The Air Pilot's Manual

Volume 5

Instrument Flying
Radio Navigation Aids
Instrument Procedures
Night Flying
IR(R) Rating
Night Rating

Recommended Reading
Civil Aviation Authority CAP 804



Nothing in this manual supersedes any UK and EU legislation or European Aviation Safety Agency (EASA) Regulations or procedures; or any operational documents issued by any United Kingdom Government Department, the Civil Aviation Authority, National Aviation Authorities, the manufacturers of aircraft, engines and systems, or by the operators of aircraft throughout the world. As maps and chart are changed regularly, any extracts reproduced in this book must not be used for flight planning or flight operations.

Copyright © 2022 Pooleys-Air Pilot Publishing Limited

ISBN 978-1-84336-235-7

Ninth edition Nov. 2018 Tenth revised edition May 2022

First edition published 1989
Reprinted with revisions 1990, 1991, 1992 and 1994
Second revised edition 1997
Reprinted 1998
Third edition 1999
Fourth revised edition 2001
Reprinted with revisions 2002
Fifth revised edition 2004
Reprinted with revisions and colour illustrations 2007
Sixth revised edition 2008
Seventh edition Feb. 2016

All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without permission from the publisher in writing.

Published by Pooleys-Air Pilot Publishing Ltd Elstree Aerodrome, Elstree, Hertfordshire, WD6 3AW. UK. Tel: +44 (0)208 207 3749 Web: www.pooleys.com Email: sales@pooleys.com

The Air Pilot's **Manual**

Volume 5

Contents

Int	roduction	i
Sec	ction One	
Ins	trument Flying Techniques	
1.	Instrument Scanning	3
2.	The Instruments	15
3.	Straight and Level Flight	51
4.	The Straight Climb and Descent	77
5.	Turning	95
6.	Unusual Attitudes	115
7.	Instrument Flight on a Limited Panel	137
Sec	ction Two	
Ra	dio Navigation Aids	
8.	Introduction to Radio Navigation Aids	161
9.	Radar	163
10.	DME	191
11.	The NDB and the ADF	203
12.	The Relative Bearing Indicator (RBI)	231
13.	The Radio Magnetic Indicator (RMI)	265
14.	The VOR	283
15.	The Instrument Landing System (ILS)	323
	VHF Direction Finding (VDF)	
17.	Introduction to RNAV	363
Se	ction Three – Instrument Procedures	
18.	Preparation for Flight	391
19.	Instrument Departures	399
20.	Instrument Arrivals	407
21.	Holding and Manoeuvring	413

22.	Instrument Approaches	425
23.	Instrument Minima	465
24.	Visual Manoeuvring	483
Sec	ction Four – Night Flying	
25.	Aerodrome Lighting	499
26.	Night Flying at an Aerodrome	505
27.	Night Navigation	523
Αp	pendix 1	
	e Instrument Rating (Restricted)/Instrument Meteorological nditions Rating - IR(R)/IMC	527
Ар	pendix 2	
Nig	ht Rating	529
Ар	pendix 3	
	t FCL Instrument Rating and Competency Based Instrument Ra eroplanes)	
Qu	estions & Answers	
Pre	paration for the IR(R) Theoretical Knowledge Exam	535
Αb	breviations	545
Ind	lex	549