



Volume 21 – 01

www.FlyingClub1.org

January 2021



The Privileged View

Steve Beste, President

Light-flyer turbulence. We all know that we are wind-limited. Many of us don't fly in the middle of the day when the thermals are kicking up. Or if we do, we resign ourselves to getting knocked around.

A lot of that comes down to wing loading – how many pounds of aircraft are supported by each square foot of wing. Check out the table below. The circles tell you why the PPG guys are walking in the middle of the day and why the gyro guys are flying.

Category	Aircraft	Gross Weight	Wing Area (ft ²)	Wing Loading (lbs/ft ²)
PPG	Powered paraglider	270	323 (30 m ²)	0.8
Part 103	Quicksilver MX (1-seat)	525	156	3.4
Part 103	Aerolite 103 (1-seat)	600	121	5.0
Light Sport	Quicksilver Sport 2s (2-seat)	1,000	174	5.7
Light Sport	Aerotrike Safari trike (2-seat)	992	156 (14.5 m ²)	6.4
Light Sport	Tecnam Eaglet	1,213	142	8.5
GA	Aeronca Champ	1,220	157	7.8
GA	Cessna 172R	2,450	174	14.1
GA	Lancair IV	3,550	98	36.2
Gyroplane	AutoGyro MTO	1,234	19.5	63.2
Military	Supermarine Spitfire	6,700	242	28
Military	F-104 Starfighter	29,027	276	105
Military	B-52	265,000	2,208	120
Military	F-16	42,300	300	141
Airliner	Boeing 737-300	138,490	980	140

I was surprised when I got into the sport at just how *much* time I was going to spend being bounced around. I soon learned, as we all do. But I don't recall anyone ever telling me before I got into the sport that being knocked around was part of the deal.

Here's an unusual video that might help. Henry TrikeLife has been making trike videos for ten years. These usually don't show turbulence because the cameras are attached to the trike. If the

trike lurches up, the cameras lurch, too. The trike doesn't move in the frame so all looks calm.

For this video, though, he used a feature in his editing software (Apple Final Cut Pro) to hold the background steady while the foreground (the trike) moves. As you can see, he's getting quite a ride.



Henry TrikeLife is now Henry TrikeGyroLife. He sold his trikes and bought a gyroplane – mainly so he could fly in more turbulent conditions. He writes:

“I have flown over 1300 hours in more than 10 years in my trikes. That’s one of the biggest reason that I started flying in my gyro. Most my trike friends fly 30 to 50 a year Most my gyro friends fly 150 to 250 hours year. I already did cross-country flight more than 250 miles in one leg, including high desert thermally place in the middle. Physical fatigue is no comparison between gyro and trike. I have already flown many places that I don’t even think about flying in my trike.”

But gyros have their limits, too. Here, Henry aborts a short flight in his new gyro because of turbulence.



In the end, the wind limits all of us flyers, no matter what we fly. Be smart, know your limits, and

Fly safely,
Steve



This Month's Fly-In Destinations

Our club meetings are not the only ones that have moved online. There are no organized fly-ins to report this month. If you feel safe to do so though, there are still fly-in restaurants that are open and they likely need your business. Looking for somewhere new? Check out funplacestofly.com. They have an extensive list of airports along with user-submitted reasons to visit them. Be warned though, the information is only as good as what people submitted and may be dated. For example, they recommend Gordonsville for Faith's cooking (remember those days?) but, you can do a radius search around an airport, so it is convenient for at least giving you some ideas.

And there is always our list of the usual places. Did I miss some? Let me know!

- Shannon Airport (KEZF) - On the field: Robin's Nest Cafe (closed Sundays), Walkable: Wawa, Perfect Pollo
- Sky Bryce Airport (VG18) - Across the street at the ski slope: Copper Kettle (closed Mon/Tue)
- Cumberland Airport (KCBE) - On the field: Hummingbird Cafe (closed Mondays)
- Richmond Exec Chesterfield (KFCI) - On the field: Kings Korner (closed Saturdays)
- Eastern West Virginia Regional Airport (KMRB) (towered) - On the field: Crosswinds Cafe (closed Sundays)

From Our Members

Last month's challenge from Steve Beste was to identify where he took a photo of a house off of his wingtip while on final. We tried to fool you, but failed at that. It was Bryce again! Dre Sarchi was the first to identify Bryce. Jim Heidish also identified the airport as Sky Bryce.

This month's challenge was again submitted by Steve Beste. He asks: Where are the ferries?




Know the answer or have a picture for the guessing game? Email me at ooi.lucy@gmail.com.

Fixing a Runway Light Controller

By Steve Beste

Did you know that you can turn on runway lights by keying your radio three times? I'm out at Front Royal, my home field, practicing touch and goes in the gloaming before civil twilight. The sun has long set behind the mountain, and the shadows are gathering. The runway is obviously right there, but the bail-out fields are disappearing. I key the radio three times and all the runway lights flash on suddenly. Beautiful! There's the runway, safety, and home, softly outlined in the gathering dark. It's quite a thrill, actually.

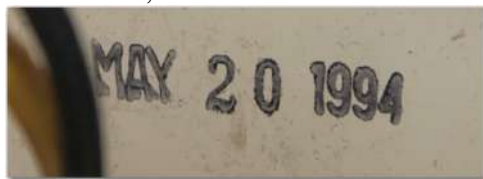
But at Front Royal, my home airport, the lights don't go *off* again. I discovered this last month that night I slept in my hangar. Front Royal, we have a problem. We also have big changes at the airport. We have a new manager, Rock Skowbo, the gas pump now works, and a friends-of-the-airport group has formed to help out. As part of that, I volunteered to fix the runway lights. Here's that story.

The controller box was easy to find. It's the box with its own radio antenna. 

But my heart sank when I looked at the controller box itself. The only branding on it is a small tag in the corner. Who even built this thing?



And inside, this:



It's a 26-year-old odd-brand electronic device. And we need parts? Good luck with *that*. But not so. The company, Control Industries, is still in business (!), selling the SAME [model](#) (!!). They answered my email within 2 hours (!!!), and had a technician who knew exactly what parts we need (!!!!), and the parts are still available (!!!!!) for only \$300. What amazing good fortune.



Here's the inside of the controller box. We need to replace one of those four circuit board cards plus the large cylindrical capacitor above the transformer. The new card will slide in easily. But that capacitor is soldered in place. How's that going to get swapped out?

Fortunately, about the same year this box was being built, the Air Force was training a young Rock Skowbo in how to solder components onto printed circuit boards. He'll replace the capacitor. The man has finally met his moment. All that years-ago training not gone to waste. Your tax dollars at work. Front Royal thanks you.



As for us pilots, here's what I learned about the system:

1. If you key your transmitter 3 times, the lights will go on at low intensity.
2. 5 clicks gets you medium intensity.
3. 7 clicks gets full brightness.
4. If you pause more than 5 seconds between clicks, it starts over.
5. The pilot cannot turn the lights off.
6. The controller will (once it's fixed) turn the lights off after 15 minutes. On their current model, that delay is adjustable. On our old unit, it's fixed.

I love small projects – at least ones that end well. And this one required *zero* trips to Home Depot, which is my standard measure of project complexity. So extra points for it.

Aeronca Chief Engine Switch Update

By Monty Betts

In my last Flying Club 1 article, I described removing the tired Lycoming O-145B2 engine on my 1941 Aeronca Chief. I purchased a “new” used engine of the same model. The former owner upgraded his Porterfield aircraft to a Continental 85 HP engine and sold me his old Lycoming engine. The engine had been overhauled in the late 1990s, but is much better condition than my current one.

My friend Abe bead blasted, inspected, and painted my existing engine mount. It now looks like new!

With help, we bolted the engine mount on to the airframe:



Next, with the help of a borrowed hoist, the newly purchased engine was bolted onto the mount. Unlike Continental engines, rubber washers isolate vibration rather than Continental typical conical rubber engine mount bushings.

Here is the new engine on the mount. The white spots on the oil sump are paper towels protecting the passageway through which fuel vapors exit the case.



You would think that, with the new engine bolted in place, that you are close to the end of the engine installation – Not so!

The next step was to install engine intake pipes that carry gasoline vapors from the side of the engine to each cylinder head. There are 2 inch long rubber hose segments that join these intake tubes to the engine at both ends. I have learned that Dow Corning 4 insulating Compound is an excellent lubricant and permits the rubber hose segments to slide over the intake tubes and make installation possible. In the following picture, these installed chrome intake pipes pass through the engine mount structure and have to be installed after the engine is on the mount.



Although the carburetors on both engines were the same, the metal boxes bolted underneath are airframe specific – Switching these metal boxes was the next step.

While hooking up the tachometer cable and engine temperature probe, I realized that I had neglected to address a serious problem – someone had used a pipe wrench to attempt to remove the oil drain plug and had sheared off the head of the oil drain plug. All that remained was a shredded,

slightly tapered stub. After 2 days of worrying about how much trouble this would cost me, I took a large pipe wrench to the airport and tried to remove the plug. It would not budge.

Next I used a Dremel to square the stub so that I could use the back end of a 3/8 ratchet extension over the squared stub. With a very large adjustable wrench, I applied a LOT of torque – The plug deformed but the threaded portion did not rotate at all. I worried another 2 days, then went back to the airport with a propane torch and a cold chisel. I re-squared the stub and used the chisel to hit the plug HARD off-center in an attempt to rotate the plug. After liberally heating the area with the torch, I re-applied the 3/8 ratchet extension and gave a hard twist – and the plug rotated and was easily removed. I was lucky.

Next, I bolted on a bracket that supported the nose cowl and installed the nose cowl itself. It was important that the nose bowl be in place before the propeller was re-installed. I wanted to install the propeller only once.

For some reason, the primer lines and fittings were different between the two engines. Took 45 minutes to remove them from the old engine and install them on the new.

Next steps are to hook up throttle controls, oil pressure line, magneto electrical. Also I have to bolt on my cleaned up baffling, through which the plug wires pass.

An issue to be addressed is whether to retain the old exhaust arrangement which brought exhaust from the left side cylinders underneath the engine to join the right side exhaust for a single exhaust pipe. The Porterfield exhaust arrangement was more complex and resulted in an exhaust port on each side. My intent is to use the Porterfield arrangement and cut required holes in the lower cowl to accommodate it – that is IF I can get this modification approved by my IA.

I have elected to test run the engine with its existing shielded ignition wires, but will not retain them when the aircraft returns to flying status because the shielded plugs are too tall and would require a large bulge in the upper cowl to clear the plugs.

After removing the stuck oil plug, I noticed that oil leaking out of the case was very thick and very dirty. I plan to run the engine with cheap SAE 30 automotive oil with a liberal amount of Marvel Mystery Oil for an hour and drain. Hope that will flush all the crud out.

Here is the current status of the aircraft:



A side note: When I started a home-built aircraft project in the 1980s, Aircraft Spruce was my go-to supplier of aircraft quality spruce, bolts & nuts hardware, fiberglass cloth, and resin. Now, however, I have become disillusioned with the company which seems to cater to supplying modern avionics and parts for name brand modern engines, and airplane Christmas tree ornaments. I find it impossible to find, for example, simple things like a hose end, a rubber washer or fitting that is not defined by a specific part number. For these, I have to go to companies like McMaster-Carr or an automobile restoration or racing supply company. I am not alone in finding this to be the case. I find that antique car restorers face many of the same problems I do – and there are companies that serve that need.

Service Providers

Recap our standing list of service providers:

- **PPG instructor and dealer:** Brian Goff, 703-963-7389
spin2329@gmail.com
<https://www.paraflightnc.com/>
- **Aircraft instructor - CFI:** Pete Bastien, 703-568-5778
- **Aircraft instructor - light sport and seaplane:** Chuck Tippet, 540-905-5091
- **Ultralight (Part 103) instruction:** Tom Richards' Grass Roots Flyers, 703-568-3607
- **Gyroplane Instructor:** Frank Noe, 443-253-7681
frankcanfly@yahoo.com
<http://www.gyromoj.com/>
- **Machinist:** Luther Taylor, 540-222-3927
- **Welder:** Luther Taylor, 540-222-3927
- **A&P mechanic/IA (not at Airpark):** JD Ingram, 513-388-6312
- **Light Sport Condition Inspections, Rotax Certified:** Tim Loehrke, 703-618-4005
- **A&P mechanic specializing in tube & fabric, based at CJR:** Air Knocker Aviation
(Abe Makely, Saverio Gambassi)
571-309-7023
airknockeraviation@gmail.com

For more information on instructors, see <http://www.flyingclub1.org/instructors/instructors.php>

Activities

Flying Club 1 Activities Schedule

Club meetings will be held on the second Saturday of every month. Warm weather meetings from April through October will be held at the Warrenton Airpark. Please see the schedule below for the location of other meetings and information on events. Changes in time or location will be posted in this newsletter and on the Club website.

Date	Activity	Location	Description
Saturday, February 13th, 11am	Winter meeting Zoom due to COVID-19	Zoom. Members will receive an email invitation. Visitors are welcome! Email Steve Beste for Zoom login credentials: president@flyingclub1.org	Program: TBD
Saturday, March 13th, 11:00am	Winter meeting Zoom due to COVID-19	Zoom. Members will receive an email invitation. Visitors are welcome! Email Steve Beste for Zoom login credentials: president@flyingclub1.org	Program: TBD
Saturday, April 10th, 11am	Fly-in, club meeting, and cookout	Outdoors at the Airpark	Club meeting, fly-in, and cookout at Warrenton Airpark
Saturday, May 8th, 11am	Fly-in, club meeting, and cookout	Outdoors at the Airpark	Club meeting, fly-in, and cookout at Warrenton Airpark
Saturday, June 12th	8:00am Poker Run 11:00am Fly-in and club meeting	Outdoors at the Airpark	Poker Run Club meeting, fly-in, and cookout at Warrenton Airpark
Saturday, July 10th, 11am	Fly-in, club meeting, and cookout	Outdoors at the Airpark	Club meeting, fly-in, and cookout at Warrenton Airpark
Saturday, August 14th, 11am	Fly-in, club meeting, and cookout	Outdoors at the Airpark	Club meeting, fly-in, and cookout at Warrenton Airpark

Date	Activity	Location	Description
Saturday, September 11th, 11am	Fly-in, club meeting, and cookout	Outdoors at the Airpark	Club meeting, fly-in, and cookout at Warrenton Airpark
Saturday, October 9th, 11am	Fly-in, club meeting, and cookout	Outdoors at the Airpark	Club meeting, fly-in, and cookout at Warrenton Airpark
Saturday, October 23rd, 9am	Club 1 Color Run Fly-out	Meet at the Front Royal Airport for the run down to Luray	Club 1 Color Run Fly-out: Front Royal to Luray
Saturday, November 13th, 11am	Fly-in, club meeting, and cookout	Outdoors at the Airpark	Club meeting, fly-in, and cookout at Warrenton Airpark
Saturday, December 11th, 5pm-8pm	Holiday Party	Tom Richards' house at the Airpark	Monthly meeting and Holiday Party

Classifieds

Ads will be run twice and then dropped unless resubmitted, or renewed by telephone or e-mail. Please advise the editor: **Lucy Ooi** (Ooi.Lucy@gmail.com) when the ad is no longer needed.

Attention Pilots



Live at Warrenton Airpark - a 76-acre Private Airfield (7VG0) located 4 miles south of Warrenton, Virginia approx. 1 mile east of US 29, off Beach Road where it intersects with Green Meadows Road – 2 Acre building lot (white outline)

Wooded lot slopes gently down to Green Meadows Road. Includes Unrestricted use of surrounding Airfield. 8 miles outside the Washington SFRA. 30+ aircraft based at the field – which is also used by upwards of 20 Powered ParaGliders (PPGs)

Asking Price \$299,000

Call Tom Richards (703) 568-3607

‘46 Taylorcraft for ½ interest sale. LIGHT SPORT. TT airframe 1225 hr. Good fabric and clear glass. 12 gal main and two 6 gal wing tanks.

Cruise at 95 burning 4 gph. Sensenich wood prop balanced with 350 hr. 65 hp Continental with 587 hr.

Rebuilt Mags and new harness with less than 75 hr.

Fresh annual and all ADs complied with.

Hangared at Warrenton Airpark.

\$7,000 for ½ interest or \$14,000 for all.

Contact Bill Sullivan at 540-422-9175 or wpsullivan99@gmail.com

Owner/Builder of Fisher Celebrity (biplane)

Looking for a Co-Owner

All wood construction, Grove one-piece spring-aluminum main gear

Powered by Rotec R2800, 7-cylinder radial engine, 100 horsepower

A tandem 2-place open cockpit biplane, cruises ~80 MPH

Qualifies as light sport

Construction site & hangar, Warrenton Airpark (7VG0)

Project is ~80% complete

Project includes Grove Gear, Rotec R2800, Instruments, Flying Wires and all other major components. Total value ~\$35,000

A current co-owner is offering his half of this beautiful project

(Entire aircraft sale – may be considered)

Call for additional info or to make an appointment to see this beautiful Taildragger!

Gil Coshland - (703) 618-3422

Asking \$17,500 for his co-ownership

Jim T. Hill - (703) 659-8336 (Co-owner)

Membership Dues Policy

The period of membership follows the calendar year - January through December. The renewal period starts on 1 October with regular dues at \$20.00 and family at \$25.00. Members who have not paid their dues by the end of February will be dropped effective 1 March and will not receive the Newsletter or Membership Roster. Please mail payments to Flying Club 1, 8570 King Carter Street, Manassas, VA 20110. Payment can also be made at the regular monthly meeting. Please include the Membership Application form with your payment. This will be used to ensure that our records are current. A copy of the membership application is attached and also printed at the end of the Newsletter.

Jim Birmbaum
Flying Club 1
Membership Director, Treasurer

MEMBERSHIP APPLICATION



Type of membership: ☐ New, ☐ Renewal, ☐ Regular, ☐ Family membership

Name(s): _____

Name To Go On Your Name Tag: _____

Street or PO Box: _____

City: _____ State: _____ Zip: _____

Telephone, Home: _____ Cell: _____ Work: _____

Spouse's Name: _____

Emergency Contact: Name: _____ Phone: _____

E-mail Address: _____

Aircraft Liability Insurance through: _____

Aircraft make and model: _____ N-Number (if any): _____

Pilot rating(s): _____

Club Activities or Services for Which You Volunteer: _____

Information from this application will be in the club's membership roster which goes only to members.

Instructions:

1. FILL OUT THE ABOVE FORM.
2. ENCLOSE A CHECK FOR \$20 (\$25 FOR A FAMILY) MADE OUT TO **“FLYING CLUB 1”**.
3. SEND THE FORM AND CHECK TO:
Jim Birnbaum, Treasurer
8570 King Carter Street
Manassas, VA 20110-4888

To join the national USUA, go to <http://www.usua.org>

To join the national USPPA, go to <http://www.usppa.org>

Flying Club 1 General Information

The Flying Club 1 is a nonprofit, recreational club dedicated to the sport of ultralight and light sport aircraft flying.

2021 CLUB OFFICERS AND DIRECTORS

President: Steve Beste 703-321-9110

Vice President: Allen Whatley 571-235-6978

Secretary: Jim Heidish 703-524-5265

Treasurer: Fabian Georges 571-282-3698

Director At Large: Pete Bastien 703-568-5778

Director At Large: Tim Loehrke 703-318-7896

Director At Large: Lucy Ooi 585-410-5573

2021 CLUB VOLUNTEER STAFF

Safety & Training: Tom Richards 703-568-3607

Membership: Fabian Georges 571-282-3698

Club Artist: Jim Heidish 703-524-5265

Newsletter Editor: Lucy Ooi (“Wee”)

Ooi.Lucy@gmail.com

Web Master: Steve Beste,

president@flyingclub1.org

A club is only as good as the members who volunteer to support its activities. The following listed activities with the club require mem-

ber support in varying amounts. Please indicate on your membership application the function(s) (can be more than one) you will support as a Club member. All active Club members are expected to participate. However, members who live some distance away and cannot attend meetings regularly may prefer to support functions associated with Club weekend activities.

ANNUAL DUES (Jan 1-Dec 31) \$20.00. Family membership (typically husband and wife): \$25.00. A spouse who wishes to participate will please complete a membership application form.

CLUB WEB SITE: <http://flyingclub1.org>

MEETINGS are monthly, year-round. See the web site for dates and places.

THE NEWSLETTER: The newsletter is published by email on the first of every month.

SUBMITTING ITEMS FOR THE NEWSLETTER Members and non-members are encouraged to submit items for this newsletter. Send submissions to Lucy Ooi at Ooi.Lucy@gmail.com at least one week prior to the end of the month.

If you are interested in joining the U.S. Ultralight National Organization go to their website for membership information at: www.usua.org

Likewise, if you are interested in joining the U.S. Powered Paragliding Association, the National PPG Organization, go to their website for membership information at: www.usppa.org