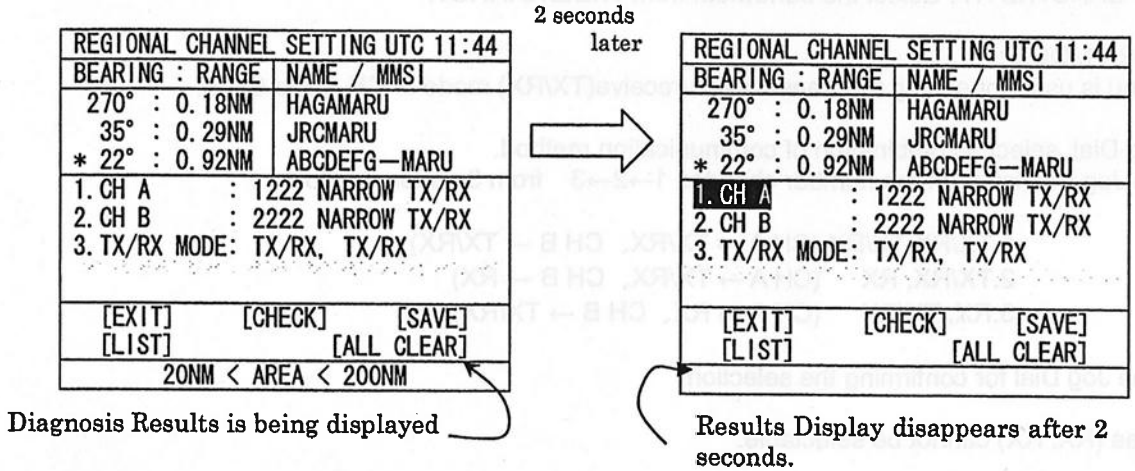
a) CONFIRMATION OF SETTINGS

When you completed step 7 above, the cursor moves down to [EXIT] at the bottom of the screen. Bring the cursor on [CHECK] with the Jog Dial and press it. Then the result of diagnosis is displayed at the bottom of the screen.

If the message does not show an error, you can register it by selecting and confirming [SAVE].



Information	Notes
20NM<AREA<200NM	Display the message for 2 seconds.
AREA CORNER ERR	
AREA 500NM OVER	
CH BW ERR	
OTHER ERR	
OVERTIME ERR	

5.2.4.4 LONG RANGE RESPONSE SETTINGS

If 4.LONG RANGE RESPONSE is selected, the screen is ready to set up for Long Range Response. Auto response(AUTO) and manual response(MANUAL) can be selected.

This setting works when a long range communication device is connected.

The default setting is AUTO. Use the Jog Dial for selection and confirmation.

| 4. LONG RANGE RESPONSE : AUTO |

5.2.4.5 BUZZER SETTINGS

5.BUZZER is the setting for buzzer sound.

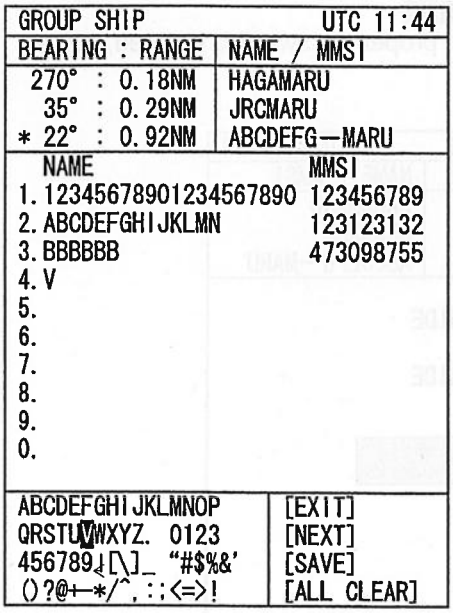
By changing this setting, user can select on/off of the buzzer.
If OFF is selected, all the sound devices including alarms, key-click sounds are stopped.

| 5. BUZZER : ON |

Buzzer sound setting

ON: Buzzer sound on
OFF: No buzzer sound

5.2.4.6 GROUP SHIP REGISTORATION



Group Ships Registration

When 6.GROUP SHIP is selected, GROUP SHIP opens.
Use this screen for registering group ships.

Maximum 10 ships can be registered as a group ship.
When [SAVE] is selected, the information is saved.

Other ships which are registered as group ships, obtain "*" on the other ships list. And the Ship Name shown in other ships list succeeds the names which are registered from this screen.

[Registration Procedure]

1. Entering Name

When this menu opens, the cursor is on 1.
Rotate the Jog Dial and the cursor move up/down over the numbers.
Select the number and press the Jog Dial, the cursor jumped to the entry of NAME and at the same time, a cursor is on A in the keyboard area. Then the name can be entered.
The method of using keyboard, see 5.1.1

2. Entering MMSI

After completing the name entry, select and push [NEXT] by the Jog Dial, then the cursor jumps to the MMSI entry area.
Numeric Entry for MMSI, see 5.1.2.
When the entry of MMSI has completed, the cursor move to next line.

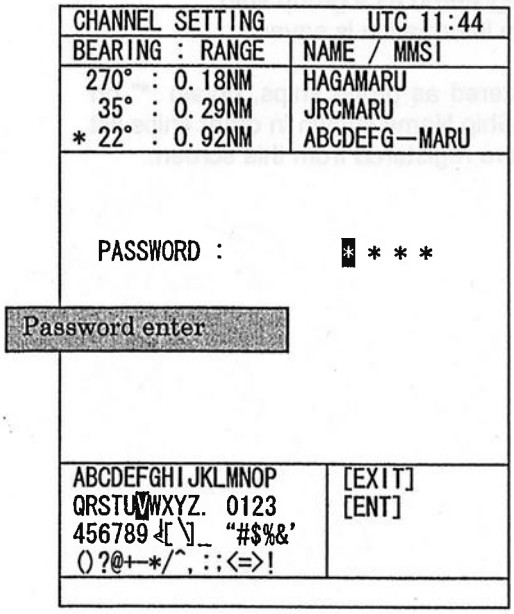
While the cursor is between 1 and 10, if it is rotated left, then jump down to [EXIT]. (Not Keyboard Area)

Select [EXIT], then discard the contents and return to SETUP.
Select [SAVE], then save the contents and return to SETUP.
Select [ALL CLEAR], then discard all contents and the cursor returns to 1.

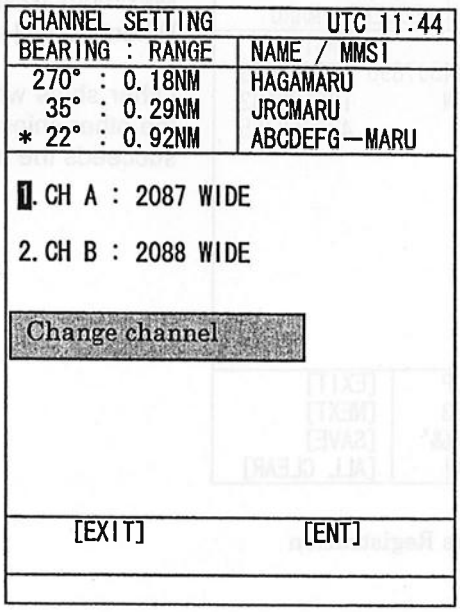
5.2.4.7 CHANGING THE CHANNEL

In case, a user want to change a channel, select 7.CHANNEL SETTING
After that, type in password from Password Input Screen(①) and the proper password is entered, go to Next screen(②)

①



②



[Procedure]

1. **Entering Password**
   For creating password which consists of 4 digit, using 『A~9』 by the Jog Dial.
   Enter 4 digits and finally confirm by pressing the Jog Dial, then the cursor jumps to [EXIT].
   ① Select [EXIT], and return to SETUP
   ② Select [ENT], and proceed to Changing Channel Screen.

2. **Changing Channel**
   Enter channel number and select the width.
   In Changing Channel screen, bring the cursor on 1.

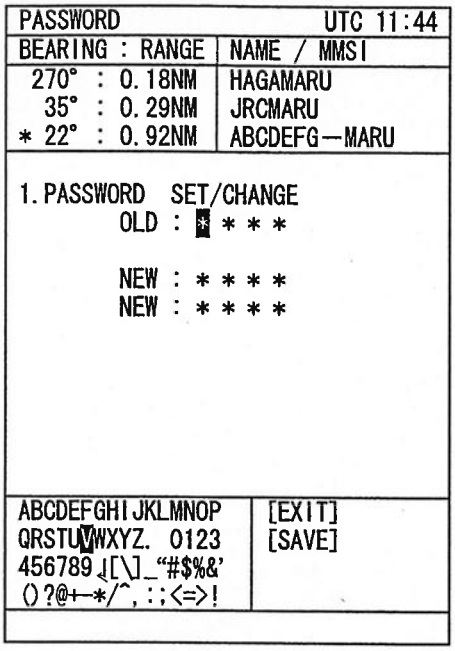
   ① On 1. , press the Jog Dial for confirming and bring the cursor to the Channel number (in the picture above, channel numbers are 2087 and 2088)
   ② See 5.0.2. for entering numeric valus
   ③ The channels which can be chosen at this moment are acceptable. But numbers besides registered channel number is specified, then the contents are discarded and the cursor jumps to the channel number entry area.
   ④ As to the Channel Number, see 『command list; 』
   ⑤ If the Jog Dial is pressed at the right edge of the channel number input area, the cursor moves to WIDE.
   ⑥ The width can be selected from: a)WIDE, b)NARROW
   ⑦ Select the width and press the Jog Dial, the cursor jumps to the next item.

The setting procedure for 2 is same as the procedure for 1.
When the setting for 2 has completed or while the cursor is over 2, if the Jog Dial is rotated to left, the cursor moves down to [EXIT].

1. If [EXIT] is selected, discard the contents and return to SETUP screen.
2. If [ENT] is selected, output a command and return to SETUP screen.

5.2.4.8 CHANGING PASSWORD

Select 8. PASSWORD, then the screen for Password setting appears.
The passwords for turning off the electricity or changing channel are set up from this screen.
Passwords should be administrated by a person who is in charge of ship.



Pass word setting screen

Rotate the Jog Dial for moving the cursor.

Press the Jog Dial and submenus will be displayed.

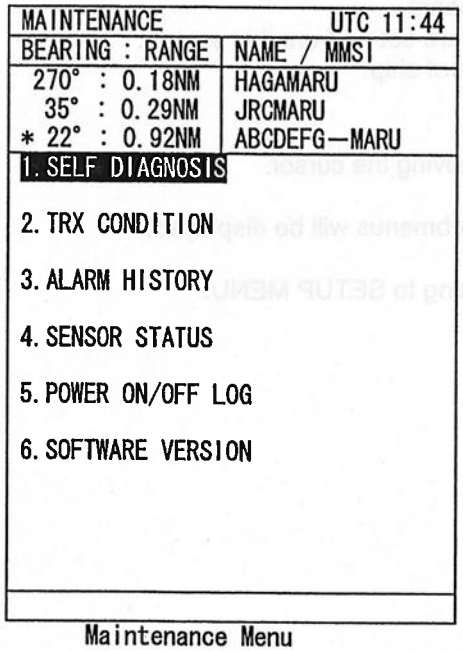
Press CLR key for returning to SETUP MENU.

[Procedure]

1. When the submenu is opened, the cursor is on * of the leftmost of the line of OLD. At the same time, there is a cursor in the keyboard area of the screen.
2. Use keyboard and type in 4 digits password after "OLD:".
3. When you type in the fourth letter and confirm by pushing the Jog Dial, then
   - If the password now input matched the current password, then the cursor jumps to the next line.
   - If the password now input does not match the current password, the cursor return to 1.
4. Type in the 4 digits new password, after upper "NEW:" for creating new password.
5. When you type in the fourth letter, then the cursor jumps to the next line. Then type in new pass word after the lower "NEW:"
   - ➢ If two passwords match, then the cursor moves to [EXIT]
   - ➢ If two new passwords don't match, the cursor return to 1.
6. And
   - If you select [EXIT], discard the contents and return to SETUP MENU.
   - If you select [SAVE], save the contents and return to SETUP MENU.

Caution :
Only alphabets and numbers can be used for password.
You can not move cursor irregularly, (such as "from 1. to keyboard area" or "Keyboard area to [EXIT]" etc.) by rotating left the Jog Dial.

5.2.5 MAINTENANCE



Maintenance Menu

When 5.MAINTENANCE is selected from Main Menu (5.2) Maintenance Menu appears.

Users can check current status of the system by the menu.

Outlines of the menu:

1. SELF DIAGNOSIS
   Perform Self Diagnosis test.

2. TRX CONDITION
   Display Logs which enable to confirm what sea area the ship has been crossing. (Maximum eight items)

3. ALARM HISTORY
   Display alarm logs for disorders. (Maximum ten items)

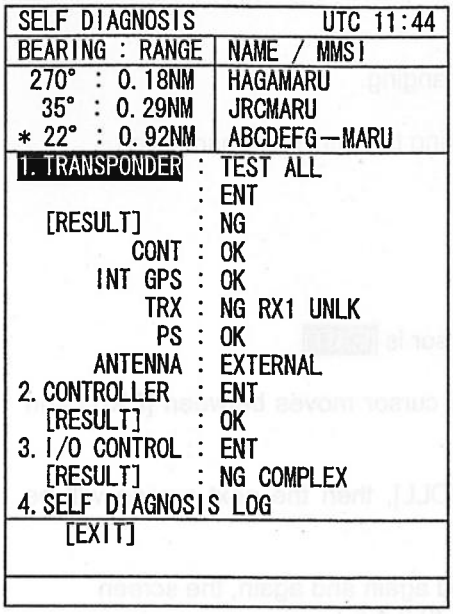
4. SENSOR STATUS
   Display current status of sensors working.

5. POWER ON/OFF LOG
   Display data and time of Power on and off. (Maximum twenty items)

6. SOFTWARE VERSION
   Display versions of software installed in computers.

5.2.5.1. SELF DIAGNOSIS

a) SELF DIAGNOSIS- OPERATIONS AND DISPLAYS



When 1.SELF DIAGNOSIS is selected from Maintenance Menu (5.2.5), SELF DIAGNOSIS screen appears.

Initially, the cursor is on 1.TRANSPONDER. And is the Jog Dial is pressed, the cursor moves to the right hand of ":"as TEST ALL.

Turn the Jog Dial and the displayed item changes as:
TEST ALL → CONTROL → INT GPS → PLL LOCK
→ LOOP TEST→ (LOOP TEST2) → PS →TEST ALL → ...

Push the Jog Dial and confirm the selection. After the confirmation the cursor move down to ENT.

Turn the Jog Dial and the displayed item changes as:
ENT → CANCEL → ENT → ...

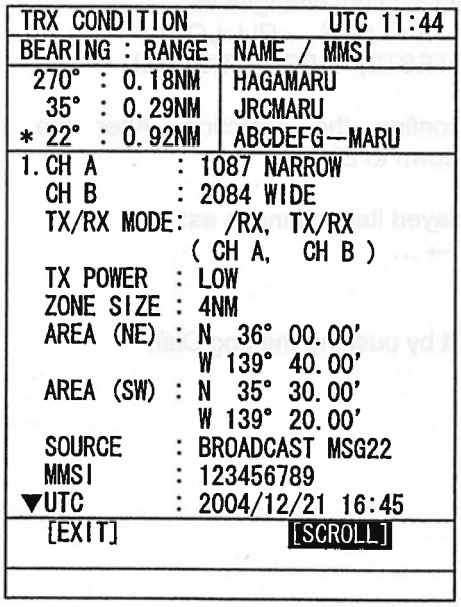
Make a selection and confirm it by pushing the Jog Dial.

5.2.5.2. TRX CONDITION

When 2.TRX CONDITION is selected from Maintenance Menu (5.2.5), TRX CONDITION screen appears.

This menu provides the information of how the setting has been changing.

Eight records from the newest are displayed. 1. of this menu is showing the current transmission.



TRX CONDITION

The default position of the cursor is [EXIT]

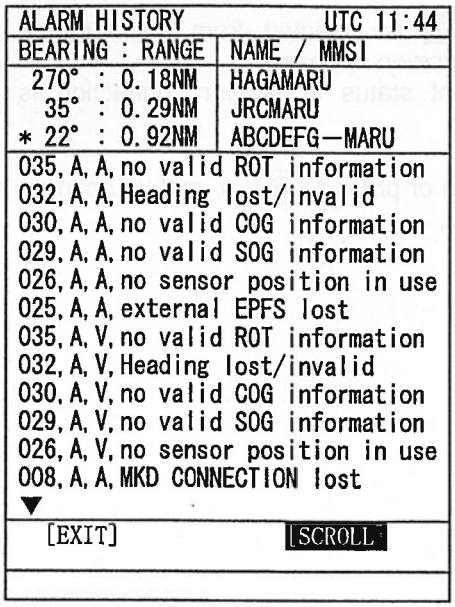
Rotate the Jog Dial, then the cursor moves between [EXIT] and [SCROLL].

Press the Jog Dial on [SCROLL], then the next screen will be displayed.

And as [SCROLL] is confirmed again and again, the screen displays the following records (2,3,4,5,).

If [EXIT] or CLR key is pressed, the process goes back to MAINTENANS MENU.

5.2.5.3. ALARM HISTORY



When 3.ALARM HISTORY is selected from Maintenance Menu (5.2.5), ALARM HISTORY screen appears.

This screen displays a history of alarms which occur while the power is on. It displays the alarm history from the most recent one maximum 20 lines. If the history consists of more than 20 lines, the lines after 21st line will be displayed on the next screens.

Select [EXIT] at the bottom or press CLR key, and you can go back to Maintenance Menu without canceling the contents of this screen.

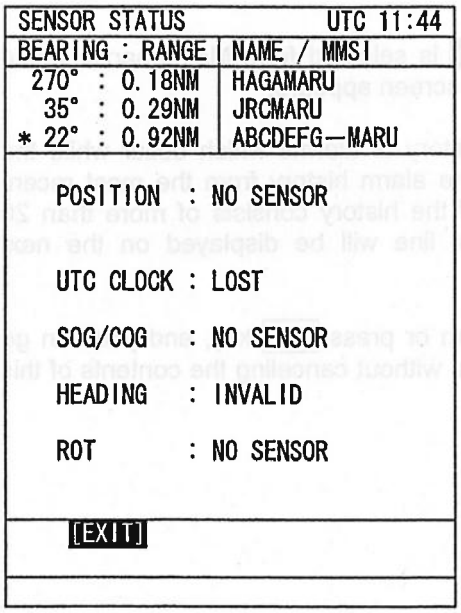
When you rotate the Jog Dial, you can place the cursor on either [EXIT] or [SCROLL].

If you select [SCROLL], the next screen pops up. On the next screen, if you select [SCROLL] again, you will return to the original screen.

If there is no more information to be displayed on the next screen, [SCROLL] is not selectable. (▼ does not appear either.)

If CLR key is pressed, the procedure go back to "Main Menu."

5.2.5.4. SENSOR STATUS



Sensor Status

When 4.SENSOR STATUS is selected from Maintenance Menu, SENSOR STATUS screen appears.
The information of current status of sensor connection is displayed on this screen.

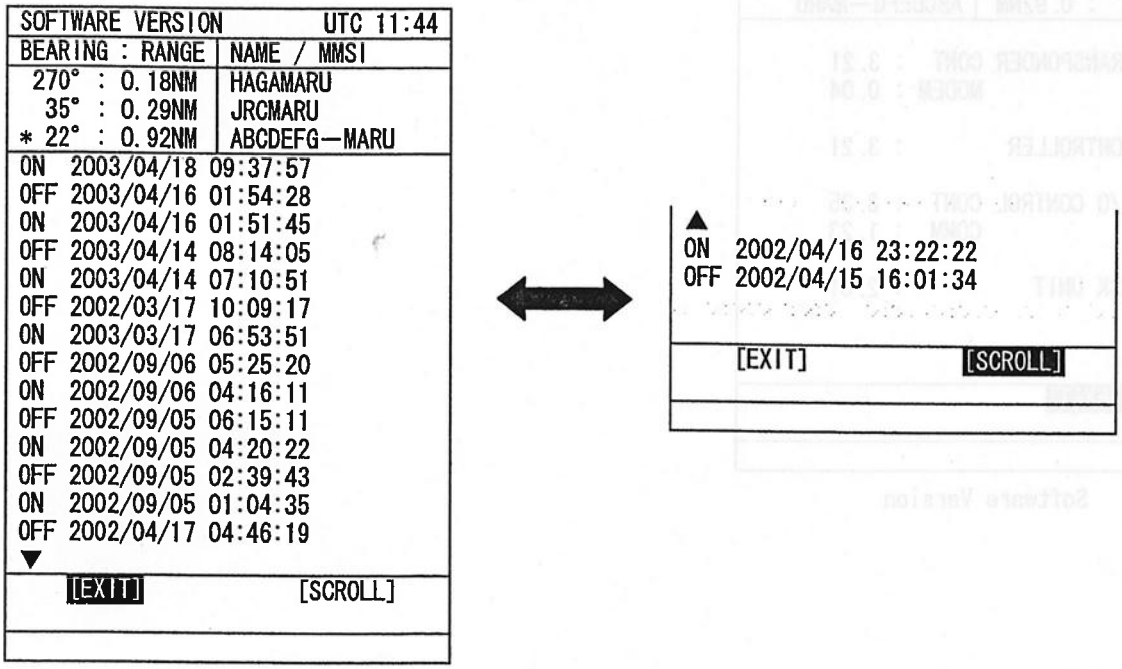
Select [EXIT] at the bottom or press CLR key, and you can go back to Maintenance Menu.

5.2.5.5. POWER ON/OFF LOG

When 5.POWER ON/OFF LOG is selected, maximum 20 lines of Power ON/OFF LOG is displayed.

There is more than 20 lines of data, ▼▲ arrears at the bottom of the screen for indicating there are more information. You can scroll down/up the screen by clicking [SCROLL] when ▼ or ▲ exists on the screen.

Select [EXIT] at the bottom or press CLR key, and you can go back to Maintenance Menu.



Power ON/OFF LOG screen

5.2.5.6. SOFTWARE VERSION

When 6.SOFTWARE VERSION is selected from Maintenance Menu, the version information of the software of each part are displayed.

Select [EXIT] at the bottom or press CLR key, and you can go back to Maintenance Menu.

SOFTWARE VERSION	UTC 11:44
BEARING : RANGE	NAME / MMSI
270° : 0.18NM	HAGAMARU
35° : 0.29NM	JRCMARU
* 22° : 0.92NM	ABCDEFG—MARU

TRANSPONDER	CONT	: 3.21
	MODEM	: 0.04
CONTROLLER		: 3.21
I/O CONTROL	CONT	: 8.35
	COMM	: 1.23
NSK UNIT		: 2.01

[EXIT]

Software Version

6. MAINTENANCE AND INSPECTION

The performance and longevity of this equipment depend on careful maintenance. To maintain the best performance, the following periodic inspections are highly recommended.

(1) Keep the power supply voltage within the specified value.
(2) Know the condition of normal status when the equipment is properly functioning. Keep comparing the current status to the normal status to immediately detect any malfunctions.

⚠WARNING

With the exception of qualified service personnel, do not attempt to service the interior of this equipment, as doing so may cause fire, electric shock or malfunction.

Each internal circuit has been fine-tuned, therefore be sure not to tune or modify without measuring instruments. If any malfunctions are detected, contact our service center or agents.

6. 1 General Maintenance and Inspection

Below are listed general maintaining and inspecting items which can be done with usual tools and apparatus.

No.	Item	Maintenance and inspection
1	Cleaning	Gently clean the surface of the panel, knobs, switches, and upper/bottom cover with a soft cloth or silicon oil. Remove dust in the unit using a brush or vacuum cleaner. No oil is needed because this unit has no moving mechanisms inside.
2	Looseness of parts	Inspect for looseness and correctly tighten the following: screws, nuts, knobs, switches, volume pots, connectors and relays inserted into sockets.
3	Fuse	If the power source fuse is blown, be sure to inspect the cause before replacing the blown fuse with a new one.
4	PCB Unit	Remove screws mounting the unit, demount the unit from the main chassis, and inspect the unit for discoloration and parching of components. To exchange parts, call our service center or agents.

Note If you remove the PCB unit, be sure to store it in a non-conductive bag.
If you wrap it up with materials such as aluminum, the buck-up power supply may short circuit and the IC may be damaged.

6. 2 Maintenance Menu

About self-diagnostics and monitoring system status, please refer to "5.2.5 Maintenance Menu"

6. MAINTENANCE AND INSPECTION

The performance and longevity of this equipment depend on careful maintenance. To maintain the best performance, the following periodic inspections are highly recommended.

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1	Cleaning	Gently clean the surface of the panel, knobs, switches, and upperbolton cover with a soft cloth or silicon oil. Remove dust in the unit using a brush or vacuum cleaner. No oil is needed because this unit has no moving mechanisms inside.
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3	Fuse	If the power source fuse is blown, be sure to inspect the cause before replacing the blown fuse with a new one.
4	PCB Unit	Remove screws mounting the unit, demount the unit from the main chassis, and inspect the unit for discoloration and parching of components. To exchange parts, call our service center or agents.

If you remove the PCB unit, be sure to store it in a non-conductive bag.
If you wrap it up with materials such as aluminum, the built-up power supply may short circuit and the IC may be damaged.

6.2 When Malfunctioning

When self-diagnostics and misfolding system status, please refer to "5.2.5 Maintenance Menu"

7. AFTER-SALES SERVICE

Before returning repair

If what appears to be a defect is detected, refer to "6.3 Troubleshooting" to check if the equipment is actually defective before requesting repair.
If the defect persists, immediately stop operation and call our service center or agents.

- During the warranty period, we or our agencies (*1) will repair the malfunction without any fee, according to the specified procedure.
- After the warranty expires, we will repair the malfunction for a fee, if repair is possible.
- Item for notification
  Product name, type, manufactured data, serial number,
  information about the malfunction (the more detailed, the better),
  your company or organization name, address and phone number.

Periodical maintenance recommended

Performance of this equipment may degrade over time because parts wear out, although degradation depends on how this unit has been maintained.
We recommend periodic professional maintenance checks in addition to daily maintenance.
Call our service center or agents for periodic professional maintenance (This maintenance requires a service charge).

Call our office or the nearest agency for detailed information about after-sales service.

(*1) Refer to the inside of the back cover for contact numbers.

8. SPECIFICATIONS

8.1 AIS TRANSPONDER (NTE-182)

(1)	Frequency range	: 156.025MHz to 162.025MHz,
		: Default channels:161.975MHz, 162.025MHz
(2)	Channel spacing	: 25kHz/12.5kHz
(3)	Frequency accuracy	: Within $\pm 3 \times 10^{-6}$
(4)	Type of emission	: F1D, F2B
(5)	Type of modulation	: GMSK, FSK
(6)	Output power	: 12.5W/2W
(7)	Rated power supply voltage	: 24Vdc (-10%, +30%)
(8)	Current consumption	: 4.5A max: when transmitting
		: 1.5A max: when receiving
(9)	Operating temperature	: -25°C to +55°C (IEC 60945)

8.2 AIS CONTROLLER (NCM-779)

8.2.1 Operation panel

(1)	Type of display	: 5.7-inch FSTN LCD, 320×240 dots
(2)	Keyboard	: 7 keys
(3)	Back-light	: For LCD and keyboard
(4)	Dimmer control	: Bright, medium1, medium2, off (Selectable from keyboard)

8.2.2 Environmental condition

(1)	Operating temperature	: -15°C to +55°C (IEC 60945)
(2)	Power voltage	: 24Vdc -10% to +30% (IEC 60945)

8.2.3 External interfaces

(1) Connection Box communication ports
One communication port meets the requirements of IEC 61162-2.

(2) External display equipment communication ports
One communication port meets the requirements of IEC 61162-2

(3) Maintenance ports
One communication port meets the RS-232C (D-sub 9pin).

8.3 CONNECTION BOX (NQE-3182)

8.3.1 Environmental condition

(1) Operating temperature : -15°C to +55°C (IEC 60945)
(2) Power voltage : 24Vdc -10% to +30% (IEC 60945)

8.3.2 External interfaces

(1) Sensor data input ports SENSOR1-1 / SENSOR2-1/ SENSOR3-1/ SENSOR4-1
Four input ports meet the requirements of IEC 61162-1.
SENSOR4-1 can receive data from IEC61162-1 sensor and half signal drive sensor such as photo-coupler driver.
(2) Sensor data input ports SENSOR1-2 / SENSOR2-2/ SENSOR3-2
Four input ports meet the requirements of IEC 61162-2.
(3) NSK for Gyro communication port
One communication port for current loop
(4) External display equipment communication ports
Two communication ports meet the requirements of IEC 61162-2
(5) External display equipment output ports
Two output ports meet the requirements of IEC 61162-2
(6) Long range communication port
One communication port meets the requirements of IEC 61162-2
(7) GNSS differential correction data communication port
One communication port meets the requirement of ITU-R M.823-2
(8) Relay terminals
One port for external alarm device

Note: IEC61162-2 interfaces comply with the following specifications.
- Output drive capacity: Differential driver output voltage is 2.0V or more (RL=100 ohms), Driver output current 50mA
- Load on the line of inputs: 100 ohms. 1 IEC61162-1 output can drive 1 IEC61162-2 input.
- Electrical isolation of input circuits: Input circuits are electrically isolated from internal circuit with opto-isolator.

8.3.3 Supported interface sentences

	Indication	Sentence format	Supported sentence formatters		
1.	SENSOR1-1 SENSOR2-1 SENSOR3-1	IEC61162-1/2	Input data	Recommend	Optional
			Longitude/Latitude Position Accuracy Time of Position	GNS GLL	GGA RMC
	SENSOR1-2 SENSOR2-2 SENSOR3-2		Datum Reference	DTM	
			RAIM Indicator	GBS	
			Speed Over Ground (SOG)	VBW	VTG OSD RMC
			Course Over Ground (COG)	RMC	VTG OSD
			Heading	HDT	OSD
			Rate of Turn (*1)	ROT	
	SENSOR4-1	ITU-R M.823-2	Input: RTCM SC-104 Ver.2.0 Type 1, 2, 7, 9		

2.	NSK	IEC61162-1	Input: VHW
3.	AUX1 AUX2 AUX3 AUX4	IEC61162-2 IEC61993-2	Input: ABM, ACA, ACK, AIR, BBM, LRI, LRF, VSD, SSD(AUX1,AUX3) Output: ABK, ACA, ALR, DSC, DSI, LRF, LR1, LR2, LR3, TXT, VDO, VDM
4.	LONGRANGE	IEC61993-2	Input: LRI, LRF Output: LRF, LR1, LR2, LR3
5.	MAINTE		Prepared for future use

(*1) Rate of Turn includes errors caused by calculation in the range of +/- 5.6 degree/minute.

8.4 POWER SUPPLY UNIT (NBD-577B)

(1) Input voltage :100 or 220 Vac ±10% 50/60Hz Single phase
:24Vdc (Back up power supply)

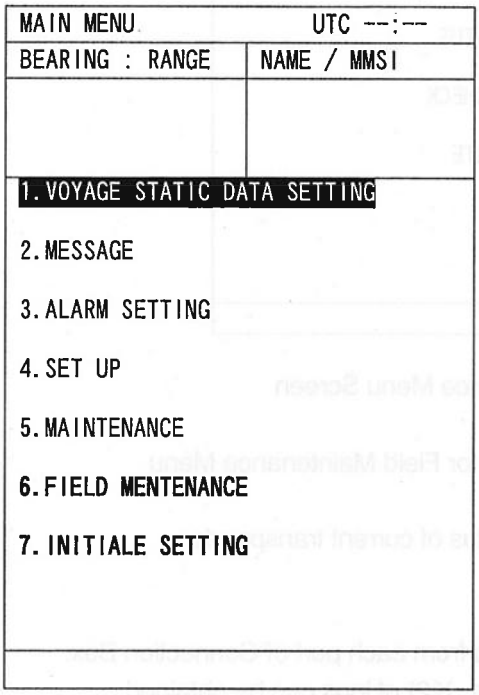
(2) Output voltage :24Vdc

Chapter 1. Maintenance Mode

1.1 Starting up Maintenance Mode

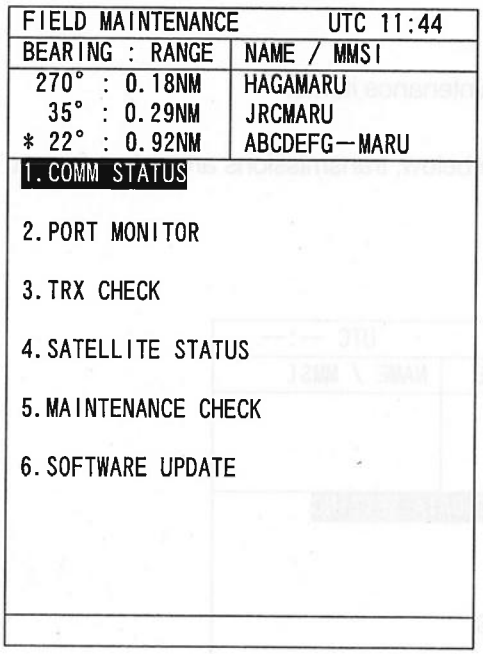
Press MENU key and PWR/DIM key while the main power is turned on.
After it starts up, the Main Manu screen appears and
6. FIELD MENTENANCE
7. INITIAL SETTING
are added to the previous menu as maintenance items.

* While we are in maintenance mode below, transmissions are not performed automatically.



1.2 FIELD MAINTENANCE

When "6.FIELD MAINTENANCE" is selected from the main menu, the screen shown below appears.
This menu displays settings of each item and monitoring items.



Field Maintenance Menu Screen

* Overview of Items which are set up for Field Maintenance Menu

1. COMM STATUS
   Display the communication status of current transponder.

2. PORT MONITOR
   Display the serial data collected from each port of Connection Box.
   Also two screen length (13 lines ×2) of logs can be obtained.

3. TRX CHECK
   Select or input radio settings of transponder.

4. SATELLITE STATUS
   Display the state of operation of GPS built-in transponder.

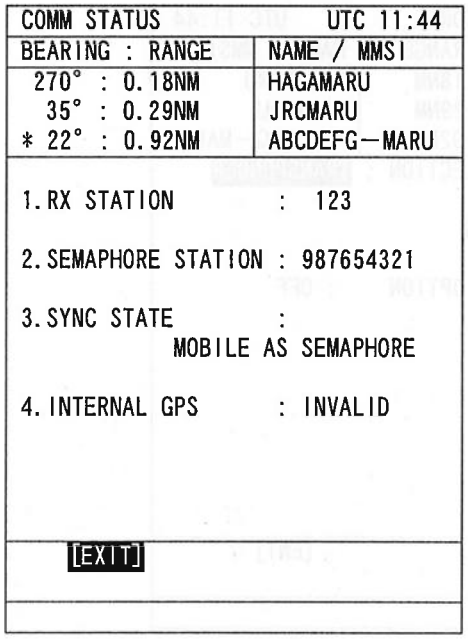
5. MAINTENANCE CHECK
   Confirm total connection and functional operation.

6. SOFTWARE UPDATE
   This menu is used for writing the software for transponder, display, and collector by serial transmission.

1.2.1 COMM STATUS

This screen displays the current status of communication.
The materials below are displayed as below:

1. RX STATION : number of received stations by transponder
2. SEMAPHORE STATION : MMSI of a semaphore station
3. SYNC STATE : displaying synchronized status
4. INTERNAL GPS : measured status of the internal GPS



Communication Status Display

• A list of displayed materials for "SYNC STATE."

Screen Display	Status of Slots Synchronized status
UTC DIRECT	UTC direct synchronized
UTC INDIRECT	UTC indirect synchronized
BASE DIRECT	Synchronized directly to the base station
BASE INDIRECT	Synchronized indirectly to the base station
MOBILE AS SEMAPHORE	Synchronized to a semaphore station
NOT AVAILABLE	Unknown (none of above)

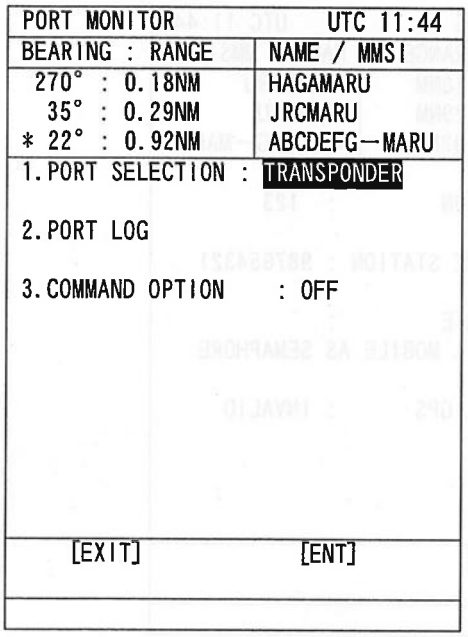
• A list of displayed materials for "INTERNAL GPS."

Screen Display	Status of measurement of PPS
VALID	Status of catching PPS signals
PPS INVALID	Status of cannot catch PPS signals
INVALID	Status of cannot measure
NOT AVAILABLE	Unknown (none of above)

1.2.2 PORT MONITOR

When an input port of connection box (NQE-3182) is specified and confirmed by pressing [ENT] on the screen, then the process goes to Port Monitor screen.
On this screen, we check if the connections with other machineries are properly done or not.
The displayed items are:

1. PORT SELECTION : Select a port to be viewed
2. PORT LOG : View the contents input of the selected port
3. COMMAND OPTION : Display the JRC original commands.



The ports which can be monitored are listed below.

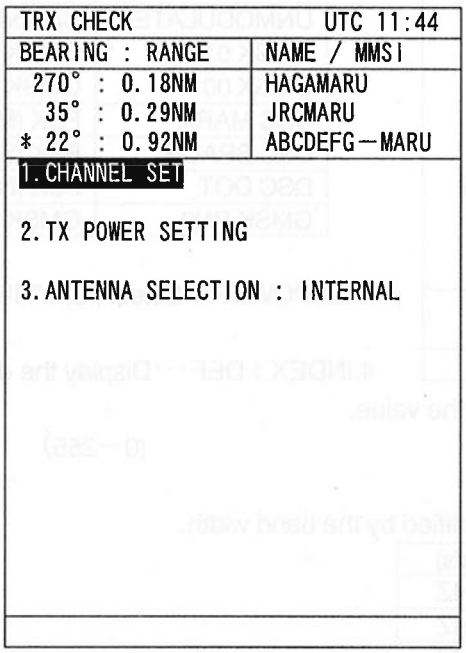
Monitor selection list

Display	remarks
OFF	Initial Display
SENSOR1	
SENSOR2	
SENSOR3	
SENSOR4	
AUX1	
AUX3	
LR	
CONTROLLER	
TRANSPONDER	

1.2.3 TRX CHECK

This menu is used to perform a wireless setting for transponder.
The items can be set up here are:

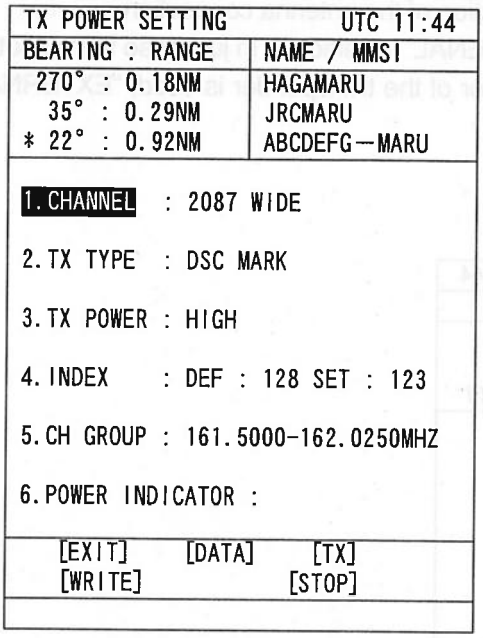
1. CHANNEL SET : Change the channel used (A/B ch).
   The method of changing the channel is same as "5.2.4.7. Changing the Channel" of the instruction manual.
2. TX POWER SETTING : Adjust the transmission power.
3. ANTENNA SELECTION : Change the direction of the antenna connection.
   Ordinarily, "INTRENAL" is selected. In just case the output antenna connector of the transponder is used, "EXTERNAL" is selected.



1.2.3.1 TX POWER SETTING

The output power in transaction can be adjusted. Here, CHANNEL, TX TYPE and TX POWER are preliminarily set therefore the power is adjusted only by SET value of 4.INDEX.
The registration of the power setting value consists of five groups (frequency bands) which are displayed at 5.CH GROUP and the values are set/registered for each group.

●Settings of each item



1.CHANNEL : Set channels and widths.

2.TX TYPE : Select output type in transmission. Ordinarily "UNMODULATED" is selected.

TX TYPE	remarks
UNMODULATED	Unmodulated transmission
GMSK 0101	GMSK (0101pattern)
GMSK 0011	GMSK (0011pattern)
DSC MARK	FSK (MARK)
DSC SPACE	FSK (SPACE)
DSC DOT	FSK (DOT)
GMSK PN9	GMSK (Random pattern)

3.TX POWER : Select from "HIGH" or "LOW"

4.INDEX : DEF・・・Display the default value.
SET・・・Change and adjust the value.
(0−255)

5.CH GROUP : Display a group identified by the band width.

	Group (Frequency Bands)
1	156.0250-156.4875MHZ
2	156.5000-156.9875MHZ
3	157.0000-157.4250MHZ
4	160.6250-160.9625MHZ
5	161.5000-162.0250MHZ

【NOTE】 When one of channels (2087, 2088 etc.) which belongs to 5 above, the whole channels of the group is assigned. Therefore the channel can be set up as one group for one channel manner. But for HIGH and LOW, settings are required individually.

6.POWER INDICATOR : Display the power value in transmission.This value is just for reference. Therefore, please use ammeter when performing adjustment.

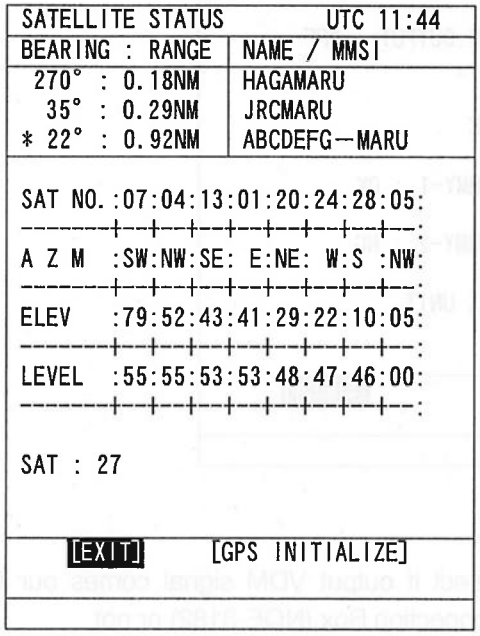
Operating Items
[EXIT] : Discard the contents which are already set up and return to TRX check screen.
[DATA] : Based on the contents which are set up, require the value of the current transponder.
[TX] : Commence continuous transmission.
[STOP] : Stop the continuous transmission.
[WRITE] : Save the value which has been set up.

1.2.4 SATELLITE STATUS

Display receiving status of the internal transponder GPS.
Click [GPS INITIALIZE] at the bottom of the screen and the internal GPS can be initialized.

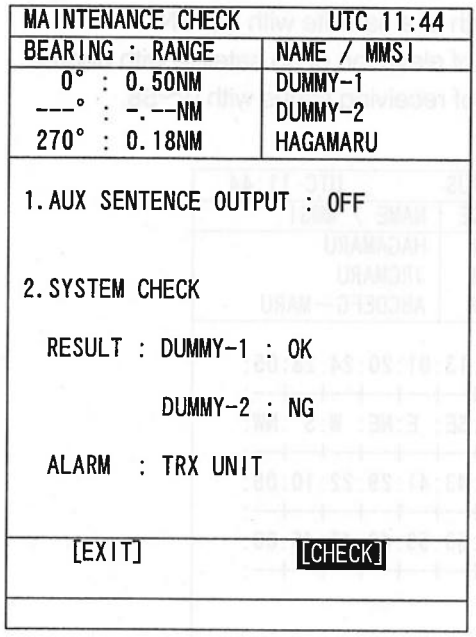
Explain how to see the menu below.

- SAT NO. : Display names of satellite which are currently received (max. 8 satellites)
- A Z M : Display an azimuth of a satellite with EWSN.
- ELEV : Display an angle of elevation of an satellite with degree.
- LEVEL : Display the level of receiving status with 0~58.



1.2.5 MAINTENANCE CHECK

Perform a connection check.
VDM signal is output from a transponder and display a dummy station for one minute.



●Operations

1. AUX SENTENCE OUTPUT : Select if output VDM signal comes our from AUX port of Connection Box (NQE-3182) or not

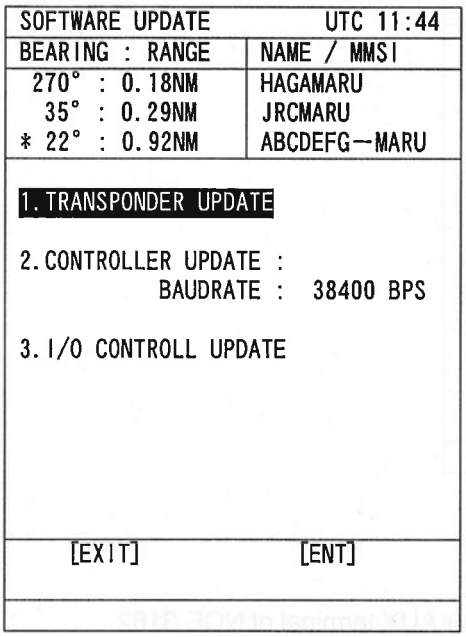
[EXIT] : Discard existing settings and return to FIELD MAINTENANCE Screen.

[CHECK] : Require transponder an output of signal for DUMMY station.

1.2.6 SOFTWARE UPDATE

Use this menu when updating a software from controller.
The machines which can update the software are below:

This machine (NCM-779)
Connection Box (NQE-3182)
Transponder (NTE-182)



- Operations

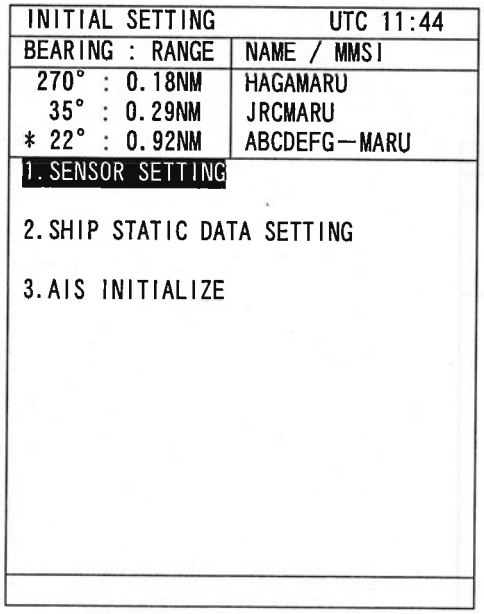
Select a function you want to update.
If you select "Transponder" or "Connection Box", then the cursor moves down. In case you select "Controller," you select BAUDRATE first and then the cursor begins to moves.

[EXIT]: Discard the contents set up, and return to FIELD MAINTENANCE MENU.

[ENT]: The selected type is set up for write mode.
And when you finish writing, cut the electricity off of the controller by pressing [PWR]+[OFF] as indicated.

1.3 INITIAL SETTING

Perform initial setting of AIS system, and initialize each unit.



* Descriptions of set up items

1.SENSOR SETTING

Perform setting up each sensor or AUX terminal of NQE-3182.

2.SHIP STATIC DATA SETTING

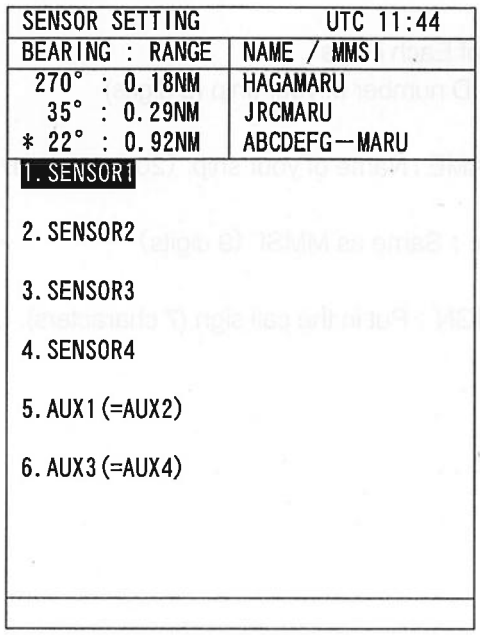
Set up the static data of own ship.

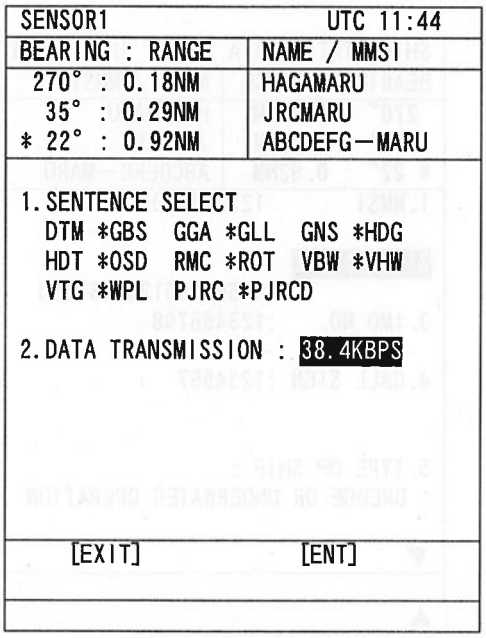
3.AIS INITIALIZE

Initialize each unit.

1.3.1 SENSOR SETTING

Setting up sensors (SENSOR1-4) and AUX terminals (AUX1,3).





On the screen shown at upper-left, when you click Jog Dial on selected item, a setting screen like the graphics upper-right appears.
In the right graphics, click [ENT] after select each category above.

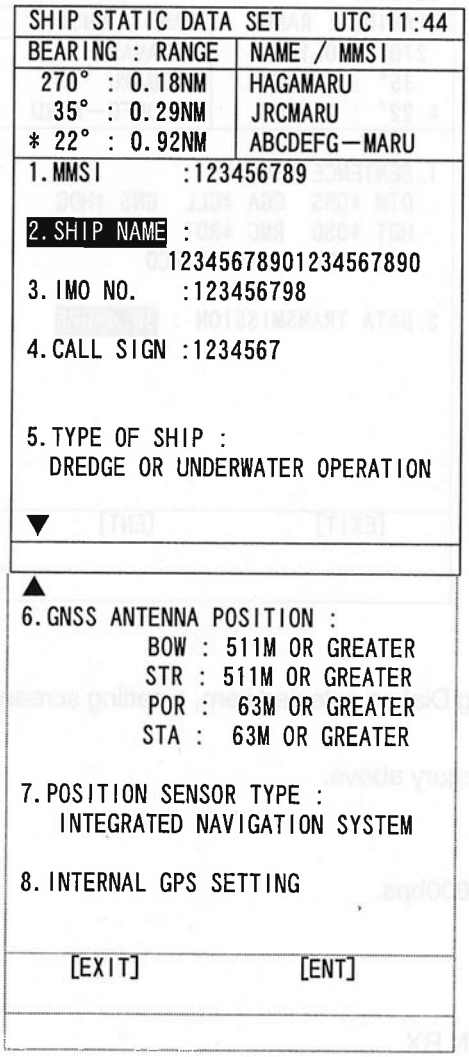
SENSOR1-3 : Change sentence used and baurate.
A baurate is selected from 38400 or 4800bps.

SENSOR4 : Change sentence used and baurate.
A baurate is selected from 4800/BEACON RX.
In case BACON RX is selected, sentence selection is not available.

AUX1,3 : A sentence used is selectable.
A baurate can not be selectable..

1.3.2 SHIP STATIC DATA SETTING

Setting up the static data of own ship



●Settings of Each items

1.MMSI : ID number of your ship (9 digits)

2.SHIP NAME : Name of your ship. (20characters)

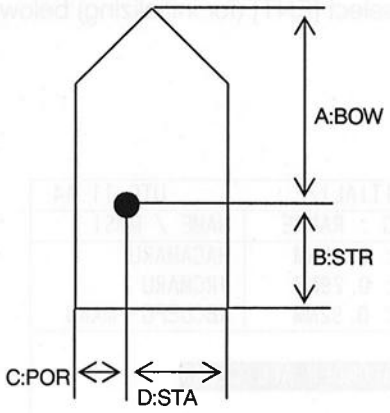
3. IMO No. : Same as MMSI (9 digits)

4.CALL SIGN : Put in the call sign (7 characters).

5.TYPE OF SHIP : Distinguish a type of ship. Types of ship are shown below:

TYPE OF SHIP	Remarks
FISHING VESSEL	
TOWING VESSEL	
TOWING VESSEL L>200M B>25M	
DREDGE OR UNDERWATER OPERATION	
VESSEL – DIVING OPERATION	
VESSEL – MILITARY OPERATION	
SAILING VESSEL	
PLEASURE CRAFT	
PILOT VESSEL	
SERCH AND RESCUE VESSEL	
TUGS	
PORT TENDERS	
WITH ANTI-POLLUTION EQUIPMENT	
LAW ENFORCEMENT VESSELS	
MEDICAL TRANSPORTS	
RESELUTION NO.18 : MOB-83	
WIG	Cargo Type is selectable.
HIGH SPEED CRAFT	
PASSENGER SHIPS	
CARGO SHIPS	
TANKER	
OTHER TYPE OF SHIP	

5. GNSS ANTENNA POSITION : Input the antenna position. Refer the graphic below and put numbers in for the position of an antenna.



7.POSITION SENSOR TYPE : Select the type of Position Sensor which is used.

Type of Position Sensor (Display)
UNDEFINED
GPS
GLONASS
COMBINED GPS/GLONASS
LORAN-C
CHAYKA
INTEGRATED NAVIGATION SYSTEM
SURVEYED

8.INTERNAL GPS SETTING : Set the transponder built-in GPS up.
See 『6.GNSS ANTENNA・・』 for reviewing how to fill in each segment.

INTERNAL GPS SETTING UTC 11:44	
BEARING : RANGE	NAME / MMSI
270° : 0.18NM	HAGAMARU
35° : 0.29NM	JRCMARU
* 22° : 0.92NM	ABCDEFG−MARU

1.ANTENNA POSITION :
BOW : 511M OR GREATER
STR : 511M OR GREATER
POR : 63M OR GREATER
STA : 63M OR GREATER

[EXIT] [ENT]
[GPS INITIALIZE]

1.3.3 AIS INITIALIZE

You can initialize by units or whole system together.
Select items to be initialized, and then select [ENT] (for initializing) below or cancel.