
Based at Pittsburgh-Butler Regional Airport, KBTP, Butler County, Pennsylvania



**This artwork on Bob Tedesco's new T-Shirt
Celebrating Veterans at AirVenture,
Coming up July 22-28. Hope to see you there!**



Presidents Message

EAA 857 Members,

It is unfortunate that we had to cancel our first Young Eagles event scheduled for Saturday, June 8th. I apologize to you for having to make that call after discussions with our Board of Directors. We have often had nearly 100 kids fly with us on this event in years past. However we found ourselves with insufficient pilot and aircraft resources available to provide service at that level. Hopefully those issues will be resolved and we will be able to conduct our scheduled Fly-in with Young Eagles on Sunday August 11. Note, Bob Santolla has agreed to cover Young Eagle Co-ordinator duties for the balance of this year.

The September date will be adjusted to 9/28 to coincide with the 90th birthday celebration for KBTP. More on that to follow.

Many thanks again to Bob Santolla for his article this month regarding Ailerons and Adverse Yaw and for hosting our May Chapter Meeting at his Farm Show Hangar.

Hat and shirt orders were delivered at the May Meeting which many of you picked up at the Santolla Hangar. Those who have yet to pick up their order please see Chuck Potts and bring a check or money sufficient to reimburse him for fronting the purchase of these items.

This is the third week of June which means it is time for Sentimental Journey in Lock Haven. If you are attending we will miss you at the meeting tomorrow but hope you have fun amongst all those Cubs!

Ted Merklin,
President EAA 857



Minutes of May 21, 2019 Meeting

Opening: President Ted Merklin called the meeting to order at 19:00 and led the members in saying the Pledge of Allegiance. The meeting was held at the Santolla Hanger at Butler Farm Show Airport.

Attendance: Sixteen members were in attendance.

Secretary's Report: Everyone was asked to be sure that they had signed the sign-in sheet. A motion to accept the Secretary's report of the September Minutes was made by Chuck Potts and seconded by Dan Pappert.

Treasurer's Report: A motion to accept the Treasurer's report was made by Larry Schaefer and seconded by Don LaVoie.

Newsletter Report: More articles are always welcome from anyone. Notify Ted Merklin if you are not receiving the newsletter. The newsletter is also published to the chapter web site at: <http://www.857.eaachapter.org/home.htm>, which has been updated for 2019.

Young Eagles Report:

- Our Air Academy camper Nikolas Peltz cleared the wait list and was accepted for the 2nd Session of the Advanced Air Academy for 17 year olds. EAA has provided the necessary paperwork to him to complete his registration.
- We earned 107 credits in the YE for the 2018 program year! The dollar value for the credits has been applied to the Air Academy candidates's Deposit, and will also be used towards his tuition, paid for by our chapter
- YPP will need to be renewed for the 2016 class of volunteers.
- High Flight Air Academy has indicated they are willing to let us use the renovated space we previously occupied for our Young Eagles Ground School sessions during our events. First up Saturday June 8th Young Eagles Day!
- For those interested in an aviation career, AOPA has scholarships, check their website for information.

Technical Advisors: Chuck Potts and Bob Santolla

Report: ADSB will be required January 1st. Pertinent to aircraft with electrical systems.

Old Business:

- The chapter reorganization is proceeding with paperwork preparation. We are looking to the EAA for an answer regarding impact on our insurance purchased at chapter renewal last December.
- Hats and shirts, Chuck Potts distributed them at the meeting Thank you Chuck!

New Business:

- We will be moving our September Fly-in Event from 9/8 to 9/28 so it coincides with the KBTP 90th birthday celebration currently being planned by the airport Board of Directors.
- The May Chapter Meeting is planned to be held at the Santolla Hangar at Farm Show, with a presentation by Bob on rebuilding engine internals. We also anticipate a follow-up for the July Meeting.
- Westmoreland county airshow has the Snowbirds this year, May 25-26.

Adjournment: A motion to adjourn at 20:46 was made by Chuck Potts, and seconded by Dan Pappert.

Program: The program was a presentation by Bob Santolla on internal engine crankcase components.

Respectfully submitted,
Richard Schubert

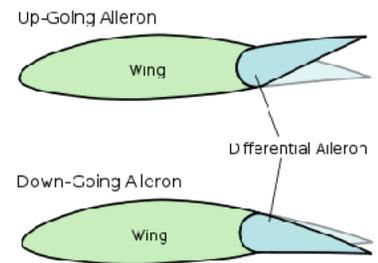
Ailerons and Adverse Yaw

by Bob Santolla

I brought my Pitts Special back north to my hangar in Butler after seven months of work in my garage in Florida. With the help from Don, Chuck, and Dan we unloaded my cargo trailer containing my airplane and wings. The boys helped me set the upper wings onto the Pitts and fortunately they fit as planned.

The Pitts has four ailerons (bi-plane) compared to the normal two ailerons on a high wing or low wing airplane. This makes things very interesting when it comes time to rig the ailerons so I thought I would write an article about ailerons and adverse yaw.

An aileron (French for "little wing" or "fin") is a hinged flight control surface usually forming part of the trailing edge of each wing of a fixed wing aircraft. Ailerons are used in pairs to control the aircraft in roll (or movement around the aircraft's longitudinal axis), which normally results in a change in flight path due to the tilting of the lift vector. Movement around this axis is called 'rolling' or 'banking'.



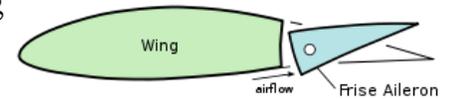
Ailerons had more or less completely supplanted other forms of lateral control, such as wing warping invented by the Wright Brothers. By 1915, ailerons became the way to control the roll axis. Just a little aileron history.

Pairs of ailerons are typically interconnected so that when one is moved downward, the other is moved upward: the down-going aileron increases the lift on its wing while the up-going aileron reduces the lift on its wing, producing a rolling (also called 'banking') moment about the aircraft's longitudinal axes (which extends from the nose to the tail of an airplane).

An unwanted side effect of aileron operation is adverse yaw — a yawing moment in the opposite direction to the roll. Using the ailerons to roll an aircraft to the right produces a yawing motion to the left. As the aircraft rolls, adverse yaw is caused partly by the change in drag between the left and right wing. The rising wing generates increased lift, which causes increased induced drag. The descending wing generates reduced lift, which causes reduced induced drag. Profile drag caused by the deflected ailerons may add further to the difference, along with changes in the lift vectors as one rotates back while the other rotates forward.

In a coordinated turn, adverse yaw is effectively compensated by the use of the rudder, which results in a sideforce on the vertical tail that opposes the adverse yaw by creating a favorable yawing moment. Another method of compensation is differential ailerons', which have been rigged such that the down-going aileron deflects less than the up-going one. In this case the opposing yaw moment is generated by a difference in profile drag between the left and right wingtips.

Frise ailerons accentuate this profile drag imbalance by protruding beneath the wing of an upward-deflected aileron, most often by being hinged slightly behind the leading edge and near the bottom of the surface, with the lower section of the aileron surface's leading edge protruding slightly below the wing's undersurface when the aileron is deflected upwards, substantially increasing profile drag on that side.



With ailerons in the neutral position, the wing on the outside of the turn develops more lift than the opposite wing due to the variation in airspeed across the wing span, which tends to cause the aircraft to continue to roll. Once the desired angle of bank (degree of rotation about the longitudinal axis) has been obtained, the pilot uses opposite aileron to prevent the angle of bank from increasing due to this variation in lift across the wing span. This minor opposite use of the control must be maintained throughout the turn. The pilot also uses a slight amount of rudder in the same direction as the turn to counteract adverse yaw and to produce a "coordinated" turn wherein the fuselage is parallel to the flight path. A simple gauge on the instrument panel called the slip indicator, also known as "the ball", indicates when this coordination is achieved.

I have included some pictures of my Cub's Frise ailerons which are visible in their different flight control positions. Also here are some pictures of my Pitts ailerons and how they are slaved together.

So as you can see ailerons play an important part in flight controls and with 4 ailerons on my Pitts Special I have a lot of work ahead of me rigging these little beauties! Let's keep 'm flyin



This Starduster biplane seen below was Sue Hostler's ride, touring around the San Juan islands in Washington's Puget Sound.





Base and Final Legs

by Sue Hostler in the Starduster!



An event poster for the Marion Wings and Wheels in Ohio you may wish to attend!



Fly-In / Drive-In

September 14 9:00am - 6:00pm

1530 Pole Lane Road

Marion, Ohio 43302 740-382-1634

Please mark your calendar for **September 14, 2019** and join us!



www.redtail.org



SALUTING
★ POWs & MIAs ★
Saturday, September 14 @ 9:00A.M.



Crusin for Dialysis

Visit www.wingswheelsmarion.org for current information.

- Food Trucks, Come HUNGRY!
- CAF Red Tail Squadron - P-51 rides!
- CAF Mobil Theater!
- Helicopter rides!
- Pedal Plane Races!
- EAA Young Eagles Program!
- Flight Simulators, DRONE Races!
- Remote Controlled Flight demonstrations
- Drive-In for Dialysis!
- **FREE** admission! **FREE** parking!
- Bring a lawn chair • Bring sunscreen



Quality Inn Marion is the official hotel of WINGS & Wheels 2019.
• Special discount for Pilots and fly-in attendees!
• Call: 740- 389 - 6636 to make your reservations.

www.wingswheelsmarion.org



Dan Hempy, President
Wings & Wheels Fly-In
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Marion Wings & Wheels Inc, 501 c 3



EAA 857 Chapter Officers for 2019

President	Ted Merklin
Vice President	Phil Kriley
Treasurer	Frank Szczerba
Secretary	Rick Schubert
Newsletter	Ed.Ted Merklin
Web Page	Ed.Ted Merklin
Young Eagles	Bob Santolla
Technical Advisors	Chuck Potts Bob Santolla
Board Members	Bob Santolla 2019-2021 Gary Marsico 2019-2020 Larry Gaichas 2019

Use contact@eaa857.org to email the Chapter President. Your request will be forwarded to the appropriate individual.

EAA 857 - Calendar for 2019

Chapter Meetings

Meetings are held on the third Tuesday of the month at 7:00 PM in the Conference Room at the Pittsburgh-Butler Regional Airport.

- January 15
- February 19
- March 19
- April 16
- May 21
- June 18
- July 16
- August 20
- September 17
- October 15
- November 19

Chapter Events

- EAA 857 First Flight - Tuesday, January 1
- EAA 857 Chili Cook Off - Sunday, February 10
- International Young Eagles Day - Saturday, June 8
- EAA 857 Fly-In and YE - Sunday, August 11
- EAA 857 Fly-In and YE - Saturday, September 28

2019 National Events

- Sun 'n Fun - April 2-7
- Sentimental Journey - June 18-22
- AirVenture Oshkosh 2019 - July 22-28



Chapter 857 Members

See your chapter's Website at:

<http://eaa857.org>

Take a look today!

Newly Updated with **This Newsletter!**

Prior Issues for 2019 will appear in our newsletter archive.

Please submit your project updates, photos, articles, thoughts, technical tips

to contact@eaa857.org

ALSO, Monitor our Facebook Group Page:

Search for "EAA Chapter 857"

Websites of Interest to EAA 857 Members

<http://www.butlercountyairport.org>

<http://www.eaa.org/>

<http://www.airventure.org/>

<http://www.aopa.org/>

<http://www.faa.gov/>

<http://faasafety.gov>

<http://www.condoraero.com>

www.draggintailpilots.weebly.com