

Flight Review - What to Do

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## Introduction

You have probably seen it, or perhaps even experienced it yourself: pilot and flight instructor check the clock, spend exactly one hour reviewing 14 CFR Part 91 operating rules, and then head out for a quick pass through the basic maneuvers generally known as "airwork." The pilot departs with a fresh flight review endorsement and, on the basis of the minimum two hours required in 14 CFR 61.56, can legally operate for the next two years. This kind of flight review may be adequate for some pilots, but for others - especially those who do not fly on a regular basis - it is not.

To serve the aviation safety purpose for which it was intended the flight review must be far more than an exercise in watching the clock and checking the box. AC 61-98A states that the flight review is "an instructional service designed to assess a pilot's knowledge and skills." The regulations are even more specific: 14 CFR 61.56 states that the person giving the flight review has the discretion to determine the maneuvers and procedures necessary for the pilot to demonstrate "safe exercise of the privileges of the pilot certificate." It is thus a proficiency-based exercise, and it is up to the instructional service provider - the CFI - to determine how much time and what type of instruction is required to ensure that the pilot has the necessary knowledge and skills for safe operation.

The flight review is also intended as an opportunity for pilots to design a personal currency and proficiency program in consultation with a CFI. In effect, then, the flight review is the aeronautical equivalent of a regular medical checkup and ongoing health improvement program. Like a physical exam, a flight review may have certain "standard" features (e.g., review of specific regulations and maneuvers). However, just as the physician should tailor the exam and follow-up to the individual's characteristics and needs, the pilot and CFI should work together to tailor both the flight review and any follow-up training plan to the individual pilot's skill, experience, aircraft, and personal flying goals.

To better accomplish these objectives, the FAA has developed two new tools for enhancing the flight review. The first is new [flight review guidance for flight instructors](http://www.faa.gov/pilots/training/media/flight_review.pdf). ([http://www.faa.gov/pilots/training/media/flight\\_review.pdf](http://www.faa.gov/pilots/training/media/flight_review.pdf)) Intended for use in conjunction with AC 61-98A, the guide to Conducting an Effective Flight Review offers ideas for structuring the flight review. It also includes tools instructors can use to help pilots develop a personalized "aeronautical health maintenance and improvement" program and establish realistic personal weather minimums.

Second, the FAA has developed a flight review preparation tool for general aviation pilots. Specifically, the Online Courses section of the [Aviation Learning Center](https://www.faasafety.gov/gslac/ALC/course_catalog.aspx) ([https://www.faasafety.gov/gslac/ALC/course\\_catalog.aspx](https://www.faasafety.gov/gslac/ALC/course_catalog.aspx)) now includes a flight review preparation course that guides pilots through a practical, real-world oriented review of the regulations and advisory material. Completing this review with a passing score on the exam, which is built around mini-scenarios, will partially satisfy the flight review requirement (14 CFR 61.56 (a) (1)) for a review of Part 91 operating rules. Pilots who use this course to prepare can then use ground time more efficiently for discussion of decision-making, personal minimums, and flying goals.

The next chapters describe some of the ideas you will see in the guide to Conducting an Effective Flight Review.

## Preparation and Ground Review

First, bear in mind that the times specified in the regulations - one hour of ground review and one hour of flight training - are intended as a floor, not a ceiling. If you are a flight instructor, managing pilot expectations is key to ensuring that you don't later feel pressured to conduct a minimum time flight review for someone whose aeronautical skills are rusty. When a pilot schedules a flight review, find out not only about total time, but also about type of flying (e.g., local leisure flying, or cross-country flying for personal transportation) and recent flight experience. You also need to know if the pilot wants to combine the flight review with a new endorsement or aircraft checkout.

If you are a pilot in need of a flight review, remember that how much time is enough will vary from pilot to pilot. Someone who flies the same airplane 200 hours every year may not need as much time as someone who has logged only 20 hours since the last flight review, or a pilot seeking a new endorsement in conjunction with the flight review. For pilots who have not flown at all for several years, a useful rule of thumb is to plan one hour of ground training and one hour of flight training for every year the pilot has been out of the cockpit.

Second, a little bit of preparation goes a long way toward making the flight review an interesting, meaningful, and effective learning experience. If you are an instructor, ask the pilot to complete the online [Flight Review Preparation Course](https://www.faasafety.gov/gslac/ALC/course_catalog.aspx) ([https://www.faasafety.gov/gslac/ALC/course\\_catalog.aspx](https://www.faasafety.gov/gslac/ALC/course_catalog.aspx)) in advance of your session and bring a copy of the completion certificate to the flight review. If you are the pilot, take the course even if your instructor doesn't assign it. The course gives you plenty of time to review material at your own pace, and focus on areas of particular interest.

A cross-country flight plan is another useful flight review preparation activity. Many people learn to fly for personal transportation, but the cross-country flight planning skills learned for practical test purposes can become rusty if they are not used on a regular basis. Structuring the flight review as a short cross-country (i.e., 30-50 miles from the home airport) is an excellent way to refresh flight planning skills. Be sure to include consideration of runway lengths, weather, expected aircraft performance, alternatives, length of runways to be used, traffic delays, fuel requirements, terrain avoidance strategies, weight and balance, and NOTAM/TFR information. [The GA Pilot's Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision-Making](https://www.faasafety.gov/files/gslac/courses/content/25/185/GA%20Weather%20Decision-Making%20Dec05.pdf) (<https://www.faasafety.gov/files/gslac/courses/content/25/185/GA%20Weather%20Decision-Making%20Dec05.pdf>) may help in this part of the exercise.

If you are the flight instructor, it is within your discretion to ask for a manual flight plan created with a sectional chart, plotter, and E6B. In real-world flying, however, many pilots today use online flight planning software for basic information and calculations. Appropriate use of these tools can enhance safety in several ways: they provide precise course and heading information; the convenience may encourage more consistent use of a flight plan; and automating manual calculations leaves more time to consider weather, performance, terrain, alternatives, and other aspects of the flight. Encouraging the pilot to use his or her preferred online tool will give you a more realistic picture of real-world behavior, and the computer-generated plan will give you an excellent opportunity to point out both the advantages and the potential pitfalls of this method. A critical point to emphasize is that automated flight planning tools can be enormously helpful, but the pilot must always review the information with a critical eye, frequently supplement the computer's plan with additional information, and never simply assume that the computer-generated package must be okay because the machine is smarter. Asking these kinds of questions is also key to critical thinking, which is in turn the secret to good aeronautical decision-making ([ADM](#)) and risk management.

Aviation security is another important topic for the ground portion of the flight review. In the post-September 11 security environment, any security incident involving general aviation pilots, aircraft, and airports can prompt calls for new restrictions. Pilots and instructors share a special responsibility to avoid such incidents by knowing and following basic security procedures at all times. These include not only respect for temporary flight restrictions (TFRs), but also for the importance of securing your aircraft against unauthorized use. Pilots should never leave the aircraft unlocked or, worse, unattended with the keys inside.

### **Flight Activities**

The aerial portion of many flight reviews consists almost exclusively of airwork followed by multiple takeoffs and landings. It is true that these maneuvers can give the instructor a very good snapshot of the pilot's basic aircraft control skills. They are also good for the pilot, who gets a safe opportunity to practice proficiency maneuvers that he or she may not have performed since the last flight review. Airwork alone, however, will not necessarily demonstrate the pilot's knowledge of avionics and other aircraft systems, and it will show even less about the pilot's ability to make safe and appropriate decisions in real-world flying ([ADM](#)).

Flying at least part of the cross-country trip assigned and discussed in the ground review is a good way to pull it all together. For example, one leg could involve flying from departure to destination, during which the pilot encounters scenarios that challenge his or her systems knowledge and decision-making skills, including risk management. The other leg can focus on airwork maneuvers. Throughout the session, the instructor should be watching for:

**Basic Skills:** Does the pilot maintain control of the aircraft when faced with a major distraction? For a satisfactory flight review, the pilot should be able to perform all maneuvers in accordance with the Practical Test Standards (PTS) for the pilot certificate that he or she holds.

**Systems Knowledge:** Does the pilot demonstrate knowledge and proficiency in using avionics, aircraft systems, and "bring-your-own-panel" handheld devices? Appropriate and proficient use of the autopilot is another skill to evaluate in this exercise.

**Aeronautical Decision-Making ([ADM](#)) Skills:** A good flight review should give the pilot multiple opportunities to make decisions. If there is a diversion, what criteria should be used to select an alternate airport? What are the possible hazards, and what can the pilot do to mitigate them? Does the pilot perform regular common sense cross-checks of what the GPS and the autopilot are doing?

### **Post-Flight Discussion**

Most of us are very familiar with the traditional "sage on the stage" model of training, in which the instructor does all the talking and hands out grades with little or no learner input. There is a place for this kind of debriefing; however, a collaborative critique is a more effective way to demonstrate the self-awareness and judgment needed for sound aeronautical decision-making. If you are a flight instructor, try using the 4 Rs to structure a collaborative post flight critique:

**Replay:** First, the pilot should verbally replay the flight. This approach gives the pilot a chance to validate his or her own perceptions, and it gives the instructor critical insight into his or her judgment abilities.

**Reconstruct:** This step encourages the pilot to learn by identifying key things that he or she would have, could have, or should have done differently.

Reflect: Insights come from investing perceptions and experiences with meaning, which in turn requires reflection on these events. For example, what was the most important lesson from this activity?

Redirect: The final step is to relate lessons learned in this flight to other experiences. For example, what parts of today's lesson could apply to a future flight, and how?

If the pilot did not perform well enough for satisfactory completion of the flight review, the PTS is the objective standard to discuss areas needing improvement, as well as a practical course of action to move forward. Even if the pilot's performance is satisfactory, though, there is value in discussing a personalized aeronautical health maintenance and improvement plan. To assist in this exercise, the guide to Conducting an Effective Flight Review includes worksheets to help develop:

**Personal Minimums:** Safe pilots understand the difference between what is legal in terms of the regulations, and what is smart in terms of pilot experience and proficiency. Use the worksheets to establish realistic and appropriate personal weather minimums.

**Personal Proficiency Practice Plan:** Flying just for fun is one of the most wonderful benefits of being a pilot, but many pilots appreciate help in developing a plan for maintaining and improving basic aeronautical skills.

**Training Plan:** Many pilots have aeronautical goals. For example, the pilot's goal might be lower personal minimums, completion of another phase in the FAA's Pilot Proficiency (Wings) Program, or obtaining a new endorsement.

The flight review is vital link in the general aviation safety chain. Whether you are giving or receiving the flight review, your approach to this exercise can play a critical role in ensuring that it is a meaningful and effective tool for maintaining and enhancing GA safety.

Finally, the guide is intended to be a living document that incorporates comments, suggestions, and ideas for best practices from GA instructors and pilots like you. Please direct comments and ideas for future versions to: [susan.parson@faa.gov](mailto:susan.parson@faa.gov). Happy flying!