



ood luck is the child of preparation, so the saying goes, and all sailors rely on a degree of good fortune at sea. So ensure you're prepared by updating your boat's safety kit this winter, while she's in the cradle and easy to work on. From the analogue to the digital, cast your eyes over our list of possible upgrades.

Storm sails

If next season's plans involve venturing a long way offshore, you're probably thinking about storm sails. They typically come into use in winds above 45 knots, to spare the main and jib and depower the rig. Look for heavy-duty Dacron cloth in a bright colour, strong reinforcing at seams, the luff and leach and load points around cringles. Some come with sheets ready spliced in. Expect to pay around £500 for each sail, says Fiona Jeckells of Jeckells Sails. Some off-the-peg products exist, including the Gale Sail from America's ATN. Priced at about £1,050 for a 40-footer, this jib is designed to fasten on around your roller-furled jib or genoa. The Storm Bag is similarly priced, and consists of a storm jib packed into a stout bag that you haul up on a sleeve around the furled jib.

Guardwires

Most cruising boats have guardwires made from 1x19 stainless steel wire. Over time, this chafes where it passes through the eyes of the stanchions, creating a snagging hazard or even the chance of failure. Often finished with a PVC coating, check your wire regularly and replace when worn.

Standard 4mm wire has 1,280kg breaking strain, and Jimmy Green is currently offering 24 percent off. Expect a studfinished wire to cost from £40-£60 for a 35ft boat.

Liferaft

A liferaft is a smart safety investment if you're planning serious cruising. Make sure you choose one with the right capacity for your crew numbers, and robust



BELOW Radeau four-person liferaft, from Plastimo

OPPOSITE

Sporting a storm jib: these are essential if you are sailing a long way offshore. Look for bright, heavyduty Dacron with strong reinforcing at the seams

BELOW

RescueMe's Epirb1 is also indispensible for offshore sailors. They alert search and rescue teams to your location via satellite enough to deal with your likely cruising grounds. For offshore sailing, choose one that meets ISO 9650, type 1 with a food and equipment pack designed to last more than 24 hours (pack 1). They're bulky and expensive, with the type described above likely to set you back at least £1,000 - Seago's ISO 9650-1 range of liferafts offer a good selection of liferafts for between four and ten men within this ballpark figure. Think about how you will store them - there are valise or canister options, including a self-launching system, based on hydrostatic technology, that deploys underwater.

There's little point in having one of these on board if it's not properly maintained. Make sure it is serviced at least every three years – a process that involves test inflation, replacing any perished supplies and repacking. If there are no problems, count on a cost from £200 to £500 plus any

replacements. Hydrostatic releases also need to be replaced every two years – at a cost of about £70. Ocean Safety offers owners the chance to come in and familiarise themselves with their unpacked liferaft during servicing at their four UK centres.

Epirb

Again, for offshore sailors, Epirbs





are pretty indispensible these days. Operating at 406MHz, they alert search and rescue agencies to your exact location via a satellite link. They then provide a homing signal for final-mile location, and many also have strobes and automatic deployment. Expect to pay upwards of £300 for this. The impressive Ocean Signal Epirb1 (£382) has a 10-year battery life and its small size make it ideal for sailors. Others offer at least six years of battery life, and a while replacement battery can be expensive they are a fraction of the cost of a new unit.

AIS

Like many electronics for your boat, AIS has an overwhelming safety value. Whether you install a receiver only, or a unit that also transmits your position to the world, it can provide early warning of a potential collision situation by working out the closest point of approach of vessels in range. A modern multifunction display (MFD) can show the AIS data directly, or you can buy AIS units with dedicated screens. Digital Yacht manufacturers a simple receiver only for £180, to wire to your MFD, or a more complex transponder that plugs into your NMEA2000 instrument network for £540. Vesper Marine offers its all-in-one transponder with colour touchscreen for €1,519.

Flares

In some parts of the world, privately-

used sailing boats are required to carry emergency signalling devices, but not in the UK. Many of us will have flares aboard 'just in case', without thinking too hard about their expiry dates. It is a calculated risk to use them once they've expired. Good brands should stay safe for longer, although there is no guarantee. However, the consequences of finding that a flare doesn't work, or even malfunctions in your hands is unpleasant to contemplate. If you want to stay up to date, new coastal flare kits, including red parachute flares, cost less than £100. Jimmy Green, for instance, does a Pains Wessex coastal pack for £91..

Gas detectors

Many older boats don't have gas detectors, although the consequences of a gas leak are potentially catastrophic. They're easy and relatively cheap to retrofit. Pilot makes a single or double sensor gas alarm available through many chandleries for about £120 or £150 respectively. Nereus makes more complex LPG and carbon monoxide alarms - useful as both gases are heavier than air and can sink into a boat's bilges and cabins with deadly consequences. The double detector costs £330. All can be supplemented with a solenoid valve that automatically shuts off the gas supply when the alarm is tripped.

Exhaust detectors

Most engines come with overheat

ABOVE LEFT AND RIGHT

Essential electronics: AIS 100 and plotter; AIT 1500 transponder

BELOW

Many sailors will have a flare aboard 'just in case'. Pictured is a flare by Drew Marine alarms that focus on the coolant temperature. For added peace of mind, you can also monitor the exhaust temperature. Trickett Marine sells a cheap (£80) and simple unit that simply rings when the temperature on the outside of the exhaust hose exceeds 93°C.





MOB equipment

There's a host of kit to help get a man overboard back onto the boat. These range from the well-known Jon Buoy inflatable rescue sling, which helps a casualty float and provides the sling to haul them back aboard (from £110) or the full Jon Buoy rescue module (£682.45), to the Kim pick-up sail (£220.50), which allows you to raise an unconscious crew member from the drink. At the cheaper end of the spectrum Duncan Well's LifeSaver is a fine 2m length of pre-spliced Dyneema that is attached to a lifejacket's lifting becket to aid retrieval. It costs £21.90.

Finally, don't forget emergency ladders – everyone's shivered at the thought of being stranded in the water alongside the boat. Ocean Outils' solution is the Magic Reboard, a compact stowable ladder that you attach to the guardwires, where its dangling lanyard makes it easy to deploy from the water. Costs from €140 in soft mode or €234 in rigid.

Radar target enhancer

For ultimate visibility to large shipping, forget the standard tetrahedral reflector of old. An active target enhancer like the Echomax Active-XS detects the sweep of another vessel's X- or S-band radar, and fires back a powerful response.

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Testing by QinetiQ shows that it is equivalent to a 110sqm reflector – five times greater than the largest passive reflectors. Cost is £815.

Fire extinguishers

Keep a fire blanket and a dry powder extinguisher in the galley – Force 4 is currently doing an offer when you by both at £19.95. Consider an automatic extinguisher in the engine compartment, but be warned: the standard setting is to deploy at 79°C. If your engine is in a very confined space, that may not be suitable.

PLB

Similar to its big sister the Epirb, this unit is designed for an individual rather than the whole boat. Tuck it in a pocket for deployment if the worst happens and you fall overboard.

and you fall overboard or have to abandon to the liferaft. The operational life is shorter – typically hours rather than days, but it still raises the alarm via satellite. Battery life is also normally around seven years. Expect to pay around £200 for Ocean Signal's PLB1 or ACR's ResQLink+.

Drogue

ARC participants are required to have some sort of drogue on board,



BELOW PLB1 personal man overboard alarm, from Ocean Signal

BELOW LEFT Echomax Active-X radar reflector to stream over the stern to slow down in big seas and even to help immobilise the boat when hove-to. At one end of the range of options is a single parachute-style drogue, like that from Ocean Safety, which is good for yachts up to 50ft and costs £467.24. At its simplest, Jimmy Green offers a PVC cone suitable for a 40ft boat for £72. However, current advice favours the use of a series drogue in heavy weather – effectively dozens of small cones attached to a stout rode.

Don Jordan's Ocean Brake is one of the best known, costing £611 for a system suitable for an 8.9t boat.

Personal

Tethers should be checked and renewed regularly. Lifejackets should be checked annually. Service kits can be acquired from United Moulders Limited. Beyond that, it's worth thinking about safety lights. Exposure Marine's MOB OLAS Float On combines a torch that links to their personal locating app if you fall overboard.



