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SAFETYWIRE

Making It Look Easy—
The "Magic" of Standard Operating Procedures

(Source: Paul J. Preidecker, FAA Safety Briefing Guest Writer)

I grew up in a small city in Texas, about 75 miles north of Dallas. If my parents wanted to offer up a perfect weekend day, they would say "Let's go for a drive to Dallas and watch airplanes!" This was well before Dallas/Fort Worth International Airport (DFW) emerged from the earth, so our drive was to Dallas Love Field. Those were the days of gleaming Pan Am 707s, pastel colored Braniff 727s, and many other airlines that have long since disappeared from the skies. If the winds that day were from the south, that meant aircraft were landing on runway 13 (later 13L when the parallel runway was created). The perfect place to watch was Bachman Park, located near the approach end of the runway. The park was (and is) actually under the raised approach light system. My dad, who was stationed at an air base near London in WWII, would point out various facts and details about the approaching aircraft. He would often remark on how those pilots make it look so easy.

I got my first flight in a Cessna when I was nine but, as for many flyers, life did not accommodate lessons for a few more years. I started at 34, while I was in the middle of a career completely unrelated to aviation. But that job required extensive travel. Whenever I was at or around an airport, especially a major field handling hundreds of airline flights per day, I was always impressed by the smooth consistency of airline operations. I noted that the landing gear, regardless of the plane, always came down at the same point on the approach. I also admired the precision pilots demonstrated by keeping the nosewheel exactly in place over the yellow lead-in line as they taxied to the gate. Dad was right. They did make it look easy!

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Behind the Magic

Ten years after my first lesson, I found myself in class at a regional airline. Later I became my airline's chief instructor, a position I held for almost 19 years. I learned why it looked easy, even though — like most things that appear to be magic — it really takes a lot of work. Rigorous, regular training was certainly a part of the answer. But there's more.

The very nature of airline operations offers a great deal of repetition: Chicago O'Hare International Airport (ORD) to Lincoln Airport (LNK) … LNK to ORD … ORD to LNK. Repetition brings a certain level of comfort from knowing that you've been there and done that. Airports become familiar, frequencies get memorized, taxi routes are well known. The dark side of repetition and familiarity is the risk of complacency. It is easy to know the drill so well that you are not prepared for the unexpected. Just because you landed on runway 27L three hours ago does not mean it will be the same this time. There are just too many variables to let complacency rule the flight deck.

Even more than airport and route familiarity, the ingredient that makes it look easy and helps thwart complacency is adherence to standard operating procedures (SOPs). SOPs are essential to flight safety. Compliance with SOPs means following the appropriate procedure at the appropriate time. It means doing it the right way, all the time, every time. SOPs are an important barrier to errors caused by fatigue, distraction, stress, or inattention. Therefore, SOPs make you a more reliable pilot. In addition, strict adherence to SOPs will allow you to more effectively deal with issues such as mechanical irregularities or unexpected weather.

I am learning that lesson all over again now. After retiring from my airline career, I started flying for a medical transport company under part 135. Once again, there are SOPs that will make it look easy and contribute to safety, but there is always a learning curve when taking on a new airplane and operating environment.

SOPs: Your Strategy for Success

Regardless of the type of flying we do, whether flying a Cub over a meandering river, or operating coast-to-coast in the flight levels, developing and adapting SOPs is key to managing safety … and making it look easy. SOPs are not just about running checklists. SOPs are also about developing a mental model and personal philosophy about operating not just an upcoming flight, but all flights. A basic five-step process will help you create your own set of procedures. **Plan-Brief-Do-Review-Renew.** Let's have a look.

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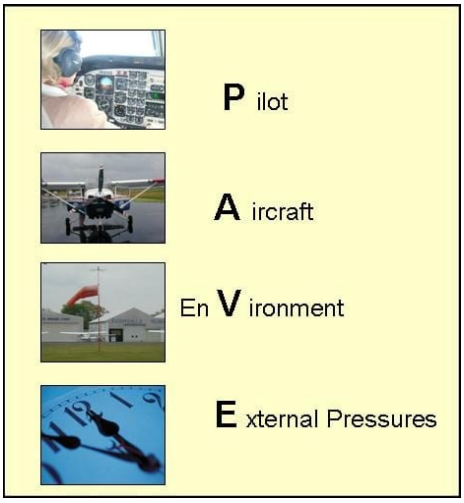

Plan: Whether you are flying around the pattern or around the country, you need a plan. An excellent place to start is to use the PAVE (Pilot, Aircraft, enVironment, External Pressures) model. Using this model is the first step to developing a model for SOPs.

With respect to the pilot, SOPs should include an honest assessment of proficiency. Has it been a few weeks since you flew in Instrument Meteorological Conditions (IMC)? Pull out your personal minimums (you have that, right?) to make sure you can manage with your skill set as it exists today, not when you first earned your rating. Consistent application of the I'M SAFE checklist (Illness, Meds, Stress, Alcohol, Fatigue, Emotions/Eating) should also be an SOP.

IMSAFE	
I	☐ Illness
M	☐ Medication
S	☐ Stress
A	☐ Alcohol
F	☐ Fatigue
E	☐ Eating

Moving to the aircraft, SOPs are not confined to your own aircraft. If you are a renter, you still have the responsibility as pilot in command (PIC) to determine airworthiness and condition for safe flight. SOPs should also include reviewing performance and weight and balance requirements.

Regarding the enVironment, the many fine flight planning tools available enable you to review everything about your flight. With the COVID-19 public health emergency, your SOP should include verifying fixed-base operator business hours and service availability. Don't ever forget checking the Notices to Airmen (NOTAMs), even for a short flight across town.

A crucial planning SOP is to identify and mitigate external pressures. Pilots are "mission driven." We want to get there, and we want to be on time. When there are threats to mission completion, be they weather, a small mechanical problem, or day turning into night, we sometimes let the mission become more important than the threat. The key to dealing with external pressures is to recognize that most of them come from internal desires and attitudes, which makes them manageable. When I was a member of my airline's Aviation Safety Action Program (the airline version of the Aviation Safety Reporting System, aka "NASA" form), we found that almost 80-percent of crew-reported mistakes used the words "rushed" or "distracted." Many of these situations could have been prevented.

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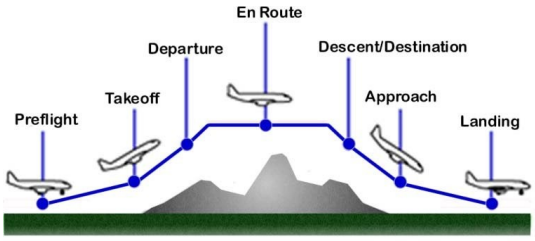
Brief: Briefings are just as important in single pilot operations as they are in a crew environment. In a crew environment, they help create a shared mental model of how a flight will be conducted. No crewmember should ever have a doubt or be surprised by what the other crewmember is thinking or doing. In a single pilot situation, it is a simple matter to brief yourself. When flying an approach in IMC, briefing the key elements of the approach out loud is a great way to create and reinforce your own mental model.

Do: Integral to well-developed SOPs are checklists and profiles. With checklists, the form may depend on your situation. Some are read-and-do. Others (typically found in crew environments) are challenge-and-response. Many functions can be performed by using a flow, which involves taking action in a logical sequence and then using the checklist to verify. Many of us also have mnemonics as part of the checklist toolbox. The point is to develop an SOP that works for you and use it every time.



With respect to profiles, this tool provides a graphical timeline representation of actions needed at key points during various phases of flight. I strongly recommend that you create your own profiles. They give you a standard model for performing certain tasks along a timeline. For example, profiles provide a set procedure (in time and space) for retracting flaps, setting up an instrument approach, or lowering the gear. Using profiles for each phase of flight will help you perform each task the same way, every time. This type of discipline helps reduce workload and gives you the mental bandwidth to respond correctly and safely to an unexpected challenge.

Review: Whether you are using a sophisticated suite of avionics or more basic steam gauges, proper flight path management is your responsibility. Your SOP should thus include constant and consistent monitoring and review of your situation. An SOP that includes callouts at critical points can easily be built into your profiles. On approach, for example, a “1,000 feet to minimums” callout will help maintain awareness of your vertical flight path. Another situational awareness technique for your SOP could be using TLAR (that looks about right) to quickly determine if you’re on track, and deploying its corollary, TARA (that ain’t right — adjust), if you aren’t where you need to be.

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Another element for the "review" part of your SOP is the debrief. At the end of the flight, I always ask my crewmember, or myself when flying solo, what I could have done better. A debrief is a great way to learn and identify improvements for the next time. No flight is perfect, but it can still be a goal.

Renew: The end of the flight does not mean the end of SOPs for the day. Do you have a personal plan for continuous improvement? Recurrent training, on-line safety seminars, and the FAA WINGS program are all resources you can use to respond to the challenge of continuous improvement in your aviation knowledge and skill. Flight reviews and instrument proficiency checks are the minimum requirements for currency. Establishing and maintaining a program of self-study should be a part of your personal SOPs.

There's nothing magical about being a better pilot or making it all look easy. But I hope you will respond to the challenge by making your own SOPs. Your success may even inspire a future pilot to join our ranks, which is another win for us all.

This article was originally published in the January/February 2021 issue of FAA Safety Briefing magazine. https://www.faa.gov/news/safety_briefing/

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Dangerous Laser Strikes Reach Highest Numbers

(Source: FAA)

Dangerous laser strikes topped all previous records in 2021. The Federal Aviation Administration (FAA) received 9,723 reports from pilots last year, a 41 percent increase over 2020.

Shining a laser at an aircraft is a serious safety threat. Many types of high-powered lasers can incapacitate pilots, many of whom are flying airplanes with hundreds of passengers. Pilots have reported 244 injuries since the FAA began recording data on laser strikes in 2010.

People who shine lasers at aircraft face FAA fines of up to $11,000 per violation and up to $30,800 for multiple laser incidents. The FAA issued $120,000 in fines for laser strikes in 2021. Violators can also face criminal penalties from federal, state and local law enforcement agencies.

“The FAA continues to educate the public about the hazards of laser strikes because they pose such a serious threat to the safety of the pilot, the passengers and everyone in the vicinity of the aircraft,” said FAA Administrator Steve Dickson.

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To identify laser-strike trends, the FAA developed a visualization tool, using the Tableau software platform, that shows laser-strike data from 2010 to 2021 and highlights trends by geographic area, per capita data, time of day and year. The FAA shares the information to draw attention to the dangerously high rate. Laser report data by year can be downloaded on the FAA's website.

The FAA encourages the public to report laser strikes to the FAA and local law enforcement agencies.

Please watch our video about the dangers of lasers, visit our web site and read our fact sheet for more information on laser strikes.

Source: (FAA News and Updates)

Analyst Note: Don't forget, see something, say something. Report to ATC anytime you suspect a laser strike with location, time, and altitude. Everything helps.

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FAA Reaches One Million Airspace Authorization for Drone Pilots

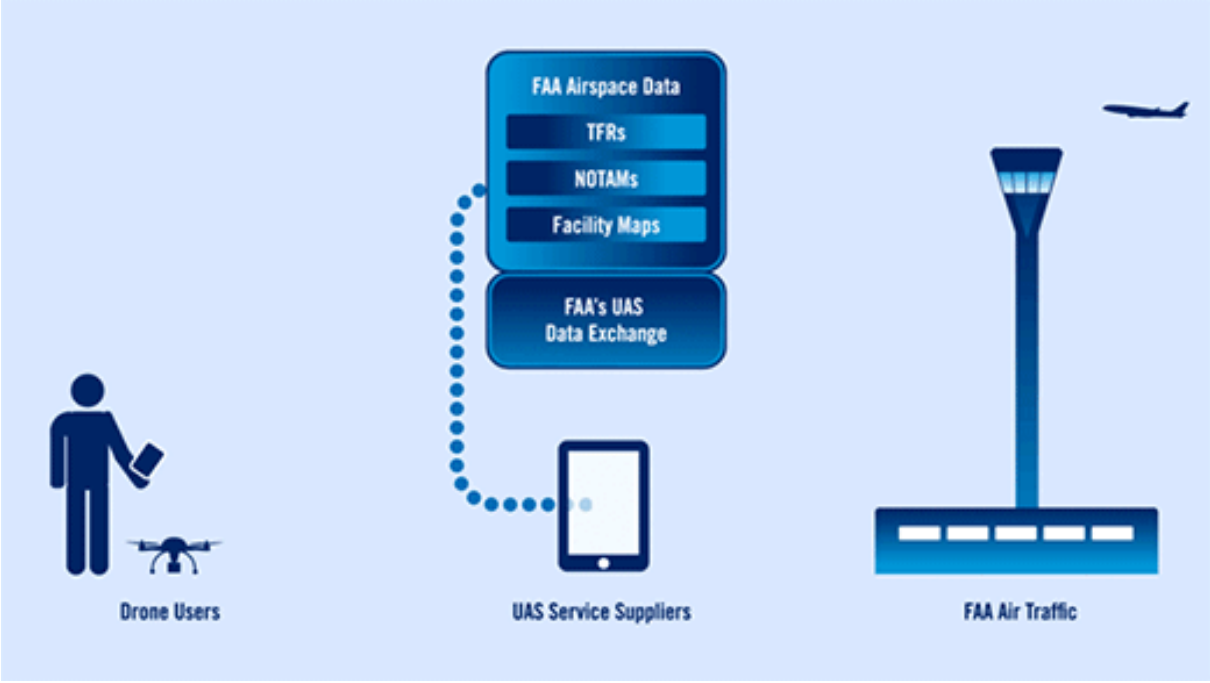
(Source: FAA)

Friday, February 4, 2022

WASHINGTON – This week, the Federal Aviation Administration (FAA) issued its millionth airspace authorization for drone pilots to use busy airspace safely. The Low Altitude Authorization and Notification Capability (LAANC) automates the process for drone pilots to quickly gain authorization and provides Air Traffic professionals with awareness of where drones may be operating.

"This system has allowed drone pilots to gain timely access to busy airspace without sacrificing safety," said Teri L. Bristol, the chief operating officer of the FAA's Air Traffic Organization. "We are grateful to everyone who helped us reach this milestone safely."

Under Part 107 of the Federal Aviation Regulations, drone operators need to secure approval from the FAA to operate in any airspace controlled by an air traffic facility. Prior to LAANC, airspace authorizations were done manually, which could take drone pilots weeks to get approved. In 2017, the FAA recognized that the manual system delayed the agency's goal to support routine drone operations and launched LAANC as a prototype for automatic airspace approvals.



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Since becoming an official program in 2018, LAANC has provided an automated system for drone pilots– both commercial pilots and recreational pilots - requesting to fly below 400 feet in controlled airspace. Drone pilots are able to request airspace authorizations through any of the FAA-Approved LAANC Service Suppliers up to 90 days before they plan to fly. The system now covers 542 air traffic facilities serving approximately 735 airports. LAANC also allows the agency to provide drone pilots with information and guidance on where they can and cannot fly a drone.

In 2021, the LAANC capability expanded to provide night authorizations to Part 107 Remote Pilots.

Drone pilots can also request airspace authorizations using the FAA DroneZone, including for areas not covered by LAANC or when the operator holds a Part 107 waiver.

For additional information on LAANC, visit the FAA website. For general inquiries on these new regulations and other UAS inquiries, please call 844-FLY-MY-UA or email the FAA.

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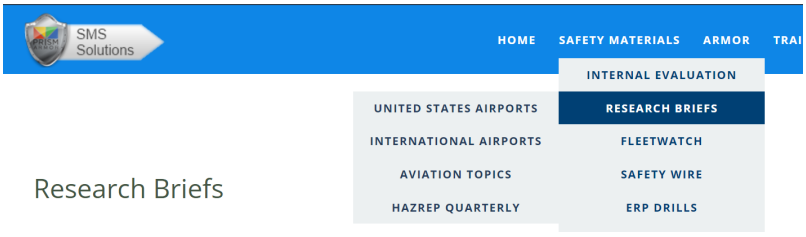
SAFETY MANAGER'S CORNER

Research Briefs

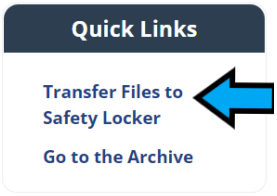
Flying into an unfamiliar airport? PRISM can build an airport brief for you.

PRISM Airport Analysis Research Briefs are designed to provide overall risk awareness for a specific airport based on the available detailed information about the local area and previous reported events at that airport. These reports are developed by PRISM analysts using various data sources.

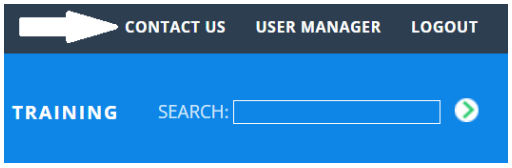
PRISM ARMOR Professional subscribers are able to request up to six research requests per subscription year. These research requests can be used toward a new airport brief, a brief on any aviation/safety topic, an update to an existing brief, or on an annual safety culture survey.



All existing research briefs are located on the PRISM ARMOR website under Safety Materials—Research Briefs (https://armor.prism.aero/SafetyMaterials/Index?cmsPageId=3) and are available for download.



The research briefs can also be transferred directly to the Safety Locker using the Quick Links on the Research Briefs page.



To request a new research brief or to have a report updated, submit a request via email to prism@argus.aero or via the "Contact Us" link at the very top right of the PRISM website pages.

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Quote of the Month

I fly because it releases my mind from the tyranny of petty things.

BY: Antoine de Saint-Exupery

While whimsical and romantic, let us not forget that our environment does not allow any room for distractions. When we strap in, tool up, or even open an email the stray thoughts of a wayward mind can have dire consequences. As aviation professionals we have to have the courage and conviction to know when the "tyranny of petty things" becomes too great. Mitigate your risks using every tool available. Plan for your distractions as best you can, and above all recognize the limits placed on mere mortals climbing to such great heights.

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UPCOMING COURSES

Mar 29 to Mar 31, 2022—PRISM Course
Safety Management System (SMS)
Denver, CO

Apr 4 to Apr 8, 2022—PROS Course
Aviation Lead Auditor Training (ALAT)
Denver, CO

Apr 18 to Apr 22, 2022—PROS Course
IOSA Auditor Training
Denver, CO

Aug 22 to Aug 26, 2022—PROS Course
Aviation Lead Auditor Training (ALAT)
Denver, CO

Sept 27 to Sept 29, 2022—PRISM Course
Safety Management System (SMS)
Denver, CO

Oct 3 to Oct 7, 2022—PROS Course
IOSA Auditor Training
Denver, CO

Nov 28 to Dec 2, 2022—PROS Course
Aviation Lead Auditor Training (ALAT)
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Dec 12 to Dec 16, 2022—PROS Course
IOSA Auditor Training
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Go to Upcoming Training Classes to register.