

Checklist

Asking for Directions

When it comes to following instructions, we humans have a habit of stubborn and often self-defeating behavior. Faced with pages of instructions for, say, setting up a spiffy new computer or assembling a cabinet, it seems so much easier to figure it out on the fly. After all, how hard can it be? Hours later, you dive for the directions you previously tossed aside, having learned that what you don't know *can* hurt you.

Bad enough when avoidable operator error gums up a computer or a cabinet, but the results of direction-free, on-the-fly attempts to master a new airplane type can be tragic – and not just for you. “Yes,” you say, “but I don't *have* directions for operating the experimental airplane I just finished building.” Or, “I don't *need* directions because this airplane can't be all that different.” Or, “I don't know how to make sense of all this information.”

For any of these issues, help – and directions – are available in the form of two FAA Advisory Circulars (AC). The current edition of AC 90-89, *Amateur-Built Aircraft and Ultralight Flight Testing Handbook*, provides information on testing newly-built experimental airplanes. A recently published document, AC 90-109, provides information, guidance, and recommendations for making the *Transition to Experimental or Unfamiliar Airplanes*.

To benefit most, just *ask*: Have the right **Attitude**, train for the **Skills** you need, and master the necessary **Knowledge**.

Attitude. This issue of *FAA Safety Briefing* focuses on professionalism which, as FAA Administrator Randy Babbitt writes on page 10, is all about having a do-the-right-thing attitude in every aspect of your flying. In making the transition to an experimental or unfamiliar airplane, risk management is key. That requires, first and foremost, the integrity to admit not only that flying involves risk, but also that the risk is higher when learning to fly an experimental or unfamiliar airplane. The pilot must then have the discipline to methodically identify hazards that create risk, and work to mitigate or eliminate each one.

Skills. To develop AC 90-109, experts from the FAA and industry considered systems, structures, performance, limitations, power plants, and procedures to establish the baseline training and procedural requirements for an operator to fly and maintain the airplane safely. Drawing on substantial experience in amateur-built airplane operations and maintenance, the group established “families,” or categories of airplanes with similar handling, performance, configuration, or complexity. It then identified the areas of skill required to safely fly an airplane with those characteristics and offered recommendations for training. (*Note: The AC recognizes that an airplane can be included in more than one family. In these cases, the pilot should develop a training strategy drawn from the appendices for each family.*)

Knowledge. In addition to the skills training described in AC-90-109 and its appendices, the group identified the areas of knowledge required to safely fly an airplane in a particular family. Consequently, the AC recommends an organized methodology to become competent in the new airplane. This process should include knowledge about systems; procedures (normal, abnormal, emergency); performance; and limitations. An important point: Even if a pilot is experienced and knowledgeable about the characteristics of a particular airplane, transitioning to a new airplane of the same family can still be challenging. As in every other area of flying, take nothing for granted and when in doubt – ASK!

In making the transition to an experimental or unfamiliar airplane, risk management is key.

Susan Parson is a Special Assistant in the FAA's Flight Standards Service and editor of FAA Safety Briefing. She is an active general aviation pilot and flight instructor.

Learn More

Advisory Circular 90-109, Transition to Experimental and Unfamiliar Aircraft

www.faa.gov/documentLibrary/media/Advisory_Circular/90-109.pdf