When **5.CARGO/STATUS** is selected, Cargo Type is ready to be selected.
After you select this item and the cursor moves down to the second line, rotate the jog dial for changing selections. Rotate the jog dial until you find the menu item which you are looking for. If you push the jog-dial, the selection is confirmed and the cursor moves down to the next item   (6. Waypoint)

```
5. CARGO/STATUS:
    NO ADDITIONAL INFORMATION
    ┌─────────────────────────────┐
    │  ALL SHIPS OF THIS TYPE     │
    │  CATEGORY  A (DG/HP/MP)     │
    │  CATEGORY  B (DG/HP/MP)     │
    │  CATEGORY  C (DG/HP/MP)     │
    │  CATEGORY  D (DG/HP/MP)     │
    └─────────────────────────────┘
      CARGO TYPE SELECTION
```

The items below can be selected for cargo type:

    CATEGORY A(DG/HP/MP)
    CATEGORY B(DG/HP/MP)
    CATEGORY C(DG/HP/MP)
    CATEGORY D(DG/HP/MP)
    NOT UNDER COMMAND
    RESTRICTED BY MANOEUVRE
    CONSTRAINED BY DRAUGHT
    NO ADDITIONAL INFORMATION
    ALL SHIPS PF THIS TYPE

But according to the type of your ship, some cargo types cannot be selectable.
In such cases, "Not Availeble"is displayed.

When **CLR** key is pressed, the selection process is terminated and the cursor returns to **5. CARGO/STATUS**

When 6. WAYPOINTS is selected, a menu for Waypoints Setting appears. Up to 14 Waypoints can be set up here.

WAYPOINTS		UTC 11:44
BEARING : RANGE		NAME / MMSI
270° : 0.18NM		HAGAMARU
35° : 0.29NM		JRCMARU
* 22° : 0.92NM		ABCDEFG—MARU
NO.	POSITION	
1.	S 89° 59.999	
	W 179° 59.999	
2.	S 88° 59.999	
	W 178° 59.999	
3.		
4.		
5.		
6.		
	[EXIT]	[SCROLL]
	[SAVE]	[ALL CLEAR]

Waypoints Setting

Rotate the jog dial to left/right and move the cursor for selecting the number of voyage plan.

Press the Jog Dial, then the position turns into being ready to be input.

If CLR is pressed, the process is terminated and go back to voyage data setting menu(5.2.1).

After completing the setting for No.6 above, if you rotate the Jog Dial to left, the cursor moves down to the small window at the bottom of the screen.

- When [EXIT] is selected, the contents which have already entered is canceled and the process goes back to "VOYAGE DATA SETTING."

- When [SCROLL] is selected, the process continues to entering another six items (positions). For example, if you press [SCROLL] after you filled No.1-6, the cursor moves to No.7 and you can set up No.7 to No.12. (For setting up next 6 items, you must complete entering the last item of the screen. This means you have to complete No.6 for going to next screen and entering No.7-12. If you are still on between No.1 and No.5, you can not go to the next screen.)

- When [SAVE] is selected, the process goes back to "VOYAGE DATA SETTING" after saving the data which was already entered.

- When [ALL CLEAR] is selected, the entered data is lost, the screen turn into blank and the cursor returns to No.1.

a) WAYPOINTS SETTING PROCEDURE

SETTINGS WAYPOINTS ITEMS

WAYPOINTS		UTC 11:44
BEARING : RANGE	NAME / MMSI	
270° : 0.18NM	HAGAMARU	
35° : 0.29NM	JRCMARU	
* 22° : 0.92NM	ABCDEFG—MARU	
NO. POSITION		
1. N 89° 59.999		
E 179° 59.999		

Waypoints Setting

WAYPOINTS		UTC 11:44
BEARING : RANGE	NAME / MMSI	
270° : 0.18NM	HAGAMARU	
35° : 0.29NM	JRCMARU	
* 22° : 0.92NM	ABCDEFG—MARU	
NO. POSITION		
1. N 89° 59.999		
E 179° 59.999		
2. N 89° 59.999		
E 179° 59.999		

Displaying Next Item

(1) WAYPOINTS CONTENTS SETTINGS

1. Rotate the Jog Dial and select the number of sailing plan.
2. Bring the cursor on "No."of the selected Waypoint and click the Jog Dial once. Then "No."begins blinking.
3. Press the jog dial once again, and the cursor moves to "N".
4. For setting up latitude, rotate the Jog Dial for selecting N or S, and confirm the selection by pressing the Jog Dial.
5. Set up debree/minmute/second of the latitude.
   The ranges of each categories are:
       Degree: 0~89° , Minute: 0~60, Second: 0~59.9999
   Therefore, the ranges for latitude and longitude are:
       Latitude: N/S 0~89° 59.9999
       Longitude: E/W 0~89° 59.9999
6. The entry for latitude has finished, the cursor jumps to longitude entry. Following the entry method for latitude, set up longitude also.
7. When the entry for longitude has been completed, the cursor jumps to the next number. So set the waypoint up same as above.

If CLR key is pressed, the procedure will be terminated and go back to "Sailing Information Setting Menu."

Addition of Waypoints

For adding new items between existing items, follow the procedure below:

```
WAYPOINTS              UTC 11:44
BEARING : RANGE    NAME / MMSI
  270° : 0.18NM    HAGAMARU
   35° : 0.29NM    JRCMARU
* 22° : 0.92NM    ABCDEFG—MARU
NO.    POSITION
 1.    N  89° 59.999
       E 179° 59.999
 2.    N  88° 59.999
       E 179° 59.999
```

↓

```
WAYPOINTS              UTC 11:44
BEARING : RANGE    NAME / MMSI
  270° : 0.18NM    HAGAMARU
   35° : 0.29NM    JRCMARU
* 22° : 0.92NM    ABCDEFG—MARU
NO.    POSITION
 2.    N  89° 59.999
       E 179° 59.999
 2.    N  88° 59.999
       E 179° 59.999
```

↓

```
WAYPOINTS              UTC 11:44
BEARING : RANGE    NAME / MMSI
  270° : 0.18NM    HAGAMARU
   35° : 0.29NM    JRCMARU
* 22° : 0.92NM    ABCDEFG—MARU
NO.    POSITION
 1.    N  89° 59.999
       E 179° 59.999
 2.    N  88° 59.999
       E 179° 59.999
 3.    N  88° 59.999
       E 179° 59.999
```

Addition of Waypoints

a. If you want to add a setting between No.1 and No.2, then put a cursor on No.1.
b. Press the Jog Dial one time for making **1** blink.
c. Rotate the Jog Dial right until "2" appear. Then press the Jog Dial.
d. As to the items after NO.2, the numbers advance by one (e.g. No.2→No.3, No.3→No.4, ~), and No.2 which is not set up yet is newly created.
e. Set up the newly created No.2 following (1) WAYPOINTS CONTENTS SETTINGS above.

Deletion of Waypoints

For deleting existing waypoints, follow the deletion procedure below. But please **do not** use [ALL CLEAR] at the bottom part of the screen for deleting Waypoints.

WAYPOINTS		UTC 11:44
BEARING : RANGE		NAME / MMSI
270° : 0.18NM		HAGAMARU
35° : 0.29NM		JRCMARU
* 22° : 0.92NM		ABCDEFG—MARU
NO.	POSITION	
1.	N 89° 59.999	
	E 179° 59.999	
CLR	N 89° 00.000	
	E 179° 59.999	
3.	N 88° 59.999	
	E 179° 59.999	

a. Move the cursor on the number of Waypoint item which you want to delete, and press the Jog Dial once.

b. While No. is blinking , rotate the Dial left. Than the display of CLR appears.

c. Set the cursor on CLR and press the Jog Dial again.

d. Make sure the selected item was deleted and the numbers of the items following the deleted one decrease by one.

WAYPOINTS		UTC 11:44
BEARING : RANGE		NAME / MMSI
270° : 0.18NM		HAGAMARU
35° : 0.29NM		JRCMARU
* 22° : 0.92NM		ABCDEFG—MARU
NO.	POSITION	
1.	N 89° 59.999	
	E 179° 59.999	
2.	N 88° 59.999	
	E 179° 59.999	

Deletion of Waypoints

5.2.1.7 GIVING NAMES TO WAYPOINTS

You can give names to Waypoints up to 20 characters for each points.
The naming method is same as the one mentioned in "5.2.1.2 Destinations Entry "

5.2.1.8 PERSONS ON BOARD ENTRY

When `8. PERSONS ON BOARD` is selected, the number of persons on board can be entered.
Enter the number with the Jog Dial. You can enter maximum 8191 for persons on board.

Press the Jog Dial, then your entry is confirmed and the cursor moves back to `8. PERSONS ON BOARD`

If `CLR` is pressed, the entry procedure is terminated and go back to voyage data setting menu (5.2.1).

5.2.1.9. HEIGHT OVER KEEL ENTRY

When you select `9. HEIGHT OVER KEEL`, the height over keel is ready to be entered.
Enter the height over keel with the Jog Dial. Maximum 204.7 meters can be entered.

```
| 9. HEIGHT OVER KEEL  :■04. 7M                |
```

Press the Jog Dial, then the entry is confirmed and the cursor return to `9.HEIGHT OVER KEEL` .

If `CLR` is pressed, the entry procedure is terminated and go back to voyage data setting menu (5.2.1).

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

1. EDIT AND TX

2. TX TRAY

3. RX TRAY

4. INTERROGATION

5. LONG RANGE

6. MESSAGE BUZZER : ON

Message Menu

When 2. MESSAGE is selected, MESSAGE MENU (a menu for sending/receiving messages) appears.
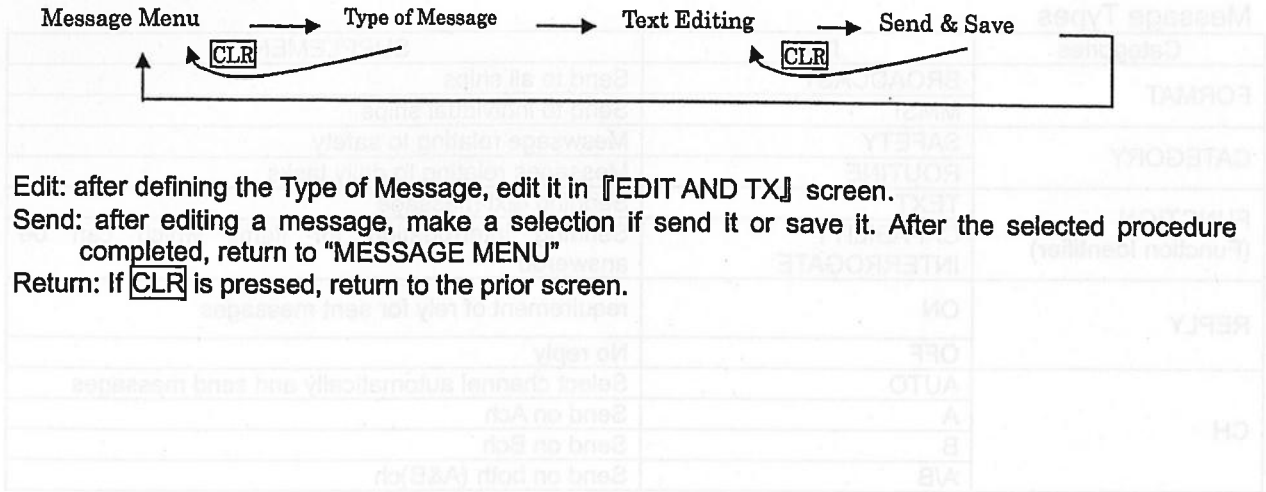Rotate the Jog Dial for moving cursor, and make selection from menu items.
Press the Jog Dial for confirmation on the selected item then you can go to corresponding sub-menu.

The outlines of each menu items are below:
1. EDIT AND TX ···displays a menu for message edition and transmission. (See. 5.2.2.1)
2. TX TRAY ···displays a menu for TX (transmission) tray. (See. 5.2.2.2)
3. RX TRAY ···displays a menu for RX (reception) tray. (See. 5.2.2.3)
4. INTERROGATION ···displays a menu for interrogation. (See. 5.2.2.4)
5. LONG RANGE ···displays a menu for long-rang messages. This menu only works when a long-range communication device is connected. (See. 5.2.2.5)
6. MESSAGE BUZZER ···Set the buzzer on/off when you receive a message (See. 5.2.2.6)

5.2.2.1 EDITING/SENDING MESSAGES

When **1.EDIT AND TX** is selected, the screens transit as the chart below shows.

```
Message Menu  ──────▶  Type of Message  ──────▶  Text Editing  ──────▶  Send & Save
         ▲   ◀CLR                                          ◀CLR
```
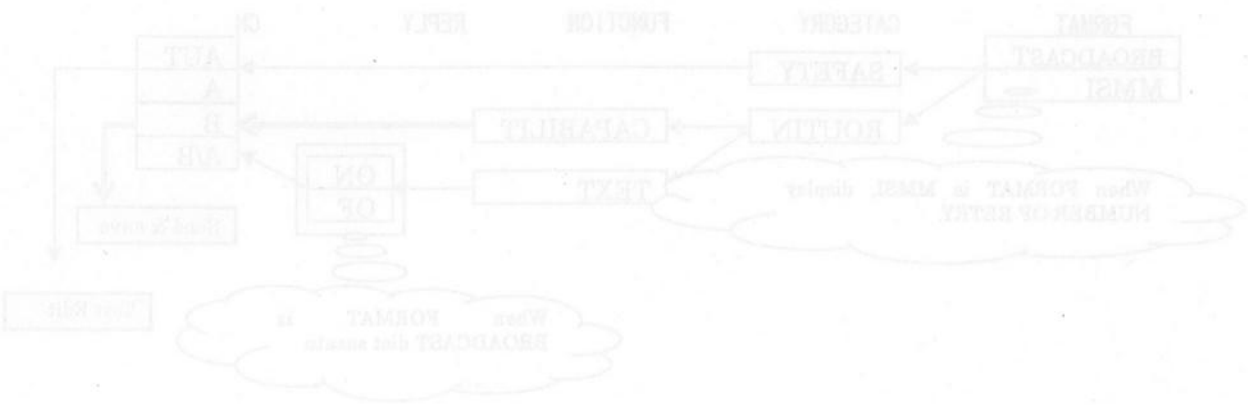
Edit: after defining the Type of Message, edit it in 〖EDIT AND TX〗 screen.

Send: after editing a message, make a selection if send it or save it. After the selected procedure completed, return to "MESSAGE MENU"

Return: If CLR is pressed, return to the prior screen.

a) MESSAGE TYPE

For defining a type of each message, select items for each category which consists of the message.

Message Types

Categories	Items	SUPPLEMENT
FORMAT	BROADCAST	Send to all ships
	MMSI	Send to individual ships
CATEGORY	SAFETY	Meswsage relating to safety
	ROUTINE	Messages relating to daily tasks
FUNCTION (Function Identifier)	TEXT	Sending text message
	CAPABILITY INTERROGATE	Sending interrogation for items which can be answered
REPLY	ON	requirement of rely for sent messages
	OFF	No reply
CH	AUTO	Select channel automatically and send messages
	A	Send on Ach
	B	Send on Bch
	A/B	Send on both (A&B)ch

Following the illustration below, select one "item" for each "category." And combine them and finally define the type of a message.

Following the directions of allows in the chart above, the setting up procedure proceeds in order.

For returning to the previous category, press CLR.

Attention: Please notice two exceptions below:
1. If FORMAT is "BROADCAST" or FUNCTION is "TEXT", then do not perform selection at REPLY.
2. When "CAPABILITY INTERROGATE" is selected for FUNCTION, after setting CH, go to "Send and Save" after setting up CH.
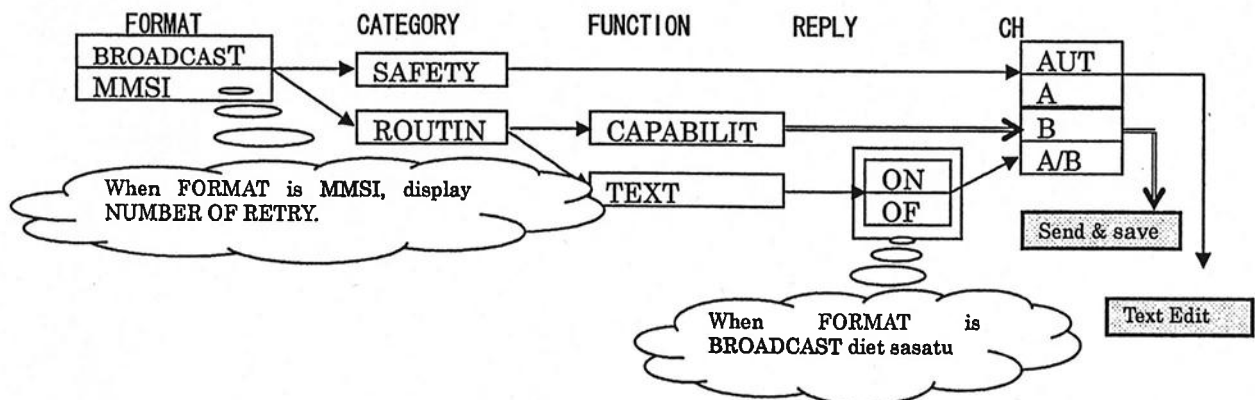
b) MESSAGE TYPE SETTINGS - setting example

Selection and Confirmation

```
┌─────────────────────────────────────┐
│ EDIT AND TX            UTC 11:44     │
├──────────────────┬──────────────────┤
│ BEARING : RANGE  │ NAME / MMSI      │
├──────────────────┼──────────────────┤
│  270° : 0.18NM   │ HAGAMARU         │
│   35° : 0.29NM   │ JRCMARU          │
│ * 22° : 0.92NM   │ ABCDEFG─MARU     │
├──────────────────┴──────────────────┤
│ 1.FORMAT : ADDRESSED                 │
│   MMSI : 987654322          ②        │
│ 2.CATEGORY : ROUTINE                 │
│                                      │
│ 3.FUNCTION :TEXT              ①      │
│                                      │
│ 4.REPLY : ON                         │
│                                      │
│ 5.CH : A/B                           │
│                                      │
│ 6.NUMBER OF RETRY : 3                │
├──────────────────┬──────────────────┤
│                  │ [EXIT]            │
│                  │ [SAVE]       ③    │
│                  │ [EDIT]            │
│                  │ [ALL CLEAR]       │
└──────────────────┴──────────────────┘
```

1. From MESSAGE MENU(5.2.2), select **1. EDIT AND TX** and press the Jog Dial.
2. EDIT AND TX opens. When "EDIT AND TX" opens, the cursor is on **1.**
3. Rotate the Jog Dial, then the cursor moves up and down over the numbers(1, 2, 3, 4,...) and the items at the bottom([EXIT], [SAVE], [EDIT], [ALL CLEAR]).
4. Make a selection and press the Jog Dial to confirm the selection.
5. If a confirmation is made while the cursor is at 1~6, the cursor jumps to the right side of ":" of each items. (e.g. If the Jog Dial is pressed when the cursor is on **5.** , the cursor moves to "A/B." Then "A/B" turns into" **A/B** ")
6. By rotating Jog Dial, view the selections and press the Jog Dial when you want to confirm the selection being displayed on the screen. (In this example, the selection varies AUTO → A → B → A/B → AUTO...)

(1) FORMAT
Setting up directions of messages.

```
┌─────────────────────────────────────┐
│ EDIT AND TX            UTC 11:44     │
├──────────────────┬──────────────────┤
│ BEARING : RANGE  │ NAME / MMSI      │
├──────────────────┼──────────────────┤
│  270° : 0.18NM   │ HAGAMARU         │
│   35° : 0.29NM   │ JRCMARU          │
│ * 22° : 0.92NM   │ ABCDEFG─MARU     │
├──────────────────┴──────────────────┤
│ 1.FORMAT : BROADCAST                 │
│                                      │
│ 2.CATEGORY : SAFETY                  │
│                                      │
│                                      │
│                                      │
│                                      │
│ 3.CH : AUTO                          │
│                                      │
├──────────────────┬──────────────────┤
│                  │ [EXIT]            │
│                  │ [SAVE]            │
│                  │ [EDIT]            │
│                  │ [ALL CLEAR]       │
└──────────────────┴──────────────────┘
```

1. "ADDRESSED" or "BROADCAST" can be selected by rotating the Jog Dial.
2. Select "ADDRESSED" for sending messages to individuals and confirm it by pressing the Jog Dial.
3. Select "BROADCAST" for sending messages to everybody on board and confirm it by pressing the Jog Dial
4. Only when "ADDRESSED" is selected, enter MMSI. Initially "000000000"is displayed so select 9 digits with the Jog Dial and confirm it by pressing the Dial.

(2) CATEGORY
Select category of message.

1. By rotating the Jog Dial, select "SAFETY" OR "TOUTINE."
2. Select "SAFETY" for sending a message about safety, and select "ROUTINE" for sending an message on ordinary tasks.
3. After making a selection, press the Jog Dial for confirmation.
4. Press TAB key:
   1) If you've selected "SAFETY", the cursor jumps to "CH"
   2) If you've selected "ROUTINE", the cursor jumps to "FUNCTION"

(3) FUNCITON
Select the function of messages:

1. "TEXT" and"CAPABILITY INTERROGATE" are selectable by rotating the Jog Dial.
2. If you send text message, select "TEXT", and if you send an interrogation select "CAPABILITY INTERROGATE".
3. If TAB key is pressed, if the message is MMSI(sent not all), then the cursor jumps to "REPLY" and if the message is sent in BROADCAST, the cursor jumps to "CH".

(4) REPLY
Select the response to messages is requested or not requested:

1. "ON" and "OFF" are selectable by rotating the Jog Dial.
2. For messages which are sent personally, if response to reception required, then select "ON",if not "OFF"
3. If TAB key is pressed, the cursor jumps to "CH".

(5) CH(Channel)
Select the transmitting channel:

1. "AUTO","A","B"and"A/B"are selectable by rotating the Jog Dial.
2. If the transmitting channel is selected automatically, select "AUTO", use channel A then select "A", use channel B then select "B", and use channel A and B then select "A/B".

(6) NUMBER OF ENTRY
See 『5.2.2.2. Retry Setting』 for "NUMBER OF ENTRY".

c) TEXT EDIT SCREEN

Enter texts, according to the procedure of "5.1.1 KEYBOARD DISPLAY AND INPUT METHOD".

```
┌─────────────────────────────────┐
│ EDIT AND TX          UTC 11:44  │
├─────────────────┬───────────────┤
│ BEARING : RANGE │ NAME / MMSI   │
│   270° : 0.18NM │ HAGAMARU      │
│    35° : 0.29NM │ JRCMARU       │
│  * 22° : 0.92NM │ ABCDEFG—MARU  │
├─────────────────┴───────────────┤
│ HOW ARE YOU ?                   │
│ IT'  S FINE.                    │
│ ▼                               │
│                                 │
│              ①                  │
│                                 │
│                                 │
│                                 │
│                                 │
│                                 │
│ ABCDEFGHIJKLMNOP   [EXIT]       │
│ QRSTUVWXYZ. 23     [SAVE]   ③   │
│ 456789 [\]_ %&'    [TX]         │
│ ()?@+-*/^,:;<=>!   [ALL CLEAR]  │
│        ②                        │
└─────────────────────────────────┘
```

Text Edit Screen

TEXT EDIT SCREEN consists of three subscreens :

① Text Screen

② Keyboard Screen (See 5.1.1)

③ Send and Save Screen (See "d")"

1. Rotate the Jog Dial, then the cursor in Keyboard Display Screen (②) moves accordingly.
2. Select a character in ② with the cursor and press the Jog Dial, then the selected character appears on ①.
3. While entering characters with the keyboard, if CLR is pressed, one character under the cursor disappears.
4. Select 『→』 in ② , and press the Jog Dial, then the cursor jumps to ③.
5. While the cursor is in ③, if CLR is pressed or [EXIT]is selected and pressed, the cursor returned to ②.
6. If [SAVE] is selected, the message is saved and the process goes back to Message Menu.
7. If [TX] is selected, message is saved, sentence is sent, and the process returns to Message Menu.
8. If [ALL CLR] is selected, all the data in ① is canceled and the cursor jump to ②.

And the maximum number of characters to be entered for each condition are below.

Maximum Number of characters to be entered

FORMAT	CATEGORY	CHARACTERS
ADDRESSED	SAFETY	156
	ROUTINE	151
BROADCAST	SAFETY	161
	ROUTINE	161

d) SENDING/SAVING MESSAGES

In case, "FUNCTION" in Message Type Screen (see a), b) Message Type) is TEXT, for sending or saving messages, follow the instruction below:

```
EDIT AND TX              UTC 11:44
BEARING : RANGE   NAME / MMSI
  270° : 0.18NM   HAGAMARU
   35° : 0.29NM   JRCMARU
* 22° : 0.92NM    ABCDEFG-MARU
HOW ARE YOU ?




ABCDEFGHIJKLMNOP    [EXIT]
QRSTUVWXYZ. 0123    [SAVE]
456789↓[\]_ "#$%&`   [TX]
()?@+-*/^,:;<=>!    [ALL CLEAR]
```

1. Press [EXIT] or CLR key to return to MESSAGE TYPE SETTINGS.

2. Select [SAVE], and save the send message. Then go to Message Menu Screen. (The data is displayed at TX TRAY.)

3. Select [TX], then save the sent message, sent sentences and go to Message Menu Screen. (The data is displayed at TX TRAY.)

Or in case "Function" is CAPABILITY INTERROGATE, sending/saving messages are done in the screen below.

```
1. FORMAT : ADDRESSED
   MMSI : 987654322
2. CATEGORY : ROUTINE

3. FUNCTION : CAPABILITY IDENTIFIER

4. CH : A/B

               [EXIT]
               [SAVE]
               [TX]
```

When a message is sent with FORMAT is ADDRESSED, the sender is supposed to obtain a certification message of receiving from the receiver. But because of some reasons, such message is not received, the sender try again to send a certification message. (= retry)

Setting up Numbers of Retry

Numbers of retries ara changable.(0~3, default value is three.).

* stands for "not sent yet."

```
┌─────────────────────────────────┐
│ TX TRAY                UTC 11:44 │
├──────────────────┬──────────────┤
│ BEARING : RANGE  │ NAME / MMSI  │
├──────────────────┼──────────────┤
│  270° : 0.18NM   │ HAGAMARU     │
│   35° : 0.29NM   │ JRCMARU      │
│ * 22° : 0.92NM   │ ABCDEFG─MARU │
├──────────────────┴──────────────┤
│  1. HAKUYOUMARU                  │
│  2. OMARU                        │
│  3. 431000000                    │
│ * 4. BROADCAST                   │
│  5. BROADCAST                    │
│  6. 232323232                    │
│ * 7. ABCDEFGHIJKLMNOPQRST        │
│  8. HAKUYOUMARU                  │
│  9. KING_KONG                    │
│ 10. 987654321                    │
│                                  │
├──────────────────────────────────┤
│ 03/04/30 17:45      123456789    │
│ CATEGORY:ROUTINE                 │
│ FUNCION :TEXT                    │
│ CH      :AUTO     ACK    :OK     │
├──────────────────────────────────┤
│                                  │
└──────────────────────────────────┘
```

SENT MESSAGE REVIEW SCREEN

When 2. TX TRAY is selected, a menu of TX(Transmission) TRAY is displayed.

TX tray stores sent messages and edited messages for sent. Maximum ten messages can be stored for viewed or sent.

1. Initially the cursor is placed on the first message.

2. As the Jog Dial is rotated, the cursor moves up and down over the messages.

3. The information of the message under the cursor is provided in the box at the lower part of the screen.

> Date, Time
> TYPE of Message (9digits number/characters)
> ...9digits for MMSI or "BROADCAST"for BROADCAST.
> CATEGORY
> FUNCTION
> CH
> ACK   (see 4.)

4. ACK

> (1) When the message was sent individually(=not BROADCAST) and "REPLY ON":
> > 1) RECEIVED A REPLY→ 『ACK:OK』
> > 2) NOT RECEIVED A REPLY → 『ACK:NONE』
> (2)When the message was sent to all(=BROADCASTED),
> > 1) Successfully Transmitted→ 『TRANSMITTED』
> > 2) Transmission Failed → 『NG』
> (3) If "BROADCAST" is selected above,   『ACK:』 is not displayed.
> (4) When the message has *, it shows that the message has not been sent yet.   『ACK:』 is not displayed either then.

If CLR is pressed, return to Message Menu (5.2.2).

With Jog Dial, select message and confirm it by pressing the Jog Dial. Then the content of the message can be confirmed.

```
TX TRAY                    UTC 11:44
BEARING : RANGE   NAME / MMSI
  270° : 0.18NM   HAGAMARU
   35° : 0.29NM   JRCMARU
* 22° : 0.92NM    ABCDEFG—MARU
YOU, HOW ARE YOU? I AM FINE. IT IS
A NICE DAY, ISN' T IT.




03/04/30 17:45      [EXIT]
CATEGORY:ROUTINE
FUNCION :TEXT       [EDIT]
CH      :AUTO       [DELETE]
```

SENT MESSAGE CONFIRM SCREEN

1. Press CLR key or select [EXIT] with Jog Dial, return to the prior screen.

2. When [EDIT] is pressed, go to EDIT AND TX screen (5.2.2.1) for editing the message.

3. For deleting a message, press [DELETE], then the message will be deleted and the process returns to SENT MESSAGES REVIEW SCREEN.

When **3. RX TRAY** is selected, a menu of RX(Reception) TRAY is displayed.

RX tray stores received messages and edited messages for sent.
Maximum ten messages can be stored.

```
* : stands for "not sent yet."
```

```
RX TRAY                UTC 11:44
BEARING : RANGE
  270° :  0.18NM
   35° :  0.29NM
* 22° :  0.92NM
   1. HAKUYOUMARU
   2. OMARU
   3. 551000000
 * 4. 441000000
   5. BROADCAST
   6. BROADCAST
 * 7. ABCDEFGHIJKLMNOPQRTS
   8. HAKUYOUMARU
   9. KING_KONG
  10. 987654321

 03/04/30 17:48      123456789
 CATEGORY:ROUTINE


                     ACK

```

RECEIVED MESSAGES REVIEW SCREEN

1. Initially the cursor is placed on the first message.

2. As the Jog Dial is rotated, the cursor moves up and down over the messages.

3. The information of the message under the cursor is provided in the box at the lower part of the screen.
   Date, Time
   TYPE of Message (9digits number/characters)
   ...9digits for MMSI or "BROADCAST" for BROADCAST
   CATEGORY
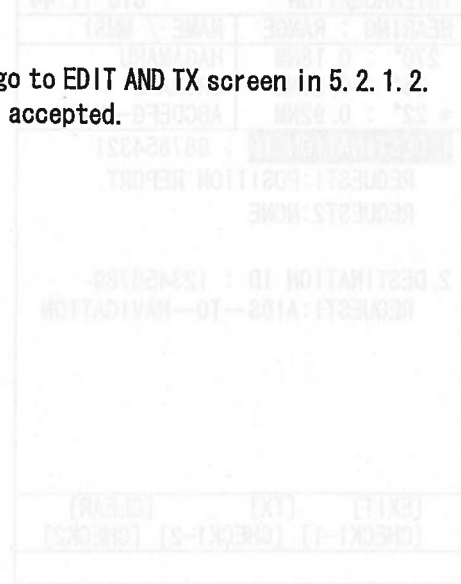   ACK

```
┌─────────────────────────────────────┐
│ RX TRAY              UTC 11:44       │
├──────────────────┬──────────────────┤
│ BEARING : RANGE  │ NAME / MMSI      │
├──────────────────┼──────────────────┤
│  270°  : 0.18NM  │ HAGAMARU         │
│   35°  : 0.29NM  │ JRCMARU          │
│ * 22°  : 0.92NM  │ ABCDEFG—MARU     │
├──────────────────┴──────────────────┤
│ ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456    │
│ 7890@@@@@@@@@@                       │
│                                     │
│                                     │
│                                     │
│                                     │
│                                     │
├──────────────────┬──────────────────┤
│ 03/04/30 17:45   │ [EXIT]           │
│ CATEGORY:ROUTINE │                  │
│                  │ [EDIT]           │
│                  │ [DELETE]         │
└──────────────────┴──────────────────┘
    RECEIVED MESSAGE CONFIRM SCREEN
```

With Jog Dial, select message and confirm it by pressing the Jog Dial. Then the content of the message can be confirmed.

1. Press CLR key or select [EXIT] with Jog Dial, return to the prior screen.

2. When [EDIT] is pressed, go to EDIT AND TX screen (5.2.1.2) for editing the message.

3. For deleting a message, press [DELETE], then the message will be deleted and the process returns to RECEIVED MESSAGES REVIEW SCREEN.

4. When [EDIT] is selected go to EDIT AND TX screen in 5.2.1.2. Reply to BROADCAST is not accepted.

When **4.INTERROGATION** is selected in Message Menu(5.2.2), the screen below are displayed.
Users can request information for destinations whose MMSI is known.

a) INTERROGATION SETTINGS

In INTERROGATION   screen, two destinations (DESTINETION 1 and DESTINETION 1) can be selected as interrogations simultaneously.

When the Jog Dial is rotated, the cursor moves between **1** and **2**.
Press the Jog Dial, then the destination is confirmed.

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

1.DESTINATION ID : 987654321
  REQUEST1:POSITION REPORT
  REQUEST2:NONE

2.DESTINATION ID : 123456789
  REQUEST1:AIDS—TO—NAVIGATION

[EXIT]   [TX]   [CLEAR]
[CHECK1-1] [CHECK1-2] [CHECK2]

INTERROGATION

(1) DESTINATION 1
For DESTINATION 1, two interrogations can be made in one time.
When DESTINATION 1 is selected and confirmed, then the first destination ID is ready to be entered. Then enter 9 digits with Jog Dial.
Press the Jog Dial, then the entry was confirmed and the cursor jumped to REQUEST1.
(See b) for how to select)

For entering REQUEST 1, rotate the Jog Dial for scrolling the contents.
Press the Jog Dial for confirming the entry. (See b) for how to select)

Set up REQUEST 2 same as 1.

(2) DESTINATION 2
For DESTINATION 2, one interrogation can be made in one time.
Set up the DESTINATION and REQUEST, follow the same procedure for setting up DESTINATION 1.

DESTINATION 1 is selected and confirmed, and then the first destination ID is ready to be entered. Then enter 9 digits with Jog Dial.
Press the Jog Dial, then the entry was confirmed and the cursor jumped to REQUEST1.
After confirming REQUEST by pressing the Jog Dial, then the cursor returns to 『2.』 .
Next rotate left the Jog Dial, then the cursor jumps to the lower box. (for the operation in the lower box, see c))

b) INTERROGATION REQUEST PATTERNS

The possible patterns of interrogation are below:

patterns of interrogations

Interrogation	Request1-1	Request1-2	Request2-1
POSITION REPORT (A)	O	O	O
SHIP STATIC AND VOYAGE (A)	O	O	O
SAR AIRCRAFT POS. REPORT	O	O	O
POSITION REPORT (B)	O	O	O
SHIP STATIC AND VOYAGE (B)	O	O	O
AIDS-TO-NAVIGATION REPORT	O	O	O
BASE STATION REPORT	O	O	O
DATA LINK MANAGEMENT MSG	O	O	O
CHANNEL MANAGEMENT	O	O	O
NONE	×	O	O

c) ITEMS IN THE BOTTOM BOX

In the Interrogation Screen (5.2.2.5), when one of the items in the bottom box, the system operates as mentioned below.

[EXIT] ················· Cancel the contents and return to Message Manu.
[TX] ················· Transmit to 『DESTINATION1』 (and 『DESTINATION2』)
[CLEAR] ·················Cancel the contents and move the cursor on 『1.DESTINATION ID』
[CHECK1-1],[1-2],[2-1] ······Return respond messages correspond to each item.

If there is no response to interrogations, this means respond message correspond to the interrogation doesn't exist. So when such selection is made in Interrogation Screen, a short warning buzzer rings.

Screens don't change the.

Additionally, basically the last line (box) of Interrogation screen is for displaying received messages or alarms, but after an interrogation request is made, it displays if response for the request was made or not.

   Ex. Responded · · · · · · · ·ACKO : OK
     Not responded · · · · · · ACKO : NONE

Responded for both requests	Only REQUEST1 was responded.
SORT:NORTH / RANGE UTC 11:43	SORT:NORTH / RANGE UTC 11:43

BEARING : RANGE	NAME / MMSI
270° : 0.18NM	HAGAMARU
35° : 0.29NM	JRCMARU
* 22° : 0.92NM	｜ABCDEFG-HIJKLMN>
121° : 4.85NM	498755431
52° :12.47NM	AABBCCDD243

N 35° 32.8484	SOG 15.2KT
E 123° 45.2264	COG 44.4°
ACK1 : OK	ACK2 : OK

BEARING : RANGE	NAME / MMSI
270° : 0.18NM	HAGAMARU
35° : 0.29NM	JRCMARU
* 22° : 0.92NM	｜ABCDEFG-HIJKLMN>
121° : 4.85NM	498755431
52° :12.47NM	AABBCCDD243

N 35° 32.8484	SOG 15.2KT
E 123° 45.2264	COG 44.4°
ACK1 : OK	ACK2 : NONE

Examples of Display of having responses

d) VIEWING RESPONSED MESSAGES

```
┌─────────────────────────────────────┐
│ INTERROGATION        UTC 11:44      │
├──────────────────┬──────────────────┤
│ BEARING : RANGE  │ NAME / MMSI      │
├──────────────────┼──────────────────┤
│  270° : 0.18NM   │ HAGAMARU         │
│   35° : 0.29NM   │ JRCMARU          │
│ * 22° : 0.92NM   │ ABCDEFG─MARU     │
├──────────────────┴──────────────────┤
│ MMSI : 123456789                    │
│ NAV STATUS : MOORED                 │
│ POS ACCURACY : HIGH                 │
│ POS  : N:35° 33.387'                │
│        E:139° 54.578'               │
│ COG  :22.0°                         │
│ SOG  :5.8KN                         │
│ HDG  :22.1°                         │
│ ROT  :0.1° /MIN                     │
│                                     │
│                                     │
│ ▐EXIT▌                              │
│                                     │
├─────────────────────────────────────┤
│                                     │
└─────────────────────────────────────┘
```

At Interrogation screen(5.2.2.5), when [CHECKO-O] ([CHECK1-1], [1-2], or [2-1]) is selected, response messages are provided.

Select [EXIT] at the bottom or press CLR key, and you can go back to Interrogation Menu (5.2.2.5).

The response screens vary depend on the type of interrogation.
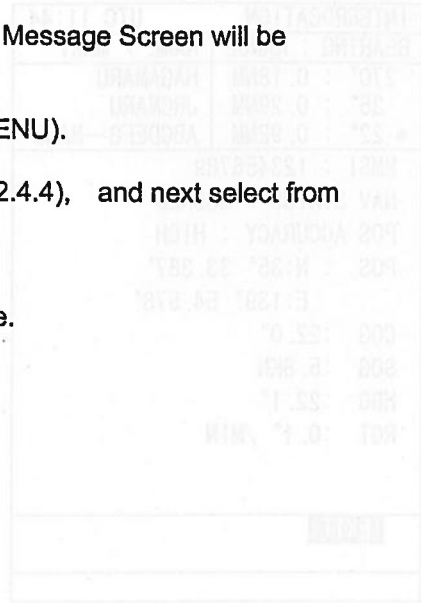
5.2.2.6 LONG RANGE MESSAGES

In Message Screen(5.2.2), if 5.LONG RANGE is selected, Long Rang Message Screen will be displayed.

The set up of Long Range Message is mentioned in 5.2.4.(SET UP MENU).

In SET UP MENU, select 4.LONG RANGE RESPONSE SETTING (5.2.4.4),   and next select from AUTO or MANUAL.

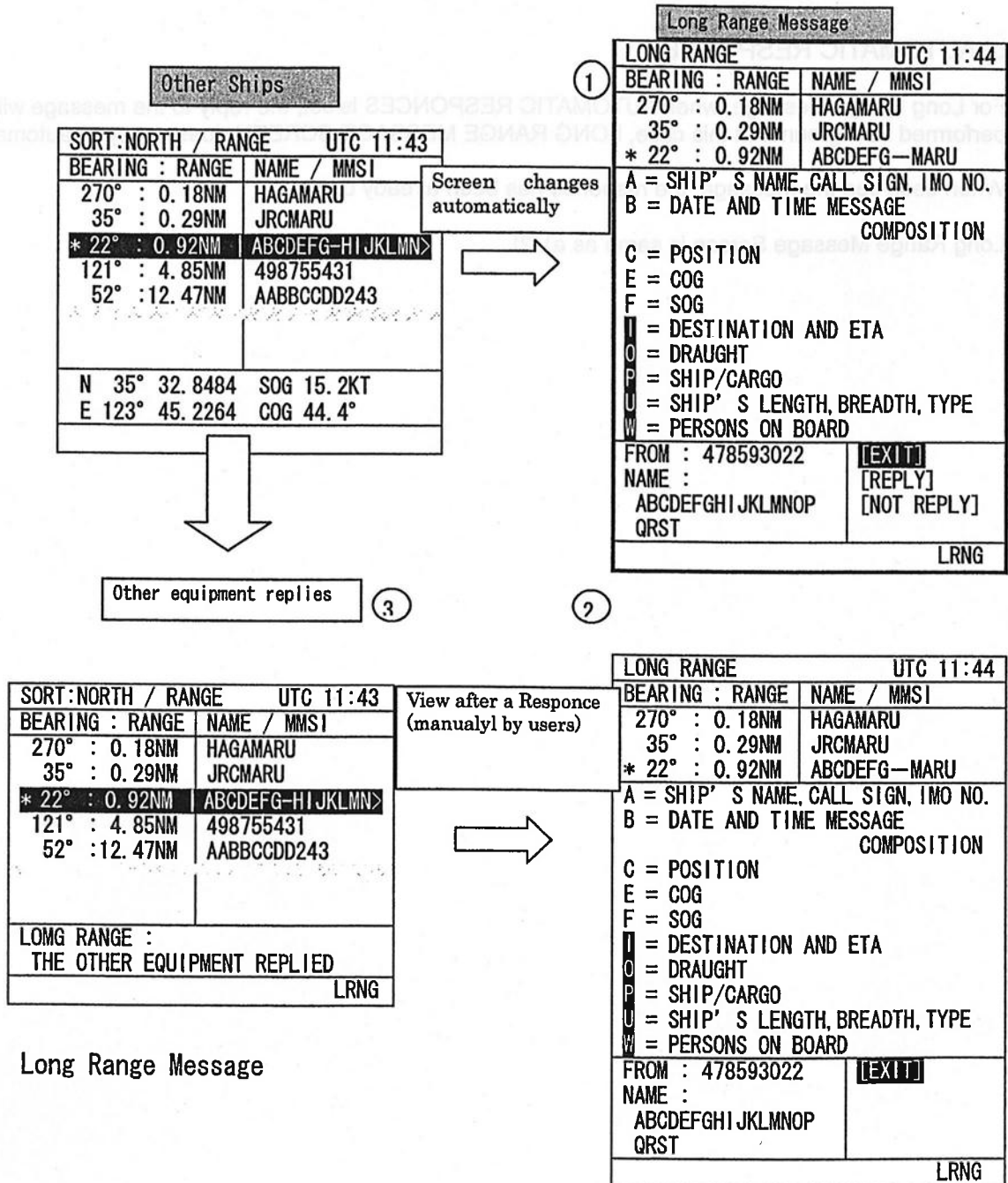When Long Range is requested, "LRNG"is displayed at the bottom line.

a) MANUAL RESPONSES

For Long Range Message, when MANUAL RESPONCES is set, when the system receives Long Range Request, Long Range Screen is opened automatically

Check the Response and *REPLY* manually to the message.

1.After Long Range Request, "Long Range Message ①"opens automatically.
2.When Other Ships reply, 『The other equipment replied』 is displayed for 2 seconds. (③)

Other Ships

SORT:NORTH / RANGE	UTC 11:43
BEARING : RANGE	NAME / MMSI
270° : 0.18NM	HAGAMARU
35° : 0.29NM	JRCMARU
* 22° : 0.92NM	ABCDEFG-HIJKLMN>
121° : 4.85NM	498755431
52° :12.47NM	AABBCCDD243

| N 35° 32.8484 | SOG 15.2KT |
| E 123° 45.2264 | COG 44.4° |

Screen changes automatically

Long Range Message

①

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

A = SHIP'S NAME, CALL SIGN, IMO NO.
B = DATE AND TIME MESSAGE
                      COMPOSITION
C = POSITION
E = COG
F = SOG
I = DESTINATION AND ETA
O = DRAUGHT
P = SHIP/CARGO
U = SHIP'S LENGTH, BREADTH, TYPE
W = PERSONS ON BOARD

FROM : 478593022	[EXIT]
NAME :	[REPLY]
ABCDEFGHIJKLMNOP	[NOT REPLY]
QRST	
	LRNG

Other equipment replies ③

②

SORT:NORTH / RANGE	UTC 11:43
BEARING : RANGE	NAME / MMSI
270° : 0.18NM	HAGAMARU
35° : 0.29NM	JRCMARU
* 22° : 0.92NM	ABCDEFG-HIJKLMN>
121° : 4.85NM	498755431
52° :12.47NM	AABBCCDD243

LOMG RANGE :	
THE OTHER EQUIPMENT REPLIED	
	LRNG

Long Range Message

View after a Responce (manualyl by users)

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

A = SHIP'S NAME, CALL SIGN, IMO NO.
B = DATE AND TIME MESSAGE
                      COMPOSITION
C = POSITION
E = COG
F = SOG
I = DESTINATION AND ETA
O = DRAUGHT
P = SHIP/CARGO
U = SHIP'S LENGTH, BREADTH, TYPE
W = PERSONS ON BOARD

FROM : 478593022	[EXIT]
NAME :	
ABCDEFGHIJKLMNOP	
QRST	
	LRNG

In Manual Response (①),

- Show the Name and MSI, in the box at down-left of ①.
- Reverse display the requested items
- Initially, the cursor appearson [EXIT].
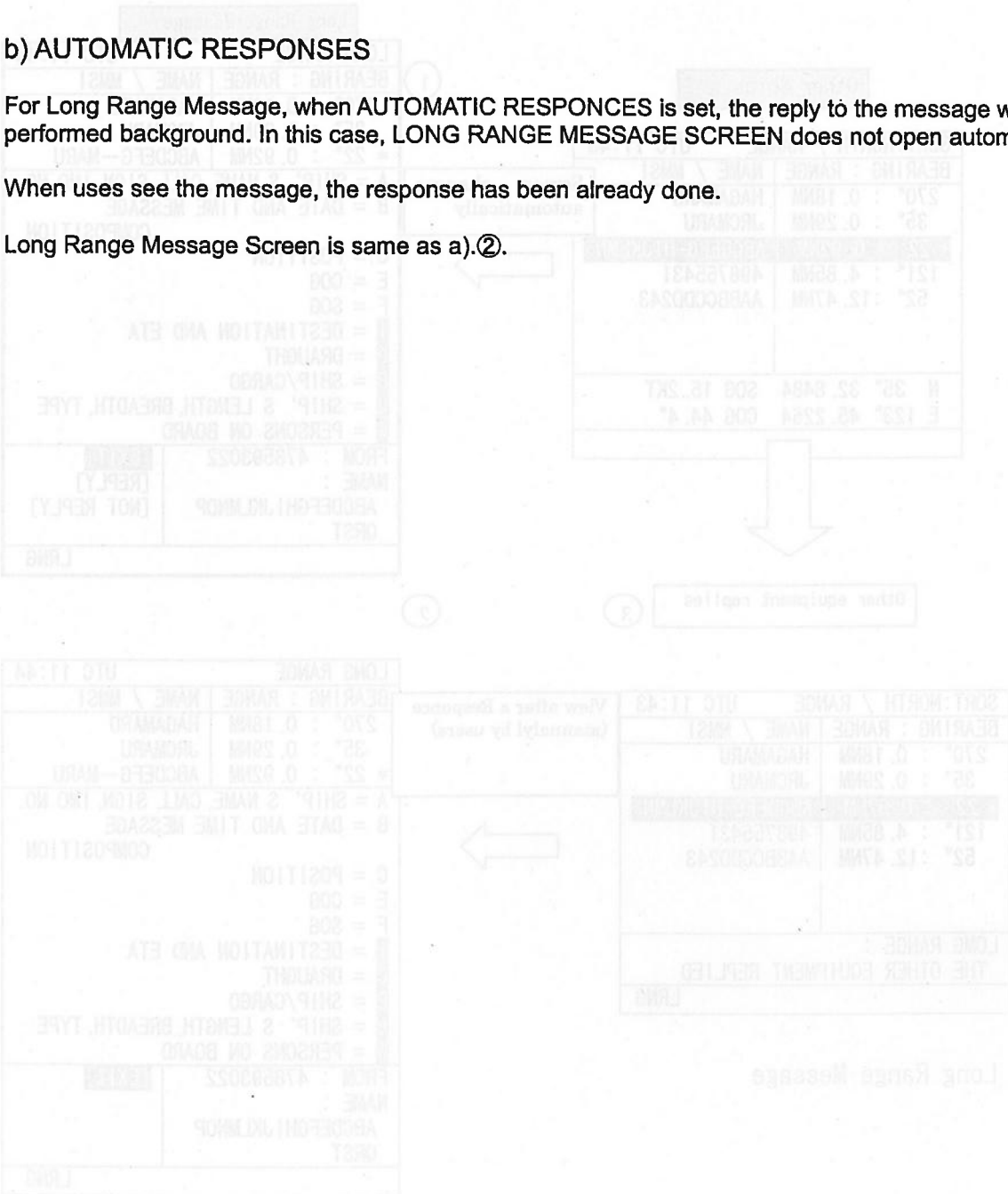-

In bottom right of LONG RANGE screen,

- If [EXIT]is selected or CRL key is pressed, return to Message Menu.
- If [REPLY] is pressed, display a sentence of accepting the request and change the display of down right of the screen. (see ① and ② above)
- If [NOT REPLY] is pressed, display a sentence of "No Reply" and change the display of down right of the screen. (see ① and ② above)

b) AUTOMATIC RESPONSES

For Long Range Message, when AUTOMATIC RESPONCES is set, the reply to the message will be performed background. In this case, LONG RANGE MESSAGE SCREEN does not open automatically.

When uses see the message, the response has been already done.

Long Range Message Screen is same as a).②.

When 4.ALARM SETTING is selected from Main Menu, USER ALARM SETTING screen appears.

The alarms that users can change the alarm settings are GUARD ZONE ALARM and LOST TARGET ALARM. From this screen, users can change the settings of these alarms.

Initially the cursor is on 1.GUARD ZONE. When the Jog Dial is rotated, the cursor moves over the selections (1.GUARD ZONE → 2.LOST TARGET → 3. USER ALARM HISTORY) , so select one of them and confirm the selection by pressing the Jog Dial.

When the CLR key is pressed, the process go back to Main Menu.

```
USER ALARM SETTING      UTC 11:44
BEARING : RANGE  | NAME / MMSI
  270° : 0.18NM  | HAGAMARU
   35° : 0.29NM  | JRCMARU
*  22° : 0.92NM  | ABCDEFG—MARU
1. GUARD ZONE     : 99.9NM
          BUZZER : ON

2. LOST TARGET : 99.9NM
        BUZZER : OFF

3. USER ALARM HISTORY
```

User Alarm Setting

1.GUARD ZONE

When 1.GUARD ZONE is selected, the range of GUARD ZONE ALARM can be set. If a ship come into the range, a warning message-"GUARD" will be displayed and a beep will be rung.

The value stands for the radius centered by own ship.
It can be set between 0 and 99.9(M).
When the value is zero(0), then GUARD ZONE ALARM (the beep also) is canceled.

When other ships come into within the radius   set up above,
(1) When 『BUZZER : ON』 , ring a beep and display "GUARD" at the bottom line.
(2) When 『BUZZER : OFF』 , no not ring beeps, nut "GUARD" is displayed.

The display/alarm can be cleared by CLR.

[Procedure]

    (1). From USER ALARM SETTING MENU, use the Jog Dial and select `1.GUARD ZONE`

    (2). With the Jog Dial, input the radius.(see 5.2.3)

        ① Maximum 99.9NM.

        ② When it is set 0.00NM, then the alarm will be canceled.

        ③ When the Jog Dial is pressed, the selection is confirmed.

        ④ When `CLR` key is pressed, the selection is canceled.

    (3). The cursor moves to `BUZZER:` , then select and confirm ON/OFF by the Jog Dial.

    (4). The cursor jumps to the next item.

2.LOST TARGET

When `2.LOST TARGET` is selected, the range of LOST TARGET ALARM can be set.

If a communication with the target is lost for more than six minutes, a warning message-"TARGET" will be displayed and a beep will be rung.

The display/alarm can be cleared by `CLR`.

[Procedure]

1.

    (1). From USER ALARM SETTING MENU, use the Jog Dial and select `2.LOST TARGET`

    (2). With the Jog Dial, input the radius.(see 5.2.3 for numeric input)

        ① Set the distance which is sufficiently possible to communicate

        ② When the Jog Dial is pressed, the selection is confirmed.

        ③ When `CLR` key is pressed, the selection is canceled.

    (3). The cursor jumps to `BUZZER:` , then select and confirm ON/OFF by the Jog Dial.

    (4). The cursor jumps to the next item.

3. USER ALARM HISTORY

The day and time of the alarms above are recorded.
The newest record comes to the top.
The newest ten records are displayed and older records are discarded.

```
┌──────────────────────────────────────┐
│ USER ALARM HISTORY        UTC 11:44  │
├──────────────────────────────────────┤
│ BEARING : RANGE │ NAME / MMSI        │
│  270° : 0.18NM  │ HAGAMARU           │
│   35° : 0.29NM  │ JRCMARU            │
│ * 22° : 0.92NM  │ ABCDEFG—MARU       │
├──────────────────────────────────────┤
│  1. 2004/01/01 12:34 GUARD           │
│  2. 2003/12/31 23:40 GUARD           │
│  3. 2003/12/31 23:34 GUARD           │
│  4. 2003/12/31 10:10 TARGET          │
│  5. 2003/12/21 12:00 GUARD           │
│  6. 2003/11/09 12:59 GUARD           │
│  7. 2003/11/09 12:58 GUARD           │
│  8. 2003/11/09 12:57 TARGET          │
│  9. 2003/11/07 12:01 TARGET          │
│ 10. 2003/11/01 19:48 GUARD           │
│                                      │
│  [EXIT]                              │
│                                      │
└──────────────────────────────────────┘
```

USER ALARM HISTORY

From MAIN MENU, when ▊4. SETUP▊ is selected, a menu for setting AIS Controller appears.

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

```
1. CONTRAST              :  49

2. TIME DIFFERENCE       : 22:22
   (LOCAL TIME)          : OFF
3. REGIONAL CHANNEL SETTING

4. LONG RANGE RESPONSE : MANUAL

5. BUZZER                : ON

6. GROUP SHIP

7. CHANNEL SETTING

8. PASSWORD
```

Setup of the AIS Controller functions and channel management of the transponder.

The outlines of menu items are:
1. CONTRAST···adjust the shade of this display. (see 5.2.4.1)
2. TIME DIFFERENCE···input Local time. (see 5.2.4.2)
3. REGIONAL CHANNEL SETTING···input . (see 5.2.4.3)
4. LONGRANGE RESPONSE···select MANUAL/AUTO response.(see 5.2.4.4)
5. BUZZER···select buzzer ON/OFF.(see 5.2.4.5)
6. GROUP SHIP···entry of group ships (max 10 ships)(see 5.2.4.6)
7. CHANNEL SETTING···set channels.(see 5.2.4.7)
8. PASSWORD···entry of a new password.(see 5.2.4.8)

When ▊1. CONTRAST▊ is selected, CONTRAST is ready to be entered.

See 5.2.3 for Numerical Input for the methodology of the numerical input.

| 1. CONTRAST   : ▊0 |

    CONTRAST ADJUSTMENT

Set up of local time, and Select a display change of time.

MAIN MENU		LMT 13:22
BEARING : RANGE	NAME / MMSI	
270° : 0.18NM	HAGAMARU	
35° : 0.29NM	JRCMARU	
* 22° : 0.92NM	ABCDEFG—MARU	

1. CONTRAST   :   49

2. TIME DIFFERENCE   : 22:22
   (LOCAL TIME)   : ON

          LMT

[Operations]
1.   Rotate the Jog Dial and select the "2.TIME DIFFERENCE".
2.   Input the Local Time.(See 5.2.3.1)
3.   Enter the Local Time with the Jog Dial. The cursor move to the lower line.
4.   Rotate the Jog Dial and select the "ON/OFF".
5.   When "ON" is selected, Current Time(the upper line) is changed to 'LMT' from 'UTC'.

     *   When UTC time is not obtained, Local Time cannot set up.

When **3. REGIONAL CHANNEL SETTING** is selected, Regional Channel Setting Menu appears.
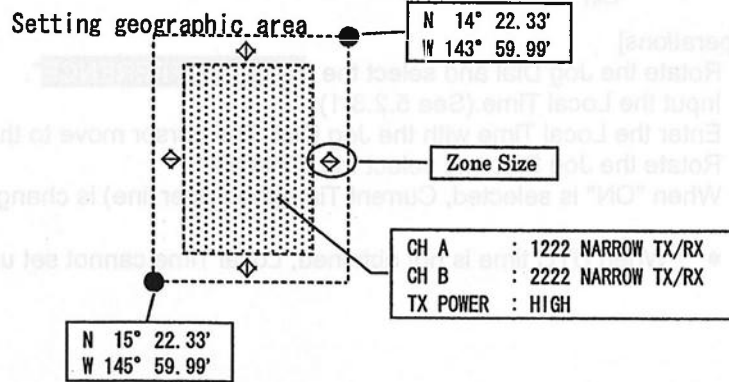
A maximum eight channel management information can be inputted.

Rotate the jog dial to left/right and move the cursor for selecting the menu.
Press the Jog Dial, then the sub menu displayed
If CLR is pressed, go back to set up menu (5.2.4).

```
REGIONAL CHANNEL SETTING UTC 11:44
BEARING : RANGE  | NAME / MMSI
  270° : 0.18NM  | HAGAMARU
   35° : 0.29NM  | JRCMARU
* 22° : 0.92NM   | ABCDEFG—MARU
1. CH A        : 1222 NARROW
2. CH B        : 2222 NARROW
3. TX/RX MODE: TX/RX,  TX/RX
               ( CH A,   CH B )
4. TX POWER   : HIGH
5. ZONE SIZE  : 5NM
6. AREA (NE)  : N  14° 22.33'
                W 143°  9.99'
7. AREA (SW)  : N  15° 22.33'
                W 145° 59.99'
8. SOURCE     : BROADCAST MSG.22
   MMSI       : 123456789
   UTC        : 2004/07/29 12:49
[EXIT]      [CHECK]      [SAVE]
[LIST]               [ALL CLEAR]
```

Regional channel setting

Setting geographic area

```
N  14° 22.33'
W 143° 59.99'
```

Zone Size

```
CH A     : 1222 NARROW TX/RX
CH B     : 2222 NARROW TX/RX
TX POWER : HIGH
```

```
N  15° 22.33'
W 145° 59.99'
```

The range of coordinates is set up in distance less than 200NM [20NM or more].

[Setting Up Procedure]
1. Set up a new transmission as the picture above. Check if the settings works or not. If OK, you can save the setting.
2. Additionally, if you want to see settings which had already been registered (maximum 9), it is available from a list.

When this menu opens, the cursor is on **1.** Press the Jog Dial then the cursor jumps to the channel number. (e.g. In the picture above, if the Jog Dial pressed while the cursor is on 1., then it jumps to "1222".)

And if you rotate the Jog Dial while it is on **1.**, then the cursor moves 1 → 2 → 3 → 4 ...

[Explanation of the setting menus]
1,2.CHANNEL:
    1. 2. are a menu for setting channel number and bandwidth.
    By rotating Jog Dial, input the channel number and confirm it by pressing the Dial.

    If CLR key is pressed, terminate the process and discard the change.

    No. : Set up to the channels which are used.
    BANDWIDTH : Select the bandwidth from WIDE/NARROW

3.   TX/RX MODE :
This menu is used for setting the transmission/receive(TX/RX) mode of CH A and CH B.

With Jog-Dial, select a combination of communication method.
Turn the Jog Dial left then the number changes 1→2→3 from 3 patterns below:

        1.TX/RX,TX/RX (CH A → TX/RX、 CH B → TX/RX)
        2.TX/RX, RX   (CH A → TX/RX、 CH B → RX)
        3.RX, TX/RX   (CH A → RX、 CH B → TX/RX)

Press the Jog Dial for confirming the selection.

Setting as (RX, RX) cannot be selectable.

4.TX POWER: Select the TX Output Power(HIGH/LOW).
    This menu is for setting the transmission power.
    The power of each setting is:
        High......12.5W
        Low.........2W
    Rotate Jog Dial and select from High or Low.
    Press the Jog Dial for confirming the selection.

5.ZONE SIZE : Set up the width of the channel change zone.
    Set the range with Jog Dial.
    The range can be input between 1 and 8NM.
    Press the Jog Dial for confirming the entry.
    If CLR key is pressed, terminate the process and discard the change.

6,7. Coordinates in area : Set up the coordinates of area.
    By setting NE at 6, SW at 7, define the area.

    When cursor is on 6, press the Jog Dial.
    The cursor moves to the right of ":", turn the Jog Dial and select "N".
    Press the Jog Dial for confirming "N".
    Enter numeric value for "xxx° xx.xx'"and press for confirmation.

    Follow the procedure above, enter value for E(East), S(South) and W(West).
    If CLR key is pressed, terminate the process and discard the change.

8. Change direction of the Regional Channel :
    When 8. is selected, the information about a setting direction is provided.
    Here only displaying the information, no selections/changes are made.

        SOURCE...The contents of directions received
        MMSI...MMSI of the origin of the setting direction
        UTC...The UTC time when the direction was accepted