ACR

A Boater's Guide to **EPIRBs**
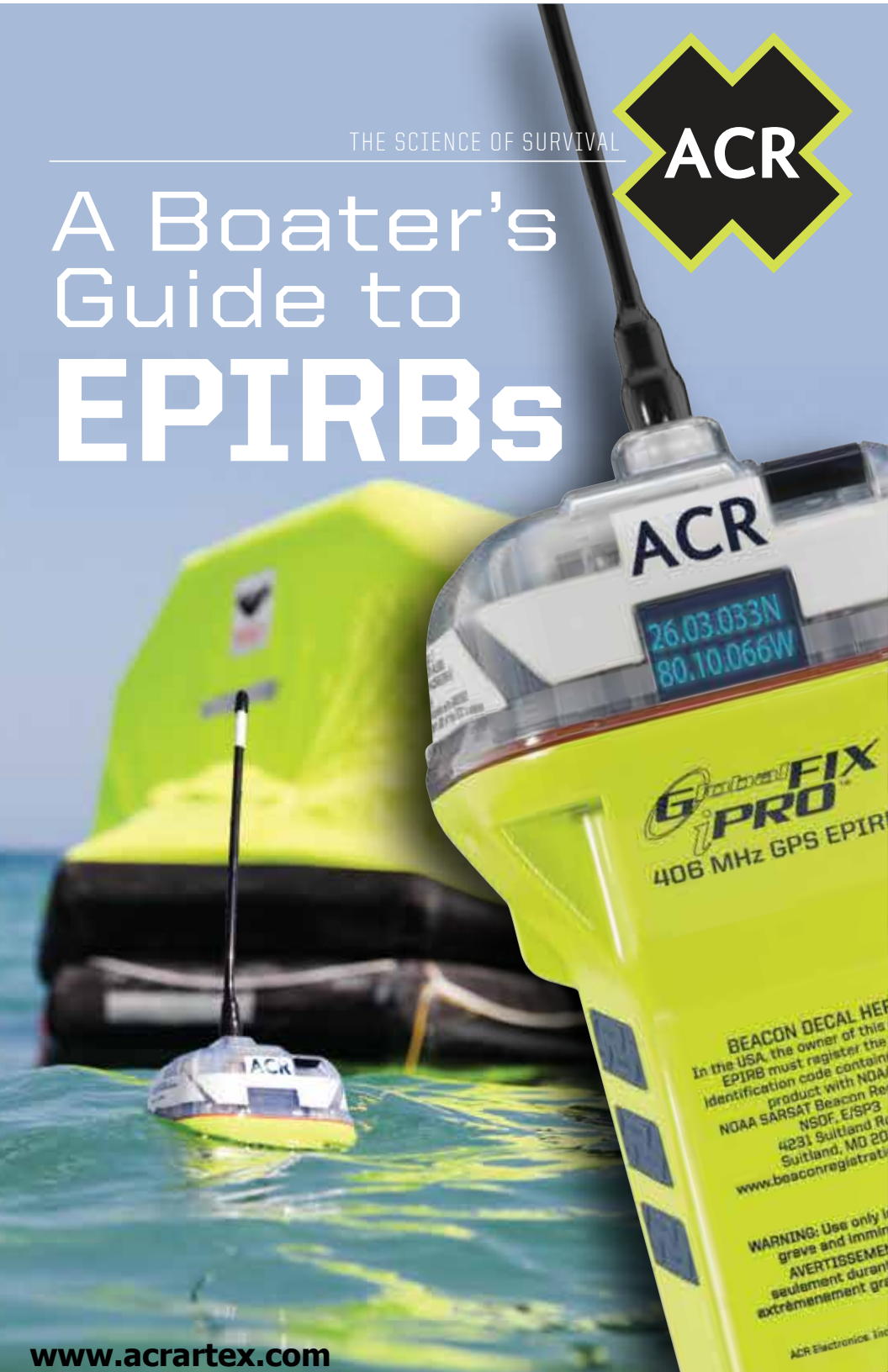
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GlobalFIX iPRO™
406 MHz GPS EPIRB

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ACR Electronics

How a 406 MHz Rescue Works

Activate EPIRB/PLB

Beacon sends 15-digit Unique Identification Number (UIN, also known as Hex ID) signal to Cospas-Sarsat satellites

The signal is routed to a ground station, Local User Terminal (LUT) and transferred to the Mission Control Center (MCC)

MCC gathers this information and passes it to the Rescue Coordination Center (RCC)

The RCC uses the beacon's registration information to verify the emergency and notify local Search and Rescue (SAR) forces

Local Search and Rescue forces are deployed to your location

35,000 lives saved and still counting

You are required to register your EPIRB with your local authority

If you purchase a new or used 406 MHz beacon, you MUST register it with your local government. If you change any information on your registration (such as phone number, address, bought a new boat, etc.) you MUST update the 406 MHz beacon registration. Also, if you sell your 406 MHz beacon, notify your local government that you have done so, and make sure the buyer registers the beacon personally. Otherwise, you may be contacted by rescue authorities if it is activated! Please provide the new owner a link to our registration web page so he/she can register their beacon.

Support Search and Rescue Register your Beacon

www.acrartex.com/support/registrations/

What is the difference?

	EPIRB Emergency Position Indicating Radio Beacon	PLB Personal Locator Beacon
Floatation	Floats in an upright position to transmit. Performs best while floating	Not required to float. Floating versions only float so it can be retrieved if dropped in water. Unit needs to be held out of the water or attached high on a PFD for best transmission.
Transmission Requirements	Minimum of 48 hours at temperatures down to -4°F (-20°C). Longer in nominal temperatures	Minimum of 24 hours at temperatures down to -4°F (-20°C). Longer in nominal temperatures
Activation	Either manually activated in or out of the bracket OR Automatically activated when out of its bracket and in the water.	Manually activated
Strobe Light	Required to have strobe light	Not required. Some newer versions have flashing LED strobes
Mounting Options	Mounted in a bracket (automatic or manual deployment), or carried in a ditch bag	Worn or carried on a person
Registration	Registered to the vessel	Registered to the person. PLBs are legal to be used on land as well as on water.

Generally speaking, for boaters an EPIRB is preferred over a PLB. EPIRBs once placed in the water will operate autonomously by self-activating and floating upright in a transmitting position. Because of their simplicity, it is easy to educate crew members on their operation. With bigger batteries for longer transmission life, EPIRB are essential for long distance transits. They are specifically designed for that worst case scenario of just you and the beacon in the water. PLBs require more effort to operate, as they must be manually activated and be held out of the water to function properly even though they are water proof. PLBs are however small enough to carry on your persons so they are well suited for single handed boaters or crew members who are routinely out of site of the Captain. The best beacon to have is the beacon you have with you when you need it.

Both require registration. It's quick, easy and free, and can be done online:

http://www.acrartex.com/support/registrations/   www.acrartex.com

Reduce the search radius down to 100m
&
Reduce the notification time from typically less than 1 hour down to a few minutes!

The Cospas-Sarsat satellite system uses 2 different satellites. The GEOSAR satellites are stationary over the equator, if your beacon has GPS coordinates, these satellites instantly alert Search and Rescue of your position in as little as 2-3 minutes.

The LEOSAR satellites are low earth orbiting and typically ever hour one flies over your location. These satellites use Doppler shift principles to calculate your position to send to Search and Rescue. However, the notification time can be typically less than1 hour while you wait for one to orbit over you.

121.5 MHz Beacon
12.5 nm radius
490 sq miles area
No notification: Requires some one listening to the 121.5 MHz Frequency

406 MHz Beacon w/GPS
0.1 nm radius
0.03 sq miles area
Notification: In as little as 5 minutes

406 MHz Beacon
3 nm radius
28 sq miles area
Notification: Typically less than 1 hour

Some questions to help you decide which EPIRB to buy.

I want an EPIRB that is going to get me rescued as fast as possible!

I want the peace of mind that comes from knowing exactly what my EPIRB is doing when I use it!

BETTER

Internal GPS

BEST

Internal GPS, GPS Interface & Digital Display

I want my EPIRB to be protected from mother nature.

I want the peace of mind knowing my EPIRB will release from the bracket automatically.

I want my EPIRB mounted close to me so I can easily grab it.

Category I Bracket

Category II Bracket Included

GlobalFix PRO

GlobalFix iPRO

You may also want to consider a ACR Personal Locator Beacon as a back up for your EPIRB and the primary safety beacon for yourself when on deck alone. Personal Locator Beacons have multiple applications and can be used on your boat, plane, or on any outdoor adventures you take.

Want more recommendations on what safety gear you should have onboard? Check out our all new Product Wizard on www.ACRARTEX.com

www.acrartex.com

Which EPIRB bracket is right for me?

Category I EPIRB - Automatically or manually deployed

Category II EPIRB - Manually deployed

EPIRBs have different categories which define which type of bracket the EPIRB uses	Cat. I	Cat. II
Bracket automatically deploys EPIRB when vessel sinks	Yes	No
Contains a Hydrostatic Release Unit (HRU)	Yes	No
Built-in deactivation water sensor to prevent false alarms	Yes	Yes
Manual activation of beacon while in bracket	Yes	Yes
Protects EPIRB from UV exposure	Yes	No

The Category I bracket is designed to release an EPIRB when the Hydrostatic Release Unit (HRU) in the bracket is submerged in water to a depth of 4 to 14 feet (1.5 - 4m). The regulation specifies a range of depth for deployment to allow for different water temperatures which will affect the release depth. The Hydrostatic Release Unit needs to be replaced every two years.

In an emergency, the EPIRB will release from its bracket, float to the surface and alert search and rescue that you need help fast.

EPIRBs in a Category II bracket need to be manually deployed and activated. They can be mounted above or below deck, in a location that is protected from outside influences (i.e. green water, traffic impacts, cabin doors, etc). Some people prefer to keep their beacon in a RapidDitch™ Abandon Ship Bag without the bracket which is OK if the bag is going to be in a dry spot on the boat.
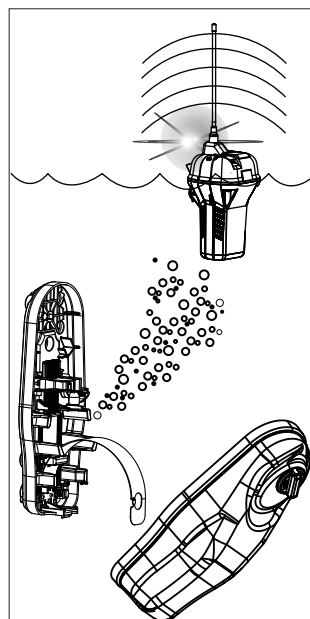
Category I Automatic Deployment

Beacon Comparison

	GlobalFix™ iPRO 2846.0 / 2848.0	GlobalFix™ PRO 2842 / 2844
Model / Product #	GlobalFix™ iPRO 2846.0 / 2848.0	GlobalFix™ PRO 2842 / 2844
Frequency	406.040 MHz 121.5 MHz homing	406.040 MHz 121.5 MHz homing
GPS	Internal and Optical Interface (NMEA)	Internal
Location Accuracy	110 yds (100m)	110 yds (100m)
Size / Weight	7.0 x 4.2 x 3.6" / 21.12 oz 17.7 x 10.7 x 9.1 cm / 600 g	7.0 x 4.2 x 3.6" / 20.9 oz 17.7 x 10.7 x 9.1 cm / 595 g
Notification Time	2 - 15 minutes	2 - 15 minutes
Deployment	Automatic (Category I) or Manual (Category II)	Automatic (Category I) or Manual (Category II)
Activation	Manual or Water	Manual or Water
Min. Required Battery Life	48 hours @ -20° C	48 hours @ -20° C
Typical Battery Life	65+ hours @ -20° C	65+ hours @ -20° C
Digital Display	Yes	No
Waterproof	To 33 ft 10 meters	To 33 ft 10 meters
Buoyant	Yes	Yes
Power Output	6.3 Watts	6.3 Watts
Strobe Light	Yes	Yes
GPS Location Test	Yes	Yes
406Link.com	Advanced testing available	Advanced testing available

35,000 lives saved and still counting

Category I recommendation: Mount in an area free of overhead obstructions, yet easily accessible.

Category II recommendation: Store your EPIRB in a DitchBag supplied with essential safety gear so that all of your safety equipment is located in one place or mount in an accessible location.

Category I: Avoid Mounting Beneath Sails

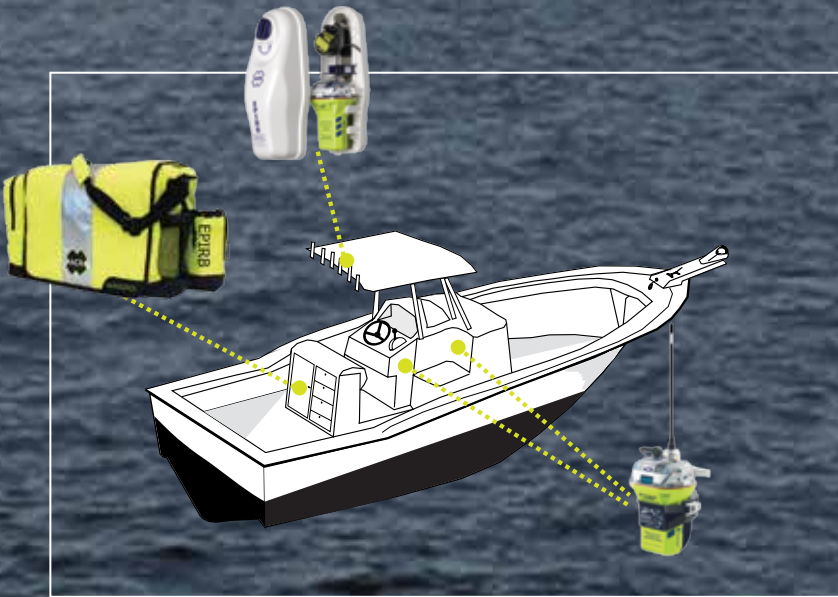**35,000 lives saved and still counting**

Recommended

- **Areas that are highly visible and in reach**

- **Inside DitchBag with all safety gear**

- **Next to life raft**

Not Recommended

- **Avoid door jambs or obstructed areas**

- **Avoid areas prone to flooding & fires**

- **Avoid mounting Category I EPIRB's inside the vessel cabin or with any overhead obstructions**

We are in the business of saving lives and science is everything: it provides laws, processes and reliable, predictable outcomes that we successfully use to combat the unpredictable, wild, dangerous forces of nature (also known in some circles as "bad luck" or "misfortune" or even "fate").

We are exacting, obsessive, serious and accurate. When your life is on the line, these are the qualities that you want in a company. We don't apologize for being overly meticulous, self critical AND obsessed with quality. We design products to outperform any regulation set for us by government agencies because that is what our customers expect, that is why the industry respects us, and more importantly, that is what we expect from ourselves.

Science and obsessive engineering provide a product that, unlike nature, plans or luck, is not subject to whims. Our company's existence is one based upon the principle of continuous improvement. We spend prodigious amounts of time and money finding new ways to challenge our products.

In other words, our testing efforts often begin where governmental standards stop. "Quality" to us means conformal coating of PCBs when there is no requirement, just for added protection. It means developing tests to validate every claim we make. It means flat-out rejecting any failure ratio that our competitors consider acceptable. Simply put, we believe any defect ratio at all is unacceptable, when lives hang in the balance.

Stay Safe (and Connected) with 406Link.com

Adventure, whether it's on the water or in the backcountry, means grabbing your gear and going for it... it's not about being careless or taking chances. That's why more and more paddlers, boaters and backpackers are packing a 406 MHz satellite signaling device.

Now, with the power of 406Link.com, you can make sure your PLB or EPIRB is functioning properly – before you ever leave – through the same satellite system used by Search and Rescue.

And with the Trip Planning feature, you can help with your recovery in an emergency by making available valuable information about your trip.

406LINK.COM

Advanced Satellite Test System Proves Your Beacon is Working

With 406Link.com, you can make sure your PLB or EPIRB is functioning properly – before you ever leave – through the same satellite system used by Search and Rescue.

*Requires optional service plan to unlock features. Visit 406Link.com for coverage in your area.

What you can do with EPIRB and 406Link.com

Directly alert Search and Rescue (SAR) of your emergency and GPS position. No subscription to 406Link.com required. Same proven 406 MHz signal that is credited with saving more than 30,000 lives.

Self Test of Beacon and simultaneously send family and friends a test message via text and email.

Thru-the-system Self Test. Now you truly see that your EPIRB is working properly by self testing and getting satellite confirmation that your signal was received.

PROVE YOUR
406Link
BEACON WORKS

Beacon Management including battery replacement reminders, self test and activation history, creating trip plans for family and friends and managing your account.

GPS Test of Beacon and simultaneously send family and friends a test message with map of location via text and email.

35,000 lives saved and still counting

I thank the USCG and the crew of the freighter Fuji Bay for their super job in our rescue. It makes me proud of having been in the Coast Guard for four years. But, the item, not person that we give our lives to, is the ACR GlobalFix EPIRB. A truly remarkable piece of needed equipment for every vessel. It saved us!

> **— Survivor Kirk Ezell**
> **2 lives saved**

With the EPIRB in hand we climbed into the raft and activated the ACR GlobalFix PRO. 40 minutes later we were rescued. What a great feeling to see the coast guard heading for us. That EPIRB was a life saver. Thanks guys for making it safer to be on the water.

> **— Survivor Shayne Sadler**
> **5 lives saved**

I was told that the Coast Guard main command station received our EPIRB alert and the right people were notified. We ended up being very lucky in our situation, thanks to the Coast Guard. I worked in the Gulf of Mexico for two years as an hydrographic surveyor on the Inez McCall and learned a great deal about marine safety. I never knew exactly how important EPIRB's were until this day. I will not leave the dock without one in the future.

> **— Survivor Jason White**
> **4 lives saved**
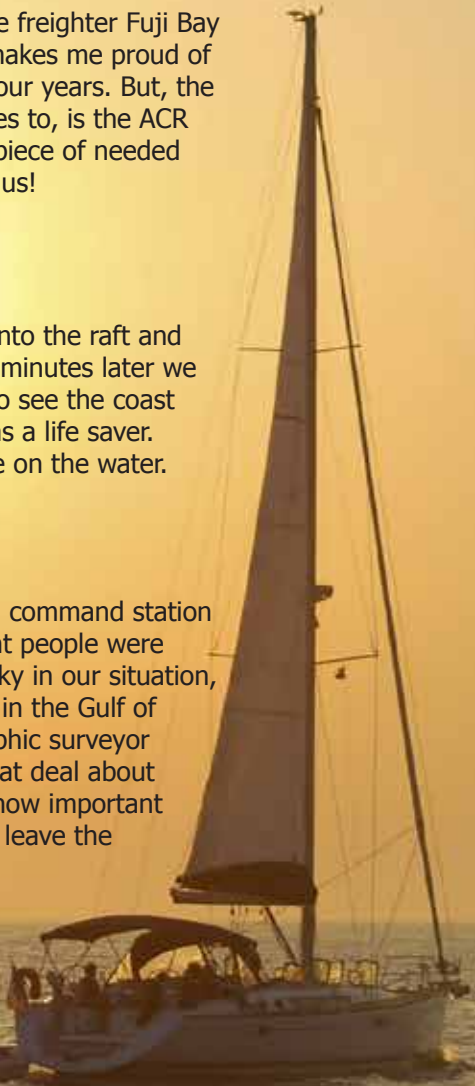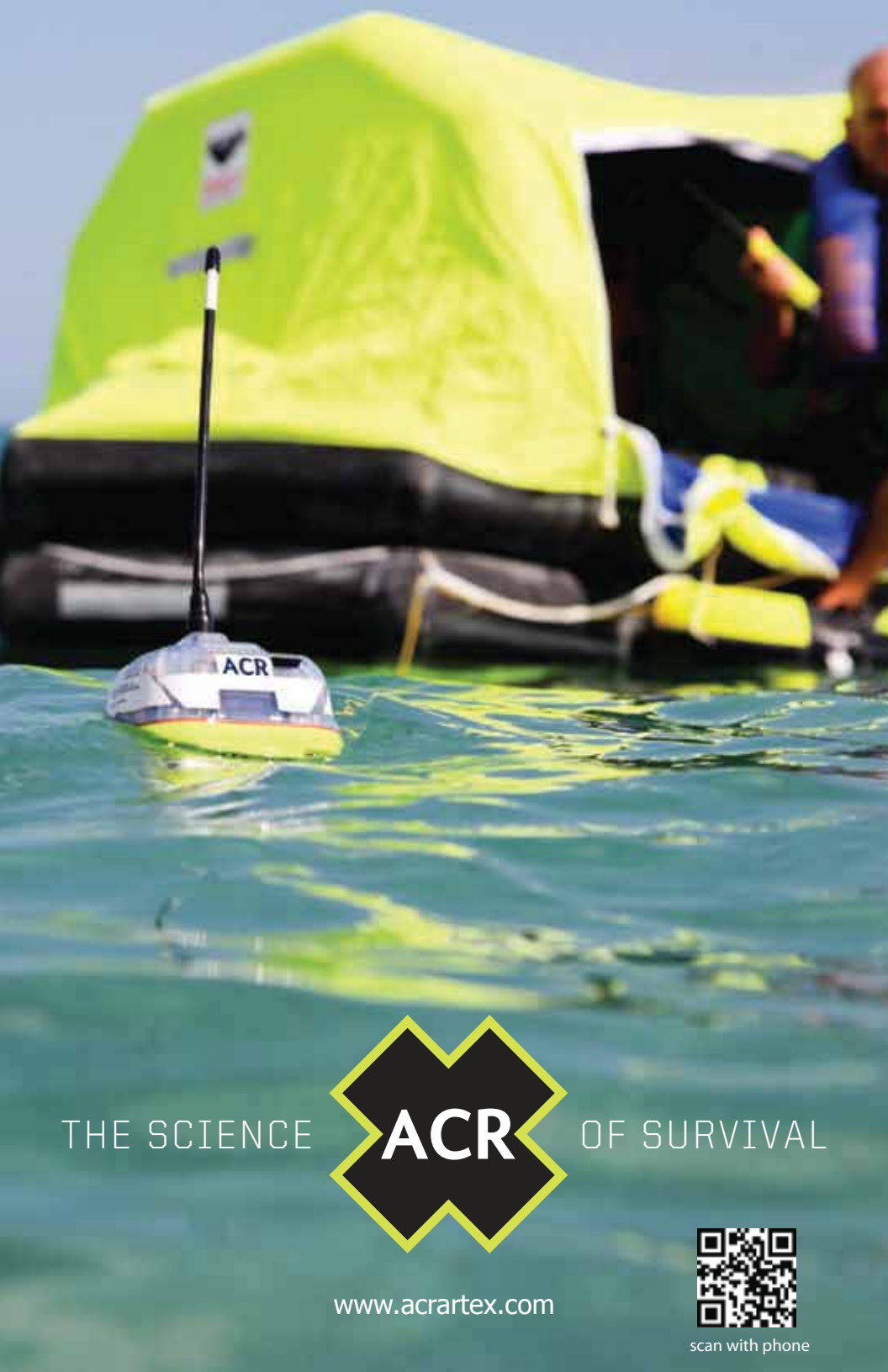
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