

**Cobra**  
**MARINE**  
Owner's Manual

**VHF MARINE RADIO**  
**MR HH350W FLT EU**

Nothing Comes Close to a Cobra® English

For more information or to order any of our products, please visit our website: [www.cobra.com](http://www.cobra.com)  
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**Our Thanks to You and Customer Assistance**

Introduction

**Our Thanks to You**  
Thank you for purchasing a Cobra Marine® VHF radio. Properly used, this Cobra® product will give you many years of reliable service.  
**How Your Cobra Marine VHF Radio Works**  
This radio is a battery-powered portable transceiver for use afloat. It gives you two-way vessel-to-vessel and vessel-to-shore station communications, primarily for safety and secondarily for navigation and operational purposes. With it, you can call for help, get information from other boaters, talk to lock or bridge tenders, and make radiotelephone calls to anywhere in the world through a marine operator.

Customer Assistance

**Customer Assistance**  
Should you encounter any problems with this product, or not understand its many features, please refer to this owner's manual. If you require further assistance after reading this manual, please contact your local dealer.

This equipment is intended for use in:

AT	✓	CY	✓	FI	✓	IE	✓	MK		RO	
BA		CZ	✓	FR	✓	IS	✓	MT	✓	SE	✓
BE	✓	DE	✓	GB	✓	IT	✓	NL	✓	SI	✓
BG		DK	✓	GR	✓	LT	✓	NO	✓	SK	✓
CH	✓	EE	✓	HR	✓	LV	✓	PL	✓	TR	✓
CS		ES	✓	HU	✓	LU	✓	PT	✓	UA	✓

✓Countries of use

There is no restriction on the EU region for  
**Transmit Frequency: 156.025 - 157.425 MHz**  
**Receive Frequency: 156.050 - 163.275 MHz**  
**For Warranty, Product Service and Accessory Information**  
Please contact your local dealer or distributor. See [www.cobra.com](http://www.cobra.com) for a list of Cobra Marine international distributors.

**Car Charger:** NHY1200400 Input: DC 12V-24V Output:12V/400MA manufacturers:SHENZHEN NUO HENG YUAN TECHNOGY CO.,LTD.  
**Battery:** CEL 523450 manufacturers: Jianguo CEL Battery Co., Ltd.

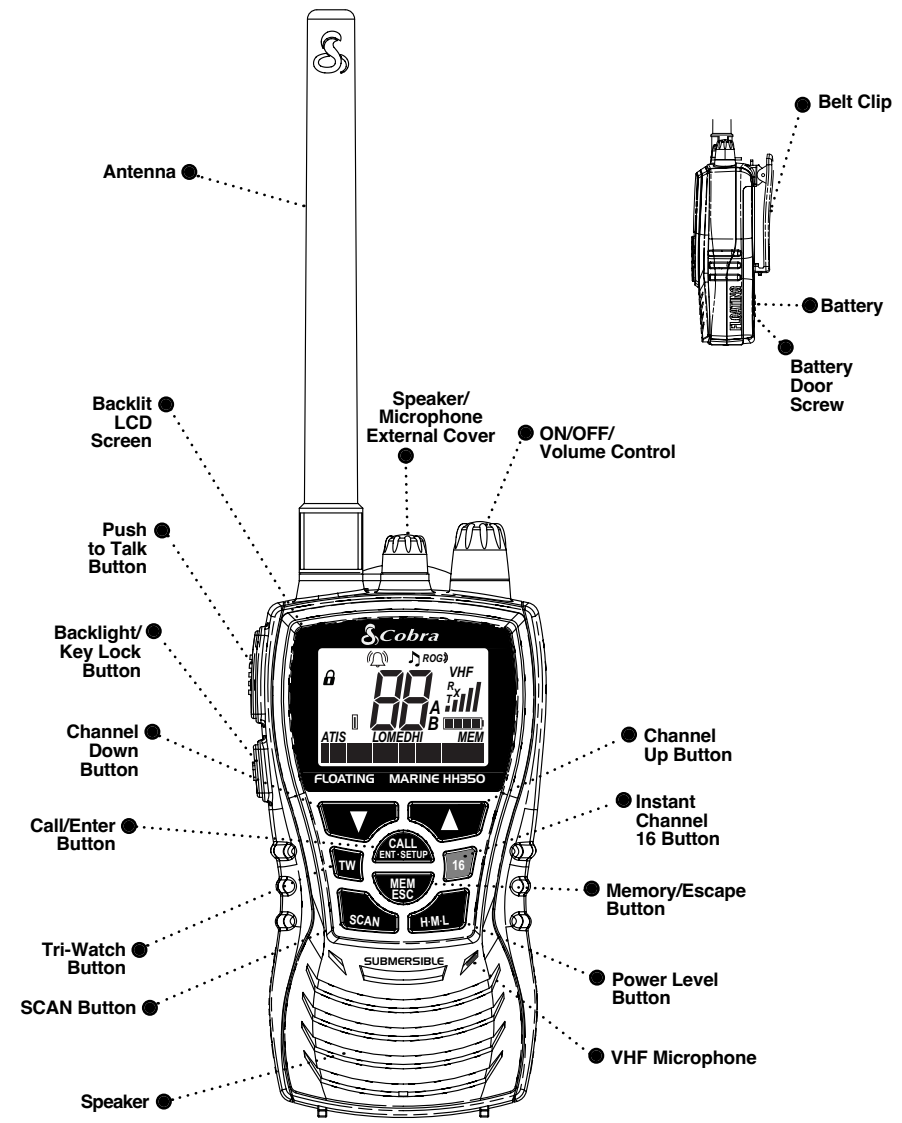
**WARNING:** Please refer the information on battery compartment for electrical and safety information before installing or operating the apparatus.  
**Adapter:** ASSA55W-120040 Input:100-240V/50/60Hz 450MA Output:12V/400MA manufacturers: AQUIL STAR PRECISION INDUSTRIAL (SHENZHEN) CO., LTD.

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Deansgrange County Dublin, Ireland A94 A4A6

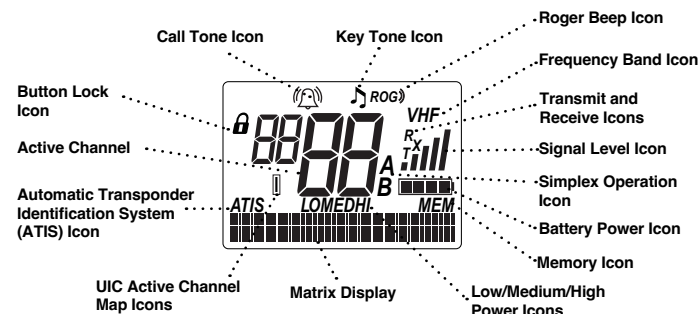
A1 English

**Radio Controls and Indicators**

Introduction



A2 English



## Product Features

### Power Settings\*

Selectable power settings produce 1, 3 or 6 watts of output power for near or distant calling.

\* Units sold in Australia will transmit at 5 watts maximum.

### USA/International/Canada Channels

Allows operation on any of the three (3) different channel maps established for these areas.

### Submersible to JIS7 Standards

Waterproof to 3.3 ft (1 m) of water for 30 minutes.

### Button/Key Lock

Prevents accidental setting changes when button lock is set.

### Channel Scan/Memory Scan

Use to scan through unlimited channels or memory locations to find conversations in progress.

### Matrix Display

The display at the bottom of the LCD screen will show text letting the user know what mode, function or operation the radio is currently in.

### AA Battery Compatible

Good for emergency backup. Requires optional AA battery tray (P/N CM 110-024).

### Instant Channel 16

Provides instant access to priority Channel 16.

### Tri-Watch

Use to monitor three (3) channels at once — Channel 16 and two (2) programmable channels.

### Floating

This radio will float if dropped overboard. It has an orange stripe so it's easy to retrieve. Must use included battery to float.

### 220V/12V Charger Included

Use to charge battery pack, at home, in a car or in a boat.

## Product Features (continued)

### Locking Desktop Charger

Holds the radio or battery in place while charging. Vertical or horizontal mounting.

### Call Tones (Selectable)

10 selectable call tones

### Automatic Transponder Identification System (ATIS)

Capable of operating within the Automatic Transponder Identification System. ATIS includes data at the end of a transmission for station identification.

### Speaker/Mic Jack

Allows connecting optional Cobra Lapel Speaker/Mic and other Cobra accessories.

### Unlimited Memory Channels

Allows programming of unlimited VHF memory channels.

### Signal Strength Meter

Shows the strength of incoming or outgoing signals.

### Illuminated Buttons

Allows high visibility of all function buttons.

### Roger Beep Tone (Selectable)

Confirmation tone indicates the completion of the user's transmission and signals to others it is clear to talk. On or Off selectable.

### BURP

The Cobra exclusive BURP feature expels water from the speaker grill if the unit is dropped in the water or is subjected to extreme rain and weather.

### LV (Latvian)

Ar šo Cobra Electronics Europe, Ltd. deklarē, ka radioiekārta VHF Marine Radio atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: <http://www.eu.cobra.com>

### LT (Lithuanian)

Aš, Cobra Electronics Europe, Ltd., patvirtinu, kad radijo įrenginių tipas VHF Marine Radio atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: <http://www.eu.cobra.com>

### HU (Hungarian)

Cobra Electronics Europe, Ltd. igazolja, hogy a VHF Marine Radio típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: <http://www.eu.cobra.com>

### MT (Maltese)

B'dan, Cobra Electronics Europe, Ltd., niddikjara li dan it-tip ta' tagħmir tar-radju VHF Marine Radio huwa konformi mad-Direttiva 2014/53/UE. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej: <http://www.eu.cobra.com>

### NL (Dutch)

Hierbij verklaar ik, Cobra Electronics Europe, Ltd., dat het type radioapparatuur VHF Marine Radio conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: <http://www.eu.cobra.com>

### PL (Polish)

Cobra Electronics Europe, Ltd. niniejszym oświadcza, że typ urządzenia radiowego VHF Marine Radio jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: <http://www.eu.cobra.com>

### PT (Portuguese)

O(a) abaixo assinado(a) Cobra Electronics Europe, Ltd. declara que o presente tipo de equipamento de rádio VHF Marine Radio está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: <http://www.eu.cobra.com>

### RO (Romanian)

Prin prezenta, Cobra Electronics Europe, Ltd. declară că tipul de echipamente radio VHF Marine Radio este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: <http://www.eu.cobra.com>

### SK (Slovak)

Cobra Electronics Europe, Ltd. týmto vyhlasuje, že rádiové zariadenie typu VHF Marine Radio je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese: <http://www.eu.cobra.com>

### SL (Slovenian)







Cobra Electronics Europe, Ltd. potrjuje, da je tip radijske opreme VHF Marine Radio skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: <http://www.eu.cobra.com>

### FI (Finnish)

Cobra Electronics Europe, Ltd. vakuuttaa, että radiolaitetyyppi VHF Marine Radio on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: <http://www.eu.cobra.com>

### SV (Swedish)

Härmed försäkrar Cobra Electronics Europe, Ltd. att denna typ av radioutrustning VHF Marine Radio överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: <http://www.eu.cobra.com>

	<b>Introduction</b>	
	Our Thanks to You . . . . .	A1
	Customer Assistance . . . . .	A1
	Radio Controls and Indicators . . . . .	A2
	Backlit LCD (Liquid Crystal Display) Screen . . . . .	A3
	Product Features . . . . .	A3
	Important Safety Information . . . . .	2
	General Precautions . . . . .	2
	Recommendations for Marine Communication . . . . .	4
	VHF Marine Radio Procedures . . . . .	4
	Licensing Information . . . . .	5
	<b>Installation</b>	
	Included in this Package . . . . .	6
	Install/Remove Antenna . . . . .	7
	Wrist Strap and Belt Clip . . . . .	8
	Batteries and Charger . . . . .	9
	<b>Operating Your Radio</b>	
	Getting Started . . . . .	12
	Setup Mode Programming . . . . .	16
	ATIS ID Programming . . . . .	21
	Standby/Receive and Transmit . . . . .	22
	Advanced Operation . . . . .	24
	Floating Feature . . . . .	31
	Maintenance . . . . .	32
	Troubleshooting . . . . .	32
	<b>VHF Marine Radio Protocols</b>	
	VHF Marine Radio Procedures . . . . .	33
	Voice Calling . . . . .	34
	Radiotelephone Calls, Emergency Messages and Distress Procedure . . . . .	36
	<b>Customer Service</b>	
	Specifications (Typical) . . . . .	40
	<b>Appendix</b>	
	VHF Marine Channel Assignments . . . . .	41
	Warranty & Accessories Order Info . . . . .	54
	Declaration of Conformity . . . . .	55

## Important Safety Information

Before installing and using your CobraMarine VHF radio, please read these general precautions and warnings.

### Warning and Notice Statements

To make the most of this radio, it must be installed and used properly. Please read the installation and operating instructions carefully before installing and using the radio. Special attention must be paid to the **WARNING** and **NOTICE** statements in this manual.



#### WARNING

Statements identify conditions that could result in personal injury or loss of life.



#### NOTICE

Statements identify conditions that could cause damage to the radio or other equipment.

## General Precautions

The following **WARNINGS** and **NOTICE** information on the following page will make you aware of RF exposure hazards and how to assure you operate the radio within the recommended RF exposure limits established for the radio.

Changes or modifications to your radio **MAY VOID** its compliance with government rules and make it illegal to use.



## WARNINGS

Your radio generates electromagnetic RF (radio frequency) energy when it is transmitting. To ensure that you and those around you are not exposed to excessive amounts of that energy, **DO NOT** touch the antenna when transmitting. **KEEP** the radio at least 5 cm (2 inches) away from yourself and others when transmitting.

**DO NOT** transmit more than 40% of the time the radio is in use — 40% duty cycle. The radio is transmitting when the **Talk** button is pressed and the transmit information shows on the LCD screen.

**ALWAYS** use only Cobra authorized accessories.

**DO NOT** operate the radio in an explosive atmosphere, near blasting sites, or in any area where signs are posted prohibiting radio transmissions.

**NEVER** place the transceiver or microphone/speaker where they might interfere with operation of your vessel or cause injury.

**DO NOT** allow children or anyone unfamiliar with proper procedures to operate the radio without supervision.

Failure to observe any of these warnings may cause you to exceed recommended RF exposure limits or create other dangerous conditions.



## NOTICE

Your radio is waterproof only when the batteries are properly installed.

**AVOID** using the radio below -4°F (-20°C) or above 86°F (30°C).

**AVOID** storing the radio below -4°F (-20°C) or above 86°F (30°C).

**KEEP** your radio at least 0,9 m (3 ft) away from your vessel's magnetic navigation compass.

**DO NOT** attempt to service any internal parts yourself. Have any necessary service performed by a qualified technician.

This radio is supplied with a lithium-ion (LiION) rechargeable battery pack.

- Use only the Cobra charger to recharge lithium-ion (LiION) batteries in the radio.
- Do not short circuit the battery pack.
- When replacing the batteries, dispose of the old batteries properly. Batteries may explode if disposed of in a fire.



### Recommendations for Marine Communication

The frequencies your radio uses are set aside to enhance safety afloat and for vessel navigation and operational messages over a range suitable for nearshore voyages. If the maximum output of your radio is not sufficient for the distances you travel from the coast, consider a higher powered handheld or installing a Cobra Marine fixed mount radio with up to 25 watts of output power. (Visit [www.cobra.com](http://www.cobra.com) or your local dealer for model availability.)

If traveling far offshore, you should consider adding even more powerful radio equipment such as HF single side band or satellite radio for your vessel.

The coastguard does not endorse mobile phones as substitutes for marine radios. They generally cannot communicate with rescue vessels and, if you make a distress call on a mobile phone, only the party you call will be able to hear you. Additionally, mobile phones may have limited coverage over water and can be hard to locate. If you do not know where you are, the coastguard will have difficulty finding you if you are using a mobile phone.

However, mobile phones can have a place on board where mobile coverage is available — to allow social conversations and keep the marine frequencies uncluttered and available for their intended uses.

### VHF Marine Radio Procedures

If you are not familiar with or need to brush up on the protocols that must be followed when using a VHF Marine Radio, please study the section beginning at page 33 before putting your radio into service.

### Licensing Information

The radio operates on all currently allocated marine channels and is switchable for use according to International, Canadian or U.S.A. regulations. It features instant access to emergency Channel 16 by pressing one key.

### Station License

The UK requires a ship's radio license and a marine radio operator's certificate before transmitting equipment can be used aboard a vessel. Other European countries have specific requirements of their own.

For detailed information and applications, contact the Radio Licensing Centre run by OFCOM in the UK. In other countries, contact the relevant national telecommunications authority.

### Canadian or U.S.A. Station License

If your vessel will be entering the sovereign waters of Canada or the U.S.A., you should contact Industry of Canada, Radio Regulatory Branch or the U.S. FCC (Federal Communications Commission) for licensing and operating information.

### Radio Call Sign

A radio call sign is included as part of the ship's radio license in the UK. Other countries may have different practices; contact your local regulatory authority for information.

### User Responsibility and Operating Locations

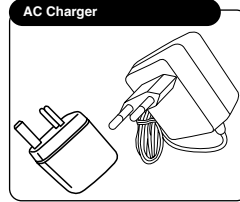
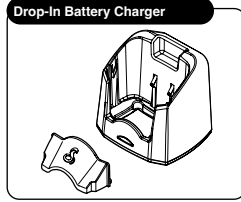
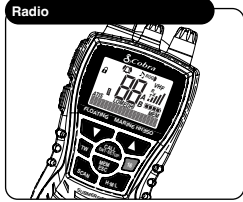
All users are responsible for observing domestic and foreign government regulations and are subject to severe penalties for violations. The transmitting frequencies in your radio are reserved for maritime use; any frequency you use for transmission must be specifically included on your ship's license. The VHF frequencies on your radio are reserved for marine use and require a special license to operate from land, including when your boat is on its trailer. The use of ATIS is prohibited outside the European inland waterways covered by the Basel Agreement.

## Included in this Package

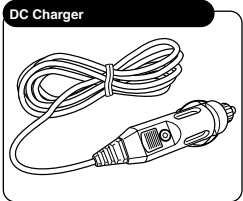
Installation

### Included in this Package

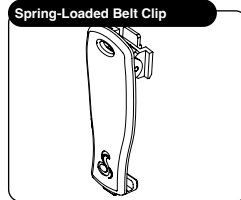
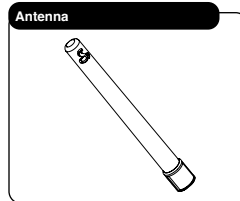
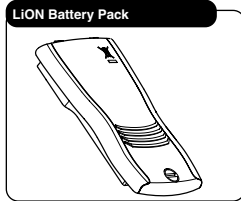
You should find all of the following items in the package with your CobraMarine VHF radio:



For connection to 220-volt power source.



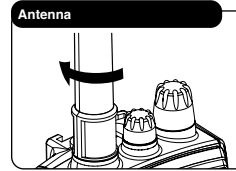
For connection to 12-volt power sources.



Installation

## Install/Remove Antenna

### Install/Remove Antenna



1. To install the antenna turn the antenna into the radio clockwise to tighten. Do not overtighten
2. To remove the antenna turn the antenna counterclockwise.

### Batteries and Charger

The radio is shipped with a sealed lithium-ion (LiON) battery pack (P/N CM 110-027) that is rechargeable.



#### WARNING

The charger provided for this radio is only to be used to charge the battery pack provided. Do not charge any other type of batteries in the charger as fire, explosion or battery damage will occur. Avoiding extreme room temperatures will also help prolong the life of the battery pack for the radio.

When your rechargeable batteries begin to discharge too quickly, it is time to install a new battery pack. Your radio will also operate with five (5) high-quality AA alkaline batteries, using the optional alkaline battery tray.

### Installing the Battery Pack

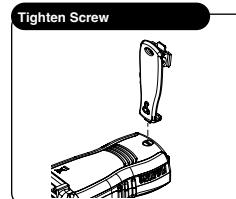


1. Position the battery pack over the back of the radio.
2. Engage the battery pack into the radio by sliding to the top until battery pack is fully seated against radio housing.
3. Tighten the screw using the end of the belt clip to secure the battery pack to the radio. Do not overtighten. Only use the end of the belt clip to tighten the screw.



#### CAUTION

1. Risk of explosion if the battery is replaced by an incorrect type;
2. Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion;
3. Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;
4. A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.



## Wrist Strap and Belt Clip

### Belt Clip

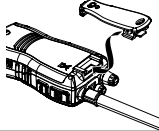


### Belt Clip

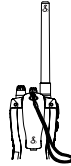
Use the spring-loaded belt clip to carry the radio on your person.

1. Slide the belt clip into the guide channel on the back of the radio until it is locked in place.
2. To attach the wrist strap, insert it through the hole at the top of the belt clip, feed it through the looped end and pull tight to secure to the belt clip.
3. Press open the belt clip, slide it over the belt and release the clip.
4. To remove the belt clip from the radio press the tab on the belt clip, which unlocks the clip, and slide it out.

### Insert Belt Clip onto Radio



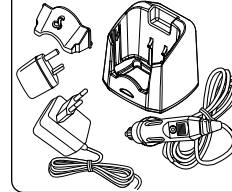
### Wrist Strap Attachment



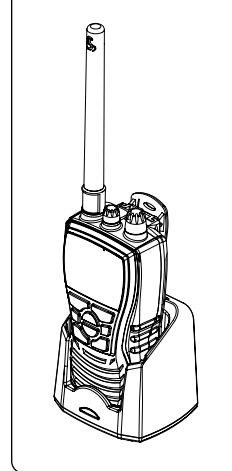
### Secure Radio



### Power Sources



### Initial Battery Charge



## Initial Charge

The Cobra-provided LiON battery pack may be charged at home, in a car or in a boat using the appropriate 12V or 220V power cord with the charger.

1. Insert one (1) of the power cords into the back of the drop-in charger.
2. Insert the other end of the power cord into the appropriate 12V or 220V power source.
3. Plug the wall charger into electrical outlet. The wall charger should be installed near the equipment and easily accessible.
4. Remove battery pack spacer from the charger and insert the entire radio/battery into the charger. The metal charge contacts on the battery will contact the mating prongs in the charger to transfer the charging current.
5. Observe that the red light on the front of the charger glows to indicate that the battery pack is properly seated and the charger is operating.
6. Allow the batteries to charge for five (5) to six (6) hours before use. The light will change back to green when the battery is fully charged.



### WARNING

Only the rechargeable LiON battery pack can be recharged. You **MUST** use one of the charging devices provided with this radio. Do not substitute any other type of charging adapter or charger base for this radio. Battery damage, fire or explosion may result. It is equally important to prevent the lithium-ion (LiON) battery pack from freezing to obtain best performance from the battery pack.

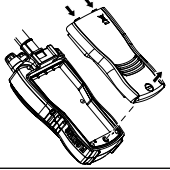


### NOTE

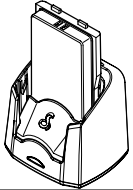
If the drop-in charger is used on a boat, Cobra recommends you attach it to a horizontal shelf or vertical bulkhead (using the screw holes provided) to prevent possible damage due to the boat rolling or pitching. The charging base has been designed to hold the battery pack in place during rough sea conditions.

## Batteries and Charger

### Remove Battery



### Battery Pack Charging Only



### To Remove Battery Pack from Radio

1. Loosen the screw on the back of the battery pack.
2. Lift the bottom of the battery pack slightly to remove it from the radio housing.
3. Pull battery pack out of the radio housing.



#### NOTE

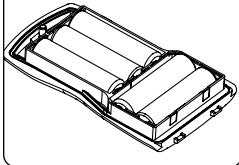
The LiON battery pack can also be charged in the battery charger without being installed in the radio. Insert the spacer into the battery charger to support the battery pack during this charging process. Follow the same procedures in “Initial Charge” to charge the battery pack.



#### NOTICE

Lithium-ion (LiON) batteries are toxic. Please dispose of properly. Some marine suppliers and electronics retailers accept old battery packs for recycling and some municipal waste disposal agencies have special provisions for battery disposal.

### Alkaline Battery Tray



### Alkaline Batteries

An optional alkaline battery tray (P/N CM 110-024) can be purchased for this radio. The alkaline battery tray acts as a backup or “Emergency” power source should the battery pack run low on power and needs to be recharged. The radio will transmit at full power when using five (5) new AA alkaline batteries.



#### WARNING

Never attempt to recharge alkaline batteries. They are not made to be recharged, and should be disposed of in a proper manner.

## Batteries and Charger

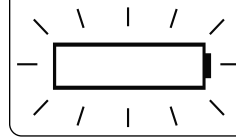
### Fully Charged



### Partially Charged



### Fully Discharged



### Maintaining the Battery Charge

As you use your radio, the battery power icon will show the battery power remaining. When the icon begins to flash, it is time to recharge or change the batteries.



#### NOTE

Radio will continue to receive signals when blinking but cannot transmit.



#### NOTICE

Use only the drop-in charger provided by Cobra. Do not use the charger with alkaline batteries; only the LiON battery pack is rechargeable. Spent alkaline batteries must be discarded and replaced.

It is a good idea to keep a set of fresh, high-quality AA alkaline batteries with your radio. Should the rechargeable battery pack become discharged and no electrical power source is available, you can insert the optional alkaline battery tray with fresh alkaline batteries and continue to use your radio.



# Getting Started

## Getting Started



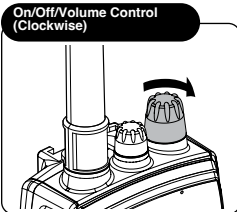
Refer to the foldout at the front of this manual to identify the various controls and indicators on your radio. Throughout this manual you will be instructed to “Press” or to “Press and Hold” various buttons (except “Push to Talk”) on the radio. “Press” means a momentary press of approximately one (1) second. “Press and Hold” means to hold the button down for approximately two (2) seconds.

Whenever you press any button except the **Talk** button on your radio, a brief tone (beep) (if key tones are selected On) will sound to confirm the button press. With all button presses, the appropriate icon will appear on the LCD and the backlight will turn On. The backlight will stay On for 10 seconds after the button is released.

At times, you will hear two (2) other sounds. Two (2) beeps will sound to confirm your setting changes and three (3) beeps will sound to notify you of an error.

## Common Radio Functions

The following procedures define common operating functions of the radio when in **Marine Standby** mode.



### Power/Volume Control

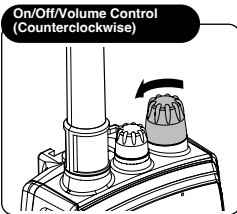
#### Power On/Off Control

The **On/Off/Volume** control is located at the upper right side of the radio. Turning the **On/Off/Volume** control past the detent position will turn the radio On or Off.

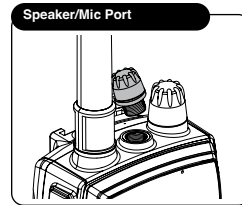
#### Volume Control

Volume is controlled by turning the **On/Off/Volume** control.

- To increase the volume, turn the **On/Off/Volume** control clockwise.
- To decrease the volume, turn the **On/Off/Volume** control counterclockwise.



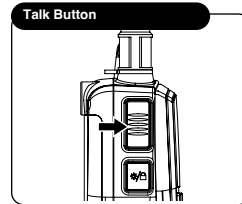
# Getting Started



## Radio Speaker and Microphone

The internal **Radio Speaker** and **Microphone** are located on the bottom front face of the radio below the lower control buttons.

An **optional Speaker/Microphone** port is located at the top of the radio between the antenna and the **Power/Volume** control. Unthread the **Speaker/Microphone** port cover to access and install an optional Cobra speaker or microphone into this port.



## Talk Button

Press and hold the **Talk** button to transmit messages. Release the **Talk** button to stop transmitting.



## Backlight/Key Lock Button

### To Display the Backlight Momentarily:

Press the **Backlight/Key Lock** button. The backlight will remain On for 10 seconds. If the backlight is already On, another press of the **Backlight/Key Lock** button will turn it Off.

### Key Lock

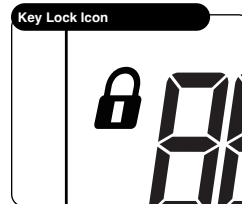
To prevent accidental changes to your settings, you can lock all of the following buttons:

- **Channel Up** Button
- **Channel Down** Button
- **SCAN** Button
- **MEM/ESC** Button
- **H-M-L** Button
- **16** Button
- **TRI-WATCH** Button
- **Call/Enter/Setup** Button



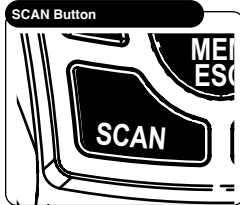
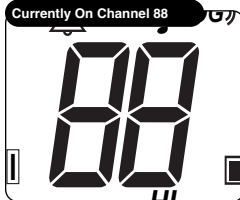
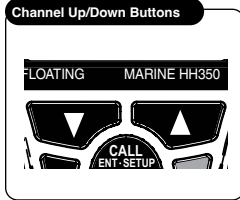
### To Lock or Unlock the Buttons:

Press and hold the **Backlight/Key Lock** button for two (2) seconds. The **Key Lock** icon will appear or disappear in the LCD. When **Key Lock** is On, pressing any of the listed buttons on the front of the radio will result in a three (3) beep error message.



Both the **Backlight/Key Lock** button and the **Talk** button are active — you can **Receive (Rx)** or **Transmit (Tx)** a message with **Key Lock** On, but you cannot change the channel.

## Getting Started



### Channel Up/Down Buttons

Your radio will **Receive (Rx)** and **Transmit (Tx)** VHF signals on the channel indicated on the LCD display. You can change the channel at any time using the **Channel Up/Down** buttons.

#### To Change Channels:

Press the **Channel Up/Down** button.

If you are on Channel 88, pressing the **Channel Up** button will advance to Channel 01. If you are on Channel 01, pressing the **Channel Down** button will advance to Channel 88.

You can press and hold the **Channel Up/Down** button for fast advance. The beep sound will occur only at the first press of the button and not during fast advance.

If the new channel selected is restricted to low power, the radio will automatically switch to **Low Power** mode and the **Low Power** icon will appear on the LCD.

If the radio is in the **Key Lock** mode, the channel will not change and the three (3) beep error signal will sound.

### SCAN Button

Press and release the **SCAN** button to scan all channels. The **SCAN** icon will display on the LCD display. Scanning begins at lower channels, and scans to higher channels. Press the **Channel Up/Down** button to change the scan direction.

When a signal is received in **SCAN** mode, the radio will pause 10 seconds before resuming **SCAN** operation. The scan will stop on the paused channel and remain there when the **Talk** button is pressed.

In **Memory** mode, press and release the **SCAN** button to scan all memory channels. Because the unit is already in the **Memory Channel** mode, only the channels in the memory bank will be displayed.



#### NOTE

Memory channels need to be saved to effectively enter the **Memory Channel** mode and scan all memory channels.

## Getting Started



### High/Medium/Low (H-M-L) Power Button

Your radio can transmit selectively at 1, 3 or 6 watts of power. Cobra suggests you maintain the low power setting for short-range communications. You will conserve battery life and avoid overpowering nearby stations with a low power setting signal. Use the high power setting for long-range communications or when you do not receive a response to a signal sent at 1 watt.

#### To Toggle Between H-M-L Power Modes:

Press the **H-M-L Power** button. The LCD will show which mode is in effect. Some channels are restricted for a maximum use of 1 watt. Your radio will automatically set the power to **Low Power** mode when you select those channels.



#### NOTE

Some channels, frequency bands and countries of use might not be able to operate in **High Power** mode.



### Call/Enter/Setup Button



#### NOTE

A few channels are Receive only and will not transmit in these channels.

The **Call/Enter/Setup** button has multiple functions. It is generally used in the following ways:

- Press and release to transmit your unique **Call Tone** signal to another radio.
- Press and hold to enter any **Setup** menu.
- Functions as an **Enter** button when making a selection in any **Setup** menu.

## Setup Mode Programming

### Setup Mode Programming

The following series of procedures is designed to allow you to set the programmable features of your radio. Correctly following these steps results in a minimal amount of radio setup programming time.

During setup programming, the matrix display will show text describing the programming action you are now performing.



#### NOTE

When in the **Setup** mode, if you stop programming for longer than 15 seconds, your entry will be saved and the radio will go back to the **Marine Standby** mode. When you return to **Setup** mode and continue programming you will see the last “value” displayed. While in the **Setup** mode, you will not receive any signal reception except when setting squelch.

### Marine (VHF) Mode Programming

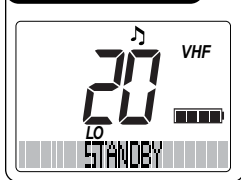
Programming these features will allow you to customize certain features of this radio to enhance your “On-Water” radio use.

Start from **Marine Standby** mode to begin **Marine (VHF) Setup** programming. **STANDBY** will be displayed on the matrix. Press and hold the **Call/Enter/Setup** button for two (2) seconds to enter the programming mode.

The mode programming follows this sequence:

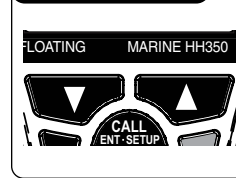
- Squelch Level Set
- UIC Channel Map
- Tone Alert On/Off
- Call Tone Select
- Roger Beep On/Off
- Key Tone On/Off
- ATIS On/Off (displayed only when ATIS enabled)

#### Marine Standby Mode



## Setup Mode Programming

#### Channel Up/Down Buttons



#### Squelch Control



### Squelch Control

**Squelch Control** filters weak signals and radio frequency (RF) noise so that you will clearly hear the signals you want. The **Squelch Control** on this radio is set through the following keypad operation.

#### To Set Squelch Control:

1. With the power On, push and hold **Call/Enter/Setup** button to access the **Setup** menu.
2. Squelch control will be the first menu item to appear. Press the **Channel Up** and **Channel Down** buttons to set level. The signal level bar graph shows squelch level while you are in **Setup** mode on the squelch adjust function.
3. To adjust your squelch, press the **Channel Down** button until you hear a hissing sound, then press and release the **Channel Up** button until the hissing stops. This will establish a “Baseline” squelch.
4. By pressing the **Channel Up** button further, you will filter weak and medium strength signals. By pressing **Channel Down** button, you will receive weaker signals.
5. Press the **Call/Enter/Setup** button to save this entry and move to the next **Setup** mode programming.

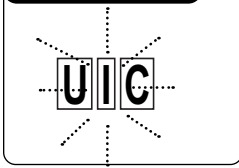


#### NOTE

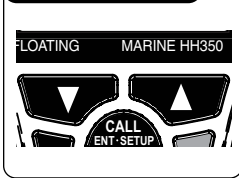
If the **Squelch** is set so that you can hear a continuous hissing sound, the **Memory Scan** and **Tri-Watch** functions will be blocked.

## Setup Mode Programming

### Active Channel Map Icon



### Channel Up/Down Buttons



### International/Canada/USA Channel Maps

Three (3) sets of VHF Channel Maps have been established for marine use: International, Canada, and USA. Most of the channels are the same for all three (3) maps, but there are definite differences (see table in the Appendix on page 42). Your radio has all three (3) maps built into it and will operate correctly in whichever area you choose.

#### To Set Channel Map Operating Area:

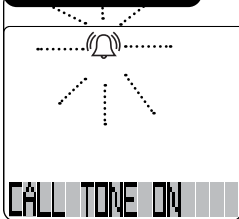
1. The **Channel Map** mode is the second mode on the **Marine (VHF) Setup** programming.
2. **U**, **I** and **C** will display, with the current setting (the **I** icon is the default) flashing.
3. Press **Channel Up/Down** button to select the **U**, **I** or **C** icon.
4. Press **Call/Enter/Setup** button to save this entry and move to the next **Setup** mode programming.



#### NOTE

One or two of the channel maps might have been disabled for sales of this radio in some countries.

### Call Tone Alert



### Call Tone Alert

If **Call Tone Alert** is set to On, the radio will alert you to a call from a compatible Cobra radio with a Call Alert.

#### To Set Call Tone On or Off:

1. Display will show **Call Tone** icon flashing and the matrix will display **CALL TONE ON** or **OFF**.
2. Press **Channel Up/Down** button to select **ON** or **OFF**.
3. Press the **Call/Enter/Setup** button to save this entry and move to the next **Setup** mode programming. The **Call Tone** icon will show in the **Standby** mode when set to **ON**.

## Setup Mode Programming

### Call Tone Select



### Call Tone Select

This setting will also allow you to transmit a unique **Call Tone** alert to identify your radio when you transmit messages. You can select from one of 10 different **Call Tone** signals.

#### To Set Call Tone:

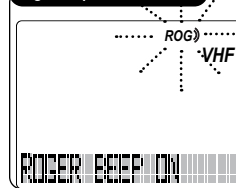
1. From the previous press of the **Call/Enter/Setup** button, the matrix will display **CALL TONE SELECT** and the display will flash the current **Call Tone** number (01 through 10).
2. Press the **Channel Up/Down** button to select a different **Call Tone**. An example of each call tone will sound for 1.5 seconds.
3. Press **Call/Enter/Setup** button to save this entry and move to the next **Setup** mode programming.



#### NOTE

**Call Tones** are not usually used for **Marine VHF** communications. We allow you to turn it On for your unique communication needs. It is only compatible with other Cobra VHF radios.

### Roger Beep Mode



### Roger Beep Mode

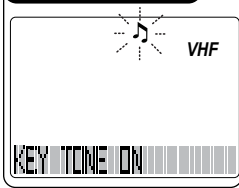
In **Roger Beep** mode, your listener will hear an audible tone when you release the **Talk** button. This alerts your listener that you are finished talking and it is OK for them to speak.

#### To Set Roger Beep On or Off:

1. Display will show **ROG** icon flashing and the matrix will display **ROGER BEEP ON** or **OFF**.
2. Press **Channel Up/Down** button to select **ON** or **OFF**. **ROG** will be displayed when On.
3. Press **Call/Enter/Setup** button to save this entry and move to the next **Setup** mode programming.

## Setup Mode Programming

### Key Tone Mode



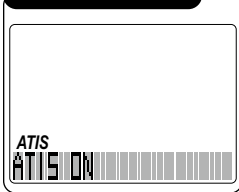
### Key Tone Mode

In **Key Tone** mode, an audible tone will sound each time a button is pressed or you change a setting.

#### To Set Key Tone On or Off:

1. Display will show **Key Tone** icon flashing and matrix will display **KEY TONE ON** or **OFF**.
2. Press **Channel Up/Down** button to select **ON** or **OFF**.
3. Press **Call/Enter/Setup** button to save entry.

### ATIS Mode



### ATIS Mode

**ATIS** mode allows control over ATIS packet transmissions. This mode is only visible after initial ATIS set-up (see page 21).

#### To Set ATIS On or Off:

1. Display will show **ATIS** icon and the matrix will display **ATIS ON** or **ATIS OFF**.
2. Press **Channel Up/Down** button to select **ON** or **OFF**.
3. Press **Call/Enter/Setup** button to save entry.

You have now ended **Marine (VHF) Setup** mode programming and will enter **Marine Standby** mode.



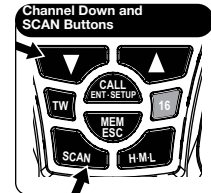
#### NOTE

Scan and Tri-Watch features are not available when ATIS is on.

## ATIS ID Programming

### ATIS ID Programming

The Automatic Transmission Identification System (ATIS) feature of this Cobra radio is used to identify marine vessels in some inland waterways of European countries that require **ATIS** transmission. An **ATIS ID** number is required to operate the ATIS feature. The **ATIS ID** number is derived from your vessel's call sign. You must enter your **ATIS ID** number into this radio before the **ATIS** system will become functional. Please consult your local dealer for questions about local ATIS requirements. The use of **ATIS** is prohibited outside the European inland waterways covered by the Basel Agreement. With this feature activated the vessels **ATIS ID** number is transmitted after every push of the **Talk** button.



#### To Set the ATIS ID Number:

#### NOTE

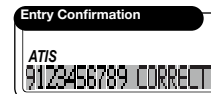
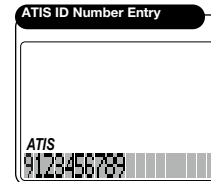
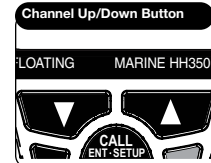
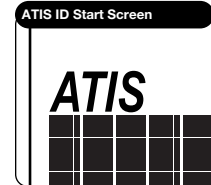
The **ATIS ID** is a 10-digit number that will always begin with the number "9." You will be asked to enter only the last nine digits. The first digit, "9," has been automatically entered for you.

1. With the radio turned Off, press and hold the **Channel Down** and **SCAN** buttons and simultaneously power On the radio.
2. The LCD will display the **ATIS** icon. A dash (-), to the right of the digit "9," will be flashing for the next entry.



#### NOTICE

**Remember**, you only have **one (1) attempt** to set the **ATIS ID** number. Once this number has been entered, only your Cobra distributor can reset the **ATIS ID** number. You can also return the radio to Cobra for reprogramming.



3. Press the **Channel Up/Down** button to scroll through the specific **ATIS** digit being entered.
4. Pressing the **Call/Enter/Setup** button advances to the right, one (1) digit, for the next entry.
5. If an error is made during entry, use the **MEM/ESC** key to back-up through the dot matrix display to correct the number.
6. Repeat this input sequence until all nine digits have been entered. The nine digits will be displayed on the matrix. The **ATIS** icon will stop flashing when a successful **ATIS ID** entry has been made.
7. When all 10 digits are displayed, press and release the **Call/Enter/Setup** button. The dot matrix will flash **CORRECT?**
8. Press and hold the **Call/Enter/Setup** button again to save the **ATIS ID** number and return to the **Marine Standby** mode.



## Standby/Receive and Transmit

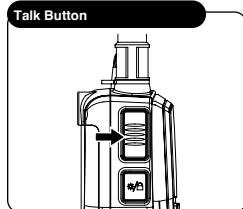
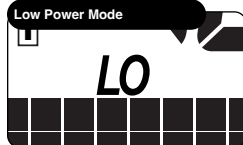
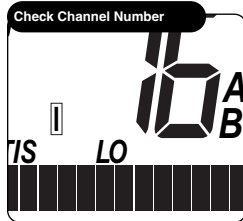
### Marine Standby and Receive (Rx) Mode

**Marine Standby** mode is the default mode for the radio whenever it is turned on. From this mode, you can change current settings by becoming familiar with the different key functions in **Marine Standby** mode. While in **Marine Standby** mode, the user will be able to transmit by pressing the **Push to Talk (Talk)** button. Signals in **Receive (Rx)** mode will be received on the selected channel(s), and alerts broadcast by NOAA will activate the corresponding NOAA weather alert channels in your radio.



#### NOTE

Coastguard alerts are broadcast on Channel 16. While in **Marine Standby** mode, you will receive any messages sent on the channel to which you are tuned.

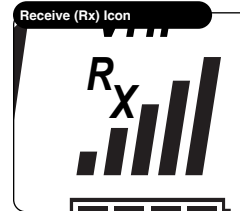
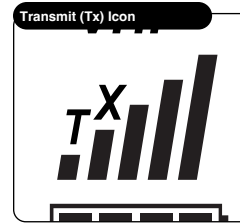


### Transmit (Tx) Mode

**Transmit (Tx)** mode gives you the ability to interact with safety services, other vessels and shore stations. When you use this capability, be sure to follow the procedures and to observe the courtesies that govern its use so everyone benefits. See Appendix to help you select the proper channels.

#### To Transmit a Message:

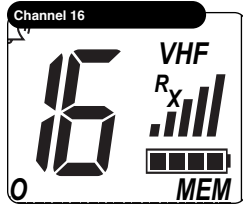
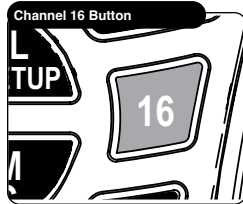
1. Check to see that your radio is set to a proper channel for the type of message you plan to send.
2. Toggle to the **Low Power** setting.
3. With the microphone about 51 mm [2 in.] from your mouth, press and hold the **Talk** button and speak into the microphone. The **Transmit** icon will appear on the LCD.
4. Release the **Talk** button when you are finished speaking. Your radio can only operate in either **Transmit (Tx)** or **Receive (Rx)** mode at any given time. You will not hear the response to your message unless the **Talk** button is released. **Battery Power** icon is frozen for Tx at whatever level it was during receive.



#### NOTE

If the **Talk** button is held down for four (4) minutes, the radio will automatically sound a series of beeps and cease transmitting to prevent unwanted signal generation and battery drain. As soon as the **Talk** button is released, it can be pressed again to resume transmission.

## Advanced Operation

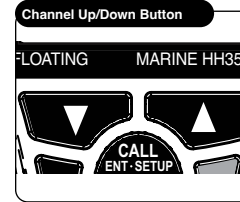
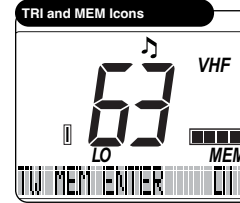
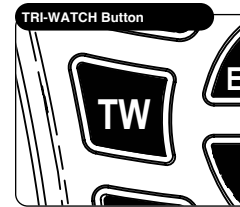


## Channel 16 Mode

**Channel 16** mode gives you quick access to calling on Channel 16 from any operational mode.

## To Switch to Channel 16:

1. Press the **Channel 16** button to change to Channel 16.
2. Press the **Channel 16** button a second time and return to the last used channel.



## Tri-Watch Mode

**Tri-Watch** mode gives you one (1) button access to scan a total of three (3) channels of most importance to you. Channel 16 is preprogrammed and will always be one (1) of the scanned locations. Two (2) other channels of your choice can be stored in the radio. These channels can be edited and/or recalled during future engagements of **Tri-Watch** mode.



## NOTE

The radio must be squelched for **Tri-Watch** mode to function. See page 17 for **Squelch** procedure.

## Tri-Watch Setup

## To Program or Edit the Tri-Watch Channels:

1. Press and hold the **TRI-WATCH** button for two (2) seconds to activate **Tri-Watch Setup** mode. The **MEM** icon on the display will turn On and the matrix will display **TW MEM ENTER 01**.

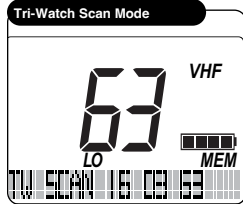
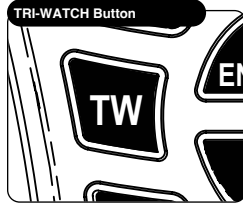


## NOTE

The main channel number will flash to indicate channel position. If there is no input activity for 15 seconds, the radio will sound three (3) beeps and return to Marine Standby mode.

2. Press **Channel Up/Down** button to select the desired **Tri-Watch** channel.
3. Press and release **TRI-WATCH** button or **Call/Enter/Setup** button to confirm entry.
4. Repeat steps 2 and 3 to program the remaining additional **Tri-Watch** memory channel.
5. After programming both **Tri-Watch** memory channels the radio will immediately engage **Tri-Watch** mode.

## Advanced Operation



### Using Tri-Watch

#### Tri-Watch Scan Mode:

1. From **Marine Standby** mode, press the **TRI-WATCH** button. The **TW SCAN** will display on the matrix along with the three marine channels stored in the **Tri-Watch** memory.
2. The radio will scan through the three (3) **Tri-Watch** memory channels.
3. A signal on any one (1) of the three (3) channels will stop the scan for 10 seconds to allow you to listen to the traffic on that location.

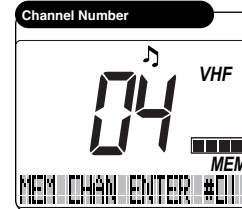
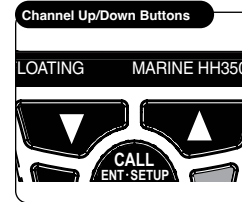
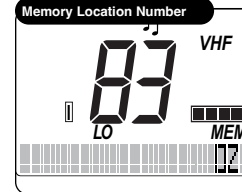
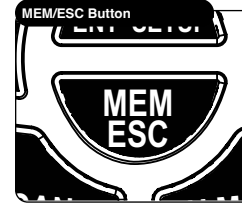


#### NOTE

After the **Tri-Watch** scan stops to monitor a channel, as long as you do not press any buttons within 10 seconds, your radio will automatically resume scanning the **Tri-Watch** channels. Channel 16 is given priority in Tri-Watch Mode.

4. Press the **Channel Up/Down** button to resume scanning the **Tri-Watch** channels or to change the scan direction.
5. To EXIT the **Tri-Watch** scan, press the **TRI-WATCH** button again. The **TRI** icon will disappear from the LCD and the radio will return to **Marine Standby** mode.

## Advanced Operation



### Memory Location Mode

Your radio has unlimited memory locations for storing your most frequently used channels. These memory locations can be selected individually or can be scanned. (See page 30 under **Memory Location Scan**.)

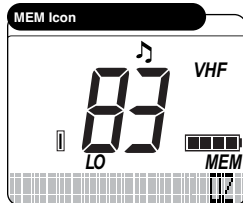
To enter **Memory** mode, press **MEM/ESC** button. The display will show the **MEM** icon and the **Memory Channel** bank will be displayed on the matrix.

#### To Program Memory Locations:

1. Press and hold the **MEM/ESC** button for two (2) seconds. The memory location number will be displayed on the matrix and the **MEM** icon will be turned On.
2. Use the **Channel Up/Down** button to advance to the memory location (00-99) you want to program.
3. Press the **MEM/ESC** button to select the memory location.
4. Use the **Channel Up/Down** button to change to the channel you want to store into the selected memory location.
5. Press the **MEM/ESC** button to program that channel. The memory location will be displayed on the matrix again.

Repeat steps 2 through 5 to program as many additional memories as you want.

6. Press and hold the **MEM/ESC** button for two (2) seconds. This will return the radio to **Memory** mode.
7. Press and release the **MEM/ESC** button again to return to **Marine Standby** mode.



### To Recall a Stored Memory Location:

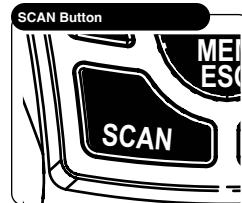
1. Press the **MEM/ESC** button. The **MEM** icon will be turned On.
2. Press the **Channel Up/Down** button to select the memory location. If a memory location has been programmed, its associated channel will display on the LCD. Your radio is now in **Marine Standby** mode on the selected memory location.

### To Exit Memory Location Mode:

Press the **MEM/ESC** button to return the radio to **Marine Standby** mode. The last channel used in **Marine Standby** mode will now be displayed on the LCD and the **MEM** icon will disappear.

### To Erase Stored Memory Locations:

1. Press and hold the **MEM/ESC** button for two (2) seconds. The memory location number will be displayed on the matrix and the **MEM** icon will be turned On.
2. Use the **Channel Up/Down** button to advance to the memory location you want to erase.
3. Press the **MEM/ESC** button to select the memory location.
4. Use the **Channel Up/Down** button to change to the channel to read "00" at the selected memory location.
5. Press the **MEM/ESC** button to erase that channel. Repeat steps 2 through 5 to erase as many additional memories as you want.
6. Press and hold the **MEM/ESC** button for two (2) seconds. This will return the radio to **Memory** mode.
7. Press and release the **MEM/ESC** button again to return to **Marine Standby** mode.



### Channel Scan Mode

During **Channel Scan** mode, the radio will rapidly switch from channel to channel through all the channels. Channel 16 will be given priority in Channel Scan Mode.

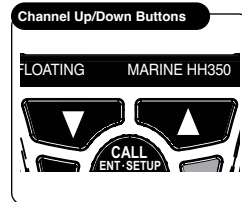
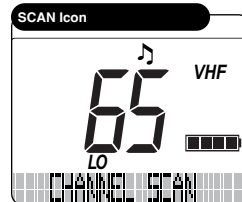


#### NOTE

The radio must be squelched for **Channel Scan** mode to function. See page 17 for **Squelch** procedure.

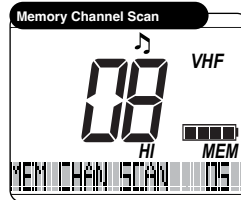
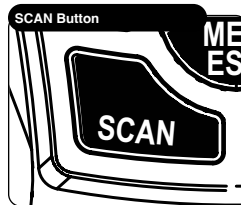
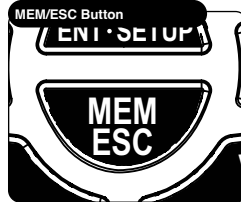
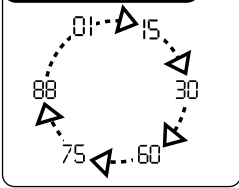
### To Enter Channel Scan:

1. From **Marine Standby** mode, press the **SCAN** button. The radio will immediately begin to scan the entire channel map selected in the active channel map. **CHANNEL SCAN** will display on the matrix.
2. A signal on any channel will stop the scan for 10 seconds to allow you to listen to the traffic on that location. After 10 seconds, the radio will resume scanning.
3. Press the **Channel Up/Down** button to resume scanning before the 10-second pause has completed or to change the scan direction.
4. To EXIT **Channel Scan** mode, press the **SCAN** button again. The **SCAN** icon will disappear from the LCD and the radio will return to **Marine Standby** mode.



## Advanced Operation

### Memory Location Scan



### Memory Location Scan Mode

During **Memory Location Scan** mode, the radio will rapidly scan through all pre-assigned memory channels. Channel 16 will be given priority in Memory Scan Mode.



#### NOTE

The radio must be squelched for **Memory Location Scan** mode to function. See page 17 for **Squelch** procedure.



#### NOTE

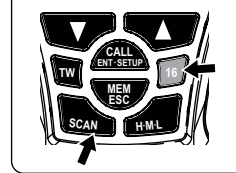
If there are fewer than two (2) memory locations programmed in the radio, the **Memory Location Scan** option will not be available. To program at least two (2) memory locations, see page 27.

#### To Enter Memory Location Scan:

1. From **Marine Standby** mode, press the **MEM/ESC** button.
2. Press the **SCAN** button. The radio will immediately begin to scan all pre-assigned memory channels. The **MEM** icon will show on the LCD, and **MEM CHAN SCAN** will display on the matrix along with the memory location.
3. A signal on any channel will stop the scan for 10 seconds to allow you to listen to the traffic on that location. After 10 seconds, the radio will resume scanning.
4. Press the **Channel Up/Down** button to resume scanning the **Memory Location Scan** channels before the 10-second pause has completed or to change the scan direction.
5. To **EXIT Memory Location Scan** mode, press the **SCAN** button again. The **MEM** icon will disappear from the LCD and the radio will return to **Marine Standby** mode.

## Floating Feature

### 16 and Scan



### Burp Feature



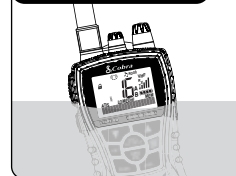
### Burp Feature

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

#### To Activate Burp:

1. Press and release the **16** and **SCAN** keys at the same time then turn on radio. Continue to hold buttons until BURP tone sounds.
2. The **Burp** tone(s) at maximum level will sound from the internal speaker for eight seconds.
3. During this time, the matrix will display **BURP**.
4. Hold the radio with the speaker grill down to help the water drain out. Shaking the radio during the BURP tone will also help to remove water from the speaker.
5. After an 8-second interval, the radio will return to standby.

### Floating Radio



### Floating Radio

This radio is designed to float if dropped overboard. The orange center makes it visible and easy to retrieve. This rugged radio is also designed to meet JIS7 (IPX7) specifications. This means it's designed to operate properly after being submerged in one meter deep water for 30 minutes.



#### NOTE

Do not leave the radio floating in water permanently. This could cause premature corrosion of the battery contacts and other damage.

The radio is only designed to float with its included Lithium-ion battery. Using other approved batteries might cause the radio to sink. This includes the optional AA battery tray.





## Maintenance

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

- Keep the radio and charger clean by wiping with a soft cloth and mild detergent. 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, wipe with a soft, moist cloth at least once a day to prevent buildup of salt deposits, which could interfere with button operation.
- If the radio will be stored for a long period, such as over the winter, remove the batteries from the battery tray and store them in a separate package. This is especially important if you are using alkaline batteries.

## Troubleshooting

No display on LCD when radio is turned On	Batteries are exhausted  Batteries not installed properly	Recharge or replace batteries  Remove batteries and reinstall according to polarity markings
Batteries run down quickly	Batteries are at the end of their life	Replace with new batteries
Will transmit at one (1) or three (3) watts, but not at six (6) watts	Batteries are low  Selected channel is limited to one (1) watt	Recharge or replace batteries  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	Re-adjust volume and squelch
No response to button press	Button lock is On	Press <b>Backlight/Key Lock</b> button
No answer to calls	Out of range of other station  Signal is blocked by terrain	Switch to three (3) or six (6) watts or move closer  Move until you have a "line-of-sight" to the other station



## VHF Marine Radio Procedures

### Maintain Your Watch

Whenever your boat is underway, the radio must be turned On and be tuned to Channel 16 except when being used for messages.

### Power

Try 1 watt first, if the station being called is within a few miles. If there is no answer, switch to 3 watts and call again. You have the ability to go up to 6 watts of output power to increase your calling distance. Remember, the lower wattage outputs will conserve your battery and minimize interference to other users.

### Calling Coast Stations

Call a coast station on its assigned channel. You may use Channel 16 when you do not know the assigned channel.

### Calling Other Vessels

Call other vessels on Channel 16. You may also call on ship-to-ship channels when you know that the vessel is listening on a ship-to-ship channel.

### Limits on Calling

You must not call the same station for more than 30 seconds at a time. If you do not get a reply, wait at least two (2) minutes before calling again. After three (3) calling periods, wait at least 15 minutes before calling again.

### Change Channels

After contacting another station on a calling channel, change immediately to a channel which is available for the type of message you want to send.

### Station Identification

Identify, in English, your station by your FCC call sign (if available), vessel name and the state registration number, at both the beginning and at the end of the message.

### Prohibited Communications

You **MUST NOT** transmit:

- False distress or emergency messages.
- Messages containing obscene, indecent or profane language.
- General calls, signals or messages (messages not addressed to a particular station) on Channel 16, except in an emergency or if you are testing your radio.
- When you are on land.



## Voice Calling

### To call another vessel or shore installation (e.g, lock or bridge tender):

- Make sure the radio is On.
- Make sure you are in standby listening mode on Channel 16. Make sure Channel 16 is not in use.
- When the channel is open (quiet), press the **Talk** button and call a vessel. Hold the radio or microphone several inches from your face and speak clearly and distinctly in a normal voice tone. Say “name or station being called,” “THIS IS [your vessel name or call sign].”
- Once contact is made, you must leave Channel 16 and go to another working channel. See channel listing on page 41.

#### For Example

#### The vessel Corsair is calling the vessel Vagabond:

**Corsair:** “Vagabond, this is Corsair. Over.”

**Vagabond:** “Please switch and answer on Channel 68 (or any proper working channel). Over.”

**Corsair:** “Switching to Channel 68. Over.”



- If the other does not respond, wait two (2) minutes and repeat. You are permitted to attempt contact three (3) times, two (2) minutes apart. If you still have not made contact, wait 15 minutes before trying again.
- After communications are completed, each vessel must sign off with its call sign or vessel name and the word “out” and return to Channel 16.



#### NOTE

For best sound quality at the station you are calling, hold the microphone on the front of the radio at least 51 mm (2 in.) from your mouth and slightly off to one (1) side. Speak in a normal tone of voice.



#### NOTE

“Over and Out”  
The most commonly misused procedure words are “over and out” within the same transmission. “Over” means you expect a reply. “Out” means you are finished and do not expect a reply.



## Radiotelephone Calls

Boaters may make and receive radiotelephone calls to and from any number on the telephone network by using the services of public coast stations. For a fee, calls can be made between your radio and telephones on land, sea and in the air.

If you plan to use these services, consider registering with the operator of the public coast station that you plan to work through. These services can provide you with detailed information and procedures to follow.



### NOTICE

You may disclose privileged information during a radiotelephone call. Keep in mind that your transmission is **NOT** private, as it is on a regular telephone. Both sides of the conversation are being broadcast and can be heard by anyone who has a radio and tunes to the channel you are using.

## Emergency Messages and Distress Procedure

The ability to summon assistance in an emergency is the primary reason to have a VHF marine radio. The marine environment can be unforgiving, and what may initially be a minor problem can rapidly develop into a situation beyond your control.

The coastguard monitors Channel 16, responds to all distress calls, and coordinates all search and rescue efforts. Depending on the availability of other capable vessels or commercial assistance operators in your vicinity, coastguard or coastguard Auxiliary craft may be dispatched.

In any event, communicate with the coastguard as soon as you experience difficulties and before your situation becomes an emergency. Use the emergency message procedures only after your situation has become grave or you are faced with a sudden danger threatening life or property and requiring immediate help. Use Channel 16 to communicate your emergency message. Make sure you transmit on high power. If you are merely out of gas, do not send an emergency message. Drop your anchor and call a friend or marina to bring the fuel you need or to give you a tow.



## Marine Emergency Signals

The three (3) spoken international emergency signals are:

### MAYDAY

The distress signal **MAYDAY** is used to indicate that a station is threatened by grave and imminent danger and requests immediate assistance.

### PAN

The urgency signal **PAN** is used when the safety of the vessel or person is in jeopardy. (This signal is properly pronounced pahn.)

### SECURITE

The safety signal **SECURITE** is used for messages about the safety of navigation or important weather warnings. (This signal is properly pronounced see-cure-ee-tay.)

When using an international emergency signal, the appropriate signal is to be spoken three (3) times prior to the message.



### NOTE

Do not use the emergency signal SECURITE if a vessel or person is in danger. Use either MAYDAY or PAN PAN, depending on the immediacy of the danger involved.

## If You Hear a Distress Call

You must give any message beginning with one (1) of these signals priority over any other messages. ALL stations MUST remain silent on Channel 16 for the duration of the emergency unless the message relates directly to the emergency.

If you hear a distress message from a vessel, stand by your radio. If it is not answered, YOU should answer. If the distressed vessel is not nearby, wait a short time for others who may be closer to acknowledge. Even if you cannot render direct assistance, you may be in a position to relay the message.



## Marine Distress Procedure

Speak slowly — clearly — calmly.

1. Make sure your radio is On.
2. Select Channel 16.
3. **Press Talk button and say:**  
“MAYDAY — MAYDAY — MAYDAY.”  
(Or “PAN — PAN — PAN,”  
or “SECURITE — SECURITE — SECURITE.”)
4. **Say:**  
“THIS IS [your vessel name or call sign],” repeated three (3) times.
5. **Say:**  
“MAYDAY (or “PAN” or “SECURITE”)  
[your vessel name or call sign].”
6. **Tell where you are:**  
(what navigational aids or landmarks are nearby).
7. State the nature of your distress.
8. State the kind of assistance needed.
9. Give number of persons aboard and conditions of any injured.
10. Estimate present seaworthiness of your vessel.
11. Briefly describe your vessel (length, type, color, hull).
12. **Say:**  
“I WILL BE LISTENING ON CHANNEL 16.”
13. **End message by saying:**  
“THIS IS [your vessel name or call sign]. OVER.”
14. Release **Talk** button and listen. Someone should answer.  
If not, repeat the call, beginning at step 3 above.

Keep the radio nearby. Even after your message has been received, the coastguard can find you more quickly if you can transmit a signal for a rescue boat to hone in on.



### For Example

“Mayday — Mayday — Mayday”  
 “This is Corsair — Corsair — Corsair” [repeated three (3) times]  
 “Mayday Corsair”  
 “Point Lynas bears 220 degrees magnetic — distance 5 kilometers”  
 “Struck submerged object and flooding — need pump and tow”  
 “Four (4) adults, three (3) children aboard — no one injured”  
 “Estimate we will remain afloat one-half hour”  
 “Corsair is 8 meter sloop with blue hull and tan deck house”  
 “I will be listening on Channel 16”  
 “This is Corsair”  
 “Over”

It is a good idea to write out a script of the message form and post it where you and others on your vessel can see it when an emergency message needs to be sent.



## Specifications (typical)

General	
Number of Channels	All U.S., Canadian and International Channels
Channel Spacing	25 kHz
Modulation	5 kHz Max.
Input Voltage	7.4 VDC
Battery Life: 5% TX, 5% RX, 90% Standby	LiON: 8 hours @ 6 watts, 14 hours @ 1 watt
Current Drain: Standby Receive (Rx) Transmit (Tx)	45 mA 200 mA 1.8 A @ High Power, 700 mA @ Low Power
Temperature Range	-20°C to 40°C
Radio Dimensions	4.8" x 2.4" x 1.4" (123 mm x 62 mm x 36 mm) not including antenna
Radio Weight	0 lbs 8 oz. (228 g) without batteries
Receiver	
Frequency Range	155.450 to 162.825 MHz
Receiver Type	Double Conversion Super-Heterodyne
Sensitivity: 12 dB Sinad	-116 dBm
Adjacent Channel Selectivity	-70 dB
Intermodulation Rejection	-68 dB
Spurious and Image Rejection	-70 dB
AF Output	250 mW @ 8 Ohms and 5% distortion
Transmitter	
Frequency Range (Tx):	155.450 to 162.425 MHz
RF Output Power	1, 3 or 6 Watts Max (5 Watts rated)
Spurious Emissions	-36 dB
Microphone Type	Condenser
Frequency Stability	±5 ppm
FM Hum and Noise	40 dB
Bluetooth®	
Classification	Class 2,1
Version	2.0
Range	10 Meters



## VHF Marine Channel Assignments

Three (3) sets of VHF **Channel Maps** have been established for marine use internationally, in Canada and in the U.S.A. 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. When shipped from the factory, your radio will be set to the International Channel Map. (See page 18 for instructions on how to change the Channel Map.)

The following is a brief outline for some of the channel assignments in the International Channel Map.

### Distress, Safety and Calling

#### Channel 16

Getting the attention of another station (calling) or in emergencies (distress and safety).

### Intership Safety

#### Channel 6

Ship-to-ship safety messages and for search and rescue messages to coastguard ships and aircraft.

### On-Board Communication

#### Channel 15, 17

Used for communication between parts of large ships.

### Navigational

#### Channels 13, 67, 75, 76

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.

### 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.



#### NOTE

The U.S.A. and Canada impose restrictions on the use of many channels within their territorial waters. These are noted in the channel assignment chart. If operating your vessel in U.S.A. or Canadian waters, consult the national communication authority or a knowledgeable local radio operator for further guidance.



# VHF Marine Channel Assignments

Appendix

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	
01		•	•	156.050	160.650	
01A/1001	•			156.050	156.050	
02		•	•	156.100	160.700	
03		•	•	156.150	160.750	
03A/1003	•			156.150	156.150	
04		•		156.200	160.800	
1004			•	156.200	156.200	
05		•		156.250	160.850	
05A/1005	•		•	156.250	156.250	
06	•	•	•	156.300	156.300	
07		•		156.350	160.950	
07A/1007	•		•	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.

# VHF Marine Channel Assignments

Appendix

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)
<b>Coast Guard Only</b>	<b>guardia costera solamente</b>
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo) operaciones portuarias, movimiento de embarcaciones
<b>West Coast (Coast Guard Only); East Coast (Commercial Fishing)</b>	<b>Costa occidental (guardia costera solamente); Costa oriental (pesca comercial)</b>
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

# VHF Marine Channel Assignments

Appendix

Channel Number Número de canal	Channel Map Mapa de canales			Frequency Frecuencia		
	USA EE.UU.	Int'l Internac	Canada Canadá	Transmit Transm.	Receive Recepción	
14	•	•	•	156.700	156.700	
15	•			Rx Only	156.750	
15		•	•	156.750	156.750	1 watt CAN 1 vatio Canadá
16	•	•	•	156.800	156.800	
17	•	•	•	156.850	156.850	1 watt CAN 1 vatio Canadá
18		•		156.900	161.500	
18A/1018	•		•	156.900	156.900	
19		•		156.950	161.550	
19A/1019	•		•	156.950	156.950	
1019		•		156.950	156.950	
2019		•		161.550	161.550	
20	•	•	•	157.000	161.600	1 watt CAN 1 vatio Canadá
20A/1020	•	•		157.000	157.000	
2020		•		161.600	161.600	
21		•		157.050	161.650	
21A/1021	•		•	157.050	157.050	
2021			•	RX only	161.650	
22		•		157.100	161.700	
22A/1022	•		•	157.100	157.100	
23		•	•	157.150	161.750	

# VHF Marine Channel Assignments

Appendix

Channel Use (English)	Uso de canales (Español)
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)
<b>International Distress, Safety and Calling</b>	<b>Llamadas, seguridad y solicitud de auxilio internacional</b>
State Controlled (U.S.A. Only)	Controlado a nivel estatal (EE.UU. solamente)
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
Commercial	Comerciales
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
Commercial	Comerciales
Port Operations	Operaciones portuarias
Port Operations	Operaciones portuarias
<b>Canada (Coast Guard Only); International (Port Operations, Ship Movement)</b>	<b>Canadá (guardia costera solamente); Internacional (operaciones portuarias, movimiento de embarcaciones)</b>
Port Operations	Operaciones portuarias
Port Operations	Operaciones portuarias
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
<b>U.S. (Government Only); Canada (Coast Guard Only)</b>	<b>EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente)</b>
<b>Coast Guard Only – Weather Broadcasts</b>	<b>Solamente Guardacostas – Transmisiones Meteorológicas</b>
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 estadounidenses y canadienses, y difusión de información sobre seguridad marítima anunciada por el canal 16
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)

# VHF Marine Channel Assignments

Appendix

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	
<b>23A/1023</b>	•			157.150	157.150	
<b>2023</b>			•	Rx Only	161.750	
<b>24</b>	•	•	•	157.200	161.800	
<b>25</b>	•	•	•	157.250	161.850	
<b>2025</b>			•	RX only	161.850	
<b>26</b>	•	•	•	157.300	161.900	
<b>27</b>	•	•	•	157.350	161.950	
<b>28</b>	•	•	•	157.400	162.000	
<b>2028</b>			•	RX only	162.000	
<b>60</b>		•	•	156.025	160.625	
<b>61</b>		•		156.075	160.675	
<b>1061</b>			•	156.075	156.075	
<b>62</b>		•		156.125	160.725	
<b>1062</b>			•	156.125	156.125	
<b>63</b>		•		156.175	160.775	
<b>63A/1063</b>	•		•	156.175	156.175	
<b>64</b>		•	•	156.225	160.825	
<b>1064</b>			•	156.225	156.225	
<b>65</b>		•		156.275	160.875	
<b>65A/1065</b>	•		•	156.275	156.275	

# VHF Marine Channel Assignments

Appendix

Channel Use (English)	Uso de canales (Español)
<b>Coast Guard Only</b>	<b>Solamente Guardacostas</b>
<b>Coast Guard Only – Weather Broadcasts</b>	<b>Solamente Guardacostas – Transmisiones Meteorológicas</b>
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
<b>Safety: Continuous Marine Broadcast (CMB) service by MCTS Canada</b>	<b>Seguridad: Transmisión Marítima Continua (CMB) servicio por MCTS Canadá</b>
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
<b>Safety: Continuous Marine Broadcast (CMB) service by MCTS Canada</b>	<b>Seguridad: Transmisión Marítima Continua (CMB) servicio por MCTS Canadá</b>
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
<b>Canada (Coast Guard Only); West Coast (Coast Guard Only); East Coast (Commercial Fishing)</b>	<b>Canadá (guardia costera solamente); Costa occidental (guardia costera solamente); Costa oriental (pesca comercial)</b>
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
<b>West Coast (Coast Guard Only); East Coast (Commercial Fishing)</b>	<b>Costa occidental (guardia costera solamente); Costa oriental (pesca comercial)</b>
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, Canada Tow Boats-BCC	Operaciones portuarias y comerciales; VTS en áreas selectas, Barcos-BCC de la remolque de Canadá
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
<b>U.S. (Government Only); Canada (Commercial Fishing)</b>	<b>EE.UU. (entidades gubernamentales solamente); Canadá (pesca comercial)</b>
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Port Operations	Operaciones portuarias

# VHF Marine Channel Assignments

Appendix

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	
66		•		156.325	160.925	
66A/1066	•		•	156.325	156.325	
67	•	•	•	156.375	156.375	
68	•	•	•	156.425	156.425	
69	•	•	•	156.475	156.475	
70	•	•	•	RX only	156.525	
71	•	•	•	156.575	156.575	1 watt USA
72	•	•	•	156.625	156.625	
73	•	•	•	156.675	156.675	
74	•	•	•	156.725	156.725	
75	•	•	•	156.775	156.775	1 watt
76	•	•	•	156.825	156.825	1 watt
77	•	•	•	156.875	156.875	1 watt USA

# VHF Marine Channel Assignments

Appendix

Channel Use (English)	Uso de canales (Español)
Public Correspondence (Marine Operator), Port Operations, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
Port Operations	Operaciones portuarias
U.S. (Commercial). Used for bridge-to-bridge communications in lower Mississippi River (Intership Only); Canada (Commercial Fishing), S&R	EE.UU. (comercial). Usado para comunicaciones de puente de mando a puente de mando en la parte baja del Río Misisipí (entre embarcaciones solamente); Canadá (pesca comercial) (transmisión y recepción)
Non-Commercial (Recreational)	No comercial (recreativo)
U.S. (Non-Commercial, Recreational); Canada (Commercial Fishing Only); International (Intership, Port Operations, Ship Movement)	EE.UU. (no comercial, recreativo); Canadá (pesca comercial solamente); Internacional (comunicaciones entre embarcaciones, operaciones portuarias, movimiento de embarcaciones)
<b>Digital Selective Calling (Voice communications not allowed)</b>	<b>Llamadas selectivas digitales (las comunicaciones verbales están prohibidas)</b>
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.

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	
78		•		156.925	161.525	
78A/1078	•		•	156.925	156.925	
1078		•		156.925	156.925	
2078		•		161.525	161.525	
79		•		156.975	161.575	
79A/1079	•		•	156.975	156.975	
1079		•		156.975	156.975	
2079		•		161.575	161.575	
80		•		157.025	161.625	
80A/1080	•		•	157.025	157.025	
81		•		157.075	161.675	
81A/1081	•		•	157.075	157.075	
82		•		157.125	161.725	
82A/1082	•		•	157.125	157.125	
83		•		157.175	161.775	
83A/1083	•		•	157.175	157.175	
2083			•	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/1088	•			157.425	157.425	

Channel Use (English)	Uso de canales (Español)
Public Correspondence (Marine Operator)	Correspondencia pública (operador marítimo)
Non-Commercial (Recreational)	No comercial (recreativo)
Port Operations	Operaciones portuarias
Port Operations	Operaciones portuarias
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	Operaciones portuarias
Port Operations	Operaciones portuarias
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
<b>U.S. (Government Only); Environmental Protection Operations)</b>	<b>EE.UU. (entidades gubernamentales solamente; operaciones de protección medioambiental)</b>
Public Correspondence (Marine Operator), Port Operation, Ship Movement	Correspondencia pública (operador marítimo), operaciones portuarias, movimiento de embarcaciones
<b>U.S. (Government Only); Canada (Coast Guard Only)</b>	<b>EE.UU. (entidades gubernamentales solamente); Canadá (guardia costera solamente)</b>
Port Operations, Ship Movement	Operaciones portuarias, movimiento de embarcaciones
<b>(Coast Guard Only) (Coast Guard Only)</b>	<b>Canadá (guardia costera solamente) Canadá (guardia costera solamente)</b>
<b>Coast Guard Only – Weather Broadcasts</b>	<b>Solamente Guardacostas – Transmisiones Meteorológicas</b>
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 (Marine Operator)	Correspondencia pública (operador marítimo)
U.S. (Commercial).	EE.UU. (comercial).
Port Operations and VTS (International & Canada).	Operaciones Portuarias y VTS (Internacional y Canadá).
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. Some other plain-numbered channels and all of the A channels and 10xx/20xx channels, such as 01A, 03A and 04A, 1019, 1078, 2078 transmit and receive on a single frequency, which is termed simplex operation. Your radio automatically adjusts to these conditions. This radio also includes new four digit channels to be compliant with the latest and future regulations.



### 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. Algunos otros canales de número llano y todos los canales A y canales 10xx / 20xx, tales como 01A, 03A y 04A, 1019, 1078, 2078 transmiten y reciben en una sola frecuencia, que se denomina operación 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). Esta radio también incluye nuevos canales de cuatro dígitos para cumplir con las regulaciones más recientes y futuras.



### 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.

## 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 19 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	Dhufuri
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





## Warranty

Please contact your local dealer for warranty information.

### Proof of Purchase Required

For warranty service you will need to provide proof of purchase from an approved dealer or retailer. Please note that if you purchased your product on the Internet from Ebay, Amazon, or any third party marketplace, you will need to provide a receipt from the actual seller for verification as an approved retailer.

You can find quality Cobra products and accessories at your local Cobra dealer, or in the U.S.A., you can order directly from Cobra.

**Please visit [www.cobra.com](http://www.cobra.com)**

Web orders will normally ship the next business day if received by us before 2:00 PM Eastern Time. Orders do not ship on weekends or holidays. All standard deliveries are Monday-Friday only. Saturday delivery can be requested in certain areas of the country for an additional shipping fee by calling Sales at 800-543-1608.

Certain orders may require additional days to process prior to shipping. Holidays may also impact processing and shipping time frame. Occasionally, items may not ship due to inventory depletion. If you need your item to be expedited, we recommend calling Sales at 800-543-1608.

### Order Acceptance

Once your order has been accepted and processed, you will receive an email that will include the shipping carrier and tracking information.

### Shipping and Delivery

Free ground shipping is included to 48 states. Hawaii, Alaska and Puerto Rico ship based on assessed fee at checkout.

We require a physical address for shipping. Sorry, no P.O. Boxes or APO/FPO addresses. Please select 2-day or next day air for shipments to Hawaii or Alaska. Shipping charges are calculated on a per-product basis. Please make note of the shipping charges associated with each item.

**Note:** For safety reasons, we cannot ship products containing lithium-ion batteries via air delivery methods. These items are available to ship via ground service only.

**Note:** For your protection, some orders may require a signature for delivery.



### EN (English)

Hereby, Cobra Electronics Europe, Ltd. declares that the radio equipment type VHF Marine Radio is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:  
<http://www.eu.cobra.com>

### ES (Spanish)

Por la presente, Cobra Electronics Europe, Ltd. declara que el tipo de equipo radioeléctrico VHF Marine Radio es conforme con la Directiva 2014/53/UE.

El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente:  
<http://www.eu.cobra.com>

### DA (Danish)

Herved erklærer Cobra Electronics Europe, Ltd., at radioudstyrstypen VHF Marine Radio er i overensstemmelse med direktiv 2014/53/EU.

EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse:  
<http://www.eu.cobra.com>

### DE (German)

Hiermit erkläre Cobra Electronics Europe, Ltd., dass der Funkanlagentyp VHF Marine Radio der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar:

<http://www.eu.cobra.com>

### BG (Bulgarian)

С настоящото Cobra Electronics Europe, Ltd. декларира, че този тип радиосъоръжение VHF Marine Radio е в съответствие с Директива 2014/53/ЕС.

Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес:  
<http://www.eu.cobra.com>

### CS (Czech)

Tímto Cobra Electronics Europe, Ltd. prohlašuje, že typ rádiového zařízení VHF Marine Radio je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese:

<http://www.eu.cobra.com>

### ET (Estonian)

Käesolevaga deklareerib Cobra Electronics Europe, Ltd., et käesolev raadioseadme tüüp VHF Marine Radio vastab direktiivi 2014/53/EL nõuetele.

ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil:  
<http://www.eu.cobra.com>

### EL (Greek)

Με την παρούσα ο/η Cobra Electronics Europe, Ltd., δηλώνει ότι ο ραδιοεξοπλισμός VHF Marine Radio πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο:

<http://www.eu.cobra.com>

### FR (French)

Le soussigné, Cobra Electronics Europe, Ltd., déclare que l'équipement radioélectrique du type VHF Marine Radio est conforme à la directive 2014/53/UE.

Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante:  
<http://www.eu.cobra.com>

### HR (Croatian)

Cobra Electronics Europe, Ltd. ovime izjavljuje da je radijska oprema tipa VHF Marine Radio u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi:

<http://www.eu.cobra.com>

### IT (Italian)

Il fabbricante, Cobra Electronics Europe, Ltd., dichiara che il tipo di apparecchiatura radio VHF Marine Radio è conforme alla direttiva 2014/53/UE.

Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet:  
<http://www.eu.cobra.com>