

# ARCHIVED REPORT

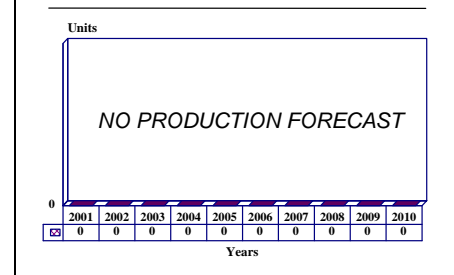
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## Erijammer A100 - Archived 07/2002

### Outlook

- Erijammer A100 and B2100 production has ended
- Last known contract awarded by Canada in 1993
- **Barring any future activity, this report will be archived next year, 2002**

10 Year Unit Production Forecast  
2001 - 2010



### Orientation

**Description.** Electronic warfare training system providing pulsed and CW jamming capability for ECM training, enabling fighter pilots and air defense weapons operators to train in a realistic environment.

#### Sponsor

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#### Licensee

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**Status.** Believed to be out of production but still in service.

**Total Produced.** An estimated 92 systems had been procured through 2000. Of this total, 82± systems can be traced directly to various nations.

**Application.** The Erijammer A100 was initially deployed on SAAB Lansan 32E, Learjet and MU-2 aircraft. It can be deployed on other military, utility transport, and corporate aircraft as required, including the Pilatus PC-9, A-7E, Learjet 35 and Falcon 50.

**Price Range.** The unit cost of an Erijammer A100 is estimated to be US\$400,000 (1998 dollars) based on comparable costs of similar systems.

## Technical Data

	<u>Metric</u>	<u>US</u>
<b>Pod Dimensions</b>		
Weight:	210 kg	460 lb
Length:	3,234 mm	127.3 in
Diameter:	426 mm	16.7 in
	<u>Metric</u>	<u>US</u>
<b>Characteristics</b>		
Frequency coverage:	H/I/J-band	6.8-10.5 GHz
Output power:	12.5 MW	
Antenna gain:	18 dB	
Pulse rise time:	<100 ns	
Pulse width:	0.1-2.0 us	
PRF:		3-6000 Hz
PRF modes:	Stable, jittered or stagger	
Scan rate:	0.1-30 s	
Scan modes:	Circular, steady, sector centered or sector off-center	

**Design Features.** The Erijammer A100 is a pod-mounted jammer with built-in antennas and electronics with a control panel installed in either the cockpit or cabin. It is entirely self-contained, requiring only power from the carrier aircraft. The pod housing was chosen for its inherent flexibility of installation and ease of maintenance.

The pod is controlled by an ECM operator who uses the 360-degree radar warning capability of the Erijammer A100 to continuously monitor the bearing of the enemy threat. Before starting the jamming operation, the system operator can select one of the three 120-degree antenna lobes.

The built-in radar warning and set-on receivers provide an acute situational awareness of target type and location. Information provided to the cockpit control box by the radar warning and set-on receivers enables the instructor to conduct closed loop training – instantly monitoring the response of the trainee to the jamming – and adjust the level of training accordingly.

**Operational Characteristics.** The Erijammer A100 was designed to provide pulsed and CW jamming capability for electronic countermeasures (ECM) training and aggressor aircraft, enabling fighter pilots and air defense weapons operators to train in a realistic environment.

## Variants/Upgrades

ALQ-503. Canadian designation of the Erijammer A100 pod.

B2100. The B2100 version of the A100 was developed by Ericsson in collaboration with Rodale Electronics in the US. The Erijammer B2100 uses the pod shell of the A100, and provides coverage of 2.6 to 5.9 GHz (high E

to H bands). The Erijammer B2100 was formally launched in December 1993.

Erijammer 200. This is a pure jamming pod used by high-performance aircraft in a high-threat environment. While the system is based on the A100 system, it has no provisions for use in training simulations, but does

incorporate added jamming capabilities. The only known platform is the AJ 137 Viggen.

Erijammer REWTS (Responsive EW Training System). This variant consists of the Erijammer A100, Erijammer B2100, ALQ-167 and a Rodale internally mounted EW system (the 8102 Smart Crow System).

DARTS (Digital Radar Threat Simulator). The DARTS system is a reconfigurable radar simulator for use in electronic support measures (ESM) and radar warning receiver (RWR) training.

## Program Review

**Background.** The Erijammer A100 is a derivative of the third-generation Petrus training pod used by the Swedish Air Force. It was launched in early 1987 and made available for demonstration, test and evaluation purposes at the end of the same year. Initial Operational Capability was achieved in May 1989, entering service on the J-32E Lanser aircraft operated by the Swedish Air Force as aggressor trainers.

In June 1989, a two-month evaluation of the Erijammer A100 system was started by the US Navy at the Pacific Missile Test Center, Point Mugu. The system was mounted on board an EA-7L aircraft from VAQ-34 of the US Navy. The demonstrations followed discussions between Ericsson and US Navy personnel and the Fleet Electronic Warfare Support Group. Ericsson provided the A100 pod for evaluation and sent a five-man team to Point Mugu to assist in installing the system, train VAQ-34 personnel in its use, and assist in the program.

The Canadian government announced plans in October 1990 to convert 10 CF-18 aircraft to carry EW training pods as part of the Canadian Electronic Support and Training System (ESTS). The full program consisted of the acquisition of three Canadair Challenger EW training aircraft and 19 pods to equip both the CF-18s and 10 CT-133 Silver Stars. In September 1992, the Ericsson/Rodale REWTS system was selected to fulfill this requirement. The flight trials program was completed in July 1991, and a series of CF-18 instructor training flights were initiated. The project was completed in 1995.

Also in July 1991, the Ericsson/Rodale joint venture bid the REWTS system as an upgrade for the NATO Multi-Service Electronic Warfare Support Group (MEWSG). This bid, in response to a UK Ministry of Defence (MoD) expression of interest, also envisioned the use of DARTS to enhance the airborne jamming/emitter stimulation capability. The outline requirement en-

visioned the acquisition of eight simulator pods and three jamming pods and the modification of existing E/F-band jammers to cover the C-band. Ericsson/Rodale competed with Whittaker Electronics' AST-7(V) for the contract.

As part of the Options for Change Defense Review, the UK retired its aging Canberra T.17 EW training aircraft, operated by 360 Squadron, in favor of assigning the work out to civilian contractors. Three groups competed for this contract: Flight Refueling Aviation (FRA), using Falcon-20 aircraft equipped with ALQ-167V jammer pods, AST-4(V) threat simulators and ALE-43/BOZ-3 chaff dispensers; Flight Operations Ltd (FOL), operating Learjet 35s with the same EW suite as the FRA aircraft; and Sweden's Nyge Aero (in partnership with the CSE Flying School and BAe), operating Learjet 35s equipped with the Ericsson Erijammer A100/B2100 and other EW equipment. The FRA bid was finally accepted, with operations starting in 1994/95.

The Swiss Air Force placed a follow-up order for the Erijammer A100 in March 1993. The order, believed to be for nine pods, equipped Pilatus PC-9 training aircraft to supplement the existing force of two Hunter T.74 EW trainers. Subsequently the Hunters were replaced by two F-5F aircraft. Also in March 1993, the Swedish Air Force placed an additional order for the Erijammer A100 system. This extended the inventory and completed the phase-out of the older Petrus system. In addition to existing platforms, the Swedish Air Force extended the use of the pod to the SK-37 Viggen, the first time that the equipment was carried on a supersonic aircraft.

Canada received and made operational its A100 system in 1996. The Swiss Air Force and Swedish contracts were also fulfilled at this time. Beyond this activity, there have been no known contracts.

## Funding

Both the Erijammer A100 and B2100 were developed by Ericsson as a private venture using corporate funding.

## Recent Contracts

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No known contracts have been awarded since 1996.

## Timetable

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<u>Month</u>	<u>Year</u>	<u>Major Development</u>
May	1987	Erijammer A100 first announced
Dec	1987	A100 pod made available for evaluation
May	1989	A100 enters service
Jun	1989	A100 begins evaluation by US Navy
Oct	1990	REWTS proposed for Canadian EW training system
Oct	1992	REWTS selected by Canada
Mar	1993	Swiss order for Erijammer A100 pods Swedish order for Erijammer A100 pods
Dec	1993	Erijammer B2100 formally announced
	1996	Canada receives and makes operational the A100 system
	1999	Erijammer 100 production ends

## Worldwide Distribution

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<b>Canada</b>	26 (20 systems to equip 10 CT-133 Silver Star and 10 CF-18B trainers; at least 6 additional systems to equip 3 Challenger EW training aircraft)
<b>Germany</b>	6 (used on Learjet 35s by civilian training organization)
<b>Sweden</b>	24 (20 systems for J-32E Lansens; 4 systems on two Learjet 35)
<b>Switzerland</b>	12+ (3 systems on Hunter T.74; at least 9 systems to equip PC-9 and F-5F aircraft)
<b>United Kingdom</b>	Total unknown, but believed to be 8-12 systems
<b>United States</b>	Total unknown; at least 2 were procured for test purposes

## Forecast Rationale

The last known deliveries of Sweden's Erijammer A100 electronic warfare training system were to Canada, which began operating the system in 1996. Since then, it appears that all other known orders for the system have been fulfilled and that production has ceased.

After its introduction in the late 1980s, the system enjoyed considerable success, with a vast majority of units going to Canada and Switzerland – a combined

total of 50 systems. Based on similar technology, the Erijammer B2100 was designed for training and combat use against surveillance radars. However, no new information has been released in recent years regarding the system, making the upgrade's cancellation appear more than likely.

Due to the lack of new contracts, the 10-year forecast chart for the Erijammer A100 has been omitted.

## Ten-Year Outlook

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There are no known orders for this system; thus, the forecast chart has been omitted. **Barring any future activity, this report will be archived next year, 2002.**

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