



LEADING EDGE
AVIONICS

Q2 2021

**GETTING BEYOND
THE PANDEMIC**

**SAYING GOODBYE TO
LOCAL ADVENTURER
CHRIS WELSH**

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LETTER FROM THE CEO

Getting Beyond The Pandemic



Even in a place where the sun shines all year long, spring has always been a time of renewal. Never has that been more true than it is today. After a year of restrictions and having our lives turned upside down, things are finally getting back to normal. People are traveling again. The flight schools are packed. And we're all getting back to the business (and the fun) of flying.

In recognition of the momentum clearly moving in the right direction, a number of OEMs have begun offering or extending some great promotions on everything from full panel upgrades to the latest in WiFi. From where we sit, there's never been a better time to fly, and there's never been a better time to buy.

So, if there's an upgrade you've been considering while the world was on hold, reach out for some great advice on the latest offerings. And most importantly, get ready to enjoy what's shaping up to be an amazing season of flying.

Saying Goodbye to Local Adventurer Chris Welsh



Recently, we lost one of the last true adventurers, Chris Welsh. Born and raised in Newport Beach, Chris passed away unexpectedly at the age of 58. For those who didn't know Chris, he had a passion for everything from submarines to sailboats to airplanes. He helped build underwater vehicles that explored the ocean floor, won international races on his sailboat, and was both an airplane and a helicopter pilot licensed to fly five different aircraft. Chris recently completed a full panel upgrade on a Citation 500 and was only one hour away from his certification to fly the airplane when he passed away. In true homage to his adventurous spirit, Chris' wife Tina, who is also a private pilot, plans to get her certifications updated so she can fly the plane herself. We can't wait to celebrate that achievement with you, Tina!

While many knew Chris as an adventurer, we also know him as both a customer and as a personal friend. Chris always had a smile on his face and a great story to tell. You can tell a lot about a person from the family and friends that surround him, and with 18 boats memorializing his life with a burial at sea, punctuated with an OV10 flyby, Chris was special indeed.

He was truly an inspiration to us all, and we thank him for all the memories and all the great stories we have to share. He will be deeply missed.

Kathryn Brewer
CEO, Leading Edge Avionics
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GETTING BACK TO THE BUSINESS OF SAFETY

4 Quick Tips to Make This Summer a Safe One



Now that we're moving the pandemic behind us, life is slowly returning to normal. For pilots, that means more travel and more time back in the cockpit. As we gear up for what's expected to be a busy flying season, it's also an opportunity to recommit to safety. Here are a few simple things you can do now to kickstart safety this summer:

Landing Lights

Sometimes, even the simplest solutions are overlooked. Take landing lights, for instance. We're constantly amazed at the number of aircraft with no lights on. It's probably the easiest way to make yourself more visible, yet for some reason, they're simply overlooked. Landing lights with a wig wag feature and strobes are a very small investment that makes your aircraft much easier to see on the final approach.

Grease

When considering maintenance, one of the things to watch out for (especially if your aircraft has been idle during the pandemic) is grease. Grease can experience oil separation when stored for an extended period of time. The oil either forms a thin film over the thickening agent or gathers in pockets within the grease. So make sure it's thoroughly stirred using the proper tools. Or just replace it if you can't get it back to a consistent state.



Sticking the Landing

If you feel a little rusty in your landing skills, one trick that will make you look like a polished pro is to bring the plane as close as you can to the runway without actually touching the ground. Then when the stall buzzer goes off, bring the throttle up off idle as gently as you can (around 50 RPM) and your tires will greet the runway with synchronized perfection.

Equating Gallons with Time

Many incidents in the air are completely avoidable. Running out of fuel is definitely one of them. One thing some pilots overlook is remembering the relationship between time and fuel. In other words, knowing that having X gallons of fuel means you are good to fly for Y amount of time. So, instead of just trying to measure distance in your head, simply set an alarm on your phone that reflects the time you have in the air based on your amount of fuel.

Got any great tips you'd like to share? Email us at info@leavionics.com.



FLYING OUTSIDE THE COUNTRY?

You Have ADSB, but is it Internationally Compliant?
Better Check Before You Go!

While the FAA's ADS-B mandate may feel like old news, it's definitely worth another look if you're planning to fly beyond the U.S. border. That's because every nation has taken its own approach to adopting the technology. Some nations made the requirement years before the US, some are planning for future implementation, and still, others may never mandate the change at all.

While there are ways to skirt the rules within the U.S., many nations already require the gear. In other words, no gear, no entry. So, as long as you're ADS-B compliant here in the U.S., you should be okay abroad, right? Well, not so fast.



The first thing you have to consider is your setup. Here at home, you have the choice between 978 MHz UAT, which typically works with existing Mode C transponders and the 1090 MHz Mode S transponder with extended squitter. What you may not realize is that most nations require the 1090 MHz Mode S transponder with an extended squitter. Nations using Aerion's satellite-based option require antenna-diversity solutions that you may not have installed. So, if you're planning on traveling internationally make sure your system employs diversity.

Another big factor to consider is where your aircraft is based. Some nations recognize the FAA's regulations for visiting aircraft, but not for based aircraft. And those are the requirements and regulations that will apply when you register your aircraft in that nation. In other words, you might have to meet more or simply different requirements if you're, say, buying or selling an aircraft and delivering it to a new home.

While the vast majority of pilots and operators here in California will stay within North America, here's what you need to know about some of the most common destinations:





United States

Here at home, you have the choice between 978 MHz UAT, which typically works with existing Mode C transponders and the 1090 MHz Mode S transponder with an extended quitter. The 1090ES solution is a universal solution in the US and complies with the majority of foreign requirements. The 978 UAT on the other hand, satisfies the FAA mandate in all airspace below 18,000 feet

If you're currently without an approved ADS-B system, it doesn't mean your aircraft is totally grounded. It just means you'll need to apply for a deviation waiver for every flight with approval by air traffic control. Each request is on a case-by-case basis and it depends largely on the workload of the facilities involved.

Canada

Canada was set to implement its ADS-B mandate this year but has since postponed the deadline. At this point, no new date has been set. Although ADS-B will be used for surveillance in Class A airspace beginning February 2021, ADS-B won't be mandatory for aircraft to be equipped. But if you have ADS-B Out, you'll need antennae on the top and bottom of the aircraft to comply with diversity.

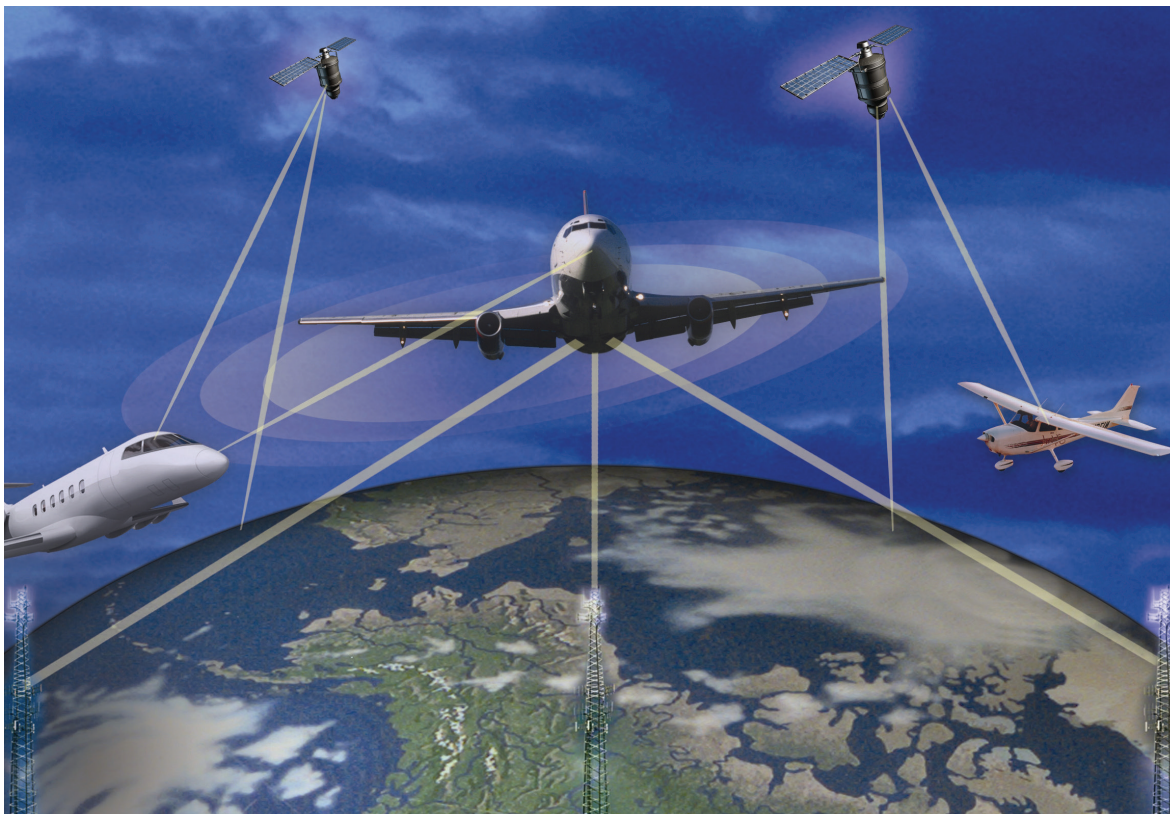


Mexico

Like Canada, Mexico delayed its mandate. Originally scheduled to take effect in January 2020, that's now been bumped to January 2022. Rumor has it that Mexico may, in fact, broaden the equipment mandate, by including the 978 UAT option, but that's yet to be confirmed.

South America

Brazil has had ADS-B on the books for helicopters serving the offshore petroleum industry for many years, but for general air travel over land, Brazil has yet to move on the mandate.



Now that the Aeron satellite-based system is available though, that may change in the near future. Columbia, on the other hand, planned to make its mandate active alongside the U.S. but has since postponed it until April 30, 2022.

Europe

Over on the other side of the pond, our friends in Europe mandated ADS-B in June 2020 for aircraft 12,500 pounds flying faster than 250 knots and on an IFR flight plan. Although there are some exemptions for older aircraft in Europe, only a 1090 MHz Mode S transponder with extended squitter qualifies.

Asia

For the most part, if you're traveling to Asia, you can expect ADS-B requirements pretty much everywhere you go. Hong Kong, for instance, has had its mandate in effect since 2014, and Taiwan has had its mandate on the books since 2020.

The long and the short of it is, if you're traveling just about anywhere these days, you're best to be equipped with ADS-B. Not only will it allow you to travel hassle-free, but it will also keep you compliant in the event of any unplanned deviations in your route.



SNAKES ON A PLANE

Would You Ever Bail on a Perfectly Good Airplane? One Aussie Did...



If you've ever sped down the runway and wondered how it would feel to bail from the plane if something ever went wrong, just ask Cliff Killeen.

Cliff is an Australian pilot who was conducting a high-speed taxi test when something went horribly wrong. Not with the plane. The plane was in perfect condition. But it did, however, have an unwelcome stowaway.

As he was clipping along the runway, he saw a brown snake taking aim at his throttle hand. Now, if you're a Nat Geo fan, then you'll know why Cliff's adrenaline was pumping. The brown snake is said to be the second most deadly snake in the world. Just one bite and you're done.

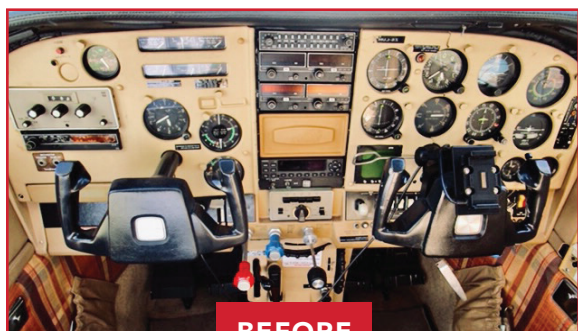
So, not liking the option for certain death, Cliff did the only thing he could. He peeled back the canopy, unhooked his harness as fast as he could, and bailed out onto the runway.

Miraculously, despite a few scrapes and some dust from tumbling down the runway, Cliff came out of it no worse for wear. His plane, on the other hand, didn't stick the landing quite as well. It wound up being a total write-off. As for the snake, its fate is still unknown.

Have you ever had to make a tough call in a split second?
If so, share it with us at info@leavionics.com.

A CESSNA 210 MAKES A NEW HOME STATESIDE

With A State-of-the-Art Glass Panel Install



BEFORE



AFTER

A few months ago, a customer brought in a Cessna 210 he purchased overseas and had shipped to the U.S. Although the plane was in great condition, it needed several upgrades in order to accommodate the owner's desire to use it for business and pleasure trips around the west coast. In particular, the owner knew he was going to upgrade the panel and was looking for recommendations and quotes from several avionics shops. After preliminary discussions with multiple shops, he entrusted Leading Edge Avionics to provide him with advice on the best glass panel configuration for his particular flying needs and budget.

CHALLENGE

The customer was looking for a feature-rich avionics stack that could be installed within his target budget. One of the most important features was to run the autopilot with a configuration that wasn't a budget-buster and still provided synthetic vision, moving map to PFD, or have split-screen to control comm and NAV frequencies.

SOLUTION

Leading Edge Avionics installed the Garmin GFC500 autopilot using a Garmin 3X touch and GAD 29 with the GTN 750 which provided all the functionality the customer was looking for at a price that met his budget goals. In addition, we installed and interfaced with the JPI EDM 930 primary engine instrumentation. With the 930 onboard, we can remove many of the old engine gauges, and open up valuable space in the panel.

BENEFIT

The G3X Touch offers a variety of scalable panel configurations and a superior feature set that includes wireless connectivity and synthetic vision as standard, as well as options such as display redundancy, advanced autopilot compatibility, engine monitoring, and more. The EDM-930 monitors his engine conditions four times per second and will warn the pilot instantly if any measurement exceeds the programmed limit. The panel looks clean and state-of-the-art.

CONCLUSION

From the very first test flight, the customer was thrilled with the installation.





ASK MIKE BILBY



Q:

Hey Mike. I know your team has done some amazing transformations on older aircraft. Any advice for someone considering buying one?

Great question!

Older aircraft can be an extremely affordable way to enjoy flying. But finding the right one may take some time. Beyond the basics, I would say you want to consider three key pieces of advice:

1) Don't let the seller drive the conversation.

Inexperienced buyers may not know the right questions to ask, so the seller takes over. When the conversation is done, you come away knowing what the seller wants you to know, not the things you need to know. So, if you're really considering an aircraft, best to bring someone more experienced into the call.

2) Verify everything.

Start with the airplane make, model, and serial number, and get the original airworthiness certificate. Some manufacturers changed their model names many times for the same airframe over the years. Just look at the Cherokee 180, a.k.a. Challenger, a.k.a. Archer. It's not uncommon for sellers to inadvertently get this wrong. And don't forget to verify the registration or "N" number, as it's another way to confirm the airplane's identity and help you with your title search actions. Don't trust the "N" numbers either shown or written in the ad to be correct.

3) Get a sense of time.

Ask for the total time on the airframe, total time on the engine(s), and time since any major overhauls or upgrades. Find out who did the overhaul and the date. Remember, top overhauls do not count for anything but a repair when determining the aircraft value. Also check the time on the props, time remaining on time-life components.

As an added bonus, I would personally want to ask them their reason for selling the aircraft. It's always an interesting and revealing question. While this is by no means an exhaustive list, it should be enough to help you understand the plane's value and whether it's something you dive into further.

STORIES FROM SNA

Pilot Makes Remarkable Emergency Landing



Photo: Richard Koehler, OC Register

If you somehow missed the story about Kevin Baughman in the local news, it's one we thought was well worth re-sharing.

Kevin is one of our valued customers, and what happened to him back in November is nothing short of remarkable. While out piloting his Piper PA-30 Twin Comanche, He began the routine process of setting up for approach into John Wayne Airport in Orange County. Only this approach and landing were anything but ordinary.

During the approach, Kevin realized his landing gear would not properly deploy and notified the air traffic controllers. So they cleared the runway, readied emergency vehicles, and Kevin braced for the worst.

But while everyone waited for the worst, Kevin was at his best. In a near textbook landing, he was able to safely skid across the runway with no injuries to the two people on board, and very little damage to the actual plane. In fact, the belly of the aircraft had little more than some serious scrapes, and the propeller needed some repairs. Other than that, the aircraft was completely spared.

After the dust settled from the emergency landing, we asked Kevin how he felt about the experience. He told us, "Well, I kept my head and remained calm which certainly contributed to the successful landing. However, I am happy to check that off my bucket list!"

Kudos to Kevin for an awe-inspiring landing, and to all those at SNA for taking such quick action!



TEAM MEMBER PROFILE

DENISE ELIAS

Accounting Manager



While you may recognize many of our employees who work in the shop, you may not be as familiar with some of them at work behind the scenes. Meet Denis Elias, who joined us in November 2020 as our new Accounting Manager.

For the past ten years, Denise has tackled all aspects of accounting from payroll to AP to collections for organizations such as Kaiser Permanente, County of San Bernardino, and most recently, Dynascan.

She has been a tremendous addition to Leading Edge Avionics and has brought a great deal of collaboration and professionalism to the team.

When not at work, Denise loves going to the beach and playing in the tide pools with her four kids (age 8-18), fixing dinner together, and watching movies. Being a mom is her primary joy and how could it not be with that clan?!

Next time you're in the area, stop by and say hi to Denise. She's sure to put a smile on your face.



MISS HAPS WEATHER

Every cause needs a champion. Meet “Miss Haps”
- our very own Sultana of Safety, Queen of Caution
and Princess of Preparedness.

Each issue she'll tackle a different safety issue in her own unique style.



Can a Certified Flight Instructor Provide Instrument Training for Private Pilots?

We all have moments where visibility all but disappears. That's precisely why we have instrument training, so we can get ourselves out of sticky situations and back into our comfort zones. This leads us to a good question, can a certified flight instructor (CFI) and not an instrument certified instructor (CFII) give you the three hours of instrument training you need as a private pilot?

The short answer is yes. The instructor can, in fact, provide training on the control and maneuvering of an airplane solely by reference to instruments. But the training they'll provide you with is for emergency situations only. It's designed to prevent you from losing control if you inadvertently enter the clouds or find yourself trapped on top. It helps you do three things:

- 1) **Recognize that the situation requires immediate remedial action**
- 2) **Maintain control of your aircraft**
- 3) **Get the assistance you need to get the airplane safely on the ground**

Essentially it's the stop, drop and roll of flying. Now, if you want to be able to fly under instrument flight rules (IFR), that requires an instrument-rating practical test. It's much more robust, and only instructors with an instrument rating on their flight instructor certificate can deliver it.

So, if you're a private pilot looking for the basics, your average flight instructor should be able to provide you with what you need. But if you're a certified pilot looking to fly in the air traffic system under IFR, you'll have to go with an instructor certified as a CFII.





COCKTAIL

THE WHISKEY SMASH

The whiskey smash is a classic cocktail with a bright flavor. The recipe first appeared in a bartender's guidebook back in 1887 and is still delighting drinkers 134 years later. It's also an excellent option for drinkers who are new to whiskey.

The refreshing combination of bourbon and mint is a perfect way to celebrate spring.

INGREDIENTS

- 5 to 8 leaves spearmint (to taste)
- ¼ lemon (cut into 3 pieces)
- 1 ounce simple syrup
- 2 ounces bourbon whiskey
- Garnish: mint sprig



INSTRUCTIONS

Gather the ingredients.

In a cocktail shaker, add the mint and lemon.

Muddle thoroughly to release the juices and oils.

Add simple syrup, whiskey and fill the shaker with ice.

Shake vigorously for 30 seconds.

Strain into an old-fashioned glass filled with crushed ice.

Garnish with a mint sprig. Serve and enjoy!

TIPS: If you don't have a muddler, just smash the ingredients with the back of a spoon or the handle of a wooden spoon. Always rinse fresh mint before using it.

*SERVING SIZE: 1 serving
TOTAL PREP TIME: 5 minutes*

AVIATION TRIVIA



Think you know aviation?

See if you can guess the answers to some of our quirkier aviation trivia.

1) In which city would you find an airport with the code, LOL?

- A) Grand Rapids B) Derby Field C) Sioux City D) Willow

2) Name this airport:



3) Prior to the pandemic, how many people were in the sky at any given moment?

- A) 400,000 B) 750,000 C) 1 million D) 1.2 million

4) How many miles can a Boeing 787 fly on a single tank?

- A) 6,000 miles B) 8,000 miles C) 10,000 miles D) 12,000 miles

5) If you're flying at 30,000 feet, how close are you to space?

- A) 7% of the way B) 12% of the way
C) 15% of the way D) 20% of the way

ANSWERS

- B) Derby Field, which gets its code from its hometown of Lovelock. Sioux City, however, isn't laughing much these days. Their code is SUX.
- Long Beach Airport
- D) Typically, there are 9,700 aircraft in the sky, flying 1.2 million people. That makes the sky the 156th most populous country in the world right between Estonia and East Timor.
- C) 10,000 miles. With that kind of range, it could circle the circumference of the Earth with just two fillups. Thankfully, most have a bathroom inside!
- A) 7% of the way. While you may feel like you're astronomically high at 30,000 feet, you've still got a long way to go before you become a cosmonaut.



HUMOR



We've Heard About Being on the Edge of Your Seat, But Have You Ever Been Out of It?

If you fly long enough, there's a good chance you'll have a story about a potential close call. Whatever your story is, we're willing to bet it's not as harrowing as the one told by Royal Flying Corps pilot, Reginald Makepeace.

During a dogfight in January 1918, he bunted his Bristol F.2B into a steep dive, and the negative Gs tossed his gunner/observer, Captain John H. Hedley, out of his seat.

What you may not know is at the time, none of the Royal Flying Corps airmen were issued parachutes in order to keep them from taking the "easy out."

So, while the aircraft continued its dive, Hedley fell several hundred feet. By some miracle, Hedley and the airplane wound up coming back together, and Hedley found himself clinging to the flat-topped aft fuselage of the fighter.

He managed to crawl back to his pit and went on, apparently nonplussed, to score 11 victories before being shot down and imprisoned two months later. (Makepeace himself had 17 victories scored with his forward-firing gun, so they were literally a deadly duo.)

After the war, Hedley became an American, moved to Chicago, and at least for a while made a living billing himself as "The Luckiest Man Alive" and giving lectures about his adventure. Had he instead moved to Berlin, he'd have had to share the stage with 1st Lt. Otto Berla, who on May 24, 1917, had been the observer aboard an Albatros C.V. when a sudden bout of turbulence bunted the airplane's nose down and popped an unbelted Berla up and out of his rear seat. He and the airplane briefly formed until a second updraft forced the tail up again just in time to meet the rapidly descending Berla, who punched feet first through the plywood-skinned turtleneck just aft of his cockpit. Very happy to be back aboard, Berla rode back to base in his new temporary office.

FUN AIRPORT CODES



With spring in full swing, we thought we'd freshen things up a bit with some spring-inspired airport codes. Here are a few of our favorites:

- **BUD** Budapest Ferenc Liszt International Airport - Budapest, Hungary
- **BED** Laurence G. Hanscom Field - Bedford, MA
- **GRO** Girona-Costa Brava Airport - Girona, Spain
- **HOE** Ban Huoeisay Airport - Huay Xai, Laos
- **MAY** Clarence A. Bain Airport - Mangrove Cay, Bahamas
- **RUN** Reunion Roland Garros Airport - Saint-Denis, France

UPCOMING EVENTS

AEA Convention 2021

June 22-25, 2021 — Dallas, Texas

[Click here for more info](#)



AirVenture 2021

June 26-August 1, 2021 — Oshkosh, Wis.

[Click here for more info](#)



OBAP ACE Academy

July 13-17, 2021 — Hawthorne, Calif.

[Click here for more info](#)



Aviation Summer Camp

July 13-14, 2021 — Bowling Green, Ky.

[Click here for more info](#)





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