S K Y L I N E S

MONTHLY NEWSLETTER OF SKYLINE SOARING CLUB,LLC AUGUST, 2005

President's Prerogative

George Hazelrigg

Freedom to Fly

To anyone who has ever held a pilot's certificate, the freedom to fly is a most cherished freedom. To glider pilots, it's a freedom that cuts to the core of our being. Yet, it's a freedom that is not shared by much of the world's population. And for many reasons. Two-thirds of the world's people are simply too poor to ever see the inside of a flying machine, powered or not. Many others live in countries whose governments consider private flying too great a threat to allow. For would-be glider pilots, vast areas of the planet are either too populated or too inhospitable to contemplate flight. And still other areas are entangled in a web of Class A, B and C and restricted airspace that is equally inhospitable to gliders.

The United States' soaring-friendly areas are likewise quickly vanishing. Many to urban sprawl—little we can do about that. But still more areas are vanishing to an ever-growing web of Federal control driven by fear. We all know what happened in the wake of 9-11: we were totally shut down for two weeks. Then the Washington, DC, metropolitan area was surrounded by an Air Defense Identification Zone (ADIZ), making flight in the area difficult at best and impossible for many. Three area general aviation airports were summarily closed for about three years and still suffer severe restrictions. And based on one stupidly failed attempt, we all must remove our shoes to get on an airliner. For nearly four years, airline passengers were considered such a threat to our nation that we wouldn't allow one to go to the bathroom within 250 miles of the Capitol (unless the plane was already above flight level 180).

Now another threat to our freedom looms. There is serious talk about extending the current ADIZ to beyond the 30-mile transponder veil. If this goes into effect, the ADIZ will come to within 0.2 miles of the Front Royal runway. In effect, our gliders would be seen as too much of a threat to national security to be allowed the freedom to fly. But what threat do we pose? And does that threat warrant such action?

The 9-11 attacks killed some 3,000 people. That is the worst act of terrorism in our nation's history. It is about equal to the number of people who die in traffic accidents each month. It is about one-seventh the number of people who are shot to death in this country each year. It is a fraction of the people who die from second-hand smoke. The recent attacks in England are also horrific: over 50 people killed. There are 50 murders in Washington, DC, every eight weeks; many of the murdered are children. To be fair, cell phones cause more deaths in this country than the recent acts of terrorism in England. So how do we gain perspective on this?

There is no outcry to ban automobiles, and certainly not to ban guns. To the contrary, there are strong lobby groups fighting to assure our rights to carry firearms. It takes about the brains of a turtle to figure that cell phone distractions in automobiles kill a fair number of people, but curbing cell phone use in cars is still a ways off. So it wouldn't appear that people are particularly afraid of these threats. Why should they be afraid of threats of a much lower magnitude?

My theory is that the threats imposed by terrorism are more newsworthy, ergo we get media-driven fear, and they are directed at political systems, ergo politicians feel more compelled to combat them than other threats. The problem is that our political system's approach to combating terrorism leads to restriction of our freedoms, which is exactly what the terrorists seek. So they win if they succeed, and they win if they lose. Either way, we lose.

Sixty-one years ago, 9,000 Americans lost their lives in an invasion of Europe that was undertaken to assure our freedom. We sing about them at every sports event with a song that ends, "the land of the free and the home of the brave." I find it interesting that the words "free" and "brave" are put together in the same phrase in this song. The simple fact is that one cannot be free if one is not brave. If we are too scared to accept some risk, including risks of terrorism, then we will never be free. And one of the freedoms we will lose first is the freedom to fly. We owe it to these 9,000 Americans who died on June 6, 1944, and to the other 340,000 who died in the rest of the war, to be brave enough to be free. If we cannot be that brave, then these Americans will have died for nothing.

The time has come for us all to contact our Congressional representatives and urge them to be brave enough to protect our freedoms. Let's preserve our freedom to fly.

Significant Events:

Congratulations to Eric Litt who added the CPL(G) rating to his already lengthy list of ratings on June 30 and to Bob Gould who soloed on July 16. Bill Vickland finished 3rd in a field of 22 1-26 pilots at the 1-26 Championships at Moriarty New Mexico. They flew six of eight days with tasks of up to 150 miles. Typical winning speeds were up to 55 miles per hour.—Well done guys!

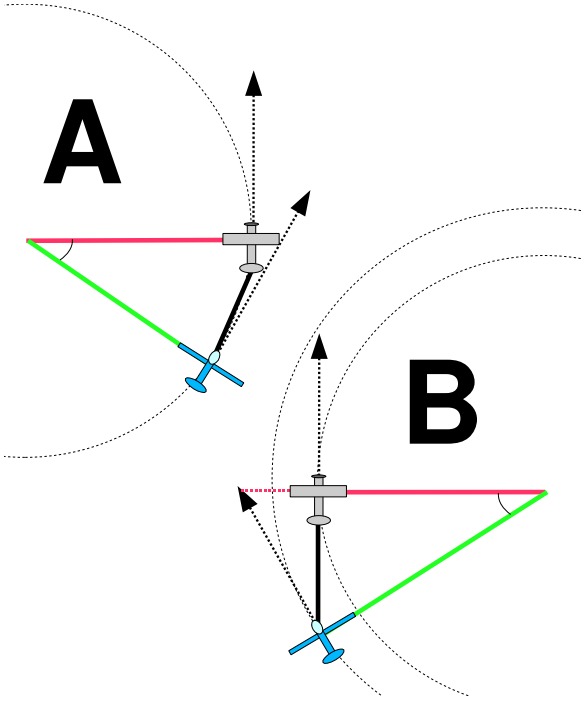

Figure 1:

Position on Aerotow During Turns

Piet E. Barber

Imagine this scenario: it is a nice soaring day, and the thermals are beginning to develop. You hop into a glider and go for a aerotow up to 3000 feet. Not wanting to waste a perfectly good thermal, the tow pilot tries to shorten your time on tow by circling to the left in a thermal. The turn steepens. The tow plane's bank nearly reaches 45°. As you maneuver your glider, what should the tow plane look like to you? Refer to figure 1. While on tow, you should be able to see:

A. Only the left side of the tow plane's fuselage should be visible. The glider's nose must be pointed toward the outside wing of the tow plane.

B. Both sides of the tow plane's fuselage should be seen equally. The glider's nose must be pointed toward the outside of the turn. The tow rope and fuselage of the tow plane must form a straight line.

Depending on which instructor you fly with, you may be expected to do Technique "A" or Technique "B." The club's instructors do not unanimously support either option. The instructors who teach Technique "B" claim that it *merits an improved* climb performance. I believe such alleged merits deserve investigation.

I wish to settle at least one aspect of the debate: and that is to concretely identify the soaring community's opinion on which of the above is the established technique. I have collected a variety of respected resources in soaring literature:

Soaring Flight Manual [1]

> It is important to fly the same arc as the tow plane and roll into the same bank angle as the tow plane. In a turn on tow, the nose of the sailplane should be pointed slightly to the outside of the turn toward the tow plane's high wing tip.

An accompanying photo shows a tow plane banked, and only one side of the tow plane's fuselage visible. *Score one for Technique "A"*

FAA Glider Flying Manual [2]

> During turns, the glider pilot observes and matches the bank angle of the tow plane's wings. In order to stay in the same flight path of the tow plane, the glider pilot must aim the nose of the glider at the outside wingtip of the tow plane. This allows the glider's flight path to coincide with the tow plane's flight path.

Figure 7-9 goes on to literally describe Technique "B" as *incorrect. Another point for Technique "A"*

Glider Basics [3], Tom Knauff

> During aerotow, keep the glider's wings parallel to the wings of the tow plane. During a turn, the glider's wing should be at the same angle of bank as the tow plane's.

In Knauff's book the figure on page 66 describes Technique "B" as "Glider positioned too far outside turn". *Technique "A" scores another.*

Among these references, the prevailing opinion clearly supports Technique "A". Other sources supporting Technique "A" include Bob Wander's "*Made Easy* [4]" series Van Sickle's Modern Airmanship [5]. The most explicit and best-written article about the subject is on JD Burch's website "Top Ten Ways to Fail the Practical [6]".

In support of Technique "B", I have been unable to find a single whisper of corroboration. Many of the books that describe aerotow explicitly describe Technique "B" as incorrect.

It certainly is possible that the soaring community has missed this great opportunity to increase climb performance on tow, as Technique "B"'s supporters claim. If this is the case, this could truly be an amazing discovery. My curiosity insists that I must investigate.

But first, let's review the techniques as I describe in figure 1, and throw some math at the analysis.

Technique "A"

Just in case you had any doubt about how I define Technique "A", here are some details. The aim is to fly the glider so that it has the same radius turn as the tow plane, or nearly so. This also means that the glider will have the same bank angle, and the same airspeed. It does not mean that the glider will be directly aligned with the tow plane's fuselage, except for bank angles that are very shallow, or nearly straight and level.

To mathematically determine the radius of a turn for any given bank angle and speed, you must use the following equation: $r = \frac{V^2}{g\tan(\phi)}$ [7]. This equation is not really meant to describe the radius of a turn on tow, as there could be significant side-load forces from the tow rope affecting the turns. For simplicity, I believe that it is close enough for the purposes of this article.

V is the speed of the aircraft (I use feet per second throughout this article), ϕ is the bank angle required (in degrees), g is the acceleration of gravity in feet per second^2, and r is the turn radius in feet. Using the above equation a 30° banked, coordinated turn at 65 knots (109 feet per second), a glider or airplane will have a turn radius of 648 feet. Subscript 'T' and 'G' represent the tow plane and glider, respectively.

With the above equation combined with the equation for the circumference of a circle for a given radius ($Circumference = 2\pi r$),

simple algebra can calculate the time that it will take the aircraft to perform that circle. An aircraft that is banked at $30,^\circ$ and a speed at 65 knots will take 37.13 seconds to complete the full circle. Each second, the airplane or glider will turn 9.7° .

At 109 feet per second, with a towline length of around 200 feet, the tow plane will be just shy of two seconds ahead of the glider. This also means that the turning tow plane will be about 2 seconds ahead of the glider for *both* distance *and* heading change. The tow plane and glider are both turning at 9.7° every second. $2 * 9.7^\circ$ is about 20 degrees. So if the left-turning glider's heading is 020, the tow plane should be pointed due north.

To the glider pilot, this looks like the nose is pointed toward the tow plane's high wing, about 20° away from the tow plane. The tow rope acts across the *chord* of the flight paths. A simple matter of geometry will reveal that the glider pilot will only see one side of the tow plane's fuselage – the side of the tow plane facing toward the inside of the turn.

Using geometry, I calculated that the difference in the tow plane's and the glider's headings (Θ) can be expressed with this equation:

$$\Theta = 2\arcsin\left(\frac{T * g\tan(\phi)}{2V^2}\right) \quad (1)$$

The difference in heading increases with the bank angle. For a very shallow bank, the difference in heading is very slight. For very shallow turns, the nose of the glider will not be pointed toward the outside wing, it might be a little closer to the fuselage. For very steep turns, the nose will be pointed well outside the tow plane's outer wing.

Would I expect a student to bring along a printout of Figure 2, a protractor, and laser pointer to determine if he is in the correct position? *Heck no!* Simply keep the wings parallel with the tow plane's, keep the glider coordinated with the correct use of rudder, and Figure 2's difference of heading will happen automatically – without the need for a protractor. Best of all, this technique works well for *all* angles of bank, whether shallow or steep.

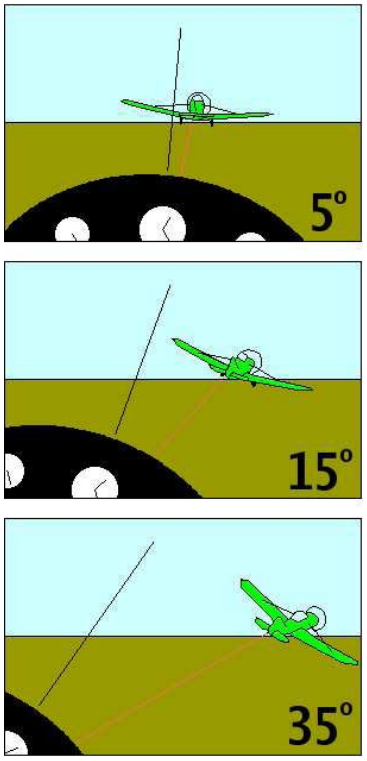

Figure 2: Technique "A" Illustration of tow plane perspective (*From JD Burch's website*, used with permission)

Technique "B"

There is one documented case (although not formally) describing this technique, as quoted from one of the club's instructors in an e-mail from earlier this year:

> Try to fly the tow by keeping the towline straight as I describe [by using Technique B]. It requires a little less bank angle than the tow plane. It is much easier to maintain position, it feels like it is where the glider wants to be. You are not flying the same path as the tow plane while in turns. [Kent] Cramer showed me this technique 26 years ago. I asked him why? He said, "Let's call it finesse" I must admit, it is a higher level of control. Years ago, I was towed by a Cessna 150/150. The tow pilot could not believe his increase in climb performance while I was on tow. He said I added 100fpm and asked what I was doing to cause that.

When the pilot chooses to align the glider along the longitudinal axis of the tow plane and the tow plane flies a coordinated turn, the glider *must* fly a longer-radius turn. Provided the tow plane maintains coordination and speed, both aircraft will go around the turn in the same amount of time. The glider must also fly a longer distance in the same amount of time. Traversing a greater distance in the same period of time requires a higher velocity. Thus, the glider will fly at a higher airspeed.

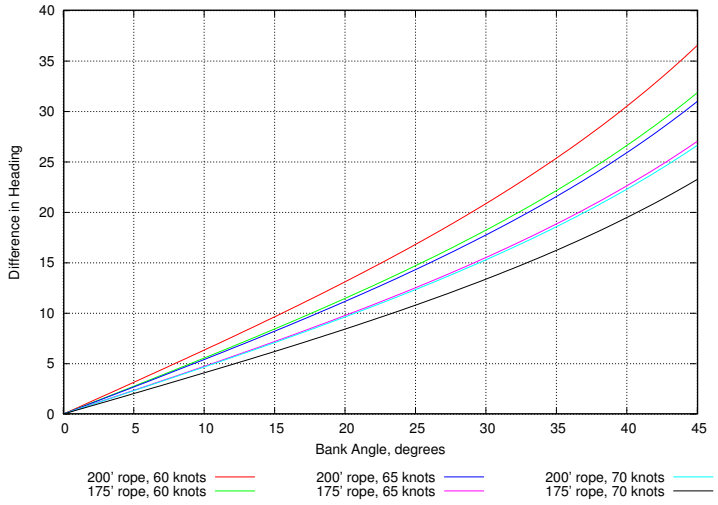

Figure 3: Difference in Heading per Angle of Bank (Technique "A")

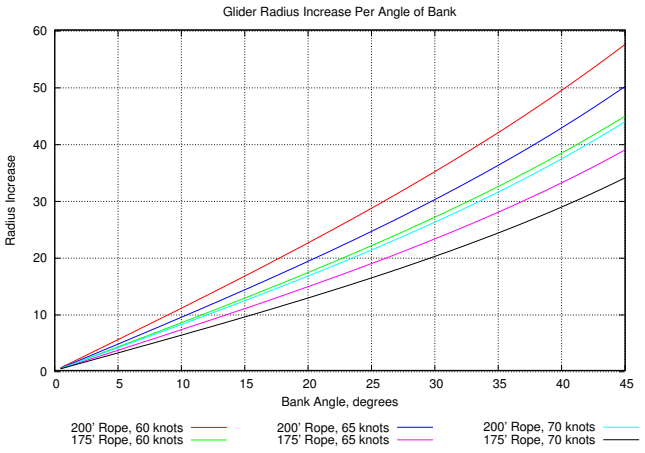

Figure 4: Increase in Turn Radius

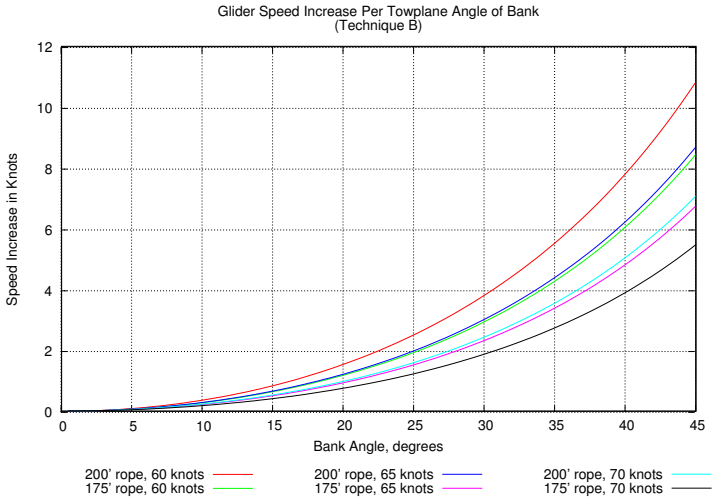

Figure 5: Technique B Glider Speed Increase

Using Technique "B", how much will a glider increase its turn radius compared to Technique "A"? How much more airspeed will the glider experience? I wondered these issues as well, and with geometry, trigonometry, and algebra, I sought to answer these questions.

Figure 1 shows a diagram of a glider and tow plane in formation in the established Technique "A" as well as the non-standard Technique "B" T (represented in black in Figure 1) is the towline length in feet. R_T is the radius of the tow plane's turn (in red), and R_G is the radius of the glider's turn (in green).

The tow plane's direction of flight for any moment in the turn is represented by the tangent to the circle. The flight path and longitudinal alignment are perpendicular to the radial line. As per this technique, the towline T should also be perpendicular to the tow plane's radius, trailing behind the tow plane.

Notice that $\triangle TR_GR_T$ is a right-triangle. Thus, the Pythagorean theorem can be applied to describe the relationship of the flight formation. $R_G^2 = R_T^2 + T^2$. If we solve for the turn radius of the glider (which is also the hypotenuse), we find that $R_G = \sqrt{R_T^2 + T^2}$.

Considering the turn, bank-angle, speed and turn-radius equations, notice that for steeper-banked turns, the difference in between the glider and tow plane's turn radii become more pronounced. Figure 3 illustrates this difference in turn radius for a given tow plane bank ϕ_T.

The equation used to make Figure 3 describes the relationship between the bank angle of the tow plane ϕ_T to the difference in turn radii between the tow plane and glider $R_G - R_T$, which I will call ΔR.

$$\Delta R = \left(\sqrt{\left(\frac{V_T^2}{g\tan(\phi_T)} \right)^2 + T^2} \right) - \left(\frac{V_T^2}{g\tan(\phi_T)} \right) \tag{2}$$

I have taken some reasonable example values for tow speed and towline length and populated them into equation 2 to generate Figure 3.

For a given tow plane bank angle, (ϕ_T), we can also calculate the increase in airspeed (ΔV) for the glider with the following equations:

$$V_G = \frac{R_G V_T}{R_T} \tag{3}$$

$$V_G = \frac{V_T \sqrt{R_T^2 + T^2}}{R_T} \tag{4}$$

$$\Delta V = \frac{V_T \sqrt{R_T^2 + T^2}}{R_T} - V_T \tag{5}$$

Using the equation $R_T = \frac{V_T^2}{g\tan(\phi_T)}$, we can substitute in some values to remove the R_T in those above equations, replacing them with bank angles and velocities:

$$\Delta V = \frac{g\tan(\phi_T)\sqrt{\left(\frac{V_T^2}{g\tan(\phi_T)} \right)^2 + T^2}}{V_T} - V_T \tag{6}$$

What This All Means to the Math-Challenged:

The opinion contained the body of soaring literature overwhelmingly supports Technique "A". Technique "B" was not described in any book, revealing that the technique is at least unknown and non-standard.

While using Technique "A" and very small values of ϕ_T (tow plane bank angle), the nose of the glider will not point toward the outside wingtip. For higher values of ϕ_T, the glider will have an increasing difference in heading. The tow plane's speed and the length of the towrope both play a role in how much the glider's nose points away from the tow plane. Figure 2 describes these relationships.

Both Techniques "A" and "B" involve the glider's nose pointing toward the outside wingtip of the tow plane to some degree. If the nose of the glider must point directly toward the tow plane during a turn, it can only be done so while doing a skid.

For shallow bank angles, Techniques "A" and "B" are nearly identical in performance, turn radius, bank angles, and drag.

For increasing bank angles, Technique "B" involves a greater turn radius as well as higher airspeeds. At higher values of ϕ_T, the V_G of a glider using Technique "B" will be demonstrably higher than a glider executing Technique "A".

At any time a glider is going faster than the best climb speed of V_{min}, the rate of climb will also decrease. Nearly every glider on tow flies faster than V_{min} and increasing the speed only further reduces the climb rate. With greater values of ϕ_T, Technique "B" loses relative to Technique "A". For this reason alone, as ϕ_T increases, the

inefficiency of Technique "B" also increases in a positive, non-linear fashion.

While using Technique "B", the tow rope will generate a side-load. The horizontal, centripetal component of this side-load (the force pulling the glider toward the center of the turn) will act to pull the glider back toward the position of Technique "A". In order to counteract this centripetal force, the pilot employing Technique "B" must use some force to counter-act this centripetal force. It can be counteracted with rudder away from the turn (causing a slip), or a reduction in the angle of bank (causing a skid).

The instructor in favor of Technique "B" described that to maintain position, the glider required less bank angle than the tow plane's. In this case the instructor is calling for a skid. For greater values of ϕ_T, the amount of skid or slip (and thus the drag) required to maintain Technique "B" also increase in a positive, non-linear fashion.

Increased airspeed, combined with a skid to maintain position both equal a technique that can not possibly yield better climb rates for the tow plane. As for the claim of the Cessna 150/150 pilot who could not explain the increase in climb, I believe that there are more reasonable explanations to the increased climb performance: perhaps they were flying through a large area of lift, perhaps there was lighter loading on the sailplane, maybe there was malfunctioning aircraft equipment.

So What Does the FAA Have to Say About This?

The FAA Practical Test Standards (Private, Commercial, Instructor) do not go into detail about which technique to use, "A" or "B". Since the body of soaring literature only supports Technique "A", you can probably expect that your examiner will want to see Technique "A."

I have collected the opinion from one very experienced (retired) Designated Examiner who states that exercising Technique "B" would cause the candidate to fail that Area of Operation for the practical test. Any time a candidate fails an Area of Operation, the whole practical is failed. He also stated that some sneaky examiners will surreptitiously ask the tow pilot to execute steeply-banked turns during the check-ride.

This examiner – Jim Burch – has also set up an excellent website describing the different ways applicants have failed the Glider Practical throughout the years. Aerotow positions is one of those top ten. If you are considering getting a rating anytime soon, I strongly suggest you visit his website. (See references at the end of this article)

If the bank angles remain shallow during the practical test, somewhere around 5°, the matter would not be available for evaluation, as previously stated, there is little difference in the two techniques at very shallow angles of bank.

Conclusion

There is no need to abandon the standard technique of "keeping your wings level with the tow plane's." After a thorough examination of the geometry, physics, and alleged merits of Technique "B", I believe the claims that it provides "a better climb rate" to be at least questionable. I also express grave doubts that the glider "feels like it belongs there," especially considering that the pilot must actively maintain a skid or slip to stay in position.

However, there is one aspect of the technique with which I do agree, as claimed by the technique's most vocal proponent. I agree that performing the technique *does* require a higher level of skill, *especially* as the tow plane's bank steepens. For that reason alone, I believe that it should not be expected as standard procedure during training.

Technique "A" scales well to steeply-banked turns. Technique "B" does not. I see no point in teaching a technique to students that offers no useful benefit,goes against the grain of the established procedure, defies the body of soaring literature and most of all – does not work well in steeply-banked turns. I do believe that Technique "B" could be reserved as an interesting novelty to be used as a demonstration of different positions behind the tow plane during a turn.

Experimental Results

Unfortunately, there is little or no documented experimental data to back up the claims of Technique "A" or "B". Despite extensive physics and geometry, the real data sometimes yield unexpected results. "Nobody believes the predictions except the analyst, Everybody believes the experimental data except the flight test engineer who took them."

Perhaps we could field an experiment to determine which technique truly merits a better climb rate. It could be performed on a very smooth day with the tow plane flown in a constant-banked turn while trimmed for a zero knot climb. Have the glider fly in the Technique "A" position. Fly a few minutes at that power setting and bank, record the results with a GPS logger. Have the glider transition to Technique "B" and note the change in climb rate for the tow plane and glider. Switch back and forth between the techniques, and vary the bank of angle.

If there is still support for Technique "B", I would be willing to perform this experiment, provided we can find a tow pilot who is willing to fly in circles all day.

Acknowledgments: Many thanks to Jim Burch, Wally Gleason, Jim Kellett for their help, and to Judah Milgram for his technical help and excellent advice.

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[2] Glider Flying Handbook (FAA-H-8083-13), Federal Aviation Administration, 2003, pages 7-6 and 7-7; figure 7-7. Available for download on the Internet: [Handbook], [Addendum]

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[6] Top Ten Ways to Fail a Practical (and how to pass one) Main page: http://home.att.net/ jdburch/topten.htm Aerotow section: http://home.att.net/ jdburch/aerotow.htm

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Now on a Lighter Note

It was a hot, muggy Saturday in late June, when Marion Catherine Garvey got the "ride of her life" at the Front Royal air strip with glider pilot, William B. Wark. Jokes could be made about any fellow taking his mother-in-law up for a ride, but this lady is quite special. Says Bill, "I really like Marion and was happy to show her a good time!" Their nearly 30 minute flight was a thrill for this sweet little lady from Cleveland, Ohio, mother of five children–who just turned 84 on the 4th of July. Marion's comments following her historic flight included: "I don't know why anyone would be afraid–I trust Bill!" "It was lovely, exhilarating, peaceful and breath-taking—what a wonderful way to see the Shenandoah Valley! I can't wait to fly, again!!". Bill has a penchant for making memorable moments above the Blue Ridge–it was in 2003, 4,000 feet above Front Royal where he proposed to Marion's eldest daughter, Lynne. Asked what his most memorable moment was mid-air, he replied, "Moments after I asked Lynne for her hand in marriage, a beautiful eagle joined us in our thermal. The eagle was my late father's favorite bird–and it was as if he was sharing his blessing with us." Bill also showed his new step-daughter, Hilary, a thrilling flight in 2004, with an hour-long flight including a few steep banks for her to see the green glory of the Virginia countryside. Earlier in the summer Bill also shared the Grob with young nephew, Cole–who found himself eligible for an aeronautical Boy Scout badge upon his return to Portland, Oregon. But making the Garvey family matriarch, Marion, a special memory was a real thrill for Bill–as he says, "It's all in the family, now!" Thanks so much, Phil–And Bill and I talk often about getting together with you & Ann–what does your summer look like? We'd be happy to head toward Falls Church!

Past President's Prerogative

Joe Parrish

Just wanted to say hello to everyone. After a couple of years of mixed results with the local soaring club here in Boston, I've decided to reactivate my membership in Skyline. I found myself really missing the camaraderie and spirit at Skyline, and with airfares so cheap between Boston and DC, it's easy to make it down on a fairly regular basis.

This is not a knock on any other soaring club; it's more a testament to the really special and unique situation that we have at Skyline. It's a terrific combination of wonderful people, great location, modern equipment, and some sort of je ne sais quoi. Furthermore, the size of the club is large enough to provide significant resources, but yet small enough that each member has the chance to make a difference. I knew this even when I was living in the DC area and active in the club, but it took a departure and a bit of perspective to really have the feeling "hit home".

Anyway, I'll be brief. I'll look forward to catching up with old friends and meeting new ones. See you soon at FRR.

Glider 'out-landings' are par for the off course

Roger Bianchini

(Top) Glider pilot Bob Collier soars over the Skyline High School site. (Above) Warren County Sheriff Deputy Carper and Virginia State Trooper Sutherland with Collier following successful out-landing. photos by Dick Otis

Shortly before noon on Saturday, July 9, experienced pilot Bob Collier took off from Front Royal Airport about 200 feet behind a Skyline Soaring Club Piper Pawnee tow plane piloted by Captain Richard Otis, U. S. Navy.

The following Monday a local daily newspaper brief commented on "a crash landing" without injuries that Collier's glider N2781Z had been involved in. That description, both Collier and Otis agree, is a bit misleading.

"It was a picture-perfect landing, strictly routine," Otis said.

"Not one of my more interesting out-landings," Collier commented.

But for a great bulk of the non-aviators among us -and our numbers are legion, unfortunate as that may be - any aircraft that starts at an airport and doesn't finish at one has crashed to some degree. However, a little knowledge goes a long way, so we sought an explanation of Collier's July 9 experience in a hayfield off Shenandoah Shores Road.

"I've been flying gliders since April of 1969 and powered aircraft before that. Over those thirty-six years I have made over a hundred out-landings, some more interesting or demanding than others," Collier says. "And I have many glider friends who can relate as many out-landing stories as I have.

"I can remember one time I had to land in field of high grass. If both wings don't engage the grass at exactly the same instant the grass will tend to slow the lower wing such that the glider turns around and you end up landing backward.

"This has happened to me four times and is quite a sight to behold from a bystander's point of view. Anyway at that particular time the farmer was sitting on his porch watching the whole thing unfold. After it was over, he came up to me with a faint hint of a smile on his face and asked if that was always the way I landed. I didn't know how to answer that. I think I muttered something like 'Only when I have to.' "

Collier says such landing do no harm to the glider "because the glider remains above the ground at almost grass top level until it comes nearly to a stop, after which it just settles gently to earth.

"Well, this landing was going to be a lot easier than one of those high grass things," Collier said of his July 9 Shenandoah Shores out-landing.

But to backtrack for a second we let Collier explain why out-landings are relatively commonplace among the gliding community.

"In order to remain aloft both gliding and hot-air ballooning depend upon air that is warmer than the surrounding air. The glider pilot is able to stay up until the sun ceases to create thermals - heated updrafts - or the pilot is unsuccessful at finding a thermal in which to circle and climb before he descends to an altitude where he must look for a field in which to land.

On this particular flight Collier experienced a series of dissipating thermals that resulted in less altitude being gained than he had hoped for as he moved from cloud formation to cloud formation distancing his glider from its takeoff point.

About a half hour into the flight Collier realized his altitude and distance from the airport made the choice of a safe spot for an out-landing his safest course of action. Fortunately Collier said he had an array of nearby farmland to choose from. In that situation he said he tries to pick a site near a structure likely populated with someone he can get directions from. "Before the advent cell-phones, a phone to call my retrieve crew - the person who will drive car and trailer to the site to pick up the glider," was also important he pointed out.

He set up a three-legged descent and radioed the airport to appraise them of his situation and general location.

"I flew down into the swale with a little extra speed so as to be able to make the touch down while in a gentle climb. As one might imagine an up-hill landing slows the aircraft rapidly and we came to full stop far short of the scattered hay bales. I radioed back to field that I was down safely and a Cessna over the airport relayed my message. As it turned out I was close enough that grounds operations heard my call directly," he said.

"It wasn't long after I had climbed out of the glider and deciding where to go to see about directions when I heard a siren wailing in the distance. I knew right away what that meant. Someone had seen me land and had called for help," which Collier said arrived in about 10 minutes.

"It was reassuring to know what good hands I would have been in if there really were a serious accident. Although I'm grateful

Glider pilot Bob Collier was forced to land in a hay field off of Shenandoah Shores Road on Thursday, July 9. Unscheduled landings by gliders are called "out landings". Collier, who has been flying gliders since 1969, said he'd made more than 100 such landings before. photo by Dick Otis

and appreciated all the kind attention the local emergency teams provided, at the same time I'm a little embarrassed and do apologize for all the commotion that I inadvertently created."

Collier hopes publication of his story will lead to a greater understanding of such situations.

"Hopefully future false alarms could be avoided if 911 dispatcher were able to discover if the incident were truly an accident or just a glider land-out.

"But again many thanks for all the help the emergency teams of Warren County and of Front Royal supplied and also to my faithful club members for coming to fetch a downed pilot and his glider," Collier concluded.

Postscripts

It wasn't long after I had climbed out of the glider and decided where to go to get directions when I heard a siren wailing in the distance. I knew right away what that meant. Someone had seen me land and had called for help. Well, this wasn't the first time the 911 call has been made. I remember one time at a glider contest in Ohio I landed in a field where a telephone lineman sitting atop his pole saw me vanish down behind a tree line and called for help. By the time it was over the ambulance, five TV and two newspaper reporters plus a state policeman were at the scene to perform their respective jobs It was very gratifying to watch how quickly all responded. As I recall it was something like twenty minutes then. But this time I bet it was something like ten minutes. Amazingly quick. It was reassuring to know what good hands I would have been in, if there really were a serious accident. My sincere thanks to all those who came so quickly.***—Bob Collier***

These events are always great stories, often enhanced in hanger flying over a beer at the end of the day. On one occasion, a member landed out at a local winery to the great joy of the owners and guests. He was not allowed to drive the car home afterwards however.... there are some of the nicest people you can possibly image in the Shenandoah Valley, and meeting them is half the fun of a land out. ....

None of us anticipated this excitement however. By the time I returned with another club member to pick up Bob and his glider, we were met by a cheery duo of a County Deputy and a Virginia State Trooper. The concerned neighbor had called 911 to report the landing. Not withstanding the caller's report the pilot and aircraft were fine, apparently somewhere in the conversation "crash" was probably mentioned, and help was immediately on the way. The trooper reported his call indicated an airliner crash, and things started to escalate until they arrived at the land-out to discover everything was fine. So after a few group photos for Bob's scrap book, we put the glider away on the trailer and returned to the airport and our post flying day beer.***—Dick Otis***

Copy That! *Selected flotsam and jetsam from the editor's daily Tsunami of email*

The Board of Directors, at their last meeting, reviewed and discussed the issues of pay-when-you-fly and "flying on account" with funds pre-deposited with the club. They have unanimously decided that the club will operate with members having a zero balance on account. Additionally, to reserve a place on the tow list, either cash or a signed check will be given to the Duty Officer. To allow time for our members to become familiar with this change, DO's will make their best efforts to implement this method for the next 2 flight weekends, after which no exceptions to this policy will be permitted. During the month of August, checks will be sent to members with positive balances and notices to members with monies due, to zero out all membership accounts.

This conversion is being made to help us meet our financial responsibility to the club's membership by simplifying the method we use to receive, process, deposit, and disburse funds.

Please direct your comments and suggestions to me, as appropriate.***—Dan Noonan, SSC Treasurer***

I've just learned form Chuck Yeates, in Canada, that Tom Foote's beautiful ***Open Cirrus is for sale***. Excellent condition, trailer, one-man rig, good instruments, C$20K. (Yes, that's CANADIAN $!) Total time 2400 hours, no accident history. I have photos of the cockpit and plane, if anyone's interested, or contact Tom Foote directly atjoy.foote@ns.sympatico.ca.

Many of you know that I've got a really soft spot for this fine 17.8M machine–VERY easy to fly, good performance in weak conditions, and a true "Classic". It was the first machine designed in its entirety by the late Klaus Holighaus, the first all-composite glider produced in quantity. There were only about 180 produced, so it's a real piece of rare soaring history that's a hoot to fly.***—Jim Kellett*** *Curdmugeon & Cirrus photo by Dick Otis*

Glider Flying Handbook to be Reprinted, Price Cut— We just ordered reprints of the FAA's Glider Flying Handbook. This has turned out to be a nice seller for us. We recently determined that several suppliers have been able to undercut our price, so we lowered our's by 15%. The handbook now sells for $29.00 plus shipping and handling. If you need or want one of these handbooks, full of color photos and figures, now is the time to buy!***—SSA e-News***

Now featured in a Post Office Near You!—The stamps above are now on sale nationwide. The sheet of 20 Classic American Aircraft issued in 1997 and are no longer available through the USPS but can be purchased from: Mystic Stamp Company, Dept. AM104 9700 Mill Street Camden, NY 13316-6109

Member ***Bob Critchlow*** has moved to Florida. Our Libelle complement has been reduced to only Kevin's beauty.

July 29, 2005: Virginia State Police announced their support for the ICE campaign this week and will begin training troopers to be aware of it.

Sgt. Kevin Barrick, a state police spokesman, said troopers sometimes have difficulty tracing next of kin after serious vehicle wrecks. Paramedics will turn to a victim's cell phone for clues to that person's identity. You can make their job much easier with a simple idea that they are trying to get everyone to adopt ICE.

ICE stands for In Case of Emergency. If you add an entry in the contacts list in your cell phone under ICE, with the name and phone number of the person that the emergency services should call on your behalf, you can save them a lot of time and have your loved ones contacted quickly. It only takes a few moments of your time to do.

Paramedics know what ICE means and they look for it immediately. ICE your cell phone NOW! For more information, click http://www.icecontact.com/

An elderly Floridian called 911 on her cell phone to report that her car has been broken into. She is hysterical as she explains her situation to the dispatcher: "They've stolen the stereo, the steering wheel, the brake pedal and even the accelerator!" she cried. The dispatcher said, "Stay calm. An officer is on the way." A few minutes later, the officer radios in. "Disregard." He says. "She got in the backseat by mistake."

SKYLINES
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