

# ARCHIVED REPORT

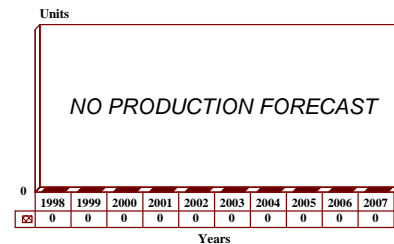
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## ARBB-33 - Archived 5/99

### Outlook

- ARBB-33 being replaced by -36
- Only known foreign order was from Qatar
- French Navy was the largest customer for this equipment
- THIS REPORT WILL BE DROPPED IN 1999 (BARRING ADDITIONAL ORDERS)

10 Year Unit Production Forecast  
1998-2007



### Orientation

**Description.** Naval H/I/J-band multimode jammer tasked with countering missile and acquisition radars.

#### Sponsor

Delegation Generale pour l'Armement (DGA)  
10/14 Rue Saint Dominique  
F-75997 Paris Armees  
France

#### Contractors

Dassault Electronique  
55 quai Carnot  
F-92214 Saint Cloud  
France  
Tel: +331 46 02 5000  
Telex: 250787

**Licensee.** No production licenses have been granted.

**Status.** In service but believed to be out of production.

**Total Produced.** It is estimated that a total of 18 ARBB-33 systems have been procured through 1999.

**Application.** The ARBB-33 is designed to jam active seeker heads and surveillance radars working in the I-, H- or J-bands.

**Price Range.** The current cost of the system is unknown.

### Technical Data

#### Metric/US

#### Characteristics

Frequency	H/I/J-band (6-20 GHz)
Azimuth coverage	2 sectors of 180 degrees
Reaction time	Less than 0.5 s
Detection sensitivity	Better than -50 dBm
Bearing accuracy	Better than 5 degrees RMS
Emitted jamming power:	100+ kW

Metric/US**Dimensions**

Canister dimensions	1.2x.2 m (4 x 7.25 ft)
Cabinet dimensions	1.8x0.6x0.78 m (6 x 2 x 2.5 ft)
Canister weight	500 kg (1100 lb)
Cabinet weight	400 kg (880 lb)

**Design Features.** The system is composed of four distinct elements as follows:

- **Canister Units** - Two canisters, a port and starboard unit, are mounted to the superstructure. Each canister is divided into two compartments with the lower portion housing the reception antenna, reception switching, control logic and receiver, while the upper portion houses the transmission antenna, transmission switching, transmitter, preregulators and control logic units. These antennas are circular phased arrays for reception and transmission.
- **Technical Cabinet** - The technical cabinet is the link between the canister units and the main control and display console. The technical cabinet is located within the superstructure in between the two canisters and contains the utilities, jamming processor, multiple-threat jamming channels, alert processor, dialogue & monitoring processor and electronic warfare system.
- **Control & Display Console** - The control and display panel is located on the bridge. This portion of the ARBB-33 system contains the control processor and user interface.

**Operational Characteristics.** The system operates within the H-, I-, and -J bands with each canister covering 180 degrees. Complete coverage and direction of threat,  $\pm 5$  degrees, is obtained via 36 10-degree lobes. The output power of the jammer is greater than 100 kW. The system can handle two simultaneous threats, or up to four threats if an optional package is chosen.

The system can be directed by its own integral radar detector unit, for a fast reaction capability, or through a direct link via a separate radar detector. Additionally, the ARBB-33 can use an indirect link that receives information from the detectors, is passed to a master control unit which processes the threat, and then directs the various ECM units accordingly.

Available jamming modulations include continuous noise, pulsed noise, cover pulse jamming, synchronous false echoes, asynchronous false echoes and range gate pull off.

## Variants/Upgrades

There are no known variants *per se*, but the new ARBB-36 system, designated Salamandre, owes its design to the ARBB-33 system.

## Program Review

**Background.** The ARBB-33 system is a further development of the ARBB-32 systems which equipped earlier generations of French warships. ARBB-33 was selected for the *Charles de Gaulle* nuclear-powered aircraft carrier in 1986. At the same time the installation of the system on to the F-70 class destroyers was undertaken. The first production ARBB-33 systems were delivered to the French Navy in 1987, for retrofit on to the Type C70 Cassard-class anti-air frigates. Newly constructed ships during the 1986-1998 time period entered service with the

ARBB-33 installed. Older ships were retrofitted during scheduled maintenance.

It is believed that the ARBB-33 is no longer in production. Its replacement, the ARBB-36 or Salamandre system, started being procured by the French Navy within the 1994-1995 time period. A retrofit program is currently underway to replace the -33 with the -36.

The only known export orders for the ARBB-33 system were procured by Qatar in the mid-1990s.

## Funding

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Development of the ARBB-33 was funded by the French Navy.

## Recent Contracts

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No known recent (1995+) contracts have been awarded for the ARBB-33.

## Timetable

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<u>Year</u>	<u>Major Development</u>
1979	ARBB-33 development started
1983	Prototype completed
1986	ARBB-33 selected for Charles de Gaulle class
1987	First ARBB-33 delivered to French Navy
1988	Destroyer <i>FS Cassard</i> commissioned with ARBB-33
1990	Last destroyers commissioned with ARBB-33
1994	Salamandre effectively replaced ARBB-33 in market
1998	Charles de Gaulle aircraft carrier to commission

## Worldwide Distribution

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**France.** Fourteen ARBB-33 systems on Cassard and Suffren class destroyers, Georges Leygues and Tourville class frigates

**Qatar.** Four ARBB-33 systems on fast-attack craft

## Forecast Rationale

The ARBB-33 jammer is an venerable system that is almost 12 years old since its first operational procurement in 1986. Its primary purpose is to act as a threat receiver/jammer against inbound missiles or acquisition radars.

The -33 was procured almost exclusively by the French Navy with the only known export order going to Qatar. Due to this rather poor showing in international sales, the -33 limped along over the years via orders garnered from the French Ministry of Defense to outfit new ships that had been ordered.

The last known orders for the ARBB-33 occurred in the 1994-95 time frame. While it has worked well, the -33 is now being replaced by the ARBB-36 Salamandre integrated countermeasures suite.

Due to the lack of verifiable orders in recent years, as well as the known procurement of a replacement system, it is believed that the -33 is no longer in production. As such no continued production has been forecast.

## Ten-Year Outlook

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No Production Forecast.

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