

# Seamanship

by Vincent Pica, Chief of Staff, First District, Southern Region (D1SR), U.S. Coast Guard Auxiliary



# Fog!

As the air temperature falls and the water still holds some of that summer warmth, we can expect fog, just as we do in the spring when the air is warming but it is the water that is still cold. For those of a more scientific bent, fog that forms when water is warmer than the air is called “steam” fog (fall). Think of that pot of spaghetti water you are boiling. Fog that forms when the water is colder than the air is called “advection” fog (spring). There is a third kind of fog called “radiation” fog. That is the fog that you see float in across the backyard or linger in a dip in a country road. But fog is fog. You can’t see the land or the buoys or, worse, the bow! What to do?

Well, with the dropping price of radar, boats in the mid-20-foot range can now be found to have radar aboard (see the section below on radar). If you do have radar aboard, as you’ve read here before, turn it on because you are **obligated** to under the rules to “use all available means.” Not surprisingly, however, the advice below holds for the 65-footer with radar and chart overlay capabilities as well as the skipper in the 17-foot open boat with a 90-hp Merc on the stern. When the fog rolls in...

Slow down to “a slow bell”, that is, with forward propulsion necessary to maintain steerage, but no greater. Don life jackets.

While underway and making way, that is, engine in gear, give 1 “prolonged” blast on your whistle (4-6 seconds). This is specified in the Navigation Rules, Rule 35(a) (see LIBW, “COLREGs: Conduct of Vessels in Restricted Visibility October 2010”) In fact, the rules say “not more than 2 minutes apart.” Let me make it plainer: no **less than** every 2 minutes.

While underway but not making way, that is, dead stop on the engine but not at anchor, give 2 “prolonged” blasts, separated by a cou-

ple of seconds apart, no less than every 2 minutes. This is Rule 35(b).

If necessary to anchor due to visibility (none!), “boats less than 39 feet 4 inches (12 meters) in length may make an efficient sound signal at intervals of not more than two minutes.” In short, it is not specified for boats under 12 meters. Boats larger than 12 meters at anchor must clang their bell 5 times quickly followed by one prolonged and one short (~1 second) blast on the whistle.

Listen. Sound travels more efficiently through fog than clear air. Listen. Bring your engine to dead stop from time to time and listen. Listen for the sound of surf (move away from that!), buoy whistles/horns/bells (move towards that, carefully) or other engines (sound danger whistle right away and take all way off – but don’t turn off the engine!).

So, now you are properly communicating with other boats but you do want to get in out of the fog if you can. How? Don’t, as some old chestnuts might advise, hug the shore. As the fog intensifies and you draw closer and closer to shore, you know what will happen - a grounding is imminent. Of far more danger, don’t “hug the shore” when you are outside an inlet. If you get caught in the surf line (see 5 above), you will be capsized and now there is imminent threat to life.

If you can’t see, you must stop, drop the hook, sound your warning horn as specified and wait out the fog. If through your electronics you come to realize that you are in a heavy traffic lane, get out - at a slow speed and just enough to be out of the traffic. But if you can’t see past the bow and you are underway and making way, you are in extreme danger of having a collision at sea.

If you have some visibility, see #'s 1 and 2 above. The slower speed will help in another

way as well – you can hear better. Lastly, if you have those canisters of compressed gas as your boat’s horn/whistle, you will likely run out of compressed air before you run out of fog. Think about getting a simple whistle. Get the “pea-less” kind in case you have to worry about your spittle freezing one cold and foggy day... and blow, baby, blow!

## Radar – How and Why Does It Work?

If there is a better sounding maritime short-hand than “scuba”, it has to be “radar.” We’ve grown up hearing about it and being subject to it – we’ve all been on the parkway doing +55 mph – so we instinctively “get it.” It is the eyes that can penetrate fog, rain, night and snow... but “getting it” and using it effectively is as much art as science.

First, what is happening? Electromagnetic energy is shot out of the radar’s “transceiver” (a transmitter and receiver combined in one) at the speed of light, and if it hits something of sufficient density, returns at the speed of light. This enables the radar unit to instantly determine the distance of the object from you. The transceiver rotates 3-4 times per minute so you are constantly scanning for all comers and all objects that will return a signal! Will a sail boat? Well, her sails certainly won’t, and unless she has a kicker engine on her stern, her low-lying hull might not either, nor her wooden mast.

Radar needs some amount of density. Here is one anecdote that illuminates the issue. A couple of summer’s ago, while we were conducting a night patrol, we were transiting from buoy 5 to buoy 6 in Narrow Bay east of the Smith Point Bridge. A moonless and cloudy night, we picked up a good-sized object lying 1,000 feet directly in the fairway, dead ahead. I was at the helm and couldn’t see a thing – no lights, no glow from a wake, nothing. I call out to my crewmen to move to the bow to extend my sight – by now we’re 500 feet away and still no one can see a thing. But she’s big and underway slowly. So, while throttling back to a “slow bell” (just enough speed to maintain steerage), we turn on the forward-looking infrared system (FLIR, like a kind of radar that detects tiny temperature differences at great distances) since I knew the engine of whatever was ahead of us had to be warmer than the boat and the water. And there, in full majesty, was a flock of swans paddling along in serene closeness – but so many and so close together that they showed up as a single, solid object to the radar even though the FLIR could see each swan individually.

And therein lies one of the issues of “getting the concept” of radar and using it effectively. But those are issues for the months ahead in *Long Island Boating World*.

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...”