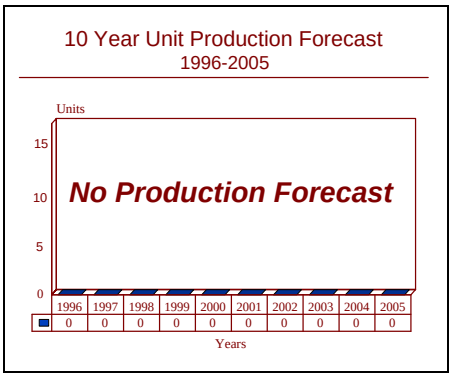
LN-66 - Archived 5/97

Outlook

- In service, on-going logistics support being provided
- Production complete; no future production anticipated
- An estimated 603 units built through 1994
- Applications: helicopters and various support and small auxiliary vessels



Orientation

Description. Surface surveillance and short-range navigation radar.

Sponsor

Canadian Marconi Co
Radar/Navaids Group
415 Legget Drive
Kanata, Ontario K2K 2B2
Canada
Tel: +1 613-592-6500
Fax: +1 613-592-7427

Contractors

Canadian Marconi Co
Radar/Navaids Group
415 Legget Drive
Kanata, Ontario K2K 2B2
Canada
Tel: +1 613-592-6500
Fax: +1 613-592-7427

Status. In service, ongoing logistics support.

Total Produced. An estimated 603 radars have been produced.

Application. SH-2F LAMPS I ASW helicopter, Tacoma Fast Attack Craft (widely exported under various class names and designations), LCAC, and a variety of support and small auxiliary vessels.

Price Range. Estimated unit price is US$750,000.

Technical Data

Dimensions	Metric	US
Transmitter/receiver:	37 x 34 x 64 cm	15 x 13 x 25 in
Transmitter weight:	34 kg	75 lb
Antenna weight:		
3 ft version	10 kg	21 lb
5 ft version	19 kg	42 lb

Antenna height:	61 cm	24 in
Antenna width:	91 or 152 cm	36 or 60 in
Display size:	25 cm	10 in

Characteristics

General:	
Horizontal beamwidth:	2.5°
Vertical beamwidth:	22°
Sidelobe suppression:	24 dB ± 10° degrees main beam
Squint angle:	4 deg 48 ft
Rotation speed:	22/24/30 rpm
Minimum range:	25 yds
Maximum range:	75 nm
LN-66 Shipset:	
Antenna:	5 x 8 x 14 ft
Frequency:	9375 MHz
Peak power:	12 kW
Pulse width:	0.5/0.9 µsec
PRF:	800, 1250, or 2500 Hz
LN-66/HP:	
Antenna:	3 ft radome enclosed
Frequency:	9375 MHz
Peak power:	75 kW
Pulse width:	0.1 or 1.0µsec
PRF:	500/2000 Hz
LN-66/SP CMR-85:	
Antenna:	3 ft radome
Frequency:	9375 MHz
Peak Power:	75 kW
Pulse width:	0.15 or 0.12µusec
PRF:	1200/3000 Hz

Design Features. The LN-66/HP radar is a modular sensor made up of five LRUs. It is equipped with a 36-inch radome when used on the Kaman Seasprite SH-2F LAMPS I helicopter. Component units are the antenna group module, a transceiver unit, a high resolution display, a North stabilizing unit and a power supply unit.

Two different types of the surface ship LN-66 are in US service. The first has a 5 ft radome and is fitted to medium sized surface ships and auxiliaries. The second has an 8 ft radome and is fitted to major surface units such as aircraft carriers and guided missile cruisers.

The surface ship LN-66 also features a modular architecture. In its most basic configuration, a three module system is available, comprising a 10kW transceiver, a 10 inch high resolution display unit, and a slotted waveguide antenna with fixed orientation such as ship's heading. The true bearing unit is available as an optional module.

The CMR-85 has a small 3 ft radome similar to that found on the LN-66/HP. It is fitted to small craft of Fast Attack Craft size.

Operational Characteristics. The LN-66 family of basic surface search radars used to detect both aircraft and land masses for target detection and navigation. Radar data can be used for a variety of other purposes, including coastal surveillance and gun fire control. Actual performance is similar for both ship-borne and helicopter applications.

Variants/Upgrades

The **LN-66/HP** radar provides the Kaman Seasprite SH-2F LAMPS I helicopter with general surveillance capability. The radar also provides or enhances coastal surveillance, navigation, fire control and ASW capabilities.

The **LN-66 (SPS-59(V))** radar is used aboard a wide range of surface combatants for surface search and general navigation.

The **TPS-66** is a Canadian designation for the radar in the TSQ-108 Radar/Sonar Surveillance Center.

The **CMR-85** was designed for a submarine environment but can serve as the primary radar for a small craft or secondary radar on a larger vessel. It is a two-unit system.

Program Review

Background. Development of the LN-66 family of radars was company funded. Subsequent USN acquisition was funded under platform lines with exports being supported by FMS credits. The Canadian Marconi Company has been involved in the Kaman Seasprite SH-2F LAMPS I program since its inception in the early 1970s. Deliveries of the LN-66/HP radar began in 1972, and the first production helicopter was handed over to the USN in 1973.

The Navy originally ordered 104 Lamps I platforms, ordering another 60 in FY87. The LN-66 radar has been the standard navigation radar for United States Navy small surface combatants and auxiliaries since the mid-1970s.

Funding

Funding is from Operations & Maintenance lines.

Analysis. This has been a successful radar for the Canadian Marconi Company; but the market is being taken over by newer equipment on new platforms. LN-66 radars have been standard equipment in their respective fields for over a decade, although the ASW function of the SH-2F/G is being taken over by the newer SH-60B Seahawk which uses the Texas Instruments APS-124 search radar.

The LN-66 is reaching the end of its life in the surface fleet. The US Navy has more advanced equipment available and there are a large number of equivalent systems on the export market. LN-66 surface units are being superseded by the SPS-64(V) and SPS-67(V) radars. Covert radars such as Pilot will begin to move into the small attack craft market within the next few years. Hughes Aircraft recently won a US Coast Guard contract to develop a new surface search radar to replace many older systems on USCG and USN vessels.

Recent Contracts

There have been no recent contracts recorded.

Timetable

FY87	Original orders
1994	Final production

Worldwide Distribution

Identified sources of export business are **Thailand, Taiwan, Philippines** and the **Republic of South Korea**.

Forecast Rationale

Production is complete. There may be a low-level effort to complete FMS orders. An estimated 34 additional LCACs are under production for the US Marine Corps; but it is not known if they all will carry the LN-66. The Marine requirement should be met from existing stocks, not requiring a significant new production run.

Ten-Year Outlook

No further production expected.

* * *