

# Happy Valentines Day



February 2019

# EAA 485



Home of the  
"Panhandle Pelicans"

[Squawk 485](#)

Monthly Meeting NAS Museum  
Saturday February 9th @ 0900  
[Details](#)

## President

John McKiernan

[rockyjs7jm@gmail.com](mailto:rockyjs7jm@gmail.com)

Cell - (850) 291-4134

Hello Everyone,

Our opening 2019 chapter meeting had a great turnout. I'll attribute that to the long absence of our world renowned hamburger lunch. We sold 24 burgers. We normally have a burger or two left over and I probably wasn't the only one who didn't get one. I'm going to devise a better system on the burger count. Maybe utilizing some split raffle ticket to get an accurate count. In other words "no ticket, no burger."

It was great to see many new faces and some faces we hadn't seen in a long time.

Please note:

**February Meeting at NAS Museum  
0900 Feb 9th**

- **January 9th Meeting called to order at 1010**
- Pledge**
- Introductions & Guests**
- Ralph Moser Ray Aviation**
- Scholarship Fund Update**
- Young Eagles Update Terry/ Chris**
- Road Trip/Activities**
- Continental/Airbus**
- We need a Road Trip coordinator**
- NAS Museum Chapter Meeting**
- Scheduled for February 9th**
- Project Updates**
- Video Magazine Jan 2019**
- Adjourned**

Lunch



## RAY AVIATION SCHOLARSHIP UPDATE

[Ralph Moser Chapter 485 Coordinator](#)

We in local EAA Chapter 485, in competition with other chapters around the country, formally submitted our application for a scholarship on Jan. 16<sup>th</sup>. We will be notified around Feb. 28<sup>th</sup> if we got one. We think our chances are good. Craig Spoke and Bill Diaz ably assist me in this project.



If we get awarded a scholarship, we will immediately begin scheduling interviews with interested candidates (and their parents/guardian if under 18) in early March, and select the best candidate. Craig Spoke, Bill Diaz and I will conduct the interviews at a neutral site, probably the Ferguson FBO conference room. We will then forward our first choice to club officers for approval. Then we will help that candidate fill out the EAA application, and forward it to EAA. They conduct a final review to ensure prerequisites are met, and send the first check. Flight training at Ferguson Airport could start as early as late March/early April.

Our candidate search for this first scholarship emphasized 16-19 year-olds who have already demonstrated a strong interest in aviation.

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For example, already took or are taking a ground school, member of Civil Air Patrol, or JROTC member. We are considering six possible candidates at this time. For privacy reasons, I will not list the names here. I have kept them up to speed with three separate "Ray Update" newsletters over the past two months. The month of February is devoted to making sure all candidates complete the EAA prerequisites for the application, as listed on the EAA website. Three will be getting needed Young Eagle flights. And Bill, Craig and I are refining our interview plan.

If you haven't already, you can familiarize yourself with this program at [www.EAA.org/RayScholars](http://www.EAA.org/RayScholars).

Hopefully my March update will announce that our chapter was awarded a scholarship, and we're busy with interviews!

## February Meeting NAS Museum Saturday February 9th @ 0900

Don't miss this event! I can't think of a better setting to have a chapter meeting at.

The location is the small theater adjacent to the Cubi Bar & Grill. **Please notice the starting time at 0900** which is when the museum opens. This allows us to conduct a short version monthly meeting, and then go on a tour of the Museum restoration facility and flight line. Following the tour we have optional lunch scheduled at 1130 at the Cubi Bar & Grill. We've reserved the special meeting room for this event. A head count will be taken at the meeting start for lunch attendees so they can setup the room for the appropriate number. There is a fixed group charge of \$12.50 per person including gratuity for lunch. **Double Click** below and open the file to view the menu.



Cubi Group Menu 9.17.18.pdf

We encourage significant others and friends to attend this interesting event taking place in an awesome venue

Don't miss this!

## Dynon Skyview Intercom SV2S

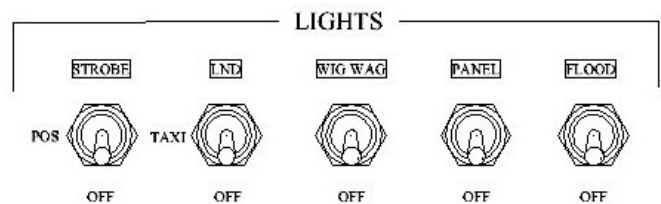


Although the name says Dynon Skyview the intercom is universal and will work with virtually any Experimental two place aircraft. It does not support more than 2 seats but has a lot of goodies.

While updating the Garmin 300xl to a Garmin 480w in my RV-7 I looked at my very, very old King KMA 20 audio panel and my Sigtronics intercom. I was starting to get an intermittent hiss and I imagine the capacitors in the King were beginning to signal the end

of their usefulness.

I started shopping for a new audio panel that would replace both items. I installed a Garmin 240 audio panel in Ron Lock's RV-8 and really liked the capabilities. The retail list price today of \$ 845 for the experimental panel provided me with a good case of sticker shock. Other audio panel manufacturers prices weren't any better. Making matters worse, I had a real estate issue in my instrument panel since the 480 was 1.3" taller than the 300xl so keeping an audio panel to the stack would mean relocating these light switches. I believe, I'd rather go to the dentist!



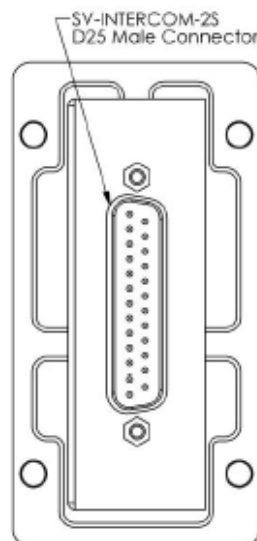


I decided to look at this from a different angle. I needed something that would let me use both my Com radios as well as give me some auxiliary channels for EFIS/EMS, autopilot warnings and allow listening to my pair of NAV radios. I knew it is possible to use a selector switch and use two Com radios, but what about the other things I wanted.

I stumbled on the Dynon Intercom by accident. This is a well designed unit listing for \$295. It actually has inputs for two Com radios, and to enable that capability you add a SPDT switch selecting either of two transmitters. The wiring guide even shows how this works. Pretty simple! In addition it has a muted and non-muted aux input channels so you can listen to all those pesky warnings and practice your Morse code. The capability to have an auto-muting system is a big plus factor for non-essential inputs. This allows prioritizing ATC communications on the muting channel while allowing warnings to also be heard without interruption on the non-muting channel. The intercom also provides a pair of stereo music inputs, one internal and an external along with some other goodies. It also has 4 dedicated wires for a Dynon Skyview. I populated those just in case Santa brought my a 10" Skyview for Xmas. No Joy!

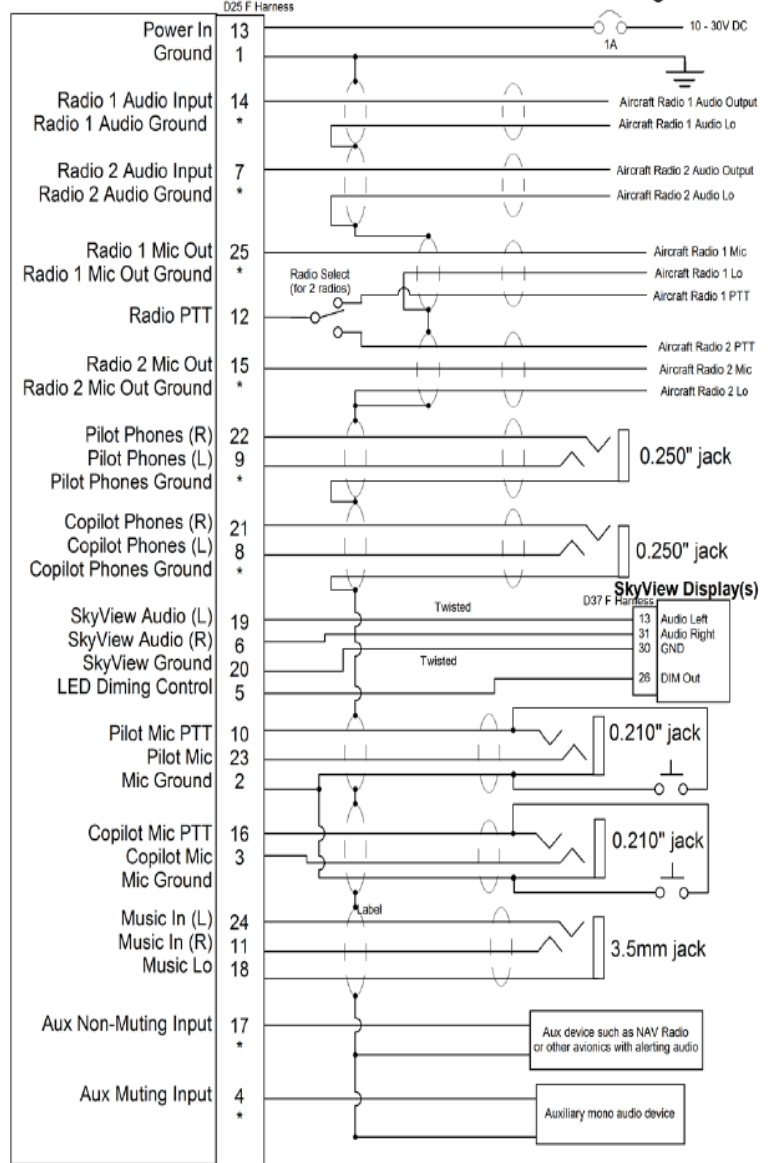
The intercom is also small in size with the outer bezel size 1.8" W by 3.52" tall in my case. The unit is supplied with both vertical and horizontal faceplates a very nice feature. I already had a rectangular vertical hole where my Sigtronics intercom panel was and by slightly enlarging the opening enabled the Dynon intercom to slide right in. The unit is extremely light weighing 7.2 oz.

All the electrical connections are handled through one d-sub D25 pin male connector. You are also provid-



ed the matching d-sub female socket connector along with the necessary socket pins and a clam-shell protector. Now that's efficiency. But the efficiency comes with a small problem.

## SV-INTERCOM-2S to Generic COM Radio Wiring Guide



Yeah, I know there always is a catch. Above is the wiring guide which on the surface appears straight forward until we look a little closer. Good wiring practice will have us terminate all shielded wires only at one side of the cable. This prevents the possibility of having a



ground loop. A ground loop means we have two different paths for the ground return. This normally introduces unwanted noise into the circuit, sometimes with very bad results. They are also difficult to trace. With this intercoms we want to terminate all the grounds at the intercom.

The problem is there is only one ground pin on the unit. WHAT??? Since your dealing with wires carrying radio signals we are dealing with lots of shields. What the directions call for is daisy chaining the grounds and shields to pin 1 which is the only ground. Remember when installing an interphone or audio panel you're not only wiring your radios but additionally mike jacks, headphone jacks and push to talk PTT switches. As an example with my stereo headphones there is a shielded 3 wire cable for both the pilot and copilot headphone jacks. That's a total of six (6) wires plus the two (2) shields. We're dealing with 8 items to connect; 4 have sockets installed and go to intercom connector and 2 grounds need to be attached to the shields and the shields need to join the chain eventually terminating at pin 1. That's just for the headphone jacks. OK, I understand, my head hurts just trying to explain it.

In my system there are over 20 ground and shield connections going to the intercom. Additionally Pin 1 is also the ground connection for the electrical supply to the radio. We need to run a wire from the main ground bus and split this line into two. One of the lines connecting to the daisy chain and the other to pin 1 ground. I'm lucky because several of my Aux audio signals aren't shielded and don't have a ground just a single wire. Looking at the wiring guide you can see how convoluted this becomes and the diagram looks so neat. Time to breakout the soldering iron. Unfortunately most of this has to be done in the aircraft.

We need a solution that provides flexibility and is as neat as possible. The first step is to place any heat shrink tubing on the shielded wire. Next I strip off the insulation and shield exposing

the internal wires about 2". You need to be careful not to nick any of the wires. I remove the insulation jacket and then slide the shield up forming a bulge and trim this back so it's clean terminating the shield at the insulation. Mini diagonal cutters make this job easy, clean and quick. They



**Bunch up the shield and trim with mini diagonal cutters**

are a must doing small wire work. From the end of the insulation up an inch or so I strip about 3/8 - 1/2" of the insulation to expose the shield.

Now we're ready to start the tying in process. I make up several 3" long 22ga ground wires and strip about 1/2" of insulation from each end. Any scrap aircraft wire can be used as long as it's flexible enough to wrap and allow movement of the shielded wire for later connection. If there is a ground wire in the bundle it's bent back up to the bare shield and then trimmed and stripped so it lies in the bare shield area.



**Any grounds need to be attached to the shield first**

The first shielded wire will get 2 of the 22 ga 3" ground wires attached to begin the daisy chain. One of the shielded wires ultimately will be on

February 2019<sup>5</sup>

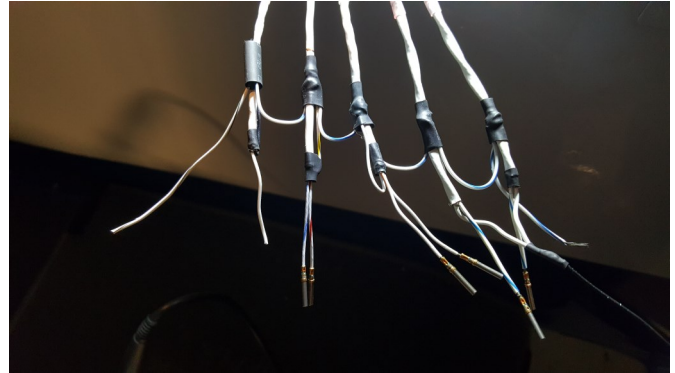


Miniature Diagonal Cutters are very handy for trimming shields and any small wires. I use them to cut small diameter heat shrink. 20ga and under wire and especially for cutting cable tie ends flush.

the end of the line and only require 1 ground and the other will be trimmed off later.

It's not a very hard process if you have access to the wires. After adding flux (cleaning paste) to the shield I use solder and add a light coat to the shield to aid in soldering. Then I take a 3" ground and wrap it around the shield area holding the internal ground wire in place. Next the other wire is attached and wound the opposite way. I make sure everything is tight and then solder the area.

Here are all but one of the shielded wires from my Garmin SL30 radio including the pilot and copilot mike and headphone jacks.



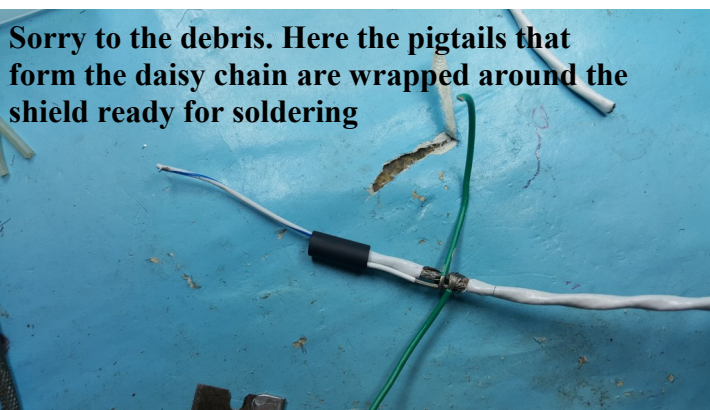
The two wires on the right are the P/CP mike jacks. Both the mike and headphone jacks are isolated from the aircraft with special phenolic washers preventing a ground loop. On the wiring guide the two Mic jack barrel wires are soldered to a pigtail that terminates in pin 2. This provides a ground to the barrel of the jack allowing the PTT switch to ground the tip keying the mike input. My aircraft PTT was done a little differently using an aircraft ground on one side of the switch already. Time to do the Garmin 480 wires!

### Finishing an Avid Flyer

My son Pat has been busy. He's having so much fun covering his fuselage that I believe he may be quitting his day job. It's been a lot of work, but there is a light shining, but not through the Poly-Spray silver coat and that's good.

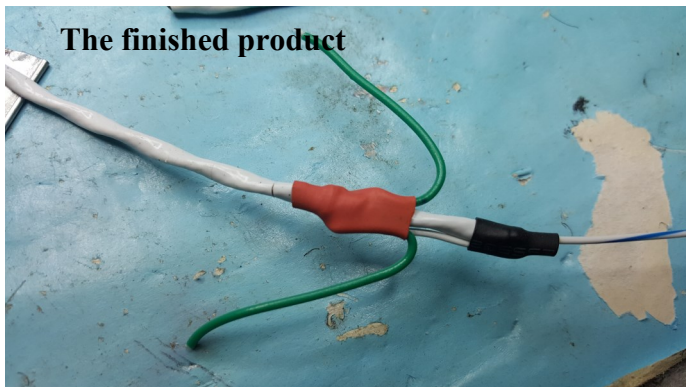


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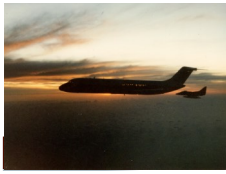


Sorry to the debris. Here the pigtails that form the daisy chain are wrapped around the shield ready for soldering

Once this is cold I slip the pre-installed heat shrink tubing over the area and use a heat gun to shrink the tube. Now it's on to the next wire.



The finished product



Fairly tight quarters. Left of the ATV are the new conventional MK IV gear legs. With the final silver coat applied it was time to do the color. The plane was painted with Daytona White Aerothane (polyurethane) paint previously and that's what the color will remain. The fuselage was first up on the block along with the gear legs. It would be necessary to get the gear legs installed at least temporarily following painting so the fuselage could be easily moved outside for the wings, struts and tail feather painting.



Here the fuselage is finished it has quite a sheen for a fabric airplane. You can see the reflection of the ATV on the side.

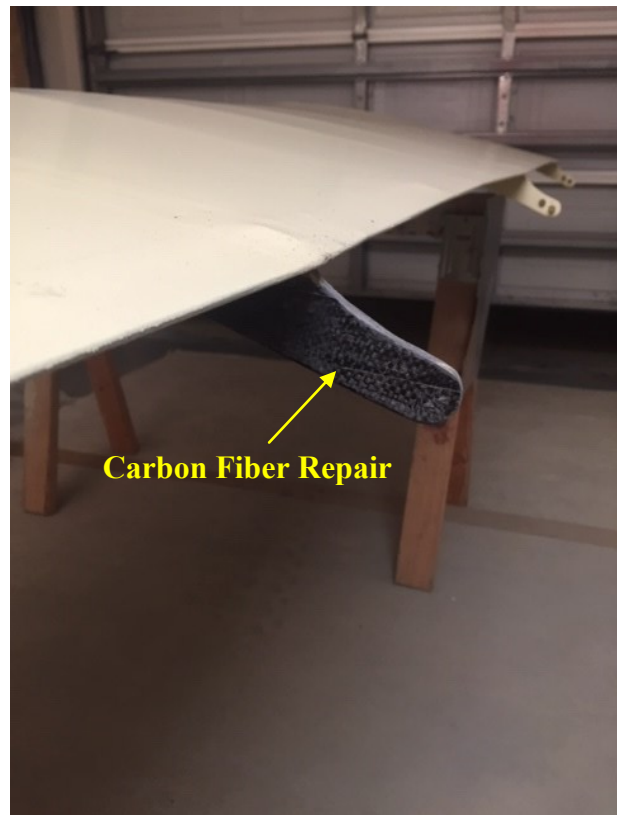
In the background there is one of the landing gear struts also finished. The brakes and wheels will be installed and the legs attached temporarily to the aircraft without using the bungees since they are a PITA to install and take two people.

The Avids use a flaperon system on the wing leaving the ailerons vulnerable to some additional hangar rash. They are attached to the wooden rib tails and need to be inspected on each flight. Following the accident two of the aileron attach



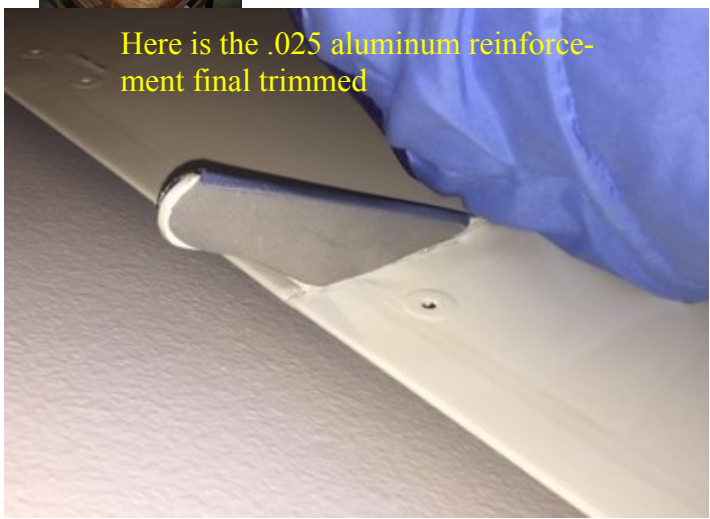
Initial fitting of broken tail on wing rib aileron attach point

points broke. They were repaired by using epoxy and clamps on the original pieces. Then a carbon fiber outer layer layup was done.



Carbon Fiber Repair

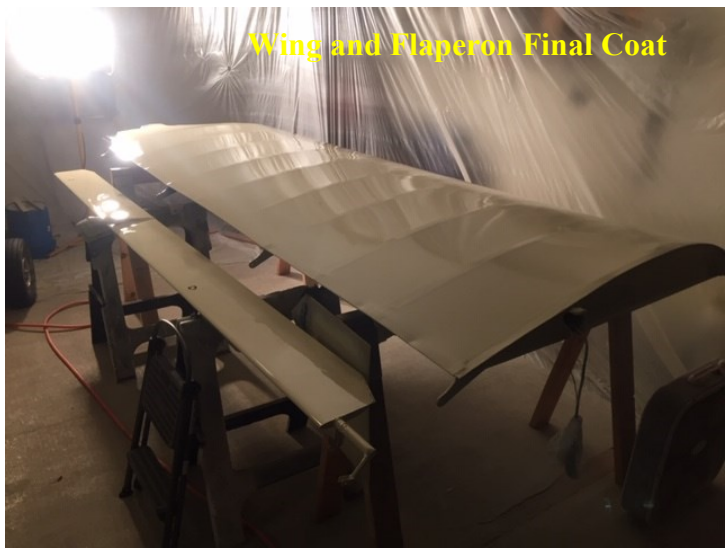
The final fix will be a .025" aluminum "U" channel attached to the rib with #8 machine screws and nuts and match drilled through the two holes that attach the aileron. Very strong repair. all the trailing edges will receive the aluminum channel fortification.



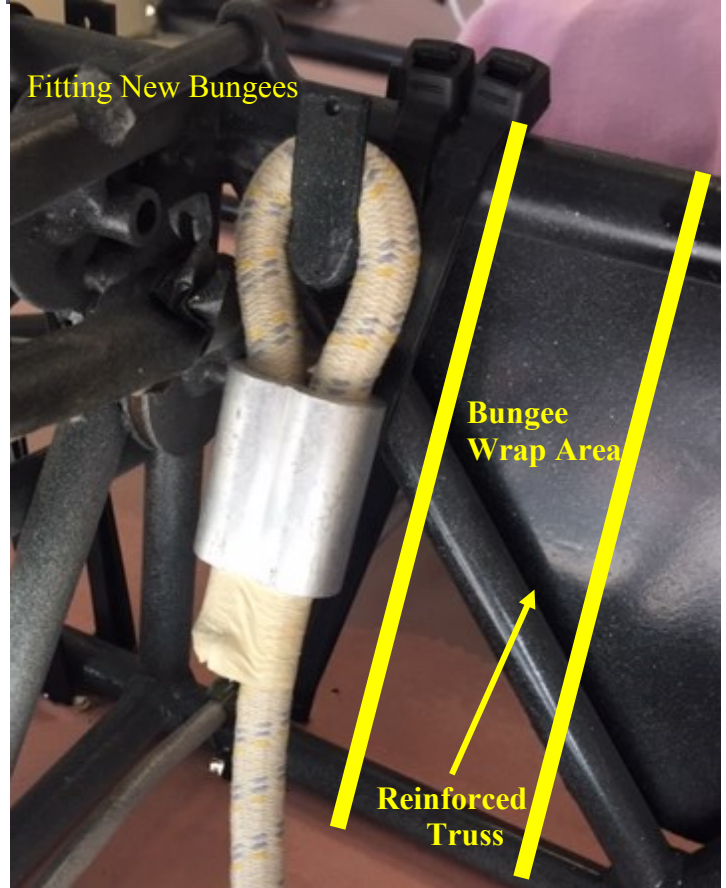
Here is the .025 aluminum reinforcement final trimmed



Avid Flyer on New Conventional Gear



Wing and Flaperon Final Coat



Fitting New Bungees

Bungee Wrap Area

Reinforced Truss



Some more painted pieces

Pat did a great job working in a very limited space. There is some touch-ups and some striping to be done. The aircraft came with unused vinyl graphics, however, Pat may go with a couple of red stripes along the fuselage for accent, but you never know. Reassembly is just around the corner.

February 2019

# Thatcher

We're back at work on the Thatcher CX-4 build after a holiday and some bad weather absences. It's been slow going up front getting all the previously made puzzle pieces to fit. We just completed the firewall fastening strip. This is a 1 1/2" strip that attaches to the firewall. On the firewall side the top cowling attaches and to the aft side nutplates are installed to fasten the forward fuselage fuel tank skin to the firewall. This was like getting planets to align.

We also made the instrument panel modular to a degree. We don't feel there would be much room to work behind the panel from the cockpit. Our solution was to cut out the bulkhead that forms the instrument panel leaving a 5/8" boarder and make a solid .063 aluminum instrument panel that is removable. We used some #8 nutplates in the bulkhead to make the instrument panel removal a one tool job.



## Fuel Tank Install

The fuel tank is held in place by forward and aft angles riveted on the fuel tank sides and the angles are located on the side longerons using AN3 bolts with nutplates. The plans called for 3/4"x3/4" 1/8" thick. We didn't have that handy but did have some 1"x1" that we used. that in place with bolts. There is a removable skin above

and connected to the fuel tank to allow fuel tank access. Everything has been fitted and match drilled. It's critical that the fuel tank height not interfere with the skin attached with screws to the two forward bulkheads.

We didn't get around to riveting the angle on just yet and I'm not sure if the Pro-Seal I have is still viable. The rivets will need to be dipped in the sealer installed and riveted. We cut an access panel in the top where the fuel filler will go to gain access. We also have some adapters to place on the tank allowing for a tank vent and fuel line to the engine. The plans call for a float indicating system, however. We may decide to go with a fool proof sight glass on the instrument panel. Here is the 10 gallon tank with clecos holding the angles in place.



You can also see the firewall bulkhead cap strip has recessed nutplates. The flush screws are also installed ensuring they will flush out. The same process will be used on the aft bulkhead making a clean installation. Since we have access to the inside of the tank we will use normal AN rivets and buck them. We assume the tank is located up close to the firewall for CG reasons. There's more room under the tank than the photo shows but it's still pretty tight.



I have a very similar picture hanging in our den with the same inscription. It was a replacement for one that I purchased back in the early 80s at a restaurant named Boom Trenchard's Flare Path in



San Diego

. As you can see by the picture it was a great place to have dinner or a drink.

[Hugh \(Boom\) Montague Trenchard](#) **Father of the Royal Air Force.**

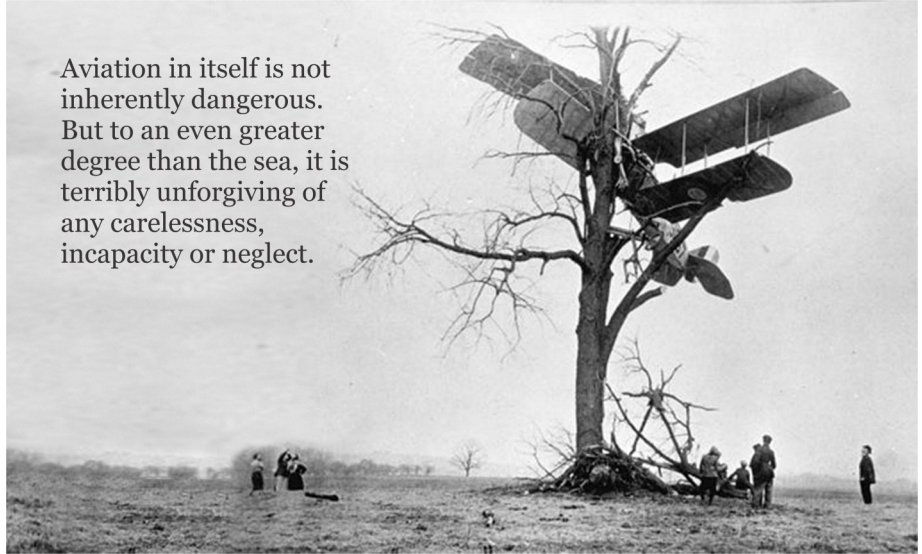


3 February 1873 – 10 February 1956

He went in the military in 1893 at the age of 20. In 1912 at the tender age of 39 became a Royal Aero Club aviator (no. 270). The entire course cost £75, involved a meagre two-and-a-half weeks tuition and a grand total of 64 minutes in the air. Just 3 years later Trenchard was promoted to general and commanded the Royal

Flying Corp in France until early 1918. Promoted to major general he was instrumental in forming the RAF (Royal Air Corps) as a permanent entity.

Boom Trenchard's Fare Path Restaurant no longer exists. It was a recreated WWI squadron building including artifacts and actual vintage aircraft on the premises. It was located right on San Diego's Lindbergh airport adjacent to the



Aviation in itself is not inherently dangerous. But to an even greater degree than the sea, it is terribly unforgiving of any carelessness, incapacity or neglect.

*Captain A. G. Lamplugh, British Aviation Insurance Group, London. 1930's*

runway where you could watch the aircraft land. Unfortunately in the 80s a corporate jet's engine blast blew out a large window injuring 8 patrons and after a time the restaurant was closed.

Back to the poster. I was in San Diego attending school in the early 80s. I had a room at the BOQ at the Naval Base that had this weird image of a Spanish Conquistador. You know the type of painting that the eyes always followed you around. Even at night there was enough light that the dude was always looking right at me. Well I had the poster in a tube and the frame that was home to Conquistador fit it perfectly. I hung it sideways, Perfect.

So for a week or so no more eyes following my every move in the room. When it came time to checkout of the "Q" I was waiting for transportation to the airfield and one of the folks working there came running up with the framed poster. I had completely forgotten and left it hanging on the wall. I explained that the frame was theirs as I started to remove the poster but they said they had a storage room full of different "paintings" so just take it.

For about 20 years the poster was prominently displayed in 3 different houses that I

February 2019<sup>10</sup>

lived in. During hurricane Ivan in 2004 our home in Gulf Breeze was substantially damaged. Most of our personal possessions were missing or destroyed. The framed poster was high up the wall in our vaulted ceiling family room. The house was a mess and when I looked up the picture frame was there but the poster was gone. It took me over 13 years to replace it. Oh, I almost forgot. The Conquistador had in fact survived the hurricane and remained protected underneath the poster. There he was on the wall still following my movements. Now that's creepy. He was entombed when the house was demolished.

### Lindbergh Field, San Diego KSAN

The approach to Rwy 27 is very scenic. Notice the large displaced threshold. The MSA within 25 NM of the airport in the quadrant the approach is flown from is 5400'. When we think of coastal airports we have a tendency to think flat without much obstruction. There is no precision approaches to Rwy 27. Even it's non-precision minimums are high, 663' above ground. Amazingly there is a 5-6 story parking garage located just off the end of the runway. We'll revisit the approach plate next month and use the approach plates wealth of information to aid VFR pilots.

In the meantime here is a night lower visibility approach from the cockpit: [Click Here!](#)



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# February 2019<sup>1</sup>

# EAA 485 news

## 2019 Officers and Committee Chairmen

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## EAA and Local Chapter Sites

[EAA 485](#) [EAA 1265](#)  
[EAA HDQTRS](#) [EAA 108](#)  
[Lite Blue Angels EAA 105](#)

## Interesting Links

[Blue Angel 360](#) Way cool  
[Drone on USS Bush](#)  
[Build Your Own ADSB Receiver](#)  
[F-18 Low Level](#)

## Miscellaneous

[FAA Notams](#)  
[Thatcher Build Site](#)  
[Aircraft Parts Express](#)  
[Barnstormers](#)  
[Skyvector.com](#) Flight Planning, Charts  
[AirNav.com](#) Airport info, Fuel Prices

Barin OLF ASOS 251 970-2469

HWY 98

Blue Angel Parkway

Normally meetings will be held at [Ferguson Airport \(82J\)](#) (Uni **122.8**) on the **First Saturday** of each month at 11:30 AM unless otherwise posted. Please check the [Ferguson Resource Page](#) if flying in.

Go past the main airport entrance and take the next left. Go thru the gate and make a left on the gravel road. Make a right past the T hangar you'll see our building down on the left side. Anyone interested in general aviation and building or restoring aircraft are welcome.

For more info contact:

John McKiernan 850 291-4134  
[rockyjs@mchsi.com](mailto:rockyjs@mchsi.com)





Home Of The PANHANDLE PELICANS

EAA 485 Pensacola, FL

2019

82J Monthly Pancake Breakfast Sched Third Saturday 0930-1100

Feb 16th, Mar 16th, Apr 20th, May 18th, Jun 15th, Jul 20th, Aug 17th, Sep 21st, Oct 19th, Nov 16th, Dec 21st.

Valentines Day Don't forget your Sweetie

Valentine's Day, also called Saint Valentine's Day or the Feast of Saint Valentine, is celebrated annually on February 14. Originating as a Western Christian feast day honoring one or two early saints named Valentinus, Valentine's Day is recognized as a significant cultural, religious, and commercial celebration of romance and romantic love in many regions around the world, although it is not a public holiday in any country.

The celebration of Valentine's day goes way back. A Catholic priest was martyred in 269 for supposedly performing marriages to Roman soldiers who were forbidden to marry. Over the centuries it was celebrated by many different religions. Cupid didn't appear until the 19th century at around the same time as sending letters or cards started.

Valentine's Day was also used to send another message. In Chicago, Feb. 14th 1929. Allegedly 4 of Al Capone's men, 2 dressed police went into a garage where rival Bugs Moran members were. What looked like a police shakedown against a wall turned into slaughter of 7 men. They were shot with two machine guns and a shotgun. Amazingly when the real police arrived there was a critically wounded survivor with 14 bullets in him. He eventually told the police that police had done it and later died in the hospital. A 1967 movie titled St. Valentines Day Massacre depicts the events leading to and the actual crime. The case was never solved.

2019

Events Calendar

February 9th 2019 0900

- NAS Museum Little Theater 0915 Meeting Call Order Pledge Introductions & Guests Ralph Moser Ray Aviation Scholarship Fund Update Young Eagles Rally April 13th Ferguson Pancake Breakfast now 3rd Saturday Road Trip/Activities Project Updates Next meeting Mar 9th Tour of Museum Restoration Facility Optional Lunch Cubi Bar (\$12.50)

Calendar

Future Meeting Dates:

- Mar 9th Apr 13th May 11th

Fly Ins:

- S&F April 2-7 Defuniak Springs April 13th Oshkosh July 22-28

## 2004 RV8A Total Time 400 hours airframe and engine since major overhaul \$85K

Lycoming IO-360 180 HP Sensenich fixed pitch prop

Well built and maintained aircraft. All SBs complied with including Aero Splat nose gear reinforcement and skid plate.

New PC680 battery

Complete Dynon 10" Skyview System:

Full EMS system (4 CHT & EGT, Fuel Flow, RPM, MAP, Oil Press, Oil Temp, Fuel Press, OAT)

Dual axis autopilots with electric trim

SV Knobs Panel

SV Autopilot Panel

Dynon ADSB-In receiver (single channel, on list for dual channel)

Stratus ESG ADSB-Out transponder Installed September 2017

Garmin 300XL GPS/Comm #2 (enroute and non-precision IFR certified)

Microair Comm #1

Garmin GMA 240 Audio Panel.

No Nav at present however tail VOR antenna and coax cable run to instrument panel

Great Instrument panel setup

2 1/4" backup Airspeed, Altimeter, Vertical Speed

Separate Lift Control pneumatic stall indicating system.

Rear seat rudder pedals. (currently uninstalled)

Ram mount for tablet

Well documented maintenance record. Full Engine logbooks

This is a sweet flying aircraft at 8500' leaned it flies 150 kts TAS @ 8.2 gph

Contact: John McKiernan 850 291-4134 [rockyjs@mchsi.com](mailto:rockyjs@mchsi.com)

