

The Air Pilot's **Manual**

Volume 7

Communications

'Recommended reading'

Civil Aviation Authority



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Air Pilot Publishing

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Dorothy is a Fellow of the Royal Aeronautical Society, Past Chairman of the GAPAN Instructor Committee of which she was a founding member and the prime instigator of the Guild's Joint Forum with Central Flying School at RAF Cranwell for Senior Flying Instructors. She is a Past Chairman of the Education & Training Committee. After serving as a Warden on the Court of GAPAN for three years, she was appointed Master for the year 2014–2015 of the newly renamed Honourable Company of Air Pilots. She is also Chairman of the Professional Flying Instructors Association.

In 2003 Dorothy was awarded the Jean Lennox Bird Trophy for her contribution to aviation and support of Women in Aviation and the BWPA (British Women Pilots Association). In 2013, Dorothy received the prestigious award of a Master Air Pilots Certificate from GAPAN. In 2015 she was awarded the Brabazon Cup by the BWPA for her outstanding achievement in aviation. A regular contributor to seminars and conferences, Dorothy is the author and editor of a large number of flying training books and has published articles in legal and insurance journals and many in aviation magazines.

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On leaving university in 1989 Helena obtained a PPL in America, converting to UK licence on her return. Shortly afterwards she started work in Air Traffic Control at London Luton Airport, earning her controller's licence in 1990. Helena continues to be an operational Air Traffic Control Officer and is currently posted to Swanwick working 'Luton Radar', 'Thames Radar' and 'Heathrow SVFR'; she is involved in controller training as an instructor, assessor and examiner. She holds a CPL/IR and has been a flying instructor since 1996, teaching PPL and associated ratings. She is a Ground and R/T examiner and has written both PPL and ATPL Radiotelephony Training Manuals.

Acknowledgements

The Civil Aviation Authority; National Air Traffic Services.

A Condensed History of the Air Pilot Manuals

For over 30 years the Air Pilot Manuals have led the academic training of pilots in the United Kingdom and in many countries around the world.

I first met Trevor Thom, a professional pilot and natural teacher, in Melbourne during a visit to Australia in January 1985. He already had his series of PPL Manuals for the Australian market and I asked him to produce a series for the New Zealand market where we had a small aviation business. Having completed this task, Trevor immediately began writing the first of the Air Pilot Manuals for the United Kingdom market and this project began in earnest on 5th December 1985.

Both Trevor Thom and Robert Johnson commenced the task in my office at Feldon. By the end of the following year, all four volumes were complete and were published in February 1987. At that time, we estimated that 95% of all the UK Flying Schools were using our manuals. Volumes 5, 6 and 7 followed, so completing the full series.

Unfortunately, Trevor Thom had a serious accident at home which prevented him from continuing with the editing of the manuals. His rights were eventually sold to David Robson, another experienced pilot and natural teacher, who progressively improved the drawings and brought colour into the manuals for the first time.

Over the years there have been many assistant editors, in particular Peter Godwin, whose help I first asked for in the very early days with Trevor Thom and which continued until quite recently. The rights in the Air Pilot Manuals are now vested with the Pooley family and they continue to be edited and published from our offices and the school at Shoreham Airport.

The Air Pilot Manuals have an outstanding reputation for accuracy and are continuously updated. They are recommended CAA reading material and are referred to extensively in the CAA examination answer booklet.

Robert Pooley

CSStJ FRIN FRAeS

Introduction

Radio is your link to the rest of the world.

Using the radio professionally has become an essential requirement in the modern aviation environment. Radio provides the interface between you and others, especially the Air Traffic Service Unit (ATSU) whose frequency you are using. Normally you will communicate with the ATSU only, and not directly with other aircraft on that frequency. They will, however, be listening in and so will be aware of your movements.

Press the transmit button, and speak clearly.

Flight radio is easy to use

You will make life more comfortable for yourself (and others) if you can use the radio efficiently. You need to know:

- **how to use** the radio equipment; and
- what to say.

Our manual will help you to achieve this in an easy-to-follow manner. If you are a beginner, the first chapter will introduce you to cockpit radio equipment. For safety and efficiency, an aeronautical language has been developed with its own jargon. Many messages are best passed using this standard phraseology (such as “Cleared for take-off” and “Cleared to land”). The **Learning the Language** section will help you to do just that as your training progresses. There are several tables included which will provide a valuable reference for you in the future. Chapters 1 to 4 contain enough information for you to feel comfortable using the radio at your home aerodrome, and for flights to your training area.

Flying Further discusses procedures in the various classes of airspace you might fly in as you proceed cross-country. **When Things Go Wrong** considers the best means of communicating in emergency situations, and also what to do if your radio fails, thereby making voice communication no longer possible.

Putting it all Together takes you through some typical flights, and **How Radio Works** explains it all for those who do not like to use anything without knowing how it works.

The real test occurs in your day-to-day flying.

The *real* test. You should aim to pass the required test for your **Flight Radiotelephony Operator’s Licence (FRTOL)** before completing your Private Pilot Licence training. But the *real* test occurs every day that you go flying in the future. Our aim is to help you pass the test, and then to be professional in the use of flight radio throughout the rest of your flying career.

Your use of the radio will improve with experience

If you are a student pilot, then you are probably a little wary of the radio. It is not very different from using a telephone, except that only one person can speak at a time – simultaneous transmission and reception is not possible.

Only one person can transmit at a time.

Most students have trouble understanding radio messages at first, but as you are exposed to it and build up your vocabulary of standard words and phrases, and as you get to know what messages to expect, your proficiency and confidence will grow.

Using the radio gets easier.

Ace radio operators are not born that way – they train themselves!

The people who staff the Air Traffic Service Units are highly trained and use the radio as part of their day-to-day lives. They are very professional. As a student pilot you are not expected to be an ace radio operator right at the start. You are a student battling to fly the aeroplane as well as trying to use the radio! The professional ATSU personnel will assist you in a friendly manner to improve your radio work.

Practice makes perfect.

Time spent listening to others is invaluable. Going flying with experienced pilots, making visits to control towers, radar rooms, flight service units and air/ground radio stations (all of which you are encouraged to do) is time well spent.

Learn from others.

Radio and Air Law

Because radio is the interface between you and the rest of the world, there is some commonality between this radio book and our book on air law. The aspects of air law relevant to using the radio are discussed here, and expanded on in Vol. 2 of *The Air Pilot's Manual*. A good understanding of the rules and regulations, as well as normal operating procedures, will help you to use the radio efficiently. You will display this by professional and confident radio work.

Follow the rules.

Your responsibilities

As an operator of flight radio, you are joining a select group of people. Various responsibilities go with the privileges. You may only use flight radio for aeronautical use; you must use appropriate language; and you must not interfere in the transmission of messages from others, especially during emergencies.

Be responsible.

Using this book

While the material in this book was up-to-date at the time of printing, changes to radio and air traffic procedures occur from time-to-time. In addition to this book, you must refer to the UK Aeronautical Information Publication (AIP), aeronautical charts, Aeronautical Information Circulars (AICs), and the CAA's Radiotelephony Manual (CAP 413). Major changes to RT phraseology will be announced in AICs. Your instructor can introduce you to these publications.

The radio call examples in this book use the following conventions. Calls made by the pilot are enclosed in a grey box, with an aeroplane symbol at the beginning of the message. For calls made by an air traffic service unit, a symbol at the beginning of the message indicates the type of air traffic service unit making the call.

 Pilot

 Control Tower

 Approach or Radar

 Air/Ground radio station

 Flight Information Service

Phonetic pronunciation

To help you learn phonetic pronunciation of words and numbers, we have written aircraft callsigns and numbers in the first few chapters as they should be pronounced, rather than as they are normally spelt. From the *Flying Further* section onward we use the normal spelling, as you should have got the hang of phonetic pronunciation by that stage.

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