

OFFSHORE COMMS —

Fifty years ago, during the very first solo, nonstop 'round-the-world race, legendary French voyager Bernard Moitessier rejected the idea of carrying a long-range radio aboard his 40-ft ketch, *Joshua*. Instead, he chose to communicate with the race committee by placing handwritten notes inside 35mm film canisters, and launching them onto the decks of passing ships with his slingshot.

Needless to say, offshore 'comms' have come a long way since that pivotal race — the Golden Globe — was staged in 1968. But these days, along with the ever-expanding assortment of communications devices designed for offshore sailing, comes the dilemma of deciding which ones belong on your 'must-have' list, and which ones you can live without — especially if you're on a limited budget. With that in mind, we'll share some tips and insights here that we hope will reduce your befuddlement.

VHF Radios

With a range of roughly 25 miles, the VHF installed in your nav station will serve as your basic everyday communications tool while cruising, allowing you to hail other vessels along your route; call marinas, port captains and service providers ashore; participate in local cruiser nets; and call nearby help in emergencies.

Newer models have some enticing functions, such as built-in GPS, digital selective (group) calling (DSC), access to marine weather, and a 'mayday' button that transmits distress calls using DSC that uniquely identifies your boat and its location, even when local conditions compromise voice transmissions.

If you're happy with your current VHF and reluctant to replace it, consider buying a new, full-featured handheld as a backup. It can serve as an emergency replacement for the radio in your nav station if, God forbid, your boat gets dismantled or you are forced to abandon ship. They are also extremely useful for keeping in touch with shore parties when cell service is not available. And these

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days, many handhelds come with all the features of a hard-wired unit, and more. Many are waterproof, float, and can be charged with a portable solar charger. In this age of waterproof electronics, a number of wind- and kitesurfers are now carrying VHF's.

High Frequency Radios

For many sailors who are fitting out boats to go cruising, one of the biggest head-scratchers is whether to invest in a "high frequency" single sideband (SSB) or ham radio for long-distance offshore communications.

Why the debate? Not too many years ago, the majority of world cruisers considered it a basic necessity to have an SSB or ham unit aboard, as it put them in touch with their neighbors out on the open ocean, gave them the ability

to make international phone calls via special marine operators, provided a means to reach rescue resources during emergencies, and, in recent years, facilitated sending and receiving email via special modems and software.

But these days a variety of satellite communication devices compete with HF radios for most offshore communication needs, including direct international voice calling, emailing, text messaging, and sending out mayday signals. Plus, as you'll read below, many such devices are portable enough to throw into your ditch bag and take in a liferaft.

All that being said, plenty of world voyagers would tell you there is nothing more comforting on a lonely night in mid-ocean than having a real-time conversation with like-minded fellow sailors, be they following in your wake or located 2,000 miles away. So it's not surprising that both SSB and ham nets are still active in the Pacific, Atlantic and elsewhere, providing both camaraderie and a small measure of security to international voyagers.

Note, however, that boat owners are required to obtain a ship station license for these radios — easily done online — plus at least one crew member must obtain an operator's license before *legally* using either type of radio. (See: www.fcc.gov.) However, there's no restriction on unlicensed sailors simply listening to nets in order to get weather info and other news.

An additional argument for retaining or upgrading your SSB and adding a Pac-tor modem is to access email over radio



SO MANY CHOICES

waves via Sailmail, a brilliantly conceived program developed by West Coast sailors Jim Corenman and Stan Honey in the 1990s, which is still used today by more than 1,500 cruising boats.

Once you pay the reasonable annual membership, messaging is free (apart from certain limitations). And because Sailmail compresses outgoing messages and processes incoming messages to rid them of graphics, viruses, html, etc., it's said to be faster than typical mail transfers via satellite devices. Consequently, an increasing number of sailors now use Sailmail over both HF radio (when propagation is good) and over a satellite device (when propagation is lousy). Downloading GRIB (weather) files is another primary use of Sailmail.

Satellite Comms & Tracking

When GPS was developed in the 1980s it seemed almost miraculous. It was hard to believe that soldiers deep in the jungle and sailors in mid-ocean suddenly had the ability to know precisely where they were, thanks to data bounced down to them from an unseen network of satellites. Particularly for bluewater mariners, the development of GPS was a quantum leap into modernity after centuries of relying on dead reckoning and sextant fixes.

These days, the ongoing miniaturization of satellite technologies is jaw-dropping. The latest chartplotters work off built-in GPS units smaller than a hockey puck with no external antenna. Smartphones and tablets less than a half inch thick also have internal GPS — and

that's just the beginning.

Today, the expansion of satellite systems, coupled with the miniaturized communication devices, allows offshore sailors to communicate by voice, text and email, and also to browse the Internet while their boats are being tracked by automated check-in functions.

This is a huge and complex subject, of course, but we'll give you a cursory overview here of some of the most popular options on the market today.

Satellite phones have been around for years, of course, and they are still relatively expensive to buy and use. But these days more and more sailors see them as a necessary tool for keeping in touch with family, friends and/or business associates. And when interfaced with an onboard computer, they can facilitate downloading weather info and text-only email while offshore.

During an emergency, a satphone can be a tremendous asset, as it will allow you to directly communicate with rescue resources, yet it is small enough to take in a ditch bag. Plus, it can be charged by a portable solar device. Phones using the Iridium or Inmarsat satellite networks have the most reliable reception, offering connectivity virtually anywhere that typical cruisers travel.



A 406 MHz EPIRB such as this communicates with the Cospas-Sarsat satellite system, giving pole-to-pole coverage.

We should inject here that no boat should venture offshore without an EPIRB (Emergency Position Indicating Radio Beacon). When activated manually — or automatically, if immersed — one of these robust waterproof units will broadcast an electronic signature that's unique to your boat, and typically send out lat-long updates on your location for nearly three days.

However, unlike satphones and the text communicators we'll introduce below, EPIRBs have no way to give specific info on the nature of your emergency. And, in order to eliminate the possibility of a false mayday — a common

occurrence — a time-consuming verification protocol must be completed before rescue resources can be dispatched. By contrast, with a satphone or satellite texting device you can communicate specifics — such as, "Crewman with broken leg needs evac" — which can speed up response time dramatically.

An offshoot of the satphone that's now very popular with cruisers is the IridiumGO! Roughly the size of a deck of cards, this amazing device serves as a satellite interface for smartphones, tablets and computers, allowing you to send and receive email, download GRIB and other weather files, and make calls

No, this isn't intended to be your Christmas shopping list — but it could be! What will they think of next?



Inmarsat's Fleet One

A SPOT Messenger



Garmin's InReach

