NAVMAN VHF 7000 / VHF 7100 Owner's Manual

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide a reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- reorient or relocate the receiving antenna.
- increase the separation between the equipment and receiver.
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- consult the dealer or an experienced radio/TV technician for help.

IMPORTANT:

1. Some features described in this manual are not available on every model. In particular, DSC functions are NOT available on the NAVMAN VHF 7000.

2. The radio channels installed into the NAVMAN VHF radio may vary from country to country, depending upon the NAVMAN VHF radio model and government or national communications authority regulations.

3. NAVMAN NZ Ltd recommends that you check the radio operating licensing requirements of your country before using the NAVMAN VHF radio. The operator is solely responsible for observing proper radio installation and usage practices.

4. A warning label is supplied with this NAVMAN VHF radio. To comply with FCC regulations, this label must be affixed in a location that is clearly visible from the operating controls of this NAVMAN VHF radio. Make sure that the chosen location is clean and dry before applying this label.

It is the owner's sole responsibility to install and use the instrument in such a manner that will not cause accidents, personal injury or property damage.

NAVMAN NZ LIMITED disclaims all liability for any use of this product in a way that may cause acidents, damage or that may violate the law.

Governing Language: This statement, any instruction manuals, user guides and other information relating to the product (Documentation) may be translated to, or has been translated from, another language (Translation). In the event of any conflict between any Translation of Documentation, the English language version of the Documentation will be the official version of the Documentation.

This manual represents the NAVMAN VHF 7000 and NAVMAN VHF 7100 at the time of printing. NAVMAN NZ LIMITED reserves the right to make changes to specifications without notice.

Contents

Chapter 1 - General Information

1.1 FEATURES

Congratulations on your purchase of a NAVMAN VHF 7000, 7100 USA, or 7100 EC marine band VHF radio. All of these models provide the following useful features:

- prominent channel display
- adjustable contrast settings for the LCD
- adjustable keypad backlighting for easy night-time use
- waterproof and submersible to comply with JIS-7
- GPS latitude and longitude display (when connected to a GPS)
- choice of High or Low (25 W or 1W) transmission power
- top centred PTT button for comfortable left- or right-handed use
- powerful 4W external audio output
- access to all currently-available marine VHF channel banks (USA, Canada, International) including weather channels where available
- special CH16 or CH16/9 key for quick access to the priority (international distress) channel
- special 3CH key to select your three favourite channels
- PSCAN (similar to dual watch) facility

In addition, the VHF 7100 models also provide:

- DSC (Digital Select Calling) capability that meets USCG SC101 and Class D Standards. *7100 USA only.*
- DSC (Digital Select Calling) capability that meets EC Class D Standards. *7100 EC only.*
- DISTRESS call button to automatically transmit the MMSID and position until an acknowledgement is received
- easy access to a buddy list of up to 20 favourite people
- MMSID storage for three favourite groups
- Group Call and All Ships Call facility
- LL position polling details
- Weather alert facility. *7100 USA only.*
- ATIS facility for inland waterways. *7100 EC only.*

1.2 CUSTOMIZING YOUR NAVMAN VHF RADIO

You can customize the NAVMAN VHF radio to suit your individual preferences. Some preferences can be set directly through the keys as explained in this chapter.

Other preferences are set up through the built-in menus and these are explained in the other chapters.

1.3 HOW TO DISPLAY AND NAVIGATE MENUS

1. Hold down MENU (or CALL MENU). Note that only four menu items can be displayed at any one time on the LCD.
2. Press + CH - to scroll up and down the menu until the cursor is postioned at the desired option. Press ENT to display that option.
3. Make any entries or changes as explained in the following section.
4. Press ENT to confirm changes. Otherwise, press ESC to keep the original entry.
5. Press ESC to exit from the screen. Any changes are active as soon as you exit the screen.

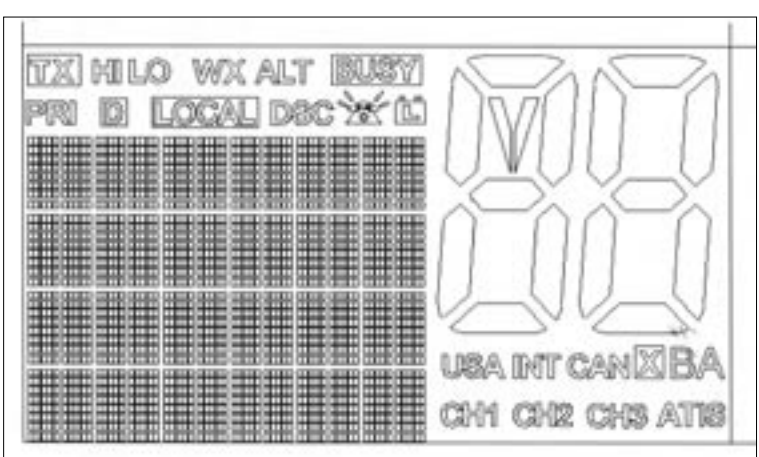
1.4 HOW TO ENTER ALPHANUMERIC DATA

If your NAVMAN VHF radio does not have the optional alphanumeric microphone, use the + CH - key to enter alphanumeric data.

Press + to count through numbers, or hold down to scroll rapidly to the desired number.

Press - to step through the alphabet, or hold down to scroll rapidly to the desired character.

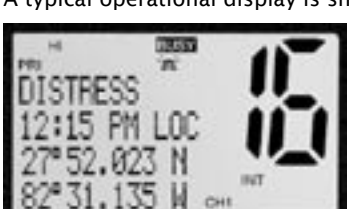
1.5 LCD SYMBOLS AND MEANINGS



This simulation shows the locations of all the following information symbols:

Symbol	Meaning
TX	Transmitting.
HI LO	Transmission power. High (HI) 25W or Low (LO) 1W.
WX	Weather channel.
WX ALT	Weather Alert. Alarm beeps will sound. *7100 USA only.*
BUSY	Receiver busy with an incoming signal.
PRI	Priority channel is selected.
D	Duplex operation. Otherwise, blank for Simplex operation.
LOCAL	Local calling is selected. Otherwise, blank for distance calling.
DSC	DSC capability is available. *7100 USA and 7100 EC only.*
	Incoming DSC call.
	Low Battery warning.
88	Channel selected.
USA INT CAN	Selected channel bank for VHF radio operations and regulations.
X	Channel is temporarily deleted from the ALL SCAN operation.
B A	Channel suffix, if applicable.
CH1 CH2 CH3	Shows which of the 3 favourite channels, if any, are selected. Otherwise blank.
ATIS	Enabled for use in inland waterways. Otherwise blank. *7100 EC only.*

A typical operational display is shown here.



The latitude and longitude of the vessel and the time are shown.

Local calling is selected.

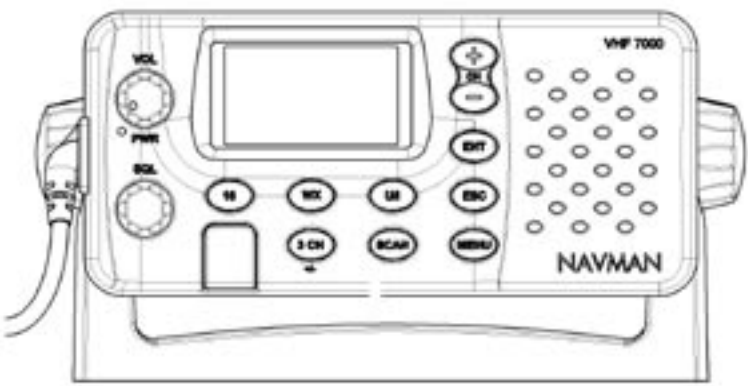
A transmission on Channel 16 is being made at high power using the International channel bank.

Channel 16 is set as the Priority channel. It is also set as favourite channel 1.

There is an incoming DSC call so the receiver is busy.

1.6 BASIC OPERATION AND KEY FUNCTIONS

All possible keys and their functions are listed. Note that some of the keys are not available depending on your NAVMAN VHF radio model.



Key	Function
VOL/PWR	**Volume and Power.** Turn clockwise to power on. Continue to turn until a comfortable volume is reached. VOL/PWR will also adjust the settings of an external speaker, if connected.
SQL	**Squelch** and **Threshold Level.** Sets the threshold level for the minimum receiver signal. Turn fully counterclockwise until random noise is heard, then turn slowly clockwise until the random noise disappears. Make another 1/4 turn clockwise for best reception in open sea conditions. In areas of high noise (eg close to large cities) reception may improve if sensitivity is reduced. Either turn SQL slowly clockwise or use the LOCAL setting. See section 2.4.
16/9	**Priority Channel.** *7100 USA only. Also on the microphone.* Press to cancel all other modes and to tune into the priority channel. Press again to return to your original channel. The default is Channel 16. To make Channel 09 the priority channel, hold down 16/9 until a beep sounds and 09 is displayed.
16	**Priority Channel.** *7100 EC and 7000 only. Also on the microphone.* Press to cancel all other modes and to tune into the priority channel, Channel 16, on high power. Press again to return to your original channel.
WX	**Weather Channel.** *7100 USA and 7000 only.* In USA and Canadian waters, press to hear the most recently selected weather station. The WX symbol is displayed on the LCD.

Press + or - to change to a different weather channel.

Press WX, then 16/9, then CALL MENU to leave the weather channels and return to the most recent channel.

If a weather alert is broadcast when you are in SCAN mode, it is picked up automatically and the alarm sounds. Press any key to hear the weather alert.

H/L — **Transmission Power.** High (HI) 25W or Low (LO) 1W. Press to toggle between high or low transmission power for the entire channel bank. The HI or LO selection is shown on the LCD.

Some channels allow only low power transmissions. Error beeps will sound if the power transmission setting is incorrect. Press H/L to change it.

Some channels allow only low power transmissions intially, but can be changed to high power by holding down H/L and PTT at the same time. See Appendix C for a complete listing of channel charts.

3CH — **Three Favourite Channels.** *Also on the microphone.* Press to toggle between your favourite channels. The CH1, CH2, or CH3 symbol appears on the LCD to show which favourite channel is selected.

To add a favourite channel for the first time, select that channel then hold 3CH to store it in the CH1 location. Repeat the procedure to store two more favourite channels in the CH2 and CH3 locations respectively.

If you try and add another favourite channel it will overwrite the existing CH3. CH1 and CH2 remain unless you delete them.

To delete a favourite channel, select that channel then hold down 3CH until the CH1, CH2 or CH3 symbol disppears off the LCD.

UIC — **Channel Bank.** *7100 USA only.* Press to toggle between USA, International or Canadian channel banks. The selected channel bank is displayed on the LCD. All the channel charts are shown in Appendix C.

U/I — **Channel Bank.** *7000 only.* Press to toggle between channel banks. *Note that the channel banks available are dependent upon your VHF radio model.* The selected channel bank is displayed on the LCD. All the channel charts are shown in Appendix C.

DIM — **Backlighting.** *7100 EC only.* Press to toggle between the backlighting settings. OFF will extinguish all the backlighting except for the DISTRESS key. (Otherwise, use the menu to change the backlight setting.)

SCAN — **Scan.** Press to scan between your current channel and the priority channel in Dual Watch mode. The weather channel is also scanned if the USA channel bank is selected.

Hold down SCAN to enter ALL SCAN mode where the priority channel is checked every 1.5 seconds.

When a signal is received, scanning stops at that channel and BUSY appears on the LCD. If the signal ceases for more than 5 seconds, the scan restarts.

Press ENT to skip over (lock out) a busy channel when in ALL SCAN mode and resume the scan. An X is shown on the LCD to designate a skipped channel. Note that it is not possible to skip over the priority channel.

Press SCAN to stop at the current channel.

+ CH - **Channel Select.** *Also on the microphone.* The current channel is shown on the LCD with any suffix (such as A or B) in small letters below the channel number.

Press + or - to step through the available channels one at a time, or hold down to scroll rapidly through all the available channels. See Appendix C for a complete listing of channel charts.

Alphanumeric Entry. This key can also be used for menu selection and for alphanumeric entry. Press + or - to scroll the cursor up or down menu options when navigating menus.

To enter numbers, press + to count through the numbers or hold down to scroll rapidly to the desired number.

To enter a character, press - to step through the alphabet or hold down to scroll rapidly to the desired character.

ENT **Enter.** Use ENT when navigating menus, to confirm entries and edits.

ESC **Escape.** Use ESC when navigating menus, to clear incorrect entries, to exit from a menu without saving changes, and to back up to the previous screen.

CALL/MENU **DSC Setup Menu** and **DSC Call Menu.** *7100 USA and 7100 EC only.* Press to enter the DSC Call Menu and make DSC calls. See Chapter 5.

Hold down to enter the DCS Setup Menu and customize your NAVMAN VHF radio. See Chapter 4.

MENU **Radio menu.** *7000 only.* Press to enter the Radio Menu and customize your NAVMAN VHF radio. See Chapter 3.

DISTRESS **Send a DSC Distress Call.** *7100 USA & 7100 EC only.* See Chapter 6.

PTT **Press To Talk**. Press PTT to transmit at any time. This automatically exits you from menu mode. You must release PTT to receive a signal.

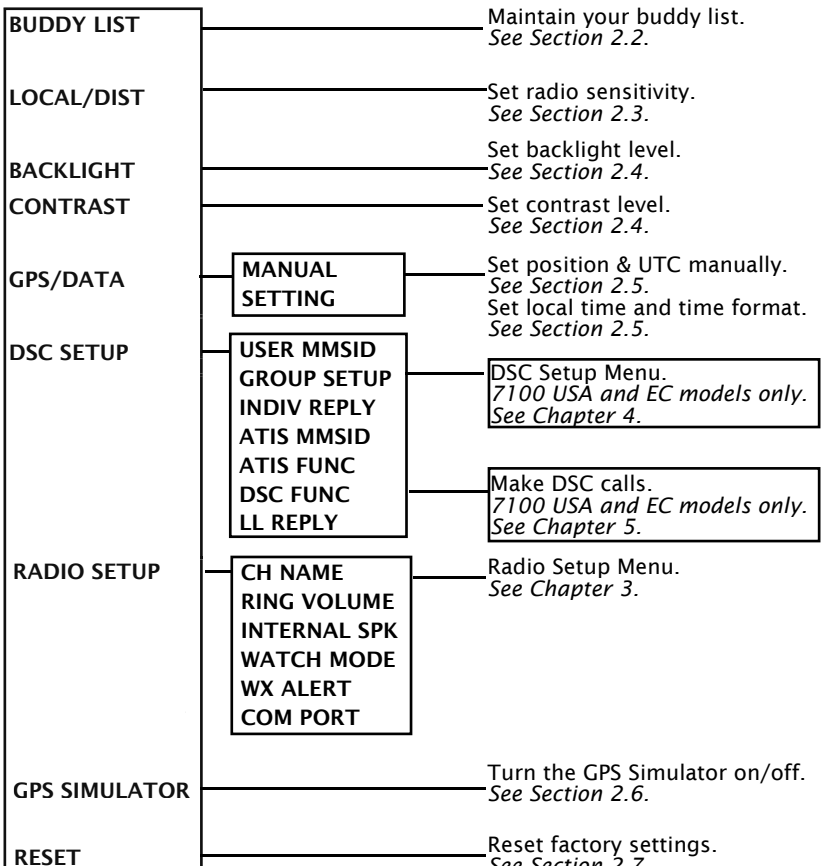
If PTT sticks, a built-in timer will automatically shut down a transmission after five minutes and sound the error beeps.

If you have a USA 7100, note that PTT will not operate if you are in WX mode.

Chapter 2 - The Radio Menu (MENU)

2.1 RADIO MENU OPTIONS (MENU)

The following options are available through MENU (or CALL MENU):



Sections 1.3 and 1.4 explain how to navigate around the menu and enter, save and change data.

2.2 MAINTAIN YOUR BUDDY LIST (BUDDY LIST)

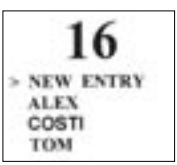
7100 USA and EC models only.

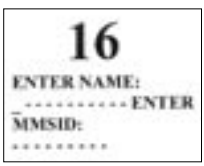
Use the Buddy List to store the names and associated MMSIDs of 20 favourite people in alphanumeric order.

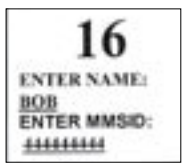
The following sections show to use BUDDY LIST to add, edit, and delete entries on your buddy list.

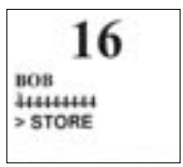
Chapter 3 explains how to call a buddy.

2.2.1 ADD AN ENTRY







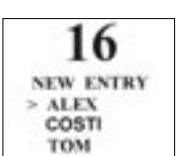


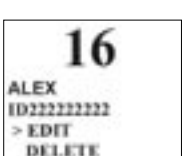
1. Select BUDDY LIST.
2. Press ENT again to display the list of entries. Scroll down (if required) to the first available blank line and press ENT.
3. Enter the buddy name (this may be alphanumeric) then press > twice to go to the MMSID entry line.
4. Enter the MMSID associated with that buddy name. This must be numeric.
5. Select SAVE & EXIT then press ENT to store the new entry, or CANCEL to exit without saving the new entry.

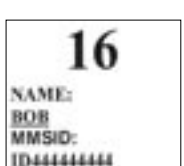
The BUDDY LIST will arrange itself automatically into alphabetic order.

Note that when the BUDDY LIST is full (20 entries), you cannot make a new entry until you have deleted an existing entry.

2.2.2 EDIT AN ENTRY



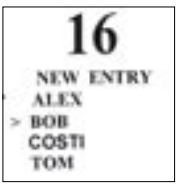




1. Select BUDDY LIST.
2. Press ENT again to display the list of entries. Scroll down (if required) to the incorrect entry.
3. Select EDIT.
4. Edit the buddy name or press ENT to edit only the MMSID.
5. Press ENT when you are finished.
6. Choose STORE to store the changes, or EXIT to exit without saving the changes. The BUDDY LIST is displayed again.

7. If more changes are required, repeat Steps 2 thru 6. Otherwise, press ESC to exit.

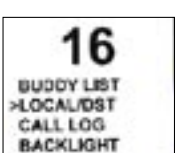
2.2.3 DELETE AN ENTRY



1. Select BUDDY LIST.
2. Press ENT again to display the list of entries. Scroll down to entry that you want to delete.
3. Select DELETE.
4. A confirmation question (ARE YOU SURE?) is displayed. Select YES to delete the entry and return to the list of entries, or NO to keep the entry.

Any deletions are effective immediately.

2.3 LOCAL OR DISTANCE SENSITIVITY (LOCAL/DST)

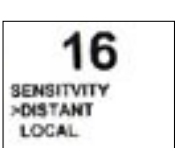


Use LOCAL/DIST to improve the sensitivity of the receiver either locally (LOCAL) or over distances (DST).

LOCAL is **not** recommended for use in open sea conditions. It is designed for use in areas of high radio noise, such as close to cities.

See also Squelch Control (SQL) in Section 1.3.

2.3.1 SET DISTANCE SENSITIVITY



1. Select LOCAL/DST.
2. Select DISTANT and select it to disable local sensitivity.

   LOCAL disappears off the LCD.

2.3.2 SET LOCAL SENSITIVITY

1. Select LOCAL/DST.
2. Scroll to LOCAL and select it to switch on local sensitivity.

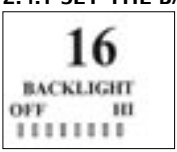
   LOCAL is displayed on the LCD as a reminder that local sensitivity is selected.

2.4 BACKLIGHTING (BACKLIGHT) AND CONTRAST (CONTRAST)

Use BACKLIGHT to set the backlight levels for the LCD, the keypad, and the microphone at the same intensity.

Use CONTRAST to set the contrast level for the LCD.

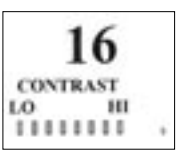
2.4.1 SET THE BACKLIGHTING LEVEL



1. Select BACKLIGHT.
2. Select the appropriate backlight level, or off (OFF). Changes are effective when you exit from the screen.

   Note that the DISTRESS key backlighting cannot be switched off, even if OFF is selected.

2.4.2 SET THE CONTRAST LEVEL



1. Select CONTRAST.
2. Select the apropriate contrast level. Changes are effective when you exit from the screen.

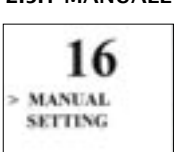
2.5 GPS DATA AND TIME (GPS/DATA)

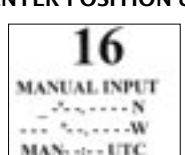
If the boat has an operational GPS navigation receiver, the VHF radio automatically detects and updates the vessel position and the local time.

However, if the GPS navigation receiver is disconnected or absent, you can specify the vessel position and the local time manually, using the GPS/DATA option.

This information is important because it will be used if a DSC distress call is transmitted.

2.5.1 MANUALLY ENTER POSITION & UTC TIME (MANUAL)





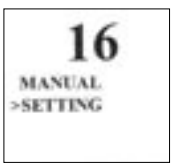
1. Select GPS/DATA, then MANUAL. Note that this function is available only if an operational GPS receiver is not connected.
2. Enter the latitude, then the longitude, then the UTC.

3. Press ENT when all the information is correct.

   The vessel latitude and longitude are shown on the LCD, with the UTC time. The prefix M indicates a manual entry.

2.5.2 LOCAL TIME DISPLAY (TIME OFFSET)

The local time can be set by entering the time offset between UTC and local time as follows.



1. Select GPS/DATA, then SETTING.
2. Select TIME OFFSET to enter the difference between UTC and local time. Half hour increments can be used with a maximum offset of +13.5 and a minimum offset of -13.5.

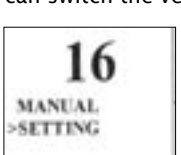
   In this example, a difference of +1.5 hours has been entered and the local time is displayed with the suffix LOC.

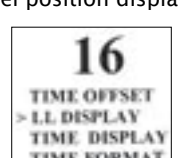
INSERT WORLD PICTURE SHOWING TIME ZONES OFFSET FROM UTC/GMT.

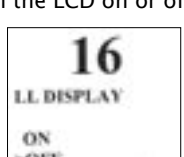
2.5.3 POSITION DISPLAY OPTIONS (LL DISPLAY)

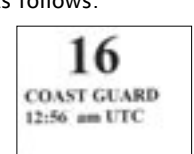
If you have entered the vessel position manually as described in the previous section, the vessel position is **always** shown on the LCD with the suffix M.

However, if the time is being updated through a GPS navigation receiver, you can switch the vessel position display on the LCD on or off as follows:







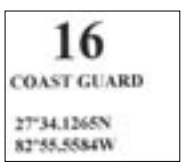


1. Select GPS/DATA, then SETTING.
2. Select LL DISPLAY.
2. Select ON (on) or OFF (off) as desired. In this example, OFF has been selected and so the LCD no longer shows the vessel position.

2.5.4 TIME DISPLAY OPTIONS (TIME DISPLAY)

If you have entered the time manually as described in the previous sections, the time is **always** shown on the LCD with the prefix M.

However, if the vessel position is being updated through a GPS navigation receiver, you can switch the time display on the LCD on or off as follows:

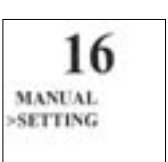


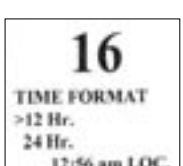
1. Select GPS/DATA, then SETTING.
2. Select TIME DISPLAY.
2. Select ON (on) or OFF (off) as desired. In this example, OFF has been selected and so the LCD no longer shows the time.

If the time display is set ON, course and speed data are not displayed on the LCD (see section 2.6.6).

2.5.5 TIME FORMAT OPTIONS (TIME FORMAT)

Time can be shown in 12 or 24 hour format.



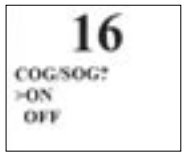


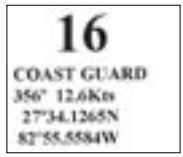
1. Select GPS/DATA, then SETTING.
2. Select TIME FORMAT.
2. Select 12 Hr or 24 Hr as desired. In this example, 12 hour format has been selected and so the LCD shows the am or pm suffix.

2.5.6 COURSE & SPEED DISPLAY OPTIONS (COG/SOG)

Use this option to display course over ground (COG) and speed over ground

(SOG) data on the LCD.





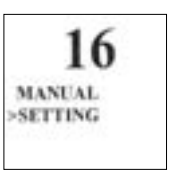
1. Select GPS/DATA, then SETTING.
2. Select COG/SOG.
2. Select ON (on) or OFF (off) as desired. In this example, ON has been selected and so the LCD shows the bearing and speed.

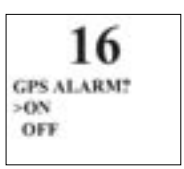
If GOG/SOG is set ON, the time is not displayed on the LCD (see section 2.6.4).

2.5.7 GPS ALARM OPTIONS (ALARM)

7100 USA and 7100 EC only.

The GPS Alarm is usually set to ON so that if the GPS navigation receiver is disconnected, the alarm sounds.





1. Select GPS/DATA, then SETTING.
2. Select ALARM.
2. Select ON (on) or OFF (off) as desired.

2.6 GPS SIMULATOR (SIMULATOR)

The GPS Simulator is usually set to OFF. However, if you want to test it, turn it on. **(new pictures)**

1. Select SIMULATOR, then select ON (on) or OFF (off) as desired.

If the GPS Simulator is turned on, the simulated speed, bearing, and LL positions appear on the LCD as:

7100 EC

11 knots moving 045°
50° 30.000N,
00° 00.000E

7100 USA

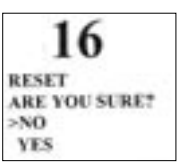
11 knots moving 045°
25° 00.000N
82° 00.000W

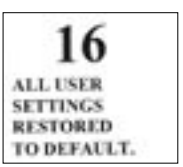
This data is updated automatically during the simulation.

Note that it is not possible to send a transmission when in simulator mode.

2.7 RESET TO FACTORY DEFAULTS (RESET)

Use this to return every setting to the factory defaults **except** your user MMSID and the entries in your buddy list. (new picture)





1. Select RESET, then select YES.

Chapter 3 - Radio Setup Menu (RADIO SETUP)

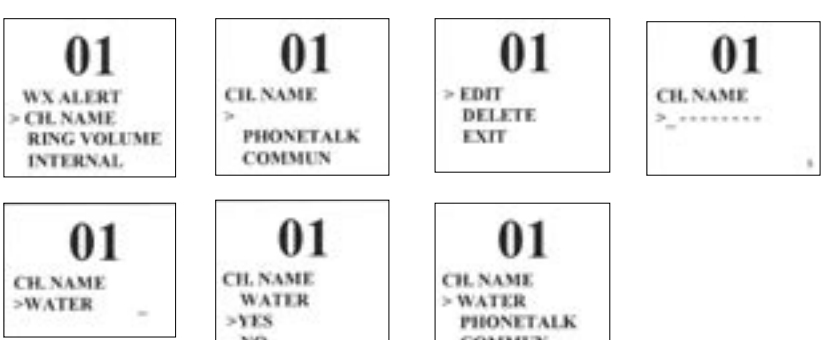
3.1 RADIO SETUP MENU (RADIO SETUP)

CH NAME	Customize channel names. *See Section 3.2.*
RING VOLUME	Set the volume level of the incoming call notification beeps. *See section 3.3.*
BEEP VOLUME	Set the volume level of the beeps. *See section 3.3.*
INTERNAL SPK	Switch on or off any internal speakers that are connected to the VHF radio. *See section 3.4.*
WATCH MODE	Edit the channel name or use the default name. *See section 3.5.*
WX ALERT	Switch the weather alert beeps on or off. (*7100 USA only.*) *See section 3.6.*
COM PORT	Select NMEA protocol for communications between the VHF radio and any other instruments. *See section 3.7.*

Sections 1.3 and 1.4 explain how to navigate around the menu and enter, save and change data.

3.2 CUSTOMIZE OR DELETE CHANNEL NAMES (CH NAME)

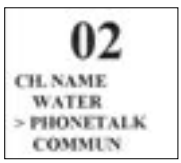
The channel charts are listed in Appendix C with their default name tags. CH NAME gives you the option to edit the channel name tags displayed on your LCD, as follows:

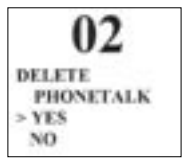


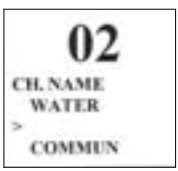
1. Select RADIO SETUP, then select CH NAME.
2. Use + or - to step through the channels with their name tags until you see the channel name tag you want to change. In this example, there is no channel name tag associated with CH01.
3. Select EDIT and press ENT to edit the existing name tag. Input the new name along the dashed line, then press ENT.

4. Select YES to confirm the new channel name tag.

Delete a channel name as follows:



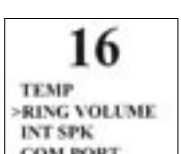




1. Select RADIO SETUP, then select CH NAME.
2. Use + or - to step through the channels with their name tags until you see the channel name tag you want to change. In this example, the PHONETALK name tag associated with CH02 is deleted.
3. Select DELETE and press ENT.
4. Select YES to confirm the deletion. The channel is shown with no name tag.

3.3 RING & BEEP VOLUME (RING VOLUME) & (BEEP VOLUME)

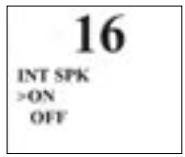
Set the volume level of the incoming signal beeps (RING VOLUME) and/or the error and warning beeps (BEEP VOLUME) to HIGH (high) or LOW (low) as follows:



1. Select RADIO SETUP, then select RING VOLUME or BEEP VOLUME as appropriate.
2. Select HIGH or LOW. (The beeps will sound at the new level.)

3.4 INTERNAL SPEAKER CONNECTIONS (INTERNAL SPK)

If any internal speakers are connected to the VHF radio, use this menu option to switch them on or off to suit your cabin arrangements.

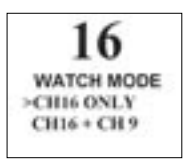


1. Select RADIO SETUP, then select INTERNAL SPK.
2. Select ON or OFF.

3.5 SET THE PRIORITY CHANNEL (WATCH MODE)

If you have a VHF 7000 or a VHF 7100 EC, watch mode is similiar to a dual watch, scanning between the priority channel and the working channel. CH16 is the priority channel.

However, **only** if you have the 7100 USA model and are operating in USA or Canadian waters, you can set the priority channel to cover both CH16 and CH09 as well as the working channel, as follows:

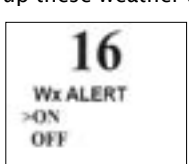


1. Select RADIO SETUP, then select WATCH MODE.
2. Select CH16 + CH09 for three channel scanning.

3.6 WEATHER ALERT (WX ALERT)

7100 USA only.

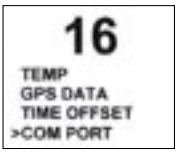
The NOAA provides several weather forecast channels for USA and Canadian waters. If severe weather such as storms or hurricanes are forecast, the NOAA broadcasts a weather alert. You can pick up these weather alerts, as follows:

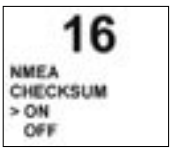


1. Select RADIO SETUP, then select Wx ALERT.
2. Select ON. When a weather alert is broadcast, the alarm beeps will sound. (If

3.7 NMEA PROTOCOL (COMM PORT)

The VHF radio can be added to a group of instruments using NMEA protocol.





1. Select RADIO SETUP, then select COM PORT.
2. Select NMEA. Specify whether CHECKSUM is on (ON) or off (OFF). CHECKSUM ON is the usual standard.

Chapter 4 - DSC Setup Menu (DSC SETUP)

These DSC facilities are available only on the VHF7100 USA and VHF7100 EC models, and a valid user MMSID must be entered to access the DSC functions.

4.1 DSC SETUP - MENU OPTIONS

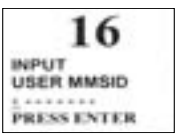
The following options are available:

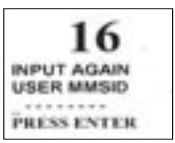
USER MMSID	Enter your user MMSID. If you do not have a user MMSID, see Appendix E.) *See section 4.2.*
GROUP SETUP	Enter or change the name and/or details of a group. *See section 4.3.*
INDIV REPLY	Choose an automatic or manual response to calls. *See section 4.4.*
ATIS MMSID	Enter or change your ATIS MMSID (*7100 EC only*). *See section 4.5.*
ATIS FUNC	Enable/disable the ATIS function (*7100 EC only*). *See section 4.5.*
DSC FUNC	Turn DSC scanning on/off. *See section 4.6.*
LL REPLY	Select the type of response to an LL request. *See section 4.7.*

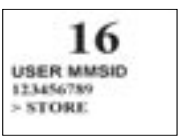
Sections 1.3 and 1.4 explain how to navigate around the menu and enter, save and change data.

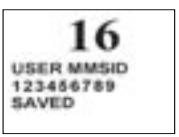
4.2 ENTER YOUR USER MMSID (USER MMSID)

This is a **once-only** operation. You must enter your user MMSID before you can access the DSC functions, as follows:









You can display and read your user MMSID at any time, but you get only one opportunity to enter your user MMSID.

1. Select DSC SETUP, then USER MMSID.
2. If this is the **first time** that you are entering your user MMSID, a dashed line appears.

   Enter your user MMSID along the dashed line and press ENT when it is correct.
3. Input the user MMSID again as a check, then select STORE.

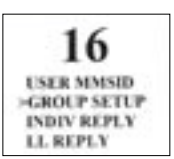
   If the user MMSID has been entered correctly both times, it is displayed for 3 seconds on the LCD and then saved (SAVED).

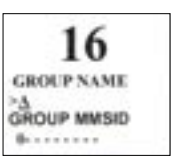
4.3 MAINTAIN YOUR GROUPS (GROUP SETUP)

Use GROUP SETUP to create, edit, or delete 1, 2, or 3 groups of frequently called people stored in alphanumeric order.

A group MMSID **always** starts with 0.

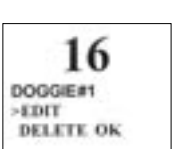
4.3.1 CREATE A GROUP (GROUP SETUP)





1. Select DSC SETUP, then select GROUP SETUP.
2. If this is the **first time** that you are entering a group name, a dashed line appears. Otherwise, any existing group names are displayed. Scroll down (if required) and enter the group name along the dashed line. It can be alphanumeric.
3. Enter the group MMSID. (Note that the first number is always 0.)
4. The group name and group MMSID are shown in a confirmation screen. Select STORE if the entry is correct.

4.3.2 EDIT GROUP NAME DETAILS (EDIT)



1. Select DSC SETUP, then select GROUP SETUP.

2. Select the group, then select EDIT.
3. Make the changes to the group name and/or to the group MMSID.
4. Select STORE to store the changes.

4.3.3 DELETE A GROUP

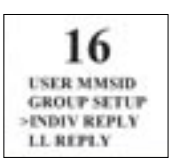
1. Select DSC SETUP, then select GROUP SETUP.
2. Select the group, then select DELETE OK.
3. Press ENT to confirm the deletion.

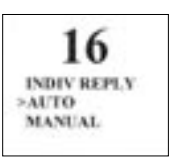
4.4 RESPONSE TO INDIVIDUAL CALLS (INDIV REPLY)

You can respond to incoming individual calls with an automatic response or with a manual response.

An automatic response sends an acknowledgement and then sets the request link channel, ready for a conversation.

A manual response asks if you want to acknowlege the call, and then asks if you want to converse with the caller.



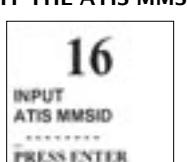


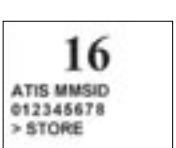
1. Select DSC SETUP, then select INDIV REPLY.
2. Select AUTO for an automatic response, or MANUAL for a manual response.

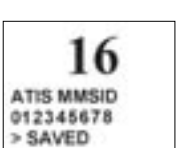
4.5 ATIS MMSID AND ATIS FUNCTIONALITY (ATIS FUNC)

7100 EC only. You **must** enter your ATIS MMSID to access ATIS functionality if you are navigating inland waterways within Europe.

4.5.1 ENTER OR EDIT THE ATIS MMSID







To enter or edit your ATIS MMSID:

1. Select DSC SETUP, then ATIS MMSID.

2. If this is the **first time** that you are entering your ATIS MMSID, a dashed line appears. Enter your ATIS MMSID here and select STORE. The first number is always 9.

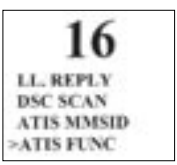
   If you are editing an existing ATIS MMSID, this will be displayed. Make the required changes.

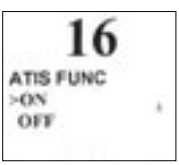
3. Input the ATIS MMSID again as a check. Press ENT and select SAVED.

   If the user MMSID has been entered correctly both times, it is displayed for 3 seconds on screen and then stored.

4.5.2 ENABLE ATIS FUNCTIONALITY (ATIS FUNC)

7100 EC only. ATIS functionality will operate only after the ATIS MMSID has been entered (see previous section).





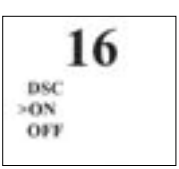
1. Select DSC SETUP, then ATIS FUNC.
2. Select ON to enable the ATIS functionality and automatically disable DSC functionality.

   A warning message will appear: WARNING DSC OFF.

(Note that it is not possible to have both ATIS ON and DSC ON simultaneously. When you enable one, the transceiver will automatically disable the other and display a warning message.)

4.6 DSC FUNCTIONALITY OPTIONS (DSC FUNC)

DSC functionality can be disabled but this is not recommended.

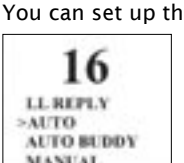


1. Select DSC SETUP, then DSC SCAN.
2. Select ON to operate the DSC functionality. (This will automatically disable ATIS functionality on the *7100 EC* and a warning message will appear: WARNING ATIS OFF.)

(Note that it is not possible to have both ATIS ON and DSC ON simultaneously on the *7100 EC*. When you enable one, the transceiver will automatically disable the other and display a warning message.)

4.7 RESPONSE TYPE TO LL CALLS (LL REPLY)

You can set up the VHF 7100 to respond to an LL request in one of four ways.



AUTO - automatically reply to any incoming LL request.
AUTO BUDDY - automatically reply to any incoming call from anyone in your buddy list or a group list.
MANUAL - choose whether to reply or not.
OFF - switch off notification of any incoming LL requests.

Chapter 5 - Sending and Receiving DSC Calls

These DSC facilities are available only on the VHF7100 USA and VHF7100 EC models, and a valid user MMSID must have been entered to access the

5.1 WHAT IS DSC?

DSC (Digital Selective Calling) is a semi-automated method of establishing VHF, MF, and HF radio calls. It has been designated as an international standard by the IMO (International Maritime Organization) and is part of the GMDSS (Global Maritime Distress and Safety System).

Currently, you are required to monitor Distress Channel 16, but DSC will eventually replace listening watches on distress frequencies and will be used to broadcast routine and urgent maritime safety information.

DSC enables you to send and receive calls from any vessel or coast station that is equipped with DSC functionality, and within geographic range. Calls can be categorised as distress, urgency, safety, or routine, and DSC selects a working channel automatically.

5.2 SENDING DSC CALLS

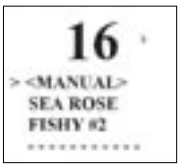
1. Press CALL MENU to show the types of DSC call that can be made.

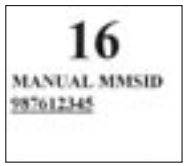
   Note that only four DSC call types can be shown at any one time on the LCD menu.

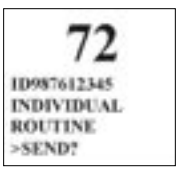
2. Press + or - to scroll up and down the DSC call types until the cursor is postioned at the desired option. Then press ENT. The DSC call types are:

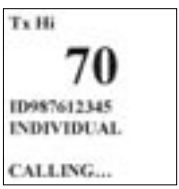
INDIVIDUAL	Make a manual call or reply to a new caller or a buddy. *See Section 5.2.1 and 5.2.2.*
INDIV ACK	*See Section 5.2.3 TBS*
LAST	Show the details of the most recent incoming call. *See Section 5.2.4.*
GROUP	Make a call to one of your three groups. *See Section 5.2.5.*
ALL SHIPS	Make an urgent, safety, or routine call to all ships USA?? *See Section 5.2.6.*
CALL LOG	Show the details of the 20 most recent incoming calls. *See Section 5.2.7.*
DISTRESS LOG	Show the details of the 20 most recent distress calls. *See Section 5.2.8.*

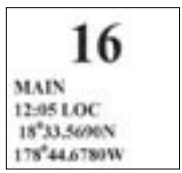
5.2.1 MAKE A ROUTINE CALL MANUALLY (INDIV REPLY)











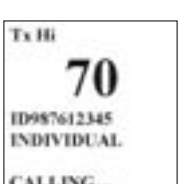
If you chose to respond manually to individual calls when you set up your DSC options (see Section 3.5), you must enter the caller's MMSID or select the buddy name, and then specify the calling channel.

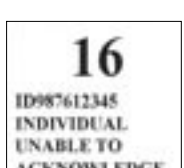
1. When the incoming call is complete, press CALL MENU to enter DSC mode, then select INDIVIDUAL.
2. If the caller *is not* in your buddy list, select MANUAL MMSID and then enter the MMSID of the caller along the dashed line.

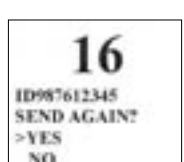
   If the caller *is* in your buddy list, just scroll down the list of buddies and select that buddy.
3. Now specify the calling channel using the + and - key and monitor that channel briefly to ensure that it is clear **before** you transmit. (This is an FCC requirement.) If it is busy, select a different calling channel.

   NOTE: If the call is from a coast station, the VHF 7100 will recognise this and automatically specify a channel.
4. The VHF 7100 summarises the call data and asks if it should send the call (SEND?). Press ENT to send the call and CALLING appears on the LCD.
5. If the call is acknowledged (ACKNOWLEDGED), press to talk when invited (PRESS PTT TO TALK).
6. If there is no reply (UNABLE TO ACKNOWLEDGE), retry the call (see Section 5.2.2).

5.2.2 RETRYING A ROUTINE CALL







1. If there is no reply to your call after one minute (UNABLE TO ACKNOWLEDGE) the VHF 7100 asks if you want to retry the call (SEND AGAIN?).
2. Select YES and press ENT to retry the call.

   The VHF 7100 will repeat this cycle twice. If the call still cannot be placed, the VHF 7100 returns to normal operation.

5.2.3 ACKNOWLEDGE AN INDIVIDUAL CALL (INDIV ACK)

TBS. OR is this VHF 7200 specific?

5.2.4 RECALL THE MOST RECENT INCOMING CALL (LAST)

The VHF 7100 stores the contact details of your most recent incoming call, so that you can call up quickly, if necessary.

1. Press CALL MENU to enter DSC mode, then select LAST CALL.

   The VHF 7100 displays the contact details of the most recent incoming call.
2. Press ENT to send a call to that contact, then set the channel and continue as explained in Section 5.2.1.

5.2.5 CALL A GROUP (GROUP)

1. Press CALL MENU to enter DSC mode, then select GROUP CALL. The VHF 7100 displays the names of your groups.
2. Select the group that you want to call, then set the channel and continue as explained in Section 5.2.1.

5.2.6 CALL ALL SHIPS (ALL SHIPS)

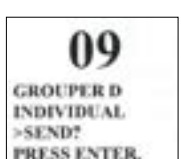
1. Press CALL MENU to enter DSC mode, then select ALL SHIPS.
2. The priority is set automatically to URGENT. However, if you have a VHF 7100 USA, you can select one of the following call priorities:

   URGENT - for use when a serious situation or problem arises that could lead to a distress situation

   SAFETY - to send safety information to all other vessels in range;

   ROUTINE - routine call.
3. The VHF 7100 asks for confirmation of the all ships call. Select YES and press ENT to transmit the call. Continue as explained in Section 5.2.1.

5.2.7 CALL USING THE CALL LOG (CALL LOG)



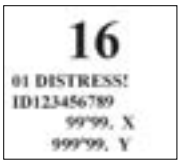
The Call Log contains the contact details for the 20 most recent incoming calls, so that you call any of them again quickly.

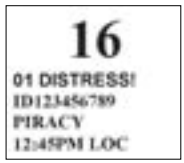
1. Press CALL MENU to enter DSC mode, then select CALL LOG.

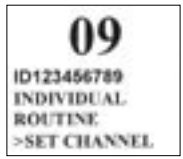
   Scroll down to the desired contact details.

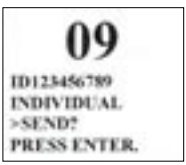
   The VHF 7100 displays the contact details for the most recent incoming call as the first entry (01) in the call log. In the example, the contact details for the 11th most recent call are displayed.
2. Set the channel and continue as explained in Section 5.2.1.

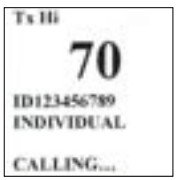
5.2.8 CALL USING THE DISTRESS LOG (DISTRES LOG)











The Distress Log contains the contact details for the 10 most recently received distress calls, so that you can call any of them quickly. Always try to make voice contact on CH16 first, as follows:

1. Press CALL MENU to enter DSC mode, then select DISTRES LOG.
2. Scroll down to the distress call entry that you want to call.

   The VHF 7100 displays the details for the most recently received distress call as the first entry (01) in the distress log.

   The details are displayed over two screens that alternate every 1.5 seconds; the first screen shows the user MMSID and location, and the second screen shows the user MMSID and the nature and time of the emergency (if specified).
3. Set the channel and continue as explained in Section 5.2.1.

5.3 RECEIVING DSC CALLS

Five types of DSC calls can be received from vessels within range at various priority levels:

DISTRESS - see Chapter 5.

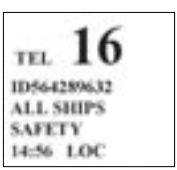
ALL SHIPS - Urgency, or Safety priority (see Section 5.3.1)

INDIVIDUAL - Urgency, Safety, or Routine priority (see Section 5.3.2)

GROUP - Routine priority only (see Section 5.3.3)

In addition to the audible alert, the telephone icon will flash on the LCD.

5.3.1 RECEIVING AN ALL SHIPS CALL (ALL SHIPS)



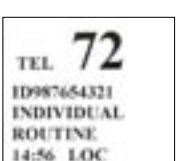
1. When you receive notification of an ALL SHIPS call, press any key to cancel the alert. The VHF 7100 automatically selects CH16.

   The priority level and the user MMSID are displayed on the LCD. If the VHF 7100 recognises the user MMSID as one of your buddies, the buddy's name is displayed in place of the user MMSID.

2. You do not need to send an acknowledgement. If necessary, press PTT to initiate voice contact on CH16 and then switch to a working channel.

The call data is stored in the Call Log (see Section 5.2.7).

5.3.2 RECEIVING AN INDIVIDUAL CALL (INDIVIDUAL)



1. When you receive notification of an INDIVIDUAL call, press any key to cancel the alert. The VHF 7100 automatically selects the channel designated in the incoming call.

   In the example, an individual routine call has selected CH72. However, safety and urgency priority level calls always select CH16.

   The priority level and the user MMSID are displayed on the LCD. If the VHF 7100 recognises the user MMSID as one of your buddies, the buddy's name is displayed in place of the user MMSID.

2. The VHF 7100 prompts you to press ENT to acknowledge the incoming call (PRESS ENTER TO ACK BACK!).

3. Press ENT, then the caller should respond to your acknowledgement by making voice contact on the designated channel. If this does not happen, you can press PTT to initiate voice contact instead.

   The call data is stored in the Call Log (see Section 5.2.7).

5.3.3 RECEIVING A GROUP CALL (GROUP CALL)

1. When you receive notification of a GROUP call, press any key to cancel the alert. The VHF 7100 automatically selects the channel designated in the incoming call.

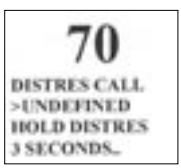
   The priority level is always routine, and the group is identified on the LCD. The group will be one of the three groups of frequently called people that you set up earlier (see Section 3.4).

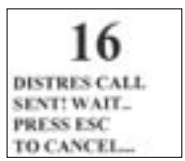
2. You do not need to send an acknowledgement. If desired, press PTT to initiate voice contact on the designated channel.

The call data is stored in the Call Log (see Section 5.2.7).

This DSC facility is available only on the VHF7100 USA and VHF7100 EC models, and a valid user MMSID must have been entered to access this DSC function.

6.1 SENDING A DISTRESS CALL





1. Open the red cover labelled DISTRESS.

   If time is available to specify the nature of the distress, go to step 2. Otherwise, go directly to step 3.

2. Press the DISTRESS key to display the following categories. Scroll to the category that describes your situation, then press ENT:

   UNDEFINED
   FIRE
   FLOODING
   COLLISION
   GROUNDING
   LISTING
   SINKING
   ADRIFT
   ABANDONING
   PIRACY
   MAN IN WATER
   EPRIB

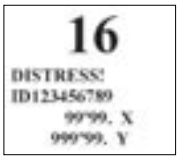
3. Hold down the DISTRESS key for about 3 seconds, until you see the distress call sent message (DISTRES CALL SENT!) on the LCD. The whole display starts to flash and beep.

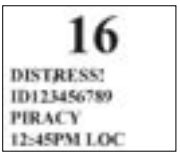
   The distress call repeats five times continuously. It then repeats randomly every 3.5 to 4.5 minutes until a distress acknowledgement (DISTRESS ACK) is received from a search and rescue authority or until you cancel the distress call manually.

   The VHF 7100 selects CH16 automatically so that you can hear any incoming voice contacts from search and rescue authorities or other vessels within range.

   Press ESC if you need to cancel the distress call. This is the only key that operates in distress mode.

6.2 RECEIVING A DISTRESS CALL (DISTRESS!)





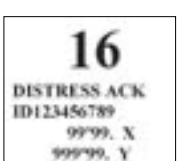
An alert sounds when a distress call (DISTRESS!) is received. The VHF 7100 automatically selects CH16 and displays the details of the distress call on the LCD.

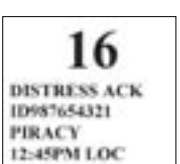
The details are displayed over two screens that alternate every 1.5 seconds; the first screen shows the user MMSID and location (if specified), and the second screen shows the user MMSID and the nature and time of the emergency (if specified).

If the location and time are not specified, these are replaced with sequences of 9s and 8s respectively. In this example, the location has not been specified.

1. Press any key to cancel the alert. You do not need to send an acknowledgement.
2. Press PTT to establish voice contact.

6.3 DISTRESS ACKNOWLEDGEMENT OR RELAY (DISTRESS ACK)





An alert sounds when a distress acknowledgement or relay (DISTRESS ACK) is received. The VHF 7100 automatically selects CH16 and displays the details of the distress call on the LCD.

The details are displayed over two screens that alternate every 1.5 seconds; the first screen shows the user MMSID and location (if specified), and the second screen shows the user MMSID and the nature and time of the emergency (if specified).

If the location and time are not specified, these are replaced with sequences of 9s and 8s respectively. In this example, the location has not been specified.

1. Press any key to cancel the alert. You do not need to send an acknowledgement.
2. Maintain a listening watch on CH16 and standby to lend assistance.

Appendix A - Technical Specifications

NAVMAN VHF 7000

GENERAL

Power Supply:	13.6V DC.
Current drain:	
Transmit	6A at 25W Tx / 1.5A at 1W Tx
Receive	Less than 250mA in standby
Useable channels:	International, USA (country specific)
Mode:	16K0G3E (FM)

PHYSICAL

LCD display (viewing):	41(H) x 53(W) mm FSTN 4 x 12 character
Contrast and Dimming control:	Yes
Antenna connector:	SO-239 (50 ohm)
Temperature Range:	-15°C to +50°C
Waterproof:	JIS-7
Dimensions:	161(W) x 75(H) x 147(D) mm - without bracket
Weight:	1.29kg (2.8lbs) - without microphone
Frequency stability:	+/- 10ppm
Frequency control:	PLL
GPS/NMEA input:	Yes
Comm. port:	4800 baud NMEA
DSC:	No

FEATURES

Flush Mount kit and dust cover:	Yes
Local/Distant control:	Yes
Position polling:	No
Track-your-buddy:	No
Call logs:	No
DSC (USCG SC101 and Class D):	No
Channel Naming:	Yes
Tri watch, Favourite channel scan, All scan:	Yes
User programmable MMSID:	No
MMSID and NAME directory:	No

TRANSMITTER

Frequency:	156.025 - 157.425MHz
Output power:	25W / 1W selectable
Transmitter protection:	Open / short circuit of antenna

Max Freq deviation:	+/- 5kHz
Spurious & harmonics:	80dB@25W, 60dB@1W
Modulation distortion:	Less than 4%@ 1kHz for a +/-3kHz deviation

RECEIVER

Frequency:	156.025 - 163.275MHz
12dB SINAD sensitivity:	0.25uV (distant) / 2.5uV (local)
20db SINAD sensitivity:	0.35uV
Adjacent CH selectivity:	more than 70dB
Spurious response:	more than 70db
Intermodulation Rejection ratio:	more than 68dB
Residual Noise level:	more than -40dB unsquelched
Audio output power:	2W (with 8 ohm at 10% distortion) 4W with 4 ohm external speaker
Compass safe distance:	0.Xm TBS

Specifications are subject to change without notice.

NAVMAN VHF 7100

GENERAL

Power Supply:	13.6V DC.
Current drain:	
Transmit	6A at 25W Tx / 1.5A at 1W Tx
Receive	Less than 250mA in standby
Useable channels:	International, USA, Canada, Weather (country specific)
Mode:	16K0G3E (FM) / 16K0G2B (DSC)

PHYSICAL

LCD display (viewing):	41(H) x 53(W) mm FSTN 4 x 12 character
Contrast and Dimming control:	Yes
Antenna connector:	SO-239 (50 ohm)
Temperature Range:	-15°C to +50°C
Waterproof:	JIS-7
Dimensions:	161(W) x 75(H) x 147(D) mm - without bracket
Weight:	1.29kg (2.8lbs) - without microphone
Frequency stability:	+/- 10ppm
Frequency control:	PLL
GPS/NMEA input:	Yes
Comm. port:	4800 baud NMEA
DSC:	Yes

FEATURES

Flush Mount kit and dust cover:	Yes
Local/Distant control:	Yes
Position polling:	Yes

Track-your-buddy:	No
Call logs:	Yes - 20 individual and 20 distress
DSC (USCG SC101 and Class D):	Yes (*7100 USA*)
Channel Naming:	Yes
Tri watch, Favourite channel scan, All scan:	Yes
User programmable MMSID:	Yes
MMSID and NAME directory:	Yes - 20 numbers & group

TRANSMITTER

Frequency:	156.025 - 157.425MHz
Output power:	25W / 1W selectable
Transmitter protection:	Open / short circuit of antenna
Max Freq deviation:	+/- 5kHz
Spurious & harmonics:	better than 2.5µW
Modulation distortion:	Less than 4%@ 1kHz for a +/-3kHz deviation

RECEIVER

Frequency:	156.025 - 163.275MHz
12dB SINAD sensitivity:	0.25uV (distant) / 2.5uV (local)
20db SINAD sensitivity:	0.35uV
Adjacent CH selectivity:	more than 65dB
Spurious response:	more than 65db
Intermodulation Rejection ratio:	more than 65dB
Residual Noise level:	more than -40dB unsquelched
Audio output power:	2W (with 8 ohm at 10% distortion) 4W with 4 ohm external speaker
Compass safe distance:	0.Xm TBS

Specifications are subject to change without notice.

Appendix B - Troubleshooting

1. The transceiver will not power up.

A fuse may have blown OR there is no voltage getting to the transceiver.

a) Check the power cable for cuts, breaks, or squashed sections.

b) Replace the fuse (2 spare fuses are supplied).

c) Check the battery voltage. This must be greater than 10.5V.

2. The transceiver blows the fuse when the power is switched on.

The power wires may have been reversed.

a) Check that the red wire is connected to the positive battery terminal, and the black wire is connected to the negative battery terminal.

3. The speaker makes popping or whining noises when the engine is running.

Electrical noise may be interfering with the transceiver.

a) Re-route the power cables away from the engine.

b) Add a noise suppressor to the power cable.

c) Use resistive spark plug wires and/or use an alternator whine filter.

4. No sound from the external speaker.

a) Check that the external speaker cable is physically connected.

b) Check the polarity of the external speaker cable.

5. Transmissions are always on low power, even when high (HI) power is selected.

The antenna may be faulty.

a) Test the transceiver with a different antenna.

b) Have the antenna checked out.

6. Battery symbol is displayed.

The power supply is too low or too high.

a) Check the battery voltage. This should be between 10.5V and ???

b) Check the generator.

7. No position information is displayed.

The GPS cable may faulty or the GPS setting may be incorrect.

a) Check that the GPS cable is physically connected.

b) Check the polarity of the GPS cable.

c) Check the baud rate setting of the GPS if applicable. The baud rate setting should be 4800 and parity should be set to NONE.

Appendix C - VHF Marine Channel Charts

C.1 INTERNATIONAL CHANNEL CHART

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
01	156.050	160.650	Public Correspondence, Duplex	No	Yes	TELEPHONE
02	156.100	160.700	Public Correspondence, Duplex	No	Yes	TELEPHONE
03	156.150	160.750	Public Correspondence, Duplex	No	Yes	TELEPHONE
04	156.200	160.800	Port Operations, Duplex	No	Yes	PORT OPS
05	156.250	160.850	Port Operations, Selected VTS Areas	No	Yes	PORT OPS/VTS
06	156.300	156.300	Inter-ship Safety	Yes	No	SAFETY
07	156.350	160.950	Port Operations, Duplex	No	Yes	PORT OPS
08	156.400	156.400	Commercial (inter-ship only)	Yes	No	COMMERCIAL
09	156.450	156.450	Recreational Calling Channel	Yes	Yes	CALLING
10	156.500	156.500	Commercial	Yes	Yes	COMMERCIAL
11	156.550	156.550	Commercial, VTS in Selected Areas	Yes	Yes	VTS
12	156.600	156.600	Port Operations, Selected VTS Areas	Yes	Yes	PORT OPS/VTS
13	156.650	156.650	Intership Navigation Safety (bridge-to-bridge)	Yes	No	BRIDGE COM
14	156.700	156.700	Port Operations, Selected VTS Areas	Yes	Yes	PORT OPS/VTS
15 [1]	156.750	156.750	Port Operations – 1W Only	Yes	Yes	PORT OPS
16	156.800	156.800	International Distress, Safety, and Calling	Yes	Yes	DISTRESS
17 [1]	156.850	156.850	State Controlled – 1W Only	Yes	Yes	SAR
18	156.900	161.500	Port Operations, Duplex	No	Yes	PORT OPS
19	156.950	161.550	Commercial, Duplex	No	Yes	SHIP - SHORE
20	157.000	161.600	Port Operations, Duplex	No	Yes	PORT OPS
21	157.050	161.650	Port Operations, Duplex	No	Yes	PORT OPS
22	157.100	161.700	Port Operations, Duplex	No	Yes	PORT OPS
23	157.150	161.750	Public Correspondence, Duplex	No	Yes	TELEPHONE
24	157.200	161.800	Public Correspondence, Duplex	No	Yes	TELEPHONE
25	157.250	161.850	Public Correspondence, Duplex	No	Yes	TELEPHONE
26	157.300	161.900	Public Correspondence, Duplex	No	Yes	TELEPHONE
27	157.350	161.950	Public Correspondence, Duplex	No	Yes	TELEPHONE
28	157.400	162.000	Public Correspondence, Duplex	No	Yes	TELEPHONE

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
60	156.025	160.625	Public Correspondence, Duplex	No	Yes	TELEPHONE
61	156.075	160.675	Port Operations, Duplex	No	Yes	PORT OPS
62	156.125	160.725	Port Operations, Duplex	No	Yes	PORT OPS
63	156.175	160.775	Port Operations, Duplex	No	Yes	PORT OPS
64	156.225	160.825	Public Correspondence, Duplex	No	Yes	TELEPHONE
65	156.275	160.875	Port Operations, Duplex	No	Yes	PORT OPS
66	156.325	160.925	Port Operations, Duplex	No	Yes	PORT OPS
67	156.375	156.375	Commercial, bridge-to-bridge	Yes	No	BRIDGE COM
68	156.425	156.425	Boat Operations, Recreational	Yes	No	SHIP - SHIP
69	156.475	156.475	Port Operations	Yes	Yes	PORT OPS
70 [3]	156.525	156.525	Digital Selective Calling - DSC	------	------	DSC
71	156.575	156.575	Port Operations	Yes	Yes	PORT OPS
72	156.625	156.625	Intership	Yes	No	SHIP - SHIP
73	156.675	156.675	Port Operations	Yes	Yes	PORT OPS
74	156.725	156.725	Port Operations	Yes	Yes	PORT OPS
77	156.875	156.875	Intership	Yes	No	SHIP - SHIP
78	156.925	161.525	Non-Commercial, Duplex	No	Yes	SHIP - SHORE
79	156.975	161.575	Commercial, Duplex	No	Yes	SHIP - SHORE
80	157.025	161.625	Commercial, Duplex	No	Yes	SHIP - SHORE
81	157.075	161.675	Port Operations, Duplex	No	Yes	PORT OPS
82	157.125	161.725	Port Operations, Duplex	No	Yes	PORT OPS
83	157.175	161.775	Public Correspondence, Duplex	No	Yes	TELEPHONE
84	157.225	161.825	Public Correspondence, Duplex	No	Yes	TELEPHONE
85	157.275	161.875	Public Correspondence, Duplex	No	Yes	TELEPHONE
86	157.325	161.925	Public Correspondence, Duplex	No	Yes	TELEPHONE
87	157.375	161.975	Public Correspondence, Duplex	No	Yes	TELEPHONE
88	157.425	162.025	Public Correspondence, Duplex	No	Yes	TELEPHONE

WEATHER		MHz	TRAFFIC TYPE			NAME TAG
Wx01	RX Only	162.550	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx02	RX Only	162.400	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx03	RX Only	162.475	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx04	RX Only	162.425	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx05	RX Only	162.450	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx06	RX Only	162.500	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx07	RX Only	162.525	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx08	RX Only	161.650	CANADIAN WEATHER CHANNEL	------	------	CANADA WX
Wx09	RX Only	161.775	CANADIAN WEATHER CHANNEL	------	------	CANADA WX
Wx10	RX Only	163.275	NOAA WEATHER CHANNEL	------	------	NOAA WX

SPECIAL NOTES ON INTERNATIONAL CHANNEL USAGE

1. LOW POWER (1W) only.
2. LOW POWER (1W) initially. Override to HIGH POWER by holding down H/L key before transmitting. Used normally in bridge-to-bridge communications.
3. Channel 70 is designated for use exclusively for Digital Selective Calling (DSC), such as Distress, Safety, and Ship Calls. No voice communication is allowed on CH70.
4. The INTERNATIONAL mode is not legal for use in U.S. or Canada waters.

C.2 USA CHANNEL CHART

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
01A	156.050	156.050	Port Operations, Selected VTS Areas	Yes	Yes	PORT OPS/VTS
03A [4]	*156.150*	*156.150*	*US Government, Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
05A	156.250	156.250	Port Operations, Selected VTS Areas	Yes	Yes	PORT OPS/VTS
06	156.300	156.300	Inter-ship Safety	Yes	No	SAFETY
07A	156.350	156.350	Commercial	Yes	Yes	COMMERCIAL
08	156.400	156.400	Commercial (inter-ship only)	Yes	No	COMMERCIAL
09	156.450	156.450	Recreational Calling Channel	Yes	Yes	CALLING
10	156.500	156.500	Commercial	Yes	Yes	COMMERCIAL
11	156.550	156.550	Commercial, VTS in Selected Areas	Yes	Yes	VTS
12	156.600	156.600	Port Operations, Selected VTS Areas	Yes	Yes	PORT OPS/VTS
13 [3]	156.650	156.650	Intership Navigation Safety (bridge-to-bridge), 1W with Power-up	Yes	No	BRIDGE COM
14	156.700	156.700	Port Operations, Selected VTS Areas	Yes	Yes	PORT OPS/VTS
15 [2]	RX Only	156.750	Environmental, RX Only	------	------	ENVIROMENTAL
16	156.800	156.800	International Distress, Safety, and Calling	Yes	Yes	DISTRESS
17 [1]	156.850	156.850	State Controlled – 1W Only	Yes	Yes	SAR
18A	156.900	156.900	Commercial	Yes	Yes	COMMERCIAL
19A	156.950	156.950	Commercial	Yes	Yes	COMMERCIAL
20	157.000	161.600	Port Operations, Canadian Coast Guard, Duplex	No	Yes	PORT OPS
20A	157.000	157.000	Port Operations	Yes	Yes	PORT OPS
21A [4]	*157.050*	*157.050*	*U.S. Government, Canadian Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
22A	157.100	157.100	Coast Guard Liaison	Yes	Yes	COAST GUARD
23A [4]	*157.150*	*157.150*	*U.S. Government, Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
24	157.200	161.800	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
25	157.250	161.850	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
26	157.300	161.900	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
27	157.350	161.950	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
28	157.400	162.000	Public Correspondence, Marine Operator	No	Yes	TELEPHONE

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
61A [4]	*156.075*	*156.075*	*U.S. Government, Canadian Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
63A	156.175	156.175	Port Operations, VTS in Selected Areas	Yes	Yes	PORT OPS/VTS
64A [4]	*156.225*	*156.225*	*U.S. Government, Canadian Commercial Fishing*	*Yes*	*Yes*	*UNAUTHORIZED*
65A	156.275	156.275	Port Operations	Yes	Yes	PORT OPS
66A	156.325	156.325	Port Operations	Yes	Yes	PORT OPS
67 [3]	156.375	156.375	Commercial, bridge-to-bridge, 1W with Power-up	Yes	No	BRIDGE COM
68	156.425	156.425	Boat Operations, Recreational	Yes	No	SHIP - SHIP
69	156.475	156.475	Boat Operations, Recreational	Yes	Yes	PLEASURE
70 [6]	156.525	156.525	Digital Selective Calling - DSC	------	------	DSC
71	156.575	156.575	Boat Operations, Recreational	Yes	Yes	PLEASURE
72	156.625	156.625	Boat Operations, Recreational	Yes	No	SHIP - SHIP
73	156.675	156.675	Port Operations	Yes	Yes	PORT OPS
74	156.725	156.725	Port Operations	Yes	Yes	PORT OPS
77 [1]	156.875	156.875	Port Operations –1W Only	Yes	Yes	PORT OPS
78A	156.925	156.925	Boat Operations, Recreational	Yes	No	SHIP - SHIP
79A	156.975	156.975	Commercial	Yes	Yes	COMMERCIAL
80A	157.025	157.025	Commercial	Yes	Yes	COMMERCIAL
81A [4]	*157.075*	*157.075*	*U.S. Government, Environmental Protection Agency Operations*	*Yes*	*Yes*	*UNAUTHORIZED*
82A [4]	*157.125*	*157.125*	*U.S. Government, Canadian Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
83A *[4]*	*157.175*	*157.175*	*U.S. Government, Canadian Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
84	157.225	161.825	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
85	157.275	161.875	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
86	157.325	161.925	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
87	157.375	161.975	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
88	157.425	162.025	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
88A	157.425	157.425	Commercial, Intership Only	Yes	No	COMMERCIAL

WEATHER		MHz	TRAFFIC TYPE			NAME TAG
Wx01	RX Only	162.550	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx02	RX Only	162.400	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx03	RX Only	162.475	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx04	RX Only	162.425	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx05	RX Only	162.450	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx06	RX Only	162.500	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx07	RX Only	162.525	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx08	RX Only	161.650	CANADIAN WEATHER CHANNEL	------	------	CANADA WX
Wx09	RX Only	161.775	CANADIAN WEATHER CHANNEL	------	------	CANADA WX
Wx10	RX Only	163.275	NOAA WEATHER CHANNEL	------	------	NOAA WX

SPECIAL NOTES ON USA CHANNEL USAGE

1. LOW POWER (1W) only.
2. Receive Only.
3. LOW POWER (1W) initially. Override to HIGH POWER by holding down H/L key before transmitting. Used normally in bridge-to-bridge communications.
4. Lightly Shaded Simplex channels 03A, 21A, 23A, 61A, 64A, 81A, 82A, and 83A cannot be lawfully used in U.S. waters unless special authorization is obtained from the U.S. Coast Guard. Not for use by the general public.
5. The letter “A” illuminated by the channel number indicates the USA channel is simplex. This same channel is always duplex when selecting International. There is no “A” reference for International channels. The letter “B” is only used for some Canadian “Receive Only” channels.
6. Channel 70 is designated for use exclusively for Digital Selective Calling (DSC), such as Distress, Safety, and Ship Calls. No voice communication is allowed on CH70.

C.3 CANADA CHANNEL CHART

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
01	156.050	160.650	Public Correspondence, Duplex	No	Yes	TELEPHONE
02	156.100	160.700	Public Correspondence, Duplex	No	Yes	TELEPHONE
03	156.150	160.750	Public Correspondence, Duplex	No	Yes	TELEPHONE
04A	156.200	156.200	Canadian Coast Guard, SAR	Yes	Yes	CANADIAN CG
05A	156.250	156.250	Port Operations, VTS in Selected Areas	Yes	Yes	PORT OPS/VTS
06	156.300	156.300	Inter-ship Safety	Yes	No	SAFETY
07A	156.350	156.350	Commercial	Yes	Yes	COMMERCIAL
08	156.400	156.400	Commercial (inter-ship only)	Yes	No	COMMERCIAL
09	156.450	156.450	Recreational Calling Channel	Yes	Yes	CALLING
10	156.500	156.500	Commercial	Yes	Yes	COMMERCIAL
11	156.550	156.550	Commercial, VTS in Selected Areas	Yes	Yes	VTS
12	156.600	156.600	Port Operations, VTS in Selected Areas	Yes	Yes	PORT OPS/VTS
13 [3]	156.650	156.650	Intership Navigation Safety (bridge-to-bridge)	Yes	No	BRIDGE COM
14	156.700	156.700	Port Operations, VTS in Selected Areas	Yes	Yes	PORT OPS/VTS
15 [1]	156.750	156.750	Commercial – 1W Only	Yes	Yes	COMMERCIAL
16	156.800	156.800	International Distress, Safety, and Calling	Yes	Yes	DISTRESS
17 [1]	156.850	156.850	State Controlled – 1W Only	Yes	Yes	SAR
18A	156.900	156.900	Commercial	Yes	Yes	COMMERCIAL
19A	156.950	156.950	Canadian Coast Guard	Yes	Yes	CANADIAN CG
20 [1]	157.000	161.600	Canadian Coast Guard, Duplex– 1W Only	No	Yes	CANADIAN CG
21	157.050	161.650	Port Operations, Duplex	No	Yes	PORT OPS
21A	157.050	157.050	U.S. Government, Canadian Coast Guard	Yes	Yes	*UNAUTHORIZED*
21B	RX Only	161.650	Port Operations, RX Only	------	------	PORT OPS
22A	157.100	157.100	Canadian Coast Guard Liaison	Yes	Yes	CANADIAN CG
23	157.150	161.750	Public Correspondence, Duplex	No	Yes	TELEPHONE
24	157.200	161.800	Public Correspondence, Duplex	No	Yes	TELEPHONE
25	157.250	161.850	Public Correspondence, Duplex	No	Yes	TELEPHONE
25B	RX Only	161.850	Public Correspondence, RX Only	------	------	TELEPHONE
26	157.300	161.900	Public Correspondence, Duplex	No	Yes	TELEPHONE
27	157.350	161.950	Public Correspondence, Duplex	No	Yes	TELEPHONE
28	157.400	162.000	Public Correspondence, Duplex	No	Yes	TELEPHONE

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
28B	RX Only	162.000	Public Correspondence, RX Only	------	------	TELEPHONE
60	156.025	160.625	Public Correspondence, Duplex	No	Yes	TELEPHONE
61A [4]	*156.075*	*156.075*	*U.S. Government, Canadian Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
62A	156.125	156.125	Canadian Coast Guard	Yes	Yes	CANADIAN CG
64	156.225	160.825	Public Correspondence, Duplex	No	Yes	TELEPHONE
64A [4]	*156.225*	*156.225*	*U.S. Government, Canadian Commercial Fishing*	*Yes*	*Yes*	*UNAUTHORIZED*
65A	156.275	156.275	Port Operations	Yes	Yes	PORT OPS
66A [1]	156.325	156.325	Port Operations – 1W Only	Yes	Yes	PORT OPS
67	156.375	156.375	Commercial, SAR	Yes	No	COMMERCIAL
68	156.425	156.425	Boat Operations, Recreational	Yes	No	SHIP - SHIP
69	156.475	156.475	Commercial Fishing Only	Yes	Yes	COMMERCIAL
70 [6]	156.525	156.525	Digital Selective Calling - DSC	------	------	DSC
71	156.575	156.575	Boat Operations, Recreational	Yes	Yes	PLEASURE
72	156.625	156.625	Intership	Yes	No	SHIP - SHIP
73	156.675	156.675	Commercial Fishing Only	Yes	Yes	COMMERCIAL
74	156.725	156.725	Commercial Fishing Only	Yes	Yes	COMMERCIAL
77 [1]	156.875	156.875	Port Operations –1W Only	Yes	Yes	PORT OPS
78A	156.925	156.925	Boat Operations, Recreational	Yes	No	SHIP - SHIP
79A	156.975	156.975	Commercial	Yes	Yes	COMMERCIAL
80A	157.025	157.025	Commercial	Yes	Yes	COMMERCIAL
81A [4]	*157.075*	*157.075*	*U.S. Government Operations*	*Yes*	*Yes*	*UNAUTHORIZED*
82A [4]	*157.125*	*157.125*	*U.S. Government, Canadian Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
83	157.175	161.775	Canadian Coast Guard	Yes	Yes	CANADIAN CG
83A [4]	*157.175*	*157.175*	*U.S. Government, Canadian Coast Guard*	*Yes*	*Yes*	*UNAUTHORIZED*
83B	RX Only	161.775	Canadian Coast Guard, RX Only	------	------	CANADIAN CG
84	157.225	161.825	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
85	157.275	161.875	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
86	157.325	161.925	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
87	157.375	161.975	Public Correspondence, Marine Operator	No	Yes	TELEPHONE
88	157.425	162.025	Public Correspondence, Marine Operator	No	Yes	TELEPHONE

WEATHER		MHz	TRAFFIC TYPE			NAME TAG
Wx01	RX Only	162.550	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx02	RX Only	162.400	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx03	RX Only	162.475	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx04	RX Only	162.425	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx05	RX Only	162.450	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx06	RX Only	162.500	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx07	RX Only	162.525	NOAA WEATHER CHANNEL	------	------	NOAA WX
Wx08	RX Only	161.650	CANADIAN WEATHER CHANNEL	------	------	CANADA WX
Wx09	RX Only	161.775	CANADIAN WEATHER CHANNEL	------	------	CANADA WX
Wx10	RX Only	163.275	NOAA WEATHER CHANNEL	------	------	NOAA WX

SPECIAL NOTES ON CANADA CHANNEL USAGE

1. LOW POWER (1W) only.
2. Receive Only.
3. LOW POWER (1W) initially. Override to HIGH POWER by holding down H/L key before transmitting. Used normally in bridge-to-bridge communications.
4. Lightly Shaded Simplex channels 21A, 23A, 61A, 64A, 81A, 82A, and 83A cannot be lawfully used in Canada waters unless special authorization is obtained from the Canadian Coast Guard. Not for use by the general public.
5. The letter “A” illuminated by the channel number indicates the Canada channel is simplex. This same channel is always duplex when selecting International. There is no “A” reference for International channels. The letter “B” is only used for some Canadian “Receive Only” channels.
6. Channel 70 is designated for use exclusively for Digital Selective Calling (DSC), such as Distress, Safety, and Ship Calls. No voice communication is allowed on CH70.
7. The CANADA mode is not legal to use in U.S. waters.

C.4 EC CHANNEL CHART

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
01	156.050	160.650	Public Correspondence, Duplex	No	Yes	TELEPHONE
02	156.100	160.700	Public Correspondence, Duplex	No	Yes	TELEPHONE
03	156.150	160.750	Public Correspondence, Duplex	No	Yes	TELEPHONE
04	156.200	160.800	Port Operations, Duplex	No	Yes	PORT OPS
05	156.250	160.850	Port Operations, VTS in Selected Areas	No	Yes	PORT OPS/VTS
06	156.300	156.300	Inter-ship Safety	Yes	No	SAFETY
07	156.350	160.950	Port Operations, Duplex	No	Yes	PORT OPS
08	156.400	156.400	Commercial (inter-ship only)	Yes	No	COMMERCIAL
09	156.450	156.450	Recreational Calling Channel	Yes	Yes	CALLING
10	156.500	156.500	Commercial	Yes	Yes	COMMERCIAL
11	156.550	156.550	Commercial, VTS in Selected Areas	Yes	Yes	VTS
12	156.600	156.600	Port Operations, Selected VTS Areas	Yes	Yes	PORT OPS/VTS
13 [2]	156.650	156.650	Intership Navigation Safety (bridge-to-bridge), 1W with Power-up	Yes	No	BRIDGE COM
14	156.700	156.700	Port Operations, VTS in Selected Areas	Yes	Yes	PORT OPS/VTS
15 [1]	156.750	156.750	Port Operations – 1W Only	Yes	Yes	PORT OPS
16	156.800	156.800	International Distress, Safety, and Calling	Yes	Yes	DISTRESS
17 [1]	156.850	156.850	State Controlled – 1W Only	Yes	Yes	SAR
18	156.900	161.500	Port Operations, Duplex	No	Yes	PORT OPS
19	156.950	161.550	Commercial, Duplex	No	Yes	SHIP - SHORE
20	157.000	161.600	Port Operations, Duplex	No	Yes	PORT OPS
21	157.050	161.650	Port Operations, Duplex	No	Yes	PORT OPS
22	157.100	161.700	Port Operations, Duplex	No	Yes	PORT OPS
23	157.150	161.750	Public Correspondence, Duplex	No	Yes	TELEPHONE
24	157.200	161.800	Public Correspondence, Duplex	No	Yes	TELEPHONE
25	157.250	161.850	Public Correspondence, Duplex	No	Yes	TELEPHONE
26	157.300	161.900	Public Correspondence, Duplex	No	Yes	TELEPHONE
27	157.350	161.950	Public Correspondence, Duplex	No	Yes	TELEPHONE
28	157.400	162.000	Public Correspondence, Duplex	No	Yes	TELEPHONE

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
60	156.025	160.625	Public Correspondence, Duplex	No	Yes	TELEPHONE
61	156.075	160.675	Port Operations, Duplex	No	Yes	PORT OPS
62	156.125	160.725	Port Operations, Duplex	No	Yes	PORT OPS
63	156.175	160.775	Port Operations, Duplex	No	Yes	PORT OPS
64	156.225	160.825	Public Correspondence, Duplex	No	Yes	TELEPHONE
65	156.275	160.875	Port Operations, Duplex	No	Yes	PORT OPS
66	156.325	160.925	Port Operations, Duplex	No	Yes	PORT OPS
67	156.375	156.375	Commercial, bridge-to-bridge	Yes	No	BRIDGE COM
68	156.425	156.425	Boat Operations, Recreational	Yes	No	SHIP - SHIP
69	156.475	156.475	Port Operations	Yes	Yes	PORT OPS
70 [3]	156.525	156.525	Digital Selective Calling - DSC	------	------	DSC
71	156.575	156.575	Port Operations	Yes	Yes	PORT OPS
72	156.625	156.625	Intership	Yes	No	SHIP - SHIP
73	156.675	156.675	Port Operations	Yes	Yes	PORT OPS
74	156.725	156.725	Port Operations	Yes	Yes	PORT OPS
77	156.875	156.875	Intership	Yes	No	SHIP - SHIP
78	156.925	161.525	Non-Commercial, Duplex	No	Yes	SHIP - SHORE
79	156.975	161.575	Commercial, Duplex	No	Yes	SHIP - SHORE
80	157.025	161.625	Commercial, Duplex	No	Yes	SHIP - SHORE
81	157.075	161.675	Port Operations, Duplex	No	Yes	PORT OPS
82	157.125	161.725	Port Operations, Duplex	No	Yes	PORT OPS
83	157.175	161.775	Public Correspondence, Duplex	No	Yes	TELEPHONE
84	157.225	161.825	Public Correspondence, Duplex	No	Yes	TELEPHONE
85	157.275	161.875	Public Correspondence, Duplex	No	Yes	TELEPHONE
86	157.325	161.925	Public Correspondence, Duplex	No	Yes	TELEPHONE
87	161.975	161.975	AIS - do not use for public correspondence reallocated	------	------	AIS1
88	162.025	162.025	AIS - do not use for public correspondence reallocated	------	------	AIS2

SPECIAL CHANNELS [7]

CH	SEND (MHz)	RECEIVE (MHz)	TRAFFIC TYPE	SHIP TO SHIP	SHIP TO SHORE	NAME TAG
00 [6]	156.000	156.000	UK Coast Guard Users	Yes	Yes	UK COAST GRD
M	157.425	157.850	UK Marina Channel M	Yes	Yes	UK MARINA
M2	161.425	161.425	UK Marina Channel M2	Yes	Yes	UK MARINA
31	157.550	162.150	INT'L, Duplex (Holland)	No	Yes	NL MARINA
96H	162.425	162.425	INT'L (Belgium)	No	Yes	BEL G MARINA
L1	155.500	155.500	INT'L (Scandinavia)	Yes	no	LEISURE 1
L2	155.525	155.525	INT'L (Scandinavia)	Yes	no	LEISURE 2
L3	155.650	155.650	INT'L (Scandinavia – not in Denmark)	Yes	no	LE ISURE3
F1	155.625	155.625	INT'L (Scandinavia)	Yes	no	FISHING 1
F2	155.775	155.775	INT'L (Scandinavia)	Yes	no	FISHING 2
F3	155.825	155.825	INT'L (Scandinavia) call back	Yes	no	FISHING 3
AIS1	161.975	161.975	AIS1	-----	-----	-----
AIS2	162.025	162.025	AIS2	-----	-----	-----

SPECIAL NOTES ON EUROPEAN INTERNATIONAL CHANNEL USAGE

1. LOW POWER (1W) only.
2. LOW POWER (1W) initially. Override to HIGH POWER by holding down H/L key before transmitting. Used normally in bridge-to-bridge communications.
3. Channel 70 is designated for use exclusively for Digital Selective Calling (DSC), such as Distress, Safety, and Ship Calls. No voice communication is allowed on CH70.
4. The INTERNATIONAL mode is not legal for use in U.S.A. or Canada waters.
5. No WX channels are available.
6. Lightly Shaded Simplex channel CH00 is only available in the UK to Coast Guard users with written authorization.
7. The special channels above maybe fitted to your radio. These are only licensed for use in the country indicated. No attempt should be made to use them in any other country.

Appendix D - MMSID & License Information

VHF 7100 only

You must obtain a user MMSID (Marine Mobile Service Identity) and enter it into your VHF 7100 in order to use the DSC functions. Contact the appropriate authorities in your country. If you are unsure who to contact, consult your NAVMAN dealer.

The user MMSID is a unique nine digit number, similiar to a personal telephone number. It is used on marine transceivers that are capable of using DSC (Digital Select Calling).

Depending upon your location, you may need need a radio station license for the VHF 7100. You may also also need an individual operator's license.

NAVMAN NZ recommends that you check the requirements of your national radio communications authorities before operating DSC functions.

TBS

NAVMAN

CE 0560