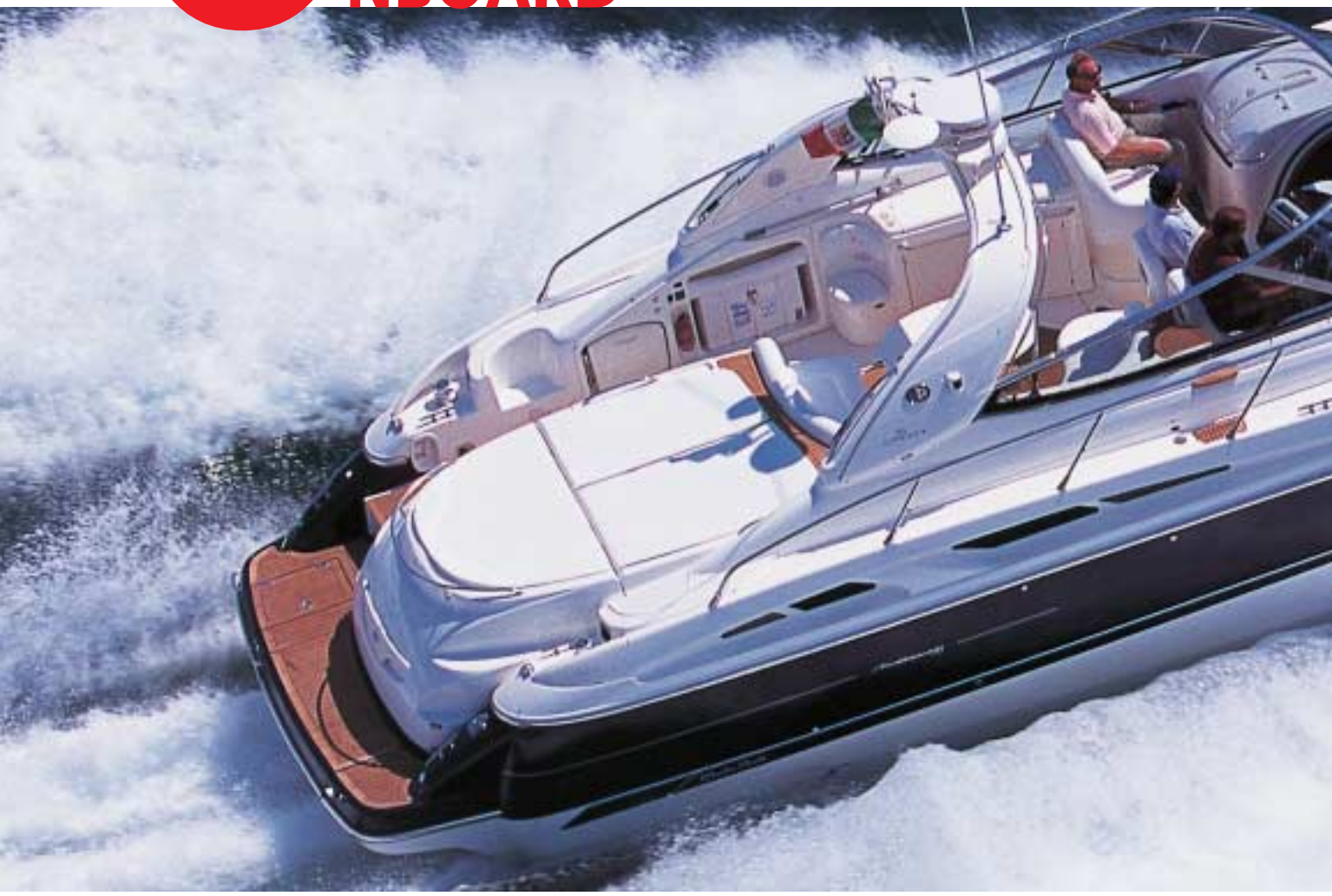
ONBOARD



The liferaft is ideally located for easy access and launch on this 50' Cranchi.

Lifesaving Equipment

By Eric Ogden

The size and type of boat are unimportant. Big or small, sail or power, racing dinghy, runabout, family cruising ketch or megayacht, the golden rule is this: Safety first, last and always. Having and updating the proper safety equipment on board a pleasure yacht are precautions that some owners and crews tend to neglect until it's too late, which is when those who need it most suddenly find that it's not working or has been hidden behind other gear in seldom-used storage lockers.

Safety equipment should be well maintained and easily accessible for immediate and efficient operation. The regulations concerning this matter, although varying from one country to another, are generally similar and in the case of charter yachts are usually very comprehensive. With regard to safety at sea the fundamental reference is the "International Convention for the Safety of Life at Sea" also known as SOLAS (Safety of Life at Sea). Chapter III of this voluminous document, published in 1974 by the International Maritime Organisation, (IMO), defines precisely the various requirements regarding the installation and use of the various safety equipment, namely lifebuoys and lifejackets, survival suits, visual signals, distress flares and life rafts.

The crew must familiarize all passengers with location and deployment of hidden liferafts.

Lifebuoys and life jackets

These must be manufactured to certain standards and be of an approved type. Lifebuoys must be stowed and easily accessible for prompt release rather than attached by a permanently fixture. During our surveys, we regularly come across lifebuoys carefully stowed in a locker or in a locked compartment and firmly fixed to their support. Worse still, some well-known shipyards deliver yachts with safety equipment that is totally inaccessible and thus useless.

The number of lifebuoys required by the regulations varies according to the size of the vessel, type of navigation and the country of registry, but the recommended minimum is generally two lifebuoys, one of which must be fitted with a self igniting light. For certain models, instead of a light there is a floating smoke signal. On this point it is common to discover that these lights are not operative, generally because of defective batteries or bulbs. They should be checked regularly.

The second lifebuoy must be equipped with a lifeline of at least 65' in length, however we recommend that both buoys are provided with a light and a lifeline. Round lifebuoys, although not valued by owners and yacht crews, conform in principal to the requirements of the SOLAS, which specifies size, minimum weight, color, resistance to bad weather and to ultra-violet rays. Their buoyancy must be at least 32 lbs. They are considered by numerous maritime authorities as the only acceptable lifebuoys and are reputed to drift less than horseshoe lifebuoys, which are much lighter. The latter are

Here, life jackets are located in a garage accessible only by a hydraulic door. Power outrage in an emergency would render them useless.

acceptable in certain cases, but they must be equipped with a small drogue.
As with all articles of safety equipment, crew and guests should be made familiar with their function and location. Similarly, all aboard should have access to a flashlight with working batteries and bulbs.
Life jackets must also be easily accessible and their location clearly marked. It is recommended that the total number of life jackets be equivalent to the number of people aboard plus 10%. Children's life jackets must also be anticipated. The different types are usually classified according to their buoyancies which vary from 21 to 59 lbs according to European standards now applicable to yachts.
Inflatable life jackets are lighter, less bulky and as such are easier to wear. They are equipped with CO2 cylinders, which can be manually or automatically operated. These cylinders should be checked annually. They are acceptable provided that they comply with ISO standards EN 395, 396 and 399, although life jackets complying with standard EN 395 with a buoyancy of 21 lbs do not seem sufficient and are notably unacceptable to the British authorities. It is therefore recommended to provide lifejackets to EN 396 with a buoyancy of 150 N (32 lbs).
All life jackets must have a crutch strap, a whistle and an automatically activated survival light and above all be in working order. Commercially used vessels must be equipped with life jackets conforming to requirements SOLAS 74-83 IMO A.689 (17). The international regulations state that all lifebuoys and life jackets must be permanently marked with the name of the boat and port of registry. All such safety equipment should be fitted with reflective strips following the IMO recommendations.
The range of lifesaving equipment for the individual also includes survival suits for cold water use. Obviously this is not required on yachts that operate in the Mediterranean during the summer or the Caribbean during the winter though it is likely that one or more may be stowed for cold water delivery passages. For British registered commercial yachts less than 24 metres in length, survival suits are replaced by Thermal Protective Aids (TPA), or survival bags made of isolated material.
Although it is not always included in the compulsory equipment we strongly recommend having on board an efficient means of rescuing a man overboard. There are

Tenders on deck can be quickly launched for a man-overboard rescue.

To conform to classification requirements, liferafts must not be permanently attached to the vessel.

These liferafts are poorly located for rapid launch from the deck of this Guy Couach yacht.

slings or strops marketed under the names Seattle Sling, Life Sling or Rescue Sling that enable an unconscious person to be hauled aboard by means of a hoist or crane.

Distress signals

All lights and flares in this category must conform to the SOLAS directives. Even if there are variations as to type and number it is generally obligatory to have on board four red parachute rockets, six handheld red flares and two buoyant smoke signals with white anti-collision hand flares often added. Primarily they must be updated, stored in a watertight container and, once again, be easily accessible.

It's always surprising during an inspection to see the captain of a yacht rummaging in a locker or under the console in the wheelhouse and emerge after a few minutes with various boxes and plastic containers that contain outdated and current flares mixed together. In an emergency, when loss of power may have disabled the lighting, you need to know that you can rely on the first flare you find to be fully functional.

It seems appropriate to include "COPSAT/SARSAT" 406MHz beacons in this category, also known under as EPIRB (Emergency Position Indicating Radio Beacons). These beacons emit a distress signal that is picked up and retransmitted by satellite to land stations that can locate the source of the signal and alert the authorities to launch a rescue operation.

There are also beacons that emit a signal on a frequency of 121.5MHz, but they are less effective and precise. It is therefore recommended to opt for a 406 MHz beacon which of course must be registered with the appropriate authorities. These beacons should be regularly maintained following the manufacturer's instructions to replace the batteries and check that everything is in good working order.

Even if they are good swimmers, children should always wear fitted lifejackets when getting in and out of the tender.





A few examples of well-positioned liferafts.

Liferafts

It is not easy to deal with this complex subject briefly. In fact for many years a working group has been attempting with much difficulty to draw up a definitive version of the ISO standard 9650. If and when this is adopted it will establish consistency in the manufacture and classification of liferafts, at least in Europe. At present inflatable life rafts are manufactured according to guidelines 38 and 39 of SOLAS or the recommendations of the ORC (Offshore Racing Council) to which it is also necessary to add other requirements stipulated by various countries.

In simple terms, an effective liferaft that conforms to regulations must have at least two inflating chambers and an isolated, watertight double bottom as well as a canopy to protect passengers. Many yachts built in Italy are still delivered with liferafts lacking canopies and double bottoms, making them unacceptable to French or British authorities for use on charter yachts.

Life rafts are generally stored in bags or in fiberglass containers. They must be ready for safe and rapid deployment in distress conditions. It is recommended that all liferafts be equipped with Hydrostatic Release Units (HRUs), which discharge the liferaft from its container and activate inflation if the vessel is sinking.

It is recommended in all cases and compulsory for commercial sailing yachts to have at least two liferafts with a combined occupant capacity equal to twice the number of people aboard. Because on e side of the vessel may be inaccessible due to heeling, it must be possible to launch these rafts from either side, and the total occupant capacity on either side must be sufficient to carry the yacht's full complement of crew and guests.

Safety and survival equipment plus supplies for the liferafts also vary. SOLAS has defined two types of safety packs designated under the categories of SOLAS A and SOLAS B. In France, inflatable liferafts have to be replaced every 12 years. Of course, all liferafts must be serviced annually by an approved service station for inspection of the general condition of the raft and its safety equipment, the weight of the gas cylinder, the condition of its container etc.

Too many yachts are still fitted with outdated safety equipment that does not comply with applicable regulations and cannot be rapidly located and made operational. Too many captains and owners tend to forget that the purpose of this essential gear and its maintenance is not only a question of complying with regulations, it is above all the means of protecting those on board and in a severe emergency to save life.