



## A MODERN AUTOGYRO FLIGHT

June 2019

Volume 61 Issue 6

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### By Jim Humphries

Kris Kelly approached me at the monthly EAA chapter 35 meeting, and reminded me that I had given him a note months ago asking for a flight in his ultra-modern autogyro. He apologized for not responding sooner, but offered to take me for a dollar ride after the meeting. Wow! I had forgotten all about that, and to my embarrassment, I didn't recognize Kris at all. No matter! I was delighted with his offer, and assured him I'd be ready and anxious to fly with him. After lunch, Kris gave us an interesting slide presentation with facts, features and characteristics of his modern autogyro, spelled with a "y".



Kris's elegant Calidus Autogyro

Things have a way of coming back around in life. I actually knew something about autogyros. [The spelling with an "i" seems to be the most common American spelling of this rotorcraft.] In my senior year in high school, I wrote my first term paper on the invention of the autogyro. It featured a Spanish designer, Juan de la Cierva, who was fascinated with the possibility of flight beneath an auto-rotating, four-blade rotor. He experimented with tilting the axis of the rotor aft about ten degrees to the direction of flight, and observing the rotor spinning-up and producing a lift and drag force as the air flow entered the

rotor disk from below. Forward speed of the craft caused autorotation of the rotor which, at a nominal rpm, produced a lift force that he reasoned sufficient to support a light aircraft in powered flight when propelled through the air by a fore-and aft mounted engine.

Juan began his experiments with a small model with thin rattan blades

and a rubber band motor to drive it forward through the air. After some trials, he found the best angle for the rotor shaft, and a workable rotor length and chord to prove his concept. His thoughts ran to designing a full-scale autogyro that he could fly. His first aircraft was powered by a gasoline engine driving a propeller in the nose. His autogyro, shown in Figure 1 below, had short wings to augment the lift of the rotor and to enable banking for turns. A short fuselage with "tail feathers" completed his design. He expected it to fly like the model, and be controllable. But he was in for a rude surprise. On his first takeoff, just as the craft got light on its wheels, it suddenly rolled to one side, and the rotor blades were destroyed on impact with the ground. He survived to search for a reason for the upset, and a fix to make his aircraft flyable.

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**Chapter 35 Member Picnic**  
**Arts and Crafts Faire**  
**1130- ? hrs**



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## PRESIDENTS COCKPIT

STEVE JONES



**Making a Difference.** Zach Ruiz, our Ray Foundation Aviation Scholar has registered with a flight school and begins his flight training in earnest next week! His goal? Get his Private Pilot Certificate before returning to school next fall. In other news, long time member Dan Martinez donated another aircraft engine to Southwest High School as a

training aid. Coming in July, David Gonzalez heads to Oshkosh to attend Air Academy! You may have seen an email about this already, but the Southwest Independent School District turned their spotlight on Southwest High School's aviation vocational curriculum. As you can imagine, your chapter factored heavily in their success. See their video here: <https://www.youtube.com/watch?v=ERxzsPIga34&feature=youtu.be>

**Gone West – John Killian.** Chapter benefactor and friend John M. Killian, Esq. passed from this realm Tuesday May 14<sup>th</sup>, 2019. Among his many accomplishments, John was instrumental in financing and equipping our chapter hangar, giving EAA Chapter 35 a unique asset and venue that continues to impact the lives of chapter members today. John had an uncanny ability to look at any situation and find a way to make everyone in the room share a laugh. His obituary sums up a life well lived. You can read it here: <http://porterloring.tributes.com/obituary/show/John-Moore-Killian-10711025>. Memorial contributions may be made to Bulverde United Methodist Church and Texas Cowboy Church, Bulverde.

**Grant!** Your chapter has been recognized for its continuing work to change lives through our Young Eagles program and our educational outreach. The Dee Howard Foundation provided a grant in the sum \$250.00 in recognition. Thanks to Phil and Susan Vaneau, our pilots, and our ground support teams for making this happen. Your efforts are getting noticed!

**VMC Club.** Thirteen pilots and enthusiasts gathered for a frank and open discussion about how to handle a really unfortunate takeoff scenario. With only a split second to make a decision, and extremely limited options, each participant was invited to discuss their possible course of action and why they would make that decision. We also learned that RP\* on the sectional demands a look at supplemental information to ensure proper pattern procedure. If you attended, this meeting qualified for Wings credit! If you missed it, don't despair. Join us next month, Friday, June 21st, 6:00 PM for the next installment. For more information on the EAA VMC Club, see: <https://www.eaa.org/ea/pilots/EAA-pilot-proficiency/vmc-club>

**June Burger Burn.** Without our members, EAA Chapter 35 would be nothing but a dream, an idle thought musing, "Wouldn't it be

cool if we could make a difference?" Well, we ARE making a difference and it's because of you. Once a year, we pause, look around and realize what a great organization we have become, because of the individual contributions of each and every member. This is it: the Membership Appreciation Picnic. So members, put your wallets away; you've already paid for this meal with your dues, your hard work and the energy you bring to make EAA Chapter 35 a force for change. Guests and visitors are welcome - the meal is \$5.00 for non-members. Of course, you COULD join the chapter -- we're a great group and would welcome your participation.

**Arts and Crafts Faire.** In addition we're hosting the June Arts and Crafts Faire during the June Picnic. We're supported by a network of spouses and family members who bring with them a diversity of interests and talent. This meeting, break out your fold-up tables and bring out those talents for all to see. You're allowed to follow an aviation theme if you must, but we get eleven months of immersion in the art and science of flying, so let's see what else interests you!

**Automatic Dependent Surveillance – Broadcast.** The deadline for ADS-B Out is fast approaching. If you haven't started planning your equipment installation, be advised the FAA has issued all vouchers for the \$500.00 rebates. Keep watching the FAA site, because as unclaimed vouchers expire, they'll be offered again.

**Coming up:** Our April Pancake Breakfast was so much fun, we're going to do it again! Join us Saturday morning, July 13<sup>th</sup>, 9:00 AM to Noon for all-you-can-eat pancakes, savory sausage, and wake-you-up coffee, and remember, PIC (flying in from another airport) does not pay!

**Country Store.** Are You Adventurous? Do you have an entrepreneurial bent? EAA Chapter 35 Needs You! Brian and June Goode are ready to mentor you on the finer points of running the wildly popular and successful Country Store. You'll learn from the best – Brian managed whole divisions of aircraft sales territories for Cessna and even today, he's the go-to person if you're looking for a Cessna Caravan. You'll continue this legacy of success and help members connect with their chapter while providing the revenue your chapter uses to drive so many fantastic initiatives. You see me lead off this column each month with 'Making a Difference'; well, it starts here. Contact Brian, June, Darren Medlin or me when you're ready to do this.

Until we meet again, fly safe and have fun doing it.





## Oskosh Announcement

### Oshkosh Roll Call

Heading to Oshkosh for EAA Airventure 2019, 22-28 July? Send me a text or email saying you're going and I'll add you to a group text. Don't forget your Chapter 35 shirts. The group photo is Wednesday, 24 July, 9 am at the Brown Arch.

Aviation Nation (a youth build support group) runs a summer camp during the week. Students and parents in the aviation program at Southwest High School are invited so you might see some familiar faces from our Young Eagle events walking around Camp Scholler. I'm looking for rides for students to and from Oshkosh so let me know if you have room and are interested. Thanks! -Darren Medlin, (210) 875-9971, eaa35vp@gmail.com



**EAA**

# Master the Art of Aviation

Join a community of pilots willing to share experience, promote safety, and help improve your flying skills.

**Chapter Gatherings**  
Third Friday of the month  
Meeting: 6:00 p.m.

**Location**  
San Geronimo Airpark 15464 Culebra Rd  
San Antonio, TX 78253

**EAA Chapter 35**  
787-644-7828  
eaa35vmclub@gmail.com  
www.eaa35.org

## CHAPTER BULLETIN BOARD

### Annual Chapter Picnic

**Main Course:** Hamburgers and Hot Dogs, complemented with buns, lettuce, tomatoes, onions, pickles, mustard, mayo, and chips.

**Side Dishes:** Please feel free to bring anything that goes with Hamburgers and Hot Dogs. Surprise us!

**Desserts:** requesting pies, cakes, cookies, brownies or anything you like.

I would like to say thank you to everyone who participated and worked very hard on cleaning our chapter building inside, beautifying our grounds, and installing the new lights on May 11<sup>th</sup>. The place looks fantastic and it's so much brighter in the clubhouse now.

#### Our volunteers:

Steve Jones – Installed LED Lighting, vacuuming  
 Jim Humphries – Dusted displays, vacuuming  
 Frank Pisz – Cleaned both bathrooms, vacuuming  
 Darren Medlin – Cleaned curtains, vacuuming  
 Jose Garcia – Cleaned windowsills  
 Frank Covington – Cleaned oven  
 Robert Moehle – Dusted Spruce Goose, cleaned out refrigerator  
 Michael Landis – Cleaned bathroom mirrors, swept closet, dusted chairs  
 Evan Carrell – Dusted wall of fame, wiped off tables, coordinated limb disposal  
 Brian Smith – Cleaned and organized kitchen cabinets  
 Zachary Ruiz – Cleaned and organized kitchen cabinets, pulled weeds and cactus  
 Chuck Fisher – Painted fireplace screen, dusted fireplace and mantle, cleaned oven  
 B.J. O'Dea – wiped down chairs  
 Ron O'Dea – Trimmed the lawn  
 David 'The Artist' Baker – Photographic support  
 Freda Jones – Assisted with LED light installation and cleaning oven, coordinated work party  
 We had other volunteers as well, but we didn't capture their work in the log. Thank you all the same for your phenomenal support. All our chapter members will enjoy the fruits of your labor for the coming year.

#### Our Kitchen Help

Roxanne Beavers – Made the delicious sandwiches, prepared salad  
 B.J. O'Dea – Helped organize the work party, set up the serving line for the meal

No one brought a Van de Graffe Generator. Maybe next year.



## A MODERN AUTOGYRO FLIGHT

## CONTINUED

(Continued from page 1)

Something was radically different between his small model and the full-size craft. The difference, he theorized, was the flexibility of the rotor blades on the model. In flight they coned upward as they generated lift and drag. But they also had the ability to rise and fall vertically during each revolution, thus compensating for the difference in lift on the left and right sides of the rotor disk. On the side of the rotor disk with its blade advancing into the relative wind from the aircraft's forward speed, more lift was generated than on the opposite side with a retreating blade. The flexibility of the thin rattan blades on the small model was automatically compensating for the unbalanced forces left and right. Cierva deduced that the



Fig. 1

a reality, and he set out to demonstrate its practical utility. This was back in the 1920's.

The benefit of an aircraft that could takeoff and land in very short distances was an eye-opener. But one more major problem remained to be solved. That was, the need to spin-up the rotor before brake release to preclude long takeoff rolls as the craft accelerated to flight speed. Cierva put his mind to the problem, and came up with a way to spin-up the rotor to an intermediate rpm before brake release. That worked, and the autogyro was on its way to becoming a practical aircraft. The following photos show other autogyro designs by several aircraft companies who developed the concept.



Figure 3. A Kellett autogyro in an air museum

It's obvious that if one could fly on auto-rotating wings, then the helicopter could not be far behind. Despite all the wonderful things that an autogyro could do, especially in slow flight, it could not hover, except in a headwind of sufficient velocity, and generally couldn't fly backwards. But the autogyro had proven that there was useful lift in a rotor disk.

The helicopter proved to be a complicated flying machine for many reasons. When the rotor was powered, a means had to be provided to "react the torque" on the rotor shaft.

As engine torque was applied, the rotor would turn in one direction, and the helicopter would begin to twist in the opposite direction. It was necessary to find a means to react the torque. One solution was to add a tail rotor in the vertical plane. That worked, and became the conventional solution. Counter-rotating lift-rotors is another option. A second problem involved developing and modulating lift from the spinning rotor. The pitch of the blades had to be controllable by the pilot.

My first flights in the iconic Bell 47/H-13 helicopter illustrated why helicopter pilots needed flight instruction before trying a lift-off. The H-13 was powered by a gasoline engine. As the collective, the control lever for increasing and decreasing the blade pitch, was raised by the pilot, the blades would take a bigger bite of the air. That began to produce lift. But it also caused drag which slowed the rotor speed. At the same time, the increased torque applied by the engine to turn the rotor, caused the helicopter to begin to twist again. A rudder pedal input was required to stop the rotation of the craft. Both of these reactions required more power from the engine. The engine rpm had to be increased immediately, which required additional pedal force. The attempt to balance all of these forces was initially beyond the skill and experience of most fixedwing pilots. Summarizing, to lift off the ground into a hover, one needed to increase the blade angle. He would need a rudder input to react the additional torque on the rotor. But both actions would drag down the engine rpm. The pilot must add more power to keep the rotor rpm from drooping, and to drive the tail rotor to hold the alignment of the helicopter. Adding more power started the process all over again. And there-in lay the rub.

Once off the ground, the helicopter is free to move in all three rotational axes, plus up and down, forward and backwards, left and right drift, which it would surely do, to the pilot's consternation. We called the resulting motion the "bug-in-a-cup" phenomenon. The instructor would lift the helicopter off the ground into a stable hover. Then he would turn the controls over to the student, who would immediately experience a growing oscillation both left-and-right and fore-and-aft. Yes, the bug-in-a-cup thing. Usually the student would realize that he was losing control, and the instructor would take back the aircraft. There was apparently a time lag associated with aircraft response which was causing the problem. The instructor could anticipate the student's problem, but even he couldn't satisfactorily explain the oscillation, or how to stop it. The student had to sort that out with successive tries. Success would come fairly quickly as his



Figure 4. An H-13 helicopter at rest



Figure 2. A Pitcairn autogyro in flight



Figure 5. An H-13 helicopter in a hover

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## A MODERN AUTOGYRO FLIGHT

## CONTINUED

(Continued from page 4)

brain adapted to stabilize the aircraft. With the instructor's presence for safety reasons, the student would soon learn to damp-out the oscillation, but he couldn't define how he was doing it either. It seemed to be a black art. Adding this bug-in-the-cup challenge to keeping the engine and rotor rpm in operating limits, and keeping the helicopter in directional control made learning to fly one of the early choppers quite a challenge. And the satisfaction of success was very sweet indeed. But I digress! Now, back to my pleasant orientation flight in Kris Kelly's modern autogyro.

Kris invited five of us for individual flights in the green Calidus Autogyro. [Yes! Spelled with a "y."] Freda Jones would go first, and I believe I was third to fly. Kris gathered us around the aircraft, and briefed us on safely entering and exiting the craft. We were shown how to strap in, and what to touch and not to touch. We watched Freda get in and get ready to fly. Kris closed the canopy and, with the engine already idling, taxied to the paved runway, and down to the takeoff end.

We watched as the rotor began to spin, and in moments they were airborne, and climbing out toward the onlookers. During the flight, Kris' friend, who was already airborne in his red autogyro (shown in Figure 7 below) joined up with them, and flew along in formation. Freda was excited with the inherent stability and pleasant flying qualities of the gyro, and with the presence of a wingman. They were soon back in the traffic pattern, and landed way down at the far end of the runway. As they



Figure 6. The red bird that joined Freda's flight

taxied up to the gathering of onlookers, Freda was all smiles. The rotor wound down, and Kris' assistant opened the canopy, and helped her dismount. She was telling us all about her flight while Kris boarded his second passenger, and taxied away for another flight.

Soon, my time came, and I appreciated a little help getting my right foot into the cockpit, and swinging the other over the seat into position. Both feet moved forward to rest on a stop, which kept my feet off the rudder pedals. I turned up the volume on the intercom, and spoke to Kris. We had a good connection. Repeating the taxi-back and takeoff, Kris soon had us climbing out. About 500 feet up, he offered me the controls. I made a gentle left turn and we leveled off and headed for Medina Lake. Kris reconfigured the rudder pedals so that I could use them for coordinated flight. Now, for the first time, I had a chance to fly a modern autogyro. To my amazement, this one flew almost like a fixed-wing airplane. I had a control stick to make turns. On the top of the stick was a familiar, military-style "coolie hat" electric trim switch. Kris had trimmed the plane for level flight, but I had a chance to use the trim as we varied our airspeed. I was beginning to feel right at home in this strange flying machine. The

stick had a solid feel about it, and it was quite responsive in initiating turns. Yes, a bit of rudder helped to coordinate the turn. These familiar pilot inputs made the autogyro immediately comfortable. The stability was built-in, as the cockpit was suspended below the rotor disk. The craft would fly hands-off naturally. This thing was fun to fly!

Kris pointed out the Medina dam, and we headed that way. He knew more about the dam than I did, and pointed-out a small spillway on the right side of the dam to provide water for local agriculture. He took control for a moment, and demonstrated a very tight left turn to parallel the dam. He spoke of how comfortable flying very low felt in this aircraft. Indeed I sensed that too. Kris remarked that I was getting more than a dollar ride, and he could tell that already I was getting relaxed flying his plane. He had me follow the twists and turns of the river downstream of the dam. This was a pleasant tracking task, and the autogyro made it easy. Soon it was time to head back to the field at San Geronimo. With a little help, I spotted the row of hangars, and set up a base leg. Kris took control, and flew what seemed to be a "normal" rectangular pattern as we turned final. He set up a comfortable rate of descent as we approached the runway. Then, just like a fixed-wing airplane, he rounded out, and touched down smoothly. Wow! What a nice machine! I can see why he was so proud of it. We taxied back to let me out, and to take on another lucky pilot/passenger. I thanked Kris, and, with some kind assistance from his helper, got out and, just like Freda, rejoined the onlookers and began raving about this fun aircraft, and the exciting flight that we made.

You might wonder about vibration. Kris had told us about how critical were the adjustments to balance the rotor and reduce vibration to a minimum. He had experienced a flight in a demo aircraft before he bought his German-manufactured kit. Vibration was scarcely noticeable. But when he first flew his home-built plane, the control stick was jumping all around with annoying amplitude. Kris got help from the factory technicians to make the very small adjustments to remove almost all of the vibration and stick oscillation. I could still feel a slight pulse in the stick, but it was so small as to be almost unnoticed. In flight, I soon forgot it entirely.

My flight lasted twenty-five minutes from takeoff to touchdown. Thank you, Kris, for a delightful flying experience in an aircraft type I had wondered about since my days in high school. I'll treasure the experience. That's some bird you built!. You have every reason to be very proud of it. I know you'll enjoy it for a long time to come. Please accept a special thanks for sharing these remarkable autogyro flights with friends and members of EAA Chapter 35.



Kris Kelly and I



## The Difference Between Knowledge and Practice



This has been a tragic several months in aviation. Pilots and non-pilots around the world have been engrossed in the widely publicized tragedies with the Boeing 737 Max and other high and not so high profile mishaps. The common denominator, regardless of whether the aircraft was a brand-new, high-tech plane, or a low-tech antique has been that something went tragically wrong that the pilot could not correct.

The 737 Max is one of the newest most sophisticated planes out there and the 737 an extraordinarily reliable, safe, workhorse. The Max has been flying for a couple of years and pilots I've talked to love them. As part of that sophistication it was designed with software that adjusted the tail-plane to give the plane the same "stick feel" as other 737's as the powerful engines give it a lighter climb feel. My pilot friends tell me it was not designed to prevent the pilots from pulling the nose to high and stalling as has been widely reported. The system operates unobtrusively in the background using AOA inputs and other parameters to fine tune the feel of the plane. It is a part of the flight control system itself, not the autopilot. It is akin, in philosophy to safety systems the automotive industry has been using for several years. So I'll start by using that analogy.

It is my understanding that the 737 Max system gives a nudge of forward "stick" as the aircraft accelerates, giving it a smooth climbout. Many aircraft have had "stick shakers" and "nudgers" for a long time to help prevent an impending stall to encourage pilot action, but this system is autonomous and doesn't require pilot action. So, instead of the pilots activating it or turning it on, this system is automatically on and a malfunction would require the pilots to specifically turn it off. Thus, as it is not part of the autopilot system, simply toggling off the autopilot (which every pilot knows to do instinctively) does not disengage this system.

Thus, this is a system that the pilots should not really have had to concern themselves with, so pilots received training about the system and its controls, but actually practicing for a failure mode would really be sort of a low priority as it shouldn't fail. If we believe press reports (take that at face value) it is unlikely the pilots had done any simulator practice correcting this failure mode.

By all press accounts, the pilots faced a scenario where the aircraft aggressively nosed over. Most pilots in that scenario would pull back and re-trim. The system could be disengaged using a console mounted switch if the pilot correctly ascertained what the problem was. In both tragedies, the pilots struggled to fly the plane as the ground got very big in the windscreen, and apparently had insufficient time to correct the problem. So, in this case, the first axiom of aircraft emergencies – "first fly the plane" – seems to have failed as the computer remained in control and flew into the ground.

The automotive parallel to this would be a malfunctioning traction control system. Most of our cars and trucks have an autonomous traction control within the "brain of the vehicle" that automatically engages the brakes differentially if a wheel spins. There is usually a

disconnect switch somewhere on the panel or shift area (do you know where yours is?).

So, you are hurtling down a mountain road and all the sudden the left rear wheel locks up throwing you into an un-commanded left turn into the oncoming lane. You regain control only to have it do so again. You probably disconnected the cruise control by hitting the brake, but while you were hurtling toward the oncoming truck did you trouble shoot the problem, locate the switch on the panel and disconnect it?

I doubt it. Although there is probably a section about this in the owner's manual and it is possible you might have read it, this is not a scenario even an experienced driver will have ever actually practiced. If you read the manual, you had been educated. But were you ever trained on this scenario?

Before moving on I have to give a disclaimer – I do not have any inside knowledge about the investigation, the solution or the software fixes. I have no idea why the AOA sensors apparently failed, etc. This is just the backdrop for a wider discussion of the need for hands-on-practice in an age of computers and ipads.

What prompted this article and comparison is that a big part of the solution discussed in the press (again take that at face value) has consistently been to give the pilots better "training". I read yesterday they were going to watch a video on an iPad. Is that enough? Is that training at all?

So, my seventy-year old L-17 does not have an automated system for...anything. It doesn't even have a stall horn. But as low tech as it is, it is equally capable of quickly and effectively overwhelming the pilot at exactly the wrong time.

The other day I did my biennial flight review. I'm a competitive sort, so although these are meant to be instructional, I still really hate to make errors. But, I still do.

Three thousand feet, wings-level. "You have flames coming from the cowling" says my extraordinarily patient instructor. I've memorized the checklist and I "know" to shut off the fuel, power and hydraulics, establish a glide, find a place to land, now. I sort of did that, but I was slow, and next thing I knew, I was dutifully soaring about at optimal glide speed gently circling a perfectly good airfield, which would have been bad if I'd been on fire. I apparently forgot about that little detail. Duh.... Obviously, the better maneuver would have been to throw out the gear before shutting off the hydraulics, effortlessly flipping the fuel, electrics and mags off and yanking the emergency hydraulic cut-off in a flash of a well-practiced hand, and aim for the flat spot – now.

### Why didn't I do that?

Because I hadn't **practiced** it. I'd read about it. We'd discussed it. I'd chair flown the scenario. I had been educated - but I had not done it or done it enough. I had not actually "trained" sufficiently. You see, Education and Training are not synonyms! The pilots of the 737 Max's may well have been perfectly educated, maybe they'd had

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## ADVENTURES FROM ANDREA

## ANDREA MCGILVRAY

**My Adventures With Budd Davisson in Arizona**

The week flew by and no pun even needed to be used. I have been a dream and now working on catching it. I'm In LOVE with the Pitts!

Knowing a goal is a good chunk of info, finding the right people to give you training is the second part. The delivery of that goal is not always easy to figure out and sometimes the goal/result comes in pieces without knowing the exact direction.

When I 1st saw the Pitts some 30 years ago, I was enamored and drooled all over it. It had my name on it, but it has been elusive all my life. My 1st ride in a 1942 Stearman took my heart and gave it the love of Acro. I had no idea that doing my own acro in my own airplane would ever become a reality; AND I fly a Pitts, well, that would be like a spacewalk. Chances were slim at best, BUT aviation does strange things and give strange opportunities. Opportunity with good timing also provides what most people call "Luck".

After one of our EAA meeting, Phil Vaneau, our Young Eagles coordinator, mentioned he got some dual in a S2B. I asked for the name and number of the instructor, Bryan Butler, and, as I was driving out of the parking lot, I was on the phone with him. So my 1st Pitts flight happened almost 2 1/2 years ago in that S2B, wow how times fly. The 1st 3 flights were "deer in headlights" holy cow amazing, and fast, BUT fun.

I started my Pitts adventure flying dual with Budd in a S2A. These were takeoff/landings and trying to keep them even, NOT just joy riding. I want to master this thing, and, by golly, I will!

How to fly a Pitts and make it do what you want IT to do.

Budd assured me that a Pitts will do what you want and only what you want. It will continue to do what you ask it to do until you ask it to do something else. That is IT, AND that is the truth, but when you don't know "what to do" well... that is where you will find yourself in a pile of the smelly stuff!!

In the Pitts, with power on, it is a lot of right rudder airplane, and with the power off it is a lot of left rudder airplane. AND everything in between is a 2-finger stick and rudder sweet as cream, smooth as silk, in a sleek hotrod.

What Budd told me also sits well with me, the Pitts is who you are. Your personality comes out and has a huge roll in the way you fly it. I guess I need to figure out my personality still.

Since my goal is to fly a S1(S or C), not a S2 (for now) ALL my lessons were in the front seat where you cannot see much of anything. That gives you the sight picture for a S1 for my takeoff/landings. Looking at the small triangles on the left and right side of the nose, small parts of the runway are all you see so I learned to see what moves. When the sides of the runway move or change size, you better fix it quick!

So, what did I learn? We did not do any loops or rolls, we just worked on takeoffs and landings.

My 1st lesson was to learn to feel my behind. That soft and squishy thing I sit on and take for granted. I thought I had some feeling in it,

but I guess it is way too soft, so we worked on the fascinating yawing of the Pitts. Power on, Right Rudder, Power off, Left rudder and back and forth. both straight and climbing/descending turns. Well, the pucker factor helps to get the softy behind educated.

Budd did the initial takeoffs and 50 ft in the air, I got the controls. Then next we did "bump & go". Touch and goes are a lot different, these are not intended nor wanting to land. JUST bump the ground one time, full power and nose up and go.

Then the dreaded scary high-speed taxing, AND, DON'T DO THIS AT HOME! Not safe, not easy, but mandatory on learning to NOT over correct and get the feel of the airplane on the roll out. The airplane is not wanting to do anything except go straight until an input happens, and that is easy to say and hard not to overcorrect or add your own opinion of what you think into the mix. wind, and bumps in the road create the need for us humans to give inputs to keep it straight. Other than that, she is an arrow that needs to be tamed.

Small quick inputs are better than big long inputs, again much easier said than done. So a quick here and there works out well. NO Dancing on these rudders and keep those toes OFF the brakes! I chased it across the runway from one side to another; it is nice to have a wide runway. JUST keep it straight he says! Ya.. ok.. that is all. You need to do nothing fancy is also what I'm told. Just keep it straight. VERY famous words.

What was most impressive about this airplane is that the "ball" is not easy to keep in the center and if you change anything. The "p" factor reflects power on and off! Yikes.. as we skidded/slipped around the sky.. NOPE.. this airplane has everything of "2". 2 sets of wings right! Since it is light and short coupled, things move quickly.

The next day Budd let me do the takeoffs which made me excited. How hard could that be??? It gave me a great pause after my 1st try. 1st of all it was nothing like the Hatz, nor what I remembered in the S2B a few years ago, and I am sure the other instructor helped me and NOTHING like any other tailwheel airplane I had ever been in. Budd said that if he was going to lose the airplane to a crash it would be on takeoff, not a landing, and I almost proved that point the 1st & 2nd totally unassisted takeoffs. AS I gave it power, he said "rudder" then repeated that until he was screaming repeatedly to me "RUDDER"!!! and finally helped me get it back straight. So on the second takeoff with more rudder, I let some weight off the tail and it darted to the left like a squirt again and Budd had to come back to the rescue.

Scared and frustrated that we almost wrecked the 1st two times, the third time I was ready and, by golly, I was NOT GOING to let her go to the left. Well, I either overdid it or we had a gust and then here comes some less right rudder, but all in all we were off the ground. Holding my breath, by the way, is possible since it does not take long for this hotrod to launch, but it is a good idea to breathe so when you are off the ground you can think again.

The next day, at 1st light, as I wake up, My head starts to spin of yesterday's flights. Keeping my eyes closed, I go over and over the take-off and landings. I rewind and play forward repeatedly until I am exhausted and opening my eyes to a new day. Today will be a better day. I am ready for the world, I hope it is ready for me! (continued Pg 16)



## Upcoming Local/Texas Events and Airshows

### Aviation Calendar of Events websites

- Aero Vents <http://AeroVents.com>
- EAA <http://www.eaa.org/calendar>
- Fly-ins <http://www.flyins.com>
- Fun Places <http://funplacestofly.com>
- Social Flight <http://socialflight.com>
- Council of Air Shows <https://www.airshows.aero/Page/ASCalendar>
- Milavia <http://milavia.net>

Please send any and all aviation activities that you may know of or come across in your travels to [ea35news@gmail.com](mailto:ea35news@gmail.com) Thanks.

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>11 May Corsicana Airshows<br/>C. David Campbell Field<br/>Corsicana, TX</li> <li>11 May Wings Over Paris<br/>Cox Field<br/>Paris, TX</li> <li>18-19 May Warbirds Over Addison<br/>Addison Airport<br/>Addison, TX</li> <li>18-19 May Southeast Texas Freedom Flight Airfest<br/>Jack Brooks Regional Airport<br/>Beaumont, TX</li> </ul> | <ul style="list-style-type: none"> <li>25 May Gill Aviation Open House<br/>David Wayne Hooks Memorial Airport<br/>Spring, TX <a href="https://b17texasraiders.org">https://b17texasraiders.org</a></li> <li>15-16 June South Plains Airshow<br/>Slaton Municipal Airport<br/>Slaton, TX</li> <li>22-23 June CAF/RGV Wing Airshow<br/>Pt. Isabel-Cameron County Airport<br/>Pt. Isabel, TX</li> <li>03 July Kaboom Town: Addison Airport Airshow<br/>Addison Airport<br/>Addison, TX</li> <li>04-07 July Tyler Warbird Expo Weekend<br/>Tyler-Pounds Regional Airport<br/>Tyler, TX</li> <li>6 July Thunder Over Cedar Creek Lake<br/>Cedar Creek Lake<br/>Tyler, TX</li> <li>20 July Conroe Open House<br/>Conroe-North Houston Regional Airport<br/>Conroe, TX</li> </ul> |
|---|--|



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## GONE WEST

**John Killian****22 Jan 35—16 May 19**

John was a wonderful benefactor to EAA Chapter 35, and personally financed the new hangar for the chapter. In fact, when a payment was due, we would find on occasion that the payment had already been made, and, of course, by John. And when the hangar was complete, we emptied out his own shop near Bulverde to almost totally equip our new hangar. John also played a part in our effort to obtain the coveted IRS rating of 501(c)3, by having his suite mate, a CPA, help past member Pat Wegner, my late wife Joanne and I with the paperwork that led to the chapter's removal from the Bexar County real estate tax roll, as well as the Medina County school tax roll.

<http://porterloring.tributes.com/obituary/show/John-Moore-Killian-10711025>

**Wilson Connell "Connie" Edwards, Sr.****25 April 35—3 May 19**

Between 1968-69, Connie was chief stunt pilot for the Battle of Britain movie, during which he logged extensive flight time piloting Me109's, Spitfires, Hurricanes, Heinkel HE III's, Junkers Ju 52's and B-25 Camera planes. During production in Bedford England in 1968, a Spitfire piloted by Connie had to be belly landed, engulfed in flames and with total loss of power. Connie was able

to accomplish this with no injuries, an act that earned him a Royal Commendation and honorary Royal Air Force wings. Connie accumulated numerous awards and commendations through



his flying career, including being awarded the first set of Honorary USCG wings, presented by the Secretary of Transportation in 1992. He was awarded the Meritorious Service Award, the highest civilian award given by the Navy, presented by Admiral F. B. Selso, II, Chief of Naval Operations, in 1992. He was awarded an FAA Special Recognition Award, presented by Donald Engen, Administrator, in 1986. He was awarded the President's Pilot Award in 1988. He received the John Henry Towers Award from the Naval Aviation Commandery, one of the most prestigious flying awards given in the U.S.A. He was awarded one of the few Navy League life memberships to be given. He was awarded "Sea Plane Pilot of the Year" by the Sea Plane Pilots Association, and the People's Choice award by the Experimental Aircraft Association in 1986. He was awarded a membership in the USCG's Order of the Pterodactyls and is a life member of the EAA, NRA, Air Force Historical Foundation, member of the Defense Orientation Conference Association, and member of the Royal Aero Club of Spain. He also served as Director of the Naval Aviation Museum Foundation. Honorary wings earned by Connie include: Royal Air Force, Spanish Air Force, Canadian Air Force, Portuguese Air Force and United States Coast Guard, the first ever awarded by the USCG. Connie, his late brother, Budo, and his late son, Tex, were inducted into the Lone Star Flight Museum's "Texas Aviation Hall of Fame" in 2016. <https://www.npwelch.com/obituary/wilson-connell-connie-edwards-sr/>

**MAY MEETING— SEE MORE AT <https://www.facebook.com/ea35/>**

**PHOTOS: CHAPTER MEMBERS**

Our annual Spring Cleaning started out slow and then really wound up. As it started out a marginal day, the members were slow to arrive, but as the day continued, it only got better. The work started slowly but gathered speed as more people arrived to help out. We got new LED lights inside the clubhouse, so now it doesn't seem dim as a dungeon, in fact, you may need sunglasses inside. We cleaned out all the flowerbeds, mowed the grass, trimmed the oak tree, cleaned up the outside lounge and picnic area, cleaned all the glass, inside and out, in the clubhouse, just to start. We also managed to get all the burned-on gook off the stove and out of the oven, cleaned up the restrooms,

repainted the firescreen on the fireplace, and even dusted all the trophy cases, spruce goose models, and all the trophies and memorabilia in the clubhouse. The final event was the vacuuming of the carpeting in the clubhouse. Now everything looks and smells like a clean, fresh, aired-out clubhouse. Many thanks to all the members who showed up and donated so much time and labor to making our clubhouse look and feel like a first-class building.









# THE BUILDER'S CORNER

Mark Julicher

## Care and feeding of 406 MHz ELT

Do you have one of the new style emergency locator transmitters? Is it installed properly? Is it legal?

Most of us know that the new style 406 MHz ELT sends a sweep signal on 121.5 just like the old ELTs did, and also sends a data burst to search and rescue satellites. This latter feature is what makes the new ELTs very effective, but like most new technology, the new ELTs require different maintenance. So let's go through the installation process to see what nuances the 406MHz brings with it.

The first consideration is that the transmitter unit must be installed on a solid bit of aircraft structure. It is not to be mounted on aircraft skin nor on a plastic hat shelf. It needs a firm mount to structure. For some installations this may require fabricating a mounting bracket. The instruction manual that comes with each ELT is clear on this point so read it carefully.

The second consideration is where the antenna must go. The antenna needs to "see the sky" because that is where the satellites are. That may seem like a no-brainer, but might be difficult to accomplish. If the aircraft has a carbon skin the drilling process can be different. If the mounting location is fiberglass then what will be done to achieve a ground plane? If there is a sliding canopy, the choicest antenna locations may be in the path of the moving structure.

The third consideration is wiring. Your previous ELT may not have had any wiring at all, but a 406MHz has two pieces besides the transmitter and antenna. There is a sounding unit that makes an alert tone when the ELT activates and there is a remote control that can activate and silence the ELT. The remote control is also used during the annual test of the unit as required by CFR 91.207. The remote control must be in reach of the pilot – otherwise it does not do much good. The sounding unit needs to be where the pilot can hear it. Stuffing the sounder back in the tail cone next to the transmitter won't cut the mustard.

Now comes a bit of a surprise. The transmitter, the sounder, and the remote control each have a battery inside. (OK some ELTs don't have three batteries but many of them do.) So a fourth consideration is that there be access to change these batteries.

You may recall that the logbook entry for an annual inspection requires not only that the ELT be tested, but also that the due date for the battery be recorded. That is still the case, but how about writing down the battery due dates for all three batteries? Good idea.

Panel real estate for the remote control may be an issue, but it is a small device and usually there is a spot where it can slip in. The form and fit (but not the function) of the 406MHz remote control is identical to some 121.5 ELTs that used a remote control, so it might be an easy swap out.

Once it is installed you must register the ELT. This is NOT the aircraft registration. ELT registration lets the search and rescue authorities know whom to call when the ELT is activated. In the USA this means Department of Commerce. Go to [www.beaconregistration.noaa.gov](http://www.beaconregistration.noaa.gov). In other countries there are obviously other registration authorities. A quick Google search will get you there.

Here is another surprise: You must re-register the ELT every two years! How do you remember THAT? Perhaps a logbook entry showing registration date and due date would be appropriate? There is no mandate for the mechanic to make such a logbook entry, but since the owner is responsible for registering the ELT then that owner would be wise to make the log entry. In any event, the pilot in command is still responsible and that brings up new questions. Suppose you rent a plane with a 406MHz in it? How do you know it is currently registered? The log will tell you when the transmitter battery is due and *ought* to tell you when the remote and sounder batteries are due, but that is not enough information to know if the unit is all legally up to snuff. Suppose you buy an airplane with a 406MHz ELT in it. The aircraft's FAA registration is NOT the ELT registration. You must go the NOAA website and register the unit to the buyer. This is because IF the ELT is activated it is the Coast Guard or USAF Search And Rescue center that will call you and not the FAA. (I know this first hand. Embarrassing.)

To reiterate, the installing mechanic does not register the unit! The owner must do this task. The owner furnishes the pertinent data including a contact phone number and the 15 digit hexadecimal code printed on the actual transmitter. So visit the website and look at what information is required in order to register – then go gather up the info and come back and actually register.

Like so many other government agencies, the Dept. of Commerce has the ability to fine offenders and make life tough – so follow the rules and keep off their radar. It is too easy for a rough landing or for the meandering fingers of a passenger to set off an ELT, so don't get yourself in a jam.





## APRIL MYSTERY PLANE REVEALED

DOUG APSEY

Just when I thought I had finally stumped everyone, Ira Wagner came through at the last minute and correctly identified our two May Mystery Airplanes as the Arrow Model F and the Call-Air Model A.

The first mystery airplane is the Arrow Model F, also called the Arrow Sport V-8, built by the Arrow Aircraft and Motor Corporation of Havelock, Nebraska. The Model F is a two seat, open cockpit, low wing monoplane that first flew in 1934. The pilot and passenger sat side-by-side. The company built 103 Model F's between 1934 and



Arrow Model F (Wikipedia)

1938 before going bankrupt. The most unique feature about this airplane is the engine. It was a modified Ford V-8 with an aluminum oil pan, aluminum cylinders and a 2:1 gear reduction drive to reduce prop rpm. The water cooled engine weighed 402 lbs and produced 82 hp. Empty weight of the Model F is 1097 lbs while max weight is 1675

lbs. Maximum speed is listed as 100 mph while normal cruise is 90 mph. With the equivalent 85 hp Continental engine of that era weighing in at about 182 lbs, you may be asking why anyone would put a heavy V-8 car engine in an airplane. The answer is that the Model F was built in response to a request by the US Bureau of Air Commerce to evaluate the feasibility of using an automotive engine to power an aircraft. According to the FAA database, there are 3 Arrow Model F's still registered in the US. The yellow Model F that was pictured in last month's newsletter hangs on display in the San Francisco International Airport.



<https://dmairfield.com/airplanes/NC16470/index.html>

The second mystery airplane is the Call-Air Model A, built by the Call Aircraft Company of Afton, Wyoming. Reuel Call was a Wyoming

Rancher who started the company in 1939 to build a touring aircraft of his own design. The prototype Model A, powered by a Continental A-80 engine, first flew in 1940. The Model A is a two seat closed cabin airplane with a strut braced wing. Various versions of the airplane were produced, all similar in design but powered by different engines. Type certification was

awarded in 1944 but production did not start until 1946 due to WWII. The production version was the Model A-2 which was powered by a Lycoming o-290 engine. Sixteen A-2's were built followed by 15 Model A-3's that were powered by the Continental C-125 engine. Sixty-five Model A-4's were produced and these were powered by the



Call-Air A-3

([http://starvalleyhs.lincolncountywy.org/Museums\\_Call\\_Air.html](http://starvalleyhs.lincolncountywy.org/Museums_Call_Air.html))

135 hp Lycoming o-290-D2 engine. The Model A-4 had seating for the pilot and 2 passengers. Maximum speed of the A-4 is listed as 112 mph while normal cruise is 102mph. The FAA database shows 23 Call-Air Model A 2', 3's and 4's still registered today in the US.

The company also produced agricultural aircraft based on the design. The first was an open-cockpit version of the A-4 called the Model A-

5. Two additional versions of the A-5 were produced, the Model A-6 powered by a Lycoming o-360 and the Model A-7 powered by a Continental W-670 radial. In all, Call Aircraft built 218 airplanes before the assets of the company were sold off in 1962. Rockwell International continued to build an agricultural aircraft based on the original Call-Air design until 1984.



Call-Air A-5 Open Cockpit Crop Duster

([http://starvalleyhs.lincolncountywy.org/Museums\\_Call\\_Air.html](http://starvalleyhs.lincolncountywy.org/Museums_Call_Air.html))

Sources for this article include:

[https://en.wikipedia.org/wiki/Arrow\\_Model\\_F](https://en.wikipedia.org/wiki/Arrow_Model_F)

[https://en.wikipedia.org/wiki/CallAir\\_Model\\_A](https://en.wikipedia.org/wiki/CallAir_Model_A)

<http://letsgofly.blogspot.com/2013/11/the-call-aircraft-company.html>

[https://en.wikipedia.org/wiki/CallAir\\_A-9](https://en.wikipedia.org/wiki/CallAir_A-9)



## NAME THE PLANE

DOUG APSEY

This month's mystery airplane may not be much of a mystery to some of you but I chose it because I thought our readers who are not familiar with the story behind this airplane might enjoy hearing about it. Who will be the first to email me at [dapsey@satx.rr.com](mailto:dapsey@satx.rr.com) with the following information about this month's mystery airplane?

1. Who designed and built it?
2. What was its designation/name?
3. What year did it first fly?
4. Where did it reside for many years after the Air Force retired it?





# Country Store

BRIAN GOODE

## HELP WANTED.....

The managers of your Country Store would like to turn over the Store to someone else. This is our 8<sup>th</sup> year of running the Store and have [enjoyed the opportunity](#), but it is time for change.

## SHIRT NEWS

For those of you who have placed orders for Chapter 35 logo'd shirts, the order has been received. We are investigating the ability to personalize the fishing shirts by adding your name, "N" number, or call sign over the right-hand pocket.

Remember, every dollar you spend at the Country Store goes towards aviation education, research, development, safety and other purposes as outlined in our EAA Chapter 35 By-Laws. Cash or credit card donations are also accepted at the Store. We can provide you with a receipt.

## SOME NEW STUFF IS HERE

We just introduced a couple of new items that are now available in the Store.

We found a Polo shirt that looks like the Lone Star Flag. We have some on order. Also have a Barbeque apron coming that also looks like the Lone Star Flag. If you didn't have time to place an order at



The 36" long X 34" wide apron is made of stain resistant material. It has 2 pockets on the front and a thermometer/pencil pocket on the bib and an adjustable neck strap.



The shirt is 100% ring-spun combed cotton pique. Solid dark blue back.

the last meeting, you can do so by sending an email to [lady-bgoode@msn.com](mailto:lady-bgoode@msn.com), or texting an order to (727)-709-1159. Since Air Show season is upon us, we are also working on getting a suitable Sun Visor for those folks who don't like to wear baseball caps, and another option for those opposed to wearing baseball caps is a big floppy Outback Hat. We are considering the kind that you can snap the brim up to the crown and look like an Australian Stockman. Both of these items will carry the Chapter 35 logo. Pricing on these two items has not yet been established, but they will be better than what you can find around town.

Wash Wax All Price Sheet for Chapter 35 Members			
PRODUCT	Size	Prices with Tax	
		List	CH 35
Wash Wax All	16 oz	10.77	\$ 8.00
Degreaser	16 oz	10.77	8.00
Belly wash	16 oz	15.10	11.00
Plex All	16 oz	10.77	8.00
Glass All	16 oz	10.77	8.00
Water Spot Remover	16 oz	10.77	8.00
Cabin cleaner	16 oz	10.77	8.00
SafeSolv	8 oz	10.77	8.00
Leather Soap	16 oz	10.77	8.00
Leather Care	16 oz	10.77	8.00
Rubber Care	16 oz	10.77	8.00
Polish All	8 oz	14.02	10.00
Aero Scrubber Pad & Handle		10.77	8.00
Aero Scrubber Pads	5 pads	32.42	24.00
Aero Towel	4 pack	10.77	8.00
Wash wax Mop - (NO POLE)		64.90	49.00

Fishing Shirts	Short sleeve	\$40.00
	Long sleeve	\$44.00
All Shirts XXL+		\$2.00
Polo Shirts	Short Sleeve	\$31.00
Duffle Bag		\$31.00
Coffee Mugs		\$7.00
Koozies		\$4.00
Baseball Caps		\$10.00
Sew-On Logo Patches		\$3.00
Decals		\$0.50
Bumper Stickers		\$1.00
Remove Before Flight Key Tags		\$5.00
Wheel Chocks - Aluminum	Two Pairs	\$40.00





## CHAPTER BUILDER'S

## DIY ADS-B In with AHRS

By Doug Apsey

There's an old adage that goes "It doesn't cost much more to do it yourself" that I have proven to be true way more times than I would care to admit. However, once in a while I get it right and do save a little money by doing, or in this case building it myself. I recently assembled an ADS-B receiver using parts readily available from Amazon for \$163.50. Since EAA Chapter 35 is made up of many "do it yourselfers" I thought some of you might be interested in this affordable alternative to some of the other products out there.



The STRATUX is a dual channel (978 MHz and 1090 MHz) ADS-B receiver that will provide both traffic and weather information via WiFi to your

tablet/iPad using your favorite flight app. It's compatible with most flight apps including ForeFlight, Wing X, FlyQ EFB, AvNav and several others. It also functions as a 3-axis AHRS if your flight app supports that option.

The parts list for the unit is available on-line from STRATUX.ME. This site even includes links that take you right to the Amazon page for each part you will need to build the unit. In addition to the information provided by the STRATUX web site, there are several YouTube videos and on-line sites available to assist you with the assembly, set-up and troubleshooting the unit. Assembly of the STRATUX is amazingly simple. The heart of the unit is a Raspberry Pi 3 mini-computer and it is literally a "plug the parts into the computer" process. It took me about 20 minutes to assemble the entire thing. It does require a micro SD card with the software loaded on it to function and setting that up was the only tricky part, mainly due to my lack of computer skills. At the time I assembled my unit, STRATUX did not have any of these cards available so I had to download the software onto the SD card from the STRATUX web site. This took

longer than assembling the unit but was good practice since STRATUX does update the software at times and you would have to learn how to download it if you wanted to update your unit. I have since checked Amazon and the cards are available again for just \$13.00 if you prefer not to mess with downloading the software yourself.

I made two changes to my STRATUX which are optional. One is an upgraded 1094 ES receiver that is offered on Amazon. This supposedly uses less power and gives longer battery life. The second option is the external GPS receiver which may provide better reception. An internal receiver is available if you prefer to keep the unit more compact. These upgrades only added about \$7.00 to the cost.

After assembling the unit, I got out my iPad out and cranked up ForeFlight and watched air traffic approach and depart SAT. I have also had the opportunity to fly with it once now and it seems to work very well. However, I did end up "dogfighting" myself a couple of times when my iPad started flashing "traffic at your altitude at 5 o'clock" which I think (I hope) was just my own airplane showing up as a "ghost" target. This, I have read, can occur if you don't have ADS-B out but are within range of another aircraft that does have ADS-B out and you are seeing your own aircraft being transmitted to you by a UAT tower. This typically shows up as traffic behind you, although I have heard it can appear anywhere around you. Makes for some real excitement as you try to outmaneuver yourself.

For those of you who may not be interested in assembling your own ADS-B receiver, this exact unit is available from a few sources pre-assembled and ready to go. It's available from Seattle Avionics or you can purchase it on Amazon from STRATUX or Crew Dog Electronic for \$250.00 or less. I'll bring the unit to one of our meetings in the near future and demonstrate it if anyone is interested in seeing it.



## SAFETY CORNER

the best videos and lectures out there. I don't know. But if we believe press accounts, they almost certainly had not practiced that procedure. They'd been educated...but not trained. The point here is that there is a huge difference between knowing *what* to do and developing the muscle memory to instinctively do it.

Most of us fly relatively infrequently. We might fly several patterns and do several touch and go's. But, when is the last time you practiced a power off landing or an unplanned go-around? OK, some of you might say every landing - if so, you are probably pretty confident doing so. Most pilots, though, have become accustomed to droning in under power, which is pretty hard to do when the engine seizes. How do pilots develop the instincts to turn at the right places, right altitude and hit the marks without power - by doing it. Not by reading about it. Simple things like recognizing a bad landing and executing a go-round are things we know, but seldom practice. Will your hand instinctively firewall the throttle in that split second or will it pull back on the yoke instead? You only know by practice. You apply the brakes in your car in an emergency by instinct, not by

## CONTINUED

thinking about which pedal to push.

Just like the new airliners, many of us are building or restoring planes with much more sophisticated systems and tools than ever before. Sometimes the manuals are massive. Have you taken the time to practice - truly practice - with the systems and understand their failure modes and gotchas? Unfortunately, I can tell you I haven't done that enough. And, so, back to my bumbling biennial; how can I make it instinctive to react to emergencies, like an engine fire, quickly and correctly? By practicing - in the aircraft.

So, for me the real lesson from the 737 Max tragedies, then, was not just a reminder of how important it is to design systems that are intuitive to humans, but that education about a system even among highly trained aircraft cannot replace hands-on practice.

To be safe and proficient, we must practice the most, the things we do the least. So practicing emergency procedures is every bit as important in my non-automated seventy year old L-17 as it is in the newest whiz-bang airliner.



## ADVENTURES FROM ANDREA

(CONTINUED)

The 4th to 7th takeoffs were much better and I refused to let the airplane go right and my last take off was pretty good, so if I was to say so myself, the last 3 were with quartering tailwinds but just keeping it straight is all that it needs. HAHA!

So how do you take a S2A Pitts off?? You set the airplane up to fly off when she is ready. HERE it goes and again, DON'T try this at home!! Get yourself straight on the runway, Behind/BUM back, head up like a golfer, add full power smoothly but quickly, within 1.5 seconds (you will with practice feel the tail fly) remove the weight off the tailwheel only, and feel the pressure of the horizontal stabilizer, LOTS more right rudder, and LOTS MORE right rudder and in about 5 seconds you are launched keeping right rudder in the WHOLE time with power on to keep the ball centered. A steep turn to the left uses lots of right rudder, so that should give you some idea that what it needs.

I can get it off the ground without ground looping now so, the inevitable, return to mother earth that holds our feet to ground without our wings. So the next lesson was to land and do a rollout to a full stop. THAT was not as hard as I expected oddly enough. This airplane responds to a smooth and instantaneous direction you ask of it. The controls are made of feathers. AND OF course the quick flick to the left or right, no standard turns are able to be done easily, that would take practice (haha). A 45 degree is shallow and a 60 is normal and it does not take any effort to have fun to fly it. So now comes the pattern. Totally not a C172 style or any other airplane I have ever flown and that includes my Kitten, Hatz, etc. You climb at 2000 ft per minute, you turn and stay close to the runway. The tip of the airplane wing is over the runway on downwind close and yes those wings are not long or big. Then on the end of your downwind, you keep your eyes open and get ready for the descent. You can almost hold your breath to get this done, but not recommended. When your wings are abeam the numbers, you pull the power off, bring it to 90 mph, ADJUST use the left rudder to keep the ball centered, bank to the left with a 90 mph airspeed. Before the intersection of final and base, you level off the wings quickly to make sure no one has snuck before you thinking you were still on downwind. Look right, then left, then bank keeping the runway insight until you have a slight angle to the runway as your heading. This ALL writes easy and is not hard after some practice. A typical decent is 2000 ft per minute and with a slip, it can be as steep as 5000ft per minute, so you never have a hard time reaching any part of the runway if you are fast or close in. KEY is keeping it at 90 m/hr and don't cross over the center of the runway. Then once you are over the runway, make sure you are going straight down the runway (last chance before you lose sight of the ground) flare when you see the runway on either side of the airplane, hold it in the 3 point position and wait...AND wait and no it does not take any longer than that. It lands faster than stall speed so that is why it has that scary looking hop/skip and jump you see when someone lands one, but it is not that scary when you are the one flying it if you keep it straight. BUT the good part is that it does not take long to slow down and come to a stop. The whole process of 1000 feet above the runway to landing is 45 seconds. This is a perfect airplane for those folks with a short attention span or no patience.

NOT having done any of this in my soon-to-be S1 Pitts yet, I understand all of this is waaayyy faster in it. Hopefully, I won't pass out holding my breath on takeoff or landings. I'm quite sure there will be some YIKES and other not mentionable words uttered in the cockpit, with a Yippeee scream once and a while.

So now comes the search, purchase, and arrival of my very own S1. I'm grateful to have Hondo as my base, long, wide, smooth runways with very little traffic will help give me lots of practice. My goal is to fly in the IAC competitions with it to work on mastering the art of Acro and one day be good enough to teach it. Bottom line, I CAN-NOT let go of this bone, I must do this, and I will do what needs to be done to make it happen. I don't think anything will make me happy until this itch is scratched.

Once my new airplane is in my hanger, I'll be off again for more of those takeoff/landings in a S2 until I feel I'm good to go. Then the same day or next day, my solo flight will happen. If you ask me if it scares me, the answer is yes.... BUT that too will pass. Fear is a good survival tool.

On a side note, I found a true Eagle. OH my, how beautiful! If I were to find the money to afford one like this, I would. This one is NOT for a 1st time Pitts pilot airplane for many reasons including far too many horses under the cowling. I would need two S1's. ONE to learn in and one to show off.

This Pitts is painted as an Eagle of the sky and is in a hanger all alone draped to keep the dust off. The beauty of the paint and the expression of her wings are magnificent yet sad and stare into dark empty space. The crack in the door is the only sunlight she sees unless she has a visitor like me. She is all alone crying to be flown. One of the most beautiful birds I have ever seen. One day.....

I have a new airplane!! When I raised the tail off the ground in my Hatz on my 1st flight back home, it felt very gentle and I had to correct for too much right rudder. It used to swing hard to the left and took lots of right rudder, not anymore. And on my 1st flight, my airspeed indicator was not working, The airplane felt good, but it was reading 80 and felt much slower than that, but ... how can that be? ... so I came in fast but it took forever to touch the runway. The airplane airspeed indicator did work, my human indicator was off. I laughed and remembered what Budd told me, it would feel different and gentler. And sure as ice-cream melts in the summers sun, it did.

So now I understand the Pirep that Budd gave years ago on the Hatz. BUT I am still very much in love with that airplane. Just FYI she is NOT for sale.

Budd's Pirep for the Hatz - (<http://www.airbum.com/pireps/PirepHatz.html>).

## Touching History

Budd is a fountain of knowledge and is our history in the making. It is a privilege to learn from him. As I stayed at their home, he and his wife shared openly, and I expect to stay friends with them both. I have learned this before, and we only appreciate someone when they are not available. AND I told him. I am doing my best to be in the here and now to not miss this amazing opportunity. (continued pg 18)



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**CHAPTER CALENDAR — CONTACT EAA35VP@GMAIL.COM - PROGRAMS ARE TENTATIVE AND SUBJECT TO CHANGE!**

JUNE	8	<b>ANNUAL CHAPTER 35 PICNIC</b> <u>Chef, Prep Cooks, Servers Needed</u>	EAA Chapter 35 Clubhouse 11:30 am to?
JULY 	13	<b>FLY-IN BREAKFAST EVENT</b> <u>Chef, Prep Cooks, Servers Needed</u> BOD Meeting	EAA Chapter 35 Clubhouse 9:00-12:00 am 12:30 am
AUGUST	10	<b>LUNCH MEETING</b>	EAA Chapter 35 Clubhouse Lunch 11:30 am Meeting/Program 12:30 pm
SEPTEMBER	14	<b>LUNCH MEETING</b>	EAA Chapter 35 Clubhouse Lunch 11:30 am Meeting/Program 12:30 pm
OCTOBER 	12	<b>FLY-IN BREAKFAST EVENT</b> <u>Chef, Prep Cooks, Servers Needed</u> BOD Meeting	EAA Chapter 35 Clubhouse 9:00 - 12:00 am 12:30 am
NOVEMBER 	9	<b>ANNUAL CHILI COOKOFF</b> EAA Chapter 35 Fly-mart Annual Membership Meeting and Election of Officers Lunch and Chili Judging	EAA Chapter 35 Clubhouse 10:00 – 11:30 am 11:30 am Immediately following the meeting
DECEMBER 	14	<b>CHRISTMAS PARTY</b> Christmas gathering 11-12 Lunch catered Gift Exchange ~\$15 target for gifts but that's up to you!	EAA Chapter 35 Clubhouse Social Hour 11:00 pm Lunch Served Noon-1:00 pm Gift Exchange 1:30 to 3:00 pm

**ADVENTURES FROM ANDREA****CONTINUED.**

Budd is an author for his own magazine and has written several books. One book is about the Pitts if you can find it costs \$300+-. So if anyone sees/hears of one that may be for sale with a slightly lower price tag, Please let me know!

So, Who is going to Oshkosh?? I am! If anyone has a need as a co-pilot, Ill share gas, etc, IF not, I plan to buy a commercial ticket. I

have accommodations at the Dorms and will be there the whole week this time and have a spare bed. I don't plan on having any transportation except my feet!

NEXT up will be the adventure of my new S1. It is in the works, the question is of the exact time.

**CLASSIFIED ADVERTISEMENTS****TWO T-HANGARS FOR RENT**

R. B. "Doc" Hecker has 2 T-Hangars for rent, 30A and 30B. Interested parties may contact him via phone or email.

Ph: 210-391-1072 Email: faexamdoc@yahoo.com

Web: assenddragonaviation.com

<[wwoldt@hotmail.com](mailto:wwoldt@hotmail.com)> for further information.

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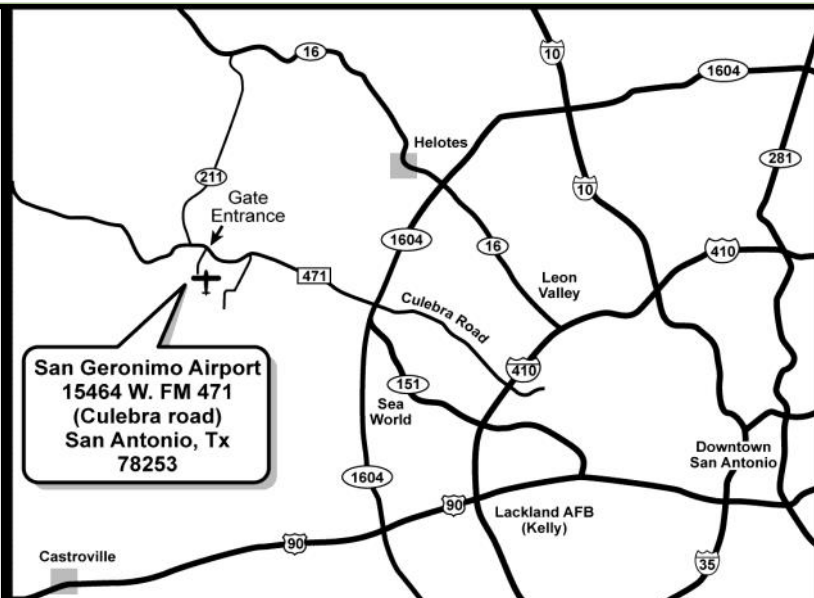
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*Chapter Picnic  
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1130- ? hrs  
Chapter 35 Clubhouse*



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For 60 years Chapter 35 has represented aviators of creativity who share a passion for flying. Come join us!

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