



EAA Chapter 478
COCKPIT CHATTER
Lexington Park, MD August 2022
A Bronze EAA Chapter



EAA Chapter 478 Monthly Gathering
August 16, 2022
AirVenture Stories and Experiences
2W6 Terminal Conference Room

In this edition of Cockpit Chatter

From The Top – We are one of 102, 2W6 Update!

Board of Directors Meeting Minutes – 2 Aug 22

Treasurer Report – Current Status

Young Eagles Corner - 30 Year Pin and Current Status

The Homebuilder's Corner - Aerolite 103 Exhaust Issues

The Flying/Maintenance Corner – C150 Panel Upgrade Planning, Williamsburg Fly-Out
AirVenture Updates - Teaser for Tuesday, Keith King Adventure, Chapter Members at AirVenture

For Sale – 2 Military Headsets

FROM THE TOP

Tom Weiss, President EAA Chapter 478

As you know EAA will begin the 30th Anniversary celebration of the YE program at AirVenture this year and special events and programs will run for the entire year. EAA has gone through the YE records and have identified all Chapters that have flown at least one YE in each year of the Program. Our Chapter is one of 102 Chapters that has achieved this. EAA has awarded a plaque to each of the 102 Chapters. This is pretty special, so a big thank you goes out to all of our Chapter members who have contributed to the program over the years.

Now that we have our Bronze Banner and the Plaque, we should have a place to display them, I plan to ask the Airport Manager if we could have some wall space in the Terminal to put a Chapter display that advertise our activities and the Young Eagles Program. With the restaurant drawing increased traffic to the Terminal Building should provide some good advertising for the Chapter.

We had a very interesting visit to Planeform last month, they have some amazing capabilities. This month

all of you are invited to tell us about your AirVenture experiences. Bring some pictures and stories and make everyone who wasn't there wish they were.

We continue to have strong interest from parents and children in the Young Eagles Program. The smaller events are a great way to get involved in a Young Eagles event and learn how a Rally is conducted during a relaxed pace event compared to our two big events each year. The more members we have helping at each event the easier it is to run the event. Thanks to everyone who has participated in an event this year and let's keep up the momentum we have started.

We have a number of events planned during the next two months, refer to the Upcoming Events section for a look into what is coming. Looking forward to seeing you on Tuesday.

Tom Weiss
President EAA Chapter 478

St. Mary's Regional Airport Update

Submitted by Egon Frech

I recently attended a seminar on the current status and plans for St. Mary's County Airport, hosted by the Patuxent Partnership at the Higher Education Center's new SMART Building. Some of the information presented filled in the gaps of what we have been told to date.

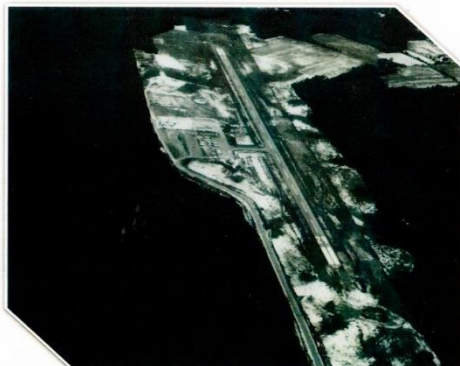
Presentations included those by Ken Reed, Managing Member of S. Hunt Aero, which has been responsible for the expansion of hangar space over the past several years, Airport Manager Allison Swint, and Gary Whipple, deputy director of the St. Mary's County Department of Public Works.

Ken Reed's presentation recounted the history of the airport, its current status and plans for future development.

Photo below is the airport as originally constructed in 1969 and below that photo of the airport taken more than a year ago, showing construction of the new SMART Building (now complete) and the Patuxent River in the background.

1969...

THE AIRPORT OPENED AND CONSISTED OF



- 50ft x 3200ft Runway
- Paved parking area
- Approximately 10 Aircraft
- No buildings



Mr. Reed's presentation also focused on the multitude of businesses that have established at the airport as well as further potential development within the land area available. The majority of future construction will be on the west ramp, which will be expanded to the west end of the runway extension now under way and will have a maneuvering area for large aircraft. His slide showed large maintenance/commercial hangars and a new 12,000 square-foot FBO hangar, whereas the plan previously presented by the County's development consultants had included some additional storage hangars. He said not much development is possible on the north side of the airport, as developable space is severely limited by environmental considerations.

In a subsequent conversation, he explained that the construction of new general aviation storage hangars in the current business climate is not economically viable due to the extremely high costs of construction. AOPA canceled plans to build additional hangars at Frederick and it is Mr. Reed's understanding that this was due to the costs of construction. There is currently a waiting list of 60 for storage hangars at 2W6.

Below: The consultants' initial plan, followed by Mr. Reed's plan. Note that some of the initially envisaged storage hangars at the west end of the current development have already been built out instead as maintenance/commercial hangars.



DEVELOPMENT PLAN

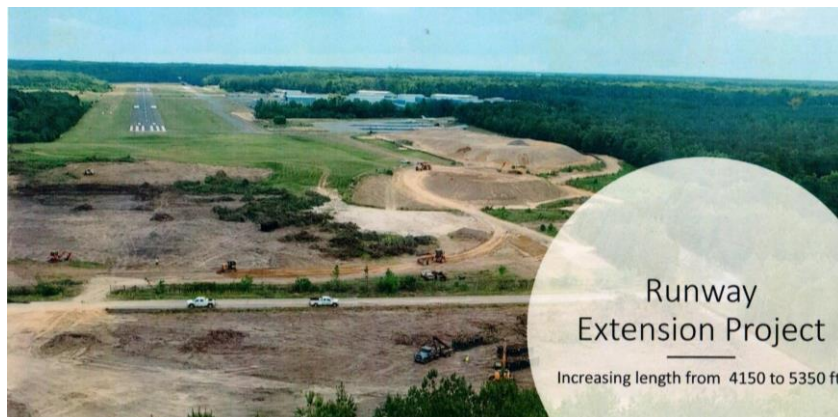
- 77 General Aviation Hangars
- 4 Office/R&D Buildings 42,400sq-ft
- 4 production facilities totaling 41,850sq-ft
- 7 large hangars totaling 72,000 sq-ft
- Helipad
- Potential UAV Operating Area



Below: One of the existing large maintenance/commercial hangars housing a Basler DC3



Mr. Reed also presented a plan by Atkinson Aeronautics and Technology to provide custom charter passenger service with aircraft such as a Piper Chieftain with non-stop service as far as 600 nautical miles. The cost would be competitive with commercial airline travel if more than three passengers traveled together.



Ms. Swint reported that, despite some weather delays with the runway extension project, she is anticipating that paving will be completed by the end of the current paving season (sometime in November.) Runway lighting, signage and other completing touches would need to be finished before the additional length would be useable.

Mr. Whipple discussed the issue of vehicle access to the airport, noting that up to now, it has been “the airport at the end of the road.” The County is considering several new road alignments that would provide access from multiple directions. One of the first, already approved, will be the extension of Airport Loop Road, which runs behind the storage hangars, to join up with the relocated Lawrence Hayden Road. Other proposals include a potential connection from there to Highway 4.

UPCOMING EVENTS

August Gathering – 16 Aug, starts at 6:30 PM
Mini Young Eagles Flight – 20 August 8:00 at 2W6 Terminal
Young Eagle Rally – 2 Sep, starts at 4:00 at 2W6 Terminal
Picnic – 24 September

EAA CHAPTER 478 MEETING MINUTES

EAA Chapter 478 Board Meeting Minutes
August 2, 2022

1776 – The signing of the United States Declaration of Independence took place.

Attendees: John Attebury, Don Bryne, Darryl Crawford, Bill Engelhart, Paul Gambacorta, Keith King, Chris Moody, Gabriel Murray, Tom Weiss, Sid Wood, and Bernie Wunder.

1. August Program – AirVenture Reports
 - a. Bring pictures or powerpoint if you attended AirVenture.
2. September Program – Picnic 24 Sep
 - a. Wings and Wheels at the Museum, not expected to interfere.
3. VMC and YE this month is a go for August 20th
 - a. Currently have a backlog of Young Eagles.
 - b. Reverse YE and VMC to address the heat. 0800-1030 YE
4. Labor Day Weekend YE Evening Event
 - a. Friday evening Young Eagle Flying, September 2nd
 - b. 1600-2000 @ 2W6
5. Election Slate for VP, Treasurer, Board terms expiring – Moody, Englehart, Attebury
 - a. Not too early to be thinking about candidates
 - b. Make sure that knowledge is spread out.
 - c. Always looking to get more people involved.
6. YE Rally in October
 - a. Need CRE official guidance before we can pick that location.
7. August Gathering and VMC Food

- a. Need to get the ok from the vendor per contract with county, Friday evening might be ok. Saturday, not so ok. Unclear at this point.
 - b. Vendor has not currently commenced operations, so should be ok until they do.
- 8. Need County permission form filled out for all YE events, big or small
- 9. Chapter display in the Terminal – need permission and a design
 - a. Includes the Bronze banner and the YE Plaque

TREASURE’S REPORT

Submitted by Don Byrne

<u>EAA Chapter 478 Financial Report</u>	
Through 1 August 2022	
Fund	Amount
Petty Cash	\$1.40
Savings	\$439.00
Checking	\$21,174.76
Total	\$21,615.16

YOUNG EAGLES CORNER

Young Eagle Coordinators – Darryl Crawford/Keith King



The next Young Eagles events will be a mini rally on 20 August at 2W6 starting at 0800. The next will be a larger event on 2 August at 2W6 starting at 4:00 PM.

Young Eagles Flown in 2022

Note: Table below is missing the data from 11June

Pilot	Young Eagles Flown 2022							2022 Total
	4/23	5/1	5/21	6/4	6/11	12/16		
Attebury, John	2		1	3	6	3		15
Boas, Scott					6			6
Bray, Buck				3	6			9
Byrne, Don					6	1		7
Byrnes, Dan	1			1				2
Byrnes, Rich			1	2	7	2		12
Carruthers, Matt					5			5
Crawford, Darryl								0
D"Errico, Mike				3	7	2		12
Frech, Edgon			1		6	2		9
Gambacorta, Paul	1	5			5			11
Lightstone, Bob					6	3		9
Moody, Chris	2			2	6	2		12
Nelson, John	2							2
Posnett, Bill				2				2
Rivera, David			3		3			6
Surfield, Ron	2			3	5			10
Wunder, Bernie	1		1	3	6			11
	11	5	7	22	80	15	0	140

Year	Flights	Year	Flights
1992	6	2008	51
1993	54	2009	113
1994	44	2010	156
1995	79	2011	187
1996	89	2012	242
1997	90	2013	79
1998	47	2014	127
1999	23	2015	248
2000	113	2016	206
2001	94	2017	205
2002	90	2018	209
2003	101	2019	112
2004	66	2020	2
2005	138	2021	65
2006	97	2022	125
2007	122		
TOTAL	1253	TOTAL	2127
GRAND TOTAL		3380	

THE HOMEBUILDER'S CORNER

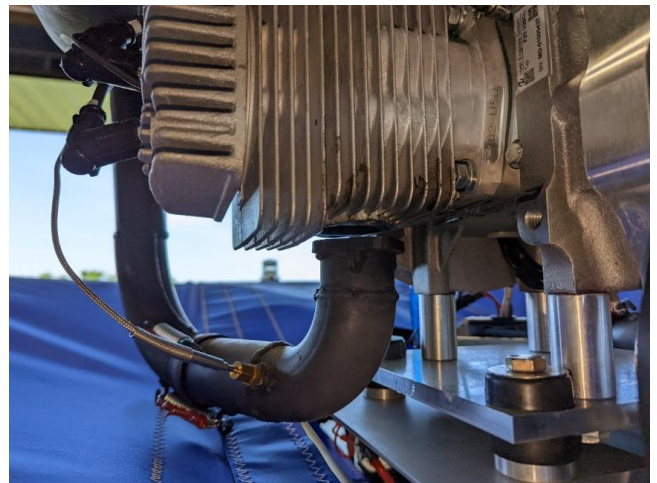
Aerolite 103 Exhaust System Issues and Solutions

Submitted by Peter Nyce

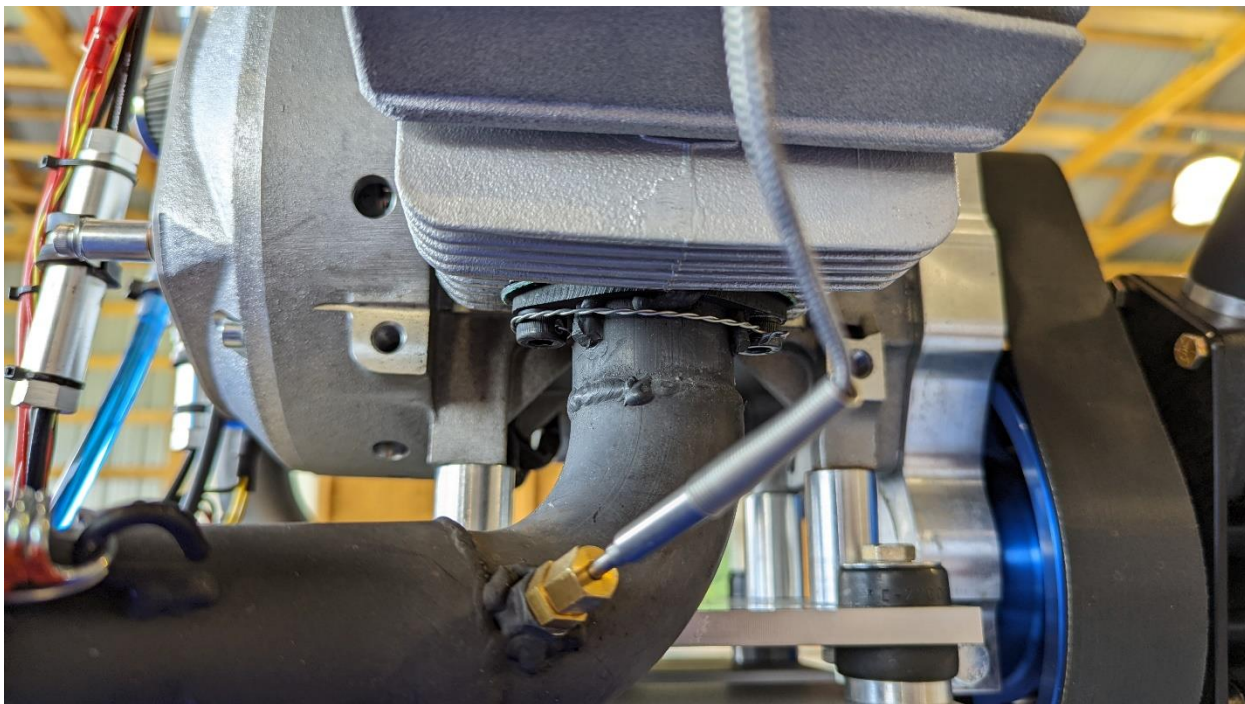
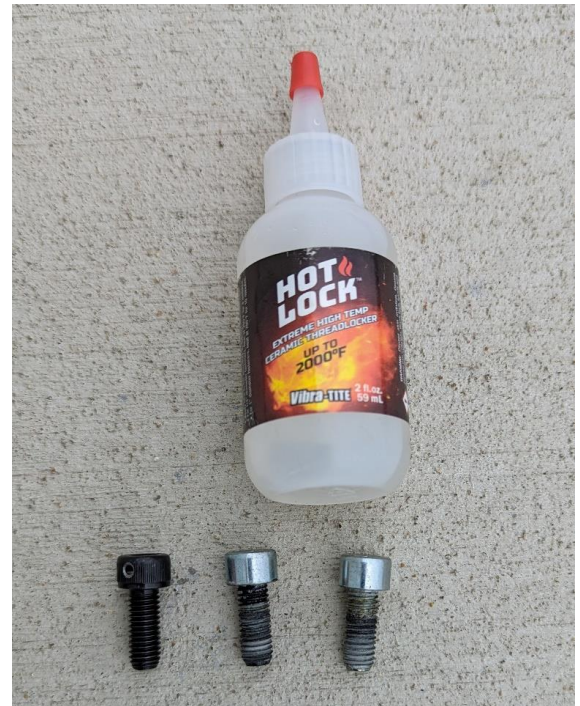
Dear Operators of 2-Cycle LSA and Ultralight Engines,

I wanted to share with you an issue that I had, and believe that I've solved, with my Hirth F23 engine, mounted on my factory-built Aerolite 103.

The airplane was delivered with about 2 hours as shown on the EIS. At about 4 hours, the left exhaust manifold mounting screws backed out during taxi training and damaged 2 prop blades. I ordered 4 replacement M8x20 screws and two gaskets from Rec Power Engineering and reinstalled the left exhaust manifold. My assumption was that the original screws had been improperly torqued. I used a high-quality torque wrench to tighten both the left and right sides to 19 ft-lbs (228 in-lbs) per the F23 manual(P.27). The right-side screws were still tight and didn't move. After another hour of ground taxi training, the left side screws backed out again further damaging the prop blades! A new set of blades are on order from Warp Drive.



I installed the third set of screws with a 2000 deg F threadlocker called “Hot Lock” by Vibra-TITE (\$16 on Amazon) and ran the engine for an hour with no problems. In the meantime, I found some 0.020 Drilled Head Grade 12.9 Socket Cap Screws M8-1.25 x 20MM online at drilledheadbolts.com. When I removed the Hot Lock treated screws to replace them, it took a considerable breakout force and I heard an audible “clink” sound. My view is that the Hot Lock did the job well. Be aware that it needs to be heat activated before reaching full strength, so I used a heat gun. The new and old screw photo shows the Hot Lock thread deposits. Finally, I replaced the exhaust screws using both Hot Lock and safety wire as I have both now and can’t afford to suffer exhaust screw FOD ever again. After sharing this with the US distributor of Hirth engines, Recreation Power Engines, they approved this solution.



THE FLYING/MAINTENANCE CORNER

C150 Panel Upgrade Planning

Submitted by Noel Fallwall

Are you thinking about wiring up a radio stack for you aircraft. I did a moderately complex installation in my Cessna 150. Attached are some images of what I went through in finalizing the design and wiring aids.

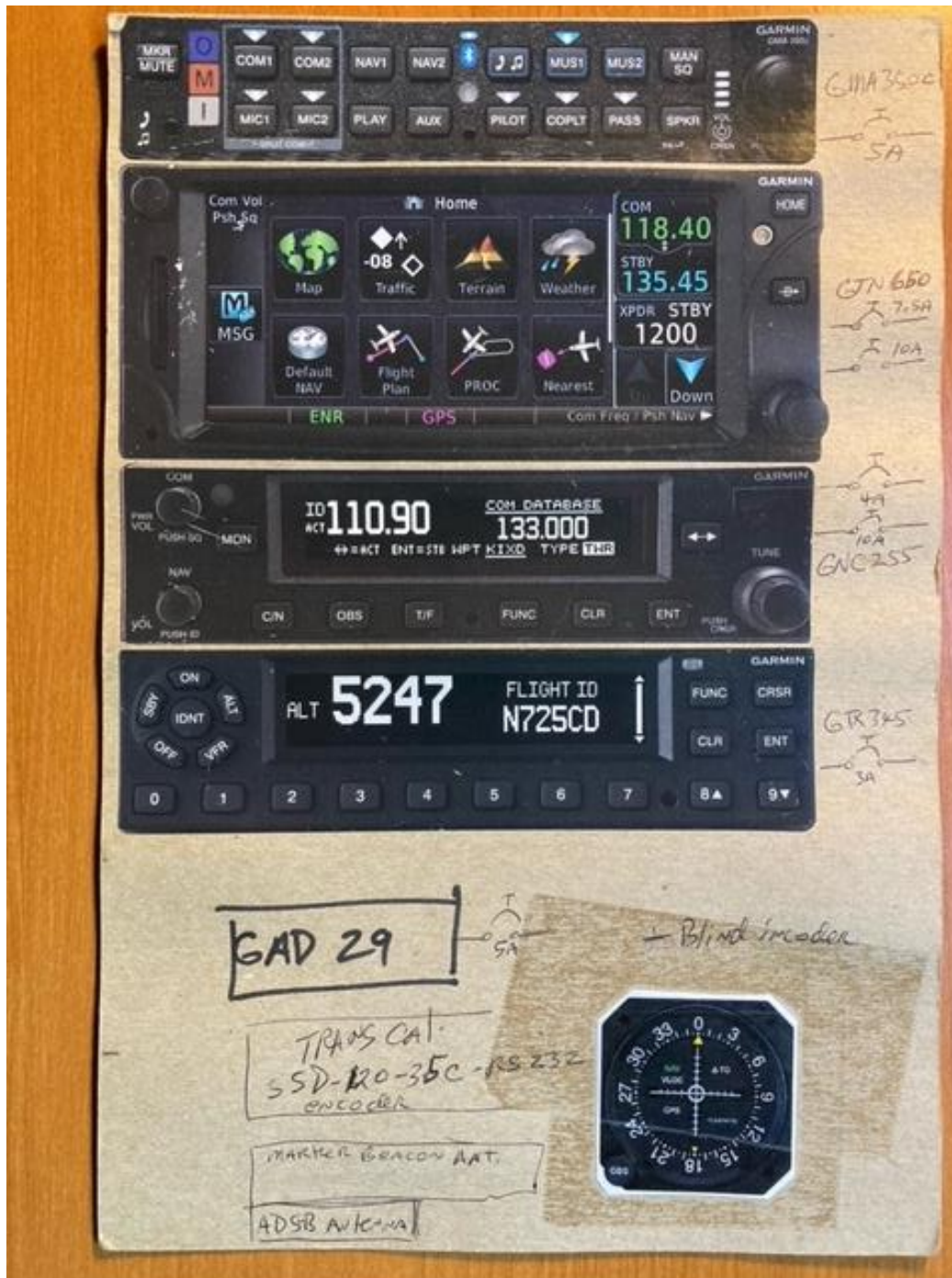


Figure 1 is what I envisioned for a new and modern IFR platform. I made sure this configuration would fit in the panel space that was available.

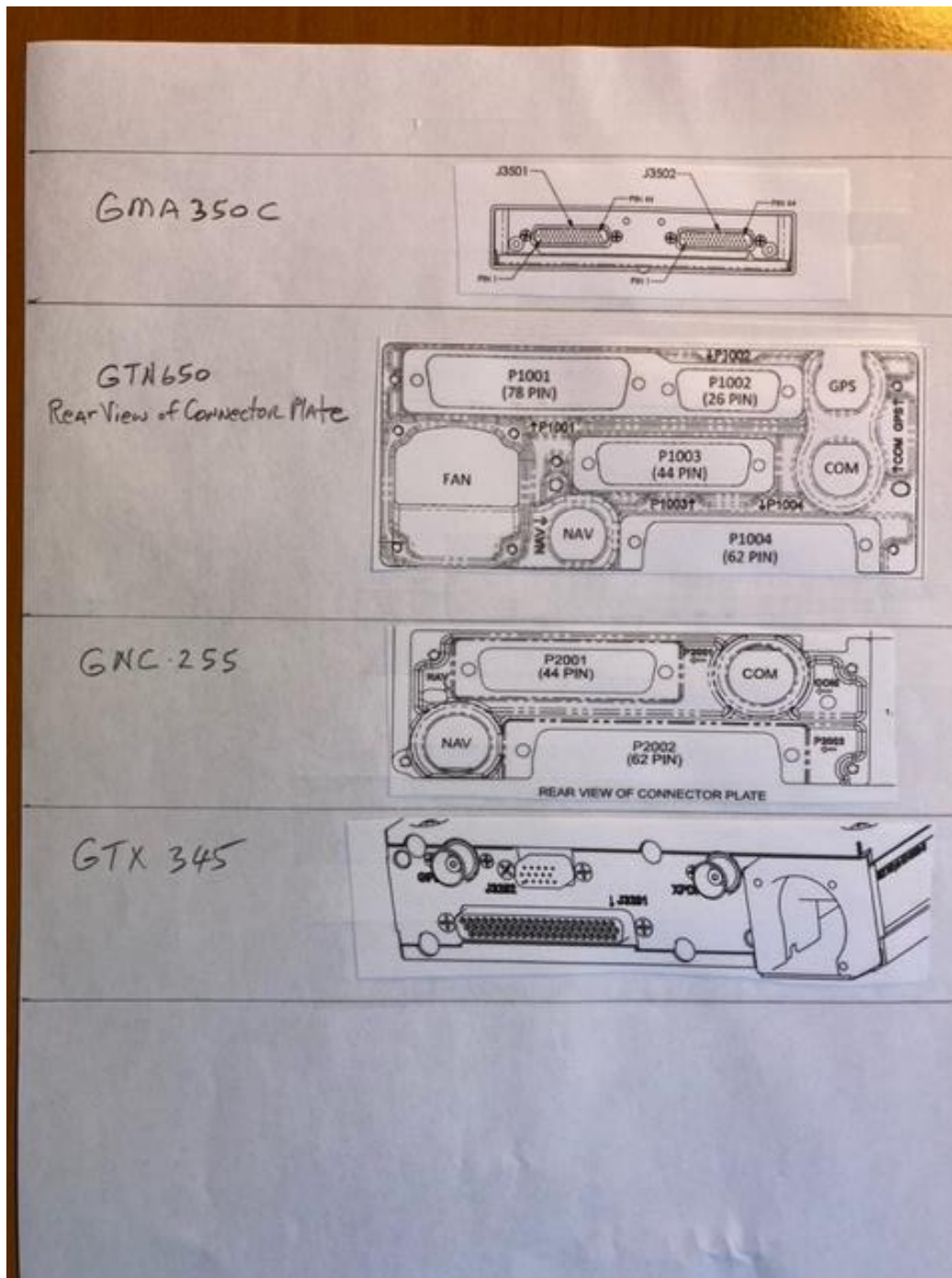


Figure 2 is a "paper doll" cut out of what the back side of the radio stack will look like. These cut outs were taken from the installation manuals for the individual units. This is an aid in insuring that the to-be-installed "D" shell connectors would be installed in the correct orientation. (DO NOT screw this up). The correct top-to-bottom mechanical orientation is shown here.

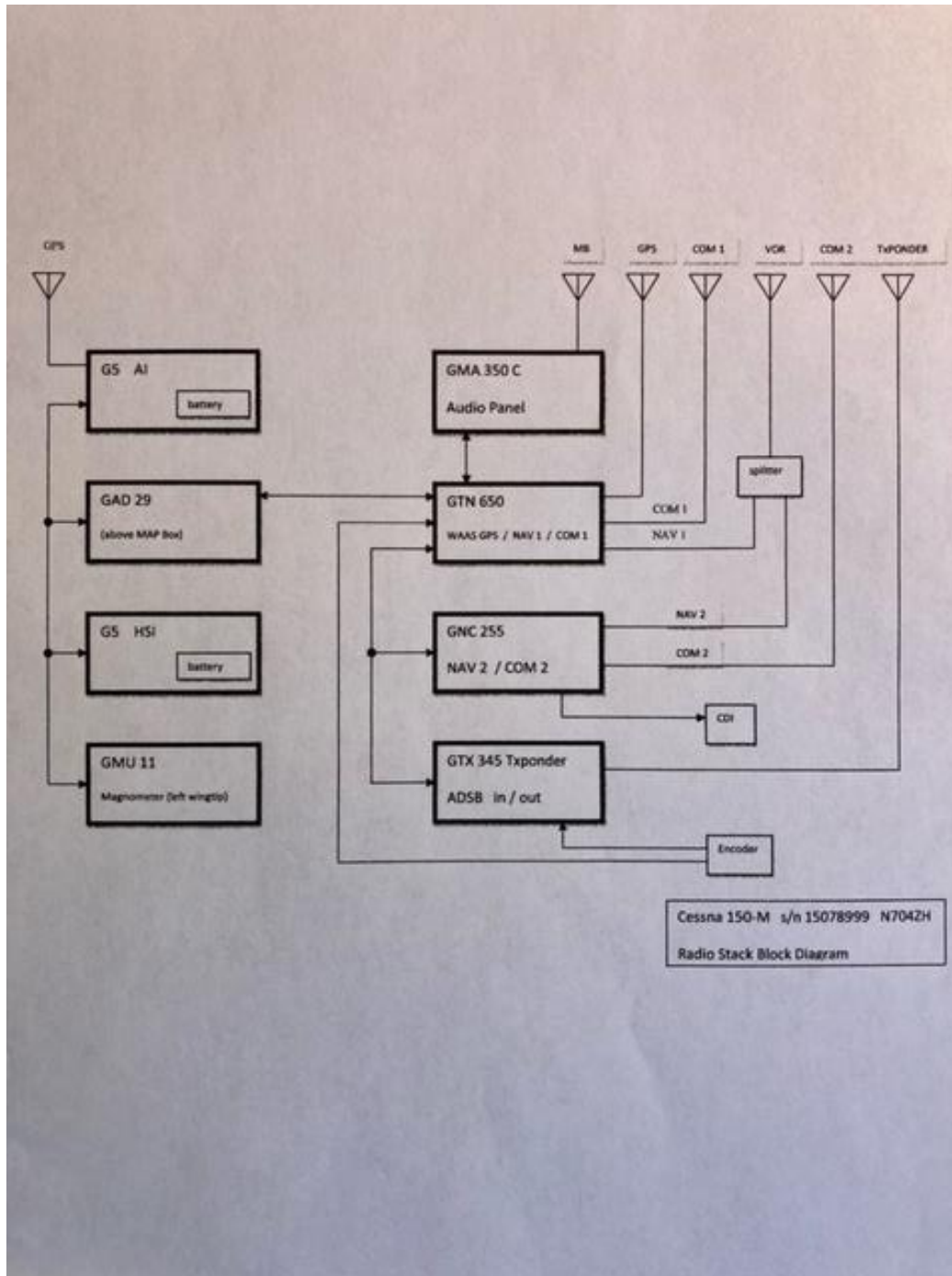
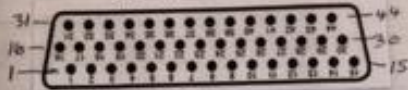


Figure 3 is a block diagram of the interconnections of the radio stack and helps with the overall understanding of how all the items work together. (The actual schematics/wiring diagram that I created is not shown here)

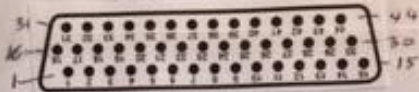
View Looking at Back of Unit

J3501

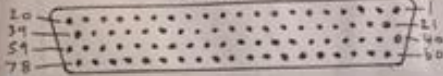


J3502

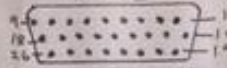
GMA 350C



P1001

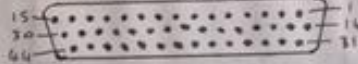


P1002

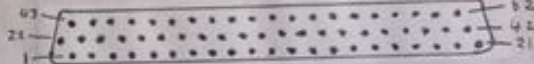


GTN 650

P1003



P1004

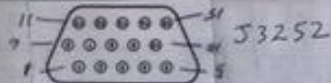


J2001

GNC 255



J2002



J3252

GTX 345



J3251

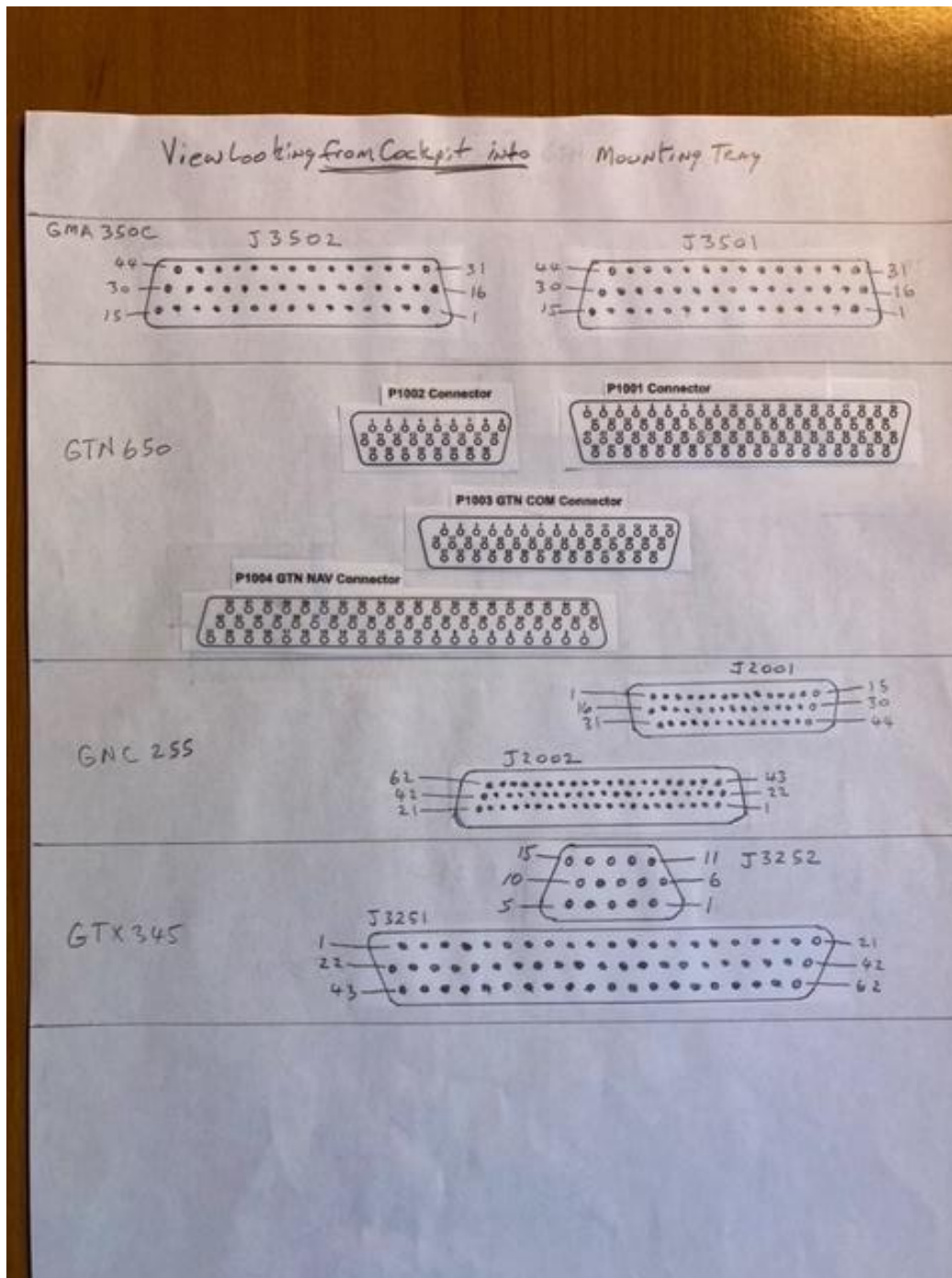


Figure 4 & 5 show the orientation of all the "D" shell connectors of the radio stack. Figure 4 is the view where you will spend most of your time while wiring up the stack. It is the view from the back of the stack and you will insert the wired pins into the connectors from this side. Figure 4 is created on one side of the paper. Now turn the paper over and redraw all the same connectors and pins. This will create Figure 5. Figure 5 now becomes the view of the radio stack that is visible from the cockpit side of the radio stack, The pin numbers now become mirror orientations from the opposite side. Figure 5 is what you will use when trouble shooting issues that might come up, and certainly when you perform power checks before installing your avionics and powering them on the first time.

Williamsburg (KJGG) Flyout

Submitted by Bernie Wunder

A non-profit organization at KJGG airport holds a pancake breakfast the second Saturday of the month to raise money to give kids scholarships for getting a private pilot's license. There were around 14 of us who flew down yesterday (August 13) to enjoy breakfast on a cool, clear blue sky August day....something of a rarity for August. Maybe that is why the airport was flooded with airplanes and people.



Unfortunately, their logistic system was soon overwhelmed. When it was my turn to get served, the server told me that there were no more scrambled eggs; just sausage and pancakes. So I ate my 3 pancakes and enjoyed the company of fellow EAAers and the environment. Wouldn't you know it, when leaving they had found another crate of eggs and was now serving the scrambled eggs, sausage and pancake breakfast as advertised.

So I guess the moral of the story is to show up at 8am or 10am and avoid the masses at 9am! We also held a short zoom call Friday evening to coordinate arrival, share information, and pair up pilots & pax....worked out pretty good. Something to consider for future flyouts.



AirVenture Updates

Oshkosh/AirVenture PIREP

Submitted by Bernie Wunder

Here are four stories I can expand upon at our next chapter gathering on Tuesday:



Living in a tent and coping with the weather at Oshkosh....an adventure unto its self.



Find out how this became the best seat at the Saturday evening airshow that only four of us had.



How I helped this lady find her glue and get some video for her musical video she was putting together to highlight the EAA AirVenture experience. Here is an example of her work: [\(92\) I See Deer Music Video - YouTube](#)



My part in building the One Week Wonder!

To tell these stories in a newsletter article would require too much typing. But I can verbally tell these stories in much shorter time next Tuesday at our chapter gathering. See you then!

AirVenture Adventure

Submitted by Keith King

Anna and I drove out to Oshkosh this year, departing Tuesday July 26th, arriving in Oshkosh the middle of the afternoon on the 27th. We met up with my son, Clay, who had flown out on Miss Virginia the Saturday before. The roles were reversed, typically Clay and I do the driving, and Anna gets to fly with Miss Virginia. She came away from the trip with a new appreciation for flying to Oshkosh versus driving.



Miss Virginia is owned by Dynamic Aviation where my son Clay works Mission Integration Systems on their fleet of King Airs and Dash-8s. My brother-in-law heads up Dynamic Aviation's Legacy fleet and is the primary pilot for the DC-3. I'm waiting for the day when I get to fly, and either Clay and/or Anna drive out the car with the tent, gear, and supplies. We have tent camped since Clay and my first Oshkosh together in 2018 – we've been there every year, except for the COVID cancelled year. It was at the 2018 Oshkosh that I learned how mature kit builds had become. This started me on the road to purchasing an RV-8 kit.

With Miss Virginia being show center, it provided a great base for kicking back from the walking and watching airshows and night shows.







To inspire the next generation of aviation professionals, Dynamic Aviation recently began a NEXTGEN Aviators Program. The program introduces young people to technical jobs by providing hands-on exploration of a broad range of aviation careers including aerospace engineering, parts fabrication and assembly, electronics and avionics, and flight. The program is supported by EAA, and was part of the reason Miss Virginia had such a prominent location at AirVenture this year. Below are examples of the stations they set-up. There were stations for aerodynamics, CAD, electrical and sheet metal. Participants also got to spend time on simulators in an airconditioned trailer. The NEXTGEN program had great participation! I volunteered with them each morning at the sheet metal station.





While at Oshkosh, we were able to pick up a commemorative plaque for our EAA Chapter 478. EAA Chapter 478 is one of the chapters that has had members participate in the Young Eagles program every

year since 1992! To recognize our chapter's unwavering support of the Young Eagles program, EAA created a commemorative plaque for EAA Chapter 478.



Last picture, Anna and I ran the AirVenture Runway 5K for the 3rd time. (By-the-way, I think it's the first year I beat her.) A fun tradition!



Chapter Members at AirVenture





FOR SALE

Military Headsets

While cleaning out my garage in VA I ran across 2 boxes of mil headsets, both unused.
Do you know anyone that might be interested in them? See pic below

Thanks,

Charlie Fox

cef5psu@gmail.com



CHAPTER 478 CALENDAR OF EVENTS

16-Aug	EAA Chapter 478 Gathering	2W6
20-Aug	EAA Chapter 478 VMC Club and Young Eagles	2W6
24-Aug	Thunder over the Boardwalk	Atlantic City NJ
SEPTEMBER		
3-4 Sep	Flying Circus Airshow Weekend Grimes Airfield PA	www.goldenageair.org
14-18 Sep	Reno Air Races	Reno NV
17-Sep	EAA240 Pancake Breakfast 0800-1200	Toughkenamon PA N57
19-25 Sep	Triple Tree Fly-In	Triple Tree SC
20-Sep	EAA Chapter 478 Gathering	2W6
24-Sep	EAA Chapter 478 VMC Club and Young Eagles	2W6
24-Sep	EAA 1041 Pancake Breakfast 0800-1200	Gettysburg PA W05
25-Sep	Breakfast at Sentinmental Journey	Lockhaven PA (KLHV)
OCTOBER		
1-2 Oct	Warbirds Over the Beach VA Military Air Museum	VA Beach VA

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 2022-23*

Vice President: Paul Gambacorta 2021-22

Secretary: Gabriel Murray 2022-23

Treasurer: *Don Byrne 2021-22*

Committee Chairs and Chapter Advisors

Social Chairman: *Bernie Wunder*

Membership Chairman:

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

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Sid Wood 2022-23

Darryl Crawford 2022-23

Chris Moody 2021-22

Bill Englehart 2021-22

John Attebury 2021-22

Brian Link 2022-23

Jacqueline Link 2022-23

Chapter Web Address

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