## Position Request Reply Type

The ability to send your position to another station is an added feature of DSC radios that have GPS attached. It is handy for rendezvous and rescue situations.

Your CobraMarine VHF radio allows you to choose whether to have the radio automatically respond to all **Position Requests** it receives or to alert you to a **Position Request** and allow you to choose whether to respond or not — manual reply.

To Set The Position Request Reply Type:

1. Enter the **DSC SETUP MENU** menu and scroll to POSITION REPLY with the **Up/Down soft keys** or the **UP/Down channel buttons.**

2. Press the **ENTR** soft key and observe the current highlighted setting — **AUTO or MANUAL**.

3. Use the **Up/Down soft keys** or the **Up/Down channel buttons** to change the setting.

4. Press the **ENTR** soft key to select the setting and return to the **DSC SETUP MENU**.
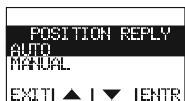
Auto Channel Switch

The ability of your radio to automatically switch to the requested channel when receiving an Individual Call. In some cases, automatically switching channels may not be wanted, especially if the radio is being used for Bridge to Bridge communications in a busy port or waterway.

Your CobraMarine VHF radio allows you to choose whether to have the radio automatically Change channels to the requested channel in an Individual Call or not.

To Set The Automatic Channel Switch On or Off:

1. Enter the **DSC SETUP MENU** menu and scroll to AUTO CHANNL SWITCH (Automatic Channel Switch) with the **Up/Down soft keys** or the **UP/Down channel buttons**.

2. Press the **ENTR** soft key and observe the current highlighted setting — **ON or OFF**.

3. Use the **Up/Down soft keys** or the **Up/Down channel buttons** to change the setting.

4. Press the **ENTR** soft key to select the setting and return to the **DSC SETUP MENU**.

Individual Call Reply

The Individual Call Reply feature is used when receiving Individual DSC calls. When receiving a Individual DSC Call, you may not want the radio to reply to the call automatically. This features allows you to disable the automatic reply. The ability to send your position to another station is an added feature of DSC radios that have GPS attached. It is handy for rendezvous and rescue situations.
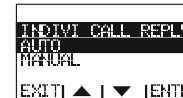
To Set The Individual Reply Auto or Manual:

1. Enter the **DSC SETUP MENU** menu and scroll to INDIVID CALL REPLY (Individual Call Reply) with the **Up/Down soft keys** or the **UP/Down channel buttons.**

2. Press the **ENTR** soft key and observe the current highlighted setting — **AUTO or MANUAL**.

3. Use the **Up/Down soft keys** or the **Up/Down channel buttons** to change the setting.

4. Press the **ENTR** soft key to select the setting and return to the **DSC SETUP MENU**.
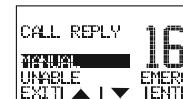
Manual Entry

The Manual position entry feature allow you to enter the time (UTC time), Latitude and Longitude.

To Enter the Time, Latitude, and Longitude:

1. Enter the **DSC SETUP MENU** menu and scroll to MANUAL ENTRY with the **Up/Down soft keys** or the **UP/Down channel buttons**.

2. The cursor will begin to blink at the first number of the UTC time entry.

3. Use the **Up/Down soft keys** or the **Up/Down channel buttons** to scroll through the number list.

4. Press the **ENTR** soft key to select a number. This will also move the blinking cursor to the next number under UTC Time.

5. Repeat steps 5 and 6 to enter additional numbers.

6. After entering the UTC time, press the **ENTR** soft key to move the blinking cursor to the first number under **LAT (Latitude)**.

7. Use the **Up/Down soft keys** or the **Up/Down channel buttons** to scroll through the number list.

8. Press the **ENTR** soft key to select the first number and move the cursor to the next number under LAT.

9. Repeat steps 9 and 10 until the seventh (7) digit of the LAT is entered.

10. After entering the LAT (Latitude), press the **ENTR** soft key to move the blinking cursor to the first number under LON (Longitude).

11. Use the **Up/Down soft keys** or the **Up/Down channel buttons** to scroll through the number list.

12. Press the **ENTR** soft key to select the first number and move the cursor to the next number under LON.

13. Repeat steps 9 and 10 until the eighth (8) digit of the LON is entered.

14. Press the **ENTR** button to save the entry and the radio will return to the **DSC SETUP MENU**.

MENU EXIT: You can exit the menu at any time by pressing the **EXIT** soft key on any screen. This method will exit to the next highest menu, repeated presses of the **EXIT** soft key will return the radio to the radio standby mode. The menu **EXIT** selection in the menu screen will return the radio immediately to the radio standby mode. When in the menu, just scroll down until the **EXIT** option is highlighted, then press the **ENTR** soft key.

Advanced Operation

Cobra® **has incorporated several features in your CobraMarine VHF radio to give you quick access to the voice calling channels and to let you monitor more than one (1) channel at once.**

Weather Alert Signal

When NOAA broadcasts a **Weather Alert Signal** and your radio is in the **Weather Alert** mode, you will hear a continuous audible tone and the radio will automatically switch to **Weather Radio** mode. The alert indicators will sound regardless of what channel you are operating on as soon as a NOAA alert signal is received.

When You Hear The Alert:

1. Press any key to turn **Off** the alert alarm and LCD indicator.

Channel 16+

This function gives you quick access to calling Channel 16 or Channel 9 from any operational mode.

Channel 16/9 Button

To Switch To Channel 16 Or Channel 9:

1. Press the Channel 16+ button to change to Channel 16 from any channel.

2. Press the Channel 16+ button again to change to Channel 9.

Additional presses of the Channel 16+ button will toggle back to the original channel and between channels 16 and 9.

Tri-Watch

Tri-Watch gives you one (1) soft key access to scan the three (3) channels of most importance to you. Channel 16 and Channel 9 will always be included as scanned channels. The remaining channel will be the VHF channel in effect when you enter **Tri-Watch** mode.
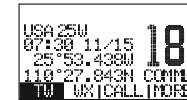
NOTE
The radio must be squelched for tri-watch to function. See page **26** for squelch procedure.

Up/Down Buttons

To Enter Tri-Watch Mode:

1. In **Standby** mode, use the **Up/Down buttons** to go to the channel you want to add as the third location to be scanned.

2. Press the **Tri-Watch soft key**.

Tri-watch will be indicated on the LCD and the radio will scan between Channel 16, Channel 9, and the third tri-watch channel you selected. A signal on any one (1) of the three (3) channels will stop the scan to allow you to listen to the traffic on the channel. The channel number will be displayed on the LCD.

Soft Keys

To Exit Tri-Watch Mode:

1. Press the **Tri-Watch** soft key. The radio will return to **Standby** mode

During Tri-Watch (while receiving an incoming transmission), You Can Choose From The Following:

a. Press the **Talk** button to remain on that tri-watch channel and return to **Standby** mode.

If you do not press any buttons, your radio will automatically resume scanning tri-watch channels when the incoming transmission is complete.
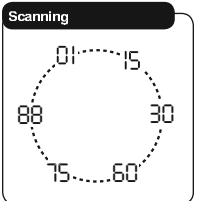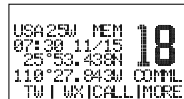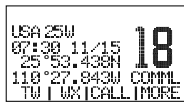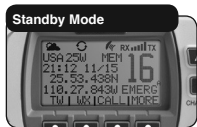
During Tri-Watch (while not receiving a transmission):

a. Press the **Talk** button to communicate on the last tri-watch channel scanned and return to **Standby** mode.
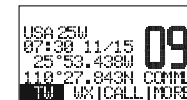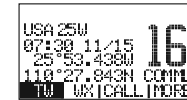
Memory Channels

You can program (or tag) any or all channels to be scanned in the **Memory Scan** mode.

Standby Mode

Up/Down Buttons

Soft Keys

Scanning

To Program Memory Channels:

1. From **Standby** mode, select a channel to be tagged using the **Up/Down** buttons.

2. Press the **MORE soft key** (if necessary), then the **MEM soft key**. The channel will be tagged for scanning and **MEM** (memory channel) will appear on the LCD whenever that channel is selected.

Repeat steps 1 through 2 to add addition memory channels.

To Clear Memory Channels:

1. From **Standby** mode, select a channel to be cleared from a memory tagging using the **Up/Down** buttons.

2. Press and hold the **MORE soft key** (if necessary), then the **MEM soft key**. The channel will be untagged and **MEM** (memory channel) will no longer appear on the LCD whenever that channel is selected.

Repeat steps 1 through 2 to clear additional channels from memory locations.

Memory Scan

During **Memory Scan**, the radio will rapidly switch from tagged channel to tagged channel. Whenever any activity is detected, the radio will stop the scan to allow you to listen to the activity on that channel. The radio will then continue to scan after 2 seconds of inactivity, unless you switch out of the **Memory Scan** mode.

NOTE
If there are fewer than two (2) channels tagged, the **Memory Scan** mode will not be available. [See page 47 under program memory channels to tag at least two (2) channels.]

NOTE
The radio must be squelched for the **Memory Scan** mode to function. See page **26** for squelch procedure.

Standby Mode

Soft Keys

To Enter Memory Scan:

1. From **Standby** mode, press the **MORE soft key** (if necessary), then the **SCAN soft key**.

The radio will immediately begin to scan the channels you tagged. SCAN (memory scan) will be highlighted on the LCD.

To Exit Memory Scan:

1. From **Memory Scan** mode, press the **SCAN soft key**.

This will return the radio to **Standby** mode on the last scanned memory location.

During Memory Scan (while receiving an incoming transmission), You Can Choose From The Following:

a. Press the **Talk** button to remain on that memory location and end scanning. This will return the radio to **Standby** mode.
The radio will then continue to scan after 2 seconds of inactivity, unless you switch out of the **Memory Scan** mode.

During Memory Scan (while not receiving a transmission):

b. Press the **Talk** button to communicate on the last channel scanned and return to **Standby** mode.
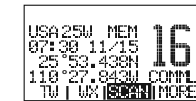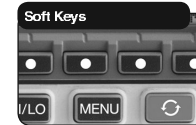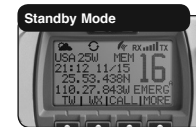
Public Address

Use the **Public Address (PA)** mode of voice transmission to communicate to other nearby vessels or people. This feature requires a mounted and connected optional PA speaker.

Soft Keys

Talk Button

To Broadcast on the PA Speaker:

1. Press the **PA** soft key.

2. Press the **Talk** button on the microphone and speak into the microphone.

NOTE
While in the **PA** mode:

- When the **Talk** button is pressed, the output is directed to the **PA** speaker and not transmitted as a radio signal through the antenna.

- Received radio messages will not be heard while the **PA** mode is active.

3. To turn off **PA**, press **PA soft key** again.

Burp Feature

Cobra's **Burp** feature allows the operator to expel water from inside the speaker grill. This is especially useful if the radio is Sprayed or during extreme foul weather conditions. In these conditions, water can become trapped in the speaker grill and muffle the audio.

Soft Keys

To Activate Burp:

1. Press the **BURP** soft key.

2. The **Burp** tone(s) at maximum level will sound from the internal speaker for five seconds.

3. During this time, the matrix will display **EXCUSE ME !**.

4. After a 5-second interval, the radio will return to standby

EXCUSE ME ! 16
EMERG
BURP   MORE

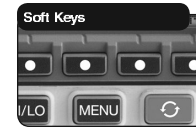## Rewind-Say-Again® Feature

The radio has a Cobra exclusive playback feature, **Rewind-Say-Again®**. This feature allows you to replay the last 20 seconds of an incoming audio transmission. It also allows you to record call details including position coordinates, call signs, registration numbers and store details that will help authorities locate a distressed vessel.

Example 1:
When engine noise, music or conversation creates too much noise to hear an inbound message clearly, press the **Rewind-Say-Again®** button to enter the **Rewind-Say-Again®** menu to be able to hear the message a second time. This feature eliminates asking the sender to repeat the message.

Example 2:
When listening to an urgent distress of an excited caller with confusing background noise, press the **Rewind-Say-Again®** button to enter the **Rewind-Say-Again®** menu to be able to hear the message a second time and get lifesaving information.

Rewind-Say-Again® Button

Soft Keys

Operation of Rewind-Say-Again®

1. Press the **Rewind** button after the last inbound audio transmission.

2. Using the **Up/Down soft keys** or the **channel Up/Down buttons** scroll to the PLAY RECORDING menu option.

3. Press the **ENTR** key to hear the recording.

4. The radio automatically replays the last 20 seconds of the previous audio transmission.

5. Respond to the caller normally, after the message is replayed.

Setup and Advanced Operation of Rewind-Say-Again®
Operation of Rewind-Say-Again®:

1. Press the **Rewind** button.

REWIND
OFF: EXIT REWIND
PAUSE RECORDING
PLAY RECORDING
EXIT| ▲ | ▼ |ENTR

   a. **OFF: EXIT REWIND** - When highlighted and the **ENTR** key is pressed, exits the **Rewind** features and when the **Rewind** button is pressed again, the screen above will be displayed.

   b. **PAUSE RECORDING** - Pause recording of incoming audio transmissions.

   c. **PLAYBACK RECORDING** - Playback recorded incoming audio.

   d. **SAVE RECORDING** - Saves recorded incoming audio.

   e. **ERASE RECORDING** - Erases the saved recording.

   f. **RECORD MESSAGE** - Record a message (using the microphone to record the message, using the PTT key to start and stop the recording).

   g. **PLAYBACK MESSAGE** - Playback the recorded message.

   h. **SAVE MESSAGE** - Save the recorded message.

   i. **ERASE MESSAGE** - Erases the saved message.

   j. **TRANSMIT MESSAGE** - Transmit the recorded message.

Digital Select Calling (DSC) Operation

The **Send** menu displays when the **Distress** button is pressed.

> **NOTE**
> This radio follows Class-D DSC protocol with a dedicated Channel 70 receiver.

Sending Distress Calls

Sending and receiving distress calls and acknowledgements on Channel 70 can be a lifesaver for mariners.

> **NOTE**
> The DSC call:

- Sound the distress alarm at all receiving stations.
- Inform receiving stations of your identity (MMSI).
- Informs receiving stations of the nature of the emergency.
- Informs receiving stations of sending position when a GPS device is connected or a position is manually entered. DSC operation does not provide receiving stations with information like number of persons aboard or injuries. This specific information must be communicated by voice on Channel 16 to the station that acknowledges a DSC Distress call.
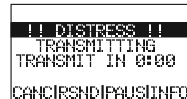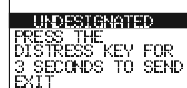
To Send a DSC Distress Call:

1. From **Standby** mode, pull down the spring-loaded red door on the transceiver and press the **Distress** button. You will have three (3) choices:

   - Send a distress call automatically, with your position, if you are connected to a GPS. Or send the call, without your position, if not connected to a GPS.
   - Include a Nature of Distress message with the distress call.
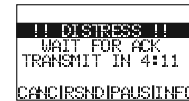   - Cancel the distress call process and return to **Standby** mode.

2. Choose one of the following:

Send an Automatic Distress Call:

   a. Press and hold the **Distress** button.

Include a Nature of Distress Message with Distress Call:

   a. Press and release the **Distress** button.

   b. Press the **Up/Down soft keys** or the **Channel Up/Down buttons** to manually select from the list of pre-programmed Nature of Distress calls — UNDESIGNATED, FIRE, FLOODING, COLLISION, GROUNDING, more.

   c. Press and hold the **Distress** button for three (3) seconds to transmit the distress signal.

Abort The Distress Call Process:

If the **Distress** button is pressed by mistake:
a. Press the EXIT soft key to return to Standby mode.

The **Distress** alarm sounds to confirm that the message is transmitted. At the end of the transmission, the radio maintains a watch on Channel 16 and Channel 70 for an acknowledgement. Press any button to turn Off the alarm.

- If an acknowledgement is received, the **Distress** alarm sounds again and the responding party's MMSI number displays on the LCD.
- If no acknowledgement is received, the radio resends the message at approximately four (4) minute intervals until an acknowledgement is received or the **Distress** call is aborted.
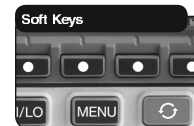
Cancelling a Distress Call
At anytime Before receiving a Distress Call Acknowledgement, the Distress can be canceled.

1. From the **WAIT FOR ACK** screen, press the **CANC** soft key.

2. From the **DISTRESS CANCEL** screen, confirm cancelling the Distress Call by pressing the **YES soft key**.

3. After the **Distress Call Cancel** message has been sent, press the **CONT** key.

4. After the Distress Cancel has been sent, your are required to follow-up with a **VOICE CANCEL** containing the following information:

   "ALL STATIONS" SAY 3 TIMES

   "This is (SHIP NAME), (CALL SIGN), (SHIP MMSI #), (POSITION)" CANCEL MY DISTRESS ALERT OF "(DATE, UTC TIME)"

5. After completing the **VOICE CANCEL** procedure, press the **DONE soft key** to return to the radio idle screen.

MRF77_MANL_OPERATION.indd   50-51   1/26/15   12:30 PM
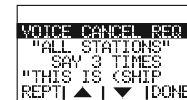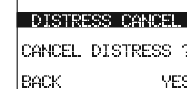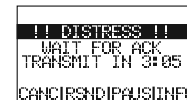
Receiving Distress Calls

When a vessel is within range of a DSC Distress call, the radio receives the call, sounds the **Distress** alarm, and switches to Channel 16. All DSC calls that are received will sound one (1) alert alarm. See pages **10-13** for descriptions of the different alarms. Press any button to turn Off the alarm. The received call information continues to display on the LCD.

```
DISTRESS RECEIVE
NOT ACKNOWLEDGED
MMSI: 123456789
RECEIVED:   0:34
STOP ALRM ANY KEY
```

```
DISTRESS RECEIVE
NOT ACKNOWLEDGED
MMSI: 123456789
RECEIVED:   0:34
OK |QUIT|PAUS|INFO
```

When A Distress Call Is Received:

1. Press any button to turn Off the alarm.

2. Read and write down the distress information that displays on the LCD (position data may or may not be shown); then determine whether to answer the call.

3. Respond, if appropriate, by pressing and holding the **Talk** button to transmit on Channel 16.

4. The received information is placed into the **Call Log**. See page **62** for more information on viewing the **Call Waiting Log.**

5. If MMSI (Maritime Mobile Service Identify) matches a contact from the **Individual Directory** entry stored in your radio, the name identification displays and the alarm sounds to identify the **Name** of the matching MMSI member.

6. Press **ESC** after viewing the display to return to normal **Standby** mode.

> **NOTE**
> The radio automatically switches to Channel 16 upon receiving a DSC Distress call and the alarm will sound for approximately two (2) minutes. Press any button to clear the **Distress** alarm instantly.

Regarding Distress Relay Calls

This radio cannot send Distress Relay calls. Only large ships and shore stations, with specially equipped radios, can send Distress Relay calls.

Receiving Distress Relay Calls

This radio does respond to a Distress Relay call just as it responds to a Distress call.

Sending An All Ships Calls

Use the DSC All Ships call for the same urgency and safety purposes as the Pan and Securite voice calls as well as sending Routine messages to all stations at once. The DSC All Ships call reaches all stations in radio range. Use the DSC All Ships call for urgent, but not life-threatening situations or to broadcast a safety warning to all vessels in the area.

Up/Down Buttons
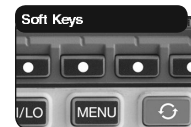
Soft Keys

```
CALL MENU
INDIVIDUAL CALL
GROUP CALL
ALL SHIPS CALL
EXIT| ▲ | ▼ |ENTR
```

```
SELECT CHANNEL
16
05
08
EXIT| ▲ | ▼ |ENTR
```

```
ALL SHIPS CALL

TRANSMIT SAFETY ?

EXIT        ENTR
```

```
ALL SHIPS CALL
SAFETY
CHANNEL 16
ELASPED TIME 0:50
EXIT
```

To Send An All Ships Call:

1. Press the **CALL soft key** and scroll to ALL SHIPS CALL with the UP/Down soft keys or the **channel Up/Down buttons.**

2. Select either SAFETY or URGENCY and press the **ENTR soft key.**

3. Using the **Up/Down soft keys** or the **channel Up/Down buttons,** select the voice channel all radios will tune to after the All Ships message is sent and press the **ENTR** key.

4. Press the **ENTR soft key** to send the **All Ships Call.**

5. The radio will tune to the voice channel previously selected.

6. Press the **EXIT soft key** to exit the All Ships Call mode and return the radio to the idle screen.

Receiving An All Ships Call

All Ships calls received from stations within range of the radio sound the Distress alarm and switch the radio to Channel 16.

```
ALL SHIPS RECEIVE
MMSI: 123456789
CONNECT TIME 8:45
TYPE: URGENCY
              QUIT
```

When An All Ships Call Is Heard:

1. Press any button to turn **Off** the alarm.

2. Read and write down the MMSI of the vessel sending the call as well as the date and time of the call.

3. Listen to the incoming voice message on the channel the radio selects for the incoming All Ships call.

Sending A Geographical Call

This radio does not send Geographical calls. Only large ships and shore stations with specially equipped radios send Geographical calls.

Sending An Individual Call

Use the DSC Individual call feature to request communication with one (1) exclusive station. The DSC Individual call does not alert all other stations within range.

Up/Down Buttons

Soft Keys

```
CALL MENU
INDIVIDUAL CALL
GROUP CALL
ALL SHIPS CALL
EXIT| ▲ | ▼ |ENTR
```

```
INDIVIDUAL CALL
MANUAL
FRIENDS BOAT

EXIT| ▲ | ▼ |ENTR
```

```
SELECT CHANNEL
06
08
09
EXIT| ▲ | ▼ |ENTR
```

```
INDIVIDUAL CALL
VOICE CALL ON
CHANNEL 06 ?

EXIT| ▲ | ▼ |ENTR
```

```
INDIVIDUAL CALL
FRIENDS BOAT
WAITING FOR ACK
ELASPED TIME00:15
EXIT          REPT
```

```
INDIVIDUAL CALL
FRIENDS BOAT
CONNECTED
ELAPSED TIME00:15
EXIT| ▲ | ▼ |ENTR
```

To Send An Individual Call:

1. Press the **CALL soft key** and scroll to INDIVIDUAL CALL with the **UP/Down soft keys** or the **channel Up/Down buttons** and press the **ENTR soft key**.

2. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight a previously entered directory entry or use the **MANUAL** entry option.

3. Press the **ENTR** key.

4. Using the **Up/Down soft keys** or the **channel Up/Down buttons**, select the voice channel all radios will tune to after the Individual Call message is sent and press the **ENTR** key.

5. Press the **ENTR soft key** to send the Individual Call.

6. The radio will tune to the voice channel previously selected.

7. Press the **EXIT soft key** to exit the Individual Call mode and return the radio to the idle screen.

■ If the radio called sends back an automatic DSC response "able to comply," the individual alarm will sound. Wait for a voice message from the called station.

■ If an "unable to comply" response or no reply is received, the radio display asks to resend the message or exit the menu. At the **Unavailable** menu, Press REPT or EXIT soft keys.

■ If **REPT** is selected, the radio restarts the individual call.

■ If **EXIT** is selected, the radio will return to the Call Menu.

Receiving An Individual Call

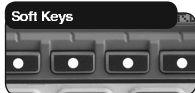When another station makes an **Individual** call to your radio:

- The Individual alarm sounds.
- The caller is identified on the LCD.
- If **Automatic Channel Switch** is on, the radio switches to the channel selected by the caller.
- Call information is placed in the **Call Log**.

To Receive An Individual Call:

Press the **Talk** button and greet the caller.

Sending A Group Call

Sending a Group call is like sending an Individual call, but the group MMSI information is used and the resend and DSC responses do not apply. See pg. **41** for creating and entering a group MMSI.

To Send A Group Call:

1. Press the **CALL soft key** and scroll to GROUP CALL with the **Up/Down soft keys** or the **channel Up/Down buttons** and press the **ENTR** soft key.

2. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight a previously entered directory entry or use the **MANUAL** entry option.

3. Press the **ENTR** key.

4. Using the **Up/Down soft keys** or the **channel Up/Down buttons**, select the voice channel all radios will tune to after the Group Call message is sent and press the **ENTR** key.

5. Press the **ENTR** soft key to send the Group Call.

6. The radio will tune to the voice channel previously selected.

7. Press the **EXIT** soft key to exit the Group Call mode and return the radio to the idle screen.

- All radios switch to the channel selected in step 1. Press and hold the **Talk** button to send a voice message to everyone in the group.
- Anyone in the group can transmit on the channel.

Receiving A Group Call

When another station makes a Group call to the radio, the **Individual** alarm sounds, the caller is identified on the LCD, call information is placed in the **Call Log**, and the radio is switched to the channel selected by the caller, similar to an Individual call. Press any button to turn Off the alarm.

To Receive A Group Call:

1. Listen for the group voice message.

2. Press the **Talk** button and respond only if appropriate.

Sending A Position Request

Position Request mode enables a DSC radio to obtain the position (latitude and longitude) of a station that has a GPS device connected to the DSC radio at that station. In most cases, a reply will be forthcoming. If for some reason, your request is not acknowledged in five (5) minutes, the user will be prompted to Resend the request or exit the menu.

To Request The Position Of Another Station:

1. Press the **CALL soft key** and scroll to POSITION REQUEST with the **Up/Down soft keys** or the **channel Up/Down buttons** and press the **ENTR** soft key.

2. Using the **Up/Down soft keys** or the c**hannel Up/Down buttons** to highlight a previously entered directory entry or use the **MANUAL** entry option.

3. Press the **ENTR** key.

4. Press the **ENTR** soft key to send the Position Request Call.

5. The radio will show the WAITING FOR ACK screen while waiting for the acknowledgement from the called radio. And will show the ACKNOWLEDGED screen after the called radio responds.

Sending A Position Request continued

6. After the called radio acknowledges the call, use the Down soft key to view the called radios current position.

7. Press the EXIT soft key to exit the Position Request mode and return the radio to the Call Menu.

NOTE
Your radio will send the **Position Request** and there will be one (1) of three (3) possible responses:

■ You will receive the position.

■ You will receive a no position data response, meaning the station you queried is not connected to a **GPS** device and cannot send its position.

■ You will receive a no reply response, meaning the operator of that station has chosen not to reply to your request.

If You Receive A Position:
The requested position with the station name and MMSI will show on your screen.

Press the **Enter** button to return to **Standby** mode after you have noted the station's position.

NOTE
If the radio is connected properly to your chartplotter, you will see the requested position of the other vessel indicated on the display.

Receiving A Position Request

When you went through the DSC set-up process, you set a position request reply type. (See page **42** to change your setting.) Depending on the setting you chose, when a **Position Request** message is received, your radio will enter either:

■ The **Auto Reply** mode.

■ The **Manual Reply** mode.

When The Radio Is In Auto Reply Mode:

A position request will sound the **Position Request** alarm and show the name of the requesting station on the LCD. Your radio will automatically respond. It will send your position, if you have a **GPS** device connected to your radio, or NO POS. DATA (no position data), if you do not have a **GPS** device connected.

Press any button to silence the alarm and exit the display.

When The Radio Is In The Manual Reply Mode:

A position request message will sound the **Position Request** alarm and show the name of the requesting station. You can choose to:

■ Reply and send your position.

■ Exit without sending your position.

If You Choose to Reply with Your Position:
1. Press the **ENTR** soft key.

If You Choose Not to Reply with Your Position:
2. Press the **EXIT** soft key.

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Sending A Position Send

Position Send uses your connected GPS in similar fashion to the **Position Request** function, except that you initiate the activity to let another station know where you are.

```
   POSITION SEND
MANUAL
FRIENDS BOAT

EXIT| ▲ | ▼ |ENTR
```

```
   POSITION SEND
ROUTINE
SAFETY

EXIT| ▲ | ▼ |ENTR
```

```
   POSITION SEND
TRANSMIT POSITION
TO FRIENDS BOAT?

EXIT          ENTR
```

```
   POSITION SEND
FRIENDS BOAT
TRANSMITTED
ELASPED TIME 0:30
EXIT
```

To Send A Position Send Message:

1. Press the **CALL soft key** and scroll to POSITION SEND with the **Up/Down soft keys** or the **channel Up/Down buttons** and press the **ENTR soft key**.

2. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight a previously entered directory entry or use the **MANUAL** entry option.

3. Press the **ENTR** key.

4. Press the **ENTR soft key** to send the Position **SEND** Call.

5. Press the **EXIT** soft key to exit the Position Send mode and return the radio to the Call Menu.

Receiving A Position Send

When another station sends you its position in **Position Send** mode, the **Individual Alarm** will sound and the station's name and position will be shown on the LCD. Press any button to turn **Off** the alarm and return to **Standby** mode.

Call Log and Distress Log

Call Waiting functions similarly to the Caller ID function on your telephone. It will capture the caller's MMSI identification number and any other data included in a DSC message.

NOTE
Each **Call Log** memory can hold up to 20 messages. Once the memory becomes full, each new call will erase the oldest call information on a first-in, first-out basis.

NOTE
The **Envelope** Icon will be displayed when calls are received and placed into any of the call logs.

All Messages Viewed
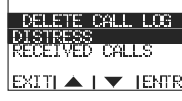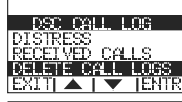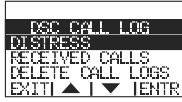
Unread Messages

■ The envelope Icon will be shown closed to indicate unread messages.

■ The envelope Icon will be shown open to indicate that all messages have been read.

To Review Call Log Messages Received While In DSC Standby Mode:

1. Press the **CALL soft key** and scroll to `CALL WAITING` with the **Up/Down soft keys** or the **channel Up/Down buttons** and press the **ENTR** soft key.

2. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight DISTRESS LOG or RECEIVED CALLS logs.

3. Press the **ENTR** key.

4. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight a log entry.

5. Press the **ENTR** key to view the log entry.

6. Press the **EXIT soft key** to exit the Position Send mode and return the radio to the DSC CALL LOGS Menu.

To Delete Call Log Information:

1. Press the **CALL soft key** and scroll to `CALL WAITING` with the **Up/Down soft keys** or the **channel Up/Down buttons** and press the **ENTR** soft key.

2. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight `DELETE CALL LOGS`.

To Delete Call Log Information continued:

3. Press the **ENTR** key.

4. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight `DISTRESS` or `RECEIVED CALLS` log entry.

5. Press the **ENTR** key and confirm delete by pressing the **ENTR** key.

6. Press the **EXIT** soft key to exit the Position Send mode and return the radio to the `DELETE CALL LOGS` Menu.

Test Call

The **Test Call** feature allows the user to confirm that the radio is fully operational and that the DSC call functions are working properly.
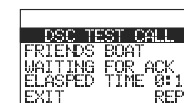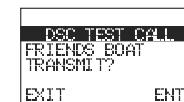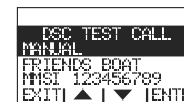
1. Press the **CALL soft key** and scroll to `TEST CALL` with the **UP/Down soft keys** or the **channel Up/Down buttons** and press the **ENTR** soft key.

2. Using the **Up/Down soft keys** or the **channel Up/Down buttons** to highlight a previously entered directory entry or use the **MANUAL** entry option.

3. Press the **ENTR** key.

4. Press the **ENTR soft key** to send the Test Call.

5. The radio will tune to the voice channel previously selected.

6. Press the **EXIT soft key** to exit the Test Call mode and return the radio to the Call Menu.

Alarm In

Allows connection to the alarm output of your chart plotter to alert you when an arrival, off-course, etc.alarm has been activated.
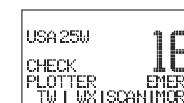
1. Connect the **Blue** wire on the back panel wire harness to the Alarm Output of your plotter (see the operators manual of your plotter for connection and use details).

2. When your plotter outputs the alarm signal (the plotter grounds the alarm output), your CobraMarine radio will activate the Alarm screen and sound a loud alarm tone.

3. Pressing any key on your CobraMarine radio will silence the alarm.

Maintenance

Very little maintenance is required to keep your CobraMarine VHF radio in good operating condition.

- Keep the radio clean by wiping with a soft cloth and mild detergent. Rinse with fresh water. Do not use solvents or harsh or abrasive cleaners, which could damage the case or scratch the LCD screen.

- If the radio is exposed to salt water, rinse it in fresh water at least once a day to prevent build-up of salt deposits, which could interfere with button operation.

Troubleshooting

Problem	Possible Cause(s)	Solution(s)
No display on LCD when radio is turned **On**	Improper power connection	Insure power connections are proper and secure
Will transmit at one (1) watt, but not at 25 watts	Selected channel is limited to one (1) watt	Switch to another channel
Will not transmit	Selected channel is limited to receive only	Switch to another channel
No sound from speaker	Volume level is too low or squelch level is too deep	Readjust volume and squelch
No answer to calls	Out of range of other station	Switch to high power (25 watts) or move closer
	Signal is blocked by terrain	Move until you have a "line-of-sight" to the other station

Specifications

General	
Number of Channels	All U.S.A., Canadian, and International 10 NOAA Weather Channels
Channel Spacing	25 kHz
Modulation	5 kHz Max.
Input Voltage	13.8 VDC
Current Drain:	
Stand-by	20 mA
Receive	200 mA
Transmit	5A @ High power 1A @ Low
Temperature Range	-20˚ C to 55˚ C
Unit Dimensions	6.25" x 3.0" x 6" (15.9 cm x 5.7 cm x 18 cm)
Unit Weight	2 lbs., 12.0 oz. (1100 g)

Receiver	
Frequency Range	156.050 to 163.275 MHz
Receiver Type	Double Conversion Super-Heterodyne
Sensitivity:	
20 dB Quieting	0.35 uV
12 dB Sinad	0.30 uV
AF Output	2.5 Watts @ 8 Ohms

Transmitter	
Frequency Range: TX	156.025 to 157.425 MHz
RF Output Power	1 and 25 Watts
Spurious Emissions	-60 dB High -55 dB Low
Microphone Type	Electret
Frequency Stability	+/-10 ppm
FM Hum and Noise	40 dB

VHF Marine Channel Assignments

Three (3) sets of VHF channels have been established for marine use in the U.S.A., Canada and the rest of the world (International). Most of the channels are the same for all three (3) maps, but there are definite differences (see table on the following pages). Your radio has all three (3) maps built into it and will operate correctly in whichever area you choose.

The following is a brief outline of the channel assignments in the U.S.A. Channel Map.

Channel Assignments (English)

Distress, Safety, and Calling
Channel 16
Getting the attention of another station (calling) or in emergencies (distress and safety).

Calling
Channel 9
General-purpose (non-emergency) calling by non-commercial vessels. Recreational boaters are urged to use this channel to reduce congestion on Channel 16.

Intership Safety
Channel 6
Ship-to-ship safety messages and for search and rescue messages to Coast Guard ships and aircraft.

Coast Guard Liaison
Channel 22A
To talk to the Coast Guard, Canadian Coast Guard (non-emergency) after making contact on Channel 16.

Non-Commercial
Channels 68, 69, 71, 72, 78A, 79A, 80A*
Working channels for small vessels. Messages must be about needs of the vessel, such as fishing reports, berthing and rendezvous. Use Channel 72 only for ship-to-ship messages.

Commercial
Channels 1A, 7A, 8, 9, 10, 11, 18A, 19A, 63A, 67, 72, 79A, 80A, 88A*
Working channels for working ships only. Messages must be about business or needs of the ship. Use Channels 8, 67, 72 and 88A only for ship-to-ship messages.

Asignación de canales de VHF para radiocomunicación marítima

Existen tres (3) juegos de canales VHF para uso marítimo en los EE.UU., Canadá y el resto del mundo (internacional). La mayoría de los canales coinciden en los tres (3) mapas, pero sin duda existen diferencias (consulte las tablas en las páginas siguientes). El radio incorpora los tres (3) mapas y funcionará correctamente en cualquiera de las tres áreas.

A continuación presentamos en forma resumida las asignaciones de canales del Mapa de canales para EE.UU.

Asignaciones de canales (Español)

Auxilio, seguridad y llamadas
Canal 16
Para ser oídos por otra estación (llamadas) o en casos de emergencia (auxilio y seguridad).

Llamadas
Canal 9
Llamadas de carácter general (excepto casos de emergencia) para embarcaciones no comerciales. Se le pide encarecidamente a la tripulación de las embarcaciones recreativas usar este canal para reducir la congestión del canal 16.

Seguridad entre embarcaciones
Canal 6
Para mensajes de seguridad entre embarcaciones y para mensajes de búsqueda y rescate enviados a barcos y aviones de la guardia costera.

Enlace con la guardia costera
Canal 22A
Para hablar con las guardias costeras estadounidenses y canadienses (excepto casos de emergencia) tras haber establecido contacto por el canal 16.

No comerciales
Canales 68, 69, 71, 72, 78A, 79A, 80A*
Canales activos para pequeñas embarcaciones. Los mensajes deberán estar relacionados con necesidades de las embarcaciones, como por ejemplo, informes de pesca, atraques y agrupamientos. Use el canal 72 solamente para mensajes entre embarcaciones.

Comerciales
Canales 1A, 7A, 8, 9, 10, 11, 18A, 19A, 63A, 67, 72, 79A, 80A, 88A*
Canales activos para embarcaciones activas solamente. Los mensajes deberán estar relacionados con la actividad comercial o las necesidades de la embarcación. Use los canales 8, 67, 72 y 88A solamente para mensajes entre embarcaciones.

VHF Marine
Channel Assignments

Appendix

VHF Marine
Channel Assignments

Appendix

Channel Assignments (English)

Sea Tow Automated Radio Check (ARC)
Channels 24, 25, 26, 27, 28, 84*

Tune your radio to the proper channel for your area (see seatow.com/arc). Conduct a radio check as you normally would. Upon releasing the mic the system will replay your transmission letting you hear how you sound.

Port Operations
Channels 1A*, 5A*, 12*, 14*, 18, 19, 20A, 21, 22, 63A*, 65A, 66A, 73, 74, 75, 76, 77*, 79, 80, 81, 82

Used for directing the movement of ships in or near ports, locks or waterways. Messages must be about operational handling, movement and safety of ships.

Navigational
Channels 13, 67

Channels are available to all vessels. Messages must be about navigation, including passing or meeting other vessels. These are also the main working channels for most locks and drawbridges. You must keep your messages short and power output at no more than 1 watt.

Maritime Control
Channel 17

For talking to vessels and coast stations operated by state or local governments. Messages must be about regulation and control, boating activities, or assistance.

Digital Selective Calling
Channel 70

This channel is set aside for distress, safety and general calling using only digital selective calling techniques. Voice communication is prohibited; your radio cannot transmit voice messages on this channel.

Weather
Channels Wx 1 Thru 10

Receive-only channels for NOAA and Canadian weather broadcasts. You cannot transmit on these channels.

NOTE
* These channels are restricted to the listed uses in certain parts of the country or for certain types of users only. Consult FCC rules or a knowledgeable radio operator before using them.

Asignaciones de canales (Español)

Sea Tow Control de radio automatizado (ARC)
Canales 24, 25, 26, 27, 28, 84*

Sintonice su radio en el canal correcto para su área (ver seatow.com/arc). Llevar a cabo una comprobación de la radio como lo haría normalmente. Al soltar el micrófono el sistema se volverá a reproducir la transmisión que le permite escuchar cómo suena.

Operaciones portuarias
Canales 1A*, 5A*, 12*, 14*, 18, 19, 20A, 21, 22, 63A*, 65A, 66A, 73, 74, 75, 76, 77*, 79, 80, 81, 82

Usados para dirigir el movimiento de las embarcaciones dentro de áreas portuarias, esclusas o canales. Los mensajes deberán estar relacionados con maniobras operacionales, movimientos y seguridad de las embarcaciones.

Navegación
Canales 13, 67

Estos canales están disponibles para todas las embarcaciones. Los mensajes deberánestar relacionados con la navegación, incluidas las maniobras para pasar o alcanzar otrasembarcaciones. Éstos también son los principales canales activos para la mayoría de las esclusas y puentes levadizos. Usted deberá transmitir mensajes cortos y mantener la potencia de salida en un vatio como máximo.

Control marítimo
Canal 17

Para comunicarse con embarcaciones y estaciones costeras operadas por entidades gubernamentales locales o estatales. Los mensajes deberán estar relacionados con regulación y control, asistencia o actividades de navegación.

Llamadas selectivas digitales
Canal 70

Este canal está reservado para solicitudes de auxilio, seguridad y llamadas de carácter general que usen solamente técnicas de llamadas selectivas digitales. Las comunicaciones verbales están prohibidas; el radio no puede transmitir mensajes de voz por este canal.

Meteorología
Canales Wx 1 a 10

Canales de recepción únicamente para difusión de información meteorológica NOAA y canadiense. Usted no puede transmitir por estos canales.

NOTA
* El uso de estos canales está dedicado a las aplicaciones que aparecen en la lista, en ciertas partes del país o para ciertos tipos de usuario solamente. Consulte las normas de la FCC o a un operador de radio con experiencia antes de usarlos.

Channel Number Número de canal	Channel Map Mapa de canales			Frequency Frecuencia		Power Limits Límites de potencia
	USA EE.UU.	Int'l nternac	Canada Canadá	Transmit Transm.	Receive Recepción	
01		●	●	156.050	160.650	
01A	●			156.050	156.050	
02		●	●	156.100	160.700	
03		●	●	156.150	160.750	
04		●		156.200	160.800	
04A			●	156.200	156.200	
05		●		156.250	160.850	
05A	●		●	156.250	156.250	
06	●	●	●	156.300	156.300	
07		●		156.350	160.950	
07A	●		●	156.350	156.350	
08	●	●	●	156.400	156.400	
09	●	●	●	156.450	156.450	
10	●	●	●	156.500	156.500	
11	●	●	●	156.550	156.550	
12	●	●	●	156.600	156.600	
13	●	●	●	156.650	156.650	1 watt USA 1 vatio EE.UU. y Canadá
14	●	●	●	156.700	156.700	
15	●			Rx Only	156.750	
15			●	156.750	156.750	1 watt CANADA 1 vatio Canadá

Channel Use (English)	Uso de canales (Español)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Port Operations and Commercial, VTS in selected areas	Operaciones portuarias y comerciales; VTS en áreas selectas
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo) operaciones portuarias, movimiento de embarcaciones
West Coast (Coast Guard Only); East Coast (Commercial Fishing)	**Costa occidental (guardia costera solamente); Costa oriental (pesca comercial)**
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo) operaciones portuarias, movimiento de embarcaciones
Port Operations, VTS in selected areas	Operaciones portuarias; VTS en áreas selectas
Intership Safety	Seguridad entre embarcaciones
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo) operaciones portuarias, movimiento de embarcaciones
Commercial	Comerciales
Commercial (Intership Only)	Comercial (entre embarcaciones solamente)
Boater Calling Channel, Non-Commercial (Recreational)	Canal de llamada de la tripulación, no comercial (recreativo)
Commercial	Comerciales
Commercial, VTS in selected areas	Comercial; VTS en áreas selectas
Port Operations, VTS in selected areas	Operaciones portuarias; VTS en áreas selectas
Intership Navigation Safety (Bridge-to-Bridge). In U.S. waters, large vessels maintain a listening watch on this channel.	Seguridad marítima entre embarcaciones (de puente de mando a puente de mando). En aguas estadounidenses, las grandes embarcaciones se mantienen vigilantes con sus radios sintonizados en este canal
Port Operations, VTS in selected areas	Operaciones portuarias; VTS en áreas selectas
Environmental (Receive Only).	Medioambiental (recepción solamente). Usado por radiobalizas de localización de siniestros (EPIRB) clase C
Canada (EPIRB Buoys Only); International (On-Board Communication)	Canadá (boyas de EPIRB solamente); Internacional (comunicación de a bordo)

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Channel Number Número de canal	Channel Map Mapa de canales			Frequency Frecuencia		Power Limits Límites de potencia
	USA EE.UU.	Int'l nternac	Canada Canadá	Transmit Transm.	Receive Recepción	
16	●	●	●	156.800	156.800	
17	●	●	●	156.850	156.850	1 watt CANADA 1 vatio Canadá
18		●		156.900	161.500	1 vatio Canadá y Internac
18A	●		●	156.900	156.900	
19		●		156.950	161.550	
19A	●		●	156.950	156.950	
20	●	●	●	157.000	161.600	1 watt CAN 1 vatio Canadá
20A	●			157.000	157.000	
21		●		157.050	161.650	
21A	●		●	157.050	157.050	
21B			●	RX only	161.650	
22		●		157.100	161.700	
22A	●		●	157.100	157.100	
23		●	●	157.150	161.750	
23A	●			157.150	157.150	
23B			●	RX Only	161.750	
24	●	●	●	157.200	161.800	
25	●	●	●	157.250	161.850	
25B			●	RX only	161.850	

Channel Use (English)	Uso de canales (Español)
International Distress, Safety and Calling	Llamadas, seguridad y solicitud de auxilio internacional
Search and Rescue	Búsqueda y rescate
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
Commercial	Comerciales
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
Commercial	Comerciales
Canada (Coast Guard Only); International (Port Operations, Ship Movement)	Canadá (guardia costera solamente); Internacional (operaciones portuarias, movimiento de embarcaciones)
Port Operations	Operaciones portuarias
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
U.S. (Government Only); Canada (Coast Guard Only)	EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente)
Coast Guard Only – Weather Broadcasts	Solamente Guardacostas – Transmisiones Meteorológicas
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
U.S. and Canadian Coast Guard Liaison and Maritime Safety Information Broadcasts that are announced on Channel 16	Enlace entre las guardias costeras y canadienses, y difusión de información sobre seguridad marítima anunciada por el canal 16
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Coast Guard Only	Solamente Guardacostas
Coast Guard Only	Solamente Guardacostas
Sea Tow Automated Radio Check Service Public Correspondence (Marine Operator), Port Operations, Ship Movement	Sea Tow Servicio de radio automatizado del control Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Sea Tow Automated Radio Check Service Public Correspondence (Marine Operator), Port Operations, Ship Movement	Sea Tow Servicio de radio automatizado del control Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Safety: Continuous Marine Broadcast (CMB) service by MCTS Canada	Seguridad: Transmisión Marítima Continua (CMB) servicio por MCTS Canadá

Channel Number Número de canal	Channel Map Mapa de canales			Frequency Frecuencia		Power Limits Límites de potencia
	USA EE.UU.	Int'l nternac	Canada Canadá	Transmit Transm.	Receive Recepción	
26	●	●	●	157.300	161.900	
27	●	●	●	157.350	161.950	
28	●	●	●	157.400	162.000	
28B			●	RX only	162.000	
60		●	●	156.025	160.625	
61		●		156.075	160.675	
61A			●	156.075	156.075	
62		●		156.125	160.725	
62A			●	156.125	156.125	
63		●		156.175	160.775	
63A	●		●	156.175	156.175	
64		●	●	156.225	160.825	
64A			●	156.225	156.225	
65		●		156.275	160.875	
65A	●		●	156.275	156.275	
66		●		156.325	160.925	
66A	●		●	156.325	156.325	1 watt CAN 1 vatio Canadá

Channel Use (English)	Uso de canales (Español)
Sea Tow Automated Radio Check Service Public Correspondence (Marine Operator), Port Operations, Ship Movement	Sea Tow Servicio de radio automatizado del control Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Sea Tow Automated Radio Check Service Public Correspondence (Marine Operator), Port Operations, Ship Movement	Sea Tow Servicio de radio automatizado del control Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Sea Tow Automated Radio Check Service Public Correspondence (Marine Operator), Port Operations, Ship Movement	Sea Tow Servicio de radio automatizado del control Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Safety: Continuous Marine Broadcast (CMB) service by MCTS Canada	**Seguridad: Transmisión Marítima Continua (CMB) servicio por MCTS Canadá**
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator) Port Operation, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
U.S. (Government Only); Canada (Coast Guard Only); West Coast (Coast Guard Only); East Coast (Commercial Fishing)	**EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente); Costa occidental (guardia costera solamente);** Costa oriental (pesca comercial)
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
West Coast (Coast Guard Only); East Coast (Commercial Fishing)	**Costa occidental (guardia costera solamente);** Costa oriental (pesca comercial)
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Port Operations and Commercial, VTS in selected areas	Operaciones portuarias y comerciales; VTS en áreas selectas
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
U.S. (Government Only); Canada (Commercial Fishing)	**EE.UU. (entidades gubernamentales solamente);** Canadá (pesca comercial)
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Port Operations	Operaciones portuarias
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Port Operations	Operaciones portuarias

Channel Number Número de canal	Channel Map Mapa de canales			Frequency Frecuencia		Power Limits Límites de potencia
	USA EE.UU.	Int'l nternac	Canada Canadá	Transmit Transm.	Receive Recepción	
67	●	●	●	156.375	156.375	1 watt USA 1 vatio Canadá
68	●	●	●	156.425	156.425	
69	●	●	●	156.475	156.475	
70	●	●	●	RX only	156.525	
71	●	●	●	156.575	156.575	1 watt USA 1 vatio EE.UU
72	●	●	●	156.625	156.625	
73	●	●	●	156.675	156.675	
74	●	●	●	156.725	156.725	
75	●	●	●	156.775	156.775	1 watt 1 vatio
76	●	●	●	156.825	156.825	1 watt 1 vatio
77	●	●	●	156.875	156.875	1 watt USA 1 vatio EE.UU
78		●		156.925	161.525	
78A	●		●	156.925	156.925	
79		●		156.975	161.575	

Channel Use (English)	Uso de canales (Español)
Internship Navigation Safety (Bridge-to-Bridge). In U.S. waters, large vessels maintain a listening watch on thias channel.	Seguridad marítima entre embarcaciones (de puente de mando a puente de mando). En aguas estadounidenses, las grandes embarcaciones se mantienen vigilantes con sus radios sintonizados en este canal.
Non-Commercial (Recreational)	No comercial (recreativo)
U.S. (Non-Commercial, Recreational); Canada (Commercial Fishing Only); International (Intership, Port Operations, Ship Movement)	**EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente); Costa occidental (guardia costera solamente);** Costa oriental (pesca comercial)
Digital Selective Calling (Voice communications not allowed)	Llamadas selectivas digitales (las comunicaciones verbales están prohibidas).
U.S. and Canada (Non-Commercial, Recreational); International (Port Operations, Ship Movement)	EE.UU. y Canadá (no comercial, recreativo); Internacional (operaciones portuarias, movimiento de embarcaciones).
Non-Commercial (Intership Only)	No comercial (entre embarcaciones solamente).
U.S. (Port Operations); Canada (Commercial Fishing Only); International (Intership, Port Operations, Ship Movement)	EE.UU. (operaciones portuarias); Canadá (pesca comercial solamente); Internacional (comunicaciones entre embarcaciones, operaciones portuarias, movimiento de embarcaciones).
U.S. (Port Operations); Canada (Commercial Fishing Only); International (Intership, Port Operations, Ship Movement)	EE.UU. (operaciones portuarias); Canadá (pesca comercial solamente); Internacional (comunicaciones entre embarcaciones, operaciones portuarias, movimiento de embarcaciones).
Port Operations (Intership Only)	Operaciones portuarias (entre embarcaciones solamente).
Port Operations (Intership Only)	Operaciones portuarias (entre embarcaciones solamente).
Port Operations (Intership only). Restricted to communications with pilots for movement and docking of ships.	Operaciones portuarias (entre embarcaciones solamente). Restringido a comunicaciones con pilotos para el movimiento y atraque de embarcaciones.
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo).
Non-Commercial (Recreational)	No comercial (recreativo).
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones.

Channel Number Número de canal	Channel Map Mapa de canales			Frequency Frecuencia		Power Limits Límites de potencia
	USA EE.UU.	Int'l Internac	Canada Canadá	Transmit Transm.	Receive Recepción	
79A	●		●	156.975	156.975	
80		●		157.025	161.625	
80A	●		●	157.025	157.025	
81		●		157.075	161.675	
81A	●		●	157.075	157.075	
82		●		157.125	161.725	
82A	●		●	157.125	157.125	
83		●		157.175	161.775	
83A	●		●	157.175	157.175	
83B			●	RX only	161.775	
84	●	●	●	157.225	161.825	
85	●	●	●	157.275	161.875	
86	●	●	●	157.325	161.925	
87	●	●	●	157.375	157.375	
88	●	●	●	157.425	157.425	
88A	●			157.425	157.425	

Channel Use (English)	Uso de canales (Español)
Commercial (Also Non-Comercial only in Great Lakes)	Comercial (en los Grandes Lagos también no comercial)
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
Commercial (Also Non-Commercial only in Great Lakes)	Comercial (en los Grandes Lagos también no comercial)
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
U.S. (Government Only); Canada (Coast Guard Only)	EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente)
Public Correspondence (Marine Operator) Port Operation, Ship Movement	Correspondencia pública (operador marítimo) operaciones portuarias, movimiento de embarcaciones
U.S. (Government Only); Canada (Coast Guard Only)	EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente)
Public Correspondence (Marine Operator) Port Operation, Ship Movement	Correspondencia pública (operador marítimo) operaciones portuarias, movimiento de embarcacione
U.S. (Government Only); Canada (Coast Guard Only)	EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente)
Coast Guard Only – Weather Broadcasts	Solamente Guardacostas – Transmisiones Meteorológicas
Sea Tow Automated Radio Check Service Public Correspondence (Marine Operator) Port Operation, Ship Movement	Sea Tow Servicio de radio automatizado del control Correspondencia pública (operador marítimo) operaciones portuarias, movimiento de embarcaciones
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Ship to Coast). In U.S. only within 75 miles of Canadian Border.	Correspondencia pública (entre embarcación y costa). En los EE.UU., solamente dentro de los casi 121 kilómetros (75 millas) de la frontera canadiense
Commercial Intership only	Comercial entre embarcaciones solamente

VHF Marine Channel Assignments (English)

NOTE
Many of the plain-numbered channels, such as 01, 02 and 03, transmit and receive on different frequencies. This is termed duplex operation. The rest of the plain-numbered channels and all of the A channels, such as 01A, 03A and 04A, transmit and receive on a single frequency, which is termed simplex operation. Your radio automatically adjusts to these conditions. When in simplex operation, the A icon will appear on the LCD (see illustration on page A3).

NOTE
All channels are preprogrammed at the factory according to international regulations and those of the FCC (U.S.A.) and Industry Canada (Canada). They cannot be altered by the user nor can modes of operation be changed between simplex and duplex.

Asignación de canales de VHF para radiocomunicación marítima (Español)

NOTA
Muchos de los canales de números simples, como 01, 02 y 03, transmiten y reciben en diferentes frecuencias. A esto se le llama operación dúplex. El resto de los canales de números simples y todos los canales A, como 01A, 03A y 04A, transmiten y reciben en una sola frecuencia, a la que se le llama operación simple (simplex). Su radio se ajusta automáticamente a estas condiciones. Cuando esté en operación simple, el icono A aparecerá en la pantalla de cristal líquido (vea la ilustración de la página A3).

NOTA
Todos los canales vienen programados previamente de fábrica conforme a los reglamentos internacionales y a los de la FCC (EE. UU) e Industry Canada (Canadá). No pueden ser alterados por el usuario, así como tampoco pueden cambiarse los modos de operación entre simple y dúplex.

Weather Channel Assignments
Asignaciones de canales meteorológicos

Channel Number (Número de canal)	RX Frequency MHz (Frecuencia de recepción (MHz))	Weather Channel
1	162.550	NOAA
2	162.400	NOAA
3	162.475	NOAA
4	162.425	NOAA
5	162.450	NOAA
6	162.500	NOAA
7	162.525	NOAA
8	161.650	Canada
9	161.775	Canada
10	163.275	NOAA

World City Time Zones

In order to set correct local time as compared to different World City Time Zones, enter the hour "offset" as listed below. The correct local time appears on the VHF for Cities all over the world. See page 43 for setup information.

Longitudinal Zone	Offset	City
E172.50 to W172.50	-12	IDLW (International Date Line West)
W172.50 to W157.50	-11	Nome
W157.50 to W142.50	-10	Honolulu
W142.50 to W127.50	-9	Yukon STD
W127.50 to W112.50	-8	Los Angeles STD
W112.50 to W097.50	-7	Denver STD
W097.50 to W082.50	-6	Chicago STD
W082.50 to W067.50	-5	New York STD
W067.50 to W052.50	-4	Caracas
W052.50 to W037.50	-3	Rio de Janeiro
W037.50 to W022.50	-2	Fernando de Noronha
W022.50 to W007.50	-1	Azores Islands
W007.50 to E007.50 GMT	+0	London
E007.50 to E022.50	+1	Rome
E022.50 to E037.50	+2	Cairo
E037.50 to E052.50	+3	Moscow
E052.50 to E067.50	+4	Abu Dhabi
E067.50 to E082.50	+5	Maldives
E082.50 to E097.50	+6	Dhuburi
E097.50 to E112.50	+7	Bangkok
E112.50 to E127.50	+8	Hong Kong
E127.50 to E142.50	+9	Tokyo
E142.50 to E157.50	+10	Sydney
E157.50 to E172.50	+11	Solomon Islands
E172.50 to W172.50	+12	Auckland

Limited 3-Year Warranty

For Products Purchased In the U.S.A.

Cobra® Electronics Corporation warrants that its CobraMarine VHF radio, and the component parts thereof, will be free of defects in workmanship and materials for a period of three (3) years from the date of first consumer purchase. This warranty may be enforced by the first consumer purchaser, provided that the product is utilized within the U.S.A.

Cobra® will, without charge, repair or replace, at its option, defective radios, products or component parts upon delivery to the Cobra® Factory Service department, accompanied by proof of the date of first consumer purchase, such as a duplicated copy of a sales receipt.

You must pay any initial shipping charges required to ship the product for warranty service, but the return charges will be at Cobra®'s expense, if the product is repaired or replaced under warranty. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

Exclusions: This limited warranty does not apply:

1. To any product damaged by accident.

2. In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.

3. If the serial number has been altered, defaced, or removed.

4. If the owner of the product resides outside the U.S.A.

All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty. Cobra® shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

For Products Purchased Outside the U.S.A.

Please contact your local dealer for warranty information.

Product Service

Product Service

If you have any questions about operation or installing your new CobraMarine VHF product, or if you are missing parts…

Please call Cobra first! DO NOT RETURN THIS PRODUCT TO THE STORE! See customer assistance on page A1.

If your product should require factory service, please call Cobra first before sending your radio. This will ensure the fastest turn-around time on your repair. You may be asked to send your radio to the Cobra factory. It will be necessary to furnish the following to have the product serviced and returned:

1. For warranty repair include some form of proof-of-purchase, such as a mechanical reproduction or carbon of a sales receipt. If you send the original receipt, it cannot be returned.

2. Send the entire product.

3. Enclose a description of what is happening with the radio. Include a typed or clearly printed name and address of where the radio is to be returned.

4. Pack radio securely to prevent damage in transit. If possible, use the original packing material.

5. Ship prepaid and insured by way of a traceable carrier such as United Parcel Service (UPS) or Priority Mail to avoid loss in transit to: Cobra Factory Service, Cobra Electronics Corporation, 6500 West Cortland Street, Chicago, Illinois 60707 U.S.A.

6. If the radio is in warranty, upon receipt of your radio it will either be repaired or exchanged depending on the model. Please allow approximately three (3) to four (4) weeks before contacting Cobra for status. If the radio is out of warranty, a letter will automatically be sent informing you of the repair charge or replacement charge.

If you have any questions, please call 773-889-3087 for assistance.

Flush Mount Template / Plantilla para montaje empotrado

Use the supplied template to mark and cut an opening in the flat surface.

CAUTION
Before cutting, be sure the area behind the flat surface is clear of any instruments or wires that might be damaged in the process.

Use la plantilla suministrada para marcar y cortar el agujero en la superficie plana.

PRECAUCIÓN
Antes de cortar, compruebe que no haya instrumentos o cables en el área detrás de la superficie plana, que puedan resultar dañados durante el proceso.

MRF77_MANL_OPERATION.indd 84-85 1/26/15 12:30 PM
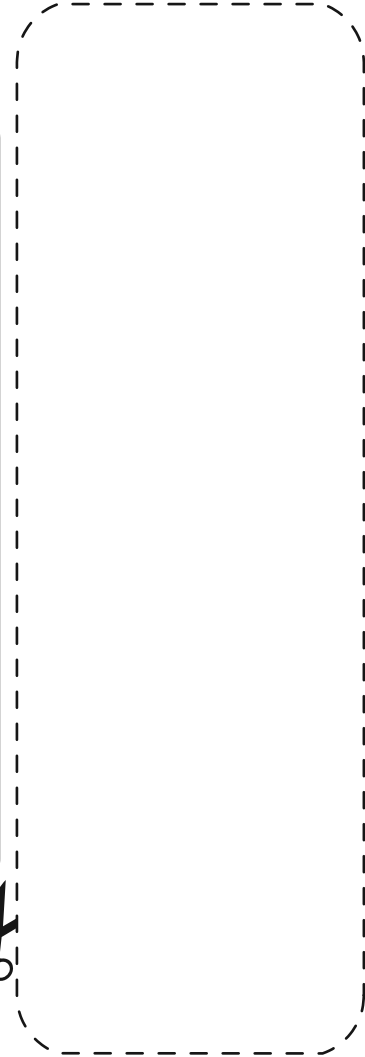
The Cobra line of quality products includes:

CB Radios

microTALK® 2-Way Radios

Radar/Laser Detectors

Mobile GPS Navigation Systems

HighGear® Accessories

Power Inverters

Accessories

For more information or to
order any of our products,
please visit our website:
www.cobra.com