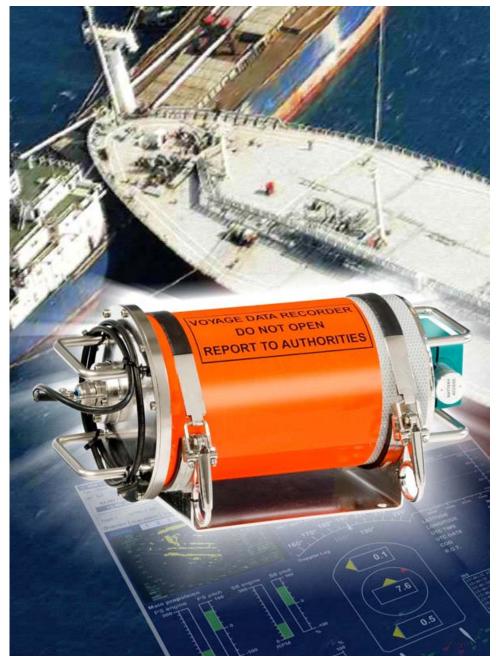


VoyageMaster[™]III S-VDR Voyage Data Recorder



Sperry Marine

VoyageMaster[®]III S-VDR

S-VDR Highlights:

- New lighter compact Data Acquisition Unit (DAU) redesigned to provide smaller, more compact unit
- New removable USB flash drive - replaces the mechanical hard drive found on the VoyageMaster II, allows quicker and easier data retrieval
- **New no moving parts** replacement of the mechanical hard drive means no moving parts, making it a more reliable and cost effective system
- **Twelve hour save feature** saves and protects previous 12 hours of navigational data on to USB flash drive, useful for recording incidents
- **Pre-configured system** allows quick and easy installation and commissioning
- Maritime ruggedness specifically designed to withstand the marine environment
- Playback and analysis software - user friendly software offers viewing of navigational, audio and video data in the office or on-board
- "Live" data monitoring capability to monitor on-board data at optional workstations
- **Beyond IMO requirements applications** - additional video, audio and signal recording are possible
- **Service friendly** maintenance, if necessary, is simplified minimizing repair time and cost
- **One stop provider** for all your installation, servicing and annual performance testing
- Supported by one of the largest worldwide service networks

VoyageMaster III S-VDR

Sperry Marine's new third generation S-VDR is an enhanced compact design with the latest solid state technology that is focused on improved robustness and easier data retrieval via a removable USB flash drive.

The fully type approved system has a flexible modular design that not only conforms to IMO requirements but provides additional video, audio and signal capabilities. In addition, the new generation S-VDR is designed without losing sight of low life-cycle costs or the high standards demanded of Sperry Marine products.

Sperry Marine:Your Preferred S-VDR Solution Provider

Even more important in today's global climate, your choice of supplier is just as important as your choice of S-VDR.

With thousands of navigation systems delivered and installed annually, Sperry Marine is an expert in providing high value navigation solutions. With over 100 years experience in design, development, installation, servicing and support Sperry Marine has become a world leader in the marine electronics industry.

IMO S-VDR Carriage Requirement

In December 2004, the International Maritime Organization (IMO) adopted regulations that require all cargo vessels operating in international waters to carry a simplified voyage recorder system (S-VDR).

The rules are as follows for cargo vessels constructed before 1 July 2002:

• Cargo vessels greater than 20,000 gross tons are required to have S-VDR installed on their first scheduled dry-docking after 1 July 2006 but **not later than 1 July 2009**.

• Cargo vessels of 3,000 gross tons and upwards but less than 20,000 gross tons are required to have S-VDR installed at their first scheduled drydocking after 1 July 2007 **but not later than 1 July 2010**.

• Exemptions can be offered if vessel is taken out of service within 2 years.

Playback Software

The VoyageMaster III S-VDR provides a wealth of data for crew, engineers and the office.

Real-time analysis – Playback software provides the operator with real-time monitoring and analysis. Designed to be intuitive, the software takes only minutes to be mastered.



Playback Screens

Customization capability – The operator has the flexibility to customize the conning pages to the user's preference.

Additional security – Limited data access can be maintained through the ability to set passwords.

Training tool – The playback function is an excellent tool for crew training. It can be used to set up scenarios showing recordings of best-practice navigation.

Data capture – Data can be extracted from the S-VDR system via PC's LAN line or from the removable USB flash drive. This data can easily be imported into a WindowsTM program for analysis both on board and on shore.



New Removable USB Flash Drive

VoyageMaster III S-VDR Standard Configuration Bridge Alarm Unit Data Acquisition Radar Video Unit Card (2 Ch.) 115/240 VAC and 24VDC (IMAGES NOT TO SCALE)

Microphones

Standard Configuration

The basic S-VDR package consists of the following:

- Data Acquisition Unit (DAU):
 - 2 VHF inputs
 - 2 radar inputs
 - Removable USB flash drive
 - UPS (2 hour)
 - Lockable, wall mounted
- 3 indoor microphones 2 outdoor microphones Protected data capsule (12 Hour) Mount for capsule with 50m cable Bridge Alarm Unit (BAU) Playback software Manuals on CD

Optional:

- Remote Video Unit (2 add. Ch.)
- Bridge and water-tight microphones

Protected Data Capsule

- Extended memory storage device
- 24 hour capsule

Mandatory S-VDR Signal List :

- Date and time (GPS)
- Latitude and longitude (GPS)
- Speed (speed log)
- Heading (gyro)
- Bridge and VHF audio
- Main radar (substitute AIS if radar is impossible to record)

Conditional S-VDR Signal List:

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If NMEA serial output is available (IEC 61162):

- Depth beneath the keel
- All IMO mandatory alarms
- Rudder order and response
- Engine order and response
- Hull opening status
- Watertight and fire doors
- Wind speed and direction
- Hull stress monitor

Type Approval

VoyageMaster III S-VDR fully complies with the following type approval requirements:

- MSC 163 (78)
- IEC61996
- IEC 60945
- EU MED Wheelmark
- MSC 214 (81)

Annual Certification

SOLAS V Regulation 18 requires all S-VDR units to have an annual performance test. Sperry Marine has been certified by ABS, Lloyds, GL, USCG and DnV to carry out the annual performance testing and re-certification.



Training

Sperry Marine supports the VoyageMaster III S-VDR and all of its products with certified maintenance, support and operator training classes. Students may attend training in Copenhagen, Denmark; New Malden, U.K.; or Charlottesville, VA U.S.A. Alternatively, on-board training may be arranged.

Additional Information

Please go to Sperry Marine's website for additional information regarding Voyage Data Recorders and a downloadable VDR Guide.

www.sperrymarine.northropgrumman.com



Sperry Marine

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S-VDR System Components

Data Capsule		Width: 420mm 16.5"
		Height: 208mm 8.2"
		Depth: 241mm 9.5"
		Weight: 14kg 31 lbs
Data	-	Width: 525mm 20.7"
Acquisition Unit		Height: 332mm 13.1"
		Depth: 336mm 13.2"
onne	1	Weight: 23kg 51 lbs
Bridge Alarm Unit		Width: 144mm 5.7"
		Height: 144mm 5.7"
		Depth: 50mm 2"
		Cut-out: 100 x 100mm 3.9 x 3.9"
Water-tight		Width: 96mm 3.8"
Microphone		Height: 96mm 3.8"
		Depth: 84mm Max 3.3"
Bridge Microphone		Width: 84mm 3.3"
		Height: 84mm 3.3"
		Depth: 56mm 2.2"
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Global Support Network

Sperry Marine maintains a globally supported service organization with authorized service at more than 200 locations worldwide.



Sperry Marine, with worldwide headquarters in Charlottesville, VA, and major engineering and support offices in Melville, NY, New Malden, England, and Hamburg, Germany, is part of the Northrop Grumman **Electronic Systems** sector.

Sperry Marine ServiceNet Over 200 Locations Worldwide

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