



# The ThunderWord

Thunderbird Field EAA Chapter 1217 June 2019

Scottsdale, Arizona

## PRESIDENT'S CORNER

Greetings from my corner of the hangar! At last month's meeting, we had Kelly Sallaway talk about a movie she is producing based on the story of British pilots at Falcon Field during WW II. Kelly did a high energy presentation with lots of great flying sequences. Thanks to John Washington for lining her up to speak.

Everywhere you look .people are talking about drones and electric powered flight as the future of general aviation. I look at drones as glorified RC helicopters and it isn't something I am interested in. Man carrying remote piloted drones look like an entertaining recipe for disaster. Plus you don't get to fly and, being a pilot, I want to fly it!

The technology that goes into these drones of the future with high powered electric motors propelling them has some great spinoff potential for sport aviation. A four engine RV-4 with electric motors housed in DC-6 type cowlings on the wings would be really cool. This month's guest speaker, Chapter member Micah Martin will be bringing us up to date on electric motor applications in homebuilts which should be very interesting.

See you at the June meeting!

*Curtis*

## JUNE CHAPTER MEETING

The June meeting of Thunderbird Field EAA Chapter 1217 will be held on Thursday, June 21st, beginning at 7 pm. This month's speaker will be Chapter member Micah Martin who is going to talk about a very interesting project he is building. It is an Onex configured for battery-powered flight. Micah is a software engineer starting with no experience building airplanes, in his talk he

will present his journey toward building a fully electric airplane, although he is not finished yet. He will talk about the engineering and other issues that he has encountered.

Thanks to Dennis Smith and Denny Myrick for getting this month's presentation lined up.

Since it is our Chapter's 21st anniversary we will have cake and drinks to enjoy.

Guests are always welcome!

## MEETING LOCATION

The location is The Scottsdale Airport Terminal Building, 15000 North Airport Drive, upstairs in the Thunderbird room. This location will be our permanent location through the remainder of 2019. Chapter 1217 originally had an agreement that we could use the terminal meeting room for free, the caveat was that if someone was willing to rent the room we had to find someplace else to meet. This led to switching back and forth with the Community Center and renting a room from them. The rent on the community center was \$100- per meeting, the rent for the Thunderbird room is \$360- per meeting. Therein lies the \$260- question. Where is this \$260- per month going to come from?

The idea was brought up last month and the plan will be to get more members to go with the LIFE MEMBER option of a one-time donation of \$500- to generate revenue. Each life member would fund two meetings. We are also going to put a donation bucket at the meetings for people to contribute to if they want to stay in the Terminal Building. Members and guests will be able to vote with their dollars and if we have sufficient interest we will stay in the terminal building. The Chapter cannot underwrite a loss so it will be up to you to decide where we will be meeting.

Continued on page 2

# HAPPY BIRTHDAY

## THUNDERBIRD FIELD EAA CHAPTER 1217

One hope is that in negotiating next year's rent we are able to convince the city of the service we provide to the community and get a reduction in rent. Two of our members who are politically active are going to spearhead that campaign and hopefully our problem will go away.

### AIRVENTURE HAPPY HOUR

It has now been a 21-year tradition of Chapter 1217 members attending the Oshkosh AirVenture Fly-in to get together one evening and compare sightings and stories. This year on the first day of the Fly-In, we will have our annual AIRVENTURE HAPPY HOUR AND FISH FRY at WENDT'S ON THE LAKE. Come and join us for some traditional Wisconsin food and libations. That's on Monday, July 22, 2019, around 7 pm.

If you want to plug it into your GPS the address is N 9699 Lake Shore Road, Van Dyne, WI 54979-9703, phone 920-688-5231; [www.wendtsonthelake.com](http://www.wendtsonthelake.com). They are located 3.8 miles south of the seaplane base.

### EAA CHAPTER 1217

#### CELEBRATES 21 YEARS

This month marks the 21st anniversary of Thunderbird Field EAA Chapter 1217. It has been a lot of fun, and we even have managed to keep a few of our founding members. They are Jack Pollack, Gretchen Kinder, Terry Emig, Mark Nuessle, and Curtis Clark.

Thanks to our Chapter members we have managed to pile up some impressive statistics: 221 meetings with an average of 35 people per meeting. That totals just under 7500 attendees!

One of the big things that keeps everyone's interest up are the ThunderWord newsletters, of which we have produced 211. Over the years we have had three different editors. They are Gretchen Kinder, Heather Baldwin, and our current hard-working editor Ron

Kassik. We owe each of them a big thanks for their hard work! When we first started, we mailed out the newsletters; but when we figured out we had given the US Post Office over \$10,000, we started e-mailing most of the newsletters and saved boatloads of money. An interesting fact was the original name of our newsletter - it was dreamed up by Jack Pollack, and it was *Mensa Lite*.

As part the effort to keep everyone informed about Chapter 1217 and aviation events in general, Jack Pollack has tirelessly been the Secretary/Treasurer, as well as running our Thunderbird Field.com website. While it has been slow to take flight, 6 years ago Paul Rhodes jumped in and set up a Chapter 1217 Facebook page. Next time you're stalking your old girlfriends, take a moment to check it out and Like us.

It takes a team effort to keep a Chapter active and fun, as well as getting the membership engaged. We are always looking for more help. Some of the folks that have stepped up to the plate and donated their time are Rusty Gavigan, who sends out the dues notices; Denny Myrick, who runs the shirt and hat sales; as well Dave Kujawa, who does the meeting cards. We also have our entertainers to thank, Bill Unternaehrer and Ron Landon as well as their spouses, for hosting many of the holiday parties, and Jack and Clare Pollack for the May Day BBQ. Also a big thanks to my wife Chrissie who puts up with all the craziness and forgotten deadlines.

What does the future hold for our Chapter is probably a big question. We now have a fantastic future home here in the new Terminal Building that unfortunately comes with a price tag. We will most likely stick with the same format of interesting meetings and social events. The Chapter serves more as a networking hub getting like-minded people together.



Photo by Scott Germain

### Pat and Mike McGarrys beautiful Cessna 185 in cooler times

#### ELECTRIC SKYMASTER

There's plenty happening in the world of environmentally friendly aviation, with a string of clean-burning aircraft notching up milestones in recent years, including the first flight of an electric light sport aircraft in Australia, the first electric test plane to tow a glider into the sky, and the first electric aircraft to cross the English Channel. LA's Ampaire has now put into the air what it says is the largest hybrid-propulsion plane to ever take flight, with plans to kick off commercial operations in the next couple of years.

There have been quite a few hybrid electric aircraft concepts and prototypes over the years, including the futuristic Volta Volaré, the Terrafugia Transition flying car and a test plane from the University of Cambridge and Boeing.

But never before has a hybrid-electric aircraft of this size flown before, at least according to Ampaire. Its Ampaire 337 plane is based on the six-seat Cessna 337 Skymaster, which it retrofitted with its own electric propulsion system. That means yanking out one of the two combustion engines and putting a battery-powered electric motor in its place, with the two now working together for optimal

efficiency through the air. Since the Cessna Skymaster is a standard category aircraft, the FAA certification process would apply to the engine and prop combination and the actual installation would be a modification or field approval.

Earlier this month the Ampaire 337 took flight for the first time in a short jaunt at Camarillo Airport, with a test pilot and flight engineer in the cockpit. Following the first outing of this prototype, Ampaire plans to continue flight testing the plane multiple times a week from June through August and gather data about the performance of its electric propulsion systems.

The information gleaned throughout will then guide the team in building a new prototype that will be used in a pilot project exploring the potential for a commercial route in Hawaii. The company imagines eventually using its hybrid aircraft to service commercial routes for regional airlines covering short distances, and hopes to begin operations in 2021.

#### HISTORY OF 4130 TUBING

4130 chrome moly cold drawn seamless round tube is one of the most widely used steel tubes in the construction of race car

Continued on page 4



**Pat McGarry took this picture near Area 51 from his Pitts Racer 7X on the way to Reno for air race pilot school earlier this month**

chassis and roll cages. Its great strength-to-weight ratio has been the preferred choice for race car and aircraft builders since the early 1900's. 4130 seamless tube is the product of two emerging technologies of the late 1800's and early 1900's: the production of alloy steels and the production of seamless tube.

### **Alloy Steels**

The first alloy steel was patented in 1865 by American metallurgist, Julius Baur, but it would be another 50 years until alloys would become widely used. The emerging automobile industry (1910 -1920) ushered in the era of alloy steels. By 1918, the United States was producing more than 1 million tons of alloy steel.

### **Seamless Tube**

The process of producing seamless tubes was invented in one operation from solid bar by two brothers from Germany, Max and Reinhard Mannesmann in 1885. Just 6 years later, the first commercially successful seamless steel tubes were produced by the Shelby Steel Tube Company of Shelby, OH. The seamless tube market at the time was driven by the bicycle industry and its need for lighter and stronger steel tubes.

### **4130 in Aircraft**

Following World War I, seamless tubing started making its way into airplane fuselages over the traditional wooden

Continued on page 5

structures. The early seamless steel fuselages were made from what we now identify as 1025 mild steel. It was soon apparent that fuselages needed a stronger material than 1025, so independent investigations were conducted by both the US Army and the Navy into the development of chrome-molybdenum (chrome-moly) and chrome-vanadium seamless steel tubes. Around this time, "The Ohio Seamless Tube Company was then doing more than any other tube company in experimenting with various alloys for tubing. It is impossible to determine definitively but it is quite probable that the first "chrome-moly" tubing, as it came to be known, was produced in that plant" (Boore, 1951 p. 89). This first tubing was pierced from a lot of alloy steel produced by Central Alloy Steel Company and was part of an experimental heat lot. The first batch of chrome moly was given to the Glenn L. Martin Airplane Company to test and then they shortly came back to purchase more. Martin merged with American-Marietta Corporation and later into Lockheed Corporation.

**Fun Fact: The Shelby Seamless Tube Mill, which produced the first commercially successful seamless steel tubes in the United States burnt down in 1908. US Steel Company, who owned the Shelby mill, decided it would not rebuild after the fire. The residents of Shelby, Ohio did not accept the fate of its mill and built a new mill on the foundations of the old one and named it the Ohio Seamless Tube Mill, which went on to produce the first chrome moly cold drawn seamless tube.**

A Division of the U.S. Army Air Service, referenced 4130 chrome moly seamless steel as the stronger choice over the mass-produced low carbon seamless steels. By 1937, George F. Titterton referred to 4130 as the generally adopted steel for aircraft construction for practically all parts made from steel sheet or tube. Boeing-Stearman used 4130 in 1934 to build its Model 75, which was used as a primary trainer for the US Army Air Forces and the US Navy through 1945. Even today, 4130 is still the standard when constructing tube fuselages.



**Travis Foss was part of the crew that flew a DC-3 to Normandy for the D Day Rememberance, He sent these really cool pictures of the flight over**

## **TYPE CLUB FLY-IN**

Each year hundreds of thousands of people flock to Oshkosh for the AirVenture Fly-In in July. What you may not realize is that there is a deep grassroots movement of Antique and Classic aircraft owners across the country that have their own mini-Oshkosh events. These events have little to no crowds, no lines for food or restrooms, and a more laidback event aimed at the entire family being able to enjoy. Many pilots go to Oshkosh a few times then decide it would be better suited to their personalities to go to a more low key event where they can learn more about their favorite type of plane. Each summer the Cubs, Luscombes, Swifts and every type of Cessna imaginable have Type Club Fly-Ins. Attached is an example of this year's Cessna 120-140 Fly-In.



### **International Cessna 120-140 Association 2019 Convention Announcement September 3-7, 2019 - Branson, Missouri**

Mark your calendar for next year as we have a great Convention lined up for our club. The 2019 Convention will be held in Branson, Missouri on September 3-7. Our host airport will be Branson West Airport KFWB. Branson is in Southwest Missouri, just south of Springfield. Our hotel is actually a beautiful resort called Chateau on the Lake. The hotel sits on the northern end of Table Rock Lake with amazing views of the rolling hills of SW Missouri.

The 2019 Convention will be somewhat different from previous events. This year the Association Board is the 'host' giving us the opportunity to try a few different things. The main difference is that we won't have a

registration table set up at the airport. Much of our focus is shifting to the resort and beautiful Branson, MO.

Two fly-outs are planned along with two dinner shows. One is a riverboat dinner cruise on Table Rock Lake and the other the Dixie Stampede, a horse show with dinner. Both fly-outs are a very comfortable distance away and quite interesting locations.

The banquet will be held at the Chateau resort, with a scrumptious menu planned in a very nice private hall. Bring your appetite and dress up, this will be a night to remember.

We are encouraging online registration which will be available in mid-January. Currently we have 40 rooms reserved at the Chateau resort and while it is possible to get more we need to secure those early. Please mark your calendars and call the resort for reservations.

Branson has an amazing collection of places to explore, as a result members having their own wheels will give everyone the opportunity to get around as they like.

Finally note the Convention is the first week of September, and with event activities going on Tuesday through Friday. The banquet will now be on Friday evening. This allows the entire weekend to fly home. We have all noticed the WX patterns have changed with the usual clear harvest weather not being there in the last week of September. Moving up a few weeks should make for better flying.

Online registration will be up and running in January. Hotel registration is available now. Please mark your calendars. This is going to be the premier social event of the Cessna 120/140 Pilot's year. The Association has a dedicated email address setup for questions concerning the convention: [convention@cessna120-140.org](mailto:convention@cessna120-140.org). Old friends and new, we hope to see you there!

The International Cessna 120-140 Association Board



Photos by Travis Foss



Photo by Travis Foss



Tom Partin has decided to stop flying and has two airplanes for sale at Thunder Ridge air park (AZ28), a 180hp LongEz and a 120hp Sonex. Anyone interested can contact Bertha Partin at [bmpartin@gmail.com](mailto:bmpartin@gmail.com)



# ThunderAds

## **GLASAIR III**

Lynn Babcock has decided it's time to sell his Glasair III. This aircraft has every upgrade from speed brakes to airconditioning and cruises at 220 kts. He is asking \$215,000. Lynn is the original builder and the plane has been based at Scottsdale Airport its entire life. 480-227-5945.

## **THATCHER CX-4 PLANS & BUILDERS MANUAL**

New, never used, donated to our Chapter.  
Curtis 602 710-4494

## **ONEX, WELL-EQUIPED LSA FOR SALE**

ONEX, folding-wing, fighter-like, single-seat, tricycle-gear LSA, an 85%-scale Sonex. Powered by 100 HP, turbo-charged VW engine. Dynon SkyView, 2020-compliant ADS-B Out avionics. Ipad for navigation fits in center console. With wings folded, Onex shares space in small T-hangar behind one wing of RV-12. Denny Myrick 480-213-4906. [Dennymyrick@me.com](mailto:Dennymyrick@me.com)...

## **COOL PLANES FOR SALE**

Only flown by little old ladies to church on Sundays. <http://captainbillywalker.com/aircraft-for-sale/aircraft-for-sale>

## **CESSNA 172'S FOR RENT**

Two IFR Cessna 172s for rent at Chandler. Owned by Chapter member Pat McGarry. Contact Chris Hoel for more information and to schedule [birdgangft@gmail.com](mailto:birdgangft@gmail.com)

Space available for ads, send us yours

## **RV-4 PARTIALLY BUILT KIT**

\$13,500 Lycoming 0-290-D2, kit for \$3,000 or \$16,000 for both. Bill Refrow 602-843-9862 [w7lov@cox.net](mailto:w7lov@cox.net)

## **LYCOMING 0-360 A1A**

Engine built up for RV project never completed. Invested \$50,000. Price very firm at \$25,000. Martin Del Giorgio [delgiorgiopels@gmail.com](mailto:delgiorgiopels@gmail.com)

## **GARMIN GDL39 PORTABLE GPS**

ADS-B Receiver with free Weather and Dual-Link Traffic. Battery Pack with extra Battery included. Works with all Apple Products. Brand new in the box, \$400. Ken Roth 602-228-5000, or e-mail: [RothDevCor@aol.com](mailto:RothDevCor@aol.com)

## **SERVICES, ETC.**

### **High-Perf Tailwheel & Akro Instruction**

Pitts, Skybolts, all experimental tailwheel aircraft. 46 year's experience. Scottsdale Airport Budd Davison, Plus-5 Aviation, 602-738-2045, [www.airbum.com](http://www.airbum.com), [buddairbum@cox.net](mailto:buddairbum@cox.net)

### **OIL COOLER REPAIR AND SALES**

Chapter member owned. R & E Cooler Service 800-657-0977 [www.oilcoolersvs.com](http://www.oilcoolersvs.com)

### **FLIGHT INSTRUCTION, ETC.**

Fred Gorrell Designated Pilot Examiner: Airplane: Private, Commercial, Instrument, ATP, ME and Lighter than Air: Private and Commercial. 602-942-2255, 602-418-2045, [fgorrell2@cox.net](mailto:fgorrell2@cox.net)

### **HOMEBUILT AIRCRAFT CERTIFICATION**

ABDAR Gary Towner 928-535-3600

### **ANNUALS, RESTORATIONS, FABRIC WORK**

Eloy Airport Julie White 520-466-3442

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