

Introduction to the Revised Edition

During the 10 years since this book was published, I've heard from a lot of people. *Aircraft Systems: Understanding Your Airplane* had become an aircraft systems text for many flight students. The original book was a collection of magazine articles I had written, with a few chapters written for the book. The comment I heard most often was that it was difficult to use in a classroom setting because of a lack of subject organization. This edition addresses the concern.

The original 31 chapters have been reduced to 15 subject-specific chapters. While this has resulted in relatively large chapters dealing with the airframe, the powerplant, the instruments, and the electrical system, this will make using the book as a text much simpler.

The material has been updated and in many cases completely rewritten for increased clarity. There have been 16 photographs and 9 illustrations added to help visual concepts, and the table on preventive maintenance has been updated. The new FAA-approved list almost doubles the things you can do to your aircraft to save a little on your maintenance bills.

Finally, I responded to comments by readers regarding areas that should be covered in the book. As a result, the new edition includes information on the following subjects, which were not covered in the first edition:

- Electromechanical actuators
- Powerplant theory of operation
- The development and chemistry of gasoline
- Avgas octane ratings and performance numbers