

# 5. LOG FILE

The log file stores routine received messages (messages other than Distress), received distress messages and transmitted messages, each in its own separate log.

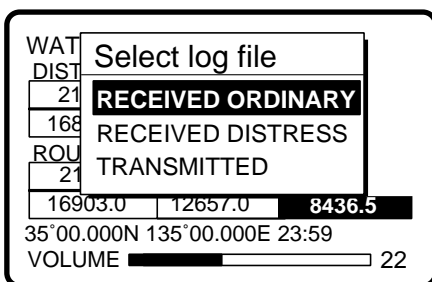
## 5.1 Log File Description

Three memory banks are provided for storage of messages: received ordinary log, received distress log and transmitted log. Each memory bank stores 50 messages, on a first-in, first-out basis. This means that a latest message is saved as log no.1 and the log no. of all previous messages in that memory bank increments by one. When the storage capacity is exceeded the oldest message is deleted to make room for the latest. Any unread messages are retained, and marked with \*.

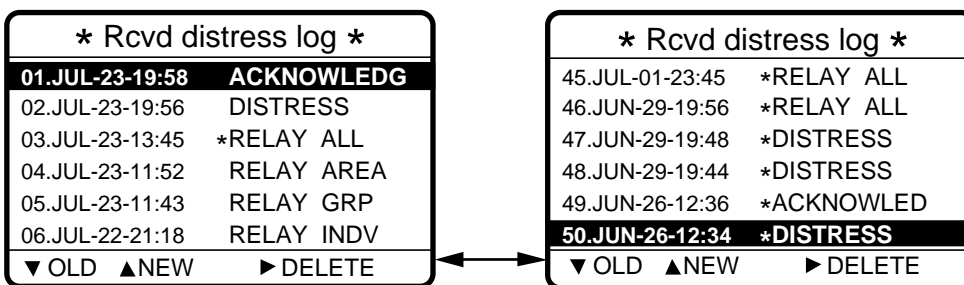
## 5.2 Opening a Log File

### 5.2.1 Distress log

1. Press the [0/LOG] key to open the log file menu.

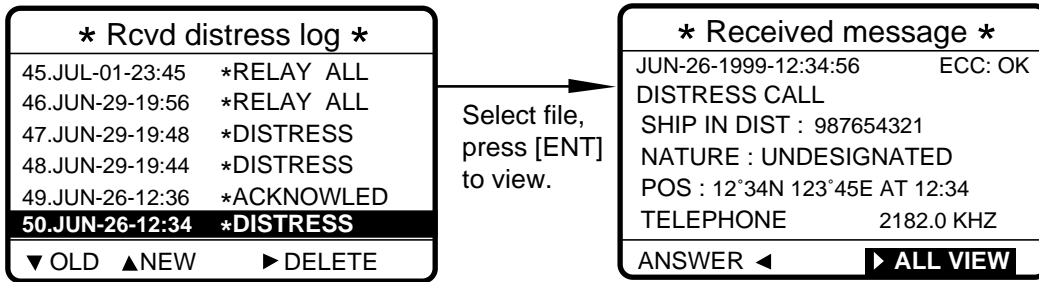


2. Select RECEIVED DISTRESS and press the [ENT] key. Use ▲ or ▼ to scroll the log as desired.



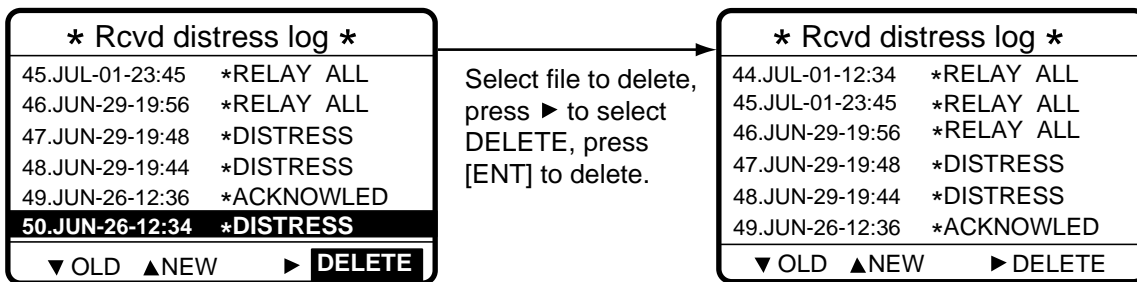
Scroll with  
▲ or ▼.

3. To view a file, select it and press the [ENT] key. To return to the distress log, press the [CANCEL] key.



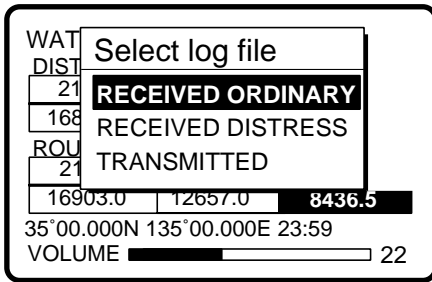
- To delete a file, select it, press ▶ to select DELETE, and press the [ENT] key. The log files are renumbered to reflect the deletion.

**Note:** Unread files cannot be deleted.

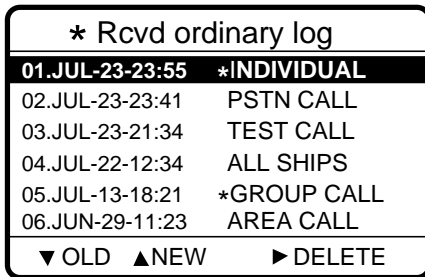


## 5.2.2 Ordinary log

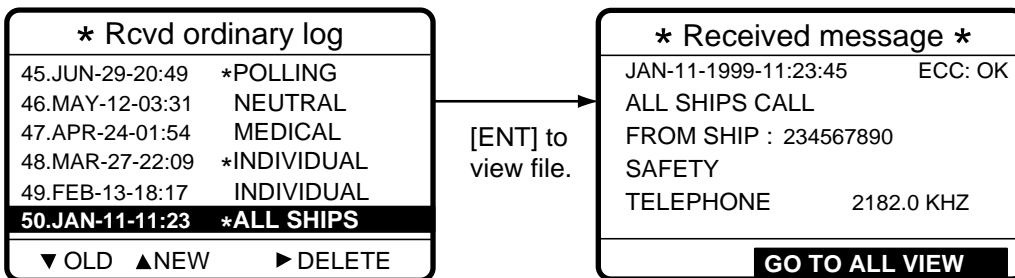
1. Press the [LOG] key to open the log file menu.



2. Press the [ENT] key to open the received ordinary log.

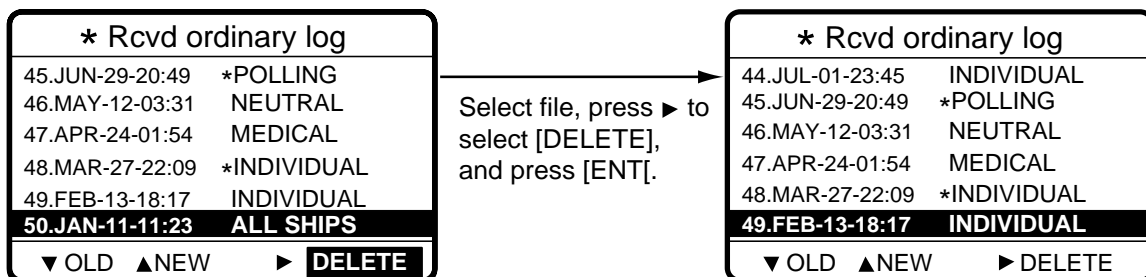


3. Use <math>\blacktriangledown</math> or <math>\blacktriangle</math> to scroll the log.
4. To view the contents of a file, select it and press the [ENT] key. To return the ordinary log, press the [CANCEL] key.



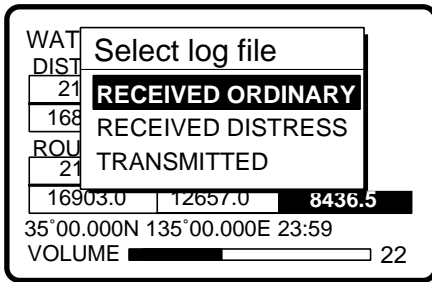
5. To delete a file, select it, press <math>\blacktriangleright</math> to select DELETE, and press the [ENT] key. The log files are renumbered to reflect the deletion.

**Note:** Unread files cannot be deleted.

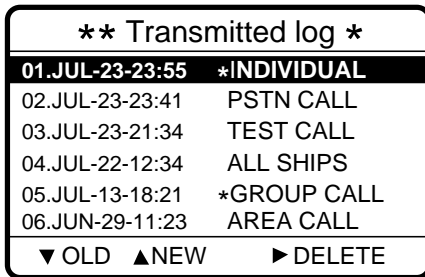


### 5.2.3 Transmitted log

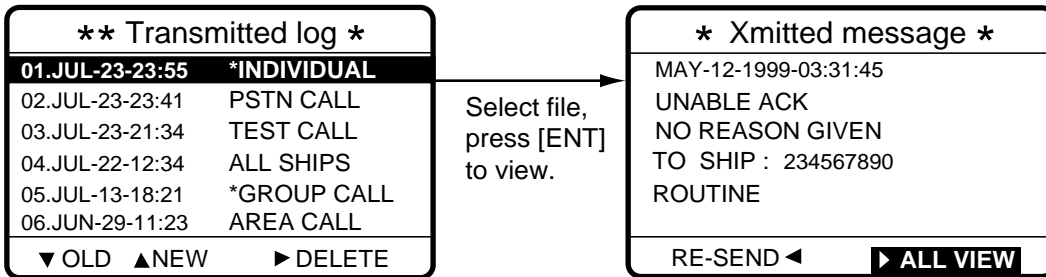
1. Press the [LOG] key to open the log file menu.



2. Select TRANSMITTED and press the [ENT] key.



3. Use ▼ or ▲ to scroll the log.
4. To view the contents of a file select it and press the [ENT] key.



5. To delete a file, select it, press ► to select DELETE, and press the [ENT] key. The log files are renumbered to reflect the deletion.

**Note:** Unread files cannot be deleted.

6. To re-send a file do the following:
  - a) Do steps 1-4 above to select file to re-send.
  - b) Press ◀ to select RE-SEND.
  - c) Press the [ENT] key.
  - d) Press the [CALL] key.

# 6. PREPARING SEND MESSAGES

In Chapter 3 you learned how to manually send individual, group and area calls. In this chapter you will learn how to send prepare and send them automatically, using prepared messages (files). 50 such files can be stored for future use.

## 6.1 Preparing Individual Call Messages

1. Press the [#]/SETUP] key to open the Setup menu.
2. Select MESSAGE and press the [ENT] key.
3. Press the [ENT] key to open the CALL TYPE menu.

| * Message file entry |                   |
|----------------------|-------------------|
| <b>CALL TYPE</b>     | <b>INDIVIDUAL</b> |
| STATION ID           | PSTN CALL         |
| COM. TYPE            | GROUP CALL        |
| COM. FREQ            | AREA CALL         |
| DSC FREQ             | : 2M-INTL         |
| ▼                    |                   |

4. Use ▲ or ▼ to select INDIVIDUAL and press the [ENT] key.
5. Press ▼ to select STATION ID and press the [ENT] key.

| * Message file entry |              |
|----------------------|--------------|
| CALL TYPE            | : INDIVIDUAL |
| <b>STATION ID</b>    | 00000000     |
| COM. TYPE            | : TELEPHONE  |
| COM. FREQ            | : NO INFO    |
| DSC FREQ             | : 2M-INTL    |
| ▼                    |              |

6. Key in ID of station which is to receive the call and press the [ENT] key.
7. Press ▼ to select COM. TYPE and press the [ENT] key.

| * Message file entry |                  |
|----------------------|------------------|
| CALL TYPE:           | INDIVIDUAL       |
| STATION ID           | : 001234567      |
| <b>COM. TYPE</b>     | <b>TELEPHONE</b> |
| COM. FREQ            | NBDP-ARQ         |
| DSC FREQ             | : NBDP-FEC       |
| ▼                    |                  |

8. Press ▼ to select COM. FREQ and press the [ENT] key. Choose appropriate item and press the [ENT] key.

| * Message file entry |                |
|----------------------|----------------|
| CALL TYPE:           | INDIVIDUAL     |
| STATION ID :         | 123456789      |
| COM. TYPE :          | <b>NO INFO</b> |
| <b>COM. FREQ :</b>   | FREQUENCY      |
|                      | CHANNEL        |
| DSC FREQ :           | POSITION       |
| ▼                    |                |

9. Press ▼ to select DSC FREQ and press the [ENT] key.

| * Message file entry |        |
|----------------------|--------|
| CALL TYPE            | 4 MHZ  |
| STATION ID           | 6 MHZ  |
| COM. TYPE            | 8 MHZ  |
| COM. FREQ            | 12 MHZ |
| <b>DSC FREQ</b>      | ▼      |
| ▼                    |        |

|        |
|--------|
| ▲      |
| 16 MHZ |
| 18 MHZ |
| 22 MHZ |
| 25 MHZ |
| OTHER  |
| MANUAL |

Use ▼ to scroll menu.

10. Select appropriate frequency and press the [ENT] key.
11. Enter file name and file number as shown on the next page.

## How to Enter File Name and Number

1. Press ▼ to scroll the display and then press the [ENT] key.

2. Use the numeric keys and cursor pad to enter file name (max. 16 characters) and press the [ENT] key. For example, enter FURUNO as the file name. (If the file name exists the message "Duplicate name! Overwrite OK?" appears. Press [ENT] to write over the name, or press the [CANCEL] key to escape.)

### How to assign file name

[1\_] key : 1→\_→1  
 [2ABC] : 2→A→B→C→2  
 [3DEF] : 3→D→E→F→3  
 [4GHI] : 4→G→H→I→4  
 [5JKL] : 5→J→K→L→5  
 [6MNO] : 6→M→N→O→6  
 [7PQRS] : 7→P→Q→R→S→7  
 [8TUV] : 8→T→U→V→8  
 [9WXYZ] : 9→W→X→Y→Z→9  
 [0\_] : 0→\_→0

1. Press ◀ or ▶ to select location.
2. Press appropriate key.

### How to enter "FURUNO" as file name

1. Press the [3] key to display F.
2. Press ▶.
3. Press the [8] key to select U.
4. Press ▶.
5. Press the [7] key to select R.
6. Press ▶.
7. Press the [8] key to select U.
8. Press ▶.
9. Press the [6] key to select N.
10. Press ▶.

3. Press ▼ followed by the [ENT] key. Key in file number in three digits with the numeric keys, and press the [ENT] key. For example, press [0] [0] [1] to enter file number 001.

4. Press the [ENT] key. The display shows the name and file number entered.

5. Press the [ENT] key to continue.

## 6.2 Preparing Group Call Messages

1. Press the [# / SETUP] key to open the Setup menu.
2. Select MESSAGE and press the [ENT] key.
3. Press the [ENT] key to open the CALL TYPE menu.

| * Message file entry |                   |
|----------------------|-------------------|
| <b>CALL TYPE</b>     | <b>INDIVIDUAL</b> |
| STATION ID           | PSTN CALL         |
| COM. TYPE            | GROUP CALL        |
| COM. FREQ            | AREA CALL         |
| DSC FREQ             | : 2M-INTL         |
| ▼                    |                   |

4. Use ▲ or ▼ to select GROUP CALL and press the [ENT] key.
5. Press ▼ to select GROUP ID and press the [ENT] key.

| * Message file entry |             |
|----------------------|-------------|
| CALL TYPE:           | GROUP CALL  |
| <b>GROUP ID</b>      | 00000000    |
| COM. TYPE            | : TELEPHONE |
| COM. FREQ            | : NO INFO   |
| DSC FREQ             | : 2M-INTL   |
| ▼                    |             |

6. Key in ID of group which is to receive the call and press the [ENT] key.
7. Press ▼ to select COM. TYPE and press the [ENT] key.

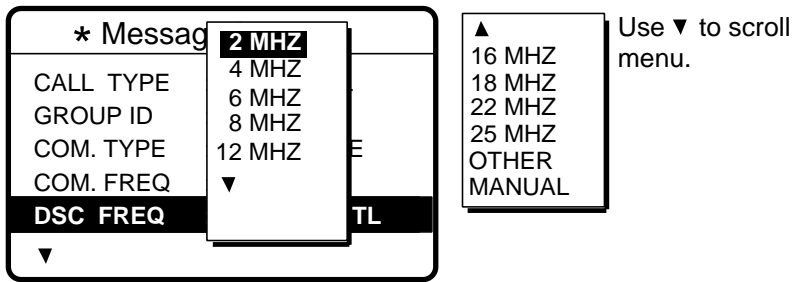
| * Message file entry |                  |
|----------------------|------------------|
| CALL TYPE:           | GROUP CALL       |
| GROUP ID             | : 001234567      |
| <b>COM. TYPE</b>     | <b>TELEPHONE</b> |
| COM. FREQ            | : NBDP-FEC       |
| DSC FREQ             | : 2M-INTL        |
| ▼                    |                  |

8. Select appropriate communications type and press the [ENT] key.
9. Press ▼ to select COM. FREQ and press the [ENT] key. Choose appropriate item and press the [ENT] key.

| * Message file entry |                    |
|----------------------|--------------------|
| CALL TYPE:           | GROUP CALL         |
| GROUP ID             | : 123456780        |
| COM. TYPE            | : NO INFO          |
| <b>COM. FREQ</b>     | <b>FREQUENCY</b>   |
| DSC FREQ             | : CHANNEL POSITION |
| ▼                    |                    |

10. Press ▼ to select DSC FREQ and press the [ENT] key.



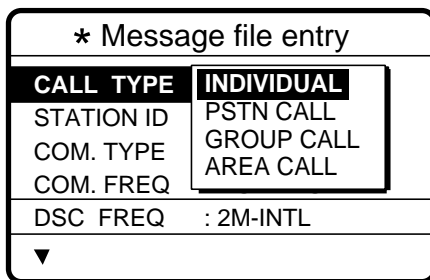


11. Select appropriate frequency and press the [ENT] key.
12. Follow “How to Enter File Name and Number” on page 6-3 to enter file name and number.

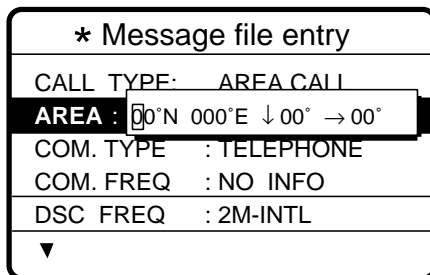
**Note:** Your ship’s group ID will be as registered as entered in step 6 of this procedure.

### 6.3 Preparing Geographic Area Call Messages

1. Press the [#]/SETUP] key to open the Setup menu.
2. Select MESSAGE and press the [ENT] key.
3. Press the [ENT] key to open the CALL TYPE menu.

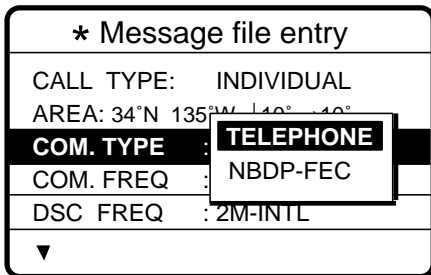


4. Use ▲ or ▼ to select AREA CALL and press the [ENT] key.
5. Press ▼ to select AREA and press the [ENT] key.

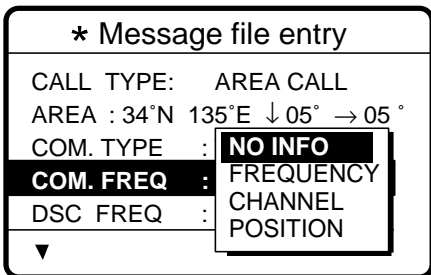


6. Select location where to enter data with ◀ or ▶, set value with numeric keys and press the [ENT] key.

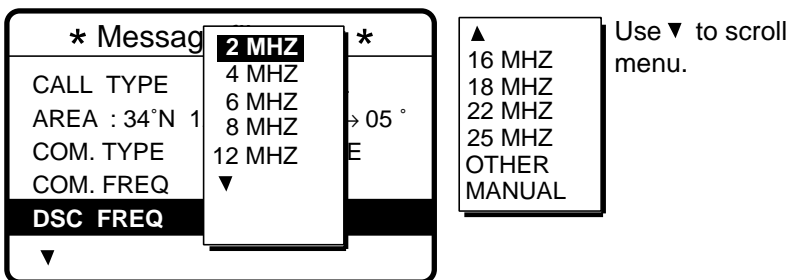
- Press **▼** to select COM. TYPE and press the [ENT] key.



- Press **▼** to select COM. FREQ and press the [ENT] key.



- Press **▼** to select DSC FREQ and press the [ENT] key.

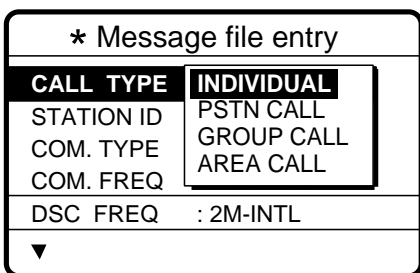


- Select appropriate frequency and press the [ENT] key.

- Follow "How to Enter File Name and Number" on page 6-3 to enter file name and number.

## 6.4 Preparing PSTN Call Messages

- Press the [#]/SETUP] key to open the Setup menu.
- Select MESSAGE and press the [ENT] key.
- Press the [ENT] key to open the CALL TYPE menu.



- Select PSTN CALL and press the [ENT] key.
- Press **▼** to select COAST ID and press the [ENT] key.

|                             |                 |
|-----------------------------|-----------------|
| <b>* Message file entry</b> |                 |
| CALL TYPE :                 | PSTN CALL       |
| <b>COAST ID</b>             | <b>00000000</b> |
| TEL NO. :                   | -----           |
| DSC FREQ :                  | 2M-INTL         |
| ▼                           |                 |

6. Key in ID of coast station (seven digits) to send the call to and press the [ENT] key.
7. Press ▼ to select TEL NO. and press the [ENT] key.

|                             |                      |
|-----------------------------|----------------------|
| <b>* Message file entry</b> |                      |
| CALL TYPE:                  | PSTN CALL            |
| COAST ID :                  | 001234567            |
| <b>TEL NO. :</b>            | <input type="text"/> |
| DSC FREQ :                  | 2M-INTL              |
| ▼                           |                      |

8. Key in telephone no. (max. 16 digits) and press the [ENT] key.
9. Press ▼ to select DSC FREQ and press the [ENT] key.

|                   |              |
|-------------------|--------------|
| <b>* Message</b>  |              |
| CALL TYPE:        |              |
| COAST ID          |              |
| TEL NO. :         |              |
| <b>DSC FREQ :</b> | <b>2 MHZ</b> |
| ▼                 |              |

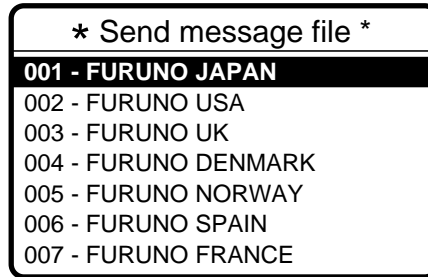
|   |        |
|---|--------|
| ▲ | 16 MHZ |
|   | 18 MHZ |
|   | 22 MHZ |
|   | 25 MHZ |
|   | OTHER  |
|   | MANUAL |
|   | ▼      |

Use ▼ to scroll menu.

10. Select appropriate frequency and press the [ENT] key.
11. Follow “How to Enter File Name and Number” on page 6-3 to enter file name and number.

## 6.5 Sending Prepared Messages

1. Press the [\*/FILE] key at the DSC standby screen to show the send message file list. Below is an example of the send message file list.



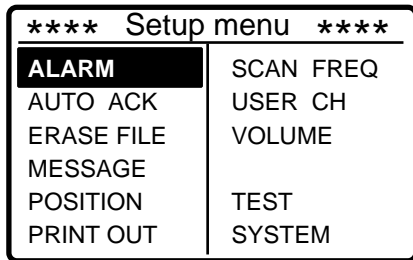
2. Select file with ▲ or ▼. (You can also select a file by entering its number with the numeric keys and pressing the [ENT] key.)
3. Press the [CALL] key to send the file.

# 7. SETUP MENU

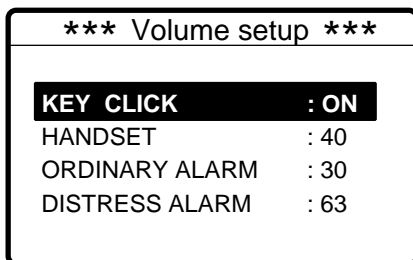
## 7.1 Setup Menu Overview

The Setup menu, consisting of 11 menus, provides for set up of the equipment according to expected usage and user's preferences.

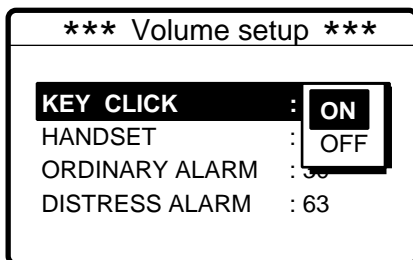
1. At the DSC standby screen, press the [#/SETUP] key to display the Setup menu.



2. Use the Cursor Pad to select a menu and press the [ENT] key. For example, select the VOLUME menu.



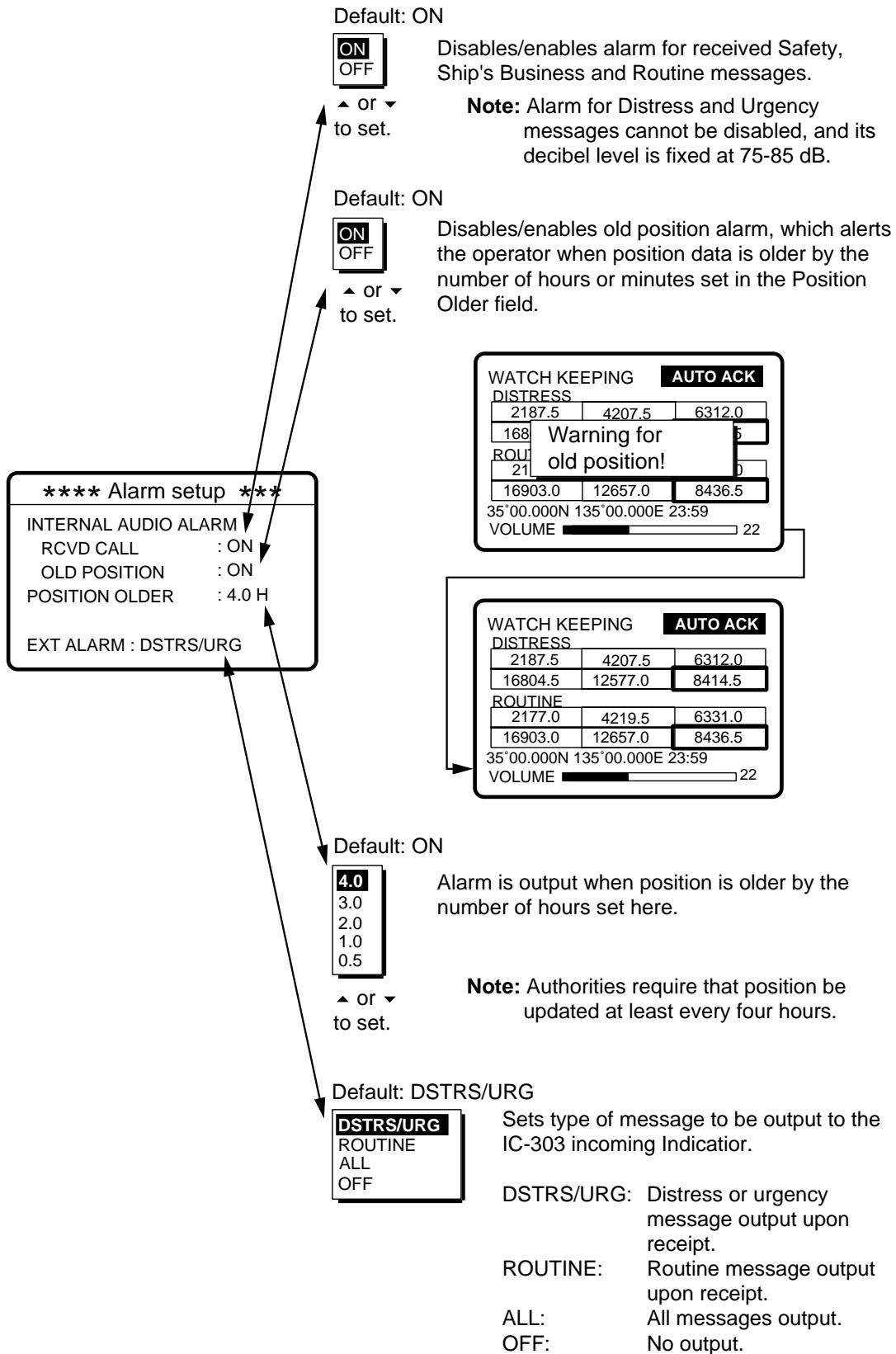
3. Use the Cursor Pad to choose item and press the [ENT] key. For example, select KEY CLICK. A pop-up window showing choices appears.



4. Use ▲ or ▼ to choose option desired and press the [ENT] key.
5. Press the [CANCEL] key twice to close the menu and return to the DSC standby screen.

## 7.2 Alarm Menu

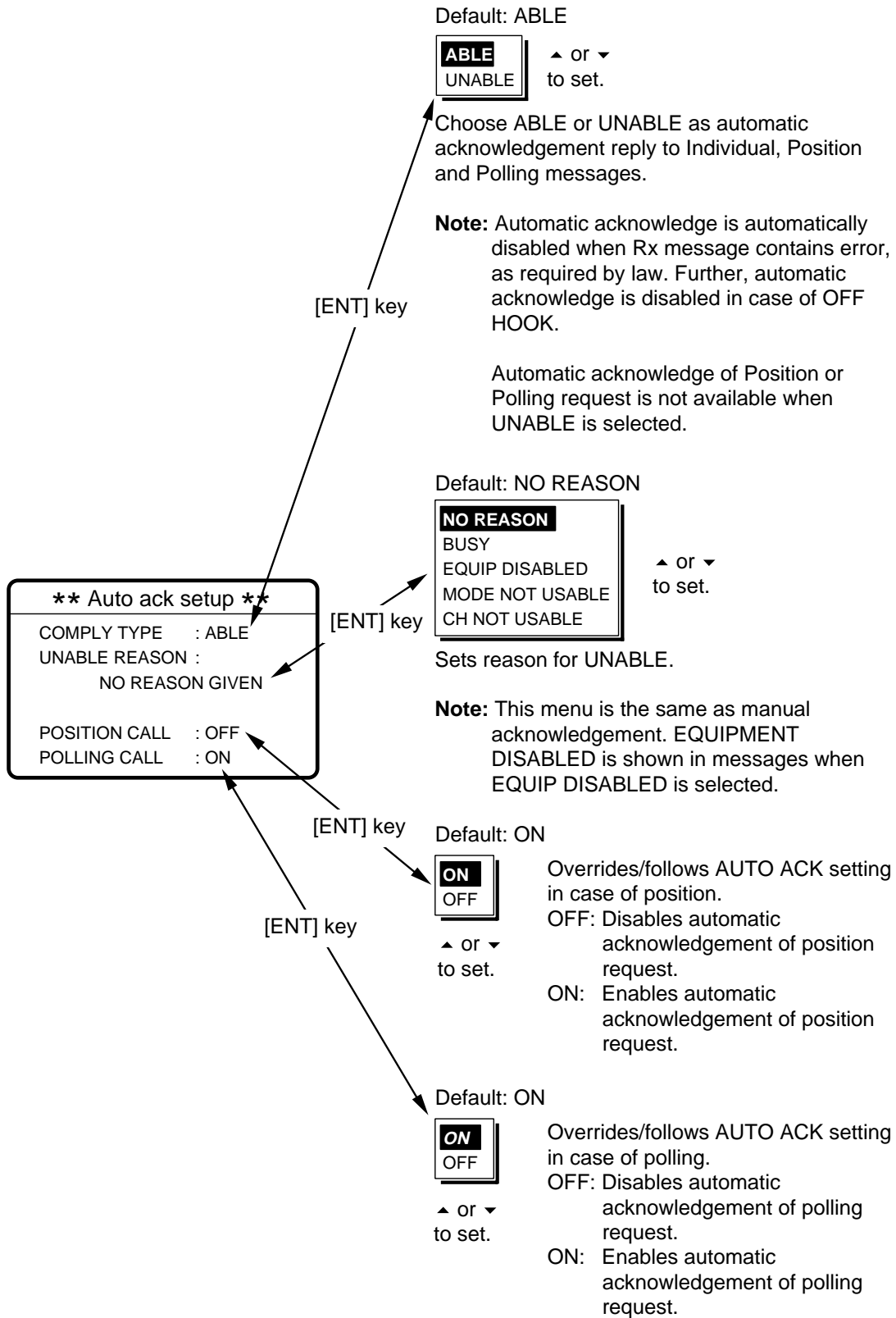
The Alarm menu enables/disables internal and external alarms. Note that the Distress/Urgency alarm cannot be disabled. Press the [# / SETUP] key, select ALARM and press the [ENT] key to display the Alarm menu.



## 7.3 Auto Ack Menu

The Auto Ack menu enables/disables automatic acknowledgement of individual, position and polling messages. Press the [# / SETUP] key, select AUTO ACK and press the [ENT] key to display the Auto Ack setup menu. See the next page for the Auto Ack menu.

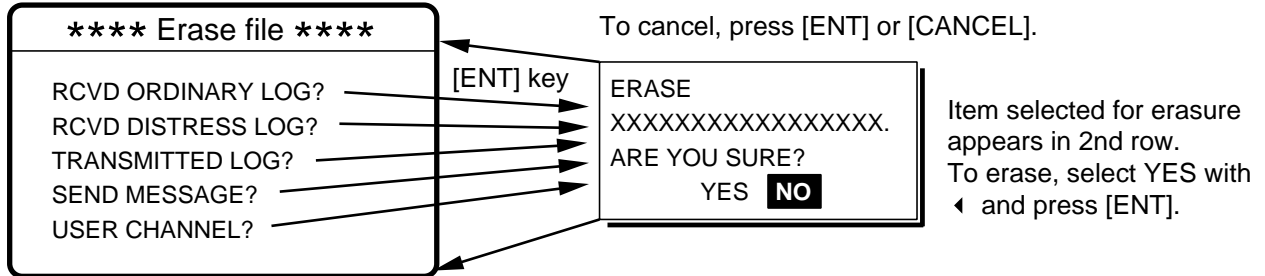
| <b>Comply type, automatic<br/>acknowledge</b> | <b>ABLE</b>                           | <b>UNABLE</b>                        |
|---|---------------------------------------|--------------------------------------|
| AUTO ACK                                      | Can send acknowledge<br>automatically | Cannot send automatic<br>acknowledge |
| MANUAL ACK                                    | Can send acknowledge manually         | Cannot send manual<br>acknowledge    |





## 7.4 Erase File Menu

The Erase File menu separately erases the entire contents of the received ordinary log, received distress log, transmitted log, send messages and user channels. Press the [# / SETUP] key, select ERASE FILE and press the [ENT] key to display the Erase File menu. Select the item to erase and press the [ENT] key.



## 7.5 Message Menu

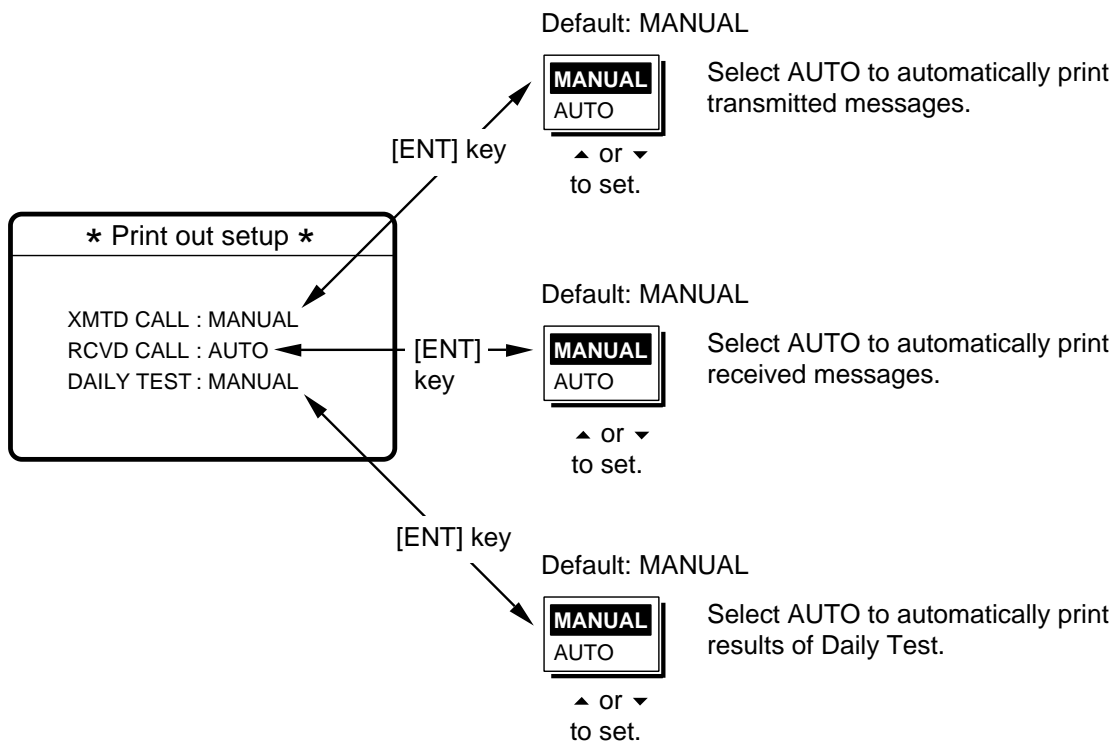
The Message menu prepares and stores messages for later transmission. Press the [# / SETUP] key, select MESSAGE and press the [ENT] key to display the Message menu. For further details see Chapter 6.

## 7.6 Position Menu

Position and time are entered (automatically or manually) on the Position menu. Manually enter position and time when the DSC-60 is not interfaced with EPFS or the EPFS is not working. Press the [# / SETUP] key, select POSITION and press the [ENT] key to display the Position menu. For further details see Paragraph 2.10 “Manual Input of Position and Time” on page 2-10.

## 7.7 Print Out Menu

The Print Out menu enables/disables automatic printing of transmitted and received messages and the results of the daily test. Press the [# / SETUP] key, select PRINT OUT and press the [ENT] key to display the Print Out menu.



## 7.7.1 Sample printouts

Printing can be done automatically or manually. For manual printing, press the [8/PRINT] key. Note that messages comprised of more than one page (for example, received messages) are printed out in their entirety.

```
* Received message at JAN-08-1999-16:10:12 *
FORMAT          : DISTRESS CALL
SELF-IDENTITY   : 987654321
NATURE OF DISTRESS : UNDESIGNATED DISTRESS
DISTRESS COORDINATES: NO INFORMATION
DISTRESS TELECOMMAND: J3E TELEPHONE
END OF SEQUENCE  : EOS
ERROR-CHECK     : OK

DSC FREQUENCY   TX: 2187.5 kHz
                 RX: 2187.5 kHz
```

Sample Received Message  
Printout (Distress)

```
* Received message at JAN-08-1999-16:10:12 *
FORMAT          : INDIVIDUAL CALL
ADDRESS         : 111660000
CATEGORY       : ROUTINE
SELF-IDENTITY   : 987654321
1st TELECOMMAND : J3E TELEPHONE
2nd TELECOMMAND : NO INFORMATION
WORKING FREQUENCY : NO INFORMATION
END OF SEQUENCE  : ACK. RQ
ERROR-CHECK     : OK

DSC FREQUENCY   TX: 2177.0 kHz
                 RX: 2177.0 kHz
```

Sample Received Message  
Printout (Individual)

```
***** Send message *****
FORMAT          : INDIVIDUAL CALL
ADDRESS         : 111660000
CATEGORY       : ROUTINE
SELF-IDENTITY   : 987654321
1st TELECOMMAND : J3E TELEPHONE
2nd TELECOMMAND : NO INFORMATION
WORKING FREQUENCY : NO INFORMATION
END OF SEQUENCE  : ACK. RQ
ERROR-CHECK     : OK

DSC FREQUENCY   TX: 2177.0 kHz
                 RX: 2177.0 kHz
```

Sample Send Message  
Printout (Individual)

```
*Transmitted message at JAN-08-1999-16:10:12 *
FORMAT          : INDIVIDUAL CALL
ADDRESS         : 987654321
CATEGORY       : ROUTINE
SELF-IDENTITY   : 111660000
1st TELECOMMAND : J3E TELEPHONE
2nd TELECOMMAND : NO INFORMATION
WORKING FREQUENCY : NO INFORMATION
END OF SEQUENCE  : ACK. RQ
ERROR-CHECK     : OK

DSC FREQUENCY   TX: 2177.0 kHz
                 RX: 2177.0 kHz
```

Sample Transmitted Message  
Printout (Individual)

**Note:** Messages are not framed in actual printouts.

## 7.8 Scan Freq Menu

The Scan Freq menu determines which DSC routine and distress frequencies to scan. Follow the instructions below to select/deselect DSC routine and distress frequencies to scan.

### 7.8.1 Distress frequencies

1. Press the [#/SETUP] key, select SCAN FREQ and press the [ENT] key to display the SCAN FREQ menu.

| ** Scan freq setup * |            |
|----------------------|------------|
| ROUTINE              | DISTRESS   |
| F1 : <b>2M-INTL</b>  | 2M : FIXED |
| F2 : 4M-INTL         | 4M : FIXED |
| F3 : 6M-INTL         | 6M : ON    |
| F4 : 8M-INTL         | 8M : FIXED |
| F5 : 16M-INTL        | 12M : ON   |
| F6 : 25M-INTL        | 16M : OFF  |

2. Press ► to shift the cursor to the DISTRESS column.
3. Select the frequency to process and press the [ENT] key. For example, select 4 MHz.

| ** Scan freq setup * |                |
|----------------------|----------------|
| ROUTINE              | DISTRESS       |
| F1 : 2M-INTL         | 2M : FIXED     |
| F2 : 2M-USR3         | <b>4M : ON</b> |
| F3 : 4M-INTL         | 6M : OFF       |
| F4 : 8M-INTL         | 8M : FIXED     |
| F5 : 16M-LCL1        | 12M : ON       |
| F6 : 25M-LCL2        | 16M : OFF      |

4. Select ON or OFF as appropriate and press the [ENT] key.
5. Press the [CANCEL] key twice to return to the DSC standby screen.

**Note:** Regulations require that 2 MHz and 8 MHz be watched continuously. These frequencies cannot be turned off.

## 7.8.2 Routine frequencies

1. Press the [#/SETUP] key, select SCAN FREQ and press the [ENT] key to display the SCAN FREQ menu.

| ** Scan freq setup * |            |
|----------------------|------------|
| ROUTINE              | DISTRESS   |
| F1 : <b>2M-INTL</b>  | 2M : FIXED |
| F2 : 4M-INTL         | 4M : FIXED |
| F3 : 6M-INTL         | 6M : ON    |
| F4 : 8M-INTL         | 8M : FIXED |
| F5 : 16M-INTL        | 12M : ON   |
| F6 : 25M-INTL        | 16M : OFF  |

2. Select the frequency to process and press the [ENT] key. For example, select 2 MHz.

| ** Scan freq setup * |            |
|----------------------|------------|
| ROUTINE              | DISTRESS   |
| OFF                  | 2M : FIXED |
| <b>F1 : 2 MHZ</b>    | 4M : ON    |
| F2 : 4 MHZ           | 6M : ON    |
| F3 : 6 MHZ           | 8M : FIXED |
| F4 : 8 MHZ           | 12M : ON   |
| F5 : 16M-INTL        | 16M : OFF  |
| F6 : 25M-INTL        |            |

Use ▼ to scroll the menu.

|               |
|---------------|
| ▲             |
| <b>12 MHZ</b> |
| 16 MHZ        |
| 22 MHZ        |
| 25 MHZ        |
| OTHER         |

3. Press the [ENT] key, and the display looks something like the one below.

| ** Scan freq setup *           |           |
|--------------------------------|-----------|
| ROUTINE                        | DISTRESS  |
| <b>INTL</b> :T12577.5/R12657.0 |           |
| LOCAL1 :T12578.0/R12657.5      |           |
| LOCAL2 :T12578.5/R12658.0      |           |
| USER CH1 :T12345.0/R12345.0    |           |
| F6 : 25M-INTL                  | 16M : OFF |

4. Select frequency desired and press the [ENT] key.
5. Press the [CANCEL] key twice to return to the DSC standby screen.

## 7.9 User CH Menu

The User CH menu allows registration of user Tx and Rx channels, where permitted by the Authorities. Follow the instructions below to register user channels.

|   |
|---|
|  <b>CAUTION</b>                                    |
| <p><b>FURUNO will assume no responsibility for the disturbance caused by the unlawful or improper setting of user channels.</b></p> |

1. Press the [#/SETUP] key, select USER CH and press the [ENT] key to display the User ch entry menu.

|                      |            |  |
|----------------------|------------|--|
| *** User ch entry ** |            |  |
| ◀ MODE: TEL          | ▶ CH: 2-01 |  |
| 0201. TX: 2111.5     | RX: 2111.5 |  |
| 0202. TX: 2222.0     | RX: 2222.0 |  |
| 0203. TX: 2333.5     | RX: 2333.5 |  |
| 0204. TX: 2444.0     | RX: 2444.0 |  |
| 0205. TX: 2555.5     | RX: 2555.5 |  |
| ▲ ▼                  |            |  |

256 channels may be registered, and each mode has its own channels.

Band and channel no. appear to right of "CH."  
Band no. setting range is 0-29 and band channel no. range is 00-99. When the full 256 channels have been entered no more channels can be entered. However, only four DSC channels can be registered per band.

2. Press ◀ to select MODE and press the [ENT] key.

|                      |            |  |
|----------------------|------------|--|
| *** User ch entry ** |            |  |
| ◀ MODE: TEL          | CH: 2-01   |  |
| 0201. TX: NBDP       | RX: 2111.5 |  |
| 0202. TX: DSC        | RX: 2222.0 |  |
| 0203. TX: 2333.5     | RX: 2333.5 |  |
| 0204. TX: 2444.0     | RX: 2444.0 |  |
| 0205. TX: 2555.5     | RX: 2555.5 |  |
| ▲ ▼                  |            |  |

3. Select appropriate mode and press the [ENT] key.
4. Press ▶ to select CH and press the [ENT] key.

|                      |            |  |
|----------------------|------------|--|
| *** User ch entry ** |            |  |
| ◀ MODE: NBDP         | CH: 0-00   |  |
| 0201. TX: 2101.5     | RX: 2101.5 |  |
| 0202. TX: 2202.0     | RX: 2202.0 |  |
| 0203. TX: 2303.5     | RX: 2303.5 |  |
| 0204. TX: 2404.0     | RX: 2404.0 |  |
| 0205. TX: 2505.5     | RX: 2505.5 |  |
| ▲ ▼                  |            |  |

- Key in channel no. and press the [ENT] key. For example, press [1], [2], [3], [4] and [ENT] to enter channel 1234. The channel selected is shown in black on white characters at the top of the screen.

| *** User ch entry ** |                |                |
|----------------------|----------------|----------------|
| ◀                    | MODE: NBDP     | ▶ CH: 12-40    |
| <b>01234.</b>        | <b>TX: 0.0</b> | <b>RX: 0.0</b> |
| 01240.               | TX: 12666.0    | RX: 13666.0    |
| 01241.               | TX: 12777.5    | RX: 13777.5    |
| 01242.               | TX: 12999.5    | RX: 13999.5    |
| 01250.               | TX: 12100.0    | RX: 13100.0    |

- Press the [ENT] key to enter Rx and Tx frequencies. For example, enter 12345.5 kHz as the Tx frequency and 13456.0 kHz as the Rx frequency.

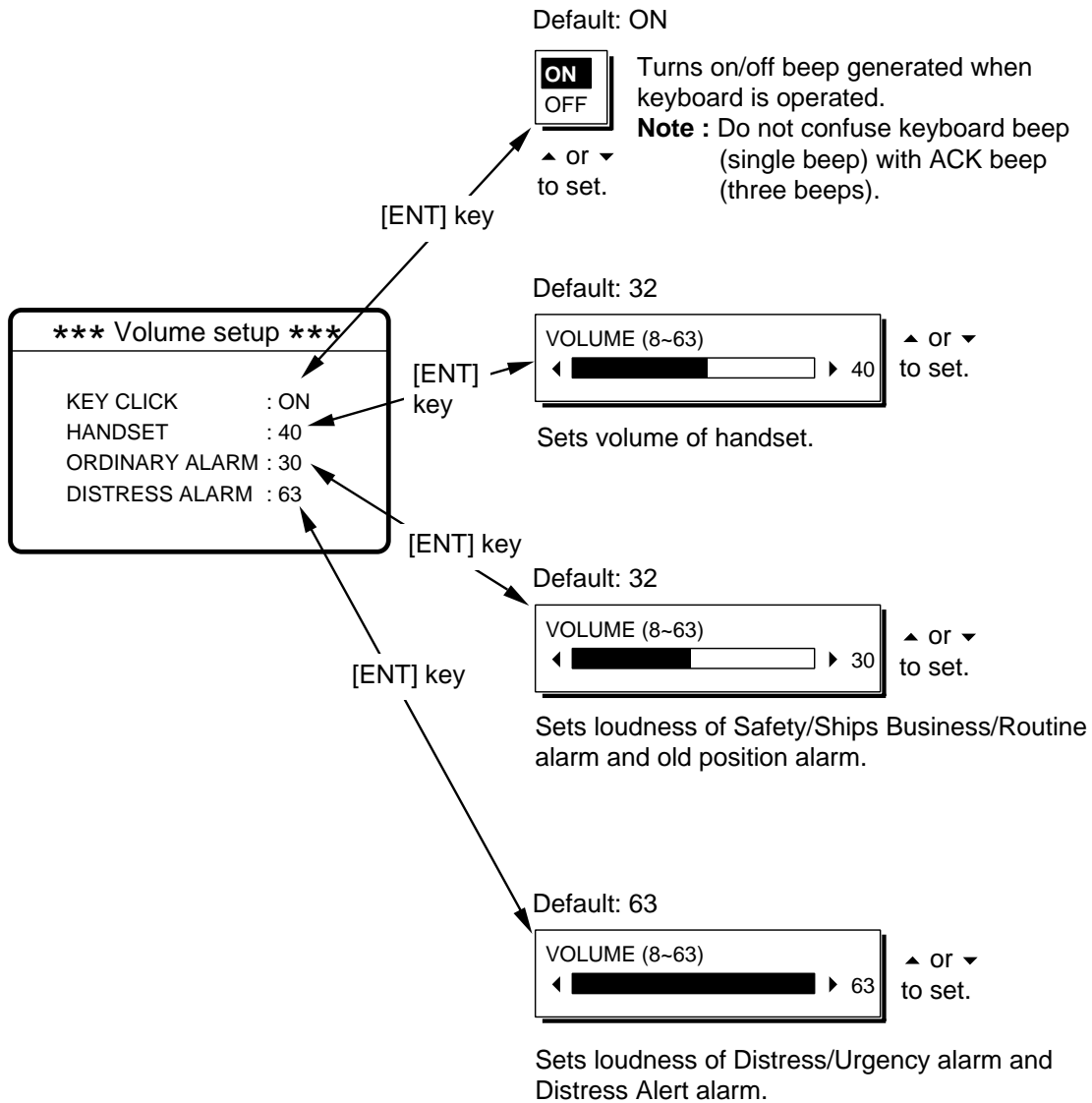
| *** User ch entry ** |                    |                    |
|----------------------|--------------------|--------------------|
| ◀                    | MODE: NBDP         | ▶ CH: 12-40        |
| <b>01234.</b>        | <b>TX: 12345.5</b> | <b>RX: 13456.0</b> |
| 01240.               | TX: 12666.0        | RX: 13666.0        |
| 01241.               | TX: 12777.5        | RX: 13777.5        |
| 01242.               | TX: 12999.5        | RX: 13999.5        |
| 01250.               | TX: 12100.0        | RX: 13100.0        |

- The display shows the information entered. Using the examples mentioned in this procedure, Tx frequency 12345.5, Rx frequency 13456.0 are registered to channel 1234.

| *** User ch entry ** |                    |                    |
|----------------------|--------------------|--------------------|
| ◀                    | MODE: NBDP         | ▶ CH: 12-34        |
| 01234.               | TX: 12345.5        | RX: 13456.0        |
| <b>01240.</b>        | <b>TX: 12666.0</b> | <b>RX: 13666.0</b> |
| 01241.               | TX: 12777.5        | RX: 13777.5        |
| 01242.               | TX: 12999.5        | RX: 13999.5        |
| 01250.               | TX: 12100.0        | RX: 13100.0        |

## 7.10 Volume Menu

The Volume menu enables/disables key beep (acknowledges correct key input) and adjusts the volume of the handset, ordinary alarm and distress/urgency alarm. Press the [# / SETUP] key, select VOLUME and press the [ENT] key to display the Volume menu.





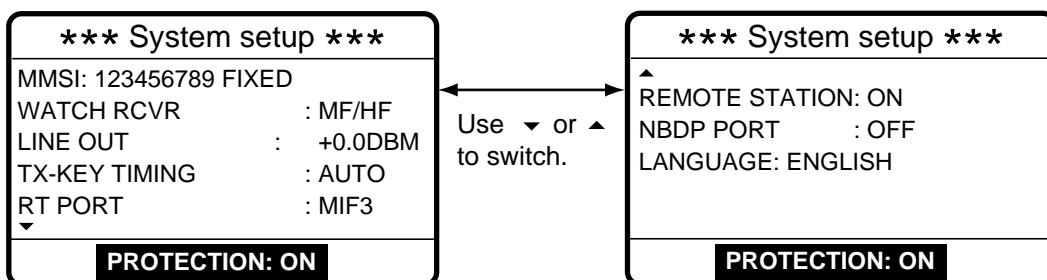
## 7.11 Test Menu

The Test menu provides test facilities (including tone test) for the service technician. This menu cannot be accessed by the operator.

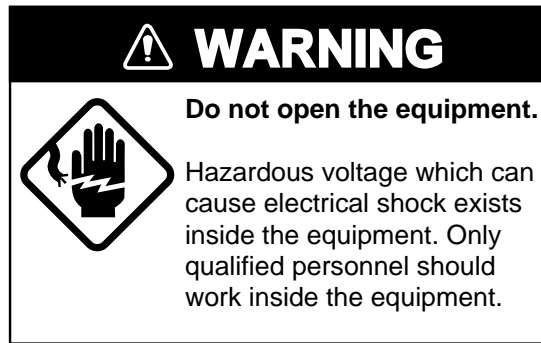
| *** Test function **  |           |
|-----------------------|-----------|
| TONE                  | AF PCB    |
| BK                    | CONT PCB  |
| REMOTE                | PANEL PCB |
| EXT ALARM             | RX PCB    |
| EXT ALERT             | TX TEST   |
| <b>PROTECTION: ON</b> |           |

## 7.12 System Menu

The System menu sets up the equipment and is for use by service technicians. This menu cannot be accessed by the operator. However the operator can view the settings by using ▲ and ▼.



# 8. CHECKING, MAINTENANCE



## 8.1 Daily Test

Authorities require that the equipment be checked daily for proper operation to ensure that it will function properly in the event of distress. **Set the frequency of the radiotelephone to other than 2182 kHz.** Execute the daily test as below.

1. At the DSC standby screen or radiotelephone setting screen, press the [3/TEST] key to start the test.
2. After several seconds the test results appear followed by the audio alarm. OK denotes normal operation, and NG (No Good), error. For NG (No Good) contact your dealer for advice.

| **DSC-60 daily test ** |              |
|------------------------|--------------|
| MAIN CPU               | : OK VER.XX* |
| MODEM                  | : OK VER.XX* |
| RCVR1                  | : OK         |
| RCVR2                  | : OK         |
| REMOTE RT              | : OK FS1562  |
| REMOTE DP              | : OK DP6     |

|            |  |
|------------|--|
| Alarm:     | Distress alarm sounds for two seconds after completion of test.  |
| MAIN CPU:  | ROM/RAM test executed and version no. displayed.   |
| MODEM:     | DSP ROM and DSC signal loopback tests executed and version no. displayed.  |
| RCVR1:     | Distress/safety watch received tested.   |
| RCVR2:     | Routine watch receiver tested.   |
| REMOTE RT: | CAID of MIF command sent and received. (System setting RP PORT must be set for MIF otherwise nothing appears.)   |
| REMOTE DP: | CAID of MIF command sent and received. (System setting NBDP PORT must be set for MIF otherwise nothing appears.) |

\* XX = Version number

3. If auto printing is active the test results are printed. To manually print results, press the [8/PRINT] key. Below is a sample test results printout.

```
* DSC-60 daily test *
AUG-14-1999-15:24
MMSI:      123456789
MAIN CPU:  OK VER.01
MODEM:     OK VER.02
RCVR1:     OK
RCVR2:     OK
REMOTE RT: OK FS1562
REMOTE DP: OK DP6
```

4. Press the [CANCEL] key to quit the test and return to the previously used screen.

## 8.2 Maintenance

Regular maintenance is necessary for continued performance. Following the procedures below will help keep the equipment in top operating condition.

### 8.2.1 Preventive maintenance

- Check the following points periodically to ensure proper performance.
- Check that each connector is firmly connected and is clean.
- Check the earth terminal for corrosion. If corroded, clean.

### 8.2.2 Cleaning

Dust on the display unit and display screen may be removed with a soft cloth. Do not use commercial cleaners to clean the display unit - they can remove paint and markings.

## 8.3 Simple Troubleshooting

The table below provides common problems and the means with which to restore normal operation. If normal operation cannot be restored do not attempt to check inside the equipment. Any servicing should be referred to a qualified technician.

| Problem  | Probable cause   | Remedy   |
|--|--|--|
| Power cannot be turned on.                               | <ul style="list-style-type: none"> <li>• Mains switchboard may be off.</li> <li>• DC overvoltage input.</li> <li>• Battery may have discharged, or poor contact at terminals.</li> </ul> | <ul style="list-style-type: none"> <li>• Turn on the mains switch</li> <li>• Check supply voltage.</li> <li>• Recharge battery and tighten battery terminals.</li> </ul> |
| Display indications do not appear but key lamps are lit. | <ul style="list-style-type: none"> <li>• Contrast is too low.</li> </ul>   | <ul style="list-style-type: none"> <li>• Press the [9/☉] key followed by ◀ or ▶ to adjust the contrast.</li> </ul>   |
| Power is on but no sound from loudspeaker.               | <ul style="list-style-type: none"> <li>• Loudspeaker is off.</li> </ul>  | <ul style="list-style-type: none"> <li>• Operate the [7/🔊] key to turn on the loudspeaker.</li> </ul>  |

## 8.4 Error Messages

The table below shows error messages and their meanings.

### *Error messages*

| Error message            | Meaning  | Remedy   |
|--------------------------|--|--|
| EPFS error               | No position data from navigator for one minute.                              | Press the [CANCEL] key to silence alarm. Check the navigator. If it is malfunctioning manually enter position. |
| Warning: Update position | Position data is older by the amount of time preset on the Alarm setup menu. | Press the [CANCEL] key to silence alarm. Reenter position on the Position menu.                                |

## 8.5 Test Call

This function sends a test signal over one of six distress and safety frequencies to a coast station. For that reason, it should not be executed unnecessarily.

1. Press the [CALL] key at the DSC standby screen, and press the [ENT] key to open the CALL TYPE menu.

| *** Send message *** |                   |
|----------------------|-------------------|
| <b>CALL TYPE</b>     | <b>INDIVIDUAL</b> |
| STATION ID           | PSTN CALL         |
| PRIORITY             | TEST CALL         |
| COM TYPE             | ALL SHIPS         |
| COM TYPE             | GROUP CALL        |
| DSC FREQ             | AREA CALL         |
|                      | POSITION          |

If this part of the menu appears, use ▲ to scroll.

|           |
|-----------|
| ▲         |
| POLLING   |
| NEUTRAL   |
| MEDICAL   |
| RELAY ALL |
| RELAY SEL |
| DISTRESS  |

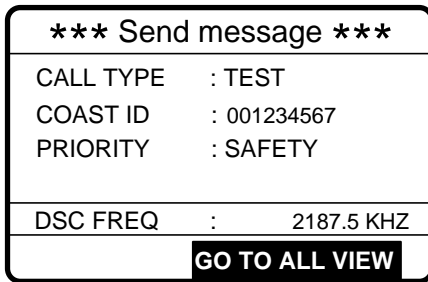
2. Use ▲ or ▼ to select TEST CALL and press the [ENT] key.
3. Press the [ENT] key to open the COAST ID menu.

| *** Send message *** |            |
|----------------------|------------|
| CALL TYPE            | TEST       |
| <b>COAST ID</b>      | 000000000  |
| PRIORITY             | SAFETY     |
| DSC FREQ             | 2187.5 KHZ |
| GO TO ALL VIEW       |            |

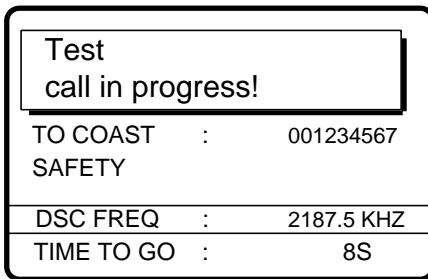
4. Key in the ID of the coast station ID (nine digits) to where to send the test call and press the [ENT] key.
5. Press the [ENT] key to open the DSC FREQ menu. (Note that PRIORITY is automatically selected to SAFETY.)

| *** Send message *** |               |
|----------------------|---------------|
| CALL TYPE            | <b>2187.5</b> |
| COAST ID             | 4207.5        |
| PRIORITY             | 6312.0        |
|                      | 8414.5        |
|                      | 12577.0       |
|                      | 16804.5       |
| <b>DSC FREQ</b>      | MANUAL        |
|                      | KHZ           |

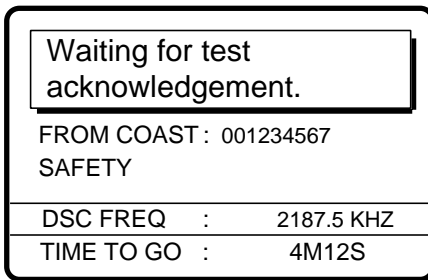
6. Select an appropriate frequency and press the [ENT] key, and the display changes as below.



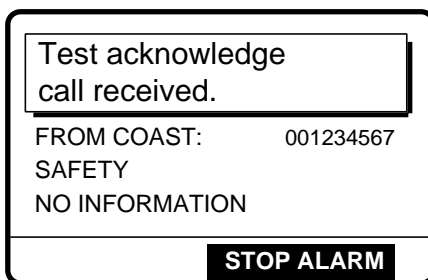
7. Press the [CALL] key to send the test call (transmission time: 6-8 sec.). The display shows "Test call in progress!" while the test call is being transmitted.



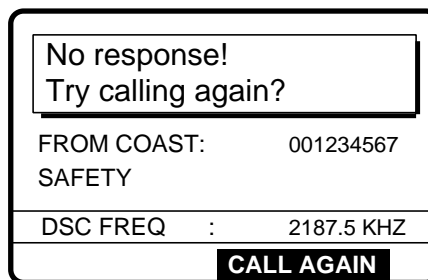
8. After the test call has been sent, the following message appears.



9. One of the following displays appears. ("No response! Try calling again?" appears when the timer counts down to zero, meaning no response from coast station.)



Test acknowledge received

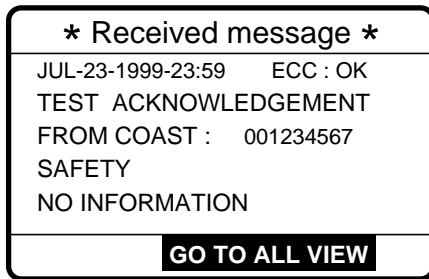


No response to test call

10. Do one of the following depending on the message shown in step 9.

## Test acknowledge call received

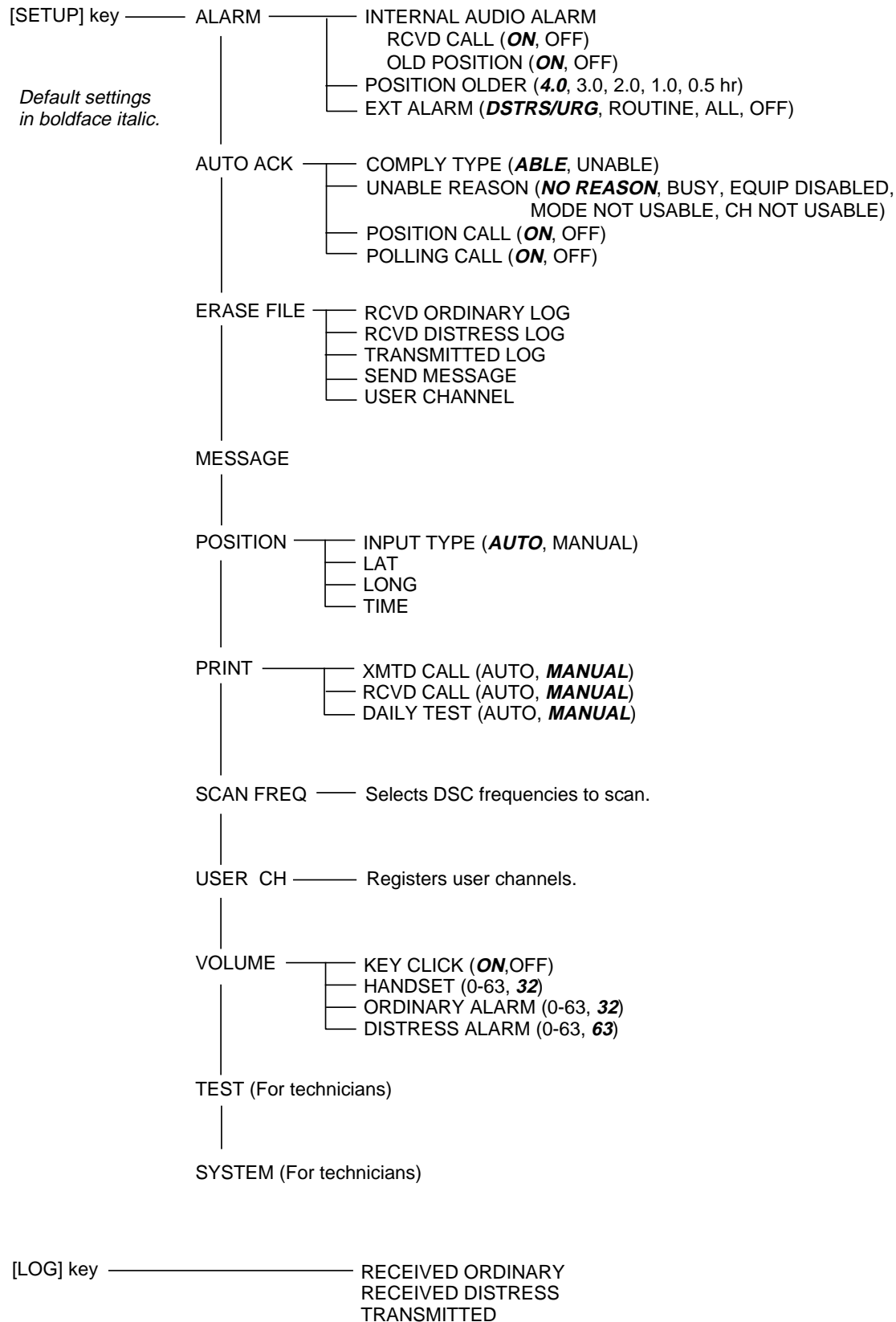
The audio alarm sounds; press the [CANCEL] key to silence the alarm. The display changes as below.



## No response! Try calling again?

Press the [ENT] key (the display shown in step 6 appears) followed by the [CALL] key to re-send the test call, or press the [CANCEL] key to return to the DSC standby screen.

## Menu Tree





# DSC Frequency Table

| Tx (kHz) | Rx (kHz) | Remarks                         | File Name  |
|----------|----------|---------------------------------|------------|
| 2187.5   | 2187.5   | Distress and Safety Frequencies |            |
| 4207.5   | 4207.5   |                                 |            |
| 6312.0   | 6312.0   |                                 |            |
| 8414.5   | 8414.5   |                                 |            |
| 12577.0  | 12577.0  |                                 |            |
| 16804.5  | 16804.5  |                                 |            |
| 458.5    | 455.5    | International Frequencies       | INTL-0.4M  |
| 2189.5   | 2177.0   |                                 | INTL-2M    |
| 4208.0   | 4219.5   |                                 | INTL-4M    |
| 6312.5   | 6331.0   |                                 | INTL-6M    |
| 8415.0   | 8436.5   |                                 | INTL-8M    |
| 12577.5  | 12567.0  |                                 | INTL-12M   |
| 16805.0  | 16903.0  |                                 | INTL-16M   |
| 18898.5  | 19703.5  |                                 | INTL-18M   |
| 22374.5  | 22444.0  |                                 | INTL-22M   |
| 25208.5  | 26121.0  |                                 | INTL-25M   |
| 4208.5   | 4220.0   | Local-1 Frequencies             | LOCAL1-4M  |
| 6313.0   | 6331.5   |                                 | LOCAL1-6M  |
| 8415.5   | 8437.0   |                                 | LOCAL1-8M  |
| 12578.0  | 12657.5  |                                 | LOCAL1-12M |
| 17805.5  | 16903.5  |                                 | LOCAL1-16M |
| 18899.0  | 19704.0  |                                 | LOCAL1-18M |
| 22375.0  | 22444.5  |                                 | LOCAL1-22M |
| 25209.0  | 26121.5  |                                 | LOCAL1-25M |
| 4209.0   | 4220.5   | Local-2 Frequencies             | LOCAL2-4M  |
| 6313.5   | 6332.0   |                                 | LOCAL2-6M  |
| 8416.0   | 8437.5   |                                 | LOCAL2-8M  |
| 12578.5  | 12658.0  |                                 | LOCAL2-12M |
| 16806.0  | 16904.0  |                                 | LOCAL2-16M |
| 18899.5  | 19704.5  |                                 | LOCAL2-18M |
| 22375.5  | 22445.0  |                                 | LOCAL2-22M |
| 25209.5  | 26122.0  |                                 | LOCAL2-25M |

## **SPECIFICATIONS OF DSC/WATCH RECEIVER DSC-60**

### 1. DSC TERMINAL

- (1) Line Out: 0 dBm (adjustable between -10 dBm and +10 dBm),  
600 ohms, balanced
- (2) Line In: -10 to +10 dBm, 600 ohms, balanced
- (3) Frequency Shift: Mark; 1615 Hz, Space; 1785 Hz
- (4) Baud Rate: 100 baud's  $\pm 30 \times 10^{-6}$
- (5) Protocol: Complies with ITU-R Rec.493-9, 541-8, 1082-1

### 2. GMDSS DSC WATCH KEEPING RECEIVER

- (1) Receiving Frequency
  - For MF spec: 2187.5 kHz
  - For MF/HF spec: 2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz,  
12577 kHz and 16804.5 kHz
- (2) Class of Emission: F1B, J2B
- (3) Frequency Stability: Within  $\pm 10$  Hz
- (4) Intermediate Frequency: 1st: 54455 kHz, 2nd: 455 kHz
- (5) Selectivity:
  - 6 dB : 270 Hz or more
  - 30 dB: within  $\pm 380$  Hz
  - 60 dB: within  $\pm 550$  Hz
- (6) RF Input Impedance: 50 ohms
- (7) Receiving Sensitivity: Better than 0 dB $\mu$  (at error rate within 1%)
- (8) Warming-up Time: 1 minute (oven 30 minutes)

### 3. GENERAL WATCH KEEPING RECEIVER (option)

- (1) Receiving Frequency 1.6 MHz to 27.5 MHz
- (2) Class of Emission: F1B, J2B
- (3) Frequency Stability: Within  $\pm 10$ Hz
- (4) Intermediate Frequency: 1st: 54455 kHz, 2nd: 455 kHz
- (5) Selectivity:
  - 6 dB : 270 to 300Hz
  - 30 dB: within  $\pm 380$ Hz
  - 60 dB: within  $\pm 550$ Hz
- (6) RF Input Impedance: 50 ohms
- (7) Receiving Sensitivity: Better than 0 dB $\mu$  (at error rate within 1%)
- (8) Warming-up Time: 1 minute (oven 30 minutes)

#### 4. MF/HF SSB TRANSCEIVER REMOTE STATION

- (1) Line Out: 0 dBm, 600 ohms, balanced
- (2) Line In: 0 dBm, 600 ohms, balanced
- (3) AF Input (Microphone): -46 dBm, 600 ohms, unbalanced
- (4) AF Output (Loudspeaker): 3 W, 4 ohms  
(Handset): 1 mW, 200 ohms

#### 5. DISPLAY

- (1) LCD Unit: 120 x 64 dots
- (2) Characters 20 characters x 8 lines (1 character: 5 x 7 dot) max.  
20 characters x 10 lines (1 character: 5 x 5 dot) max.
- (3) Back-light: Yellow, 8 tones
- (4) Contrast: 64 tones

#### 6. I/O DATA

- (1) Nav. Data Input: IEC61162-1, current loop; 1 pair/port
- (2) DMC: IEC61162-1/RS232C or  
DMC OUT/IN/CTR H/C; 3 pairs/port
- (3) Received Call Output: RCV BZ OUT/IN/CTR; 3 pairs/port
- (4) NBDP: IEC61162-1/RS232C
- (5) Printer: Centronics (parallel)
- (6) RT (MF/HF Transceiver): IEC61162-1/RS232C,  
Line in: 0dBm, 600 ohms,  
Line out: 0dBm, 600 ohms,  
and other control signals

#### 7. ENVIRONMENTAL CONDITION

- (1) Temperature: -15°C to +55°C
- (2) Relative Humidity: 93% ( 40°C)
- (3) Category of Equipment Unit  
Display Unit: Protected from the weather

#### 8. POWER SUPPLY

24VDC (backed up by battery), 1 A, less than 24 W

#### 9. COLOR

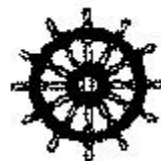
Panel: N3.0 (not changeable)  
Cabinet: 2.5GY5/1.5

**FURUNO****FURUNO ELECTRIC CO., LTD.**

9-52 Ashihara-Cho, Nishinomiya City, 662-8580, Hyogo, Japan

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Pub NO. DDC-253

**Declaration of conformity to type**We **FURUNO ELECTRIC CO., LTD.**

(Manufacturer)

9-52 Ashihara-Cho, Nishinomiya City, 662-8580, Hyogo, Japan

(Address)

hereby declare under our sole responsibility that the product

MF/HF DSC watchkeeping receiver model DSC-60 consisting of Printer PP-510, Remote distress button IC-302, Incoming indicator IC-305, Handset HSC701K-B20, AC-power supply PR-300, AC-power supply PR-240, External loudspeaker MX910-X01 and Second receiver board (routine) 05P0703

(Model names, type numbers)

to which this declaration relates conforms to the following standard(s) or normative document(s)

EN 300 338: April 1999, V1.2.1

EN 301 033: August 1998

EN 60945: January 1997

(title and/or number and date of issue of the standard(s) or other normative document(s))

For assessment, see

- EC type-examination certificate N° KCS/99212022/AA/00 of 2 December 1999 issued by KCS Certification, The Netherlands
- Test report 98540530 of 23 November 1999 issued by KTL, The Netherlands
- Test report FU 12-99-037 of October 26, 1999 issued by Furuno Labotach International Co., Ltd., Japan authorized by KCS Certification, The Netherlands

This declaration is issued according to the provisions of European Council Directive 96/98/EC on marine equipment modified by Commission Directive 98/85/EC.

On behalf of Furuno Electric Co., Ltd.

Hiroaki Komatsu  
Manager,  
International Rules and RegulationsNishinomiya City, Japan  
December 14, 1999

(Place and date of issue)

(name and signature or equivalent marking of authorized person)

|                               |      |   |      |
|-------------------------------|------|---|------|
| #/SETUP key .....             | 7-1  | Individual call                         |      |
| */FILE key .....              | 6-8  | automatic acknowledge.....              | 4-13 |
| 0/LOG key .....               | 5-1  | manual acknowledge.....                 | 4-15 |
| 1/ RT/2182 key .....          | 2-3  | sending .....                           | 4-4  |
| 2/DSC key .....               | 2-3  | Intercom .....                          | 2-8  |
| 3/TEST key.....               | 8-1  | Log file                                |      |
| 4/IntCom key .....            | 2-8  | description .....                       | 5-1  |
| 5/ACK key.....                | 2-7  | opening.....                            | 5-4  |
| 6/SCAN key.....               | 2-6  | Maintenance .....                       | 8-2  |
| 7/🔊 key.....                  | 2-5  | Medical transport call                  |      |
| 8/PRINT key .....             | 7-7  | receiving .....                         | 4-28 |
| 9/📶 key .....                 | 2-4  | sending .....                           | 4-27 |
| Alarm menu .....              | 7-2  | Menu tree .....                         | A-1  |
| All ships call                |      | Message menu.....                       | 7-5  |
| receiving .....               | 4-3  | Mode selection .....                    | 2-12 |
| sending .....                 | 4-1  | Neutral craft call                      |      |
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