SIKORSKY

Military S-76
easy to fly

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i.korsky's S-76 was originally designed for the offshore oil-support market, ex-panding later into the executive transport field. The S-76 Mk II utility version has a strengthened cabin floor and the S-76 Mk II Plus is the latest of the breed—an armed development of the utility model. Sikorsky sees a large market for a rela-tively simple but high-performance anti-tank helicopter. The S-76 is sophisticated in terms of speed and handling but simple in terms of armament when compared with attack helicopters such as the Hughes AH-64 Apache or Agusta A. 129 Mongoose. But at the same time the S-76 can be used for a variety of work, in-creasing its cost-effectiveness for Third World air arms with limited budgets.
For Flight's 45min S-76 sortie, the cap-tain is Ed Dinsmore of Sikorsky, an ex-US Army AH-1 pilot. Weather conditions are good, with a brisk westerly wind, but the lowering sun in the west considerably reduces visibility in that direction. The aircraft is configured for the trooping role, but the weapon-mounting boom is fitted. The cockpit layout is good. Each pilot has a full set of flight instruments with the engine instruments mounted to the right of the central panel. Electrical switches and communications are readily accessible on the centre pedestal. The instrument-panel coaming is quite high, which would probably make night approaches a little difficult for short pilots, although, by yaw-ing slightly, visibility can be improved considerably by looking around the glare-shield. The depth of the coaming prevents

the Sun's glare reflecting from the flight instruments, but also makes them rela-tively difficult to read when flying into the Sun as it is quite dark under the coaming. The seats are comfortable and adjustable in height, but do not slide fore and aft, although the yaw pedals are adjustable. Engine start and rotor run-up is uncom-plicated. Both engines are started before releasing the rotor brake. When the brake is released, rotor acceleration is both smooth and positive with no uncom-fortable rocking of the aircraft.
We depart from Farnborough on a south-westerly heading towards Alton. Transition to the climb is smooth, and we climb at 75kt to 1,000ft. We level off and accelerate to 140kt using 100 per cent torque on each engine. Cruise speed is 115kt and Vm. is at present 155kt, but should increase with development, says Sikorsky.
Ed then reduces speed to 120kt (60 per

The S-76 MkllPlus is an armed helicopter, here carrying two 20mm cannon pods

cent torque on both engines) and demon-strates a single-engine failure by pulling back the power on Number Two. There is a slight transient rotor r.p.m. droop, and we reduce speed to 80kt (minimum power speed), establishing a 300-400ft/min rate of descent, then apply full power on the "good" engine to climb away at a re-spectable 350ft/min. The aircraft is 1,0001b below maximum all-up weight. It would be interesting to observe the tran-sient rotor r.p.m. droop following engine failure from a higher power setting.

Before recovering the idling engine, Ed switches off a DC generator, alternator, stability augmentation system (SAS) Number Ono, and one of the hydraulic servo systems, so that I am flying what he

Are the sliding doors too small for rapid troop disembarkation?

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