Swedish multirole fighter detailed
LAYOUT of the Swedish JAS fighter/
attack/reconnaissance aircraft has
been released by the JAS Industry
Group, comprising Saab-Scania, Volvo
Flygmotor, LM Ericsson, SRA Com-
munications, and FFV. Powered by a single 18,0001b-thrust General Electric F404J turbofan, to be built under licence by Volvo Flygmotor, JAS is designed to replace Saab-Scania Vig-gens from 1992.

JAS is a compact delta with all-moving canard. Composite materials will comprise 30 per cent of the struc-ture weight—wing, canard, fin and rudder, intakes, undercarriage and access doors, and radome—with a weight saving of 'around 25 per cent. Design take-off weight of less than 18,0001b (8,000kg) is about 52 per cent that of the Viggen.
The accompanying diagram shows the internal layout of JAS. The LM Ericsson multimode pulse-Doppler radar is 40 per cent smaller than the Viggen radar, but has three times the functions, and is the primary sensor for interception, attack, and recon-naissance. Additional reconnaissance

equipment will be carried externally. The cockpit, to be developed by SRA Communications, includes three head-down TV displays for all flight, navigation, and sensor information, and a wide-angle, diffractive-optics headup display capable of presenting images from an underfuselage LM Ericsson forward - looking infrared (Flir) pod.
Internal armament includes a single cannon, probably the 30mm Oerlikon KCA fitted to the JA37 in terceptor Viggen. Access to the avionics bay behind the pilot is through the nosewheel bay. Fuselage fuel tanks are shown shaded. Inter-nal fuel capacity has been increased slightly to meet Swedish Air Force requirements.

Unit and life-cycle cost of JAS should be 60 per cent that of the Viggen. JAS will require 23 per cent of the Air Force equipment budget between 1982 and 1987. JAS budget to 2000 is SKr24,000 million (£2,250 mil-lion) at 1981 prices, of which SKr4,000 million is for weapons, recce equip-ment, and Flir.

Helicopter flies without tail rotor
A MODIFIED Hughes OH-6 with an
anti-torque tailboom in place of the
conventional tail rotor made its first
flight on December 17. Flown by
Hughes Helicopters' test pilot Chuck
Hench, the no-tail-rotor (Notar) test-bed completed two flights totalling some 21min, beginning a ten-month, 30hr test programme sponsored by the US Defence Advanced Research Projects Agency and the US Army Applied Technology Laboratory.
The hollow anti-torque tailboom is pressurised to 0-51b/in- by a variable-pitch fan driven by a shortened tail-rotor driveshaft. Pressurised air vents through a 0-85cm-wide slot along the lower starboard side of the boom, mixing with the main-rotor downwash. The boom then acts like a wing, pro-ducing a sideforce to counteract main-rotor torque.

Yaw control is provided by excess pressurised air released through a jet thruster at the tailboom tip. Port and starboard air outlets on a fixed inner cone are covered or uncovered by a single vent on the rotating outer cone, the position of which is controlled by conventional rudder pedals. In for-ward flight the thruster, and conven-tional OH-6 tail surfaces, provide yaw stability and control.
On the initial flights, Notar hovered, completed 90°, 180°, 270°, and 360° right and left turns, and flew side-ways. According to Hench, the testbed handles very well, with good response and noticeably less vibration than a normal helicopter. Observers noted that the aircraft was quiet and stable. More hover tests will be completed be-fore Notar makes its first trip outside the airport later this month.

UH-6 0 Black Hawk s

demonstrate high
readiness

SIKORSKY UH-60A Black Hawks of

the US Army's 82nd Airborne Division have demonstrated an operational readiness rate of 98 per cent in exer-cise Bright Star, based in Egypt. The 15 Black Hawks were airlifted from

Fort Bragg, North Carolina, to Cairo in US Air Force C-5 Galaxys.

In ten days of desert exercises the 15 helicopters flew 275 sorties, a total of 304 flying hours. An estimated 2,500 troops were airlifted, the heli-
copters making 1,107 landings, 777 of
them in the desert. In addition to

mission-related flying, the Black
Hawks were in popular demand for
VIP and observation flights.

FLIGHT Internationil, 16 January 1982 107