



United States Hang Gliding & Paragliding Association

FAA Resources Page for Instructors

The U.S. Hang Gliding and Paragliding Association (USHPA) is required by the FAA to ensure that flight training provides sufficient understanding of information provided in the [FAA Pilot's Handbook](#) and the [Powered Parachute Handbook](#), and that all hang glider and paraglider student pilots have access to both handbooks. The Federal Aviation Administration (FAA) maintains these instructional materials as free online resources to provide essential information for all pilots.

Content from both manuals is already integrated into USHPA's pilot training program as applicable. The USHPA has compiled a list of some of the most relevant materials from both handbooks and summarized it, along with the corresponding chapter numbers, below. An overview of FAR part 103 is also included. (See [here](#) for a webpage with this information for student pilots.) Please feel free to reference this list and recommend the handbooks or specific chapters to students that might benefit from further study.

FAA Manual Topics

Preflight and Other Flight Preparations

Chapter 5, Powered Parachute Handbook

Before launching, it's important to complete a preflight to ensure that everything is flight-ready. A key part of the preflight is confirming that everything is assembled correctly and is in good condition on the hang glider or paraglider. Students (and their instructor if flying tandem) should also make sure that they are mentally and physically prepared for the flight, the weather conditions are appropriate, and no external pressures should disrupt the flight. (PPH 5-1) Finally, before launching, the pilot(s) must ensure that they are securely attached to the glider.

Responsibilities for Tandem Students and Decision-Making in Flight

Chapter 2, Pilot's Handbook

Chapter 1, Powered Parachute Handbook

During tandem flights, the tandem instructor will be the pilot in command. They may teach their student the basics of controlling the glider, but the student pilot still has responsibilities even when they're not actively flying the glider. The instructor may ask them to assist with several tasks, including:

- Watching for other air traffic
- Looking for possible landing locations during an emergency
- Checking altitude and rate of climb/descent, if available
- Pulling the emergency parachute if the pilot is incapacitated

Instructors should brief their students on potential in-flight responsibilities before launching and confirm that they're ready to take them on if necessary.



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The Weather and How We Fly

Chapters 4 and 12, Pilot's Handbook

Hang gliders and paragliders have no engines, yet can fly for hours and travel hundreds of miles. Pilots stay aloft by using warm, rising columns of air called thermals. When the sun heats the Earth's surface, warm air rises because heat causes air molecules to spread apart, making the warm air lighter and less dense than the air around it. (PH 12-3) When birds circle and gain altitude without flapping their wings, they're riding these columns of warm air. Hang gliders and paragliders do the same thing, often with the birds!

Hang gliders and paragliders gets more lift over rocks, sand, and barren land, while they may sink more quickly over water, trees, and other areas of vegetation. This is because rocks and sand tend to absorb heat quickly, warming the air above them, while water and trees absorb and release heat much more slowly. (PH 12-7) This uneven heating results in thermals that help pilots fly longer, further, and higher. Finding thermals, and using them effectively, is a key part of being a hang glider or paraglider pilot.

Medical Conditions in Flight

Chapter 17, Pilot's Handbook

Chapter 1, Powered Parachute Handbook.

Medical factors may influence pilots' safety and enjoyment of each flight. These could include motion sickness, anxiety, dehydration, fatigue, hypoxia, hyperventilation, and stress, among others. (PPH 1-6) The use of any alcohol or drugs is prohibited before flying a hang glider or paraglider.

Motion sickness is probably the most common complaint among hang gliding and paragliding students. Symptoms include discomfort, nausea, dizziness, and vomiting. If students are prone to motion sickness, they should let their instructor know. Avoiding turbulent conditions, making wider or fewer turns, and using other techniques may help decrease any symptoms. Once students take several flights and become solo pilots, motion sickness also tends to decrease. (PH 17-12)

Where We Fly: Types of Airspace

Chapter 8, Powered Parachute Handbook

Chapter 15, Pilot's Handbook

Hang gliders and paragliders can fly in the mountains, in the flatlands (via truck, ultralight, or other forms of towing), or over the water via boat towing. But where we fly also depends on airspace, an FAA designation that helps control air traffic over defined areas. (PPH 8-1)

There are 6 classes of airspace—Class A, B, C, D, E, and G—largely defined by altitude and/or proximity to an airport. Hang gliders and paragliders are generally not allowed into Class A, B, C,



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or D airspace, so typically fly in Class E (controlled airspace that is NOT Class A, B, C, or D) or Class G (uncontrolled airspace). (PH 15-2)

Instructors are expected to be familiar with the airspace and any restrictions related to students' flights, and should explain them to students when applicable. As students progress in their training, they will learn to read a sectional chart to determine for themselves any nearby airspace boundaries or areas that may be restricted, used by the military, or have other special uses.

Risk Management

Chapter 2, Pilot's Handbook

There is an element of risk in every flight. That's why it's called risk management, not risk elimination. (PH 2-15) Instructors should review the flight plan, the student's tendency to experience motion sickness or other medical conditions, and the student's comfort level before each flight and answer any other questions the student has.

FAA Part 103 Overview

In the United States, hang glider and paraglider flights are governed by [Federal Aviation Regulation Part 103](#) for ultralight vehicles. All pilots must be familiar with and abide by this text.

According to part 103, ultralight vehicles (which include hang gliders and paragliders) must be used only for recreation or sport. They may only be flown during the day, must yield right-of-way to all aircraft, and have to stay at least 500 feet or further from clouds. They are also not required to meet FAA airworthiness certification standards, although manufacturers adhere to their own stringent standards. *Please click [here](#) for the full list of FAA restrictions and requirements.*

Tandem Exemption

Another main restriction of part 103 is that ultralights can only be flown with a single occupant. To allow student pilots to take tandem flights, the USHPA has obtained [Exemption 4721](#) from the FAA for tandem operations.