping, or climbing (if you are not already level with the towplane), or in extreme cases by opening spoilers. In terrible cases, it is important to stay away from the sagging rope and not let it loop behind a wing, and an immediate release-and-avoid may be your only good choice.

Second, at the instant the slack starts decreasing, drag is no longer your friend. The shock on the tow rope (and on the towplane and the glider) is a function of the difference in speed between the glider and towplane when the slack comes out, the amount of stretch available in the rope, and the interval of time in which that “jerk” happens. The rope does not care if you have a lot of yaw or spoilers open when the slack comes out, only the speed difference matters, but in the end any extra drag only makes it worse. Lateral offset actually does help reduce the shock, because the geometry reduces some slack directly and spreads out the time required to equalize speeds. Here are some rough numbers on lateral offset geometry:

- Being 10 feet inside the normal length of a 200-foot rope gives about 25 feet of slack drop.
- Flying a 60-foot lateral offset (about the wingspan of the K-21 or 17 degrees off the towplane tail) alone removes that 10 feet of slack and sets up a smooth return with no airspeed change.

Let's look at the current standard for slack line in the Private Pilot Glider PTS: “*D. TASK: SLACK LINE; Ref FAA-H-8083-13 (FAA Glider Flying Handbook) Objective. To determine that the applicant:*

- 1. Exhibits knowledge of the elements related to the causes, hazards, and corrections related to slack line.*
- 2. Recognizes slack line and applies immediate, positive, and smooth corrective action to eliminate slack line in various situations.”*

So, that is basically just a requirement to understand it, recognize it and deal with it. There is

no approved technique specified, except a reference to the GFH.

Now, let me walk you through a few historical training documents that explain how some institutional misguidance persists. When these documents were written, it was with best intent by experienced glider instructors who were certain they understood the issues and wanted to promote safer flying, even if they were wrong. (My personal observations follow the asterisks below each reference.)

1961 SSA American Soaring Handbook – *“If a large amount of slack develops, the slack and the shock which occurs when the rope tightens can be reduced by yawing the sailplane to one side with rudder.”*

*** Clearly over-simplified and incorrect. (This was the glider instruction manual everybody used when I started flying gliders in 1970.)

2003 FAA Glider Flying Handbook – *“Slack line recovery procedures should be initiated as soon as the glider pilot becomes aware of the situation. The pilot’s initial action should be to yaw away from the bow in the line. In the event the yawing motion fails to reduce the slack sufficiently, careful use of spoilers/dive brakes can be used to decelerate the glider and take up the slack. When the towline tightens, stabilize the tow, then gradually resume the desired aerotow position.”*

*** Still says to yaw until the slack comes out.

2013 FAA Glider Flying Handbook – *“The glider pilot should try slipping back into alignment with the towplane. In the event that slipping fails to reduce the slack sufficiently, careful use of spoilers/dive brakes can decelerate the glider and take up the slack. When the towline tightens, stabilize the tow and gradually resume the desired aerotow position.”*

*** “Yaw away from the rope” is no longer in this version, replaced by “slip,” but still does not explain two phases.

2013 Tom Knauff, Glider Flight Training Manual – *“Moderate slack should be removed by first doing nothing. To help soften the jerk, the glider pilot can yaw the glider away from the rope by applying rudder an instant before the rope comes tight. When it does come tight, the nose of the glider will be pulled around and thus soften the shock.”*

*** One of the worst bits of advice (to yaw

an instant before slack comes out), not founded in physics or aerodynamics, but widely read and adopted.

2014 Russell Holtz, Flight Training Manual For Gliders – *Six pages devoted to slack line recovery! Emphasizes avoiding the rope, especially in extreme cases. Addresses when and how to slow down, and when and how to speed up, including altitude trade. Clarifies that lateral displacement, not yawing, is the mechanism to absorb shock. Discusses how to handle slack line from being fast outside a turn.*

*** A big step forward to understanding the geometry and forces involved, and ways to recover. An expensive book, unfortunately, so not widely read.

2024 FAA Glider Flying Handbook – *“The glider pilot should initiate slack line recovery procedures as soon as possible. The glider may try slipping back into alignment with the towplane. If slipping fails to reduce the slack sufficiently, careful use of spoilers or dive brakes can decelerate the glider to gently take up the slack. When the tow line tightens and the tow stabilizes, the glider pilot gradually resumes the desired aerotow position. When slack in the tow line becomes excessive or beyond the pilot’s capability to safely recover, the glider pilot should release from the aerotow.”*

*** More words than the previous GFH version, but still says to use drag until slack is out, no useful guidance on how to ‘gently take up the slack.

Is there a bottom line in all this? To simplify, when slack is increasing more drag is good, when slack is already decreasing more drag is bad. If you find yourself in a slack line situation, look for the transition between getting worse and getting better, call it out and adjust accordingly. Automatically jamming in rudder until the slack is out is not a perfect universal solution, though it was taught for many years. Lateral offset is useful, and worth understanding. Vertical corrections can be useful but easy to misjudge and hard to teach. Learn what works best for you, but recognize and disregard bad and outdated guidance, and understand the physics involved. Read multiple sources of expert opinions.

Again, sorry if I made your head hurt. :-)

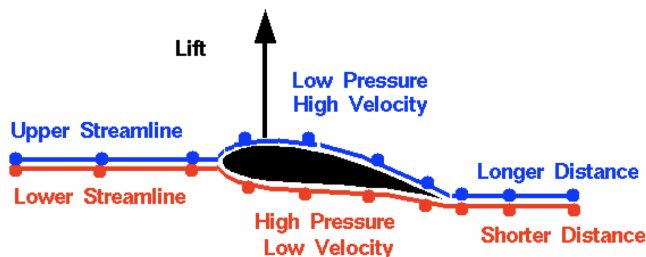
*** Bonus Points: Read some old discussion about standardization in slack rope recovery at https://groups.google.com/g/rec.aviation.soaring/c/_65nKQS_S0

All About Lift: Gliders are acted upon by three fundamental forces—gravity, drag and lift—and students are often asked to explain what creates the lift force. It is expected that the student will provide a simple explanation with no ensuing explanation of how the lift force influences the aircraft’s dynamics. This leaves the student with no understanding of the perils of lift or why certain control inputs are necessary. So, let’s take a somewhat deeper dive into the theories of lift. There are three fundamentally different theories of lift, each based on a somewhat different principle.

We’ll start with the Bernoulli theory, which is based on the conservation of energy. Relative to an aircraft in flight, the energy in a unit mass of air is given approximately by equation:

$$E \approx \frac{1}{2}V^2 + pv$$

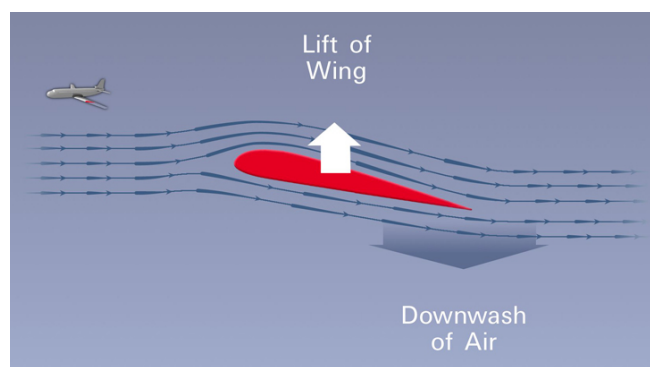
where V is the velocity of the air relative to the aircraft (true airspeed), p is the air pressure and v is the volume of the unit of air. If energy, E , is conserved, namely if there is no energy input or removal from a parcel of air, the right hand side of this equation must be constant. In this case, if V increases the product pv must decrease. The theory goes on to explain that the top surface of a wing is more curved than the bottom side, hence it is longer. Then, if two adjacent particles of air encounter the leading edge of a wing with one going over the top surface of the wing and the other going under the bottom surface, when the particles meet at the trailing edge of the wing, the one that went over the top surface had to travel further, hence faster, resulting in a greater reduction of pressure on the top surface than the bottom surface producing a pressure differential that results in the lift force. A simple explanation, the theory itself



is correct, but the explanation is wrong. Fact is, the two particles never meet up again and the air actually circulates around the wing to make the air on the top side move quite a bit faster than on the bottom side. Besides, aircraft such as the Extra 300

have symmetrical airfoils. So, clearly, the simple explanation fails.

The second explanation relies on the conservation of momentum. Momentum is the product of mass and velocity, $M = mV$, where m is the mass of an object. The idea behind this theory is that a wing displaces air downward thus producing a change in its momentum relative to an aircraft. And since momentum can be changed only by a force acting on the object (air in this case), that force is provided by the wing, which in accord with Newton’s law of action and reaction states, “for every action, there is an equal and opposite reaction.” Hence, lift. This explanation of lift is correct, but it too fails to help us understand the aircraft dynamics.



Consider the object pictured here. Have you ever seen a baseball thrown in such a way that it has a curved flight path? How can this happen? A baseball is a perfect sphere, as symmetrical as anything can be.



The forces on a baseball are, in fact, the same as those on a glider: gravity, drag and lift. Furthermore, we know that the only way a baseball can fly in a curved arc is for it to be acted upon by a force. Gravity is such a force and it acts to curve the path of the ball downward. Drag is also a force acting on the ball, but only opposite to its direction of flight—it can only slow the ball. But a baseball can curve to the right or left, even upward, and this can only be caused by the lift force. We know that, to throw a curve ball, we need to spin the ball and, somehow, the spin creates lift. In the case of the baseball, this is called the Magnus effect.

The third theory of lift is the vorticity theory. When the baseball is spun, the friction that the air experiences from its contact with the surface of the ball (and the stitches help to increase this friction)

cause the air to circulate around the ball resulting in the creation of a vortex—a small tornado centered on the ball. When a vortex moves through the air, it creates a lift force. This lift force per unit wingspan, L , is described by the Kutta-Joukowski theorem, which is expressed by the equation

$$L = \rho_{\infty} V_{\infty} \Gamma$$

where ρ_{∞} is the free-stream air density, V_{∞} is the free-stream air velocity relative to the aircraft (true airspeed) and Γ (gamma) is a rather complex quantity called the total circulation (it is a measure of the vorticity). If you insist on knowing, it is the closed line integral (denoted by the mathematical symbol $\oint$) of the vorticity (mathematically, vorticity is a field) of the air around the surface of the wing. In fact, the air is actually “circulating” around the wing with the air on the upper surface moving considerably faster than the air on the lower surface. This explains the error in the Bernoulli theory of lift. Correcting for the higher velocity of airflow over the upper surface of the wing and the lower velocity on the undersurface, the Bernoulli theory provides a correct estimate of lift. This equation tells us that the slower we fly, the greater the vorticity must be to keep us aloft. This is why large aircraft create the most dangerous wingtip vortices when slowing for landing.

Because an aircraft fuselage displaces air and owing to the finite length of the wing, the resulting vortex spills off the wingtip. As seen in this image, the resulting vortex can be quite menacing and, in the wake of larger aircraft, including helicopters, quite dangerous. These vortices can roll an aircraft at far greater rates than can be countered by aileron control inputs. Glider pilots must avoid landing behind larger aircraft so as not to be upset by their wingtip vortices.



However, besides the dangers the wingtip vortices pose, they alter the dynamics of aircraft control. It takes energy to create a vortex, and that energy—force times distance—has to come from somewhere, and that somewhere is “induced drag.” This is the principal reason that gliders have very high aspect ratio wings—to lower low-speed induced drag—whereas aircraft that fly at high speeds

have low aspect ratio wings because their speed minimizes induced drag while shorter wingspan reduces structural weight and parasitic (friction) drag.

Coming back to aircraft dynamics, we obtain additional insights. When we seek to roll an aircraft, for example, to begin a turn, we begin by moving the control stick in the direction of the turn. This movement immediately changes the lift that the wings produce. The rising wing has increased lift and the lowering wing has decreased lift. The increased lift immediately produces additional induced drag while decreased lift results in lower induced drag. These asymmetrical changes in drag result in a yawing moment (a torque) that causes the aircraft to yaw away from the desired direction of the turn, and this is the reason that we need to apply rudder in addition to the stick input to roll into or out of a turn. It is also the reason why every change of aileron control input must be immediately accompanied by rudder input. Furthermore, it is the reason why, in the case of a wing-drop or tailspin resulting from a stall, you should NEVER use aileron input to raise the dropped wing.

This insight also warns that every glider pilot must have the ability to distinguish between a tailspin and a spiral dive. Recovery from a spiral dive is effected by a coordinated roll to a wings-level attitude (unloading the wing by the use of forward stick input if necessary) followed by recovery from the dive, whereas recovery from a tailspin must never make use of aileron input to raise the wing that dropped in the stall. Thus the wrong diagnosis will result in a control input that will only worsen the extant condition. [George Hazelrigg]

Tow Pilots’ Squawk

Come on tow pilots, I’m sure you’ve got stuff to say. Get it to me for the next newsletter.

The Students’ Desk

Flight Instructors and Condor: [Fritz Treyz] Returning to glider flying after decades away quickly pushed me outside my comfort zone. I was overcontrolling the aircraft and trying to regain a light, gentle touch, but I had lost some of the “seat-of-the-pants” feel. Many flights were short sled rides of only 15 to 20 minutes, which left too little time

to repeat tasks in varied conditions and rebuild the muscle memory and instincts I needed.

At first, I was frustrated by flying with different instructors each weekend. Over time, however, I realized that multiple instructors can be helpful when training is approached methodically, though it can also slow progress. Each instructor brought a different teaching style, technique, and area of emphasis, giving me fresh perspectives that broadened my skills. The key was following Skyline's training syllabus so the instructor and I could focus on specific learning objectives.

During one flight, Ron Wagner introduced me to the Condor Simulator as a safe, cost-effective, and repeatable way for students to build aviation skills. After making room at home, I purchased Condor 3XC Simulation software and set up a simulator with a Microsoft SideWinder force-feedback joystick, rudder pedals, and a control box for the airbrakes, tow rope release, and trim. Later, I added virtual reality goggles, which made the terrain and flight dynamics feel much more like real glider flying.

As I looked for ways to practice independently, I found two glider-training resources within Condor: Holz Glider School and Condor Soaring's SOFTE Program. Both support simulator-based learning, but they differ in scope, delivery, and purpose.

Holz Glider School offers structured lessons aligned with the British Gliding Association (BGA) pre-solo curriculum. Within Condor, it includes written briefings, video demonstrations, and step-by-step flight exercises for each topic. I found the lessons and simulator exercises helpful because they provided a safe, immersive, and repeatable way to practice.

On the Safety & Training page of the Soaring Society of America magazine, I noticed a SOFTE (Simulation-based Online Flight Training Experience) webinar course offered by "the Condor Guy," Scott Manley, CFIG. After some research, I called Scott, who was very helpful. The free course combines video lessons, demonstrations of basic flying skills, and custom training tasks loaded into Condor. It goes into greater detail than the Holz lessons. In the simulator, I did not feel rushed; I could pause the flight to think through and analyze what was happening. I especially appreciated that Scott's pre-flight tasks covered both the related aerodynamics and the FAA Glider Practical Test

Standards.

Holz Glider School explains what to learn and how to practice it through text and video, while Condor Soaring's SOFTE Program provides a virtual cockpit and structured online sessions for applying those skills before or alongside real flights. The two programs complement rather than compete with each other.

Glider flight simulators can be powerful training tools, especially when paired with instructors whose teaching style, goals, and comfort level align with the student's needs.

Kudos

A special kudos to **Mia Anderson** for a full-page article featuring her in the June edition of the AOPA magazine *Pilot!* Mia notes that she is the first female to compete in both powered and glider aerobatics at the national level.

Miscellaneous Chatter

The Way We Were: I can often be found sitting around the FBO building on weekends listening to the many issues that the Club faces these days. Lots of students, busy instructors, we start flying between 9 and 10 depending on the weather. Students don't show up if rain threatens, or clouds, or wind, or holidays, or...they arrive around 10:30 and want instruction "now" so they can leave at noon. Competition between rated members and students beginning around noon. At the end of the day, the DO is looking for people to help close up shop. Makes me think of the past—the good old days. I just thought I would reminisce a bit.

It was just an average July Saturday, 1999, when I walked in the door to see my sons, George and Geoff, standing in the kitchen. They looked at me and said, "*We're going to learn to fly. It's going to be in gliders, and you're coming with us.*" So, there I was the very next day getting a ride in an ASK-21. We joined the Club that day and began our lessons. We came to the field (almost) every Saturday and Sunday, arriving no later than 7:30 AM to help set up and be sure to get on the flight instruction list early. First flight was at 8:00 AM, and students had priority until noon. Then, unless the weather was pretty bad, the rest of the day went to glider-rated

pilots. The Club had a Pawnee towplane and two club gliders: a Schweizer 2-33 (Miss Daisy) and an ASK-21. But, as the picture shows, there were a lot of private ships, mostly 1-26s. As you can see



in this picture, the taxiway (the dirt strip in front of the gliders) had yet to be paved. Furthermore, it was our practice to set up operations on the south side of the taxiway leaving enough space for gliders to land in the grass as we do now. The Club had only a few active instructors: Shane Neitzey, Joe Parish, Bob Michael, Bill Bentley, Jim Kellett, David Weaver, and three or four active tow pilots. Getting instruction wasn't all that easy and sometimes we went home without flying. When it rained, we cleaned the hangars and waxed the gliders. And, we were always there at closing time, which often seemed to be a few minutes after sunset. Members were squeezing in as much flying as the sun would allow. We took most of our instruction in Miss Daisy because everyone else wanted the K-21, and did much of our instruction with "Ropebreak Bob" Michael. We expected that at least one out of every three launches would end somewhere between the numbers and the road at the end of the runway. And Bob didn't seem to care much about the altitude. I believe I had releases as low as 150 feet in the 2-33.

At the end of the flying day it was customary



for everyone (not just a few of us) to go for dinner, mostly at the Mill, but we kept trying other places as they came and went. By the spring of 2000, our instruction was paying off. I remember one very cloudy day, ceiling about 900 feet (Class G then), perfect for students, we monopolized Miss Daisy getting numerous pattern tows. I perfected my takeoffs and landings that day.



I soloed on September 25, 1999, and earned my CPL-G on April 10, 2001. My sons soloed and earned their ratings the same week as I. I had started with my CPL, SEL and instrument, and about 600 hours of power time. My sons were ab initio. Shane was the DPE. Not long after I got my glider rating, I was recruited onto the Club's Board of Directors and from that to Club President, a position that I served in for four years. It turned out to be a time of considerable upheaval for the Club. The airport commission had become quite hostile, doing their best to incent us to leave the field. But, with help from our membership, we held strong taking the high road until the county commissioners "removed" the members of the airport commission. Our course of action through this period endeared us to the airport management and we won a seat on the airport commission. During my tenure as President, we purchased the Grob 103 and the Sprite, and began a lasting expansion of our membership. Around 2010, a few of us got together to create the Skyline Soaring Educational Foundation (SSEF) with the goal of supporting young aspiring pilots to reach for their aviation goals. The SSEF has developed into a sustaining source of funding for many of our younger students with some of our graduates already settled into careers in aviation.

I'm proud of how the Club has developed over the past 20 years, but recognize that there is both the good and the not-so-good elements of our

growth. It's good that the Club has doubled in size and boasts a substantial waiting list for non-rated wanna-be pilots, but not so good that we no longer know every other member by name and level of flying skill. I can remember several times calling the 45 only to hear a call for the 45 from a voice I would recognize as a student who would be landing behind me at which time I would call "*taking the grass*" to be sure the student would have the easier landing surface. Sometime around 2002, recognizing that we had an instructor shortage, Piet Barber created the "BIG" (Becoming Instructor Guild) special high-intensity training program, which resulted in Piet and me getting our CFI-G ratings. In my first year as an instructor I did about 175 instructional flights. The BIG program solved our instructor shortage. I can remember the instructors meeting face-to-face over dinner to discuss the progress of each individual student and how to handle problem cases. This was when I knew every student and their skill level. I don't have that familiarity anymore. Nor do I know every member of the Club personally, and I miss our face-to-face instructor meetings.

We also had a prolonged period of a tow pilot shortage. But we fixed that problem when we purchased the Husky. Even I flew tow for a short time, but gave it up because I could not instruct, tow and fly my own glider given all the demands being made on my time. But also because I could not get time in the Husky frequently enough to stay adequately proficient.

I think that the real downside of this is that I've seen a growing separation between student pilots and rated pilots. It's not common to see student pilots participate in the events populated by rated pilots. This applies, for example, to joining the rated pilots at après-flight dinners. I miss the interaction we once had between rated pilots and students across all Club activities. For several years, I had offered an annual ground school during our winter recess. But that ended with Covid, and since then I have had no expression of interest in the course. I would add that my students had essentially a 100% success rate on their knowledge tests. I've offered the course a few times since Covid but without sufficient interest to proceed and our students have sought out alternative courses such as the one given by the Philadelphia Gliding Club (PGC). I feel that this choice misses an opportunity for interaction between students and

our more "senior" members.

I also notice that, as the club has grown, there has been a growing separation between the members and specific management functions. We now have "meisters" for many duties: glider maintenance, hangar maintenance, towplane maintenance, apparel, social activities, etc. Our new Manage2Soar web site (thanks to the endless work of Piet Barber) identifies members with their duties, but it remains difficult even to find out who the meisters are: who is the chief instructor, the chief towplane pilot, the chief safety officer, the K-meister, the Discus-meister, etc? I miss this area of communication.

Lastly, I miss some of the "fun" activities we used to engage in such as frequent barbecues at the field and our annual end-of-the-season party. So, while the Club provides in all regards one of the very best venues for soaring, there remain some aspects of the past that I miss. Perhaps our newer members can suggest some things we can do to bring back some of the "intensity" we had some 20 years ago. [*George Hazelrigg*]



Members show up at the field on a good soaring day, circa 2002. Photo by Dick Otis.

I want to encourage all members, especially student pilots, to tell us why you might choose not to come to the airport on a day that has the potential to turn out to be an excellent soaring day and superb training day. Recent examples have been May 9 (Burner Day) and June 2 with sunny skies, light winds, endless thermal lift and wave contrary to predictions. What could we do to change your mind? Please email comments to me, ghazelrigg@verizon.net.

Challenge Problem

To remind you, the following is June's challenge problem:

It's a nice summer evening around 5 PM. You are flying the K-21 over the fish ponds working a weak thermal. Suddenly, the thermal stops working and you find yourself at 1,900 feet MSL. The wind is out of the northwest at 5 kts and you are in 1 kt of sink (vario showing 3 kts down). What's your plan?

- A:** Fly upwind to the north at 55 kts to land out in a large field just north of the river.
- B:** Head back to the field at minimum sink speed for a normal pattern to land on Runway 28.
- C:** Head back to the field at 60 kts on a left-base entry to Runway 10.
- D:** Head back toward the field at 55 kts with the intent to land in the field north of the pork chop if it appears that you might not make it to KFRR.
- E:** Look for another thermal to gain altitude to make it back to the field with altitude to spare.

The following are responses to last month's challenge problem:

- C:** Ok, solution just works. Fish ponds to numbers Runway 10 is just under 4 miles = 3.5 nm, at 60 kt (55 kt airspeed + 5 kt tailwind) it takes 3.5 minutes and in 3 kt of sink (300 ft/min) the altitude loss is 1050 ft, which means you arrive on short final runway 10 at 850 ft MSL or 150 ft AGL. PTT landing! You would arrive with smelly underwear.
- B:** Head back to the field at minimum sink speed for a normal pattern to land on Runway 28.
- C:** Keeping it simple and just going by the cockpit card speeds to fly solo with a knot of sink, best speed would be 54 knots indicated, slightly higher true airspeed. With a 5 knot tailwind, say 60+ true. If you were looking at the S3 vario speed-to-fly, which doesn't know winds, it should say around 54 knots. If you wanted to split hairs and credit the tailwind, that would help a little, maybe 2 knots slower indicated. Either way, from 2.74 nm out from the center of the runway (16,650 ft), at roughly 20:1 you would be looking at around 800 ft altitude loss, arriving over the runway center near 1100 MSL or 400 AGL, about the altitude you would normally be in the middle of a base leg. So

you might be able fly a no-spoiler abbreviated pattern to 28, or a conservative left pattern to 10 (safer). Personally I would just initially point at the center of the runway, monitor recommended speed-to-fly closely, and decide when closer to the runway. If landing on 10, I would plan to land in the grass, in case predominant traffic on 28 became a conflict and I had no more good options. In short, point at the middle of the runway, fly recommended speed (54K in 1 knot sink, which will change), be prepared to land 10 in the grass, monitor and reevaluate continuously.

The challenge problem for July is as follows:

It's a beautiful, cloudless day with 100-mile visibility and a 15-kt WNW wind on the surface at KFRR. In a K-21 (no GPS nav), you take a tow to 4,000 feet AGL and connect with wave. Ten minutes later as you are climbing through 8,000 MSL, you are suddenly enveloped by a cloud that developed out of nowhere. You push the stick forward and soon emerge in front of a lenticular cloud climbing at 6 kts, still with excellent visibility in the clear. You continue climbing above the clouds to 12,000 MSL, but suddenly it closes out beneath you with no visible holes through which you might descend. What do you do?

- A:** Call ATC on 121.5 and declare an emergency.
- B:** Immediately trim to 55 kts, pull full spoiler and perform a benign spiral to beneath the clouds.
- C:** Use the map function on your cell phone for navigation to KFRR and descend through the clouds over the field.
- D:** Call Potomac Approach on 120.45 describe your situation and ask for clearance and vectors to beneath the clouds over KFRR.
- E:** Decide to stay high until you find a hole through which you can descend.
- F:** Other—describe your personal plan.

Email your answers to me with an explanation of your choice, ghazelrigg@verizon.net. I'll publish answers anonymously in the August newsletter. Non-SSC members are welcome to respond.

The Photo Gallery

I'm devoting this month's Photo Gallery to pictures of previous Weeks of Training.



Operations

The following is a special notice to pilots operating from fields other than KFRR in the event that you plan to fly into our home airport.

- Note that gliders use right-hand traffic in order to remain unconflicted with airplane traffic, which uses left-hand traffic. All gliders flying with the Skyline Soaring Club have radios and announce takeoffs and landings on 123.00. Expect that gliders will be using runway 28

unless winds dictate the use of runway 10. Also, gliders are approved for use of the grass area to the north of the runway for landing.

- Be aware that skydiving operations may be conducted concurrent with SSC operations depending on the weather. Operations are announced on 123.00 beginning about five minutes prior to jump time and at *jumpers away*. Please avoid the area directly over the airport and to a radius of one mile until all jumpers are clearly in sight. Jumpers typically land in the grass areas directly adjacent to the taxiway on both north and south sides. Gliders can safely fly a normal approach to runway 28 while jumpers are in the air, but should stay north of the tree line on downwind leg. Jumpers will strive to remain clear of the grass area where gliders land.
- Airport Access (from John Bert): We will be finalizing the new gate access system within the next two weeks. With that update, we will be issuing new access cards that are preprogrammed, based on the list of those who currently have access fobs. The new system should be live very soon. Until the switch occurs, continue using your fobs to access the restricted area of the airport.

In the meantime, we will be distributing the new cards beginning June 19th. Just stop by the terminal and see either Jake or I to sign for and get your card. Keep your fob until the switch-over, then kindly return the fob once it is no longer functional. Once we have a firm date for the switch-over, we will send another message.

Upcoming Events

- There's a small group of aviation oriented folk (and their partners) who convene monthly for lunch at the Sweet Rice Thai restaurant on Rt. 7 just east of I-66. The next luncheon is scheduled for Thursday, July 3 at 11:30 AM. Come join us! [Jim Kellett]

- Application for the 2026 week of training is now open. We are seeking 12 students, 4 or more tow pilots, 4 to six instructors. Rated pilots interested in "follow-the-leader" for XC Training are welcome to come to the week of training.



Sunday 5 July 2026: Ferry gliders from Front Royal to Petersburg WV

Monday 6 July - Friday 10 July: Week of Training

Friday 10 July 15:00 - 18:00: Return equipment to Front Royal.

Applications:

<https://wot.skylinesoaring.org/application>

Details are available at:

<https://wot.skylinesoaring.org/wot-bible>.

This is a special intensive training event led annually by Piet Barber.

- The KFRR Great Pumpkin Drop, anticipated during October, will feature a pancake breakfast and a pumpkin drop from airplanes.

Notice: Help Wanted

Club Treasurer: The position of Club Treasurer will be open starting January 1, 2027. Now is the time to volunteer to take on this role with the club. Take advantage of hands-on training for the next eight months, making you fully trained. It would be best to step forward now, at your discretion, rather than wait until the last minute and enter the role under-prepared. Contact Ralph Vawter for more information (treasurer@skylinesoaring.org, or vawteralph@gmail.com)

For Sale

This section is to allow SSC members to post items (preferably, but not limited to, aircraft-related stuff) that are offered for sale or as freebies.

Rolladen-Schneider LS1-f, N6108J, 1974, based at Warren County Front Royal airport (KFRR). Contest number 6E. 2863 hours TT, June annual (will re-inspect before sale). Borgelt and Winter varios, Dittel VHF radio, one-man rigger & Mountain High O2 system. 1995 Anschau KOMET trailer. Trailer and glider in good condition. Offered to SSC members at \$18,000. For information, call: Evan Dosik (703-338-4688) or Tim Moran (202-247-8820).



Want to Fly the Pawnee? Start Here.

By now, you've probably flown behind the Piper Pawnee countless times. But have you ever thought I'd like to do that — but I lack a tailwheel endorsement and 10-hours tailwheel PIC to begin training as an SSC tow pilot? Well there now exists a clear path to get there—and a local resource that can help you take the first steps. Virginia Tailwheel Academy, based at Warrenton-Fauquier Airport (KHQY), offers dedicated tailwheel instruction in a fleet of well-equipped Cessna 140s—electric start, ADS-B out, and AV30 PFDs. Most pilots earn their endorsement in 7 to 12 hours. Once endorsed, you can continue building the required PIC time through dual or solo rental of the Cessna 140—making it a practical one-stop path from zero tailwheel experience to SSC tow pilot candidacy. You'll receive dual ground and flight instruction from SSC's own Robb Hohmann; commercial pilot, airplane and glider CFI with over 600 hours PIC in tailwheel aircraft.

For the full picture of what's required, the SSC operations manual states: *"To begin training as an SSC Tow Pilot, a pilot must have logged at least 200 total hours flight time in airplanes and have a tail-wheel endorsement. Additionally, the pilot must have logged at least 10 hours of pilot in command*

time in tail wheel airplanes after receiving a tail-wheel endorsement.”

To make the investment manageable, the academy offers discounted block time: 10-hour blocks at 6% off, and 20-hour blocks at 12% off. Given the endorsement training plus the 10 hours of solo PIC time you’ll need, a 20-hour block is worth considering from the start. If you’re ready to start working toward the endorsement, Virginia Tailwheel Academy is ready to help. info@vatailwheelacademy.com, 540-783-7FLY.

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