



COCKPIT PROCEDURES

Effective Routines
for Pilots and
Virtual Aviators



Chris R. Burger

Cockpit Procedures: Effective routines for pilots and virtual aviators
by Chris R. Burger

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1 Overview

1.1 The Reason for this Book

This book provides a detailed description of what pilots do in aircraft cockpits. It covers operating procedures step-by-step and provides perspective on why the procedures are designed the way they are.

Over the years, I have discussed these procedures in depth with several dozen students. It is always time-consuming and, especially in the early stages, students do not have enough background knowledge to fully absorb everything. Therefore I hope this book will allow prospective pilots to mull over the procedures more closely and on their own time, before their instructors start drilling the stuff into them, as well as during training itself.

Keep coming back to this book regularly, and you will find that the procedures start making more sense as your own frame of reference expands.

1.2 The Contents

The book does not rigidly advocate one set of procedures. Instead, it lays a basis for understanding procedures and using them sensibly. Therefore, it is likely that this book can also be used with your existing checklist.

The book is divided into different topics:

- **Checklists:** Different philosophies of their usage.
- **Normal procedures for airplanes:** This section can be read as one continuous account of a typical flight in a light airplane. The different phases of flight are discussed in chronological order.

- **Abnormal procedures for airplanes:** These situations are covered individually. They will seldom be encountered in normal flying and are mainly applicable to training or hazardous operations.
- **Emergency procedures for airplanes:** Procedures for situations that require immediate action to prevent a disaster. Different situations (engine failure, fire, etc.) are discussed separately.
- **Helicopter operations:** The issues unique to helicopters are discussed, using similar principles as those provided for airplanes in the previous sections.
- **Airmanship:** Some ideas on how to become a better and safer pilot.
- **Definitions:** All the abbreviations and buzzwords in the book you may not understand.
- **Appendices:** The appendices include material about aircraft manuals, example airplane checklists and Morse code pointers.

1.3 How to Use this Book

It may prove useful to start by reading the entire text in a relaxed manner, before returning to work over each section in detail.

There is no need to learn the checklists in detail, except for the few that will be used in flight. On the ground, you will use flow checks to ensure that you do not miss anything. As long as you know exactly what to do when you get to the particular control or indicator, you will be fine.

Airplane students can skip Chapter 6.

Helicopter students should read Chapter 3 to get an idea of the thinking behind procedures and to understand the concept of testing, configuring and checking equipment, and the principles of panel-by-panel operations. They can briefly skim through Chapters 4 and 5 to get an idea of priorities. Details are not relevant. Chapter 6 contains helicopter-specific details, but the last chapters pertain equally to both airplane and helicopter pilots.

Experienced pilots should try to master the concept of flow checks and panel-by-panel operation, with particular emphasis on the differences between testing, configuring and checking. Chapters 2 and 3 are most useful in this regard.

Chapters 2 and 7 provide insights to help any pilot, even those who do not intend to modify their existing way of doing things.

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Effective Routines for Pilots and Virtual Aviators—Chris R. Burger

“How-to” guide for what you should be doing in the cockpit during each phase of flight

Here is a blow-by-blow account of the steps pilots need to follow during the flight, including emergencies and training maneuvers. The author devotes an entire chapter to airmanship, with a practical definition of what it involves, a list of good habits to develop, workload management, and even what you should have in your flight bag. Both airplanes and helicopters are covered, delivering the essential aspects of effective training: technical knowledge, practical application, and context learning. *Cockpit Procedures* provides a solid understanding of the underlying principles as well as detailed descriptions of the checklists and routines used in many flight schools, charter companies and airlines.

Author Chris R. Burger gives the background to, and the practical application of the many procedures that make the aircraft cockpit function, encouraging structure and discipline in flight. Yet *Cockpit Procedures* is a fun read—Burger doesn't just spout dry facts. His lively description keeps readers focused and helps foster a passion for aviation which he obviously has and knows how to pass along to others.

Chris R. Burger is an instructor and pilot examiner, flies both airplanes and helicopters, was previously an Air Traffic Controller, and runs a flying school in South Africa. As a flight instructor whose academic background includes aviation psychology expertise, Chris works to promote a culture of safety and teach pilots how to stay out of trouble in the skies—a task well served by more than 2,500 hours of instructor experience in over 80 different aircraft models.



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