EAA Chapter 648

Longmont, Colorado 80503

Our next meeting on February 8th, 2016, at 7pm, will be held at our usual location, the Colorado Classic Aircraft Building of Carol & Bob Leyner, located on the north side of the Longmont Airport.

February

2016

www.648.eaachapter.org

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Editor

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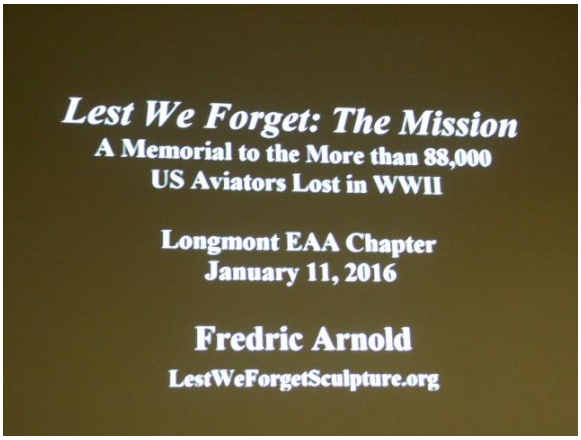

Fredric Arnold

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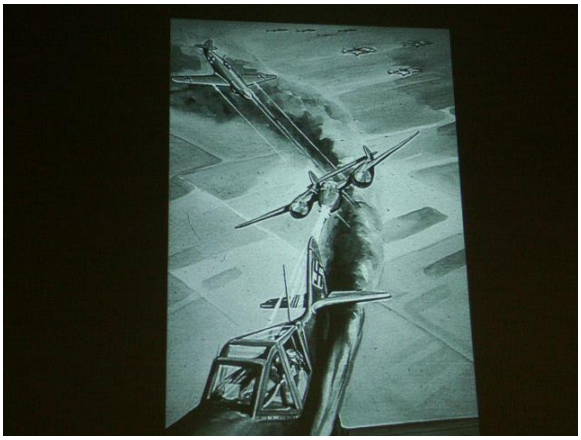
Marc Arnold



The Charlie Hornback Traveling Trophy finds a new, well deserved home

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February Program

SWITCHBLADE UPDATE : 4 December, 2015 | Samson Motorworks

Our February program will be an on-line presentation by individuals involved in the SwitchBlade project. This program involves the development of a flying car. Actually, the vehicle is currently classified as a motorcycle. The pictures and artist's renditions give some idea of what the vehicle will look like. "Flying cars" have been in the news since the late 1940's. Some have gotten into the air but as yet there is no mass-market version available. This may just be the one that sets the pace.

A Message from the President

This past month EAA members involved with the Young Eagles Program received a letter containing information on significant changes being instituted by EAA National. These changes require all individuals involved in the program such as coordinators, pilots, and ground crews to undergo background checks and special training relating to working with youth. Rather than trying to go into detail in this note, I will direct interested individuals to go to the EAA.org website and look under the Young Eagles section for particulars. It is not my place to question what rules are imposed on EAA programs but it is my choice to refrain from further participation in the Young Eagles program. It remains for individual members to make a personal choice to participate in his and other related programs. This is an important item that will be discussed as new business at the February meeting.

Dick Socash

President, EAA Chapter 648

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NEWSLETTER QUIZ

Each month, we will ask a "question" in the newsletter. Answers are given at the meeting referenced in the newsletter. At the end of the year, there will be a prize to the person who has the most correct answers. Some will be easy and some difficult.

January Question: An interesting conversation with one of our Chapter members got me to thinking about the order of actions to be taken if one would experience an abrupt engine failure during flight. What are the actions you would take and in what order?

January Answer: Standard procedures quoted by most flight instructors call for immediately establishing approach glide speed, looking for an emergency landing spot, turning on the auxiliary fuel pump, switching tanks, and cycling both magnetos. These actions are, of course, based on the assumption of level flight at altitude. On take-off for example, avoiding a stall and picking a safe landing spot take precedence. The suggestion I hadn't considered was to first, convert the forward speed of the airplane into an altitude gain. One can then follow the standard procedure. Let's hear your opinions on this at the meeting.

February Question: Assume one has the dimensions of all the parts making up an airframe. We assume the airframe was designed to provide proper structural integrity. If one wanted to build an exact half-scale version of this airframe maintaining structural integrity, would it make sense to reduce material thicknesses such as spar dimensions and skin thickness by 50%, or by less than 50% or by more than 50%?

January Program: **A PRESENTATION ON THE MULTI-FIGURE FULL SIZE SCULPTURE BEING CREATED BY THE RENOWNED ARTIST FREDRIC ARNOLD.**

As many of you know Fredric Arnold, 93, is nearing completion of his monumental sculpture which is destined for exhibition at the National WWII Museum in New Orleans. He's the last one standing of his original Group of P-38 Fighter Pilots and he's determined to finish the biggest project of his life in the time remaining to him. Major Arnold and his son Marc gave a slide show presentation and discussion on the history leading up to this project, the work to date, and the plans for public unveilings. A very interesting program presented by a very interesting artist, WW2 veteran, and individual. Question and Answer was very

informative and thanks goes out to Steve Beach for providing this interesting program for Chapter 648.

Other Items of Interest

AIRPLANE PICTURE(s) OF THE MONTH

Holding at #22

ANYONE WHO HAS A PLANE AND HAS NOT SUBMITTED A WRITE-UP AND PICTURE(S), PLEASE DO SO. THESE ITEMS FORM AN INTERESTING ADDITION TO OUR NEWSLETTER.

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Gone West…

A notice has been sent to EAA National advising of Ted Keryluk's passing. If anyone has any interesting, unique or amusing items or information about Ted for the newsletter, please pass them on to me. I still miss the guy!

Second Time Notice and March Meeting Preview

As you well know the FAA is introducing a major new requirement for flying in airspace currently requiring a Mode C Transponder. ADS-B will require important and probably costly additions or upgrades to most experimental builders, owners, and flyers. Apparently we won't have to install TSO'd level equipment but as with anything in aviation, the cost for whatever is required won't be cheap. I'm guessing there will be modifications and technical concessions before the 2020 implementation date, but a heads-up in the near future may save some or all of us aggravation. ***With all that said, our own Aaron Miller, currently building an RV8, will present to the chapter his ideas on how to comply with some of the upcoming requirements regarding ADS-B, including some lower-cost, homebuilt solutions. This topic is important to all who fly in the National Airspace System (virtually all of us) and will provide some timely and helpful information.***

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The following article submitted by Steve Beach:

What is the best glide speed?

Simply put, best glide speed is the airspeed at which the aircraft glides the farthest with the least loss of altitude. If faced with a forced landing situation, the best airspeed depends on what you're trying to do. Are you looking to cover the greatest distance or the longest time in the air? Here's what you need to know:

Distance: Use the speed and configuration that will get you the most distance forward for each increment of altitude lost. This is often referred to as the best glide speed. On most airplanes, it's roughly half-way between V_x (best angle of climb) and V_y (best rate of climb). Keep in mind that best glide speed increases with weight, so most manufacturers establish the best glide speed at the maximum gross weight for the airplane. This means your best glide speed will likely be a little lower.

Time: If you need to stay in the air as long as possible to fix a problem or communicate your intentions and prepare for a forced landing, then you want the minimum sink speed. This speed is rarely found in the Pilot Operating Handbooks; it will be a little slower than the maximum glide range speed.

What about my airplane?

Plan to experiment on a flight with your Certificated Flight Instructor (CFI). Start at V_y, or the manufacturers recommended best glide speed with power off, and note the speed versus sink rate as you adjust pitch to reduce airspeed. You should be as close to mission weight as possible. To identify minimum sink speed, look for the highest speed forward that will give you the lowest rate of decent. Knowing these speeds will give you important numbers to have in the back of your mind if a situation ever warrants their use.

How far can I glide?

A rule of thumb for Cessna 152s and 172s is 1.5 nautical (1.7 statute) miles per 1,000 feet of altitude above ground level. Experiment to see how far your airplane can glide.

Tips for pilots

There is no substitute for frequent practice at typical mission weights. One trick is to choose a spot between the first and second third of the runway or landing area for an initial aiming point. If you determine that you can make that initial spot, add flaps and perhaps slip the airplane to move the aiming spot to the first third of the landing area. It's better to land long than to stall or land short of the runway.

For a gliding approach, you'll want to reach a key position from which you know you can make a successful landing during your base leg. Until the key position is reached, keep the airplane configured for best glide. After you pass the key position, add flaps and gear to configure the airplane for landing and fly the final approach at 1.3 times the stalling speed in landing configuration (1.3 V_{so}).

When was the last time you practiced these maneuvers? They can help provide a better understanding of best glide speed when maneuvering to complete a forced landing.

- 90-degree power-off approach and landing
- 180-degree power-off approach
- 360-degree power-off overhead approach
- Overhead spiral approach

Travelling Trophy Award

This year's recipient of the Charlie Hornback Travelling Trophy is Steve Beach. Each year this trophy is awarded to a Chapter member who has contributed in a significant way to the Chapter during the past year. Steve has been instrumental in arranging programs (The car museum visit, the Air Traffic Control visit, The Fredrick Arnold talk, etc.), helping at the Young Eagles events, and of course opening ***all*** those presents at the Christmas Party. A well deserving member for the award who certainly merits our gratitude and appreciation. Thanks Steve for a set of jobs well done.

To members, friends and aspiring authors. *Get published! Send in Your Newsletter Items:*

DON'T FORGET!!! We need to get submissions from the members to include in future newsletters. I'm starting to run out of ***ideas and lies***!! Let's hear from you!! Need "Plane of the Month", trip reports, technical tips, hangar tales, "beautiful planes", and aviation slanted "fish stories."

NOTE: To all who have sent in articles. ***THANK YOU!!***

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Tool loaner list

The Chapter 648 Tool Loaner List, including skills to help other members with, will begin taking shape soon. The following list of pertinent issues is offered to Chapter members for their advice and consent at the February meeting (if time doesn't allow, the March meeting will be used for this topic). This program will be available for paid Chapter members.

1) compile list of paid Chapter members, and updated at end of March each year
2) interested members to fill out the form provided with tools, special skills, and contact data
3) forms will be collated into a list, kept by the newsletter editor, and emailed to paid chapter members
4) tools borrowed shall be returned in same or better condition
5) those who wish to borrow tools to contact loaner directly

These items are not exhaustive, and additions, corrections, and deletions are welcome and will be solicited at the meeting.

Chapter Officers:

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- **V. President:** vacant
- **Secretary:**
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