



Safety of Life At Sea: Your Radio, Installation Considerations



by VINCENT T. PICA, II
 CHIEF OF STAFF, FIRST DISTRICT, SOUTHERN REGION (D1SR)
 UNITED STATES COAST GUARD AUXILIAR

Last week, I wrote the following in the column about sounding smart on the radio:

“Unless you know the cell phone number of every boater in your vicinity, your only source of help is your radio. You don’t have one, you say? Stop reading and check yourself in someplace because that is simply nutty. Your radio is likely to be your only source of help and you go to sea without one? Over a couple of hundred dollars? And Westmarine, for one, will give you a three-year warranty on the radio... Come on, Bunky, where else can we skimp with such potentially disastrous results?”

And I meant it. But you did install it properly, didn’t you...? This column is about some of that.

Handheld vs Fixed-Mount

A little like the debate between laptop computers and desktop computers, this debate is all about power. Handheld “VHF” (very high frequency) radios typically put out 5 watts of power while fixed-mount VHF’s operate at 25 watts. When it comes to transmission power, more watts means more power – to drill through weather and all semi-permeable objects on its way to the horizon.

A Straight Line to the Horizon..?

Everyone has stood on their “tippy-toes” to see better, so height matters in getting to the horizon. For the math wizards, the formula to calculate the distance to the “true” horizon (the one you can see on a really clear day) is:

Where ‘h’ is the height of the observer (in meters,

$$d_s = \sqrt{h(2r_p + h)}$$

above sea level) and ‘r’ is the radius of the object – in this case the Earth – and the answer comes out in kilometers. Unless you’re planning on doing some boating on, say, Saturn where the radius is REALLY big, the formula can be simplified by the constant radius of the Earth to:

$$d = \sqrt{13h}$$

Where ‘h’ is again the height of the observer (in meters, above sea level). Remember my short-hand formula for converting meters to feet? Multiply the meters by 3 and add 10%. The reverse works too for converting feet to meters – take off 10% and divide the result by 3 – close enough. Say you’re 6 feet tall and your floor boards are 1 foot over the water line. So, your eye is roughly 7 feet over sea level. 7 feet less 10% is about 6 ½ feet and, dividing by 3 yields roughly 2 meters. The square root of 13 * 2 (or 26) is roughly 5. So, it is 5 kilometers to the horizon for the handheld VHF you are holding near your mouth as you speak – and it is pumping the signal out at 5 watts. What are 5 kilometers in miles? Multiply by 60% (.60) to convert to miles. 3 miles.

Now, how about putting in an 8 foot antenna and wiring it to your fixed-mount radio. You put the antenna on your top-side (the roof) of your helm cover. Let’s say that top-side is 7 feet over the water and the antenna is, as noted, 8 feet high. Now, let’s do the math. 13 * 15 feet = 195. The square root of 195 is roughly 14. What are 14 kilometers in miles? Multiply by .6 and you get over 8 miles, and you’re pumping out the signal at 25 watts. If help is 5 miles away, your handheld isn’t going to get your may-day to him, and heavy weather will clearly impact that 5-watter more than then 25-watter. Oh, but you do know his cell phone number – don’t you?

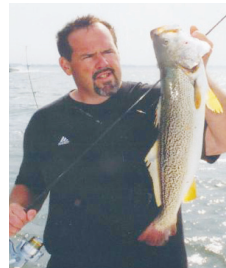
You don’t need to memorize the formulas or even look up in the answers in tables. You want to throw your signal as hard as you can (watts) as far as you can (height.) It is just that simple...

In the weeks ahead, we’ll dig into things like “gain” and Digital Selective Channels as well as the USCG’s state of the art communication system now in testing “Out East” – Rescue 21. But suffice to say in here, when you are putting out a may-day, you want what every battle commander has wanted from the beginning of time – power and distance.

BTW, if you are interested in being part of USCG Forces, email me at JoinUSCGAux@aol.com or go direct to the D1SR Human Resources department, who are in charge of new members matters, at DSO-HR and we will help you “get in this thing...”

Tides for Moriches Inlet starting with September 19, 2012

Day	High/Low	Tide Time	Height Feet	Sunrise/Sunset	Moon Time	% Moon Visible
Wed. 19	Low	3:26 AM	-0.2	6:36 AM	Rise 10:45 AM	10
19	High	9:48 AM	3.7	6:53 PM	Set 8:58 PM	
19	Low	4:05 PM	-0.1			
19	High	10:11 PM	3.2			
Thur. 20	Low	4:13 AM	-0.1	6:37 AM	Rise 11:54 AM	18
20	High	10:44 AM	3.7	6:51 PM	Set 9:48 PM	
20	Low	4:59 PM	0.1			
20	High	11:12 PM	3.0			
Fri. 21	Low	5:06 AM	0.1	6:38 AM	Rise 12:59 PM	28
21	High	11:44 AM	3.5	6:49 PM	Set 10:45 PM	
21	Low	6:00 PM	0.2			
Sat. 22	High	12:14 AM	2.9	6:39 AM	Rise 1:57 PM	39
22	Low	6:09 AM	0.3	6:48 PM	Set 11:47 PM	
22	High	12:45 PM	3.4			
22	Low	7:10 PM	0.3			
Sun. 23	High	1:17 AM	2.9	6:40 AM	Rise 2:47 PM	50
23	Low	7:24 AM	0.4	6:46 PM		
23	High	1:47 PM	3.3			
23	Low	8:20 PM	0.3			
Mon. 24	High	2:21 AM	2.9	6:41 AM	Set 12:53 AM	61
24	Low	8:36 AM	0.4	6:44 PM	Rise 3:30 PM	
24	High	2:49 PM	3.3			
24	Low	9:22 PM	0.2			
Tues. 25	High	3:25 AM	2.9	6:42 AM	Set 1:59 AM	72
25	Low	9:40 AM	0.3	6:43 PM	Rise 4:07 PM	
25	High	3:51 PM	3.3			
25	Low	10:16 PM	0.1			
Wed. 26	High	4:27 AM	3.0	6:43 AM	Set 3:05 AM	81
26	Low	10:35 AM	0.2	6:41 PM	Rise 4:40 PM	
26	High	4:49 PM	3.3			
26	Low	11:04 PM	0.0			
Thur. 27	High	5:22 AM	3.2	6:44 AM	Set 4:09 AM	88
27	Low	11:26 AM	0.1	6:39 PM	Rise 5:10 PM	
27	High	5:41 PM	3.4			
27	Low	11:49 PM	-0.1			
Fri. 28	High	6:10 AM	3.4	6:45 AM	Set 5:12 AM	94
28	Low	12:14 PM	0.1	6:37 PM	Rise 5:38 PM	
28	High	6:27 PM	3.4			
Sat. 29	Low	12:31 AM	-0.1	6:46 AM	Set 6:14 AM	98
29	High	6:52 AM	3.5	6:36 PM	Rise 6:06 PM	
29	Low	1:00 PM	0.0			
29	High	7:09 PM	3.3			
Sun. 30	Low	1:12 AM	-0.1	6:47 AM	Set 7:15 AM	99
30	High	7:32 AM	3.5	6:34 PM	Rise 6:36 PM	
30	Low	1:43 PM	0.0			
30	High	7:50 PM	3.3			
Mon. 1	Low	1:50 AM	0.0	6:48 AM	Set 8:16 AM	99
1	High	8:09 AM	3.5	6:32 PM	Rise 7:07 PM	
1	Low	2:24 PM	0.1			
1	High	8:30 PM	3.2			



FISHING WITH TONY

LAST CHANCE FOR FLUKE

by TONY SALERNO

Fluke season will officially close on September 30th. That means time is of the essence, and now is the time to get your last licks in, and put some tasty filets in the freezer for the long winter ahead.

Inside Moriches and Shinnecock Bays, the action has dropped off considerably in the past week largely due to the tropical depressions that had passed over the week before. Nonetheless, the action has been ok mainly with shorts, however there are a few keepers still around on the edges of the channels and along the edges of the drop-offs near most of the sand bars at both inlets.

The top of the flood tide brings clean, cool water inside the bays and that remains your best chance at nailing a keeper or two. Live snappers, peanut bunker or live mullet has really had its advantage over typical ham and cheese combos consisting of squid and spearing on Plain Jane Rigs. Outside the inlets, the action seems to be a bit on the quiet side since the huge sea swells that plagued most of the south shore nearly two weeks ago, which seemed to have pushed out some of the big ocean flatties well off the beach and near most off the offshore wrecks that litter the waters of the ocean.

Along the north shore, its bluefish and porgy time, especially at the Middle Grounds and along Cranes Neck. The big surprise along the rocky shorelines is the abundance of 5 to 7 inch sea bass. It seems the baby bass are competing with the porgies for homes and their food source. Actually, this bodes well for the future sea bass fishery. Hopefully they will make a comeback with true humpbacks along the north shore in a couple of years. In the meantime, there are some kingfish mixing into the fray, as well, to the delight of anglers. Good things are beginning to take hold along the north shore. Lets just hope it all bodes well for the future.

