

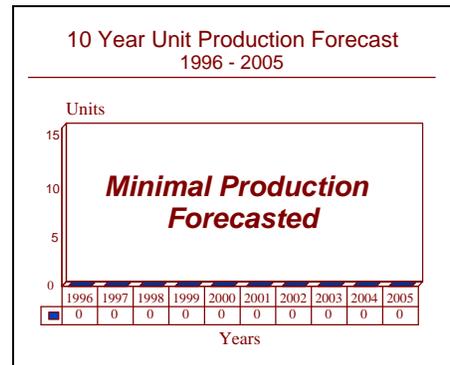
ARCHIVED REPORT

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Erijammer 300 - Archived 7/96

Outlook

- In advanced development, if this really exists...
- Production rate tied to production schedule of the JAS-39 Gripen.
- Then again, this might not even exist...



Orientation

Description. Integrated electronic warfare system for the JAS-39 Gripen.

Sponsor

Defense Materiel Administration
Forsvarets Materielverk (FMV)
Banergatan 62
S-11588 Stockholm
Sweden
Tel: +46 8 782 4000
Telex:19610

Contractors

Ericsson Radar Electronics AB
Airborne Electronics Division
S-164 84 Stockholm
Sweden
Tel: +46 8 757 3000
Fax: +46 8 752 8967
Telex: 20905

Licensee. No production licenses have been granted.

Status. Advanced development.

Total Produced. A total of 140 JAS-39 Gripen aircraft currently on order. This would imply the production of between 160 and 180 Erijammer 300 systems.

Application. The Erijammer 300 is an integrated system for the SAAB JAS-39 Gripen comprised of internally mounted radar warning and chaff dispensers combined with pod-mounted noise and deception jammers.

Price Range. Based on the known costs of comparable systems the unit value of the Erijammer 300 is estimated at US \$2 million.

Technical Data

Design Features. The system integrates an active jammer with a passive jammer automatic activation device and threat-detection equipment. The ESM antennas are mounted in two permanent pods, one under each wing. Each pod covers a single hemisphere

with the position of the sensors at the ends of the pod eliminating any blind spots. These pods have minimum separation from the wing surface in order to reduce drag. The jammer radiates forward and is a fixed

internal unit with the antenna mounted in a housing extending forward from the vertical tailfin.

The system will be a multimode, tactically adaptive system capable of countering battlefield threats around the turn of the century. The internally-mounted jamming systems and ESM pods will be linked to the main avionics computer via a 1553B data bus.

Operational Characteristics. The Erijammer 300 is intended to act as an autonomous but integrated unit within the total avionics system of the JAS-39. It will interface with the main avionics computer system and with the aircraft radar to use flight and mission data. Information from the Erijammer 300 will be presented on the main information displays within the aircraft cockpit. The use of external pods for the ESM system is unusual, but offers significant advantages from the point of surveillance coverage. The whole system is software-controlled and modular in order to permit preplanned upgrade programs.

Variants/Upgrades

There are no variants of or upgrades applied to this system at this time.

Program Review

Background. The Erijammer 300 system is under development for the JAS-39 Gripen fighter. It is intended that the system, with its high automation levels, will integrate ESM and ECM functions for defense of the aircraft. The JAS 39 is intended to be the main tactical aircraft of the Swedish Air Force. Erijammer 300 will form a standard installation in all aircraft.

The JAS-39 Gripen flight trials have been beset by problems. The prototype crashed in February 1989 as a result of deficiencies in its flight control system. Major modifications to that system were instituted delaying the test and trials program by over a year. SAAB states that the resumed test flights indicate the problems have been resolved and that the entry to service date of the Gripen will not be affected.

In 1990, Ericsson set up a new company, Ericsson Radar Electronics AB, to specialize in computer

systems, airborne electronics, aerospace, surface and remote sensors, and micro-wave communications equipment. Production sites will be Molndal, Baraos, and Kista. Responsibility for the Erijammer 300 system has been transferred to the new group.

The JAS-39 Gripen appearing at the 1992 Farnborough air display had its Erijammer 300 system installed and the podded ESM system was also on display at the Ericsson stand. Speaking exclusively to Forecast International, Ericsson representatives confirmed the basic configuration of the system and the rationale behind placing the ESM sensors in underwing housings. According to this briefing, the original solution was to incorporate the ESM sensors within the wingtip missile launch rails, but this configuration was abandoned since the final arrangement was electronically superior and had minimal drag penalties.

Funding

Development and production is funded under Swedish Government contract.

Recent Contracts

Contractor	Award (\$ millions)	Date/Description
Ericsson	38.2	1994 - Development and production of Erijammer 300 systems for Swedish Air Force.

Timetable

Mar	1980	JAS-39 Gripen project undertaken
Jun	1981	Industry proposals submitted
Apr	1987	Gripen prototype roll-out
Feb	1989	Prototype crashes
	1992	Second production order
	1994	Production order placed, service entry

Worldwide Distribution

No export markets are foreseen for the system at the moment. Sales of the Gripen to Hungary and/or Malaysia may, however, lead to sales of the Erijammer to those clients.

Forecast Rationale

The future of the Erijammer 300 program is intimately linked to the fate of the JAS-39 Gripen multipurpose aircraft, and its development and production schedules will follow those of the Gripen. Although many details of the Erijammer 300 system remain confidential, it is typical of the integrated and highly automated EW systems now favored for modern fighter designs. As such, it includes the necessary radar warning system, noise and deception jammers and integrated chaff/flare dispensing equipment. The provision of a missile approach warning system is also probable although the problems inherent in the development of such systems may make its inclusion part of an early upgrade to the basic system.

Recent orders from the Swedish Air Force have ensured that production of the Gripen will be continued throughout the forecast period. The likely future the aircraft itself is discussed in detail within our Military and Civil Aircraft Forecast. The conclusion that Gripen acquisition is unlikely to reach the levels originally planned is difficult to avoid. However, an on-going development program is in hand, and this may see the provision of a more advanced EW system for retrofitting to early-production aircraft.

The Erijammer 300 system is customized for the JAS-39 Gripen and thus has no future divorced from the Gripen airframe. This does not mean that the individual systems making up the Erijammer 300 will not achieve some export success on their own merits. Any exports of the Erijammer 300 will be in the context of Gripen sales. There are a number of outside candidates for such sales, competing against the proven and highly effective F-16, F/A-18, MiG-29 and Su-27 as well as the French Mirage 2000. The most likely export customer, Finland recently opted for the F/A-18C and F/A-18D. Export success for the Gripen is thus improbable and, while other prospects may exist, they must be regarded as highly unlikely.

Our forecast is based on the proposed production schedule of the JAS-39 Gripen as contained within the Forecast International Military Aircraft Forecast. Production of EW equipment for these aircraft is assumed to exceed the airframe production rate by the usual figure of around 20 percent to allow for spare sets, training equipment and attrition replacements. There is some possibility that the far term will see a further production excess to provide sets of a more advanced version as a replacement for early-production equipment.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Designation	Application	thru 95	High Confidence Level				Good Confidence Level				Speculative		Total 96-05
			96	97	98	99	00	01	02	03	04	05	
ERIJAMMER 300	JAS-39 (SWEDEN)	34	17	19	22	22	24	22	22	17	22	22	209