

## FREQUENTLY ASKED QUESTIONS

### 1. How big is the product and how much does it weigh?

- The DIVE01 unit is 21cm x 7cm x 3cm and weighs 590 grams (excluding electrodes and pouch)  
The combined total weight is approx. 1.5 kg – **3.3 lb**  
In Water Weight Including Electrodes 400 grams – **0.9 lb.**
- The GPSS01 unit is 17cm x 7cm x 3cm and weighs 450 grams (excluding antenna and pouch)  
The combined total weight is approx. 1200 grams – **2.7 lb**  
In Water Weight Including Electrodes 200 grams – **0.45 lb.**

### 2. How does the *Shark Shield™* effectively deter sharks?

The *Shark Shield™* produces a unique conductive field that surrounds the wearer. Sharks are sensitive to this field and when they approach too close, the field causes muscular spasms that result in the shark leaving the area.

It is believed the field is detected by the shark through its sensory receptors, known as the Ampullae of Lorenzini, found on the snouts of all predator sharks. Once detected by the shark's sensors, the field causes extreme discomfort and muscle spasms, resulting in the animal fleeing the area.

### 3. Can SeaChange Technology give a 100% guarantee that the user will never be attacked while using the *Shark Shield™*?

No. Sharks can be dangerous and often unpredictable creatures. While this technology has proven itself since 1995, and extensive testing has been done to develop and manufacture the *Shark Shield™*, it is simply impossible to guarantee that all sharks will be deterred under all circumstances. With or without the protection of a *Shark Shield™*, all sharks should be treated with respect and caution. Water sport participation in the presence of sharks is inherently dangerous. Any human activity in the water near sharks must always be considered as possessing a considerable degree of risk.

Since the inception of air bags in motor vehicles, many lives have been saved by the invention, but it cannot be claimed that they save lives 100% of the time.

Like any piece of electronic equipment, the *Shark Shield™* will not work effectively if not used in the correct manner, and if the unit is not maintained correctly.

**For example:** In the case of a scuba diver, the unit is designed to be switched on when the diver enters the water, left on for the duration of the dive, and turned off only when the diver leaves the water. It has been reported to SeaChange Technology that many divers who were using the previous Shark POD would switch the unit on only in certain circumstances, such as when descending to the ocean floor, ascending to the surface, or when they see a shark. The POD was switched off at depth, by the diver, to conserve battery power. **This is a very bad practice.** If a shark comes in to investigate a diver and the unit is not turned on, there is no negative stimulus to the shark and it will more than likely continue to investigate the wearer from close up. Once the animal is right in close and the decision to attack has been made, it is unlikely anything will stop the shark. Once in full attack mode, sharks have been observed to continue their activity

even after being wounded by rifle or pistol shots. The field emitted by the original POD and the *Shark Shield™* is therefore unlikely to succeed once the attack has actually commenced.

#### **4. When should I turn on the *Shark Shield™*?**

Do not turn the unit on until you enter the water. Turn the unit off when exiting the water.

#### **5. Do I have to leave the *Shark Shield™* switched on all the time?**

Yes, when in the water. According to the International Shark Attack File of the Ichthyology Department of the Florida Museum of Natural History - 52.3% of shark attack victims did not see the shark prior to contact. Ensure the unit is turned off when you are exiting the water.

However, the unit must be switched off when inside a shark cage or in any other confined areas such as wrecks or caves.

Also see Q4 above.

#### **6. Does the *Shark Shield™* Attract Sharks – " THE MYTH"**

NO! All free swimming sharks rely on various highly developed senses to detect and track their prey. In order of distance, the senses triggered are smell, sound, sight and at very close distances only, electric impulses.

Sharks will follow a scent trail over considerable distances. Blood, body fluids and secretions from shell fish may deposit a trail several kilometers from the source.

Low frequency vibrations travel hundreds of meters through the water and are known to attract sharks. Typical sounds might be struggling fish or humans swimming.

Most of the sharks that pose a threat to us have excellent eyesight and can readily track prey by sight, even in low light.

A particular unique sense used by the shark at close quarters, consists of hundreds of tiny gel filled pores around the the snout. These are known as Ampullae of Lorenzini and are used to pick up the electrical signals emitted by the nerve impulses from living creatures.

When a shark closes in for an attack, a protective membrane pulls back over it's eyes rendering it temporarily blind. For the few seconds this may take, the shark is able to track it's prey by the utilisation of it's Ampullae of Lorenzini.

Following the laws of Physics, the electrical signal from the *Shark Shield™* decays rapidly in the water and is almost immeasurable at distances beyond 10 metres. A shark is therefore only attracted to the source by it's long distance sense, being scent and sound.

The unique wave form emitted from the *Shark Shield™* is designed to overload and inflict discomfort as it approaches at close range in it's investigative mode.

The testing programmes we conduct are extremely expensive to operate and such it is vitally important to maximise shark visitation to our site. Over many years of field testing the original *Shark POD*, and later the new *Shark Shield™*, we have always had to stimulate the sharks long

distance senses by using blood and offal to attract the sharks and carry out testing. They are clearly not attracted by any of the Shark Shield™ products.

IS IT POSSIBLE THEN THAT THE SHARK SHIELD™ WAVE FORM ATTRACTS SHARKS FROM A DISTANCE? ABSOLUTELY NOT.

#### 7. If I am wearing a unit, but my buddy/mate is not, is he/she more prone to attack?

Anyone **not** wearing a *Shark Shield™* is at more risk of being attacked than somebody who is wearing a unit.

However the fact that one person is wearing a unit does not mean that those around him/her are placed at greater risk than if nobody in the group was wearing a unit. The unit does **not** attract sharks.

#### 8. Who can use the *Shark Shield™*?

- Divers – the DIVE01 unit (or the GPSS01 if they wish)
- Surfers – the GPSS01 (General Purpose) unit with leg rope accessory
- Snorkelers – the GPSS01 unit
- Swimmers – the GPSS01 unit

Please note if using the DIVE01 unit a wetsuit needs to be worn to reduce the skin stimulation effect.

#### 9. Can the unit be used by children?

**The *Shark Shield™* must not be used by children under the age of twelve years old.** The *Shark Shield™* is a safety device, not a toy. It is deemed that children under the age of twelve, even with adult supervision, do not have the necessary level of maturity required to use such an electrical device, which, if not used correctly, will not give the level of protection to the user that it is designed to do.

Children above the age of 12 must be supervised by an adult to ensure that the *Shark Shield™* is used correctly and in accordance with the instructions and warnings contained in the Instruction booklet supplied with each unit.

#### 10. On which part of the body is the *Shark Shield™* worn?

DIVE01 - the main housing of the unit can be worn on the thigh (a strap is provided), in a BC pocket, or attached to the front of the BC via a BC strap or D ring. The antenna electrode is worn on the ankle, with the antenna protruding out the front, so that it rests on the fin. The pad electrode is secured to the back of the scuba cylinder by means of a special quick release fastening device.

GPSS01 - worn on the ankle. Both electrodes are encased in the antenna.

#### 11. Do the electrodes need to be immersed in the water for a protective field to be created?

Yes, most definitely. Both electrodes need to be immersed in the water for a protective field to be created. In the case of the GPSS01 unit, both electrodes are encased in the antenna. In the

DIVE01 unit one electrode is encased in the antenna protruding from the ankle, whilst the other electrode is worn on the scuba cylinder.

#### 12. Does the *Shark Shield™* repel any other creatures?

One of the distinct advantages of this unique electronic wave-form is that it only repels predator sharks. It does not repel any other form of marine life.

#### 13. Has the *Shark Shield™* been proven to be safe to humans?

The field generated by the Shark Shield™, when used in accordance with the instructions contained in the instruction booklet supplied with each unit, poses no danger to the user, to sharks or to the environment. The field can be detected if the electrodes come into very close contact with the skin.

Direct contact with, or very close proximity to the antenna, may cause twitching of the surface muscles of the skin, in time with the slow pulsing of the signal. The conductive field readily travels through seawater, it being a better conductor than the human body thus the field tends to surround the body rather than penetrate it. Scientific tests show that the type of signal generated by the Shark Shield™ is unable to pass through body tissues, unlike radio waves or microwaves that readily penetrate the body, and therefore it poses no health problems for users.

However, anyone with any health condition which could increase their sensitivity to the fields created by the Shark Shield™ should not use the device. Such conditions include heart disease, a history of heart attack, peripheral vascular disease, stroke, a history of fainting or epilepsy, lung disease, or if the user is on any prescription drugs that are administered for these conditions. People who have pacemakers or are pregnant must not use the Shark Shield™ and should also avoid swimming near any other person using the Shark Shield™.

#### 14. Will I get an electric shock?

Placing the hand near the electrodes will cause stimulation of the surface muscles of the skin. It is imperative that you **never touch the electrodes** when the unit is switched on, as this will result in extreme discomfort.

#### 15. Does the *Shark Shield™* harm sharks?

From the tests conducted to date, the Shark Shield™ does not harm the shark. The majority of initial testing was carried out by a team of marine biologists at the Natal Sharks Board of South Africa. Scientific tests, as well as observations, show the field emitted by the Shark Shield™ causes discomfort to the shark, which can eventually lead to muscular spasms. However once the shark leaves the area, there is no lasting detrimental effect to the shark.

#### 16. How long does the battery pack last?

- The battery pack supplied with the DIVE01 unit will last 4 hours if fully charged prior to use.
- The battery pack supplied with the GPSS01 unit will last 2 hours if fully charged prior to use.

**17. How do I know when the battery pack is getting low?**

A green pulsing LED shows when the unit is operating normally. If the battery pack is running low a continuous red LED lights up next to the green pulsing LED. This warns the user that they have 15 minutes left in which to leave the water before the battery is fully discharged.

**18. Can I "top up" the NiMH battery pack when it still has some charge left in it, or does it need to be fully drained?**

**Yes.** Topping up the battery pack when partially charged will not damage the battery pack or lead to memory effect problems. However, any rechargeable battery benefits from being totally discharged every 6 months.

**19. How should I store the battery pack?**

It is recommended by the battery manufacturer that the battery pack be stored only partly charged. The battery should then be fully charged immediately prior to use.

**20. How can I test that the unit is working properly?**

Holding either hand close to the antenna, i.e. less than 300mm (12 inches) away, whilst immersed in water and while the unit is switched on, is a handy way of checking the field. If the unit is functioning properly, the user should feel a distinct pulsing of the skin muscles of the hand. For surfers, being on the surface of the water and often in bright sunlight, this is the easiest way to check the units operation. Divers on the other hand will usually be in more subdued lighting where the LED status indicators may be more easily seen.

**21. Where can I purchase the spares and accessories?**

Spare battery packs and accessories can be purchased from where you originally purchased your *Shark Shield™*.

**22. Who can I ask if I have a question regarding the operation of the unit?**

Please refer to the retailer from where you purchased the unit.

**23. Can I repair the unit myself?**

No. Any repairs or servicing to the unit must be carried out by an authorized Shark Shield™ service centre, as this is a specialized piece of equipment that needs to be repaired by a specialized trained technician. Otherwise the warranty will be voided. Speak to your retailer.

**24. What is the warranty period for the *Shark Shield™* unit?**

The *Shark Shield™* has a 12 month manufacturers warranty, provided the unit is maintained as per the instructions set out in the Product Information Booklet supplied with the product. The battery pack supplied with the product, or sold as an accessory, comes with a 6 month warranty from the date of purchase.

As outlined in the Product Information Booklet, the warranty is only valid if the Manufacturers Warranty Certificate has been completed and returned. It is also a requirement that proof of purchase be supplied when making a warranty claim.

**25. If I have a warranty claim, whom do I go and see to have my unit repaired?**

Please refer to the retailer from where you purchased the unit.

**26. Can I use the *Shark Shield™* in estuarine environments?**

The Shark Shield™ is designed for use in seawater only. The Shark Shield™ cannot be used in fresh or estuarine waters, as it will not establish a protective field in freshwater due to the water's reduced ability to conduct electrical energy.

**27. What sort of testing has been done on the unit?**

The electronic wave-form used in the Shark Shield™ has been on the market since 1995, in the guise of the Shark POD, and has proved its effectiveness in the field time and time again.

The Shark Shield™ has been thoroughly tested in the laboratory, and on site with Great Whites, both in Cape Town, South Africa and Neptune Island, South Australia.

Field testing of the Shark Shield™ on predator sharks involves attracting sharks using blood and offal. The unit is turned on and placed into the water with fish bait attached to attract the shark. The shark's behaviour is then observed and recorded as it investigates the food source. The testing conducted to date proves conclusively that sharks detest the effect the field has on them and will keep a safe distance between themselves and the Shark Shield™.

Remember: This testing is conducted under the worst possible scenario. The shark is stimulated, hungry and excited. A situation that any responsible person will avoid at all costs.

**28. What is the depth rating of the *Shark Shield™*?**

100 metres

**29. Does the *Shark Shield™* field interfere with a diver's hoseless air integrated dive computer?**

From the tests conducted to date, no interference has occurred.