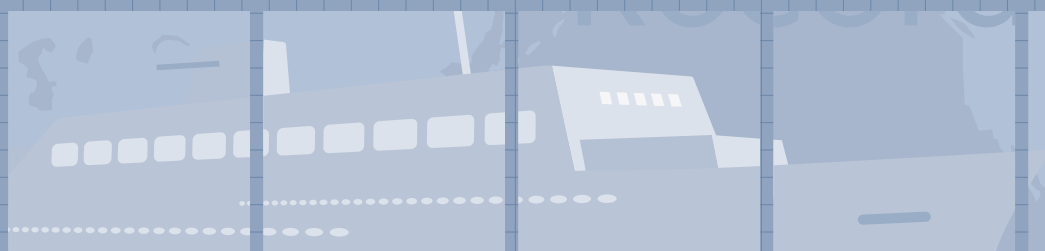


**JRC**

Voyage  
Data  
Recorder



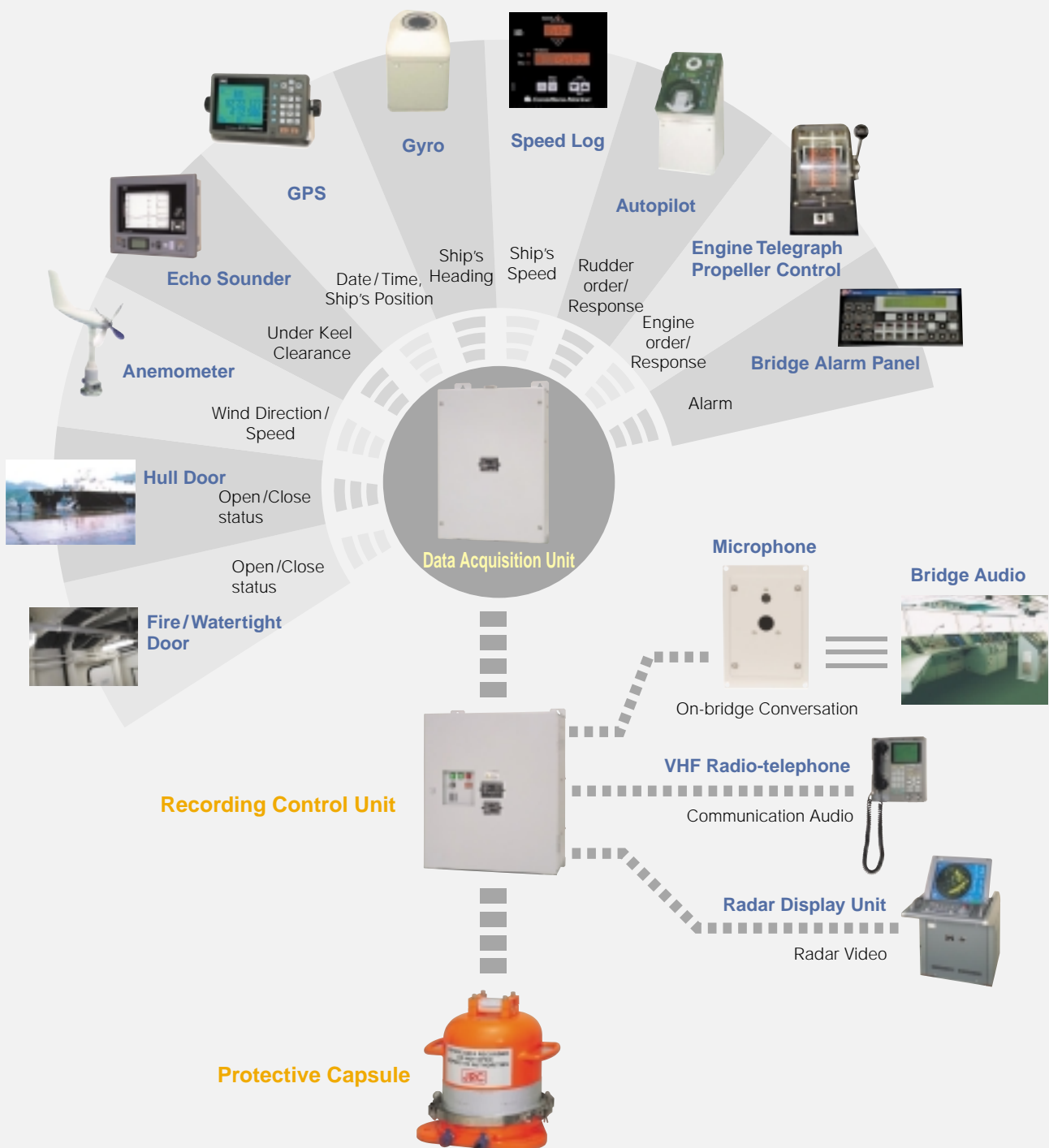
# Voyage Data Recorder (VDR) JCY-1700



The Voyage Data Recorder (VDR) is a so-called black box, recording navigational information, bridge conversation, VHF communications and radar pictures. The recorded data is used to analyze causes of an accident such as collision, grounding or sinking.

The SOLAS\*1 obligates to carry VDR for all passenger ships built on and after July 1, 2002 in international voyage, all other international ships such as cargo carrier or tankers over 3,000GT, and the existing passenger ships in international voyage.

\*1 SOLAS: International Convention for the Safety Of Life At Sea



## Features

### Compliance

- IMO Resolution A.861(20) / IEC61996 / IEC61162 / IEC60945

### Easy Installation

- Wiring reduction due to adopting Ethernet LAN
- Interface types acceptable for various sensors
- Quick onboard setting for operation and interface parameters

### Smaller and lighter Units

- Downsizing components with selection-free due to JRC's unique technologies
- Little power consumption bringing easy maintenance
- High reliability and service-ability provided by in-house design

### Rich Sensor Interface

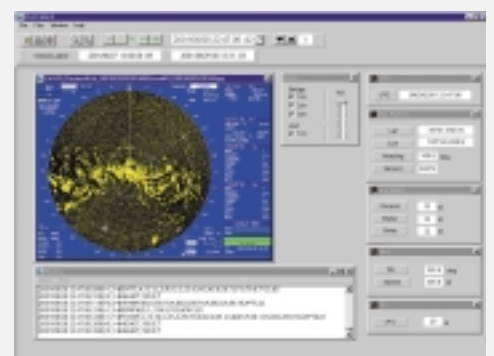
- 16 ports of signal input for serial data of voyage equipment.
- Optional units to handle analog voltage / current signals and synchronous signals.

### High Reliability & Serviceability

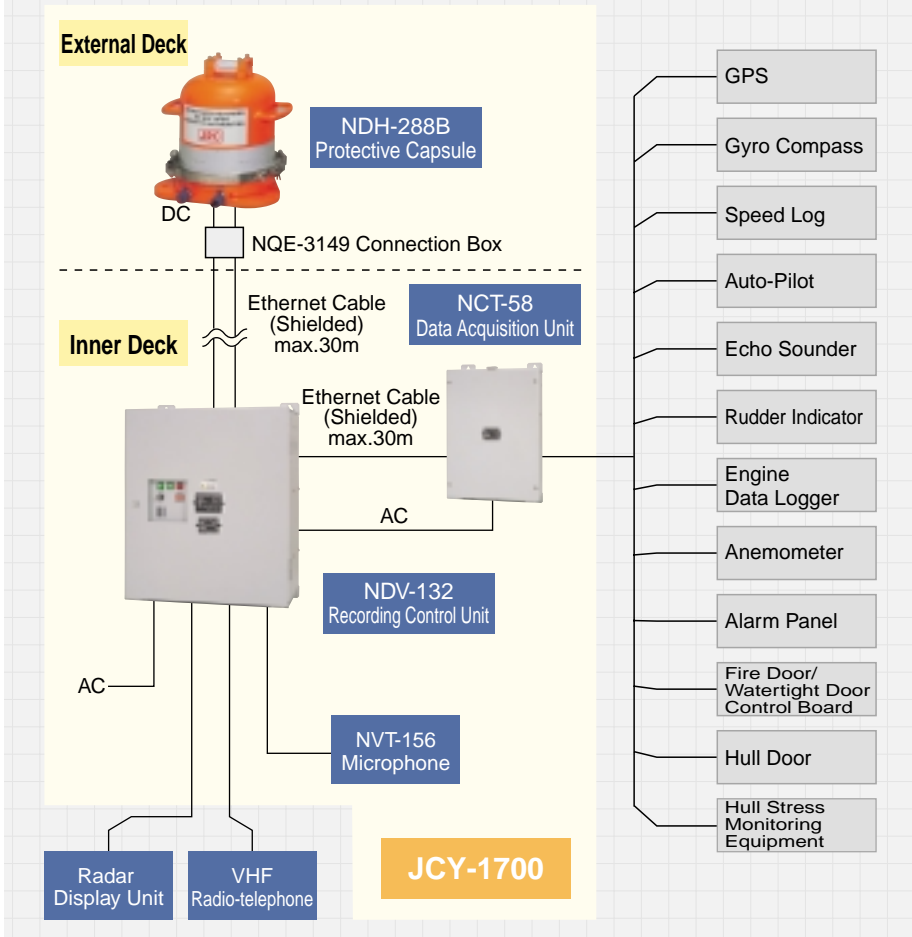
- Distributing system of in-house design bringing high reliability and serviceability
- Components rejected mechanical memory device assuring long-life operation under extreme sea condition

### Applicability

- Real-time monitoring software using commercial PC (option) providing useful navigation information from JCY-1700
- Playback software (option) bringing effective training on either board or shore side
- On-shore remote diagnostic support (option) via Inmarsat link providing quick service for JRC's navigation equipment connected to VDR as navigation data server.



## System Diagram



## Specifications

### Components

#### Standard components

Name	Model no.
Protective Capsule	NDH-288B
Connection Box	NQE-3149
Recording Control Unit	NDV-132
Data Acquisition Unit	NCT-58
Microphone Unit	NVT-156

#### Optional components

Name	Model no.
Analog Input Module	Embedded in NCT-58
Digital Signal Converter	NCT-57
External Alarm Panel	NGC-150
Microphone Unit	NVT-156
Water-proof Microphone Unit	NVT-157

### Specifications

#### Recording Control Unit (NDV-132)

- Bridge conversation input (microphone input)  
Number of inputs: up to 9 sessions  
Recording cycle: continuous, real-time
- VHF communication input  
Number of inputs: up to 3 lines  
Recording cycle: continuous, real-time  
Input level: 0dBm 600Ω (balanced)
- Radar video image input  
Number of displays: 1  
Input interface: analog RGB, Hs, Vs  
Resolution: 640 X 480 to 1600 X 1200 pixels  
Refresh rate: 60 to 85 Hz  
Recording cycle: 1 image / 15 seconds
- Backup of recorded data: PC card, 2GB

#### Data Acquisition Unit (NCT-58)

- Data Acquired: Date and time, ship's position, ship's speed, ship's heading, under keel clearance, bridge alarm, rudder order, actual rudder angle, engine and propeller revolution order and actual CPP angle, status of fire doors and watertight doors, status of hull openings, hull stress, wind speed and direction, and so on.
- Recording cycle: shorter than 1 second
- IEC61162-1 input: 16 ports
- Analog input: 4 ports (optional)

#### Microphone Unit (NVT-156)

- Built-in speakers for microphone test
- Phantom power feed

#### Capsule (NDH-288B)

- Type: fixed type
- Memory capacity of final recording media: 1.75 GB
- Duration of recording: 12 hours
- Environmental condition: fire resistance: 1,100°C (more than 1 hour) and 260°C (more than 10 hours), water resistance: 6,000m (under pressure for 24 hours)
- Data retention: more than 2 years
- Underwater beacon: 37.5 kHz ± 1 kHz  
Operating period: 30 days at a minimum

#### System Power Supply Voltage

AC100 / 110 / 115 / 120 / 200 / 220 / 230 / 240V

## Dimensions

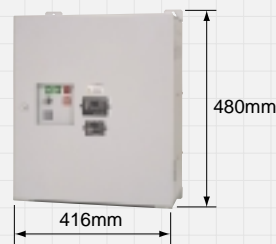
### Protective Capsule

Depth: 255mm  
Weight: 19kg



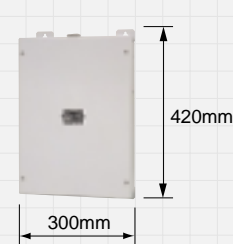
### Recording Control Unit

Depth: 230mm  
Weight: 21kg



### Data Acquisition Unit

Depth: 130mm  
Weight: 4kg



Dimensions subject to change without notice.

## ⚠ Cautions for Safety

Read the Instruction Manual before your use for safety in operation.

Do not install this equipment in a place with water, wetness, vapor, dust and oily smoke. Otherwise, a fire, electric shock or failure may result.

For the installation work for this equipment, request to JRC agents or dealers. The installation work done by any non-specialist personnel may result in an electric shock or failure.

For further information, contact:



Since 1915

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