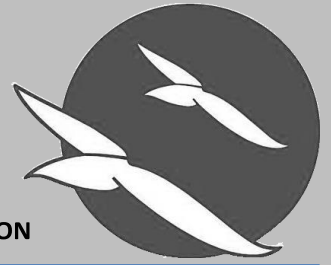


March 2018 – ISSUE 1802

GSLFIA News

THE OFFICIAL PUBLICATION OF THE GREATER ST. LOUIS FLIGHT INSTRUCTORS ASSOCIATION



"Aviation Professionals Dedicated to Excellence in Flight Instruction"

49th Annual FIRC is in the History Books

It's hard to believe that we just completed the 49th annual FIRC. The GSLFIA is about to turn 50 as we move into 2019. The 49th FIRC did provide a little different venue this year. Due to time restraints, the renewal of our updated application with the FAA did not complete in the time frame adequate for us to receive FAA approval needed for changes. For those who attended, members experienced Aviation Seminars as the primary FIRC provider. Other than that, the venue and atmosphere was genuine as a quality GSLFIA supported event.



We were there to support our members with any needs that they had as instructors, breakfast and lunch were provided on site by the GSLFIA to provide our members the best FIRC experience possible. We feel that there is real value in having a relaxing day with no need to run out for lunch and hurry back for the next session. Friendships can be renewed and we can find time to exchange our war stories as instructors. As in the past, the organization has supported Flight Instructors for nearly half of a decade. Having been a CFI myself now for 43 years, I can say in that time the aviation industry and students have changed immensely.



49th FIRC Continued

We want to sincerely thank the Wings of Hope organization for their generous support by providing their hangar facility for the event. We are now in process of completing the last parts of our FAA approved GSLFIA certification that is planned for our January 2019 FIRC. We will have a date published in the near future to identify the date of the event. We are looking forward to our 50th anniversary FIRC that will be the best ever for presenters, subjects and friendly environment.

Annual Super Safety Seminar

We hope you had the ability to attend the 2018 Super Safety seminar on March 3rd and 4th. This year's line up of subjects, speakers and food was identified by many as the best yet. The event was located at St. Louis University in Tegeler Hall. The event covered two full days from 8:00 am to 4:30 pm each day. One unique feature of this year's seminar was the new structure that provided both combined full sessions along with breakout sessions. In total, there were 29 separate topics where a variety of speakers covered areas of interest from Aircraft Systems, Single Pilot IFR, Basic Med and employment opportunity along with many more.



Photo courtesy The Aero Experience

Bob McDaniel a member of the GSLFIA received the FAA Master Pilot award along with Esther Grupenhagen for 50 years as a pilot. FAA FASTeam manager Phil Dixon presented the coveted awards to both. Several additional recipients of the award were also present to congratulate both Bob and Esther. Attendance on Saturday was 95 and 89 on Sunday.

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CFI Tips and Techniques

“Flows and Checklists”

The latest Private Pilot - Airplane Airman Certification Standard (FAA-S-ACS-6A Dated June 12, 2017) Area of Operation 1. Preflight Preparation, Task G, Operation of Systems directs our applicants to show that they can “Properly use appropriate checklists”, so we all teach checklist use, since we’re teaching students referencing the ACS’s - right!! But how many of you use Flows and/or Mnemonics during your flight training? So what are flows and what are mnemonics and how can we incorporate them in our flight instruction to produce safer, more proficient pilots? A flow is an organized pattern or sequence of positioning/confirming position of all of the controls, instruments, components of an aircraft before, during and after a flight. It is learned, usually, by memory and accomplished, usually, prior to a checklist being accomplished. And if you’ve ever taught GUMPS or CIGAR to your student you’ve used a mnemonic, it’s usually a word used as a reminder to check the position of controls, instruments, components.

Why use either one of these techniques, rather than just, always, using the checklist? These techniques can be used before a checklist to set all of the various “things” in the airplane where you want them. a checklist is used to confirm the “more important” control positions. As an example, I teach the mnemonic “CIGAR - Controls, Instruments, Gas, Attitude, Run-up” prior to a Before Takeoff checklist and, if the student has really done a thorough CIGAR check, ask the student, as he or she runs through the Checklist, if they actually have to position many items. Usually they don’t, as the CIGAR mnemonic/flow has already gotten most, if not all, of the controls/instruments/etc. The checklist is then really what it says - a CHECK list, rather than a DO list. I’ve found that this mnemonic / flow works on all of the training airplanes that we generally fly up to large aircraft-because they all have, basically the same controls/instruments/ components. These mnemonics/flows also work when you’re a single pilot and/or short on time and maybe want to CONFIRM that you’ve positioned controls properly. As another example, let’s consider the time-honored GUMPS check. I’ll bet we’ve all used this in the Pattern – retractable gear or NOT! So, you’ve accomplished a Before Landing checklist and just

Help Support the GSLFIA with Your Bookstore Purchases

Help Support the GSLFIA with a bookstore donation program. Gateway Flight Training recently opened two pilot supply locations in the St. Louis Area.

Creve Coeur Airport and the Spirit of St. Louis Airport at Million Air opened their doors with an excellent supply of aviation training materials and publications to support you and your student's needs. Any GSLFIA member purchasing supplies, texts or materials from a Gateway Pilot Supply Facility, will enable Gateway to make a donation to the GSLFIA in his / her name. Just send a copy of your receipt with your name to, info@gatewayflight.com, and the donation will be made to the GSLFIA. Shipping is free for any purchases of \$50.00 or more if shipped to a U.S. address. Help Support Education and the GSLFIA!!!!

GSLFIA Event Schedule Restructuring

We are planning to make some schedule changes for some of our events. Over the past several years we have looked at several options of when to best conduct events such as the Trivia night and the annual GSLFIA aviation awards banquet. We are now planning to have the Trivia night this year in early to mid September and the awards banquet will move to February 2019. The primary focus for moving the banquet is coordinate the GSLFIA awards along with the FAA district awards. Feedback from many of our members, industry and the board of directors lead to the decision for the changes.

Getting Your Aircraft Ready for Spring

The GSLFIA and Ideal Aviation will be sponsoring "Getting Your Aircraft Ready for Spring" on March 29th at 6:30 at the St. Louis Downtown Airport. Doug Keck the Director of Maintenance for Ideal will be the featured speaker. Ideal is located on the West ramp at 2500 Vector Drive. Please bring a friend. Here's your opportunity to discuss aircraft maintenance questions. Watch for FAA SPANS messages.

GSLFIA Newsletter Distribution

Please notify us if you know of anyone who might want to receive the GSLFIA newsletter by email. We are expanding our distribution to educational organizations, STEM programs, airports, instructors and anyone who is interested in the organization.

CFI Tips and Techniques

"Flows and Checklists" Continued

want to make extra sure that the gear is down. I actually tell students in a retractable airplane - "You have 3 wheels so you do the GUMPS check 3 times - Downwind, Base and Final" It would be hard to imagine anyone landing gear up if they've accurately done this!

Just so that you don't think that I'm advocating NOT teaching checklist use - I'm NOT. The checklist can be a "read and do" list (as I did in the USAF) or truly what the name says - a CHECK (rather than DO) list. We'll use it to check the more critical components, again Before/During/After a flight. I advocate the use of a flow/mnemonic prior to using a checklist THEN doing the checklist for a number of reasons that we've spoken of but also because in my 42 years of flight instructing I've seen more than one student who becomes SO DEPENDENT on the checklist that they couldn't operate the airplane without it. When a student is new and doesn't know an Aileron from an APU, of course we have to use a checklist, and usually as a "read and do" list, until they understand what all of those "things" in the cockpit are and do. But, I try to get them to understand what those "things" are and what they do so that they understand where switches/controls need to be for any given phase of flight - THEN use the checklist to make sure that everything is where they should be! Again, I've found that I can get in almost any airplane and "learn my way around the cockpit" just by using a flow and seeing what switches are there and where they should be. Then follow up when I "Properly use the appropriate checklist". Try it yourself first to see if you like this technique and, if you do, teach it to your student. And when you do, drop me a line and tell me if it worked for you or if I'm "full of it".

Thanks for listening.

Craig O'Mara

Director

Greater St. Louis Flight Instructor Association

"Tech Talk" Support from the GSLFIA

We received several questions regarding the maximum speed in Class B airspace. A look at CFR 91.117 will show you no speed restriction is listed for flight inside Class B airspace other than the 250 knot restriction below 10,000 feet MSL. There is also, the 200 knot speed restriction in "the airspace underlying the Class B or in a VFR corridor designated through such a Class B airspace area...". Well then, what about the class B airspace above 10,000 MSL in Denver and Salt Lake where the Class B extends to 12,000 MSL? We sent an inquiry to DEN through our friends at the STL TRACON and the response confirmed there is no 250 knot restriction in Class B above 10,000 MSL. There may exist; however, published speed restrictions associated with published arrival and departure procedures.

The GSLFIA welcomes your questions that we are always ready to address in the "Tech Talk" column anytime. Please inquire through our listed phone numbers and email addresses.



STL TRACON Support

We recently received a message from the STL TRACON asking us to provide this message on behalf of the TRACON support facility and controllers.

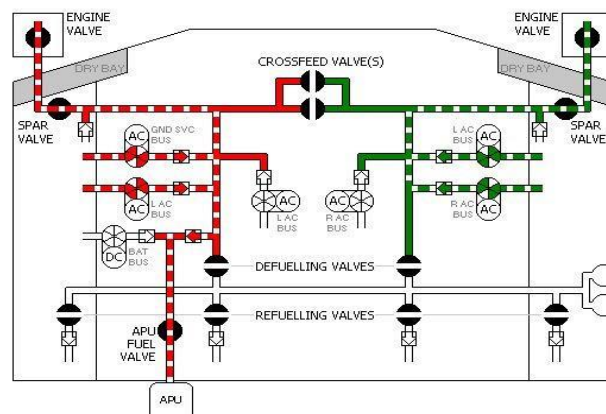
"STL Approach is here to provide the best possible service to its users. (YOU GUYS AND GALS). Please do not ever hesitate to call us for radar service during flight training. Whether this means just getting traffic advisories while maneuvering, or getting radar vectors for practice approaches into any airport within 40 miles of St. Louis. We are here to provide the safest and most expeditious air traffic services available".

St. Louis Approach TRACON Team.

Understanding the Machine

Due to the current and forecasted need for professional pilots, opportunities have never been better. Many individuals planning a career in aviation can see a much clearer path to the fight deck than the prior generation of would-be aviators. Unfortunately, some of today's aviation students feel that the need for pilots reduces the expected knowledge standards.

Many of the aviation academies offer accelerated training programs that are frequently staffed with new instructors. Most of these instructors are focused on building time to qualify themselves for a FAR Part 121 carrier. These instructors become not only the flight instructor but also become the Meteorology Instructor, Air Traffic Control Systems instructor, the Human Factors Instructor and so on. Students frequently do not receive the structured training that full collegiate programs offer.



One of the consistent areas of weakness today is the students lack of understanding of the aircraft systems. Many of today's students have little to no mechanical background that they can relate to the mechanical aspects of the aircraft. Some don't see the need and feel that the airline will teach them everything they need to know. This actually couldn't be further from the truth. A strong base line of knowledge is important for anyone planning a professional pilot career and being successful in the training program.

This is an area that I would recommend to all students to build their knowledge. As I always say, "Understanding the Machine" is critical. There are several courses available through area college aviation programs that will increase your comfort zone in this area.

Keith Mueller GSLFIA President

Mastering Slow Flight

Here's some members response to the last issue of the GSLFIA News Letter in response to techniques and practices utilized to teach slow flight. Thanks to David Chilenski for his support and help recruiting these member responses.

From Chris Johnson:

My experience as a CFI....If I tell new students to pitch for airspeed and power for altitude they will almost 100% of the time initially pitch up and gain altitude busting the 100 ft requirement.

To help the student have proper airspeed /altitude control I emphasize to focus on Power and Trim.

After reaching the practice area, generally at 2500 MSL, I will have the student:

1. Bring power back to approximately 1600 RPM, hold altitude, 10 degree of flaps when under 110 kts (Cessna 172 SP), and hold altitude! Don't worry about maneuvering airspeed yet. The airspeed will soon reach 85kts which allows for the 2nd notch of flaps to be deployed.
2. Upon reaching 85 knots, Flaps 20, continue to slow airplane, and hold altitude 2500 ft
3. Flaps 30, continue to hold 2500 MSL, and the airplane slow to airplane to approximately 60 knots.
4. Step 4 is the "Magic step." Use poor man's autopilot.... Trim... Trim is the key to good slow flight. I always tell my students that I love to work out.... In fact I do a few half marathons each year to stay in shape.... But I never want a work out in an airplane! Flying should be easy. Use the trim to make it easy on yourself. I push the student to be able to use finger tip pressure to fly the airplane in a slow flight configuration.
5. Once trimmed out, adjust as required using "pitch for airspeed / Power for altitude.

PA.VII.A.S1	Clear the area.
PA.VII.A.S2	Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES).
PA.VII.A.S3	Establish and maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., aircraft buffet, stall horn, etc.).
PA.VII.A.S4	Accomplish coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the evaluator without a stall warning (e.g., aircraft buffet, stall horn, etc.).
PA.VII.A.S5	Maintain the specified altitude, ± 100 feet; specified heading, $\pm 10^\circ$; airspeed $+10/-0$ knots; and specified angle of bank, $\pm 10^\circ$.

6. Upon reaching 60 and the plane trimmed out, use pitch for airspeed/power for altitude.. or as you say left for pitch and right for altitude to maintain 60 knots and 2500 ft!

From Josh Faibisoff

I always wonder why we make a distinction between reverse command and normal command and the use of pitch and power. Under all conditions, regardless of airspeed, pitch will control airspeed and power will control altitude. For example, during cruise if you advance the throttle and leave pitch alone you will start to climb and the airspeed won't change. In fact, it may decrease by a few knots. On the other hand, if you pull back on the elevator or trim up-pitch without touching the throttle you will enter a brief climb and the airspeed will decrease. You may ultimately enter a sluggish climb at a slower airspeed but if you trim back to a speed at or below best climb you may simply fly level at that airspeed despite having cruise power!

So, I teach that pitch controls airspeed and power is altitude. This is always true and therefore students have an easier time in slow flight and on landing approach because no change in mentality is needed. It also helps with stall awareness and recovery.

There is an excellent discussion in the classic book *Stick and Rudder*.

So What's the Big Deal with Simulators ??

Jim Stamm

For starters, where can you fly something that burns zero (0) gallons per hour !! My first introduction to a flight simulator was in early 1980 when I entered Undergraduate Pilot Training (UPT) in the US Air Force. Before starting UPT, thirty-five other pilot candidates, and I completed a short Flight Screening Program Officer Training (FSPOT) course learning to fly the T-41 Mescalero – the military version of the Cessna 172. FSPOT was an extremely military structured and demanding academic/flying program to “weed-out” prospective US Air Force pilot candidates before entering the very expensive year long UPT program. The T-41 did not have a flight simulator, but we all spent many, many hours in front of a cardboard T-41 instrument panel learning switchology and running checklists – it was time well spent.

My first real flight simulator was what many called the “box” or the T-37 sim at Reese AFB, TX. Back then the T-37 had two flight simulators – a Terrain Model Board or TMB for day VFR and a Computer Generated Imagery or CGI for night and IFR flying. Both were on multiple hydraulic actuators creating full motion feel in the seat; standing outside on the upper rail watching the “box” fly was pretty exciting, especially when doing aerobatics. I clearly remember my flight instructor telling me to never crash the TMB sim because the visual in the cockpit is obtained from an expensive camera lens on the end of a probe that you are actually flying around on a large 3D model board – crash the plane, break the camera lens !! Flying the CGI sim removed the stress of crashing – we were told a student in the class before us crashed on the TMB sim never heard who had to pay for the lens .

The T-38 was also on “stilts” as the sim instructors used to say, also with full motion except it felt a lot faster – a few students early in the UPT program got airsick in the sim. Going from the slower T-37 to the extremely fast T-38 was an eye opening experience and the opportunity to fly the “box” really helped make the transition much quicker and safer. What this really meant was saving a lot of fuel/money and wear and tear on the aircraft – I’m sure the instructors greatly appreciated the opportunity to train us “unqualified students” in the sim before our first, much more unforgiving flight in the aircraft but, we did have ejection seats in the real aircraft !!!

Simulators have advanced tremendously since 1980, both in realism and training now logged in them. Most airlines conduct all “flight training” in the simulator with a new pilots first flight in the actual aircraft being with paying passengers onboard. Flight training has evolved significantly these past several years especially when one talks about aviation ground trainers – the FAA and regulatory structure has changed as well.

Currently, the FAA assigns these “ground training devices” into three main categories: flight simulators, flight training devices, and aviation training devices. I would venture to say that every pilot will eventually use one, if not all three, of these devices to train or transition to different aircraft (ERJ-145 to B-737) during their career.

1. Flight Simulators or Full Flight Simulators (FFS) – the most capable and most expensive aviation training devices are in this category. FFS’s must include motion and visual display capability and it’s possible to earn a type rating without actually flying the airplane.

2. Aviation Training Devices (ATD’s) or Advanced Aviation Training Devices (AATD’s) are the most common in use for general aviation flight training today. Many manufacturers produce various ATD and AATD models to meet the needs for GA and corporate/business aviation. Many Part 61 and Part 141 flight schools use these devices to train students in preparation for their private, commercial, instrument and multi-engine certificates. The FAA has published Advisory Circular (AC) 61-136 to specify requirements for performance, capability and approval for each device.

3. Basic Aviation Training Device (BATD) is basically just hardware and software components (a yoke, a throttle/prop/mixture quadrant, rudder pedals, a monitor showing flight and engine instruments, etc.) allowing a pilot to fly. The FAA allows the BATD to be used for certain training and proficiency credits (please refer to the FAR’s for specific credit hours allowed).

NOW that you’ve read this far, what does all these mean to YOU and potential students ? Just recently announced Southwestern Illinois College (SWIC) in Belleville, IL has on campus simulators available for training even if you are not a currently enrolled SWIC student. Yes, even if you are NOT a SWIC student you can fly SWIC simulators. This is a tremendous opportunity !!!

Simulators Available: BATD – Conventional and G-1000 Panel Redbird SD Simulator – Conventional and G-1000 Panel PFC – DCX Simulator – Conventional and G-1000 Panel

“Mentoring Our Youth”

Introduction to Aviation Education

Though the winter weather has hindered my flying opportunities, GSLFIA has been very active! We shared Aviation-Ed, via various STEM-oriented activities December- February!

. “Curriculum Developer” meeting was on 12/14 in Edwardsville with Madison County IL administrators, was extremely useful. Setup by Dawn Waller of IMSA (IL Math & Science Academy), we shared important aviation education information about SWIC & AOPA. It was well received by them. Keith Mueller, Jim Stamm, & I represented GSLFIA.

. On 12/24, GSLBAA hosted a meeting at KSUS regarding the needs by the business aviation community. Participants included Spirit of St Louis airport management and us. We discussed the aviation needs, along with booths for aviation education at SLU’s “Aviation Camp” in July and the Air Show at KSUS on 10/13 and 10/14.

. “Aviation Career Awareness” day was on 1/25, at Gateway Christian Academy in Granite City. Keith, Bob Beckett, & I spoke to 100 high school students. They sought more about aviation careers, and the education requirements to get these jobs. Keith & Bob presented info about offerings at SWIC.

. On 1/30, I reconnected with those Missouri teachers, who attended the “2017 STEM Fair”. My focus was to share the numerous aviation activities in 2017, in which GSLFIA participated and highlight the same in 2018. The intent was to remind them that our organization is available & ready to assist the individual school’s aviation program. especially, as they plan for post-Spring semester camps.

. “IMSA Fusion & Belle Valley, District 119” meeting – Keith and I met with Dawn Waller (IMSA) and R. Dane Gale, Superintendent. We reviewed the objectives prepared by IMSA, examining the various aviation careers and what grade levels to focus our attention. While the critical need are the high school grades, R. Dane suggested that more exposure to aviation is needed beginning in the elementary grades. More work continues with these objectives, to transform them into classroom hands-on

Mentoring Continued

activities. Finally the St. Louis Science Center (SLSC) will offer a “Flight Academy” in June & July, in addition to EAA’s “Young Eagles”. Plus, SLSC will host the Smithsonian Institute’s “Destination Moon” from 4/14-9/3. This is their traveling exhibition of the Apollo 11 Command Module. For more details, see the SLSC’s website.

With each of the above, I shared the materials & programs offered by AOPA. These cover their High School STEM Initiative and numerous scholarships. Working together with these organizations, we can put forth a combined effort to educate our youth!

Jeff Rapp

Associate member of GSLFIA

Highway to the Comfort Zone

Everyone has most likely heard the age old saying that a Private Pilot certificate is a “license to learn”. Unfortunately not all pilots think of it this way. It is not uncommon for newly minted pilots to allow themselves to fall into a routine where they don’t push themselves outside of their comfort zone. This seems to be especially prevalent in pilots who are in it purely as a recreational activity. Far too often, leisure pilots fall into a routine where they will come out once a week or once a month when there is little or no wind to do their take offs and landings to maintain their currency and rarely leave their original airport. Or if they do leave the airport they go to one other specific airport that they go to all of the time.

One of our jobs as instructors is to ensure that our students always strive to keep learning. This is much easier to do when we are meeting with them on a regular basis during their training. It becomes much more difficult once the person has passed his/her check-ride and is out there in the aviation world on his/her own. This means we need to impress upon them the need to continue expanding their horizons even after they finish the certificate. Most instructors do put an emphasis on this idea during training, but with all of the constraints involved with flight training, it is easy to fall short of truly preparing students to push themselves beyond their comfort zones once the training has been completed. Simply meeting the requirements of part 61 of the FARs does not mean the student has received all of the “necessary” training.

Highway to the Comfort Zone Continued

I am not suggesting that we need to arbitrarily extend the students' training hours to make sure we cover every possible situation they may encounter. This would be an impossible task. We can; however, make sure we equip them with the necessary tools to safely push themselves beyond their comfort zone while we are checking off the requirements. Exposing our students to multiple airports with differing types of airspace, complexity, and traffic loads during training will make them less apprehensive toward going to a totally unfamiliar airport when they are deciding where to make a cross country flight down the road. Don't shy away from slightly high winds or crosswinds simply because it is beyond what the student would be able to solo or take a check-ride. When a former student or regular renter comes in for a flight review, take a look through his/her logbook and see what type of flights he/she has done in the past year. Find a way to push them out of their routine and expose them to something they may be unwilling or apprehensive to do on their own. Obviously we still have to advocate safety above all else, but pilots who understands where their limits are and are willing to slowly push past those limits are pilots who will be more likely to continue to learn and grow when they don't have us looking over their shoulders giving them guidance.

GSLFIA