

## VHF Communications

Search

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**Source:** Waterway Guide Skipper's Handbook



Skippers traveling the U.S. inland waterways use their VHF radios almost every day to contact other vessels and bridgetenders, make reservations at marinas, arrange to pass other vessels safely and conduct other business. Waterway Guide has put together the following information to help remove any confusion as to what frequency should be dialed in to call bridges, marinas, commercial ships or your friend anchored down the creek.

Remember to use low power (1 watt) for your radio transmission whenever possible. If you are within a couple of miles of the responding station (bridge, marina or other craft), there is no need to broadcast at 25 watts and disturb the transmissions of others 25 miles away.

### **Channel Usage Tips**

- VHF Channel 16 (156.8 MHz) is by far the most important frequency on the VHF-FM band. VHF Channel 16 is the international distress, safety and calling frequency.
- If you have a VHF radio on your boat, Federal Communications Commission (FCC) regulations require that you maintain a watch on either VHF Channel 09 or 16 whenever you are underway and the radio is not being used to communicate on another channel. Since the Coast Guard does not have the capability of announcing an urgent marine information broadcast or weather warning on VHF Channel 09, it recommends that boaters remain tuned to and use VHF Channel 16.
- Recreational craft typically communicate on VHF Channels 68, 69, 71, 72 or 78A. Whenever possible, avoid calling on VHF Channel 16 altogether by prearranging initial contact directly on one of these channels. No transmissions should last longer than 3 minutes.
- The Coast Guard's main working VHF Channel is 22A, and both emergency and non-emergency calls generally are switched to it in order to keep VHF Channel 16 clear. Calling the Coast Guard for a radio check on VHF Channel 16 is prohibited.
- Radio-equipped bridges on the Atlantic ICW use VHF Channel 09 with a few exceptions.
- The Bridge-to-Bridge Radio Telephone Act requires many commercial vessels, including dredges and tugboats, to monitor VHF Channel 13. VHF Channel 13 is also the frequency used by bridges in several states.

## VHF Channels

**09: Used for radio checks and hailing other stations (boats, shoreside operations). Also used to communicate with drawbridges in the State of Florida.**

**13:** Used to contact and communicate with commercial vessels, military ships and drawbridges. Bridges in several states monitor VHF Channel 13.

**16: Emergency use only!** May be used to hail other vessels, but once contact is made, conversation should be immediately switched to a working (68, 69, 71, 72, 78A) VHF channel.

**22:** Used for U.S. Coast Guard safety, navigation and Sécurité communications.

**68, 69, 71, 72 & 78A:** Used primarily for recreational ship-to-ship and <sup>[1]</sup>ship-to-shore communications.

**Note from WG Community:** *Use of channel 13 between recreational vessels is permitted for discussion of navigational issues such as meeting, passing, or intentions. This includes the initial hail if the vessels are close enough to be in a common navigational situation (generally in sight). Recreational vessels should be monitoring 13 by dual watch, scan, or second radio. For passing or meeting, first hail on 13 and then on 16 if now answer. If more than a very few words are needed in a passing or meeting situation on 16, the vessels should switch to 13. Always check that your radio is on low power when hailing a vessel in sight on 16.*

## Distress Calls

- **MAYDAY:** The distress signal "MAYDAY" is used to indicate that a vessel is threatened by grave and imminent danger and requests immediate assistance.
- **PAN PAN:** The urgency signal "PAN PAN" is used when the safety of the ship or person is in jeopardy.
- **SÉCURITÉ:** The safety signal "SÉCURITÉ" is used for messages about the safety of navigation or important weather warnings.

VHF Channel 16 is the distress call frequency. The codeword "MAYDAY" is the international alert signal of a life-threatening situation at sea. After a MAYDAY message is broadcast, VHF Channel 16 must be kept free of all traffic, other than those directly involved in the rescue situation, until the rescue has been completed.

If you hear a MAYDAY message and no one else is responding, it is your duty to step in to answer the call, relay it to the nearest rescue organization and get to the scene to help. Remember, a MAYDAY distress call can only be used when life is threatened. For example, if you have run on the rocks but no one is going to lose their life, that is NOT a MAYDAY situation.

## How to Make a Distress Call

### **MAYDAY! MAYDAY! MAYDAY!**

**This is:** *Give your vessel name and call sign.*

**Our position is:** *Read it off the GPS, or give it as something like "two miles southwest of Royal Island." (Your rescuers must be able to find you!)*

**We are:** *Describe what's happening (e.g., on fire/hit a reef/sinking).*

**We have:** *Report how many people are on board.*

**At this time we are:** *Say what you're doing about the crisis (e.g., standing by/abandoning ship).*

**For identification we are:** *Describe your boat: type, length, color, etc. (so your rescuers can more readily identify you).*

**We have:** *List safety equipment you have (e.g., flares/smoke/ocean dye markers/EPIRB).*

**We will keep watch on Channel 16 as long as we can.**

**Note:** The Coast Guard has asked the FCC to eliminate provisions for using VHF Channel 09 as an alternative calling frequency to VHF Channel 16 when it eliminates watch-keeping on VHF Channel 16 by compulsory-equipped vessels. Stay tuned for updates.

# Marine Radio Scanning

Marine Radio is an interesting area, and one that not too many people have accurate data for. While we're under construction here, let's look at a few helpful items.

## Quick and Dirty Monitoring Tips:

**Four Different Calling Channels:** That's right. 156.800 is not all that it's cracked up to be. On the rivers, 156.65 reigns supreme, and there are any number of Port Ops frequencies to be investigated when you're out there ship-watching.

- **156.800 (Ch-16) - International Calling and Distress** - This is still the primary calling channel, and the Coast Guard will announce broadcast distress calls to mariners on this channel. These bulletins end with the request for "all vessels to keep a sharp lookout, assist if possible, and advise the Coast Guard of all sightings." This channel has become overcrowded, however, and some alternates have sprung up.
- **156.650 (Ch-13) - Intership Safety in Navigable Waterways** - On inland waterways, vessels which occupy the navigable channel must monitor this frequency, and periodically announce their location and intentions. This is the real calling channel on America's rivers. Most marine radios can simultaneously monitor this frequency and Ch-16, but those without that capability must monitor Ch-13 while in the waterway. Position announcements are supposed to be made with only 1 watt, but that's still plenty of power when coming from the mast of a seagoing ship. Vessels on the rivers are likely to be at full power. A typical position announcement might go, "*Security security security. This is the motor vessel Independent Endeavor at Dutch Gap, entering the Turkey Island Cutoff. Standing by for concerned traffic on Channel 13.*" Ships who are about to meet may briefly discuss their situation here or move over to **156.300 (Ch-6)** for longer discussions.
- **156.450 (Ch-9) - Alternate Calling Channel** - This channel is meant to remove some pleasure boat traffic off of a very crowded Ch-16.
- **156.575 (Ch-70) - Digital Signalling Devices** - This channel is set aside for selective calling devices. Since it is not active in my area, I don't have much knowledge of it.

## Types of Channel Usage:

- **Calling & Safety** - As shown above, you have calling channels and safety channels blending in with each other a bit. These are definite musts for any scanner near the water.
- **Port Operations** - Includes the direction of ships through the port (Harbor Control), and the dispatch of harbor pilots to ships, and coordination between harbor pilots and tugboat pilots when docking/undocking ships.

- **Commercial** - Used by water-related business such as fisheries, launch services, tug services, etc. Users are licensed for the specific frequencies to be used.
- **Non-Commercial** - Most commonly used by Marinas for communications with pleasure boats.
- **Public Correspondence** - For the most part, this means marine telephone. Probably pretty slow now that cellular has taken over. These channels are split with ships transmitting around 157 MHz and shore stations transmitting around 161-162 MHz.
- **Coast Guard** - While the Coast Guard has a number of different frequencies, there is a block of marine channels set aside for them, roughly from 157.025 to 157.175. Coast Guard stations are organized into various Groups, and the Group will generally operate the main radio station. The station will monitor 156.800 (Ch-16), a working channel for vessels and stations in the group, and a frequency for the group's Marine Safety Office (vessel inspectors). They will also have certain port operations channels.
  - 157.100 (Ch-22A) - Used for communications between the Coast Guard and civilian vessels. Also used to broadcast bulletins to mariners, and for communications between vessels in distress and rescue crews.
  - 157.175 (Ch-83A) - Primary frequency for Coast Guard Auxiliary, a volunteer organization of private boaters.
- **Vessel Traffic System (VTS)** - The Coast Guard monitors vessels on radar and keeps them up to date on their locations, etc. around several crowded port cities.

**Those "A" and "B" Channels: (In the US, "B" stands for *Bootleg!*)** - Why do you hear channel 22 referred to as "22-Alpha?" Because many channels on the international band are split-frequency. On international radios, the regular channel number indicates the split. An "A" channel is simplex on the ship frequency. A "B" channel is simplex on the shore frequency (4.6 MHz above the ship frequency) NO "B" channels that I'm aware of are legal for marine simplex in the US.

- **Shipboard Use** - The only possible legitimate use that I'm aware of for "B" channels is for shipboard communications. I've seen frequency lists submitted by people who cruised on ocean liners that would indicate this. Whether legal under international treaty, I don't know. Four UHF frequency pairs are allocated for shipboard use. Repeater outputs would be at 457.525, 457.55, 457.575 and 457.600 with inputs 10.225 MHz higher at 467.750, 467.775, 467.800 and 467.825.
- **Where the "B"s Are** - At minimum, we're looking at the band from 160.600-162.025. It's possible that B's could go almost to 165 MHz in some radios, intruding even on Federal Government frequencies, but I have scant info on this. Areas that "B" channels would interfere with in the US include the railroad band 160.215-161.565 and the VHF broadcast pickup band at 161.640-161.760. This accounts for the "B" side of channels 1-23 and 60-83. Above this are our own marine telephone operators transmitting from 161.800-162.000.
- **How hot is the bootlegging traffic?** - Not much, as far as I know, although I've never really investigated it closely. The US Coast Guard keeps a close eye on marine radio use, and if they DF you to an inland location--well, it better not be at your house. I've heard 156.55 used around I-64 near Charlottesville, VA and have found 156.625 used for parking cars at a James River Plantation. This, and some bootlegging by the Richmond

Police have all been on legit marine channels. I haven't found any "B" channels yet. Presumably, it would take some soldering, unsoldering or diode cutting to get to them. And, like scanners, the manufacturers may be dealing better with hackers these days. Another change has come with the establishment of new unlicensed services like the Family Radio Service (FRS) and the Multi Use Radio Service (MURS). Anyone can have access to cheap, durable low power handhelds with low-noise frequencies and selective squelch. These legal services are far superior to what's offered by bootlegging on the marine band.

- **N4JRI's Radio Pages**

• **Essential Marine Channels**  
 • **for your Scanner**

<b>Channel</b>	<b>Ship</b>	<b>Shore</b>	<b>Usage</b>
<b>16</b>	<b>156.800</b>	<b>156.800</b>	<b>Calling and Distress</b>
<b>13</b>	<b>156.650</b>	<b>156.650</b>	<b>Intership Safety (calling on waterways)</b>
<b>6</b>	<b>156.300</b>	<b>156.300</b>	<b>Bridge-to-Bridge (safety)</b>
<b>9</b>	<b>156.450</b>	<b>156.450</b>	<b>Alternate calling channel</b>
<b>8</b>	<b>156.400</b>	-----	<b>Ship/ship (commercial)</b>
<b>72</b>	<b>156.625</b>	-----	<b>Ship/ship (non-commercial)</b>
<b>77</b>	<b>156.875</b>	-----	<b>Ship/ship (docking operations)</b>
<b>68</b>	<b>156.425</b>	<b>156.425</b>	<b>many Marinas &amp; pleasure boat chit-chat</b>
<b>22A</b>	<b>157.100</b>	<b>157.100</b>	<b>Coast Guard Liason</b>
<b>81A</b>	<b>157.075</b>	<b>157.075</b>	<b>Marine Safety Offices (?)</b>
<b>83A</b>	<b>157.175</b>	<b>157.175</b>	<b>Coast Guard Auxiliary</b>
<b>17</b>	<b>156.850</b>	<b>156.850</b>	<b>Gov't Agencies (state marine police, etc.)</b>

15	-----	156.750	Gov't broadcasts to vessels
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- I keep these channels programmed in all the time. 156.800 frequently pops up to relay distress calls, or to announce broadcasts about to begin on 157.100. Traffic on the James River is active on 156.65, and I've even heard country music star Jimmy Dean talking with inbound ship pilots as they pass his Varina estate. 156.625 has a bootleg user right next to the water, and the Coast Guard Auxiliary occasionally operates a groupwide net on 157.175.

## . Marine Band Channel Plan

Ch.	Ship (A)	Shore	Int. (B)	Usage
60	156.025	-----	160.625	*** international ***
<b>01</b>	<b>156.050</b>	<b>156.050</b>	160.650	<b>Port Ops (VTS N.Orleans &amp; Lower Miss.)</b>
61	156.075		160.675	*** international ***
02	156.100		160.700	*** international ***
62	156.125		160.725	*** international ***
03	156.150		160.750	*** international ***
<b>63</b>	<b>156.175</b>	<b>156.175</b>	160.775	<b>Port Ops (VTS N. Orleans &amp; Lower Miss.)</b>
04	156.200		160.800	*** international ***
64	156.225		160.825	*** international ***
<b>05</b>	<b>156.250</b>	<b>156.250</b>	160.850	<b>Port Ops (VTS N.Orleans, Houston, Seattle)</b>
<b>65</b>	<b>156.275</b>	<b>156.275</b>	160.875	<b>Port Ops</b>
<b>06</b>	<b>156.300</b>	<b>156.300</b>	156.300	<b>Safety &amp; SAR</b>
<b>66</b>	<b>156.325</b>	<b>156.325</b>	160.925	<b>Port Ops</b>
<b>07</b>	<b>156.350</b>	<b>156.350</b>	160.950	<b>Commercial</b>
<b>67</b>	<b>156.375</b>	<b>156.375</b>	160.975	<b>Navigational (Lower Mississippi River)</b> <b>Commercial elsewhere</b>
<b>08</b>	<b>156.400</b>	-----	156.400	<b>Commercial (intership only)</b>
<b>68</b>	<b>156.425</b>	<b>156.425</b>	156.425	<b>Non-Commercial</b>

<b>09</b>	<b>156.450</b>	<b>156.450</b>	156.450	<b>Secondary Calling Channel</b>
<b>69</b>	<b>156.475</b>	<b>156.475</b>	156.475	<b>Non-Commercial</b>
<b>10</b>	<b>156.500</b>	<b>156.500</b>	156.500	<b>Commercial</b>
<b>70</b>	<b>156.525</b>	<b>156.525</b>	156.525	<b>Digital Selective Calling</b>
<b>11</b>	<b>156.550</b>	<b>156.550</b>	156.550	<b>Commercial</b>
<b>71</b>	<b>156.575</b>	<b>156.575</b>	156.575	<b>Non-Commercial</b>
<b>12</b>	<b>156.600</b>	<b>156.600</b>	156.600	<b>Port Ops</b>
<b>72</b>	<b>156.625</b>	-----	156.625	<b>Non-Commercial (intership only)</b>
<b>13</b>	<b>156.650</b>	<b>156.650</b>	156.650	<b>Navigational (except Lower Mississippi River)</b>
<b>73</b>	<b>156.675</b>	<b>156.675</b>	156.675	<b>Port Ops</b>
<b>14</b>	<b>156.700</b>	<b>156.700</b>	156.700	<b>Port Ops (Ship movement on Great Lakes)</b>
<b>74</b>	<b>156.725</b>	<b>156.725</b>	156.725	<b>Port Ops</b>
<b>15</b>	-----	156.750	156.750	<b>Environmental (Coast-to-Ship only)</b>
<b>75</b>	156.775	156.775	156.775	<b>nonexistent channel (guard band for 156.800)</b>
<b>16</b>	<b>156.800</b>	<b>156.800</b>	156.800	<b>International Calling and Distress</b>
<b>76</b>	156.825	156.825	156.825	nonexistent channel (guard band for 156.800)
<b>17</b>	<b>156.850</b>	<b>156.850</b>	156.850	<b>State &amp; Local Authorities (Wx bulletins on Gr. Lakes)</b>
<b>77</b>	<b>156.875</b>	-----	156.875	<b>Port Ops (comms w/Pilot, 1 watt)</b>
<b>18</b>	<b>156.900</b>	<b>156.900</b>	161.500	<b>Commercial</b>
<b>78</b>	<b>156.925</b>	<b>156.925</b>	161.525	<b>Non-Commercial</b>
<b>19</b>	<b>156.950</b>	<b>156.950</b>	161.550	<b>Commercial</b>
<b>79</b>	<b>156.975</b>	<b>156.975</b>	161.575	<b>Commercial (Non.Comm. on Great Lakes)</b>
<b>20</b>	<b>157.000</b>	<b>161.600</b>	161.600	<b>Port Ops</b>
<b>20A</b>	<b>157.000</b>	-----	157.000	<b>Intership</b>
<b>80</b>	<b>157.025</b>	<b>157.025</b>	161.625	<b>Commercial (Non.Comm. on Great Lakes)</b>

<b>21</b>	<b>157.050</b>	<b>157.050</b>	161.650	<b>Coast Guard</b>
<b>81</b>	<b>157.075</b>	<b>157.075</b>	161.675	<b>Coast Guard</b>
<b>22</b>	<b>157.100</b>	<b>157.100</b>	161.700	<b>Coast Guard (comm's w/civilian vessels)</b>
<b>82</b>	<b>157.125</b>	<b>157.125</b>	161.725	<b>Coast Guard</b>
<b>23</b>	<b>157.150</b>	<b>157.150</b>	161.750	<b>Coast Guard</b>
<b>83</b>	<b>157.175</b>	<b>157.175</b>	161.775	<b>Coast Guard (primary for USCG Auxiliary)</b>
<b>24</b>	<b>157.200</b>	<b>161.800</b>	161.800	<b>Public Correspondence</b>
<b>84</b>	<b>157.225</b>	<b>161.825</b>	161.825	<b>Public Correspondence (AMS on Great Lakes)</b>
<b>25</b>	<b>157.250</b>	<b>161.850</b>	161.850	<b>Public Correspondence</b>
<b>85</b>	<b>157.275</b>	<b>161.875</b>	161.875	<b>Public Correspondence (AMS on Great Lakes)</b> <b>Maritime Repeaters (Alaska only)</b>
<b>26</b>	<b>157.300</b>	<b>161.900</b>	161.900	<b>Public Correspondence</b>
<b>86</b>	<b>157.325</b>	<b>161.925</b>	161.925	<b>Public Correspondence (AMS on Great Lakes)</b>
<b>27</b>	<b>157.350</b>	<b>161.950</b>	161.950	<b>Public Correspondence</b>
<b>87</b>	<b>157.375</b>	<b>161.975</b>	161.975	<b>Public Correspondence (AMS on Great Lakes)</b>
<b>28</b>	<b>157.400</b>	<b>162.000</b>	162.000	<b>Public Correspondence</b>
<b>88</b>	<b>157.425</b>	<b>162.025</b>	162.025	<b>Public Correspondence (w/in 75 mi. of Canada)</b>
<b>88A</b>	<b>157.425</b>	<b>-----</b>	162.025	<b>Commercial intership &amp; fishing air/ship (except near Canada)</b>

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- NRJRI's Radio Pages

# . The Missing Marine Band

- All those channel numbers that don't show up on the lists

Channel	Ship (A)	Shore (B)	Comments
29	157.450	162.050	
89	157.475	162.075	
30	157.500	162.100	
90	157.525	162.125	Ch-90B is US Coast Guard "Lant-30"
31	157.550	162.150	
91	157.575	162.175	
32	157.600	162.200	
92	157.625	162.225	
33	157.650	162.250	Ch-33B is US Coast Guard "Lant-31"
93	157.675	162.275	
34	157.700	162.300	
94	157.725	162.325	Ch-94B is US Coast Guard "Lant-32"
35	157.750	162.350	
95	157.775	162.375	
36	157.800	162.400	Ch-36B is WX-2
96	157.825	162.425	Ch-96B is WX-4
37	157.850	162.450	Ch-37B is WX-5
97	157.875	162.475	Ch-97B is WX-3
38	157.900	162.500	Ch-38B is WX-6
98	157.925	162.525	Ch-98B is WX-7
39	157.950	162.550	Ch-39B is WX-1
99	157.975	162.575	
40	158.000	162.600	
100	158.025	162.625	
41	158.050	162.650	

<b>101</b>	<b>158.075</b>	<b>162.675</b>	
<b>42</b>	<b>158.100</b>	<b>162.700</b>	
<b>102</b>	<b>158.125</b>	<b>162.725</b>	
<b>43</b>	<b>158.150</b>	<b>162.750</b>	
<b>103</b>	<b>158.175</b>	<b>162.775</b>	
<b>44</b>	<b>158.200</b>	<b>162.800</b>	
<b>104</b>	<b>158.225</b>	<b>162.825</b>	
<b>45</b>	<b>158.250</b>	<b>162.850</b>	
<b>105</b>	<b>158.275</b>	<b>162.875</b>	
<b>46</b>	<b>158.300</b>	<b>162.900</b>	
<b>106</b>	<b>158.325</b>	<b>162.925</b>	
<b>47</b>	<b>158.350</b>	<b>162.950</b>	
<b>107</b>	<b>158.375</b>	<b>162.975</b>	
<b>48</b>	<b>158.400</b>	<b>163.000</b>	
<b>108</b>	<b>158.425</b>	<b>163.025</b>	
<b>49</b>	<b>158.450</b>	<b>163.050</b>	<b>US Coast Guard</b>
<b>109</b>	<b>158.475</b>	<b>163.075</b>	
<b>50</b>	<b>158.500</b>	<b>163.100</b>	
<b>110</b>	<b>158.525</b>	<b>163.125</b>	
<b>51</b>	<b>158.550</b>	<b>163.150</b>	
<b>111</b>	<b>158.575</b>	<b>163.175</b>	<b>US Coast Guard "Lant-29"</b>
<b>52</b>	<b>158.600</b>	<b>163.200</b>	
<b>112</b>	<b>158.625</b>	<b>163.225</b>	
<b>53</b>	<b>158.650</b>	<b>163.250</b>	
<b>113</b>	<b>158.675</b>	<b>163.275</b>	
<b>54</b>	<b>158.700</b>	<b>163.300</b>	
<b>114</b>	<b>158.725</b>	<b>163.325</b>	
<b>55</b>	<b>158.750</b>	<b>163.350</b>	
<b>115</b>	<b>158.775</b>	<b>163.375</b>	
<b>56</b>	<b>158.800</b>	<b>163.400</b>	
<b>116</b>	<b>158.825</b>	<b>163.425</b>	
<b>57</b>	<b>158.850</b>	<b>163.450</b>	
<b>117</b>	<b>158.875</b>	<b>163.475</b>	
<b>58</b>	<b>158.900</b>	<b>163.500</b>	
<b>118</b>	<b>158.925</b>	<b>163.525</b>	

<b>59</b>	<b>158.950</b>	<b>163.550</b>	
<b>119</b>	<b>158.975</b>	<b>163.575</b>	
<b>120?</b>	<b>159.000</b>	<b>163.600</b>	

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