FURUNO

OPERATOR'S MANUAL

UAIS DISPLAY SOFTWARE

MODEL **FAISPC MARK-2 (for FA-150)**

FURUNO ELECTRIC CO., LTD.
NISHINOMIYA, JAPAN

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FOREWORD

A Word to the Owner of the FAISPC MARK-2

FURUNO Electric Company thanks you for purchasing the UAIS Display Software FAISPC MARK-2 (for UAIS Transponder FA-150). We are confident you will discover why the FURUNO name has become synonymous with quality and reliability.

For over 50 years 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 and troubleshooting procedures set forth in this manual to obtain the best performance from the equipment.

We would appreciate feedback from you, the end-user, about whether we are achieving our purposes.

Thank you for considering and purchasing FURUNO.

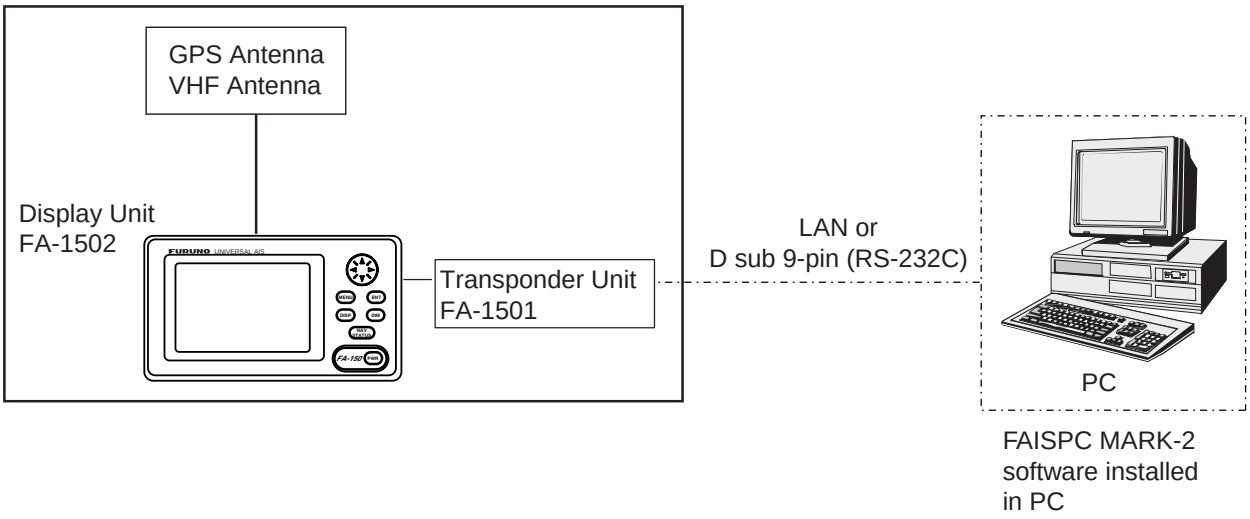
Features

The FA-150 is a universal shipborne AIS (Automatic Identification System) capable of exchanging navigation and ship data between own ship and other ships or coastal stations. It complies with IMO MSC.74(69) Annex 3, A.694, ITU-R M.1371-1 and DSC ITU-R M.825. It also complies with IEC 61993-2 (Type testing standard), IEC 60945 (EMC and environmental conditions).

This software is installed on a commercially available PC which is connected to the FA-150.

The PC displays all required information about static data, dynamic data, voyage-related data and short safety-related messages. The information and messages are automatically updated according to the ITU-R M.1371-1, e.g., static information every 6 min and on request, dynamic information every 10 s on ship whose speed is 0-14 kt and 3.3 s when changing course at 0-14 kt, etc.

System Configuration



Notice

- No part of this manual may be copied or reproduced without written permission.
- If this manual is lost or worn, contact your dealer about replacement.
- The contents of this manual and equipment specifications are subject to change without notice.
- The example screens (or illustrations) shown in this manual may not match the screens you see on your display. The screen you see depends on your system configuration and equipment settings.
- This manual is intended for use by native speakers of English.
- FURUNO will assume no responsibility for the damage caused by improper use or modification of the equipment or claims of loss of profit by a third party.

1. INSTALLATION

1.1 Requirements

FAISPC MARK-2 components

Name	Type	Code No.	Remarks
CD-ROM			・Drivers folder ・setup.exe ・hdd32.exe
USB Dongle	HASP4M1 USB KQAKA	000-149-454	Manufacturer: ALADDIN

System (PC) requirements

- CPU: Minimum 1 GHz
- Memory: Minimum 512 MB
- OS: Windows XP, Windows 2000
- USB interface
- CD-ROM drive

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

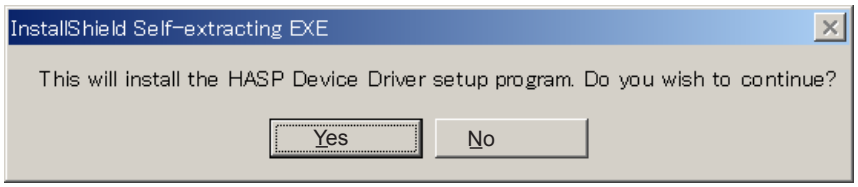
Other requirements

- Monitor resolution must be at least 1024x768.
- For best performance, the OS font size should be “100%”.
  Windows XP: Properties→Settings tab→Advanced button→General tab→DPI setting
  Windows 2000: Properties→Settings tab→Advanced button→General tab→Font size

1.2 Software Installation

1.2.1 Installing the hasp device driver

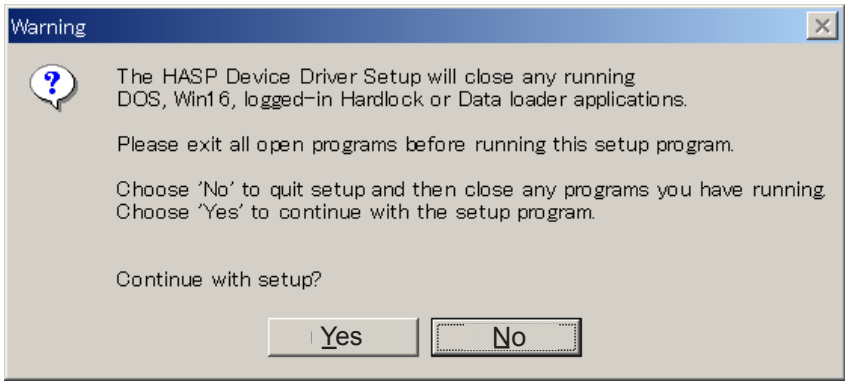
1. Turn on the PC. Set the FAISPC MARK-2 software CD-ROM in the disc drive. Open the Explorer folder to view the files on the CD-ROM.
2. Click the hdd32.exe icon to start the installation of the HASP device driver. The following message appears.



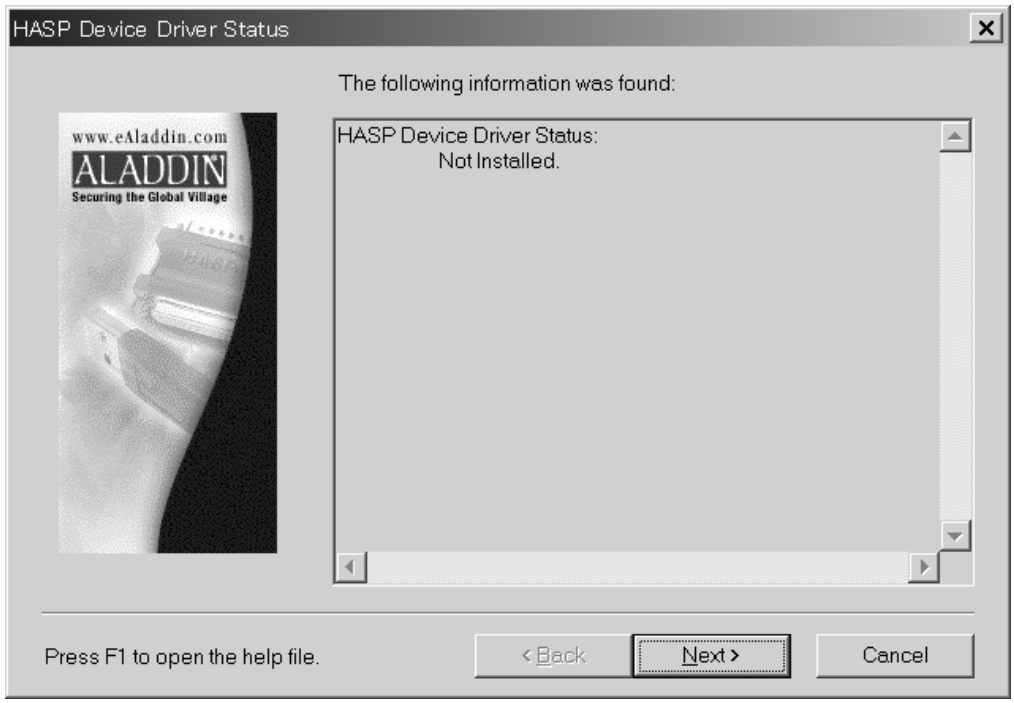
3. Insert the USB Dongle (supplied) in the USB Port.

   Note: You may also be directed to install the USB driver. If so, choose the appropriate driver from the Drivers folder in the CD-ROM when asked.

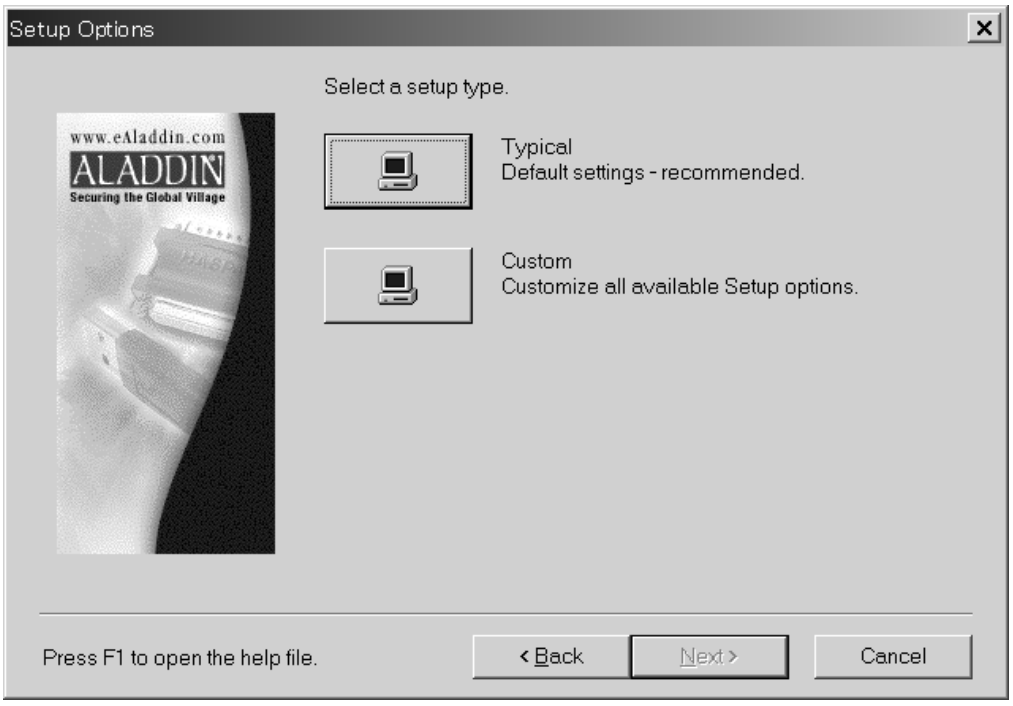
4. Click the **Yes** button.



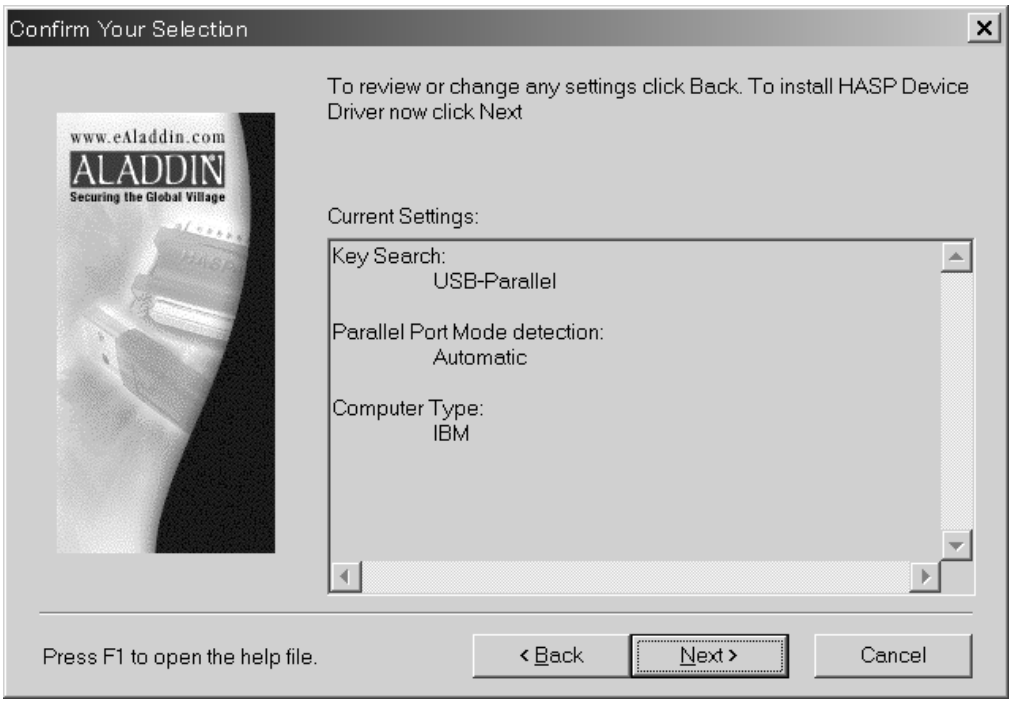
5. Click the **Yes** button.



6. Click the **Next** button.

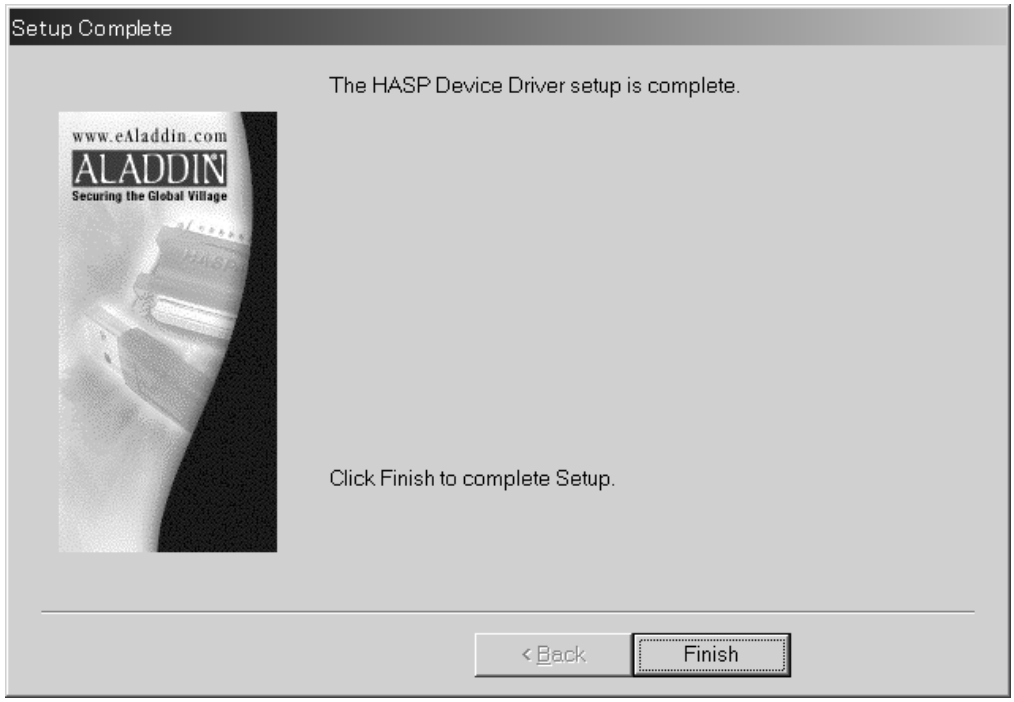


7. Choose a setup type. “Typical” is the setup type we recommend. Click the “Typical” box and the following display appears.



8. Click the **Next** button to install the HASP device driver. If the installation was successful, the following message appears.

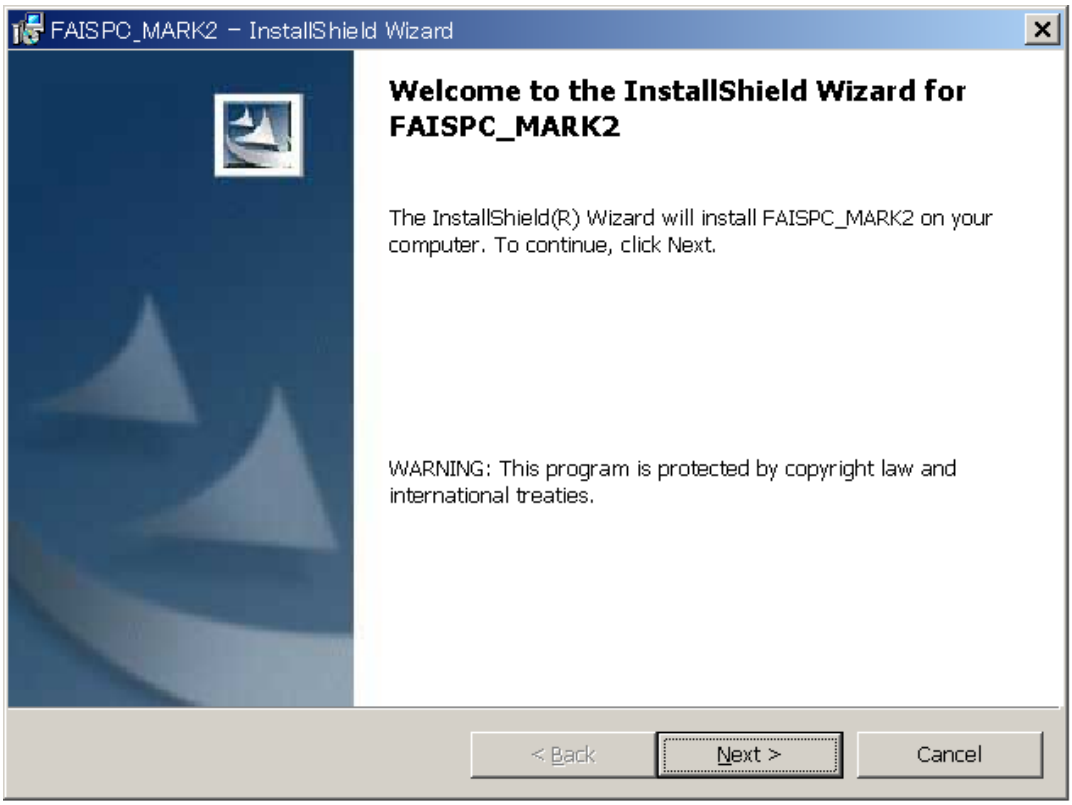
9. Click the **OK** button, and the following display appears.



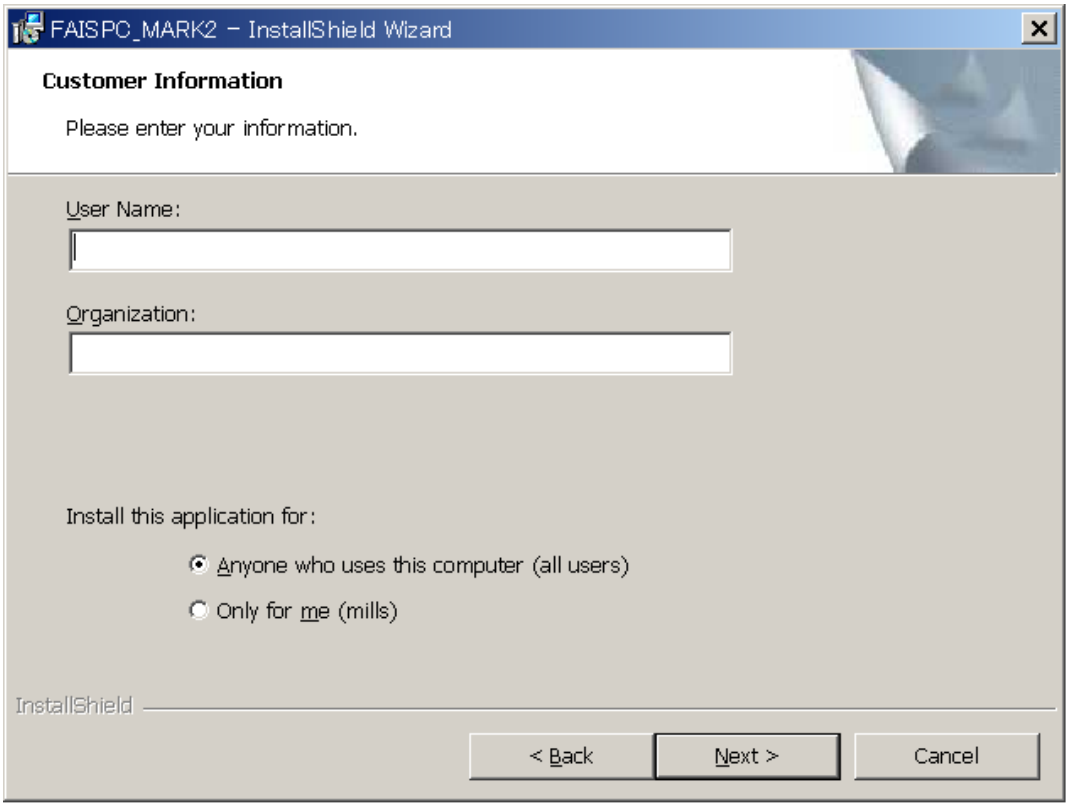
10. Click the **Finish** button to complete the installation of the HASP device driver.

1.2.2 Installing the software program

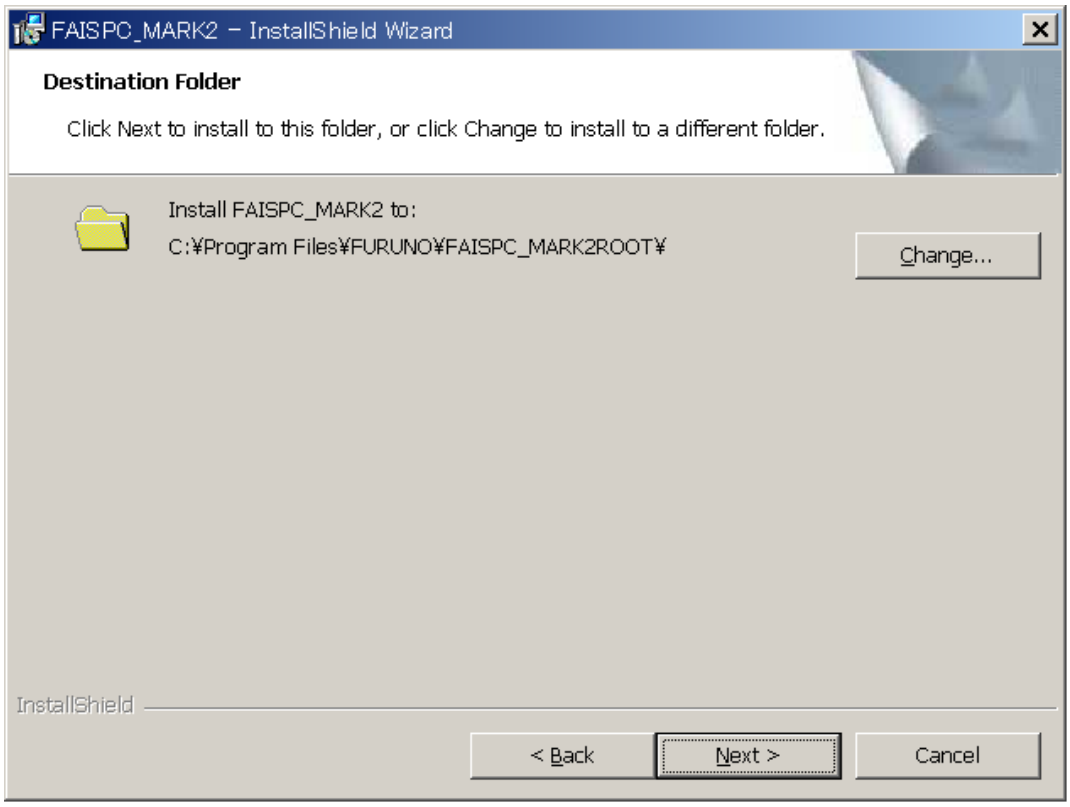
1. Click the setup.exe icon in the CD-ROM's folder. Your PC then prepares for installation, showing the message "Preparing to install". After all preparations have been completed the display shown below appears.



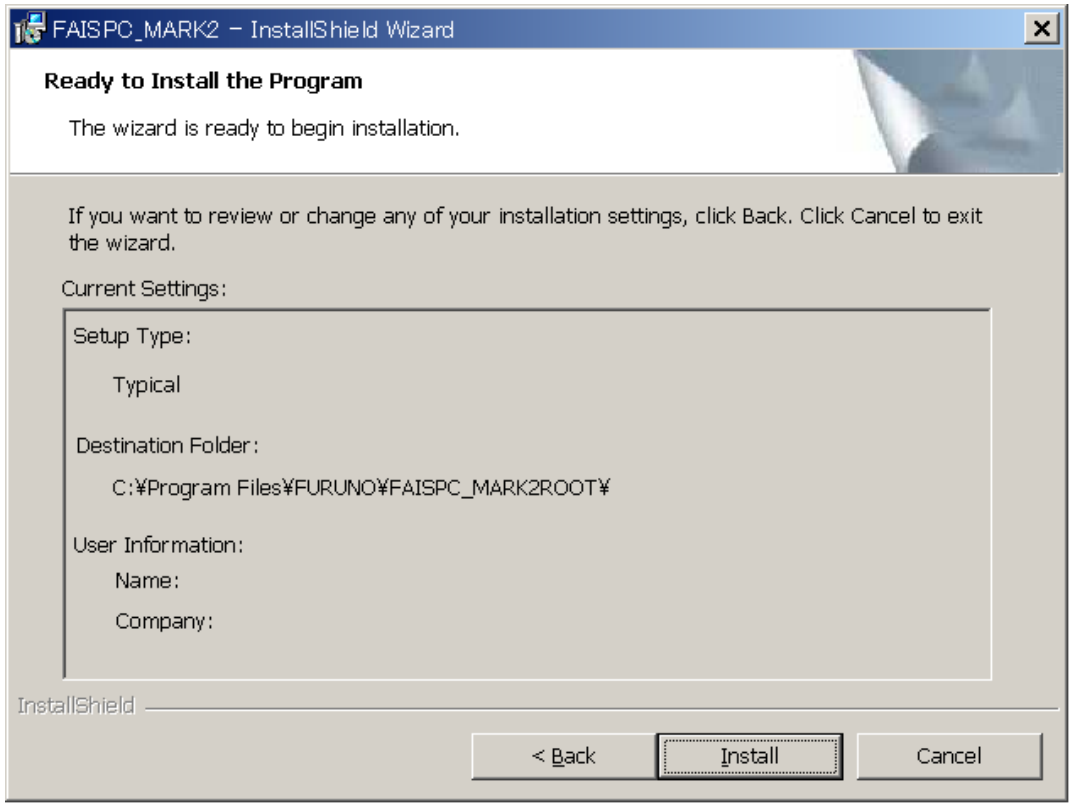
2. Click the **Next** button.



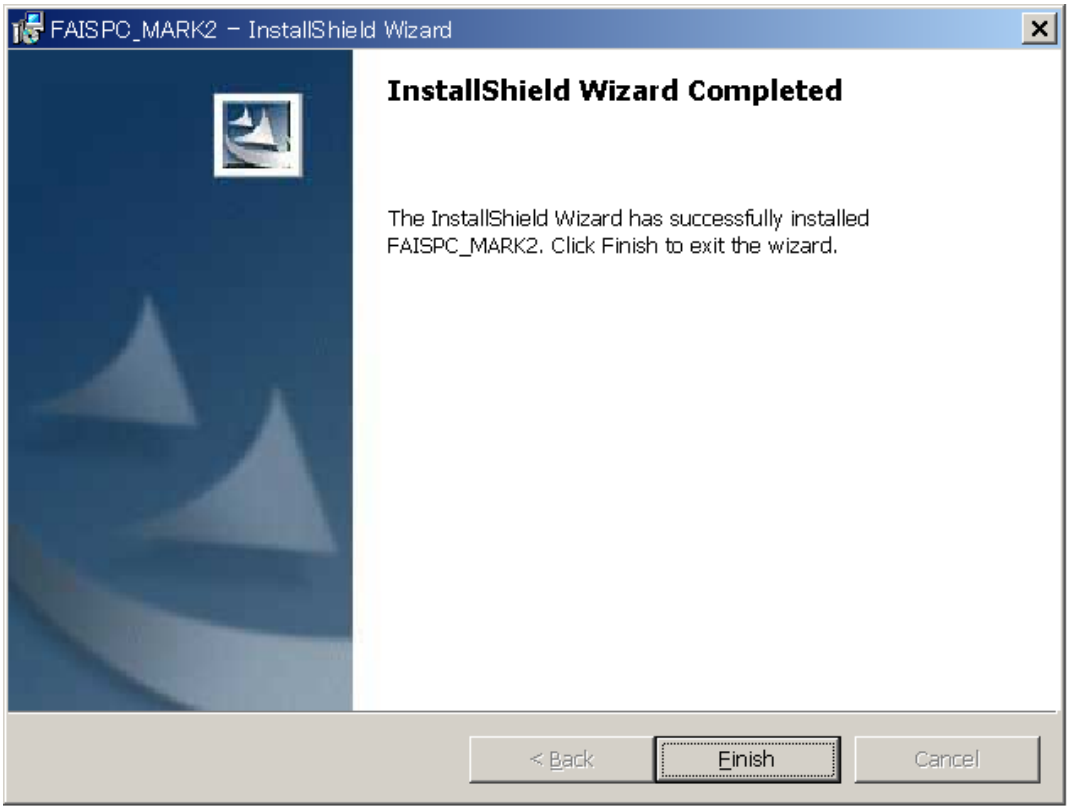
3. If desired, enter your name and organization, and choose the appropriate option for “Install this application for”.
4. Click the **Next** button.



5. Click the **Next** button to install the program at the location shown, or click the **Change** button to choose a different location.



6. Confirm settings and then click the **Install** button to install the program software. If the installation was successful the following screen appears.



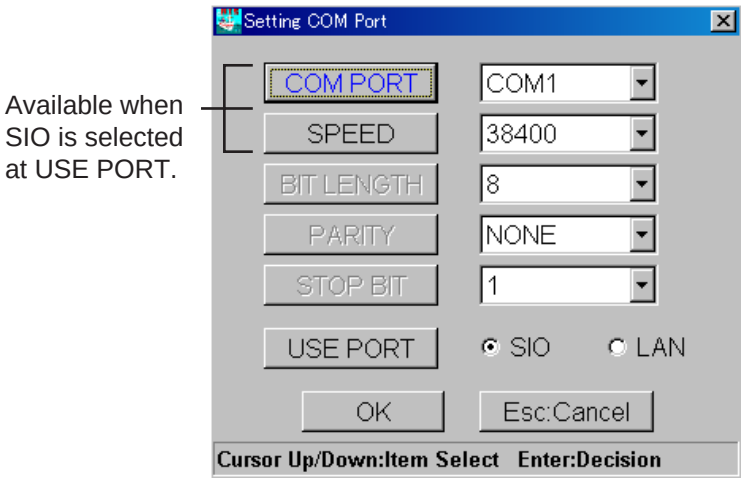
7. Click the **Finish** button to quit the InstallShield Wizard.

1.3 Initial Settings

Enter initial settings as shown in the procedures which follow.

1.3.1 PC port settings

1. Place the USB dongle in the USB port and turn on the FA-150 and the PC.
2. After the PC has booted up, click the FAISPC MARK2 application program icon (FAISPC_MARK2.exe) on the desktop to start the program. A “warning” message appears on the PC (see page 13). Click the **OK** button to erase the display.
3. Click **Option** on the menu bar followed by clicking **Setting COM Port** to show the Setting COM Port dialog box.



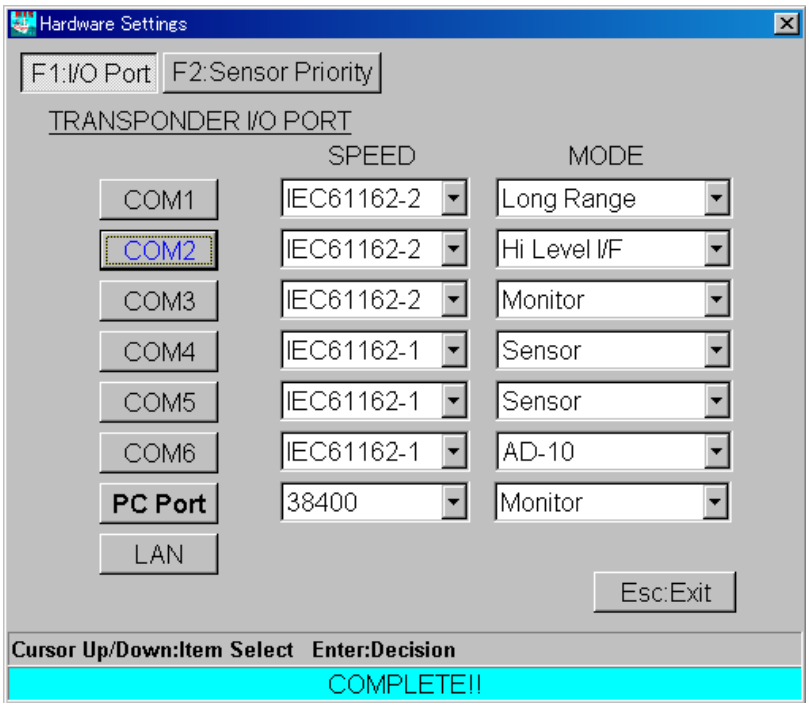
Setting COM Port dialog box

4. Click the **COM PORT** button. Click the ▼ button of COM PORT, choose the port number (COM1 - COM9) to which the FA-150 is connected and then click the **OK** button.
5. Click the **SPEED** button. Click the ▼ button of SPEED, choose the appropriate baud rate (4800, 9600, 19200, 38400, 57600 (bps)), and then click the **OK** button. Normally choose 38400 (bps). The setting should match with the PC port setting on the FA-150. Note that It is not necessary to change BIT LENGTH, PARITY or STOP BIT.
6. Click the USE PORT button. Choose where your PC is connected on the FA-150: SIO if connected to the PC port, or LAN if connected to the LAN port. For LAN, see the installation manual of the FA-150. Click the **OK** button.
7. Click the **OK** button to finish.

Confirm that “Online” appears at the upper left corner on the screen.

1.3.2 Transponder unit (FA-1501) settings

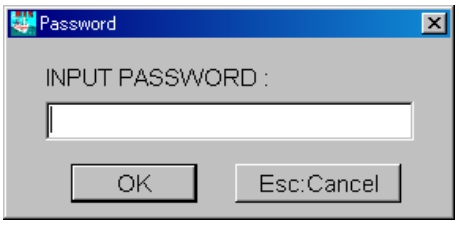
1. Click **Initial Settings** on the menu bar followed by clicking **Hardware Settings** to show the Hardware Settings dialog box.



Hardware Settings dialog box (F1: I/O port selected)

2. Click the **F1:I/O Port** button or press the **F1** key. Current speed and mode settings for each port are shown. If your system configuration is different, do the following:

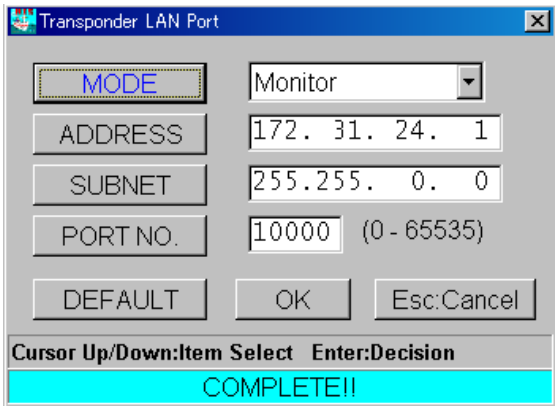
   a) Click the appropriate COM button (COM1-COM6) or the **PC Port** button.
   b) The password input box appears. Enter password and click the **OK** button.



Password input box

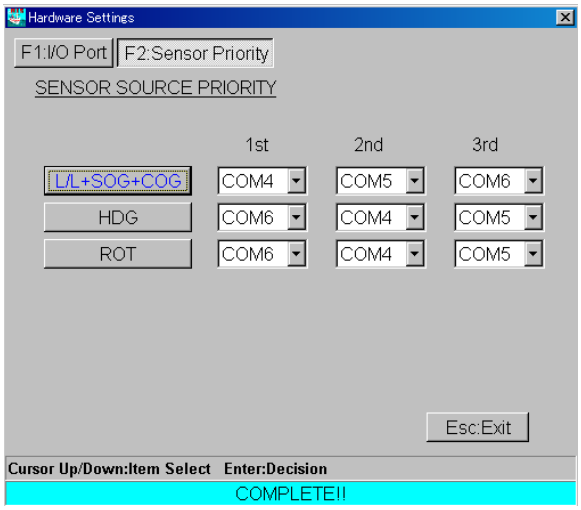
   c) Click ▼ on the SPEED box and choose appropriate data format/baud rate from the list box.
   d) Click ▼ on the MODE box and choose equipment connected to port selected.
3. Click the **OK** button.
4. Set the IP address on the FA-150 to the same IP address as set on the PC.

Note: If LAN connections have been completed, you may enter LAN settings from this equipment. Click the **LAN** button on the Hardware Settings dialog box to show the Transponder LAN Port dialog box.



Transponder LAN Port dialog box

5. Click the **F2:Sensor Priority** button or press the **F2** key.

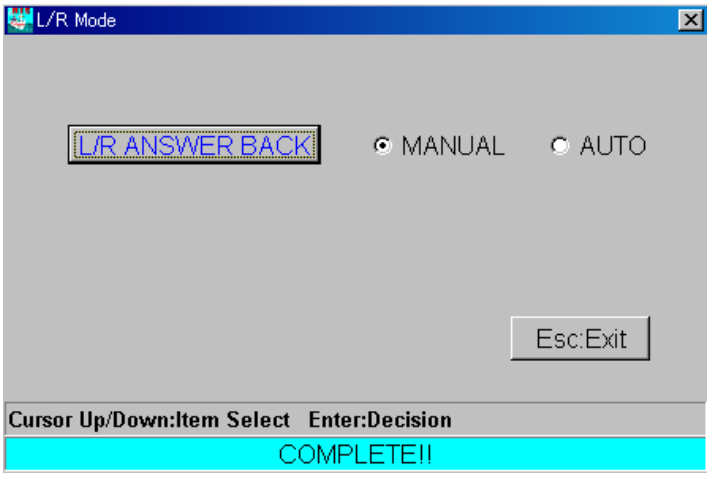


6. Click the **L/L+SOG+COG** button.
7. Choose priority order for latitude and longitude, speed over ground and course over ground Click the ▼ button on the "1st" box and then choose priority order as COM4, COM5 or COM6 from the list box. Repeat this process for 2nd and 3rd.
8. Click the **OK** button.
9. Set priority order for HDG and ROT similar to how you did for L/L+SOG+COG.
10. Click the **Esc:Exit** button or press the **Esc** key to finish.

1.3.3 Long-range mode setting

The long-range mode sets how to reply to a request for own ship data from a distant station, for example, Inmarsat C station. Choose automatic or manual reply as follows:

1. Click **Initial Settings** on the menu bar followed by clicking **L/R Mode** to show the L/R Mode dialog box.



L/R Mode dialog box

2. Click the **L/R ANSWER BACK** button.
3. Choose AUTO for automatic reply or MANUAL for manual reply.
4. Click the **OK** button.
5. Click the **Esc:Exit** button or the **Esc** key to finish.

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2. OPERATION

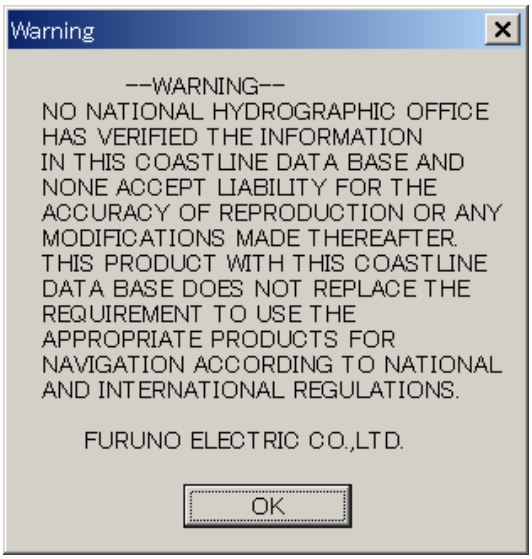
2.1 Starting Up/Quitting the Program

Before starting the program, place the USB dongle in the USB port. Keep the dongle in the port while the program is in use.

1. Turn on the FA-150.
2. Turn on the PC.
3. After the PC has booted up, click the FAISPC_MARK2.exe icon on the desktop.

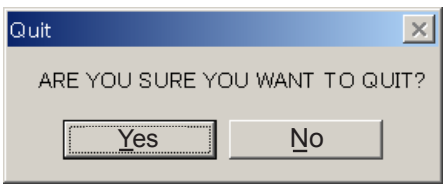
FAISPC_MARK2.exe icon

When the program has booted up, the “warning” message shown below appears.



Warning message

4. Click the **OK** button to erase the message.
5. **To quit the application,** click **File** on the menu bar followed by clicking **Quit**. (Alternately, click the **Close** button (X) at the top right-hand corner.) The prompt below appears.



6. Click the **Yes** button to quit. Settings are stored in the PcMKD.ini file.

2.2 Display Layout

2.2.1 Indications

(1) Own ship data plus date and time

(2) Map width button: Sets map width to 1/3 or 2/3 of screen width alternately.

(3) Chosen target's detailed data

(4) Target list

(5) Function keys (F1 – F12).

(6) Number of targets being received

(7) Map window

(8) Display mode button

(9) Radius button (set CPA range)

(10) Shift buttons (shift display)

(11) Range buttons (choose range)

(12) Tx status (Green: TX over CH A; Yellow: TX over CH B)

(13) Transponder status
Online: Transponder is connected
Offline: Transponder powered off or disconnected.

(14) Range and bearing indication: Shows range and bearing from own ship to pointer.

(15) Grid

(16) Range ring

(17) CPA range marker

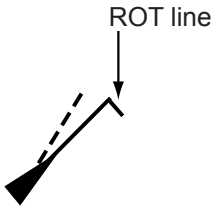
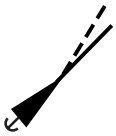
(18) Own ship marker

(19) Target track

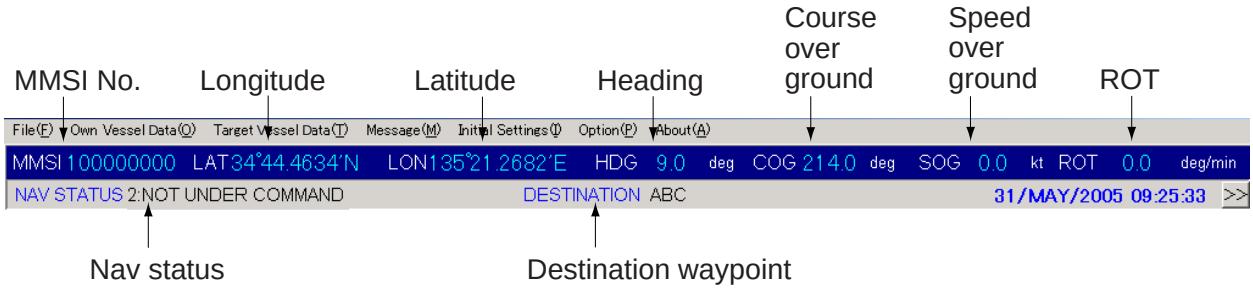
(20) Target

(21) Menu bar

2.2.2 AIS target symbols

Symbol	Target type	Color	Description
	AIS target	Green	Heading is shown with a solid line extending from the tip of the triangle. COG is shown with a broken line extending from the center of the triangle. All target types except dangerous target are colored yellow when chosen to find their data.
	AIS target w/ROT line	Green	The ROT line appears when a target's ROT is more than 10°/min.
	Dangerous target	Red	An AIS target whose CPA and TCPA are less than those values set on the CPA Settings dialog box or the CPA range marker is considered a dangerous target, on collision course with own ship. A dangerous target is colored pink when chosen to find its data.
	Lost target	Green	If no signal is received from an AIS target for 10 minutes it is declared a lost target. If no signal is received for another 10 minutes the lost target symbol is erased.
	Anchored target	Green	Target is anchored.
	Moored target	Green	Target is moored to a pier or berth.
	Aground target	Green	Target is aground.
	Transmitting target	Green	The circle flashes once when the vessel's AIS transponder transmits.
	Base station	White	Yellow when selected.
	Aid to navigation (lighthouse, buoy, etc.)	White	Yellow when selected.

2.2.3 Own ship data indications

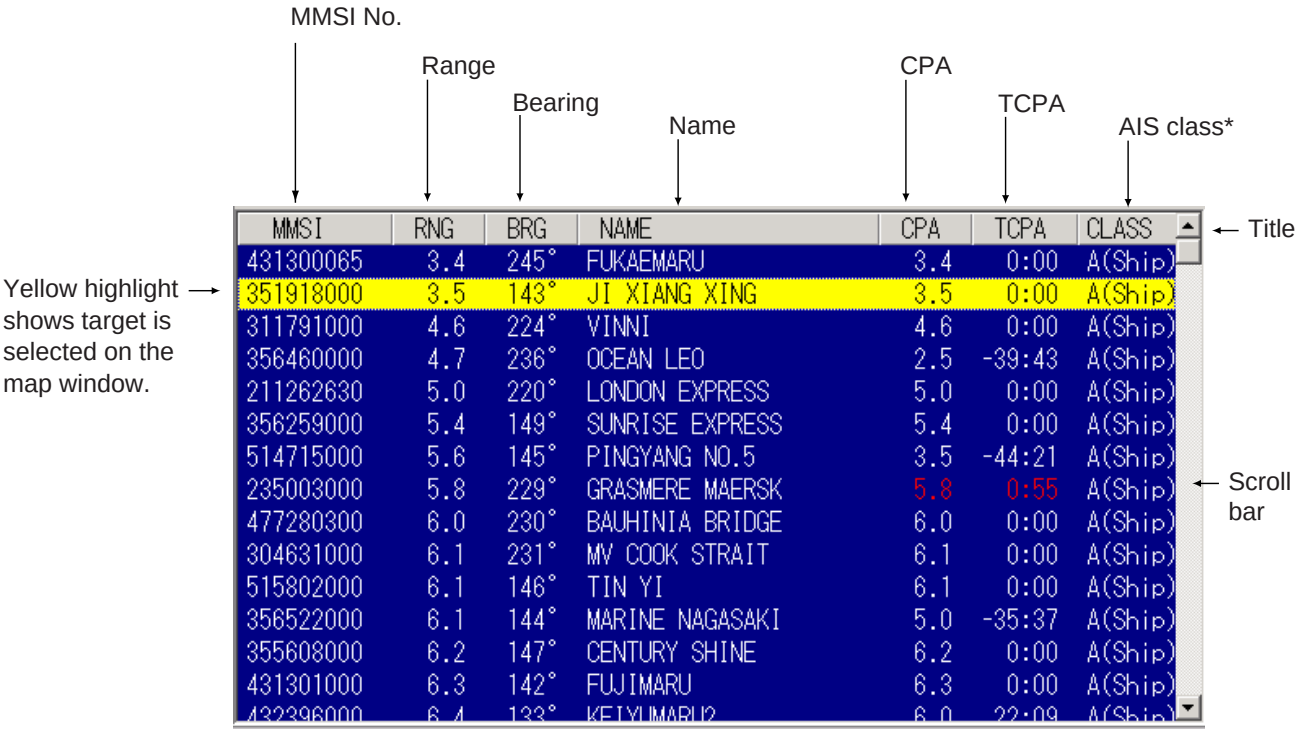


2.2.4 Target list

The target list provides various information on all targets from which the AIS transponder is receiving data. A target selected on the map window is highlighted in yellow in the target list.

The CPA and TCPA indications of a target are shown in red when its CPA and TCPA are less than the preset CPA and TCPA. When a target goes inside the CPA range marker that target's RNG indication in the target list turns red.

You may sort the list by MMSI No., Range, Name, CPA, TCPA, Bearing or Class. Click appropriate column title to sort by title selected. The list can be scrolled with the mouse thumbwheel or scroll bar.



MMSI	RNG	BRG	NAME	CPA	TCPA	CLASS
431300065	3.4	245°	FUKAEMARU	3.4	0:00	A(Ship)
351918000	3.5	143°	JI XIANG XING	3.5	0:00	A(Ship)
311791000	4.6	224°	VINNI	4.6	0:00	A(Ship)
356460000	4.7	236°	OCEAN LEO	2.5	-39:43	A(Ship)
211262630	5.0	220°	LONDON EXPRESS	5.0	0:00	A(Ship)
356259000	5.4	149°	SUNRISE EXPRESS	5.4	0:00	A(Ship)
514715000	5.6	145°	PINGYANG NO.5	3.5	-44:21	A(Ship)
235003000	5.8	229°	GRASMERE MAERSK	5.8	0:55	A(Ship)
477280300	6.0	230°	BAUHINIA BRIDGE	6.0	0:00	A(Ship)
304631000	6.1	231°	MV COOK STRAIT	6.1	0:00	A(Ship)
515802000	6.1	146°	TIN YI	6.1	0:00	A(Ship)
356522000	6.1	144°	MARINE NAGASAKI	5.0	-35:37	A(Ship)
355608000	6.2	147°	CENTURY SHINE	6.2	0:00	A(Ship)
431301000	6.3	142°	FUJIMARU	6.3	0:00	A(Ship)
432296000	6.4	133°	KEIYUMARU2	6.0	22:09	A(Ship)

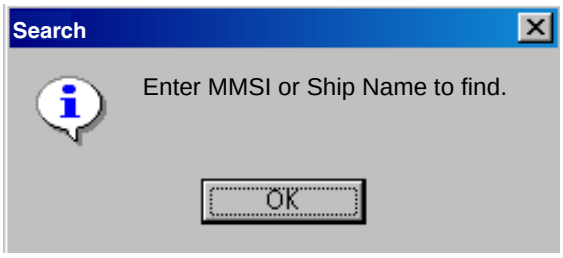
* AIS class
A: SOLAS ship
AtoN: Aid to Navigation
B: non-SOLAS ship
BS: Base Station
SAR: Search And Rescue vessel or aircraft

Target list

Searching a vessel

You can quickly search targets in the target list as follows:

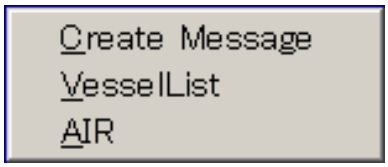
1. Click the **F3:Search** button or press the **F3** key to show the Search prompt.



2. Click the **OK** button.
3. Press the alphanumeric key which corresponds to the first character of ship's MMSI no. or name. The target which most closely matches the key pressed is then placed at the top of the target list.

Pop-up menu

A pop-up menu provides quick access to target-related functions. Right-click a target on the target list to show the pop-up menu.

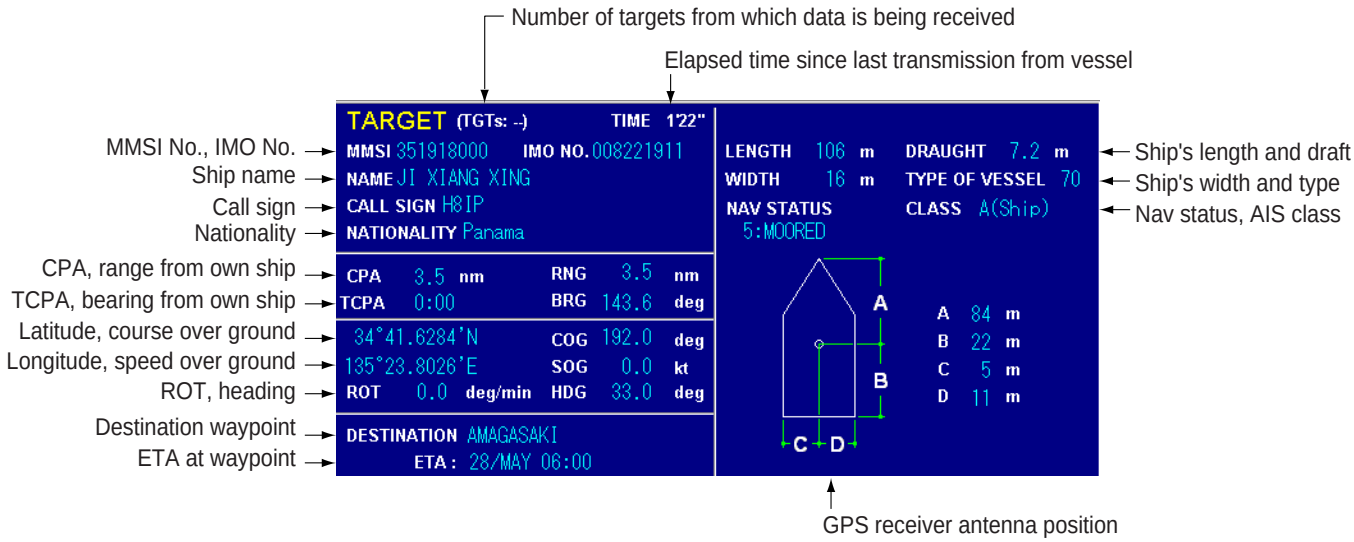


Create message: Create and send message. See paragraph 2.8.1.
Vessel list: Display other vessel list. See paragraph 2.7.
AIR: Request message from vessel. See paragraph 2.8.3.

2.3 Operations on the Map Window

2.3.1 Showing detailed target data

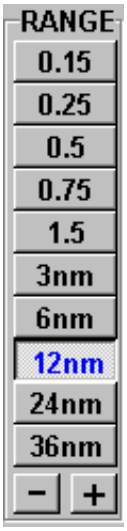
To display detailed data about a target, click the target. Its data appears to the right of the map window. An example is shown below.



Detailed target data

2.3.2 Choosing a display range

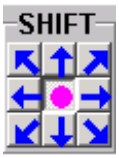
Click the appropriate **Range** button at the left side of the display to choose the display range. Click a range-specific button (0.15 – 36 (nm)), [+] button, or [–] button.



Range buttons

2.3.3 Shifting the display

Use the **Shift** buttons to shift the display. To return own ship to screen center, press the circle button (●).



Shift buttons

2.3.4 Enlarging, shrinking the display

Press and hold down the right and left mouse buttons and a pink cursor (square) appears. Drag the cursor to circumscribe the area to zoom and then release the mouse buttons.

Enlarging: Press and hold down the right and left mouse buttons and drag the mouse in a right-downward motion to show the pink cursor. Release the buttons to enlarge the area selected.

Shrinking: Press and hold down the right and left mouse buttons and drag the mouse in a right-downward motion. When the symbol ⊠ appears release both mouse buttons.

Restoring previous zoom factor: Press and hold down the right and left mouse buttons and drag the mouse in a left-downward motion. Release the mouse buttons when the symbol ⧅ appears.

2.3.5 Choosing a presentation mode

The presentation mode is available in Head-up, North-up or 3D. Use the presentation mode buttons at the right side of the screen to choose a presentation mode.

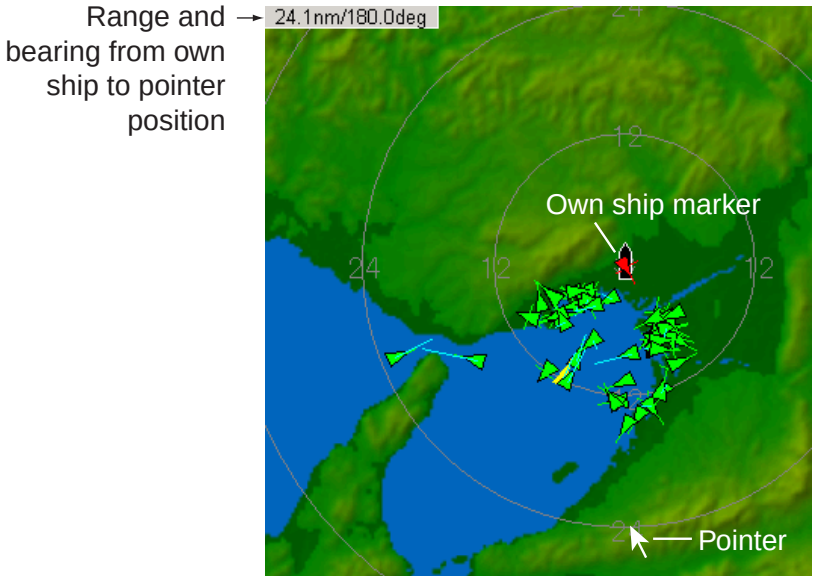
North up: True North is at the screen top.
Head up: Ship's bow is at the screen top. North is indicated with the north marker (⊙).
3D: 3D display with heading at the screen top.

2.3.6 Choosing screen center

Normally, own ship is at the screen center. If you want to make another location the screen center, place the pointer ( )on the location and press the left and right mouse buttons together.

2.3.7 Finding range and bearing to a point

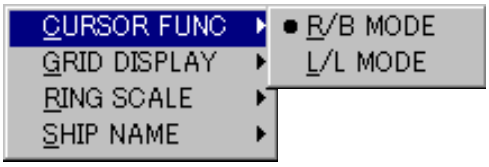
To find range and bearing to a point, place the pointer on a location and check the range and bearing indication at the top of the map window. Note that this function is not available on the 3D display.



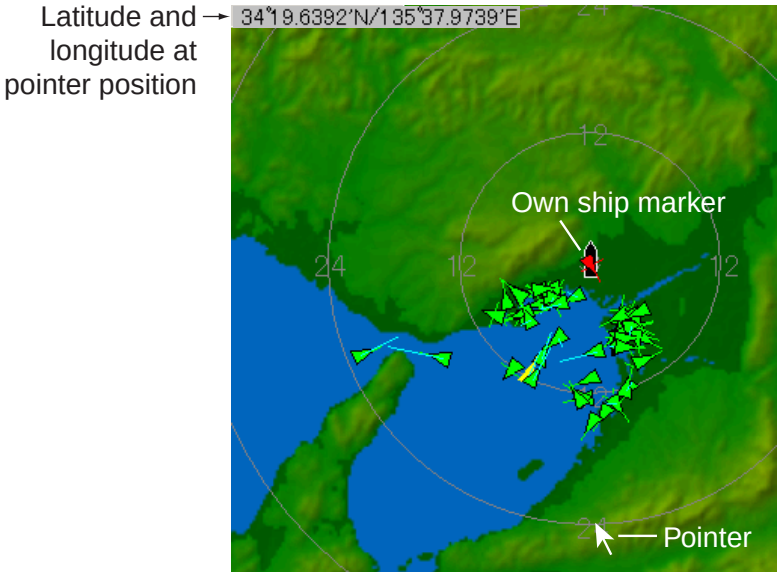
Map window (R/B mode)

Note: Latitude and longitude position of a location selected with the pointer can be shown instead of range and bearing.

1. Click the map window with the right button to display the pop-up menu shown below.
2. Click **CURSOR FUNC**.



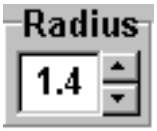
2. Click **L/L MODE**.



Map window (L/L mode)

2.3.8 Setting CPA range

Set a CPA range, with the Radius button and CPA range marker, to be alerted when a target's CPA is less than the CPA range set. Use ▲ or ▼ on the **Radius** button to adjust the CPA range marker. When a target goes inside the marker its symbol turns red. Note that the CPA range marker and the CPA set on the CPA Setting dialog box are independent of one another.

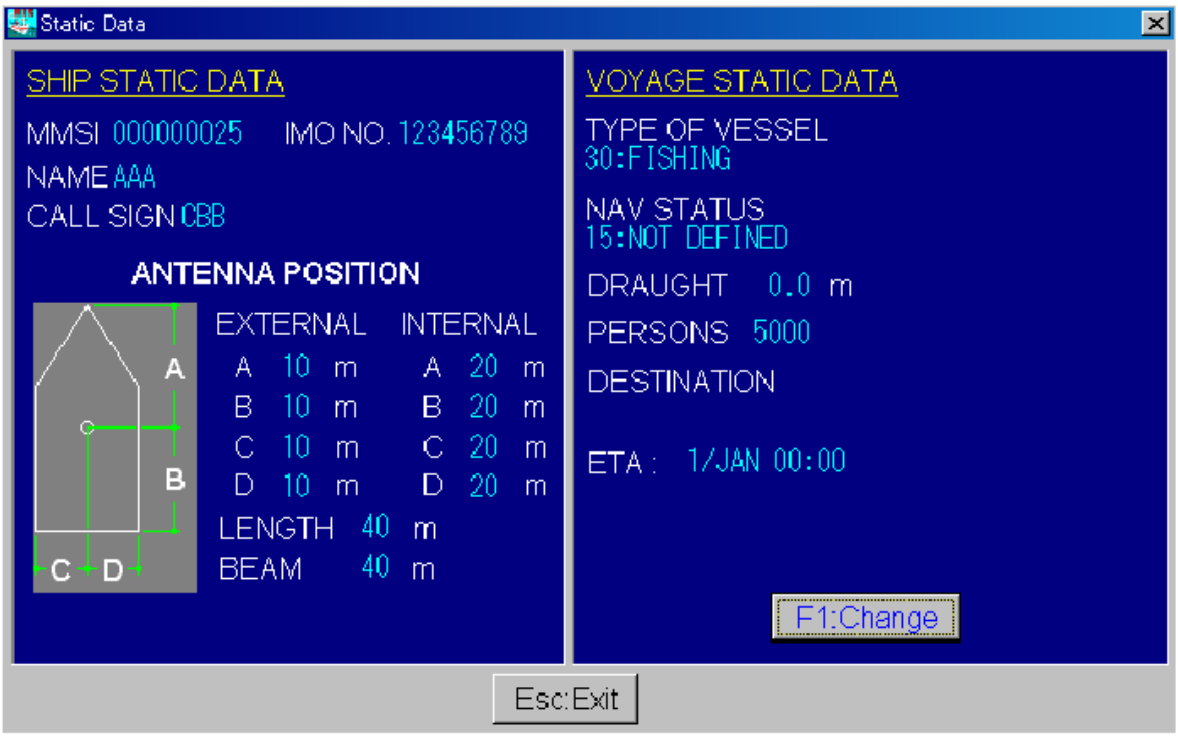


Radius button

2.4 Confirming Own Ship Data

The own ship static data should be checked once per voyage or once per month whichever is shorter.

Click **Own Vessel Data** on the menu bar followed by clicking **Static Data** to show the Static Data dialog box. (You may also display this dialog box by pressing the **F1** key.)

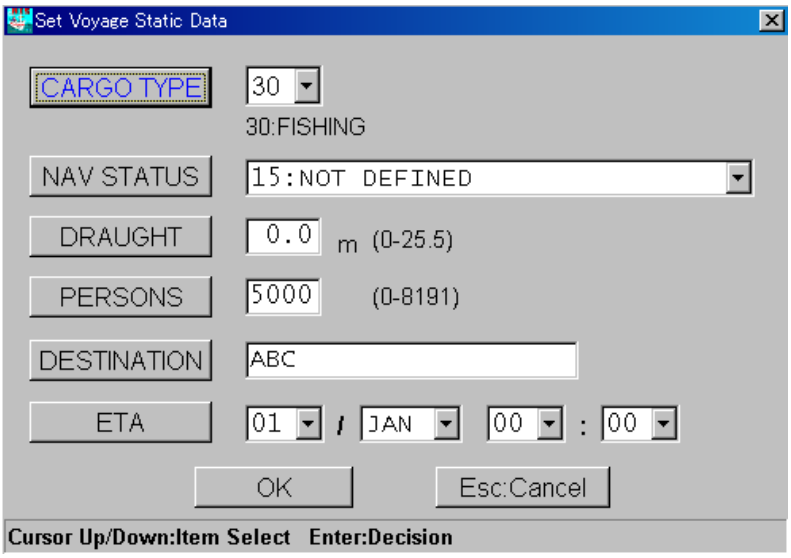


Static Data dialog box

2.5 Setting up for a Voyage

There are six items on the Set Voyage Static Data dialog box you will need to enter at the start of a voyage: cargo type, navigation status, draught(draft), number of person onboard, destination and estimated time or arrival at destination.

1. Click **Own Vessel Data** on the menu bar followed by clicking **Static Data**. (You may also execute this step by clicking **F1:Static Data** at the bottom of the screen or pressing the **F1** key.)
2. Click the **F1:Change** button or press the **F1** key to show the Set Voyage Static Data dialog box.



Set Voyage Static Data dialog box

3. Click the **CARGO TYPE** button. Click ▼ on the CARGO TYPE box, choose appropriate option from the list box and then click the **OK** button. Refer to the table on the next page for cargo type.
4. Click the **NAV STATUS** button. Click ▼ on the NAV STATUS box, choose appropriate nav status from the list box and then click the **OK** button.
   0: UNDER WAY USING ENGINE
   1: AT ANCHOR
   2: NOT UNDER COMMAND
   3: RESTRICTED MANEUVERABILITY
   4: CONSTRAINED BY DRAUGHT
   5: MOORED
   6: AGROUND
   7: ENGAGED IN FISHING
   8: UNDER WAY SAILING
   9-14: RESERVED FOR FUTURE
   15: NOT DEFINED (DEFAULT)
5. Click the **DRAUGHT** button. Enter ship's draft in three digits with the numeric keys and then click the **OK** button.
6. Click the **PERSONS** button. Enter number of persons onboard and then click the **OK** button.

7. Click the **DESTINATION** button. Enter destination with the alphabet keys (max. 20 characters) and then click the **OK** button.
8. Click the **ETA** button. Enter ETA (day, month, hour and minute) and then click the **OK** button.
9. Click the **OK** button to register settings.
10. Click the **Esc:Exit** button or press the **Esc** key to escape.

10	FUTURE USE	ALL SHIPS OF THIS TYPE
11	FUTURE USE	CARRYING DG, HS, OR MP(A)
12	FUTURE USE	CARRYING DG, HS, OR MP(B)
13	FUTURE USE	CARRYING DG, HS, OR MP(C)
14	FUTURE USE	CARRYING DG, HS, OR MP(D)
15	FUTURE USE	FUTURE USE
16	FUTURE USE	FUTURE USE
17	FUTURE USE	FUTURE USE
18	FUTURE USE	FUTURE USE
19	FUTURE USE	NONE
20	WIG	ALL SHIPS OF THIS TYPE
21	WIG	CARRYING DG, HS, OR MP(A)
22	WIG	CARRYING DG, HS, OR MP(B)
23	WIG	CARRYING DG, HS, OR MP(C)
24	WIG	CARRYING DG, HS, OR MP(D)
25	WIG	FUTURE USE
26	WIG	FUTURE USE
27	WIG	FUTURE USE
28	WIG	FUTURE USE
29	WIG	NONE
30	FISHING	
31	TOWING	
32	LENGTH OF THE TOW EXCEEDS 200M OR BREADTH EXCEEDS 25M	
33	ENGAGED IN DREDGING OR UNDERWATER OPERATIONS	
34	ENGAGED IN DIVING OPERATIONS	
35	ENGAGED IN MILITARY OPERATIONS	
36	SAILING	
37	PLEASURE CRAFT	
38	FUTURE USE	
39	FUTURE USE	
40	HSC	ALL SHIPS OF THIS TYPE
41	HSC	CARRYING DG, HS, OR MP(A)
42	HSC	CARRYING DG, HS, OR MP(B)
43	HSC	CARRYING DG, HS, OR MP(C)
44	HSC	CARRYING DG, HS, OR MP(D)
45	HSC	FUTURE USE
46	HSC	FUTURE USE
47	HSC	FUTURE USE
48	HSC	FUTURE USE
49	HSC	NONE
50	PILOT	
51	SEARCH AND RESCUE VESSELS	
52	TUGS	
53	PORT TENDERS	
54	VESSELS WITH ANTI-POLL UTION FACILITIES OR EQUIPMENT	
55	LAW ENFORCEMENT VESSELS	
56	SPARE-FOR ASSIGNMENTS TO LOCAL VESSELS	
57	SPARE-FOR ASSIGNMENTS TO LOCAL VESSELS	
58	MEDICAL TRANSPORTS	
59	SHIPS ACCORDING TO RESOLUTION NO 18	
60	PASSENGER SHIPS	ALL SHIPS OF THIS TYPE
61	PASSENGER SHIPS	CARRYING DG, HS, OR MP(A)
62	PASSENGER SHIPS	CARRYING DG, HS, OR MP(B)
63	PASSENGER SHIPS	CARRYING DG, HS, OR MP(C)
64	PASSENGER SHIPS	CARRYING DG, HS, OR MP(D)
65	PASSENGER SHIPS	FUTURE USE
66	PASSENGER SHIPS	FUTURE USE
67	PASSENGER SHIPS	FUTURE USE
68	PASSENGER SHIPS	FUTURE USE
69	PASSENGER SHIPS	NONE
70	CARGO SHIPS	ALL SHIPS OF THIS TYPE
71	CARGO SHIPS	CARRYING DG, HS, OR MP(A)
72	CARGO SHIPS	CARRYING DG, HS, OR MP(B)
73	CARGO SHIPS	CARRYING DG, HS, OR MP(C)
74	CARGO SHIPS	CARRYING DG, HS, OR MP(D)
75	CARGO SHIPS	FUTURE USE
76	CARGO SHIPS	FUTURE USE
77	CARGO SHIPS	FUTURE USE
78	CARGO SHIPS	FUTURE USE
79	CARGO SHIPS	NONE
80	TANKER	ALL SHIPS OF THIS TYPE
81	TANKER	CARRYING DG, HS, OR MP(A)
82	TANKER	CARRYING DG, HS, OR MP(B)
83	TANKER	CARRYING DG, HS, OR MP(C)
84	TANKER	CARRYING DG, HS, OR MP(D)
85	TANKER	FUTURE USE
86	TANKER	FUTURE USE
87	TANKER	FUTURE USE
88	TANKER	FUTURE USE
89	TANKER	NONE
90	OTHER TYPE OF SHIP	ALL SHIPS OF THIS TYPE
91	OTHER TYPE OF SHIP	CARRYING DG, HS, OR MP(A)
92	OTHER TYPE OF SHIP	CARRYING DG, HS, OR MP(B)
93	OTHER TYPE OF SHIP	CARRYING DG, HS, OR MP(C)
94	OTHER TYPE OF SHIP	CARRYING DG, HS, OR MP(D)
95	OTHER TYPE OF SHIP	FUTURE USE
96	OTHER TYPE OF SHIP	FUTURE USE
97	OTHER TYPE OF SHIP	FUTURE USE
98	OTHER TYPE OF SHIP	FUTURE USE
99	OTHER TYPE OF SHIP	NONE

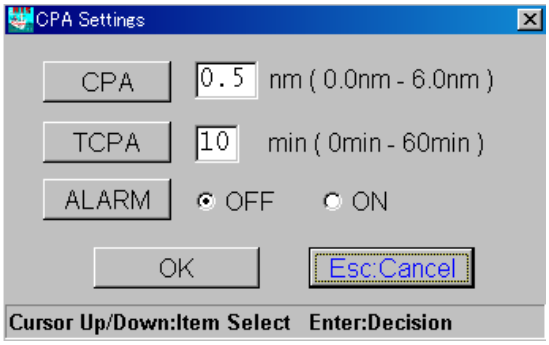
WIG: Wing in ground
HSC: High speed craft
DG: Dangerous goods
HS: Harmful substances
MP: Marine pollutants
0-9: Undefined

Vessel categories

2.6 Setting CPA and TCPA

Set the CPA (Closest Point of Approach) and TCPA (Time to Closest Point of Approach) to be alerted to targets which come close to your vessel. When a ship whose CPA and TCPA are lower than set here, the offending target's CPA and TCPA indications and its symbol are shown in red, provided the visual alarm is active.

1. Click **Option** on the menu bar followed by clicking **CPA Settings** to show the CPA Settings dialog box.



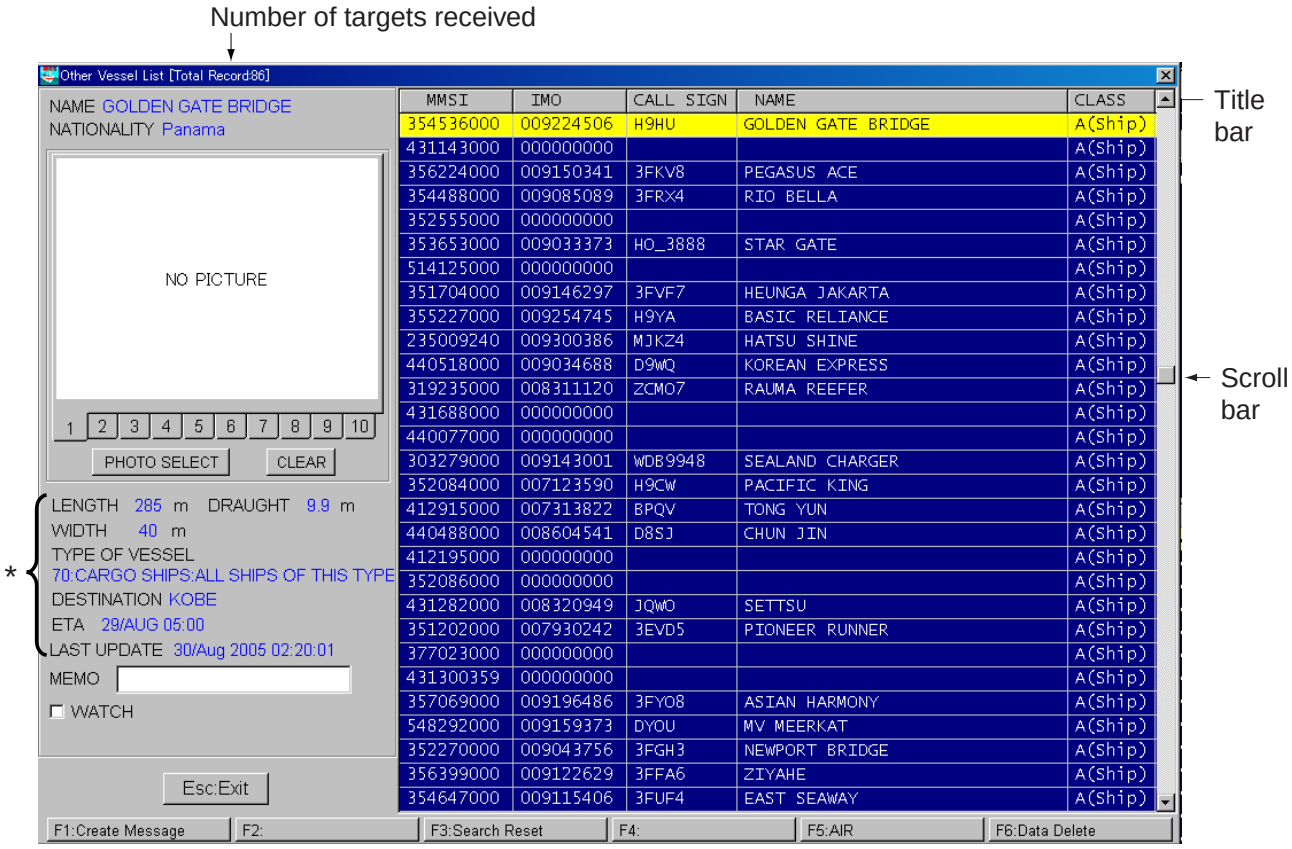
CPA Settings dialog box

2. Click the **CPA** button.
3. Enter CPA in three digits and click the **OK** button.
4. Click the **TCPA** button.
5. Enter TCPA in three digits and click the **OK** button.
6. If you want to be alerted with the visual alarm, click the **ALARM** button, choose ON and then click the **OK** button.
7. Click the **OK** button to finish.

Note: The CPA and TCPA set here are not passed to the FA-150.

2.7 Other Vessel List

The Other Vessel List provides a comprehensive list of all AIS targets you are receiving data from. Click **Target Vessel Data** on the menu bar followed by clicking **Other Vessel List** to display the Other Vessel List. (You may also display the list by clicking **F2:Vessel List** at the bottom of the screen.) AIS targets are initially sorted by MMSI No., lowest number to highest. You may also sort by IMO No., Call Sign or Name. Click the appropriate column title to sort in that manner. The list can be scrolled with the mouse thumbwheel or scroll bar.



* Data shown depends on vessel class.

Other vessel list (example: class A vessel)

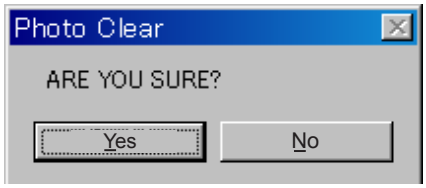
2.7.1 Operations on the other vessel list

Uploading picture of a ship

You can upload a picture (JPEG format) of a ship to display it on the Other Vessel List. As many as ten pictures can be stored per vessel.

1. Click a ship name in the Other Vessel List.
2. Click one of the photo number buttons at the left side of the screen.
3. Click the **PHOTO SELECT** button to choose desired picture. Picture chosen appears at the top left corner.
4. To quit, click the **Esc:Exit** button or press the **Esc** key to escape.

Note: To delete a picture you have uploaded, choose and display it and then click the **CLEAR** button. The prompt shown right appears; click the **YES** button to clear the picture.



Adding comments about a vessel

A MEMO box is provided to enter comments about a vessel. Choose a target from the Other Vessel List and then enter data in the MEMO box.

“Watching” a vessel

You may use the “watch” feature to monitor a vessel. Choose a target from the Other Vessel List, and then check WATCH at the left side of the display. The target’s MMSI no. is then marked in green on the target list. This is also done on the target list.

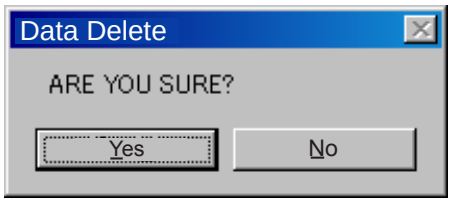
When a watched target transmits the message shown below appears. Click the **OK** button to erase the message. The message does not appear for a watched vessel from which you have received two transmissions.

Searching a vessel

Click the **F3:Search Reset** button or the **F3** key. Enter MMSI No. or ship’s name. The specified vessel is marked on the Other Vessel List.

Deleting data from the vessel list

Choose the target whose data you want to clear, click the **F6:Data Delete** button or press the **F6** key. You are then asked if you want to delete the record. Click the **Yes** button to delete the record.



2.8 Messages

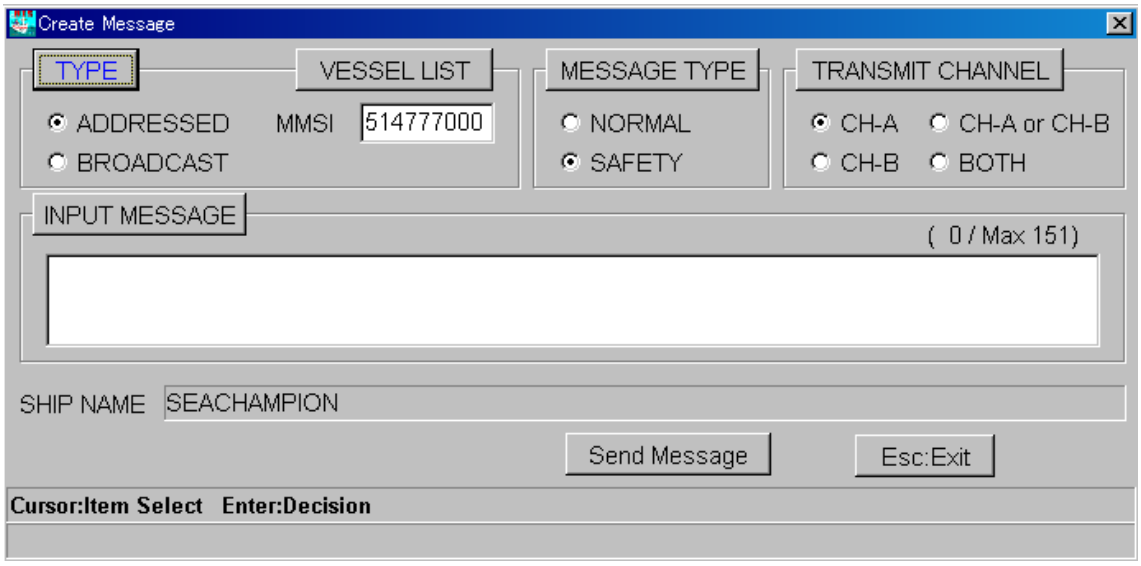
You may send and receive messages via the VHF link, to a specified ship (MMSI) or all ships in the area. Messages can be sent to warn of safety of navigation, for example, an iceberg sighted. Routine messages are also permitted.

2.8.1 Sending a message to a specific vessel

You may send a message to an AIS-equipped vessel as follows:

1. On the Target List, double-click the vessel you want to send a message. The display should now look something like the one below with “ADDRESSED” selected, the MMSI of the target shown in the MMSI box and ship name in the SHIP NAME box.

   Note: You may also choose a vessel from the Other Vessel List. Click **Create Message** on the menu bar to show the Create Message dialog box. Click the **VESSEL LIST** button to show the Other Vessel List. Choose vessel, and then click the **F1:Create Message** button or press the **F1** key.



Create Message dialog box

2. The default message type is “SAFETY”. To choose “NORMAL”, click the **MESSAGE TYPE** button, choose NORMAL and then click the **OK** button.
3. Click the **TRANSMIT CHANNEL** button. Choose the VHF channel over which to send the message and then click the **OK** button.
4. Click the **INPUT MESSAGE** button. Type your message in the window and then click the **OK** button. Up to 151 characters may be entered.
5. Click the **Send Message** button.

   The message is sent to the FA-150 for transmission. If a message sent to a specific ship is not acknowledged, it may not be possible to transmit another message for about one minute.

6. Click the **Esc:Exit** button or press the **Esc** key to finish.

2.8.2 Sending a message to all vessels

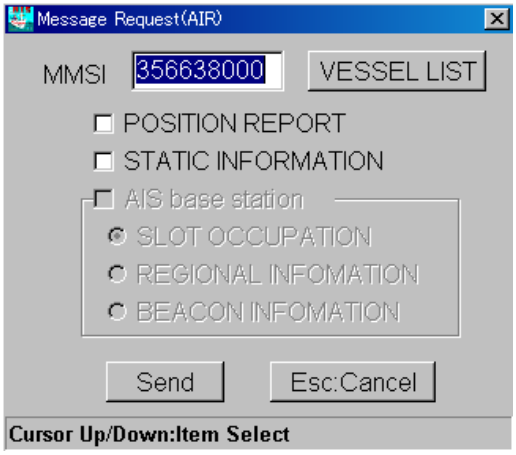
You may send a message to all AIS-equipped vessels as follows:

1. Click **Message** on the menu bar and then click **Create Message** to show the Create Message dialog box.
2. If TYPE is selected to “ADDRESSED”, click the **TYPE** button, choose BROADCAST and then click the **OK** button.
3. The default message type is “SAFETY”. To choose “NORMAL”, click the **MESSAGE TYPE** button, choose NORMAL and then click the **OK** button.
4. Click the **TRANSMIT CHANNEL** button. Choose the VHF channel over which to send the message and then click the **OK** button.
5. Click the **INPUT MESSAGE** button. Type your message in the window and then click the **OK** button. (Up to 151 characters may be entered.)
6. Click the **Send Message** button to send your message, via the FA-150.
7. Click the **Esc:Exit** button or press the **Esc** key to finish.

2.8.3 Requesting a message

You may request static data or position data from an AIS-equipped vessel.

1. Choose a vessel by one of the following methods:
   a) On the Target List, click the vessel from which you want to request a message, and the Message Request (AIR) dialog box appears. (Alternately you may choose the vessel by clicking the **F8: AIR** button at the bottom of the screen or pressing the **F8** key. You will have to enter the MMSI No. of the vessel to use those methods.)



Message Request (AIR) dialog box

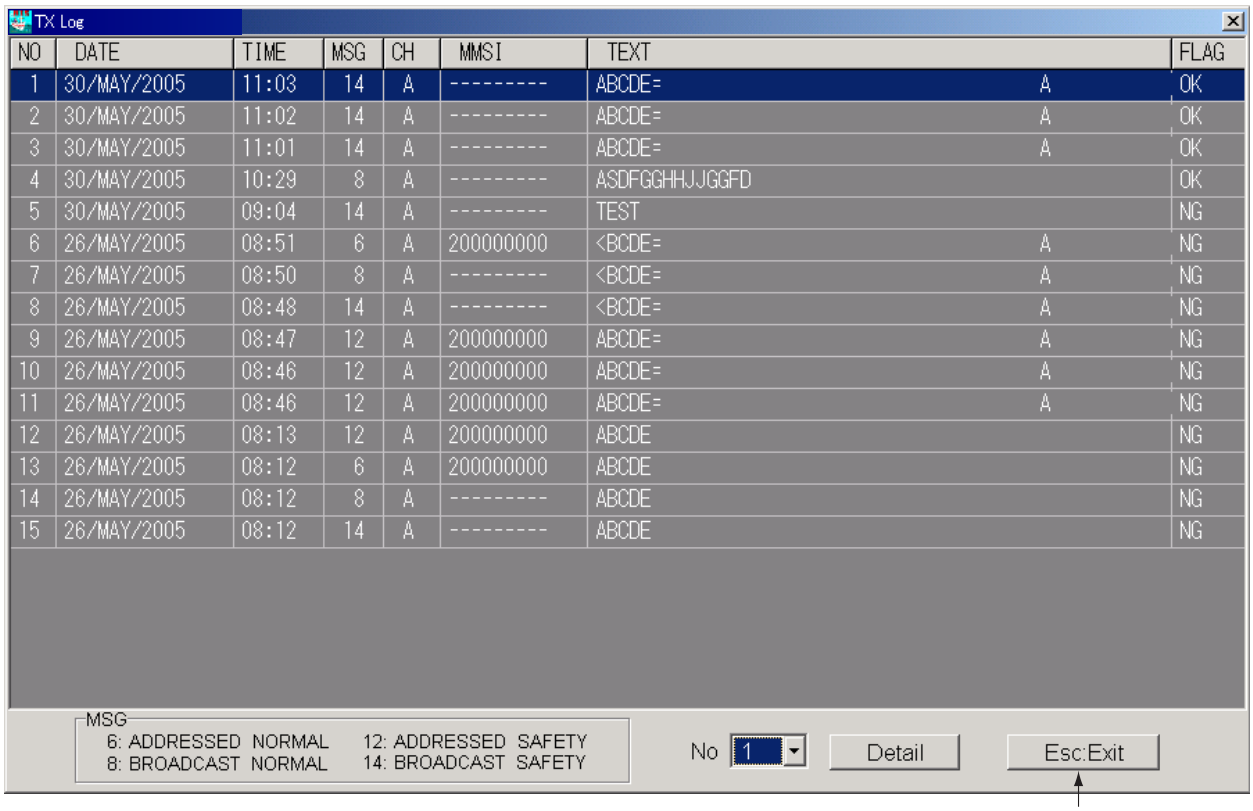
   b) Click the **F8: AIR** button at the bottom of the screen or the **F8** key. Click the **VESSEL LIST** button to show the Other Vessel List. Choose vessel and then click the **F5:AIR** button or press the **F5** key.
2. Check POSITION REPORT or STATIC INFORMATION as appropriate. POSITION REPORT to request position, or STATIC INFORMATION to request that vessel’s static information.
3. Click the **Send** button.

2.8.4 Message logs

TX log

The Tx log stores the latest 20 transmitted messages. When the log becomes full the oldest sent message is automatically deleted to make room for the latest.

Click **Message** on the menu bar followed by clicking **TX log** to show the TX log.



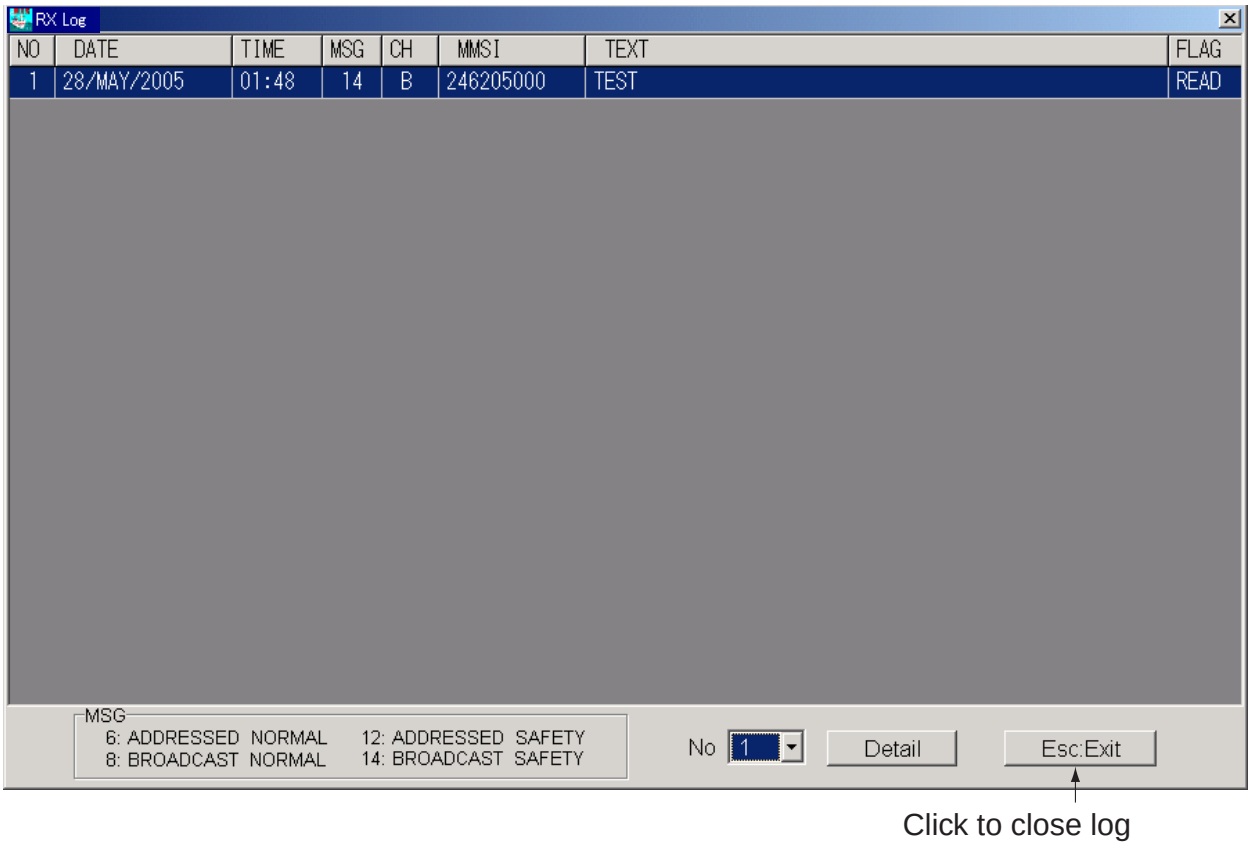
TX log

- The meaning of ID codes is shown at the bottom of the log.
- **To display a message,** double click it or choose it with the No. scroll button and then click the **Detail** button.
- **To initiate a message from a log,** choose the intended recipient from the message list and then click the **Create Message** button. The Create Message dialog box appears and the intended recipient's particulars (MMSI no., etc.) are automatically selected. Type your message and then click the **Send Message** button to send the message.

Rx log

When a message is received the message “YOU’VE GOT A MESSAGE #XX (XX = message no.) appears. Click the **Read** button to show the Rx log. You may also display the Rx log by clicking **Message** on the menu bar followed by clicking **RX Log**.

The Rx log stores the latest 20 received messages. When the log becomes full the oldest received message is automatically deleted to make room for the latest.



RX log

- The meaning of ID codes is shown at the bottom of the log**.**
- **To display a message,** double click it or choose it with the No. scroll button and then click the **Detail** button.
- **To reply to a message from the Rx log,** choose the intended recipient from the log and then click the **Create Message** button. The Create Message dialog box appears and the intended recipient’s particulars (MMSI no., etc.) are automatically selected. Type your message and then click the **Send Message** button to send the message.

2.9 Regional Operating Channels

AIS operates primarily on two dedicated VHF channels, CH 2087 and CH2088. Where these channels are not available regionally, the AIS is capable of being automatically switching to designated alternate channels by means of a message from a shore facility. Where no shore based AIS or GMDSS sea area A1 station is in place, the AIS should be switched manually as in paragraph 2.9.2.

A regional operating area is set with the procedure below. The most recent eight areas are memorized as shown below.

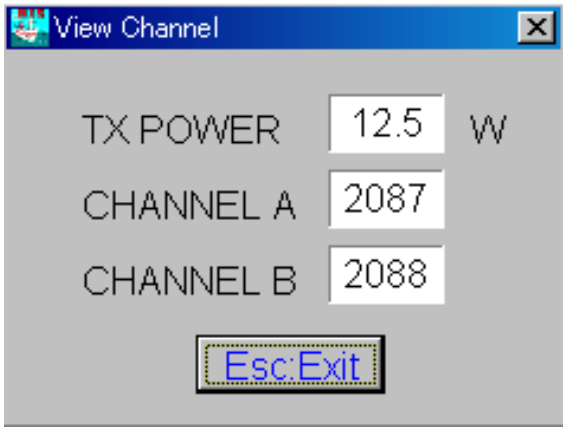
- Automatic setting of VHF DSC (channel 70) from shore-based AIS
- Automatic setting by AIS message from shore-based AIS
- Setting by shipboard system such as ECDIS
- Manual setting

The default values at a regional operating area are as follows:

- Tx power: High (12.5 W)
- Channel no. 2087, 2088
- Frequency bandwidth: 25 kHz
- Tx/Rx mode: Tx/Rx

2.9.1 Viewing channels, Tx power

1. Click **Own Vessel Data** on the menu bar followed by clicking **View Channel** to show the View Channel window.



View Channel window

2. Click the **Esc:Exit** button or press the **Esc** key to close the window.

2.9.2 Editing regional operating area status

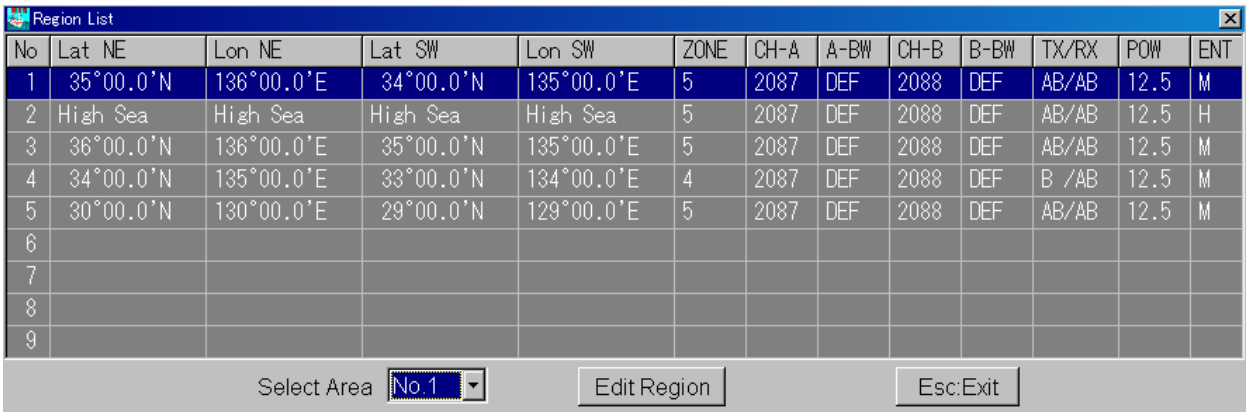
You may display the status of regional operating areas currently memorized in the equipment. Nine of any combination of AIS message from shore-based AIS, DSC message, manual settings and commands from ECDIS may be registered.

About registering areas

- Adjustment is normally not required.
- AIS and DSC messages registered within last two hours cannot be edited.
- “High Sea” data cannot be edited. (High sea data is used on high seas and is not controlled by a reference station.)
- If two areas overlap one another the oldest data is deleted.
- Data older than five weeks is deleted.
- Area data is deleted when it is more than 500 miles from the area for which it was registered.

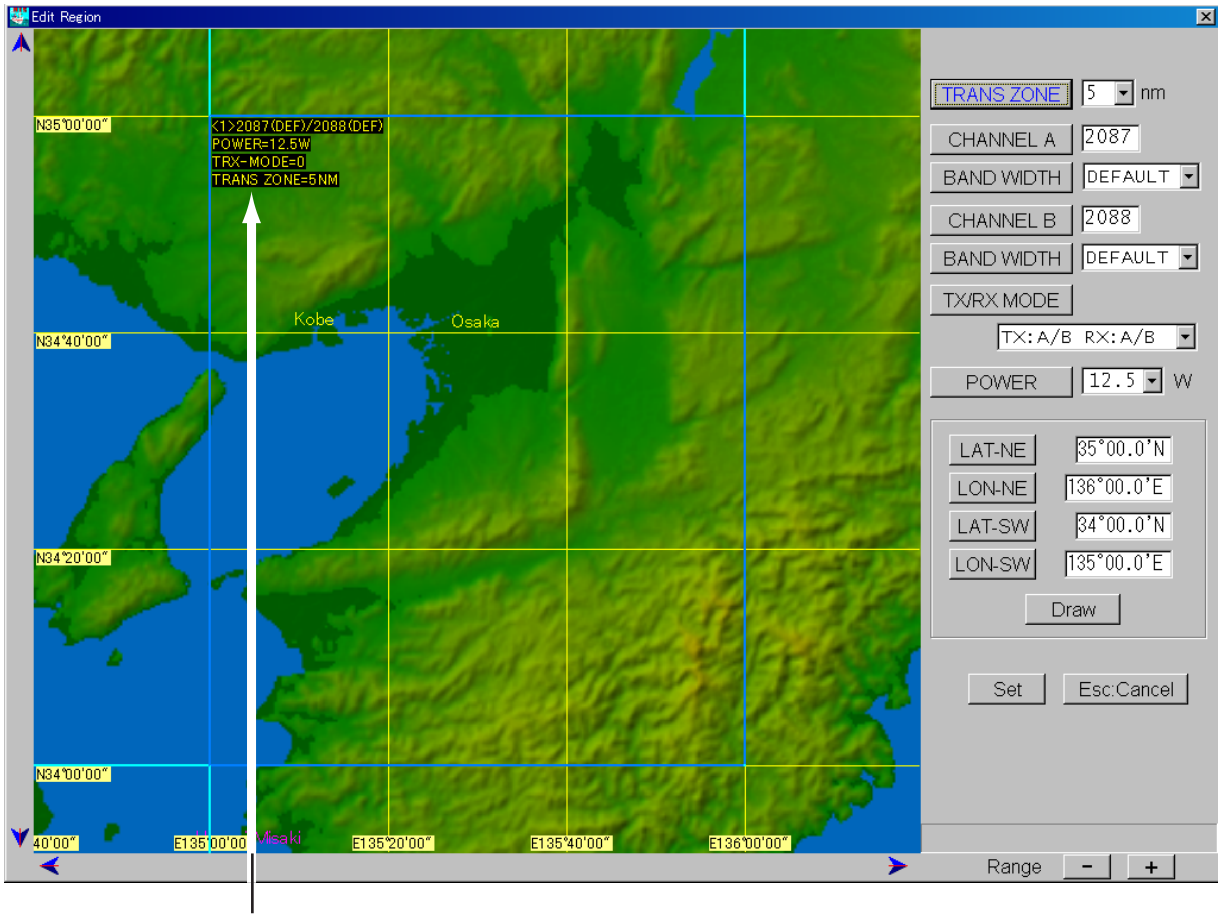
Procedure

1. Click **Own Vessel Data** on the menu bar followed by clicking **Region list** to show the Region List dialog box.



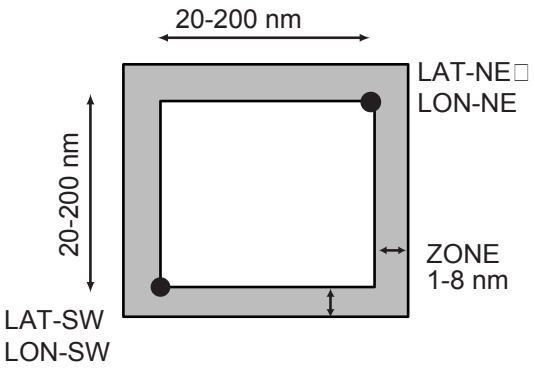
Region List dialog box

2. Choose the region to edit:
   - Double-click the region on the list, or
   - Choose region from the **Select Area** list box and then click the **Edit Region** button.



Region settings
1) Channel, bandwidth
2) Power
3) TRX mode
4) Transmission zone

3. Click the T**RANS ZONE** button. Choose zone size (1-8 nm) from the list box and then click the **OK** button. TRANS ZONE means the transition zone of a channel. The specified primary channel (A channel) within the transition zone and the primary channel within the adjoining sea area used.)



4. Click the **CHANNEL A** button. Key in channel number with the numeric keys and then click the **OK** button. See the appendix in the operator's manual for the FA-150 for channels.

5. Click the **BAND WIDTH** button. Choose band width from the list box for either DEFAULT or 12.5 kHz and then click the **OK** button. “Default” judges band width by channel number.
6. Set CHANNEL B and its bandwidth similar to how you set CHANNEL A.
7. Click the **TX/RX MODE** button. Choose TX/RX mode from the list box and then click the **OK** button.

   TX: A/B RX: A/B, TX: A RX: A/B, TX: B RX: A/B
   RX: A/B, RX: A, RX: B
8. Click the **POWER** button. Choose power (1, 2 and 12.5(W)) from the list box and then click the **OK** button.
9. Do one of the following to specify sea area:

   Designate sea area on map

   a) Place the pointer on the start point of the area.
   b) Place the pointer on the end point of the area.
   c) Click the left button. The color of the cursor changes from orange to blue. The area specified here will be reflected in the

   Manually enter NE and SW latitude and longitude

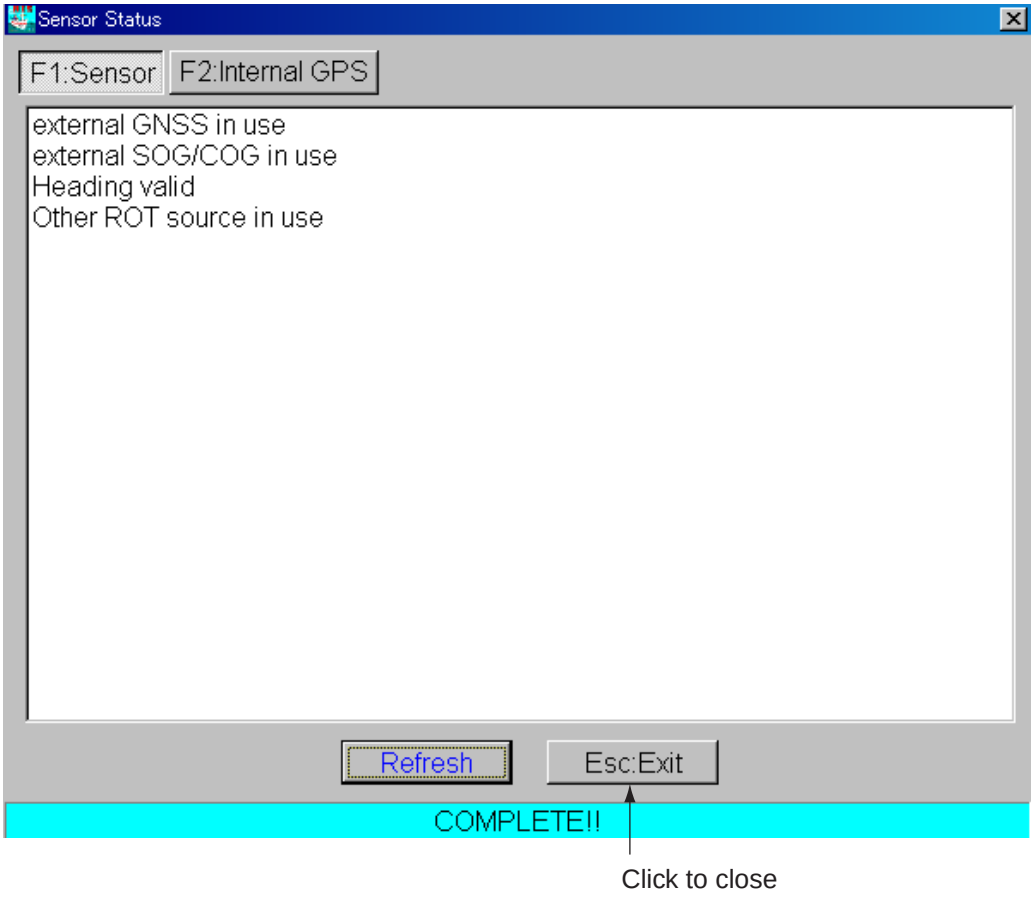
   a) Click the **LAT-NE** button. Enter latitude-northeast position and then click the **OK** button.
   b) Click the **LON-NE** button. Enter longitude-northeast position and then click the **OK** button.
   c) Click the **LAT-SW** button. Enter latitude-southwest position and then click the **OK** button.
   d) Click the **LON-SW** button. Enter longitude-southwest position and then click the **OK** button.
   e) Click the **Draw** button to redraw the region, according to your settings.
10. Click the **Set** button to finish.

2.10 Status Displays

2.10.1 Sensor status display

The sensor status display provides sensor status information. You may display it as follows:

1. Click **Option** on the menu bar followed by clicking **Sensor Status** to show the Sensor Status dialog box. (You may also display it by clicking **F5:Sensor** (at the bottom of the screen) or pressing the **F5** key.)
2. If sensor status is not shown, click the **F1:Sensor** button or press the **F1** key.



Sensor status display (sensor status)

- To update this window, click the **Refresh** button.

2.10.2 GPS status display

The GPS status display shows GPS receiver antenna position, speed over ground, course, date, time, mode, position fixing status, GPS receiver in use, RAIM accuracy and position fixing accuracy. You may display it as follows:

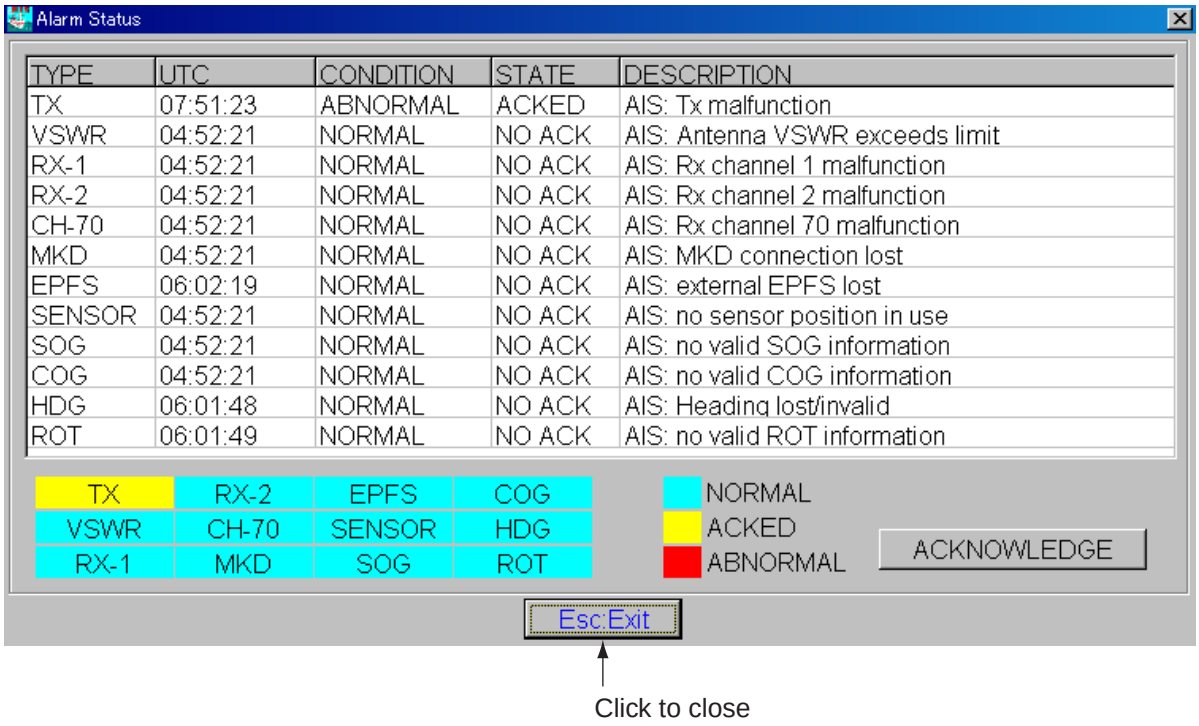
1. Click **Option** on the menu bar followed by clicking **Sensor Status** to show the Sensor Status dialog box.
2. If not the GPS status display is not shown, click the **F2:Internal GPS** button or press the **F2** key.

Sensor status display (GPS status)

2.10.3 Alarm status display

The Alarm Status display appears whenever a condition is breached. You may also show this display by

- clicking **Option** and **Alarm status** on the menu bar,
- clicking **F6:Alarm** (at the bottom of the screen), or
- pressing the **F6** key.



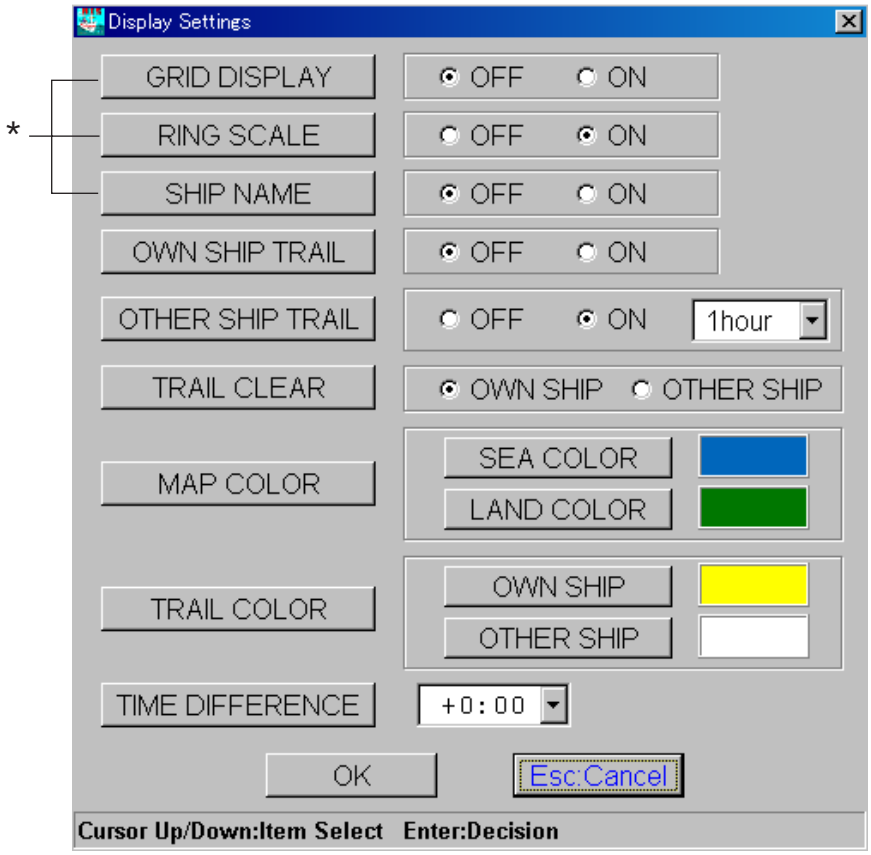
Alarm Status display

- The status received from the AIS transponder is shown in color: Light-blue, normal; Yellow, acknowledged, and Red, abnormal.
- To send acknowledgement to the FA-150 for an item displayed in red, click the **ACKNOWLEDGE** button. After the FA-150 receives this information the indication formerly shown in red is then shown in yellow.

2.11 Display Settings

The map window may be customized to suit your operating needs, on the Display Settings dialog box.

1. Click **Option** on the menu bar followed by clicking **Display Settings** to show the Display Settings dialog box.



* These items may also be set from the map window by pressing the right mouse button to show the pop-up menu shown on page 20.

Display Settings dialog box

2. Set options in the dialog box as appropriate, referring to the description below.

Display Settings dialog box description

GRID DISPLAY: Turns the grid on or off.

RING SCALE: Turns the ring scale indication on or off.

SHIP NAME: Turns the ship name display on or off.

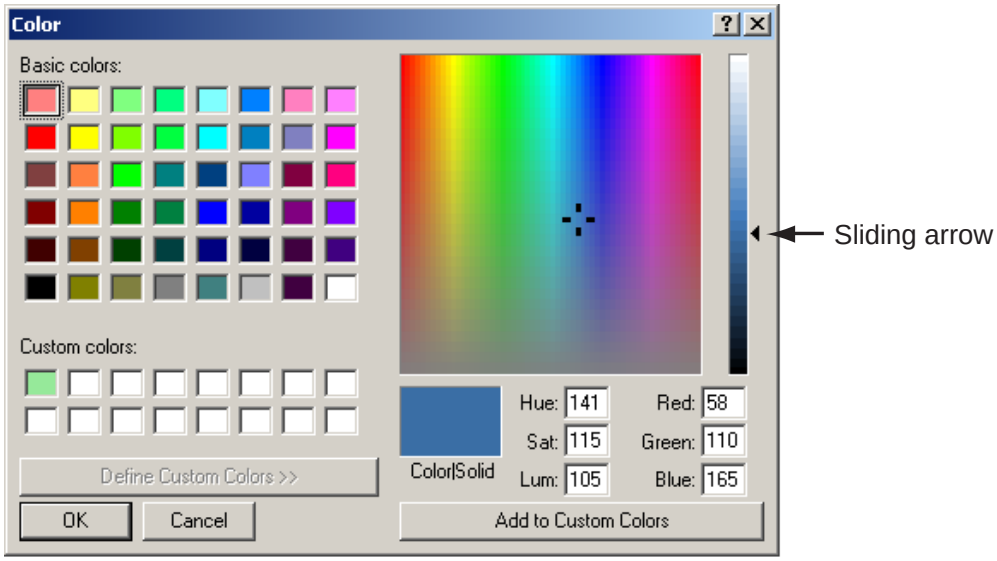
OWN SHIP TRAIL: Turns own ships trails on or off.

OTHER SHIP TRAIL: Turns other ships' trails on or off. You may set the plotting interval for other ships' trail with the scroll bar. The available intervals are 5 minutes, 10 minutes, 30 minutes, 1 hour and 2 hours.

TRAIL CLEAR: Clears own ship's and other ships' trails. Choose the trail to clear and then press the **OK** button. You are asked if it is OK to clear trails. Click the **Yes** button to clear chosen trail.

MAP COLOR: Chooses the color for sea and land.

1. Click the **MAP COLOR** button followed by clicking the **SEA COLOR** or **LAND COLOR** button as appropriate to show the Color dialog box.



Color dialog box

2. Choose a color from the Basic colors window.

   Note: To save a color to "Custom colors" (useful when you want to create several sets of colors to match lighting conditions, for example) click a box in Custom colors, choose a color from the Basic colors window and then click the **Add to Custom Colors** button.

3. If desired, you may "fine tune" the color with the sliding arrow:
   a) Place the pointer on the arrow and then push and hold down the left button while dragging the mouse to shift the arrow.
   b) Release the button when the color shown in the Color/Solid window is to your liking.
4. Click the **OK** button to finish.

TRAIL COLOR: Chooses the color for own ship's and other ships' trails. The procedure is similar to that for MAP COLOR.

TIME DIFFERENCE: If you would rather use local time (instead of UTC), enter the time difference between your time and UTC time.

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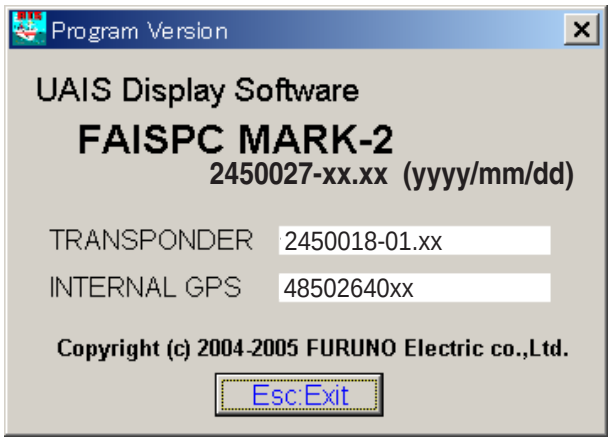
3. TROUBLESHOOTING

3.1 Displaying Program Version Numbers

Click **About** on the menu bar followed by clicking **Program Version** to show the program version no. of the UAIS display software, transponder and internal GPS. To close the display, click the **Esc:Exi**t button or press the **Esc** key.



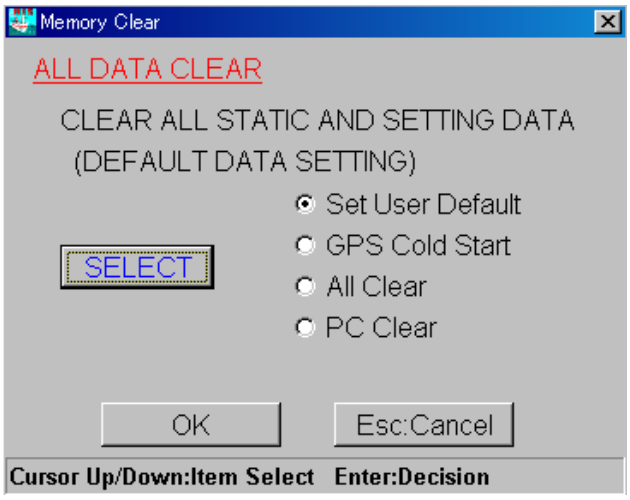
xx = Program version no.

Program Version display

3.2 Clearing Memories

You may clear all or specific memories in the FA-150 to start operation afresh with default settings. Note that MMSI and IMO numbers are not cleared.

1. Click **Initial Settings** on the menu bar followed by clicking **Memory Clear** to show the Memory Clear dialog box.



Memory Clear dialog box

2. Click the **SELECT** button.

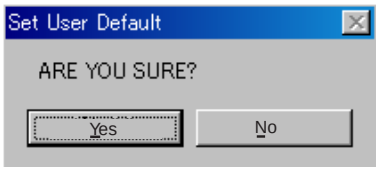
3. Choose the memory to clear:

Set User Default:	Restore default user settings.
GPS Cold Start:	Execute cold start to clear outdated Almanac from the GPS receiver.
All Clear:	Restore all default settings.
PC Clear:	Restore all default PC settings.

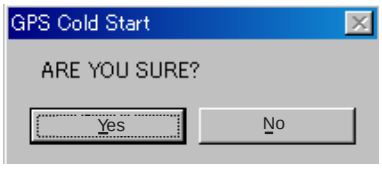
4. Click the **OK** button. Do one of the following depending on the choice you made at step 3.

Set User Default, GPS Cold Start, PC Clear

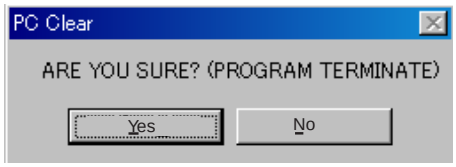
Click the **Yes** button to clear data chosen.



Set User Default



GPS Cold Start

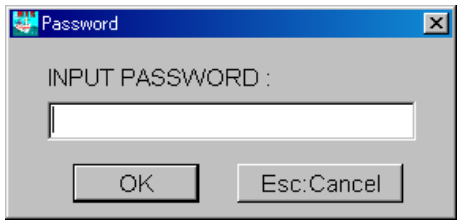


PC Clear

Clear confirmation prompts for Set User Default, GPS Cold Start and PC Clear

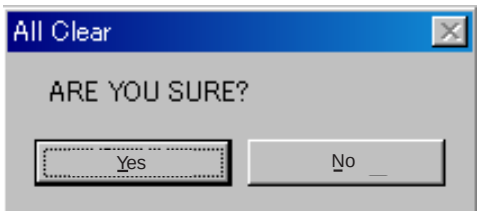
All Clear

The Password Input box appears.



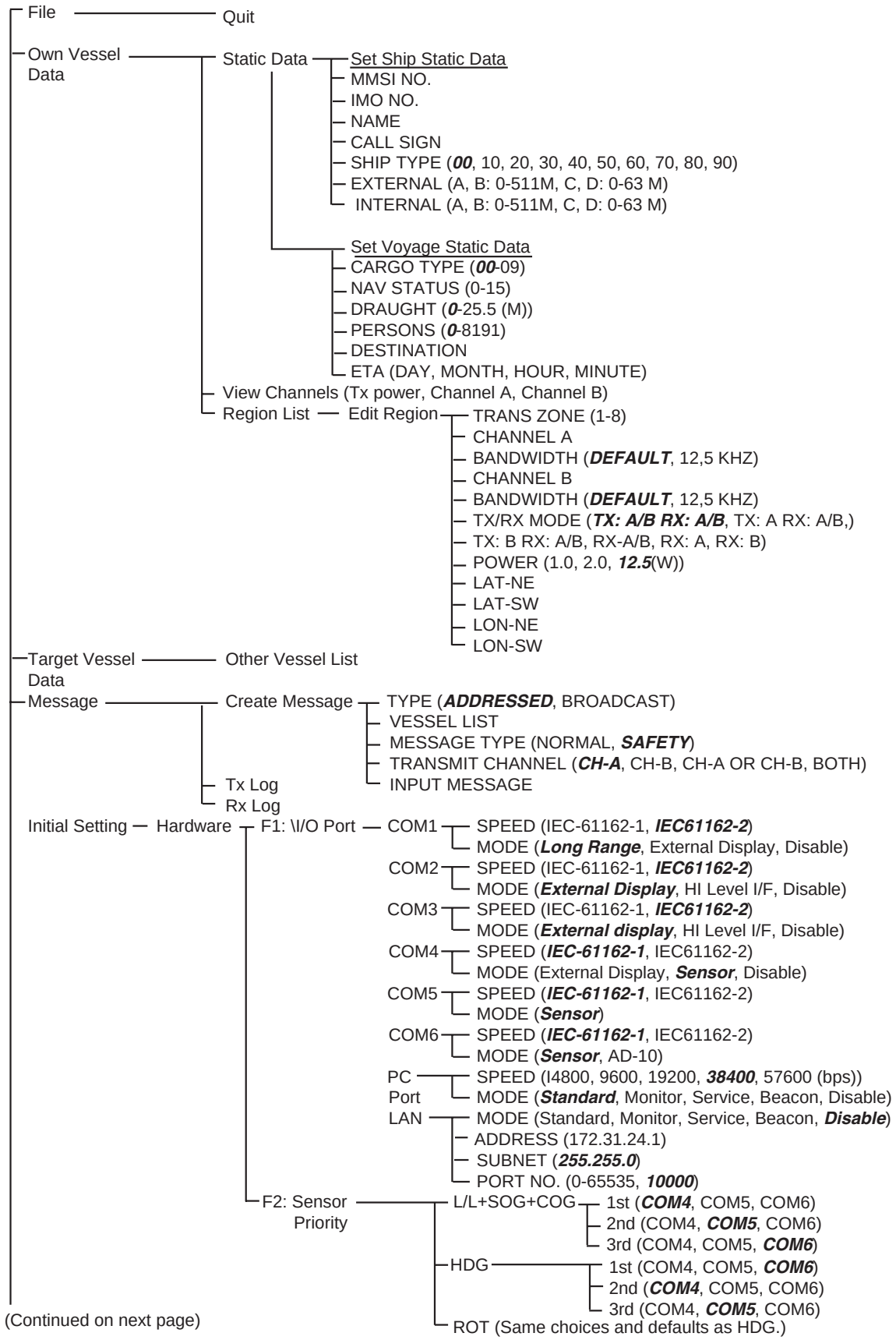
Password input box

Enter password and click the **OK** button, and the prompt shown below appears. If you are sure to clear all data, click the **Yes** button.



APPENDIX

Menu tree



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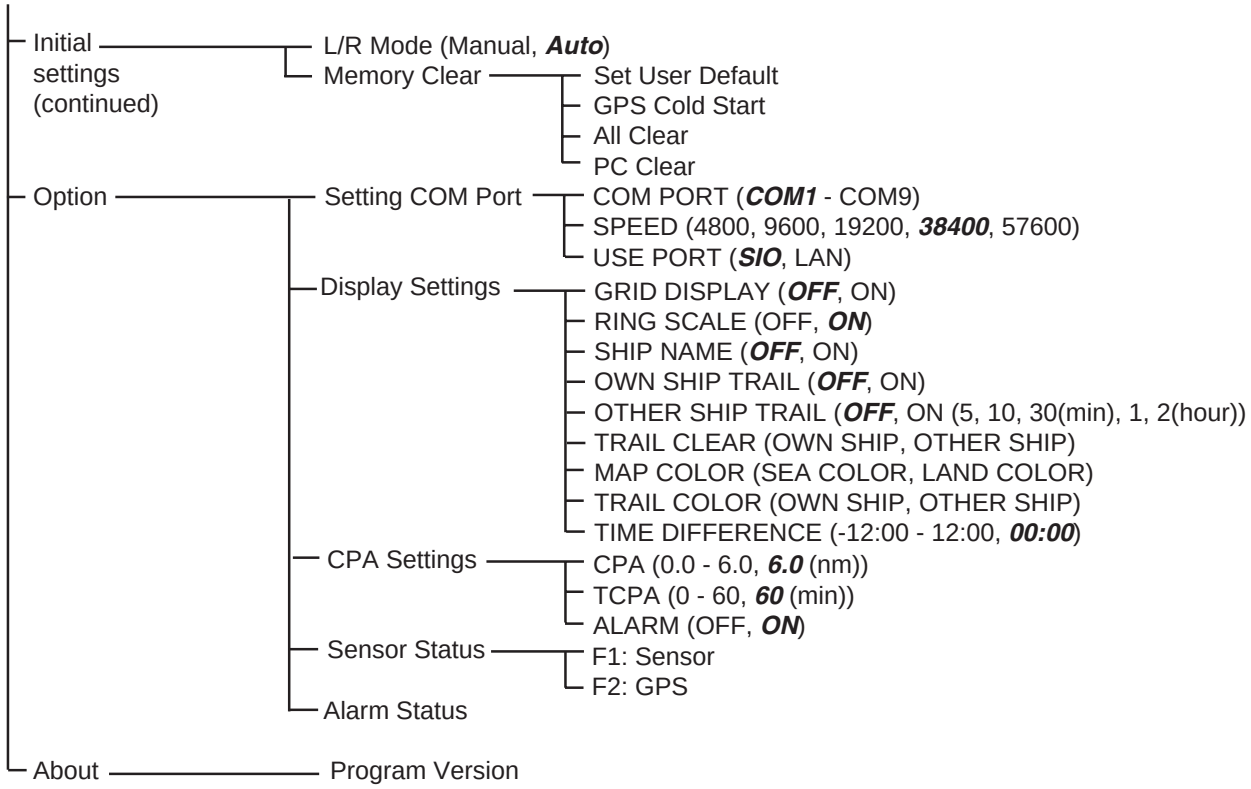

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