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Cover Photo: Cirrus SR22T with Garmin Perspective glass cockpit at San Carlos, CA Airport and landing at Reno, NV.

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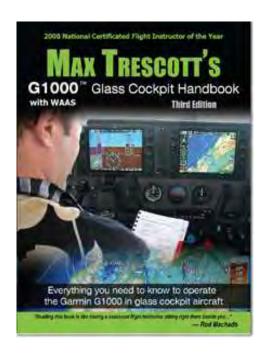
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Chapter 1: Why Learn to Fly?



Why should I learn to fly?" As you might suspect, the most credible answers come from the mouths of experienced pilots themselves.

Listening to pilots like Joe Campbell, Mary Ann Kawakami, and John Ferrell, you're

bound to hear the same theme: Whether they fly for work or recreation, down deep they'll tell you that the primary reason they're in it is for the thrills and challenge. And they all agree that flying is fun!

Flying has a truly magical quality – if you've ever flown in a small plane, you know the feeling of freedom that flying gives. In fact,

most people learn to fly for the excitement and adventure of doing something wholly amazing and new. Flying is so much fun that not a few people earn a pilot certificate with the eventual goal of earning a living doing what they love.

<u>Joe Campbell's</u> day job is sales. In his spare time, he flies for pleasure. Joe enjoys flying to meet friends and relatives, and to visit his two daughters in college.

For Mary Ann Kawakami, flying is a full-time profession. Mary Ann briefly worked in real estate, but dreamed of flying every day among the Hawaiian Islands. As a commercial pilot, she's living her dream.

Mary Ann Kawakami is a career pilot who enjoys working in an industry where every one loves their job because they're passionate about aviation. Her dream was to become a commercial pilot working in Hawaii and she now flies cargo and charter operations there in a Shorts SD3-60. She loves the fact that every flight is beautiful and exciting.



After working a few years in real estate, she decided to make her dream come true. Already a Private pilot, she went back to train for the Instrument, Commercial and multi-engine ratings she needed for the job she wanted. Soon after, she was hired and moved to Hawaii.

She feels that other young people should consider the lifestyle, challenge, thrill, exploration, and respect that a flying career offers. "Not only do people tend to have respect for pilots, but first and foremost the pilots must respect the aircraft they fly and respect the skies. I love the challenge of learning about all types of aircrafts, and learning how to use all the awesome avionics." The free travel benefits are a nice perk too!

For <u>John Ferrell</u> flying is a valued part of his work. A Silicon Valley attorney, John flies to meetings in his own plane, but also enjoys making pleasure trips with his family.

Like Joe, Mary Ann, and John, there's no reason you can't realize the dream of becoming a pilot!

How hard is learning to fly? No doubt, it's more complicated than getting a driver's license. But there's a deep pride, satisfaction, and sense of mastery that comes from learning to fly an airplane. In fact, that's why so many pilots continue to take extra training after they earn their basic pilot's certificate. Aviation offers endless opportunities for acquiring new skills – it's a perfect hobby or career for anyone who loves learning.

Some people learn to fly because they want to travel in comfort to other places for business or vacation. Finally, let's face it, flying is just a lot more enjoyable than being stuck in traffic!

There are many paths to a career in flying, including some you may never have heard of. Pilots are paid to take aerial photos, fly geologists conducting mineralogical surveys, deliver traffic reports, fly executives to meetings, fly search-and-rescue missions, and fly for airlines large or small. The need for experienced pilots is continuing to rise, and there's a growing demand for flight instructors to train the next generation of pilots.

Finally, some people learn to fly just for the satisfaction of learning to fly an airplane—even if they never intend to fly anywhere! Flying is fun and you might decide to learn just because you want to and because you can!

"...all agree that flying is

fun!"

Joe Campbell is a sales representative for a large company that does not allow employees to fly themselves in small planes for business purposes. But that's not a problem for Joe, since it's a short drive to most of his customers, and flying wouldn't help much. Besides, Joe learned to fly strictly for pleasure – like surprising his wife by flying her to dinner on her birthday.



Joe earned his Private certificate six months ago, and already he's made a number of trips up and down California to visit family and friends. He learned in a Cessna 172 with a G1000 glass cockpit and recently completed transition training to fly the more powerful Cessna 182. He's also done a mountain checkout, and can now fly the club airplanes he rents to Lake Tahoe and other high-altitude airports. Now, he's taking a ground school for an instrument rating.

"My grandfather and grandmother received their Private pilot licenses in early 1947 and my Dad also learned how to fly. So while I was late getting started, I've loved the challenge, fun, joy, and freedom of learning to fly. Earning the license turned out to be just the beginning of a new lifetime of learning."

What Can I do with a Basic Pilot Certificate?

Once you earn your pilot certificate (what most people call a -pilot's license"), you'll be free to do most anything, with only a few exceptions.

Many new pilots initially take family and friends sightseeing. They'll often begin by making day trips to locations within a few hours flying time. But once you earn your certificate, there's nothing to prevent you from flying across the country!

Pilots often fly for pure pleasure – for example, they'll hook up with a friend and take off for a meal at another airport. (Pilots call this –flying for \$100 hamburgers," because the cost of aircraft rental and a meal may exceed \$100.) Or they'll fly to an airport near a golf course or aviation museum. Many airports offer camping, and some are located near national parks and other scenic recreation areas.

Pilots may travel to —fly-ins" or air shows to meet and gab with other pilots.

The granddaddy of fly-ins is <u>AirVenture</u>, held in Oshkosh, Wisconsin in late July each year. Many pilots stay for the entire week and visit vendor exhibits, listen to forums given by well-known aviation speakers and watch the daily air show. Pilots can camp next to their airplane or stay at nearby hotels.

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As pilots begin taking trips, some may find that they've outgrown their initial training aircraft, particularly if they want to fly faster or carry more passengers. These pilots may choose to take additional training to qualify to fly higher performance aircraft. Pilots may also decide to buy or build their own airplane individually, or in a partnership with other pilots.

You may find that your pilot skills are in demand by charitable organizations. For example, the Angel Flight and Angel Flight West



volunteer organizations match pilots with medical patients who need transportation for treatment. (The patients must be able to walk on their own, and are often accompanied by a family member.) The pilots benefit from the flying time, and the patients are spared a long drive or overnight stay.

As I hinted earlier, the basic private pilot certificate does have limitations. For example, without additional training you won't be allowed to fly in the clouds, carry passengers or freight for hire, fly an aircraft with more than one engine or weighing over 12,500 pounds, or fly a jet. (You may, however, share the cost of a flight with your passengers, as long as you pay a percentage of the cost.)

With additional training and an instrument rating, you'll be ready to fly in the clouds. To be paid to fly, © Max Trescott

Cessna 400—the fastest fixed gear piston aircraft

you can train for a commercial certificate, though you won't be able to set up your own airline! (You'll have to be hired by a company with an FAA certificate for carrying freight or passengers.)

What Kind of Planes Can I Fly

You may not be able to fly the Space Shuttle on your first solo, but with a basic Pilot certificate you'll be legal to fly some sophisticated machines.

Specifically, if you get a Sport Pilot certificate, you'll be allowed to fly planes that qualify as Light Sport Aircraft. LSA's can have no more than two seats, a maximum speed of 120 knots (138 mph), and a total weight of 1,320 pounds. Later, you can train for the Private certificate, which removes these limitations.



As a Private pilot, you'll be able to fly any single-engine aircraft weighing under 12,500 pounds. (Realistically, you won't fly most airplanes in this class unless you meet the insurance requirements, which typically demand a specific number of hours of flight training for each aircraft model, and in some cases a minimum number of total flight hours).

Private pilots usually train in aircraft with two or four seats, the most popular rental models being from Cessna, Diamond, and Piper. Other popular aircraft are made by Cirrus, Beechcraft, and Mooney, though you'll find fewer of these available for rent.

Once you earn your certificate, you can train to fly any singleengine aircraft (most have six or fewer seats, though a few larger aircraft have more).

© Max Trescott CTSW Light Sport Aircraft

You can also learn to fly in a modern –glass cockpit" aircraft that has two computer displays that replace some of the traditional –round gauge" instruments. (The name –glass cockpit" refers to the computer screens, which are made of glass and are the largest objects on the instrument panel – hence, –glass cockpit.")

Most of these aircraft use the popular Garmin G1000 glass cockpit, which includes high-tech safety features that indicate the presence of nearby aircraft, obstacles, and terrain. It's no harder to learn to fly these aircraft – though you'll surely need to study the G1000 manual before you step aboard the airplane!

By the way, all aircraft are limited in the total weight they're allowed to carry. So, depending on the weightof your passengers, you may not be able to fill the seats in the airplane and carry a full load of fuel.

However, you can choose to carry less fuel to accommodate more passengers and baggage. Some student pilots will choose to buy an airplane and train for their pilot's certificate in that aircraft. In that case, you can learn in virtually any plane, as you are not limited to what's available for rent.



Cessna 172/G1000

© Max Trescott

"...learn to fly in a modern glass cockpit aircraft"

How Far Can I Fly?

The most popular training aircraft is the four-seat Cessna 172, which flies at around 105 knots (120 mph), depending on the model year. The amount of fuel carried also varies by model year – in most cases you wouldn't be able to fly more than about 3½ or 4 hours before stopping to refuel. That means you could fly about 365 to 420 nautical miles (the measure pilots use) or about 420 to 480 statute miles (the measure used when driving a car) on a tank of gas. Other training aircraft have similar speeds and range.

If you choose to buy an airplane and use it to train for your certificate, you could select a faster model. About the fastest single-engine plane you're likely to buy (even after you get your certificate) is one that can fly at around 200 knots (230 mph).

Depending on the aircraft, you might be able to fly about 1000 miles on a single tank of gas. At those distances, you might find yourself crossing multiple weather systems, which could prevent a Private pilot from completing the trip (remember – no flying in the clouds). So if you plan on making longer non-stop flights, you'll want to get an instrument rating so you can fly in clouds. Even so, you'll be limited in where and when you can fly compared to the airlines, since jets can handle a broader range of weather conditions.



G1000-equipped Cessna 172

© Max Trescott

How Safe is Flying?

Flying commercial aircraft – for example, passenger or cargo jets – is extremely safe. With two pilot crews, and the ability to climb above most weather, the airlines have improved their safety record to the point where you'd have to fly for about a million hours – every hour for the next 114 years – before you're likely to have an accident. Even with 24 accidents in 2007, the airlines had zero fatalities!

Smaller planes are as safe as the pilots flying them. They do have more accidents than the airlines, but fully 80% are the result of poor pilot decision-making. What this means is that you can eliminate most of the risk by getting the best possible training, exercising good judgment, and making conservative decisions when you fly. If you follow these guidelines, there will be times when you decide not to fly, or land at an airport short of your destination, based on careful evaluation of the risks.

Some studies conclude there's greater risk in flying than driving a car, while other studies conclude just the opposite. Regardless, if you make consistently make good decisions, flying an airplane can be at least as safe as driving a car.

There's a common misconception that whenever there's a problem with an airplane, it always results in a serious accident. But in truth, about 75% of all accidents result in minor or no injuries. In the unlikely event that an engine fails, all of the controls will still work, allowing the airplane to be flown like a glider, so that the pilot can land in a field or other safe location.

Another misconception is that mid-air collisions are frequent, and always fatal. Yet even though pilots fly millions of hours per year, there are only about a dozen mid-air collisions annually, and half the pilots involved usually survive. Modern glass-cockpit aircraft have systems that help prevent such accidents – for example, <u>displays that clearly indicate the position of nearby aircraft</u>. Ultimately, pilots have a great deal of control over how safely they choose to fly.

Pilots need to commit to continuous learning throughout their flying career. Two organizations offer free online safety courses and host local safety seminars nationwide: the Aircraft Owners and Pilots Association's Air Safety Foundation (www.aopa.org), and the FAA (www.faasafety.gov). You can register on their websites to be notified by email about seminars in your local area.

"Smaller planes are as safe as the pilots flying them."

Can I Really Do it?

Many people assume that flying demands the education and physical conditioning of a jet fighter pilot. Nothing could be further from the truth! Average people *can* learn to fly. In fact, it's fun to experience the respect that earning a pilot certificate commands.

Most people are capable of learning the basic physical and mechanical skills required to operate the controls of an airplane. It's reassuring to remember that during World War II, tens of thousands of pilots completed their training in a few months.

While most people can learn to fly, a small percentage lack the mature judgment to make good decisions during flight. You may enjoy a wild and crazy reputation in your everyday life, but flying demands an ability to make conservative decisions.

Learning to fly will require a high level of involvement – don't expect to show up at the airport and be passively –taught to fly." Flying is a hands-on endeavor that will engage your body and brain – so you must be an –active learner."

Probably the best predictors of whether you'll successfully complete flight training and earn a pilot certificate are:

- You want to do it.
- You have the time and funds.
- You have the drive and enthusiasm.

Flying is fun, so why not try it? Because I'm around pilots constantly, I'm always hearing stories of how people learned to fly. And the most common regret I hear is that people wish they had learned to fly earlier in life!

"...people wish they had learned to fly earlier in life!"

Chapter 2: What Does It Take to Get a Pilot Certificate?

Here are the major steps you'll need to take to earn your Sport Pilot or Private Pilot Certificate, though you won't complete them in the order they're listed here. (At the end of this e-book, you'll find a separate detailed <u>checklist</u> of steps that you can follow in order.)

- 1. Get your student pilot certificate. (and a medical exam for a Private certificate.)
- 2. Fly the required hours of flight training.
- 3. Do sufficient study to pass the FAA's multiple-choice knowledge test.
- 4. Take a practical flight test (called a -eheckride") with an FAA-designated examiner.
- 5. Meet the citizenship requirements.

Now, doesn't that sound fairly uncomplicated? Here's a breakdown of the steps, with descriptions:

1 Student Pilot Certificate and Medical Exam

Getting started toward earning your pilot certificate is easy! Except for the citizenship requirement (which we'll describe at the end of this section), there's nothing you need to do before starting flight training.

For the Private certificate, when you're halfway through your training and ready to fly the airplane by yourself for the first time (your first "solo"), you'll need to be 16 years old and pass a third-class medical exam administered by an FAA-designated physician or Aviation Medical Examiner (AME). Here's a a <u>list of local AMEs</u>.

The medical certificate serves as your student certificate. If you have questions about medical issues that could prevent you from passing the exam, see the FAA's <u>Guide for Aviation Medical Examiners</u> (or join the Airline Owners and Pilots Association and call their technical staff).

For the Sport Pilot certificate, you won't need a medical exam, only a valid driver's license and a student sport pilot certificate (required to solo) that you can get that from your <u>local FAA Flight Standards District Office</u> (FSDO), a <u>local AME</u>, a <u>Designated Pilot Examiner</u> (DPE), or a Sport Pilot Examiner (SPE). Note that if you've previously failed an FAA medical exam (perhaps as a Private pilot), you cannot qualify for the Sport Pilot certificate. (How's that for a —Catch 22"?).

"...there's nothing you need to do before starting flight training."

2. Required Flight Training:

The Private Pilot Certificate

Before you'll be allowed to take a checkride at the completion of your training for a Private certificate, you must be 17 years old and able to read, write, and speak English fluently. You'll also need a *minimum* of 40 hours of flight training (though the average time in the U.S. is around 60-70 hours). The Private Pilot training must include at least:



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20 hours of dual instruction including:

- 3 hours of cross-country flight to airports more than 50 miles away
- 3 hours of flight solely be reference to instruments
- 3 hours of night flight, including a 100 nautical mile round trip and 10 night takeoffs and landings
- 3 hours of instruction within 60 days prior to your practical test

10 hours of solo flight including:

- 5 hours of cross-country, including a 150-nautical mile round trip
- 3 takeoffs and landing at an airfield with a control tower

You must also receive ground instruction from your instructor (to be documented in your pilot logbook) on over a dozen topics specified by the FAA. This is in addition to any study you do in preparation for the knowledge test.

Required Flight Training: The Sport Pilot Certificate

Before you'll be allowed to take a checkride at the completion of your training for a Sport Pilot certificate, you must be 17 years old and able to read, write, and speak English fluently. You'll need a *minimum* of 20 hours of flight training (some flight schools report they've successfully licensing pilots with the minimum time). This training must include at least:

15 hours of dual instruction including:

3 hours of cross-country flight to airports more than 50 miles away

10 takeoffs and landings to a full stop

3 hours of instruction within 60 days prior to your practical test



5 hours of solo flight including:

1 solo cross-country flight of at least 75 nautical mile total distance

Note that Sport Pilots are restricted from carrying more than one passenger and from flying at night. They also cannot fly above 10,000 feet or in visibility of less than 3 miles. You can find a <u>full list of Sport</u> pilot restrictions here.

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3. Passing the FAA Knowledge Test

Private pilot candidates must pass the Private pilot knowledge test (sometimes called the —written test") with a score of 70% or better. The test is 60 multiple-choice questions from the FAA's databank of about 700 questions. A <u>subset of the questions</u> is available for your review. The Sport Pilot knowledge test has 40 questions and a <u>subset are published</u>.

Many flight schools can administer the test, which you can take any time prior to the checkride. However, you'll probably want to take it at least a month earlier, so you can focus on preparing for your checkride. You can prepare for the tests in many ways, including home-study-with-books or DVDs, or through a classroom ground school taught at a local college or flying school.

4. The Final Step: The Checkride!

The final step for both the Sport Pilot and Private certificates is to take a practical flight test with a Designated Pilot Examiner. The standards for the checkride are defined by the FAA's Practical Test Standard (PTS). You can download copies of the <u>Private PTS</u> and the <u>Sport Pilot PTS</u>. Both documents are long (119 and 177 pages) but inexpensive, so rather than print them, you may want to buy a copy.

Checkrides include an oral exam and a flight test. Your flight instructor will help you prepare for both. Often, before the checkride, you'll fly with a different instructor for a —phase check." This is a simulated checkride designed to spot any deficiencies in your performance. It can also build your confidence to hear that two instructors feel you're ready for the checkride.

When you pass the checkride, the examiner will issue you a temporary airman's certificate, which allows you to immediately begin exercising your new privileges. A lot of work goes into getting a pilot certificate, so after the checkride, be sure to go out and celebrate this significant milestone – which only one in every 500 people achieve!



5. Citizenship Requirements

For U.S. Citizens

The Transportation Security Administration (TSA) announced new rules in October 2004 that require student pilots to show proof of citizenship before they begin flight training. If you're a U.S. citizen, you'll need to show a birth certificate or passport to your flight school or flight instructor, who will record that they've seen it. You can then immediately start flight training.

For Non-US. Citizens

Resident aliens seeking flight training are required to apply to the TSA for approval, though you can take a demo flight before you apply to the TSA, to decide whether you want to learn to fly. If you decide to continue, you should create an account online at www.flightschoolcandidates.gov and specify your flight school or instructor as the training provider." For details of the TSA rules, see www.aopa.org/tsa-rule



"...you'll need to show a birth certificate or passport"

What Will it Cost?

There's no way to know exactly how much it will cost to get your pilot certificate, unless you sign up at a fixed-priced flight academy. Most of these schools are located in Florida, Arizona, and Southern California. Many are geared for career pilots who can stay in residence for a year or longer to earn the ratings they'll need in order to be hired to fly for a living. Even then, the exact costs may vary – for example, if you need more than the minimum required training, or if you have to pay fuel surcharges.

If you're learning to fly for fun, you'll probably learn at a flight school at a local airport and —pay as you go." The cost will depend on the type of plane you learn in, and the total hours you take to earn a Sport Pilot or Private certificate.

In the past, some flight schools have quoted a Sport Pilot certificate for as little as \$3,000, and a Private pilot certificate for as little as \$5,000. These rates are usually based on the bare minimum hours required by the FAA. But most pilots require more than the minimum hours to complete their certificate. With the rising price of fuel, you'll almost certainly pay more than the quoted minimum price.

Realistically, you should expect a Private certificate to cost at least \$7,000, perhaps over \$10,000 if you train in a new aircraft in a metropolitan area. (Training costs are generally higher near large cities and lower at rural airports.) If you're worried that <u>you don't have enough money</u>, you may be better off waiting until you have enough funds set aside to complete your training, or you can ask about scholarships and loans.

Ultimately, the issue is not what it costs, but what it's worth to you. Pilots sometimes justify the cost of flight training by explaining how —practical" it is, or how it will save travel time or money. But most people decide to fly for the same reason they choose any sport, hobby, or pleasurable activity—because it's fun!

"...the issue is not what it costs, but what it's worth to you."

How Long Will it Take?

How long it will take to earn your pilot certificate depends on how often you take lessons, and how quickly you can learn the required skills to pass the checkride.

For the Private certificate, if you fly once a week, I expect it will take you 11-12 months to complete your training. If you fly twice a week, you might earn your certificate in 4-5 months. I visited a school in Florida where the students fly 3 or 4 times a week and are told they'll complete their Private certificate in 90 days.

You can reduce the hours to get your certificate by flying more often – because you'll retain more information between lessons and spend less time relearning. I suggest people fly at least once a week, though 2-3 times a week is probably optimal. However, flying 4 or 5 times a week can cause information overload, unless you're in residence at a professional flight academy to become a commercial pilot.

Some people learn faster than others. I've noticed that people who've parachuted and flown radio-controlled airplanes learn faster. Is it because they're used to flaring an airfoil prior to touchdown? I'm not sure.

Older people tend to require more hours, yet I know people in their seventies who're learning to fly. So don't be discouraged, whatever your age. You can keep flying for as long as you're able to pass the FAA medical exam. I occasionally fly with a woman in her eighties who does a great job as a pilot – in her own airplane!

"...depends upon how frequently you take lessons"

Do I Need to Take a Ground School?

There's no requirement to take an in-classroom ground school. However, you do need to take the FAA knowledge test, and you need to prepare for it. There are several ways to study for the test:

- From books
- With a computer-based pilot ground school
- By enrolling in a classroom ground school at a flight school or local college

The Private knowledge test has 60 multiple-choice questions selected from the FAA's databank of about 700 questions. A <u>subset of the questions</u> is available publicly. The Sport Pilot knowledge test has 40 questions, and a <u>subset are published</u>.

You must pass the knowledge exam with a score of 70% or better. You then have two years to take the final checkride. If more than two years elapse, you'll need to take the knowledge test again.

You shouldn't study with a goal of merely passing the knowledge test. You'll be far better off if you acquire a broad knowledge of aviation subjects, because it will help you not only pass the written test, but the oral portion of the checkride. More important, it will help you become a safe, proficient pilot.

Books

Here are links to lists of recommended books for student pilots:

- Books for all student pilots
- Additional book for pilots learning in glass cockpits like the Garmin G1000.

Computer-based Study Courses

If you prefer to learn from computer-based videos, several aviation training companies now offer courses that cover essentially the same ground you'll find in the books listed above.

In-Classroom Ground Schools

There's no nationwide list of ground schools, so you'll have to do a bit of research. Try calling local flight schools and community colleges to see if they offer a Private Pilot ground school.

"...acquire a broad knowledge of aviation subjects."

What if I Cannot Afford it?

If you're worried that you don't have enough money for flight training, you may be better off waiting until you have enough funds set aside to complete your certificate. If you start learning and run out of money, you'll ultimately spend more, because you'll forget many skills and need to relearn them.

Consider applying for a scholarship. The <u>Aviation Scholarship Directory</u> costs under \$25 and lists hundreds of scholarships. You might also consider borrowing money to complete your training. Do an Internet search for —flight training loans" to find lenders.

If cost is a concern, I suggest that you find the least-expensive plane for rent, and hire the *best* (not the least-expensive) instructor you can afford. A good instructor will save you time and money – because you'll learn more efficiently – even if they charge more per hour.

The best approach to minimize the total cost is to fly twice a week or more, especially in the early phase of your training. If you fly less than once a week, you'll spend more total hours earning your certificate, because you'll spend more time relearning what you forget between lessons.

Don't give up on your dream of flying! Like thousands of pilots, you can find a way to make it happen.

"Don't give up on your dream of flying!"

Chapter 3: How Do I Get Started Now?

The philosopher Confucius said, —A journey of a thousand miles begins with a single step." To understand the steps of learning to fly and help keep you on track, we've provided a handy <u>checklist</u>. The list includes a column where you can add your target date for completing each step.

The first step is to find a <u>flight school</u> or an <u>independent flight instructor</u>. If you choose a flight school, they'll most likely recommend an instructor. And if you hire a flight instructor, they'll have suggestions for where you can rent an airplane. In either case, you'll want to <u>interview one or more instructors</u>, to ask about their experience and decide if their style matches yours.

Next, schedule a demo flight. Remember to bring your passport or birth certificate. If you aren't a U.S. citizen, you'll need to complete the <u>TSA application</u> and get prior approval for anything beyond an initial demo flight.

Next, decide whether you want to train for the Private or Sport Pilot certificate. The Sport Pilot certificate is relatively new and some flight schools may not have a light sport aircraft (LSA) for rent, so you may need to call other schools to find one that can help.

You'll also need to <u>choose the type of aircraft you want to train in</u>. For example, you might decide on a modern G1000-equipped glass cockpit aircraft, or a less-expensive two- or four-seat aircraft with traditional —round gauges." If you're training for the Sport Pilot certificate, you'll have to choose an LSA.

Be sure to <u>order study materials</u> to help you prepare for the FAA knowledge test and your flight training. Also, schedule your first flight lesson. Your flight instructor will guide you through the other required steps to complete your certificate.

"A journey of a thousand miles begins with a single step."

Where Can I Learn to Fly?

There are two ways to find a place to learn to fly. One is to find a flight school at a nearby airport, which will usually assign you an instructor that works for them. The other is to find an independent flight instructor, who will either rent you a plane, or tell you for which flight schools he or she teaches.

To find a flight school, you may first need to find a nearby airport. If you don't find a listing in your Yellow Pages directory, you might ask a pilot friend or try driving to the nearest airport. If it's a large commercial airport, you'll need to drive to the —General Aviation" or GA side of the field, which is usually separate from the passenger terminals. Don't hesitate to ask around the airport about the location of any flight schools. They are often well-hidden and sometimes lack good signage.

Here is a list of <u>flight schools</u> around the United States with whom I work most closely. All of them rent modern aircraft of various types. In most cases, you can click on a link to go directly to their website and get more information about the flight school.

You can also go to these websites to find a nearby <u>instructor</u> or <u>Master Instructor</u>. All of these instructors are members of <u>NAFI</u>, the National Association of Flight Instructors, the only professional association for flight instructors. It's fair to

assume that instructors who join NAFI take flight instruction, and their own professional self development, seriously. Some are independent instructors, while others work for a flight school. All can help you find a place to learn to fly.



How Do I Choose an Instructor?

If you go to a flight school, they'll often assign you a flight instructor. If they have more than one instructor, you may be able to interview two or more before selecting one. Alternatively, you can start by choosing an independent flight instructor. In some cases, independent flight instructors are more experienced and you may have more from which to choose.

Regardless, your primary objective is to select an instructor with whom you're compatible. Remember, you will spend a lot of time sitting close to this person and you want the training to be enjoyable. If you don't feel that the instructor's style is a good fit with yours, trust your feelings and look for another instructor. You may also want to take a demo flight with two different instructors just to confirm what it will be like to work with each of them.

In general, you will want a more experienced instructor, even if he or she costs more, since you'll probably learn more quickly from them. Find out how many hours of instruction he or she has given and how many different ratings they have. For example, are they a NAFI Master Instructor or a FAA Gold Seal Instructor? You might also ask whether you can talk to any of their previous students for recommendations.

Here are some other questions you may want to ask.

- What is your schedule and availability?
- Are you working to get a job with the airlines? If so, that instructor may leave you before you're finished with your training, so ask how they would handle transitioning you to another instructor.
- How many students have you sent for checkrides?
- What is your training philosophy?

After a few lessons, if you feel that things aren't working out, figure out what needs to change. If it's your instructor, work with them if you think they can help resolve the issue, or consider changing instructors. After all, it's your money, so make sure you're satisfied with the service you're buying.

"A good instructor can save you time and money..."

Can I Fly with Max Trescott?



Of course, particularly if you're looking for training in any type of glass cockpit aircraft, such as the Avidyne, Garmin G1000 or Garmin Perspective. I teach primarily at the Palo Alto Airport, south of San Francisco. You can rent some of the most popular glass cockpit aircraft there, including Cessna, Cirrus, Beechcraft, Mooney and Bonanzas. I also fly with owners in their aircraft. Often, I accompany a new owner to an aircraft factory and then fly home with him or her in their new airplane. Owners also hire me to fly to their area to train them in their aircraft at their home airport.

I've trained at the Cirrus, Cessna and Columbia (now Cessna) factories and am a Cessna FITS instructor, Cirrus CSIP instructor and a Columbia/Cessna C350 and C400 instructor. I also teach in the Cessna Advanced Aircraft Recurrent Training (CAART) program as a Cessna 350 and 400 instructor. I'm also completing training at Flight Safety as a Cessna Caravan instructor.

My teaching philosophy is that adults learn best when they're having fun, so you can count on a few jokes and good natured ribbing in the cockpit. Naturally this doesn't occur during critical phases of flight, such as landing or when flying an instrument approach. I always try to understand clients' objectives and create a plan that helps them reach their goals in a safe, efficient manner. People tell me that I'm patient and easy going. You won't hear me yelling in the cockpit; if you have an instructor who does, you may want to find a new one.

I was named the 2008 National CFI of the Year and received the award from the FAA Administrator at AirVenture 2008 in Oshkosh, WI. I'm also a <u>NAFI Master CFI</u> and Master Ground Instructor; only 18 people in the world concurrently hold both designations. I'm a FAA <u>Gold Seal Flight Instructor</u> and hold a multi-engine Airline Transport Pilot certificate.

If you'd like to hire me to fly in a glass cockpit aircraft, please <u>email</u> me. If we're unable to fly together, consider purchasing one of my Max Trescott training courses or hiring another Master CFI.

"...named the 2008 National CFI of the Year"

How Do I Choose an Aircraft?

If you're pursuing a Sport Pilot certificate, you'll have to learn in a LSA aircraft. Your flight school or flight instructor will let you know what choices you have.

For a Private Pilot certificate, you can train in most any single-engine aircraft. Most likely, you'll learn to fly in a two or four seat training aircraft. The most popular trainer is the Cessna 172, and you might learn to fly in a brand new one or one that's 40 years old! As you might guess, the older ones are less expensive to rent, but they also show lots of wear and tear. Try flying a newer, glass cockpit aircraft if you can.

Learn to Fly in a Glass Cockpit aircraft

Beginning in 2003, many new aircraft began shipping with two computer displays that replace the round gauges found in older aircraft. Most of these aircraft utilize the Garmin G1000, which is loaded with safety features. If your flight school has one or more of these airplanes available and you can afford the slightly higher cost, I recommend that you learn to fly in one. Virtually all of these flight schools rent G1000-equipped aircraft.

These aircraft include many safety features, including a display of nearby aircraft on their computer screens. Spotting other aircraft from the air is always difficult, but having a computer display that shows you where to look makes it easier. Unless you train in a deserted area with few other airplanes, you'll appreciate this feature, which will enhance your safety.

Other G1000 safety features include the ability to display obstacles, such as tall antennas and the height of nearby terrain. The latter is particularly useful at night, when it may be impossible to see hills and mountains outside of the cockpit. If you want to learn to fly in one of these planes, but your instructor discourages you, it's probably because he or she is inexperienced in flying these planes. You may also be told that you'll learn more in a round gauge airplane, but the opposite is true! When learning in a glass cockpit airplane, your instructor will at times shut off all of the computer displays, forcing you to fly with the three round gauges used for backup. Thus, you are also learning to fly with round gauges when you train in a glass cockpit aircraft.



What Do I Need to Buy Now?

Technically, nothing. You can show up to your first flight lesson with little more than a Passport or birth certificate to establish citizenship. You'll probably want to use an aviation headset for the flight, and your instructor or flight school may have one that they can lend you or rent to you. Your instructor will also guide you as to what you'll need to buy at various points in your flight training. Here are a few things you might start considering:

Aviation Headset

Rather than buy the cheapest headset, I recommend that you spend more to get one with automatic noise reduction (ANR) technology. These headsets use electronic noise cancellation to block out low frequency engine noise, which is fatiguing. The most important criteria for choosing a headset is that it's comfortable and fits you. Many airports and some flight schools have pilot shops where you can try on different headsets before making a purchase decision.

Ground School Training Materials

To get a head start on learning before your first flight lesson, you might consider purchasing some of the books we recommended on our <u>Ground School page</u>.

If you're considering flying a G1000-equipped glass cockpit aircraft, we also recommend:

Max Trescott's G1000 Glass Cockpit Handbook

Max Trescott's Garmin G1000 CD-ROM Course

Renter's Insurance

When choosing a place to rent aircraft, ask about their insurance. You'll most likely have to pay the insurance deductible for any damage to aircraft you rent, even for events, like a bird strike, that are out of your control. You may want to purchase renter's insurance, available from several companies, to mitigate the expense of any damage.

"You can show up to your first flight lesson with little more than a Passport..."

How do I Network with other Pilots?

There are many ways to connect with pilots and student pilots. Doing so lets you share experiences with other student pilots and learn from experienced pilots. Here are some ways to connect with other pilots.

Find a local mentor

Student pilots with mentors are more likely to complete flight training.

• Find a local pilot mentor through AOPA Project Pilot

Meet other local pilots through:

- Ground schools given at local flight schools and colleges
- Local safety seminars. Register at www.faasafety.gov for notification of seminars in your area.
- Local Air Safety Foundation seminars.
- Local Experimental Aviation Association (EAA) chapters
- Women in Aviation chapters
- The Ninety-Nines (female pilots) chapters

Internet Forums

- StudentPilot.com
- Aircraft Owners and Pilots Association (AOPA members) forum

Other Resources

The FAA sponsors many local seminars each month on a wide variety of topics at local airports. You can find a schedule of local events and other safety related information at www.FAASafety.gov. You can also register so you'll receive email notification whenever new seminars are announced in your area.

AOPA will offer you a free six-month membership, which includes their AOPA Flight Training magazines.

To get the latest aviation news each day, go to <u>www.aero-news.net</u>. You can also subscribe to their Aero-cast podcasts and view daily video interviews on <u>www.aero-tv.net</u>

"Student pilots with mentors... are more likely to complete flight training."

Chapter 4: Can I Earn a Living Flying?

Probably. It all depends upon what you ultimately want to do, how hard you're willing to work to get it, and whether you're willing to make any necessary sacrifices along the way. You will need to earn <u>additional certificates and ratings</u>. Generally, the jobs requiring the least experience also pay the least, so you may have some lean years getting to where you want to be. Even new copilots at regional airlines often have a second job to make ends meet.

Here are some flying jobs that require a Commercial certificate and relatively few total hours of flying experience. Many are lower paying jobs that pilots take to build the hours they will need to apply to the airlines.

- Fly traffic watch for a local radio or television station.
- Taking aerial photos or flying patrols over natural gas or oil pipelines
- Flying freight, often at night, in single or twin-engine aircraft

You'll need more experience, often a thousand hours or more, to qualify for some of these jobs:

- Flying for the corporation aviation department of a company
- Flying for a fractional jet ownership company
- Flying for a regional airline

You need even more experience, probably over 2,000 hours of flight time and a college degree, to qualify for:

- Flying for a major airline
- Flying jets for a major freight company

You could also earn a living as a Certificated Flight Instructor. While many CFIs teach only temporarily to build flight hours to move on to a different job, there are many career flight instructors (like me!). Recently, there has been a shortage of CFIs in the industry, which has caused the compensation to rise for these jobs. In many cases, CFIs earn more than copilots starting at regional airlines. Regardless of your goal, research the job you want first, to learn about the experience required and the compensation you might earn.



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Chapter 5: Should I Buy an Airplane?

You can if you want. Whether you choose to depends upon your individual objectives. There are many reasons for buying an airplane. Some people may have a particular aircraft in mind that they want to fly after they get their certificate. If that particular model is not available for rent, they may choose to buy one to use for their training. Depending upon the aircraft, it may take you longer to get a certificate than it would in a typical training aircraft. However, when you are finished, you'll be far more knowledgeable and proficient in the airplane than if you first trained in a different aircraft.

Some people purchase an airplane to try to lower the cost of earning a pilot certificate. This can work, particularly when the value of used, single-engine aircraft is increasing, as they were during the 1980's and 1990's. In recent years, used, single-engine aircraft prices have leveled or declined, making it harder to meet this objective.

Most people wait until after they earn their pilot certificate to purchase a plane either individually, or in partnership with one or more other pilots. Some owners reduce their cost by putting the plane on a leaseback agreement with a local flight school that rents the plane to other pilots. Most pilots do not own their own plane but continue to rent whenever they want to fly.

Should I Build an Airplane?

Building an airplane is a major undertaking. Even if you buy a kit airplane, FAA requirements dictate that you must perform at least 51% of the work required to build the airplane. It's not unusual for people to spend two thousand hours or more building an airplane. Thus, the vast majority of builders spend more hours building an

John Ferrell is an intellectual property attorney and co-founder of the Silicon Valley law firm of Carr & Ferrell LLP. His non-flying passion is helping entrepreneurs grow the value of their companies by leveraging their patents, trademarks and other intellectual property assets. With clients across the U.S., John mixes his passion for entrepreneurship with his love of flying.



John took a demonstration flight in 2005 and was immediately hooked. He completed his Private pilot certificate in 2006 and continued to train, earning an instrument rating, commercial single engine, multiengine and seaplane ratings. He enjoys the satisfaction of continual training, as he feels it makes him a safer, more skilled pilot.

In 2006, John purchased a 2006 Cessna 182 and his business use of the plane began on the trip home from the factory, as he stopped at multiple locations for meetings and to interview potential new hires. Looking for more speed, he upgraded to a Cirrus SR22T in 2007.

John flies two or three times a week (about 350 hours per year) for business and pleasure, and especially enjoys flying medical patients as a volunteer pilot for Angel Flight. —Flying is such a unique human experience. It allows you to add a complete third dimension to your view of the world. For me this third physical dimension is a metaphor for the indescribable richness that flying has added to my life. Completely apart from the increased business efficiencies, profits and opportunities that flying has made possible; the riches in friendships and experiences that flying has provided me and my family is way beyond what I could have imagined when I took my first discovery flight a few short years ago."

airplane than they do flying it. In addition, a significant number of people never complete their homebuilt aircraft.

The best resource for homebuilders is the Experimental Aircraft Association. In addition to an excellent magazine and website, they have many local chapters you can meet other like-minded homebuilders. These people are passionate building airplanes and can provide you with training and assistance in building an airplane.

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Chapter 6: Learn to Fly Checklist Activity

Target	Comp	letion	Date
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	•
Identify a Flight SchoolORIdentify an Independent Flight Instructor	
Schedule a Demo Flight (bring Passport or birth certificate)	
Complete <u>TSA Application</u> (non U.S. citizens)	
Decide on Private or Sport Pilot Certificate	
Choose type of airplane in which to train	
Order Study Materials — Online Ground School — Glass Cockpit Study Materials — FAA Books	
Schedule First Flight Lesson	
Schedule Appointment for one: Student Certificate (Sport Pilot) FAA Medical/Student Certificate (Private)	te)
Schedule FAA Knowledge Exam	
Schedule Checkride	

Chapter 7: Additional Certificates and Ratings

After earning their initial certificate, many pilots go on to earn additional certificates and ratings. Pilots planning to fly for a living must do this, as you cannot engage in any commercial activities with just a Private certificate.

Instrument Rating: Teaches greater mastery of aircraft control and permits a pilot to fly in the clouds. Note that small airplanes are less capable than jets, so you still won't be able to fly in all weather conditions. It requires:

- Holding at least a Private pilot certificate
- A minimum of 15 hours of instrument flight training
- Passing a knowledge test and a practical test

Commercial Certificate: Required for any pilot compensated for their services. Requirements include:

- Being at least 18 years old
- A minimum of 250 hours total flight time and 20 hours of flight training for the Commercial
- Passing a knowledge test and a practical test
- A third-class medical for the practical test, and a second class medical to exercise the privileges of the certificate

Multi-Engine Rating: Lets a pilot control an aircraft with more than one engine. Requirements include:

- Holding at least a Private pilot certificate
- Holding at least a third-class medical certificate
- No minimum number of hours of flight training (though it typically takes 10 to 15 hours)
- Passing a practical test

Flight Instructor Certificate: Lets a pilot teach others how to fly. Requirements include:

- Being at least 18 years old
- Holding at least a Commercial certificate and, to teach in airplanes, an instrument rating
- No minimum number of hours of flight training
- Passing two knowledge tests and a practical test

Airline Transport Certificate: Often required to fly for the major airlines. Requirements include:

- Being at least 23 years old
- Holding a Commercial certificate and instrument rating
- A minimum of 1500 hours of flight time and 350 hours of pilot in command time
- Passing a knowledge test and a practical test
- A third-class medical for the practical test, and a first class medical to exercise the privileges of the certificate



About the Author

Max Trescott is a general aviation advocate and is passionate about preserving and growing general aviation in the U.S. so that it remains available for future generations. He is the President of <u>SiliconValleyGA</u>, which protects and promotes General Aviation in California's Silicon Valley.

He began learning to fly at age 15 and became a part-time flight instructor while working at Hewlett-Packard. In 2004, he left HP to found Glass Cockpit Publishing, a publisher of aviation training materials. He actively teaches flying and is recognized as an expert in glass cockpit aircraft.

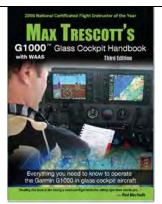
Max graduated from Swarthmore College in 1978 with a BA in Psychology and in 1979 with a B.S. in Electrical Engineering. In 1983, he graduated with a MBA in Management Strategy and Marketing from the New York University Stern School of Business. In 1979, he began a 25 year career at Hewlett-Packard in marketing, sales and management positions. For the last 8 years, he was in Enterprise Computing and managed HP's relations with a number of billion dollar companies in Silicon Valley. He has lived in Germany, Austria, New York City and California.

Max is a frequent speaker on aviation topics and speaks to capacity audiences each year at AirVenture, Sun n Fun and to other aviation groups. You can view a video of his commencement address to the 2008 graduating class at San Jose State University. To book Max to speak at your event, please send an email.

Max Trescott on Wikipedia

Check out the Max Trescott on General Aviation blog at www.maxtrescott.com

Books and CD-ROM Courses by Max Trescott



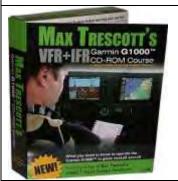
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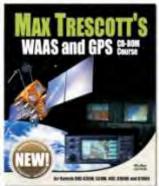


Max Trescott's Garmin G1000 CD-ROM Course

Award winning course includes simulations that help you build your proficiency at home, so that you'll fly with greater confidence and increased safety.

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WAAS, the FAA's Wide Area Augmentation System, lets you fly more than 1,700 LPV and LNAV/VNAV instrument approaches to as low as 200 feet. Whether you are a GPS expert or beginner, there is lots to know about flying the new WAAS approaches. This new course teaches you to fly these approaches step-by-step.

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Online internet courses let you get instant access to training courses. They are less expensive, though access is limited to 30 days, when courses expire.

VFR G1000 Transition Training Course	\$59.95	Learn More
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Free Podcasts featuring Max Trescott

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Becoming CFI of the Year	April, 2008	www.Aero-news.net
G1000, User Fees, Growing Pilot Population	February, 2008	www.thefinerpoints.net
G1000 Book Introduction	March, 2006	www.thefinerpoints.net

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Commencement Address: San Jose State University	May, 2008	www.Youtube.com
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