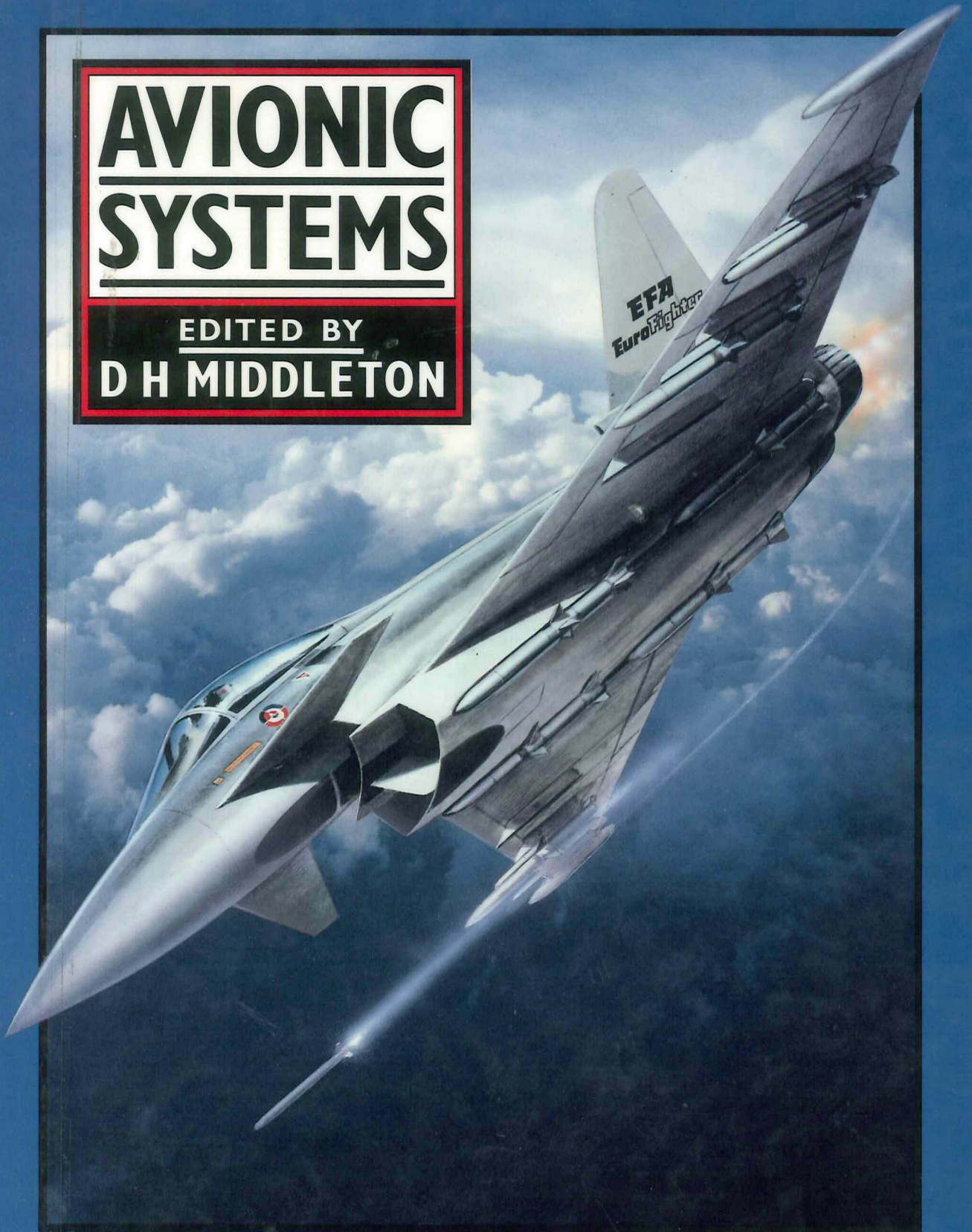


AVIONIC SYSTEMS

EDITED BY
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Longman Scientific & Technical,
Longman Group UK Limited,
Longman House, Burnt Mill, Harlow,
Essex CM20 2JE, England
and Associated Companies throughout the world.

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First published 1989

British Library Cataloguing in Publication Data
Avionic systems.

1. Aircraft. Electronic equipment
 - I. Middleton, Don, 1921–
- 629.135'5

ISBN 0-582-01881-1

Set in Linotron 202 9½/12 pt Ehrhardt Roman

Produced by Longman Singapore Publishers (Pte) Ltd.
Printed in Singapore

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PREFACE

It is beyond doubt that the origins of what we now know as avionics was a major factor in preserving the world from Nazi domination in the 1940s and it should not be forgotten that the first manifestations of its capability were demonstrated in February 1935 when Dr Watson Watt's team carried out the famous experiment at the BBC's Daventry transmitter and received a signal reflected back from a Heyford bomber approaching Daventry.

The five decades since this memorable event have seen the enterprise and brilliance of scientists and engineers at research centres and manufacturers' works combine with computer technology to produce systems of almost unbelievable capability and reliability.

This book is intended to fill a gap in the aviation technical bookshelf by discussing the present state of the art in a manner intelligible to both the student and the technician.

As General Editor it has been my privilege and pleasure to work with the authors of each chapter – each a leading practitioner in his particular subject. To them all I express my appreciation of their enthusiasm and cooperation.

To all the companies named in the text I owe a debt of gratitude for their cooperation, for the provision of photographs and information and, where appropriate, for their courtesy in permitting their engineers to contribute to this book.

Valuable advice has been given by Mr Mike Hirst, Mr Andy Hofton, Mr Harry Ratcliffe, Mr David Yeomans and Wing Commander Charles McClure of the College of Aeronautics, Cranfield, Mr A. H. Fox of Southall College, Mr Peter Drake of the CSE Oxford Air Training School, Wing Commander G. S. Bowden at Brunel College, Professor G. C. Bloodworth and Dr R. J. Patton of the University of York, Dr Bernstein and Mr David Sweeting of Queen Mary College, University of London. Mr John Burrows, Assistant Engineering Training Superintendent of British Airways and members of his staff were also extremely helpful.

My thanks for their assistance are also due to Mr John Saull, Director and Chief Surveyor of the Civil Aviation Authority and Mr D. Hawkes. From RAE Bedford, Mr R. G. White offered valuable advice as did Dr John Clarke at the Royal Signals and Radar Establishment at Malvern.

D. H. Middleton
General Editor

AVIONIC SYSTEMS

Avionics is a broad subject of ever-increasing complexity. Aircraft and engine control systems, navigation and communication systems are such highly specialised areas that engineers and scientists working on one particular aspect may be unaware of the developments occurring in the others.

This book is designed to bridge the gap between these areas and has been written by some of the leading avionics experts in the field. Subjects covered in the specially commissioned contributions include the evolution of avionics, systems design, digital technologies, and future trends and developments.

Avionic Systems will appeal to a wide technical and semi-technical readership including students, managers, engineers and scientists within the aviation and aerospace related industries. The breadth of information contained in the book will ensure that it is a valuable reference source for many years to come.

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ISBN 0-582-01881-1



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