

JANE'S
AVIONICS
1985-86

Fourth edition

Edited by
Michael Wilson

JANE'S AVIONICS

FOURTH EDITION

EDITED BY
MICHAEL WILSON BSc CEng FBIS MRAeS

1985-86



ISBN 0 7106 08160

JANE'S YEARBOOKS

"Jane's" is a registered trade mark

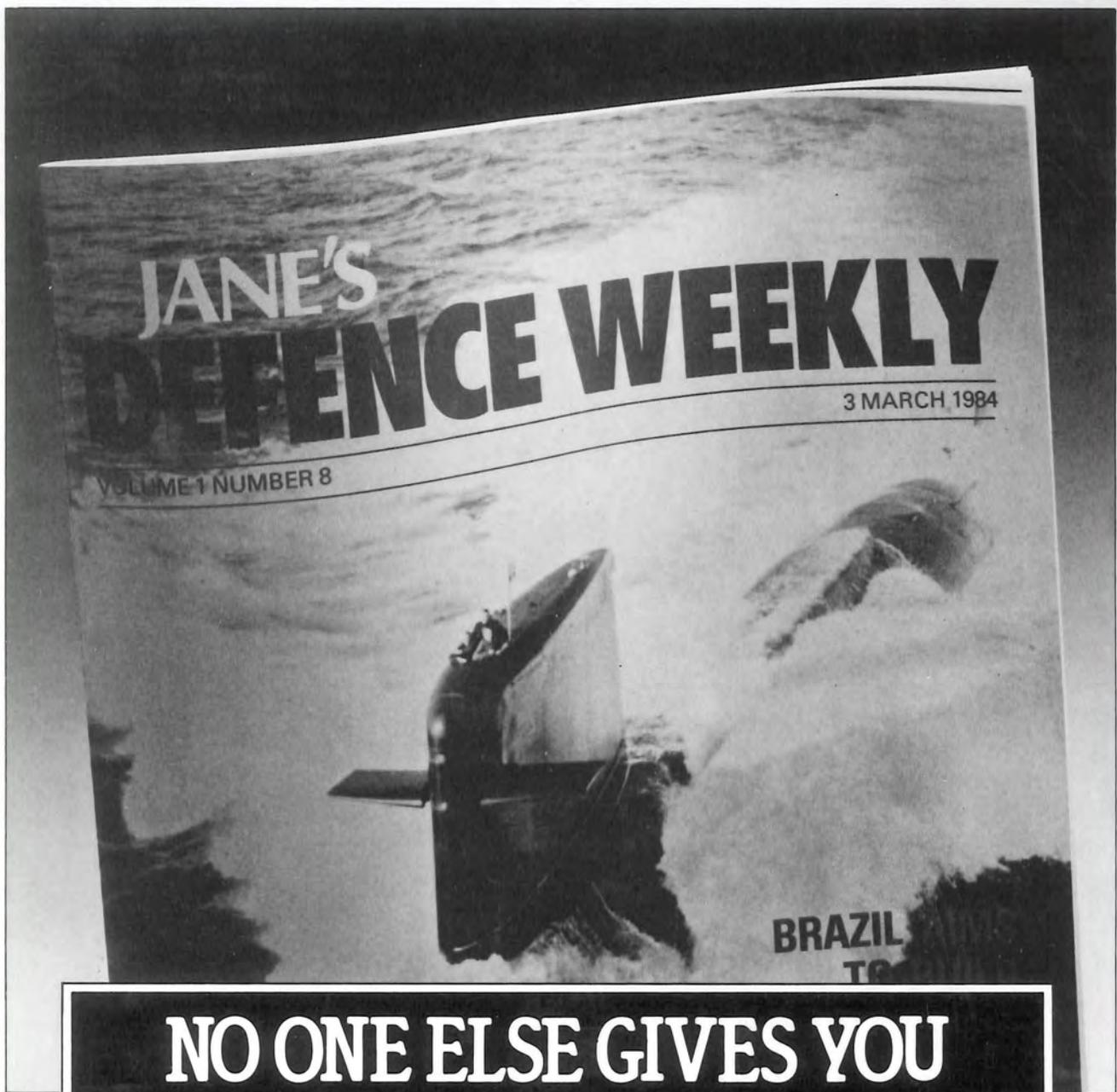
Copyright © 1985 by Jane's Publishing Company Limited, 238 City Road, London EC1V 2PU, England

All rights reserved. No part of this publication may be reproduced, stored in retrieval systems or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publishers.

In the USA and its dependencies by
Jane's Publishing Inc, 13th Floor, 135 West 50th Street, New York, NY 10020, USA

Contents

Foreword	[25]
Glossary	[39]
Anti-submarine warfare	1
Communications	19
Radio communications	20
Internal communications and in-flight entertainment	74
Headsets, handsets and microphones	81
Data processing	87
Computers	88
Data transmission standards	100
Data transmission equipment	103
Programming languages	106
Data recording	109
Displays	135
Electronic warfare	175
Flight control	213
Fly-by-wire flight control	214
Fixed-wing flight control	225
Helicopter flight control	245
Flight instruments and equipment	253
Air data systems and instruments	254
Attitude director indicators	262
Horizontal situation indicators	267
Attitude and heading reference systems	271
Radio altimeters	276
Weight and balance systems	282
Flight performance and management	283
Lasers	295
Navigation and nav/attack	307
Area navigation	308
Beacon navigation	313
Doppler navigation	321
Hyperbolic navigation	327
Inertial navigation	331
Map displays/readers	346
Omega/VLF navigation	347
Satellite navigation	353
Propulsion management	357
Autothrottles	358
Fuel management	360
Engine control	363
Engine monitoring	370
Engine performance indicators	375
Radar	381
Attack radar	382
Secondary radar	408
Surveillance radar	414
Weather radar	429
Simulation	439
Stores management	467
Television, thermal imaging and reconnaissance	477
Warning systems	501
Index	512



NO ONE ELSE GIVES YOU THE IN-DEPTH FACTS FASTER

The internationally acknowledged authority of Jane's combined with the constant update of the very latest developments in defence matters worldwide—that's Jane's Defence Weekly. No other defence journal has the pedigree of such objective reporting and now, no other

journal can be so instantly responsive in its reporting—bringing you the news as it happens anywhere at any level, be it behind the scenes or in action.

For anyone concerned with defence matters it is indispensable reading.



JANE'S
YEARBOOKS and DEFENCE WEEKLY
Where the facts are found!

IF IT'S NEWS YOU'LL FIND
IT IN OUR WEEKLY

For further information please contact the Marketing Department:
Jane's Publishing Co Limited, 238 City Road, London EC1V 2PU Tel: 01-251 9281 Tlx: 894689
Jane's Publishing Inc., 13th Floor, 135 West 50th Street, New York NY 10020 Tel: 212-586 7745 Tlx: 125732