



## 2018 Calendar of Events

Meeting dates, all meeting at 2:00 pm  
at the Hawk Building

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

## News From Headquarters

**UAS: The Impact on General Aviation and What the Future Holds**

February 1, 2019 - In light of recent reported drone sightings near airports, it is necessary to take a look at the importance of airspace restrictions, certification requirements, current regulations, and how drones can affect general aviation practice.

**The Law**

The FAA Know Before You Fly guide states that users are not permitted to fly their unmanned aircraft beyond line of sight, fly their drone within five miles of an airport or in proximity to any manned aircraft unless specifically authorized by the FAA, fly near people or stadiums, be careless or reckless, fly anything that weighs more than 55 pounds, or fly for payment or commercial purposes unless specifically authorized by the FAA.

FAA guidelines also state that users could be fined if they endanger people or other aircraft. According to federal law, users could also be fined \$250,000 or face imprisonment up to three years for failure to register their drone. For a UAS operator who holds a manned pilot certificate, the real threat is the impact those actions have on a person's pilot certificate — suspension or revocation.

**Registering Your Drone**

When registering as an operator, a UAS pilot must state if they are planning on using their drone for recreational or commercial purposes. If they state they are using it for recreational purposes then they must follow the Modeler Community-Based Organizations guidelines, previously known as Section 336, and register as a "modeler." If they are using it for commercial purposes, then they must complete the Part 107 test. Federal law states that any operator must register all aircraft that weigh more than 0.55 pounds and less than 55 pounds, be at least 13 years old in order to register, and to renew UAS registration every three years.

**Risks to General Aviation**

The threat that drones pose to general aviation practice is obvious; any midair collision with an object is dangerous to aircraft. Bird strikes happen to general aviation aircraft regularly, and while most passenger aircraft are capable of flying with one engine out of commission, drones pose a larger threat to smaller single-engine aircraft. According to a study published by the Alliance for System Safety of UAS through Research Excellence (ASSURE), a metallic object, such as a drone containing lithium batteries, could cause an uncontained failure if struck by a passenger carrying airplane with turbine engines.

reports each month and wants to "send out a clear message that operating drones around airplanes, helicopters, and airports is dangerous and illegal."

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### Young Eagles 2019 Schedule

The 2nd Saturday of each Month from  
April to  
October.

All dates are on Saturdays at 10:00 a.m. Rain date for all events is the next day (Sunday). If you can help either fly or on the ground please call me, Eric Carnahan (937-515-7453) or email me [vamustang1@wildblue.net](mailto:vamustang1@wildblue.net).

If you know of kids 8-17 that would like to experience flight please have them get in touch with me. Reminder, Kids must be registered to fly. Please do not just have kids show up.

## Meeting Minutes —

## Meeting Minutes —

EAA Chapter 174 Meeting Minutes from November 18th, 2018

Call to Order – Phil Cady – Treasurer

Opening – Pledge of Allegiance

13 in attendance.

President's Report – None

Vice President's Report - None

Treasurer's Report – Phil Cady –

SWORFI Total Net funds raised = \$321.-

Savings Balance = 6988.62

Checking Balance = 421.67

Secretary's Report – None

Young Eagles Report – None

Newsletter needs articles – Send to Eric Carnahan at [vamustang1@wildblue.net](mailto:vamustang1@wildblue.net)

Announcements

- Hangar offer by Sporty's was proposed by Phil Cady.

- General discussions on who would utilize a hangar and how to fund it for continuous lease. Trying to determine current need versus future use and the attraction to new members, if the chapter has the use of a hangar.

- Further discussions are required.

The Next Meeting is Sunday, January 20th at 2:00 pm in the Hawk Building

EAA Chapter 174 Meeting Minutes from January 20th, 2019

The weather was really cold in January and we did not have many members come out. A small group of six (6) went to the second floor at Sporty's to hangar fly and learn about a new project and member of EAA 174. Sean Peffer is starting a Zenith Super Duty and seeks some assistance and advice from EAA 174.

We hope to see everyone on February 17th at 2:00pm, in the Hawk Building.

## Young Eagles Report

## Project Updates

- Young Eagles will Start our Flying season in April of 2019.

If you have kids that you like to fly please give them my email and have send me an Email so that I can put them on the waiting list.

## *The Fleetwings Seabird*



I was checking some things out on the internet, when I came across some info on the Fleetwings Seabird. This plane is interesting in that it's fuselage is made of stainless steel that has been spot welded together. Strong and corrosion-proof it is. Designed in the mid-1930's, there were only 5 built. It took a 285 HP Jacobs radial engine to get it in the air. It cruised at 130MPH. It could carry 4 or 5 passengers. Perfect for those ocean beach get-aways.



By Bill Miracco – Chapter Secretary, EAA 174

*EAA-"Talespinners"-Chapter 174 is a 501(c)(3) exempt non-profit organization, whose principle objective is to provide educational assistance in the fabrication and restoration of classic and experimental aircraft. This newsletter is produced for the members of EAA Chapter 174 and the Cincinnati community to provide information on Chapter activities and to alert members of other potentially useful information. Any actions based on, or reproductions of information contained herein, are at the sole risk of the user. Any technical or regulatory information must be verified by the user. Neither the EAA and Chapter 174, nor the newsletter staff, assumes any responsibility for the correctness of the information contained herein.*



## Boeing's Autonomous 'Flying-Car' Makes Maiden-Voyage for 60-Seconds

### It's a VTOL or PAV, Not a Flying-Car

By Sergiu Tudose

Being stuck in traffic when you're in a huge rush to get somewhere in the city could soon *be a thing of the past* if **Boeing** gets to have their say with regards to the future of urban transportation.

Their autonomous *passenger-air-vehicle (PAV)* prototype completed a **controlled takeoff, hover** and **landing** during its *inaugural-flight-test*. It wasn't a traditional flight, as it only lasted a minute, hovering above the runway, but it marked a milestone in the PAV's development. [Same status as **Surefly**, a year ago now, that is currently being tested at Lunken airport in Cincy.] Future flights will focus on forward and wing-bone flight, as well as the **transition between vertical-and-forward flight-modes**.

"In one year, we have progressed from a conceptual-design to a **flying prototype**," stated **Boeing CTO, Greg Hyslop**. "**Boeing's** expertise and innovation have been critical in developing aviation as the world's safest and most-efficient form of transportation, and we will continue to lead with a safe, innovative and responsible approach to new **mobility-solutions**."

The **PAV-prototype** is powered by an **electric-propulsion-system** and has a range of up to 50-miles (80.47 km). It measures 30-feet (9.14 meters) long and 28-feet (8.53 meters) wide, and was designed in a way in which to **achieve efficient hover-and-forward-flight**. [Prototype looks like a kluge!]

*This is what revolution looks like, and it's because of autonomy. Certifiable-autonomy is going to make quiet, clean and safe urban-air-mobility possible,"* said **Aurora Flight Sciences** president and CEO, John Langford.

Aside from the **PAV, Boeing NeXt**, charged with leading the company's **urban-air-mobility-efforts**, also developed an **unmanned-electric-cargo-air-vehicle (CAV)**, designed to transport up to 500-lbs (226.8 kg). The **CAV** completed its first indoor test-flight last-year and will proceed outdoors sometime this year.

## Flying-Car Unexpectedly Goes Airborne During Test, Crashes to the Ground

By Michael Gauthier | Posted on [December 14, 2018](#)



This is a true "flying-car" (N112SD) by my friend in Detroit at his *Detroit Flying Cars* that I meet with at 2017 EAA Oshkosh, hope he wasn't hurt too badly. My MIT friend at *Terrafugia* is now finally taking orders for his flying-car's newest version, so you can now actually buy one. [My own personal interest is more in electric-flight and urban-air-mobility, but this is an intriguing engineering problem that I've followed for more than 46-years at my annual-week-long visit at EAA Oshkosh.]

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Motorists have long dreamed about *flying-cars*, but they're still not common place despite the best efforts of a *number of different companies*. One of the firms working on the idea is **Detroit Flying Cars** and they've suffered a major setback as their **WD-1 prototype** has crashed at **Willow Run Airport in Michigan**. According to **WDIV** and **WXYZ**, the crash happened shortly after 1:00 pm local-time when the **WD-1** was conducting a *taxi-test*.

During the test, the *plane unexpectedly went*



*airborne* and crashed back into the ground. There's no word on how high the car flew, but the crash appears to have collapsed the landing-gear and broken-off the front part of the airplane. The pilot was the only person inside the aircraft and they were reportedly taken to the **University of Michigan** hospital following the accident. At this time, the pilot's name and condition remains unknown. [I hope it wasn't my friend doing its development work, but I'm afraid it probably was.]

While we've covered a handful of *flying-cars* in the past, **Detroit Flying Cars** appears to be a relatively-new company as its website's oldest *press-release* mentions a product-unveiling the 2017 **EAA AirVenture show in Oshkosh, Wisconsin**. [See my 2017 EAA Oshkosh report and long conversation with him at the show. I was concerned about the short-wing-span and heavy-weight, amongst other things.]

The company's **WD-1** features *carbon-fiber construction*, a 26-foot (7.9 meter) *wing-span* and a 100 hp (74 kW / 101 PS) *engine*. The latter is designed to give the model a **400-mile** (643 km) *range* and a 125-mph (201 km/h) *cruising-speed in airplane-mode*.

In *car-mode*, the **WD-1** is powered by a 53 hp (40 kW / 54 PS) *electric-motor*. It can travel up to **50-miles (80 km) on electricity alone, before the engine is activated to recharge the battery**. The **Federal Aviation Administration** is investigating the accident and hopefully the pilot makes a full-recovery.

### Avoiding Potential Risks

In order to reduce aircraft-drone related accidents, the research team from ASSURE evaluated the potential impacts of a 2.7-pound quadcopter and 4-pound quadcopter, and a 4-pound and 8-pound fixed-wing drone on a single-aisle commercial transport jet and a business jet then reported on the results.

“The windshields generally sustained the least damage and the horizontal stabilizers suffered the most serious damage,” the report stated. “The structural damage severity levels ranged from no damage to failure of the primary structure and penetration of the drone into the airframe. The team conducted a preliminary computer simulation to evaluate the potential damage to engine components if a drone is ingested into an aircraft engine, including damage to fan blades, the nacelle, and the nose-cone.”

The team announced in 2017 that it planned “future additional research on engine ingestion in collaboration with engine manufacturers, as well as additional airborne collision studies with helicopters and general aviation aircraft.”

Generally, the FAA states that it is best practice to avoid flying a drone near airports. There are three options if you must fly near an airport. If you have a remote pilot certificate and are following Part 107 rules, you must get permission to fly in a controlled airspace from air traffic control through Low Altitude Authorization and Notification Capability or through the FAA Drone-Zone website. The second option is applicable if you are flying with a model aeroclub organization following the special rule for model aircraft, then you must notify the airport operator and air traffic control tower to fly within 5 miles. The last option applies to a public entity. In this case, the FAA may issue you special permission to fly in a designated location near an airport.

### Looking Ahead

On October 5, 2018, the FAA Reauthorization Act repealed Section 336 of the 2012 version of the FAA authorization law. During that time, a statement was released by the agency that it is “evaluating the impacts of the changes and how implementation will proceed.” It is still unclear how or when this act will be fully or partially implemented.

On January 14, 2019, DOT Secretary Elaine Chao announced proposed new rules and a pilot project to allow drones to fly at night and over people without waivers under certain conditions. These proposed changes to Part 107 would attempt to “balance the need to mitigate safety risks without inhibiting technological and operational advances.” When the FAA announced this draft NPRM, it indicated that it will be “seeking public input to identify major drone safety and security issues that may pose a threat to other aircraft, to people on the ground, or to national security as drones are integrated into our national airspace.”

While the FAA has released drafted plans for future allowance of commercial night flying, we will likely not see any implementation for another year or two until the commenting phase has finished.

### What Can You Do?

Know the drone laws in the state where you live, as they vary from state to state. For example, EAA’s home state of Wisconsin has two state-wide laws concerning the use of drones. Act 346 states that operators are not to use a drone to interfere with hunting, fishing, or trapping while Act 318 prohibits the operation of UAS over correctional facilities.

### EAA’s Role

EAA is working with other industry leaders on the FAA’s Unmanned Aircraft Safety Team (UAST) to ensure that the process of integrating drones into the airspace system is safe for all. EAA is involved as a member of the UAST in a sightings report working group, tasked with creating a system for manned pilots to report drone sightings. Additionally, EAA has participated in aviation rulemaking committees (ARC) focused on UAS safety and continues to carefully review any proposed rules with member interests in mind. While the safety of general aviation is always the top priority, EAA recognizes drones, and particularly traditional model aviation, as a strong pathway into the manned aviation world.

EAA also has a very active relationship with the Academy of Model Aeronautics (AMA), and partners with the AMA on joint youth education programs, supports mutually beneficial advocacy efforts, and encourages EAA chapters and AMA clubs to collaborate on promoting recreational aviation activities. EAA and AMA members also receive select reciprocal member benefits, including discounted membership to both organizations. EAA integrates RC model flying into the EAA AirVenture Oshkosh event through our Twilight Flight Fest and the RC fun fly area at Pioneer Airport and at Aviation Gateway Park in the Drone Cage. RC and free flight model activities are also showcased at the EAA museum at the annual Family Flight Fest weekend.