

**Simrad
DSC Controller**

**Shipmate
RS8400 DSC**

183.2051.005 Rev.H English



1832051005

Contents for RS8400 DSC Controller

Introduction	1-1
The keypad	2-1
Program menu overview	3-1
Main menu	3-1
Distress Alert Call (edit)	3-2
Function menu	3-4
Telecommand menu	3-4
Distress Alert Call (receiving)	4-1
Priority Call	4-2
Distress Relay Call	4-3
Distress Relay Alert from Coast Station	4-5
Priority Acknowledge	4-6
Distress Call	4-7
Urgency Call	4-9
Safety Call	4-10
Special Call	4-10
Commercial Call	4-11
Receiving a DSC Call	4-14
The Function Menu	4-15
Protected Functions	4-19
Installation	5-1
Mounting	5-1
Connections	5-2
Printer output	5-4
Initial Setup - MMSI	5-5
Specifications	5-6
Warranty	
Diagrams	
List of Simrad distributors	

Introduction for RS8400 DSC

This manual complies to both the RS8400 DSC Class B version - which meets the requirements for GMDSS (Global Maritime Distress and Safety System), and RS8400 Class D version - which is used for non-requirement vessels.

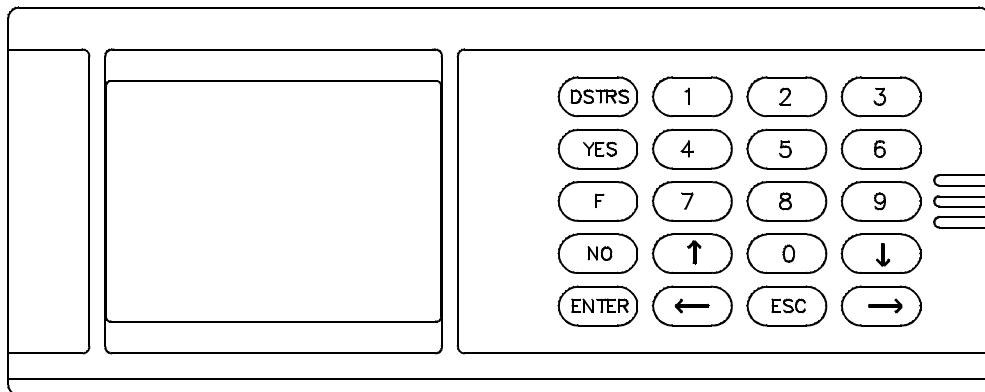
The Shipmate VHF DSC system consists of the DSC control unit RS8400 DSC and the VHF transceiver RS8400, handset RS8410 and speaker RS8330.

The main function of the DSC control unit is to generate an automatic distress call and send it out via the connected VHF transceiver. A built-in channel 70 receiver monitors the digital call channel continuously for emergency or traffic calls.

The system can also be used for making calls to other vessels and subscribers ashore.

The DSC operation will require a valid MMSI (Maritime Mobile Service Identities) number entered into the system prior to operation. The MMSI number is obtainable from the national authority.

The keypad. The keypad consists of 20 keys with easy access to the many features.



Keys to press

↓

[DSTRS] Direct access to DISTRESS ALERT CALL transmission.

[YES] Start transmission.

[F] Function menu.

[NO] Edit message before transmission.

[ENTER] Enter a line or function for editing.

[ESC] Leave present menu. Stop procedure in process.

[↑ / →] Arrow keys. Moves cursor or selects line.

[0 - 9] Numerical keys for selection of functions and insertion of figures.

Program menu overview. The RS8400 DSC is operated via a **Main menu**, **Operation menus**, and a **Function menu** system.

Keys to press

[ESC]

Main menu

- VHF DSC CONTROLLER -

1. DISTRESS ALERT
2. PRIORITY CALL
3. COMMERCIAL CALL

Time UTC: 15.12
Pos. 59:23N 017:50E

Call up the Main menu from any other menu, by pressing **ESC** (repeatedly).

Call up **DISTRESS ALERT**, press **1** (edit distress message before transmission) - see section 3 - 2.

--- Priority Call ---

Distress Relay Call
Priority Acknowledge
Distress Call
Urgency call
Safety Call
Special Call

<< ENTER TO SELECT >>

Call up **PRIORITY CALL**, press **2**

-- Commercial Call --

Dial Phone Call
Ship's Business Call
Routine Call
Polling Call
Position Request
Acknowledgement

<< ENTER TO SELECT >>

Call up **COMMERCIAL CALL**, press **3**

[↑/↓]

Adjust contrast

Distress Alert Call - Edit distress message**Keys to press**

- NATURE OF DISTRESS -
 Fire, Explosion
 Flooding
 Collision
 Grounding
 Listing, capsizing
 Sinking
 Disabled and adrift
 Undesignated distress
 Abandoning ship
 Piracy
 Man Over Board
 EPIRB emission
 < < ENTER TO SELECT > >

From the Main menu: Call the DISTRESS ALERT menu, press **1**.

Use the arrow keys to scroll up/down to select the required nature of distress, and press ENTER to confirm.

If the actual position of the ship is updated automatically by a connected navigator, you are now ready to confirm (YES) the contents of the distress call, see next page and continue procedure from the YES key.

However, if position and time is not updated automatically from a GPS navigator system, the data can be inserted manually:

[NO] Open for editing of position and time

[↓] [ENTER] Highlight position La / Lo--, and open for input

[0-9] Key in latitude, degrees and minutes

[↓↑] [ENTER] Toggle between North/South, and insert data

[0-9] Key in longitude, degrees and minutes

[↓↑] [ENTER] Toggle between East/West, and insert data

[↓] [ENTER] Highlight Time UTC, and open for input

[0-9] [ENTER] Key in UTC time, and insert data

Distress Alert Call - Edit distress message (cont'd), and activate Distress Alert

Keys to press

- ↓
- [ESC] Press ESC to leave edit mode
- [YES] Confirm contents of distress call
- [DSTRS] Push for 5 seconds - wait for countdown to zero before transmission is activated

[DSTRS] **Direct access to Distress Alert**


- DISTRESS ALERT CALL - Ship's ID:123456789 Nature of Distress: Undesignated Distress La 59:23N Lo 017:50E Time UTC: 15.12 Communication VHF C16 5 secs left to call	As stated in the display, the nature of distress will be 'Undesignated Distress'. Refer to section 3 - 2 if any of the information in the display needs to be updated, otherwise: Push DSTRS for 5 seconds - wait for countdown to zero before transmission is activated.
---	---

When the distress call takes place, the VHF is automatically tuned to channel 70 and afterwards it will switch to channel 16.

The DSC controller display will then indicate: AutoRep 3.5 - 4.5, and the distress alert will be repeated at random in time intervals of 3.5 to 4.5 minutes, until acknowledgement is received or repeat mode is cancelled by ESC (hold 5 seconds).

Wait for acknowledgement. And when received, the call information is displayed and a beep will sound. Press any key to stop the beeping.

Lift the handset and start the distress traffic:

 MAYDAY - this is - (the-9 digit MMSI no., the call sign or other identification of the ship) - (ship's position, if not automatic or properly given before) - (nature of distress, assistance required) - (any other appropriate information).

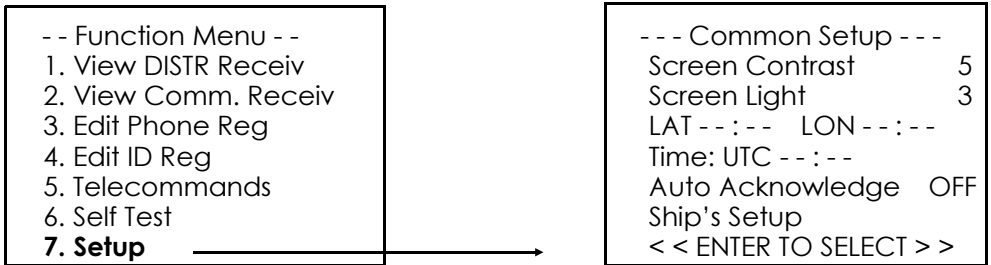
[ESC] Cancel AutoRepeat and return to MAIN MENU

Function Menu

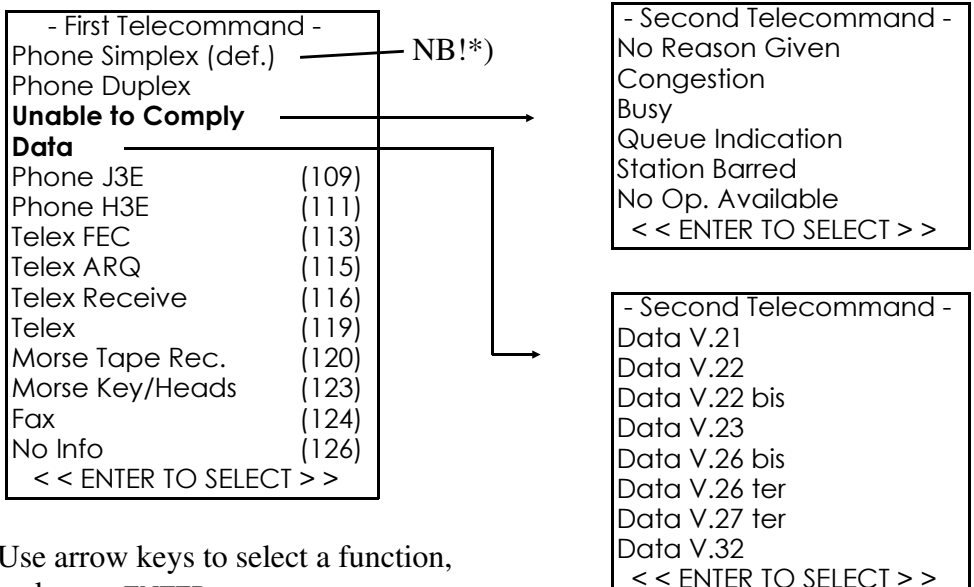
Press **ESC** to return to the Main menu at any time.

Function menu

From the Main menu: Call the Function Menu, press **F** and a number from 1 to 7.



Telecommand menu



Use arrow keys to select a function, and press **ENTER**.

*) First telecommand is default simplex and should always be simplex for normal DSC operation.

Distress Alert Call

Receiving a Distress Alert

The built-in CH70 receiver is constantly ready to receive a distress call.

Beeper signal will sound,

DISTRESS/URGENCY REC lamp will be lit (option), prompt flashing on the screen: **PRESS ANY KEY!** to view the DSC Received Alert record.

Example:

<pre> * DISTRESS ALERT * From 002 191234 Undesignated distress Pos. 45:05N 014:25E Time UTC: 12:10 phone simplex <RELAY> <ACKNOW> < <ENTER TO SELECT> > </pre>
--

The <RELAY> alternative is highlighted.
(The <RELAY> <ACKNOW> line is only shown in the Class B version).

IMPORTANT! You should **WAIT** for acknowledgement from a coast station.
Acknowledge from this ship only if no one else seems to have received the call.

Highlight <ACKNOW> only if no one else seems to have received the call; then answer Transmit? by pressing the **YES** key.

Then inform a coast station by any practicle means. Use VHF channel 16 to answer the ship in distress:



MAYDAY - (10-digit MMSI number or the call sign of the ship in distress), (repeated three times) - this is - (9-digit MMSI number or the call sign of own ship), (repeated three times) - RECEIVED MAYDAY.

[ESC]

Press ESC to return to MAIN MENU

The Distress Alert is stored in the 'Distr Receiv' buffer.

It is possible to relay or acknowledge the call later by means of the 'Priority Call' menu.

Priority Call

Priority Call

--- PRIORITY CALL --- Distress Relay Call Priority Acknowledge Distress Call Urgency Call Safety Call Special Call << ENTER TO SELECT >>

From the Main menu, press 2 to call the PRIORITY CALL menu.

There are six types of priority calls. Use ↑ or ↓ keys to select type, and ENTER.

Distress Relay Call - Covers the applicable procedures when the Master considers further help is necessary or when a received call is edited because of information received via other sources, eg. HF.

Priority Acknowledge (Class B only) - Although the general rule is to defer own acknowledgement it is recognized that if no one else seems to have heard the DSC Distress Alert Call, you are entitled to acknowledge.

Distress Call - Offers the possibility to address the call to various targets. The traffic on telephony following the call shall begin with MAYDAY.

Urgency Call - Offers the possibility to address the call to various targets. The traffic on telephony following the call shall begin with PAN PAN.

Safety Call - Offers the possibility to address the call to various targets. The traffic on telephony following the call shall begin with SECURITE.

Special Call - Handles the Medical Transport and Neutral Craft forms.

Priority Call

Distress Relay Call - Example 1.

Keys to press




Example 1: Relay copied distress alert call.

When a Distress Alert has been received and not been acknowledged, then the Master may consider that further help is necessary.

- | | |
|------------|---|
| [↑ / ↓] | Select Distress Relay Call |
| [ENTER] | Confirm selection |
| [ENTER] | 'Get Received Call' |
| [↑ / ↓] | Select the call to relay |
| [ENTER] | Confirm selection |
| [YES] [NO] | Answer YES to Transmit? and NO to edit call |

The Relay Call is send on Channel 70 and the VHF is set to Channel 16 upon end of call. WAIT for acknowledgement on Channel 16 by phone.

Lift the handset and start traffic on radiotelephony. Use the form below:

 MAYDAY - (9-digit MMSI number or the call sign or other identification of the calling station), - this is - (9-digit MMSI number or the call sign or other identification of own ship), - RECEIVED MAYDAY.

Priority Call

Distress Relay Call - Example 2.

Keys to press

Example 2: Relay edited distress alert call

A received Distress Alert may be edited to convey information received via other sources, such as HF. A new message is thus prepared and send as Distress Relay Call.

- [↓/↑] [ENTER] Select Distress Relay Call, and enter function
- [↓/↑] [ENTER] Go to Get New Call, and confirm
- [NO] Answer NO to Transmit?
- [↓/↑] [ENTER] Go to To ID (target), and enter function
- [↓/↑] [ENTER] Select All Ships or Individual, and confirm
- [→] [ENTER] For Individual, select CUR = Current Target, select REG = Address Register, see 4-18, select ENT = To key in target number, and press ENTER to confirm.
- [↓/↑] [ENTER] Go to Ship Distr., and open for entry
- [0-9] [ENTER] Key in ID number of ship in distress, if not automatically transferred from received message, and confirm entry.
- [↓/↑] [ENTER] Go to type of distress (Undesignated Distress), and open for entry.

Priority Call Distress Relay Alert from Coast Station

Keys to press

- | | | |
|-------|---------|---|
| [↓/↑] | [ENTER] | Select type of distress, and confirm entry. |
| [↓/↑] | [ENTER] | Go to Position La/Lo, and open for input. |
| [0-9] | | Key in latitude, degrees and minutes. |
| [↓/↑] | [ENTER] | Toggle between North/South, and confirm data. |
| [0-9] | | Key in longitude, degrees and minutes. |
| [↓/↑] | [ENTER] | Toggle between East/West, and confirm data. |
| [ESC] | | Confirm the new message. |
| [YES] | | Answer YES to Transmit? |

- AWAIT acknowledgement by phone on Channel 16, follow the traffic, stay on listening.

NOTE! Distress Relay Alert from Coast Station

A Coast Station will normally re-transmit the information received in a distress call as a DSC Distress Relay Call. Ships receiving such a call from a Coast Station should acknowledge the receipt of the call by radiotelephony on the distress traffic channel (Channel 16).


Priority Call Priority Acknowledge

Keys to press

Priority Acknowledge (not included in Class D version)
Defer own Acknowledgement - give the Coast Station time to act!

- | | |
|---------|--------------------------------|
| [↑ / ↓] | Select Priority Acknowledge |
| [ENTER] | Confirm selection |
| [↑ / ↓] | Select the call to acknowledge |
| [ENTER] | Confirm selection |
| [YES] | Answer YES to Transmit? |

After transmission, acknowledge by phone on Channel 16.

 **MAYDAY** - (9-digit MMSI number or the call sign of the ship in distress), (repeated three times), - this is - (9-digit MMSI number or the call sign of own ship), (repeated three times) - **RECEIVED MAYDAY**.

NOTE! The DSC Message Register contains different kinds of received DSC calls. Only those marked Distress Alert can be acknowledged.

Priority Call Distress Call

Keys to press



Distress Call

The message shall contain own ship's ID number, see setup 5-5.

[2] From Main menu, press 2 to call the PRIORITY CALL menu.

[↓/↑] [ENTER] Go to Distress Call, and enter type of call.

- Priority Distress -
Ship's ID : 987654321
Call Type: (All ships)
To Target: (Coast station)
Communication VHF Cxx
<< Transmit? Y/N/ESC >>

[YES] Answer YES if the message and target are correct

[NO] Answer NO (to transmit), and to go to Edit mode.

[↓/↑] [ENTER] Go to, and open for Call Type (target).
Select, and open for specific type of call, all ships,
individual ships, ships in limited areas, or groups of
ships.

[↓/↑] [ENTER] Select, and enter/open for:

All ships = To call all ships.

Individual = To call a specific station or ship

[←/→] To select CUR = Current information.

Priority Call Distress Call (Cont'd)

Keys to press

[←/→] [ENTER] To select REG = ID address register, and confirm.

[↓/↑] [ENTER] To select address, and confirm.

[←/→] [ENTER] Select ENT, and confirm.

[0-9] [ENTER] Key in target ID no., and confirm.

Area = To call ships in a limited area

[0-9] Key in latitude as bottom of area.

[↓/↑] [ENTER] Toggle between North/South, and confirm data.

[0-9] Key in longitude as left side of area.

[↓/↑] [ENTER] Toggle between East/West, and confirm data.

[0-9] [ENTER] Key in the width of the area in minutes, and confirm entry.

[0-9] [ENTER] Key in the height of the area in minutes, and confirm entry.


Group = To call a specific group of ships

[←/→] Select CUR, REG, ENT as above for Individual

Priority Call**Distress Call (Cont'd)****Urgency Call****Keys to press**


[↓/↑]	[ENTER]	Go to, and open for Communication VHF C (channel)
[0-9]	[ENTER]	Insert, and confirm VHF channel for communication
[ESC]		Exit edit mode
[YES]		Answer YES to start transmission

• **WAIT for Acknowledgement**, (DSC acknowledgement only by individual Distress Call), other calls are acknowledged by phone on Channel 16, and then start traffic:

 MAYDAY - this is - (the 9-digit MMSI number or other identity), - (ship's position, if not properly given before), - (nature of distress, assistance required), - (any other appropriate information).

Urgency Call

Similar to the Distress Call. After the Call has been sent on the DSC Distress Call frequency, the transmission of the Urgency message shall be send over telephony on Channel 16.

 PAN PAN - (repeated three times), - ALL STATIONS (or called Station), (repeated three times) - this is - (9-digit MMSI number and the call sign or other identification of own ship), - (the text of the Urgency message).

Priority Call

Safety Call

Special Call

Safety Call

- Select Safety Call from the Priority Call menu, and press ENTER

The procedure is similar to the Urgency Call (previous page). Complete the templet and consider Transmit? on the screen.

- **YES** will start the call.
- Follow with the message on telephony



SECURITE - (repeated three times), - this is - (9-digit MMSI number and the call sign or other identification of own ship) - (the text of the Safety message).

Special Call

Medical Transport - Complete the templet and follow up the call with details on telephony. The address is always All ships.

Neutral Craft - This call is designed to enable neutral ships to enter and pass through conflict zones. The composition resembles that of Medical Transport.

Pay Phone - This call will enable the ship to be manually connected to the public telephone network via a coast station.

Commercial Call

Keys to press



Commercial Call

[3] From the Main menu, press 3 to call the Commercial Call menu.

- Commercial Call -
 Dial Phone Call
 Ship's Business Call
 Routine Call
 Polling Call
 Position Request
 Acknowledgement
 < < ENTER TO SELECT > >

There are five types of commercial calls.

Dial Phone Call -

Call up a subscriber via a coast station:

[↓/↑] [ENTER] Go to Dial Phone Call, and open for entry.

[0-9] [ENTER] Insert coast station R. ID, and confirm, or ..

[F] Go to station ID register

[↓/↑] [ENTER] Select coast station, and confirm entry.

[0-9] [ENTER] Insert telephone number, max. 16 digits no space, and confirm entry, or ...

[F] Go to address register

[↓/↑] [ENTER] Select address (phone name/number)

[YES] Answer YES to start transmission.

Commercial Call (Cont'd)

The screen will respond with Sending DSC Call and the information:
AutoRep in 5 s.

Note! If there is no reply - no acknowledgement received within 5 seconds - a text on the screen will ask you to Wait 15 min. to call.

There are four possibilities of how to connect your call:

1. The coast station makes the telephone connection and acknowledges this to the ship. After some seconds the screen will look like this:

-- Phone --

Dial Call connected

Communication VHF Cxx
(Channel prepared!)

ESC for end of call

2. No reply from the coast station. A text on the screen will ask you to Wait 15min. to call (next try).
3. The reply is Unable to comply for a different reason than Busy. The screen is flashing as if any other DSC message was received.
4. The reply is Unable to comply for the reason Busy. The screen is flashing as if any other DSC message was received. If a key is pushed, the text Waiting 15min. for possible ringback, ESC to terminate appears. The message from the coast station will indicate that at the moment there are no radio channels free to communicate, but if there will be within 15 minutes the coast station will return (ringback) and then everything will be as in point 1. above. If this automatic ringback is not wanted, press ESC to terminate.

Note! When connected, the Push-To-Talk button (PTT) on the handset must be activated at least once every 45 seconds or the coast station will disconnect the call.

Commercial Call (Cont'd)

Keys to press



To disconnect a call there are three possibilities:

1. Pressing ESC will transmit an End-of-call message, and the coast station will acknowledge with a DSC message containing information of the charged time.
2. The coast station will automatically transmit the End-of-call message containing information of charged time. (Maybe due to the PTT-button has not been pushed or because an on-hook condition was detected on the land-line).
3. The coast station carrier disappears. A short beep will sound, and the text 5 secs. no RX-carrier is displayed.

Ship's Business Call -

- [↓/↑] [ENTER] Go to Ship's Business Call, and open for entry
- [NO] Answer NO to Transmit? if you wish to edit anything
- [↓/↑] [ENTER] Select function, and open for edit e.g. To Target, see also procedure in Distress Call (4-7)
- [0-9] [ENTER] Insert target MMSI number and confirm, or ...
- [F] Go to register
- [↓/↑] [ENTER] Select from register, and confirm
- [↓] [ENTER] Go to communication, and confirm

Commercial Call (Cont'd)
Receiving a DSC Call

Keys to press

[0-9] [ENTER] Insert channel number e.g. 06, and confirm.

[ESC] Exit edit mode

[YES] Start transmission

Routine Call - As for Ship's Business Call

Polling Call - Individual address.

Position Request - Individual address.

Acknowledgement - Latest received DSC call is displayed. Select among received files. To be send, a VHF channel number must be included.

When the Acknowledgement? Y/N question is displayed and answered with YES, another prompt requires Select channel no. (this only if no channel number is included in the call that is asking to be acknowledged). Then key in a two-digit number, and press ENTER to transmit the acknowledgement that the call is received.

Receiving a DSC Call

* Individual Alert *
 To. (your ID number)
 Type: Ship's Business
 From. (sender's ID no)
 Phone Simplex
 tcom2 = no info
 Communication VHF C06
 Ackn. requested

When receiving a DSC Call, the unit will send out beep signals in the "speaker", and the display will toggle between the actual alert information display and the legend PRESS ANY KEY.

Flashing

PRESS ANY KEY

Receiving a DSC Call (Cont'd)**The Function Menu****Keys to press**

↓
[X] Stop alert by pressing any key.

[YES] Answer YES to acknowledge the call, and the display will show the channel prepared for communication.

Communication VHF C06
(Channel prepared!)

If no channel is included in the received call, then the channel have to be inserted manually before the acknowledgement transmission can take place.

[0-9] [ENTER] Key in VHF channel, and confirm entry.



Lift off the handset to start communication.

The Function Menu

- Function Menu -
1. View DISTR Receiv
2. View Comm. Receiv
3. Edit Phone Reg
4. Edit ID Reg
5. Telecommands
6. Self Test
7. Setup
< < ENTER TO SELECT > >

Press **F** to call the Function menu, and then call the number next to the function you wish to call up.

1. View DISTR Receiv - The register stores the last 20 received Distress messages. The beginning of the first line shows the number in the register of the last message. Use the up/down arrow keys to browse through the register.

The Function Menu (Cont'd)

Keys to press

↓

2. View Comm. Receiv. - The register stores the last 20 received Commercial messages. The beginning of the first line shows the number in the register of the last message. Use the up/down arrow keys to browse through the register.

3. Edit Phone Reg. - The register stores up to 10 addresses of two lines. (The display says *phone name* until you enter your own data.) Names of max. 14 characters in line 1, and numbers of max. 16 digits in line 2.

- | | |
|---------------|--|
| [↓/↑] | Move highlighted bar to vacant address, or address to be altered. |
| [ENTER] | Open for entry in the highlighted address. |
| [↓/↑] | Select letters/figures with the arrow keys, first letter "up" is A, next is B, and so on. Empty space is one "down" from A. Continue "down" to reach special characters and figures. |
| [→] | Move the cursor to the next space. |
| [ENTER] | To confirm entry when name is complete. The number field will now be highlighted. |
| [0-9] [ENTER] | Key in the full telephone number without spaces, and confirm entry. |
| [↓/ESC] | Go to next address, or terminate session. |

The Function Menu (Cont'd)

Keys to press



4. Edit ID Reg - The register shall contain coast station names and their ID numbers. Up to 10 entries will be possible.

To edit in the register, use same procedure as described above for the Phone register. The ID number (MMSI) is 9 digits, and the name may contain 16 characters.

5. Telecommands - Only for special purpose. Set first and second Telecommand. See Function menu, page 3-4.

6. Self Test - The program controls three test loops:

- AF loop testing - the AF connections to and from the VHF.
- DSC loop testing - simulation of received DSC call to test the alarm indicators and the beep sound in the speaker.
- Access to RF loop testing. Only for local purpose. **Protected function.**

[ESC] Terminate Self Test

7. Setup - Six setup facilities are available, five of them concerning particular performances and input of data. The last choice leads to another menu, the ship's Setup menu.

[↓/↑] [ENTER] Select function, and open for insertion/editing

- Screen Contrast - The screen presents eight choices: 01234567

[↓/↑] [ENTER] Set contrast, and confirm entry

Note! Low/high contrast settings are extremes, only the middle figures can be saved. The contrast can also be adjusted by the up/down keys when in Main menu.

The Function Menu (Cont'd)

Keys to press

- Screen Light - The screen intensity can be set in eight steps: 01234567
Follow the same procedure as for the contrast.

- $\text{Lo} \rightarrow \text{Lo}$ - This facility is particularly for those who does not have a GPS position input, or if the correct position has to be entered manually for some reason - and if so, the position and time for position should preferably be updated every 4 hours. To key in the position via the keypad:

[←/→]	Place the cursor at the beginning of the position, or where you need to make a change
[0-9]	Key in digits from the keypad
[↑/↓]	Toggle between N/S and E/W
[ENTER]	Confirm position entry, - press ENTER after each position entry, both for latitude and longitude

- Time UTC - Enter correct time via this program:

[0-9]	[ENTER]	Key in digits in hours and minutes locations, and confirm entry.
-------	---------	--

- Auto Acknowledge - This facility, when ON, will automatically achieve a reply to Position Request and Polling calls.

[ENTER]	To change between ON and OFF.
---------	-------------------------------

The Function Menu (Cont'd)

Protected Functions

- Ship's Setup - This menu contains:
 - Own group ID (open access): A facility to store five ID numbers, which belong to ships in the same fleet.

```

--- Ship's Setup ---
Own Group ID
Ship's ID : 123456789
Test Pattern
Receiver Ext - Int
Print DSC Symbols
Clear Addr. ID Reg.
< < ENTER TO SELECT > >

```

- Ship's ID: Own ship's ID number shall be entered initially and will then become "write protected".
The number can be altered by authorized service engineer only.

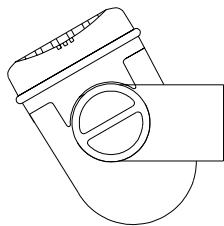
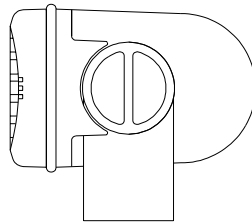
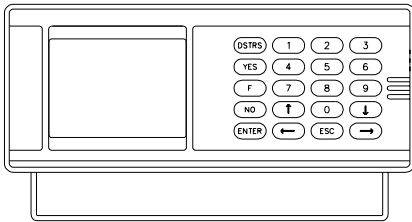
Protected Functions. Only for authorized service engineer:

- Ship's ID: Only authorized service engineer are trusted to alter the number of the ship after the initial entry.
- Test Pattern: The screen shows the test pattern built in to serve type testing and factory testing. The first four are for type tests, the last two mainly for use at the factory.
- Receiver Ext -Int: A test facility to access the EXT receiver (the one in the external VHF transceiver) instead of the INTERNAL Ch 70 receiver.
- Print DSC Symbols: Prints the DSC codes and the decimal values of the character set 0...127. Not shown on the screen.
- Clear all Registers: This function mainly serves to clear the registers when an equipment is transferred to another identity (e.g. new ship, new owner).

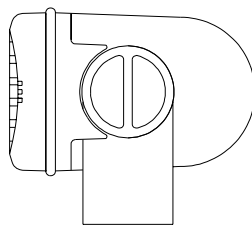
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Installation Mounting

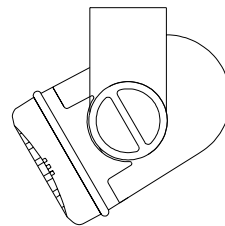
The RS8400 DSC Controller can be flush or bracket mounted - overhead, bulkhead or console.



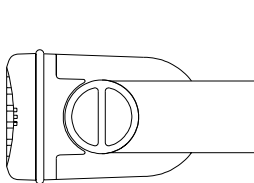
Bulkhead



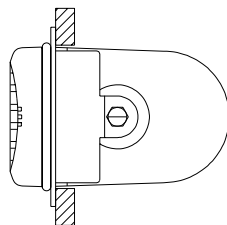
Console



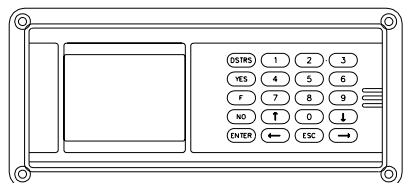
Overhead



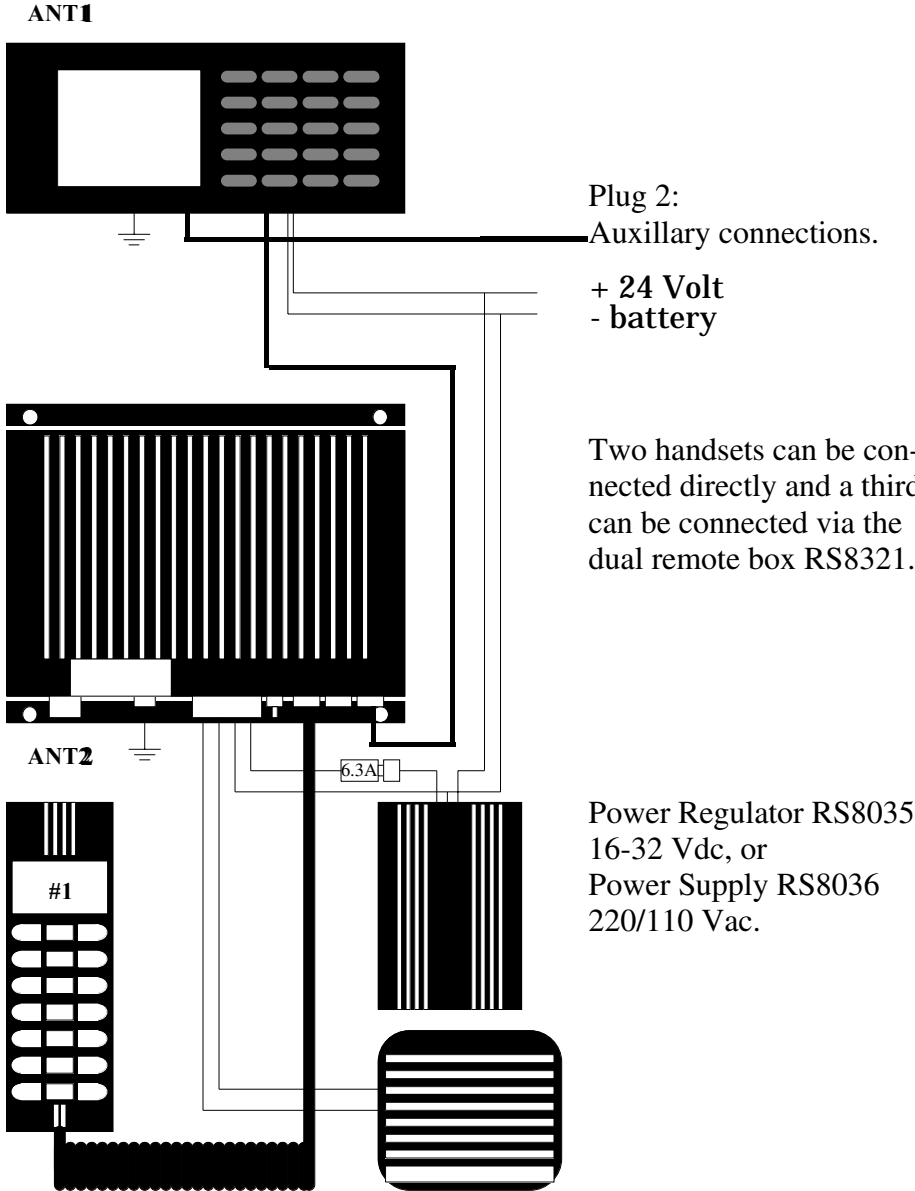
*Optional high mount
bracket: RS5712*



Optional flush mount kit: RS5713

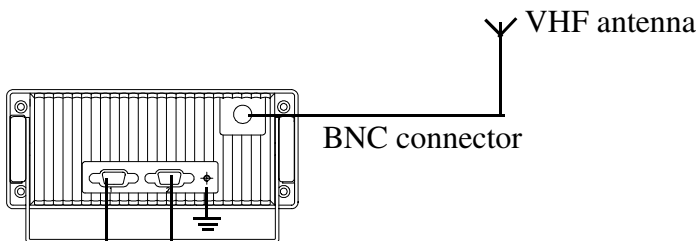


Installation Connections



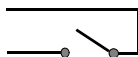
Installation

Connections (Cont'd)



Plug 2

- 1. Data in | Position and time NMEA0183 GLL,GGA
- 6. Return
- 3. Alarm out ⊗ Received call, Safety, Routing
- 2. Alarm out ⊗ Received call, Distress, Urgency
- 8. GND | Printer output (see next page)
- 7. TXD | (Printer or PC)
- 4. Send Distress ⊗ Distress transmission initiated
(External Distress button or DSTRS key on keypad)
- 5. GND
- 9. Alarm in



External Distress button

- ⊗ Indicator lamp 5V/20mA
Return on pin 5 GND

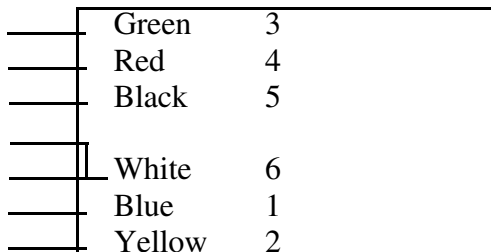
Plug 1

- 9. +8 - 43 volt Red
- 5. - battery Black

Power

Connection box:

- 4. Data out Green
- 7. Return Pink
- 3. Data in Grey
- 8. Return White
- 1. Common White
- 6. AF in Brown
- 2. AF out Yellow



Installation

Connections (Cont'd) - Printer output

Printer output

The received calls can be transferred to a printer. The print will be a copy of the screen readout.

The printer data is always present at the printer out terminal (no special setting of the RS8400 DSC Controller is required).

TXD is the only connection.
Handshake is not implemented.

Printer specifications are as follows:
Serial printer emulating IBM or EPSON standards.

RS232C connection:
1200 BAUD
8 DATABIT
NO PARITY
1 STOPBIT

The printer must be galvanic isolated from its own power source.

Connection of PC:
If you want to use a PC as storage medium for incoming calls, it can be connected to the RS8400 DSC Controller in the same manner as a printer. Use an appropriate terminal emulation program on the PC to control the input data.

Installation

Initial Setup - MMSI (Maritime Mobile Service Identities)

Having completed the installation, the ship's MMSI number must be inserted. The MMSI number is obtainable from the national authority.

Keys to press



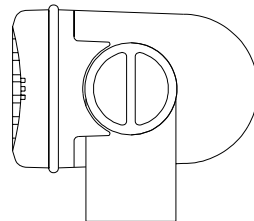
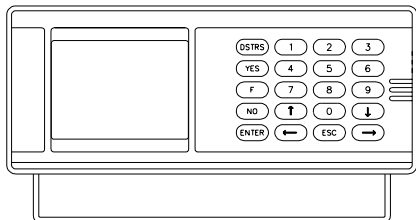
Initial Setup - MMSI

- [F] [7] Call Common Setup menu
- [↑/↓] [ENTER] Go to, and call Ship's Setup
- [↑/↓] [ENTER] Go to, and open for insertion of Ship's ID
- [0-9] Key in ID (MMSI) number - 9 digits
(e.g. 999999999)

NOTE! The factory preset number **123456789** is unprotected and can be replaced by an MMSI number. Any other number than the preset is protected in the system, so make sure the MMSI number is keyed in absolutely correct before confirming by pressing ENTER. ***Once the number has been confirmed, it can only be edited by an authorized technician.***

- [ENTER] [ESC] Confirm entry, and exit Setup menu by pressing ESC repeatedly.

Installation Specifications, DSC control and receiver unit



Power supply	8 to 43 VDC
Power drain	5 W
Operation	CCIR Rec. 541-2
Protocol	CCIR Rec. 493-5 Class B (and D)
Memory for quick-select calls	10 telephone and 10 ship ID numbers
Navigator interface	NMEA 0183, GLL, GGA
Printer interface	Serial RS232
Receiver frequency	156.525 MHz (ch 70)
Sensitivity	0.5 μ with error rate <0.01
Construction	Diecast aluminium and polycarbonate
Dimensions/weight	79x192x115 mm (3.1x7.7x4.6") / 1.5 kg
Environmental	-10 to 50°C / 95% rel.

Power regulator RS8035

Power supply, input	16 to 32 VDC, 6 A
output	13.6 VDC
Dimensions/weight	160x120x68 mm (6.3x4.7x2.7") / 1.5 kg

Power supply RS8036

Power supply, input	220/110 Vac and 24 VDC
output	13.6 VDC
Dimensions/weight	207x227x80mm (8.2x9x3.1") / 4.3 kg

SIMRAD warrants that every product shall be free of defects in material and workmanship as specified below:

CATEGORY “A”: •Autopilots •Radars •Instruments •Navigators •Radiotelephones •Plotters •Gyro compasses •Sonars •Echo sounders •Trawl Instrumentation.

These products are warranted for a period of 24 months on parts and 12 months on labour from date of purchase, except for category B items. Consumable parts such as lamps, fuses, batteries, bearings etc. are not covered by this warranty.

CATEGORY “B”: •Antennas •Transducers •Trawl sensors •Monitors (CRT) •Gyro sensitive elements •Radar magnetrons •Disk drives.

These items are warranted for a period of 12 months on parts and labour from date of purchase.

WARRANTY SERVICE is available through authorised service dealers or national distributors world-wide. Products returned will, at the sole discretion of Simrad, either be repaired or replaced free of charge within normal working hours. Freight charges, insurance, duties or any other costs are the responsibility of the customer.

Maximum liability shall not, in any case, exceed the contract price of the products claimed to be defective.

ON BOARD SERVICE can be arranged by authorised local service dealers or national distributors upon request. Labour costs for the repair/replacement of the defective modules/parts will be free of charge provided a valid warranty is confirmed. Overtime, travel, lodging, per diem, insurance, duties or any other costs are the responsibility of the customer. Additional expenses connected with replacement of transducers such as dry docking, diving and precautionary measures are not covered by this warranty.

VALIDITY: This warranty is effective only when warranty certificate or proof of purchase and equipment serial number is presented. Furthermore, the installation and operation has to be carried out in accordance with the product manual. Warranty liability does not apply to any equipment which has become inoperative due to misuse, accident, neglect, sea water damage or unauthorised repair. Simrad will not be liable for any loss, incidental or consequential damages whether based upon warranty, contract or negligence, or arising in connection with the sale, installation, use or repair of the product. Consequential damages include, but are not limited to, any loss of profit, property damage or personal injury.

The terms of warranty as described does not affect your statutory rights.

WARRANTY CARD

TO BE RETAINED BY THE OWNER

Simrad Shipmate AS
Østre Allé 6
DK-9530 Støvring
Denmark



OWNER

VESSEL

ADDRESS

HOME PORT

TYPE

SERIAL NO.

EQUIPMENT

DATE OF PURCHASE

DATE OF INSTALLATION

YES: _____ NO: _____

INSTRUCTION FOR USE GIVEN

AUTHORIZED INSTALLER/DEALER STAMP

SIMRAD warrants that every product shall be free of defects in material and workmanship as specified overleaf:

tear out

WARRANTY CARD

To be mailed to the NATIONAL DISTRIBUTOR (see overleaf)
together with the installation report *WITHIN 14 DAYS*
from the date of installation.

Simrad Shipmate AS
Østre Allé 6
DK-9530 Støvring
Denmark



OWNER

VESSEL

ADDRESS

HOME PORT

TYPE

SERIAL NO.

EQUIPMENT

DATE OF PURCHASE

DATE OF INSTALLATION

(CUSTOMER'S SIGNATURE)

(DEALER'S SIGNATURE)

STAMP
HERE

NATIONAL SIMRAD DISTRIBUTOR:
