

December 2016



EAA CHAPTER 145

SINCE 1962



**Brunch Meeting: Saturday, December 10, 2016 – 10:30 am
Riverview Airport (08C) in the Big Hangar**

CHAPTER MEETING

This month EAA Chapter 145 members and Riverview friends and family are invited to the annual Christmas Brunch.

- Riverview Main Hangar
 - Social Time 10:30 a.m. – 11:30 a.m.
 - Bring a dish about 11:00 a.m.
 - Plan to eat at 11:30 a.m.
 - Ham, place service, and drinks provided
 - Sign-up at Riverview bulletin board or email Dick Foster.
- All pilots, family, and friends are invited to this annual event.



INSIDE THIS ISSUE

- 1 BRUNCH!!!!
- 2 Computer Design
- 3 Homebuilder Hints
- 4 Approach Pattern
- 5 Upcoming Events



PRESIDENT'S CORNER

Once again we are in the "Season of Joy" As you know Happiness is not Joy. We are happy when we fly or build a project or sit around talking with our friends. Joy is the reason why we are happy. So what is the reason that we have Joy this time of year? This is not a big mystery and I bet you know the "Reason for the Season of Joy". If not, see me at the Brunch and maybe we can figure it out. I sincerely wish you happiness, but most of all Joy.

Blessings to you, Dick

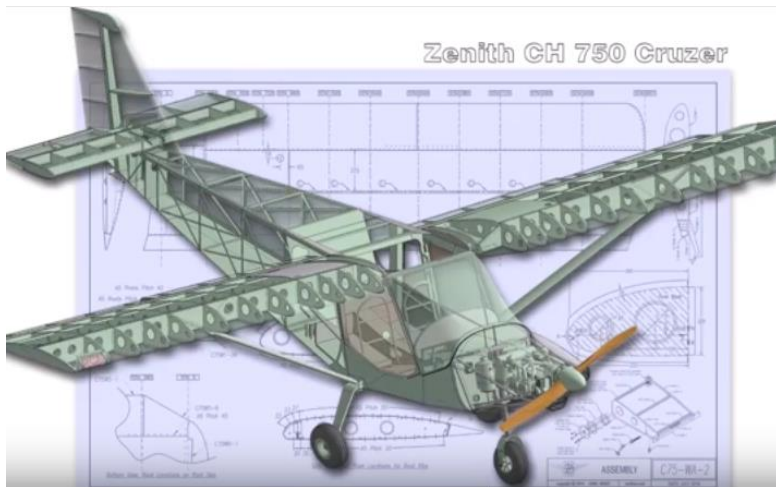
YOUNG EAGLES

No new activities for Young Eagles at this time. We will start planning events after the first of the year. Thanks to all the pilots and ground crew who help fly **226** Young Eagles this year.

EAA145 HANGAR

- Herb Harney/Bob Kawa are working on the cowling of his RV-8A.
- Bob Kwaka is working on repairing the flaps of Nick's RV-10.
- Hangar space is available for anyone working on a project. Contact Dick Foster for details.





Since its humble beginnings in Paul and Audrey's basement in Hales Corners, Wisconsin, EAA has inspired, enabled, and defended your right to take a dream sketched on a napkin at the dinner table to first flight and beyond!

You still have the freedom to sketch up a design on a napkin at the dinner table, but the power of computer-aided design (CAD), once a tool used exclusively by commercial enterprise, is now available to EAA members!

The industry standard for CAD software—used by aircraft and kit manufacturers from Cirrus to Zenith—is SOLIDWORKS. EAA has received a generous offer from SOLIDWORKS to make a personal-use version of the software available to EAA members at no charge!

EAA has assembled this resource center to help you get started using SOLIDWORKS. EAA will continue to add information, training and related resources to this resource center, so please keep checking back. Our best resource has always been people like you! So, we invite you to get on the EAA Forums and ask questions, share your experiences, and help others!

SEE: <http://www.eaa.org/en/ea/ea-membership/ea-member-benefits/solidworks-resource-center>

HINTS FOR HOMEBUILDERS

EMERGENCY TOOL KIT BY BRIAN LEE

Recently, I found myself stranded at an airport with an engine which would not start. . . and I without any tools. I do have an "airport" tool bag packed and ready for those times when I'm going to work on the airplane, but at 25 pounds I don't carry it along if I'm just going on a short flight. After trying to undo safety wire with my fingernails and a pocket knife, I resolved to assemble a small number of "essential" tools which I would leave in my flight bag — so they'd always be available when I am flying.

Here's my list:

- 4-in-one screwdriver
- Adjustable pliers
- Small file
- Adjustable wrench (which will open wide enough to fit spark plug caps)
- Spark plug wrench (deep well socket and breaker)
- Wire cutter
- Safety wire pliers
- Magnifying inspection mirror
- Awl/dental pick
- Small flat blade screwdriver



COLD WEATHER STARTING

BY LEO LANG

A continuing problem with our 1979 Skyhawk is cold weather starting. We have parked under a shade hangar most of the time but about a year ago we were able to get into a full hangar with electricity. All of us agreed that now we had to figure out a way to keep the engine warm or at least to preheat it for starting before winter flights. We finally came up with the following solution which we used last winter and it worked very well.

We bought an inexpensive 1500 watt electric heater at a discount store for \$13. There are many brands available in prices ranging up to about \$40. We selected ours because the business end where the heat came out was a standard sheet



metal duct size and it had a two speed fan. I do not think one of the radiant fanless varieties would work nearly as well. We bought a sheet metal duct reducer at a local hardware store to reduce the 6" diameter heater to a standard 4" diameter for about \$3. We then attached a standard dryer vent, purchased for about \$6, to the reducer and secured it by drilling a couple of holes in the vent and reducer and putting in sheet metal screws. The reducer was attached to the heater with the existing clamps and secured with wire from the reducer's clamps to



the heater's handle and legs. With the vent resting on the nosewheel gear aimed up under the cowling, the whole engine compartment received enough heated air that it felt warm to the touch even on 0 to 10 degree Fahrenheit days. The oil was quite warm but not hot when we left the heater on continuously. We tried turning the heater on before a flight and found that about 3 to 4 hours was required to bring everything up to temperature.

For less than \$25 and about one hour assembly time, it certainly seems to be an extremely good bargain and, I am sure, paid for itself after just a couple of uses.

The plane started much more easily and quickly after we started using the preheater. By reducing cranking time, it will cut wear on the starter and will increase battery life. It should also increase the TBO by increasing the lubrication in the engine during cold weather starts. It is light and compact and is no problem to put in the plane in the winter for use when parked at a destination airport.

WEBSITE OF THE MONTH

www.flyhummel.com/

In advance of next month's meeting with Hummel Aviation:

Engine source for Hummel Airplanes: www.hummelengines.com/

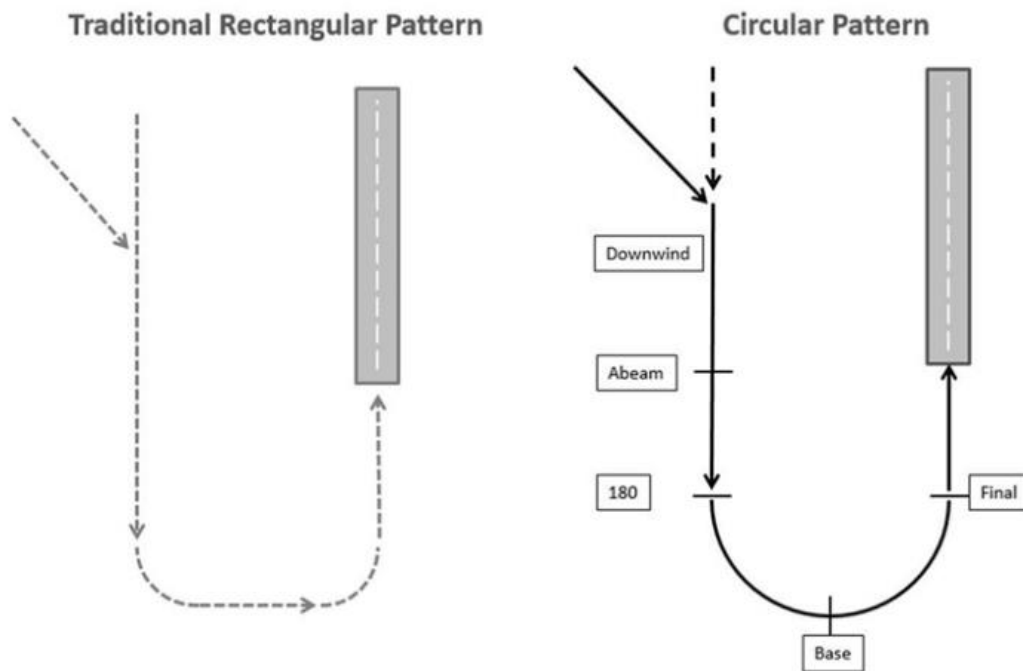
Very good interview from Dan Johnson: www.youtube.com/watch?v=UDN_pkR3_yM

Hummel around the patch: www.youtube.com/watch?v=PBceIUcrwE

AOPA Air Safety Institute, UND study stabilized approach

November 17, 2016

By Joe Kildea



On the heels of the NTSB's Nov. 14 release of its "Most Wanted" list of transportation safety improvements that included general aviation loss of control, the University of North Dakota, in partnership with the AOPA Air Safety Institute, announced that it is studying the use of a continuous turning approach or "circular pattern" as an alternative to the traditional "box" or rectangular traffic pattern.

Reduction of in-flight loss-of-control accidents continues to be identified by the NTSB as a most-wanted safety improvement. Working with senior NTSB officials at a recent loss-of-control panel, the idea was formed that UND and AOPA team up to explore how simple procedural and training methodology changes in the landing pattern might improve safety and reduce loss-of-control accidents.

The hypothesis to be studied is that in contrast with a rectangular pattern, a continuous turn from downwind to final may provide for increased stability, reduced pilot workload, and a constant bank angle throughout the maneuver, helping pilots better manage angle-of-attack variances. Additionally, the use of a continuous turning approach has the potential to reduce the likelihood of overshooting a runway during base-to-final turns, a scenario that has resulted in multiple stall/spin accidents due to aggressive corrective maneuvering. Depending on the results of the study, this procedure may serve as a mitigating technique to reduce the likelihood of loss-of-control accidents during the landing phase of flight.

"It's too early to say for sure if the continuous turn to final method will be a safer, more stabilized way to land. But what we do know is general aviation has been flying the rectangular pattern for decades, and based on substantial loss-of-control accident data in the landing pattern, we believe it's time to conduct research to determine if there is a potentially safer alternative," said George Perry, senior vice president of AOPA's Air Safety Institute. "The U.S. military, commercial airlines, and many airline ab initio programs already utilize the continuous approach turn as the standard to support safe landing pattern operations. We should determine which is safer for general aviation, and this study will help us find the answer."

"The research will consist of flight data analysis to evaluate differences between the circular pattern and the rectangular pattern," noted Lewis Archer from UND's aviation department. "Variables that will be analyzed include bank angle, airspeed, and runway overshoot." Lewis continued, "Although the study is in its early phases, and it's far too soon to draw any definitive conclusions, the new procedure has already been studied and practiced by a select group of UND instructor pilots and initial data collection has been going quite well."

The study is ongoing, and both UND and the Air Safety Institute are hopeful that results will be available sometime in early 2017.



EAA Chapter 145 website: www.145.eaachapter.org
 EAA National website: www.eaa.org
 Riverview Facebook: www.facebook.com/pages/Riverview-Airport/115468211816419

DUES ARE NOW BEING COLLECTED

Dues of \$35.00 are payable to "EAA CHAPTER 145" and can be mailed to Bob Swietek at the address listed at the end of the newsletter or brought to the monthly chapter meeting. If you need to make any updates on your contact information, please include the tear-off slip for member data update with your payment.

UPCOMING EVENTS

- | | | |
|---------------|---|---|
| Dec 10 | Riverview Airport (08C) meeting – Riverview Christmas Brunch | |
| Dec 13 | OSHKOSH (KOSH) | Museum Movie Night - The Dam Busters (1955) |
| Jan 14 | Riverview Airport (08C) meeting – Hummel Aviation, Terry Hallett | |

If you know of events that should be on the event calendar, please e-mail them to me

If you would like to be on the e-mail list for meeting and event reminders, or if you would like to receive the newsletter electronically, which is full color and delivered days before the print version... please send your e-mail address to:
randall.houtman@dematic.com

The 2015 Officers for EAA145:

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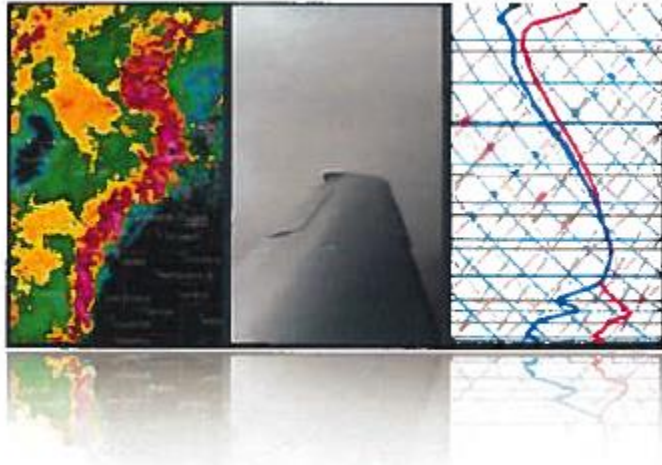
Treasurer's Report: (As of Dec 3rd)

Liabilities: \$3500.00	
Cash: \$97.62	Checking: \$136.69
Savings: \$6575.98	Total: \$7020.29

Website Editor, Bill Willyard
 (wgwillyard@att.net)

EAA CHAPTER 145 MEMBERSHIP APPLICATION / RENEWAL FORM	
DUES ARE \$35.00 PER YEAR – JANUARY 1st to DECEMBER 31st	
Name _____	Aircraft Owned _____
Co-Pilot / Spouse _____	_____
Address _____	Projects / % Complete _____
City _____	_____
State / Zip _____	Bring this form to the next meeting or mail to:
e-mail address _____	EAA Chapter 145 Treasurer
Home Phone _____	6962 Bridgewater Dr. SE
Work Phone _____	Grand Rapids, MI, 49546
National Membership # _____	





AVIATION WEATHER LINKS

WEBSITES

COLLEGE OF DUPAGE WEATHER LAB WEATHER.COD.EDU MODELS, SOUNDINGS, SATELLITE, RADAR, SURFACE AND UPPER AIR ANALYSIS. FREE.

WEATHERBELL.COM MOST EXTENSIVE WEATHER FORECAST MODEL PAGE AVAILABLE, INCLUDES ECMWF MODEL. \$199/YR.

PIVOTALWEATHER.COM MODELS AND SOUNDINGS. FREE.

TROPICALTIDBITS.COM MODELS AND SOUNDINGS. FREE.

WEATHER.RAP.UCAR.EDU EXCELLENT SATELLITE LOOPING IMAGES FOR COMPUTER OR MOBILE PHONE. FREE.

APPS

RADARSCOPE ULTRA HIGH-RES AND REAL TIME BASE AND COMPOSITE RADAR IMAGES. \$9.99.

SKWEWLOGPRO MODEL DERIVED SOUNDINGS FOR ANY AIRPORT IN THE U.S. \$14.99.

AEROWEATHERPRO METARS AND TAFS IN AN EASY TO USE FORMAT. \$3.99.

WEATHER UNDERGROUND GOOD ALL-AROUND BASIC WEATHER APP. FREE.

STORM TEAM 8 HARD TO FIND FREE LIGHTNING DATA. FREE.

INTRODUCTION TO SKEW-T FOR PILOTS: <https://youtu.be/CNBzdkmaAKE>