



Even with a hand on the window sill it's difficult to tell which way's up

AOPA discount for the Dunker

Nothing can fully prepare you for the shock and disorientation you'll experience on ditching an aircraft, but a little foreknowledge can improve your chances of getting out alive. Andark, a company based close to the new NATS headquarters at Swanwick in Hampshire, runs underwater escape training courses in which ditching is simulated and pilots are briefed on how best to stack the odds in their favour. Those who have been through the simulated experience say it's a revelation to know that even after the briefing, even after a slow descent into a benign swimming pool, even with your hand on the window sill, it's still extraordinarily difficult to keep your head, work out your orientation and do the right thing.

Andark is offering AOPA members a special rate on the 'Dunker' course this year – any course will include a free life-raft and lifejacket briefing sessions, and

the cost is reduced from £139 to £99. For Club bookings, for every six places you want, one will be free of charge.

Here, Andark's Director Andy Goddard – a fixed-wing and helicopter pilot – explains what the Dunker is all about and gives some tips on how to better your chances of survival in a ditching.

"I find it's difficult not to wear a lifejacket when flying over water, even to the Isle of Wight! There is a reason for this; part of my business is teaching underwater escape training. We have been doing this since 1993. Most of our students are oil field workers doing the offshore survival course, part of which is underwater escape training. We also do courses specifically aimed at private aviators, fixed wing and helicopter as well as those racing fast powerboats.

I too am a private aviator of a fixed wing and these days I fly a Wasp helicopter. As I live very close to the coast I am often flying

for that 'expensive' cup of tea to the Isle of Wight. Many of us cross relatively short distances over water to Europe, Ireland, across the Bristol Channel, to Lundy, the Scilly Isles, the Highlands and Islands and so forth. So why do we need to be properly dressed for over water flight? Our seas are cold – surface temperature varies from below 5°C to about 15 to 17°C; that is, very cold to cold. Our body temperature is about 37°C, so immerse your body in the sea, even at the height of summer, and you lose body heat very rapidly. Actually one of the best things you can do is wear adequate clothing to help keep your body core warm – not a T-shirt and shorts, but a good breathable layer of clothing, fleece etc. that helps retain heat over the chest and body core. A flying overall will certainly help. Even in winter, this will initially help cut down your heat loss.

The best thing you can wear is an 'immersion suit', the technical name for a drysuit. These days there are available from about £300-£500 and are more than suitable for short overwater trips. They are usually a one-piece garment with a front waterproof zip, built-in socks over which you can wear your favourite flying footwear with seals on the wrist and neck. They are made of breathable material and form a waterproof layer. Warmth comes from what

you wear under the suit. The very real gain is obvious – you stay dry and it cuts down the cold water shock which can render the fittest person incapable of the simplest task.

The very minimum is to always wear a lifejacket. Have it on and correctly adjusted, which means the crotch strap is done up. Know where the manual inflation toggle is, and as we are always reminded by the airline cabin crew ‘do not inflate your jacket until you are outside the aircraft!’ Trying to put on a lifejacket after

the engine has failed and you are about to ditch is no good for the pilot or passengers. The lifejacket is best with a spray hood; once deployed this will keep water away from your face and helps prevent drowning.

The Dunker

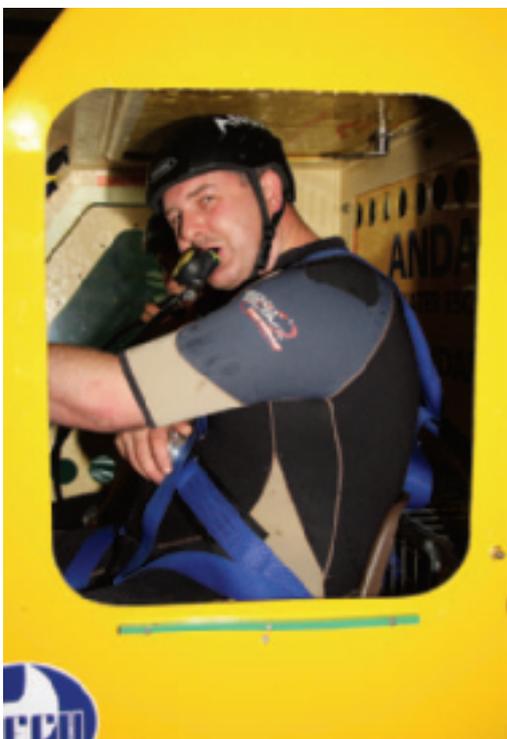
The Underwater Escape Trainer (widely known as the Dunker) really isn't torture, honest. At Andark we have an Underwater Escape Trainer which is hydraulically operated and has pilot pod as well as a

generic cabin fitted with a selection of lap straps and four-point harnesses. It has sliding doors and pop-out windows. The cabin can be tilted to simulate everything from partial submersion to 180° full immersion. In the cabin with you is the instructor, and in the pool there are safety divers to assist should it be required. The ‘Dunker’ operator/supervisor stays on poolside. The idea is not to scare you, but to break the training down in to easily manageable units. The pool water temperature is 28-30°C – i.e. warm – so you can focus on the training, not on the cold. We show the importance of making sure your harness is adjusted properly and tight. It is vital to know where your nearest exit is and how it operates. The key points to help you escape are waiting until the movement has stopped, then undo your belt – remember with your body weight pushed against the buckle it may not be easy to release. Then look towards the nearest exit – even through water, with blurred vision you will see the exit.

I always try to fly with a safety knife either in easy reach or attached to my lifejacket. These knives cut through the webbing of a harness in seconds – they cost under £10 – great to have in the cockpit on any flight, very safe because the blade is protected.

You can do this type of underwater escape training at various places around the UK. We offer the Dunker training as well as life raft and lifejacket training.

I know that training is ideal but you can



Top: come on in, the water's lovely – safety divers await the Dunker
Above: on-board instructor has the advantage of a portable air supply
Right: the Dunker's exits will be visible even under water, instructors say

greatly enhance your chances of survival by bearing in mind a few key points, even if you cannot do the training:-

- Dress for the flight – breathable clothing, enough to cut down heat loss in the water
- Immersion suit/drysuit is ideal
- Always wear that lifejacket
- Know how it works. All lifejackets have oral inflation tube, in case it fails to inflate when you pull the toggle (just like the cabin crew show you!)
- KNOW YOUR EXITS
- Brief your passengers and make sure they have their lifejackets on and know how to use them in an emergency. Show them how the doors work.
- Have a PLB (Personal Locator Beacon). It's not just for overwater flights – it locates your position wherever you are. However, if you are able try and do a course, it can be fun and a great learning experience.

Lifejackets

The minimum requirement is a manual gas lifejacket (i.e. you manually inflate the jacket by pulling the toggle once you are outside the aircraft. All jackets must have a crotch strap, otherwise you float too low in the water.

The ideal kit is a manual gas jacket with spray hood – this protects your face from

seawater and helps retain body heat. Your head is a great radiator of your precious body heat

You also need:

- A light to attract attention (obvious at night!)
 - 'Buddy line' – a short rope to keep survivors together
 - Slash knife – for cutting through webbing etc
- And remember – have a PLB. It stays with you, rather than going to the seabed with the aircraft while you float miles away on the tide.

There are also small 'James Bond Esq' breathing devices called HEED or STASS. Standby air systems – they attach to the life jacket – they are excellent BUT you must be trained in their use otherwise they are dangerous!

Don't let me put you off flying over water. With a bit of thought about 'what if' you can really improve your chances of survival should the worst ever happen.

Life raft

It's always better to carry a life raft, especially for long overwater flights. Make sure you know how it works, stow it where you can get to it easily. Can you locate it if the aircraft is partially submerged or inverted in the water? Obviously the time to learn about a life raft is not in a real

ditching! Life raft courses are a great learning experience and fun. You learn how to inflate the raft, turn it the right way up if it is inverted, get into it – not always easy – and how to survive once inside it.

If you are planning a long over water flight you must have a life raft and an immersion suit, a life jacket and, of course, some means of locating you – either a fixed EPIRB or a PLB.

Other items to consider are a personal day/night orange smoke flare.

My personal view is when over water the minimum is a life jacket with PLB. If the water is cold and I am flying across the Channel, or a distance I cannot glide to, my advice is to wear an immersion suit. That way I know I can survive a long time in the water, even if there is no life raft. As a helicopter pilot I know on ditching there may be little or no time to deploy a life raft.

Wearing an immersion suit with a good layer of insulation improves your survival time, which can amount to no more than minutes in winter, and could be less than a hour in summer!

See <http://vimeo.com/15421851> for video of Andark underwater escape training. ■

Below: you'll be as happy as this if you make it into the liferaft

