

NEWS AND VIEWS

Geoff Gartshore (Editor) at
geoff.gartshore@gmail.com

Items to Note!

1. Next COPA 26 Meeting is Tuesday May 12, 2026.
2. The next Pilot Decision Making (PDM) Zoom Workshop is Thursday May 7, 2026 (Re-scheduled). To join, send an email to cykf.pilotworkshop@gmail.com.

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WELCOME!

April is now over and hopefully better VFR flying weather will be more frequent. So fly it like you stole it!

And welcome to all COPA members, friends, and first visitors with any interest in aviation. We hope to meet you sometime, either at our monthly COPA meetings, or at any of the future fly-in events being held. Please contact Gord Millar (gordon.millar@rogers.com) if you wish to be added to the email list!

Coming Fly-Outs!

Here are some coming fly-outs on the horizon. There are lots of choices - hope to see some of you there!

May 9, 2026. COPA Flight 23 Sundridge (South River) Spring Fly-In at CPE6 from 09 AM to 2 PM. Check out the newly paved runway! A great place to visit, BBQ on site, 100 LL fuel available. Come out for complimentary coffee and pancakes! For more info contact Gary at: friendsofcpe6@gmail.com.

May 23, 2026. Stanhope Municipal Airport Fly-In to Spring at CND4, from 10 AM to 3 PM, featuring food vendors, live music, unique aircraft and classic cars, and of course, plane and helicopter rides! Rain Date Sunday May 24.

May 23, 2026. COPA Flight 73 Georgian Bay Aviators Fly-In / Motorcycle swap, at Midland/Huron Airport (CYEE) from 9 AM to 3 PM. For further information contact Grant Lloyd at: grant@springwaterwoodcraft.com

Fly-Outs, continued

May 30, 2026. Muskoka Spring Fly-In at Muskoka Airport (CYQA), from 10 AM to 2 PM. Enjoy a complimentary hot dog BBQ!. For more information contact Kennedy Lisso at: kennedy.lisso@muskokaairport.ca.

May 31, 2026. Sexsmith Airport (CSX7) Fly-In breakfast. This is a great event with a beautiful 3100 ft grass strip, well organized, and a delicious breakfast available between 8:30 AM and 11 AM. Visit the COPA Flight's website at www.copaexeter.ca for more information.

June 7, 2026. COPA Flight 69 is hosting its annual Fly-In, Drive-In breakfast at the Stratford Municipal Airport (CYSA) from 8am - 12 noon. Pancake and pea-meal bacon and local maple syrup, with coffee, tea, juice available. All donations appreciated in support of the Stratford General Hospital. This is a great, fun event and worth a visit!

June 7, 2026. COPA Flight 100 Smiths Falls - Montague Airport (CYSH) Fly-In breakfast. Breakfast served from 8 AM to 11 AM. Contact Ron Tidy at: ron-tidy@hotmail.com for more details.

June 13, 2026. COPA Flight 224 Grand River Airport Fly-In (CPP6) from 10 AM to 3 PM. Grab a bite and enjoy live music. Contact Garret Bannerman-Maxwell at: info@nearnorthaviation.com for more details.

June 13, 2026. COPA Flight 26 Discover Aviation day at CYKF. Volunteers (ground staff and pilots) needed and welcome to help make this event a success like last year! Hosted by Hammond Aviation at the FlightLine centre. More details to follow.

Pilot Workshops

Question:

My Cessna 172S emergency checklist has some items in bold and others in a normal font.

What's the difference?

CESSNA

MODEL 172S NAV III

EM

GFC 700 AFCS

ENGINE FAILURES (Continued)

ENGINE FAILURE DURING FLIGHT

1. **Airspeed - 68 KIAS** (best glide speed)
2. **FUEL SHUTOFF Valve - ON** (push)
3. **FUEL SELECTOR Valve - BOTH**
4. **FUEL PUMP Switch - ON**
5. **Mixture Control - RICH** (if restart h
6. **MAGNETOS Switch - BOTH** (or STA

NOTE

If the propeller is windmilling, automatically within a few seconds. If (possible at low speeds), turn M START, advance throttle slowly from mixture from full rich as required for operation.

7. **FUEL PUMP Switch - OFF**

NOTE

Pilot Workshops Answer:

“The bold items result from extensive research into the human factors affecting the use of a checklist. Instead of requiring pilots to memorize every action for every checklist, the most important items on time-critical emergencies like an engine failure or electrical fire were placed in bold type (or in a red box, or with some other emphasis). These are the items to memorize and perform in an emergency *before viewing the checklist*. You can then consult the checklist to confirm all memory items were completed and then finish the remainder of the actions for that emergency by reading the checklist.

Emergencies that don’t present an immediate hazard, like an alternator failure, have no memory actions. So they have no bolded items in the emergency checklist.

Therefore, you must have embedded *all* of the bolded items for your airplane in your long-term memory so you can act without referencing the checklist. As soon as it’s safe and practicable, get the checklist out, start at the top to confirm you performed all memory items, and then complete the remaining actions. Emergency procedures with no bolded items mean you go right to the checklist before doing anything. That’s so you don’t make the situation worse with inappropriate or out-of-order actions conducted from memory.

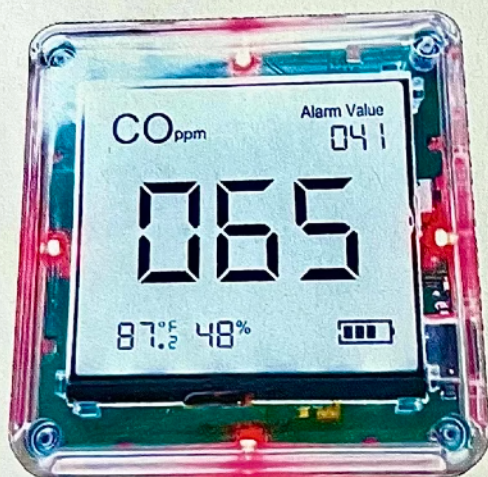
I hope it goes without saying that the emergency checklist must be readily available to you in the pilot’s seat. It is a good idea to make a copy of all the POH checklists on laminated cards you can keep in the sidewall pocket or other easily accessible location.

Finally, I highly recommend that you periodically refresh your aircraft system knowledge by reviewing the airplane and systems descriptions in Section 7 of the POH. Understanding the systems can help you recognize abnormal system behavior before it becomes critical. There may also be procedures to mitigate risk in these situations, and the system descriptions will contain amplifying information, which can help you deal with the emergency scenario.”

GADGET CORNER - CO MONITOR

(Editor): Recently saw this in my copy of Canadian Aviator. It's worth a look!

CO Monitor



Still using the cheap, stick-on CO monitor that purports to change colour when carbon monoxide levels get too high? Do you even replace it when the best-before date passes? For a modest investment in a potentially life-saving device, why not invest

in the state-of-the-art CO-Pocket by Wichita, Kansas-based Radiant Technologies? Measuring $59 \times 59 \times 20$ mm and weighing 40 g, it can be kept as a portable device on a lanyard, for example, or fixed anywhere in your cockpit. The rechargeable unit flashes a bright warning light and sounds an audible alarm when CO concentration reaches 41 ppm or greater. Charge lasts up to six months. USB cable included. About C\$115.

Learn more at radiantinstruments.com. Available from aircraftspruce.ca.

IT's ALL ABOUT THE TRAFFIC, but there's MORE!

Our ADS-B System

(John Savage and Noah Allard)



C-GAFW (C172 Skyhawk) at CYKF Before ADS-B

Our aircraft is still equipped primarily with steam gauges, aside from an ancient Garmin 195 GPS mounted on the control column and ForeFlight running on the iPad. For years, we have wanted some form of traffic display to supplement *see-and-avoid*. Many of our fellow pilots were early adopters of active traffic advisory systems (TAS) before ADS-B existed. One lesson they consistently shared was how often nearby aircraft appeared on their displays that they never managed to visually spot. This reinforced our desire for a traffic display as well as the importance of disciplined, continuous visual scanning.

Onset of ADS-B

When ADS-B emerged, we were eager to adopt it, despite its effectiveness being dependent upon the proportion of aircraft transmitting ADS-B Out. That limitation would eventually be resolved once every aircraft has ADS-B Out, but that cannot realistically occur until affordable solutions exist for general aviation. The United States has a widespread ground-based ADS-B infrastructure, using two-way 1090 MHz and UAT 978 MHz frequencies to send weather and traffic data to conventional bottom-mounted ADS-B transponders.

Many cost-effective airborne solutions are available from this well defined and 2020 US-mandated ADS-B system. Compliant aircraft are allowed into Classes A through E controlled airspace. Plus they get free weather over most of the USA and extending into Canada.

Canada - A Different Challenge

Canada presents a different challenge. With such a large proportion of sparsely populated airspace, satellite-based ADS-B makes good sense, much as it does for oceanic coverage.

NAV CANADA is a major stakeholder in the international development of satellite-based ADS-B and understandably prefers this approach as the sole means of nationwide implementation.

However, satellite-based ADS-B broadcasting on 1090 MHz introduces significant cost challenges. Aircraft planning to fly in Canadian ADS-B controlled airspace are required to have an ADS-B system with 1090 MHz ADS-B "out" capability that performs to the Minimum Operational Performance Standards of RTCA DO-260B, or newer. To do that, the equipment must have an antenna system that can broadcast toward satellite-based ADS-B receivers hundreds of miles away. Most Canadian GA aircraft currently have their 1090 MHz antenna mounted on the bottom for the Mode C transponder. As a result, changes to the antenna system would be required to enable 1090 MHz ADS-B Out transmissions to reach the orbiting satellite system. Possible solutions could include either using antenna diversity electronics or re-locating the antenna, which involves re-wiring. Both these solutions incur additional significant costs.

Currently in Canada, satellite-based ADS-B is only mandated in Class A and B airspace (largely airline traffic), but Transport Canada is proposing that the same mandate should eventually apply to all controlled airspace (C, D, E). However, the timeline for implementation of the proposed Transport Canada mandate has been slipping due to the nature of the required technology. Implementation timelines continue to be pushed back and are now not before 2028.

uAvionix System

uAvionix offers an innovative solution in the TailBeaconX, which replaces the bottom-mounted transponder antenna with a single antenna mounted on the tail, providing visibility above and below the aircraft and enabling transmission to both the satellites and ground-based radar. While clever, this solution is somewhat expensive (\$7200+big install) and requires replacing the existing transponder entirely. The new transponder (AV-30) replaces familiar front-panel controls with a small, round control head featuring tiny knobs and a less-than-intuitive method for entering a

transponder code while taxiing. Being simple-minded, we found this unappealing and decided to wait.

Taking a Different Path

In the meantime, we were tempted by inexpensive ADS-B IN-only solutions, however wanted to contribute to the system by being visible to others as well.

Realistically, we believe it will be some time before ADS-B Out to satellites can be mandated for general aviation in Canada.

More importantly, satellite ADS-B does nothing to address our primary goal: **local traffic detection**. For that, air-to-air ADS-B is required. Fortunately, ADS-B is not limited to the 1090 MHz transponder frequency. It also operates on the 978 MHz UAT band. This opened the door to implementing ADS-B Out on a separate frequency with its own antenna, independent of the transponder, while using a separate solution for ADS-B In.

uAvionix provides an elegant answer in the certified skyBeacon, which mounts on the port wingtip replacing the existing red navigation light and strobe. It transmits ADS-B Out on 978 MHz, is powered by the existing nav-light wiring, and wirelessly receives the required data from the aircraft's transponder.



**SkyBeacon on the Port Wing with UAT transmitter/GPS
(plus red nav light & white strobe).**



With no new wiring required, installation costs were minimal, and configuration was completed via Wi-Fi using an app on the phone. The only change to our checklist is to turn on the nav lights right after startup to ensure that the ADS-B is stabilized and transmitting position while taxiing. Runway incursions are a real thing. The current draw from the ADS-B hardware is minimal and the new LED nav and strobe lights have a very low draw. Win-Win!

A companion product, the skySensor, mounts on the starboard wingtip, replacing the green navigation light and strobe. It receives ADS-B-In data and streams it via Wi-Fi to ForeFlight on the iPad. The two units are available together as the skyBundle, which we purchased from Aircraft Spruce at the Brantford airport. (\$4500 + minimal install).

Installing ADS-B on the aircraft and linking it to ForeFlight has provided a significant safety and situational-awareness benefit, particularly through real-time traffic displayed on the iPad. Seeing and hearing nearby aircraft, complete with relative altitude, direction, and trend, greatly improves traffic avoidance, especially in high-workload environments.



**skySensor with UAT/1090 ADS-B in with GPS
(plus green nav light with white strobe).**

This visual traffic picture, along with aural warnings, effectively supplements **see-and-avoid** by drawing attention to aircraft that may be difficult to spot visually or operating without radio calls. ForeFlight does this well with the aural warnings to get your attention as the target symbols are small on the display. (Should Transport Canada maintain their proposed mandate - 1090 MHz to satellite with an antenna system that meets performance requirements - when eventually adopted for Class C, D, and E airspace - uAvionics has provided a Trade-up program, to the TailBeaconX, for 978 UAT customers to reduce costs for the conversion - if necessary). Regardless of what happens in the years ahead, in the meantime we now have the traffic display we wanted.

There are a lot of training aircraft in our area. A lot of that traffic doesn't have expensive ADS-B but uses NemoScout, a very effective tracking system used by WWFC and Stratford Air Services. Fortunately these targets are retransmitted on the CIFIB UAT stations at Stratford, Burlington and Hanover. Now we "see" these many airplanes in the training areas.

Beyond traffic, ADS-B supplies valuable information directly into ForeFlight, including highly accurate GPS position and ground speed, supporting better decision-making in flight. Presenting this information in a familiar, intuitive interface reduces cockpit workload and allows for faster interpretation.

So if traffic detection is most important, how visible is our aircraft? To answer that, we analyzed a sight-seeing flight a few weeks ago from Kitchener (CYKF) south to Lake Erie (see next page). FlightAware gives a good first start as the extensive ground based network usually has enough stations to provide excellent tracking, at least on 1090 MHz. Unfortunately, there aren't as many UAT 978 stations in Canada. Regardless, the UAT station at CYKF (courtesy of Don Sinclair from Kitchener RAA) tracked the aircraft on the ground and then, quickly after takeoff, the KDKK (Dunkirk, NY) station, some 70 nm away, continued the track toward Lake Erie using the station at Lancaster (Buffalo). The Brampton station played a part and then the journey tracking finished via CYKF. So FlightAware likes the UAT targets, at least to 75 nm, from all aircraft angles and right to the ground!

PAPR

The FAA provides an excellent tool to evaluate ADS-B transmissions. The PAPR or Public ADS-B Performance Report analyzes your previously stored flight and shows a comprehensive summary of all of the ADS-B messages sent. Just enter the time/date (UTC) and your ICAO code. The numbers didn't lie - performance was amazing tracking from 1000 ft above CYKF along the whole route. There were some minor dropouts considering the 75nm range but otherwise amazing, in all directions. In this case it is all about the antenna and its optimum location. At least now we have the choice of flying easily across the border to access services when the political climate normalizes.



Our Sight-Seeing Flight Tracked on FlightAware

Are We visible on ATC Radar?

The UAT ADS-B is not monitored by NavCanada, but the transponder is visible to ground-based radars. At least other aircraft with ADS-B IN can see us now! Does Nav Canada need to monitor ADS-B on both 1090 and 978? We think yes.

So What about weather?

ForeFlight seamlessly acquires ADS-B weather from UAT ground stations. In the Waterloo area we can acquire FIS-B weather above 1000 ft AGL from the FAA ground stations, displaying WX radar but no Canadian information. Canadian weather is available from CIFIB ground stations. Given the ideal location of the skySensor antenna we are expecting exceptional reception in all quadrants. Time and weather will tell.

Conclusion

This story is about the **traffic** but it is also about the **antenna performance** and using **cost- effective UAT benefits**, away from the crowded 1090 MHz.

Overall, integrating UAT ADS-B with ForeFlight has significantly improved situational awareness, risk management, and confidence in flight, making it a highly valuable upgrade for modern general aviation operations.

Coming Next:

Visiting Bancroft (CNW3) for Breakfast!