# **INSTRUCTION MANUAL**

## **VDR MAINTENANCE VIEWER**

## Model VR-7000/VR-7000S

This manual is solely for use by the installer of this equipment. Under no circumstances shall this manual be released to the user.

This manual contains no password data. Obtain password data from FURUNO before beginning the installation.

## FURUNO ELECTRIC CO., LTD.

www.furuno.com

### FURUNO ELECTRIC CO., LTD.

9-52 Ashihara-cho, Nishinomiya, 662-8580, JAPAN • FURUNO Authorized Distributor/Dealer

All rights reserved. | Printed in Japan

Pub. No. OME-44852-M

(REFU ) VR-7000/S MAINT VIEW

A : JUL. 2014 M : NOV. 19, 2024



0 0 0 2 0 0 8 3 9 1 1

## TABLE OF CONTENTS

FO	REW	ORD	iv
1.	INS		1_1
••	1.1		
		How to Install the VDR Maintenance Viewer/	
		Java <sup>®</sup> and Set Up the PC	
		1.2.1 How to install the VDR Maintenance Viewer	
		1.2.2 How to install the Java <sup>®</sup>	
		1.2.3 How to set the IP address and subnet mask	
	1.3	How to Connect a PC to the VR-7000/7000S	1-5
	1.4	How to Start the VDR Maintenance Viewer	1-5
	1.5	How to Uninstall the VDR Maintenance Viewer	1-7
	1.6	Display Configuration	1-8
2.		TWARE CONFIGURATION	
	2.1	How to Configure the VR-7000/7000S with the VDR Maintenance Viewer	
	2.2	Radar/ECDIS Signal	
	2.3	Serial Signal	
	2.4	Analog Signal	
	2.5	Digital Signal	
	2.6	Audio Signal	
		Alerts	
		Event	
		Hardware	
		JB (IF-8530)	
		Lifetime	
		Network	
		System.	
		Software	
		GPS Vessel	
	-	Delivery	-
		Sensor (LAN)	
		SA (Sensor Adapter)	
		CAM (AMS)	
		VLC	
		Image Interface	
		Audio Board	
		Image Record Setting	
		How to Upload the Configuration Data	
3.	нои	V TO BACK UP CONFIGURATION DATA	3-1
	3.1	How to Back up Configuration Data to the Recording Media	
	3.2	How to Back up Configuration Data to a PC	3-2
	3.3	How to Restore the Default Settings	
4.	HOV	V TO UPLOAD CONFIG-URATION DATA FROM A PC	4-1
5.	MED	DIA MANAGEMENT	
	5.1	Initialization of DRU, Long Term Device, User Disk	
	5.2	Creation of Long Term Device	
	5.3	Creation of User Disk	5-3

6.	OTH	IER FU	INCTIONS	6-1
	6.1	Softwa	re Management	6-1
		6.1.1	How to download software	6-1
		6.1.2	How to update software	6-1
		6.1.3	How to update VLC	
		6.1.4	How to update RAP	
	6.2	Audio I	Password	
	6.3		Comparison	
	6.4		re History	
	••••	6.4.1	How to save software history	
		6.4.2	How to configure the software communications record	
	6.5	-	Setup	
	0.0	6.5.1	Default template: The default template is created with the settings enter	
			at installation	
		6.5.2	Specific template: Use a file already created	
	6.6		nent Management	
		6.6.1	How to import a data file	
		6.6.2	How to export a data file	
	6.7		\P	
	6.8	_		
	0.0	6.8.1	Status Monitor window	
		6.8.2	VDR Error List	
		6.8.3	Sentence Information Upload.	
		6.8.4	Exchange Check	
		6.8.5	Reboot	
		0.0.0		
7.	SET	TING F	FOR SENSOR ADAPTER	7-1
7.	<b>SET</b> 7.1		Set the Equipment ID	
7.		How to		7-1
7.	7.1	How to	Set the Equipment ID	7-1 7-2
7.	7.1	How to [Installa	Set the Equipment ID ation Parameters] Menu	7-1 7-2 7-2
7.	7.1	How to [Installa 7.2.1 7.2.2	Set the Equipment ID ation Parameters] Menu Sensor setting	7-1 7-2 7-2 7-3
7.	7.1 7.2	How to [Installa 7.2.1 7.2.2 [Save]	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration	7-1 7-2 7-2 7-3 7-6
7.	7.1 7.2 7.3	How to [Installa 7.2.1 7.2.2 [Save] How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File	7-1 7-2 7-2 7-3 7-6 7-6
7.	7.1 7.2 7.3 7.4	How to [Installa 7.2.1 7.2.2 [Save] How to How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S)	7-1 7-2 7-2 7-3 7-6 7-6 7-7
7.	7.1 7.2 7.3 7.4	How to [Installa 7.2.1 7.2.2 [Save] How to How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program.	7-1 7-2 7-3 7-3 7-6 7-6 7-7 7-7
7.	7.1 7.2 7.3 7.4	How to [Installa 7.2.1 7.2.2 [Save] How to 7.5.1	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S)	7-1 7-2 7-2 7-3 7-6 7-6 7-7 7-7 7-7
	7.1 7.2 7.3 7.4 7.5	How to [Installa 7.2.1 7.2.2 [Save] How to How to 7.5.1 7.5.2 7.5.3	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program. How to confirm the firmware program version How to update the firmware program.	7-1 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-7 7-8
<b>7</b> . <b>8</b> .	7.1 7.2 7.3 7.4 7.5	How to [Installa 7.2.1 7.2.2 [Save] How to 7.5.1 7.5.2 7.5.3	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program How to confirm the firmware program version How to update the firmware program.	7-1 7-2 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-8 7-8
	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1	How to [Installa 7.2.1 7.2.2 [Save] How to 7.5.1 7.5.2 7.5.3 <b>TING F</b> How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program How to confirm the firmware program version How to update the firmware program FOR HUB-3000 Setup the HUB-3000	7-1 7-2 7-2 7-3 7-6 7-6 7-7 7-7 7-7 7-8 8-1
	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2	How to [Installa 7.2.1 7.2.2 [Save] How to 7.5.1 7.5.2 7.5.3 <b>TING F</b> How to How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program How to confirm the firmware program version How to update the firmware program FOR HUB-3000 Setup the HUB-3000 Export the Configuration File	7-1 7-2 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-2
	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1	How to [Installa 7.2.1 7.2.2 [Save] How to 7.5.1 7.5.2 7.5.3 <b>TING F</b> How to How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program How to confirm the firmware program version How to update the firmware program FOR HUB-3000 Setup the HUB-3000	7-1 7-2 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-2
8.	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2 8.3	How to [Installa 7.2.1 7.2.2 [Save] How to How to 7.5.1 7.5.2 7.5.3 <b>TING F</b> How to How to How to	Set the Equipment ID	7-1 7-2 7-2 7-3 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-2 8-2
	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2 8.3 <b>REN</b>	How to [Installa 7.2.1 7.2.2 [Save] How to 7.5.1 7.5.2 7.5.3 <b>TING F</b> How to How to How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program How to confirm the firmware program version How to confirm the firmware program How to update the firmware program Setup the HUB-3000 Setup the HUB-3000 Export the Configuration File Import the Configuration File	7-1 7-2 7-2 7-3 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-2 8-2 8-2
8.	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2 8.3 <b>REN</b> 9.1	How to [Installa 7.2.1 7.2.2 [Save] How to How to 7.5.1 7.5.2 7.5.3 TING F How to How to How to How to	Set the Equipment ID	7-1 7-2 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-2 8-2 8-2 8-2 9-1
8.	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2 8.3 <b>REN</b>	How to [Installa 7.2.1 7.2.2 [Save] How to How to 7.5.1 7.5.2 7.5.3 TING F How to How to How to How to	Set the Equipment ID ation Parameters] Menu Sensor setting Sensor adapter configuration Menu Save the Log File Update the Firmware (MC-3000S) How to activate the maintenance program How to confirm the firmware program version How to confirm the firmware program How to update the firmware program Setup the HUB-3000 Setup the HUB-3000 Export the Configuration File Import the Configuration File	7-1 7-2 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-2 8-2 8-2 8-2 9-1
8. 9.	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2 8.3 <b>REN</b> 9.1 9.2	How to [Installa 7.2.1 7.2.2 [Save] How to How to 7.5.1 7.5.2 7.5.3 TING F How to How to How to How to Networ	Set the Equipment ID	7-1 7-2 7-2 7-3 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-2 8-2 8-2 8-2 9-1 9-2
8. 9.	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2 8.3 <b>REN</b> 9.1 9.2 <b>IEC</b>	How to [Installa 7.2.1 7.2.2 [Save] How to How to 7.5.1 7.5.2 7.5.3 TING F How to How to How to How to Networ 61162-4	Set the Equipment ID	7-1 7-2 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-7 7-8 8-1 8-1 8-1 8-2 8-2 9-1 9-1 9-2 9-2
8. 9.	7.1 7.2 7.3 7.4 7.5 <b>SET</b> 8.1 8.2 8.3 <b>REN</b> 9.1 9.2 <b>IEC</b> 10.1 10.2	How to [Installa 7.2.1 7.2.2 [Save] How to How to 7.5.1 7.5.2 7.5.3 TING F How to How to How to Networ 61162-4 How to How to	Set the Equipment ID	7-1 7-2 7-2 7-3 7-6 7-6 7-6 7-7 7-7 7-7 7-7 7-8 8-1 8-1 8-2 8-2 8-1 9-1 9-1 9-2 10-1 10-1 10-2

APPX. 1 MENU TREE	AP-1
INDEX	IN-1

## FOREWORD

#### Introduction

This manual describes the procedures to follow after installing the VR-7000/7000S. The outline of the setup is as below.

- Step 1: Network setting on PC and VDR
- Step 2: Software setting
- Step 3: Backup data setting
- Step 4: Software configuration from file data
- Step 5: Media management
- Step 6: Other functions

After setting up, save a backup copy of the configuration data to both a recording media and the PC that has the VDR Maintenance Viewer.

#### Parts and equipment needed

- PC with Internet Explorer<sup>®</sup> 6.0 or higher
- LAN cable (supplied)

#### Trademarks

- Windows and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- All other brand and product names are registered trademarks, trademarks of their respective holders.

#### About this manual

The screenshots shown in this manual were taken on a Windows<sup>®</sup>7 PC. The displays you see on your PC may be different if your OS is different.

#### Notes on usage

VDR Maintenance Viewer software with program versions earlier than those listed below cannot be installed on the same PC.

- VDR Maintenance Viewer for VR-3000/S: Version 1.41
- VDR Maintenance Viewer for VR-7000/S: Version 1.04

Uninstall software except for the above-mentioned program versions. Confirm that software versions are compatible before installing new VDR Maintenance Viewer software. Where VDR Maintenance Viewer for VR-3000/S and VR-7000/S are installed on the same PC, to use VDR Maintenance Viewer for VR-7000/S after using VDR Maintenance Viewer for VR-7000/S, restart the PC before starting VDR Maintenance Viewer for VR-7000/S. A restart is not required when using VDR Maintenance Viewer for VR-7000/S after using VDR Maintenance Viewer for VR-3000/S.

#### **Open Source Software**

This product includes software to be licensed under the BSD, Apache, GPLv2 + Classpath Exception and others. For details about the term of use for these software, see the OSS license list on the supplied program CD (directory: \OSS\_LicenseList\viewer).

#### **Reverse engineering**

Reverse engineering (disassemble, decompile) of the software of this equipment is strictly prohibited.

Manual Version	Date of Modification	Software Program No.	Reason for Revision
A	July 2014	2450105-01	1st printing
В	May 2015	2450105-01.04	Software update
С	April 2016	2450105-01.06	Software update
D	November 2016	2450105-01.10	Software update
E	August 2017	2450105-01.20	Software update
F	August 2018	2450105-01.30	Software update
G	July 2019	2450105-01.40	Software update
Н	October 2020	2450105-01.61	Software update
J	July 2021	2450105-01.63	Software update
K	March 2022	2450105-01.64	Software update
L	July 2023	2450105-01.65	Software update
М	November 2024	2450105-01.66	Software update

#### Record of modifications made in this manual

This page is intentionally left blank.

## 1. INSTALLATION

The VDR Maintenance Viewer is a software program for setting and maintenance of the VDR. Install the VDR Maintenance Viewer in a PC using the accessory CD.

This chapter provides the description for the installable PC and how to install the program and set the PC.

## 1.1 Installable PC

The VDR Maintenance Viewer is compatible with the OS (Operating System) shown below. The OS language should be English or Japanese. The VDR Maintenance Viewer may not operate properly on a PC with other OS and language.

- Windows<sup>®</sup>11 (64 bit)
- Windows<sup>®</sup>10 (64 bit)
- Windows<sup>®</sup>8.1 (64 bit)
- Windows<sup>®</sup>7 (32 bit)

#### **Required specifications for replay PC**

- · CPU: Pentium 350 MHz (or equivalent) or higher
- RAM: Minimum 1 GB
- HDD: Minimum 250 GB
- Screen resolution: XGA or higher (More than SXGA (1280x1024) recommended)
- CD-ROM drive (internal or external)
- LAN port
- USB port (2.0 compatible)
- DirectX<sup>®</sup>9.0c or higher
- Java<sup>®</sup>

If there is no Java<sup>®</sup> in the PC, run the installer file included in the program CD to install the Java<sup>®</sup> program.

File name: OpenJDK8U-jre\_x86-32\_windows\_hotspot\_8u362b09.msi

Microsoft<sup>®</sup> Visual C++<sup>®</sup> 2005 SP1 (x86) or later

**Note:** Before you connect a PC to the VDR, set the IP address and subnet mask on the PC (see section 1.2).

## 1.2 How to Install the VDR Maintenance Viewer/ Java<sup>®</sup> and Set Up the PC

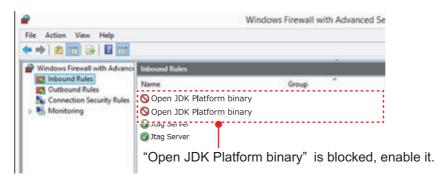
The software program for the VDR Maintenance Viewer and Java<sup>®</sup> are included in the program CD. Install the software, then set the IP address and subnet mask of the PC.

**Note:** The program CD has installation programs for three versions of the VDR Maintenance Viewer. Select the VDR Maintenance Viewer program version according to the VDR program version.

VDR program version	Compatible VDR Maintenance Viewer program version
ver. 01.66 or later	ver. 01.66 or later
ver. 01.20 to 01.65	ver. 01.65
ver. 01.10 or earlier	ver. 01.10

#### Firewall software block setting

Confirm that "Open JDK Platform binary" is not blocked by the Firewall. If blocked, enable "Open JDK Platform binary". When "Open JDK Platform binary" is blocked, the VDR Maintenance Viewer cannot connect with the VDR.



To confirm the firewall settings, open the [Windows Firewall with Advanced Security] dialog box as follows:

- Windows<sup>®</sup>7: [Start] button > [Control Panel] > [Windows Firewall] > [Advanced settings] > [Inbound Rules]
- Windows<sup>®</sup>8.1: Open the desktop > Move the mouse pointer to the bottom right edge of the screen > [Settings] > [Control Panel] > [System and Security] > [Windows Firewall] > [Advanced settings] > [Inbound Rules]
- Windows<sup>®</sup>10/Windows<sup>®</sup>11: [Start] button > [All Apps] > [Windows System] > [Control Panel] > [System and Security] > [Windows Firewall] > [Advanced settings] > [Inbound Rules]

#### 1.2.1 How to install the VDR Maintenance Viewer

- 1. Insert the supplied program CD into the CD drive.
- 2. Run "view.exe" on the program CD to show the [Setup-VR-7000] dialog box.
- 3. Click the [Next] button.
- 4. Confirm that the install location is "C:\Program Files(x86)\*\FURUNO" then click the [Next] button. \*: Folder name for 64 bit. "Program Files" for 32 bit.
- 5. Click the [Yes] button.

- 6. Click the [Next] and [Install] buttons to install the software.
- 7. After the installation is completed, the message "Yes, restart computer now" is checked. Click the [Finish] button to complete the installation and restart the PC.

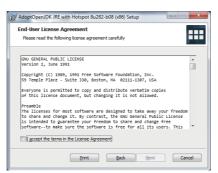
#### 1.2.2 How to install the Java<sup>®</sup>

- 1. Insert the supplied program CD into the CD drive.
- 2. Run "OpenJDK8U-jre\_x86-32\_windows\_hotspot\_8u362b09.msi" on the program CD to show the installation wizard.

**Note:** If the security warning message appears after double-clicking the installer file, click the [Run] button.

AdoptOpenJDK JRE with H	otspot 8u282-b08 (x86) Setup
	Welcome to the AdoptOpenJDK JRE with Hotspot 8u282-b08 (x86) Setup Wizard
	The Setup Wizard will install AdoptOpenJDK JRE with Hotspot Bu282-DoB (x68) on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
	Back Next Cancel

3. Click the [Next] button.



4. Check the checkbox for [I accept the terms in the License Agreement], then click the [Next] button.

H AdoptOpenJDK JRE with Hotspot 8u282-b08 (xi	B6) Setup					
Custom Setup Select the way you want features to be installed.						
Click the icons in the tree below to change the way features will be installed.						
RE with Hotspot      Add to PATH      Associate .jar      Set JAVA_HOME variable	AdoptOpenJDK Runtime Environment with Hotspot					
JavaSoft (Orade) regist	This feature requires 89MB on your hard drive. It has 2 of 4 subfeatures selected. The subfeatures require 3KB on your hard drive.					
Location: C:\Program Files\AdoptOpenJDK\jre-8.0.28	2.8-hotspot\					
Reget Disk Usage	Back Next Cancel					

5. Click the [Next] button without changing the settings.

👷 AdoptOpenJDK JRE with Hotspot 8u282-b08 (x86) Setup
Ready to install AdoptOpenJDK JRE with Hotspot 8u282-b08
Olick Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the witard.
Back Sinstall Cancel

6. Click the [Install] button.

The progress bar is shown during the installation. After the installation is completed, the confirmation message appears.

AdoptOpenJDK JRE with Hotspot 8u282-b08 (x86) Setup	😥 AdoptOpenJDK JRE with Hotspot 8u282-b08 (x86) Setup
Installing AdoptOpenJDK JRE with Hotspot 8u282-b08 (x86)	Completed the AdoptOpenJDK JRE with Hotspot 8u282-b08 (x86) Setup Wizard
Please wait while the Setup Wizard installs AdoptOpenJDK JRE with Hotspot 8u282-b08 (x86).	Click the Finish button to exit the Setup Wizard.
Status:	
Back Next Cancel	Bock Drad Cancel

7. Click the [Finish] button.

#### 1.2.3 How to set the IP address and subnet mask

#### Windows®7

- 1. Click the [Start] button then click [Control Panel].
- 2. In the search box, type adapter.
- 3. Under [Network and Sharing Center], click [View network connections].
- 4. Right click the connection to change, and then click [Properties].
- 5. Click the [Networking] tab. Under [This connection uses the following items], click [Internet Protocol Version 4 (TCP/IP v4)] then click [Properties].
- 6. Click the [Use the following IP address] button.
- Enter the IP address and subnet mask of the PC. IP address: 172.31.16.201 or 172.31.16.202 Subnet mask: 255.255.0.0 Note: The IP address of the VR-7000/7000S is 172.31.16.200.
- 8. Click the [OK] button and then click the [Close] button.
- 9. Restart the PC.

#### Windows<sup>®</sup>8.1

- 1. Move the mouse cursor to the bottom or top right corner of the screen and select the cog icon for [Settings].
- 2. Select [Control Panel].
- 3. In the [Control Panel] window, click the [View by] drop down menu, then select [Large icons] or [Small icons].
- 4. Select [Network and Sharing Center].
- 5. Select [Change adapter settings].
- 6. Right click on your connected network and select [Properties].
- 7. Select [Internet Protocol Version 4 (TCP/IP v4)] then click [Properties].
- 8. Click the [Use the following IP address] button.
- Enter the IP address and subnet mask of the PC. IP address: 172.31.16.201 or 172.31.16.202 Subnet mask: 255.255.0.0 Note: The IP address of the VR-7000/7000S is 172.31.16.200.

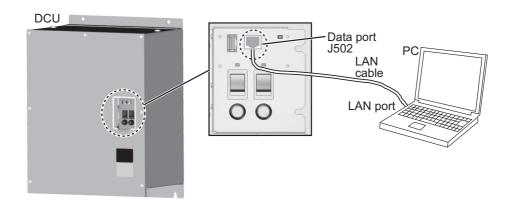
- 10. Click the [OK] button and then click the [Close] button.
- 11. Restart the PC.

#### Windows<sup>®</sup>10/Windows<sup>®</sup>11

- 1. Click [Start] button > [All Apps] > [Windows System] > [Control Panel].
- 2. In the [Control Panel] window, click the [View by] drop down menu, then select [Large icons] or [Small icons].
- 3. Select [Network and Sharing Center].
- 4. Select [Change adapter settings].
- 5. Right click on your connected network and select [Properties].
- 6. Select [Internet Protocol Version 4 (TCP/IP v4)] then click [Properties].
- 7. Click the [Use the following IP address] button.
- Enter the IP address and subnet mask of the PC. IP address: 172.31.16.201 or 172.31.16.202 Subnet mask: 255.255.0.0 Note: The IP address of the VR-7000/7000S is 172.31.16.200.
- 9. Click the [OK] button and then click it again on the next screen.
- 10. Restart the PC.

## 1.3 How to Connect a PC to the VR-7000/7000S

Open the door on the cover of the DCU. Connect the LAN cable (supplied) between the DATA port J502 in the DCU and the LAN port on the PC.



### **1.4** How to Start the VDR Maintenance Viewer

Select the VDR Maintenance Viewer program version according to the VDR program version. When the VDR Maintenance Viewer program version is not compatible with the VDR program version, VDR Maintenance Viewer does not work properly.

- When the VDR program version is "01.66" or later: Use the latest version of the VDR Maintenance Viewer ([VR-7000 VDR Maintenance Viewer (××.××)] (××.××: 01.66 or later)).
- <u>When the VDR program version is "01.20" to "01.65"</u>: Use the VDR Maintenance Viewer version 01.65 ([VR-7000 VDR Maintenance Viewer (01.65)]).

 When the VDR program version is "01.10" or earlier: Use the VDR Maintenance Viewer version 01.10 ([VR-7000 VDR Maintenance Viewer OLD (01.10)]).

#### How to start the latest version of the VDR Maintenance Viewer

- Windows<sup>®</sup>7: [Start] button > [All Programs] > [VR-7000] > [VR-7000 VDR Maintenance Viewer (××.××)] (××.××: 01.66 or later)
- Windows<sup>®</sup>8.1: [Start] screen > Right click a blank part of screen, then select [All Apps] > click "VR-7000" > [VR-7000 VDR Maintenance Viewer (××.××)] (××.××: 01.66 or later)
- Windows<sup>®</sup>10/Windows<sup>®</sup>11: [Start] menu > [All Apps] > [VR-7000] > [VR-7000 VDR Maintenance Viewer (××.××)] (××.××: 01.66 or later)

#### How to start the VDR Maintenance Viewer version 01.65

- Windows<sup>®</sup>7: [Start] button > [All Programs] > [VR-7000 Previous Version] > [VR-7000 VDR Maintenance Viewer (01.65)]
- Windows<sup>®</sup>8.1: [Start] screen > Right click a blank part of screen, then select [All Apps] > click [VR-7000 Previous Version] > [VR-7000 VDR Maintenance Viewer (01.65)]
- Windows<sup>®</sup>10/Windows<sup>®</sup>11: [Start] menu > [All Apps] > [VR-7000 Previous Version] > [VR-7000 VDR Maintenance Viewer (01.65)]

#### How to start the VDR Maintenance Viewer version 01.10

- Windows<sup>®</sup>7: [Start] button > [All Programs] > [VR-7000 Legacy Version] > [VR-7000 VDR Maintenance Viewer OLD (01.10)]
- Windows<sup>®</sup>8.1: [Start] screen > Right click a blank part of screen, then select [All Apps] > click [VR-7000 Legacy Version] > [VR-7000 VDR Maintenance Viewer OLD (01.10)]
- Windows<sup>®</sup>10/Windows<sup>®</sup>11: [Start] menu > [All Apps] > [VR-7000 Legacy Version]
   [VR-7000 VDR Maintenance Viewer OLD (01.10)]

**Note:** If the PC requests a restart while the VDR Maintenance Viewer is starting up, restart the PC.

### **1.5** How to Uninstall the VDR Maintenance Viewer

Login as the administrator to uninstall the VDR Maintenance Viewer.

#### Windows®7

- 1. Click [Start] button > [Control Panel] > [Programs] > [Programs and Features].
- 2. Select "VR-7000" then click [Uninstall].
- 3. Delete the VR-7000 folder saved in the [My Computer] > [Local Disk (C:)] > [Program Files\FURUNO] folder.

#### Windows<sup>®</sup>8.1

- Hover the cursor in the bottom-left corner of the screen until a small image of the Start Screen appears, then right-click on the icon to open the [Start Context] menu. Select [Programs and Features] menu then [Select Programs and Features].
- 2. Select "VR-7000" then click [Uninstall].
- Delete the VR-7000 folder saved in the [My Computer] > [Local Disk (C:)] > [Program Files (x86)\FURUNO] folder.

#### <u>Windows<sup>®</sup>10/Windows<sup>®</sup>11</u>

- 1. Click on the icon in the bottom-left corner of the screen, then select the [Settings] menu. Click the [System] menu then the [Apps & features].
- 2. Select "VR-7000" then click [Uninstall].
- Delete the VR-7000 folder saved in the [My Computer] > [Local Disk (C:)] > [Program Files(x86)\FURUNO] folder.

## 1.6 Display Configuration

#### **Configuration overview**

The display is divided into five areas: Display title area, Menu area, Status area, View area, and Connection information display area.

Display title area: The application name appears here. Menu area: The system menu. Status area: Shows common data (logo, time at server, etc.). The time at the server is updated at regular intervals. View area: Select the data to show with the data tabs. Connection information display area: Server status is displayed

Display title area
 Menu area
Status area
Data tabs
View area
 Connection information display area

Menu area, status area

Connection Maintenance Tool Help	4	6	6	0	8	9
FURU (3)         Froduct Hame :           2         System Time :         22/01/2016 05:05:27	RAP STATUS	POWER STATUS	Size : MB	'loat DRU Selected : DRU	Long Term Device Selected : SSD Size : 983040 MB	User Disk(USB) Selected : MENORY Size : 59082 MB

No.	ltem	Description					
Menu	Menu area						
1	Menu	<ul> <li>[Connection]: Login, Logout, Exit functions.</li> <li>[Maintenance]: VDR configuration management, Software management, Password management, Record comparison, Software history management, Easy setup, Equipment management.</li> <li>[Tool]: PC_RAP, Status monitor, VDR error list, Sentence information upload, Media management, Exchange check, Special Setting Enable, Long Term Device Down Convert, Reboot.</li> <li>[Help]: Displays the program version information.</li> </ul>					
Status	area						
2	System Time	System time and date					
3	Product Name	Display VR-7000 or VR-7000S.					
4	RAP STATUS	<ul> <li>[NORMAL]: Lights green when there are no unacknowledged or unrectified alerts.</li> <li>[ALERT]: Lights or flashes red for unacknowledged or unrectified alert.</li> <li>Alert status and lamp state and color:</li> <li>Unacknowledged alert: Flashes red.</li> <li>Unacknowledged but rectified alert: Flashes red.</li> <li>Unrectified alert: Lights red.</li> </ul>					
5	POWER STATUS	[BATT]: Battery status. [AC]: AC power status. For either indicator: Light on (Green): Power on, Light off: Power off					

No.	Item	Description
		-
6	Fixed DRU	The status of the fixed DRU appears in the [Selected] field: - DRU(green): Normal - DRU(red): Error - NO DRU(red): No fixed DRU detected. - NO DRU(gray): No fixed DRU connected (VR-7000S only). The capacity of the fixed DRU appears in the [Size] field.
7	Float DRU	<ul> <li>The status of the float-free DRU appears in the [Selected] field:</li> <li>DRU(green): Normal</li> <li>DRU(red): Error</li> <li>NO DRU(red): No float-free DRU detected.</li> <li>NO DRU(gray): No float-free DRU connected (VR-7000S only).</li> <li>The capacity of the float-free DRU appears in the [Size] field.</li> </ul>
8	Long Term Device	The status of the long term device appears in the [Selected] field: - SSD(green): Normal - SSD(red): Error - NO SSD(red): No Long Term Device detected. The capacity of the long term device appears in the [Size] field.
9	User Disk (USB)	The status of the user disk appears in the [Selected] field: - MEMORY(green): Normal - MEMORY(red): Error - NO MEMORY(red): No User Disk (USB) detected. - NO MEMORY(gray): No User Disk (USB) connected (VR-7000S on- ly). The capacity of the user disk appears in the [Size] field.

**Note:** The [Size] indication in items 6 through 9 is the capacity of each item, not the remaining capacity.

#### 1. INSTALLATION

This page is intentionally left blank.

## 2. SOFTWARE CONFIGURATION

Disconnect the Remote Alert Panel and CAM (AMS) until the software configuration is completed, otherwise the audio alarm for no radar video will sound.

The outline of the setup is as below.

- 1. Download the configuration data from the VDR into the VDR Maintenance Viewer (see section 2.1).
- 2. Set the items in each tab, referring to the descriptions in section 2.2 onwards in this chapter.
- 3. Upload the configuration data to the VDR (see section 2.25).
- 4. Backup the configuration data to the DRU (Fixed, Float), Long Term Device and the recording media (see section 2.25).

## 2.1 How to Configure the VR-7000/7000S with the VDR Maintenance Viewer

- 1. Connect the PC and DRU to the DCU.
- 2. Turn on the VDR and wait approx. four minutes.
- 3. Start the VDR Maintenance Viewer.
- 4. Enter the IP address 172.31.16.200 in the [Maintenance Login] dialog box.
- Generate the one-time password (response code) from the challenge code on the screen and enter the password correctly, then click the [Login] button.
   Note 1: Do not release the password to unauthorized personnel.

**Note 2:** If one of the following messages appears, after clicking the [Login] button, refer to the table below to rectify the error. If not rectified, contact your dealer.

Message	Remedy
[AUTHENTICATION] Failed!!	The VDR Maintenance Viewer program ver-
[arguments error]	sion is not compatible with the VDR program
[AUTHENTICATION] Failed!!	version. Check the VDR program version
[Internal error occurred [code:-1]]	([VDR Version]) on the [System Monitor] win-
[AUTHENTICATION] Failed!! [Error occurred during connecting]	dow from the RAP, then use the appropriate VDR Maintenance Viewer version.

Connection Maintenance Tool Help										
	RAP STATUS	POWER STATUS	Fixed DRU		Float DRU		Long Term De	vice	User Disk(US	(B)
	JORMAL ALERT	BATT AC	Selected :	DRU	Selected :	DRU	Selected :	SSD	Selected :	MEMORY
System Time : 22/01/2016 05:05:27			Size :	MB	Size :	MB	Size :	983040 MB	Size :	59082 MB

If the connection is successful, the following information appears in the status area. The Product Name the size of the Fixed DRU and Float are displayed upon completion of the setting of the file in step 8.

- System Time
- RAP Status
- Fixed DRU
- User Disk (USB)

- Power Status
- Float-free DRU
- Long Term Device

If an error message appears, the IP address or password may be wrong, or the cable between the PC and the VDR is not correctly connected.

#### 2. SOFTWARE CONFIGURATION

6. Select [PC\_RAP] from the [Tool] menu.

RAP STATUS	
and and a second	
Button	
	ACK
Alert	
unt	
Time / Number Name	
Pending Alert	
Pending Alert Time 7 Mumber Hane	
Time 🖓 Number Hane	Tina Differenza
Time ← Number Hame 19/12/2013 18:27:58:322 412026 GFS Large	Time Difference
Time ⊤ Number Hame 19/12/2013 18:27:58:322 412026 6PS Large 19/12/2013 17:55:33:301 412515 Fixed BMU	Exchanged
Time =         Number         Number         Number           19/12/2013         18:27:58:322         412026         OFS Large           19/12/2013         17:550:330:01         412515         Fixed BMU           19/12/2013         17:550:501         412515         Fixed BMU	Exchanged No Input Attached inform
Time ⊤         Number         Hame           19/12/2013         18:27:58:322         412026         OFS Large           19/12/2013         17:55:03:301         412515         Fixed BBU           19/12/2013         17:55:06:501         412561         Be. IECHS           19/12/2013         17:55:07         242561         Be. IECHS	Exchanged No Input Attached inform
Line T         Humber         Humber           19/12/2013         18:27:58:322         412026         GPS         Large           19/12/2013         17:55:33:301         412515         Fixed BMI         June 1           19/12/2013         17:52:15:702         412516         Fixed BMI         June 1         June 1           19/12/2013         17:52:15:702         412516         Fixed BMI         June 1         June 1           19/12/2013         17:52:15:702         412516         Fixed BMI         June 1         June 1	Exchanged No Input Attached inform

Check the indications in the [Alert] window. When an alert is displayed, the corresponding sensor data is not being received correctly. Solve the reason for the error before going to the next step. Refer to the VDR Operator's Manual for descriptions of individual error codes.

- 7. Click the [X] button at the top right corner to close the [PC\_RAP] dialog box.
- 8. From the menu, select [Maintenance] > [VDR Config Management] > [Download]. Click the [OK] button twice then the [Close] button.
- 9. Check the memory size\* of the DRUs and Long Term Device, which appears in the respective [Size] field. If the memory size display shows "\*\*\*\*MB" (data read error) restart the VDR. If the size still does not appear, check that the DRU and Long Term Device are correctly connected.

\*The value shown is the capacity, not the remaining capacity.

Example of acceptable memory size displays:



On most tabs there is an [Information] window on the left and a [Setting] window on the right. Select the channel to set in the [Information] window by selecting it with the cursor, and then set it in the [Setting] window. The results of the updated settings appear in the [Information] window. After setting each channel, click the [Set] button to finish.

After all items have been set, upload the configuration data to the VDR and backup the data to the DRU (Fixed, Float), Long Term Device and the recording media (see section 2.25).

**Note:** The configuration data must be uploaded in order to apply the configuration changes.

### 2.2 Radar/ECDIS Signal

Setup up for radar/ECDIS image recording as shown below.

#### Radar/ECDIS input settings

**Note:** When using the [Select Equipment] button, do not apply the settings of VLC1 to VLC2 or vice versa. Wrong settings, for example, the IP address, SFID and other settings of the VLC1 are applied to VLC2, will cause misoperation.

1. Click the [VLC] (Video LAN Converter) tab.

Setting
Set Select Equipment Reflect Equipment

- 2. Select a channel from the [Information] window.
- 3. Check [Active] to record the radar or ECDIS.
- 4. Set the [System Function ID]. Keep the default setting.
- Enter the radar(s) VLC IP address and subnet mask. Keep the default settings. <u>No.1 VLC</u> IP address: 10.0.0.120, subnet mask: 255.0.0.0 <u>No.2 VLC</u> IP address: 10.0.0.130, subnet mask: 255.0.0.0
- 6. Check [Ch1 Active], [Ch2 Active] to activate respective channel.
- 7. Set the image output type (DVI or RGB) at [Ch1 Input Port] or [Ch2 Input Port] as applicable.
- 8. If required, set the horizontal and vertical offsets of the radar from the conning position, in the [Ch1 Horizontal Offset(-512-511)] and [Vertical Offset(-8-7)] fields.
- 9. [Red Gain(0-1023)], [Green Gain(0-1023)] and [Blue Gain(0-1023)] adjust respective gain; however, adjustment is not necessary.
- 10. Set "Ch2" items referring to descriptions for the same items of "Ch1".

- 11. Enter brand of equipment at [Brand].
- 12. Enter equipment name at [Type No.]
- 13. Enter data name at [Data Name].
- 14. Enter equipment category at [Equipment Category].
- 15. If necessary enter remarks in the [Note] field.
- 16. Click the [Set] button to confirm all channel settings.
- 17. Click the [Check] button in the [Setting] window to confirm radar status, which is then shown as [OK] or [NG] in the [Check] column in the [Information] window.

#### Image interface settings

**Note 1:** After completing the settings, do the following to check for proper image input.

- Open the Event log and checking that the message "video (PNG] bit depth unsupported" is not displayed.
- Playback data to check that the data was correctly recorded.

**Note 2:** The buttons [Select Equipment] and [Reflect Equipment] are inoperative in this set up.

1. Click the [Image Interface] tab.

Information	n				Setting	
No	Input Type	ChNo/SFID	Status	Check	Set Select Equipment Reflect Equipment Check	
R1	VLC1	1	Active	08		
R2	VLC1	2	Active	0K	Active	
R3	VLC2	1	None	Not Comp	No	R1
R4	VLC2	2	None	Not Comp		
E1	IEC61162-450		Active	Not Comp	Brand	
E2	IEC61162-450		Active	Not Comp	Type No. (Equipment Name)	
E3	IEC61162-450	EI0015	Active	Not Comp		
					Check	0K -
					Input Type	VLC1
					Channel Number	1 -
					System Function ID1	
					Specify Device and Channel 1	
					Device Number (Image Data) (0-255) 1	1
					Channel Number (Image Data) (0-255) 1	1
					Device Number (ECDIS Information) (0-255) 1	1
					Channel Number (ECDIS Information) (0-255)	2
					RADAR/ECDIS Type	I-Band RADAR
					Horizontal Resolution	1600
					Vertical Resolution	1200
					Image Type	image/bmp
лс					Color Bit	24
No	Input Po	rt Acti		Check	Jpeg Enable	
CH1	DVI		Active	Not Comp	Note	
CH2	DVI		Active	Not Comp		
					Add System Function ID (MFD)	

- 2. Check [Active] to make the radar or ECDIS active.
- 3. Enter the brand name of the radar or ECDIS in the [Brand] field.
- 4. Enter the type no. (model no.) in the [Type No.] field.
- 5. Select the input type from the drop-down list in the [Input Type] field, referring to the following:

Video via VLC: Select [VLC1] or [VLC2]. Video and text via LAN: Select [IEC61162-450]. Video via VLC, text via LAN: Select [VLC1+ECDIS Information] or [VLC2+ECDIS Information]).

Do one of the following according to the selection made at step 7.
 [VLC1], [VLC2], [VLC1+ECDIS Information], [VLC2+ECDIS Information]: Enter channel number in the [Channel Number] field.
 [IEC61162-450]: Enter the system function identifier in the [System Function ID] field. Set the SFID of the radar/ECDIS input.

- 7. Select RADAR/ ECDIS at the [RADAR/ECDIS Type] field.
- 8. [Horizontal Resolution], [Vertical Resolution], [Image Type] and [Color Bit] cannot be changed.
- 9. Check [Jpeg Enable] to receive JPEG images from connected equipment.
- 10. Enter remarks in the [Note] field.
- 11. Click the [Check] button in the [Setting] window to confirm radar status, which is then shown as [OK] or [NG] in the [Check] column in the [Information] window.

#### How to set up to record radar/ECDIS image

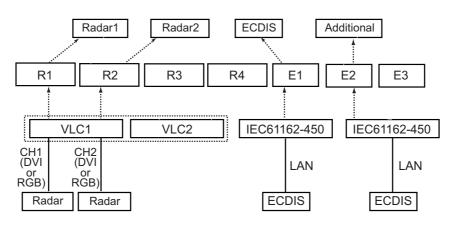
- 1. Click the [Image Record Setting] tab.
- 2. Select a radar channel from the [Information] window. For example, click the [CH No.1] field to open the corresponding setup.

					Setting	
H No.	Recording	InputSource	Status	Check	Set Check	
Radar1	Only one	RI	Active	100		
Radar2	Only one	R2	Active	OK		
ECDIS	Only one	E1	Active	OK	Active	✓
General1	Only one	E2	Active	OK		
General2	Only one	R3	Active	OK	No	Radar1
Additional	Patrol	R4/E3	Active	OK		
		112/20			Check	0K 🗸
					Recording method	Only one v
					No.1 Input source	R1 🗸
					No.2 Input source	none 🗸
					No.3 Input source	none 🗸
						Lange and the second
					No.4 Input source	none v
					Fixed DRU Recording	1
					Float DRU Recording	4
					Long Term Device Recording	1
					User Disk Recording	<b>v</b>
					Network Output	1
					Activity output	123
					Fixed DRU Recording Limit Data Size	9048576
					The second any state sate size	3040310
					Compress Type(Viewer)	• PNG _ JPE
					Compress Type(Viewer)	• PNG U JPE
					Color Bit	9bit 🗸
					Jpeg Quality	40
					Jpeg Recompress	
					Receive Image Size(KByte)	314
					Compress Image Size(KByte)	212
					combrece rmede erre/umbre/	212
					Note	

- 3. Check [Active] to make the radar (or ECDIS) active.
- 4. Select the recording method, [Only one], [Patrol] or [Backup].
  - [Only one]: Records the input source having the youngest number in case of multiple sources.
  - [Patrol]: Records all input sources cyclically.
  - [Backup]: Records by input source priority No.1 the highest, No.4 the lowest. For example if No.1, No.2, and No.3 input sources are present and the No.1 input source is lost, the No.2 input source is recorded. And if the No.2 input source is lost, the No.3 input source is recorded.
- 5. Select the input source for each of No. 1 to No. 4. The choices are [R1], [R2], [R3], [R4], [E1], [E2], and [E3]. (R=Radar, E=ECDIS)
- 6. [Fixed DRU Recording Limit Data Size] is set at the factory, and cannot be changed.
- 7. Select [PNG] or [JPEG] at [Compress Type].
- 8. Select the color bit to use, with [Color Bit]. The choices are [6 bit], [9 bit], [12 bit], [15 bit], [18 bit], [21 bit], and [24 bit].
- 9. Enter remarks in the [Note] field if required.

- 10. Click the [Set] button to finish.
- 11. To record settings to the database, open the [Image Interface] tab, then click the [Reflect Equipment] button in the [Setting] window.
- 12. Click the [Check] button in the [Setting] window to check the radar. The results appear in the [Check] column of the [Information] window.

#### **Recording scheme:**



### 2.3 Serial Signal

The serial signals (RS-422 signals) are received at the terminal board (SI01-SI08) and the IF-8530 (SI09-SI16). This channel is not only for NMEA but also binary and ASCII data. A total of 16 serial signals can be connected to the DCU and IF-8530. For serial data input via Sensor Adapter MC-3000S or IEC61162-450 via LAN, see section 2.18.

IF-8530 presence	DCU	IF-8530
Yes	SI01 - SI08	SI09 - SI16
No	SI01 - SI08	-

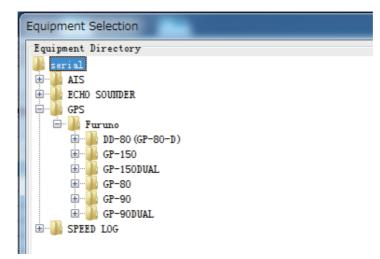
#### How to set the serial channels

Note: Do not set SI17 or higher.

- 1. Click the [Serial] tab.
- 2. Select a channel from the [Information] window.

nformation				h	Setting						
CH No.	Type No.	Status	Check		Set	Capture	Select Equipment	Reflect Eq	uipment	Check	P-sentence
	GPS	Active	Not Comp	k F							
SI02	AIS	Active	Not Comp		Active				<b>V</b>		
SI03	SPEEDLOG	Active	OK								
SI04	GYROCOMPASS	Active	OK		Brand						
SI05		Active	OK								
SI06		Active	OK		Type No.	Equipment Name)			GPS		
SI07		Active	OK						-		
SI08		Active	OK		Check				Not Comp	• •	
SI09		None	OK								
SI10		None	OK		Data Name				GPS		
SI11		None	OK						-	_	
SI12		None	OK		Data Type				IMEA	-	
SI13		None	OK						r		
SI14		None	OK		Baud rate				4800bps	<b>•</b>	
SI15		None	OK								
SI16		None	OK		Data Bits				8 👻		
SI17		None	OK								
SI18		None	OK		Parity Bi	t			None 🔻		
SI19		None	OK								
SI20		None	OK		Stop Bit				1 🔻		
SI21		None	OK		Source Ch						
SI22		None	OK		Source Ur	ecksum			N.		
SI23		None	OK		Time out				No-Times		
SI24		None	OK		rime out				no lime	at +	
SI25		None	OK		Alert Nam	e Definition			CH No.	-	
SI26		None	OK		ALC: V HIGH				an no.		
SI27		None	OK		Equipment	Category			Serial		
SI28		None	OK								
SI29		None	OK		Board Nam	e			VR-7010		
SI30		None	OK		a carde area	-					
SI31		None	OK		Note				ZDA, GNS/	'GGA, DIM	
SI32		None	OK						,		
SI33		None	OK								

3. Click the [Select Equipment] button in the [Setting] window.



- 4. Select the unit that is connected to the selected channel and click the [OK] button.
- 5. Set items as needed in the [Setting] window.
- 6. After finishing the settings for one channel, click the [Set] button. **Note:** Be sure to do this before moving to another channel.
- 7. Repeat steps 2-6 to set each channel.

#### **Description of the buttons in the Setting window**

[Set]: Save edited data.

**[Capture]**: Opens the [Serial] window to check if serial data is received. If not received, lower the baud rate.

[Select Equipment]: Select equipment settings (saved to the database) to reflect in channel.

[Reflect Equipment]: Save the equipment setting data to the database.

**[Check]**: Check all channels. The results are shown as [OK] or [NG] (No Good), in the [Information] window.

**[P-sentence]**: Show the [P-sentence definition] dialog box.

🍰 P-sente	P-sentence definition						
Field No.	Name	Detail					
1							
2							
3							
4			=				
5							
6							
7							
8							
9							
10							
11							
12							
13			-				
		Set C	ancel				

- [Field No.]: Show the field no.
- [Name]: Set the name of the P-sentence.
- [Detail]: Set the details of the P-sentence.
- [Set] button: Reflect settings to the server.
- [Cancel] button: Restore settings to previous state.

#### Description of the items in the Setting window

[Active]: Check to make channel active.

[Brand]\*: Enter brand name.

[Type No. (Equipment Name)]\*: Set type no. (equipment name).

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

[Data Name]\*: Enter data name.

[Data Type]: Enter data type.

[Baud Rate]: Set baud rate (Available for SI01 to SI08).

[Data Bits]: Set number of bits (Available for SI01 to SI08).

[Parity Bit]: Set parity bit (Available for SI01 to SI08).

[Stop Bit]: Set stop bit (Available for SI01 to SI08).

[Source Checksum]: Tick box to check for checksum in sentence.

**[Time out]**: Set the timeout value of the connected equipment. When communication with the connected equipment is interrupted or lost for longer than the time set here, the communication error occurs on the remote alarm panel. The timeout settings must be higher than the transmission rate of the connected equipment.

**Note:** Be sure to set the timeout settings for all serial channels. If the timeout setting is not adjusted, the serial communication error alert does not occur when serial connected equipment is disconnected.

[Alert Name Definition]: Select the alert display format for the serial communication error.

- [CH No.]: The alert 412301 "No No.01 Serial Connection" to 412316"No No.016 Serial Connection" occurs when the serial communication error occurs. You can find the channel number at which the error occurred by checking the alert name.
- [Equipment Name]: The alert 412801 "No XXX" to 412816 "No XXX" occurs when the serial communication error occurs. "XXX" changes according to the equipment name entered to [Type No. (Equipment Name)]. You can find the equipment name at which the error occurred by checking the alert name.

[Equipment Category]\*: Set equipment category.

[Board Name]\*: Board name.

[Note]: Enter remarks. (Entry optional.)

\*: Enter these items for easy identification of equipment.

## 2.4 Analog Signal

Analog signals are input via Sensor Adapter MC-3010A or the Junction Box IF-8530. The channel number depends on connected equipment. See the table below.

Channels are assigned according absence or presence of IF-8530. The number of IF-8530 units is set on [System] tab.

A total of 120 analog signals can be connected to the sensor adapter and IF-8530.

IF-8530 presence	IF-8530	Sensor Adapters
Yes	AN001 - AN016	AN017 - AN120(CH001 - CH104)
No	-	AN001 - AN120(CH001 - CH120)

Receivable signal: -10 V to +10 V, 0 V to +10 V, 4mA to 20 mA. Set the signal level of each channel accordingly.

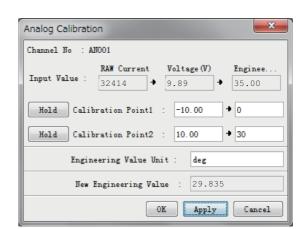
#### How to set the analog channels

- 1. Click the [Analog] tab.
- 2. Select a channel from the [Information] window. Set detailed information of the selected channel in the [Setting] window.

Information				Settir	ag		
CH No.	Type No.	Status	Check	Set	t Calibration	Select Equipment	Reflect Equipment CH Active Set Check
AN001		0.00	20				
AN002		0.02	OK	Activ	ve		
AN003		0.00	OK				
AN004		0.00	Not Comp	Bran	.d		
A11005		0.00	Not Comp				
A11006		0.02	Not Comp	Type	No. (Equipment Name)		
Al1007		0.00	Not Comp	-	c (m cu c)		
AllOOS		0.02	Not Comp	Inter	rface (JB or SA1-8)		JB
<b>A11009</b>		0.00	Not Comp	Check	ŀ		OK 👻
AN010		0.01	Not Comp	- Calcer	-		
AN011		0.00	Not Comp	Data	Name		
AN012		0.00	Not Comp				
AN013		0.01	Not Comp	Data	Type		-10-10V 👻
ANO14		0.00	Not Comp				
AN015		0.00	Not Comp	Sampl	ling Rate		500msec
AN016		0.02	Not Comp				
AN017	ROLLING MOTION	10.24	Not Comp	Cali	bration Active		
AN018		10.24	Not Comp		bration Point1		1.00
AN019		9.02	Not Comp	- Calli	bration fointi		1.00
AN020		None	OK	6.1.1	bration Point1 Value		1.00
Al1021		None	OK	Carri	bracion foinci value		1.00
Al1022		None	OK	Calif	bration Point2		2.00
A11023		None	OK	Carri	bracion roince		2.00
Al1024		None	OK	Celil	bration Point2 Value		2.00
AN025		None	OK				C105
AN026		None	OK	Engin	neering Value Unit		
Al1027		None	OK	2427.50			
A11028		None	OK	Equip	pment Category		Analog
All029		None	OK				
AN030		None	OK	Boar	d Name		MC-3010A
AN031		None	OK				

**Note:** In the default setting, there is no preset data when the [Select Equipment] button is clicked. In the case that the setup was completed on another ship and saved using the [Reflect Equipment] button, import the data by clicking the [Select Equipment] button and choosing the saved data.

- 3. Calibrate the Analog signal as follows:
  - 1) Click the [Calibration] button in the [Setting] window.
  - Enter the voltage (or current) value for [Calibration Point 1], and the corresponding engineering value in the left and right fields.
  - 3) Enter values for [Calibration Point 2].



4) Enter unit for the values in [Engineering Value Unit].

In the illustration on the preceding page, the [Engineering Value Unit] is set to degrees (deg). The [Calibration Point 1] is -10V, corresponding to 0 degrees, and [Calibration Point 2] is 10V corresponding to 30 degrees. This is set corresponding to the connected analog sensor.

Click the [Apply] button to apply values. When this is done, the [New Engineering Value] of 29.835 deg, corresponding to the input voltage of 9.89V, is displayed at the bottom of the dialog box. Whenever the input value is changed this value also changes. Check that the [New Engineering Value] is within an appropriate range.

Another method of entry is to observe the [Voltage] (or [Current]) field on the top line and click the [Hold] button of Point1 when an appropriate value is displayed. Do this again for Point2. Click the [OK] Button.

- 4. Click the [Set] button to finish. Be sure to do this <u>before</u> moving another to channel.
- 5. Repeat steps 1-4 to set up all channels.
- 6. Click the [Check] button to perform an inspection on all channels. The results are shown in the [Information] window as [OK] or [NG] (No Good).

#### Description of items in the Settings window

**[CH Active Set]** button: Click to show the [CH Active Setting] dialog box. Collective setting is done from this box.

[Active]: Put check in check box to make channel active.

[Brand]\*: Enter brand name.

[Type No. (Equipment Name)]\*: Set type no. (equipment name).

**[Interface (JB or SA1-8)]**: Type of Interface, Junction Box or Sensor Adapter. **[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

[Data Name]\*: Enter data name.

[Data Type]: Analog Data type (0~10V, -10~10v, 4~20mV)

[Sampling Rate]: Display sampling rate.

[Calibration Active]: Disable and enable analog calibration.

[Calibration Point 1]#: Enter calibration point 1.

[Calibration Point 1 Value]#: Enter calibration point 1 value.

[Calibration Point 2]#: Enter calibration point 2.

[Calibration Point 2 Value]#: Enter calibration point 2 value.

[Engineering Value Unit]#: Enter engineering value unit.

[Equipment Category]\*: Set equipment category. [Board Name]\*: Enter board names where channels are present. [Note]: Enter remarks. (Entry optional.)

\*: Enter these items for easy identification of equipment. #: For #-marked fields, the values set in the [Analog Calibration] dialog box are displayed.

## 2.5 Digital Signal

Digital signals are input via Sensor Adapter MC-3020D or the Junction Box IF-8530. The channel number depends on connected equipment. See the table below.

Channels are assigned according absence or presence of IF-8530 units. The number of IF-8530 units is set on [System] tab. A total of 640 digital signals can be input to the sensor adapter and IF-8530.

IF-8530 presence	IF-8530 CH	Sensor Adapters
Yes	DC001 - DC064	DC065 - DC640(CH001 - CH576)
No	-	DC001 - DC640(CH001 - CH640)

#### How to set the digital channels

- 1. Click the [Digital] tab.
- 2. Select a channel from the [Information] window. Set up the digital signal from the [Setting] window, referring to the descriptions in this section.

Information				Setting		
СН Ио.	Type No.	Status	Check	Set Calibration	Select Equipment Reflect Equipment	Check
DC001		0		*		
DC002		0		Active	<b>V</b>	
DC003		0		E		
DC004		0		Brand		
DC005		0				
DC006		0		Type No. (Equipment Name)		
DC007		0				
DC008		0		Interface (JB or SA1-8)	SA1	
DC009		0			or	
DC010		0		Check	0K 👻	
DC011		0				
DC012		0		Data Name		
DC013		0		Contact Type	110 👻	
DC014		0		Contact lype	10 🗸	
DC015		0		Sampling Rate	500msec	
DC016		0		Supring have	0001200	
DC017		0		Calibration Active		
DC018		0				
DC019		0		Active Status(1)		
DC020 DC021	_	0				
DC021 DC022		0		Active Status(0)		
DC022 DC023		0				
DC023		0				
DC024		0				
DC025		0		Board Name	IF-8530	
DC020	-	0				
DC028		0		Note		
DC020		0				
DC030		0				
DC031		0				
DC032		0				
DC033		0				

**Note:** In the default setting, there is no preset data when the [Select Equipment] button is clicked. In the case that the setup was completed on another ship and saved using the [Reflect Equipment] button, import the data by clicking the [Select Equipment] button and the choosing the saved data.

- 3. Do the following to set the digital signal to each 80 channel group:
  - 1) Click the [Calibration] button in the [Setting] window.

Active	Channel	0	1
	DC001-DC080	OK	IIG
	DC081-DC160	OK	līG
	DC161-DC240	OK	11G
	DC241-DC320	OK	11G
	DC321-DC400	OK	NG
	DC401-DC480	OK	11G
	DC481-DC560	OK	11G
	DC561-DC640	0K	IIG

- 2) Check the [Active] field of the channel group being set.
- 3) Enter the status in columns 0 and 1 of that group.
- 4) Click the [OK] Button.
- 4. Click the [Set] button.

Note: Be sure to click the [Set] button before setting other channels.

- 5. Repeat steps 2 to 4 to set up other channels.
- 6. Click the [Check] button to perform an inspection on all channels. The results are shown in the [Information] window as [OK] or [NG] (No Good).

#### Description of the items in the Setting window

**[CH Active Set]** button: Click to show the [CH Active Setting] dialog box. Collective setting is done from this box.

[Active]: Put check in check box to make channel active.

[Brand]\*: Enter brand name.

[Type No. (Equipment Name)]\*: Set type no. (equipment name).

**[Interface (JB or SA1-8)]**: Type of Interface, Junction Box or Sensor Adapter.

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

[Data Name]\*: Enter and display data name.

[Contact Type]: Set contact type. [NO]: normal open, [NC]: normal close [Sampling Rate]: Display sampling rate.

[Calibration Active]: Disable or enable digital calibration.

[Active Status (1)]\*: Set status display when (1) is active.

[Active Status (0)]\*: Set status display when (0) is active.

[Equipment Category]\*: Set equipment category.

[Board Name]\*: Enter board names where channels are present.

[Note]: Enter remarks. (Entry optional.)

\*: Enter these items for easy identification of equipment.

## 2.6 Audio Signal

Microphone and VHF audio settings are done in the [Audio] tab.

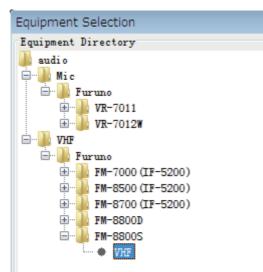
#### How to set the audio channels

- 1. Click the [Audio] tab.
- Select a channel from the [Information] window. If you selected No.1, the [VHF1/ VHF2] setting window appears. For No.2 - No.5, the [MIC] setting window appears.

Brand       Furma         Type Bo. (Equipment Hame)       PH-68005         Check       OK         Data Hame       VMP         Laput Type       VMP 1/VMP2         Sampling Data Bit       16bit         Sampling Frequency       15625Kz         Codec       1         Delay Offset (ms)       O         Equipment Category       VMP         Board Hame	Active		
Check       OK         Data Name       VHF         Input Type       VHF1/VHF2         Sampling Data Bit       16bit         Sampling Frequency       1562SHz         Codec       1         Delay Offset (ms)       0         Equipment Category       VHF         Board Hame	Brand	Furuno	
Data Name       VMP         Input Type       VMP I/VMP2         Sampling Data Bit       16bit         Sampling Frequency       15625Mr         Codec       1         Data Name       0         Equipment Category       VMP         Board Name          Note          Active          Brand       abcdefg         Type No. (Equipment Name)       abcdefg         Check       OK         Data Name          Input Type       MICL/MIC2         Sampling Data Bit       16bit         Sampling Frequency       0         MC 1/MIC2       Sampling Frequency         Codec       aggrarbis         Data Mane       0         Input Type       0         MC 1/MIC2       Sampling Frequency         Codec       aggrarbis         Dalay Offset(ms)       0         MIC 1/MIC2/46/8 Position       inge         MIC 2/46/8 Position       inge         MIC 2/46/8 Position       inge         MIC 2/46/8       3	Type No. (Equipment Name)	FM-8800S	
Input Type VHE1/VHE2   Sempling Data Bit 16bit   Sempling Prequency 15625Hz   Codec 1   Datay Offset (ms) 0   Equipment Category VHE   Beard Hame	Check	OK 🔻	
Sampling Data Bit       10bit         Sampling Frequency       15625Hz         Codec       1         Delay Offset (ms)       0         Equipment Category       WHF         Board Hame	Data Name	VHF	
Sampling Frequency       15625Hz         Codec       1         Delay Offset (ms)       0         Equipment Category       WFF         Board Hame	Input Iype	VHF1/VHF2	
Codec       1         Delay Offset (ms)       0         Equipment Category       VHF         Board Hame	Sampling Data Bit	16bit	
Delay Offset (ns)       0         Equipment Category       VHF         Board Name	Sampling Frequency	15625Hz	
Equipment Category   Board Name   Board Name   Note     Active   Active   Prand   abcdefg   Type No. (Equipment Name)   abcdefg   Check   OK   Data Name   Input Type   MCI/MIC2   Sampling Data Bit   Sampling Prequency   Odec   Delay Offset(ms)   MIC 1/3/5/7 Position   MIC 2/4/6/8 Position   Threshold Level MIC1/3/5/7   Sampling Level MIC2/4/6/8	Codec	1	
Board Hame Note  Note  Note  Active  Active  Frand  Frand  Fype Ho. (Equipment Hame)  Check  DK  Data Hame  Input Type  MIC1/MIC2  Sampling Data Bit  Sampling Prequency  Codec  oggvorbis  Delay Offset(ms)  MIC 1/3/5/7 Position  MIC 2/4/6/8 Position  Threshold Level MIC1/3/5/7  3  Threshold Level MIC2/4/6/8	Delay Offset(ms)	0	
Note     Active     Active     Brand     bacdefg     Type Ho. (Equipment Hame)     abcdefg     Check     Data Hame     Input Type     MIC1/MIC2   Sampling Prequency   Codec   oggvorbis   Delay Offset(ms)   MIC 1/3/5/7 Position   MIC 1/3/5/7   Samplid Level MIC1/3/5/7   Jhreshold Level MIC2/4/6/8	Equipment Category	VHF	
Note       window         Active       ✓         Brand       sbcdefg         Type Ho. (Equipment Hame)       sbcdefg         Check       OK ✓         Data Hame       Input Type         Input Type       MIC1/MIC2         Sampling Data Bit       16bit         Sampling Frequency       16000Hz         Codec       oggvorbis         Delay Offset(ms)       0         MIC 1/3/5/7 Position       ring         MIC 2/4/6/8 Position       3         Threshold Level MIC2/4/6/8       3	Board Name		D//// <b>[]</b> #:
ActiveImage: Constraint of the second of the se	Note		
Br andabcdefgType No. (Equipment Name)abcdefgCheckOK Data NameOK Input TypeMIC1/MIC2Sampling Data Bit16bitSampling Frequency16000HzCodecoggvorbisDelay Offset(ms)0MIC 1/3/5/7 PositionwingMIC 2/4/6/8 Position3Threshold Level MIC2/4/6/83			
Type No. (Equipment Name)abcdefgCheckOKData NameOKInput TypeMIC1/MIC2Sampling Data Bit16bitSampling Frequency16000HzCodecoggvorbisDelay Offset(ms)0MIC 1/3/5/7 PositionwingMIC 2/4/6/8 Position3Threshold Level MIC2/4/6/83	Active	•	
CheckOKData Name	Brand	abcdefg	
Data NameInput TypeMIC1/MIC2Sampling Data Bit16bitSampling Frequency16000HzCodecoggvorbisDelay Offset(ms)0MIC 1/3/5/7 PositionwingMIC 2/4/6/8 Position3Threshold Level MIC1/3/5/73	Type No. (Equipment Name)	abcdefg	
Input TypeMIC1/MIC2Sampling Data Bit16bitSampling Frequency16000HzCodecoggvorbisDelay Offset(ms)0MIC 1/3/5/7 PositionwingMIC 2/4/6/8 Position1Threshold Level MIC1/3/5/73Threshold Level MIC2/4/6/83	Check	0K 🖌	
Sampling Data Bit16bitSampling Frequency16000HzCodecoggvorbisDelay Offset(ms)0MIC 1/3/5/7 PositionwingMIC 2/4/6/8 Position	Data Name		
Sampling Frequency16000HzCodecoggvorbisDelay Offset(ms)0MIC 1/3/5/7 PositionwingMIC 2/4/6/8 Position-Threshold Level MIC1/3/5/73Threshold Level MIC2/4/6/8-	Input Type	MIC1/MIC2	
Codec     oggvorbis       Delay Offset(ms)     0       MIC 1/3/5/7 Position     wing       MIC 2/4/6/8 Position	Sampling Data Bit	16bit	
Delay Offset(ms)     0       MIC 1/3/5/7 Position     #ing       MIC 2/4/6/8 Position	Sampling Frequency	16000Hz	
MIC 1/3/5/7 Position wing MIC 2/4/6/8 Position 3 Threshold Level MIC1/3/5/7 3	Codec	oggvorbis	
MIC 2/4/6/8 Position Threshold Level MIC1/3/5/7 Threshold Level MIC2/4/6/8	Delay Offset(ms)	0	
Threshold Level MIC1/3/5/7     3       Threshold Level MIC2/4/6/8     3	MIC 1/3/5/7 Position	wing	
Threshold Level MIC2/4/6/8	MIC 2/4/6/8 Position		
	Threshold Level MIC1/3/5/7	3	
Equipment Category MIC	Threshold Level MIC2/4/6/8	3	
	Equipment Category	MIC	
Board Name abcdefg	Board Name		
Note [MIC] setting window	Note		

#### 2. SOFTWARE CONFIGURATION

3. Click [Select Equipment] from the [Setting] window.

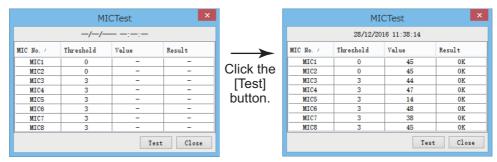


- 4. Click the connected device in the selected channel. The setting contents are displayed in the [Information] and [Setting] windows.
- 5. If required, update the contents in the [Setting] window, referring to the descriptions in this section.
- Click the [Set] button.
   Note: Be sure to click the [Set] button before moving to another channel.
- 7. Repeat steps 2-6 to set up other channels.

#### MIC test

Do the MIC test to check if the audio signal is clear and its level appropriate.

- 1. Click the [MIC Test] button in the [Setting] window.
- 2. Click the [Test] button in the [MIC Test] dialog box.

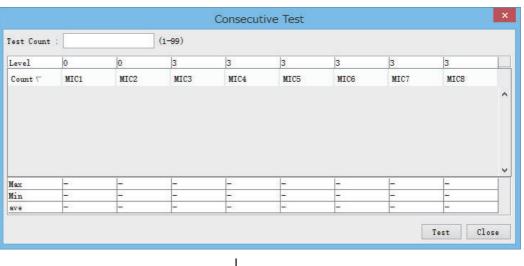


3. Click the [Close] button to close the dialog box.

#### **Continuous MIC test**

Run the continuous MIC test to test the MIC.

- 1. Click the [Continuous MIC Test] button in the [Setting] window.
- 2. Set up how many times to do the [Continuous MIC Test] at [Test Count] and click the [Test] button.



Click the [Test] button.

				Consecut					
fest Count	: 1		(1-99)						
Level	0	0	3	3	3	3	3	3	
Count 🗸	MIC1	MIC2	MIC3	MIC4	MIC5	MIC6	MIC7	MIC8	
	ок	ок	ок	OK	OK	OK	OK	OK	
Max	46	49	44	48	13	47	40	45	
Max Min	46	49	44	48	13 13	47	40	45	

3. Click the [Close] button to close the dialog box.

#### Description of the items in the Setting window. VHF dialog box

[Active]: Put check in check box to make channel active.

[Brand]\*: Enter and display brand name.

[Type No.]\*: Set type no. (equipment name).

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

[Data Name]\*: Enter data name.

[Input Type]: Enter input type.

[Sampling Data Bit]: Displays sampling data bit rate.

[Sampling Frequency]: Displays sampling frequency.

[Codec]: Set audio codec type.

[Delay Offset]: Enter amount of delay to apply to audio signal.

[Equipment Category]\*: Set equipment category.
[Board Name]\*: Enter board names where channels are present.
[Note]: Enter remarks. (Entry optional.)
\*: Enter these items for easy identification of equipment.

#### Description of the items in the Setting window, MIC dialog box

The [MIC] dialog box is similar to the [VHF] dialog box. Only the different items are described below.

[MIC 1/3/5/7 Position]\*: Show the position odd-numbered MICs.

[MIC 2/4/6/8 Position]\*: Show the position of even-numbered MICs.

[Threshold Level MIC 1/3/5/7]: Set the MIC test threshold level for odd-numbered MICs.

[Threshold Level MIC 2/4/6/8]: Set the MIC test threshold level for even-numbered MICs.

\*<sup>1</sup>: Enter these items for easy identification of equipment. Also, these items used for displaying the installation position on the Live Player V5. It is recommended that the number of characters is 13 or less. If the number of characters is too much, the Live Player V5 cannot show the full text for the MIC position.

 $^{*2}$ : Two microphones can be connected to one channel. If only one is connected, set the threshold level of the unconnected microphone to zero (0), to prevent NG (No Good) at the MIC test.

## 2.7 Alerts

Alert status is provided in the [Alert] tab.

VDR Alert History					
Tine ∇	Category	Priority	Name	Number	Status
01/07/2014 02:23:33:055	В	Caution	MIC Test Failure	412218	A:active-acknowledged or active
30/06/2014 08:22:04:584	В	Caution	AMS2 No Connection	412085	Ninormal
30/06/2014 08:18:16:101	В	Caution	AMS2 No Connection	412085	A:active-acknowledged or active
30/06/2014 08:17:16:101	В	Caution	AMS1 No Connection	412083	A:active-acknowledged or active

The [Alert] tab shows the following information about alerts. The list can be sorted by time, category or name. Click respective column title to sort.

[Time]: Time of alert [Category]: Alert category [Priority]: Priority of the alert ([Alarm], [Warning], [Caution]) [Name]: Name of alert [Number]: Alert number [Status]: Alert status

#### Alert search

1. Click the [Search] button above the [Alert] tab to show the [Search] dialog box.

Search	×
Search Condition	
	DD/MM/YYYY HH:MM:SS
Start Time	30 + / 05 + / 2021 + 16 + : 25 + : 15 +
End Time	31 + / 05 + / 2021 + 16 = : 25 + : 15 +
Name	
🗌 Number	
Priority	Alarm Warning Caution Indication
Status	II V S A A' I U 0
	Search Close

2. Add a checkmark to any desired search items (multiple items can be selected). **[Start Time]**: Set start time to search.

[End Time]: Set end time to search.

[Name]\*: Enter name of alert to search.

[Number]: Display information for alert number entered.

**[Priority]**: Select alert priority to search (Alarm, Warning, Caution, Indication).

**[Status]**: Select alert status to search. N, Normal state; V, active - unacknowledged; S, active - silenced; A, active - acknowledged; A', active; I, indication; U, rectified - unacknowledged; O, active - responsibility transferred

- \* Can be used for wild card search.
- 3. Input search data for the checked items.
- 4. Click the [Search] button.

Close the [Search] box to cancel a search.

Note: The mode changes from [Play] to [Search] when doing a search.

### 2.8 Event

The [Event] tab stores the time, category, name and contents of events recorded by the VDR.

Event History					arch
MODE : Play					
Time ∇	Category	Name	Contents1	Contents2	
01/07/2014 05:11:17:910	MIC	MIC Test full		1	
01/07/2014 05:11:17:910	MIC	MIC M3 Threshold 25	Value 0	Result Fail	=
01/07/2014 05:11:17:910	MIC	MIC M4 Threshold 25	Value 0	Result Fail	
01/07/2014 05:11:17:910	MIC	MIC M7 Threshold 25	Value 0	Result Fail	
01/07/2014 05:11:17:910	MIC	MIC M2 Threshold 25	Value 0	Result Fail	
01/07/2014 05:11:17:910	MIC	MIC M5 Threshold 25	Value 0	Result Fail	
01/07/2014 05:11:17:910	MIC	MIC M1 Threshold 25	Value 32	Result OK	
01/07/2014 05:11:17:910	MIC	MIC M8 Threshold 25	Value 31	Result OK	

**Note:** You can sort the items in ascending order ( $\triangle$ ), descending order ( $\nabla$ ) and initialization order (no symbol).

[Time]: Time an event occurred.
[Category]: Category of an event
[Name]: Name of an event
[Contents1]: Display data associated with log.
[Contents2]: Display data associated with log.

#### Event search

Do the following to search events:

1. Click the [Search] button on the upper right of the [Event] tab.

Search	>	×
Search Condition		
	DD/MM/YYYY HH:MM:SS	
🗌 Start Time	30 + / 05 + / 2021 + 16 + : 25 + : 15 +	
End Time	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
Name Name		
Number N		
Priority	Alarm Warning Caution Indication	
Status	N V S A A' I U 0	
	Search Close	

2. In the dialog box, add a checkmark to desired search items. Multiple items can be checked.

[Start Time]: Display name of event generated after a certain time.[End Time]: Display name of event generated before a certain time.[Name]\*: Display event names entered.\* Can be used for wild card search.

Enter information about the checked event to search in the character input box.

3. Click the [Search] button.

**Note:** The mode changes from [Play] to [Search] when doing a search.

### 2.9 Hardware

The [Hardware] tab provides information about the system hardware. [Note] is the only item that can be edited.

Setting		
Set		
Self Check Status	ОК	
CPU	<pre>Intel(R) Celeron(R) CPU</pre>	P4505 @ 1.87GHz
Memory Size	887MB	
CPU Board	OK	
Terminal Board	OK	
Note		
CPU Core Temperature Upper Limit (degC)	90	
CPU Board System Temperature Upper Limit (degC)	70	
Recording Unit PowerOff Temperature Upper Limit (degC)	75	
CPU Board +3.3V Voltage Threshold (+% or -%)	5	
CPU Board +5V Voltage Threshold (+% or -%)	5	
CPU Board +12V Voltage Threshold (+% or -%)	5	
CPU Board VCORE Voltage Threshold (+% or -%)	30	
CPU Battery Voltage Threshold (V)	3.0	
CPU FAN Rotation Speed Warning Level (RPM)	4800	
CPU FAN No Rotation Threshold (RPM)	100	
External FAN1 Rotation Speed Warning Level (RFM)	4000	
External FAN1 No Rotation Threshold (RPM)	100	
External FANZ Rotation Speed Warning Level (RPM)	4000	
External FANZ No Rotation Threshold (RPM)	100	

#### Description of the items in the Setting window

[Self Check Status]: Display status of self check. [CPU]: Display information about the CPU. [Memory Size]: Display memory size. [CPU Board]: Display status of CPU board. [Terminal Board]: Display status of Terminal board. [Note]: Enter and display remarks. (Entry is optional.) [CPU Core Temperature Upper Limit]: CPU core upper temperature limit. [CPU Board System Temperature Upper Limit]: CPU board system upper temperature limit. [Recording Unit Power Off Temperature Upper Limit]: The recording unit is powered off and recording is stopped when the temperature of the unit exceeds this setting. [CPU Board +3.3V Voltage Threshold]: Voltage threshold for +3.3 voltage. [CPU Board +5V Voltage Threshold]: Voltage threshold for +5 voltage. [CPU Board +12V Voltage Threshold]: Voltage threshold for +12 voltage. [CPU Board VCORE Voltage Threshold]: Voltage threshold for VCORE voltage. [CPU Battery Voltage Threshold]: Keep the default setting. [CPU FAN Rotation Speed Warning Level]: Speed warning level for CPU fan rotation. [CPU FAN No Rotation Threshold]: Threshold for no CPU fan rotation.

**[External FAN1 Rotation Speed Warning Level]**: Speed warning level for external fan1 rotation.

**[External FAN1 No Rotation Threshold]**: Threshold for no external fan1 rotation. **[External FAN2 Rotation Speed Warning Level]**: Speed warning level for external fan2 rotation.

[External FAN2 No Rotation Threshold]: Threshold for no external fan2 rotation.

### 2.10 JB (IF-8530)

Connect the Junction Box (IF-8530) to the DCU before turning on the system. The [JB] tab functions to set up the junction box.

#### How to set up the Junction Box (IF-8530)

- 1. Click the [JB] tab.
- 2. Select a Junction Box (IF-8530) from the [Information] window.

Information				Setting	
JB No.	IP Address	Status	Check	Set Check	
1	10.0.0.2	OK	30		
				Active	
				No	1
				IP Address	10.0.0.2
				MAC Address	00:00:00:00:00:00
				Check	OK 🔹
				Note	

- 3. Set up the Junction Box (IF-8530) from the [Setting] window.
- 4. Click the [Set] button. (Be sure to do this before moving to another channel).
- 5. Click the [Check] button to perform an inspection on all channels. In the [Information] window check column, either [OK] or [NG] (No Good) is displayed.

#### Description of the items in the Setting window

[Active]: Put check in check box to make channel active.

**[No]**: Display Junction Box number.

**[IP Address]**: Display IP address of Junction Box, acquired by VDR.

[MAC Address]: Display MAC address of Junction Box, acquired by VDR.

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

[Note]: Enter remarks. (Entry optional.)

### 2.11 Lifetime

The [Lifetime] tab controls consumable parts.

#### How to control consumable parts

- 1. Click the [Lifetime] tab.
- 2. Select a [Type No.] from the [Information] window. Set up the chosen type no. from the [Setting] window.

Information			Setting	
Type No.	Status	Replace Date	Set	
VR-7010 Battery	Out of Date	01/08/2014 00:00:00		
VR-7021F Battery M	Out of Date	01/08/2014 00:00:00	Type No. (Equipment Name)	VR-7010 Battery
VR-7021F HRU	Out of Date	01/08/2014 00:00:00		· · · · ·
VR-7020 Acoustic B	Out of Date	01/08/2014 00:00:00	Data Name	VR-7010 Battery
123	OK	01/01/2030 00:00:00	Data Mane	VR JOID Battery
	None			
	None		Level	Legal Exchange Parts \vee
	None			
	None		Replace Date(dd/MM/yyyy HH:mm:ss)	01/08/2014 00:00:00
	None			
	None		Lifetime term	0
	None			
	None		Note	CY1-1487-01
	None			

3. Click the [Set] button.

Note: Be sure to click the [Set] button before moving to set up a different type.

#### Description of the items in the Setting window

[Type No.]\*: Enter and display type no.

[Data Name]\*: Enter and display data name.

**[Level]**\*: Set replacement level, [Legal Exchange Parts] or [Normal Exchange Parts]. **[Replace Date]**: Enter and display recommended day of replacement.

[Lifetime Term]: The time difference between the replace date and the VDR system date.

[Note]: Show, enter remarks. (Entry optional.)

The [Status] column of the [Information] window shows the following: [OK]: The recommended date of replacement shown in the [Replace Date] box in the [Information] window has not passed. [Out of Date]: The date of replacement has passed.

[None]: The date of replacement has not been set.

\*: Enter these items for easy identification of equipment.

### 2.12 Network

The [Network] tab sets the system network.

#### How to set the system network

- 1. Click the [Network] tab.
- 2. Select a network from the [Information] window. Set up the network from the [Setting] window.

Information				Setting	
No.	IP Address	LAN Type	Status	Set	
eth1 eth2 eth3	172.31.16.200 10.0.0.100	IEC61162-450 PRIVATE LAN General Netw	0K 0K 0K	LAN Type	IEC61162-450 LAN V
eth4		General Netw	OK	IP Address1	172 31 16 200
	*			Subnet Mask1	255 255 0 0
				Multicast Address1	239 255 0 1
				IP Alias	
				IP Address2	
				Subnet Mask2	
				Multicest Address2	
				Gateway Address	
				VLAN	
				VLAN ID	10
				Note	

\*: Shown only when the CPU board in the DCU is "ADP-216-01".

3. Click the [Set] button.

**Note 1:** Be sure to click the [Set] button before setting up a different network. **Note 2:** After setting the system network, reboot the VDR to apply the settings.

#### Description of the items in the Setting window

**[LAN Type]**: Show LAN type - [PRIVATE LAN], [IEC61162-450 LAN], [General Network1] or [General Network2].

**Note:** [General Network1] and [General Network2] are used for connecting to an external network other than the VDR private network and IEC61162-450 network. To connect to an external network, be sure to activate the [Port Filtering] setting.

[IP Address1]: Set the primary IP address.

[Subnet Mask1]: Set the primary subnet mask.

**Note:** [Subnet Mask1] is adjustable only when [LAN Type] is [PRIVATE LAN]. If you changed the setting, be sure to enter "0" in the No.4 octet field.

[Multicast Address1]: Set live player multicast address. For details "How to set multicast address" on page 2-23.

**[IP Alias]**<sup>\*1</sup>: Put check in check box to make the secondary IP address active with the IP alias.

[IP Address2]<sup>\*1</sup>: Set the secondary IP address.

[Subnet Mask2]<sup>\*1</sup>: Set the secondary subnet mask.

**[Multicast Address2]**<sup>\*1</sup>: Set live player multicast address. For details "How to set multicast address" on page 2-23.

[Gateway Address]: Set gateway address.

**[Port Filtering]**\*2: Put a check in the check box to connect to an external network. When the check box is checked, the VDR can only be accessed from an external network by using Live Player V5. Note that the VDR Maintenance Viewer can not access the VDR from an external network.

Note: VDR data is sent correctly regardless of the port filtering setting.

**[VLAN]**<sup>\*3</sup>: Put check in check box to use the VLAN (Virtual LAN) function. The VLAN setting is applied to the secondary IP address when [LAN Type] is set to [IEC61162-450 LAN].

**Note:** To apply the VLAN setting, the DCU must be connected with a network HUB that is compatible with the VLAN function. Also, it is required to setup the HUB. For details of the HUB settings, contact the FURUNO Service Center.

**[VLAN ID]**<sup>\*3</sup>: Shows the VLAN ID. You cannot edit the VLAN ID.

[Note]: Enter remarks. (Entry optional.)

- <sup>\*1</sup>: Not appears when [LAN Type] is set to [General Network1] and [General Network2].
- <sup>\*2</sup>: Appears when [LAN Type] is set to [General Network1] and [General Network2].

<sup>\*3</sup>: Appears when [LAN Type] is set to [IEC61162-450 LAN].

#### How to set multicast address

**Note 1:** If you do not know the connection point for the J502, contact your dealer.

**Note 2:** This setting is necessary to get video and audio in multicast live playback mode by the Live Player V5. In case of the unicast\* live playback mode, the Live Player V5 can playback video and audio regardless of muticast address settings. \*: The unicast live playback mode is available with the VDR Maintenance Viewer version 1.30 or later. When the software version is 01.20 or earlier, only the multicast live playback mode is available.

- Port J502 (DATA) of DCU is connected to port J17 Secondary IP address at IEC61162-450 is not used: Use the following default settings: [Multicast Address1] at IEC61162-450: 239.255.0.1 [Multicast Address2] at IEC61162-450: Leave blank. [Multicast Address1] at PRIVATE LAN: Leave blank.
   [Multicast Address2] at PRIVATE LAN: Leave blank.
- <u>Secondary IP address at IEC61162-450 is connected to Live Player V5</u>: Set as follows: [Multicast Address1] at IEC61162-450: Leave blank. [Multicast Address2] at IEC61162-450: 239.255.0.1 [Multicast Address1] at PRIVATE LAN: Leave blank. [Multicast Address2] at PRIVATE LAN: Leave blank.
- Port J502 (DATA) of DCU is connected to port J26 Secondary IP address at PRIVATE LAN is not used: Set as follows: [Multicast Address1] at IEC61162-450: Leave blank. [Multicast Address2] at IEC61162-450: Leave blank. [Multicast Address1] at PRIVATE LAN: 239.255.0.1 [Multicast Address2] at PRIVATE LAN: Leave blank.
- <u>Secondary IP adress at PRIVATE LAN is connected to Live Player V5</u>: Set as follows: [Multicast Address1] at IEC61162-450: Leave blank. [Multicast Address2] at IEC61162-450: Leave blank. [Multicast Address1] at PRIVATE LAN: Leave blank. [Multicast Address2] at PRIVATE LAN: 239.255.0.1

- <u>The Live Player V5 is connected to port J41</u>: Set as follows: [Multicast Address1]/[Multicast Address2] at IEC61162-450: Leave blank. [Multicast Address1]/[Multicast Address2] at PRIVATE LAN: Leave blank. [Multicast Address] at General Network1: 239.255.0.1 [Multicast Address] at General Network1: Leave blank.
- <u>The Live Player V5 is connected to port J42</u>: Set as follows: [Multicast Address1]/[Multicast Address2] at IEC61162-450: Leave blank. [Multicast Address1]/[Multicast Address2] at PRIVATE LAN: Leave blank. [Multicast Address] at General Network1: Leave blank. [Multicast Address] at General Network1: 239.255.0.1

### 2.13 System

The [System] tab sets system related functions.

#### How to set system related functions

- 1. Click the [System] tab.
- 2. Set the items in the [Setting] window.

Setting	
Set	
VDR Type	VR-7000S 🗸
Fixed DRU Connection	
Float DRU Connection	
User Disk Connection	
Select Fixed DRU	VR-7023 🗸
SAVE Function	
Alert Management	BAM compliant 🗸
ClusterID	Лау
Brilliance Sync Function	
Junction Box Count	
Long Term Device Count	2 ~
Fixed DRU Capacity()B)	31140
	57599
Float DRU Capacity(NB) Long Term Device Capacity(NB)	983040
User Disk Capacity(NB)	-
VDR Config Version	VC01.65
VDR Config Date	19/01/2023 05:58:38
VDR Config Code	dc7f387507365964e30a66ca9d9417f7
Installation Engineer	
Installation Company	
Installation Date	
MIC Test Time	00:00 and 12:00 $\checkmark$
Note	
Fixed DRU Recover Wait Time(sec)	120
Float DRU Recover Wait Time(sec)	120
Long Term Device Recover Wait Time(sec)	120
Long Term Device Verify Check Interval(msec)	200
Save Area Health Check	
Save Area Health Check Interval(hour)	1440
Disid-1 Champer Learning	

3. Click the [Set] button.

Note: Be sure to click the [Set] button before moving to a different tab.

#### **Description of the items in the Setting window**

[VDR Type]: Select VR-7000 or VR-7000S.

**[Fixed DRU Connection]**: When using VR-7000, both [Fixed DRU Connection] and [Float DRU Connection] are checked. The setting cannot be changed. When using VR-7000S, check either [Fixed DRU Connection] or [Float DRU Connection].

**[Float DRU Connection]**: When using VR-7000, both [Fixed DRU Connection] and [Float DRU Connection] are checked. The setting cannot be changed. When using VR-7000S, check either [Fixed DRU Connection] or [Float DRU Connection].

**[User Disk Connection]**: Check to record the navigational information to User Disk (USB flush memory).

**[Select Fixed DRU]**: Select the type of the fixed DRU to be connected (VR-7020/VR-7023).

**[SAVE Function]**: If you select VR-7000S in [VDR Type], this item is automatically checked. When selecting VR-7000, it is not used.

**[Alert Management]**: Select the alert mode. Normally, select [BAM compliant]. If the alert mode is changed, the setting on the RAP is also required. For details of the RAP setting, see the installation manual (IME-44850).

[Cluster ID]: Keep the default setting.

**[Brilliance Sync Function]**: Check to enable the brilliance sharing function. The setting on the RAP is also required to enable the function. For details of the RAP setting, see the installation manual (IME-44850).

[Junction Box Count]: Number of junction boxes connected.

[Long Term Device Count]: Enter total number of long term devices in the system.

[Fixed DRU Capacity]: Enter the capacity of fixed DRU. Enter the following value according to the setting of [Select Fixed DRU].

• For VR-7020: 33549

• For VR-7023: 31140

**[Float DRU Capacity]**: Display the capacity of float-free DRU. Setting cannot be changed.

[Long Term Device Capacity]: Display the capacity of Long Term Device.

[User Disk Capacity]: Display the capacity of User Disk.

[VDR Config Version]: VDR setting version.

[VDR Config Date]: Date of VDR configuration.

[VDR Config Code]: Display VDR configuration code.

[Installation Engineer]: Name of the installer.

[Installation Company]: Name of the company that installed the system.

[Installation Date]: Date of the installation.

[MIC Test Time]: Select the time to do the MIC test.

[Note]: Enter remarks. (Entry optional.)

**[Fixed DRU Recover Wait Time]**: The number of seconds (60-600) to wait before turning the power to the fixed DRU on or off after a reset, when abnormal writing is encountered. Attempt to recover is abandoned if not successful within 10 minutes. Setting cannot be changed.

**[Float DRU Recover Wait Time]**: Same process as [Fixed DRU Recover Wait Time]. Setting cannot be changed.

**[Long Term Device Recover Wait Time]**: Same process as [Fixed DRU Recover Wait Time]. Setting cannot be changed.

[Long Term Device Verify Check Interval]: The time to wait between recording and verification. Cannot be changed.

[Save Area Health Check]: Keep the default setting.

[Save Area Health Check Interval(hour)]: Keep the default setting.

[Digital Change Logging]: Keep the default setting.

[Live Player Max Connection Count]: Number of times the Live Player has been connected.

[Alert Sentence Output Enable]: No use. Setting cannot be changed.

### 2.14 Software

The [Software] tab sets and display software-related operations.

#### How to set up software related operations

- 1. Click the [Software] tab.
- 2. Set up the chosen Item from the [Setting] window.

Set	
VDR System Program	2450102-01.66
Process Version	2450102-01.66-58
Power Distribution Unit (PDU)	2450115-01.01
Operation System	2450117-01.01
VLC1 FPGA	2450106-01.02
VLC2 FPGA	2450106-01.02
RAP Version	2450103-01.63
Audio Interface Board Version	2450107-01.02
JB1:RJE Boot Program	*
JB1:RJE App Program	*
WatchDog Interval	60
Giveup Interval	300
Refork Limit	10
Extraction Data Select Function	
Live(Remote) Function	
HET Sentence Transmission	
Provide Audio Data	
Provide Image and Chart Information	
Audio and Image Delivery Password	
Note	

3. Click the [Set] button.

#### Description of the items in the Setting window

[VDR System Program]: VDR system program no.
[Process Version]: Processor version no.
[Power Distribution Unit(PDU)]: Power Distribution Unit version no.
[Operation System]: Program no. of operation system.
[VLC1 FPGA]: Display the VLC1 FPGA version no.
[VLC2 FPGA]: Display the VLC2 FPGA version no.
[RAP Version]: Display RAP version no.
[Audio Interface Board Version]: Enter the version no. of the audio interface board.
[JB1: RJB Boot Program]: Display the no. of the RJB Boot program for Junction Boxes.
[JB1: RJB App Program]: Display the no. of the RJB App program for Junction Boxes.

**[WatchDog Interval]**: Cannot be changed - use the default value (60). **[Giveup Interval]**: Cannot be changed - use the default value (300).

[Refork Limit]: Cannot be changed - use the default value (10).

**[Extraction Data Select Function]**: For use only with the remote playback function. For details, see chapter 9. Normally, this checkbox is grayed out.

[Live (Remote) Function]: For use only with activate the remote playback function. For details, see chapter 9. Normally, this checkbox is grayed out.

**[HBT Sentence Transmission]**: Check the box to output the HBT sentence from the VDR. Keep the checkbox checked unless it is required to stop the HBT sentence output.

[Provide Audio Data]: Check the checkbox to input the audio data from the external equipment.

**[Provide Image and Chart Information]**: Check the checkbox to input the image and chart information from the external equipment.

**[Audio and Image Delivery Password]**: Set the password to access to the VDR, to extract audio and image data from the external equipment.

[Note]: Enter remarks. (Entry optional.)

# 2.15 GPS

The [GPS] tab sets up the GPS navigator.

#### How to set up the GPS navigator

- 1. Click the [GPS] tab.
- 2. Select a channel from the [Information] window. Set up the items in the [Setting] window.

Setting	
Set Check	
Priority	1st GPS
Date and Time Source / Ship Position Source (Serial Channel No. or 450 Sensor Channel No.)	LNO6 V
Check	0K ¥
GPS Antenna Position from Bow	0
GPS Antenna Position from Stern	0
GPS Antenna Position from Starboard	0
GPS Antenna Position from Port	0
GPS Failure Threshold	10
GPS Delay Time By Time Sync	1000
GPS Difference Interval	0
GPS Sync Giveup Time	60
ZDATimeout	3sec ♥
Talker	GP 🗸
Local Time Data Source	GHS 🗸
Note	
NTP Server	10 0 0 100

- 3. Click the [Set] button.
- 4. Repeat steps 2-3 to set up each Channel.
- 5. Click the [Check] button to perform an inspection on all channels. The results are shown in the [Information] window as [OK] or [NG] (No Good).

#### **Description of the items in the Setting window**

#### [Priority]: Display priority order.

**[Date and Time Source/Ship Position Source]**: Set the GPS source channel (serial channel number for ZDA sentence).

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

[GPS Antenna Position From Bow]: Enter the position of GPS antenna from bow. [GPS Antenna Position From Stern]: Enter the position of GPS antenna from stern. [GPS Antenna Position From Starboard]: Enter the position of GPS antenna from starboard.

**[GPS Antenna Position From Port]**: Enter the position of GPS antenna from port. **[GPS Failure Threshold]**: If the system receives the GPS time within the time set, the system synchronizes with the time. If the GPS time is not received, the alert 412026 is

generated. [GPS Delay Time by Time Sync]: Enter the minimum time delay for time synchronization.Time synchronization is started only in the time set here.

**[GPS Difference Interval]**: The time set here is added to the GPS time to synchronize the system time. Leave at the default value of 0.

**[GPS Sync Giveup Time]**: If the ZDA is input within the set time limit, the system restarts synchronizing. If not input within the time limit, the system restarts without synchronization.

**[ZDA Timeout]**: Enter the value (seconds) for ZDA timeout (alert 412234) from GPS. **[Talker]**: Select a talker for sentence input from GPS equipment.

**[Local Time Data Source]**: Select the sentence that is used for calculating the local time on Live Player V5 (GNS, GGA, GLL, RMA or RMC).

[Note]: Enter remarks. (Entry optional.)

**[NTP Server]**: Synchronize the time of a computer client or server to another server or reference time source. Setting cannot be changed.

### 2.16 Vessel

The [Vessel] tab sets and displays own ship's information, such as name and IMO number.

#### How to set up ship's information

1. Click the [Vessel] tab. Set up the items in the [Setting] window.

Setting	
Set	
Vessel Name	
Vessel IMO Number	
Vessel MMSI Number	
Vessel Flag	
Approval of Authority	
Note	

- 2. Click the [Set] button.
- 3. From the Maintenance menu, click [VDR Config Management] and then [Upload].
- 4. Click the [Write] buttons to save data to the DRU, Long Term Device, recording media.

#### Description of the items in the Setting window

[Vessel Name]: Enter the name of vessel.
[Vessel IMO Number]: Enter the IMO number of vessel.
[Vessel MMSI Number]: Enter the MMSI number of vessel.
[Vessel Flag]: Enter the flag of vessel.
[Approval of Authority]: Enter the name of the approving authority.
[Note]: Enter remarks. (Entry optional.)

## 2.17 Delivery

The [Delivery] tab functions to send data from the VDR to a PC via LAN.

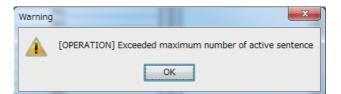
#### How to send data from VDR to PC

- 1. Click the [Delivery] tab.
- 2. Click the [Add] button to show the [Delivery Config] dialog box.

IP Addres	s	1	1	0	0	0	1	10
Port Numb	er	:	100	000				
Analog ]	Digital	Seri	al	Sen	sor (LA	A (1	lert	1

- 3. Select the protocol from the [Protocol] drop-down list. (Only [Unicast] is available.)
- 4. Enter the IP address in the [IP Address] input box.
- 5. Enter the port number in the [Port Number] input box.
- Click the tab ([Analog], [Digital], [Serial], [Sensor (LAN)] or [Alert]) of the data to send.
- 7. Select the channel of the data to send.
- 8. If [Serial] or [Sensor (LAN)] was selected at step 6, select applicable data sentence from the [Inactive] window. Click the right arrow to move the data sentence to the [Active] window. When you select "ALL", all sentences that the DCU can output are registered.

**Note:** A maximum of five sentences can be registered. If you try to register six or more sentences, following message arrears.



 Click the [OK] button to close the [Delivery Config] dialog box. The settings are listed in a table in the [Delivery Config] dialog box.
 Note: A maximum of 128 rows can be listed in the [Delivery Config] dialog box. 10. Check the checkbox in the [Active] column, and then click the [Set] button. **Note:** A maximum of 64 checkboxes can be checked.

#### Description of the buttons in the Setting window

[Set]: Save edited settings.[Add]: Create new delivery settings.[Modify]: Modify selected delivery settings.[Delete]: Delete selected delivery settings.

## 2.18 Sensor (LAN)

The [Sensor (LAN)] tab sets up sensors connected via LAN and serial data input via sensor adapter. A total of 64 serial signal channels (IEC 61162-450) can be fed via the Sensor LAN.

Informatio	n					Setting			
CH No	Type No	SFID	Status	Check		Set Capture	Select Equipment	Reflect Equipment	Check P-sentence
LNO1			None	OK .					
LN02			None	OK		Active			
LN03			None	0K					
LNO4			None	OK		Brand			
LN05			None	0K					
LNO6			None	OK		Type No. (Equipment Name			
LN07			None	OK		system adapted the			
LNOS			None	OK		System Function ID			
LN09			None	OK		System Function 12			
LN10			None	OK		Check		OK	•
LN11			None	0K		Check		ON	•
LN12			None	0K		Data Name			
LN13			None	0K		Data name			
LN14			None	0K		Data Type		IMEA	
LN15			None	0K		Sata 1990			
LN16			None	0K		Source Checksum			
LN17			None	0K					
LN18			None		=	Time out		60sec	-
LN19			None	OK					
LN20			None	OK		Alert Name Definition		CH No.	<b>•</b>
LN21			None	OK					
LN22			None	OK		Equipment Category		Sensor (L	(114
LN23			None	OK		- quiphent successi		Sensor (B	
LN24			None	OK		Note			
LN25			None	OK					
LN26			None	OK					
LN27			None	OK					
LN28			None	OK					
LN29			None	OK					
LN30			None	0K					
LN31			None	0K					
LN32			None	OK					
LN33			None	OK					

#### Description of the items in the Information window

[CH No.]: Channel No.
[Type No.]: Type of device.
[SFID]: System Function ID.
[Status]: Status of device, [Active], [Fail], or [None].
[Check]: Results of check, [OK], [NG] (No Good), or [Not Comp] (Not Checked).

#### Description of the items in the Setting window

[Set] button: Reflect settings to server.

**[Capture]** button: Opens the [Sensor (LAN)] window to check if data is received. If not received, lower the baud rate.

**[Select Equipment]** button: Select equipment settings (saved to the database) to reflect in channel.

**[Reflect Equipment]** button: Save the equipment setting data to the database. **[Check]** button: Check all channels. The results are shown as [OK] or [NG] (No Good), in the [Information] window.

**[P-sentence]** button: Show the [P-sentence definition] dialog box. (See "Description of the buttons in the Setting window" on page 2-7 for usage.)

[Active]: Check to make device active.

[Brand]: Enter the brand name of device.

[Type No]: Type of device; for example, GPS.

**[System Function ID]**: Enter SFID (System Function ID); for example, GP0001. (Do not set multiple SFIDs.)

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

[Data Name]: Input name of data.

[Data Type]: Fixed at [NMEA].

[Source Checksum]: Tick box to check for checksum in sentence.

**[Time Out]**: Set the timeout. The choices are [5 s], [10 s], [20 s], [30 s], [60 s], [120 s], [180 s], and [No-Timeout].

[Alert Name Definition]: Select the alert display format for the serial communication error.

- [CH No.]: The alert 412317 "No No.01 Serial(LAN) Connection" to 412380 "No No.64 Serial(LAN) Connection" occurs when the serial communication error occurs. You can find the channel number that communication error occurs, by checking the alert name.
- [Equipment Name]: The alert 412817 "No XXX" to 412880 "No XXX" occurs when the serial communication error occurs. "XXX" changes according to the equipment name entered to [Type No. (Equipment Name)]. You can find the equipment name that communication error occurs, by checking the alert name.

[Equipment Category]: Enter the equipment category.

[Note]: Enter remarks. (Entry optional.)

# 2.19 SA (Sensor Adapter)

The [SA] tab sets up the sensor adapters.

Information					Setting
No	SFID	Status	Check		Set Check
1	II0001	None	Not Comp		 No
2	II0002	None	OK		10
3	II0003	None	OK		System Function ID
4	II0004	None	OK		
5	II0005	None	OK	_	IP Address
6	II0006	None	OK	_	Check
7	110007 110008	None	0K .	-	Master Board
0	110008	Hone	AO		
					Master Board Program Number
					I/O Board Count
					Sub1 Board
					Sub1 Board Program Number
					Sub2 Board
					Sub2 Board Program Number
					Sub3 Board
					Sub3 Board Program Number
					Sub4 Board
					Sub4 Board Program Number
					Sub5 Board
					Sub5 Board Program Number

#### Description of the items in the Information window

[No.]: No. of adapter.
[SFID]: Enter SFID (System Function ID); for example, II0001.
[Status]: Status of device, [Active], [Fail] or [None].
[Check]: Results of check, [OK], [NG] (No Good), or [Not Comp] (Not Checked)

#### Description of the items in the Setting window

[Set] button: Reflect settings to server.

[Check] button: Check device.
[Active]: Check to make active.
[No.]: Sensor adapter no.
[System Function ID]: SFID of sensor adapter. (Do not set multiple SFIDs.)
[IP Address]: IP address of sensor adapter.
[Check]: Show check result. Same as [Check] in the [Information] window. Do not change the setting.
[Master Board]: Name of Master board.
[Master Board Program No.]: Set data type, [NMEA], [ASCII], or [Binary].
[I/O Board Count]: Show number of sub boards.
[Sub1 Board]: Classification of Sub 1 board.
[Sub1 Board Program Number]: Program no.of Sub1 board.(Content of Sub Boards 2-13 same as those for Sub Board 1.)
[Note]: Enter remarks. (Entry optional.)

### 2.20 CAM (AMS)

The [CAM (AMS)] tab sets up the Central Alert Management System (Alert Management System).

nformation			The second	Setting	
SFID	Interface Type	Status	Check	Set Check	
	Serial	Active	Not Comp		
II0201	LAN	Active	Not Comp	Active	
				Check	Not Comp $ \sim $
				Interface Type	lah 🗸
				System Function ID	II0201
				Data Recording	
				Talker1	CA
				Talker2	IN
				Talker3	II
				Note	

#### Description of the items in the Information window

[SFID]: Show CAM (AMS) SFID (System Function ID); for example, II0001.
[Interface Type]: Show Interface type, [Serial] or [LAN].
[Status]: Status of recording received from CAM (AMS), [Recording], [Fail], or [None].
[Check]: Show check results, [OK], [NG] (No Good), or [Not Comp] (Not Checked)

#### Description of the items in the Setting window

[Set] button: Reflect settings to server.
[Check] button: Check device.
[Active]: Check to make active.
[Check]: Show check result. Same as [Check] in the [Information] window. Do not change the setting.
[Interface Type]: Set the interface type, [Serial] or [LAN].
[System Function ID]: Set the SFID no. of the CAM (AMS). (Do not set multiple SFIDs.)
[Data Recording]: Check to save recording received from CAM (AMS).
[Talker 1] to [Talker 3]: Keep the default setting.
[Note]: Enter remarks. (Entry optional.)

# 2.21 VLC

The [VLC] tab sets up the Video LAN Converter.

Set Select Equipment Reflect Equipment
Set     Select Equipment     Reflect Equipment       Active     No       No     Check       System Function ID     IP Address       Submet Mask     Delay Offset(ms)       VLC Reboot     VLC Reboot       VLC Reboot Delay Time (sec)     Chi Active       Chi Input Port     Chi Equip Information       Chi Vertical Offset(-512-511)     Chi Vertical Offset(-6-7)       Chi Analog Phase(0-31)     Chi Analog Phase(0-31)       Chi Red Gain (0-1023)     Chi Oreen Gain (0-1023)       Chi Elue Gain (0-1023)     Chi Zhyur Port       Ch2 Input Port     Ch2 Equip Information

#### Description of the items in the Information window

[No.]: VLC no.
[SFID]: VLC System Function ID.
[Status]: Status of device, [Active], [Fail], or [None].
[Check]: Results of check, [OK], [NG] (No Good), or [Not Comp] (Not Checked)

#### Description of the items in the Setting window

[Set] button: Reflect settings to server.

**[Select Equipment]** button: Select the equipment that is connected witg the VLC. **Note:** When using the [Select Equipment] button, do not apply the settings of VLC1 to VLC2 or vice versa. Wrong settings, for example, the IP address, SFID and other settings of the VLC1 are applied to VLC2, will cause malfunction.

[Reflect Equipment] button: Save the equipment setting data to the database.[Check] button: Check device.[Active]: Check to make device active.[No.]: VLC no.

2-34

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

**[System Function ID]**: VLC SFID (System Function ID) of VLC. Setting cannot be changed.

[IP Address]: IP address of VLC. Setting cannot be changed.

[Subnet Mask]: Subnet mask of VLC. Setting cannot be changed.

[Delay Offset]: No use.

[VLC Reboot]: Keep the default setting.

[VLC Reboot Delay Time (sec)]: Keep the default setting.

[Ch1 Active]: Check to make channel 1 active.

[Ch1 Input Port]: Select CH1 input port type, [DVI], or [RGB].

[Ch1 Equip Information]: Set CH1 radar type (X-band, S-band, etc.).

[Ch1 Horizontal Offset (512-511)]: Enter horizontal offset for CH1.

[Ch1 Vertical Offset(-8-7]: Enter vertical offset for CH1.

[Ch1 Phase(0-31)]: Set CH1 phase. Keep the default setting.

[Ch1 Analog Phase(0-31)]: Set CH1 analog phase. Keep the default setting.

[Red Gain(0-1023)], [Green Gain(0-1023)], [Blue Gain(0-1023)]: Adjust respective gain. Keep the default setting.

Set "Ch2" items referring to corresponding "Ch1" items.
[Brand]: Set brand of equipment.
[Type No]. Set type no. (model) of equipment.
[Data Name]: Enter data name.
[Equipment Category]: Enter equipment category.
[Note]: Enter remarks. (Entry optional.)

## 2.22 Image Interface

The [Image Interface] tab sets up the image interface.

Information				
To	Input Type	ChNo/SFID	Status	Check
R1	VLC1	1	Active	- OK
R2	VLC1	2	Active	OK
R3 R4	VLC2 VLC2	1 2	None	Not Comp Not Comp
E1	IEC61162-450		Active	Not Comp
E2	IEC61162-450		Active	Not Comp
E3	IEC61162-450	EI0015	Active	Not Comp
VLC				
No	Input Por	rt Activ	ve (	heck
CH1	DVI		Active	Not Comp

Description of the items in the Information window

[No.]: Image interface no.

**[Input Type]**: Input type, [None], [IEC61162], [IEC61162-450], [VLC1], [VLC2]. **[CH No/SFID]**: Channel number/SFID.

**[Status]**: Status of image interface, [Active], [Fail], [None]. **[Check]**: Results of check, [OK], [NG] (No Good), [Not Comp] (Not Checked).

#### Description of the items in the Setting window

**Note:** The settings for the Ch1 and Ch2 items (set with the [Select Equipment] button) must not be same.

**[Set]** button: Reflect settings to server.

[Select Equipment] button. Select a radar or ECDIS model.

[Reflect Equipment] button: Record settings to the database.

[Check] button: Check device.

[Active]: Check to make device active.

[No.]: Image interface no. Same as [No.] in the [Information] window.

[Brand]: Brand of device.

[Type No]: Name of equipment.

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

**[Input Type]**: Set input type. The choices are [None], [IEC61162-450], [VLC1], [VLC2], [VLC1+ECDIS Information], [VLC2+ECDIS Information].

**[Channel Number]**: Select input channel number, [None], [1], [2]. Set if [Input Type] is other than [IEC61162-450].

**[System Function ID1]**: Set SFID of input equipment (radar, ECDIS, etc.) when [Input Type] is [IEC61162-450], [VLC1+ECDIS Information], or [VLC2+ECDIS Information]. Do not enter multiple SFIDs for VLC or Audio board.

**[Specify Device and Channel 1]**: Check the box to specify the device and channel number of the input equipment to be used for data recording.

**[Device Number (Image Data) (0-255) 1]**\*<sup>1</sup>: Enter the device number of the equipment that inputs the image data.

[Channel Number (Image Data) (0-255) 1]<sup>\*1</sup>: Enter the channel number of the equipment that inputs the image data.

**[Device Number (ECDIS Information) (0-255) 1]**\*<sup>1</sup>: Enter the device number of the equipment that inputs the ECDIS information.

**[Channel Number (ECDIS Information) (0-255) 1]**\*<sup>1</sup>: Enter the channel number of the equipment that inputs the ECDIS information.

[RADAR/ECDIS Type]: Select the radar or ECDIS type.

[Horizontal Resolution]: Display horizontal resolution of acquired image.

[Vertical Resolution]: Display vertical resolution of acquired image.

[Image Type]: Display the type of acquired image.

[Color Bit]: Display color bit of acquired image.

**[Jpeg Enable]**: Check the box to send JPEG images to connected equipment. **[Note]**: Enter remarks. (Entry optional.)

**[Add System Function ID(MFD)]**\*<sup>2</sup>: Check the box to receive multiple image data, via a single MFD, using multiple SFIDs.

**[System Function ID2]**<sup>\*2</sup> to **[System Function ID5]**<sup>\*2</sup>: Set SFID of the equipment from which the image is output. These settings are available when [Add System Function ID(MFD)] is activated.

[Specify Device and Channel 2]<sup>\*1</sup> to [Specify Device and Channel 5]<sup>\*1</sup>: Check the box to specify the device and channel number of the equipment whose data will be input for recording.

[Device Number (Image Data) (0-255) 2]<sup>\*1</sup> to [Device Number (Image Data) (0-255) 5]<sup>\*1</sup>: Enter the device number of the equipment to be used for image data input.

[Channel Number (Image Data) (0-255) 2]<sup>\*1</sup> to [Channel Number (Image Data) (0-255) 5]<sup>\*1</sup>: Enter the channel number of the equipment that inputs the image data.

[Device Number (ECDIS Information) (0-255) 2]<sup>\*1</sup> to [Device Number (ECDIS Information) (0-255) 5]<sup>\*1</sup>: Enter the device number of the equipment that inputs the ECDIS information.

[Channel Number (ECDIS Information) (0-255) 2]<sup>\*1</sup> to [Channel Number (ECDIS Information) (0-255) 5]<sup>\*1</sup>: Enter the channel number of the equipment that inputs the EC-DIS information.

\*<sup>1</sup>: Activated when the [Specify Device and Channel] checkbox is checked.

\*<sup>2</sup>: Not used for a FURUNO equipment.

### 2.23 Audio Board

The [Audio Board] tab sets up the Audio I/F board.

Information			Setting	
SFID	Status	Check	Set Check	
II8200	Active	0K	Check	OK 🔹
			System Function ID	II8200
			IP Address	10 0 0 110
			Subnet Mask	255 0 0 0
			Encode Quality	5 🔻
			Note	

#### Description of the items in the Information window

**[SFID]**: Input SFID (System Function ID); for example, II0001. **[Status]**: Status of Audio I/F board, [OK] or [Fail]. **[Check]**: Results of check, [OK], [NG] (No Good), or [Not Comp] (Not Checked)

#### Description of the items in the Setting window

[Set] button: Reflect any changes made.

**[Check]** button: Check settings. [OK], [NG] or [Not Comp] (Not Completed) appears. **[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

**[System Function ID]**: SFID of Audio I/F Board. Also can be set with DIP SW. Do not change the setting.

[IP Address]: Display IP address. Do not change the setting.

[Subnet Mask]: Display subnet mask. Do not change the setting.

**[Encode Quality]**: Set the compression rate (5 - 10) for audio data. The larger the figure the better the quality but also the larger the data. Do not change the setting.

[Note]: Enter and display remarks. (Entry is optional.)

### 2.24 Image Record Setting

The [Image Record Setting] tab sets up the radar/ECDIS recording image.

CH No.					Setting	
CH NO.	Recording	InputSource	Status	Check	Set Check	
Radar1	Only one	R1	Active	30		
Radar2	Only one	R2	Active	OK	Active	~
ECDIS	Only one	E1	Active	OK	active	<b>•</b>
General1	Only one	B2	Active	OK	No	Radar1
General2	Only one	R3	Active	OK		
Additional	Patrol	R4/E3	Active	OK	Check	0К 🗸
					Recording method	Only one 🗸
					No.1 Input source	R1 🗸
					No.2 Input source	none 🛩
					No.3 Input source	none 🗸
					No.4 Input source	none 🗸
					Fixed DRU Recording	V
					Float DRU Recording	V
					Long Tern Device Recording	V
					User Disk Recording	V
					Network Output	V
					Fixed DRU Recording Limit Data Size	9048576
					Compress Type(Viewer)	• PNG 🔘 JPEG
					Color Bit	9bit 🗸
					Jpeg Quality	40
					Jpeg Recompress	
					Receive Image Size(KEyte)	314
					Compress Image Size(KByte)	212
					Note	

#### Description of the items in the Information window

[CH No.]: Channel No.

[Recording]: Show recording method, [Only one], [Patrol] or [Backup].

[Input Source]: Show input source.

[Status]: Status of image interface, [Active], [Fail], [None].

[Check]: Results of check, [OK], [NG] (No Good), [Not Comp] (Not Checked).

#### Description of the items in the Setting window

[Set] button: Reflect settings to server.

[Check] button: Check device.

[Active]: Check to make device active.

[No.]: Image interface no.

**[Check]**: Show check result. Same as [Check] in the [Information] window. Do not change the setting.

**[Recording method]**: Select recording method. The choices are [Only one], [Patrol] or [Backup]. [Only one] records the input source having the youngest number in case of multiple sources. [Patrol] records all input sources cyclically. [Backup] records by input source priority - No.1 the highest, No.4 the lowest.

**[Input Source]**: Select the input source for each of No. 1 to No. 4. The choices are [R1], [R2], [R3], [R4], [E1], [E2], and [E3]. (R=Radar, E=ECDIS)

[Fixed DRU Recording]: No use.

[Float DRU Recording]: No use.

[Long Term Device Recording]: No use.

[User Disk Recording]: No use.

[Network Output]: No use.

[Fixed DRU Recording Limit Data Size]: Keep the default setting.

**[Compress Type]**: Select [PNG] or [JPEG]. When receiving data other than PNG 24 bit color, select [JPEG]. If you select [PNG], you cannot record data.

[Color Bit]: Select color bit to use, with [Color Bit]. The choices are [6 bit], [9 bit], [12 bit], [15 bit], [18 bit], [21 bit], and [24 bit].

[Jpeg Quality]: Keep the default setting.

[JpeqRecompress]: Check to re-compress the JPEG data received in the VR-7000/ 7000S setting. When you use this item, make sure [Jpeg Enable] is active in the [Image Interface] tab and select [JPEG] in [Compress Type] of the [Image Record Setting] tab.

[Receive Image Size]: Show image data size in reception.

[Compress Image Size]: Show image data size in compression. [Note]: Enter remarks. (Entry optional.)

#### How to Upload the Configuration Data 2.25

After all items have been set, upload the configuration data to the VDR and backup the data to the DRU (Fixed, Float), Long Term Device and the recording media as follows:

Note: The configuration data be uploaded in order to apply the configuration changes to the VDR.

- Import from... Export to... Default VDR Config Status : Not Matched VDR System Confie - Upload -VDR Config Status : OK Download -PC VDR Config Date 12/06/2020 05:09:58 VDR VDR Config Code : 3642eaabc170e14fac50615b7e944a0b Maintenance Viewer Config Fixed DRU Saved Config Write VDR Confie Status : OK f VDR Config Status : OK VDR Config Date : 12/06/2020 05:09:58 VDR Config Date : 12/06/2020 05:09:58 VDR Config Code : 3642eaabc170e14fac50615b7e944a0b Fixed DRU VDR Config Code : 3642eaabc170e14fac50615b7e944a0b Float DRU Saved Config VDR Confie Status 4 : 12/06/2020 05:09:58 VDR Config Date Float DRU VDR Config Code : 3642eaabc170e14fac50615b7e944a0b Long Term Device Saved Config VDR Confie Status : OK SSD : 15/06/2020 00:50:49 : 558e6d70c2c8e000d62a7ceaa1d56176 VDR Config Date Long Term Device VDR Config Code User Disk Saved Config VDR Confie Status USB VDR Config Date Hear Dick (HSR) VDR Config Code Compact Flash/CFast Saved Config VDR Config Status : OK CF VDR Config Date : 12/06/2020 05:09:58 CF/CFast VDR Confie Code : 3642eaabc170e14fac50615b7e944a0b Close
- Click [VDR Config Management] in the [Maintenance] menu. 1.

- Click the [Upload] button to send all inputted data to the memory of the VDR.
- 3. Click the [Write] button to send data to the Fixed DRU, Float DRU, Long Term Device, and recording media.
- 4. The message "VDR will be rebooted. Continue?" appears, click the [OK] button to continue. You are then logged out of the VDR Maintenance Viewer. The reboot takes several minutes.

#### 2. SOFTWARE CONFIGURATION

This page is intentionally left blank.

# 3. HOW TO BACK UP CONFIGURA-TION DATA

This chapter shows you how to back up configuration data to various storage media.

# 3.1 How to Back up Configuration Data to the Recording Media

Back up data to the recording media after setting the VDR. Configuration data is created on the recording media as a Configure.dat file. Writing is simultaneously done to the recording media, User Disk, Fixed DRU, Float DRU, and Long Term Device.

**Note:** When the error shown below occurs during the downloading or uploading of configuration data, check the connection of the DRU (Fixed, Float), Long Term Device, User Disk and recording media, and then upload or download the configuration data again.

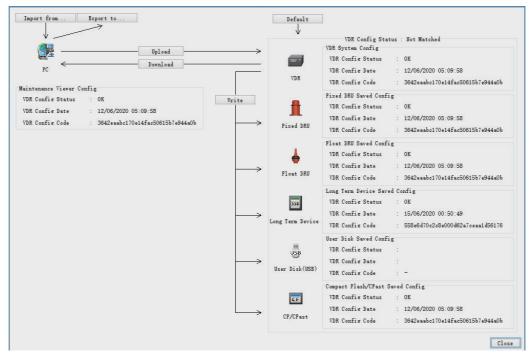
- [CONN] Download failed.

- [CONN] Could not upload config file.

If error re-occurs, re-install the VDR Maintenance Viewer.

#### How to backup data to the recording media

- 1. Set up parameters on the tabs, referring to Chapter 2.
- 2. Click the [Maintenance] menu.
- 3. Select [VDR Config Management].



- 4. Click the [Upload] button.
- 5. A confirmation window appears; click the [OK] button to start uploading to the VDR.

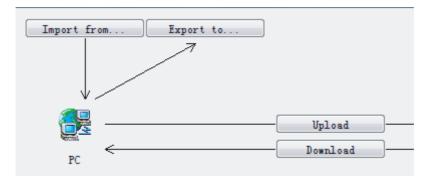
- 6. Click the [Write] button.
- 7. The message "VDR will be rebooted. Continue?" appears. Click the [OK] button to continue. You are then logged out of the VDR Maintenance Viewer. The reboot takes several minutes.
- 8. Open the [VDR Config Management] dialog box and check that the PC, VDR, DRU (Fixed, Float), Long Term Device, User Disk and recording media share the same VDR config code.

# 3.2 How to Back up Configuration Data to a PC

Configuration data saved to the PC can be shared with other vessels. For future service ease, it is recommended to backup configuration data to the PC and have the data on board the vessel. Also, it is recommended to upload this data to the FURUNO SMS (Service Management System). If data cannot be uploaded to the FURUNO SMS, contact the FURUNO Service Center.

#### How to back up configuration data to a PC

- 1. Set up parameters on the tabs, referring to Chapter 2.
- 2. Click the [Maintenance] menu.
- 3. Select [VDR Config Management].



- 4. Click the [Export to] button.
- 5. A confirmation window appears; click the [OK] button.
- 6. Select where to save the data, enter file name, then click the [Save] button.
- 7. Confirm that the backup file is in the location selected.

### 3.3 How to Restore the Default Settings

The procedure below shows how to restore default setting data to the DRU (Fixed, Float), Long Term Device, recording media and VDR Maintenance Viewer.

- 1. Connect the PC to the DCU.
- 2. Turn on the VDR and wait four minutes.
- 3. Open the VDR Maintenance Viewer on the PC.
- 4. Enter the applicable IP address (172.31.16.200) in the IP address box in the [Maintenance Login] dialog box.
- 5. Generate the one-time password (response code) from the challenge code on the screen and enter the password correctly, then click the [Login] button.
- 6. Select [Maintenance], [VDR Config Management] and [Default].
- 7. Click the [Upload] button.
- 8. Click the [Write] button.

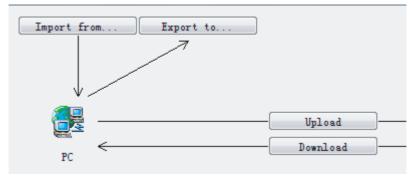
#### 3. HOW TO BACK UP CONFIGURATION DATA

This page is intentionally left blank.

# 4. HOW TO UPLOAD CONFIG-URA-TION DATA FROM A PC

The procedure below shows how to upload configuration data from the PC to the VR-7000/7000S.

- 1. Click the [Maintenance] menu.
- 2. Select [VDR Config Management] to open the dialog box shown below.



- 3. Click the [Import from] button.
- 4. The [Open] dialog box appears. Select configuration data, and then click the [Open] button.
- 5. Click the [Upload] button to upload data to the VR-7000/7000S.
- 6. Click the [Write] button.
- 7. The message "VDR will be rebooted. Continue?" appears click the [OK] button to continue. You are then logged out of the VDR Maintenance Viewer. The reboot takes several minutes.

### 4. HOW TO UPLOAD CONFIG-URATION DATA FROM A PC

This page is intentionally left blank.

# 5. MEDIA MANAGEMENT

The media management feature deletes data from recording media; initializes the system, etc.

Note 1: Do not use the Live Player when initializing or creating a medium.

**Note 2:** Remove USB flash memory except USB flash memory for use of User Disk from the USB port <u>before</u> doing any procedure in this section.

### 5.1 Initialization of DRU, Long Term Device, User Disk

This section shows how to delete data from the DRU (Fixed, Float), Long Term Device, User Disk.

**Note:** Initialization deletes all VDR setting data. Before doing the initialization, save the VDR setting data.

#### How to delete data from a DRU, Long Term Device or User Disk

- 1. Connect the LAN cable between the LAN port on the PC and J502 (DATA) in the DCU.
- 2. Open the [Tool] menu.
- 3. Select [Media Management] to open the [VDR Media Management] dialog box.
- 4. Check that the IP address shown in [Connect to IP] is the same as the IP address access point.
- 5. Click the [Analyze] button. A list of recording media connected to the VDR appears.

VDR Medis Connect		31 16 200		A	nalyze
Select	Device	Capacity	Name	Information	
	Fixed DRU	63464 MB	Fixed DRU		
	Float DRU	65536 MB	Float DRU		
1000	/dev/sdb	488386 MB	Long Term Device	1	

6. Put a checkmark in the checkbox in the [Select] column for the Fixed DRU, Float DRU or Long Term Device, User Disk.

Only one device can be initialized at a time. However, if two Long Term Devices are treated as one device, they can be initialized simultaneously.) **Note:** If there are two SSDs in a Long Term Device, the two SSDs are shown. Check all Long Term Devices shown.

7. Select [Fixed DRU Initialize], [Float DRU Initialize], [Long Term Device Initialize], [User Disk Initialize] or [Long Term Device Save Area Release] from the

[Operation] drop-down list in the [Operation] window. Be sure the media selected matches the one selected at step 6.

When selecting [Long Term Device Save Area Release], select the save area to delete the data from the [Select Area] drop-down list.

Fixed DRU Initialize:	1
Fixed DRU Initialize	
history and VDR configuration data.	
72 hours - This mode is to delete all data (Operation History, recordi	ng
All Save Area ~ data, VDR configuration data) and so you should backup oper history and VDR configuration data.	ating
Run Long Term Device Creation:	
Run Long Term Device Creation: This and is to ach a sone Long Term Device for UP-7000 Mi	1

8. Click the [Run] button.

### 5.2 Creation of Long Term Device

The Creation feature initializes the Long Term Device. To do the creation with a DRU, connect the DRU to the PC with a LAN cable. A special tool is required to do the creation.

**Note 1:** Initialization deletes all VDR setting data. Before doing the initialization, save the VDR setting data.

**Note 2:** If creation fails, try again. If creation fails again, request service to repair/replace the Long Term Device.

- 1. Do steps 1-4 in section 5.1. To format the Long Term Device, place a checkmark in the [Select] column of the listed record media in the [Name] column of the [VDR Media Management] dialog box.
- 2. From the [Operation] drop-down list in the [Operation] window, select [Long Term Device Creation].
- 3. Press the [Run] Button.

### 5.3 Creation of User Disk

The Creation feature initializes the USB flash memory to use it as User Disk.

**Note 1:** Make the [User Disk Connection] setting active (See section 2.13), and then restart the VDR. If the setting is inactive, the User Disk is not shown.

**Note 2:** Initialization deletes all data in the USB flash memory. Before doing the initialization, save the data in the USB flash memory.

**Note 3:** If creation fails or User Disk does not appear in a list of recording media, try again. If creation fails again, request service to repair/replace the USB flash memory.

**Note 4:** When using several User Disks, initialize the all USB flash memories in advance to make them active.

- 1. Do steps 1-4 in section 5.1. To format the User Disk, place a checkmark in the [Select] column of the listed record media in the [Name] column of the [VDR Media Management] dialog box.
- 2. From the [Operation] drop-down list in the [Operation] window, select [User Disk Creation].
- 3. From the drop-down list in the [Record Time] window, select a recording time to capacity of the USB flash memory (About 50GB is required for 72 hours).
- 4. Press the [Run] Button.

#### 5. MEDIA MANAGEMENT

This page is intentionally left blank.

6. OTHER FUNCTIONS

### 6.1 Software Management

The software download feature downloads VDR system software to the PC.

### 6.1.1 How to download software

- 1. Click the [Maintenance] menu.
- 2. From the [Software Management] menu, click [Software Download] to show the [Software Download] dialog box.



- 3. Click the [Download Software] button.
- 4. The confirmation window appears; click the [OK] button.

The [Software Backup Execute] window shows the results of the download. The software file, vdr.tar, is downloaded to C:\Program Files\VDR Viewer\Viewer\Backup (32 bit) or C:\Program Files(x86)\VDR Viewer\Viewer\Backup (64 bit).

### 6.1.2 How to update software

Note 1: Do not update the file downloaded at section 6.1.1.

Note 2: Be sure to upload the correct file.

- 1. Click the [Maintenance] menu.
- 2. From the [Software Management] menu, click [Software Upload] to show the [Software Update] dialog box.

Software Update	<b>X</b>
Update File Software Informa	: Select
Software Name Software Number	
Update Server	-
IPAddress	: 10 0 0 100
Restore	Update Close

- 3. Click the [Select] button to show the [Open] dialog box.
- 4. Select the update file (vdr.tar) then click the [Open] button.
- 5. Check that the displayed software information is correct.
- 6. Click the [Update] button.

After the updating is completed, the VDR is automatically restarted.

#### 6. OTHER FUNCTIONS

**Note:** If an update is not satisfactory, you can revert to the previous software version. Click the [Restore] button on the [Software Upload] dialog box to restore the previous software version. This feature is available <u>after</u> updating the software.

### 6.1.3 How to update VLC

- 1. Click the [Maintenance] menu.
- 2. From the [Software Management] menu, click [VLC Upload] to show the [VLC Update] dialog box.

VLC Update	
Update File	: Select
IP Address(DCU)	: 10 0 0 100
VLC Name	: VLC1 V
	Update Close

- 3. Click the [Select] button to show the [Open] dialog box.
- 4. Select the update file then click the [Open] button.
- 5. Check that the displayed software information is correct.
- 6. From the drop-down list in the [VLC Name] field, select a VLC for update.
- 7. Click the [Update] button.

After the updating is completed, the VDR is automatically restarted.

### 6.1.4 How to update RAP

- 1. Click the [Maintenance] menu.
- 2. From the [Software Management] menu, click [RAP Upload] to show the [RAP Update] dialog box.

RAP Update	×
Update File	: Select
IP Address(DCU)	: 10 0 0 100
Update	: Application 💌
	Update Close

- 3. Click the [Select] button to show the [Open] dialog box.
- 4. Select the update file then click the [Open] button.
- 5. Check that the displayed software information is correct.
- From the drop-down list in the [Update] field, select a program to be updated ([Application] or [Booter)].
   It takes approx. seven minutes to update the application program. The boot program takes approx. two minutes to update.
- 7. Click the [Update] button.

After the updating is completed, the RAP and DCU are automatically restarted.

**Note:** If the updating fails, the error message appears appx. 20 minutes later. In this case check the connection between the DCU and RAP, then retry the updating.

### 6.2 Audio Password

The audio password set at the Live Player can be removed to enable audio access without a password.

- 1. Click the [Maintenance] menu.
- 2. Select [Change Audio Password] from [Password Management] to show the [Change Audio Password] dialog box.
- 3. The confirmation window appears; click the [OK] button.

### 6.3 Record Comparison

The integrity of the DRU and Long Term Device recordings can be compared.

Note: This function is used by the R&D engineer for debugging.

- 1. Click the [Maintenance] menu.
- 2. Select [Record Comparison] to show the [Record Comparison] window.

The results are updated every 15 seconds.

Date 🛆	Result
09/10/2008 15:03:00	OK
09/10/2008 15:03:15	OK
09/10/2008 15:03:30	OK
09/10/2008 15:03:45	OK
09/10/2008 15:04:00	OK
09/10/2008 15:04:15	OK
09/10/2008 15:04:30	OK
09/10/2008 15:04:45	OK
09/10/2008 15:05:00	OK
09/10/2008 15:05:15	OK
09/10/2008 15:05:30	OK
09/10/2008 15:05:45	ОК
09/10/2008 15:06:00	ОК
09/10/2008 15:06:15	OK
09/10/2008 15:06:30	OK
09/10/2008 15:06:45	ОК
09/10/2008 15:07:00	OK
09/10/2008 15:07:15	ОК
09/10/2008 15:07:30	OK
09/10/2008 15:07:45	OK
09/10/2008 15:08:00	OK
09/10/2008 15:08:15	OK
09/10/2008 15:08:30	OK
09/10/2008 15:08:45	OK
09/10/2008 15:09:00	OK
68 disagreement was fou	und Close

### 6.4 Software History

This section shows you to save and configure software history (communications record).

### 6.4.1 How to save software history

**Note:** If error occurs while saving the software history, restart the VDR Maintenance Viewer.

- 1. Click the [Maintenance] menu.
- 2. Select [Software History Management] followed by [Software History Collect] to show the [Software History Collect] dialog box.

Software History Coll	ect		x
Connecting : 172	31	16	200
Destination :			Select
None			
At Once     At Once			
🔘 Periodic	30sec	-	
Alert Detection			
			OK Cancel

- 3. Click the [Select] button to show the [Open] dialog box.
- 4. Select where to save the data then click the [Open] button.
- Select desired save condition then click the [OK] button.
   [None]: No saving.

**[At Once]**: Save the software history manually. Saving begins as soon as the [OK] button is clicked.

**[Periodic]**: For debugging. Do not use otherwise. The intervals are 30 sec., 60 sec., 120 sec., and 60 min.

**[Alert Detection]**: For debugging. Do not use otherwise. Software history is saved when the specified alert is released. Enter alert number.

### 6.4.2 How to configure the software communications record

This function is for debugging. Do not do this procedure unless required. Malfunction can result.

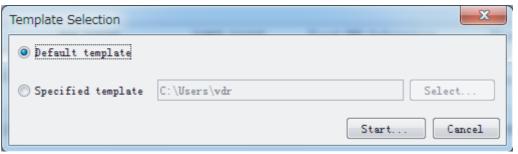
- 1. Click the [Maintenance] menu.
- 2. Select [Software History Config].
- Set the following: [Process]: Select the type of communications record to save. [ALL] saves all communications records. [Detail]: Show or hide detailed information.
- Software History Config
- 4. Click the [Send] button.

### 6.5 Easy Setup

This feature sets equipment settings in batch and creates a data file of those settings.

#### 6.5.1 Default template: The default template is created with the settings entered at installation

- 1. Click the [Maintenance] menu.
- 2. Select [Easy Setup] to show the [Template Selection] dialog box.



- 3. Select [Default template].
- 4. Click the [Start] button to show the [Easy Setup] dialog box.

Easy Setup	×
root Audio Digital Serial Analog Market Sensor Market VLC Market ImageInterface	
	Save Close

5. Right click the channels ([Audio], [Digital], [Serial], [Analog], [Sensor], [VLC], [ImageInterface]), then select [Edit] to show the [Equipment Selection] dialog box.

Equipment Selection		×
Equipment Directory		
Information		
Category	Type No	
Brand	Data Name	
Interface		

- 6. From the [Equipment Directory] dialog box, select equipment connected to the selected channel, and then click the [OK] button.
- 7. Repeat steps 5 and 6 to select equipment settings for each channel.
- 8. Click the [Save] button in the [Easy Setup] dialog box to show the [Save] window.
- 9. Select where to save the file and enter file name.
- 10. Click the [Save] button.

#### 6.5.2 Specific template: Use a file already created

- 1. Click the [Maintenance] menu.
- 2. Select [Easy Setup] to show the [Template Selection] dialog box.
- 3. Check [Specified Template].
- 4. Click the [Select] button, and then select the file to edit.
- 5. Click the [Start] button to show the [Easy Setup] dialog box.
- 6. Right click the channels ([Audio], [Digital], [Serial], [Analog], [Sensor], [VLC], [ImageInterface]), then select [Edit] to show the [Equipment Selection] dialog box.
- 7. From the [Equipment Directory] dialog box, select equipment connected to the selected channel, and then click the [OK] button.
- 8. Repeat steps 6 and 7 to select equipment settings for each channel.
- 9. Click the [Save] button in the [Easy Setup] dialog box to show the [Save] window.
- 10. Select where to save the file and enter file name.
- 11. Click the [Save] button.

### 6.6 Equipment Management

This feature controls the import and export of equipment settings.

#### 6.6.1 How to import a data file

Import data files of equipment settings created in [Easy Setup], etc. to the VDR.

- 1. Click the [Maintenance] menu.
- 2. Select [Import] from [Equipment Management] to show the [Open] dialog box.
- 3. Select the data file to import and click [Open].

#### 6.6.2 How to export a data file

Export data files of equipment settings from the VDR to a PC.

- 1. Click the [Maintenance] menu.
- 2. Select [Export] from [Equipment Management] to show the [Save] dialog box.
- 3. Enter file name.
- 4. Click the [Save] button.

### 6.7 PC\_RAP

This feature enables the same operation of the RAP (Remote Alarm Panel) from a PC. Select [PC\_RAP] from the [Tool] menu to show the [PC\_RAP] dialog box.

1		UR	UNO	(
	RAP SIATUS			
			a statute	
		NORMAL	ALERI	
			Button	
			ACK	
			U	
Ale	rt			
		1000 100		
	Time /	Number	Name	
Per	ding Alert			
Per	ding Alert	Itunber	Itane	
Per	 Time ∇			
Per		Jumber 412026 412515	GPS Large Time Difference	
Per	Time ⊽ 19/12/2013 18:27:58:322	412026	GPS Large Time Difference Fixed DRU Exchanged	
Per	Time ↓ 19/12/2013 18:27:58:322 19/12/2013 17:55:33:301	412026 412515	GPS Large Time Difference	
Per	Time ∇ 19/12/2013 18:27:58:322 19/12/2013 17:55:33:301 19/12/2013 17:54:08:501	412026 412515 412581	GPS Large Time Difference Fixed DRU Exchanged No. 1 ECDIS No Input Attached inform Float DRU Exchanged	
Per	Time ↓ 19/12/2013 18:27:58:322 19/12/2013 17:55:33:301 19/12/2013 17:54:08:501 19/12/2013 17:52:15:702	412026 412515 412581 412516	GPS Large Time Difference Fixed DRU Exchanged No. 1 ECDIS No Input Attached inform Float DRU Exchanged No. 1 ECDIS No Input Image	
Per	Time ∇ 19/12/2013 18:27:58:322 19/12/2013 17:55:33:301 19/12/2013 17:55:33:301 19/12/2013 17:52:15:702 19/12/2013 17:25:38:502	412026 412515 412581 412516 412555	GPS Large Time Difference Fixed DRU Exchanged No. 1 ECDIS No Input Attached inform Float DRU Exchanged	im .

#### ACK button

Silences the audio alarm.

#### **RAP STATUS lamps**

Display RAP status.

**[NORMAL]**: Lights green where there is neither unacknowledged nor unrectified alert. **[ALERT]**: Flashes red for unacknowledged alert. Lights red for unrectified alert.

#### Alert window

List of unacknowledged alerts. [Time]: Time alert was generated. [Number]: Alert number. [Name]: Alert name.

#### Pending Alert window

List of acknowledged alerts that have not been rectified. [Time]: Time alert was generated. [Number]: Alert number. [Name]: Alert name.

### 6.8 Other

#### 6.8.1 Status Monitor window

The [Status Monitor] provides comprehensive data about the status of the VDR. From the menu bar, click [Tool] > [Status Monitor] to show the [Status Monitor] window.

실 Status Monitor	
Reload Save	Update
SYS NAME : VR-7000	PDU : (CONNECT ) RAP : (CONNECT ) CPU S/N
VDR VERSION: 2450102-01.06	AC : (ON ) AUDIO : (CONNECT ) CPU REV.
RAP VERSION: 2450103-01.03	BATT: (ON ) VLC1 : (CONNECT ) CPU BIO:
SYS STAT : NORMAL	VLC2 : (- )
	GPS : (SI02 ) AMS1 : (- )
	AMS2 : (- )
NETWORK: (IP ADDRESS1 /SUBID	ET MASK1 )(IP ADDRESS2 /SUBHET MASK2 )
ETHER1 : (172.31.16.200 /255.2	255.0.0 )(- /- )
ETHER2 : (10.0.0.100 /255.0	0.0.0 )(- /- )
REC DEVICE: (CONNECTION/CAPACIT	TY /DISK COUNT/REC COUNTER/ROUNDIRIP)
Long Term : (CONNECT /491520	MB/1 /96895878 /0 )
Float DRU : (CONNECT /57599	MB/1 /96895878 /133 )
Fixed DRU : (CONNECT /33549	MB/1 /96895878 /39 )
User Disk : (DISCONNECT/-	MB/1 /- /- )
SA/JB : (APP /STAT )	AUDIO : (VALUE ) VIDEO: (RESOLUTION/TIME )
SA1 : (- /- )	VHF1 : (3 ) R1: (1600x1200 /04:49:47)
SA2 : (- /- )	VHF2 : (3 ) R2: (1600x1200 /04:49:55)
SA3 : (- /- )	MIC1 : (10 ) R3: (- x- /- )
SA4 : (- /- )	MIC2 : (10 ) R4: (- x- /- )
SA5 : (- /- )	MIC3 : (12 ) E1: (- x- /- )
SA6 : (- /- )	MIC4 : (8 ) E2: (- x- /- )
SA7 : (- /- )	MIC5 : (9 ) E3: (- x- /- )
SA8 : (- /- )	MIC6 : (8 ) Recording Device Restart Cou
JB1 : ( /- )	MIC7 : (8 ) Long Term : (0 💌
	4
	Close

#### Description of the buttons in the Status Monitor window

**[Reload]**: Activate or deactivate automatic refreshing of the [Status Monitor] window. When automatic refreshing is activated, the information on the window is refreshed every five seconds and the [Reload] button is highlighted in blue.

[Save]: The contents of the [Status Monitor] can be saved as a text file. Available when the [Reload] button is off.

**[Update]**: Update (refresh) the [Status Monitor] window. This button does not work when the [Reload] button is on.

[Close]: Close the [Status Monitor] window.

#### 6.8.2 VDR Error List

This feature compiles all the errors shown on the RAP for easy reference. Access from [Menu] > [Tool] > [VDR Error List].

No	Title	Detail
412026	GPS Large Time Difference	This indicates that the time difference between system time and time supplied by UTC source is more than 10 seconds. Restart VR-7000. Try to see if the CMOS clock is set correctly. If no set it and restart VR-7000. If yes, find out why the time source device GPS is delivering "out of bands" time info.
412082	RAP No Connection (DCU No Connection)	DCU: RAP is missing Connection to RAP is lost. Check cable connected to RAP. Reconnect RAP. RAP: DCU is missing Connection to DCU is lost. Check cable connected to DCU. Reconnect DCU.
412083	AMS No Connection	AMS is missing Connection to AMS is lost. Check cable connected to AMS. Reconnect AMS.
412088	JB No Connection	Indicates that Junction Box (no.1) is missing. Check Cable and IP-address setting.
412170	VDR Configuration Failure	Data cannot be stored because of abnormal VDR configuration. Restore VDR config data. If not, request service.
412171	Recording Buffer Overflow (VDR Recording Buffer Overflow)	A image exceeding a recording buffer is input. Please review the number of the RADAR/ECDIS record channels for RADAR/ECDIS image resolution.
412173	Fatal System Failure	Fatal system error. Reboot automatically after an error occurred. If it repeats, please request service.
412214	Battery Running	AC power are down. Reconnect AC power.
412218	MIC Test Failure	This ALERT is issued when the microphone test fails. This test can be run from Audio tab into the VDR Maintenance Viewer, and is run every 12-hours during normal operation. Check if microphones mounted are disabling in the VDR Maintenance Viewer. If this is OK, locate the faulty microphone and check/replace it.
412234	GPS No Connection	System has not received UTC information. Check that a valid UTC

The VDR error list contains the following information:

[No.]: Error number.

[Title]: Name of error.

[Detail]: Display details about an error.

#### 6.8.3 Sentence Information Upload

You can upload the sentence information to the DCU. Sentence information must be in PDF file format to use this function. The maximum file size is "2 MB" and the only one file can be uploaded.

Do the following procedure to upload the sentence information:

1. Access [Menu] > [Tool] > [Sentence Information Upload].



- 2. Click the [Select...] button.
- 3. Select a PDF file to be uploaded.
- 4. Click the [Upload] button.

The following message appears after completing the file upload.

		×
1	[CONN] Upload complete	
	ОК	

5. Click the [OK] button.

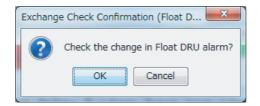
You can open the sentence information file from the Live Player V5. For how to open the sentence information, see the Live Player V5 Operator's Manual (OME-44851).

**Note:** An application for viewing the PDF file should be installed your PC to open the sentence information.

#### 6.8.4 Exchange Check

This feature removes the alerts generated when replacing the DRU (Fixed, Float) or Long Term Device.

Access [Menu] > [Tool] > [Exchange Check], select [Float DRU], [Fixed DRU] or [Long Term Device], and click [OK].



#### 6.8.5 Reboot

You can reboot the VDR from the VDR Maintenance Viewer. To reboot the VDR, select [Reboot] from the [Tool] menu.

# 7. SETTING FOR SENSOR ADAPTER

### 7.1 How to Set the Equipment ID

The default Equipment ID of the sensor adapter is "MCV016". Set the individual Equipment ID before connecting to the network.

- Set the IP address and subnet mask of the PC as shown below. IP address: 172.31.16.201 (or 172.31.16.202) Subnet mask: 255.255.0.0
- 2. Connect the laptop PC to the sensor adapter with the LAN cable.
- 3. Activate the web browser on the PC and enter the default IP address of the sensor adapter: "172.31.17.108".
- 4. Access the [Common Installation Setting] menu and click [Basic Setting] on the tab bar.

Basic Setting	Installation Pa	arameters Alert Define List		Save	System Monito	or 🛛 Factory Test & Default 🔍 🗍
Basic Setting		Basic Setti	ng			
Peripherals			Senso	r Adapter		
		E	Equipment ID	MCV001	<b>~</b>	
		Eq	uipment Name	No.1 Sensor Adapte	r 🔤	
		Equipment Type No.		MC-3000S	$\sim$	
			Subsystem			
		IP Address	Sensor Networ	k 172 . 31 .	16 . 101	

 Select the Equipment ID from the pull-down list. The [Equipment Name], [Equipment Type No.] and [IP Address] are automatically entered according to the Equipment ID.
 Setting represent (MO) (004)" to (MO) (040)".

Setting range: "MCV001" to "MCV016"

- 6. Click the box of [Serial No.] to enter the serial no. of the sensor adapter (example: xxxxxx).
- 7. After entering the setting, click [Save] on the info bar. The system is rebooted automatically to save the configuration.

If you want to discard the entry, click [Discard Changes].

Enter the other settings after setting the equipment ID, referring to the following sections. When the processor unit (EC-3000) is connected in the same network, access the [Common Installation Setting] menu from the EC-3000 and adjust the sensor adapter settings. When the EC-3000 is not connected, access the [Common Installation Setting] menu from the sensor adapter setting] menu from the sensor adapter

This manual provides the instructions when you access the [Common Installation Setting] menu from the sensor adapter. To access the [Common Installation Setting] menu from the EC-3000, see the Instruction Manual supplied with the EC-3000.

### 7.2 [Installation Parameters] Menu

The [Installation Parameters] menu sets the signals and input data of the sensors. First, select the sensor data at the [Sensor Setting] window. Then select the sensor from which the units obtain the sensor data.

#### 7.2.1 Sensor setting

- 1. Access the [Common Installation Setting] menu and click [Installation Parameters] on the tab bar.
- 2. Click [Sensor Setting] on the menu bar, then sensor category.

Conser Politing	Parameters Alert De GPS Sensor	ifine List Sat	Keep the c	o timeout for re dafault setting. nitor Factory Test &	eceiving data
GPS Sensor					
GYRO Sensor	Timeout(msec)	60000	( 100 ~ 3600000		
ROT GYRO Sensor	Equipment	D SFID	Data Type	Strict / Loose	Details
AIS Transponder	GPS001	GP0001	IEC61162-1 Ed4 🗸	Loose 🗸	Details
Echo Sounder	GPS002	GP0002	IEC61162-1 Ed4	Loose	Details
	GPS003	GP0003	IEC61162-1 Ed4 🛛 🗹	Loose 🔽	Details
SDME Sensor	GPS004	GP0004	IEC61162-1 Ed4 🛛 🗹	Loose 🔽	Details
NAVTEX Receiver	GPS005	GP0005	IEC61162-1 Ed4 🛛 🗹	Loose 🔽	Details
Water Temperature	GPS006	GP0006	IEC61162-1 Ed4 🛛 🗹	Loose 🔽	Details
Wind Sensor	GPS007	GP0007	IEC61162-1 Ed4	Loose 🔽	Details
Magnet Compass Sensor	GPS008	GP0008	IEC61162-1 Ed4 🛛 🗹	Loose 🔽	Details
Current Sensor	GPS009	GP0009	IEC61162-1 Ed4 💙	Loose 🗹	Details
Rudder Sensor	GPS010	GP0010	IEC61162-1 Ed4 🔽	Loose	Details

- 3. Check applicable check boxes according to the number of sensors connected.
- 4. Set the following items for the sensors activated at step 3.

ltem	Remarks
SFID	Keep the default setting.
	Do not use the "AI" prefix (AIS excluded) or the "II" prefix.
DATA Type	Sets the RX sentence data format. Setting options: [IEC 61162-1 Ed3], [IEC 61162-1 Ed4], [IEC 61162-1 Ed5], [ASCII], [BINARY], [MODBUS], [PSU]. Do not select [ASCII] or [BINARY].
Strict/Loose	Sets the integrity of sentence data. [Strict]: Confirm the validity of checksum, then receive sentence. [Loose]: Receive sentence regardless of checksum validity.
Details	When the default setting of [Type No.] is different from the type no. of the connected equipment, enter the type no. of the connected equipment. For other setting options ([Sensor Name], [System Alert ID], and [Subsystem]), keep the default setting.

5. Set other sensors in a similar manner.

Note: Set only the sensors connected to the sensor adapter.

#### 7.2.2 Sensor adapter configuration

A maximum of eight sensor adapters (MC-3000S) can be connected to the VR-7000/ 7000S sensor network. One MC-3000S can be connected with a maximum of ten additional units (MC-3010A or MC-3020D). However, the maximum number of MC-3010A units that can be connected to one MC-3000S is five.

**Note:** When you access the [Common Installation Setting] menu from the sensor adapter, you cannot adjust the analog and digital input settings for MC-3010A and MC-3020D. To adjust the analog and digital input settings, access the [Common Installation Setting] menu from the EC-3000.

- 1. Access the [Common Installation Setting] menu and click [Installation Parameters] on the tab bar.
- 2. Click [Sensor Adapter] on the menu bar.

Basic Setting Installa	tion Paramete	Alert Def	ine List Save	System Monitor	Factory	Test & Default 🔍
Sensor Setting	Sens	or Adapter S	etting Talker of Sentence a	and System Function ID		*
Sensor Adapter		1	1			
No.1 Sensor Adapter		Equipment ID	Equipment Name	Sensor Network	Details	
User Sensor Model List	<b>V</b>	MCV001	No.1 Sensor Adapter	172.31.16.101	Details	^
		MCV002	No.2 Sensor Adapter	172.31.17.101	Details	
		MCV003	No.3 Sensor Adapter	172.31.16.102	Details	
		MCV004	No.4 Sensor Adapter	172.31.17.102	Details	
		MCV005	No.5 Sensor Adapter	172.31.16.103	Details	
		MCV006	No.6 Sensor Adapter	172.31.17.103	Details	
		MCV007	No.7 Sensor Adapter	172.31.16.104	Details	
		MCV008	No.8 Sensor Adapter	172.31.17.104	Details	
		MCV009	No.9 Sensor Adapter	172.31.16.105	Details	
		MOV/010	No 10 Sensor Adaptor	172 21 17 105	Detaile	

\*: Select the talker ID for sentences output from the Sensor Adapter (II or SI). Normally, keep the default setting ("II"). Select "SI", only when the talker ID must be changed.

- 3. Check the check box(es) corresponding to the Equipment ID set in [Basic Setting].
- 4. Click the [Details] button and set the items referring to the following table.

11	Details Setting	_	_
	Sensor Adapter	Setting - MCV001	
	Equipme	ent Setting	
	Equipment Name	No.1 Sensor Adapter	
	Equipment Type No.	MC-3000S	
	Subsystem		~
	System Alert ID	201	~
	Alert Information Source	Alert Definition	~
	ALF Text Information	All Alert Name	~
	Cancel	ОК	

ltem	Remarks
[Subsystem]	When sharing sensor data: Set the value. Setting range: "A" to "Z".
	To not share the sensor data: Keep the default setting ("").
[System Alert ID]	The identification number that assigned in the system is shown in this field. Do not change the setting.
[Alert Information Source]	<ul> <li>Set the source of alert definition to show on the display when the alert message is received in an ALF sentence.</li> <li>[Alert Definition]: Show the alert definition registered to the processor unit.</li> <li>[Alert Sentence]: Show the alert definition included in the ALF sentence.</li> </ul>

ltem	Remarks
Item [ALF Text Information]	<ul> <li>Remarks</li> <li>Select the type of the 2/2 packet text information of ALF sentence.</li> <li>[All Alert Name]: Select this item if all alert text is included in the 2/2 packet of the ALF sentence. The text information for the 2/2 packet of the ALF sentence is shown as the alert name in the alert list/log.</li> <li>[Remaining Alert Name]: Select this item if the alert text is divided in 1/2 and 2/2 packets of the ALF sentence. The text information for both the 1/2 and 2/2 packets of the ALF sentence. The text information for both the 1/2 and 2/2 packets of the ALF sentence is shown as the alert name in the alert list/log.</li> <li>[Decision Support]: Select this item if the alert details information (Decision Support) is included in the 2/2 packet of the ALF sentence. The text information for both the text information for the 2/2 packet of the ALF sentence. The text of the ALF sentence. The text information (Decision Support) is included in the 2/2 packet of the ALF sentence. The text information for the text information for the 2/2 packet of the ALF sentence. The text information for the text information for the text information for the 2/2 packet of the ALF sentence. The text information for the 2/2 packet of the ALF sentence. The text information for the 2/2 packet of the ALF sentence. The text information for the 2/2 packet of the ALF sentence. The text information for the 2/2 packet of the ALF sentence. The text information for the 2/2 packet of the ALF sentence. The text information for the 2/2 packet of the ALF sentence.</li> </ul>
	ALF sentence is shown as the alert details in the alert list/log.

- 5. Click [No.× Sensor Adapter] on the menu bar (No.×: No.1 to No.16).
- 6. Click [Serial Input/Output].

Basic Setting Installati	on Paramete	rs Alert	Define List Save	Syste	m Monitor	Factory Test	& Default
Sensor Setting	MCV	001 Serial	Input/Output Setting				
<u>Sensor Adapter</u> <u>No.1 Sensor Adapter</u>		Serial No.	Equipment ID	Details	I/F monitor	Output	Filter
	<b>V</b>	Serial 01	GPS001 ( GP0001 ) ( No.1 GPS ) 🗸	Details	Start	Output	Filter
Serial Input/Output		Serial 02	GYO001 ( HE0001 ) ( No.1 Gyro ) 🗸	Details	Start	Output	Filter
<ul> <li>User Sensor Model List</li> </ul>	<b>~</b>	Serial 03	ROT001 ( HE0051 ) ( No.1 ROT G 🗸	Details	Start	Output	Filter
	<b>~</b>	Serial 04	AIS001 ( AI0001 ) ( No.1 AIS Tran: 🗸	Details	Start	Output	Filter
	<b>~</b>	Serial 05	ESD001 ( SD0001 ) ( No.1 Echo S 🗸	Details	Start	Output	Filter
	<b>~</b>	Serial 06	LOG001 (VD0001) (No.1 SDME	Details	Start	Output	Filter
	<b>V</b>	Serial 07	NTX001 ( CR0001 ) ( No.1 NAVTE	Details	Start	Output	Filter
	<b>V</b>	Serial 08	WTP001 ( 110051 ) ( No.1 Water Te 🗸	Details	Start	Output	Filter

There are eight serial ports on the sensor adapter. "Serial 01" to "Serial 04" can input at 38,400 bps for the AIS and Gyro.

The connector no. on the MC-3000S board and the corresponding serial port no. are shown below.

Connector No.	Serial Port No.	Connector No.	Serial Port No.
J4	Serial 01	J8	Serial 05
J5	Serial 02	50	Serial 06
J6	Serial 03	19	Serial 07
J7	Serial 04		Serial 08

7. Set the items referring to the table shown below.

ltem	Remarks
Equipment ID	Select the Equipment ID from the pull-down list. The pull-down list options change according to the setting at [Sensor Setting].

ltem	Remarks					
Details	Opens the [Details Setting] dialog box and sets the serial communi-					
	cation format. Setting items on the [Details Setting] dialog box changes according to the [Data Type] setting (see section 7.2.1).					
	Details Setting MCV001 - Serial01 MCV001 - Serial01					
	Baud rate 4800 V Baud rate 4800 V					
	Data bit 8 Data bit 8 Data bit					
	Parity bit         None         Parity bit         None         Parity bit           Stop bit         1         Stop bit         1         Image: Stop bit         Imag					
	Timeout (sec)     No timeout     Modbus Timeout (1 ~ 3600000 msec)       First Time     0					
	Continuation					
	Cancel OK Slave Address (1 ~ 247) 1 Modbus Input					
	[Data Type] = other than [MODBUS]					
	[Data Type] = [MODBUS]					
	<ul> <li>[Baud rate]: Sets the baud rate. For high-speed signal input (such as AIS and Gyro) or TTD output, set the baud rate as 38,400 bps The available serial ports with communication in 38,400 bps are [Serial 01] to [Serial 04].</li> <li>[Data bit]: Sets the number of the data bit.</li> <li>[Parity bit]: Select [Odd] or [Even] for the parity bit. The parity bit is used in parity error checking to find errors during data transmission. For no parity bit, select [None].</li> <li>[Stop bit]: Sets the stop bit (last data bit location).</li> <li>[Timeout (sec)]: When the data is not input during the time set here, timeout alert occurs.</li> <li>[First Time]: Activate the checkbox to adjust the setting. Adjust timeout for detecting the first signal.</li> <li>[Continuation]: Activate the checkbox to adjust the setting. Adjust timeout for detecting the signal lost.</li> <li>[Slave Address]: Sets the slave address for Modbus communication.</li> </ul>					
	<ul> <li>[Input] button: Sets the address and the signal bit for each alert on the [Modbus Input] window, The contents on the [Modbus Input] window depends on the alert definition settings.</li> <li>[Forward sensor data]: Check the checkbox to forward data input from the serial port to the sensor adapter. Normally keep the default setting (unchecked).</li> </ul>					
I/F monitor	Click [Start] to monitor the input signal sentences from the interface.					
Output	No use.					
Filter	Activates or deactivates the input sentence filter.					

8. Perform a consistency check and save the configuration data on the [Save] menu.

### 7.3 [Save] Menu

After completing the setting on the [Installation Parameters] menu, perform a consistency check and save the configuration data on the [Save] menu.

1. Access the [Common Installation Setting] menu and click [Save] on the tab bar.

Basic Setting	Installation Parameters	Alert Define List	Save	System Monitor	Factory Test & Default 🔍 🗼
<u>Save</u>	Save Check C Check Ret	ionsistency		In	nport Export
					^

- Click [Consistency Check] to confirm the consistency of the setting. When the consistency check is completed, the result of the check is shown. If an inconsistency is detected, an error message appears. You can not save the configuration until the inconsistency is corrected. Check the settings and correct the inconsistency, then perform the consistency check again.
- 3. When the message "Check consistency completed, you can save data. Please push the "Save" button" is shown, click [Save] in the info bar.
- 4. Click [OK] to save the configuration.
- 5. Several confirmation messages appear. Click the [OK] button to save the configuration data.

### 7.4 How to Save the Log File

The log file of the sensor adapter can be saved to a medium (PC, USB memory, etc.). The log file is used to check the status of the sensor adapter.

- 1. Connect the PC to the sensor adapter with the LAN cable.
- Activate the web browser and enter the following address in the address bar. "http://172.31.xx.xxx/cgi-bin/logall.cgi"
   "172.31.xx.xxx" is the IP address of the sensor adapter where to save the log file.
- 3. After entering the address, the window to save the log file appears. Save the log file to the PC.

### 7.5 How to Update the Firmware (MC-3000S)

This section shows you how to update the firmware program of the sensor adapter MC-3000S.

#### **Preparation**

- PC that has a LAN port Windows<sup>®</sup>7 is recommended. Disable the firewall and set the IP address and subnet mask of the PC as shown below.
   IP address: 172.31.16.201 or 172.31.16.202
   Subnet mask: 255.255.0.0
- LAN cable
- Binary file for update 2450080-xxxxxxx\_mc\_cs\_boot.bin 2450081-xxxxxxx\_mc\_cs\_mainpg.bin 2450082-xxxxxxx\_mc\_cs\_maint.bin 2450084-xxxxxxx\_mc\_io\_mainpg.bin

Boot program Main program Maintenance program Main program (analog, digital input, and digital output board)

(xxxxxxx: program version)

#### 7.5.1 How to activate the maintenance program

- 1. Turn off all sensor adapters.
- 2. Connect the applicable MC-3000S to the PC with the LAN cable.
- 3. Turn on the No. 6 of the DIP-SW (S10) on the MC-CS board (24P0114).
- 4. Turn on the sensor adapter MC-3000S.
- The maintenance program activates after about 30 seconds. At this time, the IP address of MC-3000S is changed to "172.31.17.108". Confirm that the LED (CR 74) on the MC-CS board lights 3 times and goes off for a while repeatedly.

#### 7.5.2 How to confirm the firmware program version

- 1. Activate the maintenance program of the sensor adapter MC-3000S.
- 2. Activate the command prompt of Windows<sup>®</sup>.
- 3. Enter "telnet 172.31.17.108" on the command prompt.
- 4. Enter the user name and password correctly.

```
C:¥telnet 172.31.17.108 ← Enterthetelnetcommand
Trying 172.31.17.108...
Connected 172.31.17.108
Escape character is '^]'.
MC_CS_MAINTENANCE login: ← Entertheteomean
Password: ← Entertheteomeanpassyord
```

#### 7. SETTING FOR SENSOR ADAPTER

5. Enter "/usr/sbin/version" on the command prompt to confirm the program version. The program version is shown on the command prompt.

~\$	/usr/bin/version 🗢	- Thecommand to confirm the program version.
MC	C/S BOOTLOADER-1st	: 2450080-01.01 : 2450080-01.01
		: 2450080-01.01 J Compression : 2450081-01.01 Mainpression
	C/S MAINTENANCE	: 2450081-01.01 Kalmpooram : 2450082-01.01 Kalmonancoprogram
		mimation the population of the

**Note:** The image shown above is an example. The program version number may be different.

6. After confirming the program version, enter "exit" to finish the telnet command.

#### 7.5.3 How to update the firmware program

1. Delete the version number from the firmware binary file name.

### Example : <u>2450081</u>-01010088\_mc\_cs\_mainpg.bin

Program number Version number

 $\checkmark$  Delete the version number from the file name.

### Example : <u>2450081</u>mc\_cs\_mainpg.bin

- 2. Activate the maintenance program of the sensor adapter MC-3000S.
- 3. Activate the command prompt of Windows<sup>®</sup>.
- 4. Change the current directory to the directory where the firmware binary program is saved.

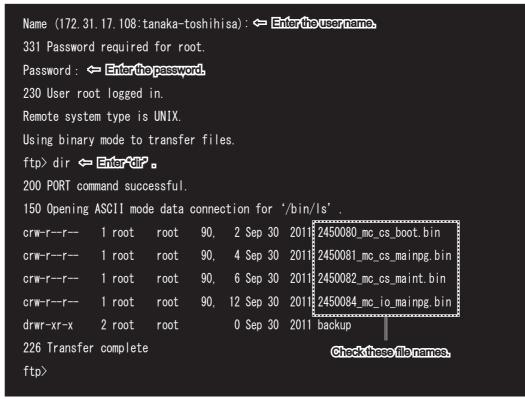
In the example shown below, binary file is saved at  $\,$  C:  ${\tt Yupdate}\,.$ 

**Note:** Change the current directory to the one where the binary file is saved.

- 5. Enter "ftp 172.31.17.108" on the command prompt. Confirm that "220-MC3000\_CS\_MAINTENANCE" is shown.
- 6. Enter the user name and password.

ftp 172.31.17.108 ← Enterthefipcommand. Connected to 172.31.17.108. 220- MC3000\_CS\_MAINTENANCE ← Confirmthattillemassage appears. 220 MC\_CS\_MAINTENANCE FTP server (Version 6.4/OpenBSD/Linux-ftpd-0.17) ready. Name (172.31.17.108:tanaka-toshihisa): ← Entertheusements. 331 Password required for root. Password : ← Enterthepassword. 7. After the login, enter "dir".

The file names that are saved in the sensor adapter are displayed. Confirm that the file names shown below are shown on the display.



- 8. Enter "bin", and then enter "hash".
- 9. Enter the command to transfer the firmware program. Example: put 24500810\_mc\_cs\_mainpg.bin
- 10. When you transfer other program, enter the command to transfer the program.
- 11. Enter "bye" to finish updating the firmware program.

ftp> bin 🗢 Enternecessarily.
200 Type set to I.
ftp> hash 🗢 Enternecessarily.
Hash mark printing on (1024 bytes/hash mark).
ftp> put 2450081_mc_cs_mainpg.bin 🗢 The command to transfer the film ware program.
local: 2450081_mc_cs_mainpg.bin remote: 2450081_mc_cs_mainpg.bin
200 PORT command successful.
150 Opening BINARY mode data connection for '2450081_mc_cs_mainpg.bin'.
#######################################
···.
#######################################
226 Transfer complete.
10888576 bytes sent in 87.84 secs (121.1 kB/s)
ftp> bye 🗢 The command to find in the figure and the find is the figure and the first state of the figure and
221 Goodbye

12. Confirm the firmware program version (see section 7.5.2.).

#### 7. SETTING FOR SENSOR ADAPTER

This page is intentionally left blank.

# 8. SETTING FOR HUB-3000

This chapter provides for the description for how to set the Intelligent Hub HUB-3000.

When using Live Player V5 from a PC that is connected to the network on board, make [IP Alias] active in the [Network] tab of VDR Maintenance Viewer, and then set the HUB-3000.

**Note:** Depending on your vessel's network configuration, the procedure outlined below may differ.

### 8.1 How to Setup the HUB-3000

- 1. Connect the LAN cable between the PC and the HUB-3000.
- 2. Open Internet Explorer<sup>®</sup> on the PC.
- 3. Enter the URL (http://192.168.0.1).
- 4. Click [Advance Config] and [Storm Control].
- 5. Set as shown in the following figure, and click the [Apply] button.

	Broadcast	Storm Control Multicas	t Storm Control Unknown	unicast Storm Control	
evice Status	Broadcast-	storm control configure			
asic Config	Port	Status	Threshold		
dvance Config	G0/1	Enable 🗸	1	(1-262143)PPS	
Port Flow Config	G0/2	Disable 🗸		(1-262143)PPS	
Storm Control	G0/3	Disable 🗸		(1-262143)PPS	
Port Security	G0/4	Disable 🗸		(1-262143)PPS	
Qos	G0/5	Disable V		(1-262143)PPS	
Port Mirror /LAN	G0/6	Disable V		(1-262143)PPS	
Port Channel	G0/7	Disable V		(1-262143)PPS	
GMP Snooping	G0/8	Disable V		(1-262143)PPS	
Ring Protection	00,0				
STP					
PDP			Apply	Reset	
LDP					
static ARPs					

- 6. Click [IGMP Snooping].
- 7. Set as shown in the following figure, then click the [Apply] and [Save ALL] buttons.

FURUNO	Save All   Logout   Abou
	IGNPSnooping Multicast List
Device Status	Configure IGMP-SNOOPING
Basic Config	Multicast Filter Mode Discard Unknown V
Advance Config	IGMP-Snooping Enable V
() 2017	Enable Auto Querry Enable V
Port Flow Config	
Storm Control Port Security	Apply
Qos	
Port Mirror	
VLAN	
Port Channel	Online Help
IGMP Snooping	Before you configure multicast filter mode with 'Discard Unknown', You must enable IGMP-Snooping.
Ring Protection STP	
PDP	When you have configured multicast filter mode with 'Discard Unknown' and enabled IGMP-Snooping, disabling Global IGMP-Snooping will cause multicast filter mode becoming Transfer Unknown'
LLDP	
Static ARPs	
Remote Monitor	
System Mar.	
System Mgr.	

### 8.2 How to Export the Configuration File

To export the HUB-3000 configuration file, do as follows:

- 1. Connect the LAN cable between the PC and the HUB-3000.
- 2. Open Internet Explorer<sup>®</sup> on the PC.
- 3. Enter the URL (http://192.168.0.1).
- 4. Click [System Mgr.] and [Startup-config].

0	
FURUNO	Save All   Logout   About
	Startup-config
Device Status	Export the current startup-config
Basic Config	Export the current startup-config
Advance Config	
Remote Monitor	Export
System Mgr.	Export
User Mgr.	
Clock Mgr.	
Log Mgr.	Import startup-config file
Diagnosis	
Startup-config	Import startup-config file Select
IOS Software	Reboot is required after importing startup-config!
Factory Settings Reboot	Import
incourse.	Import

- 5. Click the [Export] button. The file destination dialog box appears.
- 6. Specify the file destination, then click the [Export] button to export the configuration file.

### 8.3 How to Import the Configuration File

To import the HUB-3000 configuration file, do as follows:

- 1. Connect the LAN cable between the PC and the HUB-3000.
- 2. Open Internet Explorer<sup>®</sup> on the PC.
- 3. Enter the URL (http://192.168.0.1).
- 4. Click [System Mgr.] and [Startup-config].
- 5. Click the [Select...] button. The file select dialog box appears.
- 6. Select the configuration file to be imported on the file selection dialog box.
- 7. Click the [Import] button to start importing the configuration file.
- 8. Click [Reboot] to open the [Reboot] menu.

FURUNO		Save All   Logout   About
	Reboot	
Device Status	Rebooting	
Basic Config Advance Config	Reboot	
Remote Monitor System Mgr.	Reboot	
User Mgr. Clock Mgr.		
Log Mgr.	Online Help	
Diagnosis Startup-config IOS Software Factory Settings <b>Reboot</b>	◆Click the 'Reboot' button to restart the device.	
Click the	[Reboot] button.	Message from webpage
A confirr	nation massage as shown in the figure to the right	

appears.

Message f	rom webpage	×
?	Are you sure to restart the dev	vice?
	ОК	ancel

10. Click the [OK] button to restart the HUB-3000 and apply the settings.

9.

# 9. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)

You can replay or extract the data from the PC on the shore by connecting the PC to the on-board VDR through the satellite link.

Operate the Live Player V5 to use the remote playback function. For how to use the remote playback function, see the Live Player V5 operator's manual (OME-44851).

This chapter explains how to activate the remote playback setting.

**Note:** Both of the VDR and Live Player V5 program versions must be "01.30" or later, to use the remote playback function.

### 9.1 How to Activate the Remote Playback Function

Activate the remote playback function as follows:

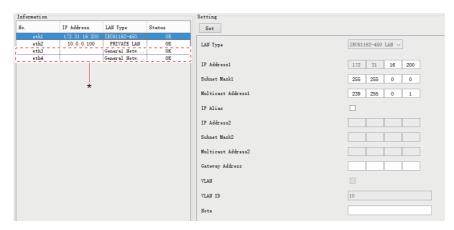
- 1. Download the VDR configuration data to the VDR Maintenance Viewer (PC), referring to the section 2.1.
- 2. Select [Tool]  $\rightarrow$  [Special Setting Enable]  $\rightarrow$  [ON].
- Enter the password then click the [OK] button.
   Note: Contact the FURUNO Service Center to get the password.
- 4. Click the [Software] tab.
- 5. Check the checkbox for both of [Extraction Data Select Function] and [Live (Remote) Function].

101.101 D000 110Er am	01.01
JB1:RJB App Program	01.30
WatchDog Interval	60
Giveup Interval	300
Refork Limit	10
Extraction Data Select Function	
Live(Remote) Function	
HBI Sentence Transmission	
Note	

- 6. Click the [Set] button.
- 7. Upload the configuration data to the VDR, referring to the section 2.25.

### 9.2 Network Settings

- 1. Download the VDR configuration data to the VDR Maintenance Viewer (PC), referring to the section 2.1.
- 2. Click the [Network] tab.



- \*: Shown only when the CPU board in the DCU is "ADP-216-01".
- 3. Click the network whose [LAN Type] is [PRIVATE LAN] in the [Information] area.
- Change [Subnet Mask1] from "255.0.0.0" to "255.255.0.0".
   Note: When you use the IF-8530, the IF-8530 software version must be "01.30" or later.
- 5. Click the [Set] button.
- Click the network that can access the satellite link in the [Information] area. When you connect to the satellite link, it is recommended to use the network whose [LAN Type] is [General Network1] or [General Network2].
- 7. Set [IP Address2]\*, [Subnet Mask2]\* and [Gateway Address] as follows:
  - [IP Address2]\*: Enter the IP address for VDR that is specified by a customer.
  - [Subnet Mask2]\*: Enter the IP subnet mask for VDR that is specified by a customer.
  - [Gateway Address]: Enter the IP address of a route or gateway that can access the satellite link.
  - \*: When [LAN Type] is set to [General Network1] or [General Network2], [IP Address] and [Subnet Mask] must be set.

**Note 1:** To access the satellite link, get the information about the IP address, subnet mask, gateway address from a customer.

**Note 2:** IP address must be different from the network segment used by the VDR. You cannot use "10.0.0.1-255" and "172.31.1-255.1-255".

- 8. Click the [Set] button.
- 9. Upload the configuration data to the VDR, referring to the section 2.25.

# 10. IEC61162-450 NETWORK SET-TINGS

### 10.1 How to Change the System Function ID

To change the system function ID (SFID) of the VDR, do as follows:

### NOTICE

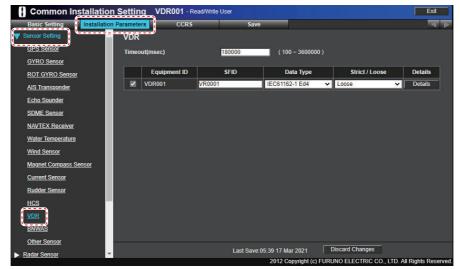
If you change the IEC61162-450 network settings, the VDR may not work properly. Keep the default settings, unless otherwise specifically directed.

- 1. Connect the PC to the VDR with the LAN cable.
- 2. Activate the web browser and enter the following address in the address bar. "http://172.31.16.200"

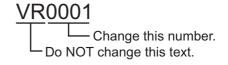
When entering the IP address on the address bar, your are asked to enter ID and password.

**Note:** The IP address of the PC must be the same as the network segment of the VDR (example: "172.31.16.201").

- 3. Generate the one-time password (response code) from the challenge code on the screen and enter the password correctly, then click [Login]. The [Common Installation Setting] menu appears.
- 4. Click the [Installation Parameters] tab on the tab bar.
- 5. Click [VDR] of [Sensor Setting] on the menu bar.



- 6. Check the checkbox [VDR001] to change the SFID.
- 7. Change the SFID.
- 8. Click the [Save] tab on the tab bar.



- 9. Click the [Consistency Check] button to confirm the consistency of the setting. When the consistency check is completed, the confirmation message appears.
- 10. Click the [Save] button, then click the [OK] button.
- 11. Reboot the VDR to apply the setting.

### **10.2** How to Change the Transmission Group

To change the Transmission Group of the VDR, do as follows:

### NOTICE

If you change the IEC61162-450 network settings, the VDR may not work properly. Keep the default settings, unless otherwise specifically directed.

- 1. Connect the PC to the VDR with the LAN cable.
- 2. Activate the web browser and enter the following address in the address bar. "http://172.31.16.200"

When entering the IP address on the address bar, your are asked to enter ID and password.

**Note:** The IP address of the PC must be the same as the network segment of the VDR (example: "172.31.16.201").

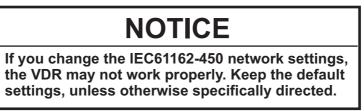
- Generate the one-time password (response code) from the challenge code on the screen and enter the password correctly, then click [Login]. The [Common Installation Setting] menu appears.
- 4. Click the [CCRS] tab on the tab bar.
- 5. Select the transmission group that the VDR belongs to from the menu bar (default transmission group: MISC).
- 6. Delete the "VR" from the [Transmission Group Talker] table.

Basic Setting	Installation	Parameters	CC	CRS		Save					
' Transmission Group	Setting	Transmi	ission Gr	roup Se	etting for M	lisc					
		Multi	cast Addres	is 2	39.192.0.1						
<u>TGTD</u>		Mu	lticast Port	6	0001						
<u>SATD</u>											
NAVD						Transmissio	. <u> </u>				
VDRD		BI	DU	ER		NL	RC	SG	SI	SS	U0
RCOM		C <sup>U1</sup>	U2	U3	U4	U5	U6	U7	U8	U9	UP
		VR	YX	-	-	-	-	-	-	-	-
TIME			-	-	-	-	-	-	-	-	-
PROP		-	-	-	-	-	-	-	-	-	-
<u>USR1</u>		-	-	-	-	-	-	-	-	-	-
USR2		-	-	-	-	-	-	-	-	-	-

- 7. Select an appropriate transmission group from the menu bar.
- 8. Enter "VR" to the [Transmission Group Talker] table.
- 9. Click the [Save] tab on the tab bar.
- 10. Click the [Consistency Check] button to confirm the consistency of the setting. When the consistency check is completed, the confirmation message appears.
- 11. Click the [Save] button, then click the [OK] button.
- 12. Reboot the VDR to apply the setting.

# 10.3 How to Restore the Settings for IEC61162-450 Ed.2

To restore the VDR to the settings for IEC61162-450 Ed.2, do as follows:



- 1. Download the configuration data from the VDR into the VDR Maintenance Viewer (see section 2.1).
- 2. Click the [Network] tab.

🔬 VDR Mainten	nance Viewer (Version 2	2450105-01.63)					>
Connection Main	tenance Tool Help						
	• : 18/03/2021 0		RAP STATUS	E BATT AC	RU Float DRU Selected : DRU 5549 ME Size : 57599 )	Long Term Device Selected : SSD B Size : 983040 MB	User Disk(USB) Selected : MEMORY Size : 60293 MB
Alert Event S Information	Serial Sensor(LAN)	GPS CAM(AMS)	Analog Digital	SA JB VLC Image Interface Image Record Se Setting	ting Audio Audio Board System	Software Hardware Lifetime N	etwork Vessel Delivery
No. ethl eth2		LAN Type EC61162-450 PRIVATE LAN	Status OK OK	Set Default (ed 1) Default (e LAN Type IP Addressi	12) IEC61162-450 LAN ~ 192 168 0	1	
				Subnet Maski	255 255 255	0	

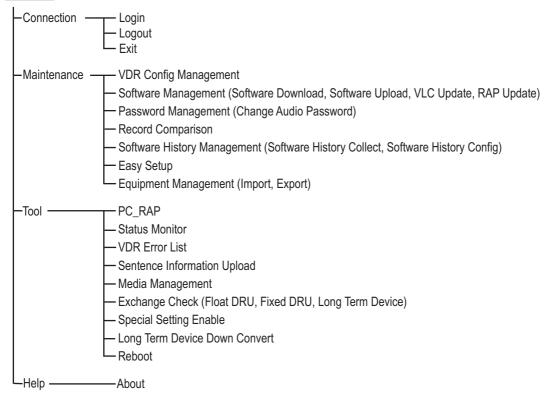
- 3. Click the [Default (ed.2)] button to restore the VDR to the settings for IEC61162-450 Ed.2. The setting is as follows:
  - IP address: 192.168.0.1
  - Subnet mask: 255.255.255.0
- 4. Select [eth1] from the [Information] window.
- 5. Upload the configuration data to the VDR (see section 2.25).

#### 10. IEC61162-450 NETWORK SETTINGS

This page is intentionally left blank.

# APPX. 1 MENU TREE

#### Menu bar



# INDEX

#### A

Alert tab Analog tab	
Audio Board tab	
Audio password	
Audio tab	.2-13
С	
CAM (AMS) tab Configuration data	2-33
backing up with PC	3-2
backing up with recording media	
restoring default	
uploading from PC	
Configuring software with viewer	
Creating long term device	
Creating User Disk	
•	
D	
Delivery tab	2-30
Digital tab	2-11
Display configuration	1-8
E	
—	~ ~
ECDIS input settings	
Event search	
Event tab	.2-17
F	
Files	
export	6-6
import	
G	
GPS tab	າງ
	2-20
Н	
Hardware tab	2-19
1	
Image Interface tab2-4,	2-35
Image Record Setting tab	
Initializing DRU, long term device	
Installation	
connection to DCU	
installable PC	
J	~ ~~
JB (Junction Box) tab	2-20
L	
Life Time tab	2-21
N	
Network tab	2-22
R	
Radar input settings	2-3
RAP	
update	6-2
upuale	

6-7
6-3
9-1
2-32
2-31
7-3
7-1
7-7
7-6
6-10
2-6
6-4
6-1
6-4
1-2
6-1
2-27
1-5
6-8
2-25
1-7
2-39
6-9
2-29
3, 2-34
6-2