



Wright Flyer: The Evolution of a Design

by Seán G. Dwyer PhD

I am no longer surprised when parents tell me “It was a life changing experience” at the end of the Young Aviators program. Think about it. Their child started the week too young and immature to start driving lessons and ended the week doing take-offs and landings in an airplane. They would have logged as many hours as some pilots had going into combat in WWI. No wonder it is a confidence builder. Speaking of self-confidence, Orville and Wilbur Wright did not have a university degree between them, but they were not afraid to challenge the scientists and engineers of the day. However, they grew up a time when earning a high school diploma was more demanding than is true today. Avid readers of anything relating to aviation, they were also diligent experimenters.

The phrase “Invention is 10% inspiration and 90% perspiration” was certainly true in their case. They would develop a prototype, test it, refine it, and then test the new prototype in a sequential process that went on for years.

The rudderless 1900 glider had only wing-warping and elevator for control. They may not have even considered the need for a rudder, since birds manage to control flight by twisting their wings and tails, and clearly do not have vertical stabilizers or rudders. However, this brings to mind the question: “If a man can stand with just two legs, why does a stool need at least three?” The difference is that a man has a brain that rebalances him thousands of times a second, thus making a third leg unnecessary. An inanimate stool does not, and needs a third or fourth leg for stability. Similarly, bird brains provide birds with adequate control without the need for a rudder. Move a feather here, a feather there, and the bird is balanced.



Northrup B-2 Bomber

It was not until the Northrup B-2 Bomber was built that a successful powered airplane was designed without a rudder. Its computer controls combination aileron/dive brake/flaps, in effect reshaping its wings just as a bird does. Of course, such computer control comes at a price, \$2 Billion per plane in the case of the B-2.

Back to the Wright brothers, they were the first to design 3-Axis controls, but why did they put the elevator in front in the early models? It would be nice to say that, being the first to play the game, they got to make the rules. But it is more complicated than that. Basically, they wanted to avoid the fate of Otto Lilienthal, who was one of their inspirations and was killed in 1896 when his hang glider stalled after hundreds of successful flights. (Would it surprise you to learn that Lilienthal was awarded US Patent No. 544,816 in 1895 for his ‘flying machine’?) Bottom line, however, having the elevator in front limited their speed. The analogy “You cannot push a rope” applies. If they made the elevator strong enough to stand up to higher speeds, they would have had to add too much weight given the materials available at the time. This is why the rudder on a ship is always at the back. This weight Vs. strength issue was also why ailerons and rigid wings replaced wing-warping for control around the longitudinal axis, although Glen Curtis had initially introduced ailerons as a way to bypass the Wright brothers patent.

My Grandmother was 15 when the Wright brothers flew in 1903, and 81 when man walked on the Moon. What amazing progress in one lifetime! Are today's kids up to the challenge? That is why the focus of the Young Aviators program is on STEM. In the next issue of Spark you will read about Ben Franklin witnessing the first flight of a manned aircraft 120 years before the Wright brothers!

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1900 Wright Glider

1903 Wright Flyer

1911 Wright Flyer Model B

There were three distinct types of Wright Flyer with many intermediate steps between models. The rudderless 1900 Glider had the pilot lying prone, as did the 1903 Wright Flyer used in the historic first powered flight. The latter had bi-planar elevators and rudders extended forward and aft respectively. In the final 1911 Wright Flyer Model B the elevator was aft with the rudder, and the pilot and passenger were sitting upright.

The Wright brothers realized that they faced three hurdles: (1) Control, (2) Wing structure, and (3) Power. Their response to each was unique, and evidence that their design process was more evolutionary than revolutionary can be found in photos of the later models. In some cases it is clear that a particular flying machine had started out as an earlier model, but had been modified to reflect the latest thinking, e.g. relocation of the elevators. Even their primary method of control, wing-warping, was “evolutionary” in that it mimicked the way birds control their own flight.



President's Corner



Eric Wolf, EAA Chapter 838 President

As usual, Phil is on time putting together the Contact and I am late with my article. However, this time, I have a valid excuse – Airventure Oshkosh!

Every year seems to be a little different than previous years and this is no exception. This year, I felt like there weren't many unique airplanes (like White Knight I/II) or big events (like Van's 40th anniversary), but there were still plenty of great warbirds, homebuilts, ultralights, and vintage aircraft. When I used to drive to Oshkosh, I always

parked in the red lot because it was close to the homebuilt parking/camping (dominated by RV's) and warbirds. When I started flying into Oshkosh, the red lot was reduced to make room for more homebuilt camping/parking. Now the red lot is gone to make room for even more homebuilts. Throwing statistics aside, I take this as a positive sign that aviation is still alive and will continue more or less at its current strength for many years. Homebuilding clearly has played a big part in keeping aviation alive.

With a low production volume and high cost industry, homebuilding has become an obvious alternative for many. With most other vehicles, it makes little sense to build when you can buy something much better and cheaper. In the aircraft world, homebuilts offer a greater range of designs reaching extremes of performance, customization, and cost.

Getting back to Oshkosh...I remember in the past I discussed with fellow homebuilders that it would be great if EAA included homebuilts in the airshow. Although Sean Tucker's über-modified Pitts biplane is an experimental, I was thinking more along the lines of a stock RV or Long-EZ. This year, there were two RV's (RV-8 and RV-8A) that performed in the show as well as Team Aerodynamix with eleven RV's (previously known as Team RV when they performed last year). I wonder if Paul Poberezny envisioned that all of this would happen when he started EAA 60 years ago.

I'd like to congratulate Tony LoCurto and Zach Kant on their recent solos. They are both graduates of the Young Aviators program, which is going on as I write this. For those of you who don't look at the last page of the newsletter, Tony is also one of our directors on the board.

Speaking of the board, we will have 2-3 director spots opening up as well as the President & Vice President seats at the end of the year. The goal (according to our bylaws) is to present the slate at the September meeting and elect the new officers/directors at the October meeting. We will also be looking for a new facilities director to replace Bob Helland (he will still handle the winter vehicle storage). Lastly, we will need a Foundation Trustee in the next several months to replace Steve Myers. If you are interested in any of these spots, please contact me for details.

We will not have our regular Thursday meeting, but we will have our annual EAA838 vs. Explorer Post 218 Mini Golf Tournament at Mulligan's on August 15 at 6:00pm. Our annual picnic will be Saturday, August 10 at the chapter building starting at noon. The chapter will provide grill items and beverages, but please bring a dish to pass.

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Supported Programs

Young Aviators

August is here! And with August comes Young Aviators. For those of you who follow us on Facebook, Centurion Aviation soloed two graduates of Young Aviators this summer. Tony LoCurto was from the Class of 2011. Tony is well on his way to obtaining his Private Pilot's License. Zach Kant was the Class of 2012 and he too is knocking out some of the requirements for his license. Congratulations to them both.

Zach is 16 so his dream of obtaining his pilot's license will have to wait a while. But with that said, he's not wasting any time either. He participated in Young Eagles and there he was given information on some next steps. He applied for a Gathering of Eagles Flight Training Scholarship. http://www.eaa.org/news/2013/2013-05-28_gathering-of-eagles-flight-training-scholarships.asp. As a part of the scholarship process he had to obtain a study program from Sporty's and write an essay. He won \$1,500!

As he waited for the scholarship results, he worked through the self study program and passed his FAA written exam in May. After he obtained the scholarship he obtained his Student license and though there were many weather related cancelations earlier this summer he accomplished his goal. He soloed July 6th. Zach is now looking for work opportunities to help him continue his dream of flying.

Aaron Gehne a YA 2011 graduate is another one who looks to be finishing his private this fall with Ken Kaebisch. He has soloed and currently working on his cross countries. Aron is in the USAF ROTC program and intending on becoming an Air Force pilot.

It is very encouraging to work with these young people. They are able to set goals and work through situations that arise in order to see their goals come to fruition. Again congratulations!

Dave Finstad
Centurion Aviation Services

Explorer Post 218

We had our annual post picnic on Thursday the 27th of June. There was a good show of members. We all were able to get in the air and had a great time. There was pizza and snacks. It was a ton of fun! A big thanks to Tracy, Daryl, Eric, Carl and Ralph!

Chapter 838 – Explorer Post 218

Mini Golf Championship August 15th

This is our normal chapter meeting night, but we skip August, because of the chapter picnic on Aug 10th.

Come and join the Explorers at Mulligan's at 6:00 pm (6633 Douglas Ave Racine, WI 53402 (262) 681-6464) There will be pizza and soda provided by the post, following the match at Mulligan's.

AirVenture 2013

The Aviation Explorer Base is in full force during AirVenture this week. Post 218 will have 15 Explorers and advisors, in addition to four chapter members on staff (Adele Helmle, Katie Clark, Jerry Baker, and Ken Sack). 180 Explorers are expected and advisors in camp from 16 different posts from throughout the USA.

AirVenture 2013 update

Aviation Explorer Post 218 attended the Aviation Explorer Base encampment this year at



EAA AirVenture. Here are some pictures of Explorers in the kitchen. They had K-P the first they got their for the opening dinner. You will more pictures and an article in the September letter.

Post 218 at the Aviation Explorer Base on Thursday morning at 6:30 AM.



our
night
see
news-

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This is a picture of 180 Explorers, advisors, and staff from 16 different posts from throughout the USA. The furthest came from California, Arizona, and North Carolina.



Eddy Huffman and Carl Bumpurs held a class on navigation for the Explorers at the Aviation Explorer Base during AirVenture 2013.

Annual Mini Golf Tournament

To all EAA 838 Members: You are again challenged for the Annual Mini Golf Tournament between Aviation Explorer Post 218 and EAA Chapter 838 Thursday 8/15/2013 at 6:00 pm at Mulligan's Mini Golf (weather permitting) at 6633 Douglas Ave Racine, WI 53402 (262) 681-6464.

Cost is \$5.00. The post will provide the pizza and soda after the match.

Call Steve Kujawa at H: (262) 637-1048 or
Ken Sack at H: (262) 554-9714 for more info.



Aviation Explorer Club

7. August 7 - 6:00 PM - GROUND SCHOOL
 - Aviation charts, weather (phone, computer)
 - Ground school - plan cross country flight:
KRAC to KBUU
88C/KRAC - headings, time, altitude, fuel burn
8. Aug. 17 - 9:00 AM - CROSS COUNTRY FLIGHT
 - Fly simulator cross country
 - Fly cross country with Chapter 838 pilots
 - Debrief with pilot, compare actual flight with planned
(RAIN DAY IS 24TH)
9. Aug. 28th - 5:00 PM - Trip to Cessna Maint. MKE
(Transportation by parents.)
10. Sept. 11 - 6:00 PM
(Transportation by parents - drive to south ramp of Batten field off Golf Rd. for tour of maint. facilities and various aircraft in hangers)



Supported Programs

11. Sept. 13 - Modine-Benstead Observatory
Time to be determined
12. Sept. 25 - 6:00 PM - Awards presentation and picnic
 - Speaker - Carolee Barnett - American Air Lines
 - Awards - Katie Clark and BSA representative,
Brian O'Lena EAA
 - Picnic by Ken Sack, Kristian Niemiec and parents
(time as needed)

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HALO

The outside grounds of EAA Chapter 838 will be used for a fundraiser on November 8th-9th. Racine's Homeless Center, HALO will be sponsoring a "Sleep Out for HALO" from Friday night at 6:30pm until 7:00 am Saturday morning.

You will begin seeing posters or letters about this, and are all welcome to participate. Youth 12 and older will be targeted along with chaperones. They will be given a box, a t-shirt a snack and a journal to document the experience of sleeping out overnight in a secure environment. They are asking each participant to obtain \$200 in pledges, and they are hoping for 200 youth and chaperones. Ken Sack will be there to lock the gate in the evening. The Racine Police department plans to have three police officers on site as well throughout the night. Dave Mann has approved of the event, and HALO will get insurance for the event covering Batten Field and EAA Chapter 838. You can either camp out overnight or be a virtual participant at home. Either way you will be asked to get pledges for HALO. Keep watching for more information. Contact Dorothy Sack, Committee Chair at 262-5549714 if you would like to be a sponsor of the event.

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Using an iPad to Calculate Your Take-Off Roll

by Seán G. Dwyer

The Saturday morning breakfast flight took a bad turn when the undercarriage of a landing airplane collapsed. Fortunately, it was not your plane, but you still have a problem. Part of the runway is blocked and you wonder if there is enough runway left for you to take-off. Also fortunately, you just happened to have installed an app on your iPad which calculates the take-off roll of your aircraft as a function of temperature and altimeter setting. Where would you find such an app? Right here, if you have a Cherokee 140. For any other type of plane, you have to insert your own performance data.

	A	B	C
1	Take-Off Distance	Input	
2	Field elevation in feet msl?	674	
3	Airport altimeter setting?	29.92	
4	Temperature in degrees F?	78	
5			
6		Output	
7	Density Altitude =	2,036	
8	Climb rate in feet min =	531	(Default if Zero)
9	Take-Off roll @ 2,150 lbs =	1,059	1,059
10	(Default used if DA < 0' or DA > 7,000')		

I find it easiest to write a program first in Excel on a Mac and then transfer it to the iPad where it opens using the Numbers application. With the exception of one line, this program is fairly simple and draws from the performance charts of a PA28-140.

Open Excel and enter all the information as shown except for cells B7, B8, B9, and C9. The equations for these are as follows:

$$B7 = 145457 * (1 - (1.95467 / (B4 + 459.7))^{0.23494}) * (0.01 + (B3^{0.19025} - 0.000013125 * B2)^{5.2564})^{0.23494}$$

$$B8 = IF(B7 < 0, 630, 630 - 0.04846 * B7)$$

$$B9 = IF(B7 > 0, C9, 800)$$

$$C9 = IF(B7 < 7001, 800 + 0.127 * B7, 0)$$

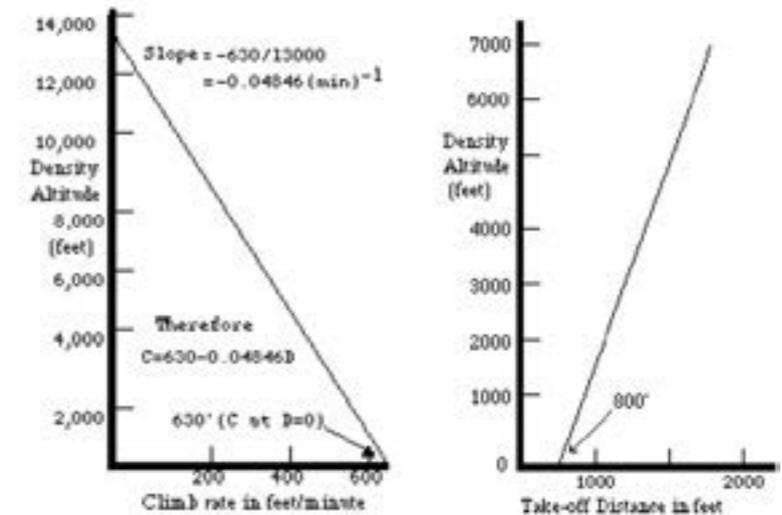
Trust me on B7. It's a real humdinger and it calculates density altitude. Translations of the other three cells are as follows:

B8 means "If Cell B7 (i.e. Density Altitude) is less than zero then B8 equals 630; Otherwise it equals (630 - 0.04846 times B7)"

B9 means "If Cell B7 is greater than zero, then Cell B9 = Cell C9, otherwise Cell B9 = 800."

C9 means "If Cell B7 is less than 7001 feet, then C9 equals (800 + 0.127 times B7); Otherwise C9 equals zero."

These "If...then..." statements provide default values when density altitude is either less than zero or outside a Cherokee's performance charts. Otherwise the equations would predict that you should take-off backwards at really cold temperatures (an unlikely event), or predict take-off rolls that are not based on the performance charts at density altitudes >7000 feet msl. Refer to the performance charts to understand the basis for the numbers in the equations. Replace these with corresponding information for the aircraft you fly. We're done! Now all you have to do is mail it to your iPad and open (and save) it in the Numbers application.



If you enter the field elevation, altimeter setting and temperature in Cells B2 - B4, the program will calculate density altitude and the take-off roll for a Cherokee 140.

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Question:

Which country launched the first man made object into Space?

- (1) USA
- (2) Russia/USSR
- (3) China
- (4) Germany

Answer on page 11



Rabbit Rules and the FAA

By Bruce Landsberg - President, AOPA Foundation

An area we've discussed before is the creeping, some would say crushing, regulatory environment that GA faces today. Most regulations started off as a common sense approach to address areas that were known to cause accidents. But as too many cooks have learned, if a little spice is good there are rapidly diminishing returns when the oregano overpowers the oatmeal!

I came across an article the other day in the Washington Post by David Fahrenthold that clearly illustrates the point. Marty Hahne, a professional magician, was busted by the U.S. Department of Agriculture for not having a license for his one-bunny show. Casey, his trusty three-pound assistant, is the highlight of the gig when extricated from a hat, picnic basket, or other enclosure. Hahne could see the rabbit in half in front of the USDA inspector—hard on Casey—but apparently not illegal if the beast is for human consumption (don't try this at home, kids.)

But it doesn't stop there. The original reg was just four pages, but now there are 14 pages of just rabbit rules. Sound familiar? When Casey goes on a road trip there must be an itinerary. Not only that, but a disaster plan is needed in case of a fire, flood, heat wave, chemical leak, or tornado. This grew out of some terrible animal abandonment abuses during hurricane Katrina. One magician has a plan: Take the rabbit with you. But Hahne has a 28-pager to illustrate the absurdity of creeping regulation. He notes that "Our country is broke and yet they have the time and money to harass somebody about a rabbit."

This whole deal was in response to the outrage of a family Dalmatian that was kidnapped and used for experimental purposes by an unscrupulous medical laboratory. If interested, you can read how these 1965 animal protection rules were

originally designed to regulate laboratories, zoos, circuses, carnivals and pet dealers at wapo.st/magic-marty. But somewhere along the way over-zealousness overshadowed a reasonable idea. It would be amusing if there wasn't such a total lack of common sense on the part of the regulators! Don't get me wrong—I love animals and currently have five rescued furry friends, but...

The operative word here is "proportionality." Regulate appropriately for the activity and no more. GA suffers badly from being constantly compared to the airlines, and much of our activity is stifled by it. The medical exemption petition is one area, Part 23 rewrite to rein in aircraft certification costs is another, and some archaic flight training rules—all are being pursued by AOPA and the industry. But rule-making takes a long time, and in the interim the application of existing rules could stand some standardization. Some regs are ambiguously written and subject to "creative interpretation."

The letter of the law, but not the intent, can lead to some very unproductive places. Conversely, we have a few pilots who through an abject lack of common sense (there's that concept again) bring GA into a bad light, and the regulators respond with a heavy hand as opposed to using just enough oregano. FAA management and staff need to exercise as much common sense as they ask of pilots—because the oatmeal is in really bad shape.

An expensive reminder Of the basics

By Bruce Landsberg - President, AOPA Foundation

The Asiana Boeing 777 accident at San Francisco is the news happening of the week. Pundits, bloggers, and all manner of experts/pseudo experts—present company included—are holding forth on what happened or might have happened.

This accident serves as an expensive and tragic reminder about the importance of basics and why things are done in certain ways regarding aviation safety. My sense is that there will be very little new that comes out of this that we didn't already know years before!

I'll confine my observations to the more salient points. Feel free to comment, as I know you will. The usual disclaimer: Until the accident is completely investigated my comments must be regarded as speculative and subject to error.

At this writing the facts appear to be that the aircraft stalled/mushed into the sea wall just short of the runway at a high angle of attack and low airspeed. Why?

- Transitioning pilots are often not "one" with the aircraft until they have acquired significantly more time to learn its nuances. Even though the captain was highly experienced in heavy jet aircraft, he was a newbie to the B777.
- The instructor pilot was also new to his role and, unless some significant mechanical problem is discovered, will likely have a contributing role for failing to properly supervise the new captain.
- One of the biggest possible factors is complacency: "I've done this a thousand times. How hard could it be?"
- The pilots reported to the NTSB that the auto-throttle failed to respond. Automation (auto-throttles in this case) must always be treated with caution. It's typically more reliable than we are but must be programmed correctly and the programming should always be verified and monitored. "Set it and forget it" is a recipe for surprise and occasional disaster.
- The culture in many countries defers to authority and experience. Even when the senior person is wrong it's tough and may be career-limiting to say that the emperor is wearing no clothes. Some senior pilots and organizations are unenlightened that they just might be subject to



the occasional human failing.

- The pilot monitoring needs to monitor the main thing. In this case that would be airspeed, configuration, and alignment. If it's not working, speak up, and if it's not corrected, take appropriate corrective action. A bruised ego is far better than a busted aircraft!
- Stabilized approaches are always a good idea, and the bigger the aircraft, the more important it becomes. For light aircraft we recommend that everything be stable at no later than 500 feet agl.
- Finally, if something looks funny or weird it probably is, and that might be a great time to do something different rather than waiting to see how it plays out.

On the Same Subject

By Phil Fountain

I was going to post comments from the NBAA AirMail system relating to last month's Boeing accident, but like most incidents the facts disprove many of the initial comments. A few months ago I made a comment about pilots not continuing to fly the airplane when something goes wrong like a single engine airplane having an failure or things get busy complying with Air Traffic Control. These things can happen with the big boys as well as the VFR pilot.

When I worked on the corporate side, I always trained our pilots to disassociate the complex cockpit aids when time is at a premium and the systems being used only gets in the way, this goes for the private pilot as well, no matter what type of airplane your flying.

Not knowing all the factual details that the NTSB has acquired, I think we can safely say that, with four Captains in the cockpit of the Boeing 777, how can any of them sit and watch the airspeed decelerate over 30 kts. and not react to the situ-

ation. There is no need to evaluate the complexities of the aircraft auto-throttle system at the time but just a simple disconnect of the auto-throttle system and autopilot and hand flying the aircraft to a safe landing.

All airplanes have a power setting that will provide an airspeed and descent rate for the airplanes configuration, weight, and atmospheric conditions.

It is obvious that there is a disconnect in the training process where pilots are taught to rely on automation over the basic fundamentals of flying an airplane. The following SAFO sheds some light on the problem. Too bad this did not get to the four Captains in SFO.

FAA Recommends Pilots Spend Less Time Using Autopilot

January 25, 2013

While the increasing level of cockpit automation and more frequent use of autopilots have helped improve operational safety and flying precision, it has also raised concerns that pilots are losing proficiency in their hand-flying skills.

A recent safety alert for operators (SAFO) issued by the Federal Aviation Administration (FAA) addresses that concern by recommending that pilots take control of their aircraft more often.

The SAFO, released earlier this month, recommends that professional flight crews and pilots of increasingly advanced aircraft should turn off the autopilot and hand-fly during "low-workload conditions," including during cruise flight in non-RVSM airspace. It also recommends operators should "promote manual flight operations when appropriate" and develop procedures to accomplish this goal.

"Autoflight systems are useful tools for pilots and have improved safety and workload management, and thus enabled more precise operations," the SAFO notes. "However, continuous use of autoflight systems could lead to degradation of the

pilot's ability to quickly recover the aircraft from an undesired state."

[Review the SAFO](#)

The SAFO adds that, though autopilots have become a prevalent and useful tool for pilots, "unfortunately, continuous use of those systems does not reinforce a pilot's knowledge and skills in manual flight operations."

In addition to potentially degrading a pilot's flying skills, reliance on the autopilot may also leave pilots unprepared to properly address a developing issue with the aircraft, noted Doug Carr, NBAA vice president for safety, security, operations & regulation.

"Automation may mask many subtle but growing problems that the aircraft might be experiencing," he said. "When that automation reaches its limits and the autopilot hands back control of the aircraft to the pilot, the flight crew must be prepared and ready to respond."

The SAFO adds that flight crews should work with operations personnel and others at their companies to "ensure that the content of this SAFO is incorporated into operational policy, provided to pilots during ground training, and reinforced in flight training and proficiency checks."

Carr noted that such procedures should also take into consideration the reasons those operations utilize automation technologies in the first place, to improve flight safety and precision.

"We believe there is value for companies to review the content of the SAFO and determine how to accommodate its recommendations, without compromising established safety procedures for their operations," he added. "We learn to fly manually; it makes sense that we should ensure that our ability to hand-fly the airplane is as proficient as our ability to operate the automation."

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FAA Safety Team

FAAST Blast — Week of July 22 – July 29, 2013
Biweekly FAA Safety Briefing News Update

Comment Period Open Until Aug. 23 for New ACS documents

On July 24, 2013, the FAA published a Notice of Request for Comment in the Federal Register regarding the availability of additional draft Airman Certification Standards (ACS) documents. They include a first draft of the authorized instructor certificate documents, a second draft of the private pilot certificate and the instrument rating documents, as well as a set of frequently asked questions. These documents can be accessed at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0649> or by referencing Docket No. FAA-2013-0649 at <http://www.regulations.gov/#!home>. The comment period closes August 23, 2013.

The aim of the ACS documents is to provide a more integrated and systematic approach to airman certification testing and training. These documents are designed to help improve the relevance, validity, and effectiveness of aeronautical training and testing materials. They also support the FAA's goal of reducing fatal GA accidents by incorporating task-specific risk management considerations with the flying skills outlined in existing practical test standards.

NTSB Releases Third of Five GA Safety Videos

This week, the National Transportation Safety Board (NTSB) released the third of five short videos designed to promote general aviation safety and complement the five Safety Alerts issued earlier this year (www.nts.gov/safety/

NTSB / FAA / NBAA / TSA

[safety_alerts.html](#)). The videos feature NTSB investigators sharing their perspectives as both GA pilots and aviation safety professionals on how both pilots and mechanics can more effectively manage the risks associated with GA flying.

The videos released to date are available on NTSB's Video Library page at www.nts.gov/video.html. We'll also send a tweet when the last two videos are released (@FAASafety-Brief) or you can follow NTSB on Twitter (@NTSB).

Rx for Safe Flying

FAA Administrator Michael Huerta and the heads of 11 aviation associations sent a letter to all U.S.-registered pilots on July 18, urging them to be more aware of the effect both prescribed medicines and non-prescription drugs containing antihistamines can have on their skills and judgment. The letter tells pilots to read prescription labels carefully, talk with their doctors, and then decide if the drugs they're taking could impair their performance in the cockpit. To read the letter and accompanying fact sheet, go to www.faa.gov/news/updates/media/Letter_Pilots_Impairing_Medications.pdf.

What Would MacGyver Do?

When it comes to survival techniques, television's MacGyver seems to have the concepts down pat. But should you encounter a flying mishap, would you know what to do? For tips on how to unleash your inner MacGyver, check out the feature article on aviation survival equipment on page 10 of the July/August 2013 issue of FAA Safety Briefing.

The link to the online edition is http://www.faa.gov/news/safety_briefing/.

“WINGS DeKalb - Safety Seminar”

On Saturday, August 10, 2013 at 8:45 AM

Location: DeKalb Taylor Municipal Airport
3232 Pleasant Street
FBO Hangar
DeKalb, IL 60115

Select Number: GL1951211

Description: Aurora Tower, Accident Casual Factors,
What Your Sectional Chart Doesn't tell You.

NBAA Airmail

International Flying

By Phil Fountain

I thought you would be interested in reading about a situation posted in the [NBAA-gulfstream] AIRMAIL system. The post is about the EU ramp check process called SAFA. The pilots concern is about the installation of a FOQA system in his airplane. FOQA is voluntary Flight Operational Quality Assurance program (in the U.S.) that records flight data information which may be transmitted via satellite to a monitoring service. The EU is ahead of the U.S. in making it a requirement. This communication is an example of the pressures corporate flight crews go through on international flights.

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Re: France SAFA Inspections, specifically QAR (FOQA) installation.

Hello,

I'm taking a G-450 to Nice in August, with a possible side trip to Paris (LFPB). We are a commercial (135) certificate holder, but operating privately. Nice trip will have the owner on board, Paris would have his family but not him on board.

Can any large aircraft operators (<27,000kgs) relate any info on how the Flight Data Analysis Program (FOQA) (FORMS at Gulfstream) requirement for commercial operators is being viewed by the French authorities? Wondering if our commercial status is going to take precedent over the fact that we're operating privately, with a subsequent penalty for not complying with the ICAO mandate to have the QAR and a monitoring program in place. We flew owner and family to Nice about 18 months ago and had no problems, but curious as to current environment.

Any info is appreciated, thanks!

Cheers,

Rob

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Good Day Rob

The key here is your operating status. As you state you are operating "Privately" (that is non-revenue). Therefore be careful to never mention the term "Commercial" in any discussions. It does not matter that the aircraft is on an US 135 certificate. You are a non-revenue private flight.

Make sure you have a SAFA checklist ready – ideally with all the necessary documentation printed or hyperlinked. This makes the inspector's life very easy during a SAFA inspection and speeds the process up.

Be very careful of the noise abatement procedures for Nice. They are VERY strict that you fly exactly the track as per the arrival and approach procedures. Review the notes thorough-

ly as there are many limitations on the ground.

Have a good trip.

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I was just in Nice no issues, I was ready with W&B and load manifest and all SAFA items. They stop you at an engine stop line and as soon as your pax leave they have you kill the APU and tow you into Kilo ramp. They will tow you out to a place where you can start your APU 30 min prior to departure. Watch your slots close minus 5 to plus 10 if they are using them

Best of luck

NextGen Funding Reform Needed, but Not User Fees

Industry stakeholders should take a "careful approach" in recommending funding and other structural reforms to the U.S. aviation system, NBAA president and CEO Ed Bolen told attendees at a NextGen symposium on Thursday in Washington, D.C. The National Air Traffic Controllers Association and Air Line Pilots Association International sponsored the event. During a discussion about NextGen modernization funding, panelists agreed that industry stakeholders are moving in the right direction by convening discussions about reasonable approaches to reform funding for important programs such as NextGen. Airlines for America president Nicholas Calio said a national policy approach is needed to "treat the industry as the strategic asset that it is for the nation." He said this should include a fresh look at the tax and regulatory structure; how to provide adequate, steady funding for NextGen; and restructuring the FAA. Bolen echoed Calio's comments, but noted, "Anything a user-fee system can do for us, the fuel tax mechanism does better. Business aviation fully supports paying for its share of the system using the fuel tax; it's easy, simple, fast and efficient," adding that it creates no administrative burden on companies and it does not require a costly bureaucracy to operate.

Vision Test

The last time I visited my AME, he told me that he thought the vision portion of the pilot's medical exam could be performed by a regular optometrist and that there is a procedure for the optometrist to submit a form or report to the AME or the FAA. He thought that doing this would make the vision portion of the medical exam performed by the AME unnecessary.

Has anyone heard of any such procedure? If so, would you please refer me to the report or form to be completed by the optometrist?

Response 1

My last medical I failed my eye test.

I went to my eye doc and my prescription needed a little tweaking. My eye doc sent a fax to my AME saying that with my new prescription my eyes are now corrected to 20/20.

That was all he needed. So to answer yes.

Response 2

It is form 8500-7 I believe. But that is correct. Just did it 2 weeks ago.

Flight into Istanbul

The following is a request for information and responding comments on a planned flight into Istanbul I thought you may find interesting. I do not think a Cessna 172 would work into the traffic pattern.

Request:

Anyone been to Istanbul lately? I have a possible trip at the end of the month, have not been there in couple years.

Hotels and intel would be appreciated. Thanks in advance

Continued



Response:

Kieth— I go there a lot. It has gotten to be a more difficult place in the last year or so to use, whether you're going to Ataturk or Sabiha.

Ataturk, because of quite a bit of congestion and traffic, 30 mile downwinds and 30 mile finals are common (almost always to 05-23). Then, there is the slot issues, which have gotten very much inflexible there now—get your pax to agree to a time early for the ETD (Expected Time of Departure) and start working on the slot straight-away. If you want to make changes, or you blow your slot—good luck... Hotel—there is a good Renaissance very close to the airport and in a great location right on the strand along the Sea of Mamara (you can go for a run right under the approach lights for RW05)

For Sabiha, parking is the issue and staying more than 24 hours can be at times problematic, if not impossible for a transient; in fact, sometimes you cannot stay at all. Hotel—Marriott Asia.

I've used Gozen as handler each place and they do OK...

For either airport, if you can stay in the city, and you like an old, classy hotel every now and then—check off the box and stay at the Pera Palace.

If your stay is long and neither airport is working for you—think about a repo to Bursa. It is a very nice city in the mountains and a great Hilton Spa hotel there.

WW II Aircraft Carriers on the Great Lakes

By Phil Fountain

I received the following e-mail from one of our chapter members and thought everyone would be interested. I would guess 99% of us never knew that this vital training occurred during the war.

The Great Lakes provided vital support for the war effort in WWII, from building 28 fleet subs in Manitowoc to providing the bulk of US industrial output, we could not have won the war if not for the benefits of the Great Lakes and their related industry. However there was another benefit of the lakes that is often overlooked. Japan quickly lost the war because, among many other things, its navy could not replace its carrier pilot losses. We could. But how did we train so many pilots in both comfort (calm seas) and safety (no enemy subs)?

We took two old side-wheel Great Lakes passenger steamers and turned them into training carriers on Lake Michigan ! Virtually every carrier pilot trained in the war got his landing training on these amazing ships! Sadly nothing but these great photos and the wrecks of the aircraft that ditched alongside them remain to tell their fascinating story! Thanks to Tom Ursem for sending this link!

Check this out! USS Sable and USS Wolverine...

<http://warbirdinformationexchange.org/phpBB3/view-topic.php?f=3&t=48962>

Caught by Surprise

By Phil Fountain

A couple of weeks ago I was coming out of the doctors office and saw a young lady waiting for a car that was driving up to pick her up. As I began to walk toward my car, I was looking down and noticed that she had two mechanical legs from the knees down. I said hi and continued to walk away.

I was totally surprised by what I had seen and not prepared to thank her for the service she gave to her country. Keep this in mind and be ready for when it may happen to you.

Sean's Answer: Although most people will answer that the Soviet Union's Sputnik was the first man-made object into Space in 1957, the correct answer is Germany's V-2 rocket, more than a decade earlier. "Space" begins at an altitude of 60 miles. The V-2 would descend from an altitude of 61-62 miles at four times the speed of sound. This made it invulnerable to anti-aircraft guns and fighters.

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Racine EAA Chapter 838

The People

Meetings

Third Thursday's 7:00 pm

Social 6:30 pm

August 2013

Volume XXIV Issue 8

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Welcome

New Chapter Members

Bill Myers	June 2013
Bill Schalk	June 2013
Michael Ratchford	May 2013
Merritt Adams	Feb 2013
Michael Arts	Feb 2013

EAA Chapter Distribution

Chapter 18	Milwaukee
Chapter 217	Kenosha
Chapter 414	Waukegan
Explorer Post 218	Racine
Steve Hedges	AOPA

Monthly Meetings

Boards Meetings	Second Thursdays	7:00 pm
Chapter Meetings	Third Thursdays	
	Social	6:30 pm
	Meeting	7:00 pm
Shop Night	Every Monday	7:00 pm
Explorer Post 218	Second Thursdays	7:00 pm
	Fourth Thursdays	7:00 pm
Young Eagles	Second Saturday	9:00 am
	(March - November)	

Upcoming Meetings & Speakers

Aug 10 th	Saturday	<u>Chapter Picnic</u>
Sep 19 th	Harold Mester	
	<u>History & Recent Developments ay General Mitchell</u>	
Oct 12 th	Chapter Event	<u>Monopoly Night</u>
Oct 17 th	Rob Madson & Bill Coolbaugh	<u>Helicopter Flying</u>
Nov 21 st	Eric Whyte	<u>History of The AirVenture Cup Races</u>
Dec 6 th		<u>Christmas Party</u>
Jan 17 th		
Feb 21 st		
Mar 21 st		
Apr 17 th		
May 15 th		
Jun 19 th		
Jul 17 th		
Aug 14 th		
Sep 18 th		

Officers

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