

Manual

**Navico DSC1400
Class D DSC Controller**

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1 General

1.1 Introduction

The DSC1400 is a Class D Digital Selective Calling (DSC) Controller designed for use with the Axis RT1400 VHF radio. With a DSC1400 the RT1400 will support the latest GMDSS requirements for non-SOLAS vessels from the International Maritime Organisation (IMO). It will enable you to make digitally selected calls, which are quicker and simpler to make than traditional voice calls using Channel 16. Should a distress situation occur, with the DSC1400 you can quickly raise an alert, indicating your identity, your position and automatically establish distress communication on the emergency voice channel.

Thank you for choosing Simrad

If you are pleased with your DSC controller we hope you will be interested in our range of marine electronic equipment, which is manufactured to the same high standards as Axis. Please contact your nearest Simrad Agent for a catalogue showing our full range of high tech marine electronic equipment.

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DSC1400 Class D Digital Selective Calling Controller

1.3 MMSI Number

For the DSC1400 to function an MMSI (Maritime Mobile Service Identifier) number will need to be entered. This can be obtained from the local radiocommunications authority.

1.4 Keypad

The telephone style ITU keypad is used for entering numeric data. When required, the keys will automatically switch to character mode allowing letters, numbers and punctuation characters to be entered. Repeatedly pressing a key will cycle through the characters available on that key (Fig 1.2).

The Cancel key will stop a task and return to the main screen. The ENTER key is used to confirm actions, such as sending a call.

1.5 Softkeys

The functions of the four softkeys - one for each line of the display (Fig 1.3) - will change to suit the menu that is currently displayed. A label indicating the function of the softkey will be displayed on the right side of the corresponding display line.

1.6 Distress Button

The distress button is located under a protective cover that must be lifted before the button can be pressed (Fig 1.4). **THIS BUTTON MUST ONLY BE USED IN A DISTRESS SITUATION.** Refer to section 2.5 for more details.

1.7 Working Channels

While all DSC transmissions from the DSC1400 are made digitally on channel 70, once the call has been put through, communication with the other vessel or station will be via a normal voice channel, which is specified when the call is made. This is referred to in this manual as a *working channel*

1 Press	0	1	2	3	4	5	6	7	8	9
2 Presses	sp	-	A	D	G	J	M	P	T	W
3 Presses	(,	B	E	H	K	N	Q	U	X
4 Presses)	.	C	F	I	L	O	R	V	Y
5 Presses	%	/	?	!	:	"	'	S	&	Z

Fig 1.2 - Keypad character map

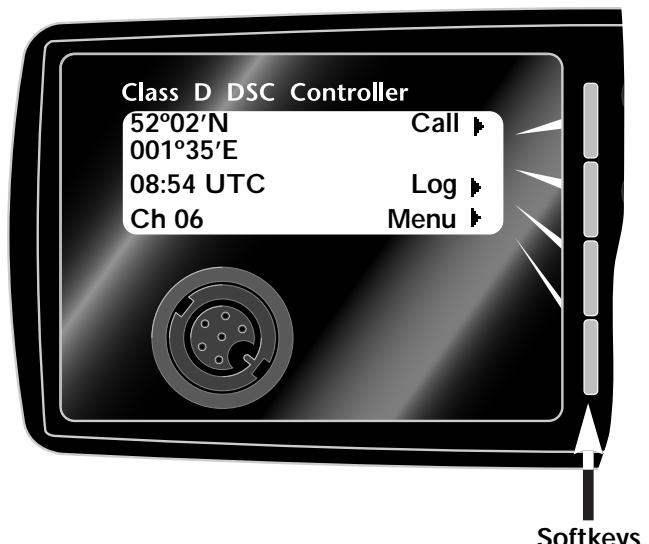


Fig 1.3 - Softkeys



Fig 1.4 - Distress Button

Press the **ENTER** key to make the call. The DSC1400 will require confirmation of the call. Press **Yes** to send the call, or **No** to cancel.

When the DSC call is sent, the RT1400 will be set to the working channel. Allow a few seconds for the stations receiving the call to switch to the working channel, then make a normal voice call on the specified working channel.

2.4 Group Call

If a group ID has been set up for the DSC1400 (see section 4.7), a call can be made to other members of the group.

Press the **Call** key four times to select the Group Call screen. Select a working channel from the list (see section 4.10) by pressing the **►** channel softkey or use the RT1400 channel select knob (Fig 1.7).

Press **ENTER** to send the call, allow a few seconds for the other members of the group to reach their radios (all VHF radios in the group should automatically switch to the specified working channel upon acknowledgement), then make a normal voice call using the working channel.

2.5 Distress Alert

NOTE - THIS CALL SHOULD ONLY BE MADE IF THE VESSEL IS IN A DISTRESS SITUATION. It is an offense to send a Distress Alert call if the vessel or crew are not in danger. Refer to section 5.1 for more details.

Lift the protective cover and press the **DISTRESS** button. The Distress Alert Screen will be displayed. If time permits, press the **►** designation softkey to select the nature of the distress. There are 10 categories recognised as Distress Alert situations, which are - Abandoning, Adrift, Collision, Fire, Flooding, Grounding, Listing, Man Overboard, Piracy and Sinking. There is also a default Undesignated category, which is used if no category is selected here.

Press and hold the **DISTRESS** key a second

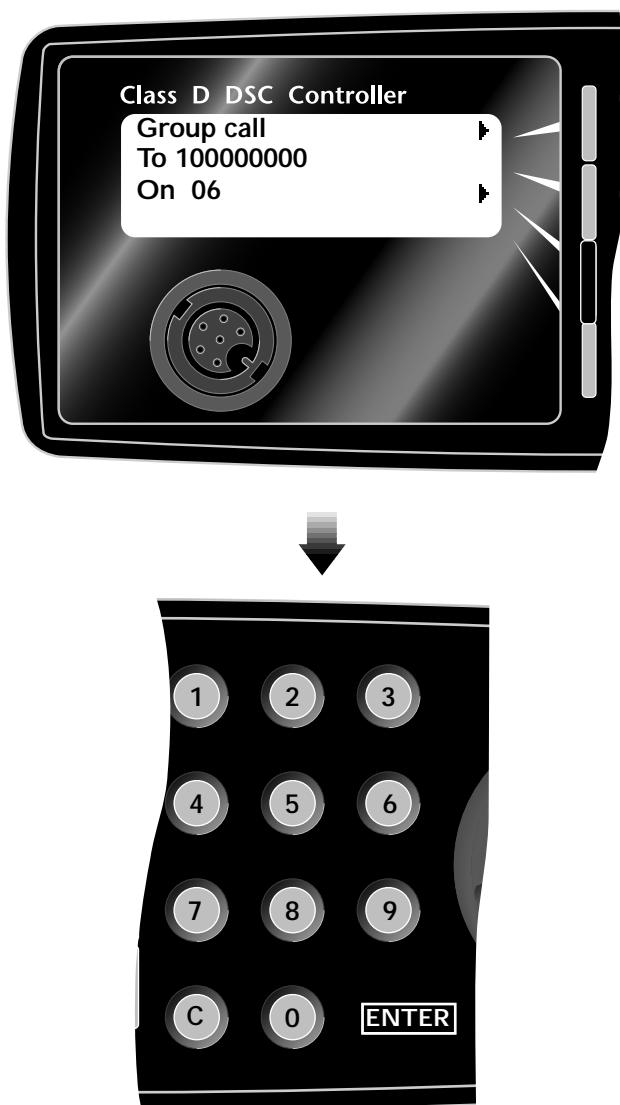


Fig 1.7 - Sending Group Call

3 Receiving A Call

3.1 General

When a DSC call is received, the DSC1400 will switch to the call log screen to display the details of the call and ring or sound the alarm - depending on the nature of the call. The procedures that follow describe how to handle the types of calls that can be received.

3.2 Routine Calls

When a Routine call is received, the screen will show the details of the call, who it is from and the working channel (Fig 3.1). To stop the ringing, press the **¶** softkey. An acknowledgement will be sent to the caller and the radio will be automatically switched to the working channel for normal voice communication.

3.3 Urgency and Safety

The procedures for Urgency and Safety calls are very similar. An Urgency call will sound the distress alarm and switch the RT1400 to channel 16. A Safety call will sound a normal ring and switch the RT1400 to the specified working channel (Fig 3.2). Press the **¶** softkey to stop the ringing, then listen for the voice message.

3.4 Group Calls

When a Group call is received, the DSC1400 will display the details of the call, indicating who it is from and the working channel. Press the **¶** softkey to stop the ringing and the RT1400 will switch to the working channel automatically.

3.5 Distress Alert

If a Distress Alert or a Distress Relay is received from another vessel, an alarm will sound and the RT1400 will switch to channel 16. The display will show the details of the Distress Alert, the MMSI of the vessel, it's position and time. Mute the alarm by pressing the **¶** softkey and maintain a listening watch on channel 16 for the distress messages. Press **C** to clear the display.



Fig 3.1 - Routine Call received



Fig 3.2 - Safety call received

4.3 Backlighting

The backlighting of the DSC1400 display and keypad is linked to the backlighting of the RT1400 display and keypad - if the lighting is adjusted on the RT1400, the same changes affect the DSC1400 and vice versa.

To change the backlighting of both units from the DSC1400, press **Menu**, then **Backlight** the required number of times to select the desired lighting level (Fig 4.3). Note that the Distress key is always faintly lit even when the backlighting is switched off.

4.4 Contrast

To adjust the contrast of the DSC1400 display, press **Menu**, then **Contrast**. Use the **-** and **+** softkeys to decrease or increase the contrast level. The display shows a bar graph indicating the selected contrast level.

Press **C** to exit to the main screen.

4.5 Sound

The sound option allows the alarm and ringing tones to be tested and changed. Press **Menu**, then **▼**, then **Sound**.

To test the Distress Alert alarm, press **Test Distress**. Press **C** to cancel the test.

To test the ringing tone, press **Test Ring**. Press **C** to cancel.

To select one of four different ringing tones, press **Ring Type** until the preferred ringing sequence (1-4) is shown. Press **Test Ring** to hear each sequence.

Note that the alarm and ringing tones are at a set volume level and cannot be muted.

4.6 MMSI

To show the MMSI number programmed into the DSC1400 and also the software version number of the unit (necessary if a fault develops with the unit), press **Menu**, then **▼**, then **MMSI** (Fig 4.5).

Press **C** to exit to the main screen.



Fig 4.3 - Adjusting backlighting level

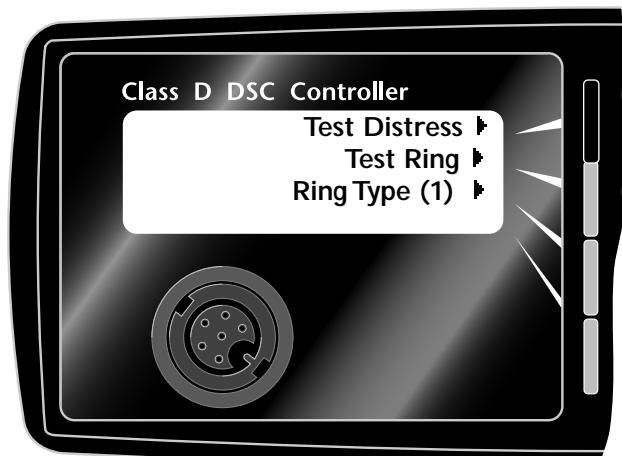


Fig 4.4 - Testing distress ring tone



Fig 4.5 - Displaying MMSI & software version

4.10 Channels

The DSC1400 includes a list of 9 working channels which can be scrolled through when using the Routine or Group Calling options (see sections 2.2 and 2.4 respectively). The first four channels are preset as 06, 08, 72 and 77. These cannot be amended. The remaining five channels are programmable.

Press **Menu**, then **▼** twice, then **Channels** (Fig 4.9). Use the **◀** and **▶** keys to move along the five programmable channels, the **▼** and **▲** keys to scroll through the available channels programmed into the RT1400. To turn the programmable channel off, set it to -- (below 01).

Always consult your local authority requirements when choosing suitable working channels. Be aware of which channels are Duplex and will not allow ship to ship communication.

Press **ENTER** to accept settings and return to the main screen.

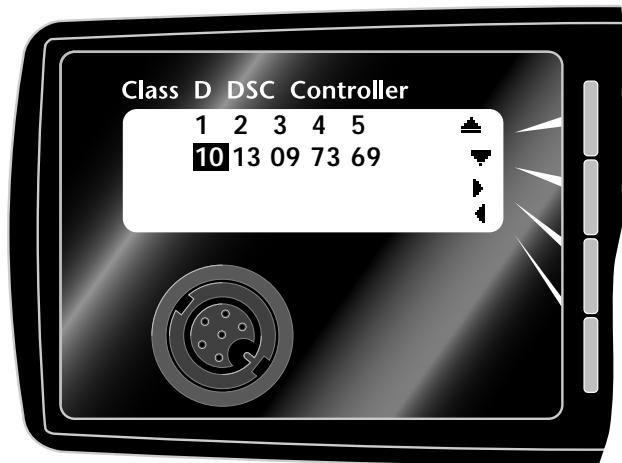


Fig 4.9 - Setting working channels

5.4 Startup

The first time that the DSC1400 is switched on, it will be necessary to enter the vessel's MMSI number (Fig 5.3). Use the keypad to enter the 9-digit MMSI. If a mistake is made, use the the **◀** key to move back and edit the error. When the number is entered, the DSC1400 will ask for verification. **It is important that the MMSI entered is checked carefully, as it can only be entered once.**

To change the MMSI number after it has been programmed the unit must be returned to an authorised Simrad Dealer to erase the existing number.

Once the MMSI is entered and confirmed, the main screen should show the current position of the vessel, the time the last position fix was taken and the channel selected on the RT1400.

If the position is not shown, check the connections and settings of the navigational receiver used. If there is no signal being received, a **!** will flash next to the time. If the **!** is not flashing, this indicates that the DSC1400 is using a manually entered position/time.

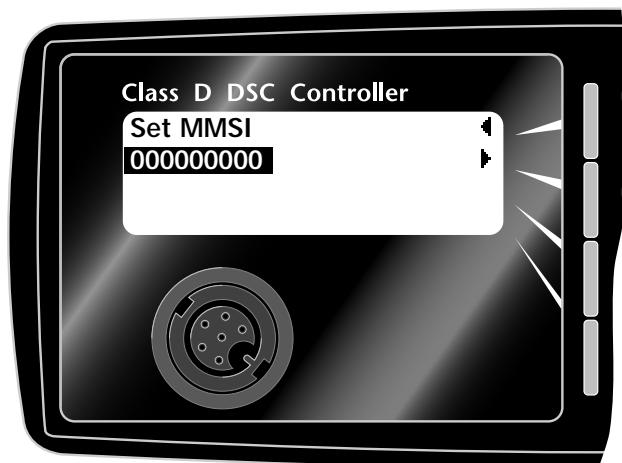


Fig 5.3 - Entering MMSI number

6.4 Alerting All Vessels Within Range

If the vessel is outside of coast radio range and needs to issue a safety warning to all vessels within radio range, transmit an All Ships Safety call by DSC. After about 15 seconds transmit on channel 16 the safety call and message as follows -

“Securité, Securité, Securité”
“All stations (*or called station*)” repeated three times
“This is (*MMSI and name or callsign of own vessel*)”
Repeat text of safety message.

6.5 Calling a Coast Radio Station

Enter the MMSI of the station into the DSC1400, either manually or from the directory. When the call is acknowledged, the working channel for voice communication will be indicated and the RT1400 will automatically switch to that channel. Make a voice call as normal.

6.6 Making an intership call

Enter the vessel’s MMSI into the DSC1400, either manually or from the directory. Before sending the call, enter the inter-ship channel to be used for subsequent communication. When the alarm sounds on the called vessel, its operator should acknowledge by DSC, then respond by voice on the selected channel.

If the MMSI number of the vessel is not known, call as now on channel 16. If no response is received, call on channel 13. This is the GMDSS bridge to bridge communication channel.

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