

ARCHIVED REPORT

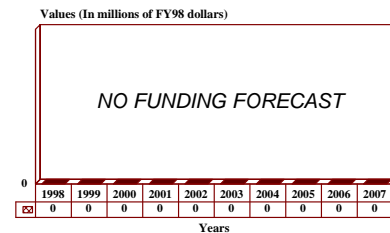
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SCLAR- Archived 1/98

Outlook

- Dispensing systems suitable for various chaff, flare and munitions
- Production ended in 1990 with no sales recorded for the last five years
- Barring a resumption of orders this report will be dropped in 1999.

Forecast Funding Levels
1998 - 2007



Orientation

Description. Naval chaff and flare decoy dispensing system, tasked with platform protection by decoying IR and radar-guided missiles.

Sponsor

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

Contractors

Alenia-Elsag Consortium
 via Panama 52
 I-00198 Rome
 Italy

OTOBreda SpA
 via Lunga 2
 I-25100 Brescia
 Italy

Licensee. Although no confirmation is available, the Kung Fen system built in Taiwan for installation on Gearing class destroyers may be a licensed derivative of SCLAR.

Status. In service.

Total Produced. A total of 112 systems were known to have been procured not counting spares.

Application. The SCLAR decoy launching system was designed to provide effective decoy cover for high-value warships from radar-guided and heat-seeking missiles. It has the added capability of firing high-explosive bombardment rockets against shore targets and small naval craft.

Price Range. A complete SCLAR Mark 2 system, complete with two launchers, microprocessor controls and computing equipment, is believed to cost approximately US\$500,000 in late-1980s values.

Technical Data

Characteristics	Metric	US
Number barrels:	20	
Rate of fire:	1 rocket/sec	
Range (IR Flares):	4 km	2.2 nm
Range (Chaff):	12 km	6.5 nm
Range (HE):	11 km	5.9 nm
Launcher weight:	1,750 kg	3,850 lbs
Train rate:	60 deg/sec	

Design Features. SCLAR Mark 2 is a microprocessor-controlled rocket firing system for chaff and conventional munition. In addition to the decoy countermeasures rockets, it can be used to fire HE and illuminating rounds. The rounds themselves are the same as used in the earlier UCLAR system and are fired from the same launcher boxes. The difference between the two systems is in the use of a digital multiprocessing computer based on an ELSAG-designed ESA-24 microprocessor. This computer can be used to store a large set of decoy patterns, which

can then be recalled and used as circumstances dictate. The standard installation consists of the control console, data processing unit, rocket launchers, and local control panels. The data processing unit can drive two rocket launchers, laying them for line and elevation and programming decoy firing patterns.

Operational Characteristics. The launcher system can be configured to accommodate 81 mm or 127 mm rockets, loading either 24 81 mm or 12 127 mm in place of the normal 20 105 mm.

Variants/Upgrades

Breda has revealed a soft/hard-kill derivative of the SCLAR system, which combines the existing SCLAR Mk 2 decoy dispenser with two three-barreled launchers for Mistral surface-to-air missiles on a common stabilized

mounting equipped with both low-light and IR electro-optics. A two-dimensional search radar can also be coupled to the system.

Program Review

Background. SCLAR Mark 2 is a derivative of the earlier UCLAR and SCLAR rocket launching systems. The system was developed to meet the requirements of the Italian Navy and has been installed onboard the following warships of the Italian Navy: *RIM Giuseppe Garibaldi*, *RIM Vittorio Veneto*, two Andrea Doria class cruisers, two Animoso class destroyers, two Impavido class destroyers, eight Maestrale class frigates, four Lupo class frigates, and two Alpino class frigates. However, recent Italian construction has shifted to other systems, the French Sagaie being chosen for the Luigi Durand de la Penne class destroyers and the British Barricade for the Minerva class frigates.

The SCLAR Mark 2 system has been widely exported to a number of countries with considerable numbers supplied both as original and retrofit equipment. This includes Turkey, which uses the system on its FRAM- modified Gearing class frigates. In 1989, Turkey announced its intention to refit at least four and possibly up to ten of its aging Gearing FRAM-2 frigates with vertical launch Sea Sparrow and SCLAR. These modifications were

scheduled to take place during the 1990-92 time frame. This program however was subsequently curtailed, in lieu of ordering more new MEKO-200 class frigates.

A decreasing number of other countries operates very old frigates of this type. The short remaining hull life of those ships makes further refits of this type unlikely. Since 1990, all new construction has turned to rival systems while retrofits and upgrade programs also have all specified alternative equipment. Plans to re-equip the Danish Niels Juel class with SCLAR have now been abandoned — after the necessary equipment had already been procured — with these ships receiving SRBOC launchers for Sea Gnat decoys in their place.

The German F123 Brandenburg class frigates were also scheduled to receive SCLAR launchers, probably with the intention of using equipment removed from other ships. However, recent photographs suggest that this equipment is yet to be installed, and Germany is reported as having moved to adopt the Sea Gnat decoy munitions. If correct, this implies a move to a larger-caliber launcher, probably

SRBOC. The Mk.36 SRBOC is already in widespread service with the German fleet. The Italian Navy decided in 1994 to specify Sea Gnat munitions for its future

warship construction; this will probably extend to refitting existing ships with Sea Gnat-compatible launchers as well.

Funding

Development was funded by the Italian government as part of the equipment fit of the Maestrale class frigates.

Recent Contracts

No recent contracts are known

Timetable

1978	Ordered by Italy for Maestrale frigates Ordered by Nigeria for Aradu frigate Ordered by Venezuela for Mariscal Sucre frigates
1979	Ordered by Germany for Hamburg frigates Ordered by Ecuador for Esmeraldas corvettes Ordered by Italy for Andrea Doria cruisers
1980	Ordered by Italy for Lupo frigates Ordered by Argentina for MEKO-360 destroyers
1981	Ordered by Italy for Garibaldi aircraft carrier Ordered by Italy for Veneto helicopter carrier
1982	Ordered by Iraq for Hittin frigates
1983	Ordered by Italy for Impavido destroyers Ordered by Turkey for Robert H Smith minelayer
1984	Ordered by Peru for Carvajal frigates Ordered by Italy for Audace class destroyers Ordered by Italy for San Giorgio LPDs
1985	Ordered by Turkey for Gearing destroyers
1987	Ordered by Italy for Animoso class destroyers Ordered by Denmark for Niels Juel frigates

Worldwide Distribution

The following distribution list is obtained from the Forecast International World Naval Electronic Warfare Database. Each ship normally has a pair of SCLAR launchers with the total number of systems designated within the parentheses.

Argentina 4 MEKO-360 FF (8)

Ecuador 6 Esmeraldas FFL (6)

Germany 4 Brandenburg FF (8); 1 Hamburg FF (2)

Italy 1 Etna AOR (2); 2 Stromboli AOR (4); 1 Guiseppe Garibaldi CH (2); 1 Vittorio Veneto CHL (2); 2 Audace

DD (4); 8 Lupo FF (16); 8 Maestrale FF (16); 3 San Giorgio LPD (6)

Nigeria 1 MEKO-360 FF (2)

Peru 4 Lupo FF (8)

Turkey 4 Gearing FRAM-1 FF (8); 1 Gearing FRAM-2 FF (2); 2 Köln FF (4)

Venezuela 6 Lupo FF (12)

Forecast Rationale

The SCLAR decoy launching system is now under intense pressure from two separate directions. At the high end of the market, i.e., NATO and other sophisticated maritime operators, the current shift is to the adoption of Sea Gnat munitions and to launchers compatible with them. Essentially, this means the US SRBOC system or its equivalents. Thus, SCLAR can be expected to vanish from European inventories in the near future. This process has already taken place in the Danish fleet, and appears to be underway in the German navy. It will also take place in Turkey when the last of the old US Gearing class frigates are broken up. Procurement for Italian domestic use has terminated since the adoption of Sagaie for new construction. With the Italian decision to go to a Sea Gnat-compatible solution on decoy launchers, we expect to see a program of SCLAR replacement by SRBOC in the near future.

No SCLAR orders have been recorded for five years now, with recent users opting for Mark 36/137 SRBOC or Shield as the dispenser of choice. With the Italian Minervas being equipped with Barricade and the De La Pennes with Sagaie, there does not appear to be an obvious new domestic construction market. The projected

limited procurement for domestic retrofits on fleet auxiliaries occurred but utilized systems removed from older ships. The only remaining projected fit is two systems for the new LPD *Cristoforo Colombo*, and this too may use systems made available by scrapping older platforms.

The export market will continue to opt largely for SRBOC and Shield, squeezing out the older SCLAR, which suffers from the availability of lightweight decoy launching systems. These lack the range, efficiency and flexibility of SCLAR but can be installed with less ship impact and are substantially cheaper. As a result, although SCLAR continues to be offered as original equipment with Italian-designed corvettes and frigates, orders have now virtually dried up and the SCLAR system seems to have reached the end of its life.

Overall, we must conclude that the SCLAR Mark 2 system is now reaching the end of a successful life. No allowance is made for the Taiwanese system, since its relationship to SCLAR remains unconfirmed. As a result, no production is forecast and, unless the situation changes, this report will be discarded next year.

Ten-Year Outlook

Barring a resumption of orders this report will be dropped in 1999.

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