



By courtesy of the Royal Netherlands Navy



## STING-EO Mk2



### General

STING-EO Mk2 is Thales Nederland's latest multi-purpose multi-sensor naval fire control tracking system.

STING-EO Mk2 is an evolution of STING-EO, both of which are based on the proven and widely trusted STIR family of fire control tracking systems.

STING-EO Mk2 supports gun fire control, performs kill assessment and makes a valuable contribution to classification and identification of threats. In addition, the system can be used as a surveillance sensor, even under radar silence conditions.

STING-EO Mk2 overcomes the tracking problems often associated with low-flying missiles. By applying dual radar bands (I- and K-band), and complemented by EO sensors, STING-EO Mk2 realizes extremely high track continuity, even in littoral, high-clutter and jamming scenarios.

STING-EO Mk2 offers low life cycle cost and high operational availability, achieved primarily by the application of solid state I- and K-band transmitters. These modular units have high reliability and offer 'graceful degradation': In case of malfunctions, performance is only reduced in steps, there is no single point of failure. This allows repairs to be postponed to after the mission.

During day, night and radar silence conditions detection, observation and tracking are enabled by the latest electro-optical components. STING-EO Mk2 employs a third generation focal plane array MWIR-camera, colour and black & white TV cameras and an eye-safe (class 1M) Laser Range Finder

STING-EO Mk2 is easy to install on board. Most of its components are installed in the above-deck director. This results in a small below deck footprint, limited ship cabling and no need for a waveguide run.

### Main characteristics

- Automatic acquisition and tracking of targets with adaptive waveform techniques
- Sophisticated signal and data processing, including optimum filtering techniques for tracking of manoeuvring targets in cluttered environments
- Extensive ECCM facilities
- Solid State transmitters for I-band and K-band
- On-line BIT with fault detection and isolation down to LRU level
- Small below deck footprint, no ship's waveguide run.

## Functional Aspects

STINGEO Mk2 with its lightweight director is suitable for installation in naval vessels of any size. A high level of automation ensures fast and accurate performance combined with a low workload.

STINGEO Mk2 provides automatic target acquisition through I-band on remote 1D, 2D or 3D designation; subsequent I/K-band tracking is performed automatically.

In addition, STINGEO Mk2 offers optronic track capability. Target data can be derived simultaneously from radar and optronics. Automatic best data source selection (I/K) ensures optimal track accuracies supported by TV/IR camera tracking and laser range finding.

Under control of a command and control system, STINGEO Mk2 offers support functions such as sector search (with automatic target detection), missile launch detection, projectile position measuring during gun fire and kill assessment support. Facilities for calibration, tilt and alignment corrections are also provided. Extensive built-in test facilities support both operator and maintainer.

## Technical Data

### Antenna

Antenna type	: Cassegrain with I- and K-band monopulse cluster
Diameter antenna	: 1.2 m
Beamwidth	: I-band : 2° : K-band : 0.5°

### Director drives

Train movement	: Unlimited
Elevation	: -30 to 120° (ref. ship's deck)
Speed:	
- Training	: 2,7 rad/s
- Elevation	: 2.5 rad/s

### Transmitters

Transmitter type	: Solid State
------------------	---------------

### Instrumented range

- I-band	: 120 km
- K-band	: 36 km

## Dimensions and Weight

	Width (mm)	Height (mm)	Depth (mm)	Weight (kg)
Director	Ø2200	2412	-	750
Supply and Amplifier Cabinet	745	1230	445	150
Liquid Cooling Cabinet	600	1800	600	300
Air Drier	350	910	230	40

## Power Requirements

Voltage	Frequency	Phase	Power
115V	60 Hz	3 ph	2.5 kVA
115V	60 Hz	1 ph	0.6 kVA
440V	60 Hz	3 ph	20 kVA

## Environmental Conditions

The design and construction of the equipment are based on current international military standards for shipborne equipment.

## System Overview



## ADDRESS

**THALES NEDERLAND**  
P.O. Box 42  
7550 GD HENGLO  
THE NETHERLANDS  
Phone : +31 74 248 81 11  
Fax : +31 74 242 59 36

**THALES**  
7/9 rue des Mathurins  
92221 BAGNEUX CEDEX  
FRANCE  
Phone : +33 1 40 84 40 00  
Fax : +33 1 40 84 33 81