

Volume 18

January 2025



SKYWRITER

Calgary Recreational Flying Club
COPA Flight 114



OFFICIAL NEWSLETTER

Our Mission

Promoting the safe enjoyment of aviation for pilots, aircraft builders and enthusiasts.

Our Vision

Welcoming owners and pilots of all types of aircraft including ultra-light, amateur-built, certified and other types of aircraft.

Connecting members through regular meetings, monthly newsletters, our website, social media, BBQ's and fly-outs.

Exchanging knowledge and information about flying and flight safety, and aircraft construction and maintenance via meeting presentations, newsletters and other events.

Sharing and enjoying real-world flying adventures.

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Featured on the Cover:

Mike Sweere's little Kitfox IV.
A nice shot he provided us.
A Good looking aircraft!

PRESIDENT'S MESSAGE

January 2025

BRIAN BYL



2025 has finally arrived.

I hope you were able to celebrate the Christmas season with family and friends and welcomed the New Year with hope and enthusiasm. We are thankful to share our good fortune with family and friends.

The weather until the last few days of December was amazing – temperatures hovering close to the freezing mark, little snow and favourable winds. Hopefully, you were able to take advantage of the great flying conditions.

Although I was unable to attend the December meeting, I was told the attendance was great and around 40 members were able to make it and enjoy the pizzas that Brian Vasseur picked up. Our guest speaker Tamara Hughes' presentation about her grandfather Norman Bruce was very well received and enjoyed by all. Thanks to Brian and Tamara for a great evening. And thanks to everyone for supporting our club.

In case you forgot, our next meeting is **Wednesday, January 8, at 19:00 at the Hangar Flight Museum.** As I mentioned in the December Skywriter, Drs. Scott Forsyth and Mindy Gautama from YBW Aeromedical Clinic will be presenting a discussion on some basic facts about aviation medicine, the processes of Transport Canada, some important info around staying fit to fly.

Speaking of fit to fly, with no further progress on the repairs to MLB, I realized the other day that I'm actually feeling a little depressed with the situation. It's been six months since the incident and I now have to wait until warmer weather before the repairs can be done. The stars have not lined up and I'm getting frustrated.

I just have not had the enthusiasm to get out there and fly the 150 and have missed a very nice fall flying window. I think it's time I change my attitude, get more enthused and go flying. How's that for a New Year's resolution? I promise to get off my butt and make every effort to fulfill it!

As you know, Stu Simpson, Greg LaBine and I are departing the executive. I hope you have given thought to stepping up and contributing to the future and success of the CRFC in the elections to be held at this January meeting. Again, I wish to thank all members of our executive for contributing to the success of the CRFC.

We will be collecting annual dues for the 2024-25 season which are still a very reasonable \$30. Andrew will gladly accept cash, cheques and e-transfers.

See you on January 8th!



May you have tailwinds and if you don't, turn around and go in the opposite direction!

Brian

Newsletter Update

Director/Newsletter Editor **GREG LABINE**



New Year... New Crew!

Well, sort of a new crew. As many of you know, we are changing out 3 of our Executives and those vacant positions will be opened for the nomination and election of new members to the Executive Board. I can't overstate the importance of having members step forward to volunteer to fill these positions. If you enjoy our club and wish to see it continue, please consider putting your name forward for this.

Brian Byl is stepping down after being our President for Seven great years. I wish to express a heaping amount of gratitude to Brian for his time and dedication at the helm of our club. He saw us through some difficult times, such as keeping the club in everyone's thoughts while we couldn't hold regular meetings for a long period, due to the pandemic. I found Brian to be a great leader, open to all ideas and input from others and always valued their contributions. And the coffee and pie during our planning meetings was always fantastic! ***Thanks for all your work Brian!***

I also wish to extend a lot of appreciation to **Stu Simpson**, one of the longest standing Legacy members of our club, as he is stepping down as a Director. It was really nice to have him as a Director. His many contributions helped reshape our club when it really needed it. He's been a great contributor to not only the stories he submits to Skywriter, but also the knowledge sharing on Meteorology, Navigation, Regulations and just plain good flying advice during club meeting open discussions. I've learned a lot. ***Thank you Stu for all that you do!***

As for myself, I'll be backing away from the Directorship after 5 years as I'm pretty tapped out for ideas for now. In my time on the Executive I did accomplish a few objectives including re-designing our Club Logo and reworking our Newsletter to give it a fresh new look. I was also able to arrange a few guest speaker presentations such as the Halifax Bomber and the Antonov An-2. I do wish to continue as the Newsletter Editor of our Skywriter as long as everyone wants me to continue in that role. I really enjoy it and feel its where my time is best spent.

As for those who are continuing on as Executive members, **Brian Vasseur, Andrew Crocker, Al Baljak and John Kerr**, I thank them for their efforts and for staying on to welcome the new Executive Members who will be joining them.
I know you'll do a great job, thanks!

Our guest speaker last month, Tamara Hughes, gave us a fascinating and very entertaining presentation. Her detailed chronology of her Grandfather, Norman Bruce's adventurous journey through the infancy of gliding and his many important contributions over the years, which led to many referring to him as "*The Father of gliding in Western Canada*". It certainly captivated everyone's interest and the pictures and references to many local Alberta towns involved in the story gave it a sense of attachment for many of us.



This month we have more really good contributions to Skywriter, including a few from our outgoing President Brian Byl. We also have a really interesting article from Stu Simpson on Autopilots. Brian Vasseur gives us some food for thought about ADSB to improve flight safety.

In closing, I wish the new incoming Executive Members and our current remaining Executive Members, much continued success going forward. All club members should appreciate the time and efforts it takes to make this organization a going concern and a great club to be part of. ***A big thanks to you all!***

Our meeting this month will feature as a guest speaker, DR. Scott Forsyth and Dr. Mindy Gautama from YBW Aeromedical Clinic. It should be an informative talk.

Wednesday, January 8, 2025 at 19:00.

See you then!

GREG.

ADSB FOR EVERYONE

By Brian Vasseur



As GA pilots in Alberta we are fortunate to have a lot of open airspace and very few restrictions on where we want to go. I believe a side effect of this is the thinking that there isn't a lot of traffic to worry about in this open airspace.

I flew about 30 hours in November and had two close calls that could have been easily avoided with the right technology. I always fly with a XAON PCAS which provides sort-of accurate information on nearby traffic with a transponder. It isn't great but it helped me find traffic flying where I planned to be in enough time to turn out of the way.

Adding ADSB Out and In can be an uncomfortable upgrade, especially for many of us who fly inexpensive airplanes. I think we need to adopt the mindset that safety is as important as clean fuel and oil changes. Almost everyone has a cellphone, a PC, an iPad in their plane, we use WAZE and Google Maps to get notified of traffic cams on the way to the airport, our cars have radar cruise control with automatic braking and possibly even lane control.

We should expect that same level of technology in our planes. Some ADSB options can be expensive, and there are others such as the uAvionix SkyEcho (\$1000 ish) which are easily affordable by everyone. I bring up the SkyEcho because it is being tested by some people in High River. They are working with TC to try and get it approved for Canada.

I am sure that many reading this are cringing at the thought of another mandatory cost to go flying. I think it's another cost we need to accept as aircraft owners.

It's not enough just to buy the equipment to see other planes, everyone needs to install the equipment to broadcast their location to other aircraft nearby. The old idea of "see and be seen" made sense before ADS-B but it's time for all of us to be safer in the air.



Brian Vasseur and Stu Simpson were up flying early in December and snapped this terrific shot of the prairie winter landscape from Brian's Zenair CH250.

A HELPING HAND

By Stu Simpson



I spent many years of my flying career poo-pooing autopilots. Who needs one? I thought. I got into this game so I could fly the airplane myself, and not let a computer do it. I wanted to be the one with my hand on the stick deciding where the plane goes, and when. “I don’t need no stinkin’ autopilot”, I proclaimed.

Right up until I got one!

I’ll happily proclaim now that I love my Cavalier’s autopilot, and that I fully understand all the fuss about them, why guys want them, and how useful they can be.



The author’s Cavalier. A simple homebuilt with some sophisticated systems. *By Divan Mueller*

So, just to be clear, an autopilot is a computational device that uses inputs from various other sources to adjust the airplane’s controls to operate it within chosen parameters. That’s a fancy way of saying it’ll fly the plane for you and hold heading and altitude. The more advanced the autopilot, the more things it can control, including climb and descent rates, speed, and lots more.

The higher end APs will fly instrument approaches. The most sophisticated ones can even land an airplane totally on their own.

An autopilot is just a little computer that does what a pilot tells it to do. The control head, which sits in the panel, is the part where the pilot tells the computer what he or she wants. The buttons and knobs set things like desired heading or altitude.

The computer sends signals to devices called servos. These are boxes with electric motors whose shafts are connected via gears and levers to either control rods, control cables, or trim cables. As the servos move back and forth, they also move the control surfaces to make them do what the computer commands.



A typical autopilot servo. Teardrop shaped servo arm can be rotated to attach to a control rod, control cable, or a trim cable.
Courtesy of Trio Avionics.

Once you set the parameters, you activate the AP and watch the plane follow those instructions. For example, the servo moves one direction, pulling on an aileron control rod, and that causes the airplane to bank. It's pretty exciting for me to see that in the Cav, especially since I never thought I'd own a plane with an autopilot.

When I got my Cavalier in 2012 it came with an autopilot already installed, called the *Trio EZ Pilot*. Trio Avionics, based in El Cajon, California, a suburb of San Diego, started out making APs for homebuilts. But with recent rule changes, the same slightly modified models are now being installed in certified planes, too.

One of the Cav's previous owners installed the EZ Pilot and did a really good job of it. It's pretty simple by comparison to higher end units, but it's very capable for use in homebuilt planes like the Cav.

My EZ Pilot is a really enjoyable tool and toy. It's the most basic model that Trio produces, being only single axis connected to my ailerons, but the things it'll do are pretty far beyond basic and I only use a portion of them.



The Cav's panel. The EZ Pilot control head is left of the Dynon EFIS. A Garmin 496 is below the tachometer. *By Stu Simpson.*

First, it must be connected to a host GPS. The Cav has a Garmin 496 that provides output nav and steering info via wired connection to the EZ Pilot. I can punch in a destination, or even a multi-point route, and once I'm in the air turn over navigation to the AP.

It can fly offset to the left or right of the Garmin's course line. That's useful if I'm traveling along a well used air route, perhaps between Three Hills and Red Deer. My AP will allow me to parallel that course line a mile or so to the right side of it, thus avoiding traffic tracking the magenta line from the opposite direction.

I can also intercept an existing course line. For example, let's say I tell the Garmin I want to go from Red Deer to Kirkby Field, where I hangar east of Calgary. It draws a course line between the centres of each airport. If I take off on runway 29 at YQF, by the time I'm ready to turn left on course, I'm way to the west of the intended course line. But I can simply select the correct command on the EZ Pilot, and it'll turn the Cav back to the southeast to intercept the established course line, and then turn the Cav onto the correct track to get back home. I only have to look after the altitude trim. This can also be useful if I get bumped off my course line for something like weather, traffic, or terrain.

Naturally, the other approach to the same problem would be to simply reach altitude, tell the GPS to go direct from my current position, and then activate the AP.

The EZ Pilot can also track a route that I enter into the GPS using as many waypoints as I want. I can take off, activate the AP to have it pick up the initial course and it'll fly the Cav to all the remaining waypoints.

I can do things more simply, too. While cruising en route, I can have the AP maintain my GPS heading, which is different than a selected course line. There's a small toggle switch on the control head that moves left and right. It changes my heading by one degree at a time, but if I hold the switch it moves through the heading numbers more quickly. I'll use this occasionally when flying very loose formation with Bob Kirkby in his Cherokee on our longer trips. And it's really useful if I need to dodge around weather ahead.

Naturally, I'll eventually have to account for any deviations, but that's where I can either go direct or simply switch over to the intercept mode and let the EZ Pilot look after the correction.

I love the fact that the EZ Pilot also has a terrific Emergency Course Reversal feature. If I come up against something where I need to turn around and run away, I simply press the MODE button for three seconds. As long as the AP is powered on and talking to the GPS, it'll turn the Cav 175 degrees in the opposite direction. I don't even need to be tracking a course line for this feature to work.

There are a number of autopilot systems out there specifically for homebuilts that are much cheaper than those for certified planes. A lot of them are 2-axis models that will also control altitude. And there's nothing stopping you from putting in a system from a certified airplane. Well, nothing except your credit card limit.

Why even bother with an autopilot? Well, for me there are a bunch of advantages. First of all, it's really cool to have such a device in the Cav. It's just fun!

Beyond the cool factor, though, is how the AP really makes longer trips easier and more enjoyable. On hot summer afternoons with lots of turbulent thermal activity, the EZ Pilot just simplifies the flight.

If I have a course punched in, and the wind and thermals are kicking the Cav around, the AP takes all the work out of staying on course so I can look after speed and altitude. The automation makes the flight much less tiring. That becomes more important if I'm at higher, more fatiguing altitudes where I dehydrate faster, or on longer legs where I can't drink a lot of water. And on days like that, every little bit of help, uh, helps.



The ironically named Simpson Mountains on a warm afternoon above the Utah desert. The thermal turbulence in times and places like this makes the autopilot really worthwhile. *By Stu Simpson*

Also, if I'm in or approaching marginal weather the AP looks after a bunch of the flying so I can concentrate on other problems such as course and diversion planning, and perhaps terrain or obstacle avoidance.

In September 2023, my wife and I flew the Cav to Memphis, TN. The first day of the trip in particular had marginal visibility in smoke over pretty featureless, thermally terrain. But by using the Cav's EFIS, GPS's and the EZ Pilot I was able to fly the trip safely and much more comfortably. My wife even recognized and commented on how valuable the AP was that day.

The last aspect is that it's simply convenient. If I need to do something in the cockpit, such as remove a jacket, grab a snack, or mess with something else, it's simple to just flip on the autopilot, manually trim the pitch and complete the task. Easy peezy. It'd be easier peezier, too, if I had altitude control, but I don't really need that.

How often do I actually use the autopilot? Well, honestly not much in my local flying. I like hand flying the Cav. If I'm going to Lacombe for lunch, or out to Castlegar, BC, to see my folks, I'm unlikely to use the EZ Pilot. But if I get tired of dealing with the daytime thermals, sometimes I'll punch in the destination and flip on the AP to take a bit of a breather. I won't use it in formation flying, of course, unless there's substantial separation, which probably then doesn't even qualify as formation flying.

I once read an article listing ten things to make you a better pilot. Near the top of the list was the suggestion to use the autopilot as much as possible. The author suggested that it allowed the pilot to concentrate on other tasks to more successfully and safely complete the flight. So I decided to try it.

Turns out that's BS. The more I used the AP in just day-to-day flying around southern Alberta, which comprises most of my air time, the less I enjoyed my plane. Regular autopilot use ended pretty quickly and I was back to hand flying about 95% of the time.

My autopilot isn't something I strictly MUST have. But it's something that really helps with the workload in situations like turbulence, long distances and tougher conditions. And in those cases, it's a helping hand that's really, really NICE to have!

A NEW METEOROLOGY WEBSITE FROM NAV CANADA.

It's from an online COPA Safety Seminar. It contains a collection of meteorological terms, what they mean, and how they affect aircraft operations. This was brought forward by **Stu Simpson** to share with all of you. He thought it'd be handy for all to have access to it to help grow their weather knowledge. Below is a screen-grab of what it looks like. Use this link below to search it, and check it out and see more:

<https://avmet.navcanada.ca/en/>

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NAV CANADA recognizes and respects the Indigenous peoples as the traditional stewards of the lands on which we operate today.

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NAV CANADA



Reasons for Declaring an Emergency

Featuring John Krug

By Brian Byl

Question:

What conditions or situations warrant declaring an emergency with ATC?

Answer:

Let's look at the textbook answer first and then we'll talk about how that applies to the real world. An emergency can either be a distress or an urgency condition. Basically, it's any time that you are in doubt as to the safe outcome of the flight. As the pilot in command, you're the one who is responsible for the safe outcome and you have the authority under the FARs to declare an emergency.

The difference between a Distress and Urgency condition: Distress is obviously that, DISTRESS. The engine has quit, the airplane is on fire, and we have to do something right now. Those are the pretty easy ones to make the decision on. You're going to do what you have to do to complete the flight safely. The really grey ones are the Urgency ones. That's what we'd like to talk about here.

What constitutes an Urgency condition? Is it that feeling in the seat of your pants that something is not right with the airplane? Is it a warning light? Are you a little low on fuel? Are you unsure of your position? Is the weather getting lower than you would like to see it? Those are all Urgency situations. What can you do about it? Well, again, the first thing to do is to fess up and talk to ATC. ATC can be a great resource. They can't fly the airplane for you, but they can definitely help you with some of the tools that you might need to manage the safe outcome of that flight.

The sooner you can communicate the information, the sooner ATC can mobilize whatever resources are necessary to assist you. If you start running into some weather that's significantly lower than you're comfortable with, this is the time to communicate and say... Approach. Ceilings are getting too low here. I'm going to need some help finding another airport. As pilots, we always run into that ego situation where we don't want to self-confess. But I would rather self-confess and say - Hey, I need some help here - than to have it progress to the point beyond where ATC can do anything to help you out.

Tip of the Week Courtesy PilotWorkshops

Brian's Last Word

As When I had my engine failure back in 2010, I was able to contact the La Ronge FSS and let them know that I was having engine problems and told them I was probably going to land on a logging road. I never did declare an emergency however they specifically asked me "Are you declaring an emergency?" I replied "Well, my engine is not producing any power and I'm landing on a logging road so, yes I am!" As I found out later at that point in time they were already mobilizing the ground troops to try and locate me. I had given them my approximate location earlier in my radio call.

I just read about an accident where the pilot never declared an emergency although his engine was running very rough, he was in heavy IFR 3 miles off the coast of Florida. ATC gave him vectors to the nearest airport but they were not direct. If he had declared an emergency, they would have given him vectors direct to the airport or closest point of land. Unfortunately, his engine failed completely and he and two of his passengers drowned.

This is not an uncommon occurrence, as some pilots are reluctant to say, "I'm declaring an emergency", for fear of repercussions after the fact. The point is, you will never get into trouble for that declaration.

Another consideration in doing this is that it breaks a psychological barrier. If for whatever reason you're having doubts about making such a declaration, once you do, you've now accepted that it is an emergency situation, whatever the magnitude might be, and that makes it much easier for you to shift your thinking squarely into your emergency response mode.

So, if you have a problem that is getting worse, or could get worse, call the nearest ATC facility or broadcast blind on 121.5 or 126.7. Declare a PAN PAN, a Mayday, or an outright Emergency.

There are absolutely no negative repercussions to doing so, and it might just save your life or someone else's.

Brian



Calendar of coming Aviation events

First Saturday each month-

CEN3 Three Hills, AB. Fly- Coffee 9:00 to 12:00 noon.

Second Saturday each month-

CYXH Medicine Hat, AB. Fly-in Breakfast 8:00 to 12:00.

Third Saturday each month-

CEK6 Flagstaff - Killam/Sedgewick, AB. Coffee and Treats by Shelly.

Third Saturday each month-

CEG4 Drumheller, AB. Coffee.

Fourth Saturday each month-

CEX3 Wetaskiwin, AB. Coffee 9:00 to 12:00

(Ed.- Thanks to Dennis Fox for furnishing info on these events)

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\$Free

EAA Vintage Aircraft, EAA Sport Aviation and AOPA magazines to give away. 35+ years, too many to show. I don't want to throw them away.

Brian Byl

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\$4,200

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