

# Sukhoi flies latest Su-37 demonstrator

HOWARD GETHIN/LONDON

SUKHOI IS TO offer South Korea an enhanced version of the Su-35 fighter, equipped with the NIIP NO-11M phased-array radar, 1553 digital databus and a cockpit featuring multifunction colour displays and a sidestick control column, following recent test flights of a new Su-37 multirole demonstrator – the T10M-12.

Sukhoi has offered South Korea a licence for partial assembly of the Su-35 from Russian components, 100% local servicing and technology transfer, according to Russian media sources. The Sukhoi proposal also includes offsetting the cost of the aircraft against Russia's large debt to South Korea.

The economic downturn in Asia has caused a slowdown in South Korea's F-X fighter programme. A request for proposals was expected in July, but the programme is unlikely to get under way before 2000 (*Flight International*, 26 August - 1 September).



Sukhoi's Su-37 711 has been upstaged by the 712 – with new engine nozzles to come soon

The test aircraft, number 712, will soon be fitted with Lyulka Saturn AL-31FP thrust vectoring engines, which are now under test on two Su-30MK fighters.

The T10M-12 has so far not been shown publicly and is undergoing trials alongside the two Su-30MKs with AL-31FP engines. Increased thrust AL-31FPs are reported to be under development.

Flight tests of the AL-31FPs began on the second prototype Su-30MK on 23 March, according to Su-27M programme manager

Vladimir Konokhov. The nozzles are vectorable as in previous AL-31 derivatives, but move in the horizontal, not vertical, plane. The engines are mounted at a 32° off-vertical angle, so that the nozzles can move in intersecting planes, giving an X-shaped vectoring path when viewed from astern. The nozzles are driven by the aircraft's flight control system, giving enhanced manoeuvrability in combat.

Increased use of titanium has reduced the weight of the nozzle significantly, as well as doubling the

service life from 250h to 500h.

The Ufa Motor Building plant has begun producing 88 AL-31FP engines for India's 40 Su-30MKI multirole fighter. The Su-30MKs already delivered to India are equipped with earlier non-thrust vectoring engines, which will be replaced by the AL-31FP. The final prototype Su-37, with a complete fire-control system and avionics of all-Russian manufacture, together with AL-31FP engines, is to be shown at the Paris air show in 1999, according to Konokhov. □

## NEWS IN BRIEF

### COMPOSITE ROCKET

Thiokol Propulsion has developed a composite cased motor for the US Army's Hydra 70 air-launched 70mm rocket, the first such casing to be used in a tactical sized weapon. The casing, which can withstand pressures up to 690 bar (10,000lb/in<sup>2</sup>), gives increased range or velocity. The motor will undergo airworthiness tests on a Boeing AH-64 helicopter this year.

### HEAD-UP FOR X-32

Boeing has chosen GEC-Marconi Avionics to provide head-up displays for its X-32 Joint Strike Fighter concept demonstrator aircraft as the company moves closer to defining the production avionics package. Boeing completed a series of avionics demonstrations in July, paving the way for the flight test programme.

## Israel studies DC-3 and Super Cub replacements

THE ISRAELI air force has begun evaluating replacement options for its Douglas DC-3 electronic intelligence (ELINT) aircraft and Piper Super Cub trainers.

The aircraft under evaluation for the ELINT role include the Bombardier Dash 8, Embraer EMB-120, ATR 42, Fairchild Dornier 328 and Saab 2000. A decision on the replacement is due by mid-1999.

The air force plans to acquire five turboprop aircraft initially, although further purchases are likely as funding becomes available to replace more of the 18 DC-3s in its inventory – including 10 aircraft in storage.

The air force also intends to replace its fleet of 35 Piper Super Cubs, used in the primary training role. The limited manoeuvrability of the Super Cub is thought to be

one of the prime reasons for the replacement decision. The Northrop T-3A (based on the Slingby T-67), hitherto viewed as the natural replacement for the Cub, is being re-evaluated because of a series of accidents in US Air Force service.

The Israeli air force is considering other possible replacements for the Super Cub, with a decision likely to be made in 1999. □

## Thailand forces aim to dispose of surplus helicopters

THAILAND'S cash-strapped armed forces and police are trying to dispose of surplus utility transport and VIP helicopters in an effort to generate revenue badly needed for new aircraft and to maintain the airworthiness of other fleet types.

The Royal Thai Air Force has put its two surviving Royal Flight Eurocopter AS332L2 Super Puma Mk2s on the market, following the fatal crash of another Super Puma in September 1997. The air force is

believed to be discussing trading in the VIP-configured machines for either Bell 412s or Sikorsky S-70s.

The Thai army is also trying to find potential buyers for up to half of its fleet of six Boeing CH-47D Chinooks, at least one of which is reported to be grounded. Approaches are understood to have been made to the Singapore armed forces, which maintains a training detachment in Thailand. There appears to be little interest, because of the lack of commonality with

Singapore's new digital cockpit CH-47SDs.

The Royal Thai Navy is seeking offers for some of its six Bell 214STs and six 212s, possibly in exchange for new 412s. The navy has also been trying to raise financing to exercise a US Navy offer for up to 10 Kaman SH-2F Seasprites.

Thailand's police force has been assessing the marketability of its 20 Bell 205 helicopters. One idea is to exchange some machines for spares to support newer Bell 412s. □