

VHF 210/215

Item	Key	Description		
1	DISTRESS	Lift the door and press to send a DSC distress call with a programmed MMSI number (Entering Your MMSI Number, page 12).		
2	VOL/SQ	Press the dial to switch between volume or squelch. Rotate the dial to adjust the volume or squelch level.		
3		Select the key that corresponds to the on-screen item to select the item.		
4	SELECT	On the home screen, rotate the dial to change the channel. On the home screen, press the dial to toggle weather channels (NOAA® Weather Broadcasts and Alerts, page 11). Rotate the dial to highlight an item in a list. Press the dial to select an item.		
	PWR North America: 16/9 International: 16+	Hold to turn the radio on and off. Press to toggle between preset channels.		
	DSC	Select to view a menu of DSC options.		
	HI/LO	Select to change the transmission mode and receiving sensitivity.		
	CLEAR	Select to return to the previous menu option. Select to cancel or mute an incoming DSC call.		
	MENU	From the home screen, select to view configuration options. From a menu, select to return to the home screen.		

Sending an Undesignated Distress Call

When you send an undesignated distress call, the nature of your emergency is not transmitted to the receiving stations. Sending an undesignated distress call is a faster procedure that can save you time during an emergency.

1 Lift the spring-loaded door, and hold DISTRESS for at least 3 seconds.

3 Hold PTT on the handset or radio to relay your distress message.

The radio beeps and counts down the seconds. DISTRESS CALL COUNTING DOWN appears on the screen. The radio sounds an alarm, switches to channel 70, and transmits your call on high (25 W) power.

2 Press any key to silence the alarm sound. The radio tunes to channel 16 on high (25 W) power.

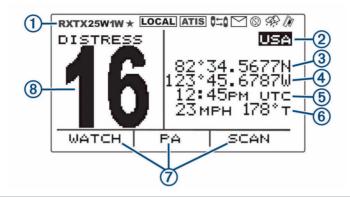
Handset Overview



1	PTT	Hold to broadcast.
2	▲ or ▼	Select to change the channel on the radio.
3	North America: 16/9 International: 16+	Select to toggle between preset channels.

Introduction 3

Home Screen



Radio system status, settings, and alerts International, Canadian, or USA frequency band Latitude¹ Longitude 1 Time¹ Speed over ground (SOG) or course over ground (COG) ² Soft-key functions change depending on your current activity 8 Working channel

² The SOG and COG appear when the radio has a GPS signal acquired, and the option is enabled in the menu (*Number Settings*, page 23).

4 Introduction

¹ The latitude, longitude, and time appear when the radio has a GPS signal acquired. You can enter data manually when the radio does not have a GPS signal.

System Status Icons

Icon	Status
ICOII	Status
RX	Receiving an incoming signal
TX	Transmitting
25W	Transmitting at 25 W
1W	Transmitting at 1 W
*	Saved channel
LOCAL	Local receiver mode, often used in areas with radio frequency interference (harbors)
ATIS	ATIS enabled
0=0	Position tracking enabled
	Auto channel changing disabled
	Incoming or missed DSC call
S.	Weather alerts enabled
	GPS signal acquired

Basic Operation

Turning On and Off the Device

Hold PWR.

TIP: You can set the device to turn on automatically (*System Settings*, page 23).

Adjusting the Radio Volume

- 1 Set the squelch level to **MIN** before you adjust the radio volume (optional).
- 2 Turn the VOL/SQ dial to increase or decrease the radio volume.

Adjusting the Squelch Level

You can adjust the sensitivity level of the squelch to filter out background noise. When you increase the squelch level, you hear fewer weak background signals when you are receiving.

- Press the VOL/SQ dial.
 SQUELCH appears on the screen.
- 2 Turn the VOL/SQ dial counter-clockwise until you hear audio.
- 3 Turn the VOL/SQ dial clockwise until there is no background noise.

Basic Operation 5

Selecting the Frequency Band

You can switch between the USA, International, or Canadian frequency bands (Channel Lists, page 25).

NOTE: Not all frequency bands are available on all device models.

- 1 Select MENU > CHANNEL > FREQUENCY BAND.
- 2 Select a frequency band.

Selecting a Channel

You can select an International, Canadian, or USA channel (Selecting the Frequency Band, page 6).

Select an option:

- · To select a channel on the device, turn the **SELECT** dial.
- To select a channel on the handset, select ▲ or ▼.

Transmitting with the Radio

- 1 Select an appropriate channel.
- 2 Verify that the channel is clear.

NOTE: You cannot obstruct the communications of other people due to Federal Communications Commission (FCC) and international guidelines.

3 Hold PTT on the handset.

TX appears at the top of the screen.

4 Speak into the handset.

NOTE: Five minutes is the maximum time allowed for transmission. After five minutes of transmitting, PTT is disabled until you release PTT.

5 Release PTT.

Calling Another GHS™ II Handset

After connecting at least two GHS 11 handsets to your radio, you can use the intercom feature to communicate between the handsets. For example, you can use a handset at the helm to communicate with a user of a handset in a below-deck engine room.

NOTE: The intercom feature is not available with VHF 110/115 models.

- 1 Select PA > INTERCM.
- 2 Rotate the dial on the handset to select an intercom station to call, and select **SELECT**.
- **3** At the receiving intercom station, hold **PTT** to respond.

Either user must hold PTT to talk.

4 Select EXIT to end the call.

Monitoring Multiple Channels

Before you can monitor multiple channels, you must turn off ATIS (*Automatic Transmitter Identification System*, page 21).

You can monitor priority channels and the currently selected channel for broadcasting activity. Channel 16 is the first-priority channel on your radio. Channel 9 is the default second-priority channel. You can program a different channel as your second-priority channel (Selecting a Different Second-Priority Channel, page 8).

Select WATCH.

Monitoring Two Channels

You can monitor your current channel and channel 16 at the same time.

Select WATCH > DUAL.

DUAL WATCH and the channels you are monitoring appear on the screen. For example, DUAL WATCH CH:, and 16 + 9.

Monitoring Three Channels

You can monitor your current channel, channel 16, and your second-priority channel at the same time.

Select WATCH > TRI.

TRI WATCH, your current channel, channel 16, and your second-priority channel appear on the screen. For example, TRI WATCH CH:, and 75 + 16 + 9.

Selecting a Different Second-Priority Channel

You can select a channel other than channel 9 as your second-priority channel.

- 1 Select MENU > CHANNEL > 2ND PRIORITY.
- 2 Select an option:
 - On the radio, turn the **SELECT** dial to the preferred channel.
- 3 Select OK.

Switching to Priority Channels

You can quickly switch between your current working channel and a priority channel. When you change to a priority channel, the transmit power is set to high (25 W) automatically, and when you change back to your current channel, the transmit-power setting is restored.

On North American models, you can quickly switch between channel 16, your second-priority channel, and your original channel using the 16/9 key.

On International models, you can quickly switch between channel 16 and your original channel using the 16+ key.

- 1 To switch from your current channel to channel 16, select 16/9 or 16+.
 - The transmit power changes to high (25 W) automatically. You can select **HI/LO > 1W** to change the transmit power to low (1 W).
- 2 On North American models, select 16/9 to switch to your second-priority channel.
- 3 Select 16/9 or 16+ to return to your previous channel and transmit-power setting.

Setting the Receiving Sensitivity

You can control the receiving sensitivity of the radio. When you have noise in high-traffic areas or areas with electromagnetic interference, such as near cell-phone towers, you can set the receiving sensitivity to LOC to decrease receiver sensitivity. In remote areas and on open water, you can set the receiving sensitivity to DIST to ensure that you use the maximum range of the receiver.

- 1 Select HI/LO.
- 2 Select an option:
 - · Select LOC to enable local sensitivity.
 - · Select **DIST** to enable distant sensitivity.

Switching Between I W and 25 W Transmitting Modes

You can control the transmitting power of the radio. Low (1 W) is used for local transmissions, and high (25 W) is used for distance and distress transmissions.

When two signals broadcast on the same frequency, a VHF radio receives only the stronger of the two signals. You should transmit calls other than distress calls using the lowest power setting that allows you to communicate, to reduce the possibility that your transmissions interfere with the transmissions of others.

In the USA channel band, transmissions on channels 13, 17, 67, and 77 must be low (1 W) by default.

In the Canadian channel band, transmissions on channels 13, 15, 17, 20, 1066, 67, 75, 76, and 77 must be low (1 W) by default.

In the International channel band, transmissions on channels 15, 17, 75, and 76 must be low (1 W).

NOTE: In the USA and Canadian channel bands, you can bypass the power setting for these channels temporarily during transmission (*Bypassing the Low Transmission Power Setting*, page 9). In the International channel band, the radio does not permit transmissions on these channels to be changed to high (25 W).

- 1 Select HI/LO.
- 2 Select 1W or 25W.
- 3 Select OK.

Bypassing the Low Transmission Power Setting

In the USA and Canadian frequency bands, transmissions on select channels are required to be low-power (1 W) by default, because they are intended for intership (bridge-to-bridge) communication (*Switching Between 1 W and 25 W Transmitting Modes*, page 9). If other radios cannot receive these channels due to the low power setting, you can bypass the default restriction during transmission.

NOTE: In the International channel band, the radio does not permit transmissions on these select channels to be changed to high (25 W).

- 1 From a USA or Canadian channel set to low power by default, such a 13,17, or 77, hold PTT.
- 2 While transmitting, select 25W.

Basic Operation 9

Using the Hailer

Before you can use the hailer function, you must provide and install a hailer horn on your boat deck or tower (optional). For more information, see the *Installation Instructions*.

The hailer allows you to make on-boat or ship-to-shore announcements, and allows two-way communications between connected radios. You can address the ship using the radio or handset, and sounds received through the horn can be heard through the radio speaker. For vessels with enclosed cabins, the hailer allows you to hear sounds from the deck.

NOTE: Hailer functionality is not available on all VHF radio models.

NOTE: When the radio is in hailer mode, it does not receive broadcasts from the currently active channel.

- 1 Select PA > HAILER.
 - Sounds received through the horn are heard through the radio speaker.
- 2 Hold PTT.
- 3 Select an option:
 - To make an announcement, speak into the handset.
 - To adjust the volume of the hailer broadcast, turn the SELECT dial on the radio, or select ▲ or ➤ on the handset.
- 4 Release PTT to stop broadcasting and listen for broadcasts from other connected radios on the ship.

Foghorn

NOTE: Foghorn functionality is not available on all VHF radio models.

Before you can use the foghorn, you must provide and install a hailer horn (optional) on the deck or tower of your boat. For more information, see the *Installation Instructions*.

The foghorn is part of the public address system of your radio. You can sound the foghorn through a hailer horn or an external speaker. Your radio can sound the horn automatically using standard patterns, or you can sound the horn manually. When you manually operate the foghorn, sounds received through the horn can be heard through the radio speaker between soundings.

Sounding the Foghorn Automatically

- 1 Select PA > FOG > AUTO.
- 2 Select a foghorn-type option.
 - The radio alternates between sounding the pattern of tones or rings and receiving radio broadcasts.
- 3 Turn the SELECT dial to adjust the volume of the horn (optional).

Sounding the Foghorn Manually

NOTE: When you sound the horn manually, the radio does not receive broadcasts between horn soundings.

- 1 Select PA > FOG > MANUAL.
 - Sounds are received through the horn and heard through the radio speaker.
- 2 Hold PTT.
 - **NOTE:** The horn stops sounding when you release PTT.
- 3 Turn the **SELECT** dial to adjust the volume of the horn (optional).

Adjusting the Sound Frequency of the Foghorn

You can increase or decrease the sound frequency of the foghorn. The pitch of the tone rises with an increase in frequency, and falls with a decrease in frequency. The minimum setting is 200 Hz, and the maximum setting is 850 Hz. The default setting is 350 Hz. Regulations dictate the correct frequency of foghorns, which correlate with the size of your vessel.

- 1 Select MENU > SYSTEM > FOG FREQUENCY.
- 2 Turn the **SELECT** dial to adjust the frequency in 50 Hz increments.
- 3 Select ACCEPT.

Entering Text

You may need to enter a name, a number, or other text on the radio.

- 1 From a number or text field, turn the **SELECT** dial to change the number, letter, or character.
- 2 Press the SELECT dial to accept the number, letter, or character and move to the next space in the sequence.
- 3 Repeat this process for each number, letter, or character.
 - **NOTE:** You can select to return to the previous entry in the sequence.
- 4 Select ACCEPT.

NOAA° Weather Broadcasts and Alerts

NOTE: This feature is not available on all radio models.

NOAA weather broadcasts on the weather (WX) channels are available only in the USA and certain regions in Canada.

Compatible radio models are programmed with 10 WX channels to monitor weather broadcasts from the National Oceanic and Atmospheric Organization (NOAA). WX channels are listen-only channels that broadcast in a continuous loop and are updated regularly. NOAA broadcasting information is regional and relevant to your broadcast area.

Tuning Weather Broadcasts

- From the home screen, press the SELECT dial.
 WX appears on the screen.
- 2 Turn the **SELECT** dial to change the weather channel.

Enabling and Disabling Weather Alerts

You can enable weather (WX) alerts to sound when you are using standard radio channels.

- 1 When tuning weather broadcasts, select **ALERT** to enable or disable weather alerts.
 indicates that weather alerts are enabled.
- 2 Select EXIT.

The radio returns to normal operation while continuing to monitor weather alerts.

Digital Selective Calling

Digital Selective Calling

NOTE: Before you can use DSC capabilities, you must enter a Mobile Marine Safety Identity (MMSI) number (*Entering Your MMSI Number*, page 12). An MMSI number identifies each DSC radio, like a telephone number.

Digital Selective Calling (DSC) is a key component of the Global Maritime Distress and Safety System (GMDSS). DSC enables VHF radios to place and receive digital calls directly with other vessels and shore stations, including the USA and Canadian Coast Guards. Your radio includes full Class-D DSC capabilities.

If you have a GPS device connected to the transceiver, your latitude, longitude, and the current time are transmitted when you send a distress call or other type of DSC call. If you enter your position information manually, your latitude, longitude, and time of entry are transmitted with the call. Transmitting your location automatically speeds help in an emergency situation.

Channel 70 is reserved exclusively for DSC calls, and your device uses a dedicated receiver to maintain a constant watch on Channel 70. You do not need to change the channel to make a DSC call. Your device changes to Channel 70 automatically to transmit a DSC call. Your radio sends the DSC data over Channel 70 in less than one second, and then tunes to an appropriate channel for voice communications.

appears on the device screen when you have an incoming or missed DSC call.

NOTE: The device disables DSC automatically when you turn on ATIS (*Automatic Transmitter Identification System*, page 21).

Entering Your MMSI Number

NOTICE

You can enter your MMSI number only once. If you must change your MMSI number after entering it, you must take your radio to your Garmin® dealer for reprogramming.

The Mobile Marine Safety Identity (MMSI) number is a nine-digit code that acts as a DSC self-identification number, and it is required to use the DSC capabilities of your radio. You can obtain an MMSI number from the telecommunications authority or ship registry for your country. In the USA, you can obtain an MMSI number from these sources:

- Federal Communications Commission (FCC): assignments are recognized internationally
- BoatU.S.*, Sea Tow*, or United States Power Squadrons*: assignments are for USA waters only.
- 1 Select MENU > DSC > MY MMSI.
- **2** Enter your MMSI number (*Entering Text*, page 11).
- 3 Select ACCEPT.
 - The radio prompts you to confirm your identity.
- **4** Enter your MMSI number again, and select **ACCEPT**. If the MMSI numbers you entered do not match, a message appears.
- 5 If necessary, select **RETRY**, and enter the number again.

Viewing Your MMSI Number

Select MENU > DSC > MY MMSI.

Distress Calls

When you make a distress call, your call is transmitted to all DSC-capable radios within receiving range. Your current GPS position (latitude and longitude) and the current time are included in the transmission if you have a GPS device connected to your transceiver. If you manually entered your position information with the time, that data is transmitted with the call.

NOTE: You should familiarize yourself with the standard distress-call format and protocol to ensure your calls are clear and effective.

Sending an Undesignated Distress Call

When you send an undesignated distress call, the nature of your emergency is not transmitted to the receiving stations. Sending an undesignated distress call is a faster procedure that can save you time during an emergency.

- 1 Lift the spring-loaded door, and hold **DISTRESS** for at least 3 seconds.
 - The radio beeps and counts down the seconds. DISTRESS CALL COUNTING DOWN appears on the screen. The radio sounds an alarm, switches to channel 70, and transmits your call on high (25 W) power.
- 2 Press any key to silence the alarm sound.
 - The radio tunes to channel 16 on high (25 W) power.
- **3** Hold **PTT** on the handset or radio to relay your distress message.

The radio waits for an acknowledgment (ACK) on channel 70 from a listening station.

Sending a Designated Distress Call

When you send a designated distress call, the nature of your emergency is transmitted to the receiving stations.

- 1 Lift the spring-loaded door, and press DISTRESS.
- 2 Turn the **SELECT** dial, and select the type of distress call.
 - TIP: You can select CLEAR to exit the screen without sending a distress call.
- 3 Hold **DISTRESS** for at least three seconds.
 - The radio beeps and counts down the seconds. DISTRESS CALL COUNTING DOWN appears on the screen.
 - The radio sounds an alarm, switches to channel 70, and transmits your call on high (25 W) power.
- 4 Press any key to silence the alarm sound.
 - The radio tunes to channel 16 on high (25 W) power.
- 5 Hold PTT on the handset or radio to relay your message.
 - The radio waits for an acknowledgment (ACK) on channel 70 from a listening station.

Waiting For and Receiving and Acknowledgment for a Distress Call

If the radio does not receive an acknowledgment for a distress call, the radio retransmits the distress call randomly between 3.5 to 4.5 minutes later, and continues to retransmit the distress call at random intervals until the radio receives an acknowledgment.

When the radio receives the acknowledgment, it begins beeping and DISTRSS ACK appears on the screen.

- 1 Press any key to turn off the beeping.
- 2 Select to view additional information.
 - **TIP:** If the MMSI of the station transmitting the acknowledgment signal is an entry in your directory, the name associated with the MMSI number appears on the screen. If the MMSI of the station is not in your directory, the MMSI number appears on the screen.
- 3 Select ACCEPT.

Stopping Automatic Retransmission of Distress Calls

Select CANCEL.

The radio remains tuned to channel 16.

NOTE: Selecting CANCEL ends the automatic repetition of the call, but does not communicate to other stations that you no longer have an emergency. If you no longer have an emergency, you should revoke the distress call (*Revoking a Distress Call*, page 13).

Revoking a Distress Call

You do not transmit a distress call until you hold DISTRESS for at least three seconds. If you inadvertently make a distress call, or are no longer in distress, you should cancel the call immediately by transmitting a voice message to all stations on channel 16.

- 1 Select CANCEL > YES, and wait until DISTRESS CANCEL HAS BEEN SENT appears on the screen.
- 2 Select OK.
- 3 Hold PTT on the handset, and transmit an appropriate voice message to cancel the distress call (*Distress Call Cancellation Script*, page 13).
- 4 Select an option:
 - Select **END** to complete the distress-call cancellation and return to normal radio operation.
 - Select **RESEND** to resend the distress-call cancellation and start the process again.

Distress Call Cancellation Script

When you revoke a DSC distress call (*Revoking a Distress Call*, page 13), you should transmit an appropriate cancellation message.

For example,	"All stations,	, all stations, all	stations, this is _	(vessel na	ame), MMSI numl	oer, po	sition
(North or	South),	(West or East).	Cancel my distre	ss alert of	_(date and time).	This is	_(vessel
name), MMSI	l number	Out."					

Digital Selective Calling 13