Your AIS display will show nearby vessels, their speed, direction of travel, and their VHF contact information. AIS is not a substitute for radar but an important complement. AIS information from nearby vessels can be delayed by several minutes; and therefore, AIS shows you where the vessel was located. Radar shows you where it is now.

The chartplotter, running reliable electronic charts, provides for safe accurate navigation in low visibility. Zoomed in at an appropriate level, a good plotter enables you to accurately pinpoint hazards. Remember, not all obstacles on all charts are depicted precisely, so a margin of error is prudent! Set your radar range to the same scale as your plotter – or overlay it on the plotter if you can – to match charted features with radar for a clearer picture of your surroundings. Three-dimensional charts that show bathymetric data are better still. Use your plotter's predicted track feature to point your way past hazards.

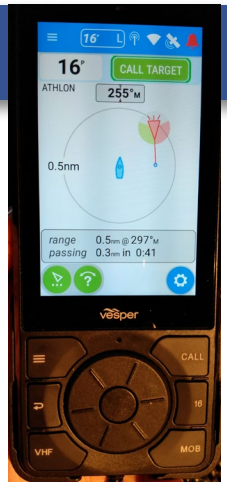
Finally, use your VHF radio. Commercial vessels routinely broadcast their approach to points or channels which may bring them close to other traffic, so monitor VTS channels as well as Channel 16. Follow their example and announce your intentions when you enter waters where you may meet other vessels; invite concerned craft to respond. If you spot a converging target on radar, call them to determine their intentions and discuss how to pass or cross safely.

Listen and look carefully. There is still a place for our own sharpened senses when we think we can't see diddly. In steamship days, skippers and pilots blew a whistle and listened for the time it took for echoes to return in order to determine their distance from shore. It makes sense to throttle back from time to time. Step on deck and listen for whatever you might hear: a horn, voices, a nearby outboard, birds calling, the lap of waves against the shoreline, the low thrum of really big engines…or nothing at all.

In restricted visibility, Collision Regulations require you to sound a single prolonged (four to six seconds) horn blast every two minutes when you are under way, and two prolonged blasts if you are stopped. Sound carries well across still water and in fog, and sends a clear message to anyone around. Don't forget to use your nose, as well. Water smells different than land; the odor of guano may tip you off to a seabird colony on an isolated rock; a whiff of engine exhaust may warn you of vessels nearby.

Even when you're sure you can't see a thing, you often still can – if you look hard enough. Have your crew keep an intent bow watch for anything you may not see from the helm. Sometimes wearing sunglasses actually helps to see images in the fog. The white hull of that lone sport fisher rolling in the chop may appear faintly. Or the superstructure of a container ship or ferry may float serenely through the top layer of the mist…and, hopefully, it won't be too close.

CORTEX - AIS, VHF, VESSEL MONITORING, ANCHOR WATCH, AND MOB

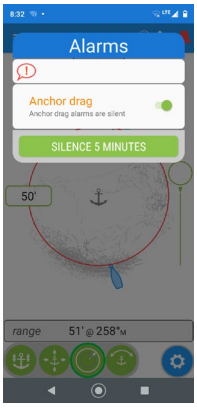


Handset - AIS Traffic

Vesper's Cortex is a feature-packed latest technology device that combines AIS (Transmit & Receive), VHF Radio (all new design), vessel monitoring, anchor watch, and Man Overboard, integrated with cellular cloud and Wifi communication. The Cortex unit mounts out-of-sight in an electronics bay and does not need console space. The separate smartphone sized handset can be mounted or stored just about anywhere. The touchscreen handset is used to setup and control the Cortex unit. Smart alarms prioritize concerns and conflicts. The best way to describe this multi-faceted device is by major function areas:

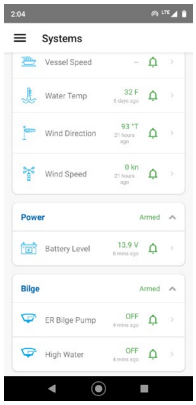
VHF Radio. The handset is the voice and calling interface for the Class D VHF DSC radio. Changing channels and choosing power settings is easy, using the handset's touchscreen, along with the handset's buttons and control wheel. Favorite channels can be saved for easy re-use. A good quality speaker and microphone are built into the handset.

VHF/DSC. Digital Select Calling has got to be one of the most under-utilized features of VHF. Cortex has solved the difficult to use problems with DSC. From the handset, you can DSC call another DSC VHF radio from the Cortex device directory, or Cortex plotter display of nearby AIS targets. DSC calling "rings" the called VHF radio and switches both radios to the selected working channel when the called radio "picks up", thus eliminating the need to hail on channel 16. It's a convenient way to contact buddy boats.



Anchor Watch. The anchor watch uses precise GPS tracking, along with its built-in heading sensor to more accurately track and record the vessel's position. If your vessel moves outside of the prescribed boundary circle, Cortex will sound an alarm on the onboard handset and to the smartphone app. Through the Cortex Cloud and monitoring system, you can check the vessels anchor watch, water depth, wind speed, and wind direction – all remotely using your smartphone.

AIS. Automatic Identification System is one of the features that distinguishes Cortex from other AIS devices. Cortex is a Class B SO-TDMA (also known as Class B+) Transponder. B+ class means that Cortex can more precisely report your vessel to other AIS listeners with more frequent transmissions and at a higher power. Cortex's collision avoidance feature is a big help with vessel conflicts. The one-touch DSC calling feature allows you to easily and quickly call AIS targets from the Cortex handset to arrange for safe passage; simply tap the onscreen icon. Cortex's built-in heading sensor provides heading information to other AIS listeners.



Vessel Monitoring. The Cortex unit includes boat system monitoring of high-water bilge, bilge pump, smoke/heat, battery voltage, hatch/door opening, and motion sensor. With the smartphone app, you can remotely turn on/off vessel devices such as lights, or refrigerator/ice maker. Full featured monitoring and control requires a Cortex Cloud service plan, available with a monthly or annual fee. There is no charge for the basic alarm monitoring, with two status checks per day.

MOB. Cortex activates an alarm when an AIS Man-Overboard device is detected. MOB Devices are small devices available from a number of providers that are attached to a person; and when activated by water or manually, emits an AIS MOB signal. Cortex displays the MOB and best course to the location. MOB waypoints can also be set by pressing the MOB button on Cortex handsets.

Vesper has really thought of everything for the Cortex. The device includes a no-loss VHF antenna splitter, connections for NMEA 2000 and NMEA 0183. Handsets (tethered and non-tethered), and the Cortex Onboard iOS/Andriod app, communicate with the Cortex unit over Wifi and display information and control the unit. The separate Vesper/Cortex iOS/Android app works with the Cortex Cloud for remote communication with the Cortex device.

For more information visit the Vesper's website at www.VesperMarine.com