Marine Communications *by Day Chapin*

Amateur radio is getting more popular as an alternative communication system for boaters. Some of the reasons, such as the limited number of vessel-to-vessel channels in the marine band, limited range, inability to run a "net" or control frequencies, and the congestion on the marine bands in the summer have accelerated this trend. You are probably familiar with marine radios and their use so I'll use that as a benchmark to talk about how Amateur radio is being used especially in calling other boaters and listening. This information will be useful if you are new to Amateur Radio or if you have a radio and would like to listen in on some of the summer boating activity, such as the BC Boaters Net or the Puget Sound Boaters Net.

Calling Frequencies

– Channel 16 marine & 2 meter Amateur

What do Channel 16 and 146.52 MHz have in common? Both are emergency calling frequencies. Most boaters monitor Channel 16 while traveling to not only be available for emergency communications - but also listen for other boaters who may be trying to contact them. The protocol on Channel 16 is to call the other boat three times followed by your boat name. For example, "Summation, Summation, Summation this is Oceana on 16." It is good practice to indicate which channel you are on since many vessels monitor a variety of frequencies. The normal practice is to find a working channel first – then when Summation answers "Oceana this is Summation on 16" – reply "switch to 68" – with the reply – "Summation switching to 68." Both operators continue discussion on 68 and then usually conclude their conversation with "Oceana – back to 16." (Eventually, the USCG and the FCC would like to see informal boat-to-boat calling migrate over to VHF Channel 9, retaining 16 as an emergency calling and distress channel. Some regions with dense boating populations – like Long Island Sound and Southern California – are already publishing this change. However, that implies that the boats will have two VHF radios, or a scanning unit, so that they can listen for calls from friends while still maintaining the distress watch on Channel 16.)

Marine radio works if the vessels are fairly close (within a few miles) since marine VHF is "line of sight" simplex communication. Simplex means that you both transmit and receive on the same frequency while Amateur radio communications use a repeater for much greater range. A repeater is an amplifier – usually on a mountain top – that receives a signal on one frequency and then retransmits the signal on a different frequency or location: this split-frequency operation is usually referred to as "duplex." Channel 16 is simplex, but the CG (US and Canadian) have repeaters designed for this purpose spanning from Puget Sound to Alaska. That is why you can usually talk to the CG with a handheld marine radio – but not to other boaters that are out of range.

The 2-meter Amateur Radio community also has a calling frequency – it is 146.52 MHz (megahertz). This frequency is very close to the marine VHF Channel 16 frequency of 156.8 MHz so the equipment and signal propagation is very similar. The protocol on 652 (as 146.52 is called) is similar but different. [The ARRL The Repeater Directory calls this the "Wilderness Protocol." In addition to 146.52 MHz, they also list 52.525, 223.5, 446.0, and 1294.5 MHz as secondary frequencies. This was originally developed for those hiking or backpacking or when repeaters are out of range - but is now used by all Amateurs. The recommendation is to monitor every three hours starting at 0700 local time for 5 minutes.] You can call a specific station (Amateurs use call signs instead of boat names). To call Chuck on Summation – I would use "KE7GCX this is W7HDC." If I was on a boat I would add MM or Marine Mobile after the call sign. When Chuck answers – we can carry on a short conversation on 652 (which is different than using Marine Channel 16 where information communications are not allowed) or move to another frequency (QSY). The simplex frequencies are also useful if you go off in a dinghy or ashore – there are no limitations about using Amateur Radio on shore like there is for the marine bands (you can also use more power). You can also call CQ (calling all stations) on 652 and speak with whomever responds to your call, or just transmit your call sign and say monitoring, e.g. "W7HDC monitoring," to let others know you are on the air and listening.

While there is no designated calling frequency on HF (high frequency), many local boaters associated with the NW Boaters Net use 3865 KHz. This is the frequency that the Port Ludlow Amateur Radio Group has used for years for their net. I used this frequency one time when returning from a trip to the Queen Charlottes. We were traveling down Fitz Hugh Sound, a channel near Hakai Pass and found that Bill Whitney, WO7O was traveling up the same channel. We ended up rafting in the middle of the channel for a visit for about an hour – and then continued on our respective trips.

Scanning

Many of us got our start in Amateur radio by listening (also called scanning, monitoring, guarding) to radio transmissions. For example, once we leave our slip in Edmonds we are immediately close to not only the shipping lanes, but also Ferry Traffic and those little orange speedy boats that often travel with the ferry. I've set our radio to scan Channels 13 (bridge to bridge), 14 (vessel traffic - or VTS), 16 (general hailing and emergency), and 22A (USCG).