

Squadron III

The only monthly dedicated All-Canard flyers newsletter
for events, resources, updates and more in the canard flying world.



June 2018

Volume VIII, Issue 6

Picture of the Month:



POW Charlie Plumb's Long EZ over Point Conception, CA [Eric Cobb]

FAA Developments:

Flight Plan Forms changing: Curtis Wray and I filled out ICAO flight plans to go from the Bahamas to Grand Turk and there are differences. The FAA is "internationalizing" and will soon go to this new form. Some guys found the form on their iPad and submitted it. I called mine in on a credit card call. The only real difference I was surprised by was the FAA guy lecturing us on the letters following the type aircraft - they had combinations of letters, not just "/G" or "/S". For those familiar, could you give us some good examples of what the letters would be for a typical homebuilt canard? <http://sportysnetwork.com/ipad/files/2016/03/faa7233-4-1.jpg>

Forced Landings:

Beagle has been flying with the Glide function on in Foreflight (after programming glide speed and glide ratio) and finds these canards have airports in glide range so much of every flight - the squiggly line in higher terrain is mesmerizing, unfortunately. Once used to its functions, you might be encouraged to fly higher for a bigger range "circle".

RUTAN TIME:

BURT & DICK RUTAN BIRTHDAY PARTY – please RSVP David Orr if coming to Coeur D’Alene for June 29th and 30th to celebrate Burt & Dick’s birthdays.

A couple of suggestions before you go please RSVP to David Orr, aka Beagle so I can keep the list up to date for Tonya:

First a note from Tonya Rutan to those coming.

A couple of suggestions before you go:

Tonya has a request:

"I'd like you to add a note to your next mailing. Our friends at Antenna Films, Scott B and Sandy Guthrie, are making a documentary about Burt's life titled "Looking up, Way Up". They will film parts of the party on June 30. They are also helping us scan and archive years of previously undocumented photos and videos. If you have, and want to share, precious moments from the 70's and 80's of the Rutan Bros, please bring a copy to the party to give to Antenna Films.

There's no compensation expected here for footage, but we'll add them to the Burt Rutan archives for history. Mark your photos and video footage with name, email address & phone number for proper credit."

Beagle suggests you find your oldest Canard T-Shirt and wear it to the June 30th party. I'll be bringing my oldest - I'll give a new Canard formation shirt to the oldest (with a date incorporated on it) T-Shirt from the Canard world.

Burt Rutan supplied this photo and write up: *"Finally, after a frustrating winter, SkiGull is back flying. Bob Bishop...flew SkiGull flight #11 on May 18th.*



Bob insists that he flew flight #11, 12 and 13 (three full-stop landings and taxi-backs), so it is he, not someone else that is the pilot for unlucky #13. Bob was here to record a voice history of the Bede days (Mid 1970s), to help me complete that chapter of my Autobiography. Bob's flying focused on a large variety of maneuvers - he was not briefed on details from previous flights since I wanted to not poison his impressions. He debriefed extensively into an audio recorded and I have not had time yet to put it in a report. In general he liked the visibility, sound level, ease of flying/landing. I did not ask him to extend the tested flight envelope, but he did add a bit of max speed on recovery from one of his chandelles. His assessment of the EDS matched that of Glenn and Forger. He did all maneuvers with EDS either off or with settings of: S=75, B=10, Y=10 and R=10. Flight 14 will be flown tomorrow by Joe Person."



Joe Person and Burt Rutan- I had no idea Joe had built part of SkiGull!

CALENDAR - Canard Events in RED:

Jun 15, 2018: Mojave Airport's museum *Plane Crazy Saturday!* 10 a.m. - 2 p.m. Free admission! 3rd Saturday of every month.

Next Year there will be a summer Jackpot race...

JUNE:

June 29, 30 - Coeur D'Alene, BURT & DICK RUTAN Birthday Party.



Can't promise you'll see this many canards at this party - there are so many within 200 miles of Mojave, many fewer near Idaho.

TONYA's Invitation: *Friday, June 29: Welcome Friday arrivals to our house for evening party overlooking Lake Coeur D'Alene.*

Saturday, June 30: All day BBQ party will be held at our hangar, known as Honey Badger Hangar (HBH). Folks will see the SkiGull. A film crew, who is making a documentary about Burt's life, will be on hand to interview those who'd like to tell their stories.

Sunday, July 1 : Everyone flies away. I'll supply yogurt and pastries for those who want to start early.

Everyone needs to know that they should park on the Northwest Ramp of the airport to access our hangar... I will have "limo" service to the hangar because the airport doesn't want people walking the taxi ways. It's a nice big area." Needless to say, this is Burt & Tonya's home airport so we don't want to screw up and create a parking mess! Park pretty for the photos though!

Beagle: David&CanardFinder.Net Please give me your head count if you and yours are coming - or know someone not in the Squadron who may be coming too - I'll send the detail on driving, commercial or parking your canard...bring tie down ropes. I have the addresses, hangar map and parking instructions, just ask Beagle.

JULY:

For any of you in the northeast area and maybe any who can't (or could) get to the EAA Chapter 106 Experimental fly-in on June 30th, we (in the person of Jose Velez, main instigator) are planning on an informal canard get-together at the EAA Chapter 106 hangar at Lawrence Airport (KLWM) in Lawrence, MA on August 18th (Saturday) from about 1000 to about 1600.

No specific program, but a BBQ type thing, with some potential discussions about W&B procedures, maybe a W&B procedure itself, discussion of Phase I flight testing procedures, and any other damn thing that anyone wants to talk about for 6 hours. Plus a bunch of poking at any of the planes that show up.

If the weather sucks (for either flying or driving in) then MAYBE we'll do it on the 19th - we'll make these calls as the dates get closer.

Plus, as an added incentive to get folks there if canard aircraft isn't enough, we're going to have black bean veggie burgers for those that don't eat meat (I know - completely un-American) - can't beat that! This, of course, is along with the standard meat eater fare.

If you're interested, please let Jose know at:

skyeyecorp@airpost.net

Tell him I sent you. And the secret password is "Swordfish".

July 1st washout date: 7th, 2018. 8:00 AM - 4:00 PM **Northeast Fly-in (Former RV-Canard) Fly-in** Rear of KLWM N. Andover, MA **Canard Contact:** JOEL VENTURA 978-475-6875 (H) ventura@brandeis.edu
<http://www.106.eaachapter.org/2018experimental-flyin.htm>

July 6-8, 2018 Arlington Northwest EAA Fly-in (AWO) www.ArlingtonFlyin.org
with Canard Flyout to ? On Thursday or Friday evening?



>Camp under your wing with other Canards

Keep checking the Squadron III newsletter and Canard Web-sites for further information.

With the subject event's airshow schedule on Friday, July 7 closing the field from 1830 through 2130, a dinner flight on Saturday, July 8 is more viable (field opens up at 1700 after the afternoon airshow concludes).

July 8th, 2018 or the 15th weather day UK EZ Flyin Dan Gay, Great Yarmouth, Norfolk 011 44 493 301534 dansmusic@me.com Seething Aerodrome (EGSJ):
"...the Canard Fly-in at Seething is planned for Sunday the 8th of July, with an alternate bad weather day for the 15th. B and Bs can be organized for those staying overnight. Once again Dianne is sorting the buffet and BBQ. She does amazing food and you won't be disappointed. It is still to be decided if we will be having the competitions and prizes this year, but we will keep you posted. All aircraft are welcome, so tell whoever you think might be interested in a fun day out."

(Some of last year's comments: Our very own Rough River of sorts. I posted all the info on our Facebook Page and will keep you updated on how thing progress. Hopefully we will get some good video and photos of the event."



Jul 13, 2018: Mojave Airport's museum [Plane Crazy Saturday!](#) 10 a.m. - 2 p.m. Free admission! 3rd Saturday of every month.

Jul 22, 2018: SARL Air Venture Cup Air Race Mitchell, SD to Oshkosh, WI (KOSH) <http://sportairrace.org/sarl/>

Jul 23-29, 2018 OSHKOSH www.AirVenture.org

The Velocity guys have a webinar about going to Oshkosh that is very thorough for the first timer: In VOBA's Reiff Lorenz's words: "It is public and searchable on YouTube, so anyone can find it there. Here's a direct link that you can provide to the Canard Squadron list: <https://youtu.be/2BADMMdyEqA>"

Beagle will try to write down all the appointments the canard guys tell me of - lectures, meals or informal get togethers. Send your dates in for me please.

Remaining Canard focused events:

**Aug 24-25?, 2018?: "International Gathering aircraft
"DUCKS" CANARDS**

Vannes Meucon airfield. As in previous years, we expect many of you in our great gathering planes formula "RUTAN" Varieze, Hug, Cozy III, IV and

other variants, Dragonfly, Speed-duck, not to mention the excellent Junqua Ibis. Book now your weekend. Information from Serge Dupont

tadcozsd@bbox.fr

02 97 67 24 68

06 27 22 51 14

Sep 1-3, 2018 (Labor Day) **HHFC KANAB UTAH (KNB)**

Saturday through Monday. Timed event Sunday Morning. Some people will arrive on the 1st, feel free to come a day early to enjoy more of Kanab. Schedule of events to come. Please let us know if you make a reservation and are planning to come. More info AllenandLaura@iCloud.com. The new hotel that we have coordinated with gave us an updated phone number that will get folks directly to staff that can help them book for Kanab if they are interested. Here is the updated flyer (with photos - I can't seem to lift):

The Canyon Collection Hotels - Reservations call 435-644-8660 Call and tell them you are booking for the flyin to receive a special rate not listed on their website. You have your choice of 3 of their hotels. The Canyons Boutique Hotel, Canyons Lodge (Primary), The Quail Park Lodge. 3 Price points, all in close proximity to each other. To review their website: TheCanyonsCollection.com.



We had a great time with everyone last year in Kanab, and we are preparing for the Labor Day weekend event again this year. The Rutan Kanab 2018 Fly-in will take place September 1, 2, and 3 (Saturday, Sunday, and departures on Monday). It's become popular with a number of people to arrive a day early on Friday, so we have coordinated with the hotel to block the rooms for the nights of Friday Aug. 31st, Saturday and Sunday Sept. 1, and 2nd. Please forward this email to any canard enthusiast who may not be on this address list. If we have left someone off the list inadvertently, please let us know.

If you haven't been to the Rutan Kanab Fly-in, KKNB is a small town airport. The three main reasons people say they love coming to Kanab for the fly-in: 1. The laid back atmosphere, 2. The scenery, and 3. The timed event. Every year there seem to be between 20-30 planes that make the trip to KKNB, along with folks who drive in. We don't plan a lot of scheduled activities, so that people can choose what they want to do, including plenty of airport "ramp talk". A few planned group activities that bring everyone together are typically the outdoor pizza party, a group fly out on Saturday morning, the timed event Sunday morning, and a group "awards" dinner on Sunday evening. There is plenty of free time during the 3 day fly-in to explore Kanab, Kane County, and the surrounding national parks and attractions. More "back seat" and "right seat" Canadians are attending Kanab each year, and there are activities available in the area for you if you're not interested in hanging out at the airport.

For 2018, we secured lodging with the fantastic Canyons Collection hotels again (three separate but commonly owned properties in close proximity). We received great feedback from attendees last year about the lodging, and from the hotel management about the event. The 2018 room rates for the Rutan Kanab Fly-in are as follows:

1. The Canyons Lodge \$99-\$169/night + tax (*includes continental breakfast) 13 rooms available
 2. Canyons Boutique Hotel \$179/ night +tax (*includes breakfast buffet) 20 rooms available
 3. Quail Park Lodge \$139/night + tax (*includes continental breakfast) 10 rooms available
- *Please do not book online*.

Please book Canyons Lodge as the primary hotel before the other two. Identify that you're with the Rutan Fly-in group when you call to make your reservations. Any hotel based social activities will be held on the grounds of the Canyons Lodge in the common areas. Also... book as soon as you can, because they'll release our block of rooms fairly soon, after all... Summer is peak travel season. The 72 hour/ 3 day cancellation policy will apply to reservations, even though issues crop up last minute.

If you'd like to see the properties, the website is www.TheCanyonsCollection.com.

(Again, *please do not book online*.) Travis is the owner, and he's the only independent hotelier left in Kanab. When you're ready to book a room you'll need to call them at 844-322-8824. Their desk staff have all been briefed about our group event, and will be able to take your reservation by phone.

Because the event has grown in size, we have outgrown most venues in Kanab for our Sunday evening awards dinner. We have been exploring our options for alternatives. If someone has a suggestion for the awards dinner that will accommodate 60 people, please email or contact us ASAP. There is no written schedule of events available until we secure a plan for the awards dinner. We are hoping to have the Kane County Visitors Bureau bus available again for transportation to and from the hotel/airport.

26-30 Sep '18: **ROUGH RIVER** 800-325-1713 (rooms).

RoughRiver.org <http://www.roughriver.org> UGOLINI, NICK Charleston, SC 843-324-6627(Cell) unick3@gmail.com has taken over from the prior guys!



Post-Flyin Contact information:

Columbia June 1-3, 2018

The Rise of Cozy aircraft

The Beagle attended Columbia with Cherie, also called Canards West. There were more wives than I've ever seen before. The organization of Tim & Judy Fisher was particularly good - with great transportation available for people to get to the campground with their tent and stuff (a Golf Cart which was running all weekend). Tim had his pickup and Judy here big SUV and was running people to restaurants and hotels, then gather the food and vital stuff that made the dinner more successful. Outstanding photographer Patti Pitzer provided a great photo of the big crowd of planes:



Beagle walked the line taking photos but then had Apple erase the phone because replacing the charging port required opening the phone. I guess people who keep vital information on their phones are safer - Tim Fisher took photos of all the aircraft there so we have a list. Back them up regularly folks.

We had a number of would be canard owners at the flyin and they were impressed with canard performance!

- Long EZ N666BA (Brian Amendala) WA
- Long EZ N91CX (Ray McCrea) CA
- Cozy IVN574CZ (Bernie Siu) CA
- Cozy IVN753CZ (Kevin Walsh) CA
- Long EZ N131DB (Don Berlin) AZ
- Cozy III N655DK (Jorgen Skovbjerg) CA
- Cozy IV N433DP (Doug & Patti Pitzer) CA
- Long EZ NX36DX (Bob Obreiter) CA
- Berkut N73EZ (David Orr) CA
- Long EZ N180EZ (Andrew Amendala) WA
- Long EZ N455EZ (Joseph Samson) NV
- Long EZ N45FC (Steve Stearns) CO
- Cozy III N32HL (Smith, Al) CA
- Long EZ N58JB (Alan Thaye) CA
- Long EZ N57JP (James Price) ID

Long EZ N731JS (James Napier) CA
Cozy IV N91KS (Keith Spreuer) CA
Long EZ N97LZ (Michael Zwijacz) OR
Long EZ N64MC (Bruce McElhoe) CA
Cozy IV N83MZ (Marc Zeitlin) CA
Cozy IV N175PT (Tim Andres) CA
Cozy IVN97TL (Shawn Brennemann) CA
Long EZ N97WP (David Stiehr) CA
Velocity N105WP (Wilhelm Percival) NV
Long EZ N727WV (Wolf Voelker) CA
Long EZ N14ZG (Brian Brown) CA
Cozy IVN287R (Dennis Rose) CA
Cozy IVN787T (Tom Kennedy) CA
Varieze N183W (Bill Oertel) CA
Long EZ N4281X (John Bauer) AZ
Long EZ N32618 (Chris Randall) CA

31 Canards

18 Long EZs

9 Cozy IVs
2 Cozy IIIs
1 Varieze
1 Velocity
1 Berkut
1 C172RG

California: 22
Arizona: 2
Washington: 2
Nevada: 2
Oregon: 1
Idaho: 1

Tim Fisher has his plane down in Southern California getting some much needed improvements. He now owns a large trailer and Judy has suggested she can use it to shop for large box items now.

Kim Prout, Europa owner who lives at Columbia came for a short while.

Trystyn Clark, future canard owner, visited

Eliot Floersch, future canard owner, visited a short while with his girlfriend.

Trevor Orr brought his family, Julie, Taylor and Duncan by Cessna

Non-Builder owner advice:

Prop Bolt/Lug nightmare. Do you have spare prop and spare prop bolts/lugs? I was reminded after about 8 years of forgetfulness that changing a prop can end up with "issues". I was changing props on my Berkut and found that my prop bolt had been damaged in the installation. There I was with 5 prop bolts attached and a gnarled prop bolt. I'd previously had this problem when the plane was new and got some spare prop bolts and stainless lugs, so I took out an undamaged and lovely new prop bolt and put it in. The extension's lug, unfortunately doesn't fix itself and so I wiped out a perfectly nice new one. I removed the prop, took out the lug and put in a new one (my A&P suggested a C clamp and socket be used to install the new lug). I had another new prop bolt but I figured the now perfect lug would reform the first new prop bolt - kind of like a large tap would do. (I forgot again the advice by the bolt/lug guy that nobody should try using taps on either prop or lugs.) He insisted I should use beeswax as the only lubricant. The prop bolt didn't go in - so I then hopefully installed my undamaged spare second new prop bolt into the same new lug - great

idea, right? Well, the new lug was ruined by the gnarled new prop bolt... So the spares gone I was lucky enough to give up these efforts and take a used lug and prop bolt from a plane down for engine modifications and flew the Berkut to Puerto Rico and back. I ordered more spares before I left and chided myself for learning this lesson again. Use beeswax when installing prop bolts in stainless lugs, if either thread is damaged, likely the other is damaged too. Stainless is susceptible to galling, galled lugs damage prop bolts. Some of the EZ guys may disagree, but those with the post-2000 Operating Limitations (the document with the Airworthiness Certificate), have a requirement to write to the FAA with your plan to flight test the major change in the designated flight test area in your Operating Limitations. I've forgotten how the pre-2000 Operating Limitations treat major changes - but certainly an A&P has to do such a major item on those planes. I'd gladly assert that changing a Hertzler 2 blade for a Hertzler 2 blade would not be a major change unless you have changed the size of the prop considerably. These are the kind of things that can void insurance...not doing the testing mandated by the Operating Limitations - if the FAA or DAR tells you an item is not a major change, confirm it back to them in writing.

Locate a spare prop - make it your own if possible:

The other topic - most of my experienced canard owner friends have a second prop - often installed in a shipping box ready to send out to them if they have damaged a prop while on a trip - so they can get the plane home promptly...3 blade props tend to be harder to ship reasonably - as a new owner, be aware that you can throw a tool, a bolt or a rock through our great prop and end up grounding the plane anywhere you fly - you might tap your canard friends to see what sized spares (SAE 1 or 2, prop bolt length and size) they might have you might tap into. Ordering a new prop or searching to buy a used prop can take months and years. Another problem for the rarer variable pitched prop canard guys - I don't know many who have a spare variable pitched prop - and the hydraulic type need engine modifications to install a fixed prop on them. I won't go into the problems with the effort to change a single blade in variable pitched props - like MTs...pushers are at risk for prop damage... Oddly, I've had spares for 15 years and never needed it...but I have offered it out quite often.

In Memorium:

Member John Slade died as the result of illness in early May, he was well respected for his help of other canard folks in the North East and Florida. Our condolences go out to his wife, Charmaine.

Rego Burger of Port Elizabeth, South Africa:

Non-Member Rego Burger died in a dramatic crash into a cliff seemingly below the airport from which he'd taken off. In the words of a South African who knew him: *"We lost our friend Rego Burger today in his Cozy...From what I can gather, it appeared to have been an EFATO. (Engine Failure at Take Off - or in this case) "Either engine failure or redrive failure. A Buick V8 3500 was installed with a belted redrive. Here is video footage of seconds before impact. The speed has high and it seems he made a 180 to return to the runway trying to clear a gorge, but alas, with dire consequences."* (Beagle suggests you canard guys skip the video - it looks desperate and really says little of what happened.)

<https://web.facebook.com/PEExpressNewspaper/videos/1710087719077815/UzpfSTE0MjM0NzYwMzY6MTAYMTY2NTkxMjQzNzY4NzM/>

"Rego's accident is sad. My take on it is that, him being a high time pilot and test pilot on top of that, is that he would have followed the rule of EFATO to keep to the 30/30 degree rule for forced landing. I also believe that the engine quit on lift off. Remember he was under powered and only had 140 HP at full

bore, so this adversely affected the rate of climb a lot. Sticking to the 30/.30 degree rule, it fast became apparent that he will not clear the ridge up ahead and then opted for a left turn to the ocean. Looking at the video I was surprised at the speed and as you say he did not convert speed into altitude. That Cozy was in a deep (canard) stall for sure. I have often experienced this with mine during finals and had to forcefully use aileron and rudder to level out. (There was sufficient power to do this.) He lacked that power edge from the engine out situation. So what I am saying is that the turn exceeded [beyond the] direction to the ocean and into a spiral. Something just does not seem right in the video. Either way, I do not believe he would have made the ocean [which is] about 3Km away from the altitude he attained. Remember also he had a belted redrive that also threw a belt long ago and if this was the case the spinning prop would have also adversely affected his glide ratio." Beagle: something else about auto engines I hadn't thought of.

Kent Ashton provided the Cozy group more news and pictures of a smoking hole below the tall building at 11 o'clock from the runway if you are taking off towards the sea. "That building can be seen on Google maps here: <https://www.google.com/maps/place/Baakens+Valley/@-33.9741489,25.6119215,344a,35y,39.35t/data=!3m1!1e3!4m5!3m4!1s0x1e7ad1819a3227e3:0x5210da22462cd1e!8m2!3d-33.9552966!4d25.5584865?hl=en> narrow the image so you can see the runways which are at 229' msl actually only a runway length, just over a mile, from the harbor. Most Cozy aircraft would lift off 1/3 down one of these runways. Depending on various factors, I'd have to guess 15/1 glide ratio so Rego would have needed to be at about 470' to glide to the runway if taking off on 35 or 08 (Port Elizabeth is an East Coast city). If you lived there, what would your plan be on those main runways.

Builder's Help Desk:

UL Power experience coming:

Beagle asked Robert Helms of lightweight UL Power engines about his sales to canard guys:

"One Long EZ flying. Three Cozy Mk IV's under construction. One Velocity about to fly. And Velocity is considering putting our engine on their Twin. The fleet is growing. Oh, and a Dragonfly under construction."

Labeling your panel - another twist or two:

Member Travis Young of Winter Park, FL - writing for VOBA: "In search of a DIY way to professionally label things (like the instrument panel), I spent about a week playing with DecalPro. While that solution may have worked out in the end, it has a significant learning curve, white lettering is much harder to do than every other color, and I found myself out of supplies on a holiday weekend that I was hoping to finish the panel prep.

I ended up buying a **Cricut machine** that cuts vinyl labels at a hobby store. I could reliably cut down lettering as small as 14 point bold Arial from a PNG graphic file as well as other graphics such as the Velocity logo. In about 4 hours from buying the machine I had the vinyl cut and on the panel ready for clear coating. While 12 point bold would probably be the most "ideal size" for lettering on the panel, a little extra size is probably going to end up being a plus in flight/with age."

Member Scott Keith, of Vero Beach, FL - again for VOBA: "Check out Front Panel Designer software too. It is a free download and they did my panel in aluminum for \$230 (including all machining and engraving). Only took 7 days. I would also be happy to send anyone my Front Panel Designer file. Here is the website: <https://www.frontpanelexpress.com/>"

Glass for less: Stan Meleski, Lakewood, CA (Los Angeles area) 562-257-8010 (cell) Stan@benchmarkcomposites.com Reports: "I just bought some new surplus RA 7725 fiberglass 38" wide and have some of it for sale. Current price at ACS (for the same thing) is \$7.75 per yard, plus tax. My price is \$5.50 with a 15 yard minimum. If you know anyone, or would like to publish [his offer], that would be great."

Key Maintenance Tip:

BEAGLE's ELT batteries expire:

The 403mh AKC brand ELT batteries reached 5 years - stated expiration. I had opened a previous Orange style 121.5 ELT of the same mfg and found 8 D Cell batteries (standard flashlight batteries are 1.5v). Anyway, I went to Costco for a batch of D Cells and imagine my surprise when I opened the 403mh case and found that the batteries were 3 volt Lithium stye - 4 of them insulated by Styrofoam and removed they looked like this:



- I bought 4 more from Batteries.com - the receipt said TNR Technical, Inc. and the box said Fedco Electronics. The dern things cost \$25 each plus shipping etc for ~\$125. The orange box has warnings not to open the box (although you'd have to open it to replace the battery pack that Aircraft Spruce sells for \$167. As the same exact originals were said to expire exactly 5 years from the ELT's mfg date, I am writing a new date of 5 years from now on the Orange box for next time. Now I have D cell sized batteries that might just blow out some flashlight bulb if I use them anywhere else.

If you have any electric trim, you should, of course, check that it doesn't jam all the way forward or aft...

Vance describes all his testing to 5/6/18 and is working on a quick release that disconnects his trim system now so he can retain his great stick feel.

"TO ALL....

Marc Zeitlin has found a possible problem with my electric elevator trim system of 29 years.

During his customer CI inspections he has discovered that the elevator trim if run to the limit may inhibit full MANUAL opposite elevator movement. As far as I know this usually manifests itself in the full elevator up configuration. He asked me to check mine and sure enough, with the electric motor driven to full DOWN elevator limit I still had manual control full up ! Imagine my surprise when I drove it full UP elevator and it locked. Normally you would not see this in flight as you would be plastered on the canopy. But we are talking an un-commanded malfunction of sorts to drive the servo to its limits.

So skipping ahead 6 different configurations and 4 test flights, this is what I found. without a lot of laborious detail I;

Shortened the springs
Lengthen the springs
Lengthen the torque tube
Shortened the servo operating length.
Lengthened the main internal rod
Changed the anchor point of the servo.

Most all of the above **will alleviate the locking of the up-elevator** but will result in a degraded pilots FEEL of the stick forces and linearity of input of the actuation-to-expected-aircraft-results. So I am not happy.

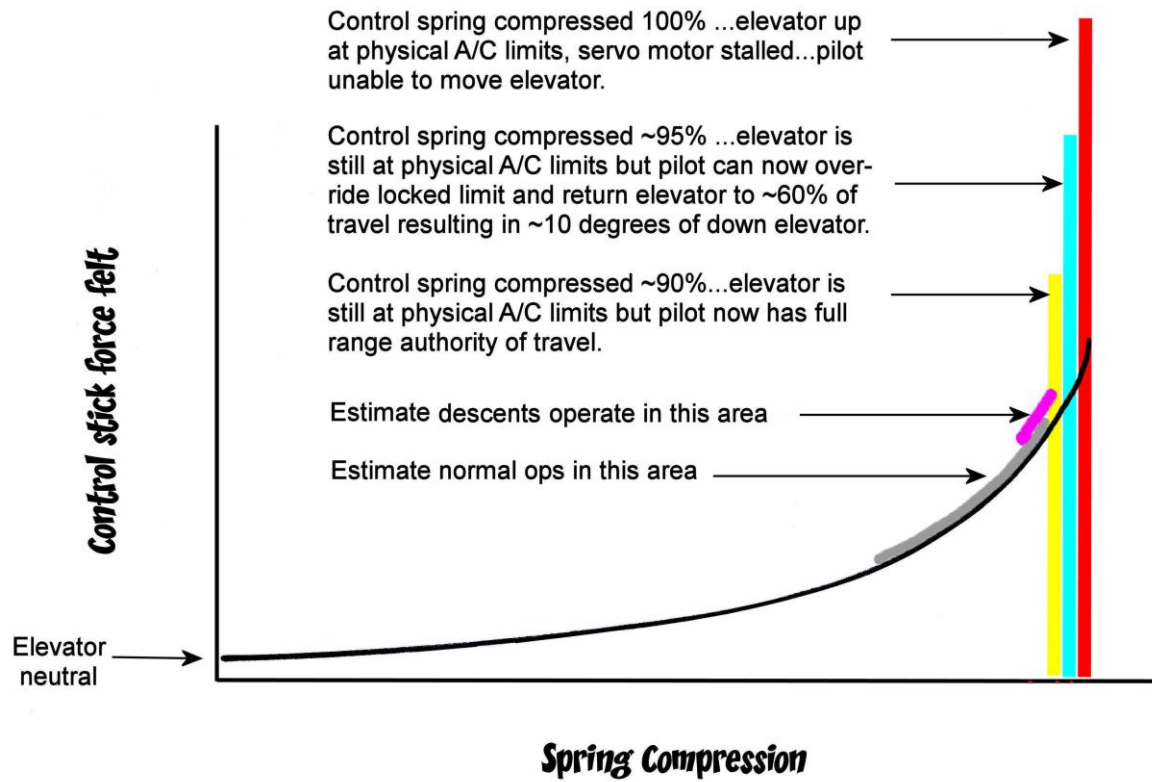
I have flown a fair amount of VEZs, LEZs and COZYs and mostly, they all fly a little different. Without bragging, mine is one of the nicest flying ones in the bunchso I've been told by others. I attribute this to two things, The trim system ...and I lucked out building the canard / elevator correctly.

The Cozy has a distinct disadvantage when compared to the LEZ BERKUT, VEZ in that we can have two peeps up front which means the canard has to work that much harder and the trim system has to be much more accommodating.

I found that descending from cruise altitudes at high speeds (leaving 12,000' descending at 4 to 500 ft/min) requires the trim to stiffen up a pretty good amount to keep the nose coming down, generally in the pink area of the chart below where the spring is just about bound up but not quite. At this point the spring has a lot of stored energy which is released in the stiffness of the up elevator."

Atkinson electric trim mod explanation

Part 2



A way to improve your cowl:

Beagle heard an interesting story this weekend - Klaus Xavier told a guy that he often just fills the cowl up with two part foam, then eats away at the foam until it fits around the engine with the old cowl installed. (I presume he puts duct tape on the cowl surface first.) Then Klaus removes the old cowl, puts the foam back and using smooth curves starts sanding away the outside of the foam until he gets the minimal shape for the new cowl. Klaus told him that he's done this many times over the years - and the guy said that he would use it to do a localized improvement - using foam only in part of the cowl...I'd never heard of this method of making the cowl more streamlined.

Requests to Individual Members:

Does anyone know anything about this engine - is it a Perkins Diesel or some such?: VOBA's Andrew Cole asked:

"While trying to look up the weight of the IO-360, for my SE project, I ran across this page:

<https://www.lycoming.com/engines/del-120>

Apparently Lycoming makes a Jet-A which appears to be perfect for a [Velocity] SE. Makes 205hp, full FADEC, weighs almost the same as the IO-360, and is turbo charged!" (Beagle: And you need to provide an intercooler yourself.)

What the flyers are doing:

John Dee, Escondido, CA per his daughter: "I want to notify you that John Dee has not checked his e-mail address (john.dee@cox.net) for over 4 years. You may want to remove him from your e-mail list. I am his daughter and I have been handling his personal, medical and financial affairs since 2014. He has been living at a nice, private care home in Escondido. He is now 93 years old and doing fairly well with a brand-new heart pacemaker (battery powered alternator in engine speak). He remains passionate about airplanes and loves looking at his many books about all planes and other innovative machines. I recently hung his photo all of the Rutan planes on his room wall. I'm happy he enjoyed so many years with the EZ Squadron as "Marty" with lots of fabulous "fly-ins" and great Ramona airport friends." **One of the San Diego guys who didn't move to Arizona!**

Patrick Nerger, Sparks, NV: "Won the Nevada State truck driving Championship for 2018"; he edits the Mailing.

Cristian Casanova, Lo Barnachena, Chile - is getting close to flying his Long EZ and came up to Los Angeles to get some stick time in Dave Ronneberg and Beagle's aircraft. Seeing the runway from the back seat is high on impossible and even seeing the airspeed and altimeter took some sitting low in the seat...he had read of the type's handling qualities, but was still surprised that the planes take virtually no throttle from the perch to landing...I suggested he get a Cozy IV ride with someone - maybe next trip to America...he'll be in Miami next week, apparently.

Another Nose lift & Bruce Tifft Kudos.

Brian Heinritz, Las Vegas, NV: "First, I received a brief message from you a week or two ago about my electric nose lift. Yes, it was installed in my Co-Z III by Jim Emons with an assist by Bill Oertel when I was at Chino a little over a year ago. Thus far, it has been working perfectly. Just to ensure I don't generate excessive loads on the overall structure, I only lift the nose with one person on board. If I have a passenger, I load the passenger, raise the nose and then I get into the aircraft in the "conventional" EZ manner.

In another update, I completed my annual and transponder inspection, and performed the required flight test for the installation of my new Hertzler Silver Bullet prop. I don't have a lot of objective performance numbers, but my static RPM at the beginning of the takeoff roll is at least 50 RPM improved over the old Bruce Tifft prop, which served me well for over 20 years. This suggests that the pitch and design of the Hertzler prop provides an improvement in the climb, which in my subjective judgment appears to be the case, and is important for us in the high elevation and mountainous West. In cruise, I appear to gain between 3 to 7 knots at the various power settings (2500 to 2700 RPM) and altitudes (6500 to 10500) that I tested. I am getting exhaust staining on one of my prop blades, so I need to re-clock it to keep the blades out of the exhaust pulses, per Gary Hertzler's direction.

The key improvement is the much greater smoothness over the Tifft prop. With the Tifft, I typically cruised at 2500 RPM, since settings above and below that resulted in a noticeable vibration. The Hertzler prop is smooth throughout all power settings. The result is that I am now more likely to use settings I typically avoided in the past, giving me more options for selecting economy or high speed cruise for the conditions.

Finally, I removed the spinner. It provided a degree of "ramp speed" but in my testing never seemed to provide any performance change, and perhaps inhibited airflow out of the engine compartment.

Next project: ADSB Out...."

PLAN YOUR GO-AROUND! :

Beagle has a before takeoff check list item after canopy double checked locked to review a plan for an engine failure on takeoff - where will I go from virtually any airport - what altitude will allow a turn back? Can I turn 30 degrees immediately on takeoff to make a teardrop back to the opposite runway easier (at a lower altitude? Or to the same runway from a better position?) Are the other runways on the field in better position with a left or right 30 degree turn if you are not under tower instruction to maintain heading? **But maybe the checklist should be amended to add reasons for a go-around reviewed before every landing...No landing is assured unless you are slow enough to turn off on a taxiway - the thinking doesn't stop when the wheels are on the ground...push back "Pilot letdown" until parked.**

Plan your go-around - how much runway remaining is safely enough is a changing target depending on speed. Test your brakes early (we've had as many runway departures from one brake failing as any other cause, I believe). So, think about losing a brake, landing downhill, landing fast or landing long, or runway incursions as reasons to be spring loaded. Can I turn off the engine and get stopped quicker? Is the far end of this runway benign enough or far enough away to get the plane stopped when the nose drops to the runway (something that is slower in electric nose lift planes). I have enough experience to know that when the nose stop hits the paved runway the EZ types stop in about 400' - yep, short! How long does it take the nose to reach the ground. Is there a gully or fence that makes nose on the ground a bad idea?

SOOOO...we've had two run off the runway events recently. Recently one of us saw a canard that landed long at Santa Monica after the runway had been shortened. The plane ended up in a hangar door after a kind of ground loop - a turn that amounted to about 100 degrees of turn or more; there was nobody injured. We now have a second - the pilot was planning on the nearly 5,000' long runway and was asked late if he wanted another runway more into the wind, the "shorter runway". In the second event, the pilot landed at 80 knots and found himself coming to the end of the runway when he had only in his own words: "about 1700' ft left...and I didn't even think of going around ... my mindset was like when you see a yellow signal light and hit the gas...I had no thought of the end appearing when it did. I hit the binders and nosed towards the exit a hard right turn ... [my] right brake gave it up and I headed slightly left before I got off both brakes I hit the nose gear up as I clear the end ... had I been aligned straight I would have been unharmed in the safety zone ... the slight left led me into trees .. . [I] now practice (of at least) thinking of going around when I approach a yellow light ... it's all in the brain eh?" Again, no injury. **Beagle:** 1700' is close to rotation point near sea level, but from 30 knots during landing it's plenty unless you are on a

high altitude runway - I have the impression it takes me as much distance to get from 0 to 35 knots as from 35 knots to 70 knots in my canard. An attempted go-around too late could also be fatal - so you have the speed/distance concept in your thinking before you land. On a really short runway, your first best though might be to test your brakes and go around then and if you are below 50, to just pull your nose gear up (some of us don't have that luxury)...it's amazing how much steering authority we have with the nose gear up, I've found.

Full Retract does gear up on a grass strip:

Per Velocity's CEO - criticizing the Kitplanes article because of some errors - it seems the new owner refused transition training and had no retract experience and told the FAA that the gear warnings system had been disconnected by the prior owner. The airplane has been repaired and was to be painted, no injuries. Apparently insurers require transition training in Velocity aircraft - something that all our new owners could use. In fact, so many of the gear up events in the past have been facilitated by a non-operational gear warning system - I know that happened to me fairly early in my Long EZ years.

[http://s3.amazonaws.com/ClubExpressClubFiles/495146/attach/1983883_0 Checkpoints-Improving-safety-record.pdf](http://s3.amazonaws.com/ClubExpressClubFiles/495146/attach/1983883_0_Checkpoints-Improving-safety-record.pdf)

Getting a new airplane the right way:

Scott Walter, with a background of a number of years in a fast Long EZ, followed by a retract Cozy IV had jumped back in with the purchase of N8XW - an award winning Turbocharged Velocity:



Scott is doing it right - he went to Galveston, TX to pick up the plane with Velocity Check out instructor Rene Dugas. It was good to meet Rene at Chino and chit-chat between instructional days here.

New members:

Joining:

17 LAIDLAW, LES 317 Davis St., Mankato, MN 56001 leslaidlaw@hotmail.com
Cozy IV:Ch10

"I am not building in [chapter] order. I have the fuselage tub completed. the turtle back completed with windows but not attached. I have the center spar finished but not attached, the canard is 1/2 finished and still glued to the work bench waiting for the temps to warm up the fill the trough with glass. I have the canopy ready to start install, and the cowling from another builder. I have the rudder pedals made (Bernard SUI) style hanging. The wings are cut out and the form for jiggling them up is made and again waiting for temps to be able to glass. I have the strakes Prepeg (cozy girl) style formed and the leading edge finished for the strakes. I started last summer and had about 3 months to work on it before it got too cold. I was gone for 5 weeks last summer and I hope to be finished glassing by the end of this summer."

Joining:

18 REECE, MAX'36, Wichita Falls, TX 940-696-1571
maxreece@gmail.com Varieze:N63SD O-200A replacing engine

Joining:

02 BROWN, BRIAN 580 Camino De La Reina #223, San Diego, CA 92108-3124
netwest@gmail.com Long EZ:N159BB 40 hrs IO-360 Montgomery Field (KMYF)

New Address:

04 KOESTER, DAVE "ROLLER" & ANETTE, 2074 SE Benson Pl., Newport Oregon 97365 541-728-DAVE(3283)Cell 541-501-8980(H) 541-349-9616(fax)
dave.koester@gmail.com Long EZ:N408EZ O-235-L2C adding Roncz canard, bought Long EZ project too. Hobby Field (Creswell) (77S)

89 MAGDALENO II, JOE "Chopper Joe" 2001 E. Plumb Ln, Reno, NV 89502 714-553-8961(cell) letsgoriding@cox.net Emeritus will build: Cozy IV:CH4 Reno International Airport (RNO)

93 BUXBAUM, MARK & JOYCE 164 Greenview Dr., Richland WA 99352 509-627-6272(H) Long EZ:N444MR res00p55@charter.net Pasco Airport (PSC)

Added to the Electronic Squadron library:

13CZ3 May'18 Nose wheel strut and "foot" alignment by Vance Atkinson
18SA10: Jan 1967, pg 8: "A Bubble Canopy for your Homebuilt by Hugh Beckham
31FA13 May 2018: FAA ICAO format Flight Plan form

Oh and Not so Trivial:

From Sporty's: **"Optimize battery life with this hidden iPad utility**

May 7, 2018

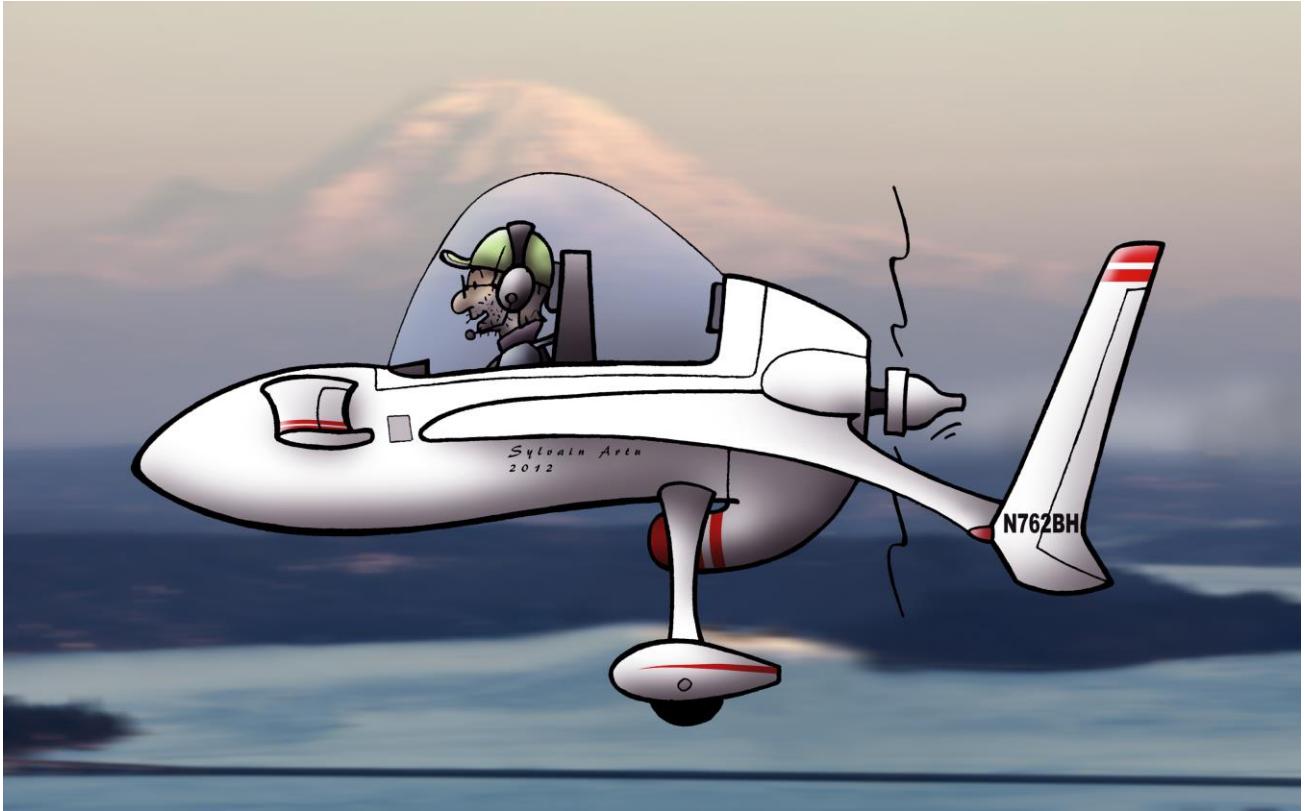
Pilots tend to focus more on optimizing the iPad's battery life than the average iPad user since this is critical to keeping the device functioning in the airplane over the course of a flight. Fortunately, there's a dedicated utility in the main iPad settings to help shed some light on which apps are using the most power, possibly while running in the background.

Go the main iPad settings app and scroll down to the "Battery" option from the list on the left side of the screen. Here you'll see a breakdown of battery usage by app, with the option to view it either over the last 24 hours or 7 days. Next, tap the clock symbol to the right of the "Last 7 Days" button and you'll see the usage time for each app, including stats on whether the app was open on the screen or running in the background.

In addition to showing the percentage of battery used by each app, you may also see the note "background activity" just below the app's name. This means a portion of the battery drain came during times when the app was updating content in the background while you weren't actively using it. If you don't use this app often and want to disable that capability, go the main page of the Settings app -> General -> Background App Refresh. Here you can disable background updates for the iPad altogether, or choose to disable it for individual apps.

While you're performing iPad housecleaning, we'd also recommend you go to iPad Settings -> Privacy -> Location Services and review the settings for each app's ability to track your location in the background, which can significantly reduce battery life."

Dave Viglierchio, at an unknown address in South Florida: *“This guy does great cartooning of aircraft. I made a couple shirts after he did mine, the first in the US several years ago.”*



Air Pictures Sylvain Artu sylvain.aerophotos@gmail.com (supplied by David Viglierchio)