Simplified Voyage Data Recorder

JCY-1850

- Compact flashcard: no moving parts
- Easy IP based maintenance
- External recording on PC: 180GB for 60 days
- User-friendly real-time playback software
- Global service network

Complies with all current regulations for existing vessels above 3,000 GT.
**JCY-1850 Simplified Voyage Data Recorder**

The JCY-1850 Simplified Voyage Data recorder (S-VDR) is a so-called black box which complies with IMO, MSC 163 (78) performance standard according to IMO, SOLAS-V, Regulation 20 as well as VDR, recording navigational information, bridge conversation and VHF communication. The recorded data is used to analyze causes of an accident such as collision, grounding or sinking. The SOLAS obligates to carry S-VDR for all existing cargo ships over 3,000GT after 1 July, 2006 but not later than 1 July, 2010.

<table>
<thead>
<tr>
<th>International Voyage Existing Cargo Ships</th>
<th>Mandatory Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 20,000 Gross Ton (GT)</td>
<td>The first dry-docking after 1 July, 2006 but not later than 1 July 2009.</td>
</tr>
<tr>
<td>Over 3,000 GT, Less Than 20,000GT</td>
<td>The first dry-docking after 1 July, 2007 but not later than 1 July 2010.</td>
</tr>
</tbody>
</table>

**JCY-1850 Reliability**

JRC's second generation S-VDR incorporates the latest technology to aid a safe nautical future.

**In-house technology**

JRC uses self fabricated reliable, marinised hard-ware, purposely designed for the S-VDR. The non PC-based equipment ensures spare parts availability for many years.

**Dedicated industrial OS**

A reliable platform is created by using an optimized operating system. The dedicated software guarantees a stable environment.

**World-wide support**

JRC gives continuous support through its offices and network of fully trained agents around the world.

**L3 capsule**

L3 is one of the main suppliers of flight recorders to the aircraft industry. They have proven themselves in the VDR market and are the worldwide leader. L3 delivers one of the smallest and lightest S-VDR capsules in the market.
**JCY-1850 performance feature**

The protective capsule of JCY-1850 can record the data 12 hours at least. The recorded data can be checked easily by the playback-software on the user PC according to IMO, SN Circular 246.

**Space saving black-box design**

Mount the black-box at a convenient location to make all necessary interfacing. The separate operation panel can be located on the bridge for easy-access to status and alarm information.

**Playback-software**

JRC includes playback-software that also incorporates real time monitoring functionality on the user PC. The acquisitioned data can be displayed as both graphical and numerical. Standard CSV data conversion enables easy and efficient exchange of information to shore, e.g. by e-mail.

**External recording**

Standard LAN output enables you to connect up to 4 different PC’s by use of a hub. All S-VDR data, including radar video, can be stored on these PC’s. 3GB storage capacity per day is required if you would like to save the data on your computer. This gives you the possibility to easily playback, select and send data.

**System Configuration**

- **Mandatory Equipments**
  - GPS
  - Speed Log
  - Gyro
  - VHF Radiophone
  - Radar
  - AIS

- **Conditional Equipments**
  - Accessible IEC61162 data format
  - Engine Telegraph
  - Echo Sounder
  - Autopilot
  - Bridge Alarm Panel
  - Anemometer

- **Equipment List**
  - Operation panel Unit NCG-169
  - Float free capsule unit (TBD)
  - Protective capsule unit NDH-317
  - Real-time monitor NVT-161
  - On-Bridge Conversation
  - Microphone
  - Recording control unit NDV-1850
  - Navigation Data
  - Communication Audio
  - Radar Video
  - Record navigation data
JCY-1850 specifications

Dimension Drawings

- Protective capsule NDH-317: 215.2mm, Mass 8.1kg
- Connection box NQE-3163: 176mm, Mass 1.3kg
- Recording control unit NDV-1850: 540mm, Mass 21.0kg
- Operation panel unit NCG-169: 165mm, Mass 0.3kg
- Microphone NVT-161: 160mm, Mass 0.2kg
- Waterproof microphone NVT-162: 110mm, Mass 1.2kg

Internation requirements
IMO MSC163(78), IEC 61996-2, IEC61162-1&-2, IEC60945, etc.

Protective capsule

- Recording data: [Mandatory] date & time, ship’s position, speed, heading, bridge communications, Radar Image, VHF Audio, AIS information ( inaccessible radar)
- [IEC61162 accessible] under keel clearance, bridge main alarms, rudder order/response, engine order/response, water-, fire-tight door status, hull opening status, accelerations and hull stresses, wind speed/directions, etc.

Standard Components

<table>
<thead>
<tr>
<th>Unit</th>
<th>Model</th>
<th>Q'ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protective capsule unit</td>
<td>NDH-317</td>
<td>1</td>
</tr>
<tr>
<td>Connection box</td>
<td>NQE-3163</td>
<td>1</td>
</tr>
<tr>
<td>Recording control unit</td>
<td>NDV-1850</td>
<td>1</td>
</tr>
<tr>
<td>Operation panel Unit</td>
<td>NCG-169</td>
<td>1</td>
</tr>
<tr>
<td>Microphone</td>
<td>NVT-161</td>
<td>3</td>
</tr>
<tr>
<td>Spare parts</td>
<td>7ZJJD0080</td>
<td>1</td>
</tr>
<tr>
<td>Playback software</td>
<td>CYC-315 (For Investigator)</td>
<td>1</td>
</tr>
<tr>
<td>Playback software</td>
<td>CYC-316 (For Operator)</td>
<td>1</td>
</tr>
</tbody>
</table>

Optional Components

<table>
<thead>
<tr>
<th>Unit</th>
<th>Model</th>
<th>Q'ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterproof microphone</td>
<td>NVT-162</td>
<td>1</td>
</tr>
<tr>
<td>Frame grabber board kit</td>
<td>7ZJJD0052</td>
<td>1</td>
</tr>
<tr>
<td>Second video channel kit</td>
<td>7ZJJD0055</td>
<td>1</td>
</tr>
<tr>
<td>Armoured LAN cable</td>
<td>7ZCAF0200</td>
<td>30m</td>
</tr>
</tbody>
</table>

Input ports for sensor connecting

- Mic audio: 9 ports
- VHF audio: 3 ports
- IEC61162-1&2: 16 ports
- NSK: sync/step/pulse unit
- Radar (option): RGB
- Analogue (option): 32 ports max.
- Contact (option): 256 ports max.

System input voltage
AC100 / 110 / 115 / 120 / 220 / 240 V

• Specifications may be subject to change without notice.

For further information, contact:

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ISO9001, ISO14001 Certified