



Highlights and Margin Notes in
Wolfgang Langewieshe's

Stick and Rudder: An Explanation of the Art of Flying
Chapter 13 Notes

Perhaps my notes and observations will inspire you to buy your own copy and learn from this classic...or to take the copy you already own off the shelf and revisit its great lessons, just as I am doing again now.

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Continuing my notes on Wolfgang Langewieshe's essential classic, ***Stick and Rudder***.

Part IV: The Basic Maneuvers

Chapter 13: "Straight and Level Cruising"

Page No.	Highlighted Text (Langewiesche's words)	My margin notes
230	Connoisseurs, such as flight instructors and government inspectors, consider straight and level flight a most revealing test of a pilot's ability: it reveals whether he really understands how his controls work.	It seems easier to fly then things are changing; there's always something to do. We don't spend enough time in training simply cruising, especially in IFR training.
231	(after stating you can't control drift with rudder) The remedy is simple: Don't.	That's a good all-purpose quote!
232	The [magnetic] compass behaves best when the ship is headed southeasterly or southwesterly. If you are ever caught above clouds without blind-flying instruments, and have to go down through them, or in any other situation where you must use the compass as a blind-flying instrument, fly a southeasterly or southwesterly direction.	I always taught to head south. I see his point, however, because directly south makes the compass more sensitive.
	To fly a compass course, you must fly the airplane straight by watching the ground below, or a distant cloud, or the stars (or, if you are inside clouds, by watching a special gyroscopic blind-flying instrument). You must fly it straight even if you should have a strong feeling that you are flying in the wrong direction.	Human factors
	It is in rough air that straight flight becomes an art—and the interesting thing about it is that can do it all wrong and never know it; you merely think the air is much rougher than it actually is.	Overcorrection; pilot-induced oscillation
233	The right thing to do is to use the controls in a coordinated manner all of the time....straight flight consists of a series of S turns, the turns being shallowed out so much that the S finally becomes a straight line.	Instrument flying is the act of constantly correcting for what you just did.
235	How to level off...press your nose down with your flipper until your air-speed indicator shows the desired cruising speed. Then, manipulating your flippers so as to maintain that speed, you adjust your throttle so that flight will be level...[and] trim....	Power, pitch, trim
	Another was of doing the same job...set your throttle for the desired cruising rpm and then, by means of the elevator, hold your nose higher or lower...to obtain level flight.	Generally the first way, pitch then trim, results in reaching cruise speed sooner. The second method sometimes results in cruising nose high at a higher angle of attack, and lower final cruise speed.
	Still another way: you climb beyond your intended your intended cruising altitude by a couple of hundred feet, set your throttle for approximate cruising power, and	Getting "on the step"—it does not result in a faster cruise speed, only getting to cruise speed faster.

	then go down in a shallow dive, thus quickly picking up your cruising air speed.	
236	How to hold your altitude...catch the first small indication of any rise or sink, and make corrections promptly.	It's easier to make small corrections when deviations are small than to make big corrections then deviations are big.
238	The most important mental characteristic of the good pilot [is] that his attention is always dilated, spread, wandering—never concentrated.	Avoid fixation
	For the family airplane of the future, someone ought to design an altimeter with a face similar to an ordinary household thermometer.	L anticipates the vertical altitude (and airspeed) tape...although he seems to think "real" (i.e., commercial) pilots would still use traditional altimeters.

I'll add chapter highlights and notes until we reach the end of the book. If you're impatient—and I hope you are—you won't wait for my musings, but instead will secure your own copy of *Stick and Rudder* now. Beyond simply reading its words, you'll truly analyze, criticize, mark up and understand Langewiesche's teachings to, as Adler suggests, **make this book your own**.

I look forward to your comments on these notes and the larger work. Please send your thoughts to me at mastery.flight.training@cox.net. Thank you.



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