

The Air Pilot's **Manual**

Volume 2

Air Law and **Meteorology**

'Recommended reading'

Civil Aviation Authority

Singapore CAA Recommended Study Guide



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Air Pilot Publishing

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Tel: +44 (0)208 207 3749

Web: www.pooleys.com

Email: sales@pooleys.com

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Volume 2

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Editorial Team

Dorothy Saul-Pooley LLB (Hons) FRAeS FRIN

Dorothy held both an ATPL (A) and CPL (H) and was an instructor and examiner on aeroplanes and an instructor on helicopters for over 25 years. For 15 years she was Head of Training of a school dedicated to running Flight Instructor and examiner courses at Shoreham Airport. For 20 years Dorothy was also a CAA Flight Instructor Examiner (Senior Examiner).

Dorothy originally qualified as a solicitor in 1982 and acted for many years as a specialist dealing with aviation insurance liability issues and aircraft accident investigation work. She has lectured widely on aviation law and insurance matters. This highly unusual combination of qualifications and experience led to Dorothy's appointment as one of the Honorary Solicitors to the Guild of Air Pilots and Air Navigators (GAPAN).

Dorothy is a Fellow of the Royal Aeronautical Society and of the Royal Institute of Navigation. She is the Past Chairman of the GAPAN Instructor Committee, of which she was a founding member and she was the prime instigator of the Guild's biennial joint Forum with the Central Flying School at RAF Cranwell for Senior Flight Instructors, both civil and military. She is also Past Chairman of the Education and Training Committee. Dorothy was elected to the post of Master of the Honourable Company of Air Pilots (formerly GAPAN) for the year 2014-2015, the first woman to hold that post. Dorothy currently holds the post of Chairman of the Professional Flying Instructors Association and is the Governor of the British Section of the 99s, an international women pilots' organisation.

In 2003, Dorothy was awarded the Jean Lennox Bird Trophy for her contribution to aviation and support of Women in Aviation and the British Women Pilots Association (BWPA). In 2013, Dorothy was honoured to receive the prestigious award of a Master Air Pilot certificate from GAPAN. In 2015 she was awarded the Brabazon Cup by the BWPA for her outstanding achievements in aviation. In 2019 Dorothy was awarded the Pike Trophy by the Honourable Company of Air Pilots for her outstanding contribution to the maintenance of civil flying instruction standards.

As consulting editor for Air Pilot Manuals and for Pooleys Flight Equipment, Dorothy has written, edited and contributed to more than 30 training manuals and has published many articles in aviation magazines, legal journals and on-line publications.

Helena Hughes

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. During her time at Luton she was involved in controller training as both an instructor and assessor. Helena continues to be an operational Air Traffic Control Officer and is currently posted to Thames Radar. She holds a CPL/IR and has been a flying instructor since 1998, teaching PPL and associated ratings. She is a Ground and R/T examiner and has written both PPL and ATPL Radiotelephony Training Manuals.

Philip Baxter BA (Hons) LLB (Hons)

Philip held a UK ATPL (A), is an Instructor and has been a PPL Examiner. He began his working life in the Civil Service, having joined from school, and stayed for more years than he now cares to remember! He worked in a wide variety of (mostly) very interesting jobs, within several Departments, which included one period as Private Secretary to a government Minister, another (reflecting his long-standing interest in aviation matters) dealing with aircraft noise and ICAO 'Annex 16' issues as well as pollution from aircraft engines; and another as a technical author. Much of the remainder of his Civil Service career was related to telecommunications, ranging from international Treaties to technical standardisation. This included representing his departmental interests on Standards Committees in particular, both internationally and domestically. Both his Degrees, the first in Science and Technology, the second in Law (providing an unusual combination) were awarded following part-time study with the Open University. Since 'retiring' early from a senior middle-management grade, Philip worked for six years as a full-time Flight Instructor and Flight Examiner, accruing some three and a half thousand instructional hours. Phil teaches ground school subjects for the Flying Instructor course and has also been Vice Chairman of the Professional Flight Instructors' Association (PFIA).

Robert Seaman BSc MRI FRMetS

Rob Seaman is a professional pilot on the Airbus family, a flight instructor and meteorologist who is committed to connecting these professions together for the benefit of flight safety. With a life-long passion for aviation he was awarded a Royal Air Force flying scholarship (1998), the Norman Motley Flight Instructor Scholarship (2007), elected Liveryman of the Honourable Company of Air Pilots (2016) and was expert advisor on the United Kingdom Flight Safety Committee. Rob's key interest is in the practical application of human factors to meteorological threats so as to enhance their management on the flight deck. His previous career in the Met Office culminated as Head of Policy Advice relating climate change and the environment to foreign and defence policy. This drew on experience gained from previous roles supporting civil and military aviation operations; as a Senior Applied Scientist developing weather related decision aids to increase efficiency and effectiveness, and as an Operational Meteorologist supporting the military at HQ Air Command, the Falklands and the Middle East. Rob studied Physics at Imperial College, is an Associate of the Royal College of Science and Fellow of the Royal Meteorological Society.

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The Civil Aviation Authority, Captain R. W. K. Snell, Shaun McConnell, the late David Hockings, Helena Hughes, Geoffrey Farmiloe AFRIN, LLB (Hons), LLM, Daljeet Gill, Philip Odell, Esther Law and the many other instructors and students whose comments have helped to improve this manual.

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 Felden. By the end of the following year, all four volumes were complete and were published in February 1987. By the end of that year, 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 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 MBE

CSJ FRIN FRAeS

Preface to the Sixteenth Edition

Keeping up to date with legal changes is challenging, because the law is changing all the time. In this edition, we have expanded on the European regulations which are still in a transitional period of implementation. We have included the European rules of the air. Please be aware that there are almost daily changes to some aspects of aviation law, so you must check the CAA and EASA websites frequently.

To highlight the difference between UK CAA material and ICAO or EASA material, we use a lighter typeface for the ICAO material.

NOTE Please check our websites for updates and links to references mentioned in the text. Please refer to www.pooleysapp.com and to the Pooleys websites: www.pooleys.com and www.pooleysfis.com.

STOP PRESS February 2020

Just before we went to press with this volume, the following notice was issued by the CAA. This does impact on the text relating to VFR flight in Class D airspace and therefore there may be questions in the practice questions section which are based on the pre-existing exemption to the regulations and which may no longer be correct. We apologise for any confusion that may arise, but the issue of this notice is evidence of how often the law changes and the importance of ensuring that you check all source documents before flight. There may be other rule changes as a result of the UK's departure from the EU, so please be extra vigilant and discuss concerns with your flight instructor. (*please see the following page*).



18 Feb 2020

UK to revert to international rules on visual flight in Class D airspace after exemption expires

From 26 March 2020 the UK's exemption from the Standardised European Rules of the Air (SERA) covering visibility and distances from cloud in Class D airspace for pilots flying under Visual Flight Rules (VFR) will no longer apply.

From 26 March, VFR flights in Class D airspace will need to comply with SERA.5001, meaning there will be a requirement to be 1000ft vertically clear of cloud. It will still be possible to ask air traffic control for a Special VFR clearance within a control zone if the weather conditions require this. The exemption has only applied to flights below 3000 feet and slower than 140kts. In future, UK Class D rules will be fully consistent with SERA and the ICAO requirements that are applied around the rest of the world. ICAO introduced these rules to improve situational awareness for all pilots flying in Class D airspace.

The exemption has been extended several times but the UK has been informed by the European Commission that no further extensions would be possible.

UK air traffic control providers have been notified so they can amend their procedures and the CAA will be publishing further guidance for pilots on how to comply with the new rules in advance of the change.

The CAA will monitor the impact of the change, including the number of aircraft that are declined clearances to cross controlled airspace.

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