

# Training Corner

## YOUR AVIATION LIBRARY

The Seventeenth in a series of articles by:  
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**YOUR AVIATION LIBRARY**, begins my **Unit 3: Aeronautical Knowledge** of my gyroplane flight training guide. As an aviation enthusiast, you should begin to assemble a library of references for additional learning.

The FAA, as in any bureaucracy, is frequently known by the amount of paper it can generate. If a paper is thick, it must be good; if it weighs a ton it must be excellent. However, the FAA has also produced some exceptional manuals. Many of its publications have been consolidated into very effective and useful handbooks.

A great place to start deciding what goes into your aviation library is to look at the Practical Test Standards [PTS] for the license that you are interested in. It contains a complete list of publications that contain all of the correct answers to both the aeronautical skill questions and the aeronautical knowledge questions that could ever be asked by your CFI or an examiner. The PTS is quite complete and thorough. By using it as a guide and meeting its standards, you are assured of being a safe and competent pilot.

Whatever you decide to do, a PTS becomes your base document. At a minimum you should begin with the Recreational Pilot Practical Test Standards. Even if you decide to fly unlicensed under the ultra-light rules,

Part 103, I recommend that you use the Recreational Pilot PTS as your learning guide. The PTS states the flying maneuvers you must be able to do plus how well you need to do them. It also contains a list of topics for discussion about which you must be knowledgeable. Thus the PTS gives you a list of all references where each topic is explained and discussed. Among other things these topics contain "rules of the road." How would you like to take a drive through a crowded city with other drivers who do not know any road signs or traffic rules? The aviation "rules of the road" avoid this confusion and unsafe condition.

If you choose to make a reference list from the PTS, it will be just short of one mile long and take you a month of Sundays to assemble. Here is a quote from my *Flight Instructor PTS*; "Publications, other than those listed, may be used as references if their content conveys substantially the same meaning as the referenced publication." What this means is that some of those handbooks I mentioned becomes our salvation. Thank you, FAA!

In addition to FAA publications, private authors have written material pertaining to gyroplanes. Some of this material, while quite good, is not readily available. The main reasons are that the writers are

no longer active in aviation or that the equipment they wrote about is rarely found, much less used. I will outline some of the more current and readily available gyroplane publications for you to consider. Please bear in mind that it is very possible that I do not know all of the private materials that might be available. If I have missed something, it is unintentional. I am not trying to be selective or to leave anything out. It is only that I do not happen to be aware of it.

Nevertheless, the following list of references should, at a minimum, be in your aviation library. This selection will provide the guidance, direction, and knowledge to accomplish all of your aviation goals. Those goals should include learning about the aviation environment and world and in which you will be operating, expanding your knowledge about gyroplanes in particular, investigating gyroplane training and learning how to fly, and finding out how to build and license your home-built aircraft.

### From the practical test standards [select 1]:

"FAA-S-8081-3: RECREATIONAL PILOT PRACTICAL TEST STANDARDS; ROTORCRAFT-GYROPLANE "

"FAA-S-8081-15: PRIVATE PILOT PRACTICAL TEST STANDARDS; ROTORCRAFT - GYROPLANE"

FAA-S-8081-16: "COMMERCIAL PILOT PRACTICAL TEST STANDARDS; ROTORCRAFT - GYROPLANE"

**From the advisory circulars [acs]:**

"AC 20-27D: CERTIFICATION AND OPERATION OF AMATEUR-BUILT AIRCRAFT"

"AC 61-21A: FLIGHT TRAINING HANDBOOK; REVISED 1980"

"AC 61-23C: PILOT'S HANDBOOK OF AERONAUTICAL KNOWLEDGE; REVISED 1997"

"FAA-H-8083-21: ROTORCRAFT FLYING HANDBOOK; PUBLISHED 2000" [NEW]

**From private authors:**

"UNDERSTANDING THE GYROPLANE", by Paul Abbott

"THE GYROPLANE FLIGHT MANUAL", by Paul Abbott

"HOW TO LICENSE A HOME-BUILT AIRCRAFT", by Paul Abbott

"GYROPLANE FLYING FOR BEGINNERS", by Patrick Howell

**FAR/AIM 2001: ASA handbook that includes:**

FAR PART 1: "DEFINITIONS AND ABBREVIATIONS"

FAR PART 43: "MAINTENANCE, PREVENTATIVE MAINTENANCE, REBUILDING and ALTERATION"

FAR PART 61: "CERTIFICATION; PILOTS, FLIGHT INSTRUCTORS, & GROUND INSTRUCTORS"

FAR PART 67: "MEDICAL STANDARDS AND CERTIFICATION"

FAR PART 91: "GENERAL OPERATING AND FLIGHT RULES"

AIM: "AIRMAN'S INFORMATION MANUAL"

NTSB PART 830: "NOTIFICATION & REPORTING OF AIRCRAFT ACCIDENTS & INCIDENTS"

**From the gyroplane manufacturer:**

"The Aircraft Pilot Operating Handbook" [POH]

As I mentioned before, the PTS is your basic document. It states the requirements for both skills and knowledge. It is a free download from the

FAA's web site at; <http://afs600.faa.gov>, click Search, scroll down to Practical Test Standards, and click Search again. Downloads are in Adobe Acrobat .pdf format, so everyone should be able to receive them. Begin by selecting one PTS and use it as your organizational and study guide, e.g. your road map into aviation.

Many of the Advisory Circulars are handbooks. This means that they contain condensed information from numerous other sources that cover the most important topics. Consequently, they lack some of the thorough explanation and detail that you might want or need. You would then have to go to the source reference. All aviation topics, however, are covered. The section on weather, for example, comes from two weather books that are very complete, thorough, and detailed. You would need to consult the topic books for more explanation and detail.

AC 61-21A and AC 61-23C have always been base documents that outline pilot training and aeronautical knowledge. The publications give you a very complete overview of what aviation is all about. They have a great deal to say about airplanes because that is the vast majority of what flies. But what about gyroplanes? Gyros are such a very small part of the aviation industry that most people don't even know what a gyro is. Most think it is a spicy Greek sandwich!

The "ROTORCRAFT FLYING HANDBOOK" is a new publication just recently available. While information on helicopters is included, it is the FAA's first publication that specifically addresses gyroplanes. The material was assembled from many different sources and with help from representatives of the gyro community. It is a little general in nature and does not go into much detail. Nevertheless, it is a great overview and nice orientation into helicopters and gyroplanes. To learn more detail about gyroplanes you will have to go to a private author.

Paul Abbott has been around gyroplanes for quite some time. His

first book came out in 1977, "THE Gyroplane Flight Manual." His most recent revision was in 1992. It is, to my knowledge, the first and longest standing gyroplane book available. Mr. Abbott gives you a general overview of what is involved in learning to fly. It is not a "how to book," but rather a "what's involved in it" book. The "how to" is the responsibility of your flight instructor.

In 1986, Mr. Abbott added a second book, "How To License A Homebuilt Aircraft." When you get ready to build your kit, this book will save you some headaches and wasted time. The latest revision is 1994.

Mr. Abbott's third book appeared in 1988, "Understanding The Gyroplane." He nicely outlines how and why gyroplanes fly. His most recent revision was made in 1994.

All of these books are easy to read and understand. They are not very technical and are more on the conceptual side. It offers a beginner an excellent introduction into what gyroplanes are all about and how they fly without getting too wrapped up in charts, graphs, formulas, and diagrams.

"GYROPLANE FLYING FOR BEGINNERS," by Patrick Howell is a bit of a misnomer. Not only is it a great manual for beginners, but the old pros who think that they know it all, will learn a thing or two, also. It is very complete and quite technical in nature.

Mr. Howell includes sections of numerous manuals and publications making his book one of those nearly all-inclusive handbooks. He restates all of the pertinent FAA regulations, the Practical Test Standards, much from the Airman's Information Manual, and the NTSB rules. The manual is so complete; it is almost a one-stop study guide, depending on your background.

The FAR/AIM is updated and published each year. Any new changes in regulations, pilot requirements, and operating procedures must be noted. You must review changes each year to stay current. This is one

book that you must maintain a current copy of to remain up-to-date.

Notice, that I did not mention anything about AC 20-27D, "CERTIFICATION OF AMATEUR-BUILT AIRCRAFT" and the "Pilot Operating Handbook". I'll do that in later articles. For now the focus is on your immediate aeronautical knowledge.

In conclusion, what do I recommend? Well, if you are a beginner, start with Mr. Abbott's books. When you finish them, you'll basically know what you're talking about and where you want to go next. If you decide to continue in gyros and do some training, download a PTS as your road map. Begin to assemble the rest of the above references. Sooner or later you will need them all.

FAA publications may be ordered from the Superintendent of Documents; U.S. Government Printing Office; Washington, DC 20402-9325.

Aviation bookstores across the country carry many of these, also. It just depends on what is near you and what they stock.

Paul Abbott's books may be ordered by mailing \$16.95 for each book plus \$2.00 postage per order to The Abbott Company; P.O. Box 1121; Carmel, IN 46082. He also takes VISA and MC.

All are also obtainable from Paul's website, [www.abbottcompany.com](http://www.abbottcompany.com); from PRA HQ, [prahq@pra.org](mailto:prahq@pra.org) or by calling the office at (219) 353-7227. His ad can be found in this issue on this page.

Patrick Howell's book is available only on CD for a cost of \$19.95 [U.S.], postage included. You may order it directly from him. Mail to: Patrick Howell; 11 Thirlmere Gardens; Ashby-De-La-Zouch; Leicestershire LE 65 1FN; 01530-417682; U.K.; from PRA HQ, [prahq@pra.org](mailto:prahq@pra.org) or by calling the office at (219) 353-7227. His ad can be found in this issue on this page.

In my next article, "Your PTS As An Aviation Road Map", I'll provide you some guidance in using your PTS as an organizational guide into aviation. It maps out topics to study and learn, lists study materials, outlines the flying skills you will need to practice, and states how well you must be able to fly them.

**CAUTION:** Be patient and master each stage of flying and knowledge before venturing on. The longer you are in aviation the more you find out you are never as good or as smart as you think you are.

Remember, "the air, even more so than the sea, is most unforgiving for the slightest mistake." Get qualified flight instruction before getting into a gyro. Skillful pilots make it look easy, but it takes time to learn. Do not get into a hurry and take chances.

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A Guide to Getting Your Gyroplane License

By Patrick Howell

Highly recommended by Don Farrington and Wing Commander Ken Wallis.

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