

# **Marine VHF Radios**

Wery high frequency (VHF) marine radios are an essential component of safe boating practices. Some would argue it is the most important piece of safety equipment to have onboard. I wrote about these little wonders a few years back. Since then many new and improved VHF radios have been introduced to the consumer market. So, this month I'm going to give you an update on new developments in addition to a refresher on explaining how some existing features work.

#### **Rescue 21**

The U.S. Coast Guard is gradually rolling out an upgrade of their coastal search and rescue capabilities, known as Rescue 21. Rescue 21 will eliminate gaps in VHF reception nationwide. This system will allow accurate tracking of the location of Mayday calls within 20 miles of the coast. Between now and 2011, Rescue 21 will eliminate gaps in VHF coverage over the entire coastal U.S., and allow enhanced digital recording and playback of distress calls. The Rescue 21 program is scheduled to be implemented in Northern California between 2007 and 2011. (Some say as early as 2009.)

# **Digital Selective Calling (DSC)**

All fixed-mounted VHF radios sold in the U.S. are now required to include DSC capability. If these communications systems are interfaced with a GPS receiver, they will be able to transmit crucial vessel information, your position and, with some high-end radios, the nature of your distress call (undesignated, fire, flooding, collision, grounding, capsize, sinking, adrift, abandoning, piracy, man overboard). In an emergency, one push of a button will send an automated digital distress alert like a VHF frequency EPIRB (emergency position indicating radio beacon) containing your position and Maritime Mobile Service Identity (MMSI) to rescue facilities and other vessels equipped with DSC.

#### Marine Mobile Service Identity (MMSI)

To get the safety benefits of DSC, you must first obtain your nine-digit MMSI number and you must connect your VHF radio to a GPS receiver. Both the Federal Communications Commission (FCC) and the U.S. Coast Guard have approved the BoatU.S. MMSI program. To obtain and register your MMSI number, log on to www.boatus.com/mmsi/ and follow the instructions. You will need the vessel's CF number or documentation number. I was able to register our vessel *Her Way* online in five minutes.



Fixed-mounted VHF with DSC capability.

DSC also provides non-emergency capabilities, allowing you to communicate individually with another boat or group of boats using MMSI numbers. You can send and receive each other's positions as well so long as all involved have interfaced DSC with GPS. This new capability is worth investing in a new VHF radio for your vessel even if the one you have now works fine.

#### **DSC VHF Capability Advantages**

DSC radios have a one-button emergency transmission that sends the vessel's unique MMSI number. In addition, should the skipper become incapacitated, the radio will continue sending the Mayday.

Most importantly, this devise can be used by anyone regardless of knowledge of how to communicate via VHF radio.

# What to Look for

Scanning capability: Scanners make it easy to keep track of radio traffic by listening to a number of stations in rapid succession. They generally hesitate on an active channel until the conversation stops, and then move on to the next channel.

Programming the scanning feature is simple with today's new VHF radios. Simply select the channel you want to add to the scan and press the "MEM" key. This stores the channel in memory. Repeat this procedure for all of the channels you want to scan. To remove a channel from scan mode, simply select it and press MEM again. The channel is now removed from memory. Virtually all manufacturers use this system for scanning.

# **Do You Want a Second Station?**

Many radios can use one or more optional full-function microphones that even include a channel display. Changing channels or volume levels and adding or deleting channels from the scanner's memory are easily accomplished with these units. Second stations are ideal for the flybridge, cockpit, navigation station or anywhere else you could use VHF communications.

Second stations are a good alternative to having a less powerful portable VHF onboard. These new remotes use the full power of the fixed-mount radio (25 watts) and the effectiveness of full-sized antennae to ensure you have optimum range. However, a back-up portable unit is still a good idea because it uses a separate power supply and antennae if the fixed system fails.



A remote microphone for a fixed-mounted VHF radio.

#### Hi/Low

Of the hundreds of VHF radios I've used over the years, I've never come across one without the "Hi/Low" feature. However, most of my clients at Pacific Powerboating have no idea what this feature does. What the Hi/Low feature does is increase or reduce the wattage of your VHF transmissions. Increased wattage means greater range.

So, let's say you are attempting to hail a bridge on the Delta to request an opening. Any experienced Delta mariner knows bridges won't open until the vessel is in sight of the bridge operator and relatively close to the bridge. So you don't need to communicate with the bridge until you are close. In this situation it is best to use the "Low" setting on the radio because you don't need the maximum transmission power. Also, there are many drawbridges on the Delta and on any given weekend in the summer there is a lot of VHF traffic on channel 9 trying to communicate with these bridges.

If you are using "Hi," your transmission could unnecessarily interrupt other transmissions

to other bridges many miles away. Another example is if you are traveling with friends in a flotilla along the same route toward the same destination and you are within sight of the vessel you want to contact, the "Low" setting will suffice just fine and reduce the possibility of interrupting transmissions from other vessels miles away.

# Kevo's Tips

If your vessel doesn't have a VHF marine radio, get one. For smaller runabouts, portable models are the best solution. Keep in mind these units will not be capable of using the Rescue 21 program when it is up and running. If your vessel has an old VHF that is incompatible with the Rescue 21 program, consider putting on your wish list a new VHF radio. They are easy to install. My wife, The Admiral, installed our new one. (I'll pay for that!) HA!

As always, feedback is appreciated. I can be reached at 925/890-8428 or kevo@ yachtsmanmagazine.com.

Be safe & happy boating!