



# Voyage Data Recorder

Long term performance and reliability

# Compliant with the latest performance criteria

In line with the revised Voyage Data Recorder (VDR) performance standards which came into force on 1 July 2014, JRC welcomes or as we say in Japan, yōkoso, to our fourth generation VDR model, the JCY-1900. Having been involved in VDR development from the very beginning in 2001, this latest revision in the performance standards has allowed JRC to re-think, develop and design its latest model with the standard attention to detail for performance, reliability and long term competitive cost of ownership.

## The required ones by the new performance standards

- Equipped of capsule of two types of fixed type and float free type
- Recording of 48 hours in both capsule of fixed type and float free type
- Recording of 30 days / 720 hours in built-in media in control unit
- Image recording of two radar and one ECDIS
- Recording of AIS information
- Audio recording of minimum 2ch of bridge microphone and audio recording of independent minimum 1ch of external wing microphone
- Independent recording of microphone audio of VHF call audio
- Recording of electronic logbook, electronic inclinometer, thruster and BAMS information \*<sup>1</sup>

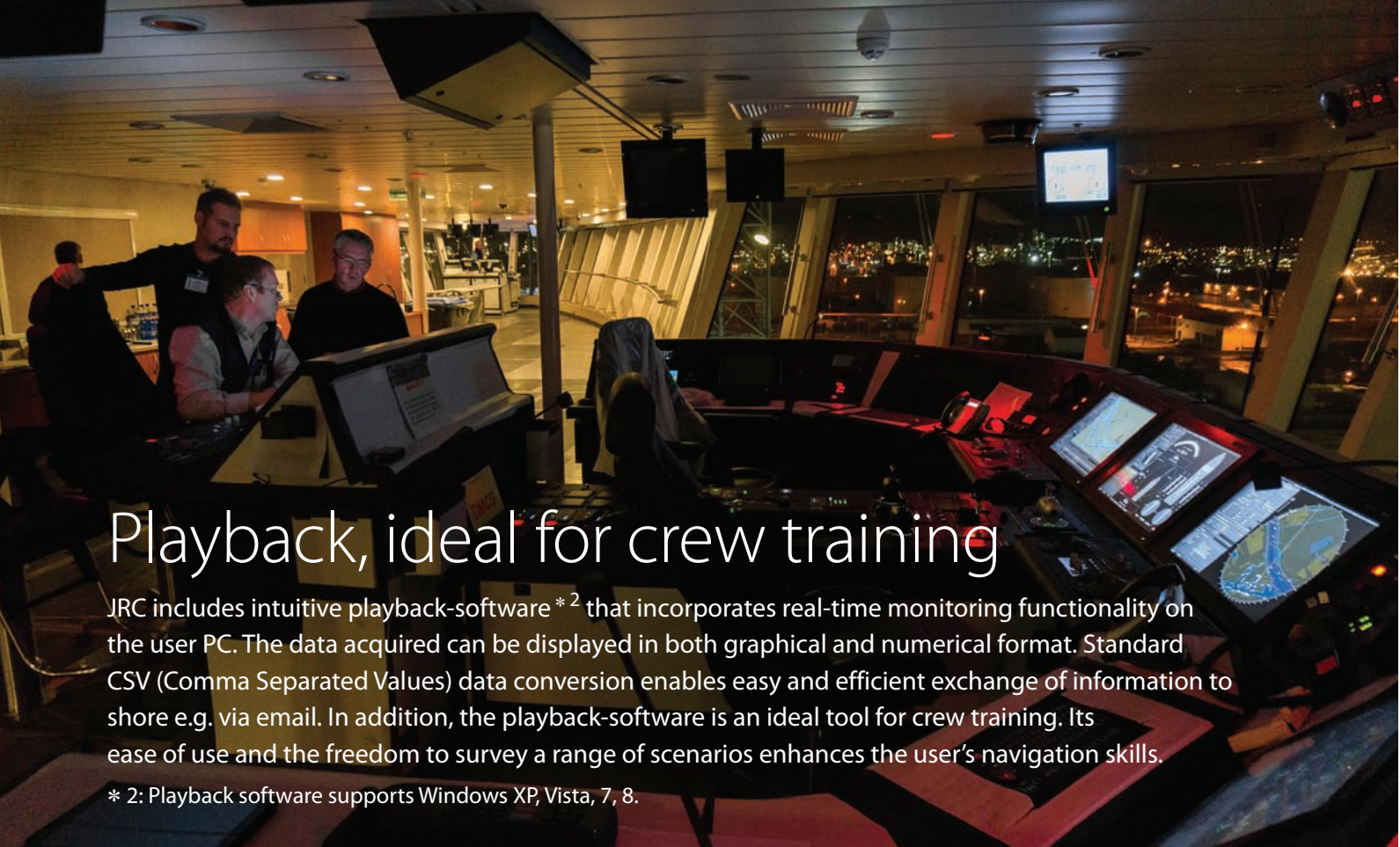
\* 1: Only when it is mounted on a ship.



## System operation, on a 7-inch display

Newly designed for the JCY-1900 is the 7-inch color LCD touch display which allows full system operation. Displaying various VDR alerts with detailed information, see what sensors are connected including status, view the latest recorded image data of radar and ECDIS and playback of audio tracks recorded from microphones.





## Playback, ideal for crew training

JRC includes intuitive playback-software \* 2 that incorporates real-time monitoring functionality on the user PC. The data acquired can be displayed in both graphical and numerical format. Standard CSV (Comma Separated Values) data conversion enables easy and efficient exchange of information to shore e.g. via email. In addition, the playback-software is an ideal tool for crew training. Its ease of use and the freedom to survey a range of scenarios enhances the user's navigation skills.

\* 2: Playback software supports Windows XP, Vista, 7, 8.

## Remote maintenance, closer to you than ever



The new JRC VDR has a dedicated server integrated as standard to support our JRC proprietary Remote Maintenance System (RMS) using IP-routing technology to monitor status of navigation and radio communication equipment onboard, via JRC's FB or GX Inmarsat satellite communications systems, to establish a highly secure connection data link to the vessel. This allows a cost-effective determination of the operating status, software version numbers installed, etc., of the JRC equipment onboard whilst the vessel is at sea. Being able to diagnose a problem remotely, accurately, reliably and quickly, allows the ship owner to save one of the most precious commodities, time. JRC can make preparations at the next port for the necessary repair work, dramatically increasing the return to work status, using our comprehensive and well-trained global support network.

## Built, around our MFD

The JCY-1900 is built around our revolutionary new Multi Function Display (MFD) which functions as radar and/or ECDIS. The unit supports a LAN video input with a maximum of 6 video signals, which allows a straightforward and seamless integration of our MFD, supporting multiple radars and paperless sailing with dual ECDIS.

Naturally, connecting our previous generation radar/ECDIS equipment or other third party radar/ECDIS are also possible, although may require additional hardware.

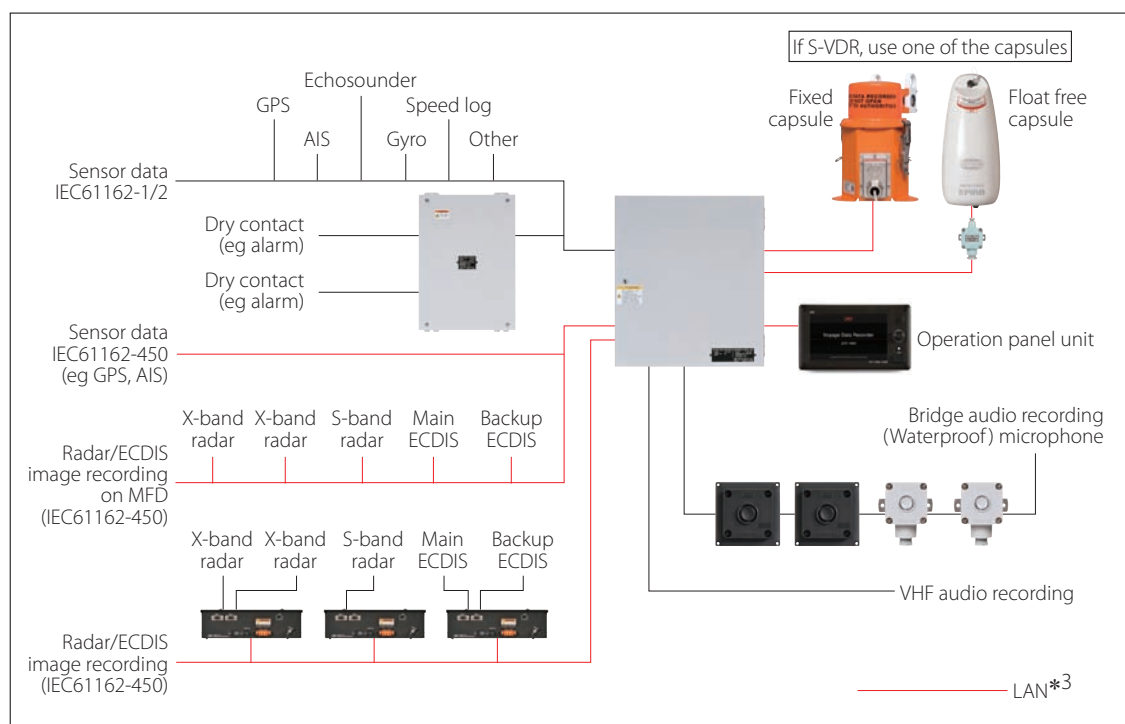


# No new S-VDR regulation, yet a new model

While there is no new Simplified Voyage Data Recorder (S-VDR) requirement, there will also be the new JCY-1950 variant available with just one capsule, fixed or float free. JRC is a company founded on the principles of long term reliability and customer support and there are many ship owners sailing with older S-VDR makes and models that might no longer be supported. JRC views this as a duty to these owners to continue to offer an acceptable alternative solution.

## System diagram

The VDR can be connected to various navigation and communication equipment and sensors onboard a ship. JRC's straightforward configuration assures continuous performance of the VDR system.



\* 3: If you want to connect 5 or more ports, please use the 100BASE-T compatible HUB.

### In the box

- Recording control unit (JCY-1900) NDV-1900
- Recording control unit (JCY-1950) NDV-1950
- Operation panel unit (JCY-1900) NCG-1900
- Operation panel unit (JCY-1950) NCG-1950
- Fixed capsule NDH-338
- Float free capsule NDH-339
- Microphones (3x) NVT-181
- Junction box NQE-7700A
- Playback software CYC-825
- Real time monitoring CYC-826
- Spare parts

### Options

- Microphone NVT-181
- Waterproof microphone NVT-182
- Digital signal convertor NCT-82
- Digital signal convertor NCT-83
- Data acquisition unit NCT-84
- Analog-Digital convertor CEF-60
- Frame grabber board NWP-69

If you want to retrofit as S-VDR, requires either one capsule of the fixed type or float free type.

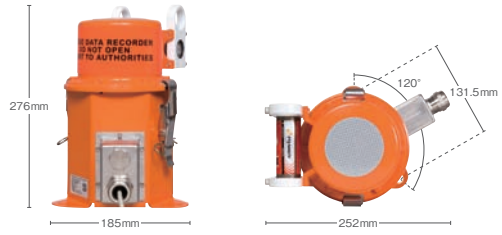
Since there is a case where there is limit, the capsule of the type equipped as S-VDR, please check in advance to the classification/Flag State.

# Dimensions

Operation panel unit **RoHS**  
NCG-1900/1950 MASS 800 g



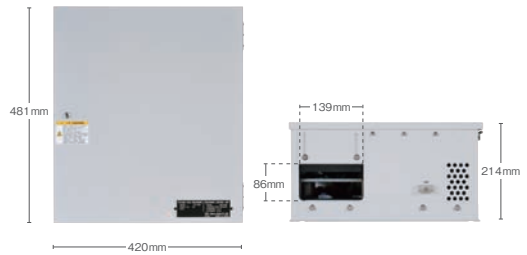
Fixed capsule **RoHS**  
NDH-338 MASS 6.8 kg



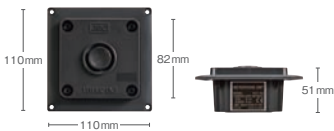
Float free capsule **RoHS**  
NDH-339 MASS 5.2 kg



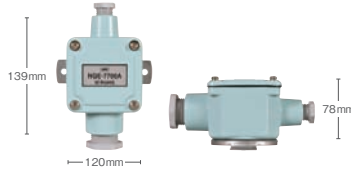
Recording control unit **RoHS**  
NDV-1900/1950 MASS 22.5 kg



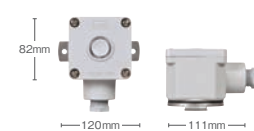
Microphone **RoHS**  
NVT-181 MASS 200 g



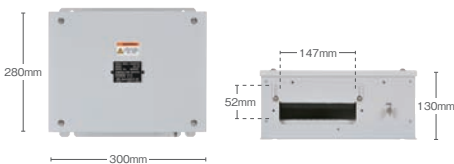
Junction box **RoHS**  
NQE-7700A MASS 600 g



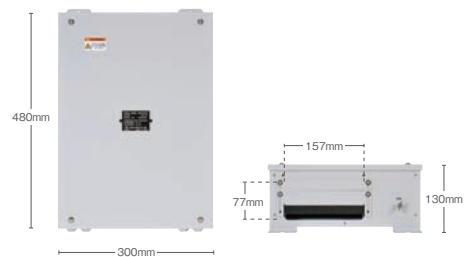
Waterproof microphone **RoHS**  
NVT-182 MASS 500 g



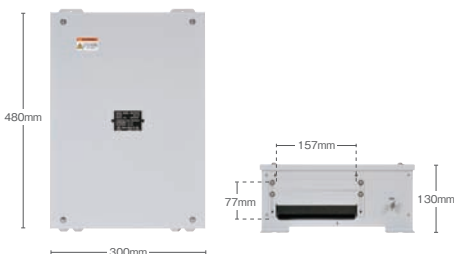
Digital signal converter **RoHS**  
NCT-82 MASS 2.8 kg



Digital signal converter **RoHS**  
NCT-83 MASS 4.2 kg



Data acquisition unit **RoHS**  
NCT-84 MASS 4.3 kg



Frame grabber board **RoHS**  
NWP-69 MASS 1.5 kg



# Specifications

Name	Voyage Data Recorder (VDR)
Model	JCY-1900
<b>Operation panel unit</b>	
Display	7inch WVGA color LCD, 800x480pixel Built in speaker, Touch + rotate and push button, USB (copying of data)
<b>Protective capsule</b>	
<b>Recording data</b>	
Sensor data	date & time, ship's position, speed, heading, echo sounder, main alarms, rudder order and response, engine and thruster order and response, watertight and fire door status, Hull openings status, Accelerations and hull stresses, Wind speed and direction, AIS, Rolling motion, Electronic logbook, BNWAS, speed and distance measuring equipment both ground/water speed
Audio data	Microphone, VHF
Image data	Radar (X band/S band), ECDIS
Recording time	Fixed capsule: 48 hours (capacity 32GB) Float free capsule: 48 hours (capacity 30GB) Solid state drive: 720 hours (30 days) (capacity 512GB)
Data recording interval	Sensor data: depends on the input from the sensors (normally 1 second) Audio data: continuous (1 audio file / minutes) Image data: 3 images /15 seconds
<b>Input ports for sensor connecting</b>	
Serial port	IEC61162-1 (4800bps): 22 ports IEC61162-2 (38400bps): 2 ports
LAN	IEC61162-450: 24 ports
Microphone audio input	8 ports
VHF audio input	4 ports
Radar/ECDIS input	6 ports
Connection I/F	RGB (option)
Dry contact	32 ports (option: NCT-82 dry contact input) 64 ports (option: NCT-83 dry contact input)
Analog input	8 ports (option)
<b>Power supply</b>	
100-120VAC (±10%) 1-phase 50/60Hz 200-240VAC (±10%) 1-phase 50/60Hz	

• Specifications may be subject to change without notice.

**For further information, contact:**



**Japan Radio Co., Ltd.**

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