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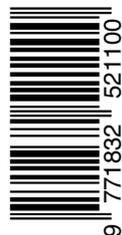
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SECURITY AT SEA

THE EVER-INCREASING DIVERSITY OF THREATS TO YACHTS MEANS THAT AN EVER-WIDER RANGE OF SECURITY PRODUCTS ARE HITTING THE MARKET, CATERING TO YACHTS OF ALL SIZES. **FRANCES AND MICHAEL HOWORTH** PRESENT A GUIDE TO WHICH SYSTEMS OFFER WHAT IN TERMS OF SAFETY AND SECURITY, AND HOW OWNERS CAN ENSURE PEACE OF MIND.

Size matters, and never more so than when it comes to yacht security. Ask a captain of a globetrotting superyacht what security he has in place, and he will talk of guns and the need for armed guards onboard as the yacht makes a transit across waters known to be infested with pirates. Ask the guy with the six-metre boat down at the yacht club the same question, and he will boast of the system that triggers off an alarm in his pocket if someone puts a knife into the canvas dodgers that surround his helm station. As with many things in the world of yachts, certain terminology means different things to different boat owners.

On some yachts, security systems are nothing more than simple door-hatch sensors or audible alarms that in the 'barking dog' mode alert marina staff who can attend the boat in moments. More sophisticated systems can be linked to alerts that show on a smartphone, computer or tablet. Texts and email messages are automatically generated when an intruder issue arises.

Blake Cooper is distributor principal of Global Ocean Security Technologies (GOST). With a background in corporate electronic security, providing high-end network-based access control, CCTV, alarm system installation, support and management, Cooper started his own Atlantis Security in 2009 because he saw a gap in the industry.

"We have seen a massive jump in enquiries since the start of this year," he told *Ocean*. "We specialise in protecting high-value assets that are located on or near bodies of water. We install and maintain equipment on vessels, both commercial and pleasure, as well as marinas, shipyards, slipways, wharves, even private homes and apartment blocks."

For the last four years his company has been distributing GOST in Australia.

GOST was formally known as Paradox Marine. The GOST product offers comprehensive wireless security, monitoring, satellite tracking, surveillance, acoustic deterrents and cloaking systems for any size yacht from the tenders it carries to the most complex of superyacht motherships.

Cooper says, "We supply GOST and other unique marine security products that have been designed specifically for the marine environment. We cannot tell you anything about the projects we have been involved with here in Australia due to the confidentiality requirements we have with our clients, but the systems we have fitted protect yachts against theft, fire, smoke, high water in the bilge, low voltage, loss of shore power and intrusion. The systems use contact sensors, motion detectors, infrared beam sensors, deck sensors, dock pull away sensors and many more. Sensors, sirens, acoustic sound barriers and flashing lights can chase off intruders before the boat is ever stolen and needs to be tracked."

He adds, "We are also busy developing a marine access control and alarm system with an Australian security equipment manufacturer. It has a lot of cool features, works with most of the GOST equipment, integrates with most of the biggest names in AV and lighting control systems and even has an iPad and iPhone app so you can control your vessel even when you are not on it. We will be releasing it shortly. We are very excited about this new venture."

There remains, however, a general lack of security awareness throughout the marine industry. Some owners, for example, still believe that they can keep the keys to their multi-million-dollar vessel in the storage well on the port side, 'where no one ever looks'.

Cooper is unwilling to discuss the finer points of completed installations onboard yachts due to the confidentiality agreements he has with his clients. That said, he was able to indulge us with some 'hypothetical' systems that he may or may not have installed in some vessels both here in Australia and overseas.

World-cruising yachts can be vulnerable at anchor, particularly in unfamiliar waters. There have been cases where vessels have been approached during the day to pay 'anchorage fees'. Usually, this is a ruse to extort money and to 'case' the vessel, then to come back at night to threaten and rob the occupants. The GOST Sound Barrier is very effective in this scenario. When activated, it emits an ear-piecing sound that affects the inner ear, and disorients the intruders up to a range of 10 metres.

Such systems have the ability to tie the vessel's security and monitoring system to a house or unit nearby. If the vessel is usually docked at the rear of the premises, the building's alarm system can be used to monitor and transmit a warning or alarm, if intrusion or high-water is detected.

CCTV has come a long way in the last few years. Today, most superyachts around the world rely on the convenience and functionality that can be provided by modern, networked CCTV. Whether at anchor, docked at a marina or underway, superyachts can employ various analytic technologies and complex algorithms to detect if people or objects are where they are supposed to be, or where they are not wanted.

This technology is often used to protect gangways or passerelles on yachts. If unauthorised persons try to gain access to the vessel, they are then detected by the system and an alarm can be triggered and the onboard security team or captain can be notified. A different scenario could be that someone has left something like a box, bag or briefcase near the passerelle and left the area. The system can also detect that item and alert security or the captain for an immediate response.

PIRACY

When it comes to security at sea, much has changed in recent years. The threat of attack and theft in port and at anchor remains a constant worry to cruising yacht owners and captains alike. The yacht *Lynn Rival* was hijacked by Somali pirates in 2009, highlighting the dangers for yachts transiting the high-risk areas alone without suitable protection.

Non-lethal devices are gaining popularity due to the varied customs requirements in different countries. Some countries have a blanket ban on vessels carrying weapons like pistols, machine guns, shotguns and ammunition.

The PepperBall Flashlauncher is one such device. Its look is deceptive. It looks just like a handheld touchscreen, but is equipped with a bright 100-lumen flashlight and a laser to assist in targeting the assailant, and can fire up to five projectiles that, in addition to stinging like hell, release a hot pepper powder designed to subdue any assailant. Although not legal for the general public in Australia, this can be purchased with a special permit.

Paul Kerr of Security Protection Services has, with the aid of others, developed his SMU-100, a system that emits a dazzling wall of light and allows security teams or crew using it to harmlessly engage potential inbound threats at distance and interrogate them. He says, "Using the device temporarily

impairs the vision of pirates and keeps them out of their weapons range without escalating the violence in doing so.”

The system works so well that several significant charter yachts have used the system to thwart not pirates, but paparazzi. “If you cannot see it you cannot photograph it!” says Kerr.

Priced at the top end, a newer, more compact device, to be known as the SMU-200, is currently under development and will be available before the end of 2014.

Another very high-tech solution available to detect unknown vessels on the high seas, the SMU-200 uses thermal and low-light cameras to detect 360

“IF THE INSURANCE COMPANY METHOD FAILS OR IS NOT A VIABLE OPTION, WE WILL RECOVER THE VESSEL BY MORE AGGRESSIVE MEANS.”



degrees around the vessel. If required, the system can defend against incoming vessels and alert security and crew that a potential threat is approaching. It can be linked to a LRAD (Long Range Acoustic Device) or green laser to defend the vessel automatically if required. The LRAD can be used to warn incoming vessels that they have been detected, and that they are in danger of being fired upon. The green laser dazzles would-be assailants by shining a low-powered laser into their eyes. If used at night, this takes away the target's night vision and makes it very hard to see.

The average ransom fee paid to Somali pirates rose from AU\$720,000 per person in 2007 to \$5.4 million in 2011. It is claimed that piracy is now the single largest contributor to the economy of Somalia. This surge in piracy has fuelled an increase in the number of yachts built with integral panic rooms, and there is even one company specialising in the retrofitting of such areas on yachts.

Steve Brook is business development director for the Panic Room Company, which manufactures and installs panic rooms, using flatpack assembly techniques, inside well-protected areas aboard superyachts. He explains, “Shortly after we established our company we identified interest from the superyacht industry. Our portable product has immense appeal, as it is quickly installed with no welding and minimal need for specialist equipment or training, offers ballistic and blast protection and can keep a crew of between two and 24 people safe for up to five days with ship-to-shore communication. An independent power supply, air filtration, the ability to activate a smoke screen and basic survival essentials from fresh water to toilets can also be provided.”

UNATTENDED YACHTS

For yachts left unattended in a marina or on a mooring, the internet is a great tool. With a computer, iPad or tablet, it is possible to respond to an alarm notification by checking and verifying status and then acting upon any sensor onboard. Using the right programs, owners can even turn selected sensors on and off or notify any of the authorities including harbour masters, fire brigades and commercial boat concierge services to take appropriate action within minutes. Activation devices that detect movements inside a boat can be used to trigger onboard cameras – these same devices

can be useful to check on live-aboard crew when owners suspect them of partying instead of working!

Many boat alarm system manufacturers offer a stealthy and covert GPS tracking option that will track a route showing exactly where the boat is at all times. This is useful if a boat is stolen, as it can direct the police to meet the hijackers when they arrive at their destination. This tracking feature also provides the opportunity to see the progress of a boat when a delivery captain is relocating it to another area.

While physical security protection measures are important, many superyacht owners are becoming more and more aware of emerging security threats, such as cyber security. John Hodder, heading up his own firm Cattewater Projects, told *Ocean*, “Cyber security has become a highly critical issue for owners and operators as a result of the growing pervasiveness and diffusion of ICT technology.”

He added, “We can also analyse the extra security risk of carrying valuable art onboard and recommend ways of reducing risk of theft or damage using additional or improved security.”

According to Hodder, one common problem they highlight is that of pan and tilt CCTV cameras. These are often left wrongly aligned, and he recommends replacing them with fixed versions. These then monitor valuable art using discreet security systems, employing miniature electronic devices affixed to frames or display cases, to allow remote satellite tracking if removed. The cameras, of course, can also be monitored using the company's live data recorder.

STOLEN YACHTS

Tony Sparks spent 28 years in the U.S. Army, with most of his career assigned

to special operations units, including the U.S. Army Rangers and a special mission unit responsible for counter-terrorism and hostage rescue worldwide. He now heads up a yacht security services firm called Phantom Services, and is an expert in yacht security technology, anti-piracy training, counter-intelligence and onboard security in general. He has been responsible for security surveys of over 600 ocean-going vessels and 50 major international ports and harbours. Team members are military veterans with over 20 years of experience in special operations and domestic and international security.

He told *Ocean*, “With our Security Concierge Program, we can track down a vessel and work in concert with any insurance company to negotiate the return of a vessel. If the insurance company method fails or is not a viable option, we will recover the vessel by more aggressive means.”

He added, “When a vessel is stolen and taken to a foreign destination, there are several issues involved in recovering it. One of the many issues we address is recovering the vessel when in territorial waters that may not be very friendly to recovery negotiations.”

STAY SECURE

Dean La Vey has been involved with superyacht security for many years. His company Secure Yacht Limited offers systems and programs dealing with all security concerns aboard such vessels. All systems are designed to meet individual clients' specific requirements.

He told *Ocean*, “If it does not exist, we'll design it and build it! In addition to that I will offer guidance in regard to ISPS Code to ensure compliance.”

Secure Yacht specialises in technologically advanced security concepts geared for the protection of superyachts, their owners and the assets onboard. They liaise directly with naval architects and shipyards during the design and build process, and can retrofit specialist security equipment when dealing with an existing vessel.

La Vey confirms “I have fitted biometric security devices aboard several superyachts. I do so linking specialist biometric readers to my own proprietary Net2 Marine, a computer-networked access control system that is exceptionally quick and easy to learn and operate.”

Smaller boats with absent owners can get security protection from the Australian-made units sold by BlueRay Marine. The company's mission is to give boat owners the peace of mind they need when they are not onboard themselves. Since 2002 the company has made and marketed its own devices that monitor a

boat's batteries, bilge pump operation, security, shore power, GPS location and can activate electrical equipment all by text messaging.

Dee Montague-Jones of Smart1Marine told us, “I vividly remember talking to my husband on Balmoral Beach and looking over at our anchored boat trying to work out if the anchor was dragging or not. It was, so we thought to ourselves that there has to be a system that can monitor the anchor and alert us when we were on shore. During the working week our boat is left unattended on a mooring, and we wanted something to keep track and ensure the mooring line is holding. We found it overseas and we are now the Australian distributors for a range of products focused on securing and tracking boats including Yacht Sentinel, an innovative boat security system that keeps watch while you are away.”

Do-it-yourselfers can fit the Securepro LS-30 boat alarm that features a 128-zone wire-free security system. It can send both SMS and voice calls to five mobile numbers when activated. Power drain is minimal when connected to the boat's 12-volt source, there is also a 10-

hour back-up battery inside the base unit. The mobile terminal included just needs a prepaid mobile phone sim card, which is powered from the base unit.

Smaller craft require special consideration, and the Triton Alarm from Columbia Boat Alarms offers protection that triggers when one of its canvas-snap sensors is tampered with. Canvas snap sensors provide boat security by replacing the existing canvas snaps at locations where an intruder is most likely to board the boat.

A small magnet is placed in the cap of the snap on the canvas. When snapped onto the canvas snap sensor the magnet keeps the alarm circuit closed. As soon as the canvas is unsnapped the magnet moves away from the sensor and the control senses the open circuit and the alarm triggers. The company makes hatch sensors and other easy-to-fit security devices. Another small yacht solution comes from Steal Armor in the USA, whose Stryker 2 has a clever sonic-security alarm system that looks like a Chilli Bin beer cooler. Hidden inside, however, is a piercing siren that discourages intruders.

SOME OWNERS STILL BELIEVE THAT THEY CAN KEEP THE KEYS TO THEIR MULTI-MILLION-DOLLAR VESSEL IN THE STORAGE WELL ON THE PORT SIDE, 'WHERE NO ONE EVER LOOKS.'



For large yachts the problem is the same, only different! The intruder often makes his way onboard a yacht in the guise of someone who has every right to board. This means crew must be extremely vigilant when undertaking gangway watches.

In a bid to highlight some superyacht security shortcomings, one company, which cannot be named, told *Ocean*, “We regularly test the boarding security employed on superyachts and we have never yet been detected doing so. A member of our team places printed red cards inside owners' areas or the engine room to let the crew know someone uninvited has been aboard.”

On one yacht, in Turkey, they took the owner's 9-millimetre pistol from his suite, returning it to him at his home the next day to demonstrate how insecure his yacht really was.

When it comes to size, boats do differ, but when it comes to the mindset of the owner it all comes down to one thing: yachting is for pleasure and when the owner is not on board, he wants the peace of mind of knowing that it is safe and sound. ○

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