

NUMBER 4715 VOLUME 157

HEAD OFFICE

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS, UK. Telephone +44 (20) 8652 3842; Fax +44 (20) 8652 3840 I flight international@rhi

C man mgm.m.comationar@ron.co.ak	
Editorial Enquiries	+44 (20) 8652 3842
Editor Carol Reed	+44 (20) 8652 4989
Editor's PA Debra Warburton	+44 (20) 8652 3835
News Editor Andrew Chuter	+44 (20) 8652 3843
Deputy News Editor Emma Kelly	+44 (20) 8652 3096
Features Editor DeeDee Doke	+44 (20) 8652 3852
Commercial Aviation Editor	
Max Kingsley-Jones	+44 (20) 8652 3825
Operations/Safety Editor	
David Learmount	+44 (20) 8652 3845
Business Editor Chris Jasper	+44 (20) 8652 3990
Defence Aviation Editor Stewart Penney	+44 (20) 8652 3834

Operations/Safety Editor	
David Learmount	+44 (20) 8652 3845
Business Editor Chris Jasper	+44 (20) 8652 3990
Defence Aviation Editor Stewart Penney	+44 (20) 8652 3834
Corporate & General Aviation Reporter	
Kate Sarsfield	+44 (20) 8652 3885
Spaceflight Correspondent Tim Furniss	+44 (1237) 471960
Editorial Assistant Laura Hailstone	+44 (20) 8652 3842
Group Production Editor Graeme Osborn	+44 (20) 8652 3828
Group Art Editor James Mason	+44 (20) 8652 4994
Chief Sub-Editor Chris Thornton	+44 (20) 8652 3850
Layout Sub-Editor Annabel Wells	+44 (20) 8652 3848
Designer Paruna Patel	+44 (20) 8652 4997
Chief Technical Artist Tim Hall	+44 (20) 8652 8047
Technical Artist Giuseppe Picarella	+44 (20) 8652 8054
Editorial Artist Gareth Burness	+44 (20) 8652 8043

Luitoriai Artist Garcui Durgess	T44 (20) 0002 0040
Photographer Mark Wagner	+44 (20) 8944 5225
Picture Librarian Kim Hearn	+44 (20) 8652 3427
Air Transport Intelligence	+44 (20) 8652 8724
EUROPE/MIDDLE EAST	
European Editor (Paris) Julian Moxon	+33 (1) 47 55 95 60
The state of the s	Fax +33 (1) 47 55 95 61
Munich Correspondent Andrew Doyle	+49 (89) 910 76 780
	Fax +49 (89) 910 76 217
Israel Correspondent Arie Egozi	+972 (3) 967 1155
Moscow Correspondent	+7 (095) 393 4717
Alexander Velovich	Fax +7 (095) 393 4717

THOMUNDON FOROTON	·un		10001	000	77 17
AMERICAS					
Washington DC Office	Fax	+1	(703)	836	8344
Americas Editor Graham Warwick		+1	(703)	836	3448
East Coast Editor Paul Lewis		+1	(703)	836	3084
Washington Correspondent Ramon Lopez		+1	(703)	836	7443
West Coast Editor Guy Norris		+1	(949)	252	8971
			10401		

ASIA PACIFIC	
Asia Editor (Singapore) Andrzej Jeziorski	+65 434 3309
	Fax +65 338 6171
Australia Correspondent Paul Phelan	+61 (7) 4053 2791

READER SERVICES Subscriptions Cathy Clarke, Flight International Subscriptions, Reed Business Information, PO Box 302, Haywards Heath,

Fax +61 (7) 4053 3003

+1 (718) 392 7477

+44 (1707) 665151

West Sussex. RH16 3DH. UK.	
Telephone/credit card orders	+44 (1444) 445454
	Fax +44 (1444) 440619
e-mail r	bi.subscriptions@rbi.co.uk
US subscriptions PO Box 4928,	+1-800 (637) 6073
Oak Brook, Illinois, 60522-9947, USA	Fax +1-800 (327) 9021
from Canada	+303 (470) 4426
	Fax +303 (470) 4691
Navada de escuisios	. 44 (20) 7201 7704

	Fax +44 (1/U/) bbU33L
Back issues ESCO Business Serv	rices +44 (1371) 810433
Recent copies only	Fax +44 (1371) 811065
Flight International website	http://www.flightinternational.com
For a full listing of RBI magazines	http://www.reedbusiness.com
Cuba animatiana Datana	1

9	11-11	3			
for a full listing of RBI magazines http://www.reedbusiness					
Subscription Rates:	1 year	2 year	3 year		
Europe	£80/\$135	£135/\$220	£175/\$290		
All Other Countries	£85/\$140	£145/\$240	£190/\$315		
Only paid subscriptions availab	le. Cheques made	e payable to Flid	ht International.		

Newstrade Distributed by Marketforce (UK) Ltd

Flight International is a weekly news magazine for professionals working in all sectors of the aerospace industry wordwide, serving all branches of airrow systems, support equipment and component manufacture and all sectors of opera-tion, including air transport, general aviation, defence, spaceflight and regulatory and other authorities.



US Newstrade Enquiries

Flight International Directories



Comment 5 Headlines 6 Airbus placed to win MAS order .. Japan suffers another launch failure 7 MD-80 crash sparks emergency AD GAMA predicts healthy growth 8 EVA is 777X launch customer Air Transport Alliance reveals regional plans...... 10 India completes bilateral talks SAS studies options for 70-seater 11 14 Air Foyle plans widebody arm Provisos put on Russian polar routes 17 Enhanced A340 under discussion Defence Kosovo report shows NATO flaws Northrop Grumman wins USN UAV contest Australia seeks refuelling funding Argentine A-4Rs start build-up..... 26 USA may help Philippines deal..... **Business**

29 SIA gives Thai alliance headache Thomson-CSF and Samsung launch venture

Lockheed I	Vlartın takes up	training	31

m business minigais	
Regional jets steal output lead	31
Jets overtake turboprops for the first time	

u Gener	al Aviation	
US econom	y boosts charters	36

LoPresti gets Fury design rights	38
Islander noise tests beat expectations	

Snaceflight

Internet drives satellite growth	39
Russia reacts on ISS module delays	40

US Budget

DoD perpetuates tactical shortfall 44 FAA asks for \$11 billion; NASA focuses on Shuttle replacement



The Zeppelin makes a 21st century comeback - but its makers say they are looking to the future, not recreating the past.

ER SPACE 2000

h aerospace & defence technology exhibition & airshow 22 - 27 February, 2000 • Chanal Exhibition Centre, Singapore



The Asian horizon glows with promise after two years of economic drought, and its aerospace sector is recovering in a revitalised business climate.

Cautious optimism replaces Asia's gloom
Industry trends
Defence renaissance
USA in the Pacific
The Australian view
To the rescue
Broader horizons
The great debate 99

Market review

The great debate	82
AEW&C on the attack	84
Bad company	
Going further with FANS	90

FAA pushes FANS-1 Pacific expansion	
Lengthy service	92
Key operators assess the 777-300	

Exhibitors list10	1
A guide to Asian Aerospace 2000	_

Letters	110

Uncle Roger is on tour in the South Pacific

Classified	111
Classified Aircraft for sale, services, courses an	d tuitio
Appointments The industry's ton jobs marketplace	116
The industry's ton jobs marketniace	

Employment Services Index Assistance for aerospace professionals in employment and career development