

Airworthy

The Official Journal of the Black Forest Soaring Society

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Elbert, CO 80106



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Club Web Page: SoarBFSS.org

Facebook Group Page: [BFSS Member Only Page](#)

Facebook External Page: [BFSS Public Page](#)

FROM THE EDITOR

Well, the local soaring season is mostly over (is it?) and we're moving into off-season mode. Some of us have boxed up our babies for the season, others are still working on licenses, badges, and such.

Although the year is almost over we're all planning our campaigns for next year, right? If not, I have a few suggestions. You'll notice in the club calendar below, I have three listings that don't seem to be related to BFSS. Ah, but here's what I'm thinking:

First up is the Minden Wave Camp in April. Here's your chance to get that diamond altitude leg as well as to get well above 18,000 feet. It's not Perlan, but the view and the experience are unbelievable. Think about it.

The next item is the 1-26 Championships, late May in Moriarty. Although our club 1-26 is long gone, the 1-26 Association also invites other low performance ships to join in the competition. The PW-5 and the Russia meet that criteria. So why not have a team entry to the Championships? Hey Brian, how about taking your 1-36?

Lastly, Alice and I will be attending the Women Soaring Pilots Association Seminar in July in St. Louis. We don't have many women pilots in

the club but we do have a few. Why not head east and represent BFSS at the WSPA Seminar?

There are lots of things to think about between now and the start of cross country season. Why not start planning now?

On another subject, the BFSS Winter Party is back. Dinner and awards. Ingo Kuenzel and Gary Baker are taking the lead on planning. We should have dates and more info soon. Pencil in a Saturday evening in February.

Another subject: Back issues of *Airworthy* are now available on the BFSS website (<http://soarbfss.org/Airworthy>). This includes all the issues since the reboot last year. I have some old issues from the early 90s that I'm in the process of scanning and I'll put those up soon.

Finally, everyone here at the staff of *Airworthy* (Mark, Alice, and Frannie and Herschel the cats) wish everyone a Happy Thanksgiving!

Mark Palmer, Editor

CALENDAR

Board of Directors Meetings

November 6, 2018 6:45 – 8:45

Monument Library
1706 Lake Woodmoor Dr.
Monument, CO

<https://ppld.org/monument-library>

December 4, 2018 6:45 – 8:45

Monument Library
1706 Lake Woodmoor Dr.
Monument, CO

<https://ppld.org/monument-library>

BFSS Winter Party

February, 2019

Info to come

Minden Wave Camp

April 8 – 12, 2019

Minden, NV

Contact www.soaringnv.com

1-26 Championships and Low Performance Contest

May 28 – June 7, 2019

Moriarty, NM

Women Soaring Pilots Association Seminar

July 1-5, 2019

St. Louis, MO

FLEET UPDATE

ASK-21 – The front altimeter went on the blink, so the one from 840 has temporarily been installed until the broken one can be repaired.

2-33 – Refurbishment continues. See Alice's update below.

AC-4C Russia – A wish list of upgrades has been started. See the article below.

PW-5 – Nothing to report

Blanik L-23 – Nothing to report

FRIENDLY REMINDER

Snow season is coming! Heavy winter snows and rain will make the grass portions of the field very muddy. Please, under any circumstances, **DO NOT** drive the golf carts on the grass. Driving on the grass could result in deep ruts and a lot of headaches for the club and airpark users.

OPS DUTY CALENDAR

Here is the Ops Duty schedule for November and early December:

Keefe, Mike	11/03/2018
Abbe, Joshua	11/04/2018
Kolk, Brandon	11/10/2018
Leonard, Dave	11/11/2018
Make, Jeff	11/17/2018
McClain, Kip	11/18/2018
Palmer, Mark	11/24/2018
Palmer, Alice	11/25/2018
Metzger, Marc	12/01/2018
Paluch, Zach	12/02/2018

Remember, if you can't make your duty assignment, YOU must find a replacement. Once that is done, contact [Ingo Kuenzel](#) and let him know so he is aware of the change. Be sure to go to the Calendar page on the website and put yourself down for the day you're assigned.

SIMULATOR FLIGHT TRAINING

by Quay Snyder

Fellow BFSS members and especially instructors and student pilots, I am behind in my reading with my travels, but wanted to point out an excellent article by Scott Manley in the September 2018 of *Soaring* magazine. On pages 42-45, he outlines a training curriculum for the Private pilot rating. It incorporates ground, flight and simulator-based training.

We have the luxury of having a Condor simulator, which is the basis of Scott's simulation-based training. He provides his training materials for FREE to everyone. The diagram on the lower right corner of page 43 is the overall training plan. Each of the 19 sections has its own Condor-based lesson plan and Condor instructions. This is a very effective and inexpensive way to progress quickly through the FAA Practical Test standards regardless of weather, glider availability, or instructor availability. You can use the simulator in the

club or you can get Condor, a joy stick, and rudder pedals for home and use it every day for about \$200. You could do hundreds of flights for the cost of a few flights with an instructor.

For those of you who have advanced further, flying Condor is a way to improve your skills and compete with others on Condor online competitions, especially when we get into winter.

Fly Safely,
Quay

COLORADO STATE 13.5 METER RECORDS by Mark Palmer

Well, there aren't any, really. I was perusing the SSA state records the other day. Somewhere along the line 13.5 meters was added as a class. The categories include Distance, Altitude, Out and Return, and Triangle Speed. Check them out at www.ssa.org/BadgesAndRecords . Here's another way to improve your skills and go down in the record books! Dave Rolley has put together a nice set of tasks that can be used out of KAP. So let's have some fun and make some records!

Before you go racing off cross country you should really get your Bronze Badge. See Mrs. Badger's article below.

ACCOMPLISHMENTS

Julie Kinder – First solo and A Badge. Congratulations!



Julie Kinder and CFI Stan Bissell

THANK YOU!

Steve Johnson and **Gary Baker** – For more work on the Hangar 3 roof leaks.



Steve Johnson – For persistence in troubleshooting the No. 2 golf cart problems—the shorted batteries have now been replaced.

WELCOME NEW MEMBERS!

Chris Ravotti – New member flying with Ingo.

James “JC” Conahan III – JC is 14 and just starting out. Ingo will be his primary instructor.

FRIDAY TOWING CONTINUES

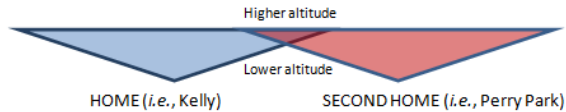
Because of the success of Friday towing, it will continue into the fall until non-flyable weather becomes the norm. If you wish to fly on a Friday, get on the schedule as early as you can. Then let Bill Gerblick know and he'll see who might be available to tow. As before, Friday tows are not guaranteed, so early scheduling is a must.

CONE FLYING

by **Raul Boerner, Chief CFI**

The basic definition of HOME is this: The airport from which you launched. “Cone Flying” means the higher you get, the further away you can go (and still make it HOME). The definition of SECOND HOME is this: Another safe place to land.

Cross-country flying is the connection of cones (HOMES). Thus, you always have a safe place to land.



Glide Ratio is the distance you can fly per altitude lost. On the other hand, Effective Glide Ratio considers the wind's effect on how far you can glide. In a no-wind situation, you can glide the same distance going out as you can coming back. But in a wind situation, you glide further with a tailwind and shorter with a headwind.

For example, 30:1 is a typical glide ratio of club gliders. But this is not an intuitive number. We prefer to know how far we can glide per 1,000 feet of altitude. To calculate this number, we divide the glide ratio by 6. Thus, a 30:1 glide ratio becomes 5 NM per 1,000 feet; we'll call "5" this glider's base number. NOTE: This is a NO WIND number. It is with a perfect pilot, in a perfect glider, in perfect weather.

If we want a cushion, we reduce the 5 NM per 1,000' to 4 NM (in a NO-WIND SITUATION). So with a small headwind, we reduce the 4 NM per 1,000' base to 3 NM per 1,000'. Conversely with a small tailwind, we increase the 4 NM per 1,000' base to 5 NM per 1,000'. This is what we mean when we say that this is a 3-4-5 glider. Remember, we reduced the base number (5) to 4 because we are not perfect, our glider is not perfect, and the weather forecast is not perfect.

GLIDE RATIOS of CLUB GLIDERS
(In a perfect world)

- The L-23 glide ratio at L/D max is 28:1 (4.6 NM per 1,000' in a perfect world).
- The ASK-21 glide ratio at L/D max is 34:1 (5.6 NM per 1,000' in a perfect world).
- The AC-4C glide ratio at L/D max is 35:1 (5.8 NM per 1,000' in a perfect world).
- The PW-5 glide ratio at L/D max is 32:1 (5.3 NM per 1,000' in a perfect world).

PERFECT WORLD		REAL WORLD (cushioned)
L-23	3-4-5 NM/1000'	2-3-4 NM/1000'
ASK-21	5-6-7 NM/1000'	4-5-6 NM/1000'
AC-4C	5-6-7 NM/1000'	4-5-6 NM/1000'
PW-5	5-6-7 NM/1000'	4-5-6 NM/1000'

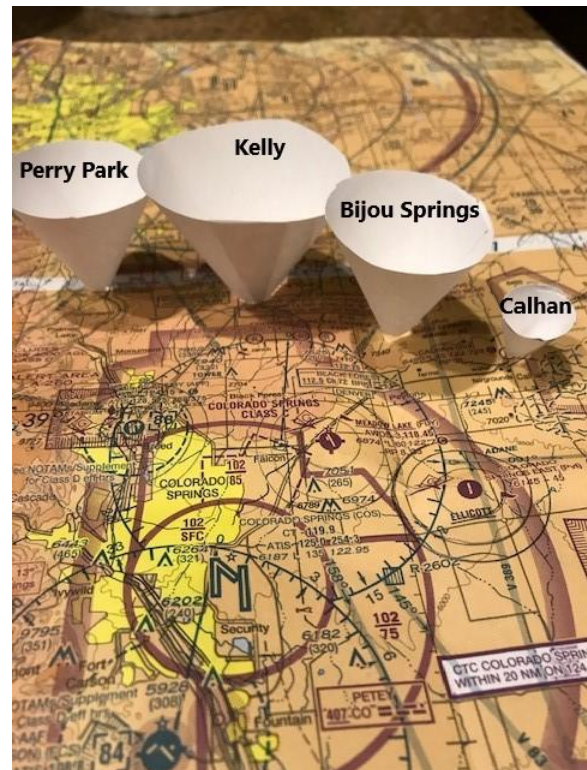
NO-WIND Conditions (quick math for close-in operations)

L-23	loses 217' per NM	(use 300' per NM for cushion)
ASK-21	loses 179' per NM	(use 250' per NM for cushion)
AC-4C	loses 174' per NM	(use 250' per NM for cushion)
PW-5	loses 190' per NM	(use 250' per NM for cushion)

Question 1: If you are three nautical miles from Kelly and plan to arrive at traffic pattern altitude (8,000' MSL), what is the minimum altitude for starting back home?

Question 2: In the photo of the four cones over a sectional chart, what must you do to safely bridge the gap between Calhan Airport and the Bijou Springs PVT runway?

Question 3: If unable to bridge the gap between Calhan Airport and the Bijou Springs PVT runway, what should you do?



RUSSIA WINTER UPGRADES by Dave Rolley and Mark Palmer

Winter is coming and the staff at Fox Delta Engineering have some plans for the AC-4C Russia. Dave and Mark have come up with a list of what they would like to do. The plan is to take the ship off the schedule sometime in November or December and have it back online after the first of the year. The majority of the aircraft work will be done at Dave Rolley's shop. Here's the tentative punch list:

Aircraft:

- Tailwheel alignment (replace tailwheel?)
- Shorten stick (new wiring on PTT)
- Make tail dolly
- Repair spar guide for starboard wing
- Make tip wheel like PW-5
- Anodize aluminum brake parts
- Reconnect variometer audio
- Install USB power plug in panel
- Install gear warning horn

Trailer modifications/improvements:

- Fuselage tiedown
- Wingtip tiedown
- Rear rollover fittings on tailgate
- Latch for rudder area cover on rear door
- Latch for front doors

Make up an illustrated guide for:

- Assembly
- Disassembly
- Taking it out of the trailer
- Putting it into the trailer
- Proper hook-up to tow vehicle

If you'd like to be involved in this project, let Dave or Mark know.

FOR SALE

Microair Avionics T2000SFL Transponder and Encoder: \$1,000. I'll help with the installation, arranging to get the installation signed off, and getting the 91.413 transponder check

accomplished. Contact Dave Rolley at soar.rubber.duck@gmail.com.

Oxygen system parts: Two bottles (they have pressure), old USAF-style regulators, blinkers, and mask. \$100. Contact Ingo.



Have a ship you want to sell? Looking for a partnership? We can list it in *Airworthy*.

SSA BADGE PROGRAM by Mrs. Badger



As SSA instructors recently anointed by our Chief CFI Raul as "the Badgers," Mark and I were excited to award badges to **Julie Kinder** (A Badge; see Accomplishments in this issue) and **Vitaliy Aksyonov** (A and B Badges; see Accomplishments in the October issue). The badge program in the club has been relatively inactive for some time, and we are looking forward to getting it started again. We are both strong proponents of the SSA badge program as a way to build skills, increase safety, and, of course, have fun! *[Plus, all the pins look really cool on your hat! – Mark]*

According to the SSA, the early badges started back in the era of shock-cord launches and open primary gliders. Since there were no dual gliders, everyone was essentially self-taught. The A, B and C Badges originated in the 1920s in Germany. Requirements for the A Badge were

two flights with duration of 45 seconds and one flight with a duration of 60 seconds that included two “S” turns!

Fortunately, we have a bit more advanced syllabus today, and our A, B, and C Badges are more challenging. In addition to the A, B, and C, the Bronze Badge was created to promote further development of cross country skills. The full requirements for each of these and more advanced badges are available on the SSA website:

<https://www.ssa.org/BadgesAndRecords#ABC>

We will be working with all the instructors to encourage club members to work toward these achievements. If there’s enough interest next year, we may hold some workshops to get people prepared to take the Bronze Badge written test. That’s a great goal for members interested in pursuing not only the Bronze Badge, but also the FAI Silver Badge and beyond.



We also ask our highly experienced club members to encourage our newer pilots to pursue these badges, and to share stories of their own badge flights. Please think about writing up your stories of attempts or successful badge flights (no matter how long ago) and we’ll publish them in *Airworthy!*

THEY’RE HITCHED!



Monday, October 1st was the date of Raul and Brenell’s wedding. After the wedding in front of a judge, the couple retreated to Vail (with Savanna the ring dog) for some time together. Congratulations!



The celebration continued on October 20th with a fabulous party hosted by Bif and Ceil Huss at their beautiful KAP home. Wonderful food and great company made it a perfect event! Thank you Bif and Ceil for your hospitality!



The happy couple celebrates with friends



BRR!

In October we completed gluing the bottom and left side fuselage fabric. It's starting to look like an aircraft again! Thanks to Doug Curry for his patience as we continue with the detail work that takes a lot of time.

N65840 TANKER 2-33 REFURB by Alice Palmer

The 840 project team continues to make significant progress in spite of our latest challenge—cold!

We continued working through the early October cold snap. On one of our 2-33 Thursdays, we arrived at the hangar where it was 30°F. This gave us the opportunity to see if the old propane heater actually worked—and it did—although it needed some troubleshooting from Raul and Steve to keep it running.



*Bottom and left side fabric is glued
(fuselage is upside down)*

Mark stripped and prepped some additional small parts, which are now ready for primer and paint.

Ed sanded the wingtip wheel brackets in preparation for paint, and located new wheels. Funny how they look amazingly like hockey pucks! Ed also replumbed the instruments and did some additional work on the panel.

Raul worked with a plastics company in Denver to obtain new side and top windows.



A dedicated team!

The door is a side project that continues as time allows. It will probably travel back to the (heated) Palmer garage so work can continue during the week.



Thank you to our neighbors Dave Allen and Jamie Treat who stop by regularly to help. We appreciate your advice and techniques.

I'd also like to send a special thank you to Luanne Jebens, our Univair account representative. She is great to work with and helps us with all our orders and questions!

Thank you all for your hard work, and especially for enduring the cold!

Mark Palmer
Raul Boerner
Gary Baker
Ed Anderson
Doug Curry

And finally--

We are sad to say our two volunteer cat-faced spiders, Charlotte and Charlita, have passed on to the great web in the sky. Having laid their eggs, they've completed their life cycle. We miss watching their activities as we work. Maybe we'll see some little ones in the spring.



Goodbye Girls!

MORE PHOTOS!



Joshua Abbe in BA, inbound



Julie Kinder's first solo landing! Sweeeet!



Proud Mom, Becky Kinder hugs daughter Julie after her first solo flight. 'Oh, Mom!'



Wave flight out of Westcliffe, Colorado. Photo by Mike Cavanaugh

Then and now—helping the Palmers through the years. Thank you Dave!



Dave Rolley and son Charlie with Mark and Alice Palmer before Alice flies the Zuni II. Circa 1994.



Echoes: Flash forward to today. Alice with Dave Rolley and Echo Fox, the Palmers' "new" DG-300. Dave has provided invaluable help as our unpaid research assistant.



*Winter landscape
Photo by EllaJane Urschel*

Winter is on its way.