



CONFIDENT FLYING

A Pilot Upgrade

*A guide to better risk management, decision making
and judgment, to get the most out of your flying.*



Second Edition

Richard L. Collins & Patrick E. Bradley

Confident Flying—A Pilot Upgrade

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by Richard L. Collins and Patrick E. Bradley

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Chapter 1

Preflight Planning

Patrick Bradley: A very experienced pilot once opined to me that half of all general aviation injuries and fatalities could be avoided with thorough preflight planning. As a student pilot, I remember being dumbfounded by this little tidbit. Though I had soloed by that time, I still thought pilots got into trouble as a result of things that they did in the airplane, not on the ground. And as for preflight planning, that consisted of scheduling an airplane for the same time I could borrow my parents' car. Up to that time, other people made all the decisions regarding where I could fly and what weather conditions I could handle. It wasn't until further along in my instruction that I began to understand the extent to which thorough planning can make or break a flight. And as for the experienced pilot's estimate regarding preflight planning and aircraft accidents, I tend to think he was conservative regarding the number of injuries or accidents that could be avoided.

Preflight planning, as I understand it today, consists of everything a pilot must do before walking out onto the tarmac, and maybe a little more. It involves planning and familiarizing oneself with the route of flight, checking airport instrument approaches for instrument flights, estimating fuel requirements, sizing up the weather, and calculating weight and balance. It involves evaluating a wide range of factors and ultimately making a number of judgment calls that lead to the decision on whether the flight will at least begin. Because many aspects of preflight planning often seem routine, and because the decision-making process can often be mind-warpingly difficult, I often find the temptation to cut corners nearly overpowering. Who wants to spend time wearing down pencil lead or squinting at performance charts when he could be flying? No one, of course. But it didn't take me many flights to learn that, without the proper preflight preparation, even the simplest, most familiar jaunt can be trans-

formed into a potentially dangerous series of humbling and bumbling calamities. With that thought in mind, I wear out pencils and squint at performance charts, confident that the time spent prior to the actual flight will stand me in good stead.

The Night Before

I usually try to complete as much as possible of the planning for a particular flight well prior to the event, often the evening before. Even if I don't leave first thing in the morning, it always seems as though there's too little time right before departure to sit down and think through my game plan. I've found that rushed preflight planning simply degenerates into a fill-in-the-spaces exercise that may fulfill the minimum requirements but doesn't go nearly far enough in enabling me to fully prepare. I do best when I can take enough time to walk through the basic steps of flight planning.

My first step is to select the route I will follow VFR or file with flight service. It is on this route that I will base other calculations. Of course, when you are planning an instrument flight, the most basic route selection can be rendered entirely academic when you receive your clearance before takeoff—the most direct and thoughtfully selected route may not always be the one preferred by ATC. Usually, though, especially when the route is not a familiar one, the exercise of studying the location of unfamiliar NAVAIDs, airports, and intersections can be useful during the flight or even beforehand, when you've got to copy a five-minute clearance along airways and use NAVAIDs completely different from those you requested in the flight plan (“Did he say GOOFY or GOOPY intersection?”). I try to make a point of studying the relationship of the VORs surrounding the main checkpoints along my route. That way, if ATC decides to clear me from New York to Wichita via Oklahoma City, I'll know whether I'm getting a raw deal. It's also helpful to know your geography when trying to circumvent weather with the help of ATC. I recall once having a center controller tell me I could get around thundershowers by diverting toward Westminster. I had to search wildly through my enroute chart to find the mysterious NAVAID so I could tell whether I should turn left or right.

Approach Study

In addition to selecting and studying my route of flight, I study the approaches at my destination airport if I'm not intimately familiar with them. It's impossible to know with any certainty which approach you will end up flying, but I find it helpful to check the approaches for any potential tricks or for significant terrain. This step is particularly important because I know, from past experience, that I tend to miss potentially critical items during the actual preparation for the approach. An airplane cockpit is an inhospitable environment in which to study the fine print on an approach plate, and I've made some ridiculous and obvious blunders simply through oversight.

On a practice flight more recent than I would like to admit, I noticed halfway through the procedure turn on an ADF approach that, instead of flying the published approach, I had flown the entry to the published holding pattern at the NDB. The published approach turn called for a one-minute outbound leg from the NAVAID followed by the procedure turn. Fortunately, my gaffe occurred in a practice setting with me under a hood and a check pilot scratching her head wondering what in the world I was up to. In the flurry of preparation for the approach, I simply fixated on the holding pattern to the exclusion of the actual procedure. Not surprisingly, I had not looked over the approach prior to my ridiculous first attempt. The same thing could easily have occurred under actual conditions though, and it gives one pause. I am frequently amazed at the complexity of some nonprecision approaches in particular and the ease with which I can overlook or misinterpret the most obvious elements simply through sensory overload.

Another benefit of studying approach plates before starting the flight is the opportunity to note the significant obstacles and where they lie with respect to the inboard segment of the approach. Before a recent flight to Lebanon, New Hampshire, I took a look at the approaches that were available and checked to see whether there were any idiosyncrasies I ought to know about before getting started. Well, as it turns out, Lebanon Airport is something of a fortress. It's nestled in a wooded valley and is surrounded by hills which, while not the Rockies, are high enough and close enough to the airport to justify an ILS decision height just under 1,000

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“Why should man want to fly at all? . . . What justifies the risk of life? I believe the risks I take are justified by the sheer love of the life I lead.” The Last Hero: Charles A. Lindbergh by Walter S. Ross (Harper & Row)

Concluding with this quote, this unique book by pilots Richard Collins and Patrick Bradley explores common misconceptions regarding risks and show what the actual risks are and why. It is impossible to eliminate all risk from any activity—especially one as dynamic as flying—but it can be minimized significantly.

The authors share both good and bad decisions they’ve made throughout their flying careers, which pay big dividends in the risk management business and minimize the potential for mishaps. “I remember once musing through my logbook and coming to the realization that every trip I canceled, and every diversion I made, was on an outbound trip. Sliding for home plate, I made it every time. Certainly I had to ask myself if that was an indication of a double standard.”

This kind of reflective insight is the basis for a program for risk management, sound decision making, and judgment. A pilot may take a known risk in exchange for greater utility. But first, it is essential to understand what the true risks are in each situation; they are not always apparent. Coauthors Collins and Bradley bring together varied experiences and different perspectives in their consideration of the risks in each phase of flight, including preflight, takeoff, en route portions of both VFR and IFR flight, approach and arrival, landings, and more. Particular high-risk areas are evaluated as well, including night flight, aerobatics, mid-air collision possibilities, special weather considerations, and human factors.

By sharing personal experiences, reviewing statistics and accident reports, and playing “what if?”—this book shows you how to achieve increased utility and a higher level of safety in your flight. Originally written in 1989 (first edition title, *Pilot Upgrade*), this book has been updated in 2001.

Richard L. Collins has spent his life in aviation, logging over 18,500 flight hours in almost every type of aircraft, including Concorde, and writing about it in over 900 magazine articles and 11 books for pilots—plus many video productions. He has been editor-in-chief of *Flying* magazine, and publisher and editor-in-chief of *AOPA Pilot* magazine. Collins has won many aviation awards and continues to do extensive research in aviation safety. He is currently an editor-at-large for *Flying* and editorial consultant to Sporty’s Academy.

Patrick E. Bradley has been a frequent contributor to aviation publications including *Flying* and *AOPA Pilot*. Bradley first soloed 25 years ago and holds a commercial certificate with instrument and multiengine ratings. He is an attorney who specializes in aviation and other product liability litigation and who, despite his day job, still loves to fly airplanes.

“There is no doubt that the demands on controlling an airplane can be great, but they pale in comparison to the rewards. Consider risk management just one part of the most enjoyable and rewarding challenge left around today.”



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