



*We had a record number of fly-ins at our February 2014 breakfast!*

### ***President's Address***

**The Spring Flying Season is upon us and there are a lot of really exciting things to make it more pleasurable! The great weather, maybe a fresh paint job, completed annual or new equipment on the airplane and a few opportunities to improve our piloting skills. The main opportunity is that We, Chapter 866, have been very fortunate to be able to host a seminar for the Orlando FAAS Team.**

**Many of us have been going to the safety briefings for years, some are new and some have not had the opportunity to go. This month's Chapter meeting will be a Briefing on Runway Safety. One of our members, Robert Kistner, will be presenting the seminar in the Sandrift Community Center, which is located across the airfield from our Building 10 on Singleton Avenue. Larry has very kindly forwarded the reservation information to everyone on our list. Please do take advantage of this. The Chapter is paying for the use of the room and Robert is helping out with refreshments. There are limited seats, but there will be enough for our chapter plus another 75 seats.**

**This avenue seemed like a very good way for us to earn Wings credits toward our BFRs, a good outreach to grow the Chapter and a fun learning experience. It is also a good way to stretch our Educational funds so everyone can participate! I am looking forward to the presentation and I hope that everyone else will, too. If this is successful, we could entertain the idea of another seminar later in the year on another subject. So, save the date- March 5<sup>th</sup>, 7:30-9:30 at the Sandrift Community Center, 585 N. Singleton Ave, Titusville, FL 32780. Please come early to help set-up the room, if you can. We have the room from 7-10pm**

**Breakfast this month comes before the Meeting. First Saturday is, well, March the 1<sup>st</sup>.**

Our speaker last month, Roy Hanan and his wife, Laurie, made a very interesting presentation of the Auto Gyros which they assemble in Edgewater. I have seen these machines fly and I am always spellbound by them! Roy also announced that one of our own, Jeff Wilde, has earned his Rotor Rating! Congratulations!

Many of you will notice that there is a little more room in Building 10- Steve Quickel has taken the Continental 065 to his workshop and made a donation to the Chapter for it. Many Thanks! This money will be used for fuel during our next Young Eagles Rally.

The Post Office Box has also been renewed for an additional 6 months. Having a central mail collection point seems to be working out well.

We'll have a new recruiting tool. We have talked about a brochure for the Chapter for years and now, thanks to everyone who offered input for the process, pictures of our activities, drawings and logos, we will have them. The brochures- full color, tri-folds with an application to be filled out should arrive in the last week of February so we have them for our FAASTeam meeting and for our breakfast. The cost was reasonable- about \$.27 each. They are generic in nature without references to any officers or specific things so will be useful for a long time.

For a final bit, we have been experiencing Speed Week in Volusia County which means increased aviation traffic among other things- not a bad deal. We get to see some interesting aircraft plying our skies. What is most unusual about this year is the tandem appearance of two of Goodyear's airship fleet. This is history in the making as Goodyear has never had two ships for Speed Weeks, flying at the same time. We have been to EVB several times to interact with pilots and crew and get a few pictures. The Pompano Beach ship, *Spirit of Innovation*, has a female pilot, which is another first. Couple of pictures for your enjoyment:



*Spirit of Goodyear and Spirit of Innovation at EVB, 18 FE 2014*

**Women Fly!**

**Goodyear Airship Pilot Mandy; Mary Wunder, and Deborah Van Treuren**



**See everyone on the 1<sup>st</sup>!**

**Blue Skies,**

**Deborah Van Treuren,  
President**



## ***Meeting at TICO***

In the capacity of AOPA ASN volunteer for X21, I like to attend an Airport Authority meeting once in a while, just in case there's something that we tenants and users of Dunn need to be aware of. It had been a long time since attending one of these so, on Thurs. Feb 20 I went to their meeting as an observer. The meeting was excellent and as a Dunn tenant I feel that we are very fortunate to have these folks on the authority board and to have such a fine administration team looking out for their customers, (us), the taxpayers and their other customers, the private enterprise sector occupying the TICO Airport property and the properties adjacent to them. BIG and exciting things are going on!! There was considerable discussion about plans to operate a UAS out of Space Coast Regional and also about a new company called Rocket Crafters who might be launching something different out of there also. I'm wondering what might happen to our airspace around Titusville.

Towards the end of the meeting the chairman asked for public input and EAA Merritt Island chapter 724 president Don White stood and informed the board about the success of the TriMotor flights out of Merritt Island last month. This brought a lot of positive response from the board members and the chairman said that maybe next time the TriMotor could be operated out of X21 and several others agreed with that. The Airport Administrator recognized me as the newsletter editor of C866 and as a tenant at Dunn. The board addressed me and asked if I thought that would be feasible. I said ABSOLUTELY and explained that we were interested in doing it this year but the offer came on such short notice we didn't feel as though we had time to put it together. Don White said they have already scheduled or intend to schedule the TriMotor for yr 2016. This is the next time it will be available to this area. My thoughts about this are.. A joint effort between C866 and C724 we can put this together at Dunn in 2016! How does this sound to you?

Glad I went to that meeting, I'll tell you more at our next meeting about what else I learned at the authority meeting.

Larry



## ***A Pilot's View of Unmanned Systems***

It was January 15<sup>th</sup>, 2009 - We all remember it well... Captain "Sully" Sullenberger and Jeff Skiles were miraculously gliding their stricken Airbus A320 into the Hudson River after being struck midair by a flock of loathsome Canadian geese. Conspiracy theorists point out they were indeed Canadian and after all this could have been a nation-state terrorist attack. I'm sure the TSA is still demanding resource money to investigate and mitigate flock movement.



For Air Transport safety, the manufacturers have to demonstrate the ability to smack into a four-pound dead chicken. These geese were huge and heavily armed in numbers; therefore the necessity for the Miracle on the Hudson. "Smack into" of course is a highly technical aerospace design term and assumed to be beyond the capability of the reader. This then brings us to discuss the short term future of flying.

It's on the news often. Amazon wants to deliver packages, a bar wants to deliver beer to the ice fisherman, activists want to pry and spy, and of course journalists want to get the high ground. The dreaded drone is everywhere. Actually, a drone is a towed or autonomous aircraft such as a gunnery target or the V1 buzz bomb. The correct term for our new arrivals is the Unmanned Aircraft System (UAS).

Let's divide UAS's into two classes for simplicity: commercial/military, and recreational.

The big boys on the block have been flying UAS's for some time. Lockheed, Boeing, and Northrup-Grumman have multi-million dollar toys that I would love to play with. In 2013, the FAA released the *Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap*. As technologies and associated certifications of UAS's and their pilot's mature, we will see more authorized flight that fits within safe operational control. (Personally, I think not until full ADS-B and NEXTGEN implementation.) The FAA at this time has only one unrestricted certification for an officially approved operator...CONOCO ice flow spotting in Alaska.

Our primary duty while flying in the NAS is to "see and avoid". There lies the problem. A UAS's "sense and avoid" capability has not been demonstrated. In addition, command and control issues such as spoofing or hijacking are a serious concern. It is a cyber-threat played all too often. Removing the pilot from the aircraft creates a series of performance considerations between manned and unmanned aircraft that still need to be understood. All the more, we couple this with the threat of jamming or takeover by hostile parties.

With respect to demonstrators or military operators, The FAA views all these others as recreational - just as model aircraft. For all those journalists, entrepreneurs and excited techies; the law and clarifications are not debatable:

- Recreational use only
- Less than 55 pounds
- Visual Line of sight flight and control
- No operation above 400'
- No operation within 5 miles of an airport (unless approved by ATC or airport operator)
- Avoid persons and property

The FAA has their hands full with enforcement. Prices for camera and sensor mounted UAS's have dropped to the absurdity. GPS guidance and autopilots are available. What was once the realm of the CIA and NRO is in the hands of the family down the block! In addition, there is a growing backlash from the general public in having "Big Brother" restrict these small UAS's. Naturally this reflects the deep understanding that these persons have of National Airspace and flight safety.

**Note that these regulations carry a greater possible penalty for pilots operating UAS's than the average Joe; since these could be interpreted as FAR violations. As we have seen, the FAA can be a little swift to use its power. It is not likely that the FAA is going to harass someone meandering about on a Sunday morning near the airport teaching their kids how to fly an RC cub. However, they could certainly make a pilot's day quite uncomfortable. One should also note that the art of Hawker Tempest drone tipping is frowned upon in a GA pilot's interacting with UAS's....would be fun though.**

**As I look over the near-term wild west of UAS's and GA aircraft co-mingling....It gets me thinking, I wonder how "Sully" would do against a 55 pound UAS flown by a wannabe Walter Cronkite, checking out the latest traffic accident on Singleton Avenue and Garden Street?**

**Edward J. Brennan**

**EAA - 857897**

**In case of a serious case of insomnia, I recommend the following bedtime reading:**

[PUBLIC LAW 112-95—FEB. 14, 2012](#) (section 336)

[Federal Register Notice - Clarification of FAA Policy](#)

[Integration of Civil Unmanned Aircraft Systems \(UAS\) in the](#)

[National Airspace System \(NAS\) Roadmap](#)

[FAA ADVISORY CIRCULAR AC 91-57](#)



*The EAA does Good Job for 866 Chapter member*

At our last chapter meeting Bob Rychel stood and told us about how his airworthiness had been issued for a limited amount of time after MIDO issued this. The only explanation given was that this was at the discretion of the person issuing the certificate. SO, Bob called EAA looking for a possible explanation for this and he was told that this is the first time they ever heard of this and that they would try to find out why this happened. EAA made some phone calls and soon Bob was contacted by FAA's MIDO dept asking when he would be available to meet with the representative who issued the certificate. A couple of days later they met and the rep. handed Bob a new certificate with no limitations! First flight coming soon!

## *How To Groundloop Your Taildragger*

Submitted by Ben Charvet

Judging by how frequently it is performed, the Groundloop is indeed a popular maneuver. The Groundloop is an extreme low-level figure that is highly acrobatic in nature, which may be executed in many exciting variations. It is customarily performed as the last figure in a sequence, but I have seen the Groundloop attempted as a preliminary or warm-up maneuver.

It is rarely scored however, because it is most often performed out of the Judges' line-of-sight. Also, the Groundloop is categorized as a surprise maneuver, and therefore nobody is really prepared when it is executed. In fact, the figure is not considered genuine unless Judges, spectators and the pilot-in-command are all surprised! The many interesting and dynamic variations do not have a Degree of Difficulty or "K" attached, but rather are rated on the International HC\* scale. \*Holy Cow.

### HISTORICAL PERSPECTIVE

The Groundloop is one of the earliest recorded aerobatic figures. It was performed on virtually all of the taildraggers dating back to Aviation's infancy. The maneuver really came into its own during the Golden Era of the Groundloop which was when the cross-wind landing was invented. Previous to this, circular landing fields were the norm and the pilot simply eye-balled the windsock, and landed into wind. However, it was soon discovered that a short, straight landing strip could be plowed out, and now there would be lots of room for hangars, clubhouse, and an expansive cocktail lounge. Once everyone saw how much fun this new land-use concept generated, it was adopted internationally. The daily Groundloop displays were an instant hit, and helped cast the new idea in tarmac.

### ANALYSIS

Most Groundloops are weathercocking related phenomena. This means that at least one main wheel must be touching the earth, and a wind is blowing. Traditionally, the maneuver is started in a cross-wind; during the landing roll-out the tail is allowed to be blown down-wind. At this point there are a variety of options that can be exercised depending on your inputs, and the maneuver can take off in almost any direction, and finish in a variety of attitudes. Groundloops that occur under calm conditions are more rare, and require vigorous control inputs, so you really have to work at it to get a decent one.

Groundloops can be generated anywhere from 5MPH to flying speed. When executed at high speed, the figure covers more territory and generally spawns the most interesting variations.

High-wing taildraggers probably Ground loop the best because the upwind wing is more exposed to the breeze. The high-wing also enjoys a longer arm to really accelerate things once the maneuver starts. If the airplane is

designed with the wheels forming a small triangle (short-coupled), and in the hands of the right pilot, this could be a Groundlooping champion.

## **ESSENTIAL BACKGROUND KNOWLEDGE**

Avoid the study of the following subjects: a) Cross-wind Landings and Take-offs. b) Ground-Handling in winds.

Avoid seeking instruction on these subjects, for it will greatly reduce your chances of producing a truly World-Class Groundloop. Also, you might want to have a good line ready in case someone raises one of these subjects in conversation: "Cross-wind Landings, heck, wasn't that about lesson 5 on your Private License? I'm way beyond that.

**PREPARATION** - To be successful, we must prepare both pilot and aircraft.

**PILOT** - To perform good Groundloops, the best preparation is no preparation.

**AIRCRAFT** - The aircraft can be prepared in a variety of ways to ensure consistently good Groundloops. First of all, the main wheels should be shimmed to a toe-in condition. If the wheels are adjusted to track straight ahead or are shimmed slightly toe-out, the tracking will be too stable to assist your attempts at Groundlooping. Keep the tire pressures different from one another. If you know the direction of the cross-wind, reduce the pressure on the up-wind tire before going flying. And remember, it isn't necessary to change the tires until you can see the second ply of fabric showing; a blow-out can be the start of a dazzling Groundloop.

Avoid the hassle of taking off those trouble some wheel-pants by putting a drop of Loc-tite on the screws. Now you have a good excuse not to inspect the brakes. So, when the brake fails on one side or the caliper pinches through a rusted disc, you will enjoy a splendid Groundloop.

At the back end, you can start by loosening the fitting that holds the tail-wheel spring to the fuselage. Just back the nuts off a few turns. Also back off the nut that attaches the tail-wheel casting to the spring. Now, slack off the steering springs a couple of links so the chains sag. And while you're at it, cut off that lock wire that some conscientious Engineer installed in case the chains break. From time to time they break on landing and produce a thrilling, and rakish Cramer-like lurch. Fantastic! These simple mods will produce a delightfully loose rear-end that feels like it's on ball-bearings.

The little tail-wheel is best left alone; over time it becomes worn into an interesting cone-shape by the effects of slipstream, P-factor and gyroscopic effect. These left-turning forces create more wear on the starboard side of the tire, and soon you have a beautifully unstable little demon back there to really help you out.

Install the push-to-talk switch in a remote area of the cockpit. When the tower talks to you on the roll-out, you can look down into the cockpit to locate the button, and when you look up, you may be treated to the wonderful green-and-blue kaleidoscope of rotation about the vertical axis.

## **TECHNIQUE (HOW-TO)**

Once the pilot and aircraft are prepared, it's a little like shooting fish in a barrel; there's really nothing to it. There are several things you can do to get the Groundloop going, but really the best thing to do is nothing. Just let it happen. If you are landing or fast-taxiing in a cross-wind and you want a Groundloop... you guessed it- do nothing.

Taxi with abandon. As a pilot, you are a free-spirited individual, and this can be best displayed by a carefree jaunt down the taxiway. Just let go of the stick and use the hands-free time to organize your maps and sequence cards. If the tail-wheel comes off the ground, you're going a little fast. Maybe you'll want to use the time to put on your seatbelt, polish the inside of the canopy, re-tie your shoelaces or perhaps light up a smoke.

**Taildraggers have the right-of-way, so you won't have to stop suddenly.**

**When cleared for take-off, start bringing the power up as you swing out on to the runway. Of course you'll want to shove the stick forward quickly to get that tail up (you can't get it up too soon). If the plane will fly at 50, hold it on until 65. This technique spreads out the landing gear and brushes off some rubber, but everybody does it and it looks cool. If you get rolling quickly, any cross-wind won't matter. Now rotate as you would a 767. Haul straight back and blaze into the blue.**

**On the approach, keep it low and fast. If the airplane lands at 50, cross the fence at 100. It's best not to have a planned touchdown point because that can interfere with the free-spirited nature of the flying event. Start fanning the rudders through 500 feet, and keep it going until you've cleared the runway. The fanning technique is to let the airplane know who's boss. Get the plane down to the runway as soon as possible, and force it to land with plenty of forward stick. The fast-landing method is good for all weather conditions, especially quartering tail-winds. Once the plane is firmly on the ground, let go of the stick, but keep fanning the rudder to cool the tail-wheel assembly. Taxi in as you taxied out.**

## **VARIATIONS**

**45-Degree Overland Express - This one is best done at about 40 MPH. The airplane is allowed to weathercock slightly, the upwind wing and wheel are allowed to rise about 30 degrees and the plane swings into wind. At 45 degrees off the runway heading, sharp downwind brake, full aft stick and aileron into wind are added to stop the Groundloop. The plane is now headed off overland. This is useful for taking a short-cut to the washrooms after a long flight.**

**90-Degree Quick Turn with Prop Curl - Use the same technique as above, except at about 20 MPH. When you stomp on the downwind brake, also shove the stick forward. Even though you are traveling slower, the gyroscopic effect of shoving the stick forward will give you that extra 45 degrees of rotation. The tail will rise briskly. As soon as the prop touches the runway, pull hard back on the stick and apply both brakes. This was how the original Q-Tip Propeller was invented. If you've done it just right, you'll probably have a much more efficient prop.**

**The Prop Curl can also be done straight ahead. Taxi at about 10 MPH while tucking in your shirt or cleaning your sunglasses. Keep your hands off the stick and slam on the brakes. Voila! Also try this while maneuvering the tail-wheel over an obstacle. For a more dramatic Curl, hold the stick forward and add a burst of power.**

**Pitts Special Twin Arcs - Start the Groundloop from the roll-out at about 25 MPH. Remove all cross-wind inputs and allow the airplane to weathercock. Move the stick forward to at least neutral to lighten the tail-wheel and reduce its directional control. The little biplane will rise up on the downwind wheel and begin a concise pirouette. The downwind wing-tip will hit the runway and begin scribing an arc of red butyrate, Dacron and plywood. Without hesitation slam in full upwind aileron, as if to attempt to lift the lower wing. The downwind aileron will shoot down and describe a beautiful red arc parallel to that made by the wing-tip. Pull the stick full back, push full downwind brake with full rudder and a burst of power to erect the plane. These little red arcs are very artistic and will attract a good crowd in the evening following the days flying.**

**180-Degree Pirouette with back-track - This one is best attempted in a light high-wing with narrow bungee landing gear, a Cub will do. The maneuver works best in a quartering tail-wind. This figure looks difficult, but is really pretty simple. It works best if the pilot does not interfere.**

**Get the weather-cocking started in the usual manner. Move aileron out-of-wind and push the stick forward to get weight off the tail. 20 MPH is fine. As the up-wind wing rises, the center of gravity swings as a pendulum toward the lower wing. About the time the down-going wing smacks the runway, the center of gravity will have swung to the outside of the downwind wheel. Apply this brake hard. Now it's as if you had two upwind wheels because the center of gravity has migrated outside via centrifugal force. So now it wouldn't matter which brake you applied, the effect would be to increase the rotation of the Groundloop.**



**The wing-tip smacks off the tarmac, the brake completed a full 180-degree turn, and fast-taxi back to the button.**

**Groundloop with Bunt. - This is certainly one of the more dramatic figures in the Groundloop family. You'll want to be traveling a little faster to get this one. Say 35 MPH. The figure should start slowly then get faster and tighter as rotation sets in. A dry runway is necessary, and a quartering tail-wind from the left is best. Once rotation starts, shove in full down-wind stick and full forward elevator. This will really tighten up the rotation. Now add full brakes and full power. The tail will shoot upwards and the airplane will do a kind of shoulder roll right on to its back. This is really low-level inverted, and you should ensure that your belts are very tight. This figure should be reserved for the last flight of the day.**

## **CONCLUSION**

**The Groundloop has been around for almost a century and I'm sure it will be with us forever. And to keep it alive, all we have to do is be a little complacent, a little cock-sure and in a little hurry. Most important, one needs a thorough misunderstanding of weathercocking, cross-wind take-offs, landings and ground-handling. Sounds pretty easy to me.**

**Enjoy your spin-around!!!**

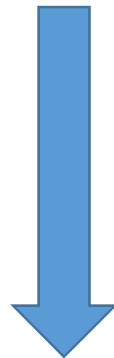
Larry Gilbert Personal note: When I was taking flying lessons in a J3 and later when licensed and had been flying only tail draggers, believe it or not I don't recall even knowing about the ground loop. Then, when I started flying nose draggers to get a commercial license, instructor people asked me if I had ever ground looped any of those tail wheel airplanes and I didn't know what they were talking about. Later I heard a lot about ground loops and began to believe they're real. In 09 while landing Fancy on runway 4 at Dunn I planted the mains (wheel Indg) and was rolling pretty fast and I got nervous about rolling across the main paved runway because you hit that pavement at an angle with one wheel that hits first and then the other hits because of the angle that these runways cross so, I pulled the stick back to get the tail down for tail wheel steering, hit the bump and went around so fast it was impossible to stop! No damage was done. Now this thing is dang real to me! I'm still not sure what happened, in about 1/2 second we made a screeching 180° to the right rolling on the left wheel only! **DANG!**



I have since seen some very serious ground loops, see picture..

***Chapter sponsored FAASTeam meeting coming up fast!* AS you may have already read in this newsletter, our first Titusville FAA safety meeting is being held on Mar. 5. All of our chapter members should attend this meeting if it is possible. All pilots within the area should be at this meeting, EAA members or not! This will gives you credit towards the wings program and may even help reduce your insurance costs if you show proof (the certificate) that you attend these. Notices of this meeting are sent out by Orlando FSDO to those who subscribe to the free newsletter they put out, notice about this meeting is on our facebook page. Registration isn't required to attend this meeting. The FSDO FAASTeam people are taking registrations on line if you want to pre register..... Tell all of your pilot friends in the area who may not get this message through us or the FAA. It won't look good if this isn't well attended, in my opinion. .... Larry**

**Note: Our own chapter member Bob Kistner (Master CFI) will be the presenter**



## **Chapter Breakfast**

**Sat. Mar. 1, 2014**

**Dunn Airpark (X21)**

**8:00 – 10:00 am**

**Chapter Meeting/FAASTeam safety  
meeting**

**Sandrift Community Center**

**585 N Singleton Ave**

**Titusville, Fl 32796**