

# **FURUNO**

## **OPERATOR'S MANUAL**

*LIVE PLAYER V5*

Model **VR-7030**

---

**ECF**

(Elemental Chlorine Free)

The paper used in this manual  
is elemental chlorine free.

**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-44851-J

(REFU ) VR-7000 LIVE PLAYER

A : JUL. 2014

J : AUG. 18, 2021



0 0 0 1 7 9 3 5 0 1 8

# IMPORTANT NOTICES

---

## General

- This manual has been authored with simplified grammar, to meet the needs of international users.
- The operator of this equipment must read and follow the instructions in this manual. Wrong operation or maintenance can void the warranty or cause injury.
- Do not copy any part of this manual without written permission from FURUNO.
- If this manual is lost or worn, contact your dealer about replacement.
- The contents of this manual and the equipment specifications can change without notice.
- The example screens (or illustrations) shown in this manual can be different from the screens you see on your display. The screens you see depend on your system configuration and equipment settings.
- Save this manual for future reference.
- Any modification of the equipment (including software) by persons not authorized by FURUNO will void the warranty.
- The following concern acts as our importer in Europe, as defined in DECISION No 768/2008/EC.
  - Name: FURUNO EUROPE B.V.
  - Address: Ridderhaven 19B, 2984 BT Ridderkerk, The Netherlands
- The following concern acts as our importer in UK, as defined in SI 2016/1025 as amended SI 2019/470.
  - Name: FURUNO (UK) LTD.
  - Address: West Building Penner Road Havant Hampshire PO9 1QY, U.K.
- All brand, product names, trademarks, registered trademarks, and service marks belong to their respective holders.
- Pentium is a trademark of Intel Corporation in the U.S. and/or other countries.
- Windows, Microsoft Visual C++, and DirectX are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Ogg Vorbis is a registered trademark of the Xiph Organization.

## How to discard this product

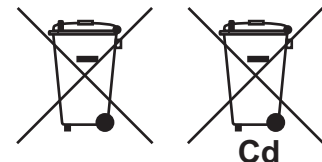
Discard this product according to local regulations for the disposal of industrial waste. For disposal in the USA, see the homepage of the Electronics Industries Alliance (<http://www.eiae.org/>) for the correct method of disposal.

## How to discard a used battery

Some FURUNO products have a battery(ies). To see if your product has a battery, see the chapter on Maintenance. Follow the instructions below if a battery is used. Tape the + and - terminals of battery before disposal to prevent fire, heat generation caused by short circuit.

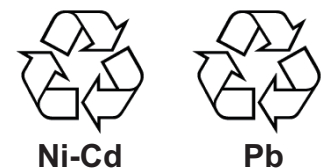
### In the European Union

The crossed-out trash can symbol indicates that all types of batteries must not be discarded in standard trash, or at a trash site. Take the used batteries to a battery collection site according to your national legislation and the Batteries Directive 2006/66/EU.



### In the USA

The Mobius loop symbol (three chasing arrows) indicates that Ni-Cd and lead-acid rechargeable batteries must be recycled. Take the used batteries to a battery collection site according to local laws.



### In the other countries

There are no international standards for the battery recycle symbol. The number of symbols can increase when the other countries make their own recycle symbols in the future.

# TABLE OF CONTENTS

---

<b>FOREWORD</b> .....	<b>v</b>
<b>1. INSTALLATION</b> .....	<b>1-1</b>
1.1 Installable PC .....	1-1
1.2 How to Install the Live Player V5 and Set Up the PC .....	1-1
1.2.1 Windows®7 .....	1-2
1.2.2 Windows®8.1 .....	1-3
1.2.3 Windows®10 .....	1-4
1.3 How to Connect a PC to the VR-7000/7000S .....	1-5
1.4 How to Start the Live Player V5 .....	1-5
1.5 How to Uninstall the Live Player V5 .....	1-6
1.5.1 Windows®7 .....	1-6
1.5.2 Windows®8.1 .....	1-6
1.5.3 Windows®10 .....	1-6
<b>2. PLAYER CONFIGURATION</b> .....	<b>2-1</b>
2.1 Display Configuration .....	2-1
2.1.1 Configuration overview .....	2-1
2.1.2 Menu area, status area, control area .....	2-2
2.1.3 View area .....	2-4
2.2 How to Create a New Configuration Page .....	2-5
2.3 Making a User-specified Graphical Form .....	2-8
2.3.1 Arranging graphical sheet .....	2-8
2.3.2 Configuration of graphical object .....	2-10
2.3.3 Compass sheet .....	2-11
2.3.4 Dial Meter and Dual Dial Meter sheets .....	2-13
2.3.5 Doppler (log) sheet .....	2-14
2.3.6 Graph sheet .....	2-15
2.3.7 Horizontal bar sheet .....	2-17
2.3.8 Horizontal ruler sheet .....	2-18
2.3.9 Wind direction sheet .....	2-19
2.3.10 Numeric data display sheet .....	2-20
2.3.11 Pitch and roll sheet .....	2-21
2.3.12 Rudder sheet .....	2-22
2.3.13 Vertical bar sheet .....	2-23
2.3.14 Azimuth Promotion sheet .....	2-24
2.3.15 Two Dimension Plotter sheet .....	2-25
2.3.16 Color definition .....	2-26
2.3.17 Formatter syntax .....	2-27
2.3.18 [Radar/AIS] sheet .....	2-27
2.3.19 Inclinator Sheet .....	2-28
2.4 Setting of Data Source .....	2-30
2.5 Saving the Configuration .....	2-35
2.6 When Live Player V5 Display Error Occurs .....	2-37
2.6.1 How to clear the Java® cache .....	2-37
2.6.2 How to reload the configuration .....	2-38
2.6.3 How to change the OS font size setting .....	2-38

<b>3.</b>	<b>EXTRACTING, REPLAYING DATA .....</b>	<b>3-1</b>
3.1	Reading the Data Recorded in the Long Term Device.....	3-1
3.1.1	How to connect the replay PC to the Long Term Device .....	3-2
3.2	How to Extract Data from a Long Term Device or Save Area, Replay the Data on a PC .....	3-4
3.2.1	How to extract the data from a Long Term Device .....	3-5
3.2.2	How to extract the data from Save area .....	3-7
3.2.3	How to replay the data copied into the PC .....	3-9
3.3	How to replay Data and Extract the Data on an User Disk.....	3-10
3.3.1	How to replay the data in the User Disk .....	3-10
3.3.2	How to extract the data from a User Disk.....	3-11
<b>4.</b>	<b>LIVE PLAY .....</b>	<b>4-1</b>
4.1	Wiring .....	4-1
4.2	How to Display Data .....	4-2
<b>5.</b>	<b>DATA DECODER .....</b>	<b>5-1</b>
5.1	Opening the Decoder Library .....	5-1
5.2	Decoder Library .....	5-2
5.3	Decoder Editor.....	5-4
<b>6.</b>	<b>OTHER SETTINGS .....</b>	<b>6-1</b>
6.1	Alert Popup.....	6-1
6.2	Settings for Alert .....	6-5
6.2.1	Buzzer setting.....	6-5
6.2.2	Alert popup screen .....	6-5
6.3	Extraction of Recorded Data .....	6-6
6.4	Audio Setting .....	6-8
6.5	How to Set Password for Audio Reproduction .....	6-9
6.6	How to Open the Sentence Information .....	6-9
6.7	How to combine extracted data .....	6-10
<b>7.</b>	<b>LIVE PLAYER V5 BACKUP .....</b>	<b>7-1</b>
7.1	Starting the Backup Process .....	7-2
7.2	Settings After Restart of Program.....	7-3
7.3	Replaying the Extracted Data.....	7-3
<b>8.</b>	<b>SERIAL OUTPUT FOR OTHER APPLICATIONS.....</b>	<b>8-1</b>
<b>9.</b>	<b>AIS DISPLAY .....</b>	<b>9-1</b>
9.1	Display Layout.....	9-1
9.2	Target Symbols .....	9-3
9.3	Display Range .....	9-4
9.4	Own Ship Details Window (detailed information) .....	9-4
9.5	AIS Target Details Window.....	9-5
9.6	Message Logs .....	9-6
9.6.1	RX message log .....	9-6
9.6.2	TX message log .....	9-7
<b>10.</b>	<b>VDR CONFIGURATION .....</b>	<b>10-1</b>
10.1	How to Confirm the VDR Configuration.....	10-1
10.2	Configuration File in the PC.....	10-1

<b>11. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)</b> .....	<b>11-1</b>
11.1 Preparations .....	11-1
11.2 Limitations and Notifications .....	11-1
11.3 Communication speed measuring.....	11-2
11.4 Live (Remote) Replay .....	11-3
11.4.1 Connection on Live (Remote) Replay .....	11-3
11.4.2 Live (Remote) Replay settings .....	11-4
11.4.3 Live (Remote) data conversion .....	11-8
11.5 Data extraction on remote connection .....	11-9
11.5.1 How to extract the data on remote connection.....	11-9
11.5.2 How to resume the extraction .....	11-11
<b>APPX. 1 MENU TREE</b> .....	<b>AP-1</b>
<b>APPX. 2 MATERIALS FOR PLAYBACK</b> .....	<b>AP-2</b>
<b>INDEX</b> .....	<b>IN-1</b>

# FOREWORD

---

## A Word to the Owner of the Live Player V5 VR-7030

FURUNO Electric Company thanks you for purchasing the Live Player V5 VR-7030. We are confident you will discover why the FURUNO name has become synonymous with quality and reliability.

Since 1948, FURUNO Electric Company has enjoyed an enviable reputation for quality and reliability throughout the world. This dedication to excellence is furthered by our extensive global network of agents and dealers.

Please carefully read and follow the operation procedures set forth in this manual to obtain the best performance from this equipment.

Thank you for considering and purchasing FURUNO.

## Features

This Live Player V5 is a software program that installs in a PC, and functions to monitor and playback the data collected in the VR-7000/7000S's DRU, Long Term Device.

## Notes on usage

Observe the notices shown below to prevent malfunction.

- Do not connect the Live Player to a DRU (Fixed, Float-free) during recording. Data may not be correctly recorded to the DRU. Further, do not extract data from a DRU during recording.
- Live Player software with program versions earlier than those listed below cannot be installed on the same PC.
  - VR-3000/S: Version 1.41
  - VR-7000/S: Version 1.04

Uninstall software except for the above-mentioned program versions. Confirm that software versions are compatible before installing new Live Player software. Where both Live Player V4 and Live Player V5 are installed on the same PC, to use Live Player V5 after using Live Player V4, restart the PC before starting Live Player V5. A restart is not required when using Live Player V4 after using Live Player V5.

- The screenshots shown in this manual were taken on a Windows<sup>®</sup>7 based PC. The screens you see may be different depending on your PC's OS.

## **Open Source Software**

This product includes software to be licensed under the BSD, Apache 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 (reverse assemble, reverse compiler) of the software of this equipment is strictly prohibited.



# 1. INSTALLATION

---

The Live Player V5 is a software program that installs in a PC, and functions to monitor and playback the data collected in the VR-7000/7000S's DRU, Long Term Device. Install the Live Player V5 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 Live Player V5 is compatible with the OS (Operating System) shown below. The OS language should be English or Japanese. The Live Player V5 may not operate properly on the PC with other OS and language.

- **Windows®10** (64 bit)
- **Windows®8.1** (32bit, 64 bit)
- **Windows®7** (32bit, 64 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®9.0c or higher
- Java® (If there is no Java® in the PC, download and install the Java® program from the Internet.)
- Microsoft® Visual C++® 2005 SP1 (x86) or later.

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

## 1.2 How to Install the Live Player V5 and Set Up the PC

The software program for the Live Player V5 is included in the program CD. Follow the appropriate procedure, depending on your OS. The procedure is comprised of the following three steps.

- Install the software.
- Set the IP address and subnet mask of the PC.

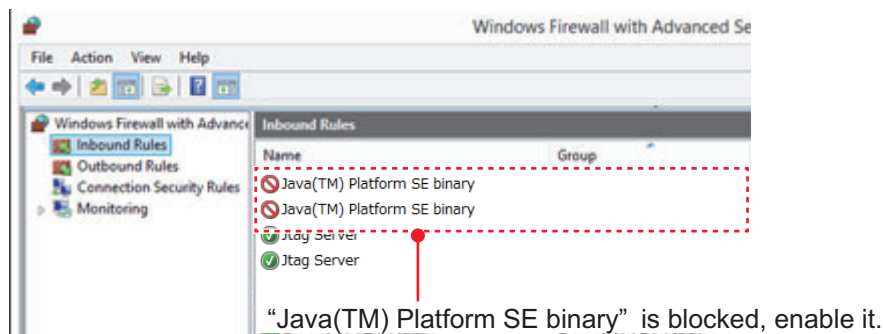
**Note:** The Live Player V5 version 1.20 (or later) is not compatible with version 1.10(or earlier). Therefore, the program CD has install programs for both Live Player V5 latest version and version 1.10(or earlier). If the Live Player V5 version 1.10(or earlier) has

## 1. INSTALLATION

been installed in your PC, uninstall the Live Player V5 before installing the latest version.

### **Firewall software block setting**

Confirm that “JAVA (TM) Platform SE binary” is not blocked by the Firewall. If blocked, enable “JAVA (TM) Platform SE binary”. When “JAVA (TM) Platform SE binary” is blocked, the Live Player V5 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:** [Start] button > [All Apps] > [Windows System] > [Control Panel] > [System and Security] > [Windows Firewall] > [Advanced settings] > [Inbound Rules]

### 1.2.1 Windows<sup>®</sup>7

#### **Install the software**

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\*\FURUNO” then click the [Next] button. \* Folder name for 32 bit. “Program Files(x86)” for 64 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.

#### **Set the IP address and subnet mask**

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.
7. Enter the IP address and subnet mask of the PC. If you do not know the connection port, contact a FURUNO agent or dealer.  
Port J502 (DATA) of DCU is connected to port J17:  
 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.  
Port J502 (DATA) of DCU is connected to port J26:  
 IP address: 10.0.0.101 or 10.0.0.102  
 Subnet mask: 255.0.0.0  
**Note:** The IP address of the VR-7000/7000S is 10.0.0.100.
8. Click the [OK] button and then click the [Close] button.
9. Restart the PC.

## 1.2.2 Windows® 8.1

### Install the software

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\*\FURUNO" then click the [Next] button. \* Folder name for 32 bit. "Program Files(x86)" for 64 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.

### Set the IP address and subnet mask

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, select [Category] and then select Large 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.
9. Enter the IP address and subnet mask of the PC. If you do not know the connection port, contact a FURUNO agent or dealer.  
Port J502 (DATA) of DCU is connected to port J17:  
 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.

## 1. INSTALLATION

Port J502 (DATA) of DCU is connected to port J26:

IP address: 10.0.0.101 or 10.0.0.102

Subnet mask: 255.0.0.0

**Note:** The IP address of the VR-7000/7000S is 10.0.0.100.

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

### 1.2.3 Windows® 10

#### **Install the software**

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.
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.

#### **Set the IP address and subnet mask**

1. Right-click on the icon in the bottom-left corner of the screen to open the [Quick Access] menu.
2. Click the [Control Panel] option on the [Quick Access] menu to open the [Control Panel].
3. In the [Control Panel] window, select [Category] and then select Large 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.
9. Enter the IP address and subnet mask of the PC. If you do not know the connection port, contact a FURUNO agent or dealer.

Port J502 (DATA) of DCU is connected to port J17:

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.

Port J502 (DATA) of DCU is connected to port J26:

IP address: 10.0.0.101 or 10.0.0.102

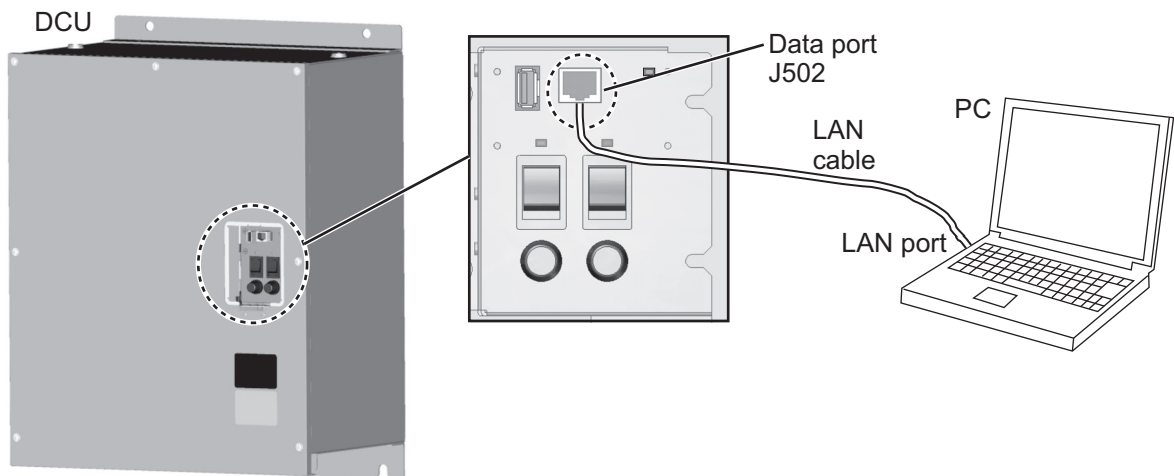
Subnet mask: 255.0.0.0

**Note:** The IP address of the VR-7000/7000S is 10.0.0.100.

10. Click the [OK] button and then click it again on the next screen.
11. 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 Live Player V5

Select the Live Player V5 program version according to the VDR program version. When the Live Player V5 program version is not compatible with the VDR program version, the Live Player V5 does not work properly.

- When the VDR program version is "01.20" or later:  
Use the latest version of Live Player V5 ([Live Player V5 (xx.xx)] (xx.xx: 01.20 or later).
- When the VDR program version is "01.10" or earlier:  
Use the Live Player V5 version 01.10 ([Live Player V5 OLD (01.10)]).

### How to start the latest version of Live Player V5

- **Windows®7:** [Start] button > [All Programs] > [VR-7000] > [Live Player V5 (xx.xx)] (xx.xx: 01.20 or later).
- **Windows®8.1:** [Start] screen > Right click a blank part of screen then select [All Apps] > click "VR-7000" > [Live Player V5 (xx.xx)] (xx.xx: 01.20 or later).
- **Windows®10:** [Start] menu > [All Apps] > [VR-7000] > [Live Player V5 (xx.xx)] (xx.xx: 01.20 or later).

### How to start the Live Player V5 version 01.10

- **Windows®7:** [Start] button > [All Programs] > [VR-7000 Previous Version] > [Live Player V5 OLD (01.10)]
- **Windows®8.1:** [Start] screen > Right click a blank part of screen then select [All Apps] > click [VR-7000 Previous Version] > [Live Player V5 OLD (01.10)]
- **Windows®10:** [Start] menu > [All Apps] > [VR-7000 Previous Version] > [Live Player V5 OLD (01.10)]

**Note 1:** When one of the following symptoms occurs, reboot the Live Player.

- A Java® related error occurs and Live Player shuts down.

## 1. INSTALLATION

- The Live Player shuts down when maximizing or minimizing a dialog box.
- The track list does not appear (source selected from [Source Select] window; [Analyze] button clicked) after several minutes.

**Note 2:** If the PC requests a restart while the Live Player is starting up, restart the PC.

**Note 3:** If there is audio or video in Live play on [Multicast], activate [Network Interface Select] checkbox on the [Source Select] dialog box, then select the LAN port that is connected with the VR-7000/S.

## 1.5 How to Uninstall the Live Player V5

Login as the administrator to uninstall the Live Player.

### 1.5.1 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. \*: Folder name for 32 bit. "Program Files(x86)" for 64 bit.

### 1.5.2 Windows® 8.1

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].
3. Delete the VR-7000 folder saved in the [My Computer] > [Local Disk (C:)] > [Program Files\*\FURUNO] folder. \*: Folder name for 32 bit. "Program Files(x86)" for 64 bit.

### 1.5.3 Windows® 10

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].
3. Delete the VR-7000 folder saved in the [My Computer] > [Local Disk (C:)] > [Program Files(x86)\FURUNO] folder.

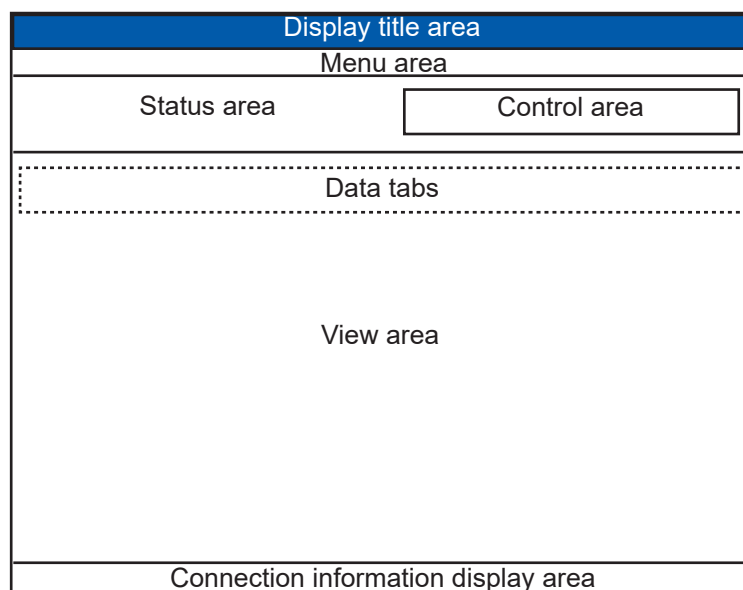
# 2. PLAYER CONFIGURATION

---

The user can configure the layout and the data to display. The configuration can be saved and copied as a file, which can be loaded to another PC to share the same layout. In addition, the configuration can be saved in a capsule for use as the default layout for replay and live play.

## 2.1 Display Configuration

### 2.1.1 Configuration overview



**Display title area:** The application name appears here.

- For version 1.20: Live Player V5 (Version 2450)

**Menu area:** The system menu.

**Status area:** Shows common data (FURUNO logo, time at DCU, etc.). The time at the VDR is updated at regular intervals.

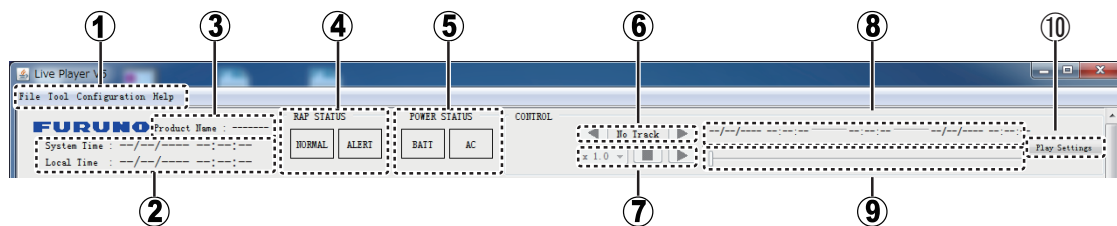
**Control area:** The operation buttons related to the contents of the view area appear here.

**View area:** Select the data to show with the data tabs.

**Connection information display area:** VDR status is displayed.

## 2. PLAYER CONFIGURATION

### 2.1.2 Menu area, status area, control area



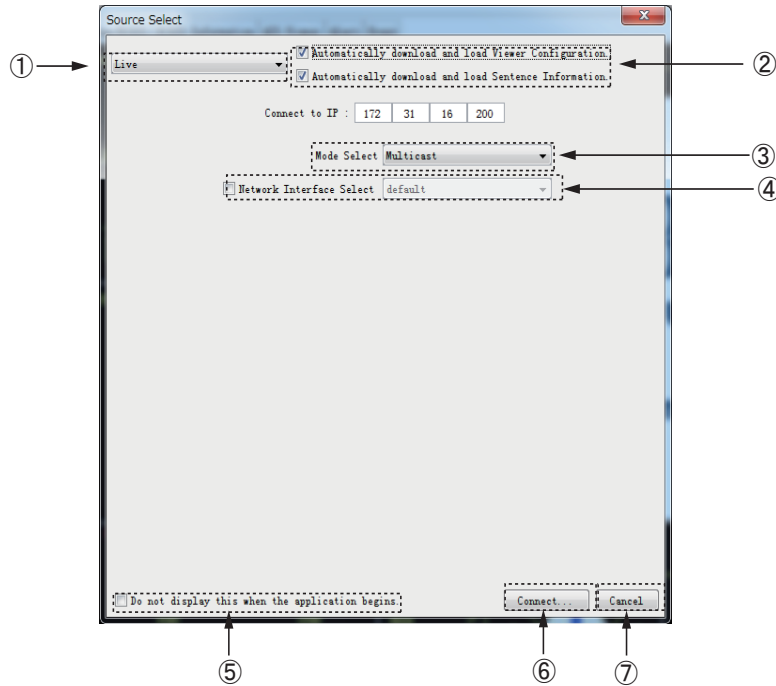
No.	Item	Description
<b>Menu area</b>		
1	Menu	<p><b>[File]</b>: [Open VDR Config...]: Opens the VDR configuration.[Exit]: Exits the application.</p> <p><b>[Tool]</b>: [Source Select]: Shows the [Source Select] dialog box.            [Volume]: Shows the [Audio Volume] dialog box.            [Extract]: Shows the [Extract] dialog box.            [Analyze]: Shows the [Extractor Analysis] dialog box.            [Combine extracted data]: Shows the [Combine extracted data] dialog box (See section 6.7).            [Live (Remote) Data Export]: Shows the [Live (Remote) Data Export] dialog box (See section 11.4.3).            [Live(Remote) Data Clear]: Clears the data replayed in Live (Remote) Replay.            [Alert Display]: Shows the [Alert Popup] dialog box.            [Buzzer Setting]: Shows the [Buzzer Setting] dialog box.            [Alert Popup]: Sets the alert popup on or off.            [Audio]: Sets the audio reproduction on or off.            [Password]: Shows the [Password Setting] dialog box.            [Serial Output]: Shows the [Serial Output] dialog box.            [Backup]: Shows the [Backup] dialog box.            [Sentence Information]: Shows the sentence information when it is saved to VDR (PDF format).            [Measuring for network quality]: Shows the [Measuring for network quality] (See section 11.3).</p> <p><b>[Configuration]</b> [Configuration Mode]: Turns the configuration mode on or off.[Sheet]: Shows the [Sheet list].[Decoder library]: Shows the [Decoder Library List]. [Alert definition list]: Shows the [Alert Definition List].[Viewer configuration management ]: Shows the [Viewer Config Management]. [VDR Config]: Shows the [VDR Config].[Backup Configuration File Clear]: Clears the configuration downloaded by Live (Remote) Replay function (See section 11.4.1).</p> <p><b>[Help]</b> [About]: Displays the program version information.</p>
<b>Status area</b>		
2	System time, local time	System time and local time.
3	Product name	Display VR-7000 or VR-7000S.
4	RAP STATUS	<p>Alert status is shown with colored and lighting or flashing lamps.</p> <p><b>[NORMAL]</b>: Lights green when there are no unacknowledged or unrectified alerts.</p> <p><b>[ALERT]</b>: Lights or flashes red for unacknowledged or unrectified alert.</p> <p><u>Alert status and lamp state and color:</u></p> <p><b>Unacknowledged alert</b>: Flashes red.</p> <p><b>Unrectified alert</b>: Lights red.</p> <p><b>Unacknowledged but rectified alert</b>: Flashes red.</p>



No.	Item	Description
5	POWER STATUS	<b>[BATT]</b> : Battery status appears. <b>[AC]</b> : AC power status. For either indicator: Light on (Green): Power on, Light off: Power off
<b>Control area</b>		
6	Track control panel	Selects the track to playback. ◀: Replace the played back track with one track number younger than the played back track. <b>Track</b> : Display currently selected track number. "-" appears when no track is selected. ▶: Replace played back track with next sequential track.
7	Play control panel	Control track playback. For the 8x playback speed, asterisks may appear in the data. This is not a sign of malfunction. If necessary, lower the playback speed to remove the asterisks.  x 1.0 ▼: Select playback speed. ■: Stop playback. ▶: Play back data.   : Pause playback.
8	Time panel	Display various times. <b>Start time</b> : Display the time when the recording of the selected track started. <b>Play time</b> : Display the time from the Start time to the End time of the track currently being played back <b>End time</b> : Display the time when the recording of the currently played back track was stopped.
9	Time control	Set the start time for playback. The time at the slider position appears in the time panel.
10	[Play Setting] button	Click this button to adjust live (remote) replay settings (see section 11.4.2). This button is shown at the right of Control area in Live (Remote) connection.

### 2.1.3 View area

The items shown in the view area changes according to the mode selected, with [Source Select] in the [Tool] menu.



No.	Item	Function
1	Mode drop-down list	There are two main modes (Live and Extract (Playback)) and seven sub modes (Fixed DRU, Float DRU, Long Term Device (Direct), Long Term Device (LAN), and User Disk (USB), Long Term Device (Save Area), Live (Remote)).
2	[Automatically download and load Viewer Configuration] checkbox	Check this checkbox to download viewer configuration from the connection source (DCU or DRU). It can also be used for playback. Previously downloaded configuration is written over each time new configuration data is downloaded. If the configuration data is incorrect, an error message appears and no downloading occurs.
	[Automatically download and load Sentence Information] checkbox	Check this checkbox to download the sentence information (PDF file) from the DCU. If the sentence information is not saved, it cannot be downloaded.
3	[Mode Select] button	This checkbox appears only when [Live] is selected from the mode drop-down list. Select [Multicast] when performing live playing with multiple Live Player V5. Select [Unicast] when performing live playback with one Live Player V5.
4	[Network Interface Select] checkbox	If the audio or video are not replayed in Live play, activate this checkbox, then select the LAN port that is connected with the VR-7000/S. <b>Note:</b> This checkbox appears only when [Live] is selected from the mode drop-down list. The checkbox is available when [Multicast] is selected.

No.	Item	Function
5	Launch configuration	The dialog box appears at the start up of the application. Check this box to hide the dialog box at start up.
6	[Connect] button	Click the button to connect to the VDR/Long Term Device. If the connection could not be made, an error message appears. After the connection is made the base display for the mode selected appears.
7	[Cancel] button	Click the button to finish current display and return to the base display.

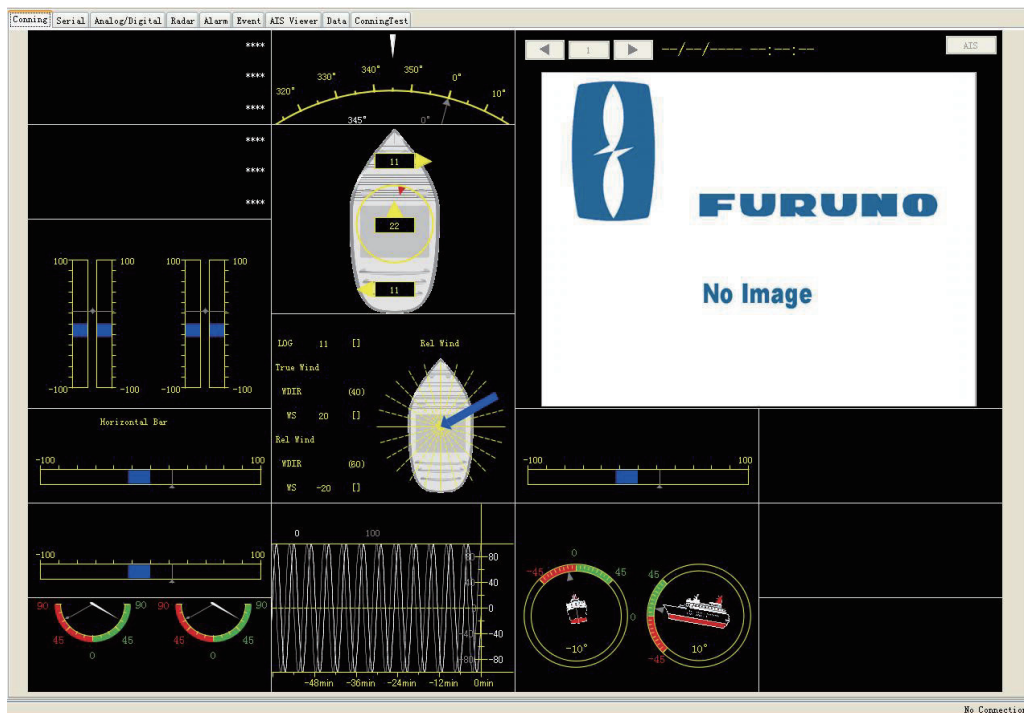
## 2.2 How to Create a New Configuration Page

Do the procedure in this section to create a new player configuration page. The window title bar complies with the general standard for Microsoft GUI.

**Note 1:** Stop Replay or Live Play before creating a new player configuration page. If the LAN cable is disconnected, Replay or Live Play stops, however they are still active. In this case, restart the Live Player V5 and create a new player configuration page.

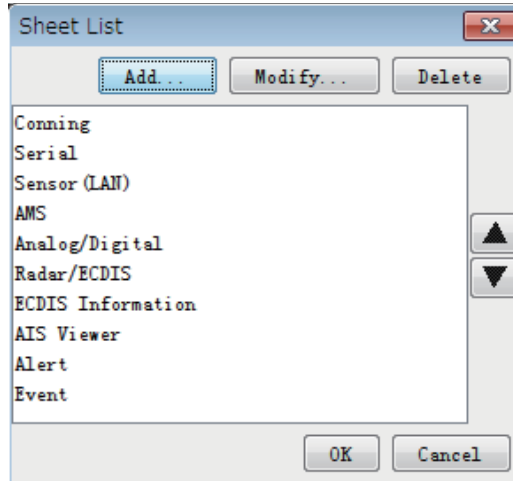
**Note 2:** A part of the conning display may be hidden when scrolling the display. If this occurs, change the component placement.

1. Start the Live Player V5.
2. Click the [Cancel] button in the [Source Select] dialog box.
3. Click [Configuration] > [Configuration Mode] > [ON].  
The program provides the following data sheet. However you can make a custom-er's data sheet. Proceed to step 4.

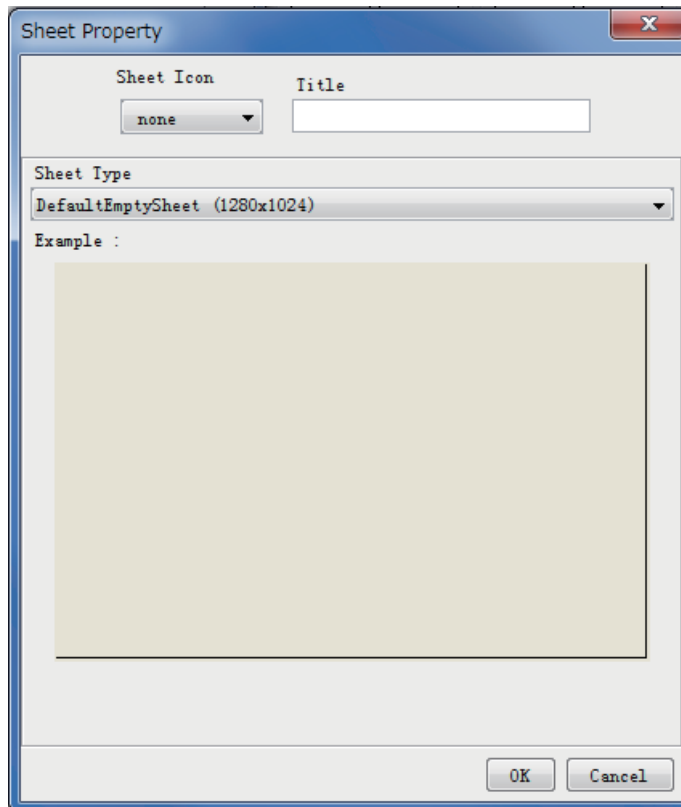


## 2. PLAYER CONFIGURATION

4. Click [Configuration] > [Sheet] to show the [Sheet List] dialog box.



5. Click the [Add] button to show the [Sheet Property] dialog box.



6. Select a tab icon from the [Sheet Icon] drop-down list as appropriate.



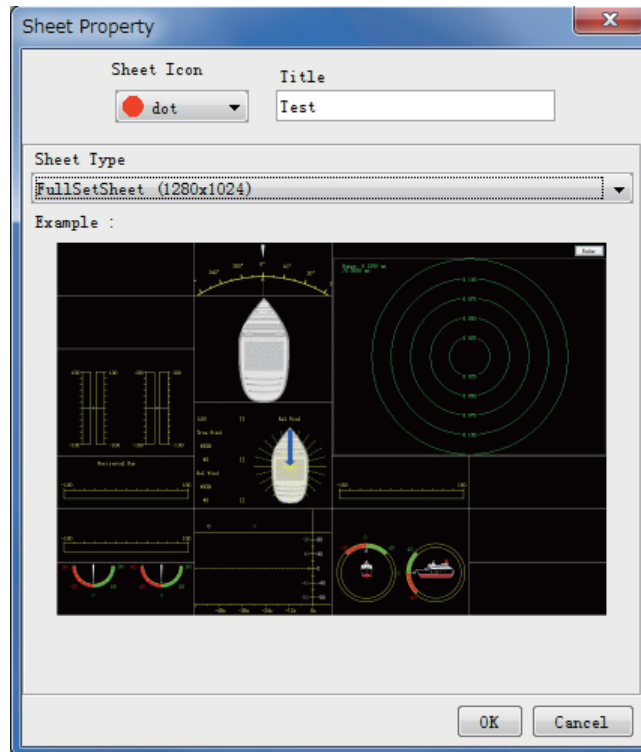
7. Enter a name for the tab in the [Title] field.

8. Select a suitable template for the page layout from the [Sheet Type] drop-down list, and the template selected appears in the [Example] window.

- **DefaultEmptySheet (1280×1024)/ DefaultEmptySheet (1920×1200)/ DefaultEmptySheet (3840×2180)** Provides a blank sheet from which to create a template from scratch.
- **FullSetSheet (1280×1024)** Provides a preset graphical objects.

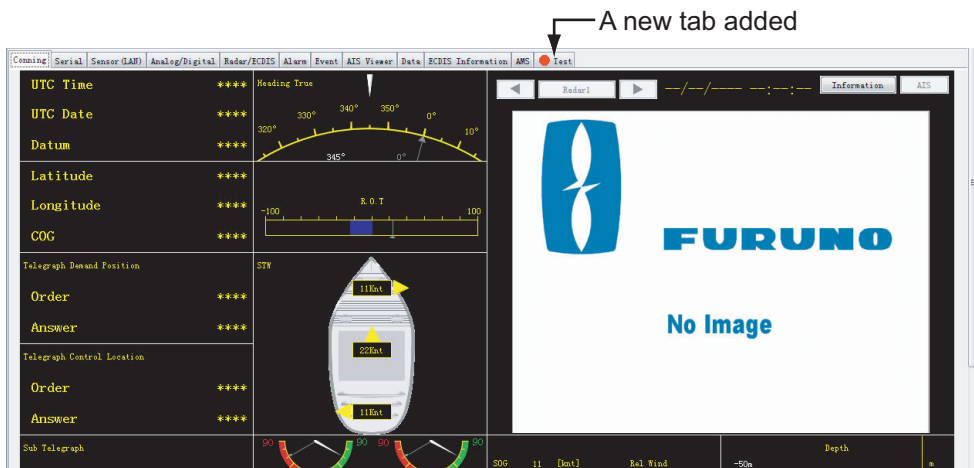
**Note 1:** Do not use two or more data sheets whose page size is 1920×1200 or 3840×2180.

**Note 2:** When you select [DefaultEmptySheet (3840×2180)], use a monitor whose screen size is 42 inch or more. If you use a monitor whose screen size is small to display the high resolution image, the text size on the monitor may be small.



Example: FullSetSheet (1280×1024)

9. Click the [OK] button to close the [Sheet Property] dialog box.
10. Click the [OK] button to close the [Sheet List] dialog box. The new tab appears at right side of the tab list.



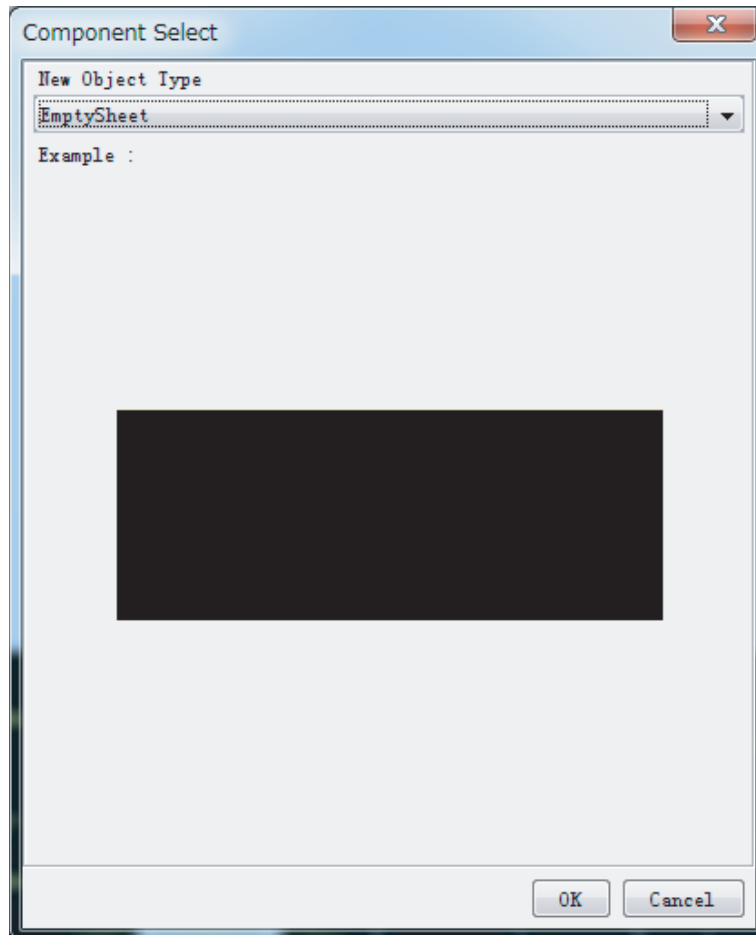
11. Go to the next section to set each data box.

## 2.3 Making a User-specified Graphical Form

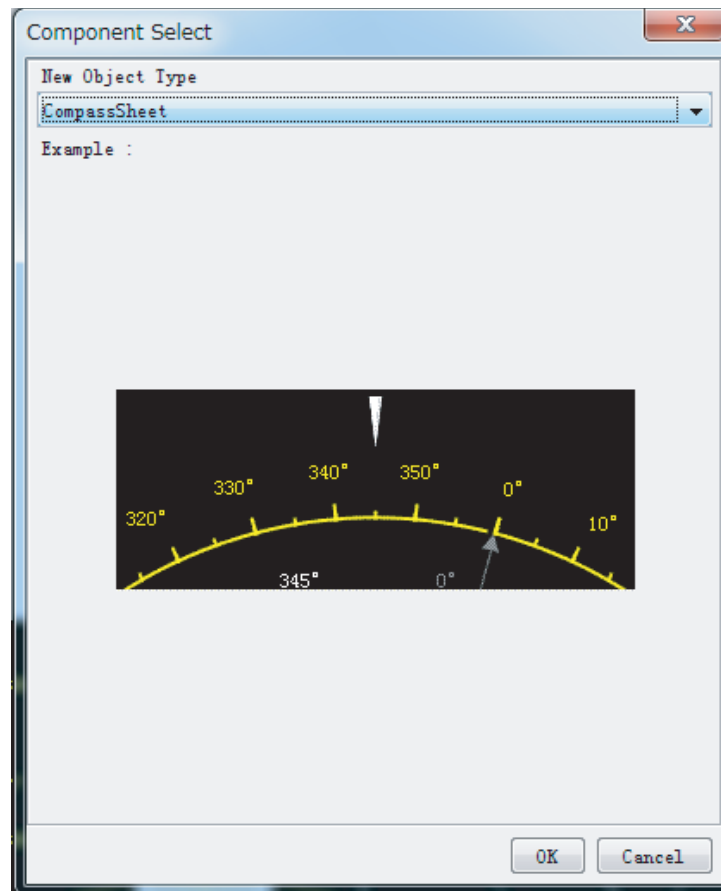
### 2.3.1 Arranging graphical sheet

To create a graphical form, do as follows:

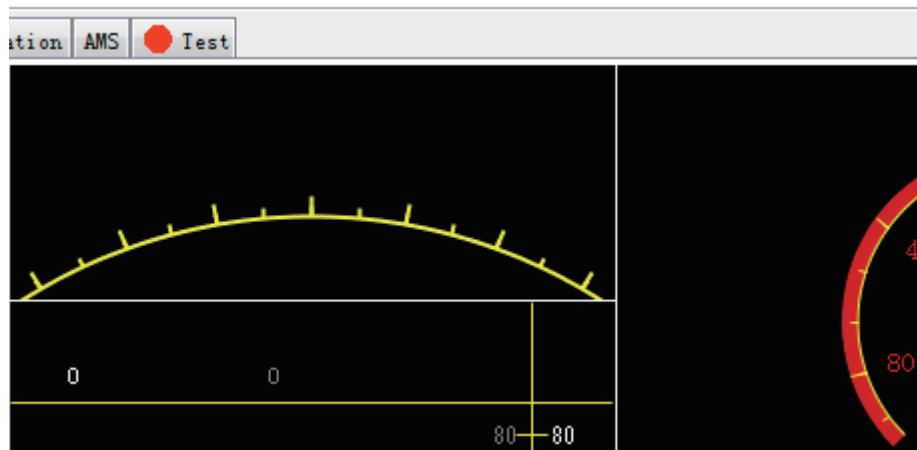
1. Right click on an empty panel to show the context-sensitive menu.
2. Click the [Add] button to show the [Component Select] dialog box.



- Click the arrow on the drop-down list and select (click) the object desired you wish to display. In the example shown below, [CompassSheet] is selected.



- Click the [OK] button. In the example shown below, the compass sheet is displayed.

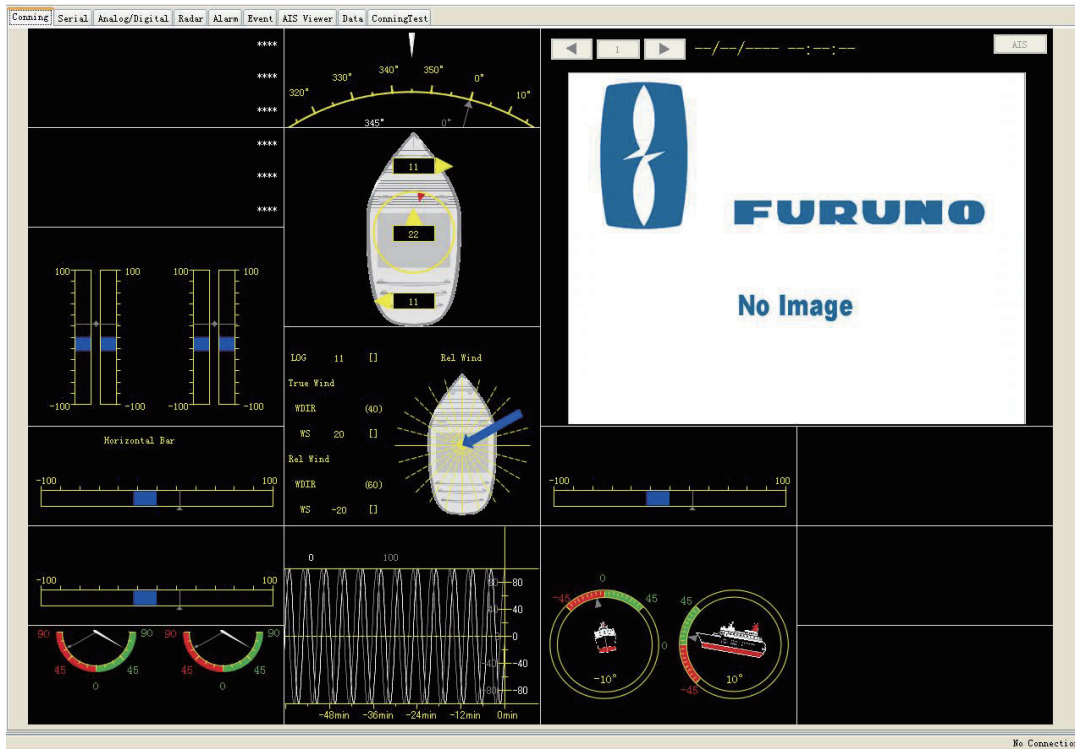


- Right click on an empty panel again to show the panel menu and repeat steps 2 to 4 to select other objects. There are 15 objects: [Compass Sheet], [Dial Meter Sheet], [Doppler Log Sheet], [Dual Dial Meter Sheet], [Graph Sheet], [Horizontal Bar Sheet], [Horizontal Ruler Sheet], [Wind Direction Sheet], [Numeric Data Display Sheet], [Pitch and Roll Sheet], [Rudder Sheet], [Vertical Bar Sheet], [Radar/AIS], [Radar/AIS (900×690)], [Radar/AIS (1200×920)], [Azimuth Promotion Sheet], [Two Dimension Plotter Sheet] and [Inclinometer Sheet].

## 2. PLAYER CONFIGURATION

### Panel layout

The position of a sheet can be changed. Locate the pointer on a sheet and drag-and-drop it.



### 2.3.2 Configuration of graphical object

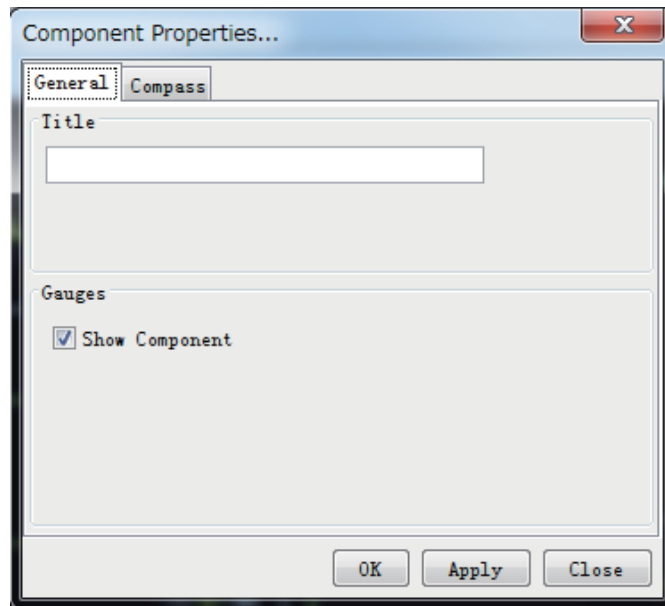
There are 16 objects. Configure each graphical object as described in the next several sections. To display each [Component Properties] dialog box, right click each object and select [Property]. To show input signal data, set various items in the [Property] dialog box. However, the Radar/AIS sheet has no items to set.





### 2.3.3 Compass sheet

#### General tab



The leftmost tab on any sheet is called the [General] tab, and it contains the parameters common to all graphical objects.

**[Title]:**

Enter text that is displayed in the graphical object.

**[Gauges]:**

Check the check box to enable the display of gauges defined for that graphical object. (This setting is invalid for Two Dimension Plotter Sheet.)

**[OK] button:**

After setting all items, click the button to finish configuring all objects.

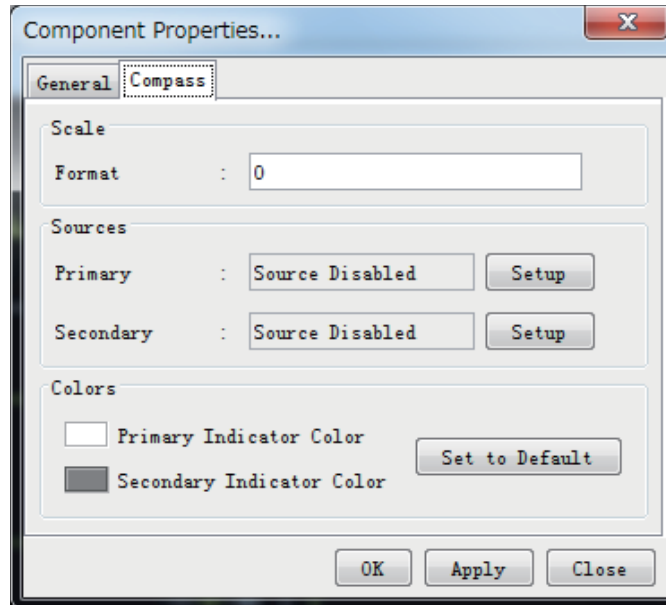
**[Apply] button:**

Show effect after setting.

**[Close] button:**

Close the sheet.

**Compass tab**



**[Scale]:**

[Format]: Define the format of the figures on the compass dial. See section 2.3.17.

**[Sources]:**

[Primary]: Select the primary data source to control the rotation of the compass dial.

[Secondary]: Select the secondary data source (optionally) to control the small triangle circling on the compass dial.

Click the [Setup] button to display the source setting dialog box.

Open the [Analog], [Digital], [Sensor (LAN)] or [Serial] tab according to the input signal connected.

For the compass sheet, open the [Serial] tab and set HDG or HDT to show ship's heading data.

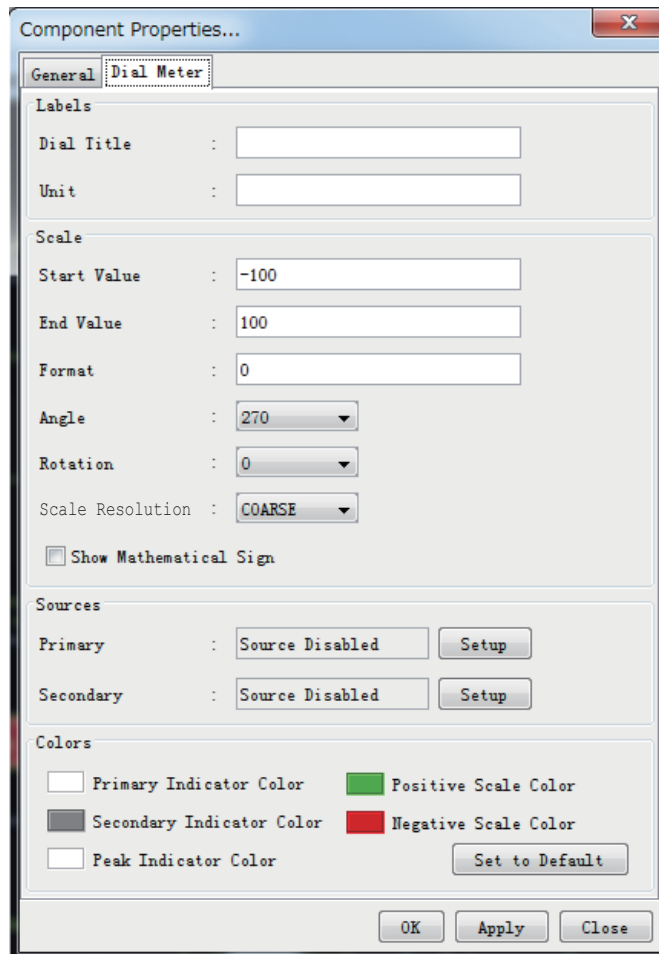
**[Colors]:**

The parameters in this window control the appearance of the dial meter. The [Set to Default] resets all the colors to the default definition. See section 2.3.16.

## 2.3.4 Dial Meter and Dual Dial Meter sheets

The setting of the [General] tab is similar to that shown in section 2.3.3.

### Dial Meter tab



#### **[Labels]:**

[Dial Title]: Text located immediately over the dial meter.

[Unit]: Text located inside the dial.

#### **[Scale]:**

This window contains the parameters for controlling the geometry and resolution of the dial.

[Start Value]: The start value corresponds to the most counterclockwise point on the dial.

[End Value]: The end value corresponds to the most clockwise point on the dial.

[Format]: Define the format of the figures on the dial, see section 2.3.17.

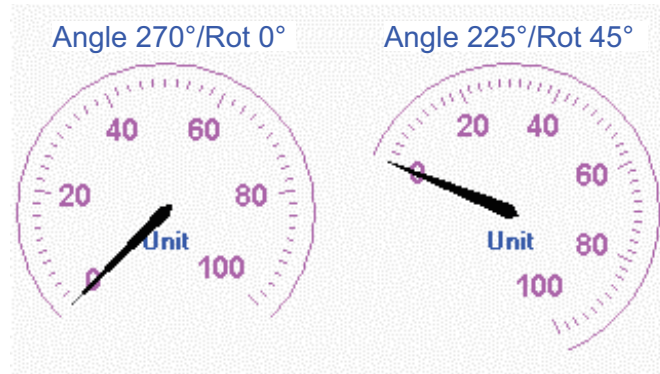
[Angle]: Define the extent of the dial.

[Rotation]: In default setting, the dial will be oriented like a typical speedometer in a car. The operator may change the orientation by selecting a value other than 0 from the drop-down list.

[Scale Resolution]: Select scale resolution.

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

## 2. PLAYER CONFIGURATION



Example of settings for dual dial meter

### [Sources]:

[Primary]: Input to the pointer for the dial meter.

[Secondary]: Input to the secondary indicator for the dial meter. The secondary indicator is shown as a small triangle. The secondary indicator is typically used for displaying the “commanded value” while the main indicator shows the actual value.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.4.

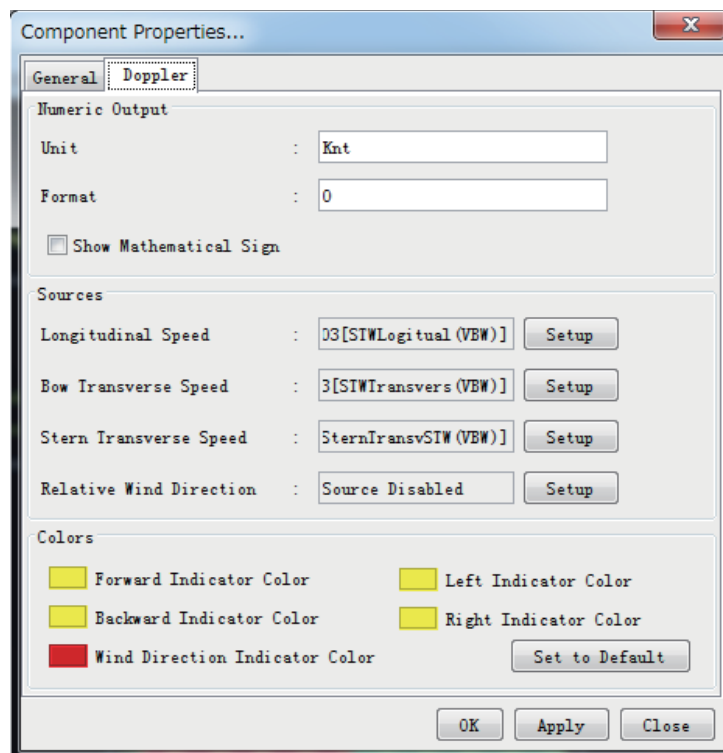
### [Colors]:

The parameters in this window control the appearance of the dial meter. The [Set to Default] resets all the colors to the default definition. See section 2.3.16.

## 2.3.5 Doppler (log) sheet

The setting of the [General] tab is similar to that shown in section 2.3.3.

### Doppler (log) tab



**[Numeric Output]:**

[Unit]: Text displayed after all numeric outputs, e.g., Kn.

[Format]: Define the format of the numeric outputs. See section 2.3.17.

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

**[Sources]:**

Four inputs may be applied to the Doppler log object.

[Longitudinal Speed]: Shown as numeric data in the center of the sheet.

[Bow Transverse Speed]: Shown as numeric data at the bottom of the sheet.

[Stern Transverse Speed]: Shown as numeric data at the top of the sheet.

[Relative Wind Direction]: Shown as a triangle circling the center of the sheet.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.4.

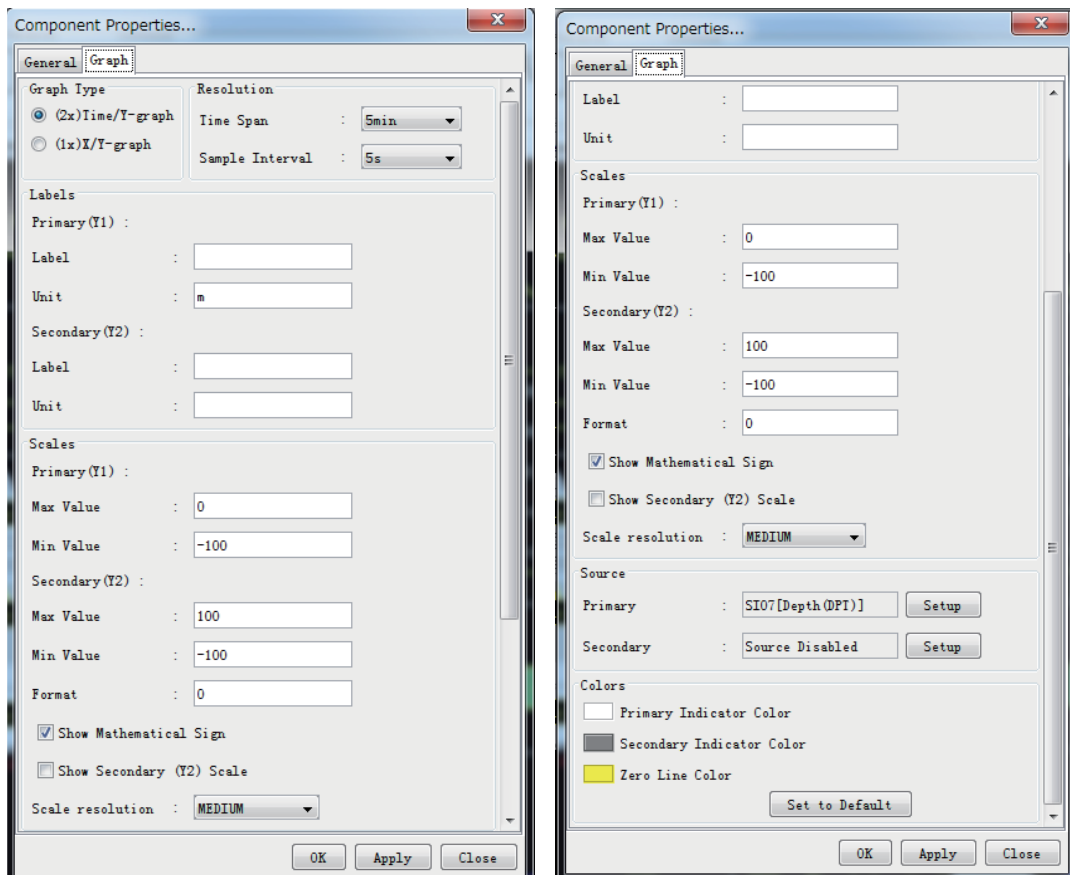
**[Colors]:**

The parameters in this window control the appearance of the object. The [Set to Default] button resets all the colors to the default definition. See subsection 2.3.16.

## 2.3.6 Graph sheet

The setting of the [General] tab is similar to that shown in section 2.3.3.

### Graph tab



## 2. PLAYER CONFIGURATION

### **[Graph type]:**

This window defines the input to the X-coordinate for the graph object.

[Time/Y graphs]: The primary and secondary are used as Y-coordinate for two independent graphs. The time is used as the X-coordinate for both graphs.

[X/Y graph]: The primary input is used for the X-coordinate and the secondary for the Y-coordinate.

### **[Resolution]:**

This window defines the resolution of the graph(s). Small values for "Time Span" and "Sample Interval" provide a graph with high resolution while high values provide a graph that covers a large time span.

### **[Labels]:**

[Label]: Labels for numeric output.

[Unit]: Text displayed after numeric output and Y-axis, and X-axis if X/Y graph is selected.

### **[Scales]:**

[Max Value]: [Time/Y-Graph]  
[Primary (Y1)]: Set maximum scale for Y1 axis.  
[Secondary (Y2)]: Set maximum scale for Y2 axis.  
[X/Y-Graph]  
[Primary (Y1)]: Set maximum scale for Y axis.  
[Secondary (Y2)]: Set maximum scale for Y axis.

[Min Value]: [Time/Y-Graph]  
[Primary (Y1)]: Set minimum scale for Y1 axis.  
[Secondary (Y2)]: Set minimum scale for Y2 axis.  
[X/Y-Graph]  
[Primary (Y1)]: Set minimum scale for Y axis.  
[Secondary (Y2)]: Set minimum scale for Y axis.

[Format]: Define the format of the numeric outputs. See section 2.3.17.

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

[Show Secondary (Y2) Scale]: Check to show Y2 axis scale.

[Scale resolution]: Set scale resolution - [Fine], [Medium] or [Coarse].

### **[Sources]:**

[Primary]: Set the primary data source for Y1 axis or Y-axis.

[Secondary]: Set the secondary data source for Y2 axis or X-axis.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

### **[Colors]:**

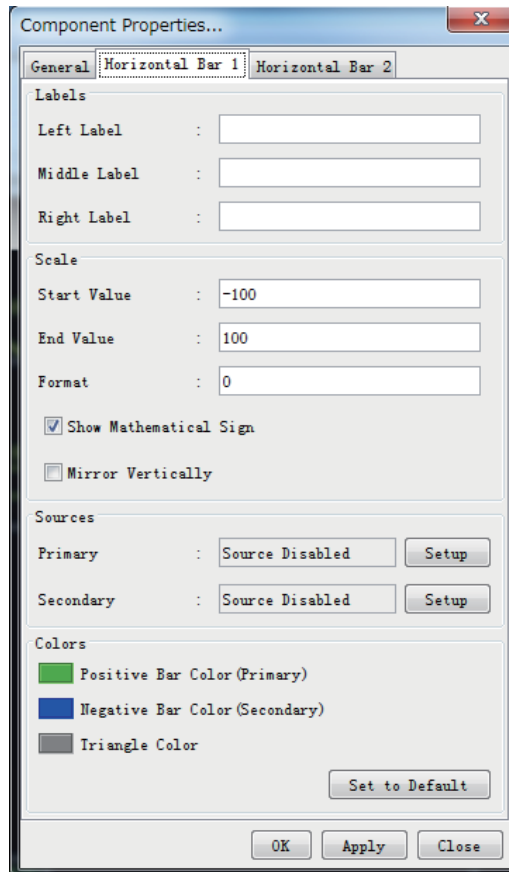
The parameters in this window control the colors of the graph. The [Set to Default] button resets all the colors to the default definition. See section 2.3.16.

### 2.3.7 Horizontal bar sheet

The setting of the [General] tab is similar to that shown in section 2.3.3. To display two horizontal bars, check two check boxes in the [Gauges] window in the General tab.

The parameters for the horizontal bar correspond to the parameters for vertical bar. An extra label (middle) has been added.

#### Horizontal Bar tab



#### **[Labels]:**

A vertical bar has two labels, one at each end. One of them is typically used as a description while the other indicates units.

#### **[Scale]:**

[Start Value]: The start value corresponds to the bottom of the bar.

[End Value]: The end value corresponds to the top of the bar.

[Mirror Vertically]: In the default setting, two adjacent bars are two symmetrical instances of the bar object, that is, bar 1,2 and 3,4 form two pairs. The operator may change this by, for example, “horizontally mirror” bar object 1 and 3.

[Format]: Define the format of the figures for the bar object. See section 2.3.17. [Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

#### **[Sources]:**

[Primary]: Input to the main indicator for the bar object.

[Secondary]: Input to the secondary indicator for the bar object. The secondary indicator is shown as a small triangle. The secondary indicator is typically used for displaying the “commanded value” while the bar shows the actual value.

## 2. PLAYER CONFIGURATION

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

### [Colors]:

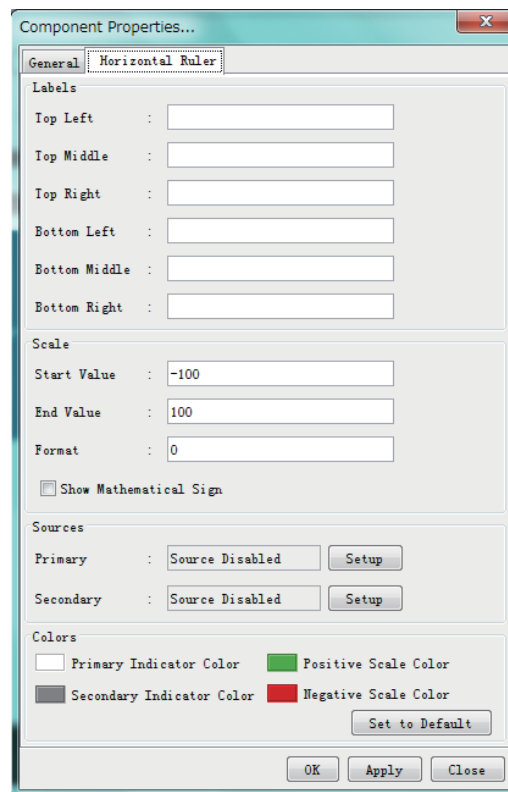
Parameters in this window control the appearance of the bar object. The [Set to Default] button resets all the colors to the default definition. See section 2.3.16.

**Note:** To show the title on the horizontal bar, uncheck [Show Horizontal Bar 1] on the [General] tab and enter a name at the [Title] box.

## 2.3.8 Horizontal ruler sheet

The setting of the [General] tab is similar to that shown in section 2.3.3.

### Horizontal ruler tab



### [Labels]:

A horizontal bar has 6 labels.

### [Scale]:

[Start Value]: The start value corresponds to the far-left point of the ruler.

[End Value]: The end value corresponds to the far-right point of the ruler.

[Format]: Define the format of the figures on the ruler object. See section 2.3.17.

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.



**[Sources]:**

[Primary]: Input to the main indicator for the bar object. The main indicator is shown as a triangle above the ruler.

[Secondary]: Input to the secondary indicator for the bar object. The secondary indicator is shown as a triangle below the ruler. The secondary indicator is typically used for displaying the “commanded value” while the primary indicator shows the actual value.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

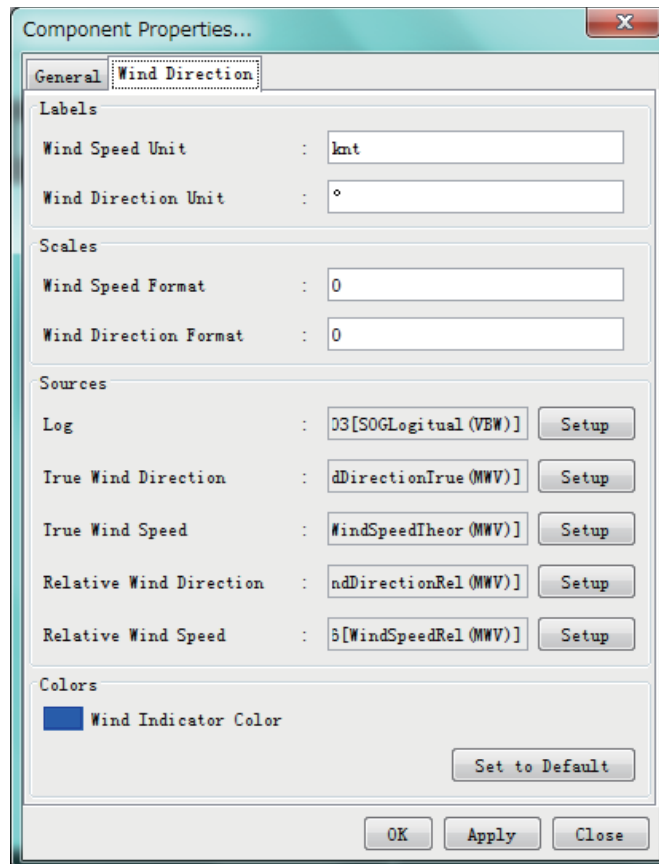
**[Colors]:**

Parameters in this window control the appearance of the ruler object. The [Set to Default] button resets all the colors to the default definition. See section 2.3.16.

## 2.3.9 Wind direction sheet

The setting of the [General] tab is similar to that shown in section 2.3.3.

### Wind Direction tab

**[Labels]:**

[Wind Speed Unit]: Text shown at wind speed indication.

[Wind Direction Unit]: Text shown at wind direction indication.

**[Scales]:**

[Wind Speed Format]: Define the format of the numeric outputs. See section 2.3.17.

[Wind Direction Format]: Define the format of the numeric outputs. See section 2.3.16.

## 2. PLAYER CONFIGURATION

### [Sources]:

[Log]: Set the data source of own ship speed. The typical input is data from the Speed log sensor.

[True Wind Direction]: Set the data source of true wind direction.

[True Wind Speed]: Set the data source of true wind speed.

[Relative Wind Direction]: Set the data source of relative wind direction.

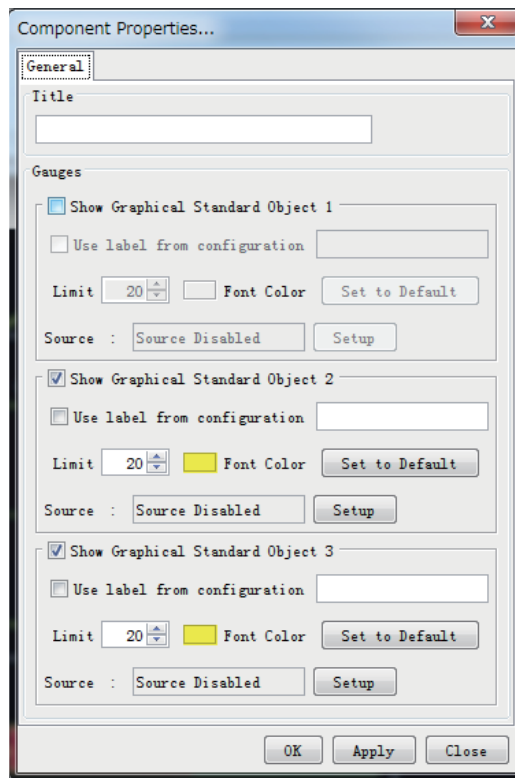
[Relative Wind Speed]: Set the data source of relative wind speed.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

### [Colors]:

The parameters in this window control the appearance of the object. The Set to Default button resets all the colors to the default definition. See section 2.3.16.

## 2.3.10 Numeric data display sheet



The Numeric Data Display does not display any gauges. Three smaller “objects” for displaying numeric data or text are displayed instead. These smaller objects, called “Graphical standard objects”, are almost identical to the non-graphical standard objects defined for showing data in tabular form.

Note that the overall title for the graphical object may interfere with the [Graphical Standard Object 1].

The color of the label text for a “Graphical Standard Object” is determined by the default color definition (Text/Outline Color). See section 2.3.16. The “Primary indicator color” is used as default for the displayed data but may be set by the operator.

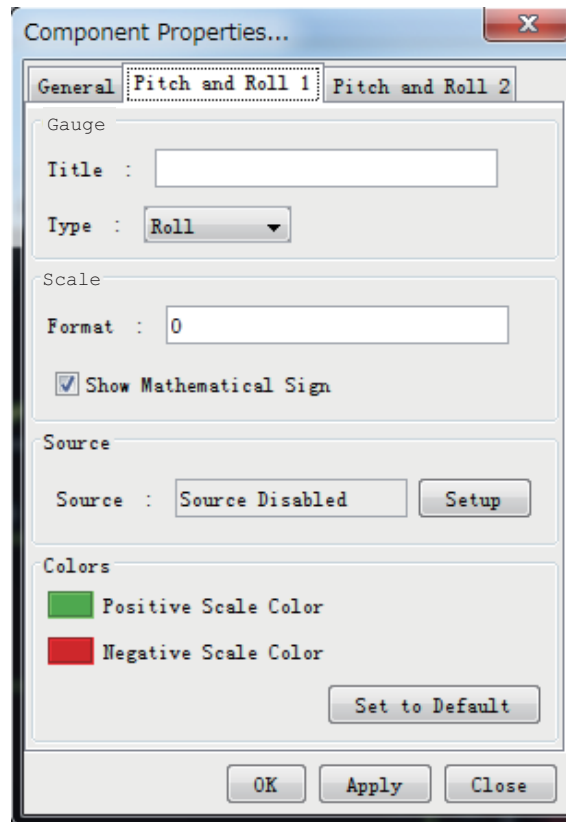
A number of Numeric Data Displays may be linked by removing adjacent lines.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

### 2.3.11 Pitch and roll sheet

The setting of the [General] tab is similar to that shown in section 2.3.3.

#### Pitch and Roll tab



#### **[Gauge]:**

[Title]: Text shown above the gauge.

[Type]: Used to select gauge type (pitch or roll). Pitch is default for gauge 2; roll is default for gauge 1.

#### **[Scale]:**

[Format]: Define the format of the numeric outputs. See section 2.3.17.

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

#### **[Source]:**

[Source]: Set the data source of pitch and roll. The typical input is data from the rudder angle sensor.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

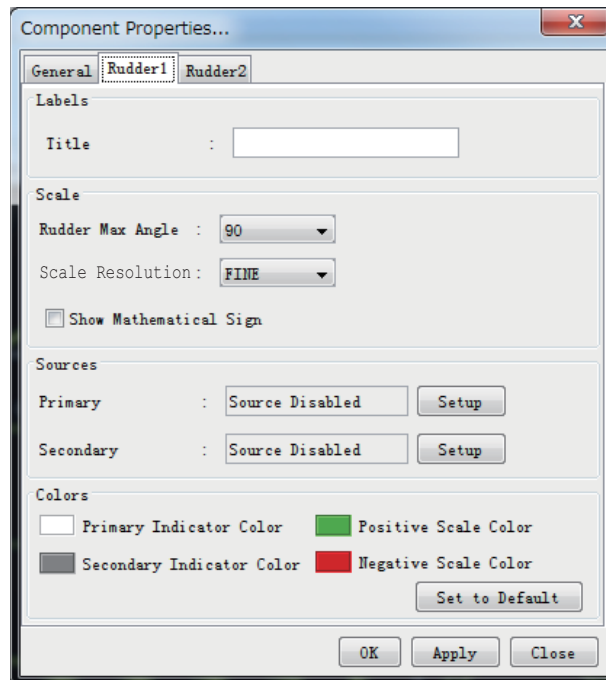
#### **[Colors]:**

The parameters in this window control the appearance of the object. The Set to Default button resets all the colors to the default definition. See section 2.3.16.

### 2.3.12 Rudder sheet

The setting of the [General] tab is similar to that shown in section 2.3.3.

#### Rudder tab



**[Labels]:**

[Title]: Text shown beneath the rudder indicator.

**[Scale]:**

[Rudder Max Angle]: This parameter controls the extent of the dial for the object. It is recommended that a value equal to the maximum rudder angle for vessel be used.

[Scale Resolution]: Select scale resolution.

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

**[Sources]:**

[Primary]: Set the primary data source of rudder angle. The typical input is data from the rudder angle sensor. [Secondary]: Set the secondary data source of rudder angle (optionally). The typical secondary input is "Commanded rudder angle".

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

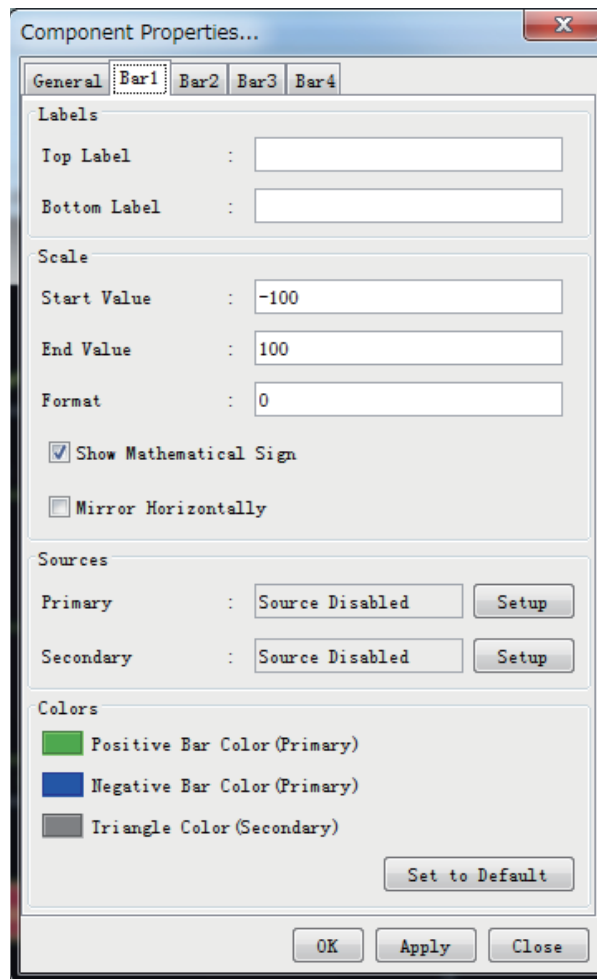
**[Colors]:**

The parameters in this window control the appearance of the object. The [Set to Default] button resets all the colors to the default definition. See section 2.3.16.

### 2.3.13 Vertical bar sheet

The setting of the [General] tab is similar to that shown in section 2.3.3.

#### Bar1 tab



#### **[Labels]:**

A vertical bar has two labels, one at each end. One of them is typically used as description while the other indicates units.

#### **[Scale]:**

[Start Value]: The start value corresponds to the bottom of the bar.

[End Value]: The end value corresponds to the top of the bar.

[Format]: Define the format of the figures for the bar object. See section 2.3.17.

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

[Mirror Horizontally]: In the default setting, the adjacent bars are two symmetrical instances of the bar object, that is, bar 1,2 and 3,4 form two pairs. The operator may change this by, for example, "horizontally mirror" bar object 1 and 3.

#### **[Sources]:**

[Primary]: Input to the main indicator for the bar object.

[Secondary]: Input to the secondary indicator for the bar object. The secondary indicator is shown as a small triangle. The secondary indicator is typically used for displaying the "commanded value" while the bar shows the actual value.

## 2. PLAYER CONFIGURATION

The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

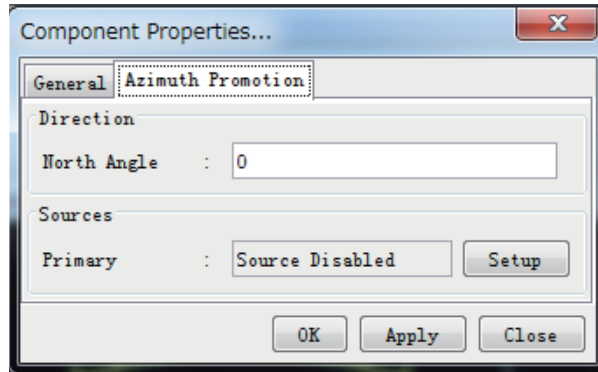
### **[Colors]:**

The parameters in this window control the appearance of the bar object. The [Set to Default] button resets all the colors to the default definition. See section 2.3.16.

### **2.3.14 Azimuth Promotion sheet**

The setting of the [General] tab is similar to that shown in section 2.3.3.

#### **Azimuth Promotion tab**



### **[Direction]:**

[North Angle]: Enter north angle relative to the screen.

### **[Sources]:**

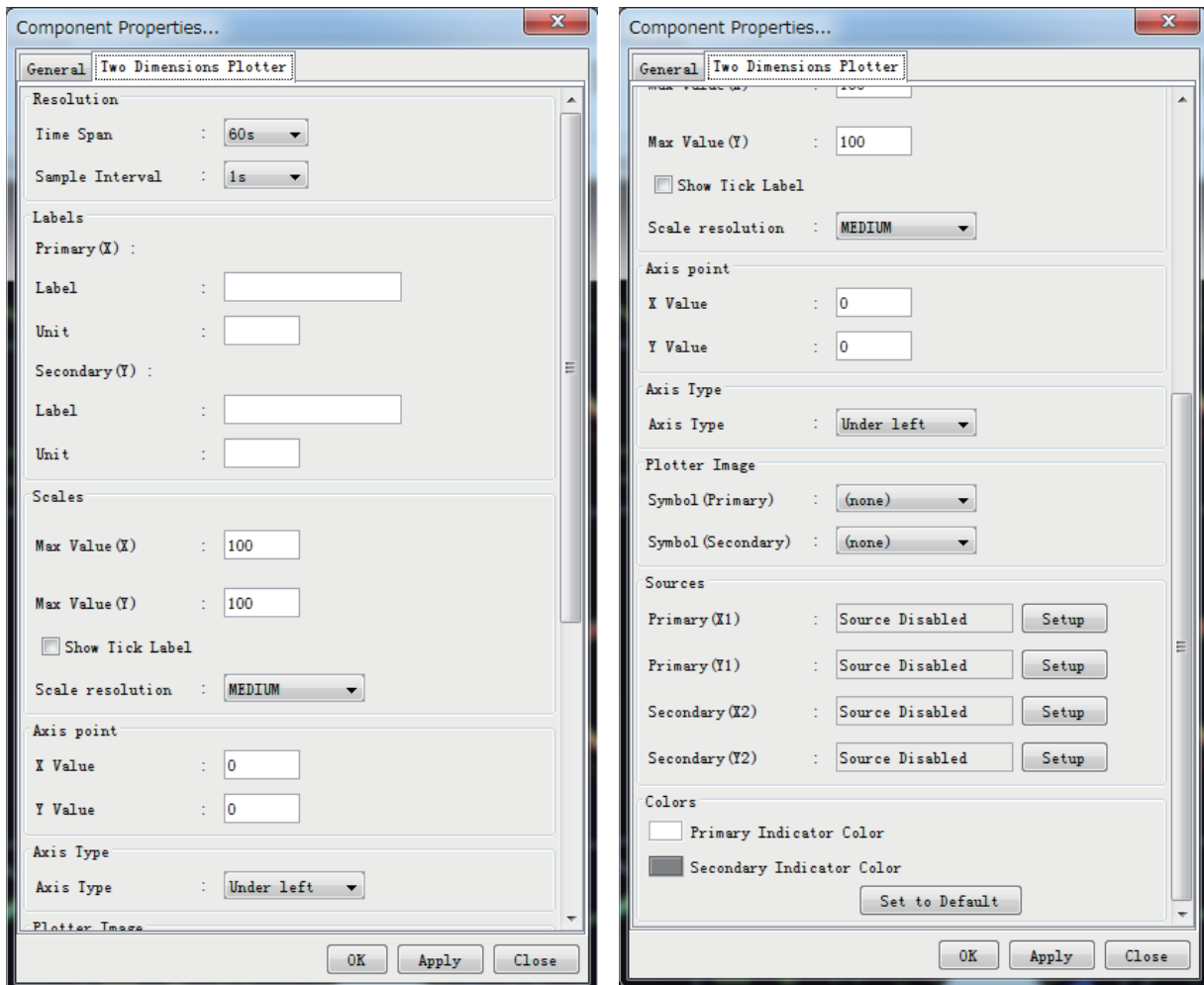
[Primary]: Set the data source of bearing data. Moving direction is displayed. The [Setup] button opens a dialog box where the source data may be defined. See section 2.3.

Set a direction signal from the serial data sentence, for example, HDG, HDT, MWV, VHW, VTG, etc.

### 2.3.15 Two Dimension Plotter sheet

The setting of the General tab is similar to that shown in section 2.3.3.

#### Two Dimensions Plotter tab



#### **[Resolution]:**

[Time Span]: Enter time span for plotter screen.

[Sample Interval]: Enter sample interval for plotter screen.

#### **[Labels]:**

[Primary]: The label and unit of X-axis.

[Secondary]: The label and unit of Y-axis.

#### **[Scales]:**

[Max Value (X)]: Set maximum value for X-axis.

[Max Value (Y)]: Set maximum value for Y-axis.

[Show Tick Label]: Check to show tick label.

[Scale Resolution]: Select scale resolution, among coarse, medium and fine.

#### **[Axis Point]:**

[X Value]: Enter starting point of X-axis.

[Y Value]: Enter starting point of Y-axis.

#### **[Axis Type]:**

[Axis Type]: Select axis type between Under-left and Central. The Central shows center of the coordinates to center of the screen.

## 2. PLAYER CONFIGURATION

### [Plotter Image]:

[Symbol]: Select symbol for the ship among ship, circle, triangle, and cross.

### [Sources]:

[Primary]: Set the primary data source for X1 and Y1 axes.

[Secondary]: Set the secondary data source for X1 and Y1 axes.

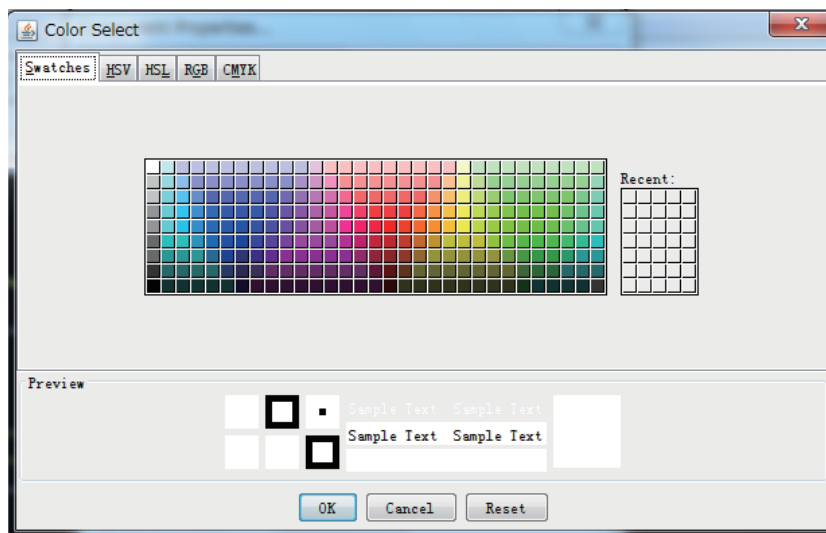
The [Setup] button opens a dialog box where the source data may be defined. See section 2.4.

### [Colors]:

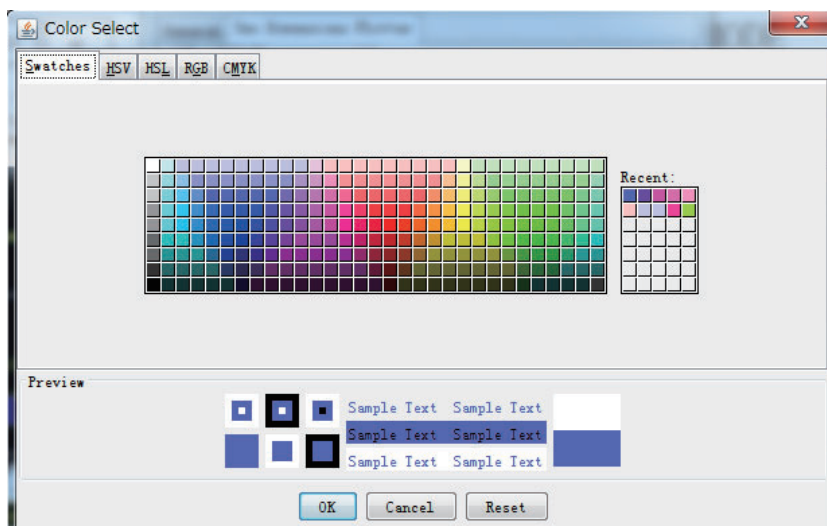
The parameters in this window control the appearance of the bar object. The [Set to Default] button resets all the colors to the default definition. See section 2.3.16.

## 2.3.16 Color definition

To define the color for an item, click the color box on each sheet to open the [Color Select] dialog box.



Click an appropriate color on the color palette to select it. Click appropriate tab ([HSV], [HSL], [RGB], [CMYK]) to see your color selection and further adjust the color. The example below is the [Swatches] tab.





### 2.3.17 Formatter syntax

Figures displayed by the graphical objects may be formatted, that is, the number of digits after the decimal point and leading zeroes may be defined.

The formatter syntax is identical to the syntax defined for formatting output from an NMEA decoder.

**Example:** 7.5 and 10 can be shown three different ways depending on the formatter used.

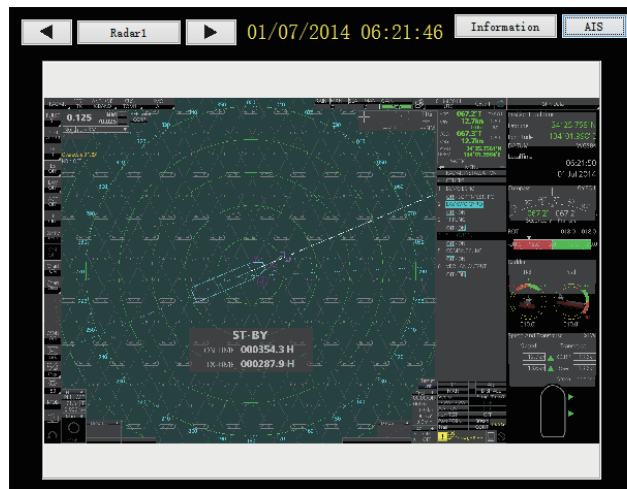
Formatter	Display "7.5"	Display "10"
	Result	
0	7	10
0.0	7.5	10.0
000	007	010

### 2.3.18 [Radar/AIS] sheet

Use ◀ or ▶ to select the image to show on the [Radar/AIS] sheet. Three sheet sizes are available for the [Radar/AIS] sheet (600×470, 900×690, 1200×920).

To show the AIS screen, click [AIS] button at the upper right corner.

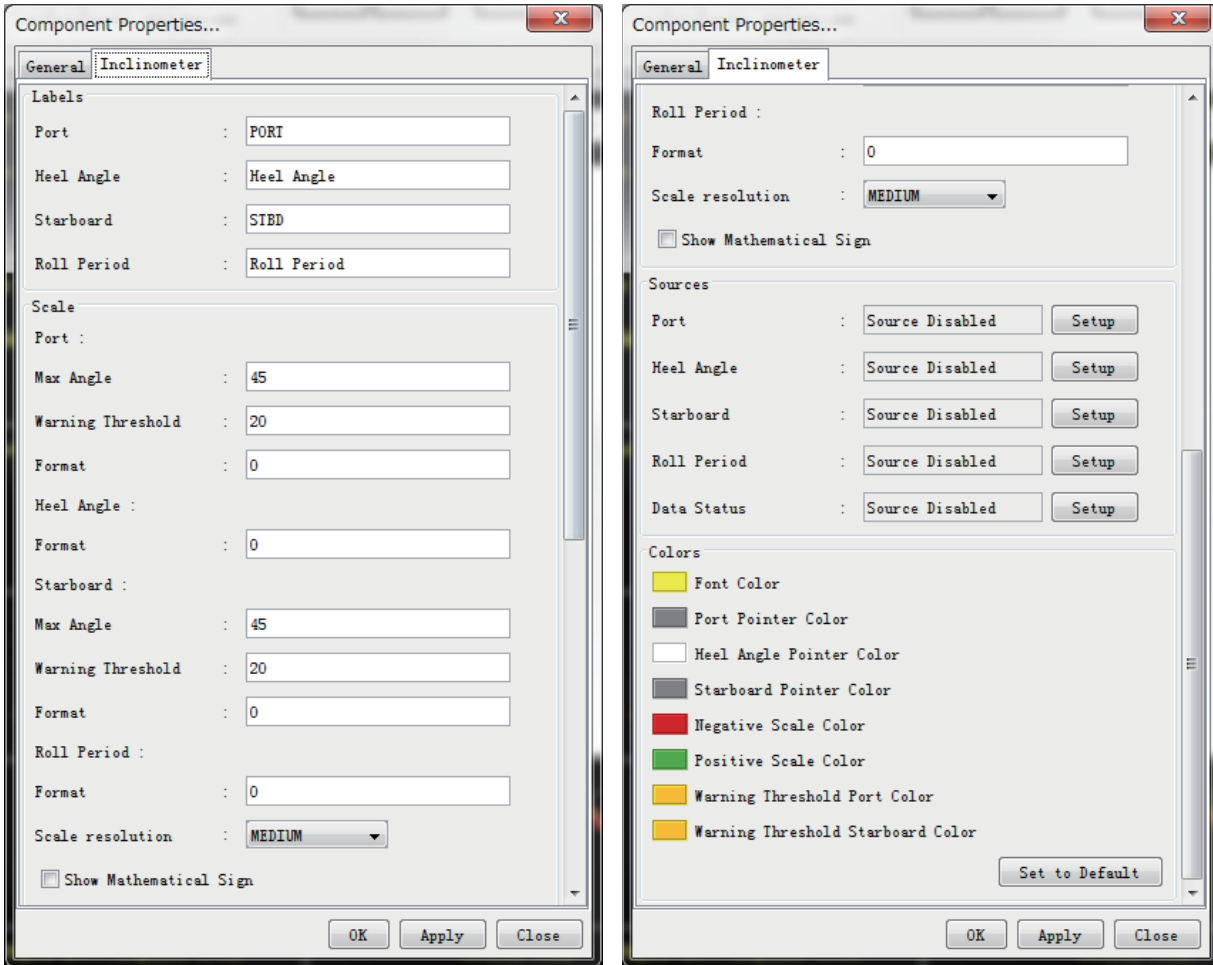
The [Information] button provides textual information about the image shown.



### 2.3.19 Inclinometer Sheet

Settings for the [General] tab are similar to that shown in section 2.3.3.

#### Inclinometer tab



**[Labels]:**

[Port]: Enter text that is displayed at the upper left of the inclinometer for the port inclination angle.

[Heel Angle]: Enter text that is displayed at the top of the inclinometer for the heel angle.

[Starboard]: Enter text that is displayed at the upper right of the inclinometer for the starboard inclination angle.

[Roll Period]: Enter text that is displayed at the lower right of the inclinometer for value the roll period.

**[Scales]:**

Set the inclination angle for port and starboard, the heel angle and the roll period for the inclinometer.

[Max Angle]: Set maximum value displayed. Do not use decimal values.

[Warning Threshold]: Set angle displayed as warning. Do not use decimal values.

[Format]: Define the format of the figures for the bar object. See section 2.3.17.

[Scale Resolution]: Select the scale of resolution from [COURSE], [MEDIUM] or [FINE].

[Show Mathematical Sign]: Check this box to show the negative mathematical sign. The mathematical sign appears with the related numerical indication.

**[Sources]:**

[Port]: Set the data source of port inclination angle.

[Heel Angle]: Set the data source of heel angle.

[Starboard]: Set the data source of starboard inclination angle.

[Roll Period]: Set the data source of roll period.

[Data Status]: Set the data source of data status at the lower left of the inclinometer.

The [Setup] button opens a dialog box where the source data may be defined. See section 2.4.

**[Colors]:**

The parameters in this window control the appearance of the object. The [Set to Default] button resets all the colors to the default definition. See section 2.3.16.

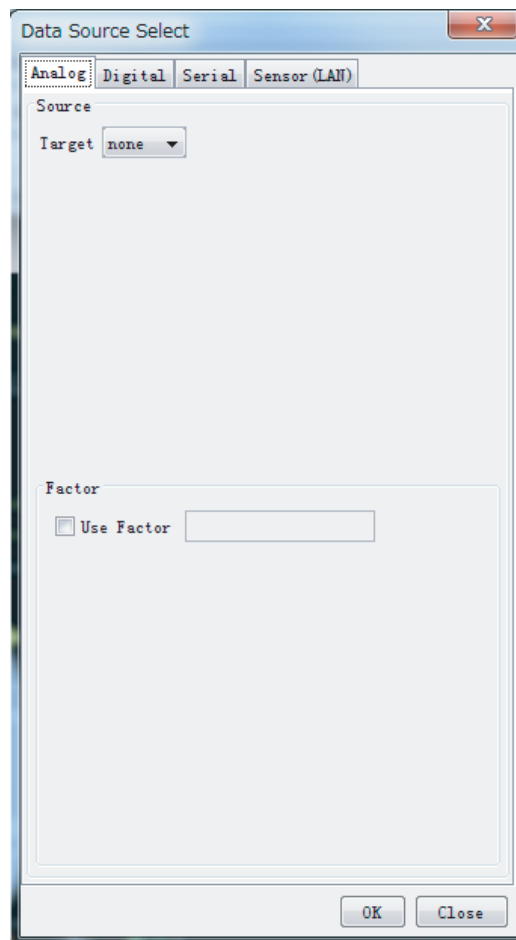
## 2.4 Setting of Data Source

Select the source to use to show the respective data on each sheet. Before setting the source data, make a memo about connection channel and input signal.

Click the [Conning] tab. Right-click any sheet other than the [Radar/AIS] sheet then select [Properties]. Click the [Setup] button in the [Component Properties] dialog box to show the [Data Source Select] dialog box. Click the applicable tab among [Analog], [Digital], [Serial], [Sensor (LAN)] and [Configuration].

**Note:** The [Configuration] tab appears only when the [Numeric Data Display Sheet] is selected(See step 5 on section 2.3.1).

### Analog tab



#### **[Source], [Target]:**

Set the channel of the input sensor that you want to use to show analog data. The setting range is from AN001 to AN120.

#### **[Factor]:**

To apply a factor (multiplier) to the original data, check the [Use Factor] check box and enter a factor. For example, enter 0.514 for speed data to convert knots to m/s.

**Digital tab**

The screenshot shows a 'Data Source Select' dialog box with the 'Digital' tab selected. The 'Source' field is empty, and the 'Target' dropdown is set to 'none'. The 'Use alternative values' checkbox is checked, and the 'Active value' and 'Inactive value' input fields are empty. The 'Use Factor' checkbox is unchecked, and its input field is also empty. The dialog has 'OK' and 'Close' buttons at the bottom.

**[Source], [Target]:**

Set the channel of the input sensor that you want to use to show digital data. The setting range is from DC001 to DC640.

**[Alternative Value]:**

To use an alternative value, check the [Use alternative values]. If not checked, the text entered at installation appears in the [Active value] box and [Inactive value] box.

**Example**

For alert signal of [Normal Close]

[Active value] to [Normal]

[Inactive value] to [General alert] or [Fire alert]

For steering gear run indicator signal of [Normal Open]

[Active value] to [Run]

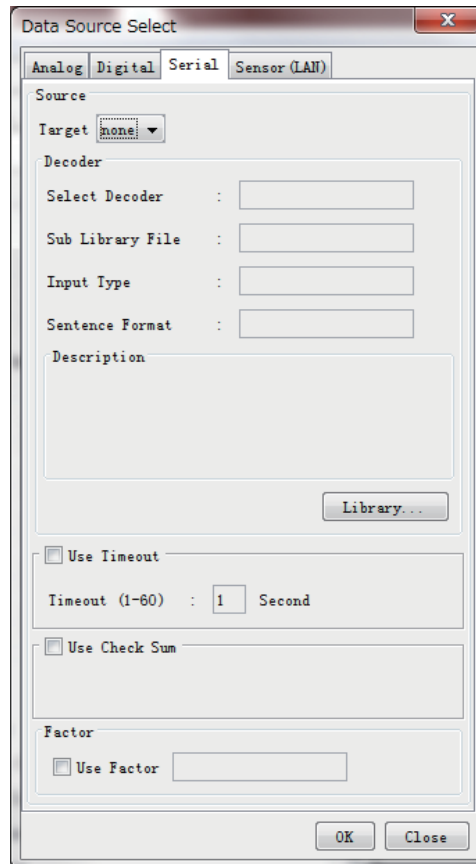
[Inactive value] to [Stop]

[Factor]: To use a factor, check the [Use Factor] check box and enter a signal factor.

## 2. PLAYER CONFIGURATION

### **Serial tab**

The serial signal means IEC61162 or NMEA0183 format signal.



**[Source], [Target]:**

Set the channel of the input sensor that you want to use to show serial data. The setting range is from SI01 to SI72 (SI17 and higher are no use).

**[Decoder]:**

Set data type.

**[Library]:**

Show the [Decoder Library] dialog box (see section 5.2). Also, you can add the data sentence to decoder library. See "To add a data sentence:" on page 35.

**[Use Timeout]:**

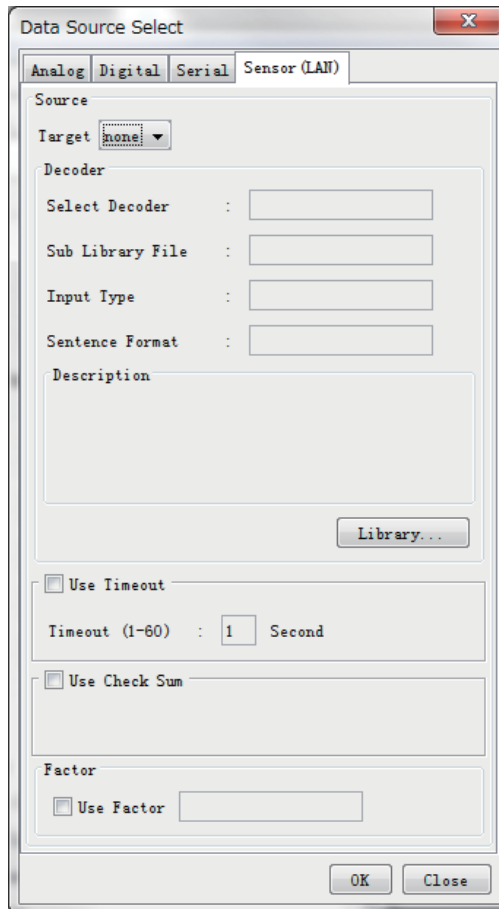
To use timeout functions, check the [Use Timeout] box and enter a time from 1 to 60 seconds. For multiple like data sources set the same use timeout for each.

**[Use Check Sum]:**

Check this box to use the check sum that is included in serial data.

**[Factor]:**

To use a factor, check the [Use Factor] check box and enter a signal factor.

**Sensor (LAN) tab****[Source], [Target]:**

Set the channel of the input sensor that you want to use to show Sensor (LAN) data. The setting range is from LN01 to LN64.

**[Decoder]:**

Set data type.

**[Library]:**

Show the [Decoder Library] dialog box (see section 5.2). Also, you can add the data sentence to decoder library. See "To add a data sentence:" on page 35.

**[Use Timeout]:**

Check the [Use Timeout] box and enter time from 1 to 60 seconds. For multiple like data sources set the same use timeout for each.

**[Use Check Sum]:**

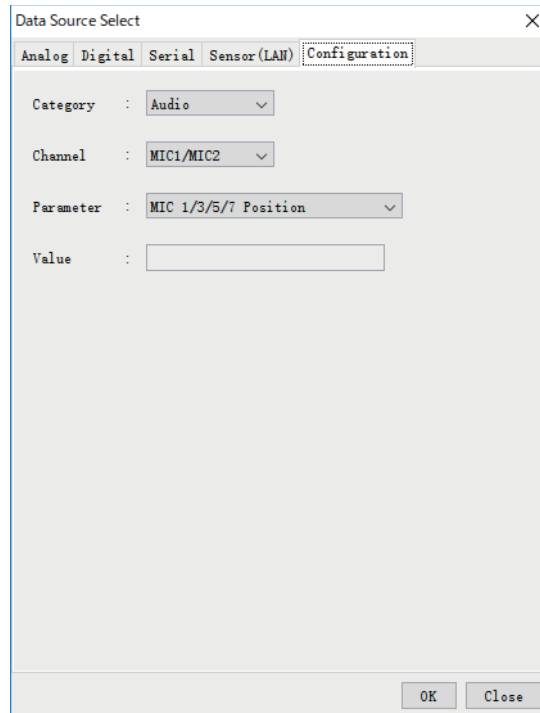
Check this box to use the check sum that is included in serial data.

**[Factor]:**

To use a factor, check the [Use Factor] check box and enter a signal factor.

### **Configuration tab**

You can set the information of installed the MIC to be shown on the conning display.



[Category]: Configuration is not required (fixed to [Audio]).

[Channel]/[Parameter]: This menu is to show the position of the MIC to the display. Configuration can be selected from followings: [Channel] • [MIC1/MIC2] • [MIC3/MIC4] • [MIC5/MIC6] • [MIC7/MIC8] [Parameter] • [MIC 1/3/5/7 Position] • [MIC 2/4/6/8 Position]

When you want to show the channel and position of MIC2, set as follows:

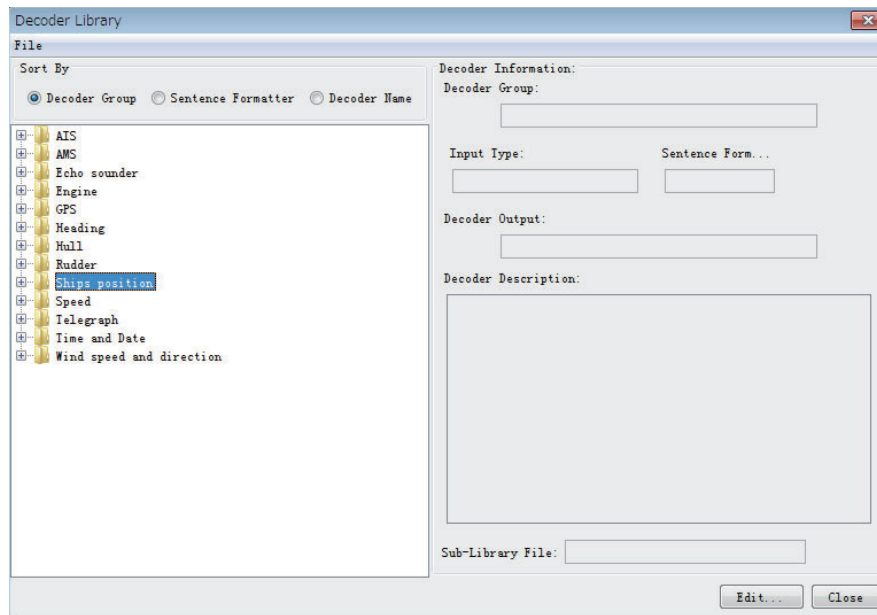
- [Channel]: [MIC1/MIC2]
- [Parameter]: [MIC 2/4/6/8 Position]

[Value]: The position of selected the MIC on [Channel] and [Parameter] is shown automatically.



**To add a data sentence:**

1. Click the [Library] button to show the [Decoder Library] dialog box.



2. Click the desired data (NMEA sentence) in the decoder library (left-hand window of the [Decoder Library] dialog box). This library supports all the sentences specified in IEC 61996. If a sentence that is not supported by this library is input to the VR-7000/7000S, you can create and edit a new decoder for the sentence. See section 5.3 for how to create a new decoder.
3. Click the [OK] button, and the data sentence appears in the [Decoder] dialog box.

## 2.5 Saving the Configuration

You can save the configuration to a DRU or Long Term Device.

**Note 1:** When the error message "[CONN] Could not upload \*\*\*.tar" appears when saving the configuration, check the connection of the DRU and Long Term Device, and then save the configuration.

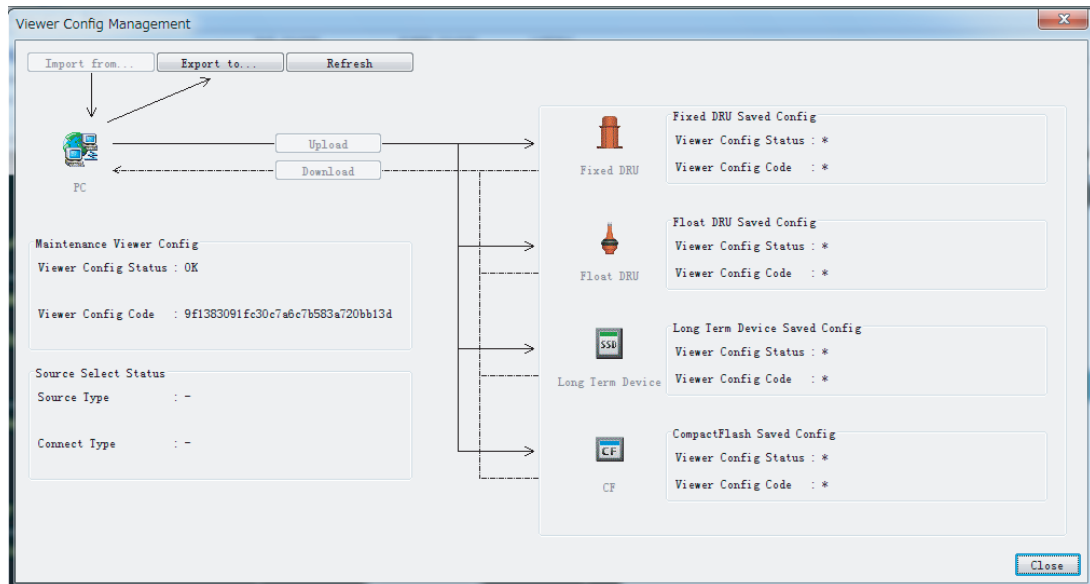
**Note 2:** When the DRU (Fixed, Float), Long Term Device and CF do not have the configuration data and you click the [Refresh] button, the error message "[CONN] Could not Refresh" or "[CONN] could not Download" is shown. In this case, reboot the Live Player V5.

**Note 3:** If the [Configuration Mode] is set to [ON], click the [Configuration] menu to open and set the [Configuration Mode] to [OFF]. Then, the message "Save Viewer Config?" is shown and click [Yes] to save the configuration.

### To save the configuration created to the replay PC

**Note:** Be sure to save the created display form on PC for backup. Depending on the player setting, it may be overwritten when connecting to the VDR.

1. Click [Configuration mode] > set it [OFF]> [Configuration]> [Viewer Config Management] to show the [Viewer Config Management] dialog box.



2. Click the [Export to] button.
3. Enter a file name, select a file save location and click [Save] button.
4. Click the [OK] and [Close] buttons.

**Note:** Turn Configuration OFF and save the setting data. Restart the Live Player V5 to reflect the setting data.

### To save the configuration to the DRU, long term device

**Note:** Connect the Live Player V5 to the VDR on live mode before doing the following procedure (see chapter 4).

1. With the Configuration Mode set for OFF, click [Configuration] > [Viewer Config Management] to show the [Viewer Config Management] dialog box.
2. Click the [Upload] button to open the [Upload] dialog box.
3. Click the [Select] button and enter name for the file in the [File name] box.
4. Select where to save the file then click the [Open] button.
5. Click the [OK] button twice.
6. Click the [OK] and [Close] buttons.

**Note:** See section 3.1 "Reading the Data Recorded in the Long Term Device" when you load the configuration data from the Long Term Device to the PC.

## 2.6 When Live Player V5 Display Error Occurs

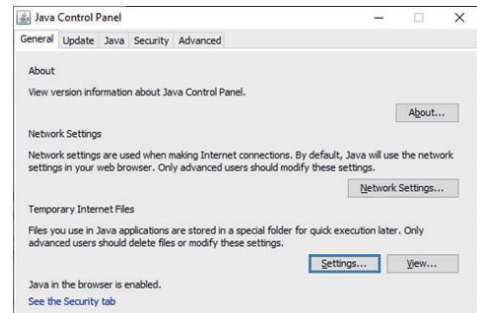
Live Player V5 may occasionally display errors on some of the display tabs. For example, a part of display is not displayed, the image is distorted, etc.

If a display error occurs, exit the Live Player V5 application, then restart the PC. If not rectified, do the following procedures.

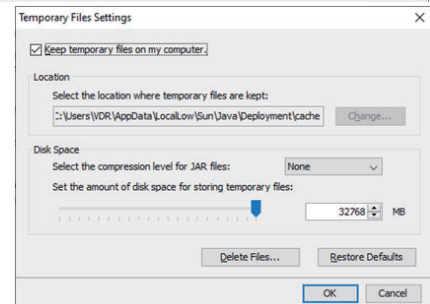
- Clear the Java<sup>®</sup> cache. See section 2.6.1.
- Reload the configuration. See section 2.6.2.
- Change the OS font size setting to “100%”. See section 2.6.2.

### 2.6.1 How to clear the Java<sup>®</sup> cache

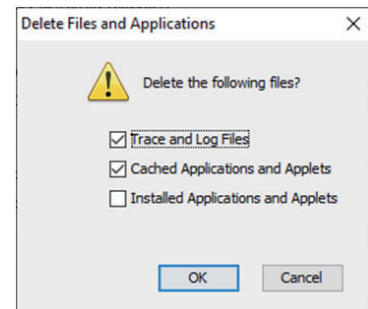
1. Right-click the star button on the desktop.
2. Select [Search] from the menu.
3. Enter “control” in the search box, then select [Control Panel] from the search results.
4. Select [Java (32 bit)].  
The [Java Control Panel] window appears.



5. Confirm that the [General] tab is selected, then click the [Settings] button for [Temporary Internet Files].  
The [Temporary Files Settings] window appears.

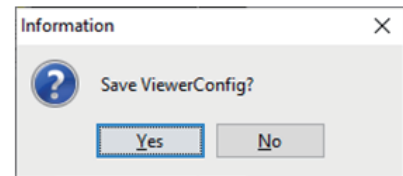
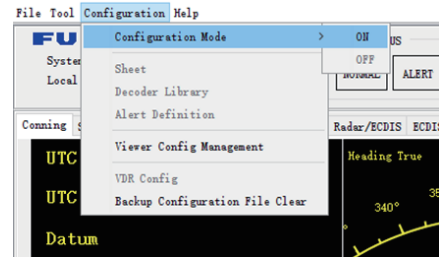


6. Click the [Delete Files] button.
7. Check the checkbox for [Trace and Log Files] and [Cached Applications and Applets], then click the [OK] button.
8. Close the window.



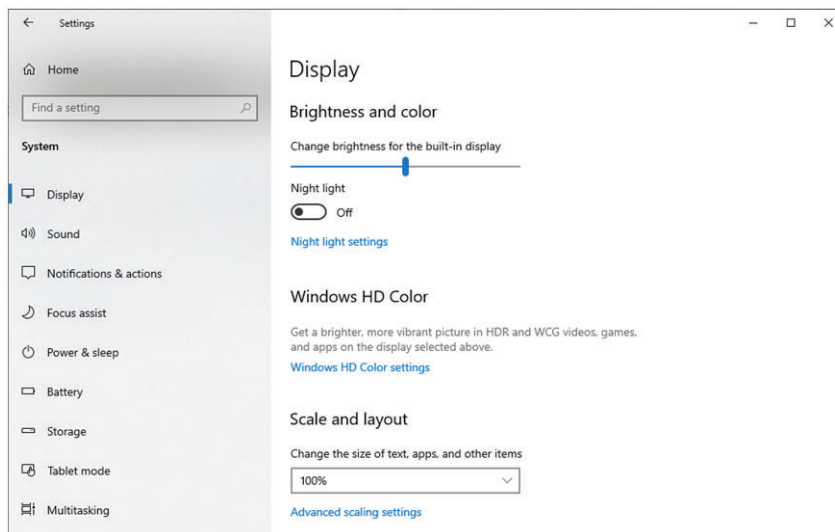
## 2.6.2 How to reload the configuration

1. Run the Live Player V5 application.  
The [Source Select] window appears.
2. Click the [Cancel] button of the [Source Select] window.
3. Open the [Configuration] menu, then set [Configuration Mode] to [ON].
4. Without changing other settings, open the [Configuration] menu, then set [Configuration Mode] to [OFF].  
The confirmation message as shown in the figure to the right appears.
5. Click the [Yes] button to close the window.



## 2.6.3 How to change the OS font size setting

1. Right-click the star button on the desktop.
2. Select [Settings] from the menu.
3. Select [System].



4. Set [Change the size of text, apps, and other items] to "100%".
5. Close the setting window.

# 3. EXTRACTING, REPLAYING DATA

---

The replay function is specially designed for data analysis after an incident, with the recording stopped. (Do not access the DRU while it is recording.) Playback is possible while recording, by connecting to the Long Term Device via LAN.

**Note:** Recording is terminated only in the following instances:

- During essential maintenance purposes while the vessel is in port.
- The vessel is dry-docked.

To stop recording, turn off the BATTERY BACK-UP and AC SUPPLY MAINS switch in the VDR in that order. DO NOT turn off the system by the main breaker while the BATTERY switch is on. If this is done, the system operates on the batteries. The system stops after running on batteries for two hours.

There are two ways to replay the data recorded:

- 1) Access the data stored in the long term device without playing back recorded data.
- 2) Reading the data extracted from the DRU or the Long Term Device.

**Note 1:** Do not remove the Long Term Device(s) from the VDR unless authorized to do so. Extract data to a PC or when necessary.

**Note 2:** If you hear audio intermittently at playback, see "Intermittent audio at playback" in section 6.4.

**Note 3:** If error occurs at the start of playback, click the [Start] button again.

**Note 4:** When you minimize the Live Player V5 window while replaying the recorded data, the audio data may not be synched with the display screen. In this case, stop the replay, then click the [Start] button again.

**Note 5:** If the message "Audio setup failed" appears during playback, click the [OK] button. Try to replay data again.

## 3.1 Reading the Data Recorded in the Long Term Device

This section explains how to access and play back the data recorded in the Long Term Device without retrieving the data from the HDD of the replay PC.

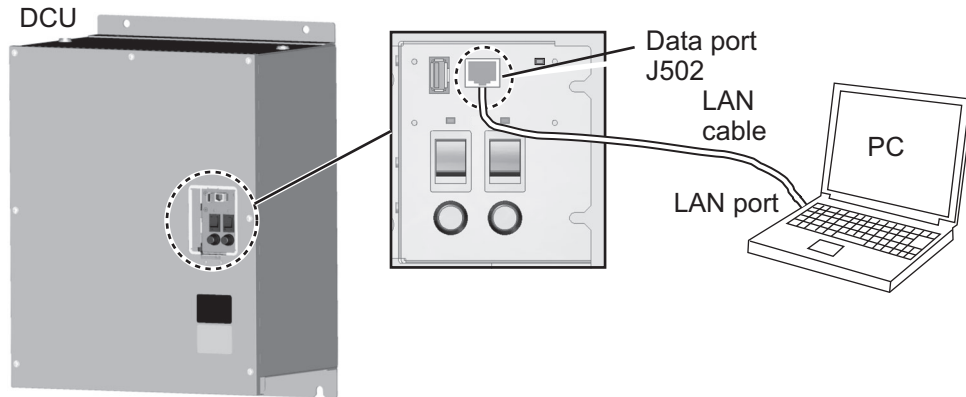
Normally, it takes more than one hour to retrieve the recorded data from the Long Term Device to the replay PC. Using this Live Player V5 software, however, the data recorded in the Long Term Device can be read to replay it without copying the data into the HDD of the replay PC. This feature is useful during the installation of the VDR to check if all the data input to the VDR is properly recorded in the Long Term Device.

### 3. EXTRACTING, REPLAYING DATA

#### 3.1.1 How to connect the replay PC to the Long Term Device

Data can be read from the DATA port J502 in the DCU during recording. If an incident occurs, you can read the data as follows.

1. Open the door on the cover of the DCU. Connect the LAN cable between the LAN port on the replay PC and the DATA port J502 in the DCU.

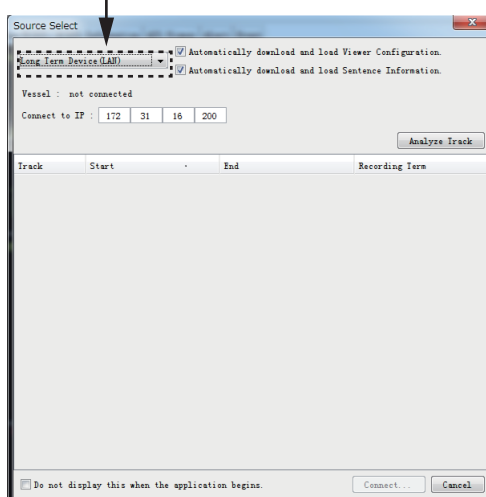


2. Start the Live Player V5.
3. Open the [Tool] menu and select [Source Select] to show the [Source Select] dialog box. Select [Long Term Device (LAN)] or [Long Term Device (Save Area)] from the drop-down list.

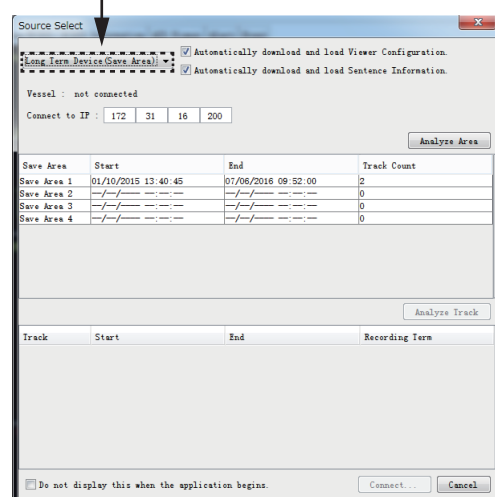
**Note:** [Long Term Device (Save Area)] is only available with the VR-7000S.

4. Check that the IP address is 172.31.16.200 (or 10.0.0.100). See section 1.2 for the IP address of the destination host.  
If you selected [Long Term Device (Save Area)] at step 3, click the [Analyze Area] button then select the save area for data extraction from [Save Area 1] to [Save Area 4].

[Long Term Device (LAN)] is selected



[Long Term Device (Save Area)] is selected



5. Click the [Analyze Track] button to show track information.

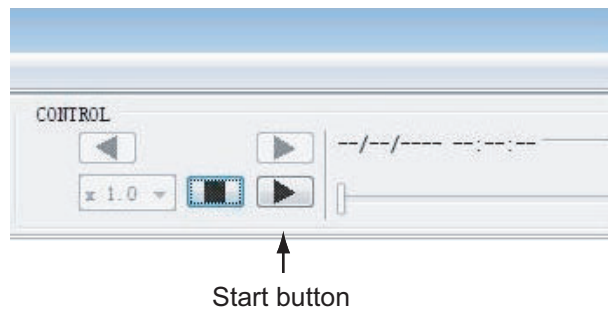
**Note:** If one of the following messages appears, after clicking the [Analyze Track] button, see the following table to rectify the error. If not rectified, contact your dealer.

Message	Remedy
[ANALYZE] Could not analyze: Long Term Device data. Reading failed.	The Live Player V5 program version is not compatible with the VDR program version. Check the VDR program version ([VDR Version]) on the [System Monitor] window from the RAP, then use an appropriate Live Player V5 version.
[CONN] [ANALYZE] Could not analyze: Save area	The Live Player V5 program version is older than the VDR program version. Use the latest version of Live Player V5.
[ANALYZE] Could not analyze: Save-Area data. Reading failed.	The the VDR program version is older than Live Player V5 program version. Use the Live Player V5 version 1.10.

6. Click the [Connect] button.

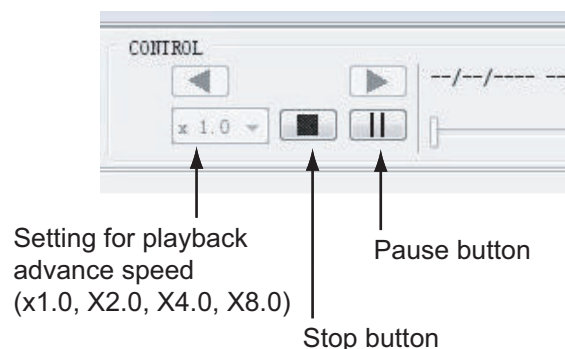
After connecting to the Long Term Device, the [Source Select] dialog box disappears.

7. Click the Start button.



You can change the playback advance speed and select the track number. To pause the playback, click the Pause button.

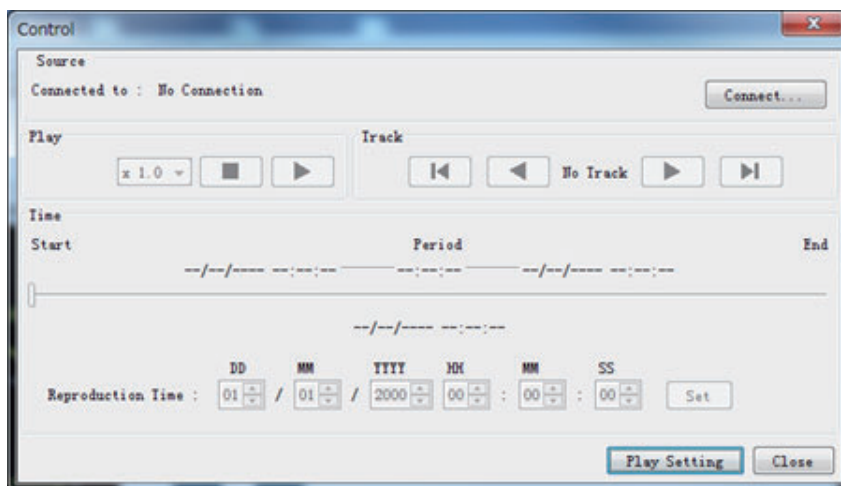
**Note:** The X8.0 playback speed may stop playback depending on PC specifications and load conditions. If playback stops, reduce the playback speed.



8. To stop playback, click the Stop button.

**Note:** You can show the [Control] dialog box by putting the cursor in the [CONTROL] area and dragging the cursor while holding down the left button. This dialog box has a slider bar for selecting playback start time. You can also specify the playback start time by entering desired numeric value and clicking the [Set] button.





## 3.2 How to Extract Data from a Long Term Device or Save Area, Replay the Data on a PC

**Note:** VR-7000 cannot use the save area.

The data recorded in a Long Term Device or save area can be extracted to the HDD of the replay PC and replayed with the Live Player V5 software. The wiring necessary to retrieve the data is the same as shown in section 3.1.1.

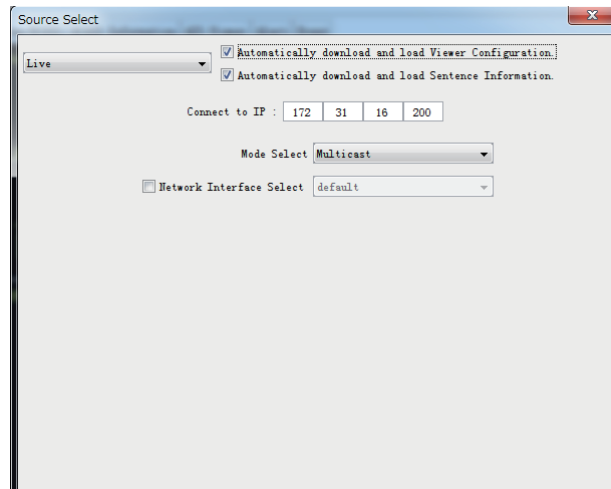
### Notes on extraction

- The temporary analysis files requires a minimum of 30 GB free space on the C drive of the PC.
- Data recording of more than 13 hours cannot be extracted and analyzed at once.
- If "Get size failed" appears at the start of extraction, click the [OK] button.
- The message that announces completion of extraction may not appear. If the progress bar shows 100%, extraction is complete.
- If an error message appears during extraction and extraction stops or extraction stops due to insufficient disk space, restart the Live Player and try the extraction again.
- The Live Player may stop when extraction cancels. If this occurs, quit the Live Player from the Task Manager then restart the Live Player.
- Do not extract data to a medium whose remaining space is too low to hold the data. The OS may not start up if the medium is used as the system drive and it is full. (Estimate 1GB for one hour of data.)
- Do not connect a storage device to more than one Live Player in extraction or play back. Extraction or play back may stop. Also, when using the Data Consistency Analyzer, you cannot connect to the Long Term Device via the Live Player.
- Recording continues when extracting data from a Long Term Device (LAN). Newer data may not be extracted since older data is overwritten. If this occurs, set the start time for extraction backward some hours.
- When you fail the extraction, the message "[FILE] Do you delete extracted file?" appears. To continue extracting, click [No] then select the folder where you extracted the data and click [Resume] to continue extraction.



### 3.2.1 How to extract the data from a Long Term Device

1. Select [Source Select] from the [Tool] menu to show the [Source Select] dialog box.



2. Click the drop-down list and select [Long Term Device (LAN)].
3. Confirm that the IP address ([Connect to IP]) is following.
  - 172.31.16.200
  - 10.0.0.100
4. Click the [Analyze Track] button.

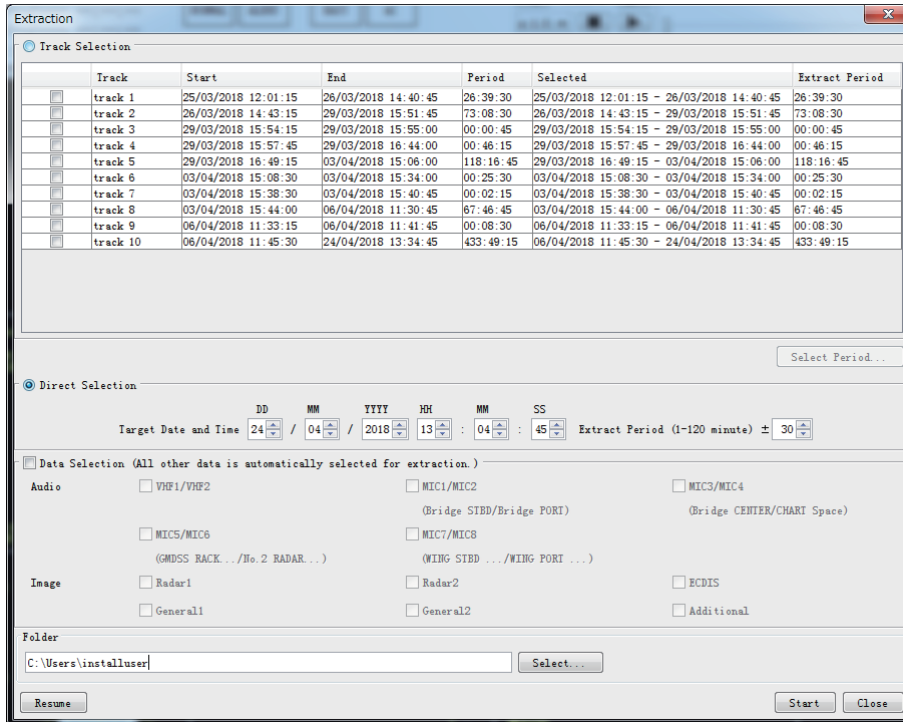
**Note:** If the following error message appears after clicking the [Analyze Track] button, see the table below to rectify the error. If not rectified, contact your dealer.

Message	Remedy
[ANALYZE] Could not analyze: Long Term Device data. Reading failed.	Check the VDR program version ([VDR Version]) on the [System Monitor] window from the RAP, then use an appropriate Live Player V5 version.

5. Click the [Connect] button.

### 3. EXTRACTING, REPLAYING DATA

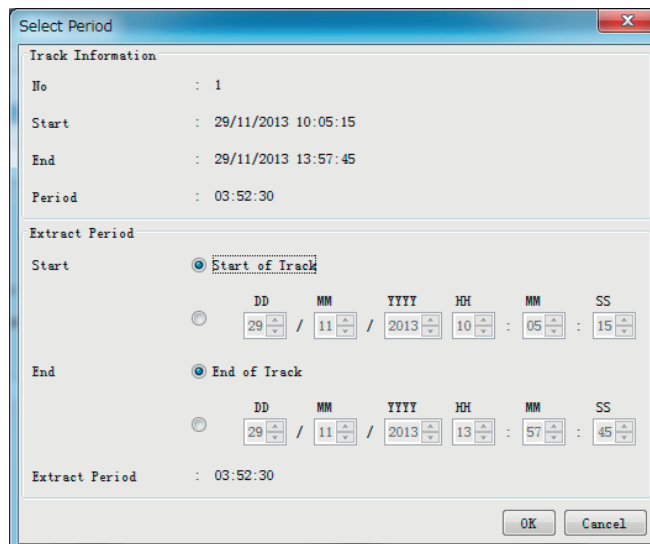
6. Click [Extract] in the [Tool] menu.



7. Specify the extraction data by each one of the following methods.
  - Select the track.
  - Select date and period.

#### **How to select the track:**

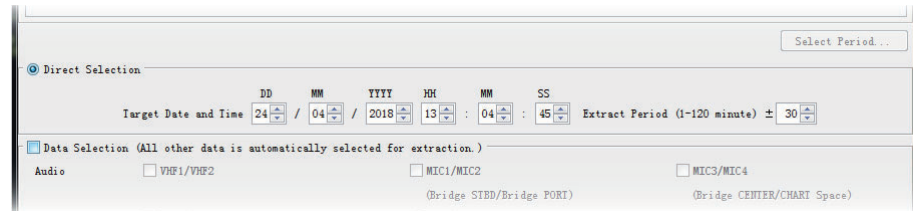
- 1) Activate the [Track Selection] radio button, then check the track you want to extract.
- 2) Click the [Select Period] button to show the [Select Period] window.



- 3) Set the start time and the end time in the [Extract Period] field. When you want to extract all track, check [Start of Track] and [End of Track].
- 4) Click the [OK] button.

**How to select date and period:**

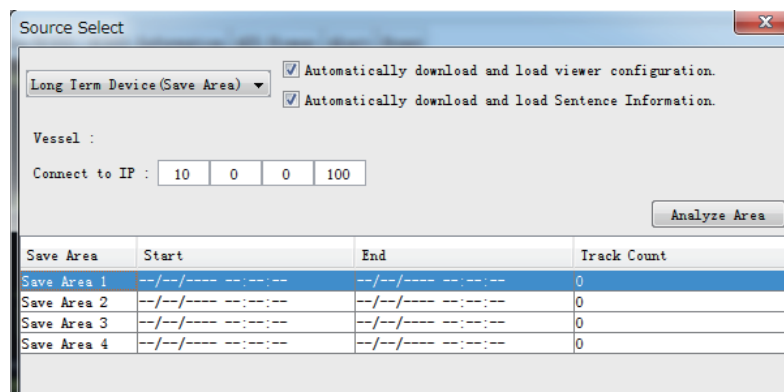
- 1) Activate the [Direct Selection] radio button.
- 2) Select the target date and period to extract.



8. Click [Select] button to open the [Open] dialog box
9. Select where to save the data and click the [Open] button.
10. Click the [Start] button in the [Extraction] dialog box. The [Extract Process] dialog-box appears and the bar graph, which indicates retrieving status, appears. When the extraction is completed, the message "Extracting data to ... completed" appears.  
**Note:** If the [Extraction Process] window appears without clicking the [Start] button, close the window to start extracting data.
11. Click the [OK] button and then click the [Close] button.

**3.2.2 How to extract the data from Save area**

1. Select [Source Select] from the [Tool] menu to show the [Source Select] dialog-box.



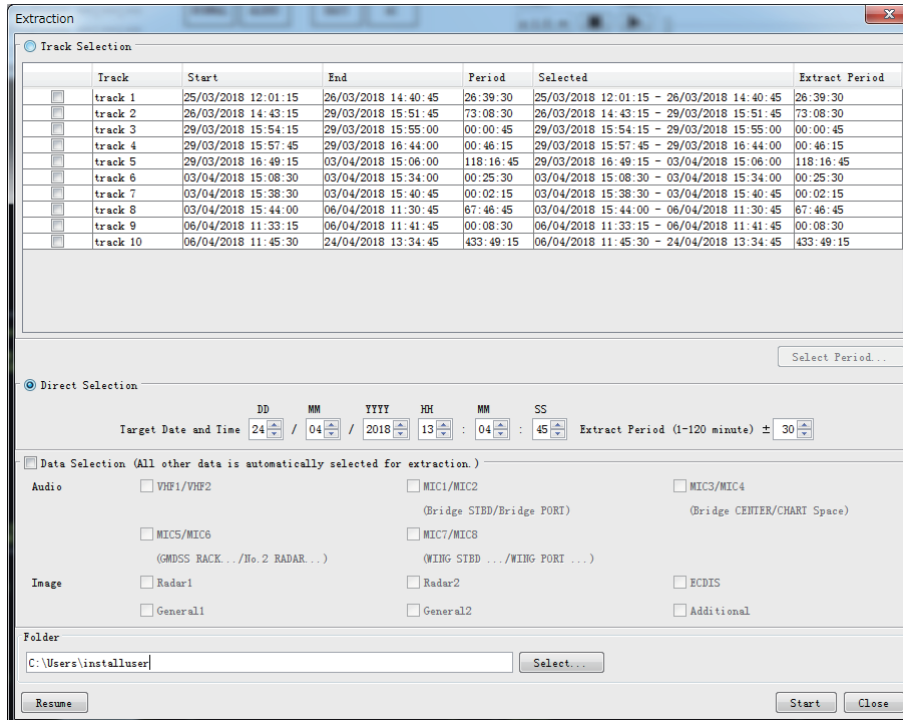
2. Click the drop-down list and select [Long Term Device (Save Area)].
3. Click the [Analyze Area] button and select data save area from [Save Area 1] to [Save Area 4].
4. Click the [Analyze Track] button.  
**Note:** If the following error message appears after clicking the [Analyze Track] button, see the table below to rectify the error. If not rectified, contact your dealer.

Message	Remedy
[CONN] [ANALYZE] Could not analyze: Save area	The Live Player V5 program version is older than the DCU program version. Use the latest version of Live Player V5.
[ANALYZE] Could not analyze: Save-Area data. Reading failed.	The the VDR program version is older than Live Player V5 program version. Use the Live Player V5 version 1.10.

5. Click the [Connect] button.

### 3. EXTRACTING, REPLAYING DATA

#### 6. Click [Extract] in the [Tool] menu.

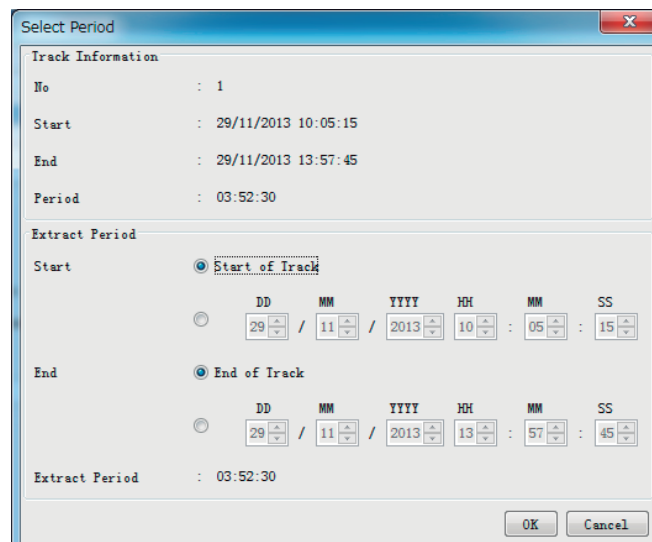


#### 7. Specify the extraction data by each one of the following methods.

- Select the track.
- Select date and period.

#### **How to select the track:**

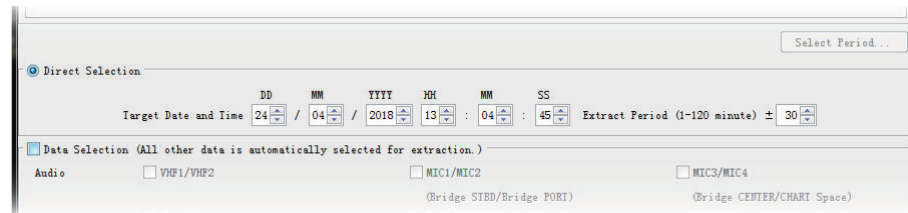
- 1) Activate the [Track Selection] radio button, then check the track you want to extract.
- 2) Click the [Select Period] button to show the [Select Period] window.



- 3) Set the start time and the end time in the [Extract Period] field. When you want to extract all track, check [Start of Track] and [End of Track].
- 4) Click the [OK] button.

**How to select date and period:**

- 1) Activate the [Direct Selection] radio button.
- 2) Select the target date and period to extract.



8. Click [Select] button to open the [Open] dialog box
9. Select where to save the data and click the [Open] button.
10. Click the [Start] button in the [Extraction] dialog box. The [Extract Process] dialog-box appears and the bar graph, which indicates retrieving status, appears. When the extraction is completed, the message "Extracting data to ... completed" appears.  
**Note:** If the [Extraction Process] window appears without clicking the [Start] button, close the window to start extracting data.
11. Click the [OK] button and then click the [Close] button.

**3.2.3 How to replay the data copied into the PC**

**Note:** When you adjust the seek bar to control position of playback, the audio data may not be replayed correctly. In this case, adjust the seek bar to move the position of playback forward or backward.

1. Select [Source Select] from the [Tool] menu to show the [Source Select] dialog box.
2. Click the drop-down list and select [Extract].
3. Click the [Select] button to show the [Open] dialog box.
4. Select the file you want to replay and click the [Open] button.
5. Click the [Analyze Track] button in the [Source Select] dialog box then click the [Connect] button.

**Note:** If "This extract data was converted from "Live(Remote)" data. It is different from the actual recorded data for that reason." appears, the selected data quality may be lower than the actual data, because the selected data is converted from "Live(Remote)" data. Extract the actual data. If you need actual recorded data, extract the data again seeing section 3.2.1.

6. Click the [Start] button to show the data on the screen.

## 3.3 How to replay Data and Extract the Data on an User Disk

It is possible to access and play back the data recorded in an User Disk without retrieving the data from the HDD of the replay PC. Also, the data recorded in the User Disk can be extracted to the HDD of the replay PC.

**Note:** Data in an User Disk can be played back and extracted only with Windows<sup>®</sup>7, Windows<sup>®</sup>8.1 or Windows<sup>®</sup>10. The above-mentioned operations can not be done with Windows<sup>®</sup>XP and Windows Vista<sup>®</sup>.

### 3.3.1 How to replay the data in the User Disk

**Note:** When you adjust the seek bar to control position of playback, the audio data may not be replayed correctly. In this case, adjust the seek bar to move the position of playback forward or backward.

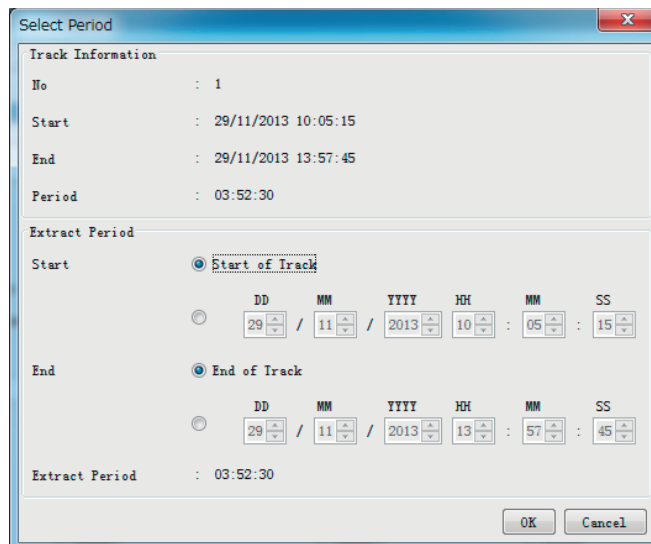
1. Insert an User Disk (USB flush memory) into the USB port on the replay PC.
2. Start the Live Player V5.
3. Open the [Tool] menu and select [Source Select] to show the [Source Select] dialog box.
4. Select [User Disk (USB)] from the drop-down list.
5. Click the [Select] button to show the [Open] dialog box.
6. Select the file you want to replay and click the [Open] button.
7. Click the [Analyze Track] button in the [Source Select] dialog box then click the [Connect] button.
8. Click the [Start] button to show the data on the screen.

### 3.3.2 How to extract the data from a User Disk

1. Select [Source Select] from the [Tool] menu to show the [Source Select] dialog box.
2. Click the drop-down list and select [User Disk (USB)].
3. Click the [Analyze Track] button.
4. Click the [Connect] button.
5. Click [Extract] in the [Tool] menu.
6. Specify the extraction data by each one of the following methods.
  - Select the track.
  - Select date and period.

#### How to select the track:

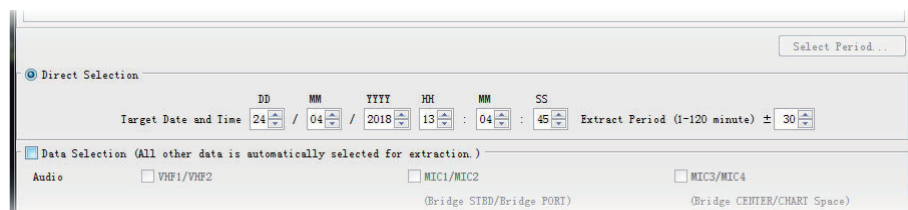
- 1) Activate the [Track Selection] radio button, then check the track you want to extract.
- 2) Click the [Select Period] button to show the [Select Period] window.



- 3) Set the start time and the end time in the [Extract Period] field. When you want to extract all track, check [Start of Track] and [End of Track].
- 4) Click the [OK] button.

#### How to select date and period:

- 1) Activate the [Direct Selection] radio button.
- 2) Select the target date and period to extract.



7. Click the [Select] button to show the [Open] dialog box.
8. Select where to save the data and click the [Open] button.

### 3. EXTRACTING, REPLAYING DATA

9. Click the [Start] button in the [Extraction] dialog box. The [Extract Process] dialog box appears and the bar graph, which indicates retrieving status, appears. When the extraction is completed, the message "Extracting data to ... completed" appears.  
**Note:** If the [Extraction Process] window appears without clicking the [Start] button, close the window to start extracting data.
10. Click the [OK] button and then click the [Close] button.



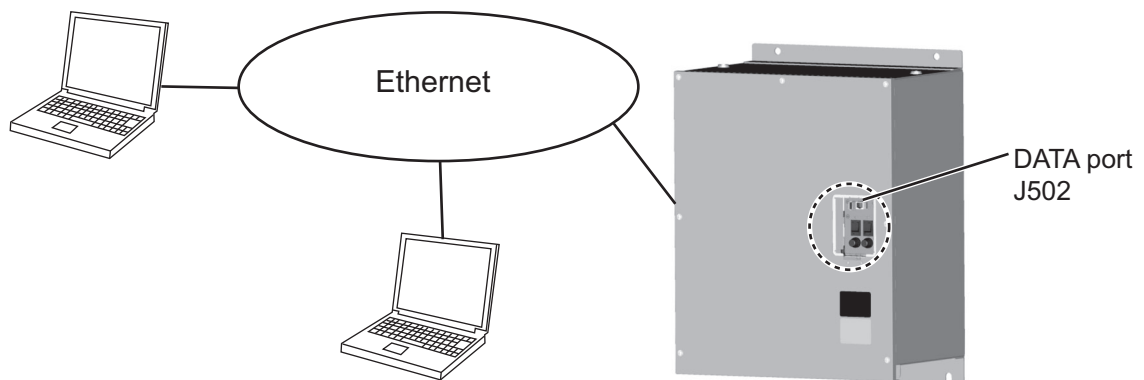
## 4. LIVE PLAY

In addition to its replay functions, this software has a “Live Play” capability when the Live Player PC is connected to the VDR with a LAN cable. The Live Player V5 allows monitoring all the data input to the VDR in real time at a remote location. This is useful for checking the current status of all devices connected to the VDR.

### 4.1 Wiring

Any PC in the network with the Live Player software can access the VDR. Also, two PCs can communicate with the VDR since the VDR can distribute the Live Play data. However, the operation via a router cannot be guaranteed. When you connect one PC (Live Player V5), select Unicast mode and select Multicast mode when you connect multiple PCs. You cannot select Multicast mode and Unicast mode at the same time. When the message “Live connect failed [over than number of max connection]” is shown, disconnect all live connections and connect them again.

To connect more than two PCs, consult your dealer.



**Note 1:** After powering the DCU, the RAP shows “Starting” and the DCU shows “No DCU connection” for approx. four minutes. Do not connect the Live Player V5 during this period, to prevent fatal error.

**Note 2:** The DCU’s Fail Safe function may execute Process Restart, which could disconnect the Live Player V5 from the DCU. If this occurs, reconnect the Live Player V5.

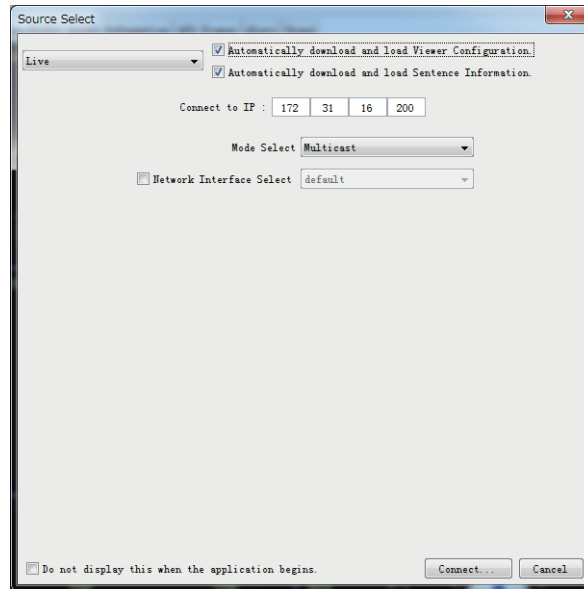
**Note 3:** Do not connect any devices other than the VR-7000/7000S and the PC(s) w/ Live Player V5 to this network, to prevent malfunction of the VR-7000/7000S by unwanted packet transmission.

## 4.2 How to Display Data

Following procedure is to start Live Play.

**Note:** When the driver install program is activated during “Live Play”, the audio volume may get louder regardless of the setting on PC. In this case, reboot the Live Player V5.

1. Start the Live Player V5 software.
2. Open the [Tool] menu and select [Source Select].



3. Click the drop-down list and select [Live].
4. Select [Unicast] when you connect one PC. Select [Multicast] when you connect multiple PCs from [Mode Select].
 

**Note:** When the audio or video is not played during connection on [Multicast], check [Network Interface Select] on [Source Select] dialog box to select the interface for VDR connection and click the [Connect] button.
5. Check [Automatically download and load Viewer Configuration] to download viewer configuration from the connection source (DCU or DRU). Check [Automatically download and load Sentence Information] to download the sentence information (PDF file) from the VDR.
 

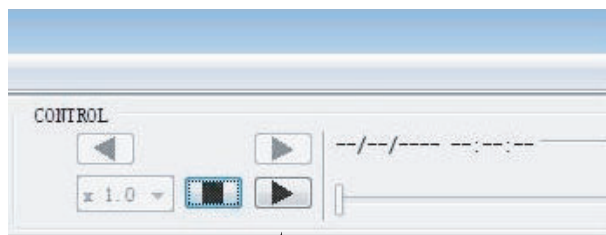
**Note:** When you download the display form and sentence information, the current configuration is overwritten.
6. Click the [Connect] button.
 

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

Message	Remedy
Live connect failed [over the number of max connection]	The maximum number of the PC connected to the DCU is exceeded. Disconnect other PC from the DCU.
	The Live Player V5 program version is older than the DCU program version. Use the Live Player V5 latest version.

Message	Remedy
[CONN] Connection error. Live (IP address is shown)	The wrong IP address is entered. Confirm the IP address of the DCU, then enter the correct IP address.
	The the DCU program version is older than Live Player V5 program version. Use the Live Player V5 version 1.10.
To VDR connection has been rejected. Because Live (Remote) is connecting.	VDR is connecting in Live (Remote) mode. Connect again after the alert 412901(Live-play Not Available) disappears.

7. Click the Start button to play back data in real time.



Start button

To pause the live play, click the Pause button.



Pause button

Stop button

8. To stop playing back the data, click the Stop button.

**Note:** When the message “To VDR connection has been disconnected. Because came Live(Remote) connected.” is shown, Live play stops and Live Player V5 is disconnected form the VDR. Connect again after the alert 412901 (Liveplay Not Available) disappears.

#### 4. LIVE PLAY

This page is intentionally left blank.

# 5. DATA DECODER

---

The decoder library is used to organize the decoders. A decoder is a small script that describes how information is decoded and retrieved from a specific NMEA sentence. This means any sentence can be decoded and displayed in a user-specified form with this software if the sentence fully meets the NMEA standard (proprietary sentence is also accepted).

The decoder descriptions use VDR specialty script language. The descriptions are checked, and if error is found, the message “Syntax error” appears. When this occurs, data cannot be loaded or saved.

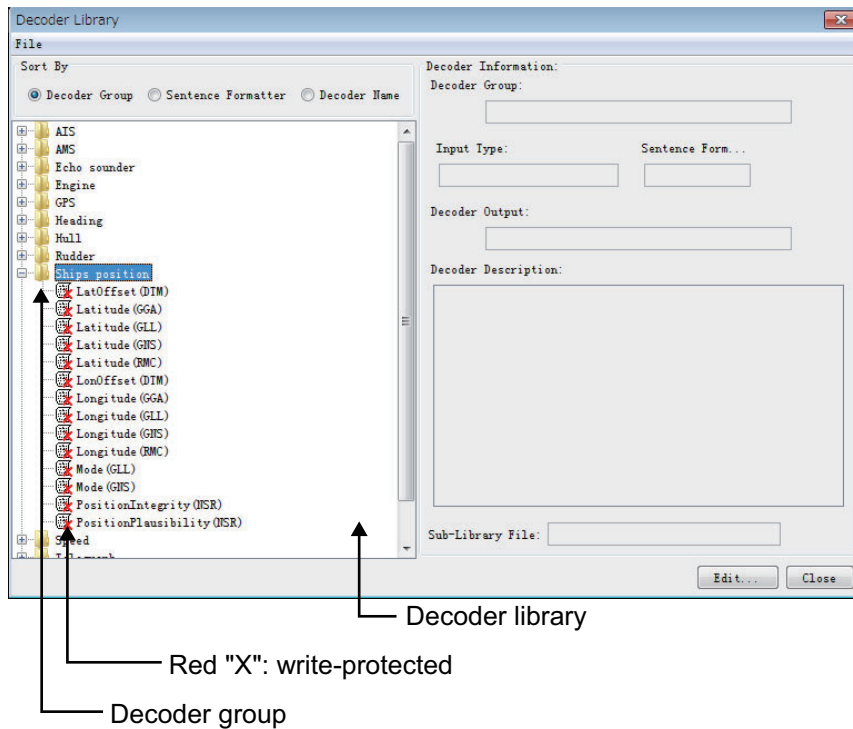
## 5.1 Opening the Decoder Library

1. Click [Configuration] menu > set [Configuration Mode] to [ON].
2. Click [Configuration] menu and [Decoder Library] to show the [Decoder Library] dialog box.
3. Click the applicable “+” button in the left window to show the data sentences for that group. Click an item to show its information in the [Decoder Information] window. This library supports all the sentences specified in IEC 61996. See section 5.2.
4. To edit a sentence, click the [Edit] button.
5. A confirmation message appears. Click the [OK] button in the message to show the [NMEA Decoder Editor]. See section 5.3.

Sentences not supported by this library can be input to the VR-7000/7000S to create a decoder for the sentence. In addition, you can program the decoder so that a specified data can be picked up and displayed on the [Replay] and [Live Play] window.

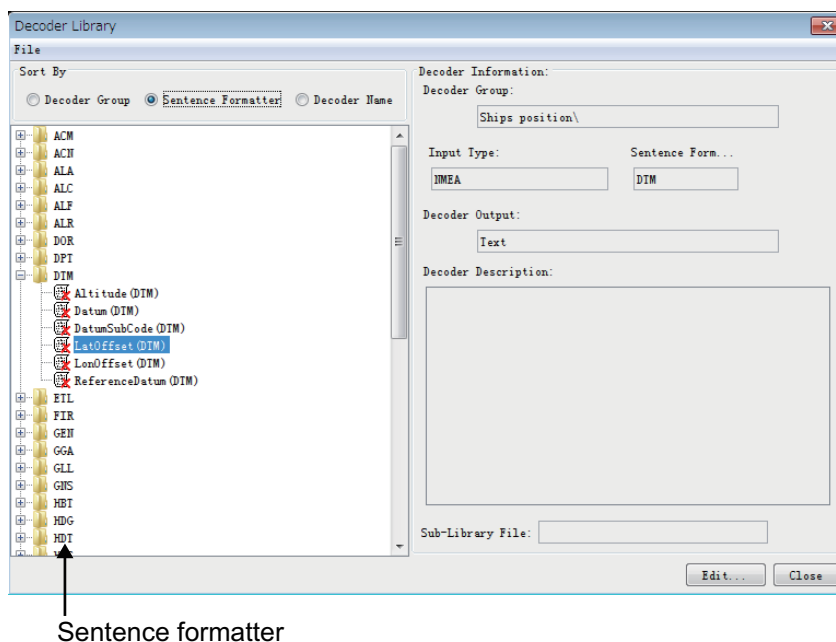
## 5.2 Decoder Library

The [Sort By] feature sorts the library by [Decoder Group], [Sentence Formatter], or [Decoder Name].

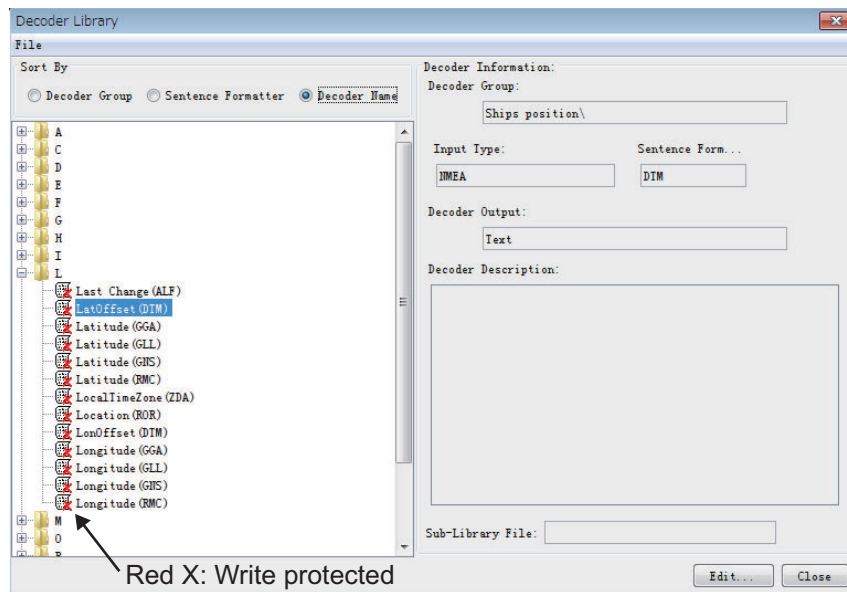


**[Decoder Group]:** A decoder belongs to a group, and all decoders in the same group are stored in the same folder. Groups have been defined corresponding to the data items to be recorded. The user may establish new groups.

**[Sentence formatter]:** A decoder is only able to retrieve information from one specific NMEA sentence. A typical decoder is only able to retrieve information from one field in an NMEA sentence. Most NMEA sentences contain many fields, hence a number of decoders may be needed for retrieving all the information from one sentence.



**[Decoder name]:** A decoder must be assigned a name, and the name must be unique within the decoder group.



**[Write-protected decoders]:** A number of standard decoders (protected decoders) have been defined. These decoders are write-protected and cannot be changed or deleted by the user. These are indicated with a red “X” mark as shown above. However, the operator may use one of these decoders as a template for a new decoder.

**[Sub-library]:** The Player, at startup, “compiles” the library from a number of library files each containing a number of decoders. The standard decoders are stored in one file and another file is used to store the user-defined decoders. The user is not able to add or delete the sub-library files.

**[Decoder output]:** The output from a decoder may behave like analog data, digital data or a text string. This information may be indicated for a decoder. However, this information is only informative and will not be used by the Player.

**[Input type]:** The input type of the standard decoders defined are all NMEA. A unique input type can be defined for a decoder.

### **Drop down menus**

[File] -> [Import]: Import decoders from an external file. The imported decoders will be added to the user defined sub-library file.

[File] -> [Export]: Four choices to export decoders:

[All Decoders]: Export all decoders

[Selected Decoder/Folder]: Output decoders contained in a folder.

[All Decoders (incl. Library decoders)]: Export all decoders incl. library decoders.

[Selected Decoders (incl. Library decoders)]: Export all decoders contained in a folder, incl. library decoders.

**Note:** When the decoder detects an error, data cannot be imported or exported and the message "syntax error" appears.

### **Decoder library**

- The decoder library is shown to the left. The “radio buttons” at the top define how the library is organized.

## 5. DATA DECODER

- A context-sensitive menu, which has the functions listed below, is available by right clicking on a folder or a decoder.
  - [New Folder]: Add a new folder in the library.
  - [New Decoder]: Add a new decoder in the library.
  - [Copy]: Copy the selected decoder.
  - [Edit]: Open the decoder edit screen.
  - [Rename]: Change the name of selected decoder or folder.
  - [Delete]: Delete the selected decoder or folder.
- A new “root folder” can be created by right clicking on the empty space beneath the “library tree”.

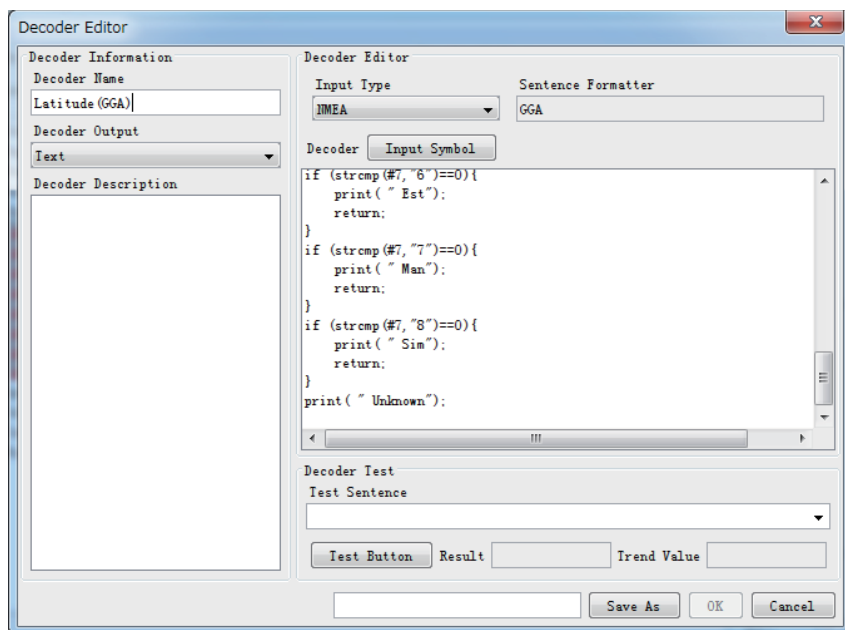
### Decoder description

The remaining decoder properties, for the selected decoder, are shown in decoder description located to the right of the decoder library window.

## 5.3 Decoder Editor

You can edit a decoder that has been defined, in the [Decoder Editor] screen. The [Decoder Editor] may be opened from the decoder library (see next page). Select a decoder from the [Decoder Library] dialog box and click the [Edit] button.

**Note:** Do not create a blank decoder. Viewer settings cannot be downloaded if they were uploaded with a blank decoder.



### General buttons

**[OK]:** Save changes after the editor window is closed. The previous version of the decoder is overwritten.

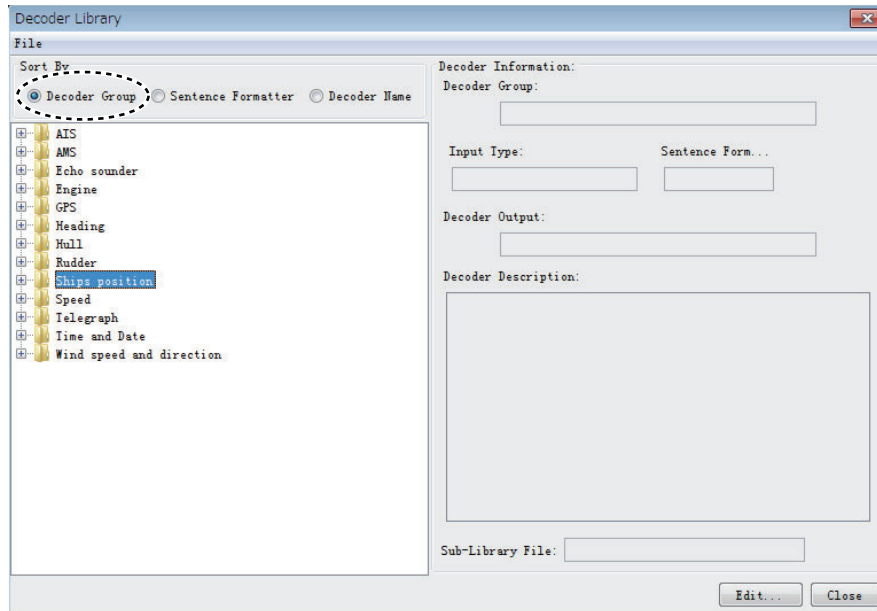
**[Cancel]:** Close the editor window; any changes made will be ignored and lost.

**[Save As]:** Close the editor window. Changes made may be saved if the [Save As] button in the decoder library is activated. This will give the operator an opportunity to save the changes using a new name/folder while maintaining the previous version of the decoder.

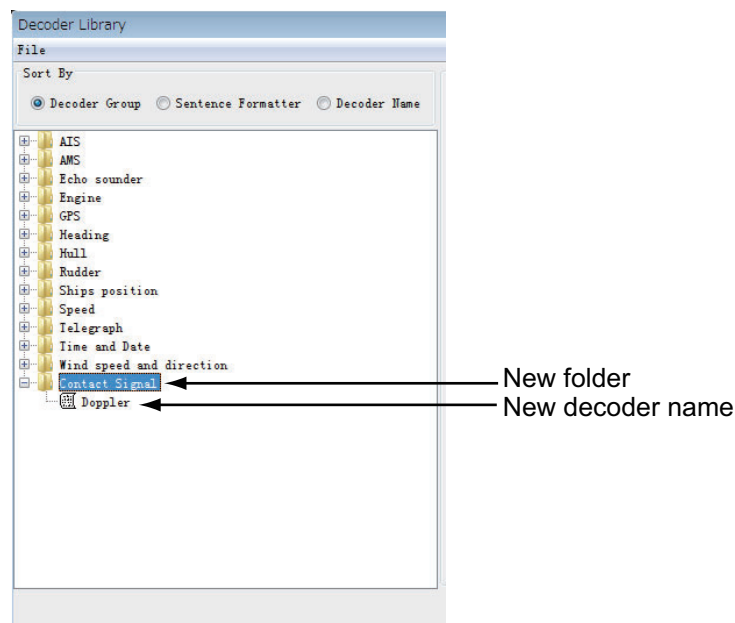


**To make a new decoder, do as follows:**

1. Click [Configuration] menu > [Configuration Mode] > ON.
2. Click [Configuration] menu and [Decoder Library] to show the [Decoder Library] dialog box.
3. Select the [Decoder Group] radio button in the [Sort By] window.

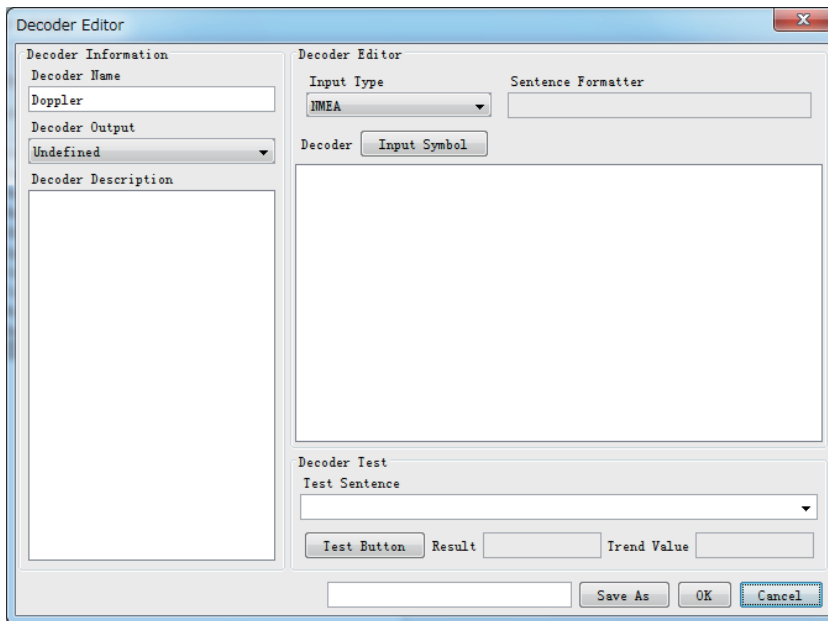


4. Right click on the empty space beneath the library tree in the [Decoder Library] to show the [New Folder] button.
5. Right click the [New Folder] button and click [Rename] to enter a name for the folder (For example: Contact Signal).
6. Right click the new folder (for example, Contact Signal was named at step 5) and click [New Decoder] in the menu displayed.
7. Right click [New Decoder] and click [Rename] to enter a name for the new decoder (for example: No.1 Door).

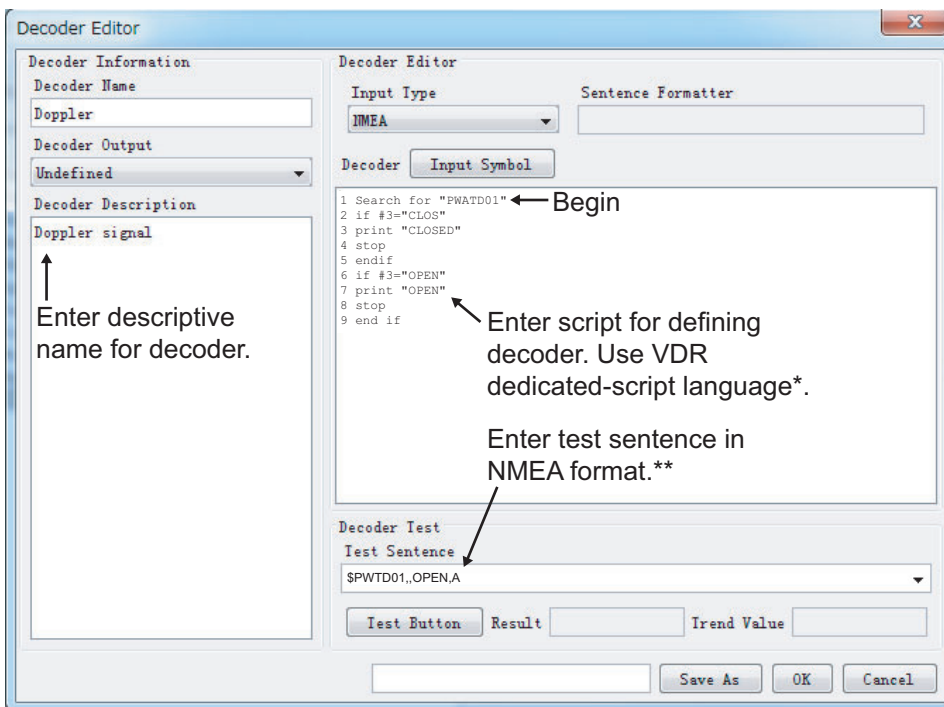


## 5. DATA DECODER

- Double click the new icon (in the example in step 7 it is No. 1 Door) to show the Decoder Editor dialog box.



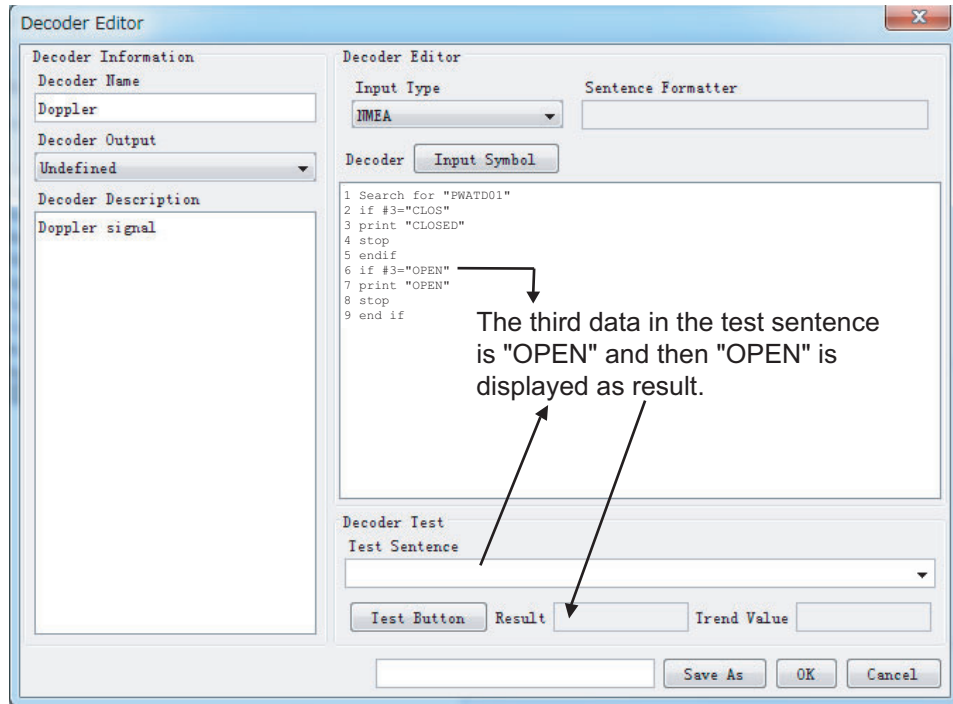
- Select and enter items as follows.



\*: Contact Furuno service center for details.

\*\*: Do not enter checksum.

10. Click the [Test Button] button. The decoder may be tested against an NMEA sentence. The test results are displayed in the [Result] box and the [Trend Value] box. The decoded data is checked, and if error is found the message "syntax error" appears. The decoder cannot import or export data when error is found.



11. Enter [Decoder] name and click the [Save As] button to save the decoder and erase the [Decoder Library] dialog box.
12. Click the [Close] button.

## 5. DATA DECODER

This page is intentionally left blank.

# 6. OTHER SETTINGS

---

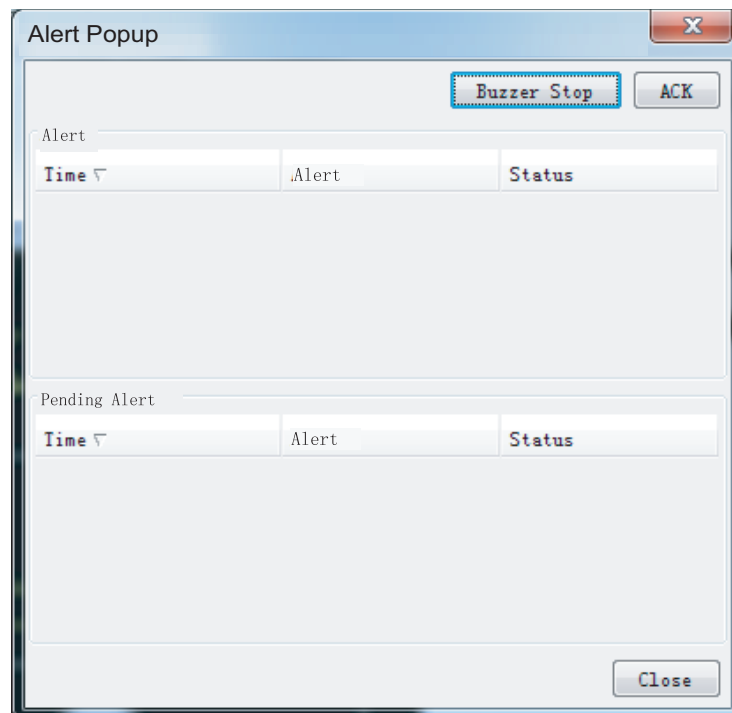
## 6.1 Alert Popup

The [Alert Popup] dialog box provides the following operations:

- displays alert information (time and status of alerts)
- acknowledges alerts, stops buzzer
- configures objects for alerts

To show the [Alert Popup] dialog box, set the Configuration Mode to OFF, click [Tool] and [Alert Display] on the menu to activate the [Alert Popup] dialog box.

**Note:** Select [Live], [Fixed DRU], [Float DRU], [Long Term Device (Direct)], [Long Term Device (LAN)], [Long Term Device (Save Area)], [User Disk (USB)] or [Extract] from the [Source Select] dialog box in advance.



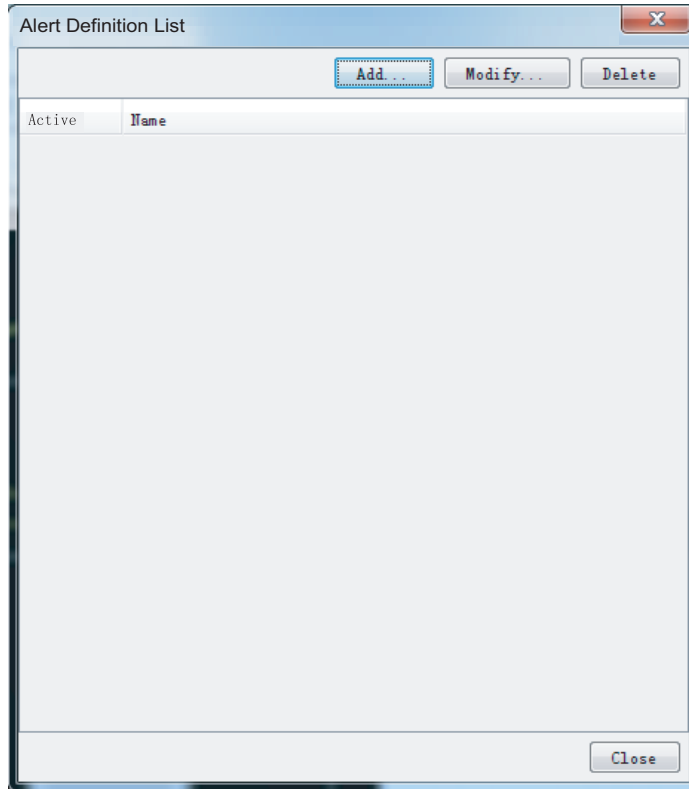
**[Buzzer Stop]** button: Mute the audio until a new alert is generated.

**[ACK]** button: Acknowledge alerts (one by one) shown.

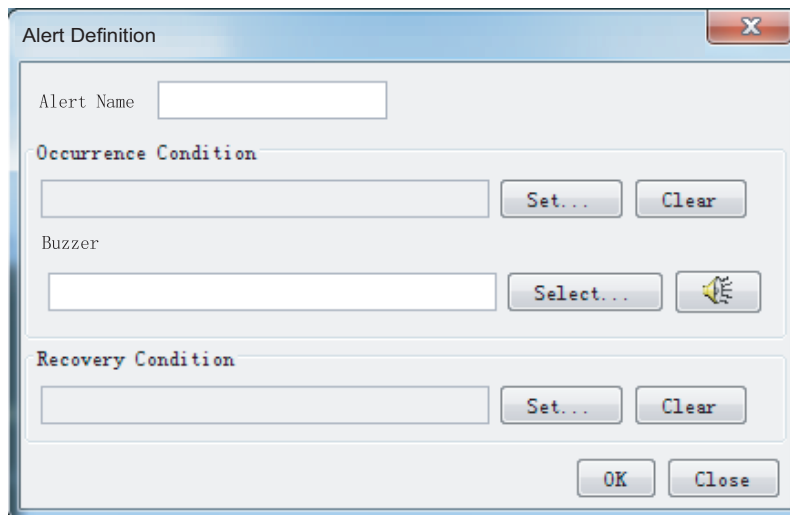
**Configuration of objects for alerts**

The [Alert Definition List] stores up to 50 objects for alerts. When the storage capacity is exceeded, an error message appears. If this occurs, do not click the Close button to close the window. Configuration cannot be completed correctly.

1. In the [Configuration Mode ON] state, click [Alert Definition] in the [Configuration] menu to show the [Alert Definition List].



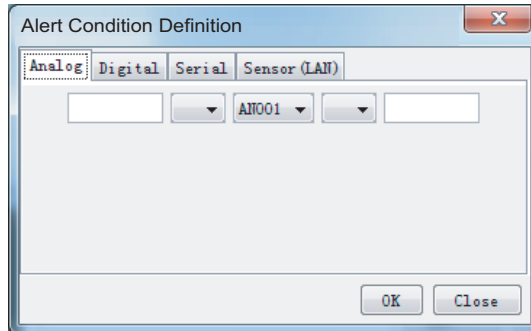
2. Click the [Add] button to show the [Alert Definition] dialog box.



3. Enter a name for the alert in [Alert Name] box. A maximum of 32 characters may be used. Do not exceed 32 characters, because all alerts cannot be displayed if an alert name is too long.
4. Click the [Set...] button to right of the [Occurrence Condition] box.

- Open the [Analog], [Digital], [Serial] or [Sensor (LAN)] tab and enter the condition that triggers the alert for each format.

**[Analog] tab**

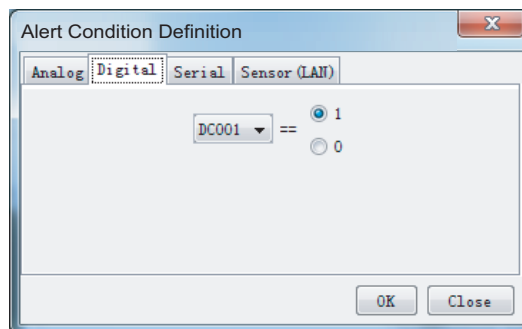


Set a signal input channel among AN001 to AN120. Set a formula for the alert conditions.

Value	Symbol	Input ch.	Symbol	Value
A	blank	AN001	blank	B
	<		<	
	<= (≤)		<= (≤)	
	== (=)			
	!= (≠)			

Example: If a signal of input ch. AN001 is greater than 12 and less than 24, then  $12 < AN001 < 24$

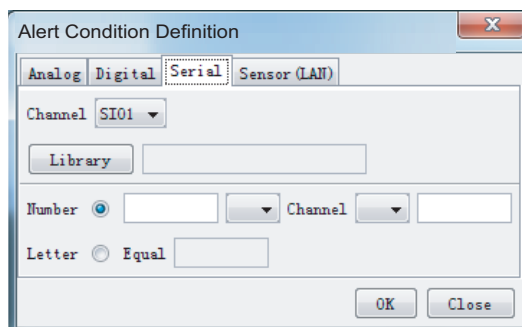
**[Digital] tab**



Set a signal input channel among DC001 to DC640 and select 1 or 0.

**Example:** If a signal level is normal low (0) and the signal goes to high level (1) for alert state, select 1.

**[Serial] tab**



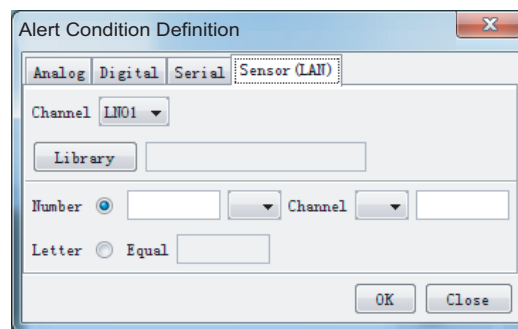
## 6. OTHER SETTINGS

Set a signal input channel among SI01 to SI72. (SI17 and higher are no use.) Select a signal sentence in the Library. Select a setting method between [Number] and [Letter]. For [Number], set a formula for the alert condition.

Value	Symbol	Input ch.	Symbol	Value
A	blank	SI001	blank	B
	<		<	
	<= (≦)		<= (≦)	
	== (=)			
	!= (≠)			

Example: If a signal of input ch. SI001 is greater than 12 and less than 24, then  $12 < SI001 < 24$

### [Sensor (LAN)] tab



Set a signal input channel among LN01 to LN64. Select a signal sentence in the Library. Select a setting method between [Number] and [Letter]. For [Number], set a formula for the alert condition.

Value	Symbol	Input ch.	Symbol	Value
A	blank	LN001	blank	B
	<		<	
	<= (≦)		<= (≦)	
	== (=)			
	!= (≠)			

Example: If a signal of input ch. LN001 is greater than 12 and less than 24, then  $12 < LN001 < 24$

6. Click the [OK] button several times to close the [Alert Definition List].

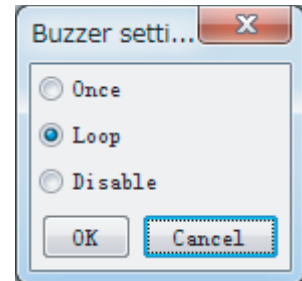


## 6.2 Settings for Alert

### 6.2.1 Buzzer setting

Set how to handle the buzzer that sounds for alerts.

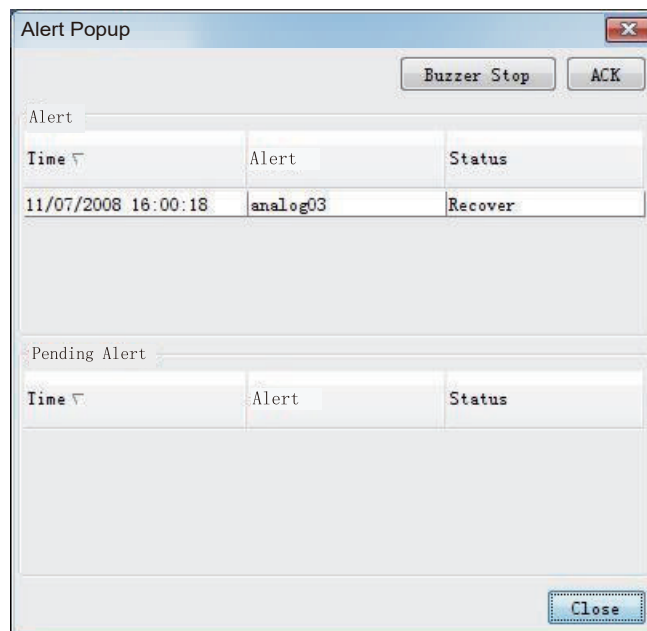
1. Select [Buzzer Setting] from the [Tool] menu.
2. Select a radio button.
  - **[Once]**: The buzzer sounds once.
  - **[Loop]**: The buzzer sounds continuously. To stop the buzzer, click the [Buzzer Stop] button in the [Alert Popup] screen.
  - **[Disable]**: Mutes the buzzer.
3. Click the [OK] button.



### 6.2.2 Alert popup screen

Activate or don't activate the [Alert Popup] screen when an alert occurs.

1. Select [Alert Popup] from the [Tool] menu.
2. Select [ON] or [OFF] as appropriate.
  - **[ON]**: Activate the [Alert Popup] screen when an alert occurs.
  - **[OFF]**: Don't activate the [Alert Popup] screen when an alert occurs.



**[Buzzer Stop]** button: Click to stop the buzzer.

**[ACK]** button: Acknowledge alerts shown.

## 6.3 Extraction of Recorded Data

The analyze function can extract a necessary data from recorded data and save it to the HDD in the PC.

### Notes on extraction

- Free space of more than 30 GB is required in the C drive of the PC to create a temporary file for the analysis.
- The data recording more than 13 hours cannot be extracted and analyzed at once.
- When you click the [Extract Furuno Format] or [Extract IEC Format] button consecutively, two [Extract Process] windows are shown and you cannot close the Live Player V5. In this case, activate the task manager of Windows® to shut down the task.
- Do not set the source to other than [Extract], [Long Term Device (LAN) or [Long Term Device (Save Area)] for recording.
- If "Get size failed" appears at the start of extraction, click the [OK] button to start.
- The forecasted value of the displayed data size is the overall data size. It is not the size of the extracted data.
- If extraction does not start properly, restart the Live Player and try again.

### How to extract recorded data

1. Set the Configuration Mode to OFF, then select [Source Select] from the [Tool] menu.
2. Select a data source (except Live) from the drop-down list and connect the line.
3. Click the [Analyze Track] and [Connect] buttons.
4. Click [Analyze] in the [Tool] menu to show the [Extractor Analysis] dialog box.

Track	Start	End	Period	Selected	Extract Pe...
track 1	01/05/2021 05:42:15	11/05/2021 06:31:45	240:49:30	01/05/2021 05:42:15 - 11/05/2021 06:31:45	240:49:30
track 2	11/05/2021 06:35:15	12/05/2021 07:25:45	24:50:30	11/05/2021 06:35:15 - 12/05/2021 07:25:45	24:50:30
track 3	12/05/2021 07:28:15	14/05/2021 04:41:15	45:13:00	12/05/2021 07:28:15 - 14/05/2021 04:41:15	45:13:00
track 4	14/05/2021 04:45:00	14/05/2021 05:39:30	00:54:30	14/05/2021 04:45:00 - 14/05/2021 05:39:30	00:54:30

**Data Selection**

Audio:  VHF1  VHF2  MIC1  MIC2  MIC3  MIC4  MIC5  MIC6  MIC7  MIC8

Radar:  Radar1  Radar2  ECDIS  General1  General2  Additional

Additional Info:  R1  R2  R3  R4  E1  E2  E3

Serial:   Raw  Engineer

Sensor (LAN):   Raw  Engineer

Analog:   Raw  Engineer

Digital:   Raw  Engineer

CAM (AMS):  CAM1 (AMS1)  CAM2 (AMS2)

History:  All  Alert Only  Off

Sentence:

**File Format**

Audio:  16bit 16000Hz PCM

Radar:  BMP  PNG  JPEG

Additional Info:  CSV

Serial:  CSV

Sensor (LAN):  CSV

Analog:  CSV

Digital:  CSV

CAM (AMS):  CSV

History:  CSV

Sentence:  CSV

**Additional Information**

UTC And Serial Channel No.

**Folder/File name**

C:\Users\installuser

5. Check the track to extract in the [Track Selection].

6. Click the [Select Period] button and set the start time and the end time.

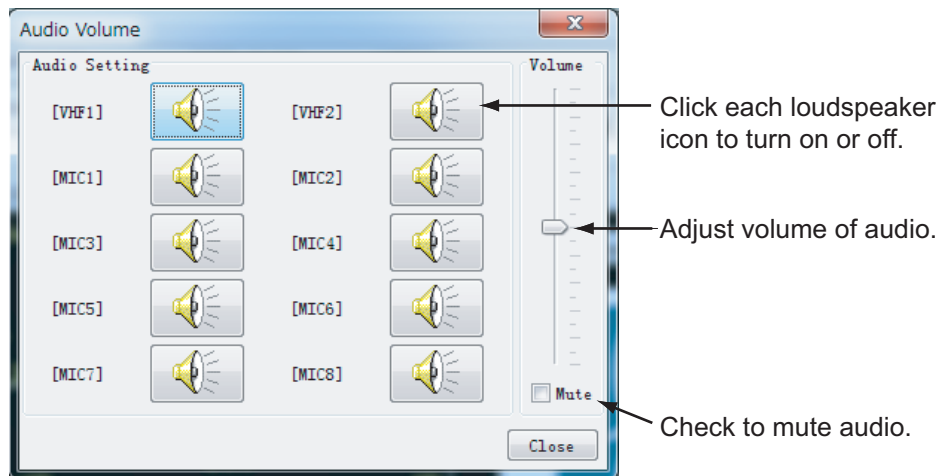
The screenshot shows a 'Select Period' dialog box with the following details:

- Track Information:**
  - No: 1
  - Start: 29/11/2013 10:05:15
  - End: 29/11/2013 13:57:45
  - Period: 03:52:30
- Extract Period:**
  - Start:**  Start of Track. Below it are spinners for DD (29), MM (11), YYYY (2013), HH (10), MM (05), and SS (15).
  - End:**  End of Track. Below it are spinners for DD (29), MM (11), YYYY (2013), HH (13), MM (57), and SS (45).
  - Extract Period:** 03:52:30
- Buttons:** OK and Cancel.

7. Click the [OK] button to confirm the times and return to the [Extractor Analysis] dialog box.
8. Put a checkmark on data type and channel on the [Data Selection] window. For [Serial], [Sensor (LAN)], [Analog], [Digital], click corresponding button and select required channel. [History] defines what data to extract. [All] extracts all data, [Alert Only] extracts only alert data and [Off] extracts no data.
9. Define an output format for each data in the [File Format] window.
10. Click the [Select] button and specify saving location in the [Folder/File Name] field.
11. Click the [Extract Furuno Format] button.
12. After completing the extraction ([Progress of All] becomes 100%), click the [Close] button.

## 6.4 Audio Setting

The audio can be set from the menu bar. Click the [Tool] menu in the menu bar and then click [Volume] to show the [Audio Volume] dialog box. (If a password was defined at installation, enter the password.) Set each item as shown in the figure below.



### **Intermittent audio at playback**

Depending on the PC, you may hear audio intermittently. In this case, set the audio.ini file as follows.

1. Close the Live Player V5.
2. Open the audio.ini file in C:\Program Files\*\VDRViewer\Viewer\config folder by the Notepad. \*"Program Files (x86)" for 64 bit Windows®8.1.
3. Change LocSoftWare = 0 to LocSoftWare = 1.
4. Change RestoreDirectSound = 0 to RestoreDirectSound = 1.
5. Save and overwrite the audio.ini file.
6. Start the Live Player V5.

### **No audio at playback**

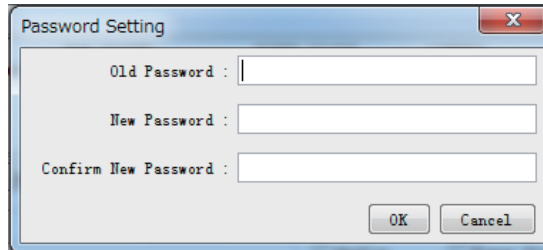
If there is no audio from a Windows XP® PC during playback, do as follows to get audio.

1. Click the [Start] button, [Control Panel], [Sound and Audio Devices].
2. Click the [Audio] tab, then click the [Advanced] button.
3. Click the [Performance] tab.
4. Move the [Hardware acceleration] slider all the way left.
5. Click the [OK] button twice.

## 6.5 How to Set Password for Audio Reproduction

Do the following procedures to set password for audio reproduction. The default has no password.

1. Select [Password] from the [Tool] menu to show the [Password Setting] dialog box.



2. Enter old password in the [Old Password] box. (In the default setting, no password is set.)
3. Enter new password in the [New Password] box.
4. Enter the new password in the [Confirm New Password] box.
5. Click the [OK] button.

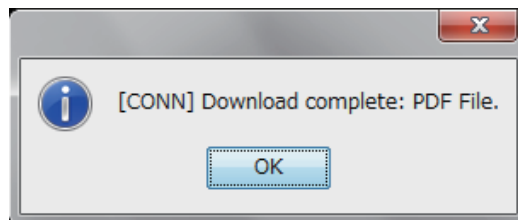
### How to set audio reproduction

You can set the audio reproduction on or off.

1. Select [Audio] from the [Tool] menu.
2. Select [ON] or [OFF] as appropriate.  
If you select [ON], the password screen appears.
3. Enter password and click the [OK] button.

## 6.6 How to Open the Sentence Information

When the sentence information (PDF file) is saved in the VDR, the sentence information is automatically downloaded during “Live Play” or replaying the data via LAN connection ([Long Term Device (LAN)]) in the case of checking [Automatically download and load Sentence Information]. The following message appears after downloading the sentence information.



Select [Sentence Information] from the [Tool] menu, to open the downloaded sentence information. After selecting [Sentence Information], the PDF file viewer automatically starts and opens the sentence information.

**Note 1:** An application for viewing the PDF file should be installed your PC to open the sentence information.

**Note 2:** If the sentence information is not downloaded, [Sentence Information] on the [Tool] menu is grayed out and cannot be selected.

## 6.7 How to combine extracted data

The [Combine extracted data] function lets you combine two data files, extracted from the same VDR, into one file. You can also use this function with files which have different extraction settings. This function is available without connecting the VR-7000/S.

**Note 1:** The data to be combined must be extracted from the same VDR. However, if the VDR configuration is changed between the two extractions\*, this function is not available.

\*: Adjusted by the service person from the VDR Maintenance Viewer.

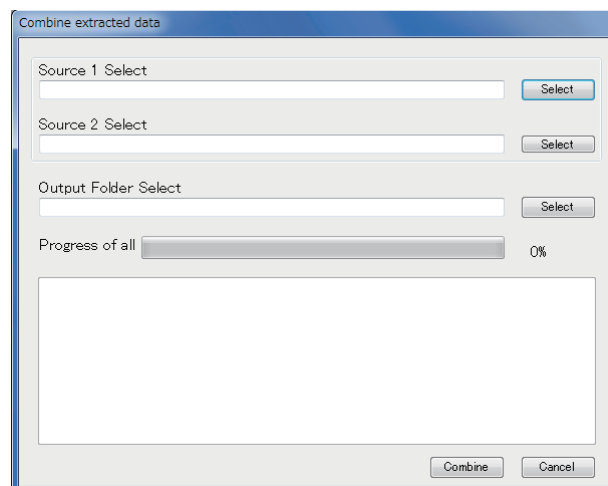
**Note 2:** Do not use data that is converted at section 11.4.3. Correct data cannot be generated.

**Note 3:** When the audio data is part of the combined data, there may be a slight delay in audio playback.

**Note 4:** When the [Combine extracted data] window is not shown, run "vc.exe" in the accessory CD to install Visual C++®.

**Note 5:** Do not set the same folder when you select [Source 1 Select], [Source 2 Select] and [Output Folder Select].

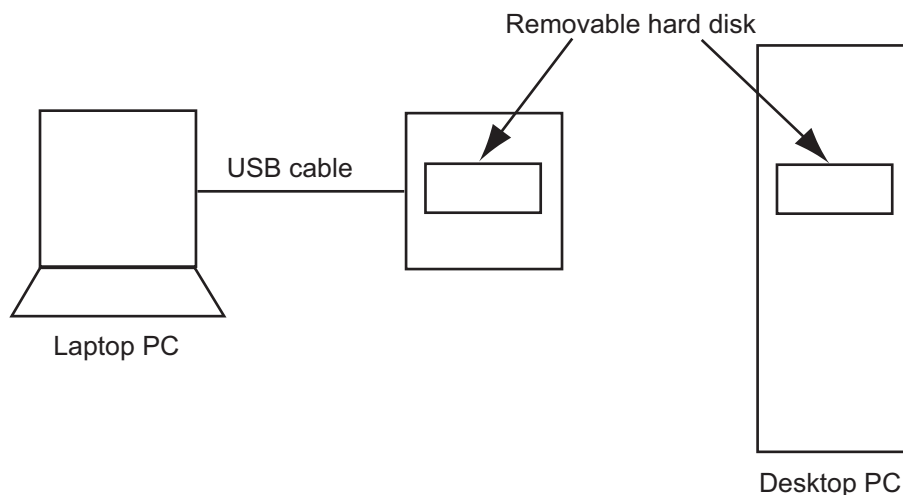
1. Start the Live Player V5 software.
2. Open the [Tool] menu and select [Combine extracted data].



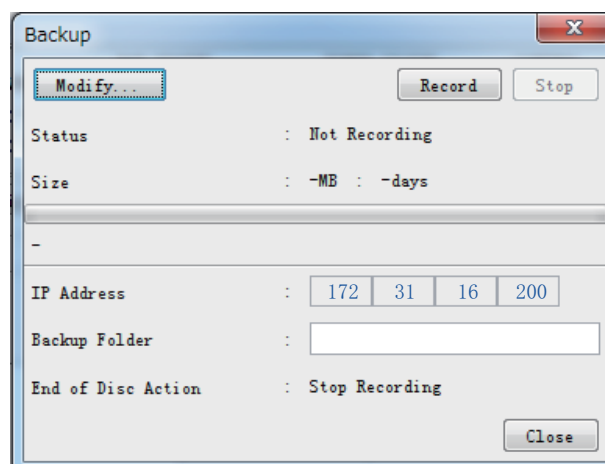
3. Click the [Select] button on [Source 1 Select] to set the data to be combined.
4. Click the [Select] button on [Source 2 Select] to set the data to be combined.
5. Click the [Select] button on [Output Folder Select] to set the folder to save combined data.
6. Click the [Combine] button.

# 7. LIVE PLAYER V5 BACKUP

The Live Player V5 can use the internal hard disk in a PC for backup, however it is strongly recommended that an external removable hard disk be used for this purpose.



To start backing up data, select [Backup] in the [Tool] menu to show the [Backup] dialog box.



**Note 1:** Do not start the backup program when playing back live. This will overload the processor and the backup or live-play will not work.

**Note 2:** Duration of Backup

The VDR typically generates 24GB of data each day (in case of radar 3ch). Make a folder for storing data. Do not save the data to the root of the drive, because data in the root will be erased when the backup begins.

**Note 3:** Use a removable disk formatted to NTFS. Do not use a removable disk formatted to FAT32.

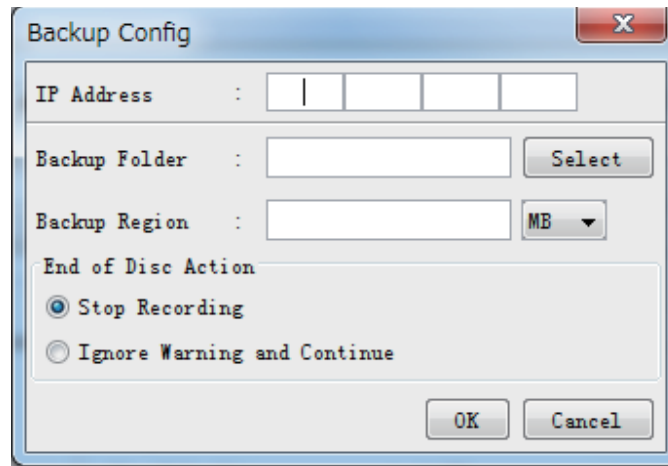
**Note 4:** If you force-quit the Live Player V5 during the backup process, restart the Live Player V5 and perform the backup process again.

**Note 5:** Deactivate the anti-virus software (Norton, Kaspersky or Virus Buster) before the backup. The backup may stop if a anti-virus program is active.

## 7.1 Starting the Backup Process

A disc must be selected for back up before the backup process can start.

1. Open the [Tool] menu then select [Backup] to show the [Backup dialog] box.
2. Click the [Modify] button in the [Backup] dialog box to show the [Backup Config] dialog box.



3. Click the [Select] button and specify a folder to be saved. A new folder is created and named by date and time in the specified folder.
  - Note 1:** All data in the specified folder for backup are erased. Be sure to specify a new folder for backup.
  - Note 2:** Do not save data to root of drive. Make a new folder and save data there.
4. Set a volume for backup data in the [Backup Region] box (more than 500 MB).
  - Note:** This setting should not exceed the amount of free space at the saving location.
5. Set the IP address of the VR-7000/7000S in the [IP Address] box. See section 1.2 for the IP address of the PC.
6. Check [Stop Recording] in the [End of Disc Action] window to stop when the volume of the disc reaches the volume specified in the [Backup Region] box. Check [Ignore Warning onand Continue] to continue even if the volume of the disc reaches the volume specified in the [Backup Region] box - the oldest data will be overwritten.
7. Click the [OK] button to close the [Backup Config] dialog box.
8. Click the [Record] button in the [Backup] dialog box to start backing up data. The bar graph in the [Backup] dialog box shows progress.
9. To stop backing up data, click the [Stop] button in the [Backup] dialog box.
  - Note 1:** After you stop or finish backing up data, disconnect the external HDD or reboot the PC. For Windows®8.1, the shutdown function does not stop the backup function.
  - Note 2:** After closing then re-opening the [Backup] dialog box, if the [Stop] button does not respond, or the graph is not shown, close and re-open the dialog box again.



## 7.2 Settings After Restart of Program

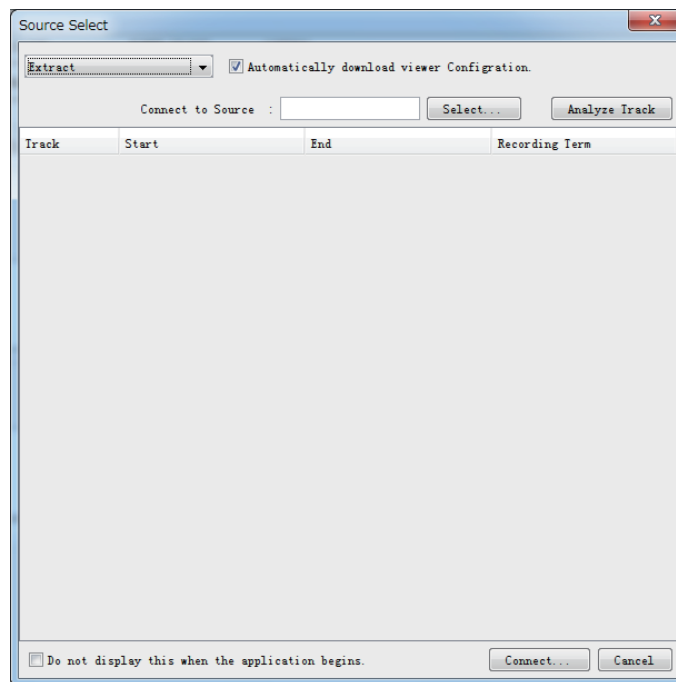
Setting data is backed up to the disc upon exit from the program. Backup will be done in subsequent exits provided the disc used for the previous backup is still available.

**Note 1:** The Live Player continues to store data automatically after recovery of lines, close of Backup dialog box or restart of the VDR.

**Note 2:** When you restart the PC during backup, the backup will not restart automatically. For how to restart backup manually, see the procedure in section 7.1.

## 7.3 Replaying the Extracted Data

1. Start the Live Player V5 software.
2. Click the [Tool] menu and [Source Select] to show the [Source Select] dialog box.



3. Select [Extract] from the drop-down list.
4. Click the [Select] button and select a folder you want to replay.
5. To see track information in the extracted data, click the [Analyze Track] button. The track information appears in the lower part of the dialog box.
6. Click the [Connect] button in the dialog box.
7. Click the Start button to replay the extracted data. The replaying will start.
8. To stop replaying, click the Stop button.

## 7. LIVE PLAYER V5 BACKUP

This page is intentionally left blank.

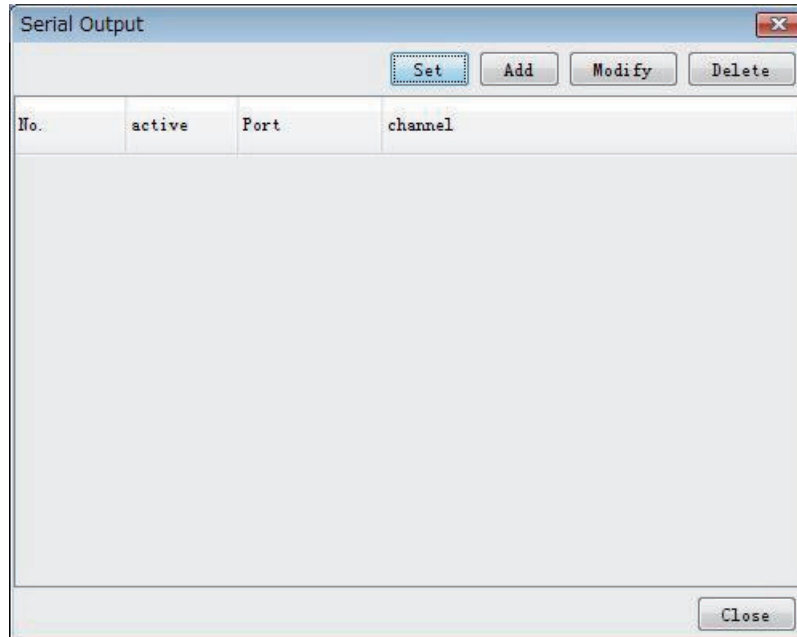
## 8. SERIAL OUTPUT FOR OTHER APPLICATIONS

---

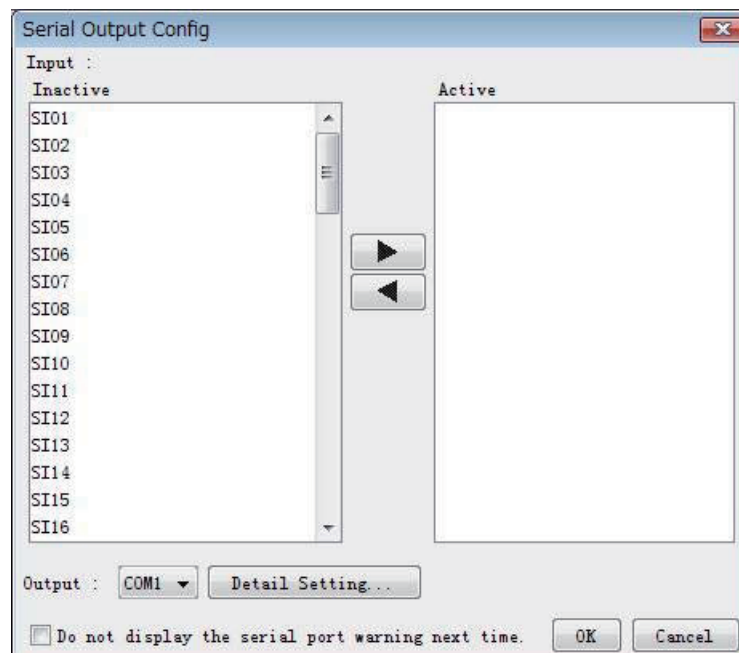
The Live Player V5 can output serial data to other applications.

### Configuration of serial output

1. In the Configuration Mode [OFF], click the [Tool] menu and [Serial Output] to show the [Serial Output] dialog box.



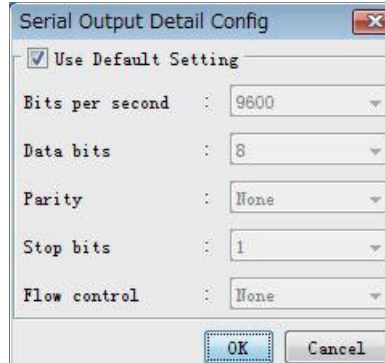
2. Click the [Add] button to show the [Serial Output Config] dialog box.



3. Select a serial output port of the VR-7000/7000S from the [Inactive] window and move it to the [Active] window.

## 8. SERIAL OUTPUT FOR OTHER APPLICATIONS

4. Select an output port (serial port on the PC that operates the Live Player) from the [Output] drop-down list.  
**Note:** Up to four serial output ports can be selected in numerical order. More than five output ports cannot be selected.
5. Click the [Detail Setting] button to show the [Serial Output Detail Config] dialog box.



6. To use the default settings, check the [Use Default Setting] box. If you do not use the default, set each item in the dialog box.
7. Click the [OK] button. The [Serial Output Detail Config] dialog box disappears.
8. Click the [OK] button.
9. Enter check mark in the row of [Active] and set items for data output.

The operator may select a number of data sources and one output port.

To modify the serial output, select the item you want to modify and click the [Modify] button.

### **Merging of data**

The program is designed to handle NMEA sentences, i.e., two sentences will not be interleaved but sent one at a time. The program may fail to relay ASCII or binary data depending on the properties of the data.

# 9. AIS DISPLAY

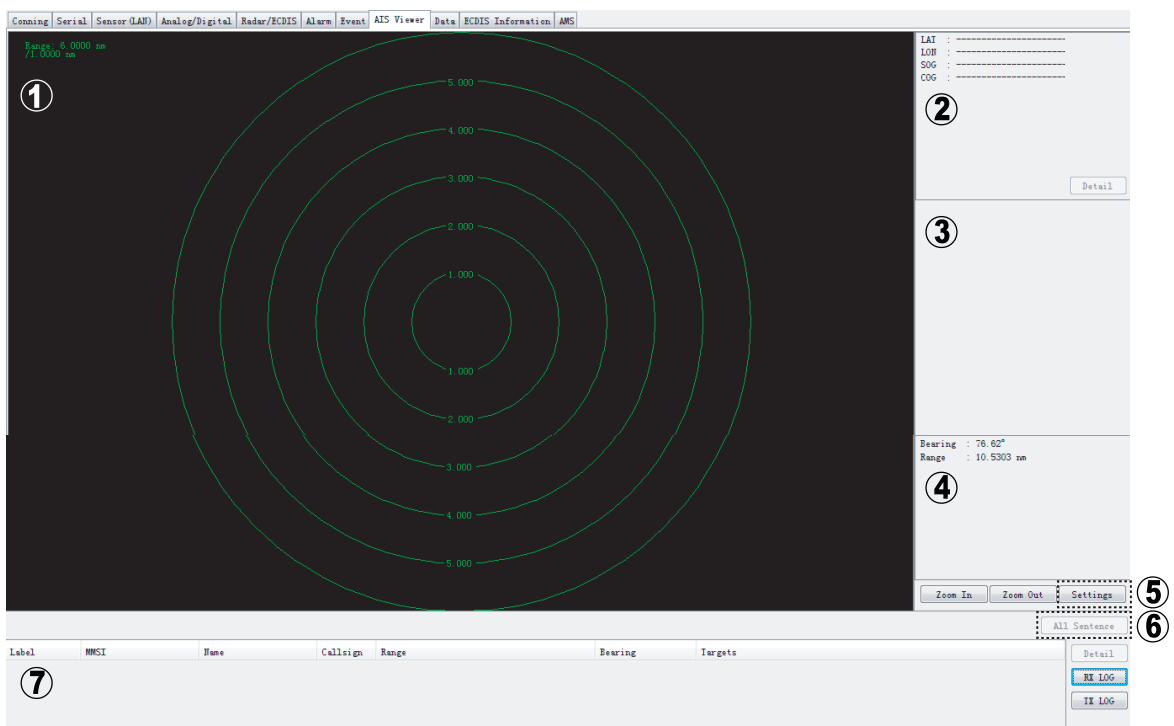
**NOTICE:** The AIS display shows the past recorded information of other vessels. Do not use the information for navigation.

## 9.1 Display Layout

Click the [AIS Viewer] tab to show the AIS display. Click [Source Select] in the [Tool] menu. Set media, then click the [Start] button to show AIS data.

**Note 1:** The presentation mode is fixed to North-up (true bearing). See below for description of display items.

**Note 2:** The AIS display shows relative positions of AIS targets referenced to own ship position found in the VDO sentence.



### (1) AIS graphic window

Displays AIS transponder equipped vessels with symbols.

- The concentric circles are range rings. You can change range by clicking the [Zoom In] or [Zoom Out] button. You can display this window in full screen by double clicking the AIS window.
- The radial line extending from screen center is own ship's heading.
- AIS targets are marked with a triangle. Symbol appearance changes with target status. The display can show a maximum of 500 targets (nearest targets from own ship) simultaneously.

**(2) Own ship information**

Latitude, Longitude, SOG (speed over ground), COG (course over ground) of own vessel is shown. You can display detailed information by clicking the [Details] button. See section 9.4.

**(3) Target data box**

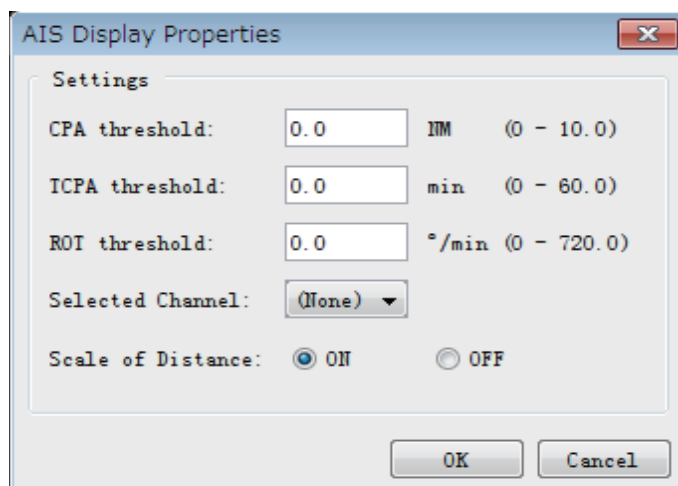
A target is selected by left-clicking it on the graphic area. Click it again to deselect. The data of three targets may be shown simultaneously. See section 9.5. To clear data, click the [Close] button. Other ships' data includes Name, Call sign, SOG, COG, TCPA and CPA. To display detailed data, click the [Detail] button.

**(4) Cursor data**

Bearing and range from own ship to cursor position.

**(5) [Settings] button**

Click the [Settings] button to display the following dialog box and set necessary items.



**[CPA threshold]:** Set further distance for which to classify a target as a dangerous target.

**[TCPA threshold]:** Set maximum time for closest point of approach for which to classify a target as a dangerous target.

**[ROT threshold]:** Display condition of ROT direction. Set highest ROT value for which to display ROT line on target.

**[Selected Channel]:** Set serial port of the VR-7000/7000S that AIS data inputs.

**[Scale of Distance]:** Turn range ring distance indication on or off.

**(6) [All Sentence] button**

Click the [All Sentence] button to show all AIS sentences.

**(7) Target list**

Lists all targets, in range order from own ship.

**[Label]:** The label A, B or C is attached to targets selected to show their data in the Target Data Box.

**[MMSI]:** MMSI number of target

**[Name]:** Ship's name of target

**[Call sign]:** Call sign of target




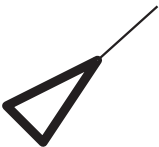
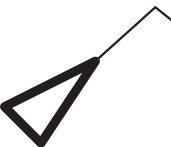
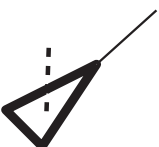

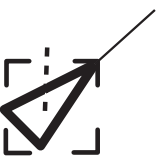


**[Range]:** Distance from own ship to target

**[Bearing]:** Bearing from own ship to target

**[Target]:** Status of target (dangerous or lost) is also indicated.

To display detailed data about a target, select it from the list and click the [Detail] button.

## 9.2 Target Symbols

AIS target	Symbol	Description of symbol
Sleeping target		An isosceles, acute-angled triangle with its centroid representing the target's reference position. The most acute apex of the triangle is aligned with the heading of the target, or with its COG, if heading information is not available.
Activated target		Same as above but line is thicker.
Dangerous target		A target becomes a dangerous target when its CPA and TCPA are smaller than a set value. The symbol is displayed in red.  If the TCPA becomes negative, the dangerous target becomes a normal target.
Heading line		A thin green line is put at the apex of the target to indicate the vessel's heading.
Heading line, ROT		Direction of turn indication (if available) to display actually initiated course.
Speed vector		The speed vector is displayed as a dashed line starting at the centroid of the triangle.
A to N		Aid to navigation
Selected target		A selected target is marked with a broken square.
Lost target	 Lost A to N   Lost AIS target	A target changes into a lost target when its data is not received for three minutes. Further, the lost target disappears when no data is received for an additional three minutes.

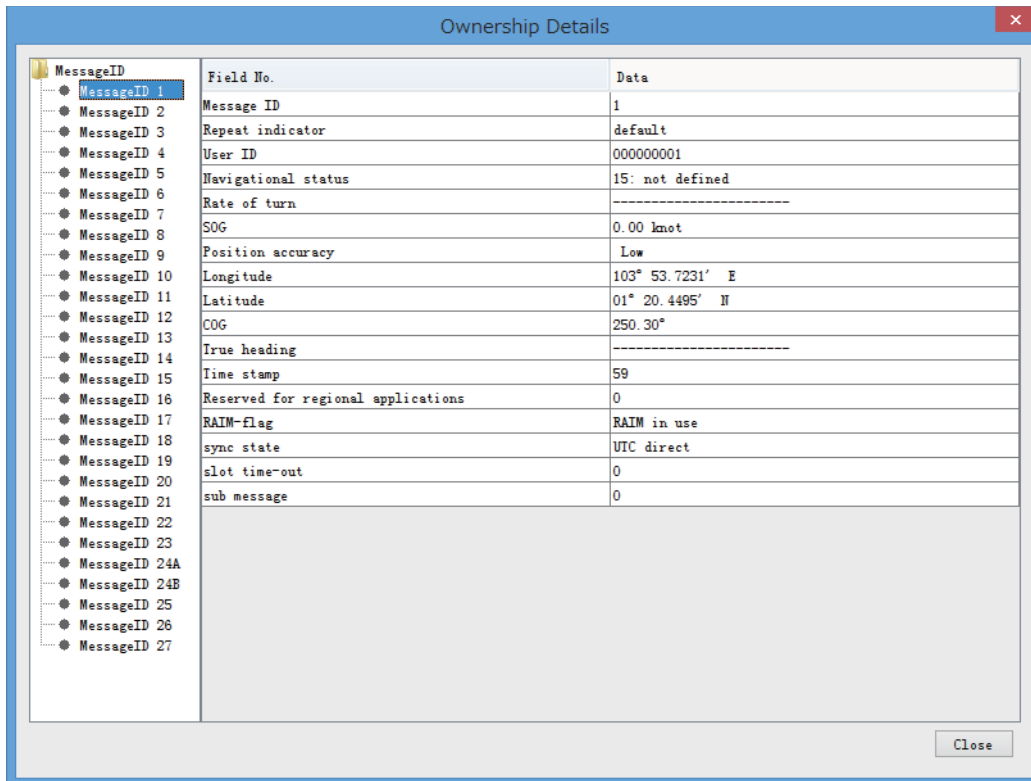
### 9.3 Display Range

Display range may be chosen by clicking the [Zoom In] or [Zoom Out] button. The table below shows the available ranges.

Range (NM)	0.125	0.25	0.5	0.75	1	1.5	2	3	4	6	8	12	16	24	48	96
Range ring interval (NM)	0.025	0.05	0.1	0.125	0.2	0.25	0.4	0.5	1	1	2	2	4	4	8	16
Number of Range rings	5	5	5	6	5	6		6	4	6	4	6	4	6	6	6

### 9.4 Own Ship Details Window (detailed information)

Click the [Detail] button in the own ship information area to show the own ship details data. The window shows the data for Message ID 1. “---” is shown where there is no data.



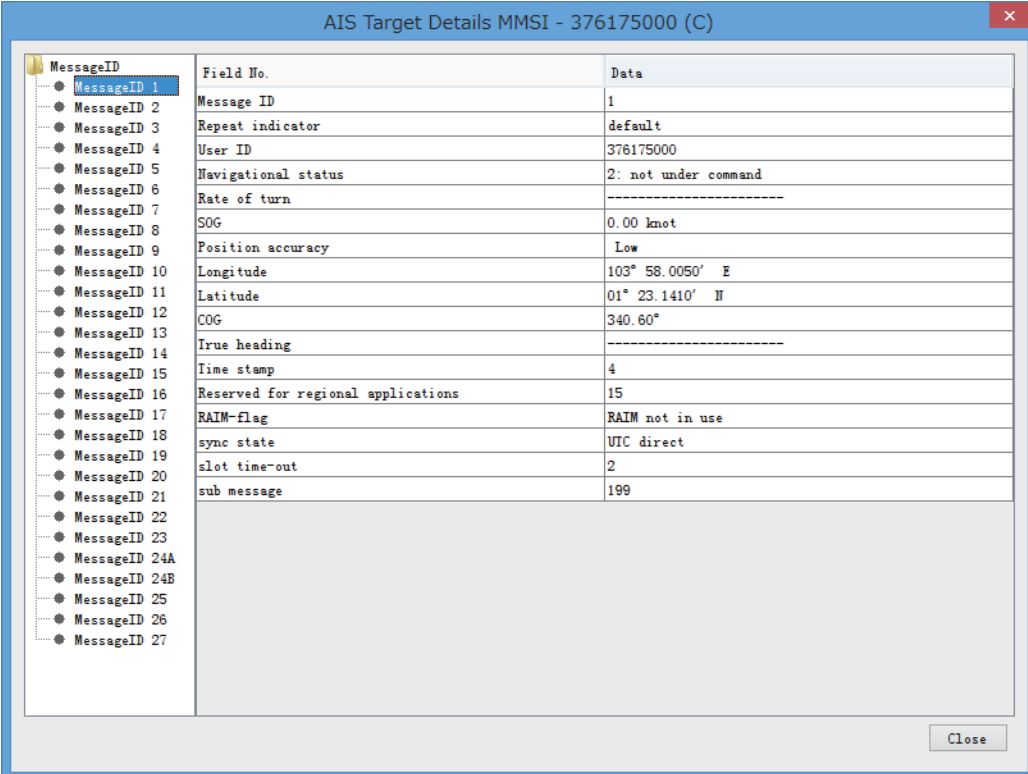
*Message ID 1 window*

There are 27 message IDs as shown in the figure above. To show the details for another message ID number, click the desired message ID number.



## 9.5 AIS Target Details Window

Press the [Detail] button in the target data box to show the AIS target details data. The window shows the data for Message ID 1.



MessageID	Field No.	Data
MessageID 1	Message ID	1
MessageID 2	Repeat indicator	default
MessageID 3	User ID	376175000
MessageID 4	Navigational status	2: not under command
MessageID 5	Rate of turn	-----
MessageID 6	SOG	0.00 knot
MessageID 7	Position accuracy	Low
MessageID 8	Longitude	103° 58.0050' E
MessageID 9	Latitude	01° 23.1410' N
MessageID 10	COG	340.60°
MessageID 11	True heading	-----
MessageID 12	Time stamp	4
MessageID 13	Reserved for regional applications	15
MessageID 14	RAIM-flag	RAIM not in use
MessageID 15	sync state	UTC direct
MessageID 16	slot time-out	2
MessageID 17	sub message	199
MessageID 18		
MessageID 19		
MessageID 20		
MessageID 21		
MessageID 22		
MessageID 23		
MessageID 24A		
MessageID 24B		
MessageID 25		
MessageID 26		
MessageID 27		

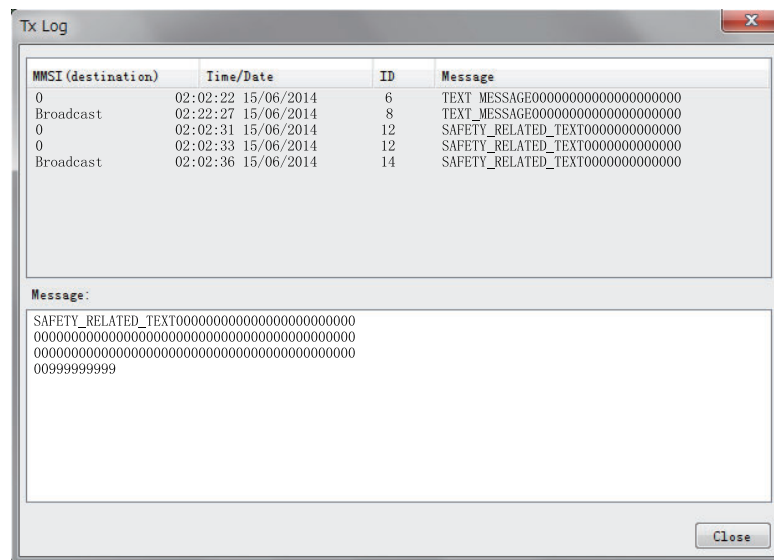
*Message ID 1 window*

There are 27 message IDs as shown in the figure above. To show the details for another message ID number, click the desired message ID number.



## 9.6.2 TX message log

Press the [TX LOG] button in the target list area to show the TX message log (VDO sentence).



*TX log window*

**[MMSI (Destination)]:** MMSI number of a message receiving station. [Broadcast] means broadcast message.

**[Time/Date]:** Time and date which the VDR recorded the message.

**[ID]:** Message ID (ID6 or ID12: addressed message, ID8 or ID14: broadcast message)

**[Message]:** The first 32 characters of a TX message are displayed.

To show the full message (in the [Message] window), select the message from the list.

To close the TX message log, click the [Close] button.

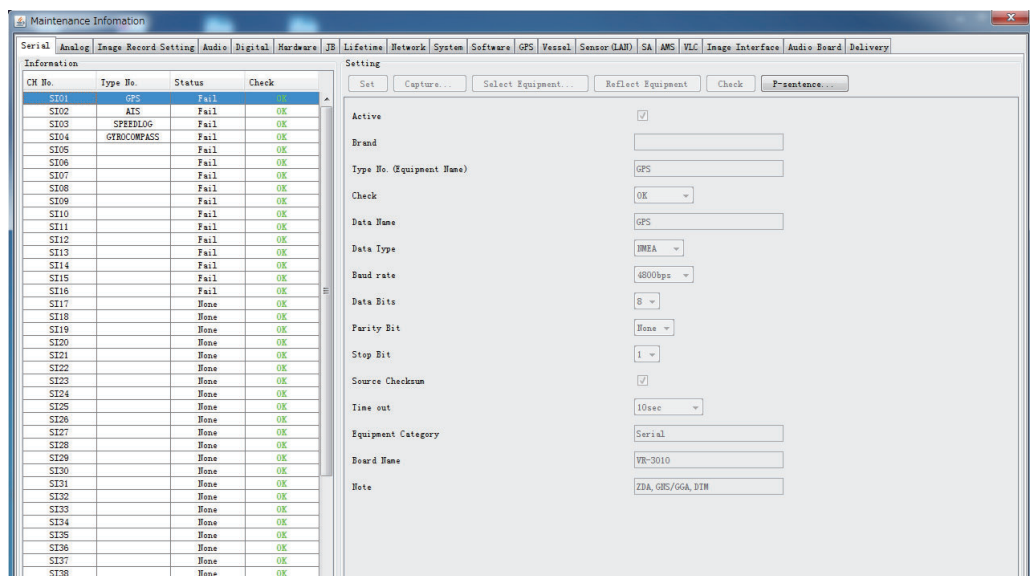
This page is intentionally left blank.

# 10. VDR CONFIGURATION

## 10.1 How to Confirm the VDR Configuration

After connecting the PC to the VDR in the Live Player V5, you can check the VDR configuration. The display shows the VDR setting data of the latest connected sources.

1. Select [Source Select] from the [Tool] menu.
2. Select [Live] from the [Source Select] dialog box.
3. Click the [Connect] button.
4. Click [Configuration] > [VDR Config].
5. Click each tab to confirm the VDR settings.



## 10.2 Configuration File in the PC

You can confirm the configuration file that you have stored in the PC as follows.

1. Disconnect the Live Player V5 from the VDR.
2. Click [File] menu on the Menu bar.
3. Select [Open VDR Config] to show the [VDR Config File Selection] dialog box.
4. Select the configuration file and click the [Open] button.

## 10. VDR CONFIGURATION

This page is intentionally left blank.

# 11. 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. This chapter explains the preparation and limitations about the remote playback function, and how to use.

## 11.1 Preparations

The following preparations are required to connect the PC on the shore to the on-board VDR:

- The land-ship connection through the satellite link (ex. VSAT) must be established by the VPN connection. Check the communication between the PC on the shore and on-board VDR, sending the Ping request to the specified IP address.
- Configure the firewall to allow access to all network ports used for the land-ship communication. This setting must be applied to all network devices. For the network ports used by the VDR and Live Player V5, ask your dealer.
- It is required to configure the VDR to activate the remote playback function. Contact your dealer to activate the remote playback function.
- When you want to connect the PC to the multiple VDR, it is required to assign the unique IP address to each VDR.

## 11.2 Limitations and Notifications

Keep in mind the following limitations and notifications to use the remote playback function.

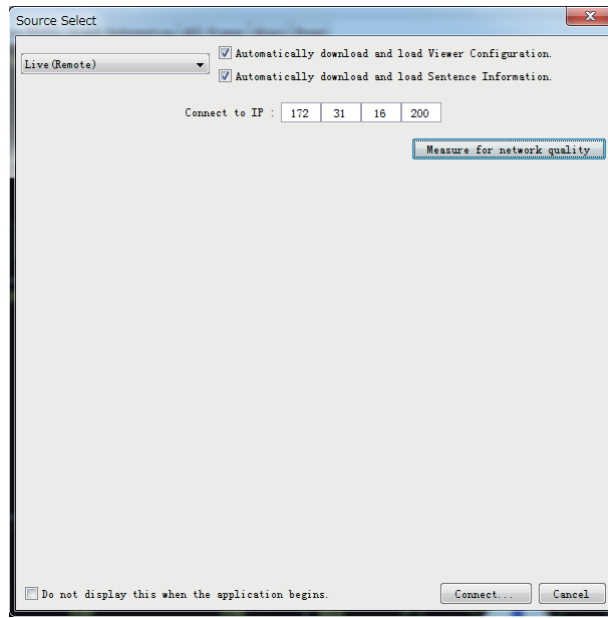
- Both of the VDR and Live Player V5 program versions must be “01.30” or later.
- The following functions are available by using the remote playback function:
  - Remote live play ([Live (Remote)])
  - Data extraction by LAN connection ([Long Term Device (LAN)])
  - The remote replay function is not available when the on-board PC (Live Player V5) is connecting to the VDR by Long Term Device (LAN) or Long Term Device (Save Area) connection or RAP is extracting the data.
- The following communication environment is recommended to use the remote playback function:
  - Average baud rate: 80 kbps or higher
  - Packet loss rate: Less than 5%
  - Average communication delay: Less than 1200 msec
- See chapter 4 on OME-44850-\*, check recommended network configuration and required settings before using the remote playback function.

## 11.3 Communication speed measuring

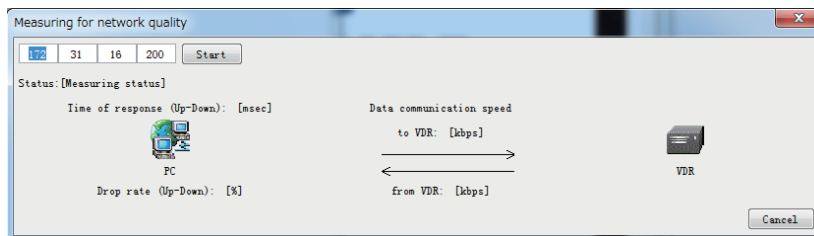
By using Live Player V5 and following procedures, you can measure the communication speed.

**Note:** You cannot measure communication speed during the data replay.

1. Start the Live Player V5 software.
2. Open the [Tool] menu and select [Source Select].
3. Select [Live (Remote)] from the drop-down list.



4. Click the [Measuring for network quality] button to open the following dialog box.



5. Enter the IP address of the VDR to be connected, click the [Start] button. The packet drop rate, communication delay and speed are calculated. The packet drop rate and communication delay are calculated by sending a ping. The communication speed is measured by uploading and down loading a 1 MB data.
6. Wait for a while, check the results shown to the screen. The required time to measure depends on communication environment.

**Note:** The following communication environment is recommended to use the remote playback function:

- Average baud rate: 80 kbps or higher
- Packet loss rate: Less than 5%
- Average communication delay: Less than 1200 msec

Following table shows the guide between communication speed and replayable channels:



*The guide between communication speed and channels can be replayed*

Communication speed	Channels can be replayed
80 kbps	Analog, Digital, Serial: 5ch, Sensor(LAN): 6ch, AMS: 1ch
180 kbps	Playback 80 kbps contents plus one screen image at 50% resolution on one channel. <b>Note:</b> 100 kbps is used for replaying the image at 50% resolution per channel.
280 kbps	Playback 80 kbps contents plus audio on one channel. <b>Note:</b> 200 kbps is used for replaying audio per channel.
480 kbps	Playback 80 kbps contents plus one screen image at 100% resolution on one channel. <b>Note:</b> 400 kbps is used for replaying the image at 100% resolution per channel.

## 11.4 Live (Remote) Replay

By using Live (Remote) Replay function you can do the live play on remote connections.

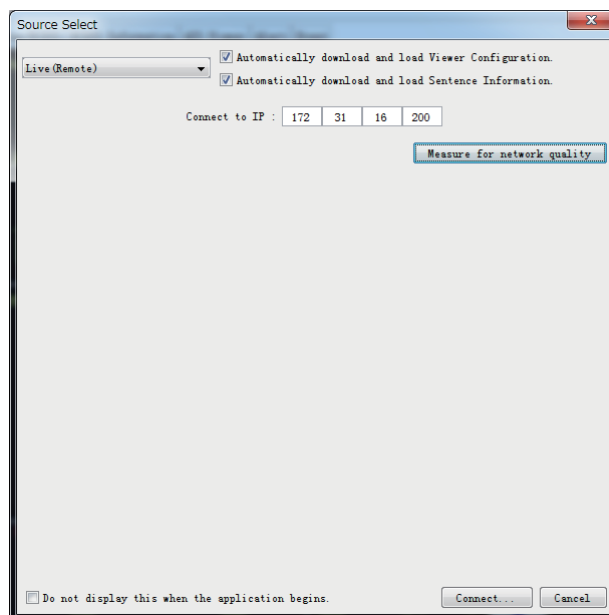
**Note 1:** The replayed data is different from actual data by the reduction and decimation.

**Note 2:** Depending on the line condition, the number of the replayable data is limited.

**Note 3:** During the remote replay, normal live replay function cannot be used.

### 11.4.1 Connection on Live (Remote) Replay

1. Start the Live Player V5 software.
2. Open the [Tool] menu and select [Source Select].
3. Select [Live (Remote)] from the drop-down list.



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

4. Enter the IP address of the VDR to be connected.  
**Note 1:** Check [Automatically download and load Viewer Configuration] to download viewer configuration from the connection source (DCU or DRU). The configuration is overwritten.  
**Note 2:** Check [Automatically download and load Sentence Information] to download the sentence information (PDF file) from the VDR. If the sentence information is not saved, it cannot be downloaded.
5. Click the [Connect] button.  
**Note 1:** When the Live Player V5 connects to the VDR for the first time, the time to download and check the VDR setting is required. From the second time, the downloaded data will be used unless the configuration of VDR is not changed.  
**Note 2:** When you download the data again, select [Backup Configuration File Clear] from the [Configuration] menu to delete all backup settings and click the [OK] button.  
**Note 3:** While the VDR is on Live (Remote) replay, alert 412901(Liveplay Not Available)is shown and another Live Player V5 cannot use Replay function.  
**Note 4:** After clicking the [Connect] button, it takes a time to close [Source Select] dialog box depending on the communication speed. Do not operate the live player until the dialog box closes.
6. Click Start button. Analog, Digital, Serial: 1-5ch and Sensor (LAN): 1-6ch, AMS: 1ch are played under initial settings.  
**Note:** Live (Remote) replay starts after the stocking the data to buffer. Wait for a while until the Live (Remote) replay starts.
7. Click Stop button or Pause button to stop the live (remote) replay.  
**Note:** After finishing the Live (Remote) replay, make sure to disconnect to VDR with clicking the [OK] button on popup window on [Source Select] from [Tool] menu.

### 11.4.2 Live (Remote) Replay settings

The settings of Live (Remote) Replay is done at the [Play Setting] window. Depending on the communication condition, you can adjust the information to replay. Do the following procedure to open the window.

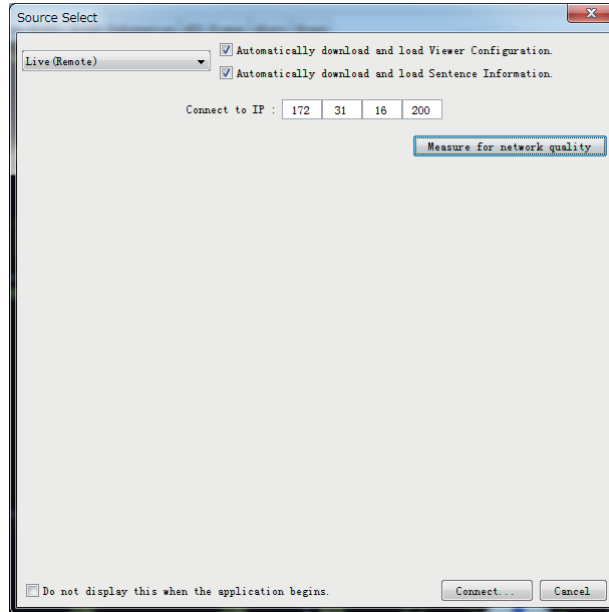
**Note 1:** During the replay, you cannot adjust the settings.

**Note 2:** Depending on the communication condition, some information to be available cannot be replayed.

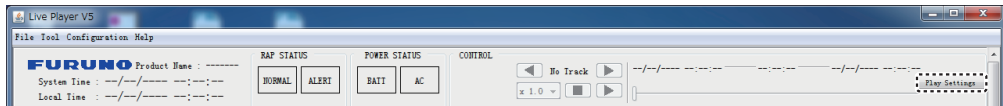
1. Start the Live Player V5 software.
2. Open the [Tool] menu and select [Source Select]

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

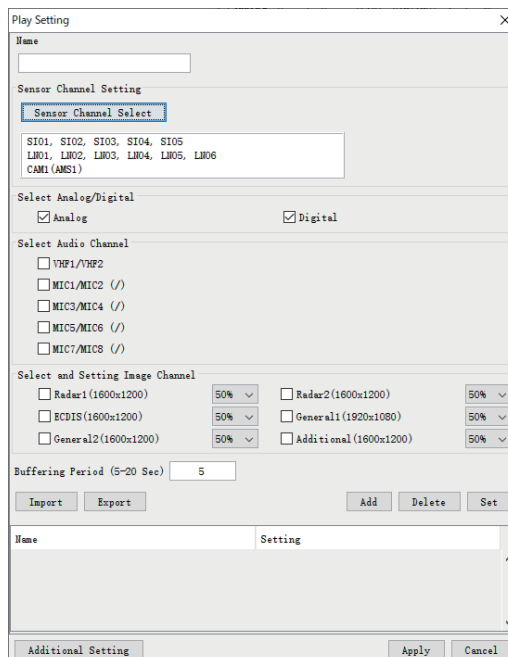
3. Select [Live (Remote)] from the drop-down list.



4. Click the [Connect] button.



5. Click the [Play Setting] button on control area.



6. Set each menu item, referring to the following table.

Menu	Function
[Name]	Enter the setting name.
[Sensor Channel Select]	Shows the [Sensor Channel Select] dialog box, set the channel to replay (see "[Sensor Channel Select] dialog box" on the page 11-7). The list of available channel is shown bottom of [Sensor Channel Select] button.
[Analog]	Click to replay analog data.

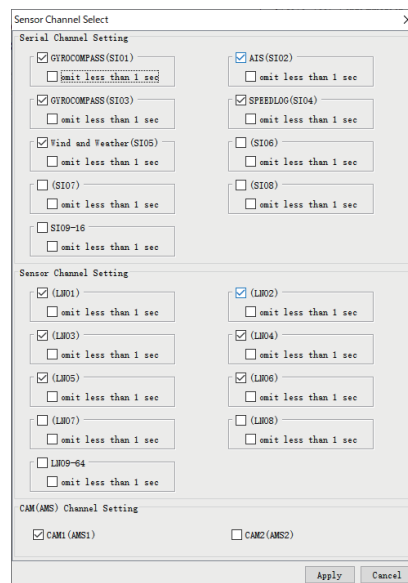
11. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)

Menu	Function
[Digital]	Click to replay digital data.
[VHF1/VHF2]	Click to replay VHF1/VHF2 data.
[MIC1/MIC2]	Click to replay MIC1/MIC2 data.
[MIC3/MIC4]	Click to replay MIC3/MIC4 data.
[MIC5/MIC6]	Click to replay MIC5/MIC6 data.
[MIC7/MIC8]	Click to replay MIC7/MIC8 data.
[Radar1]	Click to replay radar1 figure. You can select the size of figure from 100%, 50%, and 25%
[Radar2]	Click to replay radar2 figure. You can select the size of figure from 100%, 50%, and 25%
[ECDIS]	Click to replay ECDIS figure. You can select the size of figure from 100%, 50%, and 25%
[General1]	Click to replay General1 figure. You can select the size of figure from 100%, 50%, and 25%
[General2]	Click to replay General2 figure. You can select the size of figure from 100%, 50%, and 25%
[Additional]	Click to replay additional figure. You can select the size of figure from 100%, 50%, and 25%
[Buffering Period]	Set buffering period. After buffering the data, the replay starts (Setting rate: 5 to 20 seconds).
[Import]	Import play setting file. Click the [Import] button to show the file select dialog box to select the file.
[Export]	Export all play setting file to PC. Click the [Export] button to show the dialog box to save the file.
[Add]	Add the current playback settings to the list at the bottom of the [Play Setting] window.
[Delete]	Delete the selected playback settings from the list at the bottom of the [Play Setting] window.
[Set]	Show the selected playback settings from the list at the bottom of the [Play Setting] window.
[Additional Setting]	Shows the [Additional Setting] dialog box. For details of the [Additional Setting] dialog box, "[Additional Setting] dialog box" on the page 11-7.
[Apply]	Click to use current playback settings for replay.
[Cancel]	Click to cancel settings.

**[Sensor Channel Select] dialog box**

This menu is used for setting configuration of the channels to replay. Once you check [omit less than 1 sec], same sentence entered within a second is not replayed. Use this function to reduce the data from gyro and so on.

**Note:** The equipment name of each serial channel in VDR configuration is shown to the menu.



Menu	Function
[SI01] to [SI08]	Check to replay each serial channels.
[SI09-16]	
[LN01] to [LN08]	Check to replay each sensor (LAN) channels.
[LN09-64]	
[CAM1 (AMS1)]	Check to replay CAM (AMS) channels.
[CAM2 (AMS2)]	
[Apply]	Check to apply settings.
[Cancel]	Check to cancel settings.

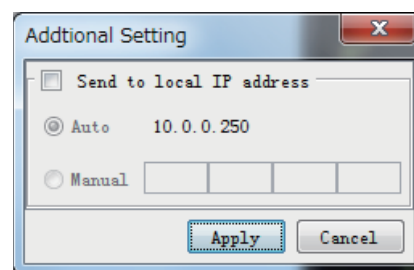
**[Additional Setting] dialog box**

This menu is used for specifying the destination IP address while using the Live (Remote) function.

**Note 1:** When data is not replayed correctly while using the Live (Remote) function, use this menu.

**Note 2:** The destination IP address must be the IP address of the running PC.

**Note 3:** The DCU software version must be "01.40" or later to use the [Additional Setting] dialog box. If the DCU software version is not "01.40" or later, do not use this function.



Menu	Function
[Send to local IP address]	Check to specify the destination IP address while using Live (Remote) function.
[Auto]/[Manual]	Available when the [Send to local IP address] checkbox is checked. <ul style="list-style-type: none"> <li>• [Auto]: The IP address of the PC used for the Live (Remote) function is automatically entered.</li> <li>• [Manual]: When the IP address entered by the [Auto] setting is not correct, use the manual setting. Enter the IP address of the PC used for the Live (Remote) function.</li> </ul>

### 11.4.3 Live (Remote) data conversion

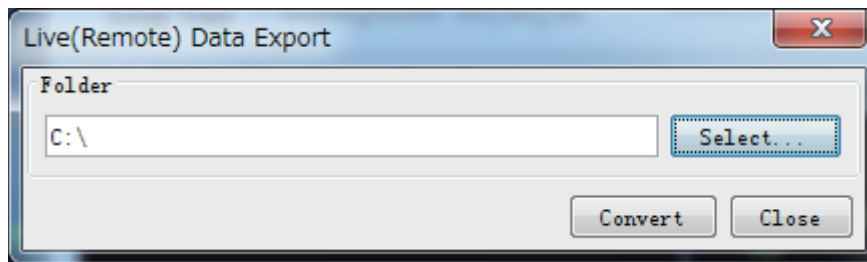
By converting the data replayed with Live (Remote) function, you can replay the data as same as the extracted data on Live Player V5. The data within last one hour can be converted.

**Note 1:** The converted data is different from actual data.

**Note 2:** When you connect another VDR or change Play Setting before the conversion, the function is not available.

**Note 3:** Do not use the converted data for combine or re-extracting.

1. Open the [Tool] menu and select the [Source Select] to show the [Source Select] dialog box. Select [Live (Remote) Data Export] from the drop-down list.



2. Click the [Select...] button to decide the folder.
3. Click the [Convert] button.
4. After finishing the conversion, click the [Close] button.

For how to play converted data, see section 3.2.3 "How to replay the data copied into the PC".

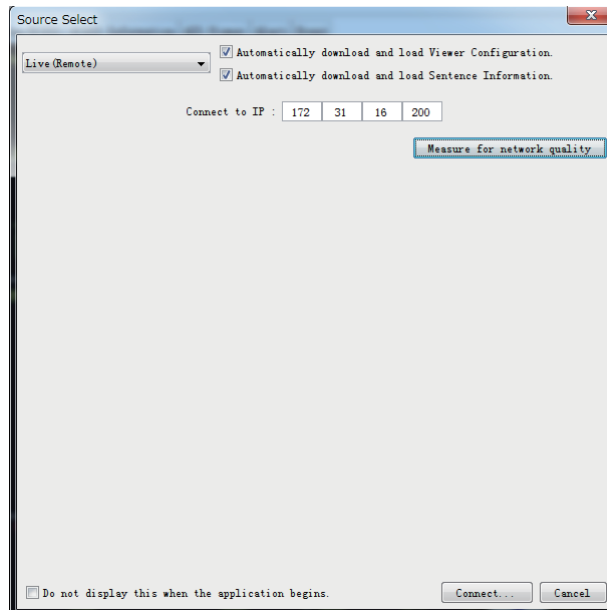
## 11.5 Data extraction on remote connection

You can extract the recording data from VR-7000/7000S on remote connection.

**Note:** You can extract the data only from Long Term Device. You cannot extract the data from the DRU.

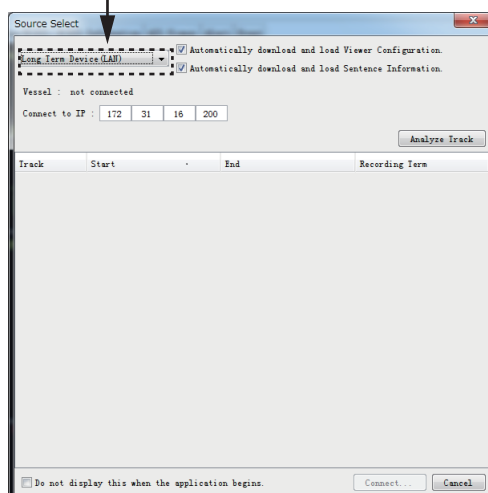
### 11.5.1 How to extract the data on remote connection

1. Start the Live Player V5 software.
2. Open the [Tool] menu and select the [Live (Remote)] on [Source Select].

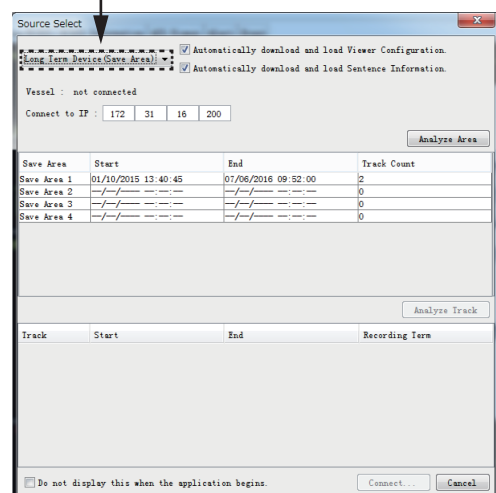


3. Select [Long Term Device (LAN)] from the list box on the [Source Select] dialog box when you extract the data from long term device. In case of the VR-7000S, [Long Term Device (Save Area)] can be also selected.

[Long Term Device (LAN)] is selected



[Long Term Device (Save Area)] is selected



4. Enter the IP address of the VDR to be connected.
5. Remove the check from [Automatically download and load Viewer Configuration].
6. Remove the check from [Automatically download and load Sentence Information].
7. When [Long Term Device (Save Area)] is selected at step 3, click the [Analyze Area] button. When [Long Term Device (LAN)] is selected, go to the next step.

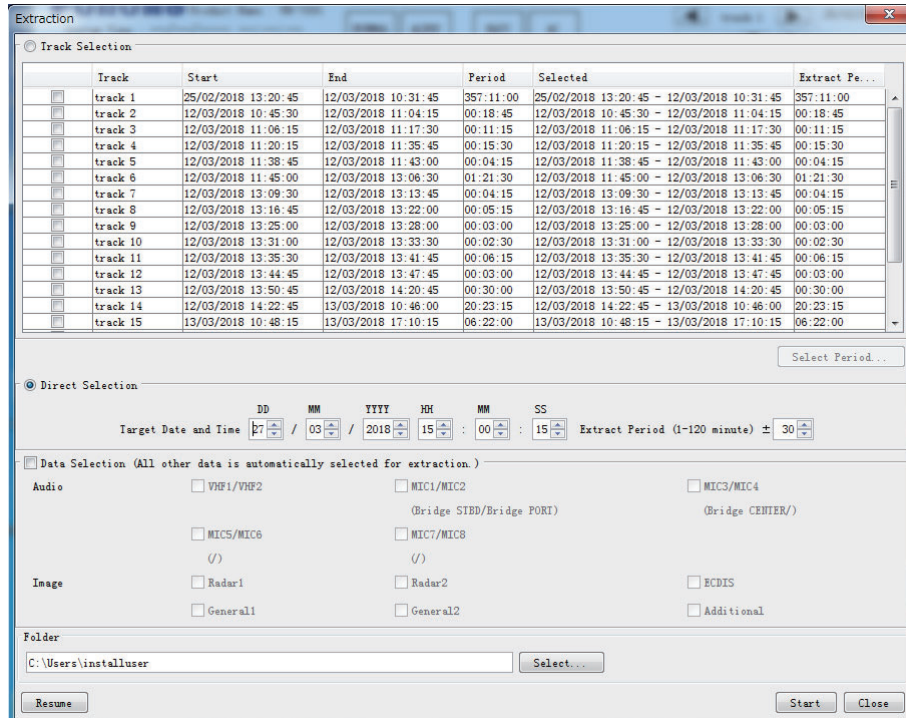
## 11. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)

8. Click the [Analyze Track] button.

9. Click the [Connect] button.

**Note:** Confirm that [VR-7000] ([VR-7000S]) is shown at the [Product Name] field after clicking the [Connect] button, then go to the next step.

10. Select [Extract] from [Tool] menu.

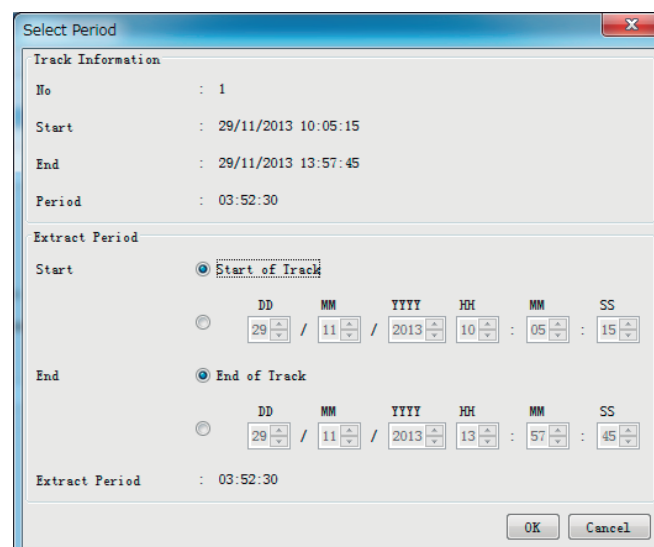


11. Specify the extraction data by each one of the following methods.

- Select the track.
- Select date and period.

### How to select the track:

- 1) Activate the [Track Selection] radio button, then check the track you want to extract.
- 2) Click the [Select Period] button to show the [Select Period] window.



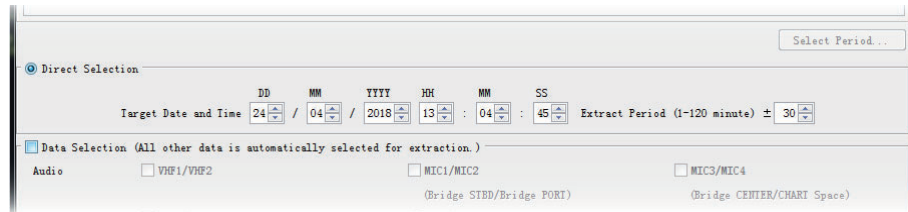


## 11. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)

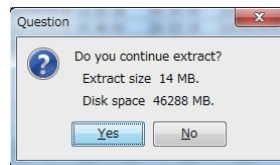
- 3) Set the start time and the end time in the [Extract Period] field. When you want to extract all track, check [Start of Track] and [End of Track].
- 4) Click the [OK] button.

### **How to select date and period:**

- 1) Activate the [Direct Selection] radio button.
- 2) Select the target date and period to extract.



12. Click the check boxes on [Data Selection] to select the required data. If you check [Data Selection], you can extract the data except Audio and Image.  
**Note:** When the [Data Selection] is not available, contact your dealer.
13. Click the [Select] button to set the folder to save the extracted data.
14. Click the [Start] button and check estimated time.



15. Click the [Yes] button to start the extraction.  
**Note 1:** When you stop the extraction on the way, click the [Stop] button on [Extraction Process] window. Depend on the communication speed, it takes a time to cancel processing. If you want to kill the function, click the [Stop] button again.  
**Note 2:** When you fail the extraction, the message "[FILE] Do you delete extracted file?" is shown to ask delete the extracted data. If you restart the extraction, click the [No] button to avoid deleting the data and click the [Resume] button.

### **11.5.2 How to resume the extraction**

When you fail to extract the data, you can leave the data and restart the extraction from the middle.

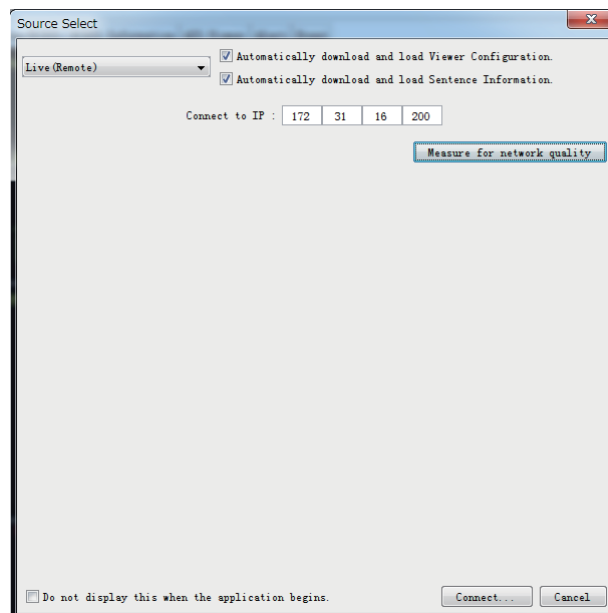
**Note:** When you restart the extraction, it is required to connect with the VDR same as when aborting the extraction. If the VDR configuration data\* is changed before restarting extraction, this function is unavailable.

\*: Adjusted by the service person from the VDR Maintenance Viewer.

1. Start the Live Player V5 software.

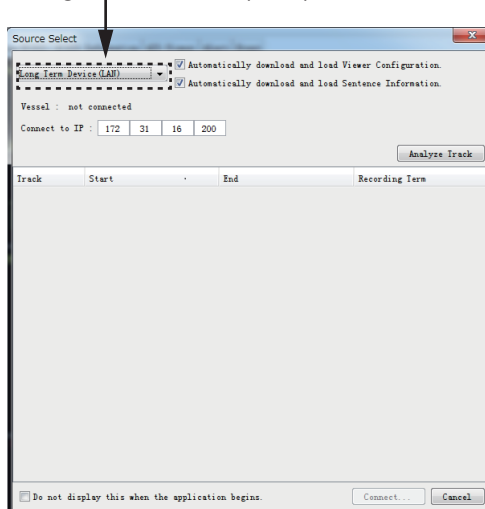
## 11. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)

2. Open the [Tool] menu and select [Source Select] to show the [Source Select] dialog box.

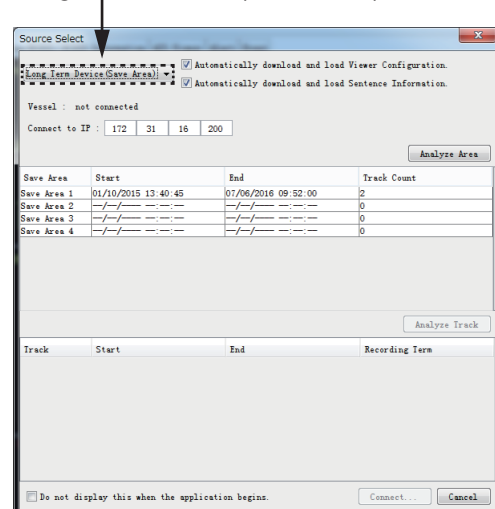


3. Select [Long Term Device (LAN)] from the list box on the [Source Select] dialog box when you extract the data from the long term device. In the case of VR-7000S, [Long Term Device (Save Area)] can be also selected.

[Long Term Device (LAN)] is selected



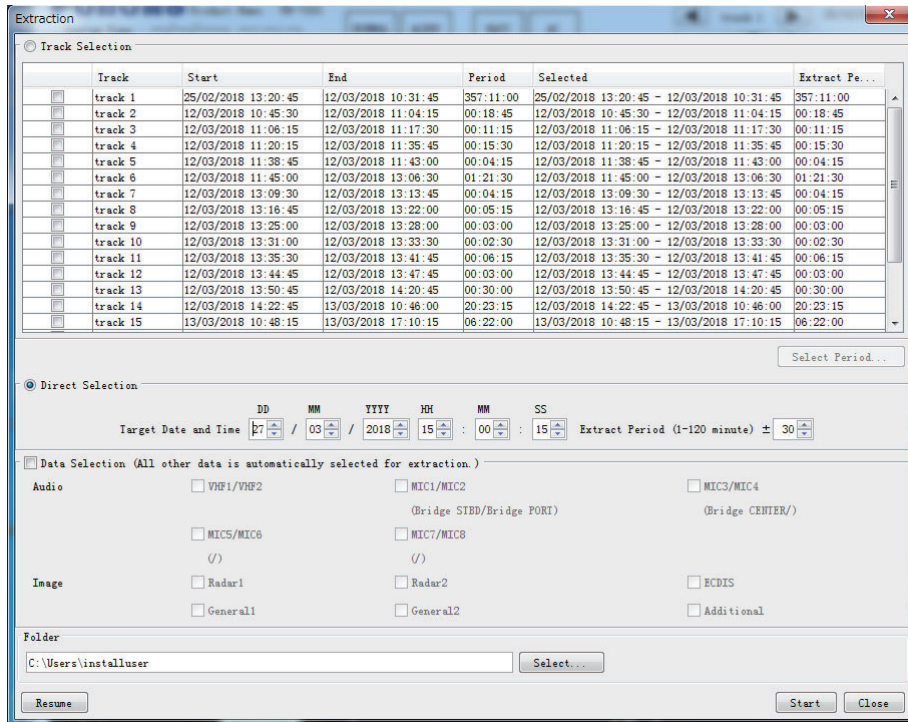
[Long Term Device (Save Area)] is selected



4. Enter the IP address of the VDR to be connected.
5. Remove the check from [Automatically download and load Viewer Configuration].
6. Remove the check from [Automatically download and load Sentence Information].
7. When [Long Term Device (Save Area)] is selected at step 3, click the [Analyze Area] button. When [Long Term Device (LAN)] is selected, go to the next step.
8. Click the [Analyze Track] button.
9. Click the [Connect] button.

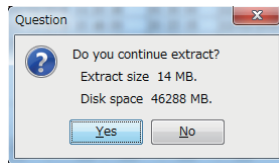
## 11. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)

10. Select [Extract] from [Tool] menu.



11. Click the [Select] button to set the folder to save the extracted data.

12. Click the [Resume] button to check estimated time.



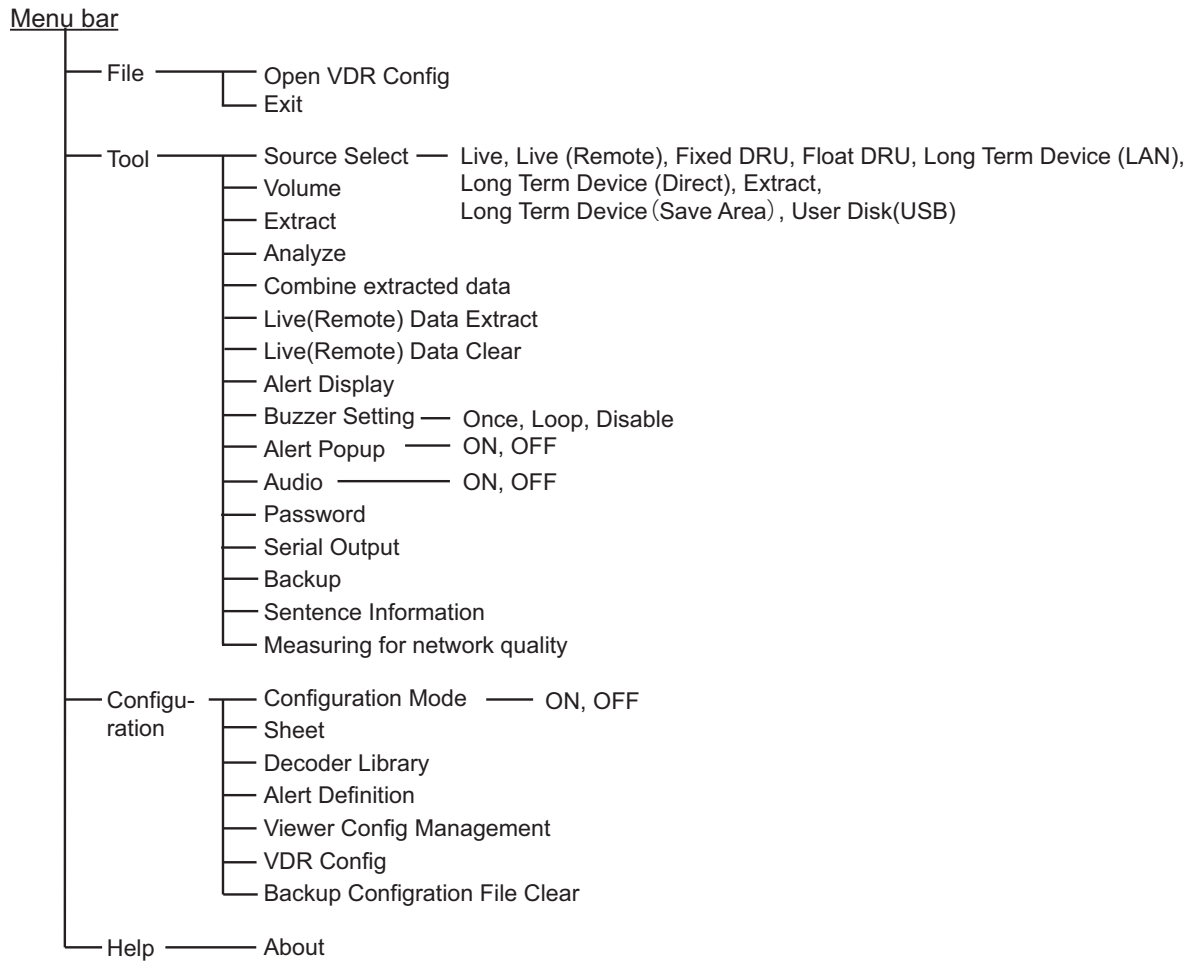
13. Click the [Yes] button to start the extraction.

11. REMOTE PLAYBACK SETTING (LAND-SHIP COMMUNICATION)

This page is intentionally left blank.

# APPX. 1 MENU TREE

---



# APPX. 2 MATERIALS FOR PLAYBACK

IMO Circular MSC.214(81) recommends that all VDR systems installed on or after 1 June 2008 carry software to playback data on a PC, the manual for data extraction, and the cable necessary to connect the PC to the Data Collecting Unit (DCU). Attach the supplied card holder to the front door of the DCU to store the items listed in the table below.

## *Items to store in the card holder*

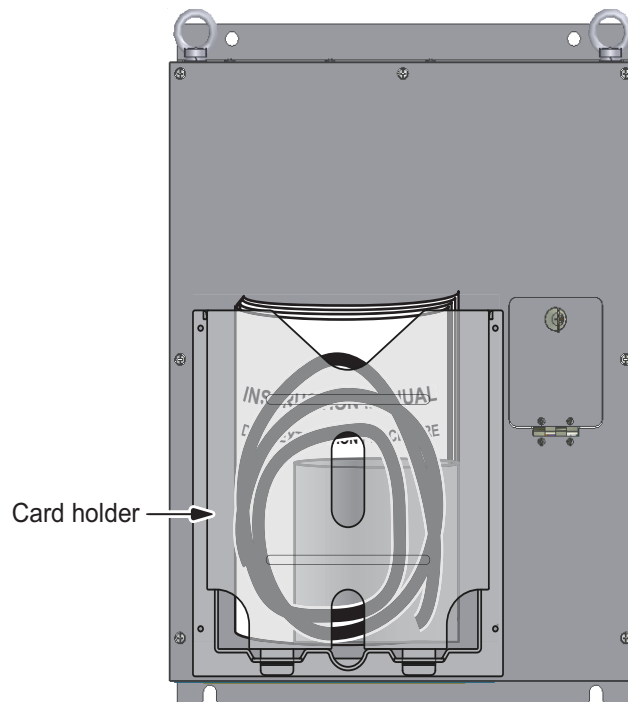
Name	Type	Code No.	Remarks
CD-ROM (For Live Player)	VR-7030 SW&MANUAL CD	000-191-754	With Accessories FP24-01110
Data Extraction Procedure	E42-01402	000-179-354	
LAN Cable Assembly	MOD-Z072-020+	001-167-880-10	

See the data extraction procedure for how to play back data.

## How to attach the card holder

Use the supplied accessories to attach the card holder to the DCU.

Remove the paper from the double-sided tape on the card holder. Attach the card holder to the location in the DCU shown below.



# INDEX

---

## **A**

- AIS
  - display layout ..... 9-1
  - own ship details..... 9-4
  - RX message log..... 9-6
  - target details..... 9-5
  - target display range..... 9-4
  - target symbols..... 9-3
  - TX message log ..... 9-7
- Alert popup
  - configuration..... 6-1
  - on/off ..... 6-5
- Analog tab ..... 2-30
- Audio settings..... 6-8
- Azimuth promotion tab ..... 2-24

## **B**

- Backup ..... 7-1
  - replaying..... 7-3
  - starting ..... 7-2
- buzzer setting..... 6-5

## **C**

- Color definition ..... 2-26
- Compass sheet
  - Compass tab ..... 2-12
  - General tab ..... 2-11
- Configuration
  - confirming..... 10-1
  - creating ..... 2-5
  - saving to DRU ..... 2-36
  - saving to replay PC ..... 2-35

## **D**

- Decoder editor..... 5-4
- Decoder library
  - description..... 5-2
  - editor ..... 5-4
  - opening ..... 5-1
- Dial meter tab..... 2-13
- Digital tab ..... 2-31
- Display configuration..... 2-1
- Displaying data..... 4-2
- Doppler tab..... 2-14
- Dual Dial meter tab ..... 2-13

## **E**

- Extracting recorded data ..... 6-6

## **F**

- Formatter syntax ..... 2-27

## **G**

- Graph tab ..... 2-15

## **H**

- Horizontal bar tab..... 2-17
- Horizontal ruler tab..... 2-18

## **I**

- Inclinometer tab..... 2-28
- Installation
  - connection to DCU ..... 1-5
  - installable PC ..... 1-1
  - Windows 10..... 1-4
  - Windows 7..... 1-2
  - Windows 8.1..... 1-3

## **L**

- Long Term Device
  - reading data recorded in ..... 3-1
  - reading data retrieved in..... 3-4

## **N**

- Numeric data display sheet..... 2-20

## **P**

- Pitch and roll tab ..... 2-21

## **R**

- Radar/AIS sheet..... 2-27
- Remote Playback Setting
  - Communication speed measuring..... 11-2
  - Data extraction ..... 11-9
  - Limitations and Notifications..... 11-1
  - Live (Remote) Replay..... 11-3
  - Preparations..... 11-1
- Rudder tab ..... 2-22

## **S**

- Sensor (LAN) tab ..... 2-33
- Sentence information ..... 6-9
- Serial output..... 8-1
- Serial tab ..... 2-32
- Starting..... 1-5

## **T**

- Two dimensions plotter tab ..... 2-25

## **U**

- Uninstalling..... 1-6
- User Disk
  - extract ..... 3-11
  - reply ..... 3-10

## **V**

- Vertical bar tab ..... 2-23

## **W**

- Wind direction tab ..... 2-19