

Humminbird® VHF55S Operations Manual

531460-1_A



THANK YOU!

Thank you for choosing Humminbird®, America's #1 name in fishfinders. Humminbird® has built its reputation by designing and manufacturing top-quality, thoroughly reliable marine equipment. Your Humminbird® is designed for trouble-free use in even the harshest marine environment. In the unlikely event that your Humminbird® does require repairs, we offer an exclusive Service Policy - free of charge during the first three years after purchase, and available at a reasonable rate after the three-year warranty period expires for the radio, and free of charge during the first year after purchase for the Ni-MH battery pack. For complete details, see the separate warranty sections in the back of this manual. We encourage you to read this operations manual carefully in order to get full benefit from all the features and applications of your Humminbird® product.

Contact our Customer Resource Center at either 1-800-633-1468 or visit our website at www.humminbird.com.

WARNING! *Disassembly and repair of this electronic unit should only be performed by authorized service personnel. Any modification of the serial number or attempt to repair the original equipment or accessories by unauthorized individuals will void the warranty. Handling and/or opening this unit may result in exposure to lead, in the form of solder.*

WARNING! *This product contains lead, a chemical known to the state of California to cause cancer, birth defects and other reproductive harm.*

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VHF55S INTRODUCTION

The Humminbird® VHF55S represents state-of-the-art high tech VHF Handheld engineering, and is skillfully designed and constructed with the finest components. It is constructed to commercial-grade standards to give you clear, reliable communication.

The Humminbird® VHF55S is available in three different versions:

- VHF55S.
- VHF55SC Camouflage.
- VHF55S Plus.

HOW VHF WORKS

The most popular method of communicating with other boats is via very high frequency (VHF) radio. In technical terms, this is similar to the way that commercial radio stations transmit. VHF equipment is relatively simple, and can therefore be compact and low cost.

To ensure that maritime users do not cause interference for other radio users, a part of the radio spectrum has been allocated specifically to this group of users. These reserved frequencies have been numbered; for example, Channel 16 (usually abbreviated Ch16) actually refers to a frequency of 156.800 MHz.

Because radio does not recognize geographic or political boundaries, and to make sure that boats traveling on international voyages can always communicate, the VHF marine band is the same worldwide. There are 55 international marine channels, a similar number of private channels (allocated on a local basis to commercial organizations) and some other unique national channels.

The United States and Canada employ a slightly different application of marine channels, using the same frequencies but allocating more simplex (one-way) rather than duplex (two-way) channels.

National channels include WX (weather) channels in the U.S., fishing channels in Norway and the marina channels M and M2 in the U.K. To make sure that your radio is fitted with the correct local channels, be sure to purchase type-approved equipment in the country of intended use.

PARTS SUPPLIED

Before using your VHF55S, please make sure that the following parts are included for your model:

- **VHF55S Radio:**
 - Alkaline battery compartment (6 AA batteries not included).
 - Belt clip.
 - Flexible antenna.

- **VHF55SC Camouflage Radio:**
 - Alkaline battery compartment (6 AA batteries not included).
 - Belt clip.
 - Flexible antenna.

- **VHF55S Plus Radio:**
 - Alkaline battery compartment (6 AA batteries not included).
 - One Nickel-Metal Hydride (Ni-MH) rechargeable battery pack.
 - AC/DC chargers with desktop cradle.
 - Belt clip.

OPTIONAL ACCESSORIES

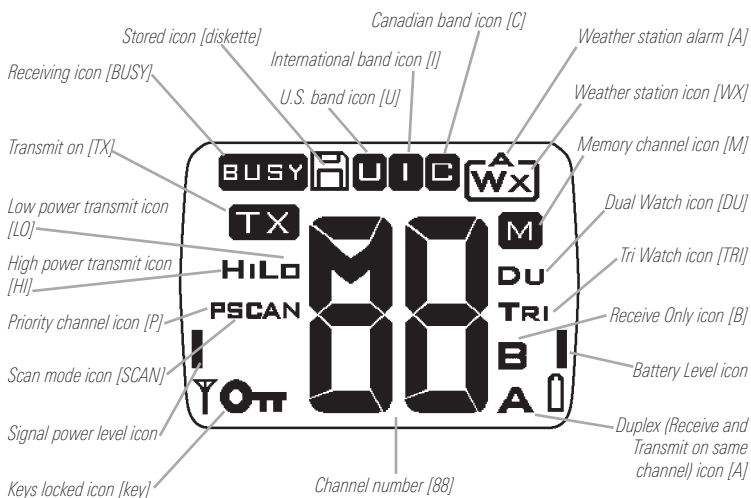
The following optional accessories are available for the VHF55S radios:

- A battery eliminator, which allows the radio to be powered by a 12 Volt source without the need for batteries. The adapter plugs into any standard 12 Volt cigarette lighter plug. (Part # BE 2)
- A rechargeable Ni-MH Battery pack. (Part # BVHF55)
- A rechargeable Ni-MH Battery pack with AC/DC charger and desktop cradle included. (Part # BKVHF55)

NOTE: You can visit our website at www.humminbird.com to order these accessories online or contact our Customer Resource Center at 1-800-633-1468.

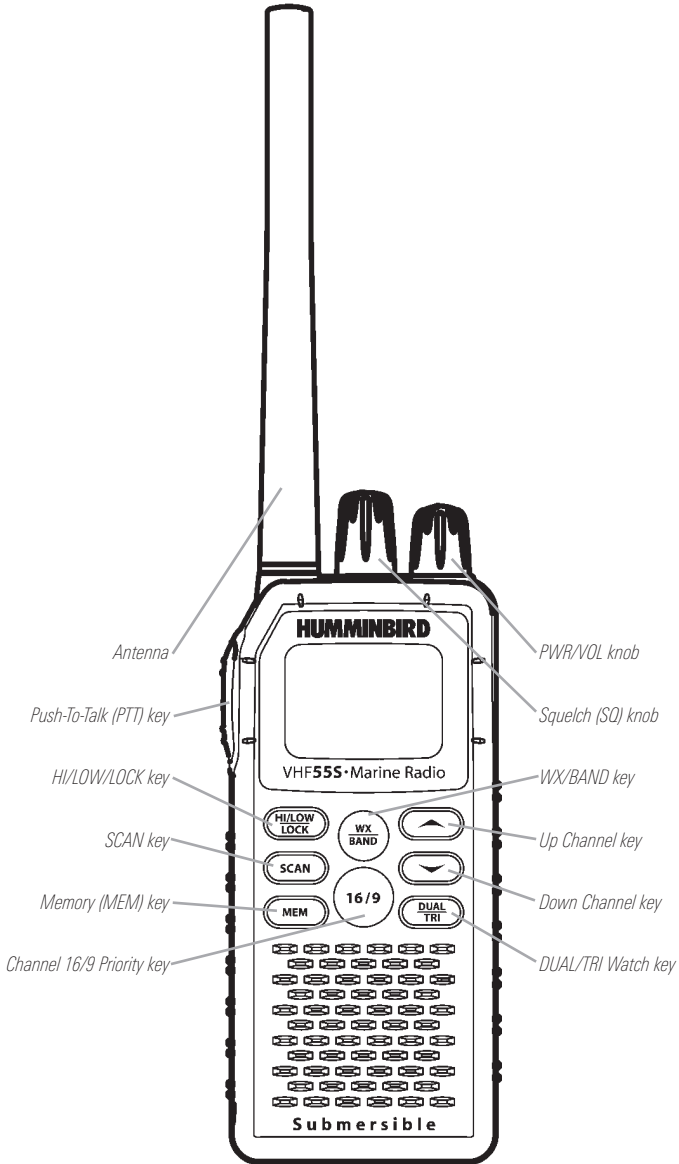
WHAT'S ON THE DISPLAY

The Humminbird® VHF55S uses an LCD display, together with an 8-button keypad, to control all user functions. The figure shows a typical view you might see on the display at initial power-up.



VHF55S CONTROLS

The following drawing shows the Humminbird® VHF55S controls:



FEATURES OVERVIEW

Your Humminbird® VHF55S has the following features:

Channel 16/9 Priority Key: Provides quick access to emergency Channel 16, the universal and most frequently-used marine channel, which is used for distress or safety communications. Pressing and holding the 16/9 channel key for 3 seconds allows quick and easy access to Channel 9. Channel 9 is an alternate frequency for distress or safety in some areas in the event Channel 16 is congested.

PLL (Phase Lock Loop) Controlled Circuitry: Provides accurate and stable channel selection.

Squelch Adjustment: Allows you to eliminate static and background noises during communications.

Key Lock: Allows you to lock the keypad in order to prevent accidental key presses.

High/Low Transmit Power Selection: Allows you to select either High Power Transmit for long-range communications or Low Power Transmit for shorter-range communications to save battery power.

Battery Level Indicator: Indicates the amount of battery life remaining.

Battery Charging Station: Allows you to recharge your Ni-MH battery pack (not included with all models)

Backlit LCD Display: Allows you to operate the radio in low light conditions.

Memory Channels: Allows you to store channels as “memory channels” that you can easily retrieve for future use.

WX/BAND Key: Allows you to select the Weather Band, the U.S. Channel Band, the International Channel Band or the Canadian Channel Band.

SCAN Key: Allows you to scan all channels, to scan channels saved in memory or to conduct a priority scan.

Signal Strength Meter: Allows you to see the strength of the transmit and receive signals.

Dual Watch: Allows you to scan alternately between your currently-selected channel and Channel 16 to make sure you don't miss distress or emergency calls.

Tri Watch: Allows you to scan alternately between your currently selected channel, Channel 16, and Channel 9 to make sure you don't miss distress or emergency calls.

Normal Scan: Allows you to scan all available channels for active channels.

Memory Scan: Allows you to rapidly scan pre-programmed channels to locate active channels.

Priority Scan: Allows you to scan all channels while alternately scanning Channel 16 to make sure that you don't miss distress or emergency calls.

NOTE: You should record your VHF55S's serial number, which is on the back panel of the radio, here.

Serial Number: _____.

BEFORE USING YOUR VHF55S

Before using your VHF55S radio, you should do two things:

1. Install the 6 alkaline batteries or charge and install the battery pack onto the radio.
2. Attach the antenna to the radio.

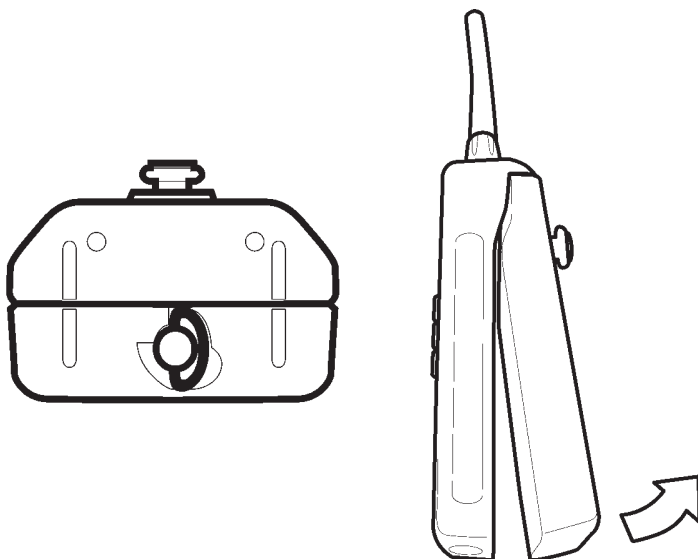
In addition, you may want to perform the additional optional step:

3. Attach the belt clip to the radio (optional).

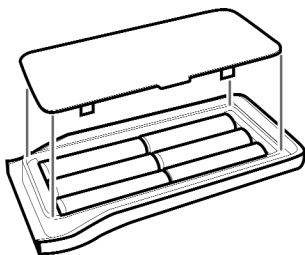
1. Installing the Alkaline Batteries or Charging and Installing the Ni-MH Battery Pack

NOTE: If you are using alkaline batteries, you must make sure you have six fully-charged batteries.

NOTE: Rotate fastener as shown to remove battery pack from the radio. Lift the battery pack out and up from the bottom to remove it from the radio.



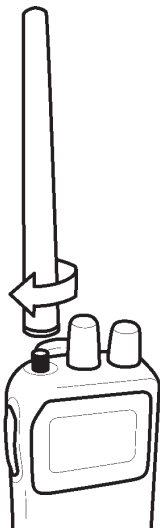
- 1a. If you are going to use alkaline batteries, remove the alkaline battery compartment cover and install 6 AA alkaline batteries. Re-install the cover to the battery compartment, then secure in place.



or...

- 1b. If you are going to use the Ni-MH re-chargeable battery pack, make sure that it is fully charged before trying to operate the radio. You can either charge the battery pack when it is attached to the radio or when it is not yet attached. To charge the Ni-MH battery pack, place it in the desktop charging cradle and plug either the AC or DC charger into the cradle, depending on the power source that you plan to use. You will know that the battery pack is seated correctly in the charger when the charging indicator LED lights up. You should charge the battery pack for 14-15 hours. Attach the battery pack to the radio when it is finished charging if you have not already done so.

CAUTION: *The battery pack will continue to charge as long as it is in the charger and the charger is connected to a power source, so you must remember to take the radio/battery pack out of the charger when it has been fully charged. Overcharging batteries may result in damage to both the battery pack and radio.*

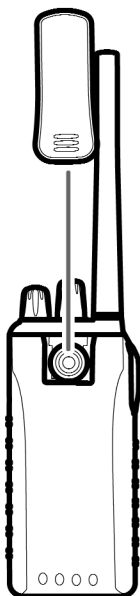


2. Attaching the Antenna

You will need to make sure that the flexible antenna is attached to the radio.

To install the antenna:

1. Install the antenna securely onto the radio, making sure that the antenna and the threads on the unit are free from debris. Finger tighten only.



3. Attaching the Belt Clip (Optional)

The belt clip supplied with your radio allows you to attach the radio to your belt.

To attach the belt clip:

1. Attach the belt clip to the back of your VHF55S radio, making sure that the fitting groove is aligned.

USING YOUR VHF55S

You should be familiar with several operating procedures:

1. Turning the power on/off.
2. Adjusting Squelch.
3. Selecting the U.S./International/Canadian band.
4. Transmitting and receiving.
5. Accessing the 16/9 priority channels.
6. Selecting a channel.
7. Selecting high/low power.
8. Locking the keypad.
9. Selecting a weather channel.
10. Adding channels to memory.
11. Scanning.
12. Accessing channels saved to memory.
13. Using the monitor modes.
14. Resetting the radio.

1. Turning the Power On/Off

Use the PWR/VOL knob to turn the radio on, and once on, to adjust the volume as well.

To turn on the radio:

1. Rotate the PWR/VOL knob to turn the radio on or off. The knob will make a clicking noise when you have turned the radio on.
2. Once on, rotate the PWR/VOL knob further to adjust the volume.

2. Adjusting Squelch

Squelch is used to eliminate static and background noise in between transmissions, and allows for silent operation of the radio until a transmission is received. If Squelch is set too high, only the strongest transmissions can be heard, and if it is set too low, intermittent static and noise may be annoying. Squelch is controlled by the SQ knob located on the top of the radio.

To set Squelch:

1. Turn the SQ knob counter-clockwise as far as it will go. You will hear a lot of static.
2. Then turn the SQ knob clockwise until the static stops; this is the correct position for the SQ knob.

3. Selecting U.S./International/Canadian Band

When operating in U.S. waters, your radio should be set for the U.S. band; when operating in Canadian waters, the radio should be set for the Canadian band; when operating in International waters, the radio should be set for the International band.

To select a band:

1. To select a band, press and hold the WX/BAND key for 3 seconds, then release. The LCD will display the U, I or C icon (for U.S., International, or Canadian). Continue to press and hold the WX/BAND key for 3 seconds, then release until the LCD shows the desired band.

4. Transmitting and Receiving

Use the Push-To-Talk (PTT) key to transmit (speak) and receive (listen) on the selected channel.

To transmit and receive:

1. Press and hold the Push-To-Talk (PTT) key, then speak into the radio to transmit. The TX icon will appear on the LCD while you are transmitting.
2. Release the Push-To-Talk (PTT) key to listen.

***NOTE:** Before transmitting, make sure that the channel you have selected is not a receive-only channel.*

5. Accessing the 16/9 Priority Channels

The Channel 16/9 Priority key allows you to access the emergency channel 16 quickly; pressing and holding this key also allows you to access channel 9, which is an alternate emergency channel in some areas.

To access the 16/9 channels:

1. Press the Channel 16/9 Priority key to access channel 16.
2. To access the alternate channel 9 which is available in some areas, press and hold the Channel 16/9 Priority key for 3 seconds, then release.

6. Selecting a Channel

Use the Up/Down key to scroll through the available channels. See *Marine Channels* for a list of channels and their frequencies.

To select a channel:

1. To select a channel, use the Up/Down key to find a channel. Stop when you find the desired channel.

***NOTE:** Not all channel numbers are available in INT bands.*

7. Selecting High/Low Power

You must press and release the HI/LOW/LOCK key to toggle the transmit power between High and Low. Select HI (High Power Transmit) for long-range communications, and LOW (Low Power Transmit) for shorter-range communications to save battery power.

To change the transmit power:

1. Press the HI/LOW/LOCK key to toggle between High and Low transmit power. When the radio is operating at high power, the HI icon appears on the LCD, and when operating at low power, the LOW icon appears on the LCD.

8. Locking the Keypad

Use the HI/LOW/LOCK key to activate the Key Lock function in order to avoid accidental key presses of the radio keypad.

To lock and unlock the keypad:

1. To lock the keypad, press and hold the HI/LOW/LOCK key until the Key Lock icon appears on the LCD.

***NOTE:** Once Key Lock is turned on, pressing the keys will have no effect except for the Push-To-Talk (PTT) key, which is not affected by Key Lock.*

2. To unlock the keypad, press and hold the HI/LOW/LOCK key again until the Key Lock icon is removed from the LCD.

9. Selecting a Weather Channel

The U.S. National Oceanic and Atmospheric Administration (NOAA) broadcasts continuous weather reports and severe weather alerts, as needed. Your Humminbird® VHF55S is programmed to receive 10 NOAA weather channels, and to sound an alarm if a weather alert is received. The A icon will appear on the LCD above the WX icon if there is a Weather Alarm. See **Marine Channels** for a list of channels and their frequencies.

To select a weather channel:

1. Press and release the WX/BAND key to enter Weather mode. The WX icon will appear on the LCD. After selecting the WX band you must press and hold the WX/BAND key for three seconds to receive weather alarms. The weather alarm icon will appear on the display.
2. Press the Up or Down Channel keys to change the WX channel from 1 through 10.
3. Press and release the WX/BAND key again to return to normal operation.

***NOTE:** Weather broadcasts are available in North America, but may not be heard in all parts of Canada.*

***NOTE:** During Weather mode, the PTT, Scan, HI/LOW/LOCK and MEM keys are disabled and an error beep will sound if they are pressed.*

10. Adding/Deleting Channels to/from Memory

Your VHF55S can store any channel (including private channels). The stored channels are the ones scanned in the Memory Scan mode.

To add channels to memory:

1. During normal operating mode, use the Up or Down Channel keys to select the desired channel for programming.
2. Press and hold the MEM key for 3 seconds. The Stored icon will appear, indicating that the current channel has been saved in memory. Any number of channels can be saved as memory channels.

To delete channels from memory:

1. During normal operating mode, use the Up or Down Channel keys to select the saved channel you wish to delete.
2. Press and hold the MEM key for 3 seconds. The selected channel will be deleted from memory.

11. Scanning

Your Humminbird® VHF55S comes with three scan options:

- **Normal Scan:** If there are no channels in memory, the default is Normal Scan. In Normal Scan mode, all channels in the channel set are scanned in sequence, assuming no channels have been stored in memory. After the last channel number has been scanned, the cycle repeats. Normal Scan automatically searches for transmissions on the channel set being scanned. If a TX signal is received, the scan stops on the receiving channel as long as it is present and the Scan icon is flashing. If the signal is lost for five seconds or more, the radio resumes scanning.
- **Memory Scan:** In Memory Scan mode, only the channels that have been saved in memory are scanned in sequence. After the last saved channel number has been scanned, the cycle repeats.
- **Priority Scan:** In Priority Scan mode, you can scan all channels while alternately scanning Channel 16 to make sure that you don't miss distress or emergency calls.

To activate scan modes:

- 1a. Press and release the SCAN key when no channels are stored in memory to activate the Normal Scan function. The Scan icon will appear on the LCD.

or...

- 1b. Press and release the SCAN key when there is at least one channel in memory to activate the Memory Scan function. The Stored and Scan icons will appear on the LCD.

or...

1. Press and release the SCAN key for 3 seconds to enter Priority Scan mode. The Priority Scan (P) icon will appear on the LCD just before the Scan icon.
2. During any of the Scan modes, press the Up or Down Channel keys to change the scan direction. Up increases the channel number while Down decreases it.
3. Press and release the SCAN key to terminate the Scan mode.

NOTE: During Scan mode, the WX/BAND, MEM, and DUAL/TRI Watch keys will not function and will sound an error beep if pressed.

12. Accessing Channels Saved to Memory

Once channels have been saved, you can easily access them by pressing the MEM key. Once in Memory mode, only the channels saved to memory will be accessible using the Up or Down Channel keys.

To access saved channels:

1. Press the MEM key. The Stored and M icons will appear on the LCD to indicate that you are in Memory mode.
2. Use the Up or Down Channel keys to scan through the saved channels.
3. Press the MEM key again to regain access to all channels.

13. Using the Watch Monitor Modes

The Humminbird® VHF55S is equipped with two types of monitor modes: Dual Watch and Tri Watch.

Dual Watch monitors the current working channel and Channel 16 alternately.

To activate and terminate Dual Watch mode:

1. Press and release the DUAL/TRI Watch key to activate the Dual Watch mode. The DU icon will appear on the LCD.
- 2a. Press and release the DUAL/TRI Watch key again to terminate Dual Watch mode and return to the previous working channel.

or...

- 2b. Press and hold the DUAL/TRI Watch key for 3 seconds to terminate Dual Watch mode and enter into Tri Watch mode. The TRI icon will appear on the LCD.

NOTE: During Dual Watch mode, the SCAN, MEM, WX/BAND, and the Up and Down Channel keys are inactive and will sound an error beep if pressed.

Tri Watch monitors Channel 16, Channel 9 and the current working channel.

To activate and terminate Tri Watch mode:

1. Press and hold the DUAL/TRI Watch key for 3 seconds to activate the Tri Watch mode. The TRI icon will appear on the LCD.
- 2a. Press and hold the DUAL/TRI Watch key again for 3 seconds to terminate Tri Watch Mode and to return to the previous working channel.

or...

- 2b. Press and release the DUAL/TRI Watch key to terminate Tri Watch mode and enter into Dual Watch mode. The DU icon will appear on the LCD.

NOTE: During Tri Watch mode, the SCAN, MEM, WX/BAND and Up or Down Channel keys are inactive and will sound an error beep if pressed.

14. Resetting the Radio

You can reset many radio settings back to the factory default settings. Resetting the radio will:

- Erase any channels stored in memory.
- Return to U.S. channels, if another mode is currently selected at the time of reset.
- Turn Off the Weather Alert setting, if it is currently active.
- Return power settings to their original state.

To reset the radio:

1. Turn the radio Off by rotating the PWR/VOL knob to the Off position.
2. Simultaneously press and hold both the SCAN and WX/BAND keys.

then...

3. While continuing to hold the SCAN and WX/BAND keys, power the radio back On, then continue to hold the SCAN and WX/BAND keys down for 3 seconds, then release both keys.

MAINTENANCE

To keep your Humminbird® VHF55S working properly, perform the following maintenance as needed.

If your unit comes into contact with salt spray, simply wipe the affected surfaces with a cloth dampened in fresh water. Do not use a chemical glass cleaner on the lens, as chemicals in the solution may cause cracking in the lens. When cleaning the LCD protective lens, use a chamois and non-abrasive, mild cleaner. Do not wipe while dirt or grease is on the lens. Be careful to avoid scratching the lens.

WARNING: *Never leave your VHF55S in a closed car or trunk; the extremely high temperatures generated in hot weather can damage the electronics.*

TROUBLESHOOTING

Before contacting the Humminbird® Customer Resource Center, please read the following section. Taking the time to review these troubleshooting guidelines may allow you to solve a performance problem yourself, and therefore avoid sending your unit back for repair.

NOTE: *Do not attempt to repair the VHF55S yourself, as there are no user serviceable parts inside, and special tools and techniques are required for reassembly in order to maintain the waterproof integrity of the housing. Repairs should be performed only by authorized Humminbird® technicians.*

VHF55S Doesn't Power Up

If your VHF55S doesn't power up, refer to the Installation section, and make sure that:

- The Ni-MH battery pack is fully charged (14-15 hours).
- The battery pack or batteries are installed properly.
- If you are using six AA alkaline batteries, make sure they have a charge.

Correct any known problems, including removing corrosion from the battery terminals, or actually replacing the batteries (if using alkaline) if necessary.

RADIO 3-YEAR LIMITED WARRANTY

We warrant the original retail purchaser that products made by Humminbird® have been manufactured free from defects in materials and workmanship. This warranty for the VHF55S radio is effective for three years from the date of original retail purchase. Humminbird® products found to be defective and covered by this warranty will be replaced or repaired free of charge at Humminbird's option and returned to the customer freight prepaid. Humminbird's sole responsibility under this warranty is limited to the repair or replacement of a product that has been deemed defective by Humminbird®. Humminbird® is not responsible for charges connected with the removal of such product or reinstallation of replaced or repaired parts.

This warranty does not apply to a product that has been:

- Improperly installed;
- Used in an installation other than that recommended in the product installation and operation instructions;
- Damaged or has failed because of an accident or abnormal operation;
- Repaired or modified by entities other than Humminbird®.

Please retain your original receipt as a proof of the purchase date. This will be required for in-warranty service.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, OBLIGATIONS OR LIABILITIES ON THE PART OF HUMMINBIRD® AND WILL BE THE CUSTOMER'S EXCLUSIVE REMEDY, EXCEPT FOR ANY APPLICABLE IMPLIED WARRANTIES UNDER STATE LAW WHICH ARE HEREBY LIMITED IN DURATION TO THREE YEARS FROM THE DATE OF ORIGINAL PURCHASE. IN NO EVENT WILL HUMMINBIRD® BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY RELATING TO THE PRODUCTS.

Some states do not allow limitations on an implied warranty, or the exclusion of incidental or consequential damages, so the above exclusions may not apply to you. You may also have other rights, which vary from state to state.

NI-MH BATTERY 1-YEAR LIMITED WARRANTY

We warrant the original retail purchaser that products made by Humminbird® have been manufactured free from defects in materials and workmanship. This warranty for the Ni-MH battery pack is effective for one year from the date of original retail purchase. Humminbird® products found to be defective and covered by this warranty will be replaced or repaired free of charge at Humminbird's option and returned to the customer freight prepaid. Humminbird's sole responsibility under this warranty is limited to the repair or replacement of a product that has been deemed defective by Humminbird®. Humminbird® is not responsible for charges connected with the removal of such product or reinstallation of replaced or repaired parts.

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Some states do not allow limitations on an implied warranty, or the exclusion of incidental or consequential damages, so the above exclusions may not apply to you. You may also have other rights, which vary from state to state.

HUMMINBIRD® SERVICE POLICY

Even though you'll probably never need to take advantage of our incredible service policy, it's good to know that we back our products this confidently. We do it because you deserve the best. We will make every effort to repair your unit within three business days from the receipt of your unit at our factory. This does not include shipping time to and from our factory. Units received on Friday are typically shipped by the following Wednesday, units received Monday are typically shipped by Thursday, etc.

All repair work is performed by factory-trained technicians to meet exacting factory specifications. Factory-serviced units go through the same rigorous testing and quality control inspections as new production units.

After the original warranty period, a standard flat rate service charge will be assessed for each repair (physical damage and missing parts are not included). Any repairs made after the original warranty will be warranted for an additional 90 days after service has been performed by our factory technicians. You can contact our Customer Resource Center or visit our website to verify the flat rate repair fee for your product (visit the Product Support section):

<http://www.humminbird.com>

We reserve the right to deem any product unserviceable when replacement parts are no longer available or impossible to obtain. This Service Policy is valid in the United States only. This applies only to Humminbird® products returned to our factory in Eufaula, Alabama. This Service Policy is subject to change without notice.

Returning Your Unit for Service

Before sending your unit in for repair, please contact the factory, either by phone or by email, to obtain a Repair Authorization Number for your unit. Please have your product model name and serial number available before calling the factory. If you contact the factory by e-mail, please include your product model name and serial number in the e-mail, and use Request for Repair Authorization Number for your e-mail subject header. You should include your Repair Authorization Number in all subsequent communications about your unit.

For IN-WARRANTY service, complete the following steps:

- Obtain a Repair Authorization Number from the Humminbird® Customer Resource Center.
- Tag product with your name, street address, phone number and your assigned Repair Authorization Number.
- Include a brief written description of the problem.
- Include a copy of your receipt (to show proof and date of purchase).
- Return product freight prepaid to Humminbird®, using an insured carrier with delivery confirmation.

For OUT-OF-WARRANTY service, complete the following steps:

- Obtain a Repair Authorization Number from the Humminbird® Customer Resource Center.
- Include payment in the form of credit card number and expiration date, money order or personal check. Please do not send cash.
- Tag product with your name, street address, phone number and your assigned Repair Authorization Number.
- Include a brief written description of the problem.
- Return product freight prepaid to Humminbird®, using an insured carrier with delivery confirmation.

SPECIFICATIONS

Channels	All U.S., Canadian and International Channels 10 NOAA Weather Channels
Frequency Method	Phase Lock Loop
Frequency Range	TX 156.025~157.950 MHz RX 156.300~163.275 MHz
Antenna Impedance	50 Ohms
Power Supply	7.2 VDC
Display	Backlit Liquid Crystal Diode (LCD)
Operating Temperatures	-4°F to 140°F (-20°C to 60°C)
Dimensions (with 7.2 V Battery Pack):	2.52 in (64 mm) (W) x 0.63 in (16 mm) (H) x 1.50 in (38 mm) (D)
Weight (with 7.2 V Battery Pack):	0.96 lbs. (435 g)

Transmitter:

Power Output	1 or 5 Watts (Switch Selectable)
Modulation Type	FM
Hum and Noise Attenuation	40 dB
Audio Distortion	5%
Spurious Signal Suppression	70 dB

Receiver:

Sensitivity at 12 dB SINAD	0.5 μ V
S/N Ratio (20 dB)	0.8 μ V
Squelch Sensitivity	Threshold -12 dB μ V (EMF)
Adjacent Channel Rejection	65 dB
Audio Power Output	200 mW at 10% THD
Spurious Response Attenuation	65 dB
Hum and Noise Attenuation	40 dB
Modulation Acceptance Bandwidth	+/- 7.0 kHz Minimum

NOTE: Product specifications and features are subject to change without notice.

NOTE: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

FCCID: KLLTM-886

MARINE CHANNELS

Refer to the following Marine Channels tables, depending on your location.

NOAA* Weather Radio Frequencies		
<u>Channel</u>	<u>Frequency (MHz)</u>	<u>Use</u>
WX0	163.275	NOAA Weather.
WX1	162.550	NOAA Weather.
WX2	162.400	NOAA Weather.
WX3	162.475	NOAA Weather.
WX4	162.425	NOAA Weather.
WX5	162.450	NOAA Weather.
WX6	162.500	NOAA Weather.
WX7	162.525	NOAA Weather.
WX8	161.650	Canadian Weather.
WX9	161.775	Canadian Weather.

** NOAA stands for National Oceanic and Atmospheric Administration.*

U.S. Marine Channels

Channel No.	Ship Transmit MHz	Ship Receive MHz	Use
01A	156.050	156.050	Port Operations and Commercial, VTS* . Available Only in New Orleans / Lower Mississippi area.
05A	156.250	156.250	Port Operations or VTS in the Houston, New Orleans and Seattle areas.
06	156.300	156.300	Intership Safety.
07A	156.350	156.350	Commercial.
08	156.400	156.400	Commercial (Intership Only).
09	156.450	156.450	Boater Calling. Commercial and Non-Commercial.
10	156.500	156.500	Commercial.
11	156.550	156.550	Commercial. VTS in Selected Areas.
12	156.600	156.600	Port Operations. VTS in Selected Areas.
13	156.650	156.650	Intership Navigation Safety (Bridge to Bridge). Ships >20 m in Length Maintain a Listening Watch on this Channel in U.S. Waters.
14	156.700	156.700	Port Operations. VTS in Selected Areas.
15	--	156.750	Environmental (Receive Only). Used by Class C EPIRBs.
16	156.800	156.800	International Distress, Safety and Calling. Ships Required to Carry Radio, USCG, and Most Coast Stations Maintain a Listening Watch on this Channel.
17	156.850	156.850	State Control.
18A	156.900	156.900	Commercial.
19A	156.950	156.950	Commercial.
20	157.000	161.600	Port Operations (duplex).
20A	157.000	157.000	Port Operations.
21A	157.050	157.050	U.S. Coast Guard only.
22A	157.100	157.100	Coast Guard Liaison and Maritime Safety Information Broadcasts. Broadcasts Announced on Channel 16.
23A	157.150	157.150	U.S. Coast Guard Only.
24	157.200	161.800	Public Correspondence (Marine Operator).
25	157.250	161.850	Public Correspondence (Marine Operator).
26	157.300	161.900	Public Correspondence (Marine Operator).

U.S. Marine Channels

Channel No.	Ship Transmit MHz	Ship Receive MHz	Use
27	157.350	161.950	Public Correspondence (Marine Operator).
28	157.400	162.000	Public Correspondence (Marine Operator).
63A	156.175	156.175	Port Operations and Commercial, VTS. Available Only in New Orleans / Lower Mississippi area.
65A	156.275	156.275	Port Operations.
66A	156.325	156.325	Port Operations.
67	156.375	156.375	Commercial. Used for Bridge to Bridge Communications in Lower Mississippi River. Intership Only.
68	156.425	156.425	Non-Commercial.
69	156.475	156.475	Non-Commercial.
70	156.525	156.525	Digital Selective Calling (Voice Communications Not Allowed).
71	156.575	156.575	Non-Commercial.
72	156.625	156.625	Non-Commercial (Intership Only).
73	156.675	156.675	Port Operations.
74	156.725	156.725	Port Operations.
77	156.875	156.875	Port Operations (Intership Only).
78A	156.925	156.925	Non-Commercial.
79A	156.975	156.975	Commercial. Non-Commercial in Great Lakes Only.
80A	157.025	157.025	Commercial. Non-Commercial in Great Lakes Only.
81A	157.075	157.075	U.S. Government Only - Environmental Protection Operations.
82A	157.125	157.125	U.S. Government Only.
83A	157.175	157.175	U.S. Coast Guard Only.
84	157.225	161.825	Public Correspondence (Marine Operator).
85	157.275	161.875	Public Correspondence (Marine Operator).
86	157.325	161.925	Public Correspondence (Marine Operator).
88A	157.425	157.425	Commercial, Intership Only.

** VTS stands for Vessel Traffic Service, and is a system that provides active monitoring and navigational advice for vessels in particularly confined and busy waterways.*

International Marine Channels

Channel No.	Ship Transmit MHz	Ship Receive MHz	Use
01	156.050	160.650	Public Correspondence (Marine Operator).
02	156.100	160.700	Public Correspondence (Marine Operator).
03	156.150	160.750	Public Correspondence (Marine Operator).
04	156.200	160.800	Public Correspondence (Marine Operator).
05	156.250	160.850	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
06	156.300	156.300	Intership Safety.
07	156.350	160.950	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
08	156.400	156.400	Intership.
09	156.450	156.450	Intership, Port Operations, Ship Movement.
10	156.500	156.500	Intership.
11	156.550	156.550	Port Operations, Ship Movement.
12	156.600	156.600	Port Operations, Ship Movement.
13	156.650	156.650	Intership Navigation, Safety.
14	156.700	156.700	Port Operations, Ship Movement.
15 (1)	156.750	156.750	On Board Communications, Intership.
16	156.800	156.800	International Distress, Safety.
17 (1)	156.850	156.850	On Board Communications, Intership.
18	156.900	161.500	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
19	156.950	161.550	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
20	157.000	161.600	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
21	157.050	161.650	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
22	157.100	161.700	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
23	157.150	161.750	Public Correspondence (Marine Operator).
24	157.200	161.800	Public Correspondence (Marine Operator).
25	157.250	161.850	Public Correspondence (Marine Operator).
26	157.300	161.900	Public Correspondence (Marine Operator).
27	157.350	161.950	Public Correspondence (Marine Operator).
28	157.400	162.000	Public Correspondence (Marine Operator).
60	156.025	160.625	Public Correspondence (Marine Operator), Port Operations, Ship Movement.
61	156.075	160.675	Public Correspondence (Marine Operator), Port Operations, Ship Movement.

International Marine Channels

Channel No.	Ship Transmit MHz	Ship Receive MHz	Use
62	156.125	160.725	Public Correspondence (Marine Operator). Port Operations, Ship Movement.
63	156.175	160.775	Public Correspondence (Marine Operator). Port Operations, Ship Movement.
64	156.225	160.825	Public Correspondence (Marine Operator). Port Operations, Ship Movement.
65	156.275	160.875	Public Correspondence (Marine Operator). Port Operations, Ship Movement.
66	156.325	160.925	Public Correspondence (Marine Operator). Port Operations, Ship Movement.
67	156.375	156.375	Intership, Port Operations.
68	156.425	156.425	Port Operations, Ship Movement.
69	156.475	156.475	Intership, Port Operations, Ship Movement.
71	156.575	156.575	Port Operations, Ship Movement.
72	156.625	156.625	Intership, Port Operations, Ship Movement.
73	156.675	156.675	Intership, Port Operations, Ship Movement.
74	156.725	156.725	Port Operations, Ship Movement.
77	156.875	156.875	Intership.
78	156.925	161.525	Public Correspondence, Port Operations.
79	156.975	161.575	Public Correspondence, Port Operations.
80	157.025	161.625	Public Correspondence, Port Operations.
81	157.075	161.675	Public Correspondence, Port Operations.
82	157.125	161.725	Public Correspondence, Port Operations.
83	157.175	161.775	Public Correspondence, Port Operations.
84	157.225	161.825	Public Correspondence, Port Operations.
85	157.275	161.875	Public Correspondence, Port Operations.
86	157.325	161.925	Public Correspondence, Port Operations.
87A	157.375	157.375	Public Correspondence, Port Operations.
88A	157.425	157.425	Public Correspondence, Port Operations.

1. For channels 15 and 17, output power is fixed at 1 Watt only. Transmission at high power is not permitted.

2. Channel 70 is used for Digital Selective Calling (DSC) only and is not available for voice transmissions. Channel 70 does not appear on the display.

IMPORTANT NOTICE: The International frequency mode is not legal for use while operating in U.S. waters. The TX/RX frequencies available in International frequency mode were agreed upon by the attending countries at the 1968 ITU-International Telecommunication Union meeting in Geneva, and are legal for use in International waters only.

Canadian Marine Channels

Channel No.	Ship Transmit MHz	Ship Receive MHz	Use
01	156.050	160.650	Public Correspondence (Marine Operator).
02	156.100	160.700	Public Correspondence (Marine Operator).
03	156.150	160.750	Public Correspondence (Marine Operator).
04A	156.200	156.200	Pacific Coast: Coast Guard, East Coast: Commercial Fishing.
05A	156.250	156.250	Port Operation, VTS in Seattle.
06	156.300	156.300	Intership Safety.
07A	156.350	156.350	Commercial.
08	156.400	156.400	Commercial Intership only.
09	156.450	156.450	Boater Calling Channel, Commercial and Noncommercial (Recreational).
10	156.500	156.500	Commercial.
11	156.550	156.550	Commercial. VTS in Selected Areas.
12	156.600	156.600	Port Operations. VTS in Selected Areas.
13	156.650	156.650	Intership Navigation Safety (Bridge to Bridge).
14	156.700	156.700	Port Operations. VTS in Selected Areas.
15	156.750	156.750	Commercial, Noncommercial, Ship Movement (1 Watt only).
16	156.800	156.800	International Distress, Safety and Calling.
17	156.850	156.850	State Controlled (1 Watt only).
18A	156.900	156.900	Commercial.
19A	156.950	156.950	Coast Guard.
20	157.000	161.600	Coast Guard.
21A	157.050	157.050	Coast Guard.
22A	157.100	157.100	U.S. And Canadian Coast Guard Liaison And Maritime Safety Info. Broadcasts Announced On Ch. 16.
23	157.150	161.750	Public Correspondence (Marine Operator).
24	157.200	161.800	Public Correspondence (Marine Operator).
25	157.250	161.850	Public Correspondence (Marine Operator).
26	157.300	161.900	Public Correspondence (Marine Operator).

Canadian Marine Channels

Channel No.	Ship Transmit MHz	Ship Receive MHz	Use
27	157.350	161.950	Public Correspondence (Marine Operator).
28	157.400	162.000	Public Correspondence (Marine Operator).
60	156.025	160.625	Public Correspondence (Marine Operator).
61A	156.075	156.075	Pacific Coast: Coast Guard East Coast: Commercial Fishing Only.
62A	156.125	156.125	Pacific Coast: Coast Guard East Coast: Commercial Fishing Only.
63A	156.175	156.175	Port Operation and Commercial. VTS in Selected Areas.
64A	156.225	156.225	Commercial Fishing.
65A	156.275	156.275	Port Operations.
66A	156.325	156.325	Port Operations.
67	156.375	156.375	Commercial Fishing.
68	156.425	156.425	Noncommercial (Recreational).
69	156.475	156.475	Commercial Fishing Only.
71	156.575	156.575	Noncommercial (Recreational).
72	156.625	156.625	Noncommercial (Intership Only).
79A	156.975	156.975	Commercial.
80A	157.025	157.025	Commercial.
81A	157.075	157.075	U.S. Government Only, Environmental Protection Operations.
82A	157.125	157.125	Coast Guard Only.
84	157.225	161.825	Public Correspondence (Marine Operator).
85	157.275	161.875	Public Correspondence (Marine Operator).
86	157.325	161.925	Public Correspondence (Marine Operator).
87	157.375	161.975	Public Correspondence (Marine Operator).
88	157.425	162.025	Public Correspondence (Ship to Coast).

** VTS stands for Vessel Traffic Service, and is a system that provides active monitoring and navigational advice for vessels in particularly confined and busy waterways.*

NOTES

NOTES

Contact Humminbird

Contact the Humminbird® Customer Resource Center
in any of the following ways:

By Telephone:

(Monday - Friday 8:00 a.m. to 4:30 p.m.

Central Standard Time):

1-800-633-1468

By e-mail:

(typically we respond to your e-mail within three business days):

custserv@johnsonoutdoors.com

For direct shipping, our address is:

Humminbird

Service Department

678 Humminbird Lane

Eufaula, AL 36027 USA



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