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Chapter 81 Skywriter

Annual Dues \$20

Checks should be made payable to EAA Chapter 81 and brought to a chapter meeting or sent to the Treasurer:

Eric Nelson
10270 N. Krauswood Ln
Oro Valley AZ 85737

Do not send payment to the newsletter editor!

EAA Chapter 81 Meeting
January 18, 2020 - 10:00 hrs
Ryan Airfield Administration building
(Just East of Richie's Cafe)



Click on the link below to see aviation events around Arizona

[Arizona Aviation Events](#)

These handsome chapter 81 patches are available from Eric Nelson when you cough up money for your dues.

Dave Jaksha

A brazen suggestion....

As some of you will remember I have been playing around with welding. My end goal was to produce an engine mount for my project plane, but in reality to upgrade my male standing in the world (real men weld!). After learning to burn oblong holes in parts, I progressed to beautiful circular holes. If the materials are of similar thickness, I can now produce a pretty decent weld. TIG is also versatile, being able to weld many materials such as Aluminum, Chrome Moly, Magnesium, Copper. But, if you are interested in joining dissimilar metals, brazing is a good choice. Also, joining thin and thick materials, brazing can be a good choice. Controlling the temperature of the thick material without burning through the thin part can be difficult with either TIG or gas welding.

Brazing is a process of joining components without melting the base metal. A material with a lower melting point than the base metal is flowed between and over the pieces to be joined. Brazing is similar to soldering, except at a much higher temperature and with a filler material that has a much higher tensile strength. Silicon-bronze, and aluminum-bronze is a commonly used filler.

TIG normally applied as a fusion welding process and brazing is commonly associated with oxy-acetylene torches, flux powder etc. However, application of a TIG arc run on a low current so as not to melt the base material and a suitable filler rod fed into the arc produces excellent brazed joints.

This filler rod is quite different from conventional oxy-acetylene 'silicon bronze' brazing rod. The filler rod should not have flux coating and also should be Tin free. Suitable rod can be found by searching for TIG brazing rod on the web. As the TIG torch provides a protective gas (Argon) shroud, there is no need for the addition of flux, as with the long established brazing process.

The melting point of silicon bronze TIG rod is between 1800 and 1990 F, while the melting point of steel is around 2700 F. But if you are not careful, its pretty easy to melt some of the steel base metal into the weld.

The tensile strength of Si-Bronze ranges from 50-70 KSI (Kilopounds per Square Inch). The fit-up, type of joint and cleanliness of the base material are more important than when welding. Lap or socketed joints produce the highest strength.

Also, TIG brazing is usually done in the DC mode, just like welding steel. If you use aluminum-bronze brazing rod, using the TIG AC mode can be useful to help clean the base metals. Have fun.

Ben Wilson

Looking for Wittman Tailwind W-10 stuff:

1. W-10 Plans (24' span – triangle tips)
2. Builders Manual by Jim Stanton
3. Callbie Metal Wing Plans
4. Clement Mods Drawing Package with Tri-gear.
5. Dimensions of Brian Alley Carbon Fiber Cowling.
6. Info on Vetterman Exhaust with muffers for carb/cabin heat.
7. Any “trail of breadcrumbs” to find a 0-320
8. Ideas on 3-blade prop.

If you're moving on to something faster, sleeker and fancier – this would be a good way to retrieve some value from Tailwind stuff
In your garage.

Ben Wilson

EAA 42794

4benwilson@comcast.net

Erik Fjerstad

New Members information needed!

In December we were fortunate to have a number of new members join up. Unfortunately some paid cash and didn't leave any contact information, so we have only their name, insufficient to add them to the roster. One person subsequently tried to borrow chapter tools but our Hangar Managers didn't have a record of their membership, but we were able to straighten that out and collect the person's information. That left two new members without contact details, and they can't receive emails until we get them. If you know either Gene or David please let them know to contact us so we can update their contact information.

Hopefully new members Gene Bywater and David Bramlett will either find and read this newsletter online or will come to a future meeting where we can get their details. Gene and David, if you read this, send an email me (president81@eaa81.org) with your name, address, phone number, EAA number, aircraft project info, etc.

Erik Fjerstad
Chapter 81 President

EAA webinars are free to all aviation enthusiasts. Pre-registration is recommended since space is limited to the first 1,000 registrants. Upcoming webinars include the following topics and presenters:

1/8/20

7 p.m. CST

[AOG! Dealing With Breakdowns Away From Home](#)

Qualifies for FAA WINGS and AMT credit.

Mike Busch

It's every aircraft owner's worst nightmare, an aircraft mechanical problem that occurs while on a trip far away from home base. This is always stressful. You're stuck somewhere you don't want to be, dependent on shops and mechanics you don't know or trust, and generally far outside your comfort zone. Maintenance expert Mike Busch and his colleagues have guided clients through thousands of these situations. From this experience Mike has developed three simple rules for ensuring the best possible outcome. In this webinar, Mike illustrates these rules by taking you through a number of real-life aircraft on ground situations and how they were resolved.

1/14/20

7 p.m. CST

[Chapter Websites - A New Offering](#)

Charlie Becker

EAA's Charlie Becker will present the new EAA website offering available free to EAA Chapters.

Bob Miller

EAA Chapter 81 Meeting Minutes December 21, 2019

Meeting was called to order at the Ryan Field meeting room at 1004 by President Erik Fjerstad.

Secretary's Report: A possible new record was set when the motion for approval of the Minutes of the November 23 meeting, without their being read, was made, seconded, and voted upon in 3 seconds flat. In case you were wondering, the motion passed unanimously.

Treasurer's Report: Eric Nelson informed us that we have \$5,070.49 in the bank as of 11/30/19. This is after total annual expenses of \$3,205.00, including Chapter Hangar rental (2,475.00), Chapter Insurance renewal (\$420.00), Chapter renewal with EAA (\$100.00), AZ Corporate Commission's \$10.00, and mailing/website/newsletter expenses of \$200.00. There was a notable discrepancy between the \$10.00 donated for coffee and donuts in November and the \$95.12 cost (admittedly from September through November). As Bob Miller is now making a big show about paying for his donuts, some *other* chiseler(s) need to pony up for what they consume.

Visitors: Kim Neibauer is visiting from Chapter 800 in Grand Junction, Colorado. David Bramlitz, an EAA member, is a mechanic for SkyWest, and is working on his pilot's certificate. He has restored an Airbike. Mark Starks is from Casa Grande. Arned (hope I got that right) Hernandez is here with Jeff Gilbert.

Old Business: None

New Business: Jim Keown (rhymes with bow-in) suggests that the February Meeting might be at Xerocraft at our usual time (10 AM) on Saturday the 15th. Xerocraft is a group of engineers, artists, and hobbyists who have amassed an amazing collection of machine tools and love to share their knowledge and facilities with others.

Steve Hulland is soliciting flight-line volunteers for the Copperstate Fly-In, which will take place on February 6-9 in conjunction with the Buckeye Air Fair. Free camping will be provided.

It was initially planned to go around the room and ask about projects, but four of our members had presentations prepared; it was decided to postpone the rest of the projects until the January 18 meeting.

Stephen Zigelstein brought in a kiddy biplane constructed mostly from a hand truck and a plastic barrel. It's easy and inexpensive to build and looks like a lot of fun, especially when the toddler can hand-crank the propeller!

Chuck Valade (you should be able to pronounce it by now - OK, for you slow learners, it rhymes with abrade) is scratch-building a Zenith CH 750 Cruiser (yes that is how it is spelled). This has significant differences from the STOL (Short Take-Off and Landing) version, with single-strut wings, less STOL capability (stall speed is a whole 39 MPH!), but a higher cruise speed of 118 MPH. It features a more petite empennage (ooh la la!) with a narrower horizontal stabilizer and elevator, and a separate vertical stabilizer and rudder, compared to the all-flying vertical tail of the STOL. It still qualifies as an LSA (Light Sport Aircraft), and will be added to his collection: a Glasair, a Zenith 601, and a BD-4. Chuck hand-formed every rib and fabricated nearly every part of his Zenith projects.

Erik Fjerstad has been learning a great deal about about his Hatz biplane, built by Chapter 81 member Dennis hall. Although Erik has plenty of tailwheel hours, very early in his transition training, he ground-looped the Hatz, damaging the fabric under a lower wing. Another incident involved a wheel-pant that disintegrated when its sole retaining bolt backed out of the wheel hub. There had been no provision to safety this bolt, and it relied upon the springiness of the fairing to prevent its backing out. As it backed out, the fiber glass wheel pant expanded, so it continued to look normal until the wheel pant ran out of expansion and the bolt departed, shortly followed by the wheel pant. The remains of the wheel pant were found, and Eric purchased a new replacement, but had then to deal with paint, including pin-striping, and finding a way to safety the retaining bolt. He modified a nut plate and the bolts are now safety-wired to the wheel pants. Then, while installing his ADS-B unit at an awkward angle, it slipped from his grasp and the mounting bracket cut a slit in the fabric, naturally where there were three colors of paint. His initial attempt to patch from the inside looked great from the inside but terrible from the outside. The second try was from the outside and defies detection.

Erik has learned a great deal about paint matching! He also added a switch to the panel and printed a vinyl wood-grain covering with new labels. His other airplane, the RV-6A, must have gotten jealous at all the attention that the Hatz was receiving, because its panel labels started to peel off, despite a coat of clear lacquer. After investigating several alternatives, he selected a DIY (Do It Yourself) labeling system from Avery, available at Office Depot. They should be more durable.

Bob Miller had somehow inherited the old 24" X 18" Chapter 81 posters that directed folks to Project Meetings. They were sun-faded, washed away with rain, and featured a biplane drawn in at least three planes (pun intended). Bob thought that he could do better. This began an educational experience in multi-media art, as Bob can contain all of his art talent in a tiny thimble. He can't draw a line, but used a straight-edge and a compass, along with some inexpensive stencils, to replicate the numbers and letters on the posters. He discovered that a Sharpie marker will bleed under a straight-edge, and the first poster was doctored with a great deal of White-Out. The next medium, colored crayon pencils, was much more user-friendly, if less brilliant in color. Unhappy with his attempts to improve the drawing of the biplane, he copped out and found a lovely photo of a red Hatz biplane online, cut it out, and glued it on. The red direction arrows are made from colored duct tape, as on the originals, and he proudly claims that he did actually hand-draw the saguaro cactus featured on each poster. The new replacements have been sprayed with a matte transparent lacquer for sun and rain protection.

Meeting was adjourned at 1100. The next meeting will be on Saturday, January 18 at the Ryan Field Meeting Room at 1000.

Respectfully Submitted by
Secretary Bob Miller



Steven Hlland

COPPERSTATE 2020 will be a 4 day event starting Thursday February 6th and running through Sunday, February 9th. In addition to the terrific events from 2019, we will be holding a Competition Day featuring Spot Landing, STOL and other events to be announced.

COPPERSTATE and the Buckeye Air Fair 2019 saw in excess of 30,000 people February 8, 9 & 10! That's a sizable increase over past years – and no wonder. With events such as an **Airshow, Exhibitors, Sky Shop, Forums, Workshops, Youth Activities, Terrific Food Vendors...**its easy to understand why crowds came out every day and flew beautiful planes in from all over the country.

Steve Hlland is looking for Flight Line Operations during the Copperstate Fly-In February 6th 1/2 day; 7th & 8th all day and from 07:00 until Noon on the 9th.

Flight Line Volunteers can contact Steve via email at aztaildragger@gmail.com or text, not call, me at 520-307-5775.

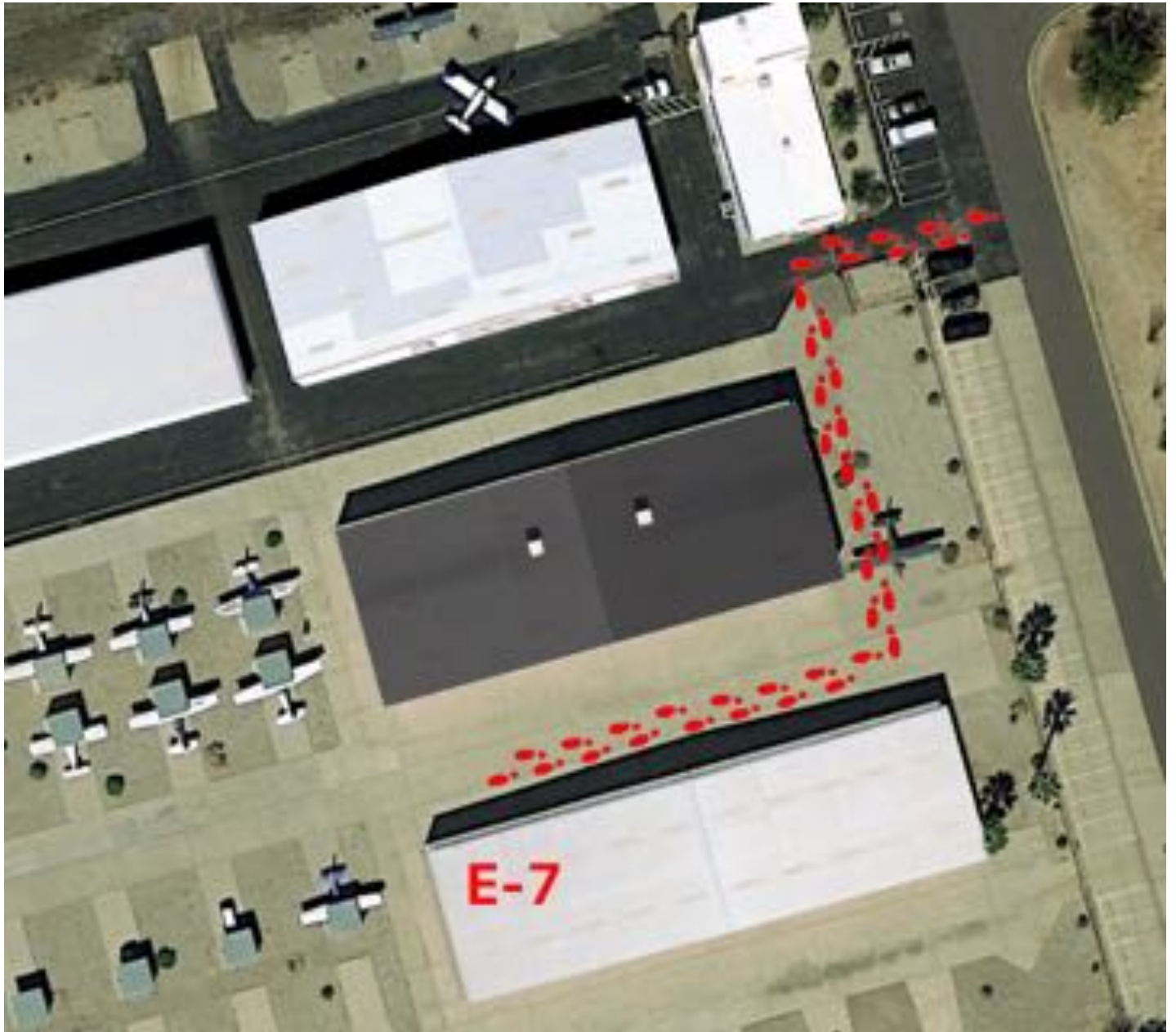
Members can view the very nice Copperstate Fly-In Web Page at <https://www.copperstate.org/> Anyone volunteering for one shift on any day will not have to pay any camping fees. I and a couple of FLO's crew will arrive on Wednesday February 5th in order to set up signage, FLO's camping area, etc.

Location of the EAA Chap 81 hanger

Drive down South Aviator Lane to the end. Park just south of AirWest. There is a walk in gate just south of the auto gate. It is not locked. Walk through the gate, and turn left. Walk past the first hanger on your right. The EAA hanger is on the Northwest corner of the second hanger, E-7. Chairs are available or Bring your own chair

See the two images below!





Classifieds

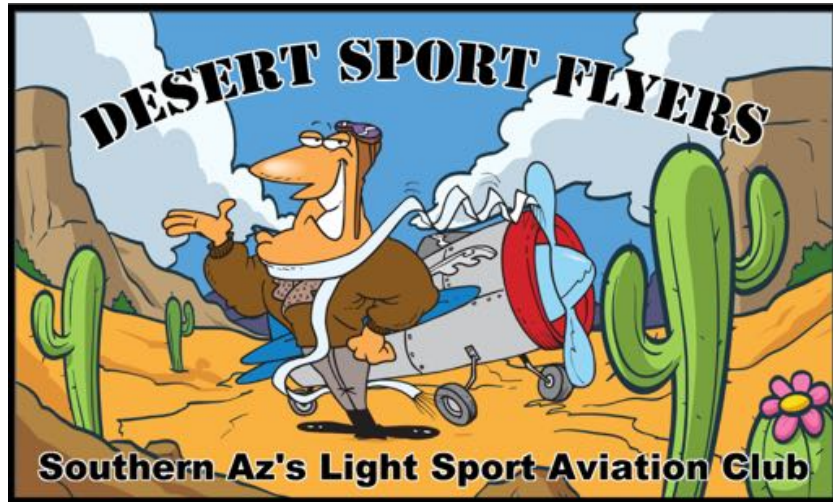
Remember that you can place an add in the newsletter (it will appear on the Chapter 81 web site also) to sell those items in your hangar. Then, you can buy more shiny stuff to put in your hangar! Send email to newsletter81@eaa81.org with a pic, description and contact information.

011 Zenith Zodiac 601XL w/B modifications. EXTREMELY nice looking plane. 158 hrs, Jabiru 3300, MGL Glass panel plus a mounted tablet, autopilot, plus all the other stuff. \$44,500

If interested, contact Jimmy
860-946-7194
jimmyg2000@att.net



Important updated information!



Lyndell Taylor
ltaylor017@yahoo.com

Desert Sport Flyers suffered a setback in March when during the annual inspection a crack was discovered in the top cap of the center section main spar of the club's aircraft. The manager elected to disband the club at that time. However, some of the club members felt that the club should be continued with new organization documents and new management. Since that time, the new organization has been formed and will operate under the same name (Desert Sport Flyers). There are some options available for obtaining an aircraft and the club will soon make its decision as to what aircraft it will choose. The new managers are: Jessica Cox, President; Mark Gregory, Secretary; Steve Hulland, Treasurer; Jerry Witt, Maintenance Officer; And Bob Rill, Director at Large. If anyone is interested in membership in the new club, please contact one of the new officers.

Lyndell D Taylor

Stephen Zigelstein

Stephen has been building these aircraft for some time. Perfect for anyone that has small children or grandchildren. Easy build! Some parts are available prefabricated from Harbor Freight Aircraft Supply! To save on engine cost, the prop is hand cranked. From the photo it seems that the prop could use a little more pitch, and elevator and rudder authority is limited! Larger size Chap81 pilots may substitute a bigger barrel for some cheap stick time.

Stephen has some complimentary simple plans and instructions available if you are interested.

stephen_zigelstein@msn.com 308-383-9786



Angel Duncan

Attention Zenith Builders

We have an assortment of NEW Zenith parts at the chapter 81 hangar. If you need any of these items, please call or text Angel Duncan @ (520) 270-8076 (cell) or (520) 578-1162 (home) or e-mail aduncan6000@gmail.com

Donations to Chapter 81 for these items are appreciated. Don't forget, we are a 501c3 nonprofit!

- 1 Fiberglass Cowling for 750 firewall. (Other models have same firewall as 750)
- 1 Pitot Tube
- 2 Rudder Pedal Pivot L Brackets
- 2 Control Stick Grips
- 2 Rudder Cable Fairings

701 PARTS

- 2 7F4-3 REAR TIE DOWNS
- 18 7C6-1 CABLE PLATES
- 2 7F12-4 GUSSETS
- 2 7F15-4 GUSSETS
- 2 7F19-16C2 NYLON BLOCKS

801 PARTS

- 1 DOOR LOCKS/HANDLE KIT w/keys
- 2 8A2-4A FLAPERON ROOT HINGE
- 1 8C1-4 RUDDER CABLE PULLEY BUSHING
- 2 8F19-14 NYLON BEARING
- 1 8H2-15 ELEVATOR HINGEPIN ANGLE
- 1 8C8-14 FLAP MOTOR INNER BUSHING
- 1 8C8-15 FLAP MOTOR OUTER BUSHING

750 PARTS

1	75C4-5 (or 701# 7C5-1)	UPPER ELEVATOR CABLE FAIRLEAD
1	75C4-6	TOP SKIN ELEVATOR FAIRLEAD
1	75Z1-11	LOWER ELEVATOR CONTROL STOP

601 PARTS

1	6E6-3	OIL TANK TOP SUPPORT
36	6LAA-2	BALANCE WEIGHTS 1/8 MS
29	6LAA-3	BALANCE WEIGHTS 3/16 MS
10 inch	MS20257-5	HINGH
1	6ZU1-5	BOTTOM CAP ANGLE
3	6ZU1-5	BOTTOM CAP ANGLE (DRILLED)
2	6ZU2-4	SPAR UPRIGHTS
2	6ZU3-2	SIDE DOUBLER
3	6ZU4-2	AILERON STIP SUPPORT
1	312-185X300	RUDDER BUSHING
2	C16-14864	40 LBS. DOOR GAS STRUTS
1	65T5-2	TRAILING EDGE SKIN
1	65T5-1	LEADING EDGE SKIN
1	6T4-4/1	VERTICAL TAIL SPAR
2	6T4-5	DOUBLE ANGLES (wrapped with Vertical tail spar above)
2	6B18-5	SPAR ACCESS COVER

601 PARTS CONTINUED

1	6K2-2	CENTER CONSOLE
2	6W9-3	BELLCRANK ACCESS COVER

RIVITS

10	MS2047AD5-7
5	AD5-10
109	AD6-10
3	AD6-12 (CUT)
4	AD6-15

TOOLS

701 LEADING EDGE SLAT ASSEMBLY JIG

EAA BIPLANE FOR SALE

\$19,500



125 hp Lycoming O-290-G,
New brakes & tires
417 252-0332 OR 417 252-1750
WILLOW SPRINGS, MISSOURI
More photos available on request

2007 Johnston Tiger Cub, Single Seat LSA, Rotax 503 DCDI, TT ACFT/ENG 70hrs, Basic VFR instruments, Custom 9 gal aluminum tank, Cleveland Brakes, Custom cargo storage compartment behind seat, Folding wings, Can be flown with Doors open or Off , Stall 27 - Cruise 75 MPH

Asking \$9K

Stephen Zigelstein. Best way to contact me is Cell Phone
[308-383-9786](tel:308-383-9786)



Best Prices on Dynon for EAA Members

Marc Edmonds, the owner of Light Sport USA in Sisters Oregon and a premier Dynon independent dealer, is offering to all EAA chapter members what he believes to be the lowest pricing in the USA on new Dynon avionics available on Dynon's website, (www.dynonstore.com), shipped directly from Dynon in Woodinville, WA. to the purchaser with full warranty.

For a firm quote contact Marc Edmonds at Light Sport USA, www.lightsportusa.com 541-719-1245 vtails@yahoo.com

Due to circumstances I am forced to sell my Rv9a sliding canopy kit. Chapter 81 has viewed my project twice, Craftsmanship is excellent. Tail, wing, and fuselage are complete. Electric elevator, electric aileron, electric flaps. Ray Allen stick grips, Dual brakes. landing lights kit, Position light kit, Whelen strobe kit. Finish kit is included. Plane is on gear temporarily. Air plane has had wings installed and tail and wings measured and drilled for correct angles. Stewart system primer. Lift reserve indicator. Tanks sealed. External steps. Gray and blue leather seating. No engine or prop, It has the fuel injection cowl so a 360 will also fit, besides 320.

Neil Cubbon
520 373 3909
Neilc@icloud.com

"After 2 years of health problems, I am back at work on my two projects, however, I can use some help. Both are shown in the attached photo.

The yellow one is a 3/4 scale Navy version of a Stearman WW2 trainer in wood construction and almost finished. Remaining work is activating the Rotec radial engine, brakes and instruments.

The other is a full-size version of a Fokker DR1, metal framed WW1 fighter with a lot of work remaining.

If you think that you, or someone you know, might be interested in gaining some hands-on construction experience, please give me a call or text me at 520.282.1523, or email me at rolden1@gmail.com.



1948 Swift airframe TT 2250 hours, engine 345 SMOH, New prop. many approved mods including 210HP continental IO-360 engine, stick flight controls, 50 gallon fuel upgrade, sliding canopy and more. \$60,000.00. based at Ryan Field. contact George Snyder [520-661-2127](tel:520-661-2127) for more info.



Long Ez Project for sale

I will no longer be able to get my pilot's license due to medical issues. The URL below will take you to my website that shows most of the components included in the sale. The price is \$2500, but I am open to partial or complete trades(looking for enclosed trailer or SCCA project car), open to all offers, the worst I can do is say no. I can store this project until spring if needed. Please email with any questions, or use the reply box on the website.

<https://longezforsale.godaddysites.com/>

Thank You,
Allen (aabebay@everttek.net)

In July 2018, I purchased the Empennage/ Tailcone and Wing Kits from Van's Aircraft for a RV12iS (see attached). In October 2018, under the supervision of Synergy Air (Eugene, Oregon), I completed the Empennage. I have now completed the Tailcone, but have not done anything on the Wing Kit, except sorting and labeling all the parts and fittings. The cost of all the items that I have purchased from Van's Aircraft amounts to \$11,400. The cost today from Van's for these same parts would be about \$12,000. I also have the complete tool kit for the RV-12iS which I purchased from Aircraft Tool Supply at a cost of about \$1,600 plus a pneumatic squeezer (3" yoke) costing \$500.00. I have attached a few pictures of the Empennage and Tailcone.

The Empennage, Tailcone, and Wing Kit are available for the price that I paid for them, namely \$11,400 or best offer. The RV12iS Tool Kit is available at no extra cost and there is no tax applicable.

If interested, please contact John Twyman at:

Tel: [520.207.5002](tel:520.207.5002) (voice only) or

Email: john.w.twyman@gmail.com



Check out our Chapter Facebook Page!
<https://www.facebook.com/ea81.org>

**Please send items of interest, classifieds, etc
to**

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or to Dave's address on front page.



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