

EL/L-8231 - Archived 8/96

Outlook

- In operational service
- No future production is forecast

Orientation

Description. Airborne electronic countermeasures system tasked with the protection of combat aircraft and helicopters against continuous-wave (CW) radar-guided missiles.

Sponsor

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Contractors

IAI ELTA Electronics Industries Limited
Electronics Division

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Israel
Tel: +972 55 30333
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Licensee. No production licenses have been granted.

Status. In service

Total Produced. A total of about 310 systems were built by the time production ceased in 1992.

Application. The EL/L-8231 is installed on the IAI Kfir, IAI Neshar and the Israeli Air Force F-4E.

Price Range. Costs for systems of similar capabilities would indicate a unit price of about US\$200,000.

Technical Data

Characteristics

Frequency range: H to J bands
Power consumption: 0.6 kVA
Environmental:

MIL-STD-5400 Class 2

Dimensions

Weight:

Metric

18 kg

US

40 lb

Design Features. The EL/L 8231 is a miniaturized system designed for installation in the fuselages of small tactical aircraft or combat helicopters. Operating in the H- to J-bands, the system produces ECM against continuous wave radars of the type used in active radar seeker heads. The system consists of an RF-transmitter, logic unit, control circuits and antenna units. In addition, power interfaces and display interfaces are provided. The antenna system can be configured to best suit the platform aircraft. The system operates in a fully automatic mode

and is activated upon receipt of a hostile radar signal. Incoming signals are amplified and then broadband broadcast by a power amplifier/ traveling wave tube arrangement.

Operational Features. The EL/L-8231 is complementary to the EL/L-8230 system, providing set-on warning and continuous wave jamming. Together the two systems provided the integrated EW system for older Israeli combat aircraft.

Variants/Upgrades

Other than speculation that the capabilities of the system are being progressively upgraded as new and more

advanced systems are introduced, no information on upgraded versions of this system is available.

Program Review

Background. Little information on the development of this system is available. Evidence indicates that it entered Israeli service in the late 1970s. The likely timing of the project and suggestions from the manufacturer that the EL/L-8231 system has been in development and production for around 15 years, point to it being a result of experience gained during the October War. In 1987, a joint venture was announced between ELTA Electronics and Loral Corporation to develop, manufacture and market a missile warning receiver based on the EL/L-8231.

Following the cancellation of the Lavi, the US gave permission to Israeli Aircraft Industries (IAI) Limited to supply 14 of its Kfir combat aircraft to Colombia. The US had been blocking the deal for some time and altered its stance to soften the blow of Lavi cancellation. ELTA is almost certain to have provided airborne jamming systems for these aircraft.

The EL/L-8231 airborne electronic countermeasures system was in production to meet the requirements of the Israeli Defense Force. The system is operational with the IDF and complements the EL/L-8230 ECM system. It is

now being replaced by the appropriate variant of the Elisra SPS system.

According to Israeli sources, the Philippines purchased Kfir aircraft in late 1991, followed by Taiwan early in 1992. However, our local sources state that neither order was actually placed and, while offers were received by both countries from Israel, neither seriously contemplated the purchase. At that time, the Philippine Government lacked the financial resources or desire for the aircraft, while Taiwan appears to have used the offer as a means of gaining leverage for the purchase of F-16 and Mirage 2000/5 aircraft.

Much information has now come to light on the supply of Israeli airborne EW equipment to China. Israeli avionics designed for the Lavi now equip one in-service Chinese aircraft, a version of the J-8-II Finback (replacing US equipment originally to have been supplied under the Peace Pearl program), and a new fighter, now in final development, which bears a stunning physical resemblance to the Lavi. Both of these types are reported to use a variant of the Elisra SPS system and are not, therefore, candidates for the EL/L-8231.

Funding

The EL/L-8231 is believed to have been developed under Israeli Government funding. ELTA Electronics is a subsidiary of IAI (Israel Aircraft Industries) Limited, Electronics Division.

Recent Contracts

No contractual information has been made publicly available.

Timetable

1973

Probable start of development

August 1995

1977	Probable entry to Israeli service
1982	Information on EL/L-8231 first available
1987	Joint agreement with Loral

Worldwide Distribution

Israel (310 on Kfir, F-4E and A-4)

Forecast Rationale

Although company information relating to the EL/L-8231 at one point indicated a potential use on helicopters, against this must be set the fact that the overwhelming majority of these helicopters are US supplied and have the necessary EW kit as part of their standard avionics. Integrating a new unit into such airframes would be unjustifiably expensive. IAI has recently been promoting the development of a light strike aircraft exploiting the technology and systems developed for the Lavi, but packaged in a much cheaper and less-capable airframe. This project is unlikely to cause much interest in the technology oriented Israeli Air Force, and will not attract sufficient export attention to make it viable. It can therefore be neglected as a potential source of EL/L-8231 orders.

The Israeli avionics industry continues to promote its products actively, but efforts in the EW sector concentrate

upon the Elisra SPS family, which includes variants specifically designed to suit the design and operational requirements of all likely platforms. This equipment will take up any sales that find their way to Israeli suppliers. Overall, we must conclude that the EL/L-8231, along with the complementary EL/L-8230, has now reached the end of its production life. Any sales that do occur will be met by drawing down the existing Israeli Air Force inventory.

A careful examination of platform production strongly indicates that the EL/L-8231 production line closed out in 1991 with the production of 30 units to re-equip the remaining F-4 force. This may be masked by sales of inventory units to export clients. We do not anticipate any additional production of this system and this report will be discarded next year.

Ten-Year Outlook

No production is forecast.

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