



# **Sport-Private-Commercial Ground School**

## **Introduction**

# Introduction

## Who's Who?

Please share a little about yourself with the class.

- What is your name?
- Where you live?
- What is your experience flying?
- What type of pilot certification are you seeking (sport, private, etc.)?
- What do you want to do after you get a pilots license? (recreation, business, commercial, military prep, just want to see if you can?)

I am Steve Reisser, Advanced Ground Instructor; [stevereisser@yahoo.com](mailto:stevereisser@yahoo.com)

# Introduction

Ground School is designed not just to help you pass the requirement of passing the FAA Sport-Private-Commercial Pilot Aeronautical Knowledge written examination, but to give you vital and helpful information which will make you a more knowledgeable and SAFER pilot.

You need this and we will have *FUN!*

# Introduction

## Materials

- CURRENT FAR/AIM
- E6B FLIGHT COMPUTER [aluminum] & NAVIGATION PLOTTER
- SOUTHEASTERN U.S. AIRPORT FACILITY DIRECTORY
- CURRENT MIAMI SECTIONAL AERONAUTICAL CHART
- SPORT/PRIVATE/COMMERCIAL PILOT FAA KNOWLEDGE TEST BOOK

If you want, the Jeppesen Private Pilot Manual is a great text for both Sport and Private Written Exam preparations or Instrument/Commercial Textbook for the commercial ground school.

Recommend ASA: Private Oral Exam Guide

Total Private Pilot Training materials cost with all the recommended optional material including shipping is approximately \$200 (as of 11/2011).

Remember you are still getting approximately \$2,000 of free instruction.

Commercial Material List on Request or on enrollment in the class.

Most found at [www.sportys.com/pilotshop](http://www.sportys.com/pilotshop)

ALL OTHER MATERIALS ON CLASS DVD

# Class DVD Material

I have prepared a DVD for use on your home computer. Put the disc in your PC-DVD, open Windows Explorer (Start, All Programs, Accessories, Windows Explorer). Click on your DVD drive (.. double-click on My Computer and you will see it there)

It might be easier for you to copy the DVD to your PC rather than using the slower DVD each time you want to access it. Do so if you wish.

You need to have the capability to read PDF files (Adobe Reader – it is free and can be installed from the DVD in the Acrobat Viewer Folder). You also need the ability to view Microsoft PowerPoint Slideshows which can also be installed from the DVD from the MS PowerPoint Viewer Folder)



# Class DVD Material

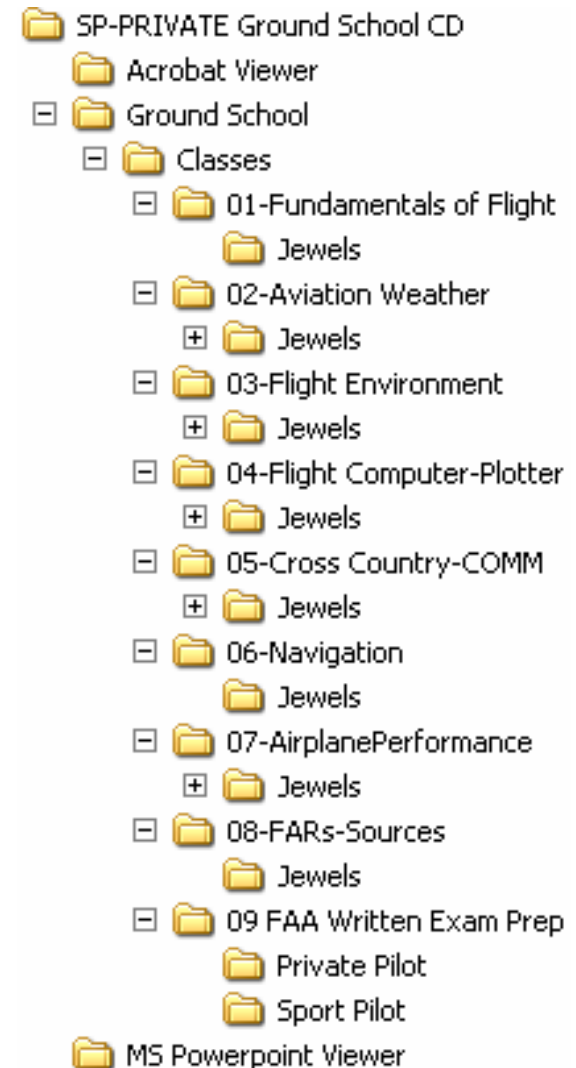
There are 9 sections of Study

Each Section contains a “pdf” file with an overview of materials (6 slides per page).

Many find it useful to print and bring to class to make notes from our class study. The section also contains a “pps” program that presents the material as you will observe in class.

Each Section has a “Jewel Box” with great training aids and supplemental section study materials.

Most sections will be covered in a week, some less, some more depending on the progress of the class.



# Introduction

## *Basic Rules for Success*

**ATTEND** every class (3 strikes and you are out) and please be on time – class starts 9 A.M.

**INQUIRE** if you are not sure of anything

**REVIEW** materials before and after class

**COMMIT** to achieve. It is hard work but well worth your effort.

# Introduction

This course is taught as a **proficiency based experience** to insure that you can demonstrate at a “minimum performance level” all area of knowledge in aeronautical knowledge. Each session (beginning at the 2<sup>nd</sup> session) will begin with a quiz of the last session. If you are unsatisfied with your proficiency, I will provide re-tests 1 hour before each class to help you achieve your goal.

# Introduction

## Course Content

Fundamentals of Flight, Airplane Systems, Aerodynamics, Aviation Weather, Flight Operations, The Flight Computer (E6B), Flight Communications, Navigation, Cross Country Flights, Aircraft Performance, and Federal Aviation Regulations.

Specific Session Topics and Quizzes identified in the Student Handout

**Website: <http://groundschoo.weebly.com>**

# Changes in Class Content



Changes to class content may be posted to the website and can be downloaded.

The material is dynamic and frequently is updated! Check date for downloads.



LAST COURSE UPDATE: November 16, 2009.

Commercial Groundschool will be published on enrollment of 5 or greater number of students.

PRIVATE-SPORT PILOT PRESENTATIONS: right-click links, then "Save As" to your folders.

Introduction To Ground School for Student Pilots

Fundamentals of Flight

Aviation Weather

The Flight Environment

The Flight Computer and Plotter

E6B Emulator

Cross-Country Planning and Communications Assignment X/C

Homework

Navigation

Aircraft Performance-Weight and Balance

Federal Aviation Regulations

Other Sources Of Aeronautical Information

# Certificates, Categories, Classes and Type Ratings

## CERTIFICATES

	<u>Restrictions</u>
• Student Pilot	Released by CFI Endorsement
• Sport Pilot (2005)	Numerous
• Recreational Pilot	Numerous
• Private Pilot (non-instrument or instrument)	VFR only without Instrument Rating
• Commercial Pilot (Non instrument or instrument)	VFR only without Instrument Rating
• Airline Transport Pilot	

<u>AIRMEN CATEGORY</u>	<u>CLASS</u>	<u>Restrictions</u>
Lighter-than-air	Airship (blimp)	
	Free Balloon	
	Hot Air	
	Lighter-than-air	
Rotorcraft	Helicopter	
	Gyroplane	
Glider	(none)	Aerotow Only
Powerlift	(none)	
Airplane	Single-Engine-Land SEL	
	Single-Engine-Sea SES	
	Multi-Engine-Land MEL	
	Multi-Engine-Sea MES	

# More on Categories, Classes and Type Ratings

## AIRCRAFT CLASS (Same as Airmen Categories)

Lighter-than-air  
Rotorcraft  
Glider  
Airplane

## AIRCRAFT CATEGORY

Transport  
Utility  
Normal  
Limited  
Restricted  
Aerobatic  
Provisional

# Certificates, Categories, Classes and Type Ratings

## Additional Ratings in the Certification-Rating Matrix

### **Type**

CFI

### **Category/Class**

Airplane - SE

Airplane - ME

Rotorcraft - Helicopter

Rotorcraft - Gyroplane

CFII

Instrument - Airplane

Instrument - Helicopter

Instrument – Glider

### **Type**

Ground Instructor

### **Application**

Basic - Private, sport pilot, recreational pilot, and private pilot flight review

Advanced - Private, commercial, and all flight reviews

Instrument -Private, commercial, instrument all flight reviews.

### **Specific Type Ratings**

Specific aircraft/weight

Jet and aircraft weighing greater than 12,500 lbs (approximate 125+ specific type ratings)

# Introduction

- **Requirements for Obtaining Your Private Pilot Certificate**
- You must be at least 17 years of age when you finish your training and take your FAA practical (flight) test.
- You must be able to read, speak, write, and converse fluently in English.
- You must obtain a student pilot certificate and at least a Third Class medical certificate
- You must be at least 16 years of age to receive a student pilot certificate (required to Solo).
- You must undergo a routine medical examination that may only be administered by a FAA-designated doctor, which are called aviation medical examiners (AMEs). A third class medical certificate is valid for 5 years (60 months) if the date of the examination was before your 40th birthday, or 2 years (24 months) if the date of the examination was on or after your 40th birthday. The medical certificate expires on the last day of the month issued (when another medical examination is required).

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**Individuals holding recreational pilot certificate or higher may exercise flight under the Sport Pilot Certificate if the individual:**

- Has a valid pilot certificate
- Is in compliance with medical requirements of a Sport Pilot (medical not suspended)
- Has a Sport Pilot Aircraft proficiency endorsement for a specific SP category/class aircraft
- Can continue to exercise those privileges as long as medical requirements are met and biennial flight reviews are passed.

A private pilot choosing to operate at the sport pilot level need not do anything more than to comply with the rules. No change of certificates is necessary. If ramp checked, a private pilot may simply present the private pilot certificate and valid state driver's license and inform the FAA inspector "I am operating as a sport pilot."

# Introduction

## **Light-Sport Aircraft:**

- May be operated at night if the aircraft is equipped per FAR 91.205, if such operations are allowed by the aircraft's operating limitations and the pilot holds at least a Private Pilot certificate and a minimum of a third-class medical.

## **Sport Pilot Qualifications:**

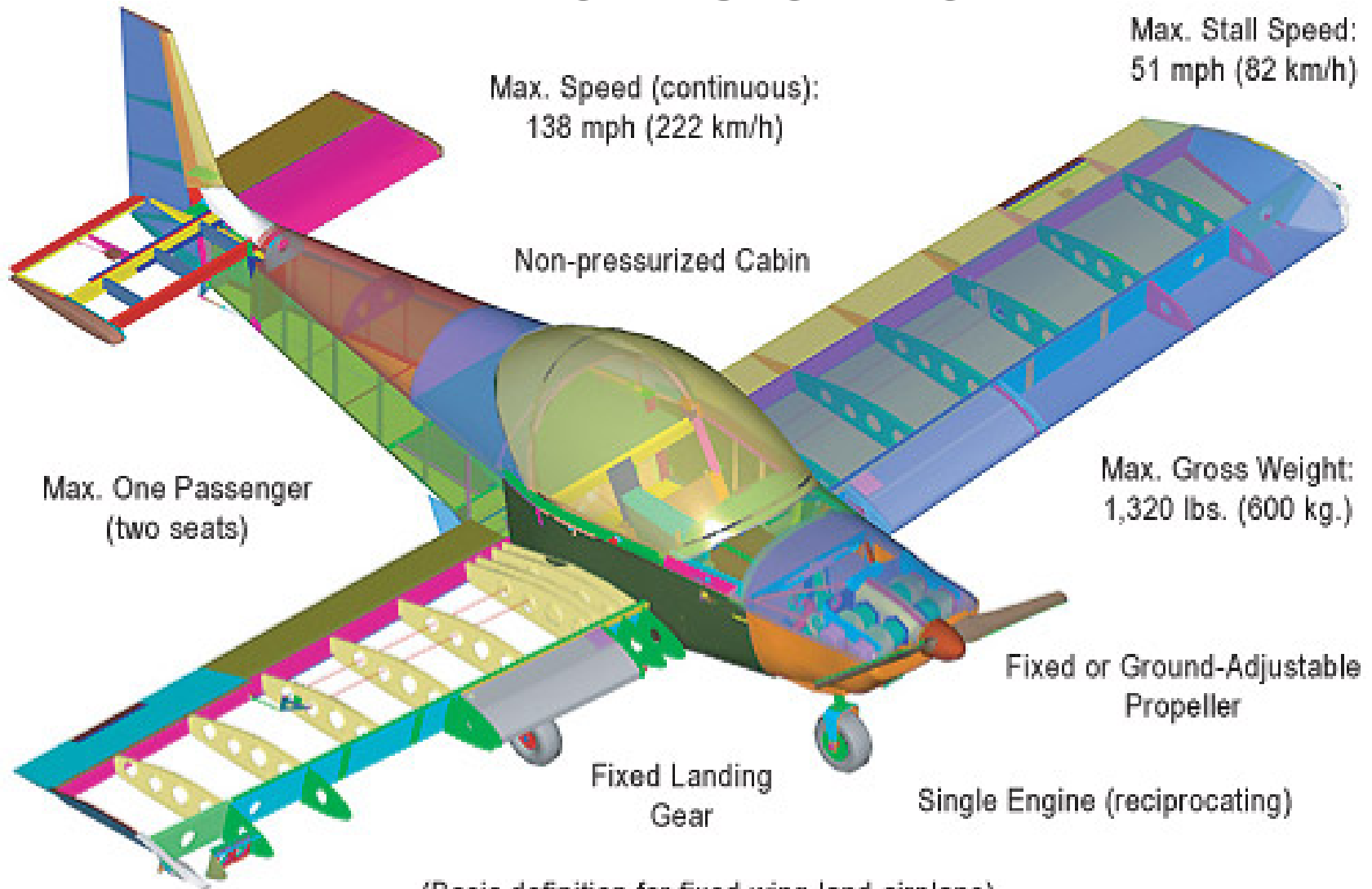
- At least 16 to be a student Sport Pilot(14 for gliders).
- At least 17 years of age(16 for gliders).
- Valid state driver's license
- Proficient (read, write, understand) in the English language
- Be able to affirm general good health and not using substances or medications that impede judgment, cognition, or motor skills

# Introduction

## **Light-Sport Aircraft:**

- The FAA defines a light-sport aircraft as an aircraft, other than a helicopter or powered-lift that, since its original certification, has continued to meet the following:
- Maximum gross takeoff weight—1,320 lbs, or 1,430 lbs for seaplanes.
- Maximum stall speed—51 mph (45 knots) CAS
- Maximum speed in level flight with maximum continuous power ( $V_h$ )—138 mph (120 knots) CAS
- Single or two-seat aircraft only

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(Basic definition for fixed wing land airplane).

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## **Light-Sport Aircraft:**

- Single, reciprocating engine (if powered), including rotary or diesel engines
- Fixed or ground-adjustable propeller
- Unpressurized cabin
- Fixed landing gear, except for an aircraft intended for operation on water or a glider
- Can be manufactured and sold ready-to-fly under a new Special Light-Sport aircraft certification category. Aircraft must meet industry consensus standards. Aircraft under this certification may be used for sport and recreation, flight training, and aircraft rental.

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## **Light-Sport Aircraft:**

- **Can be licensed Experimental Light-Sport Aircraft (E-LSA) if kit- or plans-built. Aircraft under this certification may be used only for sport and recreation and flight instruction for the owner of the aircraft.**
- **Can be licensed Experimental Light-Sport Aircraft (E-LSA) if the aircraft has previously been operated as an ultralight but does not meet the FAR Part 103 definition of an ultralight vehicle. Will have FAA registration—N-number.**

# Introduction

## **Aeronautical Knowledge (Same for SPORT and PRIVATE CERTIFICATE)**

**35 hours of aeronautical ground training**

***You must pass an FAA Written Examination. To be eligible for your to take the exam, you must have an endorsement to show that you are sufficiently prepared to pass the examination of 40(SP) 60(PP) questions with a score of 70% or greater.***  
**WE WILL START THIS TRAINING NEXT WEEKEND!! 😊**

## COMMERCIAL

A commercial pilot may be compensated for flying. Training for the certificate focuses on a better understanding of aircraft systems and a higher standard of airmanship. The commercial certificate itself does not allow a pilot to fly in instrument meteorological conditions, and commercial pilots without an instrument rating are restricted to daytime flight within 50 nautical miles when flying for hire.

A commercial airplane pilot must be able to operate a complex airplane, as a specific number of hours of complex (or turbine-powered) aircraft time are among the prerequisites, and at least a portion of the practical examination is performed in a complex aircraft.

The requirements are:

- Be at least 18 years of age

- Hold a private pilot certificate

- Be able to read, speak, write, and understand the English language

- Accumulate and log a specified amount of training and experience; the following are part of the airplane single-engine land class rating requirements:

  - If training under Part 61, at least 250 hours of piloting time including 20 hours of training with an instructor and 10 hours of solo flight, and other requirements including several "cross-country" flights, i.e. more than 50 nautical miles (93 km) from the departure airport and both solo and instructor-accompanied night flights

  - If training under Part 141, at least 190 hours of training time including 55 hours with an instructor and 10 hours of solo flight, and other requirements including several cross-country, solo, and night flights

- Pass a 100-question aeronautical knowledge test

- Pass an oral test and flight test administered by an FAA inspector, FAA-designated examiner, or authorized check instructor (Part 141 only)

By itself, this certificate does not permit the pilot to set up an operation that carries members of the public for hire; such operations are governed by other regulations. Otherwise, a commercial pilot can be paid for certain types of operation, such as banner towing, agricultural applications, and photography, and can be paid for instructing if he holds a flight instructor certificate. To fly for hire, the pilot must hold a second class medical certificate, which is valid for one year.

Encourage you to **Join EAA**. National and local

## NATIONAL

### Young Eagles Participants – FREE

FREE of charge to any young person who has completed a Young Eagles flight.

### Student EAA Membership - \$10

Membership for those non-young eagle students whom are 17 years old or younger.

### Individual EAA Membership - \$40

The EAA Individual Membership includes all the benefits of EAA membership as outlined in the EAA Membership Guide, with your choice of EAA Sport Aviation magazine or EAA Sport Pilot magazine.

### EAA Family Membership - \$50

For only \$10, upgrade your EAA membership to “Family” and extend card-carrying privileges to your spouse and any children under 18 who live with you.

### International EAA Membership - \$56

For individuals living outside the US or Canada.

## LOCAL

### Local EAA 175 Membership - \$24/year

Monthly meetings on the 4<sup>th</sup> Saturday of each month. Plan to come as you determine if you want to join OR just come even if you don't care to join – enjoy the aviation programs. It is in your best interest for you to associate and have the support and encouragement of other pilots. YOU MAY ATTEND ANY EAA 175 MEETING AS A VISITOR WITHOUT JOINING EITHER NATIONAL OR LOCAL.

## HOME WORK

1. Get all materials for class.
2. I recommend that you copy the CD to your PC to make it easier for you to review materials.
3. If you don't have Adobe Reader, use the CD "Adobe Viewer" and click on the .exe file to install the viewer.
4. If you don't have Microsoft Office with MS PowerPoint, you should use the CD MS PowerPoint Viewer and click on the .exe file to install to view PPS files on CD
5. If you have purchased the Private Pilot Manual, read Section I, Fundamentals Of Flight, Aircraft, Systems, Instruments, and Aerodynamics.
6. Get 6 months FREE "Flight Training Magazine" from AOPA by going to <http://flighttraining.aopa.org/>, position over the "Students" tab, and click on Free Magazine. EXCELLENT for both students and certified pilots (Sport, Private, Instrument and commercial). I still learn things in this magazine and I have been a pilot for 40 years!!
7. Bring your duck tape, next week is a HUGE section and I don't want any exploding heads 😊

*Class starts next session : see you then*