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: INTERNATIONAL

* Aeritalia/Lockheed F-104S The Starfighter's Autonetics
R21G radar is being modernised by Rockwell's Missile Systems Division and CGE-Fiar. Moving-target indication
*r and tracking are being incorporated, antenna design is being improved, electronic counter-countermeasures are being added and reliability is being increased.

BAC/Dassault Jaguar International This development of
* the variants in service with the French Air Force and RAF
^ will be the first to carry a radar. The Thomson-CSF/EMD
j Agave is being offered (see Super Etendard entry), •> although other types may be selected by future customers. The RAF-standard Marconi-Elliott Navwass (Navigation
* and Weapon-Aiming Subsystem) can also be installed, and
x additional sensors such as infra-red and low-light television
I can be fitted.
I * Thomson-CSF is, in collaboration with Martin Orlando,
I developing Atlis (Automatic-Tracking Laser Illumination
I System) for use on single-seat ground-attack aircraft such
I SJ- as Jaguar and Mirage F.1E. The Atlis pod contains a tele-| vision camera for initial identification and a Cilas laser j "' which will illuminate ground targets and track them auto-I y matically. Atlis is designed to allow precision delivery of
I guided weapons, and Thomson-CSF is also developing the
I >• Ariel semi-active laser seeker which can be fitted to missiles
I such as the AS.30 to allow them to home on targets
I

y illuminated by the Atlis pod.
I -(
I Panavia MRCA Texas Instruments is developing the ter-
I" rain-following radar for MRCA, with Ferranti and Marconi
I working on the early stages of development of an air-to-air
W radar for the air-defence aircraft required by the RAF. The
m main nav-attack computer is a Litef (German Litton) Spirit
I 3, on which Smiths Industries is collaborating, and the
w inertial-navigation system is supplied by Ferranti. That
I company is also responsible for the laser ranger and
I marked-target seeker, in association with Eltro and Selenia.
I The head-up display is by Smiths, assisted by Teldix and
I OMI.

The Mirage F.I has an all-French attack system which includes the
Thomson-CSF Cyrano IV monopulse radar and head-up display.

SWEDEN

Saab AJ37 Viggen The attack version of the Viggen employs an LM Ericsson UAP 1011 (PS-37/A) X-band monopulse multi-mode radar which is completely solid-state apart from some of the high-frequency components. Functions include search, tracking, ranging, ground map-ping and terrain avoidance. A Saab CK-37 general-purpose digital computer is responsible for navigation and weapon control, cues being shown on the Marconi-Elliott head-up display.

Saab JA37 Viggen LM Ericsson has developed the UAP 1023 (PS-46/A) long-range, high-performance pulse-Doppler radar for the fighter Viggen. It is claimed to be unaffected by variations in altitude and atmospheric conditions, is highly resistant to electronic countermeasures and is undisturbed by ground clutter. Saab builds the Singer-Kearfott SKC 2037 central digital computer under licence, and a Smiths Industries head-up display replaces the Marconi-Elliott unit.

UNITED KINGDOM

Hawker Siddeley FRS.l Sea Harrier The Sea Harrier will carry a Ferranti Blue Fox X-band air-to-air and air-to-surf ace radar developed from the Seaspray equipment fitted to naval Lynxes. The main differences from Seaspray lie in the 20in aerial, which has dual-monopulse capability and which operates in both vertical and horizontal planes with a scan pattern modified from that used in the helicopter radar. Frequency agility can be selected by the pilot.
A Ferranti Heading and Attitude Reference System (HARS) derived from the Inas platform (as used in land-based Harriers) is coupled with Doppler and replaces Inas itself, and a Smiths HUD with a combined cursive/raster display will be used. The associated high-speed digital weapon-aiming computer has a 20,000-word store, of which 16,000 words will form a reprogrammable core.

UNITED STATES

McDonnell Douglas A-4M Skyhawk The A-4Ms in service with the United States Marine Corps and the A-4Hs of the Israeli Defence Forces, together with the A-4s ordered by Kuwait, are fitted with a Singer-Kearfott KT-70 inertial-navigation system, Lear Siegler bombing computer and