

COMPLEAT AVIATOR

n anonymous quote from the earlier days of aviation describes aviation safety — indeed, survival — as a process in which:

You start with a bag full of luck and an empty bag of experience. The trick is to fill the bag of experience before you empty the bag of luck.

I suspect that most pilots would like to depend on more than luck, so let me substitute "opportunity" for "luck" and reframe the idea to say that "the trick is to use what's in the bag of opportunity to fill the bag of experience." Happily, the range of opportunities you have to become a more experienced and "compleat" 21st century aviator is almost boundless. Let's look at a few.

New Certificate

The basic document that the FAA issues to a pilot or instructor is a certificate, which attests to successful

completion of established standards and requirements to practice in a given field.

Earning a new pilot or instructor certificate is the most obvious opportunity to add to your base of aviation knowledge, skill, and experience. If you hold a sport or recreational pilot certificate, you are already well on the way to meeting the aeronautical knowledge and experience requirements for a private pilot certificate.

From there, why not consider training for a commercial pilot certificate? As Doug Stewart's article on page 15 observes, the maneuvers required for a commercial pilot certificate will make you a more proficient pilot even if you have no interest in flying for hire. And did I mention that commercial maneuvers like chandelles, lazy eights, and eightson-pylons are also a lot of fun? Even though it can be very challenging to perform these maneuvers correctly (just ask my instructor about my early attempts to master the lazy eight!), many pilots find that the commercial certificate is the one they most enjoy earning.

If you hold a commercial certificate, think about working toward the next level, airline transport pilot (ATP). I sometimes describe the ATP

> aviation's Ph.D. As with the commercial certificate,

Editor's Note: If you have ever seen Izaak Walton's "Compleat Angler," you'll recognize the spelling in the title and text of this article as an archaic version of "complete" that is often used in handbooks. It conveys our point a bit more clearly and colorfully than the conventional spelling, so please don't blame our copy editors for missing it.



September/October 2011

you need not be aiming for an airline career to train for an ATP certificate. If you set it as a goal, though, the knowledge, skill, and experience you gain from the effort to attain it will undoubtedly make you a more well-rounded, or "compleat," aviator.

New Rating

Another way to advance your aeronautical knowledge and skills is to train for a new rating on your pilot certificate. A rating is a statement that, as part of a certificate, sets forth special conditions, privileges, or limitations. In other words, ratings specify what, and/or how, the pilot is qualified to fly, and they come in several varieties.

The most common form is the aircraft category and class rating that you see on your pilot certificate. For example, a typical rating on a private pilot certificate is "airplane single-engine land." If you decide that you want to fly twin-engine airplanes, you need to complete the training and testing requirements for a multiengine rating. Your private pilot certificate will then have ratings for "airplane single and multiengine land." As Tom Hoffmann's article on page 12 describes, you can also learn a great deal from a glider rating. That one is still on my list, along with the seaplane rating that I hope to add in connection with a future trip to Sun 'n Fun.

Ratings are also added to a certificate when the pilot qualifies for a certain operating privilege, such as an instrument rating, in a specific aircraft category and class. Although the time and effort required to earn an instrument rating is very similar to that required to attain a private pilot certificate, it is well worth

achieving. First, training for an instrument rating will sharpen your basic flying skills because it demands a

greater level of precision and discipline. Second, it will open up a much wider range of flying possibilities that are completely closed to a VFRonly pilot. Last, but certainly not least, an instrument rating can enhance your safety.

The knowledge, skill, and experience you gain from the effort to attain a new aviation qualification will make you a more well-rounded aviator.

New Endorsement

Still another opportunity to fill your bag of aviation experience is to earn a new endorsement. An endorsement attests to the completion of ground and/or flight training required for specific operating privileges, for airman certification testing, or for recurrent training such as flight review or instrument proficiency check. Except for certain endorsements made in pen and ink on a student pilot certificate, endorsements are generally made in the pilot's logbook.

The range of possible endorsements is as wide as the world of aviation. Just a few that you might consider adding include spins, high performance,

high altitude, complex, and tailwheel. Of these, I had the most fun - and learned the most about basic

Learn something and earn something on every flight.

flying - from earning my tailwheel endorsement in a Citabria several years back. The tailwheel endorsement training also provided my first opportunity to operate on grass.



With any certificate, rating, or endorsement, don't be intimidated by the magnitude of the challenge. Having earned all of my certificates, ratings, and endorsements in my spare time on

A new aviation challenge could be just the ticket to making you a more "compleat" aviator.

weekends and holidays, I can well relate to how daunting it can be to embark on such a project. Just as the proverbial 1,000 mile journey begins with a single

step, though, the minimum aeronautical experience requirement for a new aviation qualification begins with the first tenth that clicks over on the Hobbs meter. Here are a few suggestions for mentally managing the process and your progress.

Learn something on every flight. Your instructor or flight school should have a syllabus for training. Use it to determine what knowledge and skill you should expect to acquire on each flight, and focus on wringing the maximum amount of learning and experience you can get from every hour you fly. Although there are times when the repetition of skill-based maneuvers is the most that provides a real-world training experience (e.g., taking your family on a vacation trip) can significantly enhance your learning opportunities.

- Earn something on every flight. The aeronautical knowledge and experience requirements for each certificate, rating and endorsement are clearly set out in 14 CFR part 61. Try to ensure that each flight provides some element that takes you closer to your goal.
- Track your progress. When I was building time for my ATP certificate, I made a simple Excel spreadsheet with the various experience requirements (e.g., cross-country, night) in one column and my accumulated time for each category in others. I created a formula to update my progress after each flight. It was both satisfying and encouraging to watch the way each flight subtracted from the "time still needed" columns and added to one of the "hours accumulated" columns.

New Challenge

Not every opportunity to add experience



aviation challenge could be just the ticket to making you a more "compleat" aviator. The opportunities in the new challenge category are nearly boundless, but here are a few possibilities:

- Glass cockpit familiarization training.

 Though many pilots these days start and finish their training in glass cockpit aircraft, this technology may still be unfamiliar to others.

 Even if you plan to fly your favorite rounddial airplane forever, you might find it both interesting and useful to sample from the glass cockpit menu. If you are instrument-rated, hire an instructor to show you the basics of an RNAV(GPS) approach to LPV minimums.
- Specialized training. I have previously written about my (highly addictive) experience with formation flight training ("Up Close and Personal" in the SepOct 2009 issue of FAA Aviation News). I also learned a great deal from taking several courses in upset and unusual attitude recovery. Aerobatic training is still on my personal "compleat" aviator's to-do list.
- *Cross-country trip.* No, I mean a real cross-country trip, the kind that takes you from shore-to-shore. A Cessna T206 trip to Arizona and back with flying friends in 2009 still ranks as one of the greatest and best opportunities I have ever had for aviation learning and experience.



Bottom line: When it comes to opportunities to add experience and become a more compleat aviator, the sky is the limit.

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Certificates, Ratings, Endorsements

Certificates: The basic document that the FAA issues to a pilot is a certificate. There are several different levels of pilot certification, depending on the extent of training and testing required. These include student, sport, recreational, private, commercial, and airline transport pilot (ATP). The FAA also issues instructor certificates, such as flight instructor and ground instructor.

Ratings: Except for student and sport pilot certificates, all pilot and instructor certificates have associated ratings that specify what, and/or how, the pilot is qualified to fly. The most common form is the aircraft category and class rating, with the typical rating on a private pilot certificate being "airplane single-engine land." An aircraft specific type rating is required to act as pilot-in-command of any aircraft that is more than 12,500 pounds maximum gross takeoff weight or of any turbojet. Ratings are also added to a certificate when the pilot qualifies for a certain operating privilege, such as an instrument rating.

Endorsements: An endorsement attests to the completion of ground and/or flight training required for specific operating privileges or for airman certification testing. Endorsements are used to provide operating privileges and limitations to student pilots since they do not yet have an aircraft category and class rating; to attest to an applicant's preparation for an airman knowledge test or practical test; to certify completion of recurrent training requirements such as a flight review or instrument proficiency check; and to attest to completion of training and experience for certain aircraft characteristics (e.g., tailwheel, high performance, complex, high altitude).