584 FLIGHT International, 27 August (977

Very little was said about the Sea
Dart improvement programme, which
is intended to allow the weapon to
meet the changing threat, particularly
in the face of electronic counter-
measures, until well beyond the year 2000. Sea Dart improvements will not be confined to any one area but will result in an all-round improvement in, for example, speed, range and maxi-mum engagement altitude. At the peak of development work, the pro-gramme should provide about 500 job opportunities at the principal con-tractors.

If all these new programmes pro-ceed as planned, the Government ex-pects to spend about £400 million

FINAL selection of aircraft types to meet Japan's F-X fighter and P-XL maritime patrol and anti-submarine aircraft requirements is due to be made when the National Defence Council (NDC) meets on August 30. The' Japanese Defence Agency has already chosen the F-15 and P-3C and requested Government approval for a licence-production deal to cover both types.
Present plans call for two F-15s, four TF-ISs and three P-3Cs to be imported from the USA. Eight more F15s' and two more P-3Cs would be assembled in Japan from knocked-down assemblies, then local produc-tion of both types would begin.
Although procurement of both air-craft is now virtually certain, the present requirement to reduce Japanese defence expenditure may result in smaller production runs than originally planned. The defence agency hopes to procure 123 F-15/ TF-15s and 46 P-3Cs within the next decade.

Mitsubishi is likely to be prime contractor for the F-15 programme and would start deliveries of Japanese-built aircraft from Fiscal Year 1980 onwards. P-3C production will prob-ably be handled by Kawasaki, with deliveries starting in FY 81.
The Defence Agency expects to request funds for the first 25 F-15s, four TF-15s and five to seven P-3Cs in the FY 78 budget. These will cost more than $1 • 2 billion—more than 16 per cent of the planned FY 78 defence spending. This heavy invest-ment in the F-15/P-3C programme has ruled out the Air Self-Defence Force's plans to buy fourAEW E-2Cs.
Selection of the Lockheed maritime patrol aircraft rather than investing funds in a local design programme is likely to be the most controversial move. The Ministry of International Trade and Industry still supports the development of an indigenous P-XL design, and a decision will be made by Prime Minister Takeo Fukada before the NDC meeting next week. Chances of the local design being favoured are slim, however.

between now and project completion. This should produce around 1,500 jobs during development and a further two or three thousand when the weapons are in production. Increased employ-ment among the various subcontrac-tors may produce several thousand more jobs in different parts of the country.
P3T, Tow and Super Sidewinder are all expected to enter service in the early 1980s. Tow is already operational with many nations, while development of AIM-9L is essentially complete. Upgraded Sea Dart should enter ser-vice in the mid-1980s and will first be introduced aboard the guided-missile destroyer Sheffield.

The most serious problem facing the P-3C is believed to be a secret sales contract signed in July 1973 between Lockheed and Yoshio Kodama, the right-wing leader prose-cuted during the Lockheed bribes scandal last year. Still effective, the contract calls for a payment of nearly $9 million from the US company to Kodama if Japan's P-3C procurement exceeds 50.
Defence Minister Asao Mihara told the Diet on August 11 that Lockheed must break the agreement with Kodama before a P-3C order could be placed, and must agree to accept every Japanese request over the monitoring of costs and payments to agents.

Cut-price cruise missile
THE first phase of Britain's cruise-missile studies will cost about £10,500, according to Defence Secretary Fred Mulley. Asked by Frank Allaun (Lab, Salford East) for further details of the studies, including estimated cost, Mr Mulley said in a recent written reply that some of the options and limitations involved in developing such a weapon should be made clear by work now being carried out. Terrain contour-matching guidance is included in the studies, he added. A qualified missile engineer cur-rently earns anything from £4,500 upwards, so the present budget can cover only a few months' work by one or two engineers.

Sram missile launched
from B-1
FIRST missile launch from a B-1 took place recently when the third proto-type released a live Sram air-to-ground missile during its 41st test flight. Launch method was similar to that used by the B-52, the missile falling from the weapons bay and igniting a few seconds later. The B-1 was flying at about 500kt at a height of 6,000ft with the wings swept 65°.
A telemetry package replaced the normal Sram warhead. The missile flew in a semi-ballistic trajectory over

the White Sands missile range to-wards a target forward of the launch aircraft.
B-1 No 3 is the only prototype equipped with the avionics necessary to launch Sram and other weapons, but all three are still flying for re-search and development purposes. More than 60hr of test flying have been carried out since the B-1 pro-duction programme was cancelled on June 30.

First upgraded Chaparral
delivered

THE US Army took delivery last month of the first production MIM-72C Chaparral surface-to-air missile. Lt Gen E. J. D'Ambrosio of the Army's Material Development and Readiness Command formally accepted the first round at the Red River Depot, Texarkana, Texas.
The Aeronutronic division of Ford Aerospace received the first contract for the uprated -72C missile in early 1976, and a follow-on contract in Feb-ruary this year. The new missile has a new blast-fragmentation warhead, M-817 proximity fuze and all-aspect AN/DAW-l guidance.

Hotting up the Aspide
RECENT flight-trials of the Selenia Aspide multi-role missile have tested its performance in the surface-to-air role when powered by a new solid-propellant rocket motor developed by Snia-Viscosa of Milan.

Earlier flight-tests used a Rocket-dyne motor but the Italian-built unit has a higher thrust, giving the com-plete missile a higher initial velocity. All trials performed so far have been in the surface-to-air mode, and small batches of production rounds are due to leave the production line at the end of this year for delivery "to naval users."

Although Aspide has been planned as a multi-role missile, no firm date has been decided for the start of air-to-air firing trials. In this role the basic missile would be fitted with wings and tail surfaces of larger span. These are plug-in fittings, allowing missiles to be quickly modified from one configuration to another and re-ducing the number of rounds required to be held in storage by an operator of both types of missile.
Like the British-designed Sky Flash air-to-air missile, Aspide is based on the US Sparrow and carries a new autopilot and monopulse seeker head. The hydraulic system of Aspide is closed-loop, unlike the earlier AIM-7E Sparrow built under licence by Selenia, which had used an open-loop system.
Asked whether the missile could be used in the surface-to-air role against sea-skimming missiles, a company spokesman told Flight that the Aspide/Albatross combination could intercept-targets with a radar cross-section of 0 • 5m3

at low level.

Japan chooses F-15 and P-3C