

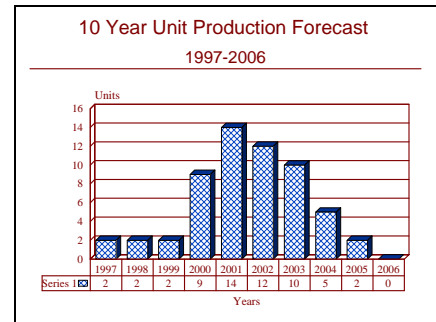
ARCHIVED REPORT

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IHS-6 - Archived 9/98

Outlook

- System to equip Italian EH-101 helicopters
- Upgrade programs planned
- Over 162 systems have been produced to date



Orientation

Description. Electronic support measures/electronic countermeasures equipment.

Sponsor

Ministero Della Difesa
 Office for Military Production
 Via XX Settembre 123
 Pal Eserceto
 I-00100 Rome
 Italy

Contractors

Elettronica SpA
 Via Tiburtina Valeria Km 13,700
 I-00131 Rome
 Italy
 Tel: +396 43641
 Telex: 611024

Licensee. No licenses have been granted at the present time.

Status. Production and service.

Total Produced. Total production of the IHS-6 system is believed to be around 162 systems. Italian users account for 148 with another 12 on order.

Application. An integrated ESM and ECM system designed for helicopter applications in support of tactical air or naval operations. The system is composed of the Elettronica RQH-5 ESM system and the TQN-2 modular jamming system.

Price Range. Based on the known costs of comparable systems, a unit price of US\$1.5 million can be projected. Existing contracts do not provide enough information for contract-cost averaging.

Technical Data

Characteristics

Target tracking capacity: 50
 Frequency coverage: D- to J-bands (1-18 GHz)

Operational characteristics. IHS-6 is capable of tracking 50 targets, using advanced signal processing and data-handling techniques. The system has a power-

ful library which is tactically reprogrammable, and provides storage of 2,000 threats. Multimode CRT displays provide graphic and alphanumeric threat depic-

tion. System capabilities include interception, analysis, direction finding, and jamming of signals received in the 1-to-18 GHz frequency bands.

The RQH-5(V) ESM/ELINT sensor on which the IHS-6 system is based has three subvariants. The Series 730 is

intended for maritime patrol/ASW aircraft, the Series 740 is for fighter aircraft and the Series 780 is optimized for specialized ESM/ELINT/ EW aircraft.

Variants/Upgrades

IHS-6.730 - Commercial designation for maritime patrol aircraft systems.

IHS-6.740 - Commercial designation for fighter aircraft systems.

IHS-6.780 - Commercial designation for ESM/ELINT/ EW aircraft systems.

SL/ALR-730 - Italian military designation for Italian Air Force Atlantique upgrade.

SL/ALR-735 - Italian military designation for Italian Navy EH-101.

SL/ALR-743 - Italian military designation for fixed wing attack aircraft variant for unspecified foreign fighter.

The IHS-6/RQH-5(V) system will be progressively upgraded, assisted by the modular nature of the equipment. It is anticipated that advances in microprocessing and data-handling systems will particularly affect the development of the system.

Program Review

Background. The IHS-6 was primarily developed to meet the EW requirements of naval task forces engaging other forces in dense electromagnetic environments. Mission profiles include task force EW defense against missile or aircraft threats, standoff or stand-in jamming, and air strike support. The system is multi-configurable and at least two sales have been described using designation suffixes. The system is believed to be in service with several navies and with at least one air force (Egypt, on the Westland Sea King Commando platform). Other platforms for which the IHS-6 has reportedly been fitted include the Agusta A.109.

Elettronica has taken the system over from its previous manufacturer, Alenia, as part of a major restructuring of the Italian military electronics industry. It is still in production and being supplied to clients on a confidential basis. Variants of the IHS-6/RQH-5(V) systems have been selected for both the Italian Maritime Aircraft update (as the SL/ALR-730) and for the Italian Navy EH-101 helicopters (as the SL/ALR-735). Since the former application imposes few constraints on weight or volume, the system will receive improved ELINT capability, better man/machine interfaces and increased data storage/processing capabilities.

The company has also received contracts for the SL/ALR-743 supersonic aircraft variant. Elettronica is careful to give the impression that these are export contracts for unspecified foreign fighters. In fact, the existence of an Italian military designation and other evidence strongly suggests that the orders are to equip Italian Air Force Tornado aircraft (which are, after all, largely foreign-built).

A version of the IHS-6 is also being proposed as the ESM sensor for the NH-90 helicopter. If this program reaches production status, the IHS-6 is a very strong contender for that application since it is the only suitable system produced by the NH-90 member countries. Another, and possibly more viable, candidate is the new ASH-60 Leonardo ASW helicopter. This is effectively the US SH-60F Oceanhawk, built under license in Italy and equipped with Italian weapons and sensors. It can be regarded as a follow-on to the well-established AB-212 series helicopters which are widely used in the shipborne role.

During late 1992, the Italian Navy defense budget revealed that the number of EH-101 helicopters on order was being reduced from 38 to 18. This has now been cut further, to 16 aircraft (8 ASW, 4 AEW, 4 transport). These will now be deployed from the air-capable ship *RIM Guiseppe Garibaldi* and its projected sister ship. Destroyers and frigates will continue to deploy the AB-212 and (presumably) its replacement. By mid-1995, there were reports from Canada that the canceled Canadian order for EH-101 helicopters would be revived but would be to Italian standards in order to cut cost to a minimum.

Certainly, a competition for a new Canadian maritime helicopter has been revived with a range of competitors. The requirement for a new shipborne helicopter is undoubtedly urgent since the existing aircraft are reaching the end of their life. However, at the time of writing, there is no indication of a winning airframe, let alone any systems for that aircraft.

Funding

The system was developed as a corporate private venture.

Recent Contracts

Contractor	Award (\$ millions)	Date/Description
Selenia	N/A	1988 — Contract from Italian MoD for maritime aircraft update with ALR-730.
Selenia	N/A	1989 — Contract from Italian MoD for ALR-735 to equip EH-101.

Timetable

1975	Development started
1980	IHS-6/RQH-5 entered service
1980	IHS-6-equipped Commandos delivered to Egypt
1988	Selected for Italian Air Force Atlantique upgrade
1989	Selected for Italian EH-101
1991	Production transferred from Alenia to Elettronica as part of industrial reorganization

Worldwide Distribution

Egypt. (Unknown number on Egyptian Air Force Commando helicopters and Egyptian Navy Sea King Mk.47. One report suggests that 4 Commando and 15 Sea King Mk.47 helicopters have been equipped with IHS-6)

Italy. (30 on ASH-3D, 18 on Atlantique 1, 100 on Tornado IDS)

Forecast Rationale

The Elettronica IHS-6 provides a very effective range of ECM/ESM support for naval and air operations. The system's plusses include flexibility in operation, portability, and retrofit capability. All marketable assets at a time when EW systems are being required to play a variety of roles and offer lower-cost performance.

The IHS-6/RQH-5 system is a major beneficiary of the merger of Elettronica and Alenia's EW operations. It has replaced the Colibri system in that company's product range, being a more capable system than the Colibri. It is possible, therefore, that it will feature in midlife upgrades of existing Colibri platforms. This points to Italian Navy AB-212 helicopters as potential platforms.

The Italian Navy will be retaining numerous examples of this type for deployment on ships too small to handle the EH-101. These helicopters will be reaching the end of their service lives towards the end of the forecast period.

The Italian military electronics industry has established a good track record of providing EW upgrades for equipment supplied by the Soviet Union in the 1960s and now

needing modern ECM and avionics. The Alenia SL/ALQ-234 ECM pod is a good case in point, having been retrofitted to both the MiG-21 and Su-7 aircraft. The SL/ALR-743 variant of the IHS-6 system is in a good position to emulate this success for the later generation MiG-23 and Su-17/20/22 series aircraft.

The helicopter-borne versions of the IHS-6 system are good contenders to re-equip maritime surveillance versions of the Mil-14. This is regarded as a sound airframe with deficient avionics. This may point to acquisition by the Czech Republic and Hungary as these two countries reorganize their armed forces along Western lines.

The equipment should remain in production throughout most of the forecast period, with necessary development and upgrades taking place periodically. Domestic acquisition will likely concentrate on the purchase of around 15 systems for the maritime aircraft update and 10 for the ASW and AEW portions of the EH-101 fleet.

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