THE WINDSOCK

March, 2024

Editor: Frank Huber | Layout Editor: Frank Huber

The President's Flight Deck

The Ides of March are here, and we may get a real spring this year! This month's Chapter meeting will be held on Monday, March 25th beginning with the social/dinner hour at 6:00 PM. Chicken Kiev will be served. We have a repeat presenter, Jeremy Vecoli from EAA Chapter 25. Jeremy's presentation will cover various administrative and mechanical issues (both expected and unexpected) that were encountered during the process of reviving a 1942 US Army Aeronca L-3B, that sat in storage for 16 years. This presentation will qualify for FAAST and AMT credits. This should be a very interesting presentation for anyone restoring an aircraft.

A couple of email surveys have been sent to Chapter members for upcoming volunteer and fundraising opportunities. The first is with Flight Expo in Princeton, MN. This is an opportunity to help Sharon and Duane complete their Piper Colt project. A second fundraising opportunity is to help Connie and Lex at the Father's Day fly-in at Cambridge airport. I hope you will consider volunteering for either or both opportunities.

Our Chapter will be hosting an EAA Leadership Boot Camp on Saturday, April 6th. EAA has sent out invitations to Chapter leaders in Minnesota and Western Wisconsin. If anyone is interested in attending, please reach out to Bob Henkes for more information. A sign up genius has also been sent out for some volunteers to help clean the Chapter building next Saturday.

Finally, be sure to invite a friend or family member to one of our events, because you never know who may catch the aviation bug!

I hope to see you at the Chapter meeting!

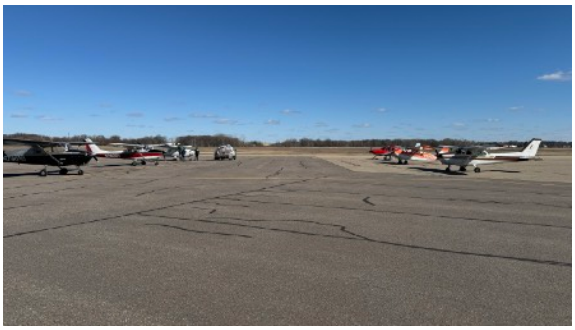
Kevin

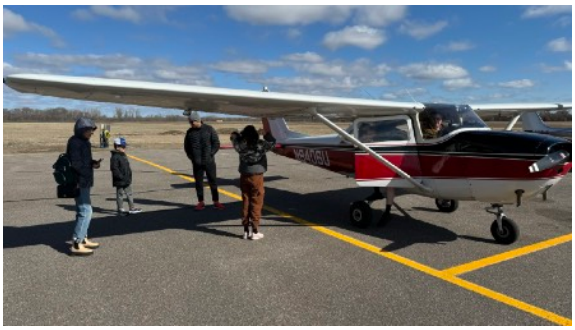
YOUR CHAPTER BOARD OFFICIERS

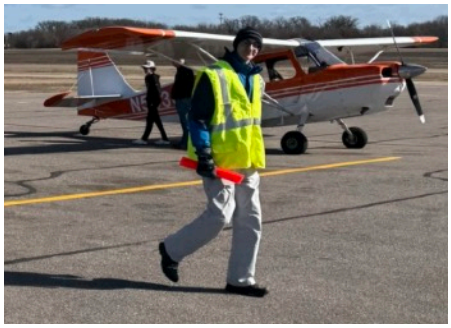
Kevin Sislo, President	Robert Henkes, Vice President
Ellen Quist, Secretary	Mark Heule, Treasurer
Charles Jasicki, Director	Michael Grzincich, Director

Contact the Board at: board@eaa237.org

Our chapter held another successful Young Eagles event on Saturday, March 9 at Atlantic Aviation. Sixty-eight young people, 14 girls and 54 boys went flying on a sunny brisk day. Twenty-nine of the Young Eagles were first timers and 19 have flown five or more times. Six chapter members, Andy Geppert, Joseph Gmitter, Michael Grzincich, Mike Miller, Claud Morgan and Zachary Zweifler, flew twenty six flights to provide flights for all the young people interested in a flying experience. As usual we had excellent ground support to make things flow smoothly. Our next scheduled Young Eagles event is on Saturday, April 13 from 9am to 2pm at Atlantic Aviation. If you know a young person, who might enjoy a free flight let then know they can sign up on our website. If you would like to volunteer your time to help out, come on out and enjoy the fun!



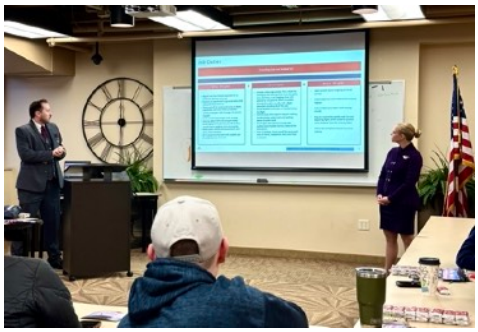




Liam Dewanz has been selected as our 2024 Ray Aviation Scholarship recipient. Liam, the twin brother of Francesca Dewanz our 2023 Ray Scholar, has been a member of our chapter for over two years, attended EAA Air Academy, has taken multiple Young Eagle rides over the last four years, has been a recent volunteer at our Young Eagle events, is a member of our BSA Aviation Explorer Post, has passed his PPL written exam, is a member of the Stanton CAP Squadron, has started his flight training through the CAP Cadet Flight Training program and is attending the Rochester Community Technical College's Associate of Applied Science Aviation Pilot program along with his sister, Francesca. Liam plans to pursue a career as a professional pilot. Liam's pursuit of his aviation interest in all the things I mentioned above covers almost every item that we are looking for in a Ray Aviation Scholar applicant, which are covered on our chapter website. We should all do our part to support and encourage our Ray Scholars as they pursue their Private Pilot licenses.

Our BSA Aviation Explorer Post continues to expose their members to various facets of aviation. During their February 1 meeting, they received a presentation from Paul Campobasso with the Red Wing Soaring Association. At the February 16 meeting, the group did some training on DC motors and planned for future events. At the March 1 meeting, they had a presentation from John Schmidt, a pilot with the Minnesota Wing of the Commemorative Air Force , about the work the CAF does to preserve the aircraft from WWII and their history. On March 15, the group received a presentation by Connor Dahler, from the Delta Airlines In-Flight Service Team about careers with Delta Airlines as flight attendant crew members.

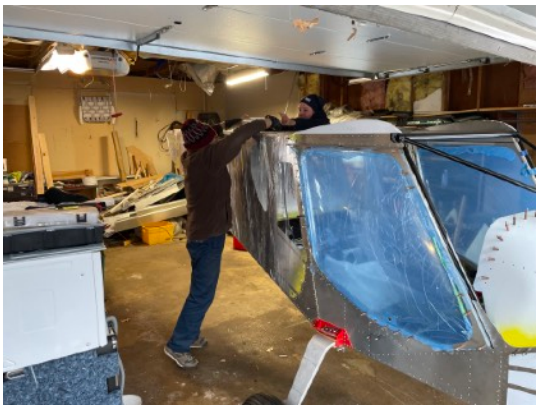
The Chapter 237 Aviation Explorer Post is a great opportunity for young men and women to be exposed to the many careers available within aviation as well as the history of aviation. If you know a young person wit an interest in aviation please direct them to the Chapter 237 website for further information about our program.

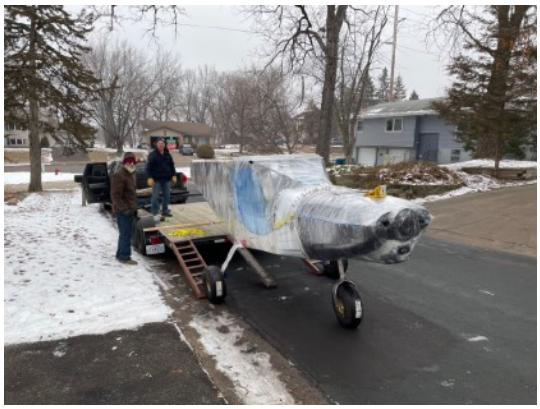


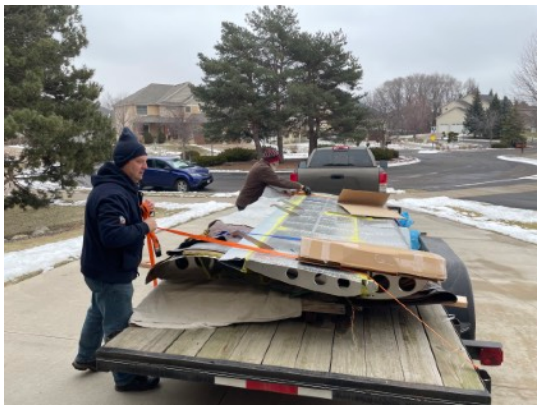
Connor and Nicole, Delta Airlines flight attendants, shared their excitement about their careers as a part of Delta's award winning In-Flight service team.

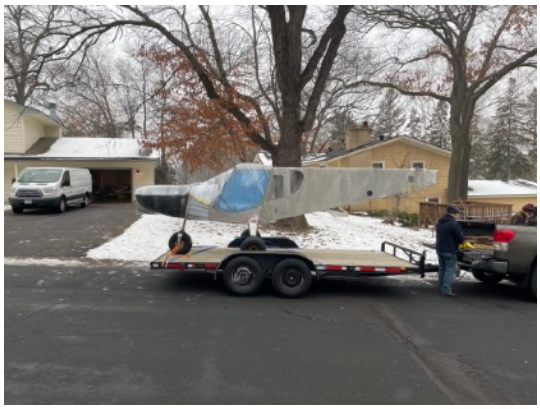
WHAT OUR MEMBERS ARE BUILDING, RESTORING AND FLYING
Timothy Aanerud Zenith STOL CH-750

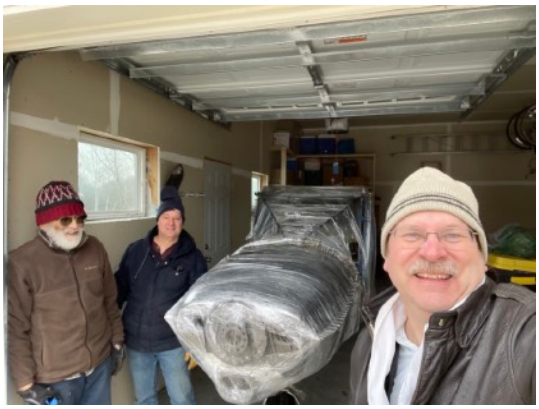
January 23 was moving day for Timothy Aanerud's Zenith STOL 701 from his Maple Grove house to his new home in Brooklyn Park.Tim had asked for help with the move at the January chapter meeting. The following day, Dick Pugh and Kevin Sislo showed up to help with a truck and trailer. After getting the fuselage covered with protective plastic, the fuselage was loaded up and moved to Timothy's new home. They next loaded up the wings and moved them as well. Tim says his new home has a much bigger garage for the project and is wide enough to put the wings on inside the garage.











Chapter 237 Coming Events

* VMC/IMC Meeting on Tuesday, March 19 VMC begins at 6:30 pm and IMC at 7:30 pm
* Chapter Meeting on Monday , March 25 beginning at 6pm with dinner, meeting to follow at 7pm
* Chapter Aviation Explorer Post meetings Friday April 5 and 12 at 7pm
• Chapter Aviation Breakfast Social Saturday, April 6 from 7:30am to 11am
* Chapter 237 Young Eagles Event at Atlantic Aviation on Saturday, April 13 from 9am to 2pm
* VMC/IMC Meeting on Tuesday, April 16 VMC begins at 6:30 pm and IMC at 7:30 pm
* Chapter Meeting on Monday , April 22 beginning at 6pm with dinner, meeting to follow at 7pm

boldmethod

What Is A Procedure Turn Altitude? Video
https://www.boldmethod.com/shorts/shorts.ifr.0063/

Do I Need To Fly The Procedure Turn? Video
https://www.boldmethod.com/shorts/shorts.ifr.0064/

How To Fly A Circling Only Approach
https://www.boldmethod.com/learn-to-fly/regulations/how-to-fly-a-circling-only-instrument-approach-descent-to-landing/

Do I Need To Follow Stepdown Altitudes When I Go Visual Video
https://www.boldmethod.com/shorts/shorts.ifr.0068/

AIR FACTS

Go or No Go: Gulf Coast rain showers *By John Zimmerman*

https://airfactsjournal.com/2024/02/go-or-no-go-gulf-coast-rain-showers/?trk_msg=A2CDVL9P5RHK3B26SDTU89QLK8&trk_contact=RMPCRR64F9CCIR5GOMICQNE7OC&trk_sid=79MSJPMQC0ROMOCU9OKL7190BG&trk_link=JNLEJECFHEF4ND4CMKMLSC74IC&utm_source=listrak&utm_medium=Email&utm_term=Go+or+No+Go:+Gulf+Coast+Rain+Showers&utm_campaign=F24024A&utm_content=Lessons+Learned+From+a+Sloppy+Approach+++Go+or+No+Go

IFR Challenge - RNAV approach to Tillmook

https://airfactsjournal.com/2024/02/ifr-challenge-rnav-approach-at-tillamook/?trk_msg=A2CDVL9P5RHK3B26SDTU89QLK8&trk_contact=RMPCRR64F9CCIR5GOMICQNE7OC&trk_sid=79MSJPMQC0ROMOCU9OKL7190BG&trk_link=HVHFHV803P14FDVHMBI5IDP8U8&utm_source=listrak&utm_medium=Email&utm_term=IFR+Challenge+-+RNAV+Approach+at+Tillamook&utm_campaign=F24024A&utm_content=Lessons+Learned+From+a+Sloppy+Approach+++Go+or+No+Go

boldmethod

Is It Ok To Fly In The Yellow Arc
https://www.boldmethod.com/learn-to-fly/aerodynamics/is-it-ok-to-fly-in-the-yellow-arc-cruise-descent-phases/

When Should I Use IDENT? Video
https://www.boldmethod.com/shorts/shorts.vfr.0079/

5 Uncommon VFR Sectional Items To Watch For
https://www.boldmethod.com/blog/lists/2024/02/five-uncommon-vfr-sectional-items-to-watch-out-for/

Tips To Get On The Centerline Video
https://www.boldmethod.com/shorts/shorts.vfr.0082/

Where Is Class G Airspace Located? Video
https://www.boldmethod.com/shorts/shorts.vfr.0081/

How Far Should You Taxi Behind
A Jet?
https://www.boldmethod.com/learn-to-fly/maneuvers/taxi-behind-jet-blast/

9 Factors That Increase Your Takeoff Ground Roll
https://www.boldmethod.com/blog/lists/2024/09/9-factors-that-will-increase-your-takeoff-roll/

Aim Point VS Touchdown Point Video
https://www.boldmethod.com/shorts/shorts.vfr.0083/

Class E Airspace Borders: How Are They Marked on a Sectional Chart? Video
https://www.boldmethod.com/shorts/shorts.vfr.0083/

Why Is There A 250 Knot Speed Limit Below 10,000 Feet?
https://www.boldmethod.com/learn-to-fly/regulations/why-there-is-a-250-knot-speed-limit-below-10000-feet-msl/

9 Common Mistakes Pilots Make During Taxi
https://www.boldmethod.com/blog/lists/2024/02/9-common-mistakes-during-taxi/

6 Most Common Private Pilot Checkride Falures
https://www.boldmethod.com/blog/lists/2024/01/the-six-most-common-private-pilot-checkride-failures/

6 Questions About Stalls?
https://www.boldmethod.com/blog/quizzes/2024/02/see-how-much-you-know-about-stalls-with-these-6-questions/

6 Mistakes Every Student Pilot Makes At Least Once
https://www.boldmethod.com/blog/lists/2024/02/5-mistakes-every-student-pilot-makes-at-least-once/

Incorrect Traffic Pattern Entry Leads To Mid-Air Conflict
https://www.boldmethod.com/learn-to-fly/maneuvers/incorrect-pattern-entry-leads-to-mid-air-conflict-at-non-towered-airport/

How To Establish Two-Way Communication Video
https://www.boldmethod.com/shorts/shorts.vfr.0087/

How Fuel Flow Effects CHT Video
https://www.boldmethod.com/shorts/shorts.systems.0015/

Is Your Grip Causing Your Bad Landings? Video
https://www.boldmethod.com/shorts/shorts.vfr.0088/

QUICK LINKS

AIR FACTS the journal for personal air travel - by pilots, for pilots

The art of instrument approaches - 7 tips for proficient flying *By John Zimmerman*

https://airfactsjournal.com/2024/02/art-instrument-approaches-7-tips/?trk_msg=5KR3IT4OMFGKB09TB1UH82PCFS&trk_contact=RMPCRR64F9CCIR5GOMICQNE7OC&trk_sid=KDKKVASS4I6B58V39884J56244&trk_link=67S3FPM74BEK7FMGI0V7UPSRNS&utm_source=listrak&utm_medium=Email&utm_term=The+Art+of+Instrument+Approaches+-+7+Tips+for+Proficient+Flying&utm_campaign=F24032A&utm_content=The+Art+of+Instrument+Approaches+++An+Alaskan+Flying+Adventure

North to Alaska *By Curtis Penner*

https://airfactsjournal.com/2024/03/north-to-alaska-2/?trk_msg=5KR3IT4OMFGKB09TB1UH82PCFS&trk_contact=RMPCRR64F9CCIR5GOMICQNE7OC&trk_sid=KDKKVASS4I6B58V39884J56244&trk_link=BS0PT9JGRKD4N4TI69HPM3IOKO&utm_source=listrak&utm_medium=Email&utm_term=North+to+Alaska&utm_campaign=F24032A&utm_content=The+Art+of+Instrument+Approaches+++An+Alaskan+Flying+Adventure

Take a step back *By Parvez Dara*

https://airfactsjournal.com/2024/03/take-a-step-back/?trk_msg=5KR3IT4OMFGKB09TB1UH82PCFS&trk_contact=RMPCRR64F9CCIR5GOMICQNE7OC&trk_sid=KDKKVASS4I6B58V39884J56244&trk_link=1NS8QR9NOOTK5CCGFNS8G3CMVK&utm_source=listrak&utm_medium=Email&utm_term=Take+a+Step+Back&utm_campaign=F24032A&utm_content=The+Art+of+Instrument+Approaches+++An+Alaskan+Flying+Adventure

As far as the stick would go *By Richard Payson*

https://airfactsjournal.com/2024/02/as-far-as-the-stick-would-go/?trk_msg=A2CDVL9P5BHK3B26SDTUI89QLK8&trk_contact=RMPCRR64F9CCIR5GOMICQNE7OC&trk_sid=79MSJPMQC0ROMOCU9OKL7190BG&trk_link=QCCQ96RUCA7K94271LAIS74RDG&utm_source=listrak&utm_medium=Email&utm_term=As+Far+as+the+Stick+Would+Go&utm_campaign=F24024A&utm_content=Lessons+Learned+From+a+Sloppy+Approach+++Go+or+No+Go

“I’m going to crash” helping a pilot in distress *By Kim Jost*

https://airfactsjournal.com/2023/02/im-going-to-crash-helping-a-pilot-in-distress/?trk_msg=A2CDVL9P5BHK3B26SDTUI89QLK8&trk_contact=RMPCRR64F9CCIR5GOMICQNE7OC&trk_sid=79MSJPMQC0ROMOCU9OKL7190BG&trk_link=8BE7K7H6B03KH7LBPHH3TJIB1S&utm_source=listrak&utm_medium=Email&utm_term=“I’m+Going+to+Crash!”+-+Helping+a+Pilot+in+Distress&utm_campaign=F24024A&utm_content=Lessons+Learned+From+a+Sloppy+Approach+++Go+or+No+Go

Throwback: 5 Iconic Aircraft Types That Northwest Airlines Flew Over The Years
https://simpleflying.com/northwest-airlines-iconic-aircraft-list/

See Inside Boeing 777X Test Plane Used to Certify the $442 Million Jet
https://www.businessinsider.com/boeing-777x-testbed-test-plane-aircraft-new-see-inside-photos-2024-3

Everything You Need To Know About The Boeing 377 'Stratocruiser'
https://simpleflying.com/boeing-377-stratocruiser-guide/

FLYING LESSONS for March 14, 2024

In the February 29th Mastery of Flight **report** we discussed the significant, negative performance impact of taking off and landing with a tailwind. Using Cessna and Beechcraft performance charts as examples, we postulated that ***tailwinds have a roughly three to five times greater impact on takeoff and landing performance, negatively, than do headwinds improve takeoff performance***. In other words, a little headwind helps a little, but a little tailwind hurts a lot.

But sometimes it makes sense to intentionally take off or land with a tailwind. For one, the runway may be so long that there is no doubt the airplane will become airborne or come to a stop on landing in the available runway length even with a tailwind. In that case it may be better to conform to ATC's direction, local noise abatement procedures or other airplanes' traffic patterns with a tailwind than it is to go against the grain just to have a headwind component.

Another case when intentional tailwind takeoffs and landings make sense are so-called "one-way" airports, those that because of local terrain or obstacles require taking off and landing in one compass direction—landing to the west and taking off to the east to avoid a hill off the west end of the airport, for instance.

A third situation is when there is a significant slope to the runway. A runway that climbs or descends steeply with horizontal distance will adversely affect airplane performance with or without a wind. The slope may be enough to make an airport a "one-way" strip, at least for some airplanes, with or without obstacles close to the departure ends.

So how can you decide whether a runway is one-way because of runway slope? Most Pilot's Operating Handbooks assume a level runway surface on their Takeoff and Landing Performance charts…in other words, **you're on your own** to predict performance when the runway has a slope.

Diamond Aircraft's DA-40-180 POH, however, does give us some guidance. Look at this Caution. **A 2% up slope** (a change in elevation of two feet per 100 feet of horizontal distance, or two meters foeeach 100 meters) **creates a 10% increase in takeoff distance**. The effect on the takeoff roll may be even greater, i.e., the distance to take off and clear an obstacle increases 10% with a 2% slope but the airplane will roll even more above "book" distance before the wheels leave the surface. ***The POH doesn't tell us***, but it's not too much of a stretch to expect the performance to increase by a similar percentage if you take off downhill on a 2% slope. Certainly **it would be worth experimenting *under controlled conditions*** with a very light airplane and a long, downward-sloping runway before tacking a short, downhill runway.

CAUTION

A ground slope of 2% (2 m per 100 m, or 2 ft per 100 ft) results in an increase in the take-off distance of approximately 10%. The effect on the take-off roll can be greater.

Now let's consider winds from last week's discussion. Two knots of tailwind component is worth roughly 10% change in airplane performance (using the Cessna and Beech charts as examples). Consequently **it takes about two knots of tailwind component to balance the effect of taking off downhill on a 2% slope or landing up a 2% slope** (using the Diamond Aircraft POH as a single data point).

What's the practical application of this estimate? Conventional wisdom is that it's better to take off downhill and land uphill than to take off and land into the wind on sloping runways. However, this (very) preliminary correlation of various POH data suggests that **the amount of tailwind it takes to make even a downhill landing or uphill takeoff a bad idea is very slight**—just a couple of knots. ***It seems a good idea to take off and land into to wind even with a 2% runway slope.***

Sometimes, with safe experimentation, we learn the limits of POH-derived performance when the charts don't cover all the variables. Then we can ***make our own, informed decisions*** **about what works for us in our airplanes**. For example, for a few years I flew a turbocharged Baron from a short runway (3400 feet, short in 58TC terms, anyway) with a little more than a 3% slope. With practice at weights as light as I could get, I found that it indeed *was* more comfortable landing uphill and taking off downhill from that airport, with tailwind components up to as much as about 10 knots.

Perhaps some readers are more familiar with the physics than I and have done the math, and can provide definitive answers. It seems likely, however, that the degradation in performance working against a runway slope is not additive, but instead multiplicative with slope. Regardless, empirical data told me it made sense to take off and land with slight tailwind components on that particular runway. Regardless, I tried to fly the airplane as light as safely possible, especially on landing—the turbo Baron has a lot of inertia that makes landing distance more critical than takeoff in that specific model.

I strongly suspect, however, that ***simply flying the airplane at the appropriate speeds for liftoff and final approach will do more*** to assure you can use a runway that meets your airplane's needs than any additional benefit that derives from playing the tailwind-vs-runway slope game. **With or into the wind,** apply no less than a 50% margin to what you calculate, and 100% additional buffer if you don't use maximum performance, short-field technique.

Are you faced with a similar decision? Don't "wing it," don't do it because someone on the internet (like me) or the local ace tells you to, and certainly **don't try it simply *hoping* you'll get the performance you need.** Gather as much available information as possible, using data from your POH as primary but not completely discounting very general rules of thumb from others to help you fill the gaps. Then **conduct some controlled experiments** at light airplane weights and ***varying the variables*** as few at a time as possible, being ready to chop the power and **abort a takeoff early** if you don't get the initial performance you need, and to power up and **go around** at all points of the landing attempt, including after the wheels are on the runway if necessary.

Airplanes usually fly extremely well in the middle of their approved performance ranges. For almost all of us, almost all of the time, there's no need to get close to the edges of the envelope.

John Schmidt, President of EAA Chapter 25 will be teaching his "Intro to Aviation" class, which he has been teaching for about 20 years, this coming summer through the Forest Lake and White Bear Lake Community Education programs.

Forest Lake Community Education: Intro to Aviation - Intro Ages 10-15
11 sessions June 17- July 2 12:30 - 3:30 Mon-Fri No class June 19 $245
Learn the history, science, math, personalities and traditions of aviation. We will look at aviation maps, navigation, design, art and the people behind the progress of flight. We will look back at the history and learn the future direction of powered flight. More info: Page 25 https://indd.adobe.com/view/f41e8683-bd6f-4847-9e55-4bf94e3e1849

White Bear Lake Community Education Intro to Aviation-Lets Fly!: Gr 5-9 12 Sessions | Mon-Thu, Jul 29-Aug 15 1:00-4:00 PM | $199 | Lincoln Elementary School | Schmidt More info: https://resources.finalsite.net/images/v1709049962/whitebeark12mnus/gany4zkfgpe9p9yx86l3/CSSummerFINALCATALOG.pdf

Chapter member Eric Anderson has a number of items, tools. storage bins, handheld radio, aviation hardware and other things that he no longer needs, as his aircraft building days are over. Eric is going to donate the proceeds from the sale of these items to the chapter. To check out what he has for sale go to this link: https://photos.google.com/share/AF1QipOzPGIU2lNDEpeyhVkaMZbR-qGH_Hgx3LiqWs3NwchT8thsFNqFzV8O79VAaCYEGQ?key=ejBhQ2hmT29mamdYLU1nR1JVSjlpemNkeml2SmRn
Eric will accept all reasonable offers. Contact him at : ewander124@gmail.com

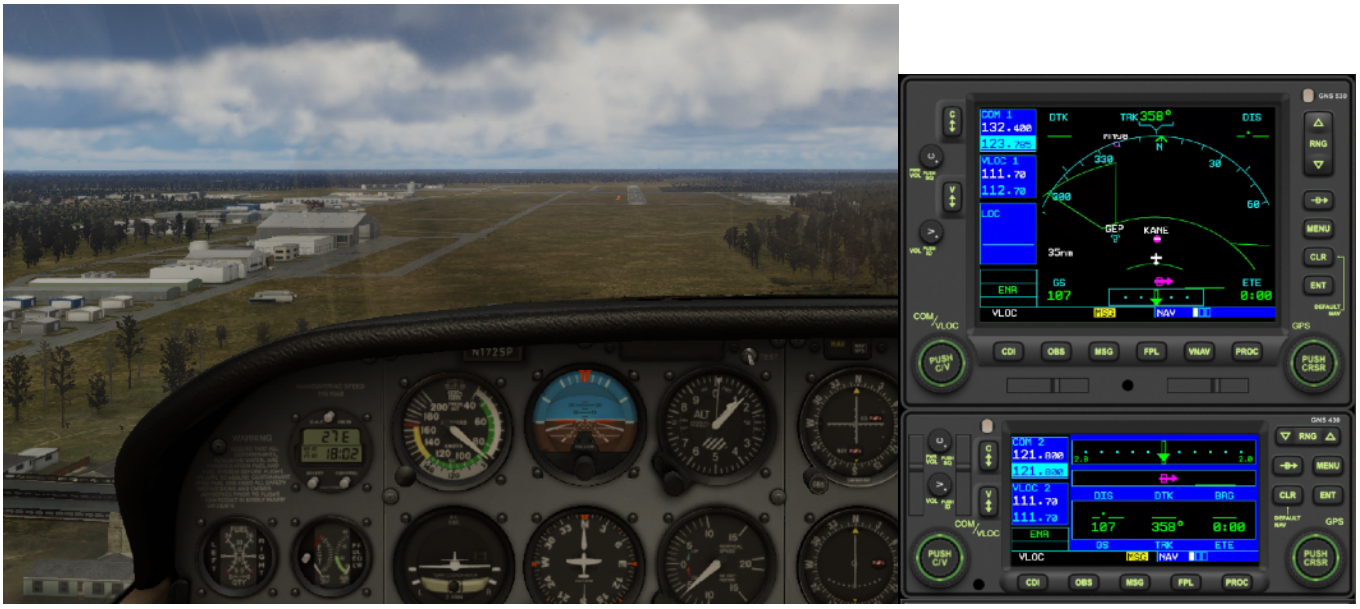
The Tech Corner - by Dave Peterson

Flight Simulator Software Upgrade – A couple of weeks ago we installed a new version of the software on the chapters flight simulator. This included upgrading to X-Plane 12 and Air Manager 4.2.8. I have always been a bit conservative when it comes to doing software upgrades. While early major releases do have improved features (which users always want) they also tend to be a bit 'buggy'. We had been using X-Plane 11 since we implemented our flight simulator over 4 years ago and version 12 has been out for a couple of years now so we finally decided it was time to do the upgrade.

One of the first things users will notice with the new X-Plane version is the improvement in the graphics rendering. This includes weather (cloud) formations and ground details (trees and vegetation, buildings and runway surfaces). It just seems more real. Internally, it takes a lot of programming to accomplish these improvements as indicated by the technology 'buzzwords' mentioned in the technical article at this link. Whats-new-in-xplane In the picture below we are on the runway 36 approach at Anoka County Airport on a VFR broken day.

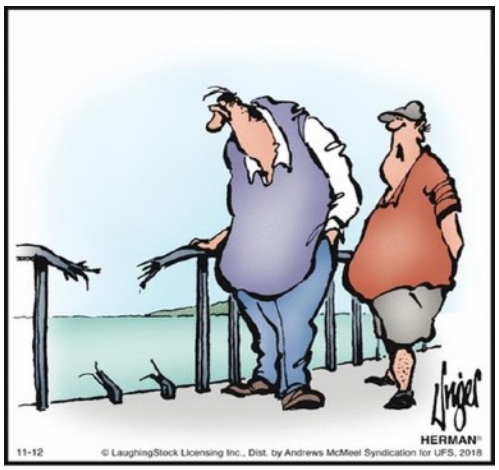
The new Air Manager upgrade was a welcome release for me personally. Previously, when configuring the display panels for the Garmin 430 and 530, it was tricky having to 'pop-out' the video display part of these from the main X-Plane monitor and move them over to the touch-screen instrument panel monitor (see picture below). Getting the video display sized and positioned just right in the instrument bezels was a challenge. The new version uses a streaming video technique where the programming code for the actual instrument in Air Manager makes a call (subscribes) to the instrument's video 'feed' from the X-Plane model. So, wherever the instrument is moved to on the instrument panel (touch-screen) monitor, the video part moves with it automatically. This would be similar to watching a YouTube video on your PC and deciding to move the browser window displaying YouTube to a different location on your PC screen.

For more info on our simulator please see our Flight Simulator Home Page.

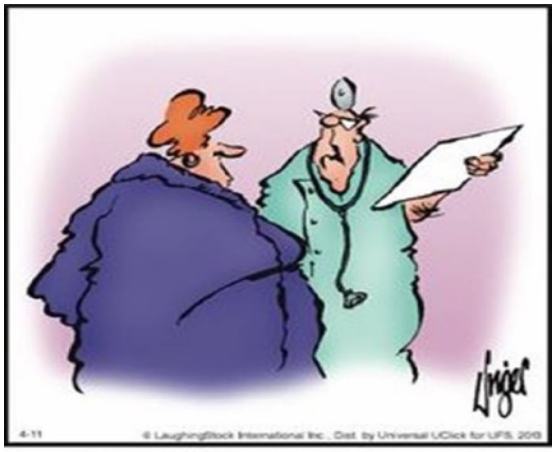


Please let me know if you found this article interesting and/or if you have any suggestions for future topics of a technical nature. Email me at: Dave.Peterson@eaa237.org

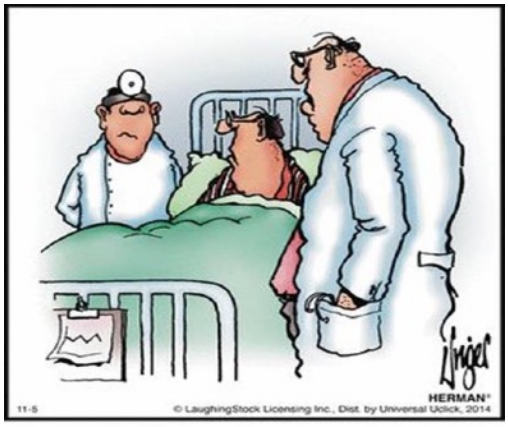
On The Lighter Side



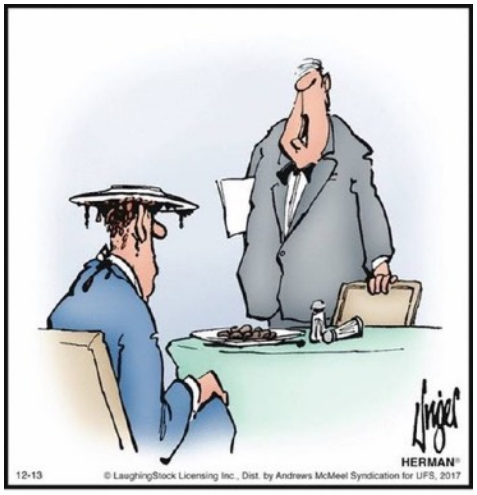
"Did you see a large woman on a bike go past here?"



"You're suffering from very high food pressure."



"You've got to start sometime. Why don't you operate on this one?"



"Is the lady coming back, sir?"

"I'll give you something for gas."

In future Windsock editions, I plan to showcase aircraft that our members are building, restoring and flying. Please email me with the aircraft you are building, have completed building, are restoring or have purchased and are flying. I will follow up with you to provide a questionaire and will come out to take pictures to include with your article.

If you have a story or photo you would like to see in our newsletter, contact Frank Huber | eaap51@comcast.net | 763-245-0170

To view past issues of The Windsock, visit www.eaa237.org and select newsletters.