



GX600D

VHF MARINE RADIO



PRINTED IN ENGLISH
INTERNATIONAL: CE0168 ⓘ
USA : FCC ID : TXJGX600D
CANADA : IC 7332A-GX600D
AUSTRALIA: ⓘ N9

INSTRUCTION MANUAL

WARNING: SAFETY INFORMATION

The GX600D is a radio transmitting device.

- When transmitting, keep any part of your head or body more than 1.5 m from the antenna.
- Do not transmit near electrical blasting equipment or in explosive atmospheres.
- Do not allow children to operate a radio transmitter unsupervised.

INTERNATIONAL CUSTOMERS

Local requirements will vary throughout the world with regard to operator qualification, DSC registration and MMSI allocations.

International customers should refer to this manual for contact details to obtain specific requirements for your country.

OPERATING RULES

Priorities

- Read all rules and regulations pertaining to priorities and keep an up-to-date copy handy. Safety and distress calls take priority over all others.
- You must monitor Channel 16 when you are not operating on another channel.
- False or fraudulent distress calls are prohibited under law.

Privacy

- Information overheard but not intended for you cannot lawfully be used in any way.
- Indecent or profane language is prohibited.

Radio Licenses

Ship Station License

When your craft is equipped with a VHF FM radio, you must have a current radio station licence before using the radio. It is unlawful to operate a ship station which is not licensed.

Inquire through your dealer or the appropriate government agency for a Ship-Radiotelephone license. This license includes the call sign which is your craft's identification for radio purposes.

Operators License

A restricted Radiotelephone Operator Permit is the license most often held by small vessel radio operators when a radio is not required for safety purposes.

The restricted Radiotelephone Operator Permit must be posted near the radio or be kept with the operator. Only a licensed radio operator may operate a radio.

However, non-licensed individuals may talk over a radio if a licensed operator starts, supervises, ends the call and makes the necessary log entries.

A current copy of the applicable government rules and regulations is only required to be on hand for vessels in which a radio telephone is compulsory. However, even if you are not required to have these on hand it is your responsibility to be thoroughly acquainted with all pertinent rules and regulations.

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INTRODUCTION

Congratulations. You have just purchased one of the most technically advanced VHF marine radios in the world.

The GME GX600D is a VHF FM radio designed to operate in the 156 - 163 MHz marine band.

The GX600D has a number of enhanced features including fully user programmable Channel Scanning, Dual Watch and Triple Watch functions, a programmable 'Instant' channel memory and adjustable back lighting. In addition it incorporates Digital Selective Calling and supports position reporting when connected to a GPS receiver.

With its compact size and IP67 design it can easily be installed into almost any panel mounting location in your fly bridge or cabin.

The GX600D is totally designed at our Gladesville facility. Precision robots and the very latest manufacturing techniques ensure a consistently high quality is maintained resulting in a communications system of extreme reliability and performance.

Please read this manual thoroughly to ensure you get the best from the GX600D's features.

FEATURES

- Compact IP67 Design
- Selectable International, USA, and Canadian Channel Sets
- GPS position display when connected to a GPS
- Fully Compliant Class 'D' Digital Selective Calling
- Separate DSC Receiver
- Selectable USA Weather Channels
- Dual Watch and Triple Watch with Programmable Priority Channel.
- 10 Private Channels available
- Programmable Channel Scanning
- Selectable Power 25/1 Watt
- Working Channel Memory
- Adjustable Digital Squelch setting

OPERATOR QUALIFICATIONS

Any person in Australia operating a VHF marine radio should possess at least a Marine Radio Operators VHF Certificate of Proficiency (MROVCP). Alternatively,

operators may choose to obtain a Marine Radio Operators Certificate of Proficiency (MROCP), which covers the operation of both VHF and MF/HF equipment.

Many TAFEs and marine organisations offer courses leading to examination for the MROVCP and MROCP although such courses are not compulsory. Persons wishing to obtain the MROVCP or MROCP should first purchase a copy of the Maritime Radio Operator Handbook which is essential reading for every boat owner in Australia.

The Australian Maritime College (AMC) provides the marine examination and certificate service on behalf of the ACA. The AMC can provide the details of organisations and individuals offering courses and or conducting exams. For further information visit: www.amc.edu.au

DIGITAL SELECTIVE CALLING (DSC)

The Digital Selective Calling (DSC) feature on your GX600D uses preformatted digital data messages instead of voice to transmit urgent or important information to another radio. DSC alerts all radios within range to a distress message even when a listening watch is not being maintained. This increases the chances of your signal being heard.

DSC is part of the Global Maritime Distress and Safety System (GMDSS) which is expected to eventually replace listening watches on distress frequencies and will be used to announce all routine and urgent maritime safety information broadcasts.

DSC AND GPS

DSC operation is enhanced by the addition of a GPS receiver or chartplotter connected to your GX600D. When a GPS is connected, your distress call can automatically include your current position and time, while a chartplotter will allow you to display the position of another vessel. If a GPS is not connected, DSC calls can still be sent and received to alert the operator of another vessel for subsequent voice communication.

MARINE MOBILE SERVICE IDENTITY (MMSI)

The MMSI is a 9-digit number used to identify a radio that is capable of using DSC. The number is used to selectively call other vessels.

To setup and use the DSC feature on your radio: Please refer to the 'Digital Selective Calling' section on page 8 of this manual.

NOTE: You can still receive distress calls without a user MMSI.

USER MMSI

To use the DSC feature you must be registered with the appropriate licensing authority (AMSA in Australia) who will issue you with your unique user MMSI number. You can then enter this into your GX600D to enable DSC operation. Having a registered user MMSI means you can be identified much quicker in an emergency.

Your GX600D is shipped from the factory without a user MMSI number. It is up to the user to obtain a valid MMSI from the appropriate licensing authority and enter the MMSI into the radio to enable DSC operation.

GROUP MMSI

The Group MMSI is used for DSC Group Calls. A Group Call provides a method for all vessels with a common interest (eg: a yacht club or a fishing fleet) to be contacted with

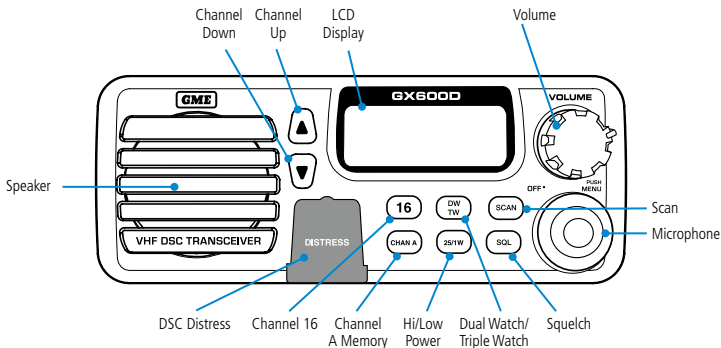
one DSC call. Group MMSI's are usually issued by a club or organisation for use by members participating in group activities (such as yacht racing etc).

RANGE

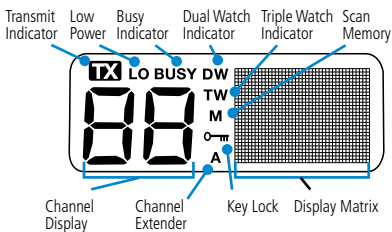
The range of VHF transmissions depends on antenna height, transmitter power and the terrain over which the signals pass. Ship to ship communications should be possible over at least 8 nautical miles and up to about 27 nautical miles. Ship to shore ranges will often be greater due to the increased height of the shore antenna and communications of 25 to 50 nautical miles are possible.

OPERATION

CONTROLS

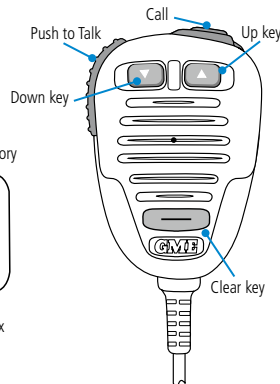


DISPLAY

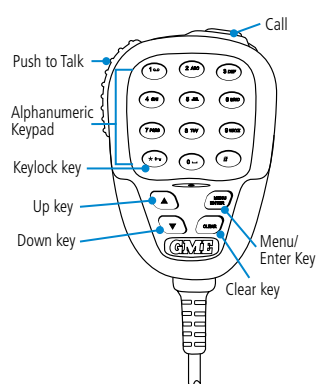


MICROPHONE

MC516



(Optional MC540)



VOLUME ON/OFF

Rotate the **volume** control clockwise past the 'click' to turn the GX600D ON. Your user MMSI is displayed momentarily at switch-on. While receiving a signal, continue to rotate clockwise to increase the sound in the speaker. Rotate the control fully counterclockwise past the 'click' to turn the GX600D OFF.

NOTE: At minimum volume setting there is still sufficient volume to be heard in a quiet cabin environment.

CHANNEL SELECTION

Standard Marine Channels

Briefly press the ▲ key to step upwards one channel or the ▼ key to step downwards one channel. A high beep will be heard at each press. The ▲ or ▼ keys are also duplicated on the front of the microphone.

Press and hold the ▲ or ▼ keys for 1.5 seconds to scroll quickly upwards or downwards through the channels at a rate of 10 channels per second. When the key is released channel scrolling stops.

Weather Channels

The US weather channels are available only when the USA Channel Set has been selected. When available, weather channels are numbered 01 – 10 and are inserted into the normal channel sequence below marine channel 01. They are selected in the usual way using the ▲ or ▼ keys. Weather channels are identified by the WX icon on the display.

Private Channels

Up to 20 private channels can be programmed into the GX600D for organisations that have been officially allocated special frequencies. Private channels are programmed on application by your nearest GME branch office. All requests for private channel programming must be supported by ACMA (Australian Communications and Media Authority) documentation.

If private channels have been installed they will appear as A0 – A9 and B0 – B9 above CH 88.

SQUELCH

To open the squelch:

Briefly press the **SQL** key. A low beep will be heard and the squelch will open. Briefly press the **SQL** key again to close the squelch. A high beep will be heard and the squelch will be restored to its preset level.

Setting the Squelch Preset Level:

The preset squelch level can be adjusted to suit local conditions. If you are in an electrically noisy location or unwanted weak signals keep opening the squelch, you




can adjust the squelch setting so that the GX600D remains quiet. Note that increasing the preset squelch level will mean that stronger signals will be required to overcome the squelch and may result in missed calls from weaker signals.


The best setting is the minimum one required to keep the receiver quiet.

To enter the Squelch setting mode:

Press and hold the **SQL** key for 1.5 seconds until a high beep is heard. The present squelch setting will be displayed in digits from -1 to -9 with -1 being minimum and -9 being maximum squelch. The default setting is -2. While in this mode, briefly press the ▲ or ▼ keys to increase or decrease the squelch level respectively as required. Briefly press the **SQL** key again to exit the squelch setting mode or wait 5 seconds and it will exit automatically. A low beep will be heard.

Keylock (Optional MC540 microphone only)

To lock the keypad press and hold the  key on the MC540 microphone. A high beep will be heard and the  symbol will be displayed. Press and hold the  key again to cancel the keylock function.

While keylock is enabled, only the **PTT**, , **SQL**, **16** and **DISTRESS** keys are accessible. All other keys are locked.

Pressing **16** will cancel the keylock and revert to Channel 16 on high power.

Pressing **DISTRESS** will cancel the keylock and activate the distress menu.

TRANSMITTING

To Transmit:

Press the **Push to Talk (PTT)** switch on the microphone. Hold the microphone about 5 - 8 cm from your face and speak at a normal voice level. The microphone is quite sensitive so it is not necessary to raise your voice or shout. Release the **PTT** when you have finished talking.

NOTE: PTT transmissions are disabled on Channel 70.

Time-out Timer

Excessive transmission time is controlled by a time-out timer. If the **PTT** is held for more than 5 minutes, the transmitter will be temporarily disabled to prevent accidental jamming of the channel frequency. Ten seconds before the time out occurs, the 'TX' icon will flash and a low warning beep will sound to notify you of the impending timeout. Once the timeout occurs, both the backlight and the 'TX' icon will flash and another low warning beep will be heard. At this time the transmitter is disabled.

To reset the timer and re-enable the transmitter:

Release the **PTT** switch and wait 10 seconds. During this time the radio will display 'TX INHIBITED FOR 10 SECS'.

NOTE: Even if the **PTT** switch is released during the 10 second warning period, the PTT will still be inhibited for 10 seconds after the **PTT** is released.

CHANNEL 16

Briefly press the **16** key to switch straight to Channel 16. All previous control settings (such as scanning or low transmitter power) will be cancelled and the radio will be restored to normal operation with high transmit power selected.

SELECTING CHANNEL SETS

The GX600D is programmed with three Channel Sets -International, USA and Canada. These Channel Sets support various channel and frequency allocations for other parts of the world. Once you have selected the required Channel Set for your location, you should not need to change it again unless you have moved to another country.

When using the GX600D in Australia:

The International Channel Set should be selected.

To change the Channel Set:

Please refer to the Configuration Menu Setup on page 17 of this manual.

DISPLAY BACKLIGHTING/ CONTRAST

The LCD display is backlit for easy viewing at night. The brightness and contrast of the backlighting can be adjusted. Backlight settings are accessed through the menu. For details on setting the display brightness or contrast please refer to the Configuration Menu Setup on page 16 of this manual.

TRANSMIT POWER

The GX600D has both High (25 Watt) and Low (1 Watt) transmitter power settings. For long range transmissions the power should be set to 25 Watts. For local transmissions a 1 Watt setting will conserve power and reduce interference to nearby radios. The default setting is 25 Watts.

To switch between High and Low transmitter power:

Briefly press the **25/1W** key. A high beep indicates High power is selected while a low beep indicates Low power is selected. When Low power is selected 'LO' is displayed.

NOTE: The radio always defaults to High power when Channel 16 is selected.

- Selecting Channel 16 using the **16** key will reset ALL channels to High power.
- Selecting Channel 16 using the **▲** or **▼** keys resets only channel 16 to High Power but retains any Low power setting on the other channels.
- To specifically use Low power on Channel 16, select channel 16 then briefly press the **25/1W** key to select low power. 'LO' will be displayed.

WORKING CHANNEL MEMORY

The GX600D has a dedicated 'working channel' memory called Channel A which allows you to store and recall an often-used working channel. The memory is accessed using the **CHAN A** key. Channel A is also used as the priority channel for the Triple Watch function (see page 7).

To Store a Frequency into Channel A:

Select the required channel using the **▲** or **▼** keys, then press and hold the **CHAN A** key for 1.5 seconds. The channel number will flash then a high beep will be heard as the channel is stored.

To Recall Channel A:

Briefly press the **CHAN A** key to switch immediately to the channel stored in that memory. If the radio was scanning the scan will be cancelled.

DUAL WATCH KEY (DW)

The Dual Watch function is a 2 channel scan feature where the GX600D switches between Channel 16 and any other selected channel. This allows you to monitor a working or club channel while still being able to receive important broadcasts on Channel 16.

To use the Dual Watch function:

Select your preferred working channel - either with the **▲** or **▼** keys or by selecting the **CHAN A** memory - then briefly press the **DW** key. A high beep will be heard and both 'DW' and 'CH16' will appear on the display to indicate you are Dual Watching the selected channel with Channel 16. The GX600D will now monitor the selected channel AND Channel 16 by alternating equally between them. During this time the channel display will remain on the selected channel.

To cancel Dual Watching:

Briefly press the **DW** key again.

DUAL WATCH FEATURES

If a signal appears on Channel 16:

The radio will switch immediately to Channel 16 and '16' will be displayed. At this point the selected channel is no longer being monitored because Channel 16 has priority.

During this time the **PTT** may be pressed for normal transmissions on Channel 16. Once channel 16 has become inactive for 5 seconds the Dual Watch function will resume.

If a signal appears on the selected channel:

Scanning will pause on the selected channel BUT Channel 16 will continue to be monitored every 2 seconds. During this time the **PTT** may be pressed for normal transmissions on the selected channel (note that monitoring of Channel 16 ceases while transmitting). Once the selected channel has become inactive for 5 seconds the Dual Watch function will resume.

To Transmit on the selected Channel while Dual Watching:

Simply press the **PTT**. The Dual Watch function will pause on the selected channel during the transmission and remain paused until 5 seconds after all activity has ceased on the channel. Dual Watch will then resume.

To Transmit on Channel 16 while Dual Watching:

Press the **16** key to select Channel 16. Dual watch will be cancelled and the radio will switch straight to Channel 16. Now press the **PTT** and transmit in the usual way. When your conversation has ended, press the **DW** key to resume Dual Watching.

To change the selected Channel while Dual Watching:

Simply select another channel using the **▲** or **▼** keys. Dual Watching continues on the newly selected channel.

TRIPLE WATCH KEY (TW)

The Triple Watch function is an extension of the Dual Watch feature. It allows the GX600D to monitor Channel 16, a selected channel AND a priority channel. Each channel is scanned equally for signals with priority given first to CH 16, then the Priority channel and lastly the selected channel.

When Triple Watch is selected the 'TW' icon is displayed along with Channel 16, the selected Channel and the Priority Channel. The 'Priority' Channel is the one stored in the CHAN A memory.

To use the Triple Watch mode:

First program your priority channel (the default priority channel is 9) into the CHAN A memory, then select your preferred working channel using the **▲** or **▼** keys. Now press and hold the **TW** key for 1.5 seconds until a high beep is heard. 'TW' and the selected channel will be displayed along with CH16 and the Priority Channel number.

To change the selected channel at any time:

Press the **▲** or **▼** keys.

To cancel Triple Watch

Briefly press the **TW** key to switch to Dual Watch mode. A high beep will be heard

OR

Press and hold the **TW** key to return to normal operation. A low beep will be heard.

TRIPLE WATCH FEATURES

If a signal appears on Channel 16:

The radio will switch immediately to Channel 16 and 'CH 16' will be displayed. At this point the selected channel and the Priority channel are no longer being monitored because Channel 16 has highest priority. During this time the **PTT** may be pressed for normal transmissions on Channel 16. Once Channel 16 has become inactive for 5 seconds the Triple Watch function will resume.

If a signal appears on the Priority channel:

Scanning will pause on the Priority channel BUT Channel 16 will continue to be monitored every 2 seconds (the selected channel is not monitored). During this time the **PTT** may be pressed for normal transmissions on the Priority channel (monitoring of Channel 16 ceases while transmitting). Once the Priority channel has become inactive for 5 seconds Triple Watch will resume.

If a signal appears on the selected Channel:

Scanning will pause on the selected channel BUT channel 16 and the Priority channel will continue to be monitored every 2 seconds. During this time the **PTT** may be pressed for normal transmissions on the selected channel (monitoring of channel 16 and the Priority channel ceases while transmitting). Once the selected channel has become inactive for 5 seconds the Triple Watch will resume.

To Transmit on the selected Channel while Triple Watching:

Simply press the **PTT**. The Triple Watch function will pause during the transmission and remain paused until 5 seconds after all activity has ceased on the channel. Triple Watch will then resume.

To Transmit on the Priority channel while Triple Watching:

Briefly press the **CHAN A**. Triple Watch is cancelled and the Priority channel will become the selected channel. Now press the **PTT** and transmit in the usual way. When your conversation has ended, re-select your selected channel.

To Transmit on Channel 16 while Triple Watching:

Press the **16** key. Triple Watch will be cancelled and the radio will switch straight to Channel 16. Now press the **PTT** and transmit in the usual way. When your conversation has ended, press and hold the **TW** key to resume Triple Watching.

SCANNING

The Scan function allows the GX600D to scan through a series of user selected channels looking for activity. Scanning is done in an ascending sequence at a rate of 10 channels per second.

Channels can be selected and stored for scanning from any of the available channels, including weather channels (if the USA channel set is selected) and private channels (if they are enabled).

NOTE: The transmitter is disabled while scanning. If the **PTT** is pressed, a low beep will be heard and the PTT is ignored.

To store Channels for Scanning:

Select the required channel using the **▲** or **▼** keys, then press and hold the **SCAN** key for 1.5 seconds. A high beep will be heard and 'M' will appear next to the channel number.

Repeat the process to remove a previously stored channel from the scan list. When a channel is removed a low beep is heard and 'M' disappears from the display on that channel.

To begin Scanning:

Briefly press the **SCAN** key. The GX600D will scan upwards through the stored channels at 10 channels per second and the display will show rapidly changing channel numbers. If a signal is located, scanning will pause on that channel and will remain for 5 seconds after the signal has gone. Scanning will then resume.

To Stop the Scan:

Briefly press the **SCAN** key again. The radio will return to the last selected channel.

SCANNING FEATURES

If the scan is paused on a busy channel and you wish to remain on that channel:

Briefly press the **SCAN** key. Scanning will be cancelled and the radio will remain on that channel. To resume scanning, briefly press the **SCAN** key again.

If the scan is paused on a busy channel and you wish to skip over that channel:

Briefly press the **SCAN** key twice. Scanning will resume with the next channel in sequence.

If the scan is paused on a busy channel and you wish to transmit on that channel:

Simply press the **PTT** switch. Scanning will be cancelled and the radio will remain on that channel.

NOTE: if the PTT is pressed at any other time while scanning, a low beep will be heard and the PTT will be ignored.

To switch immediately to Channel 16:

Briefly press the **16** key. Channel 16 will be selected, scanning will be cancelled and the radio will be restored to normal operation with high transmitter power selected.

To switch immediately to the stored working channel (CHAN A):

Briefly press the **CHAN A** key. Scanning will be cancelled and the radio will switch to the channel stored in the CHAN A memory.

Scanning Notes:

1. Each channel set has its own independent scan memory. E.g. Scan channels stored under the International channel do not affect those stored under the USA channel set.
2. A minimum of 2 channels is required in the scan memory before scanning is allowed. If there are less than 2 channels, pressing the Scan key will give a low beep and the scan will be ignored.
3. The following keys/functions are disabled while scanning:
 - PTT
 - 25/1W
 - Scan memory storage
 - **▲** and **▼** keys

Scanning with Dual Watch:

If Dual Watch is selected while scanning, Channel 16 will be inserted into the scan every fifth channel.

Scanning with Triple Watch:

If Triple Watch is selected while scanning, Channel 16 and the priority channel (stored in the CHAN A memory) will both be inserted into the scan every fifth channel.

DIGITAL SELECTIVE CALLING (DSC)

Digital Selective Calling (DSC) uses digital data to provide automatic distress alerting and position reporting between DSC equipped radios. Using preset functions built in to the radio, you can make a range of automated digital calls including Distress Calls, All Ships and Group Calls as well as calls to individual radios. With the addition of a GPS you

can also send your position to another vessel or request their position. DSC has a number of advantages over voice calls including the ability to handle increased radio traffic and the automatic identification of your ship and its position in the event of an emergency.

DSC is part of the Global Maritime Distress and Safety System (GMDSS) and will eventually replace audible listening-watches on distress frequencies. It will also be used to announce routine and urgent maritime safety information broadcasts to other ships in the area.

DSC calls are sent and received on CH70. The GX600D has two receivers, one of which is dedicated to CH70. Therefore, regardless of which channel you are operating on, the GX600D will not miss a DSC call.

USER MMSI (MARINE MOBILE SERVICE IDENTITY)

A User MMSI is a 9-digit number used to identify a DSC capable Radio. The number is used to selectively call other vessels and is issued by your local Maritime Authority (AMSA in Australia).

NOTE: Before you can use DSC, you must have entered your User MMSI number into your GX600D. If you don't yet have a User MMSI, please register with your local Maritime Authority who will then issue a unique MMSI number. Please refer to the User MMSI section of the Configuration Menu on page 19 of this manual for instructions on entering your User MMSI.

DISTRESS CALLS

To make a DSC Distress Call:

Always use the Red **DISTRESS** button on the GX600D's front panel. To make any other DSC call, use the **CALL** button on the microphone.

MAKING A DISTRESS CALL:

1. Open the Red **DISTRESS** cover.
2. Briefly press the **DISTRESS** key. The display shows the 'Nature of distress' Menu list.
3. Use the **▲** or **▼** keys to select the nature of the distress. The list includes: Undefined, Fire, Flooding, Collision, Grounding, Listing, Sinking, Disabled, Abandoning, Piracy and Man Overboard.
4. With the correct distress item selected, press and hold the **DISTRESS** key for 5 seconds. The display will flash and the radio will count from 5 down to 1, beeping at each count.

NOTE: To cancel the distress call, release the **DISTRESS** key before the countdown is completed. The radio will return to normal operation on CH16.

5. When the countdown is complete, the **DISTRESS** call will be sent on Channel 70 (whether CH70 is busy or not). After the distress call is sent, the radio switches to CH16 and the display shows 'DISTRESS' and 'Wait Ack ...' to indicate it is now in the distress mode and is waiting for an acknowledgement from another radio.

DISTRESS:

WAIT ACK . . .

While in distress call mode, the GX600D is set on CH16 and the user cannot change channels. The keys on the microphone are disabled and all front panel keys except for SQL are disabled. If the **PTT** is pressed, the radio transmits on CH16 on HI power.

If an acknowledgement is not received, the distress call will be resent at around 4 minute intervals (whether CH70 is busy or not) – for as long as the radio remains in the distress call mode.

NOTE: A distress call can also be resent immediately at any time by holding the **DISTRESS** key again for 5 seconds.

The distress call mode is cancelled when a **DISTRESS ACKNOWLEDGE** is received or the **16** key is pressed. The radio then returns to normal operation on CH16.

NOTE: A Distress Acknowledge response is generally sent by a coastal base station.

RECEIVING A DISTRESS CALL

When a Distress Call is received:

If Auto channel in the Setup Menu is to ON the GX600D switches to CH16 and generates an audible Distress Alert alarm.

If Auto Channel is set to off the GX600D will ask "set to CH16?" press the **CALL** button to accept and switch to CH16 or press the **-** key to stop the alarm and remain on the current channel.

The radio's display then alternates between the name and position of the vessel in distress and the time and nature of the emergency at 3 second intervals:

DISTRESS:
SIRIUS
S 45° 23.48'
E 151°21.14'

**Name & Position
of Vessel**

DISTRESS:
LISTING
05:32 UTC

**Nature of Distress
& Time**

Press the **-** key to cancel the alarm but continue displaying the emergency information.

Press the – key again to return to Normal operating mode on CH16.

MAKING ALL OTHER DSC CALLS

All other DSC calls - apart from distress calls - are made using the **CALL** button on the microphone.

DSC MENU NAVIGATION

To access the DSC Call menu:

Press the **CALL** button on the microphone. The 'CALL' Menu will be displayed providing a range of DSC call options.

To navigate the Call Menu:

Press the ▲ or ▼ keys to move up or down through the available menu options.

Press the **CALL** button to select the current menu selection.

Press the – key to quit the current menu selection.

Press the – key again to exit the 'CALL' menu and return to normal operation.

NOTE: At any time in DSC mode, including Distress Calls, press the 16 key to cancel DSC mode entirely and return the radio to normal mode on HI power.

DSC CALL MENU OPTIONS

Individual Calls:

Use the 'Individual Call' option to alert a specific vessel that you wish to communicate with them on a specified channel. If the called vessel's radio is on a different channel, their radio will change to the channel you specify.

NOTE: To make an individual DSC call you must know the MMSI of the vessel you are calling.

To make an Individual Call:

1. Press the **CALL** button. The DSC Call menu will be displayed.
2. Select 'INDIVIDUAL' and press the **CALL** button. The MMSI number field will be displayed.
3. Enter the vessel's MMSI number

You can either;

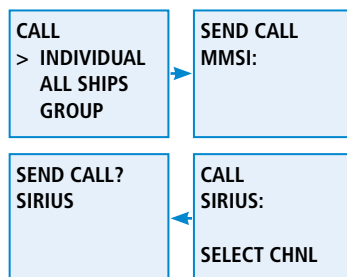
- i. Press the ▲ key to retrieve the last called MMSI or
- ii. Press the ▼ key to select a vessel's MMSI from the Address Book or
- iii. Manually enter the vessel's MMSI as follows;
 - a. Press and hold the **CALL** button to enter the EDIT mode.
 - b. Use the ▲ or ▼ keys to enter the first digit of the User MMSI number.

- c. Press the **CALL** button to move to the next digit position. Repeat until all 9 digits have been entered.

NOTE: To correct an error during entry, press the **CALL** button repeatedly to move the cursor position to the incorrect digit then use the ▲ or ▼ keys to change the digit at that location.

4. Once the correct MMSI has been entered or selected, press the **CALL** button. 'SELECT CHNL' is displayed.
5. Select the channel to be used for voice communication using the ▲ or ▼ keys then press the **CALL** button.
6. 'SEND CALL' is displayed. Press the **CALL** button to send.

NOTE: If you are calling a Coast Station you will not be asked to select a channel. Instead the Coast Station will decide the channel to be used.



Once the call has been sent, the radio will wait for an acknowledgement. If an acknowledgement is received the radio displays.

**CALL FROM:
SIRIUS
ACKNOWLEDGE**

Press the – key (or wait a further 5 seconds) for the radio to return to Normal mode. You can now have normal voice communications on the selected channel.

If NO Acknowledgement is received:

It is likely that the vessel you called is switched off or out of range. If no response is received within 5 seconds the radio displays:

**CALLING . . .
SIRIUS
NO REPLY**

Press the – key (or wait a further 5 seconds) for the radio to return to Normal mode.

If an acknowledgment is received but the other radio is unable to comply:

This indicates the called vessel's radio has received and acknowledged your call, but could not change to the requested channel. This could mean the called vessel's radio is configured for manual reply or is in a mode where the operator does not want the channel to change.

The radio displays:

**CALL FROM:
SIRIUS
ACKNOWLEDGE
NOT COMPLY**

Press the **—** key (or wait a further 5 seconds) for radio to return to Normal mode.

ALL-SHIPS CALL

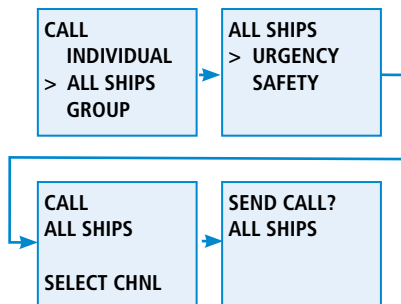
An All-Ships call is a DSC broadcast to alert all ships in the area. It is the equivalent to sending a PAN-PAN or SECURITE voice call. Since the call is to All Ships and not to an individual vessel, a calling MMSI is not required. Ships receiving an All-Ships call will change to CH16.

To make an All Ships call:

1. Press the **CALL** button.
2. Select 'ALL SHIPS' and press the **CALL** button.
3. Select 'URGENCY' or 'SAFETY' as appropriate and press the **CALL** button.
4. The radio will display the 'SELECT CHNL' option but will default to Channel 16 automatically.
5. If another channel is required use the **▲** or **▼** keys to select an alternate channel, otherwise press the **CALL** button to use Channel 16.
6. 'SEND CALL?' 'ALL SHIPS' will be displayed.
7. Press the **CALL** button to send the call.

The radio returns to Normal mode on Channel 16 (or your alternative selected channel) as soon as the call has been sent.

NOTE: There is no DSC acknowledge to an All Ships call.



GROUP CALL

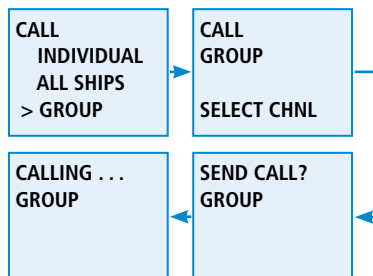
A Group Call is used to contact all ships that have the same Group MMSI. All ships receiving a Group call will change to the specified channel. For example this could be used to alert all yachts in a race to announce a change in the race conditions.

To make a Group Call:

1. Press the **CALL** button
2. Select 'GROUP' and press the **CALL** button again. The Group MMSI used is the one programmed into your radio (see Configuration Menu).
3. Select channel to be used for subsequent communications then press **CALL**.
4. 'Send CALL? Group' is displayed
5. Press **CALL** again to send the call

The radio returns to Normal mode on the selected channel as soon as the call has been sent.

NOTE: There is no DSC acknowledge to a Group call.



POSITION REQUEST

A Position Request is used to obtain the position of another vessel. The other vessel's position is displayed on your radio's LCD. If you have a chartplotter connected to the GX600D, the position of the other vessel can also be displayed on the chartplotter's screen.

To make a Position Request:

1. Press the **CALL** button
2. Select 'POS REQUEST' then press the **CALL** button
3. Enter the vessels MMSI.

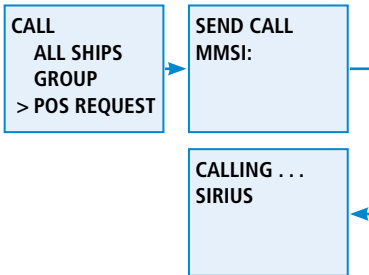
You can either;

- i. Press the **▲** key to retrieve the last called MMSI or
- ii. Press the **▼** key to select a vessel's MMSI from the Address Book or

- iii. Manually enter the vessel's MMSI as follows;
 - a. Press and hold the **CALL** button to enter the EDIT mode.
 - b. Use the **▲** or **▼** keys to enter the first digit of the vessel's MMSI number.
 - c. Press the **CALL** button to move to the next digit position. Repeat until all 9 digits have been entered.

NOTE: To correct an error during entry, press the **CALL** button repeatedly to move the cursor position to the incorrect digit then use the **▲** or **▼** keys to change the digit at that location.

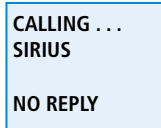
- 4. Once the correct MMSI has been entered or selected, press the **CALL** button. 'SEND CALL' is displayed.
- 5. Press the **CALL** button to send.



Position Request Responses

If NO acknowledgement is received:

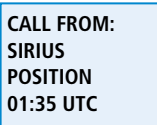
It is likely that the vessel you called is switched off or out of range. If no response is received within 5 seconds the radio displays:



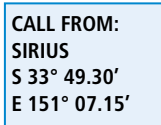
Press the **—** key or wait a further 5 seconds for the radio to return to Normal mode.

If an acknowledgement is received:

The display will alternate between position and time as shown below. The position is displayed on the LCD as Lat/Long in Degrees, Minutes and Decimal Minutes. If a Chartplotter is attached, the position is also sent to the Chartplotter and appears on the Chartplotter's display.

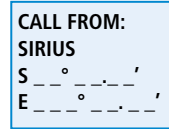
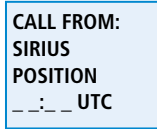


Displays time in UTC



Displays Position

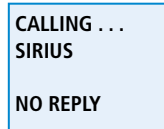
NOTE: If the radio you are calling does not have a GPS connected or the GPS signal is not valid, the GPS position data will be invalid. In that case, the position used will be the manually set position. If the manual position has not been set or hasn't been updated within 23 hours, then position data is sent as: 'N 99'99 E 999'99' to indicate position data is invalid. When this is received on the GX600D it will be displayed as:



Press the **—** key (or wait 5 seconds) for the radio to return to Normal mode.

The called radio cannot comply:

The called vessel's radio has received your request, but could not send its position. This could mean the called vessel's radio is configured for manual reply, or is in a mode where Position Requests are denied (see 'Position Reply' setting on page 17 in the Configuration Menu).



Press the **—** key or wait a further 5 seconds for the radio to return to Normal mode.

Position Send

'Position Send' is used to manually send YOUR position to another vessel. For example, another ship may request your position using voice communications. Instead of speaking the latitude and longitude over a voice channel, you can send your position via DSC which can then be displayed on the other ship's radio or directly onto their chartplotter's screen.

To send a 'Position Send' Call:

1. Press the **CALL** button
2. Select 'POS SEND' then press the **CALL** button
3. Enter the vessels MMSI.

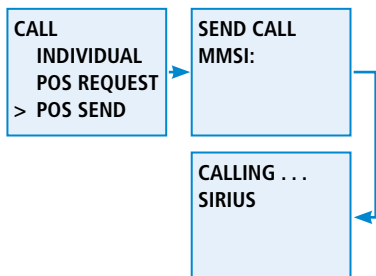
You can either;

- i. Press the **▲** key to retrieve the last called MMSI or
- ii. Press the **▼** key to select a vessel's MMSI from the Address Book or
- iii. Manually enter the vessel's MMSI as follows;
 - a. Press and hold the **CALL** button to enter the EDIT mode.

- b. Use the ▲ or ▼ keys to enter the first digit of the vessel's MMSI number.
- c. Press the **CALL** button to move to the next digit position. Repeat until all 9 digits have been entered.

NOTE: To correct an error during entry, press the **CALL** button repeatedly to move the cursor position to the incorrect digit then use the ▲ or ▼ keys to change the digit at that location.

4. Once the correct MMSI has been entered or selected, press the **CALL** button. 'SEND CALL' is displayed.
5. Press the **CALL** button to send.



The radio returns to Normal mode on the current channel as soon as the call has been sent.

NOTE: There is no DSC acknowledgement of a 'Position Send' call.

RECEIVING DSC CALLS

When a DSC call is received, the GX600D automatically responds depending on the type of call. If a GPS is connected to the caller's radio and is receiving a valid signal then their GPS time is used to display the time of the call on your GX600D's display.

Received calls are saved to the Call Log. Received DSC Acknowledge calls are not saved in the call log.

Receiving an Individual Call

When an 'Individual' call is received, the GX600D changes to the requested channel (if 'Auto CHNL' is on) and generates an audible 'Individual Call' alarm. The display then shows:

**CALL FROM:
SIRIUS
ROUTINE
CH 12**

Your GX600D automatically transmits a DSC acknowledge back to the caller.

NOTE: If the GX600D is configured for Manual TX the radio will not change channel and the acknowledge call will be 'Unable to comply'.

To cancel the alarm, press any key. The radio returns to 'Normal' mode on the current channel.

Receiving an All Ships Call

When an All Ships call is received, the GX600D switches to CH16 and generates an audible All-Ships Urgency/Safety alarm. The Display shows:

**ALL SHIPS:
SIRIUS
URGENCY**

Press any key to cancel the alarm. The radio returns to Normal mode on CH16.

Receiving a Group Call

When a Group Call is received, the GX600D changes to the requested channel (if 'Auto CHNL' is on) and generates an audible Group Call alarm.

The display shows:

**GROUP CALL:
SIRIUS

CH12**

Press any key to cancel the alarm. The radio returns to Normal mode on the current channel.

Receiving a Position Request

When a Position Request is received, your GX600D generates a DSC Position Reply message then displays the following:

**CALL FROM:
SIRIUS
POSITION REQ**

Press any key to clear the display. The radio returns to Normal mode on the current channel.

Receiving a Position Send

When a Position Send is received, your GX600D displays alternating information every 3 seconds to indicate the GPS time and the position of the calling vessel:

**CALL FROM:
SIRIUS
POSITION
01:35 UTC**

**GPS Time of
Calling Vessel**

**CALL FROM:
SIRIUS
S 33° 49.30'
E 151° 07.15'**

**Position of
Calling Vessel**

If a chartplotter is connected to your GX600D, the position of the calling ship is displayed on the chartplotter.

Press any key to clear the display. The radio returns to Normal mode on the current channel.

CONFIGURATION MENU

The GX600D is easily configured using a menu system. The menu allows access to the following options:

- **Address Book:** Add, Edit and Erase frequently called stations in your address book
- **Call Log:** Keep track of incoming calls and return calls recorded in the log. Calls are categorised separately as Routine or Distress for easy identification.
- **Display:** Change your display's brightness and contrast.
- **Setup:** Adjust key beeps and alarm volume settings, select the channel band, add names to channels, configure DSC response parameters and select NMEA baud rates.
- **GPS Setup:** Enter Lat/Long, UTC time and time offset and configure GPS display and alert status.
- **MMSI:** Enter your User and Group MMSI codes.

USING THE MENU

NOTE: The following description applies to the MC516 microphone supplied with your GX600D. If using the optional MC540 keypad microphone please use the alternative keys as shown in the table below.

FUNCTION	MC516	MC540
Select/Enter	Call/Volume	Menu/Enter
Clear/Quit	—	Clear
Up	▲	▲
Down	▼	▼
Enter Characters	▲ or ▼	Alpha/numeric keypad

For all menu items, first press the **Volume** knob to access the main menu. Once you are in the main menu, most functions can be accessed from the microphone.

- Use the ▲ or ▼ keys on the microphone (or radio) to scroll through the various menu options. Selected menu items are prefixed with '>'.
• Press the **CALL** button on the microphone (or the Volume knob on the radio) to accept your selection.
- Press the — key on the microphone to quit the current selection or press repeatedly to exit the menu completely.

- When entering characters use the ▲ or ▼ keys to select the character then press the **CALL** button to move to the next character position.

MENU OPTIONS

ADDRESS BOOK

The address book is used to store the names and user MMSI's of other vessels. This makes it easy to identify incoming DSC calls and to make DSC calls to those stations.

To select the Address Book:

1. From the main menu, press the ▲ or ▼ keys to select 'ADD BOOK'
2. Press the **CALL** button to accept.

The following Address Book options are available

- ADD
- EDIT
- ERASE

To ADD a contact to the Address Book:

1. Select 'ADD' from the Address Book menu and press the **CALL** button. 'Name' is displayed.
2. Use the ▲ or ▼ keys to select the first character of your contact's name. Press the **CALL** button to move to the next character position.
3. Repeat step 2 until all required characters have been entered. Up to 11 characters are available.
4. When finished, press and hold the **CALL** button to confirm. 'MMSI' is then displayed.
5. Use the ▲ or ▼ keys to enter the first digit of your contact's MMSI number. Press the **CALL** button to move to the next digit position.
6. Repeat step 5 until all digits have been entered.
7. Press and hold the **CALL** button to confirm and store the contact into the address book.

NOTE: To correct an error while entering a name or MMSI:

1. Briefly press the **CALL** button repeatedly to move the cursor to the character you wish to edit. The character at the cursor position will flash.
2. To change the character at the cursor position, press the ▲ or ▼ keys.
3. To delete a character to the left of the cursor position, press the — key.

To EDIT a contact stored in the Address Book:

1. Select 'EDIT' from the Address Book menu and press the **CALL** button. A list of stored names is displayed.
2. Press the ▲ or ▼ keys to scroll to the desired name then press the **CALL** button to select it. The Name and MMSI of the selected item is displayed with the flashing cursor positioned on the first character.
3. To edit the Name, briefly press the **CALL** button repeatedly to move the cursor to the character that requires editing. The character will flash.
4. Press the ▲ or ▼ keys to change the character in that position.
5. To delete a character immediately to the left of the cursor position, press the – key.
6. To edit the MMSI number, press and hold the **CALL** button. The cursor will move to the MMSI number.
7. Repeat the process above to edit the MMSI number as required.
8. When finished, press and hold the **CALL** button to save the entry and return to the Address Book menu.

ERASING CONTACTS

To ERASE a single contact from the Address Book:

1. Select 'ERASE' from the Address Book menu and press the **CALL** button.
2. Select 'One-By-One' and press the **CALL** button.
3. Use the ▲ or ▼ keys to select the required name then press the **CALL** button. 'Erase Entry?' is displayed along with the name and MMSI of the contact.
4. Press the **CALL** button to confirm deletion or press the – key to cancel.

To ERASE ALL contacts from the Address Book:

1. Select 'ERASE' from the Address Book menu and press the **CALL** button.
2. Select 'All Entries' and press the **CALL** button.
3. 'Erase All Add Book?' is displayed. Press the **CALL** button to confirm or press the – key to cancel.

CALL LOGS

The call log keeps track of the DSC calls you have received. DSC calls are logged as either Routine or Distress. Up to 10 calls can be logged in each category. Logged calls are numbered 1 – 10 with call 1 being the most recent. If more than 10 calls have been logged the oldest call is discarded when a new call is logged.

Viewing the Call Logs:

1. Select 'CALL LOG' from the main menu and press the **CALL** button.
2. Select either 'ROUTINE' or 'DISTRESS' from the Call Log menu and press the **CALL** button.
3. The most recently logged call will be displayed as 'RECEIVED: 1' along with the MMSI of the caller and details of the call. If the caller is in your address book, their name will be displayed in place of the MMSI number.
4. Press the ▲ or ▼ keys to view additional logged calls.

To call a station listed in the Call Log:

1. When the required logged call is displayed, briefly press the **CALL** button.
2. Use the ▲ or ▼ keys to select the required channel if prompted.
3. Press the **CALL** button. 'Send Call?' Is displayed.
4. Press the **CALL** button again to send the call.

NOTE: You can also call stations from the call log using the 'Call' option in the submenu (described below).

CALL LOG SUBMENU

While displaying the details of a logged call, briefly press the **Volume** knob to access additional submenu options relating to the displayed call. The following submenu options are available

- Call
- Add ADDR
- Erase

To Call a station listed in the Call Log (alternate method):

1. When the required logged call is displayed, press the **Volume** knob to access the submenu.
2. Select 'Call' then press the **CALL** button.
3. Use the ▲ or ▼ keys to select the required channel if prompted.
4. Press the **CALL** button. 'Send Call?' Is displayed
5. Press the **CALL** button again to send the call.

To Add the listed caller to your Address Book:

1. Select 'ADD ADDR' from the Address book menu and press the **CALL** button. You will be prompted to enter a name for this entry.

2. Enter the name using the ▲ or ▼ keys to select each character then press the **CALL** button to move to the next character position.
3. When finished press and hold the **CALL** button. The MMSI will be automatically transferred from the call list to the Address Entry page.
4. Press and hold the **CALL** button again to confirm and store the new contact in the address book. 'Saving' will be displayed as the address is stored.

To Erase The Displayed Entry From The Call Log:

1. Select 'Erase' from the Address book menu and press the **CALL** button. 'Erase Entry?' is displayed
2. Press and hold the **CALL** button to confirm.

To Erase all Logged Calls:

1. Select 'Erase Logs' from the Address book menu and press the **CALL** button. 'Erase All?' is displayed.
2. Press and hold the **CALL** button to confirm.

DISPLAY

To configure the display, select the 'DISPLAY' option from the main menu. The following Display options are available

- Backlight
- Contrast

Backlight Adjustment

1. To adjust the display's backlighting, select 'Backlight' from the Display menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to select 'OFF', 'DIM' or 'BRIGHT'. The display changes immediately with each selection.
3. Press the **CALL** button to accept the selection.

Contrast

1. To adjust the display's contrast, select 'Contrast' from the Display menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to adjust the contrast so that the display is easily readable. The contrast will change with each key press and a reference value from -20 to +20 will be displayed. The contrast setting is dependent on your viewing angle so we recommend you adjust the contrast from your normal viewing position.
3. Press the **CALL** button to accept the selection.

SETUP

The Setup menu configures the general operation of the radio. The following menu is displayed in Setup

- Key Beep
- Alarm Beep

- Auto Channel
- Pos Reply
- Indiv Reply
- UIC
- Chnl Name
- NMEA-1
- NMEA-2

Key Beep

Changes the volume of the beeps that are heard when the keys are pressed.

To change the key beep volume;

1. Select 'KEY BEEP' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to set the Beep volume to 'HI', 'MED', 'LOW' or 'OFF'.
3. Press the **CALL** button to accept the selection and return to the 'SETUP' Menu.

Alarm Beep

Changes the volume of the Alarm beeps.

To change the alarm volume;

1. Select 'ALARM BEEP' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to set the Alarm Beep volume to 'HI', 'MED' or 'LOW'.
3. Press the **CALL** button to accept the selection and return to the 'SETUP' Menu.

NOTE: The Emergency Alarm volume is always set to High and is not affected by this adjustment.

Auto Channel

Auto Channel defines whether your radio will change channels automatically when requested by another vessel's DSC call.

1. Select 'AUTO CHNL' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to set the Auto Channel feature to ON or OFF.
 - Select 'ON' to allow your radio to change channels when requested by an incoming DSC call.
 - Select OFF to ignore incoming channel change requests from DSC calls and remain on the selected channel.
3. Press the **CALL** button to accept the selection and return to the 'SETUP' Menu.

Position Reply

The Position Reply function determines whether your radio will automatically send its GPS position to another vessel whenever a Position Request is received. (To use this feature your GX600D must have a GPS connected or a manual GPS position must have been entered).

1. Select 'POS REPLY' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to select 'Auto' or 'Manual'.
 - Select 'Auto' to allow your position to be sent automatically when requested by an incoming DSC call.
 - Select 'Manual' to disable automatic position sending.
3. Press the **CALL** button to accept the selection and return to the 'SETUP' Menu

Individual Reply

The Individual Reply function determines whether your radio will automatically acknowledge an incoming Individual Call.

1. Select 'INDV REPLY' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to select MANUAL or AUTO.
 - Select 'AUTO' to allow your radio to automatically send an acknowledge when an Individual DSC Call is received from another station.
 - Select 'MANUAL' to prompt you to respond manually to an Individual DSC Call. In this mode your radio will display 'REPLY OK?' and await your response.
3. Press the **CALL** button to accept the selection and return to the 'SETUP' Menu.

UIC (USA/International/Canadian)

Selects the radio frequency channel set used by the GX600D. Because channel allocations vary between countries you should use the channel set for the country you are operating within. The radio supports International, USA and Canadian channel sets. The default setting is International.

1. Select 'UIC' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to select 'CAN' (Canada), 'USA' or 'INTL' (International).
3. Press the **CALL** button to accept the selection and return to normal operation.

Whenever the Channel Set is changed, the GX600D will switch to CH 16.

NOTE: When the USA Channel Set is selected, weather channels will be accessible below Channel 01.

Channel Name

Use the Channel name function to apply useful names to channels to help identify their usage (e.g. a club/working channel).

1. Select 'CHNL NAME' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to select the first character of your channel name.
3. Press the **CALL** button to move to the next character position.
4. Repeat until all required characters (up to 11) have been entered.

NOTE: To correct an error while entering the channel name, press the **CALL** button repeatedly to move the cursor to the required character position, then use the ▲ or ▼ keys to correct the character in that position.

5. When finished, press and hold the **CALL** button to confirm.

NMEA-1 Baud/NMEA-2 Baud

Use this option to adjust the baud rate (data communications speed) of the GX600D's NMEA serial data ports. The GX600D has two serial ports labelled NMEA- 1 and NMEA-2. The Baud rates of each port can be set independently. Note that the baud rate you choose must match that of the device/s you are connecting.

1. Select 'NMEA-1 Baud' or 'NMEA-2 Baud' from the Setup menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to select from 4800, 9600, 19200 or 38400 baud.
3. When finished, press and hold the **CALL** button to confirm and return to normal operation.

GPS Setup

The GPS setup allows you to manually set GPS position coordinates and time parameters for situations where your GX600D does not have a GPS connected and cannot obtain this information automatically. You can also configure GPS display and alerts. The following menu is displayed in GPS Setup.

- Position
- UTC Time
- Time Offset
- GPS Display
- GPS Alert

POSITION

Allows manual entry of the latitude and longitude of your vessel's location. This allows the DSC function to transmit your position coordinates in an emergency. The position must be entered in Degrees, Minutes and Decimal/Minutes (DMM).

To enter your position

1. Select 'POSITION' from the GPS Menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to select 'N' (North) or 'S' (South).
3. Press and hold the **CALL** button. The cursor moves to the first digit position of the Latitude field.
4. Use the ▲ or ▼ keys to select the first digit of the Latitude then briefly press the **CALL** button to move to the next digit position.
5. Repeat until all digits have been entered.
6. Press and hold the **CALL** button to confirm and store the Latitude. The cursor will move to the Longitude field.
7. Use the ▲ or ▼ keys to select 'E' (East) or 'W' (West) then press and hold the **CALL** button. The cursor moves to the first digit position of the Longitude field.
8. Use the ▲ or ▼ keys to select the first digit of the Longitude then briefly press the **CALL** button to move to the next digit position.
9. Repeat until all digits have been entered.
10. When finished, press and hold the **CALL** button to confirm and store the position.

NOTE: The position will be erased after 23 hours or when the radio is switched off.

UTC TIME

Lets you manually set the time in UTC (Greenwich Mean Time). The time is entered as Hours: Minutes : Seconds in 24 hour time format.

TO ENTER THE TIME IN UTC:

1. From the 'GPS SETUP' menu, select 'UTC TIME' then press the **CALL** button. The Hours cursor will be flashing.
2. Use the ▲ or ▼ keys to select the hours then press the **CALL** button. The Minutes cursor will flash.
3. Use the ▲ or ▼ keys to select the minutes then press the **CALL** button. The Seconds cursor will flash.
4. Use the ▲ or ▼ keys to set the seconds then press the **CALL** button.

The radio returns to the 'SETUP' Menu.

NOTE: The time will be erased after 23 hours or when the radio is switched off.

TIME OFFSET

Lets you set the time difference between UTC time and your local time. This will allow the radio to display local time. A list of Time offsets is in the back of this manual.

To set the Time Offset:

1. From the 'GPS SETUP' menu, select 'TIME OFFSET' then press the **CALL** button.
2. Use the ▲ or ▼ keys to set the time offset from -12:00hrs to +13:00hrs in 30 minute segments.
3. Press the **CALL** button to accept and return to the 'GPS SETUP' Menu.

GPS DISPLAY

Selects whether or not to display your GPS position on the LCD. If the GPS display in 'ON' but a GPS receiver is not connected, 'NO GPS' is displayed instead.

1. From the 'GPS SETUP' menu, select 'GPS DISPLAY' then press the **CALL** button.
2. Use the ▲ or ▼ keys to select 'OFF' or 'ON'.
3. Press the **CALL** button to accept and return to the 'GPS SETUP' Menu.

GPS ALERT

The GX600D monitors the NMEA ports for GPS data and can sound an alarm if the GPS position data is lost or is disconnected. The GPS Alert option has three settings – OFF, ON and AUTO.

OFF – The GPS Alarm is turned off. Valid GPS position data applied to the NMEA ports will be used by the GX600D but you will not be alerted if the position data is lost.

ON – The GPS alarm will sound if there has been no valid GPS position for 30 seconds. Either the GPS position has been lost or your GPS device is not connected or switched on.

AUTO – The GX600D will automatically determine if a GPS data source is connected and will only sound the alarm if valid GPS data was detected then lost. This is the recommended (default) setting.

To select the GPS Alert setting

1. From the 'GPS SETUP' menu, select 'GPS Alert' then press the **CALL** button.
2. Use the ▲ or ▼ keys to select 'OFF', 'AUTO' or 'ON'.
3. Press the **CALL** button to accept and return to the 'GPS SETUP' Menu.

GROUP MMSI

A Group Call provides a method for contacting multiple vessels with a common interest by using one DSC call. There is no limit on the number of times you can change the Group MMSI.

To enter the Group MMSI

1. Select 'GROUP MMSI' from the Main Menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to enter the first digit of the 'GROUP MMSI' number.
3. Press the **CALL** button to move to the next digit position.
4. Repeat until all 9 digits have been entered.
5. To correct an error during entry, press the **CALL** button repeatedly to move the cursor position to the incorrect digit then use the ▲ or ▼ keys to change the digit at that location.
6. When finished, press and hold the **CALL** button to confirm and return to the main menu.

NOTE: If the Group MMSI field already has an MMSI number, press and hold the – key to clear the MMSI field. You can then enter a new Group MMSI number.

USER MMSI

The User MMSI is unique to each radio and must be entered to enable normal DSC operation - except for the reception of distress calls which do not require a user MMSI.

The GX600D is shipped from the factory with the user MMSI 'un-programmed'. It is up to the user to obtain a valid MMSI from the appropriate licensing authority and enter the MMSI into the radio to enable DSC operation.

IMPORTANT: It is a requirement of the regulations that the User MMSI can only be entered ONCE. If there is a need to change the MMSI more than once you will need to contact your authorized GME service centre for advice. For this reason take special care when entering your User MMSI number to ensure it is entered correctly before saving it.

To enter the 9 digit User MMSI number issued to you by your local authority:

1. Select 'USER MMSI' from the Main Menu then press the **CALL** button.
2. Use the ▲ or ▼ keys to enter the first digit of the User MMSI number.
3. Press the **CALL** button to move to the next digit position.
4. Repeat until all 9 digits have been entered.

5. To correct an error during entry, press the **CALL** button repeatedly to move the cursor position to the incorrect digit then use the ▲ or ▼ keys to change the digit at that location.
6. Once the 9 digit User MMSI has been entered, *double check to ensure that the number is correct* then press and hold the **CALL** button to store it. The radio will return to the main menu.

CONNECTING A GPS RECEIVER OR PLOTTER

You can connect a GPS receiver or GPS Plotter to your GX600D. A GPS receiver will provide your radio with GPS position and time reporting. Connecting a GPS plotter will allow DSC positions of ships to be displayed directly on your plotter. GPS connections are made through the NMEA ports on your radio.

NMEA PORTS

The GX600D features two NMEA ports labelled NMEA 1 and NMEA 2. These are available on the rear panel. NMEA sentences generated by the GX600D will appear on the output of both ports. In addition, any NMEA sentences received at the input of one port will be mirrored at the output of the other port.

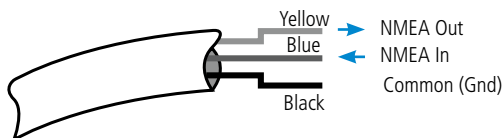
The NMEA Baud rate of each port can be set separately from within the Setup menu. Available Baud rates are 4800, 9600, 19200 and 38400 bps.

NMEA 0183 DATA

The GX600D recognises the following standard NMEA sentences. You may need to select NMEA 0183 Input/ Output using the interface settings on your GPS, Plotter or connected device.

NMEA Input from GPS: GPGLL, GPGAA, GPRMC, GPGNS (v2.x)

NMEA Output to plotter: GPDSC (v2.x) GPDSE (v3.x)



INSTALLATION

NOTE: Your GX600D is designed for connection to negative earth electrical systems only.

Selecting a location

It is advisable to spend a little time selecting the best location for your GX600D. The mounting bracket can be rotated above, below or behind the radio enabling the radio to be mounted in a wide range of locations. In addition, using the optional flush mounting kits (MK600, MK001, MK002) the GX600D can be mounted directly in a panel or dashboard. The flush mounting kits allow for installation or replacement of any existing VHF radio.

UPRIGHT OR OVERHEAD MOUNTING

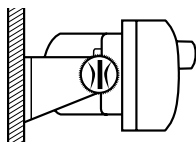
Keep the following points in mind when choosing a location.

- The GX600D is designed to meet the IP67 specification which allows for direct water spray. However, we recommend you select a location that will minimise excessive exposure to water splashes or continuous rain.
- Select a location that won't expose your radio to continuous direct sunlight which could cause overheating or UV degradation.
- Ensure that the location allows a free flow of air around the heat sink on the back of the radio.

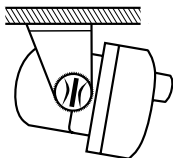
- The microphone and all controls should be readily accessible and the loud speaker easily heard from the normal steering position. An extension speaker (SPK600) can be installed if required.
- For best results connect the battery leads directly to the vessel's battery. If you need to extend the power leads to reach the battery use heavy insulated automotive wire of at least #10 gauge.
- Components and currents in the radio create magnetic fields. To avoid interference to ships compasses or autopilot sensors, the GX600D should be mounted at least 300 mm from such equipment.

INSTALLING THE UNIT

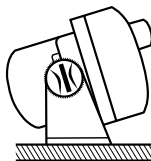
After choosing your location, hold the unit with the mounting bracket attached into the desired position and mark the location with a pencil. Remove the mounting bracket from the radio and drill the mounting holes. Bolt or screw the bracket in place using hardware suitable for the mounting surface. The unit is supplied with stainless steel screws; however, if the mounting surface is unsuitable for screws you may need to replace these with stainless steel bolts. Remember the fixings for overhead mounted units may have to withstand heavy pounding when the vessel is in rough water or being towed on a trailer.



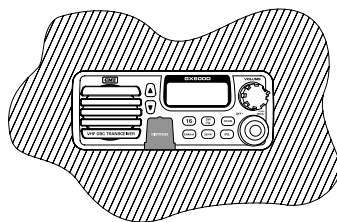
Panel
Mounting



Overhead
Mounting

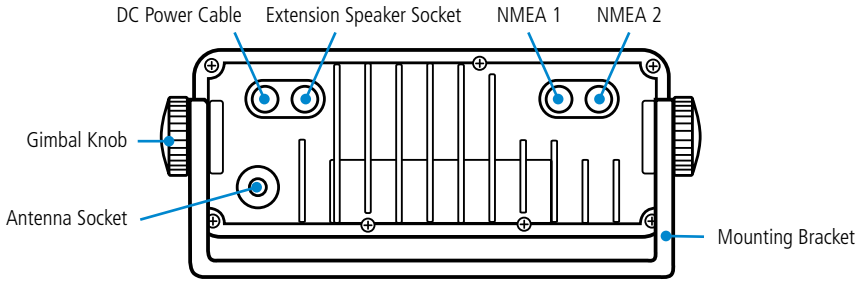


Upright
Mounting



Flush Mounting (Optional MK600, MK001,
MK002 flush mounting kits available)

Rear Panel Connections



DC Connections

Connect the RED power lead to the Positive (+) side of the battery or to an accessory point in the vessel's fuse box.

Connect the BLACK power lead to the Negative (-) side of the battery or to a ground point in your vessel's fuse box.

NOTE: The RED power lead is fitted with a 10 Amp fuse. If the fuse blows, use only a standard 10 Amp (3AG type) fuse as a replacement. Use of higher rated fuses or 'slow blow' types could result in damage to your radio which would void the warranty.

Connect the antenna cable to the rear antenna socket on the radio using a PL259 coaxial connector.

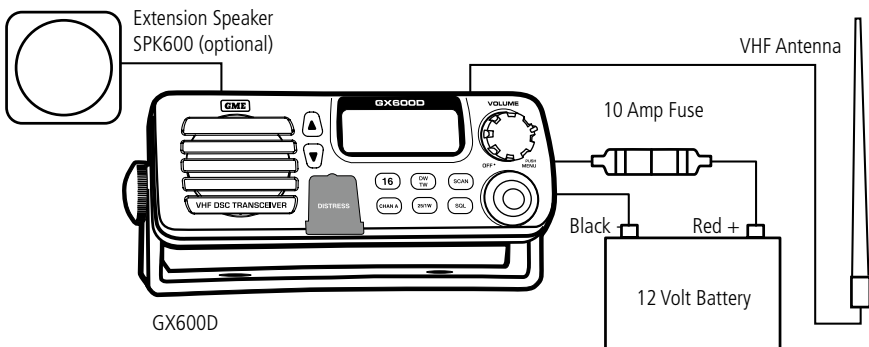
If required, an SPK600 extension speaker may be installed near the steering position or outside the cabin to improve the reception clarity in those areas. The SPK600 is specifically designed for the GX600D with a watertight connector to match the extension speaker socket on the rear of the radio.

Noise Suppression

The inherent design of VHF FM radios results in a high level of resistance to ignition and electrical interference. However in some installations it may be necessary to take additional steps to help reduce or eliminate noise interference. During installation, try to route the DC battery leads, the antenna lead or any accessory wires away from the engine compartment, ignition or alternator wiring. If the noise continues, it may be necessary to fit a suppression kit. Contact your local marine dealer for more information.

Similarly, if the interference you are experiencing is from other electronic equipment such as a depth sounder, try to keep the depth sounder's DC leads and transducer cable well away from your GX600D's wiring.

GX600D Wiring



SPECIFICATIONS

ELECTRICAL

General

- Complies with: AS/NZS4415.1.2003
Frequency Range: 155 – 165 MHz
Channel Spacing: 25 kHz
Modulation: FM
Channels Sets:
 - International, USA, Canada
 - Private – 20 Channels
 - USA Weather ChannelsSupply Voltage:
 - 12 volt nominal
 - 10.5 – 15.6 volt max. range
 - Negative EarthFrequency Stability: ± 1.5 kHz over environmental extremes
Scan Speed: 100 ms/channel (10 channels/sec)

Transmitter

- Power Output:
 - High: 25 watts max
 - Low: 1 watt maxSpurious Emissions: < -75 dBc
Frequency Deviation: ± 5 kHz max +20 dB limiting @ 1 kHz
Frequency Response: + 6 dB per octave, 300 Hz – 3 kHz, +1 - 3 dB
Demodulated S/N: > 50 dB weighted
Current Consumption:
 - High Power: < 5 Amps
 - Low Power: 850 mA

Receiver

- IF Frequencies:
 - 1st: 21.4 MHz
 - 2nd: 450 kHzSensitivity: -120 dBm for 12 dB SINAD unweighted
Squelch Sensitivity: Adjustable, 10 preset levels
Spurious Rejection: > 75 dB
Intermodulation Rejection: > 73 dB
Adjacent Channel Rejection: > 75 dB
Blocking Rejection: > 100 dB
RF Bandwidth: < 4 MHz
Switching Bandwidth: > 10 MHz
Frequency Response: -6 dB per octave de-emphasis, 300 Hz – 3 kHz, +1 - 3 dB
Audio Output Power:
 - 4 Watts average into external 4 Ohm speaker
 - 2 Watts average into internal speakerAudio SN: > 45 dB weighted

Conducted Spurious

- Emission: < -70 dBm
Current Consumption:
 - Muted: < 200 mA
 - Full volume: 700 mA

DSC RECEIVER

- IF frequencies:
 - 1st: 38.85 MHz
 - 2nd: 455 kHz(Note: all DSC limits are for 10e-2 BER)
Sensitivity: -120 dBm
Spurious Rejection: > 75 dB
Intermodulation Rejection: > 73 dB
Adjacent Channel Rejection: > 75 dB
Blocking Rejection: > 100 dB

MECHANICAL

- Dimensions: 164 (W) x 65 (H) x 77 (D) mm
Flush Mounting: 46 mm panel depth minimum
Weight: 585 grams

ENVIRONMENTAL

- Temperature Range: - 10°C to + 55°C
Vibration: MIL STD 810E, procedure 13.4.8
Solar Radiation: Case UV stabilised
Water and Dust
Resistance: IP67 excluding external cabling
Compass Safe Distance: 300 mm

EXTERNAL CONNECTIONS

- Microphone: 6 pin socket
DC Supply: 2 pin socket
External Speaker: 3.5 mm phono line socket
NMEA1: 3 wire cable
NMEA2: 3 wire cable

All specifications are typical and subject to change without notice or obligation.

STANDARD COMMUNICATIONS WARRANTY AGAINST DEFECTS

This warranty against defects is given by Standard Communications Pty Ltd ACN 000 346 814 (We, us, our or GME). Our contact details are set out in clause 2.7. This warranty statement only applies to products purchased in Australia. Please contact your local GME distributor for products sold outside of Australia. Local distributor details at www.gme.net.au/export.

1. Consumer guarantees

- 1.1 Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
- 1.2 To the extent we are able, we exclude all other conditions, warranties and obligations which would otherwise be implied.

2. Warranty against defects

- 2.1 This warranty is in addition to and does not limit, exclude or restrict your rights under the Competition and Consumer Act 2010 (Australia) or any other mandatory protection laws that may apply.
- 2.2 We warrant our goods to be free from defects in materials and workmanship for the warranty period (see warranty table) from the date of original sale (or another period we agree to in writing). Subject to our obligations under clause 1.2, we will at our option, either repair or replace goods which we are satisfied are defective. We warrant any replacement parts for the remainder of the period of warranty for the goods into which they are incorporated.
- 2.3 To the extent permitted by law, our sole liability for breach of a condition, warranty or other obligation implied by law is limited
 - (a) in the case of goods we supply, to any one of the following as we decide –
 - (i) the replacement of the goods or the supply of equivalent goods;
 - (ii) the repair of the goods;
 - (iii) the cost of repairing the goods or of acquiring equivalent goods;
 - (b) in the case of services we supply, to any one of the following as we decide –
 - (i) the supplying of the services again;
 - (ii) the cost of having the services supplied again.
- 2.4 For repairs outside the warranty period, we warrant our repairs to be free from defects in materials and workmanship for three months from the date of the original repair. We agree to re-repair or replace (at our option) any materials or workmanship which we are satisfied are defective.

- 2.5 We warrant that we will perform services with reasonable care and skill and agree to investigate any complaint regarding our services made in good faith. If we are satisfied that the complaint is justified, and as our sole liability to you under this warranty (to the extent permitted at law), we agree to supply those services again at no extra charge to you.
- 2.6 To make a warranty claim you must before the end of the applicable warranty period (see warranty table), at your own cost, return the goods you allege are defective, provide written details of the defect, and give us an original or copy of the sales invoice or some other evidence showing details of the transaction.
- 2.7 Send your claim to: Standard Communications Pty Ltd. Unit B, 22-24 College Street, Gladesville, NSW 2111, Australia. Tel: (02) 9879 8888 Fax: (02) 9816 4722. Email: servadmin@gme.net.au
- 2.8 If we determine that your goods are defective, we will pay for the cost of returning the repaired or replaced goods to you, and reimburse you for your reasonable expenses of sending your warranty claim to us.

3. What this warranty does not cover

- 3.1 This warranty will not apply in relation to:
 - (a) goods modified or altered in any way;
 - (b) defects and damage caused by use with non Standard Communications products;
 - (c) repairs performed other than by our authorised representative;
 - (d) defects or damage resulting from misuse, accident, impact or neglect;
 - (e) goods improperly installed or used in a manner contrary to the relevant instruction manual; or
 - (f) goods where the serial number has been removed or made illegal.

4. Warranty period

- 4.1 We provide the following warranty on GME and Kingray products. No repair or replacement during the warranty period will renew or extend the warranty period past the period from original date of purchase.

PRODUCT TYPE	WARRANTY PERIOD
VHF marine transceivers	1 year



A division of: **Standard Communications Pty. Ltd.**

HO: Locked bag 2086, North Ryde, NSW 1670, Australia. T: +61 (0)2 9844 6666 F: +61 (0)2 9844 6600

Adelaide: Unit 1, 14 Phillips St, Thebarton, SA 5031
T: (08) 8234 2633 F: (08) 8234 5138

Brisbane: Unit 1, 89-101 Factory Rd, Oxley, QLD 4075
T: (07) 3278 6444 F: (07) 3278 6555

Melbourne: 7 Micro Circuit, Dandenong South, VIC 3165
T: (03) 9798 0988 F: (03) 9798 0177

Perth: Unit 1, 10-12 Harvard Way, Canning Vale, WA
6155 T: (08) 9455 5744 F: (08) 9455 3110

Sydney: Unit B, 22-24 College St, Gladesville, NSW 2111
T: (02) 9879 8888 F: (02) 9816 4722

Auckland: 2/24 Bishop Dunn Pl, East Tamaki, Manakau,
2163 NZ T: (09) 274 0955 F: (09) 274 0959

For customers outside Australia and New Zealand please contact your local GME retailer or email: export@gme.net.au
www.gme.net.au