FURUNO

OPERATOR'S MANUAL

AIS INTERFACE

MODEL IF-1500AIS

FURUNO ELECTRIC CO., LTD.
NISHINOMIYA, JAPAN
SAFETY INSTRUCTIONS

Safety Instructions for the Operator

⚠️ WARNING
Do not disassemble or modify the equipment.
Fire, electrical shock or serious injury can result.

Immediately turn off the power at the switchboard if the equipment is emitting smoke or fire.
Continued use of the equipment can cause fire or electrical shock. Contact a FURUNO agent for service.

Make sure no rain or water splash leaks into the equipment.
Fire or electrical shock can result if water leaks in the equipment.

Keep heater away from equipment.
A heater may melt the power cord, which can result in fire or electrical shock.

Do not place liquid-filled containers on the top of the equipment.
Fire or electrical shock can result.

Safety Instructions for the Installer

⚠️ WARNING
Turn off the power at the switchboard before beginning the installation.
Fire or electrical shock can result if the power is left on.

Do not install the equipment where it may get wet from rain or water splash.
Water in the equipment can result in fire, electrical shock or damage the equipment.

Be sure that the power supply is compatible with the voltage rating of the equipment.
Connection of an incorrect power supply can cause fire or damage the equipment.

⚠️ CAUTION
Observe the following compass safe distances to prevent interference to a magnetic compass:

<table>
<thead>
<tr>
<th>Compass Type</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard compass</td>
<td>0.55 m</td>
</tr>
<tr>
<td>Steering compass</td>
<td>0.35 m</td>
</tr>
</tbody>
</table>
Foreword

FURUNO Electric Company thanks you for purchasing the IF-1500AIS AIS Interface. We are confident you will discover why the FURUNO name has become synonymous with quality and reliability.

Your equipment is designed and constructed to meet the rigorous demands of the marine environment. However, no machine can perform its intended function unless properly installed and maintained. Please carefully read and follow the installation and maintenance procedures set forth in this manual.

Thank you for considering and purchasing FURUNO.

Features

The IF-1500AIS enables connection of the FURUNO AIS Transponder FA-100 to the NavNet2 Series radars to display AIS information on the radar and plotter displays. AIS target data input from the transponder are selected and sorted (by range, CPA/TCPA, etc.), format-converted and then output to the NavNet2 series radar.

Equipment List

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Code No.</th>
<th>Qty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS Interface</td>
<td>IF-1500AIS</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Installation Materials</td>
<td>CP14-06500</td>
<td>000-040-013</td>
<td>1 set</td>
<td>1) Cable assy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MJ-A15A3F0013-035-3A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MJ-A7SPF0003-050</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MJ-A6SPF0012-050</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2) Self-tapping screws 4x16,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 pcs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>004-000-730</td>
<td>1 set</td>
<td></td>
</tr>
<tr>
<td>Optional supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable Assy.</td>
<td>MJ-A15A3F0013-035-3A</td>
<td>000-145-880</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cable Assy.</td>
<td>MJ-A7SPF0003-050</td>
<td>000-136-730</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cable Assy.</td>
<td>MJ-A6SPF0012-050</td>
<td>000-134-424</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cable Assy.</td>
<td>MJ-A6SPF0012-100</td>
<td>000-133-817</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
System Configuration

Mounting
The unit can be mounted on a desktop or a bulkhead. When choosing a mounting location, keep in mind the following points:

- Consider cable lengths.
- Choose a location away from rain and water splash and one which is not in direct sunlight.
- Observe the maintenance space noted in the outline drawing to facilitate servicing.
- Observe the compass safe distances noted in the safety instructions at the beginning of this manual.

Fix the unit to the mounting location with four self-tapping screws (4x16). Connect cables referring to the interconnection diagram. Run a ground wire (local supply) between the ground terminal and ship’s superstructure.
Wiring

Refer to the interconnection diagram at the back of this manual and the illustration below.

**For IEC 61162-2**

AIS
- External display
- Aux. display
- Pilot plug

For IEC 61162-1, NMEA-0183

AIS
- External display
- Aux. display
- Pilot plug
Data Sentences

The following data sentences are input to and output from the AIS Interface.

Operation

No operation is required of the user. All AIS-related operations are carried out from the NavNet2 series radar or plotter.

Cleaning

Dust may be removed from the cabinet with a soft dry cloth. For stubborn dirt, water-diluted mild detergent may be used. Do not use chemical-based cleaning agents to clean the cabinet; they can remove paint and markings.

Replacement of Fuse

The 3A fuse in the power cable protects the equipment from reverse polarity and equipment trouble. If the fuse blows, find the cause before replacing the fuse. If it blows after replacement request service.

⚠️ WARNING

Use the proper fuse.

Use of a wrong fuse can result in damage to the equipment or cause fire.
### SPECIFICATIONS OF AIS INTERFACE IF-1500AIS

**1. PORTS**

1.1 Number of ports 2 ports (IN/OUT)

1.2 Baud rate 38,400 bps

1.3 AIS IN port (RS-485) Input data: VDM, VDO, ALR, ABK, TXT, ACA, LRI/LRF
Output data: ABM, BBM, ACK, LRI/LRF

1.4 DATA OUT port Input data: ACK, Target quantity, Sort condition
Output data: VDM, VDO, ALR, TXT, P-sentences

1.5 Digital interface IEC 61162-2

**2. ENVIRONMENTAL CONDITIONS**

2.1 Useable temperature -15°C to 55°C

2.2 Relative humidity 95%(40°C)

2.3 EMC IEC 60945

2.4 Waterproofing IP20

**3. POWER SUPPLY**

12-24 VDC, 0.2-0.1 A

**4. COLOR**

N3.0
<table>
<thead>
<tr>
<th>ユニット</th>
<th>品目</th>
<th>単位</th>
<th>クラス</th>
<th>数量</th>
</tr>
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<tbody>
<tr>
<td>インターフェイス</td>
<td>217</td>
<td>108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>予備品</th>
<th>品目</th>
<th>善状</th>
<th>数量</th>
</tr>
</thead>
<tbody>
<tr>
<td>ヒューズ</td>
<td>30</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>工事材料</th>
<th>品目</th>
<th>善状</th>
<th>数量</th>
</tr>
</thead>
<tbody>
<tr>
<td>ケーブル組品</td>
<td>L=3.5M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ケーブル組品</td>
<td>L=5M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ケーブル組品</td>
<td>L=5M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ドラスタビンネル</td>
<td>16</td>
<td>φ4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>図書</th>
<th>品目</th>
<th>善状</th>
<th>数量</th>
</tr>
</thead>
<tbody>
<tr>
<td>取扱説明書</td>
<td>257</td>
<td>182</td>
<td></td>
</tr>
</tbody>
</table>
注記
1) 印寸法は最小サービス空間寸法とする。
2) 指定外の寸法公差は表1による。
3) 取付⽤ネジはプラスタッピングネジ呼び径4×16を使用のこと。

表1
<table>
<thead>
<tr>
<th>寸法区分 (mm)</th>
<th>公差 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ≤ L ≤ 50</td>
<td>±1.5</td>
</tr>
<tr>
<td>50 &lt; L ≤ 100</td>
<td>±2.5</td>
</tr>
<tr>
<td>100 &lt; L ≤ 500</td>
<td>±3</td>
</tr>
</tbody>
</table>

NOTE
1. # MINIMUM SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
3. USE SELF-TAPPING SCREWS 4×16 FOR FIXING THE UNIT.

DRAWN: MAY 10, ’05  E. MIYOSHI
DESIG: TAKAHASHI, T
APPROVED: [Signature]
SCALE: 1/2
WEIGHT: 0.80 KG
DRAWN: C4435-G01-C

FURUNO ELECTRIC CO., LTD.
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