

FLIGHT

INTERNATIONAL

OVER THE TOP

FANS SHRINKS THE WORLD

5-11 AUGUST 1998 £2

A Reed Business Publication

Denmark Dkr 33 ● France Fr20
Germany DM 11.80 ● Greece Dra1100
Holland Dfl 8.95 ● Italy L.6000
Norway Nkr37.00 ● Malta LM1.15
Spain Ptas650 ● USA \$4.75

Ref: BL09SEPT97 PF 071197/ Df: 26521660
FLIGHT INTERNATIONAL (G B)
05.08.98 Vol: 153 No. 4637
0015-3710 21872678 05.08.98
LIBRIS
144 BLVD KRIM BELKACEM
ALGER
ALGERIE



FARNBOROUGH
SHOW PREVIEW

**THE WORLD'S TOP
MARKETPLACE
FOR AEROSPACE JOBS**



HEAD OFFICE

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS, UK
 Telephone +44 (181) 652 3842; Fax +44 (181) 652 3840
 e-mail flight.international@rbi.co.uk

Editorial Enquiries +44 (181) 652 3842

Editor Carol Reed	+44 (181) 652 4989
Editor's PA Lisa Jenkins	+44 (181) 652 3882
News Editor Andrew Chuter	+44 (181) 652 3843
Operations/Safety Editor David Leamont	+44 (181) 652 3845
Business Editor Kevin O'Toole	+44 (181) 652 3835
Commercial Aviation Editor Max Kingsley-Jones	+44 (181) 652 3825
Defence Aviation Editor	+44 (181) 652 3834
Technical Reporter Ian Sheppard	+44 (181) 652 3990
Corporate & General Aviation Reporter Kate Sarsfield	+44 (181) 652 3885
Spaceflight Correspondent Tim Furniss	+44 (1237) 471960
Editorial Assistant	+44 (181) 652 3842
Art & Production Editor Alexis Rendell	+44 (181) 652 3828
Design Editor	+44 (181) 652 4994
Chief Sub-Editor Chris Thornton	+44 (181) 652 3850
Layout Sub-Editor Annabel Wells	+44 (181) 652 3848
Senior Technical Artist Tim Hall	+44 (181) 652 8047
Technical Artist Giuseppe Picarella	+44 (181) 652 8054
Editorial Artist Gareth Burgess	+44 (181) 652 8043
Photographer Mark Wagner	+44 (181) 944 5225
Picture Librarian Kim Hearn	+44 (181) 652 3427
Newsletters Editor Emma Kelly	+44 (181) 652 3096
Air Transport Intelligence	+44 (181) 652 8724

EUROPE/MIDDLE EAST

European Editor (Paris) Julian Moxon	+33 (1) 47 55 95 60
	Fax +33 (1) 47 55 95 61
Munich Correspondent Andrzej Jeziorski	+49 (89) 910 76 780
	Fax +49 (89) 910 76 217
Israel Correspondent Arie Egozi	+972 (3) 967 1155
Moscow Correspondent Alexander Velovich	+7 (095) 393 4717
	Fax +7 (095) 393 4717

AMERICAS

Washington Office	Fax +1 (703) 836 8344
American Editor Graham Warwick	+1 (703) 836 3448
Washington Correspondent Ramon Lopez	+1 (703) 836 7443
West Coast Correspondent Guy Norris	+1 (949) 252 8971
	Fax +1 (949) 252 8972

ASIA PACIFIC

Asian Editor (Singapore) Paul Lewis	+65 434 3309
	Fax +65 338 6171
Australian Correspondent Paul Phelan	+61 (7) 4053 2791
	Fax +61 (7) 4053 3003

READER SERVICES

Subscriptions Karen Parker, Flight International Subscriptions, Reed Business Information, PO Box 302, Haywards Heath, West Sussex. RH16 3DH. UK.
 Telephone/credit card orders +44 (1444) 445454
 Fax +44 (1444) 440619
 e-mail rbi.subscriptions@rbi.co.uk

US subscriptions PO Box 7542, Highlands Ranch, CO 80126-7542
 from Canada Fax +1-800 (637) 6073
 Fax +1-800 (327) 9021
 +303 (470) 4426
 Fax +303 (470) 4691

Far East subscriptions +65 338 3398
 Reed Asian Publishing (Pte) Ltd Fax +65 338 3213
 No.1 Temasek Avenue, #17-01
 Millenia Tower, Singapore 039192

Newstrade enquiries +44 (171) 261 7704
 US Newstrade Enquiries +1 (718) 392 7477

Flight International Directories +44 (1707) 665151
 Fax +44 (1707) 660330

Back issues ESCO Business Services +44 (1371) 810433
 Recent copies only Fax +44 (1371) 811065

Faxback service (touch-tone telephones only) +44 (181) 652 4019

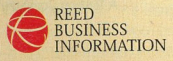
For a full listing of RBI magazines http://www.reedbusiness.com

Qualified Subscription Rates:	1 year	2 year	3 year
Europe	£70	£124	£158
North America	\$184	\$315	\$402
All Other Countries	£79	£139	£180

Only paid subscriptions available. Cheques made payable to Flight International.

Distributed by Marketforce

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



ISSN 0015-3710

Comment 5

Headlines 6

Wolf reviews 728JET project 6

Shareholders sue Northrop Grumman EC delivers alliances judgement ... 7

N2130 faces last rites

Big order boosts NG737 family..... 8

Greeks buy Dasa stand-off missile

Air Transport 10

Las Vegas casinos bet on airline 10

Air Europa Express doubles ATP fleet

Airworld keeps Flying Colours team 11

FAA veto hits Afghan overflights

Atlas eyes mid-size aircraft..... 15

CityFlyer paves way for all-jet fleet

Japanese domestic market hots up 16

BM Engineering makes third party break

Arkia aims for Nigerian start-up ... 18

US Airways/American embark on marketing pact

Defence 21

Argentina takes first local A-4AR.. 21



Locally upgraded A-4AR is first of 27

Six bid to supply Australian attack helicopter

Israel offered F-16 upgrade link .. 22

IAI discusses 'special' Arrow production

UK sizes up An-124 and Beluga.... 23

F-2 tests slip after flutter and crack discoveries

'Digitised' Comanche emerges 24

Business 26

EC rejects Olympic cash moans.... 26

Dollar strength helps boost ST Aero profits

General Aviation 27

Gulfstream plans to improve GIV 27

K-C sale changes face of completions market

Proteus has successful first flight.. 28

New part-ownership scheme set up in USA

Spaceflight 30

Processor failures delay launches 30

X-38 parafoil testing is imminent 31

Industry 32

Lucas starts on 'power by wire' 32

R-R prepares low-emissions combustor tests

Features 34

Farnborough preview..... 34

Who's there, what's where, the way there

Navigation Special

COVER STORY

Flight International takes a look at the progress being made in the implementation of future air navigation systems.

Where is the money? 45

CNS/ATM is held up by lack of funds

On top of the world 49

Transpolar routeing is getting closer

Russian potential..... 52

Implications of Glonass evaluation

Heavenly hailing system 53

Teledesic 'Internet in the sky' gathers pace

Getting kitted out 54

Lancair IV sets new standards for factory designs

People 57

Letters..... 58

Straight and Level..... 59

Classified 60

The top international marketplace for aircraft, equipment, tuition and jobs.



Part 1 of our annual Commercial Aircraft of the World Directory covers commuter and regional types seating up to 100 passengers, including the Bombardier de Havilland Dash 8.

NEXT WEEK