

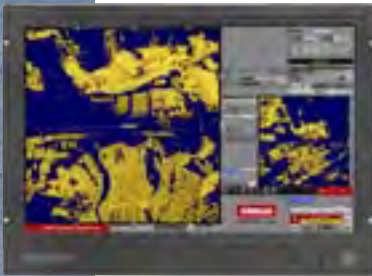
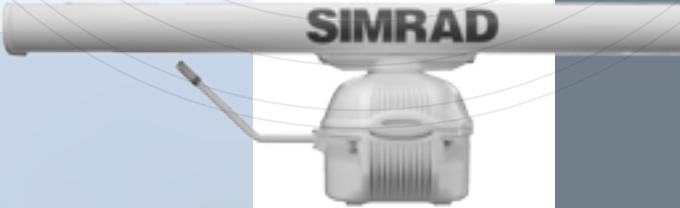
SIMRAD

PRO
SERIES

Simrad ARGUS Radar

DETECT | PROTECT | LOCATE

ARGUS
RADAR



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Simrad ARGUS Radar

STATE OF THE ART X-BAND RADAR

The Simrad ARGUS radar is a new series of improved X-band radars which provide mariners with even better detection capability. The new configuration is characterized by reduced weight, small dimensions and compact electronics thereby offering the proper solution for installation even on small High Speed Crafts.

► X-band

X-band antenna group including 6 or 9 foot antenna and pedestal with 12 or 25 kW transceiver up-mast.

► Main features:

- Designed for new Navigation Radar Standard IEC 62388
- Pedestal with built-in 12 kW or 25 kW transceiver supports 6' and 9' antennas
- Modular and solid state construction
- Electronic Modulator based on mosfet technology
- Long life 3rd generation magnetron (12 kW and 25 kW)
- Low Noise Amplifier providing a reduced overall Noise Figure
- Microcomputer controlled operations
- Serial link with telemetry and remote control for adjustments
- Built-in test facilities for power supply and modulator parameters
- PRF jittering removing any possible ambiguity due to multiple-time-around echoes
- Two different Sectors Blanking to be set at time of installation
- Performance Monitor
- Rotation: 20 or 40 rpm
- Easy installation



"In Greek mythology, Argus Panoptes, or Argos, guardian of the heifer-nymph Io and son of Arestor, was a primordial giant whose epithet "Panoptes", "all-seeing", led to his being described with multiple, often one hundred, eyes."

Source: Wikipedia

RADAR APPROVALS

- EC Marine Equipment Directive (MED)
- United States Coast Guard (USGC)
- China Classification Society (CCS)
- Russian Maritime Register of Shipping (RS)
- Shipping Register of Ukraine
- FCC
- ISO 9001

WHO IS THE ARGUS RADAR FOR?

► Short Sea



► Patrol / SAR / Military



► Super Yacht



► Work Boat / OSV



► Passenger / HSC



► Fishing vessel



ARGUS Radar - Product overview

The Simrad ARGUS radars fully comply and exceed IMO regulations. Thanks to the modular design, they can be either assembled to form a stand-alone display cabinet or be flush mounted into a mechanical bridge console.

The standard configuration always includes full ARPA, AIS and an electronic built-in Interswitch for dual radar installations.

PRO ARGUS KEY FEATURES

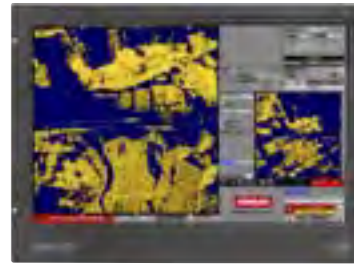
- ▶ State of the art professional X-band radar
- ▶ Available in 12 and 25 kW versions
- ▶ Approved for IMO vessels
- ▶ Separate processor, monitor and operation panel
- ▶ 40 target ARPA feature as standard
- ▶ Wide screen color monitor option
- ▶ Superior signal processing
- ▶ Significantly larger target presentation area
- ▶ Seamless use of up to four antennas
- ▶ Optional Advanced Oil Spill and Ice Detection Software



▶ 19" display
Part no. 000-10632-001



▶ 23" display
Part no. 000-10633-001



▶ 27" display
Part no. 000-10634-001



▶ ARGUS Core Unit



▶ ARGUS keyboard

ARGUS RADAR DISPLAY

The ARGUS display is produced in three different configurations.



- ▶ **The deck configuration** provides an optional display deck stand which can also house the electronic cabinet. Two different options available :
 - Desk-Top Cabinet for 27" with Pedestal
 - Desk-Top Cabinet for 23" / Adapter Frame kit for 19" Monitor / Pedestal



- ▶ **The modular configuration** with monitor, keyboard and ARPA electronic cabinet supplied as three separate modules which can be flush mounted into the bridge console to the customers' preference.



- ▶ **The table top configuration** where the monitor and key-board are housed into an ergonomic console while the ARPA electronics are contained in a separate bulkhead mounted cabinet.

ARGUS Radar - Product overview

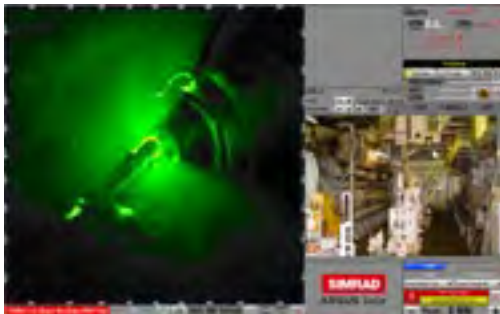
SCREEN PRESENTATION

▶ Wide screen (27") radar presentation:

- **Square Radar PPI**
- **No info clutter in radar PPI** - Most professional radar users sail in North-up presentation (as in the ECDIS) enabling the navigator to see further on short range and pulse settings.
- **User selectable second** - Use for dual range, extra target zoom or of center presentation.
- **User selectable viewing area** - Select CCTV, full Conning or second radar scanner, all without compromising IMO performance requirements.



▶ Wide screen - Add up to 3 cameras per monitor

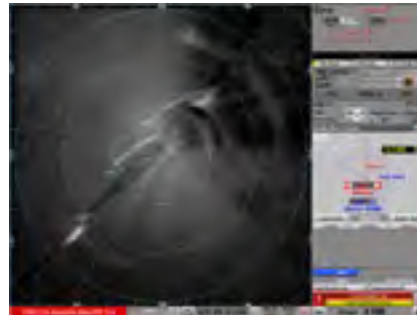


" This is the easiest radar we have ever installed. That gives us an advantage against the competition when we are quoting package deals."

Greek distributor Peter Spanos, MD - after having installed three systems

▶ 19" and 23" displays

- **Square Radar PPI** - Same as a chart on an ECDIS.
- **No info clutter in radar PPI** - Most professional radar users sail in North-up presentation (as in the ECDIS) enabling the navigator to see further on short range and pulse settings.
- **Main radar operator settings** - One line containing most used radar functions and information.
- **User selectable viewing area**



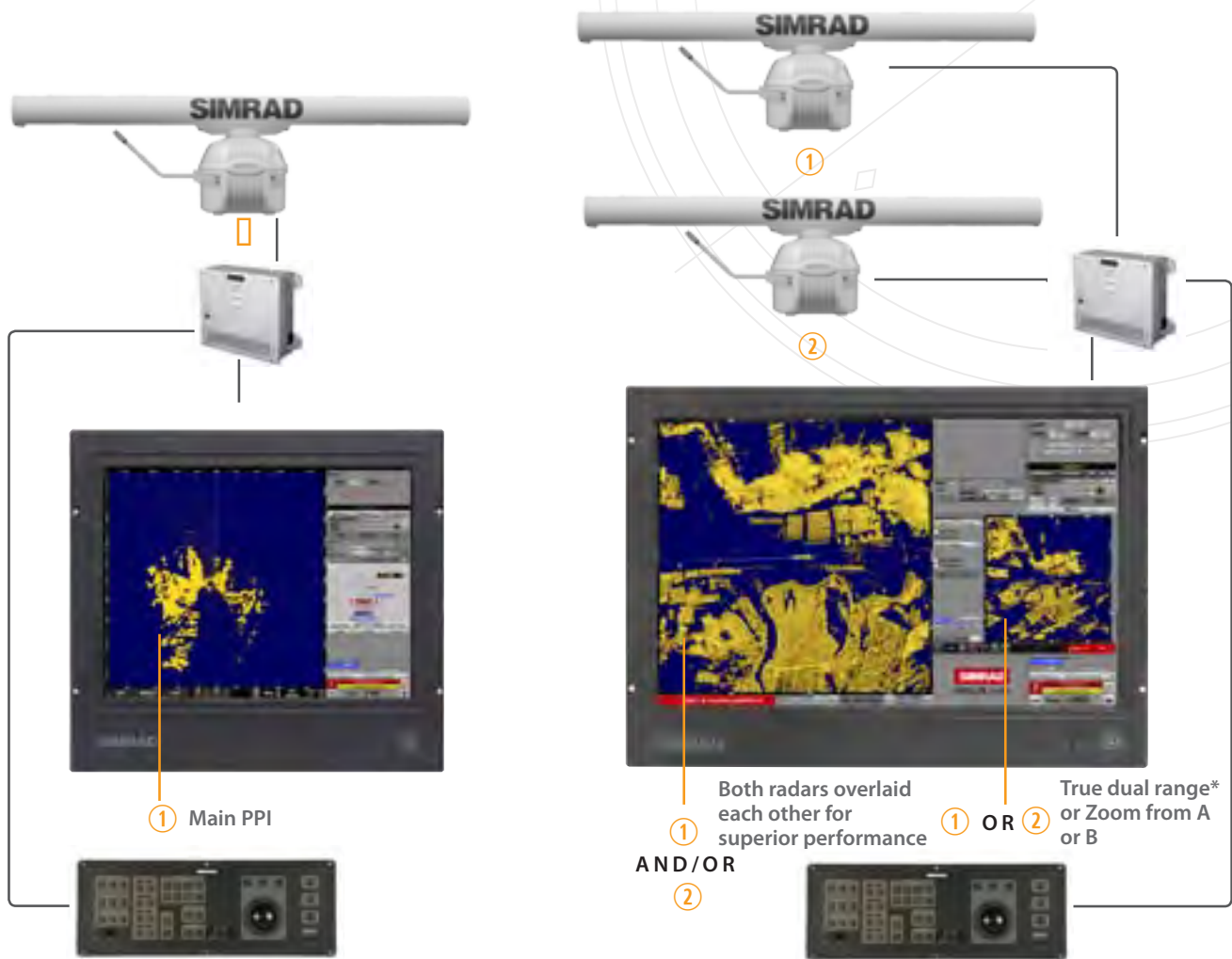
TROUBLE FREE INSTALLATION/SERVICE WITH SNAP-ON CONNECTOR

The interface with the radar console is through a single connector and it is not necessary to open the transceiver casing during installation. Every analogue adjustment is made remotely from the ARGUS console.



- ▶ Easy installation. The radar cable snaps on from the outside ensuring quick, easy and trouble free installation.
- ▶ Easy service. With the connector on the outside, there are no cables that need removal or are in the way of easy servicing. Choose between pre-terminated or open end cables in selected lengths.

ARGUS Radar - Radar display configuration options



* Available on 27" only

▶ ARGUS Radar Systems part numbers

Part Number	Description
000-10497-001	Argus 12U/6X P System - includes 12kW Upmast Scanner with 6' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
000-10499-001	Argus 12U/9X P System - includes 12kW Upmast Scanner with 9' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
000-10501-001	Argus 25U/6X P System - includes 25kW Upmast Scanner with 6' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
000-10503-001	Argus 25U/9X P System - includes 25kW Upmast Scanner with 9' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
000-10496-001	Argus 12U/6X P HSC System - includes 12kW Upmast Scanner with 6' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch

Part Number	Description
000-10498-001	Argus 12U/9X P HSC System - includes 12kW Upmast Scanner with 9' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
000-10500-001	Argus 25U/6X P HSC System - includes 25kW Upmast Scanner with 6' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
000-10502-001	Argus 25U/9X P HSC System - includes 25kW Upmast Scanner with 9' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
Available on request	Argus 30U/12S P S-Band Radar Scanners available on request includes 30kW Upmast Scanner with 12' Antenna, Core unit, Expanded keyboard, Performance monitor, 40 target ARPA, 200 target AIS and Interswitch
Available on request	Advanced Oil Spill and Ice Detection Software (OSID). Available as standard upgrade without compromising the IMO type approval

Building an Anti-Piracy System

The SIMRAD ARGUS system introduces some key features that tackle the problem of piracy of the merchant fleet and yachts. By utilizing Broadband Radar's* close range performance and zero radiation, fleet owners can build an anti-piracy system into the navigation display. Pirates typically attack vessels underway and at night from behind to avoid being seen on the Navigational radar. They very often approach in small skiffs hard to detect in-between waves with 4-8 pirates on board. Sometimes with two - three boats together and using a Mother ship as base. So far evasive ship manoeuvres seem to be the best action hindering boarding and an attack can last several hours before giving up. Pirates are also attacking while ships are at anchorage.

Navigational Radars are typically mounted in front of smokestacks and are therefore focused forward looking. The sheer size of the scanner prevents mounting in strategic places.

The ARGUS has the ability to merge two high powered antennas to find small targets in-between ocean waves, display long and short range simultaneously and zoom in on and track suspicious targets.

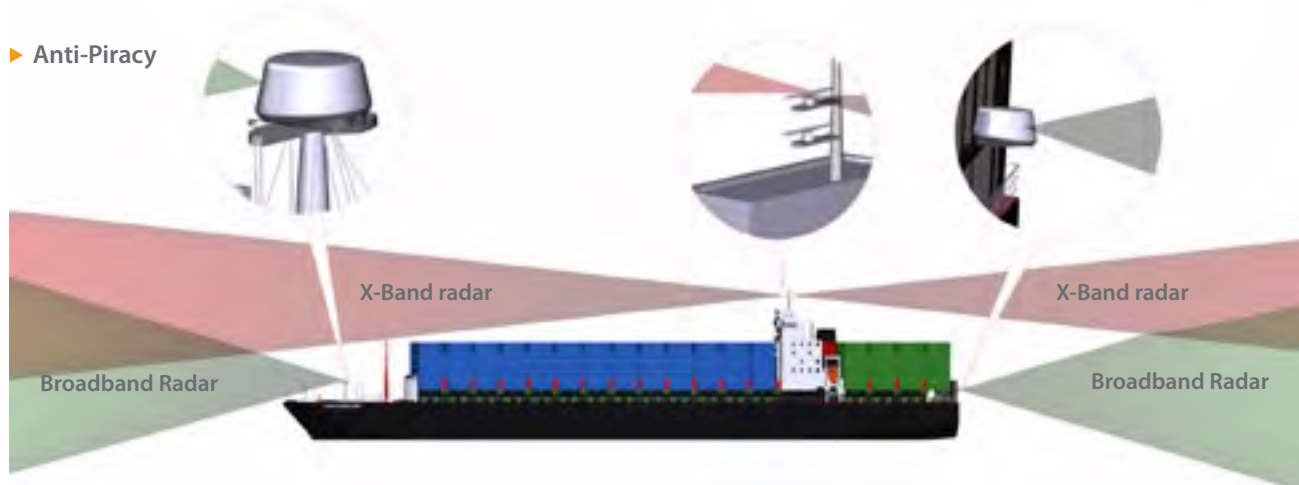
The ARGUS also has the ability to integrate Broadband Radar and display Pulse and Broadband simultaneously in one single display overview with uncompromised IMO performance.



► Tighten the Blind Zones

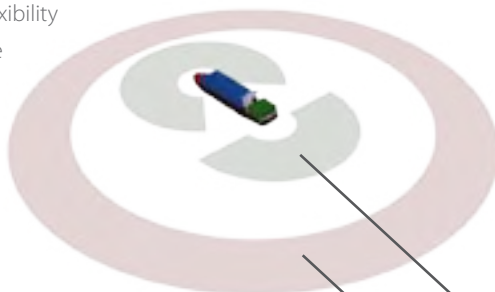
The Broadband Radar* component provides complete close range coverage within the pulse radar's blind spot. Targets can be monitored and detected within a 5m range ensuring that all potential threats are monitored.

► Anti-Piracy



Docking Radar

With the optional Broadband Radar's* close range performance, the navigator or pilot can monitor the vessel relative to the dock or other structure right up to the point of contact. Total flexibility of installation is available due to zero radiation hazard enabling scanner location that is not possible with pulse radars' inherent radiation.



Broadband Radar

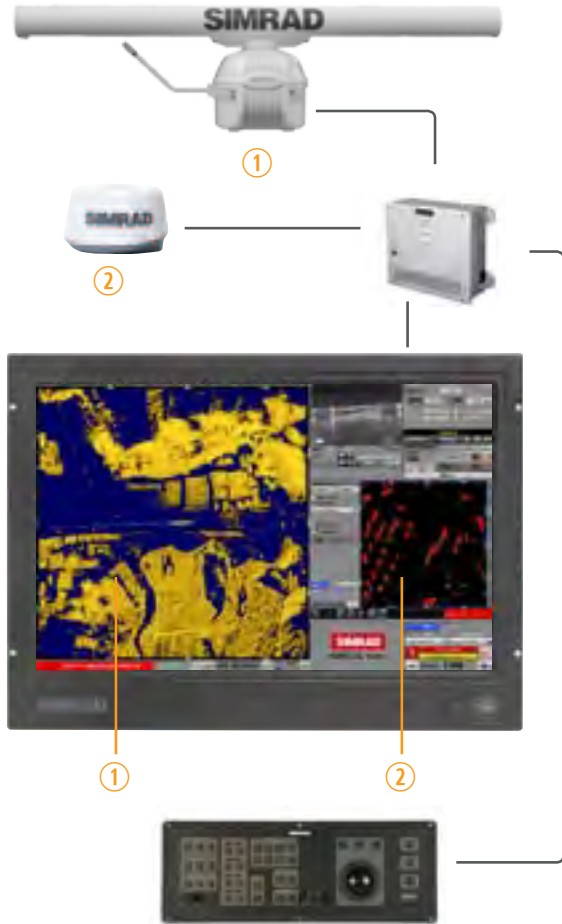
X-Band radar

*Broadband Radar integration dependent on local type approval

ARGUS Radar - Radar display configuration options

Add Broadband Radar to the ARGUS system with either a single or dual scanner implementation and monitor close range targets alongside the long range view (widescreen monitor required).

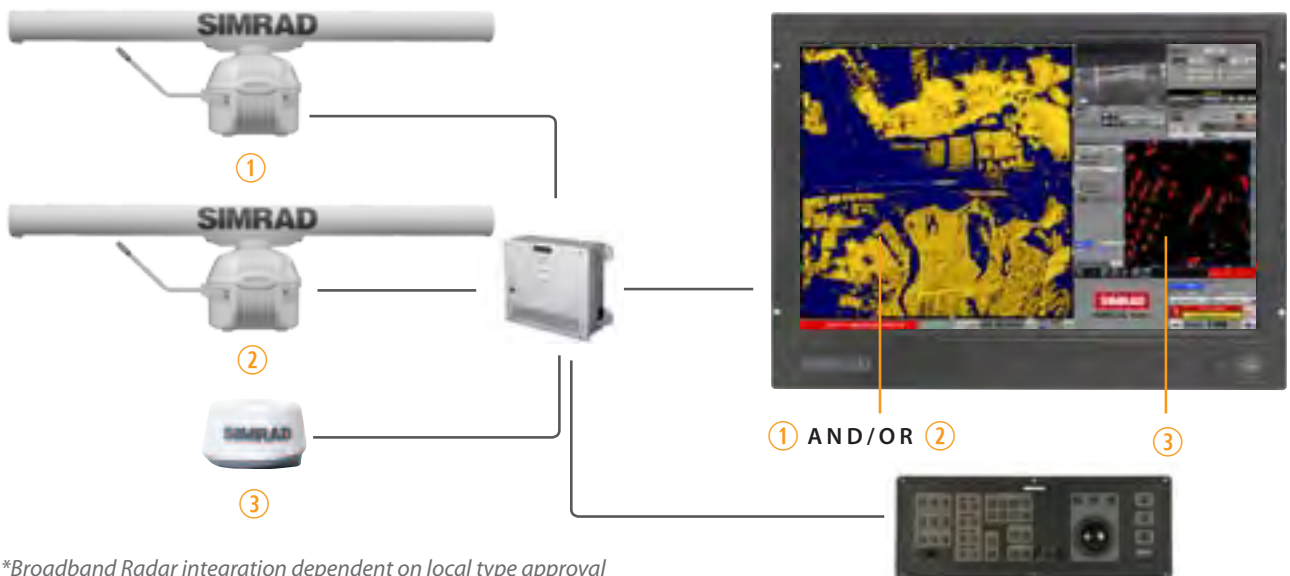
▼ Broadband Radar Integration (Dual)



▼ Broadband Radar Integration (Dual)



▼ Anti Piracy and/or Anti collision and/or Docking Radar integration



*Broadband Radar integration dependent on local type approval

Advanced Oil Spill and Ice Detection Software (OSID)

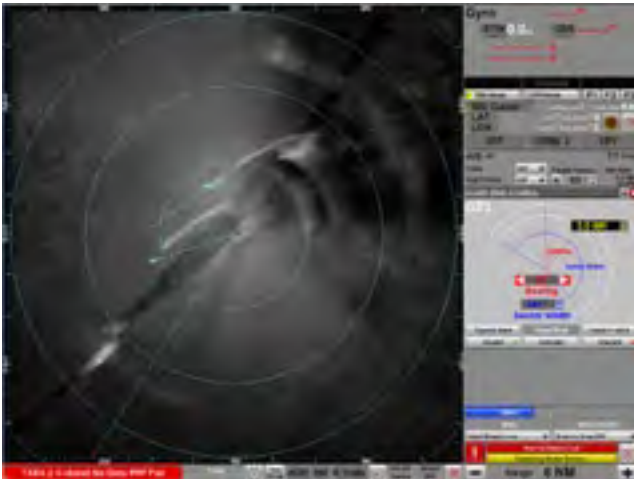
With the optional Advanced OSID Software module installed, the Simrad ARGUS system provides the navigator with both the unique Oil Spill Detection software and the special Ice Navigator features. The navigator can use the radar display as a normal ARPA radar and then easily switch over to the oil spill function as required, enhancing the functionality and providing a comprehensive oil-spill response tool.

The ARGUS radar is the perfect tool for ships in Arctic waters. The Advanced OSID software provides special STC shape for optimal suppression of iced sea clutter and easy interpretation of small

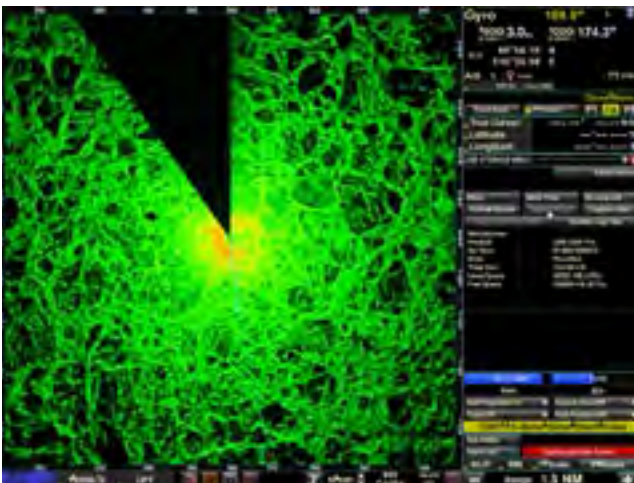
objects and echoes over ice. The result is that new ice pathways or rough areas in the ice banks are clearly visible making water easily be detected.

A Master/Slave inter-switch board is provided as an integral part of the ARGUS radar system. This means that the oil-spill and ice detection displays can easily be interfaced to all on-board radar sensors. The Advanced OSID Software also enables an increase of the antenna rotation speed up to 44 revolutions per minute and the advanced video processing allows for operation under all kinds of visibility conditions.

▼ Oil Spill Detection



▼ Ice Detection and Navigation



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