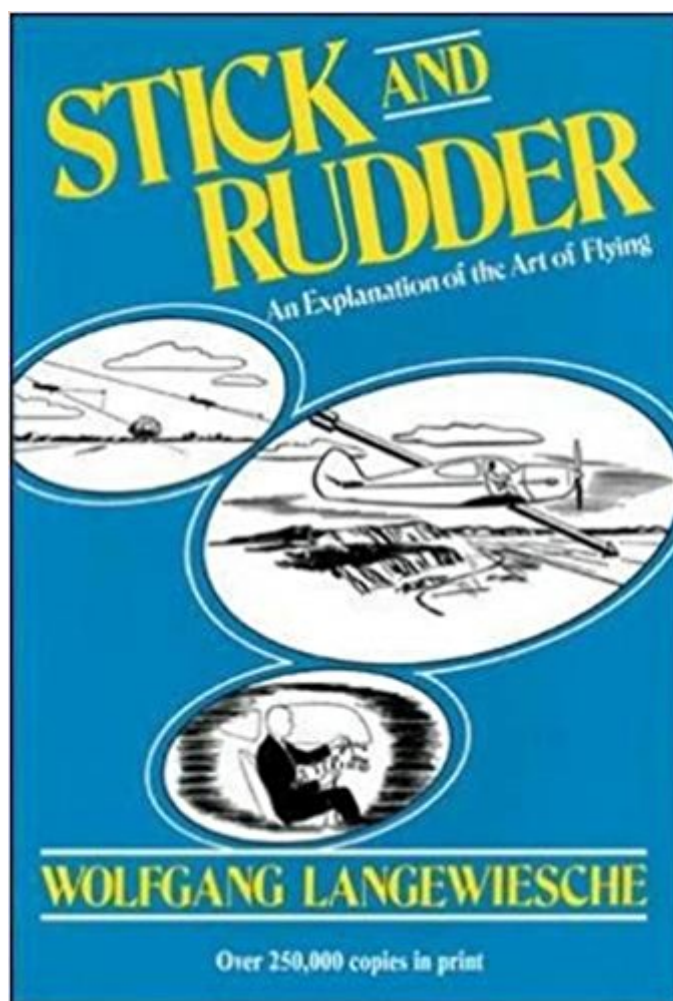


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# Stick And Rudder: An Explanation Of The Art Of Flying



## Synopsis

WHAT'S IN STICK AND RUDDER: The invisible secret of all heavier-than-air flight: the Angle of Attack. What it is, and why it can't be seen. How lift is made, and what the pilot has to do with it. Why airplanes stall How do you know you're about to stall? The landing approach. How the pilot's eye functions in judging the approach. The visual clues by which an experienced pilot unconsciously judges: how you can quickly learn to use them. "The Spot that does not move." This is the first statement of this phenomenon. A foolproof method of making a landing approach across pole lines and trees. The elevator and the throttle. One controls the speed, the other controls climb and descent. Which is which? The paradox of the glide. By pointing the nose down less steeply, you descend more steeply. By pointing the nose down more steeply, you can glide further. What's the rudder for? The rudder does NOT turn the airplane the way a boat's rudder turns the boat. Then what does it do? How a turn is flown. The role of ailerons, rudder, and elevator in making a turn. The landing--how it's made. The visual clues that tell you where the ground is. The "tail-dragger" landing gear and what's tricky about it. This is probably the only analysis of tail-draggers now available to those who want to fly one. The tricycle landing gear and what's so good about it. A strong advocacy of the tricycle gear written at a time when almost all civil airplanes were taildraggers. Why the airplane doesn't feel the wind. Why the airplane usually flies a little sidewise. Plus: a chapter on Air Accidents by Leighton Collins, founder and editor of AIR FACTS. His analyses of aviation's safety problems have deeply influenced pilots and aeronautical engineers and have contributed to the benign characteristics of today's airplane. Stick and Rudder is the first exact analysis of the art of flying ever attempted. It has been continuously in print for thirty-three years. It shows precisely what the pilot does when he flies, just how he does it, and why. Because the basics are largely unchanging, the book therefore is applicable to large airplanes and small, old airplanes and new, and is of interest not only to the learner but also to the accomplished pilot and to the instructor himself. When Stick and Rudder first came out, some of its contents were considered highly controversial. In recent years its formulations have become widely accepted. Pilots and flight instructors have found that the book works. Today several excellent manuals offer the pilot accurate and valuable technical information. But Stick and Rudder remains the leading think-book on the art of flying. One thorough reading of it is the equivalent of many hours of practice.

## Book Information

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## Customer Reviews

WHAT'S IN STICK AND RUDDER: \* The invisible secret of all heavier-than-air flight--the Angle of Attack. What it is, and why it can't be seen. How lift is made, and what the pilot has to do with it. \* Why airplanes stall\* How do you know you're about to stall?\* The landing approach. How the pilot's eye functions in judging the approach. The visual clues by which an experienced pilot unconsciously judges: how you can quickly learn to use them.\* "The Spot that does not move." This is the first statement of this phenomenon. A foolproof method of making a landing approach across pole lines and trees.\* The elevator and the throttle. One controls the speed, the other controls climb and descent. Which is which?\* The paradox of the glide. By pointing the nose down less steeply, you descend more steeply. By pointing the nose down more steeply, you can glide further.\* What's the rudder for? The rudder does NOT turn the airplane the way a boat's rudder turns the boat. Then what does it do?\* How a turn is flown. The role of ailerons, rudder, and elevator in making a turn.\* The landing--how it's made. The visual clues that tell you where the ground is.\* The "tail-dragger" landing gear and what's tricky about it. This is probably the only analysis of tail-draggers now available to those who want to fly one.\* The tricycle landing gear and what's so good about it. A strong advocacy of the tricycle gear written at a time when almost all civil airplanes were taildraggers.\* Why the airplane doesn't feel the wind. Why the airplane usually flies a little sidewise.\* Plus: a chapter on Air Accidents by Leighton Collins, founder and editor of AIR FACTS.His analyses of aviation's safety problems have deeply influenced pilots and aeronautical engineers and have contributed to the benign characteristics of today's airplane. FLAP COPY STICK AND RUDDER is the first exact analysis of the art of flying ever attempted. It has been continuously in print for thirty-three years, and has enjoyed steadily increasing sales. Flight instructors have found that the

book does indeed explain important phases of the art of flying, in a way the learner can use. It shows precisely what the pilot does when he flies, just how he does it, and why. These basics are largely unchanging. The book therefore is applicable to large airplanes and small, old airplanes and new, and is of interest not only to the learner but also to the accomplished pilot and to the instructor himself. When STICK AND RUDDER first came out, some of its contents were considered highly controversial. In recent years its formulations have become widely accepted. Pilots and flight instructors have found that the book works. Today several excellent manuals offer the pilot accurate and valuable technical information. But STICK AND RUDDER remains the leading think-book on the art of flying. One thorough reading of it should be the equivalent of many hours of practice.

Wolfgang Langewiesche first soloed in 1934 in Chicago. Early in his flying he was struck by a strange discrepancy: in piloting, the words and the realities did not agree. What pilots claimed to be doing in flying an airplane, was not what they did in practice. Langewiesche set himself the task of describing more accurately and realistically what the pilot really does when he flies. The first result was a series of articles in Air Facts, analyzing various points of piloting technique. In 1944 Stick and Rudder was published.

If you fly or know someone who does -- buy this book! You may literally save their lives some day. It's a steal for a hard cover volume and it's one of the best texts on stick & rudder flying I've ever read. I'm an Air Force Academy grad with a degree in Astronautical Engineering. I know all the equations of flight and have tested wings in a lab. I was also a Jet Instructor Pilot for several years and also have a small out of Cessna 172 time (I just didn't enjoy props). Been out of flying for 30 years. I then took a ride in a glider and fell in love with soaring! You hardly use the rudder in normal jet flying so I had a lot to "re-learn" about how important it is in light aircraft. One of my glider instructor's recommended this book. I was skeptical, but quickly fell in love with it. It was written many years ago and the old wording and line drawings just added to my interest. You won't find any equations or graphs -- but sound words from a pilot who knows how to fly.

This is THE book to read if you are a) learning to fly, b) want to learn to fly, c) already know how to fly or d) want to refresh what you might've forgotten about flying. As a CFI / CFII / MEI / AGI and former airline Check Airman, this book is THE BIBLE. Should be required reading for every aviator (because that is who I try to produce as an instructor: Aviators, not just pilots).

I'm not a complete fan of the writing style, but the information offered is quite valuable to me anyway let's say. There are items of interest you might not, or most likely will not get from MOST CFI's. No offense, but too many people rush through school just to get certified then become a CFI. They get the right answers that they memorized on the test based on what they have to answer, flew the right patterns well enough to get by and so on, you know the type. Not saying the right answers are wrong, but a lot of those test-passers can talk the talk but can't walk jack-s\*\*\*. The point is, this book breaks down many important concepts that I personally am not just memorizing, but making mine. If there was an emergency situation, and I knew you read this book, I would rather have you flying the plane than someone who's flown for 10 or more years and hasn't. (Read the book.) Highly recommended.

I'm pursuing a PPL under part 61 so I'm basically building my own ground school curriculum from books here at . The various FAA books are good, and cover the basics, but in terms of describing how an airplane is flown, how it's maneuvered, and how to avoid digging a big hole in the ground, this is the book. Just buy it already... I don't care how long you've been flying I'm convinced you'll find this a good read. I read through it the first time right after reading the FAA Airplane Flying Handbook, and even though it was written in the 40's (and has a few dated ideas... like how rudders will be gone from airplanes in "a few years") it still does a much better job of describing the basics. The book is well-written, well-illustrated, and comprehensive. The single most important thing I learned from reading this, and what is missing from every other book I've read, is how to avoid killing yourself in an airplane. The author talks about how accidents actually happen, and most importantly how to avoid them. It's simple, to-the-point, and not necessarily what you'd think (although it is completely logical). Those chapters alone should make it mandatory reading for any pilot, and that's only about 20% of the book. Consider the rest a bonus.

Funny, the title is Stick and Rudder and yet the author spends half the book complaining that the stick should be restricted to prevent dangerous excessive elevator and rudders shouldn't exist because they are the major cause of crashes. The book was written in the 30's and focuses on tail draggers. It is interesting to hear the author's predictions on how "future" aircraft will be designed. For example, he predicts safety improvements in aircraft design will eliminate fatalities due to stalls. He praises safety aircraft that do not allow the angle of attack to approach a stall - protecting pilots from themselves (but unsafely limiting aircraft maneuverability, in my opinion). He also suggests rudders will be unnecessary in the future, e.g., with the "new" tricycle landing gear allowing

cross-wind landings while "crabing" (without the aircraft aligned to the runway). Somewhat amusing. Mr. Langewiesche rants too loud and often on the angle of attack and the big engineering mistake of rudders. Still, in reading through the book, I did get some new insights on glide control, landing technique and emergency aircraft maneuvers. Overall, I (250 hour private pilot) found useful conceptual models in the book actually helped me solve some control problems I was having. With the publication date in mind, it is definitely worth reading for a flight student or for an experienced pilot.

If you are a pilot and if you are able to fly "by the seat of your pants" then this book explains the phenomena perfectly. You have somehow come to grips with how a wing works, maybe from all those trips as a kid when you held your hand out of the backseat window of a car as it sped down the road and marveled at the notion of lift. Seems so, so simple--and it is! This book just puts it all into airplane perspective. If you are a natural pilot, this is a must read. If you stiffly fly by rote from what you were taught and would like to become a natural pilot, this book will help you do that.

After all these years, still the best explanation of the basics of aerodynamics and the effects of pilot input on aircraft control. No confusing the new student at this early stage of radio frequencies, meteorology, automatic navigation. These things must be learned, but the basics must be mastered.

Best book on flying I ever read, period. It is also the only book I ever read that definitely and measurably improved my flying skills. This is so good that I bought several more as Christmas gifts for fellow pilots. Reading this should be mandatory before anyone ever solos an airplane. After you read it and understand it you will be a better pilot in small aircraft.

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