



Higher Living



2021 marks our 10th year in business as a flight school! We have certainly grown from our start with one airplane, N161KM, at the KHRJ airport. In the first few years we struggled to get things going but our perseverance has paid off with a flight school that we are immensely proud of. Over the past decade we have steadily added airplanes, instructors, and capabilities to the company. All the staff of Executive Flight Training have contributed each in their own ways to grow the school and I thank them all for their work. I'm proud of the quality instructors which we have attracted to our group. I also thank each of you personally for flying with us all these years and I pledge to continue to make EFTS as fine a flight school as I can.

My big news for this quarter is the addition of a Redbird TD-2 flight simulator we are sharing courtesy of Odyssey Aero Club. This is an FAA approved Basic Aviation Training Device (BATD)

simulator which you can use to record time in your logbook. The simulator is located upstairs in the FBO and is available for your use. Please see the article about the simulator and what you can do with it in this newsletter.

Our Warrior N41669 is on loan to the Harnett County Airport since the one there has been sold and several students are using it there. If you live closer to KHRJ than KTTA you might want to take advantage of that. You can use our scheduler to reserve flight time at Harnett (KHRJ) while the airplane is there. On the scheduler you can now select an airport as well as an airplane and instructor. There are instructors available there and you will see them when you select the airport in the scheduler.

We will continue to work to enhance our capabilities over the coming year.

Come fly with us.

Contact Us

Phone: 919-219-5933

Schedule your next aviation adventure at www.ExecFT.com

Located in the FBO at 700 Rod Sullivan Road, Sanford, NC.

Airplane & Instructor Rates

Arrow (N9386N)	\$195/hr
Archer (N299PA)	\$165/hr
Warrior (N41669)	\$155/hr
Cherokee (N720FL)	\$150/hr
Cherokees (N515DH, N711FL, N98166)	\$140/hr
Cessna 172 N3816Q	\$140/hr
Instructor time	\$50/hr
Redbird TD2	\$40/hr

Simulating Flight

There is now a Redbird TD2 Flight Simulator available for your use upstairs in the FBO. It is owned by Odyssey Flying Club and we have worked out a sharing agreement so that all can benefit. The simulator features an option to use traditional instrument panels or a Garmin G1000. It also features additional side displays for a full 3 screen view which is very realistic. The airplane that is simulated is a Cessna 172.



The cost to use this simulator is very economical. You will need to pay a \$15/month Odyssey Aero Club membership fee during the months you want to have access to the simulator and then just \$40/hour for flight. If you need to have an EFTS instructor present, then instructor fees (\$50/hr) will apply.

This is a BATD or Basic Aviation Training Device and is certified for flight training by the FAA. This means you can log time you spend flying in the simulator in certain ways in your logbook. Also, you can use the simulator to satisfy the approach requirements for instrument flying currency (instructor not required).

Personally, I think it is fun and simply good practice to fly the simulator whether you can make use of the logged time or not. Also, it is a great alternative on days of bad weather (or hot weather). Since this simulator optionally features a G1000 glass cockpit you can learn about that as well.

Here is how you can save some money on flying and log time towards your pilot certificate.

If you are working towards a Private Pilot certificate you can log 2.5 simulator hours towards the required 40 for your training. These must be with an instructor. Here is the regulation 61.109(k)(1). Some restrictions on which phases of Private Pilot training do apply.

Pilots working towards an Instrument Rating can log 10 hours in the simulator per 61.65 (i)(1-3).

For maintaining instrument currency see 61.57 (c)(1-2) which does not require an instructor to be present. You can fly all your approaches, holds and course interception here.

Commercial Pilots can log 50 hours total in a simulator per 61.129(i)(1)(i)

All times logged towards a certificate must be with an instructor. No time in the simulator can be considered PIC time but goes separately into your logbook. It is important that both

you and your instructor understand how to log time properly so there won't be any time discrepancies at the time of your checkride. Of course, you can always fly the simulator solo to help keep yourself proficient.

If you are interested, please contact Jan Squillace with Odyssey Aero Club to get an introduction on how to operate the Redbird. If you are doing training which requires an instructor, you will schedule the instructor through our website as you normally would and the simulator through Odyssey. We will work to make it easy for you.

Either contact us at 919-219-5933 or Jan at Odyssey at 919-551-5002. In the library section of the website there is a section titled Flight Simulator with detailed instructions on how to get set up to fly, schedule the simulator and/or an instructor and how to log time.

Read more about the TD-2 at <https://simulators.redbirdflight.com/products/td2>

Aviation Rules of Thumb...One Literally

A rule of thumb is defined as "a broadly accurate guide or principle, based on experience or practice rather than theory". Every activity or profession has a collection of them. Many apply to

aviation and there are a few I have come to use while flying. See if you know these.

- Stop if you have not reached 70% of takeoff speed by 50% of the runway length.
- To approximate the proper rate of descent on a 3-degree glideslope either divide groundspeed by 2 and tack on a zero or multiply your groundspeed by 5.
- With a 1-degree descent angle 1 mile traveled is 100 feet lower whatever the speed.
- In most airplanes maximum nose up trim and an idle engine will allow a glide at best glide speed. Confirm this in your airplane before depending on it. When trying this don't attempt to turn the trim up beyond the stops.
- The glide ratio for a Cherokee 140 is 10.3:1 so you can glide at best glide speed in calm air about 10 times your altitude AGL.
- The distance to the horizon in nautical miles is approximately equal to the square root of your altitude in feet.

And now for my thumb-based rule of thumb. I do not use paper charts as much anymore but on a sectional chart my thumb width is 5nm, two fingers are 10nm and 4

fingers at the knuckles is about 25 nm. Knowing this made it easy to estimate distances while in flight.

Open Door in Flight

A survey taken on Pilot Workshops shows that 74% of respondents have had an airplane door come open in flight. The usual scenario is that it was a hot day and you taxied with the door open to keep you cool and then had to wait on a landing or two once you reached the runway. This was enough time to cause you to forget that the door is not latched. The other scenario is the door appeared latched but some airframe stress on takeoff or in flight caused the latch to loosen its grip.



While the opening of the door is startling when it happens, you should not let it worry you. The picture above shows the maximum amount the door will open in flight. Wind pressure will hold it in this position.

What should you do? You may be tempted to try to close the door but that won't be possible. You will not be able to close it because the slipstream will force the door open enough that you can't latch it. Also, your attempts to relatch the door with one hand and fly with the other can seriously distract you and cause an accident. There are several cases of airplane crashes due to pilots being distracted by an open door. If you have a passenger sitting next to the open door, they will be concerned but try to calm them, they won't fall out, they are wearing seat belts aren't they, and again don't let it take your attention from flying.

If the door opens on takeoff the best solution is a trip around the pattern followed by a calm and normal landing. When safely off the runway you can latch the door. If the door opens in flight away from the airport just keep flying or land at a nearby airport. The only way the open door will hurt you is if you let it take away your attention on the flight.

Microsoft Flight Simulator 2020

The new Microsoft Flight Simulator (MSF) is an incredibly accurate rendering of the entire world with thousands of locations to visit. I have had a version of MFS since it was first available on

a PC. It has been amazing to see it evolve over the decades.

When I was learning to fly, I always used MSF to fly every cross country I was planning. By doing so when I did the trip for real it felt as though I had already made the trip. Everything would look familiar. Then when I was getting my instrument rating MSF was hugely helpful to allowing me to turn down the weather and fly approaches (at home for free). I'm sure it helped me get better more quickly. It would likely work for you as well. There is an option that allows it to display actual traffic wherever you are (from ADS-b) out the window of your simulated airplane. So if you are home and miss the congested traffic pattern at KTTA you can turn it on.



I've already taken a collection of flights, over Victoria Falls, circled the volcanic caldera of Santorini, flew into Reagan International airport, circumnavigated Puerto Rico, flew into the Grand Canyon and down the Colorado river, practiced instrument approaches at KBUY and a few flights around KTTA. You are not limited to the usual Cessna aircraft but instead you have a complete stable of

everything from turbine aircraft to ultralights to try out. Many more aircraft can be purchased separately. You can see videos prepared by Microsoft at <https://www.xbox.com/en-US/games/microsoft-flight-simulator>

The only equipment required beyond a powerful computer is a joystick. The more expensive yoke and rudder pedals make it more immersive but are not required. If you have VR glasses, you can use those, and it will appear that you are sitting in an airplane. It is genuinely nice. Give it a try if you can.

I strongly recommend Microsoft Flight Simulator for your use at home to make you a better pilot. Now if only we could log time with it as well. Maybe one day.

How to use Flight Following

An amazingly easy way to enhance flight safety when VFR on a cross country trip, day or night, is to request Flight Following. If you aren't yet comfortable speaking with air traffic control, ask your instructor to help you out. Once that is done then Flight Following will be a good item to have in your flying repertoire. Flight following adds a person helping to look over your shoulder during your flight and adds quick

access to ATC services should a problem arise.

Once in the air and established on course and at your desired altitude call the nearest approach controller and simply say you are requesting flight following. From KTTA, depending on your direction of travel, this could be KRDU, KFAY or KGSO. If the controller is terribly busy you may be turned down but in my experience this seldom happens. Just remember that the responsibility of the controller is to IFR aircraft first.



The approach controller will want to know your N number, type of airplane, where you are, your altitude, and where you are going. After that is determined you will be assigned a transponder code to use instead of 1200 for your flight. Set that code and you are on your way. Make sure to keep one ear on the radio so you can respond quickly if you are contacted. After all, the whole point of flight following is to be able to get warnings or assistance from ATC. Also, they may request you to make a slight temporary course adjustment or change altitude to help them out with airplane avoidance. Additionally, as you fly cross country, they will

hand you off to the next nearest controller by giving you a new frequency to use. You must be able to acknowledge that handoff and contact the subsequent controller.

Mind your course and altitude. Do your best to stay within 100 feet of the altitude you said you would use. The controller can't provide much help if you are wandering needlessly in either altitude or heading. If you want to change heading to a different airport or to change altitude due to clouds or turbulence, then tell the controller. They will probably reply with a statement to maintain VFR.

When you get close to your destination or if you want to cancel flight following for any reason then contact the controller and simply say so. They will acknowledge your request and will likely remind you to squawk VFR which means you should switch your transponder back to 1200. Do NOT just land or switch the radio frequency without cancelling first.

Some warnings, VFR flight following does NOT clear you to fly through any airspace that you normally would not enter without ATC clearance or permission. Before entering class C or B airspace, or any restricted area always confirm with the controller you are speaking with. All weather avoidance and navigation are still on you. You can request

assistance at any time but otherwise you are the PIC.

Keeping your sUAS Certificate Current

Updating your drone (sUAS) certificate is now easier since the training is going online for recurrent testing on April 6. The online testing is done by the FAA. Before that date a test was required every 24 months at a in-person testing center.



Now the FAA online version is free and you can do it from home. Your sUAS certificate never expires but if you want to use it then you must stay current. If you are using your drone certificate for true commercial applications be sure to check with the NC DOT web site as well because NC requires an additional certification for drone use in business operations.

Zero Throttle Start

Use the amount of throttle that works best—and is as gentle as possible with your

engine. You have probably watched and heard so many piston-powered airplane engines roar to life and immediately rev to what sounds like more than 1500, maybe even 2000 RPM. This can't be good for a cold engine. So, here's an alternative to consider.



Try a "zero-throttle" start. Prime the engine normally, either with the primer in cold weather or one to two pumps of the throttle in warm weather and keep the throttle all the way back to idle position. Fully closed. This may not work 100 percent of the time, but often you'll be surprised how well it works. If the engine fuel system is set properly and in good condition, your engine will likely start nice and gently, after which you can notice the oil pressure coming up, and *then*, you can gradually increase the RPM to 1000 for further warm-up.

So give it a try! This is a useful procedure to lengthen the life of your engine. And as a side-

note, you'll appear much more professional with your passengers and with everyone around the ramp when you start your engine. It's all a part of smooth piloting operations that can give you an advantage as the preferred pilot your passengers love to fly with.

Question of the Quarter

What is the age requirement to take the private pilot written test?

Answer:

An applicant must be at least 15 years of age to take the test, although applicants for the balloon or glider tests can be 14 years of age. You must be at least 16 to solo and 17 to get your pilot certificate. There is no age limitation on beginning flight lessons while with an instructor. Also, there is no maximum age to acquire a pilot certificate.

You just learned something new.

The "Higher Living" newsletter editor can be reached at david@execft.com Your feedback and article subject suggestions are welcome.