



Safety of Life at Sea: Your Radio...

■ by VINCENT T. PICA, II

Flotilla Commander, 18-06 (1SR) - United States Coast Guard Auxiliary



Back in August '07, 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

desk top 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:

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

where 'h' is the height of the observer (in meters, 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 1/2 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 hold-

ing 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 wire 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 the 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 JoinUSCGAux2008@aol.com or go direct to MaryJo Cruickshank, who is in charge of new members matters, at FSO-PS@emcg.us and we will help you "get in this thing..."

1708 Montauk Highway
Mastic, NY 11950



Movie Listing Hotline
1-631-657-3297

Showtime Information for Friday April 11th- Thursday April 17th

* Matinee. *6.

Nim's Island (PG)

Fri & Sat: (*12:55), (*2:50), (*4:40), 6:25, 8:10, 9:55

Sun: (*12:55), (*2:50), (*4:40), 6:25

Mon - Thu: 7:10, 9:10

A young girl inhabits an isolated island with her scientist father and communicates with a reclusive author of the novel she's reading. Based on the book by Wendy Orr and Kerry Millard.

Starring: Jodie Foster, Abigail Breslin, Gerard Butler, Alphonso McAuley, Peter Callan



The Ruins (R)

Fri & Sat: (*1:00), (*2:45), (*4:30), 6:15, 8:00, 9:45

Sun: (*1:00), (*2:45), (*4:30), 6:10, 7:50

Mon - Thu: 7:30, 9:15



Four American friends on vacation in Cancún, Mexico, meet a German tourist who persuades them to join his hunt for his younger brother, who was last seen with his girlfriend near some mysterious ruins.

Starring: Jonathan Tucker, Laura Ramsey, Jena Malone, Shawn Ashmore

21 (PG-13)

Fri & Sat: (*1:00), (*3:20), 7:15, 9:30

Sun: (*1:00), (*3:20), 7:15

Mon - Thu: 7:00, 9:00

Dr. Seuss' Horton Hears a Who (G)

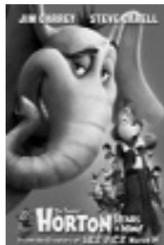
Fri & Sat: (*1:05), (*2:50), (*4:30), 6:15, 8:05, 9:40

Sun: (*1:05), (*2:50), (*4:30), 6:15, 8:05

Mon - Thu: 7:05, 8:45

The imaginative elephant Horton hears a cry for help coming from a tiny speck of dust floating through the air. Suspecting there may be life on that speck and despite a surrounding community which thinks he has lost his mind, Horton is determined to help.

Starring: Jim Carrey, Steve Carell, Carol Burnett, Seth Rogen, Will Arnett



Superhero Movie (PG-13)

Fri & Sat: (*1:10), (*2:50), (*4:25), 6:30, 8:05, 9:45

Sun: (*1:10), (*2:50), (*4:25), 6:30, 8:05

Mon - Thu: 7:25, 9:00

10,000 B.C. (PG-13)

Fri & Sat: (*1:15), (*3:20), 5:20, 7:20, 9:20

Sun: (*1:15), (*3:20), 5:20, 7:20

Mon - Thu: 7:10, 9:10

Epic tale that centers on three stages in the development of primitive man, as seen through a 21-year-old hunter from a primitive tribe who must hunt mammoth to survive.

Starring: Steven Strait, Camilla Belle, Marco Khanlian, Cliff Curtis, Timothy Barlow



Purchase tickets online or for
showtime updates go to
www.island-cinemas.com