



EAA Chapter 478
COCKPIT CHATTER
Lexington Park, MD May 2021
A Bronze EAA Chapter



EAA Chapter 478 Monthly Gathering
May 18, 6:30 PM
Social Time: 6:00-6:30 PM
Topic: Propeller Balancing Experience
Location: 2W6 Terminal Building

In this edition of Cockpit Chatter

From The Top –We are back to “In Person” Events
Board of Directors Meeting Minutes – May 4, 2021
Treasurer Report – Current Status
Social Committee Report – 2W6 Social and Prop Balance
Young Eagles Corner - 12 June Rally Announcement
The Homebuilder’s Corner - RV-8 Status, Tiger Moth Status, Transition from Engineer to Builder to Tester
The Flying/Maintenance Corner – Prop Balance Miscellaneous, Organizing the PA-32 Fly-In
For Sale – Lancair 320 “A” Kit
Chapter Calendar –

FROM THE TOP

Tom Weiss, President EAA Chapter 478

We are going to hold this Month's Gathering at the 2W6 Terminal building for an "In-Person" event. I think the program will be pretty short, we will be discussing using the Chapter's Prop Balancer. I will also be soliciting your inputs for Chapter events for the rest of the year. Now that the weather is good and COVID restrictions should not impact us significantly we need to get back encouraging the next generation to fly and making all of us better pilots.

We held a social at 2W6 yesterday, it was a good turn out and based on the sounds level in the terminal building from everyone talking, it is clear everyone in attendance enjoyed catching up with the other members of the Chapter. After the social we balanced the prop on a member's airplane, this was a great learning experience for everyone who watched this. Turns out this is not as easy as it appears in all of the You Tube videos we have all watched.

We are planning on a Young Eagle's Rally at 2W6 on 12 June, please keep your calendar's clear for that day. We need good chapter participation to make an event like a YE Rally run safely and to be successful.

Thanks for all of the Newsletter Inputs. Be thinking about what you want to do activity wise for the remainder of the year and let us know on Tuesday. Looking forward to seeing everyone Tuesday.

Tom Weiss

2W6 50th (51st) Anniversary Celebration

I don't have an update on this at this point - TAW

There has been some discussion about moving some of the events that were planned for 2020 to 2021 for the 2W6 50th anniversary. This is all dependant on the COVID status in the spring, but the hope is that many of the events that were planned for late spring and summer can be run in 2021. The County website is still active and is <https://www.stmarysmd.com/dpw/airport-operations/anniversary/>



UPCOMING EVENTS

May Gathering 18 May at 2W6 – 6:30 PM

VMC Zoom Meeting 3rd Saturday of each month – Details via email

Young Eagles Day – 12 June @ 2W6

EAA CHAPTER 478 MEETING MINUTES

EAA Chapter 478 Board Meeting Minutes

May 4th, 2021

1942-The Battle of the Coral Sea begins with an attack by aircraft from the United States aircraft carrier USS Yorktown on Japanese naval forces at Tulagi Island in the Solomon Islands. The Japanese forces had invaded Tulagi the day before.

Attendees: Darryl Crawford, Bill Englehart, Paul Gambacorta, Chris Moody, Gabriel Murray, John Nelson, Bill Posnett, Tom Weiss, Sid Wood, and Bernie Wunder

Agenda:

- May Program for Gathering
 - Last month's program was well received
 - Going to focus on prop balancing for May
 - Will feature information published by other chapters and our own chapter.
- Terminal at 2W6 is open
 - Conference room limit is 10 people
 - Main room limit is 36
 - Construction in terminal, one room for the Annapolis Flight Club and a second room, use unknown. Conference room is going to be remodeled. Getting a pilot's lounge, where flight club was located.
 - Ramp access might be a challenge regarding Young Eagles.
- Social Event in May or Poker Run?
 - Bug smash run over Memorial Day weekend is a possibility.
- Young Eagles – 12 June
 - Might be a more limited event.
 - Try to keep people outside.

- Board members have interest.
- Require people to sign up.
- Assume 2 flights per hour per pilot.
- Mask requirements in airplane (?). Pilot's discretion?
 - Waiting for EAA guidance
- No preflight airplane, put a call out.
- Prewrapped hot dog, bag of chips, and a drink.
- Open Hangar
 - Start planning for a June event
- Picnic type event?
 - Hold off and wait for COVID.
- Other ideas?
 - Please use the website for renewing membership and point new members towards it so Chris Moody can get necessary membership information.

TREASURE'S REPORT

Submitted by Don Byrne

<u>EAA Chapter 478 Financial Report</u>	
Through 28 February 2021	
Fund	Amount
Petty Cash	\$78.01
Savings	\$439.00
Checking	\$22,038.80
Total	\$22,555.81

SOCIAL COMMITTEE CORNER

A couple of pictures below from the setup of the Prop Balance and all of the intense help that was available.



**YOUNG
CORNER**
Young Eagle



EAGLES

Coordinator –

Darryl Crawford

Young Eagles Rally 2021

Limited to
50 children



EAA Chapter 478

Free airplane rides for kids ages 8 to 17
Parent/legal guardian approval and signature required

When:

June 12, 2021
9am – 1pm
weather permitting

Where:

St. Mary's Airport
44200 Airport Rd.
California, MD 20619



Contact:

Darryl Crawford (478 Young Eagles Coordinator)
Darryl27@msn.com
Pre-register at YEday.org



Year	Flights	Year	Flights	Pilot	Young Eagles Flown 2021				Total
1992	6	2008	51	Attebury, John				MISC	0
1993	54	2009	113	Bray, Buck					0
1994	44	2010	156	Byrne, Don					0
1995	79	2011	187	Carruthers, Steve					0
1996	89	2012	242	Crawford, Darryl					0
1997	90	2013	79	Farry, Kristen					0
1998	47	2014	127	Frech, Egon					0
1999	23	2015	248	Gambacorta, Paul					0
2000	113	2016	206	Gates, Don					0
2001	94	2017	205	Harvey, Ed					0
2002	90	2018	209	Hollady, Mark					0
2003	101	2019	112	Kornacki, Troy					0
2004	66	2020	2	Lightstone, Bob					0
2005	138			Moody, Chris					0
2006	97			Nelson, John					0
2007	122			Piercy, Jake					0
				Surfield, Ron					0
				Wunder, Bernie					0
TOTAL	1253	TOTAL	1937	Totals	0			0	0
GRAND TOTAL		3190							

THE HOMEBUILDER'S CORNER

RV 8 Update

Submitted by Charles Fox

Progress on RV 8 build is moving forward, thanks to Rich Miller, Chris Moody, Andy and Chris Woodburn. I recently finished canopy rail system and getting ready to start cutting canopy, see photo below.

Will be going to Oshkosh in July to see what deals may be available on engines, prop and avionics.



Tiger Moth Update

Submitted by Eric Chase

Even though I moved, I thought I would send my former Chapter mates an update of my project (Fisher Flying Products R80 Tiger Moth). Since relocating, I have re-built the work table and gotten to work with the fuselage, albeit slowly due to still working full-time for a contractor in Lexington Park. Since the hangar is unheated AND a 40 minute drive away, I didn't get as much work done over the winter as I would have liked. I have, however, FINALLY settled on a power plant for the airplane. I bought a Yamaha Apex engine (998cc, 4 cylinder, 5 valve per cylinder) out of a 2007 snowmobile. The engine had 10,000km on it, so it probably had less than 500 hours on it.



I located an A&P (via the EAA Chapter 17 network) who also owns a PWC (Jet Ski, Wave Runner, etc) repair shop who agreed to tear the engine down and rebuild it. When he saw the engine, he told me he's seen the base engine in Wave Runners in 2003-04. I recently got the engine back from him; he said it was in good shape but is now essentially new. He even painted it for me in original Wave Runner colors.



I try to stay off Facebook, but there is a page (Yamaha Aircraft Conversions) that has been a treasure trove of information; including many potential sources for parts (headers, engine mounts, etc). I am currently waiting for a SkyTrax PSRU. I'll likely get the propeller from Culver Props.

I hope to build more frequently now that the weather is getting nicer and have a fuselage to sit in and make airplane noises before too long. But everything is relative on my build, as I started back in 1997.



Fuselage sides

Transiting from Engineer to Builder to Tester

Submitted by Brain Link

As I have been tinkering away at preparing this model of mine for flight testing, I've recently taken pause to notice the many similarities that lay between what I typically experience in my line of work as a flight test engineer and what I am doing with my own project. Having spent the better part of the last year and a half constructing this small aircraft, where my focus has been solely on matters relating to fabrication, now that full-bore dynamic scale test flying is literally around the corner, I find myself necessarily shifting back in to "flight test mode". Easier said than done!

When I think about it, we in the E-AB community experience a lot more regularly what professional test pilots and engineers get the opportunity to experience- the first flight of a new design aircraft. Granted, most E-AB aircraft are built from kits or plans, but some of us gravitate toward doing our own design with varying degrees of success. Just like our professional counterparts, when we take a bespoke design into the air, no matter how much we prepare, we are taking those first few steps into a series of potential unknowns. Will my aircraft fly as designed? If it doesn't, how can I prepare myself to take appropriate corrective action? In my case, I have a wealth of data generated from countless hours of simulation and analysis of my design as I was developing it. But that was over two years ago! I've been mixing resins, laying up glass, turning wrenches and sanding ad nauseum in all that time! How do I rack my brain & re-engage all of this? Yes, I have a test plan and everything else, but how do I truly prepare for something like this?

Sometimes, going back to the basics is the best course of action. Despite the amount of time required to prepare the aircraft for flight, I absolutely must devote time to replaying all those analyses again, looking at strip charts in real time and inputting control movements to see what happens next. I was learning the aircraft all over again from an engineering and piloting perspective. The next part in this buildup was pure flight simulation. Thanks to modern technology, replicating a model aircraft is quite easy, but the best part is that in some applications, you can tweak the aircraft's aeromechanical properties to your liking. In this case, I dynamically adjusted a familiar and known model to behave in the manner my data tells me how my test model will behave, very much in the manner of a variable stability training aircraft that student pilots and engineers use at numerous professional test pilot courses.

Now, in all honesty, a simulator lacks a lot of fidelity, so you really cannot learn how to fly an aircraft per se. Think of the "garbage in, garbage out" philosophy. You can make a streetcar fly in a simulator if you programmed in unrealistic variables and constants, but conversely, you can make a docile aircraft such as a Searay ultralight fly more aggressively than an Extra 300! If the physics modeling is wrong, even by accident, there is the potential to be way off track from minute one! All we can do is program in known constants & variables with a significant degree of conservatism and let the chips fall as they may, adjusting as we learn. However, all this said, simulators are excellent for giving the pilot & engineer a decent idea of how a system will operate. In this case, I made this virtual model (a Great Planes PT-60 trainer that I am very familiar with) fly as close to what the real model's simulated stability & control analyses showed me, mass properties in all, but if I got into a pickle, I was able to "turn off" the programmed control laws and make the model revert to its original configuration, allowing me to recover from the maneuver. Conversely, I was able to "inject"

select variables, fly a maneuver and see what happens, much in the same manner as the Flight Test Injection Panel we use in a full-scale test aircraft. Does it fully prepare me for what I may experience when I pace the model through its dynamic scale test points? Yes and no, in the respect that it allows me to “fly” this model in a zero-risk, controlled environment, increasing my basic piloting proficiency in the context of this particular model design of mine, but at the end of the day, I am only flying a virtual model with potential unknowns. I can only use these virtual simulations as a baseline, because after all, in the real world, the aircraft’s true aeromechanical properties come into play, as do environmental variables that are difficult to plan for, such as turbulence, shifting winds, etc., as well as other distractors, such as noise, other aircraft, trying to communicate and so on.

Am I confident my design will fly? Of course! I am not worried much as to if the aircraft will fly in its most basic configuration, but the question remains as to whether it will fly as designed throughout the design flight envelope. Fortunately, this most basic question keeps all of us in the flight test community gainfully employed in so many capacities throughout the life cycle of an aircraft! Just as an example, the V-22 has been flying since 1989, and to this day we are still exploring, redefining and improving it!

In closing, when preparing to test, all we can do is study what we truly know up to that point, know the machine & systems by way of study & simulation, know the plan by way of rehearsals, and sticking to the plan in its entirety, deviating only when required, and executing the best way we know how. Knowledge is power. Even though this is just a model, it is only prudent to test as if it’s the full-size aircraft I will eventually be building and flying. After all, my life depends on it!

THE FLYING/MAINTENANCE CORNER



Balance weights installed on a Lycoming 0-320 after a Prop Balance



Prop Balance Instrumentation Mount I made for my engine on the RV7 - TAW

The PA32 Memphis Fly-In, a social media success story

Submitted by Troy Kornacki

With social media taking some heat lately, it is extremely pleasant to focus on how incredible a resource it has become to bring pilots together. The recent Piper PA-32 Fly-In, hosted in Olive Branch Mississippi (KOLV), is truly one of the best examples of social media's success in general aviation, and was one of the most amazing aviation experiences in my thirty years of flying.

I am no stranger to aviation; I began flying with a Civil Air Patrol solo scholarship thirty years ago, with my first solo flight at the Frederick Municipal Airport (KFDK), home of AOPA. This began a uninterrupted love for aviation which has included owning seven fixed-wing aircraft, and helicopter, commercial helicopter & IFR ratings, all of which were (by random chance) also completed at AOPA's home airport.

My current aircraft, a 1977 Piper Lance, was purchased in 2018 after the birth of our third child, a daughter affectionately named Piper. Very quickly after purchasing this high performance, complex aircraft, I knew it was imperative to find a resource to connect with others to share knowledge, thereby allowing me to carry my precious cargo in the safest possible manner. As private pilots, we are solely responsible for the safety of each and every flight including the passengers who trust us so dearly to reach our destinations.

I have been a moderate Facebook user for several years and had happened upon a robust group of other PA-32 drivers whose membership base contained over six-thousand enthusiasts. To value the benefits of the group as immeasurable is an understatement, and I clearly realized I had found a gem in the rough seas of social media. Nowhere have I met so many people vested in sharing knowledge and dedicating themselves to helping others transition and operate their beloved aircraft safely. I can firmly attest that I am a safer pilot flying my family of five over the past three years & five-hundred hours in large part due to this fantastic group of pilots.

As a new member to the group, I felt inherently charged with posting anything and everything I could of substance to further stimulate the incredible learning environment on our group page. I have become known for my open and honest dialogue in the pursuit of safety. I share not only my successes, but my failures as well, which was very well accepted by our many members. Personally, I not only wanted to ensure people were able to learn from my mistakes, but to create an environment where members did not feel afraid of posting theirs as well, thus allowing me to learn. This philosophy can sometimes be lost in aviation as I have personally witnessed and read about mistakes made which could have been simply avoided by the open sharing of information and flying exploits.

One of my goals as I continually witnessed personal relationships being forged over the keyboard was finding a way for all these great pilots to finally meet each other in person. I floated the idea of a fly-in event just prior to COVID-19, but it was washed away in the turmoil of the virus which has affected us all. In life, timing is always everything, and I came to the realization this idea had to be rolled back into the hangar for a later flight. In January 2021 the idea once again surfaced and the decision was made to move forward.

In the spirit of the great group of people that make up the PA-32 Owners and Pilots Facebook Group, several people immediately stood up and volunteered to assist me in this undertaking. Airport selection was extremely difficult as our aircraft attendance counts were climbing faster than we could record them. We kept outgrowing airports on a weekly basis until one of our members put us in contact with Gil Bobo, the manager at the Olive Branch Airport (KOLV) in Olive Branch, MS. The minute I spoke with Gil I realized we had someone who fully understood the necessity of

promoting general aviation, and I announced a final selection to the group as he (literally) rolled out the red carpet for us. The dates were set for April 23-25, 2021, and before we knew it, the number of registered aircraft topped 120 of the various types of PA-32 variants. This would be the largest gathering of this type of aircraft in history. Aircraft would be flying in from as far as Nevada, Colorado, Florida, Iowa, Minnesota and Connecticut. Incredibly, we even had a member make the drive from Rochester New York.

Suddenly, it became evident that this grass roots meeting of pilots flying similar aircraft was turning from a simple fly-out to a full-fledged aviation event. Fortunately, I was able to conference with the event director at AOPA to receive guidance on how to responsibly and safely proceed moving forward. AOPA is such an amazing resource for pilots and always seems to be there when we need them with valuable and relevant contributions. Piper Aircraft found out about our event and immediately committed their attendance saying that they would not allow this many of their aircraft owners to congregate without them having a presence. Ultimately, Piper flew in for the event with an M600, and stayed the entire weekend with a volunteered commitment for a larger role in next year's event.

In the midst of this rapidly growing event which was being planned by all rookies, we often felt like we were chasing a snowball rolling down a hill, watching it grow before our eyes. The time came to once again lean on our fantastic group of members, and a panel of five were established to systematically divide roles in order to secure the success and safety of the event. We separated the responsibilities into five categories; Master Planner, Virtual Operations Briefings and Weather, Event Ground Operations, Event Static Operations, and Raffle Coordinator.

When all was said and done, we ended up having over two-hundred room nights booked at the Peabody Hotel in Memphis for Friday and Saturday evening, two dinners with gross receipts totaling over fifteen-thousand dollars, event shirts and hats which were given to ATC and the airport staff, as well as multiple vendors who attended. We had everything from food trucks providing vending to golf carts marshaling aircraft and shuttling passengers around the event and even had an FAA approved drone flight documenting the event from above. A Maryland-based airplane tinting company successfully tinted nineteen aircraft during the weekend. The shining star of the event was the raffle which had product donations exceeding fifty-thousand dollars and included almost every major name in general aviation. We had multiple members volunteering by calling aviation businesses asking for donations, and packages were being received almost daily. The outpouring of support for our small grass roots event was absolutely overwhelming, and even though the weather was IFR during our Saturday main event, we had well over eighty aircraft and hundreds of people attended solidifying this into an annual event.

This idea, which was simply a small seed planted pre-COVID, blossomed into one of the most memorable aviation experiences for many of the attendees, and allowed all of us to meet the people we have grown to know and love over years typing away on the keyboard, in person. I have always said it to others and think to myself each time I fly that we live in the greatest place in the world to experience general aviation and we must all actively participate to preserve the freedom.



Memphis Fly-In

SCHEDULE

April 23-25 2021 Olive Branch Airport Olive Branch, MS

Friday 23 April

- ✈ All-Day: ARRIVAL Olive Branch Airport KOLV
- ✈ 4:00 PM: Hotel Check-In
Peabody Hotel 149 Union Avenue Memphis, TN TEL. 901-529-4000
- ✈ 8:00 PM: PA32 Group Dinner Texas De Brazil (**RESERVATION REQUIRED**)
150 Peabody Place Street Suite 103

Saturday 24 April

- ✈ 10:00-4:00 PM: PA32 FLY-IN Olive Branch Airport KOLV
- ✈ **NOTE:** If flying in **ONLY** for the day please plan to ARRIVE before 12:00 PM and DEPART no earlier than 3:00 PM, Thank You!
- ✈ 8:00 PM: PA32 Group Dinner at The Rendezvous Restaurant (**RESERVATION REQUIRED**)
52 South 2nd Street (Short Walk from Peabody)

Sunday 25 April

- ✈ ALL DAY: DEPART Olive Branch Airport KOLV
8000 Terminal Drive Olive Branch, MS 662-895-2978 901-521-9439



FOR SALE



Lancair 320 A-kit parts available. If interested contact Paul Gambacorta by phone 480-440-1691 or email paul.gambacorta@gmail.com

CHAPTER 478 CALENDAR OF EVENTS

Date	Event	Location
JANUARY		
FEBRUARY		
MARCH	Poker Run 27 March	
APRIL		
18 MAY	Gathering	2W6 Terminal
JUNE	YE Day 12 June	
JULY		

AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		

In the Chocks

Thanks for all of the inputs this month, looking forward to seeing all of you at a Chapter event soon.

Build, Repair and Fly Safe.

Tom Weiss – Editor/President

Cockpit Chatter is published monthly by the Experimental Aircraft Association (EAA) Chapter 478 solely for the dissemination of information and ideas to the membership. Gatherings are held on the Third Tuesday of the month at 7:30 PM in the Patuxent River Test and Evaluation Museum. Membership is \$20.00 per year and requires an active membership in EAA. Any opinions expressed herein are strictly those of the author and do not necessarily reflect the opinions of the chapter or the Experimental Aircraft Association.

Chapter Officers

President: *Tom Weiss* 2020-21

Vice President: Paul Gambacorta 2021-22

Secretary: Gabriel Murray 2020-21

Treasurer: *Don Byrne* 2021-22

Committee Chairs and Chapter Advisors

Social Chairman: *Bernie Wunder*

Membership Chairman: John Cook

Program Coordinator: Paul Gambacorta

Young Eagles: Darryl Crawford/Keith King

Flight Advisors: *Bill Posnett*

Technical Counselors: Sid Wood 2018

Newsletter Editor: *Tom Weiss*

Web Editor: Chris Moody

Tool Crib Committee: Colin Cline/Alan Tolksdorf

Board Members

Sid Wood 2020-21

Darryl Crawford 2020-21

Chris Moody 2021-22

Egon Frech 2020-21

John Nelson 2020-21

Bill Posnett 2020-21

Bill Englehart 2021-22

Chapter Web Address

<https://chapters.eaa.org/EAA478>