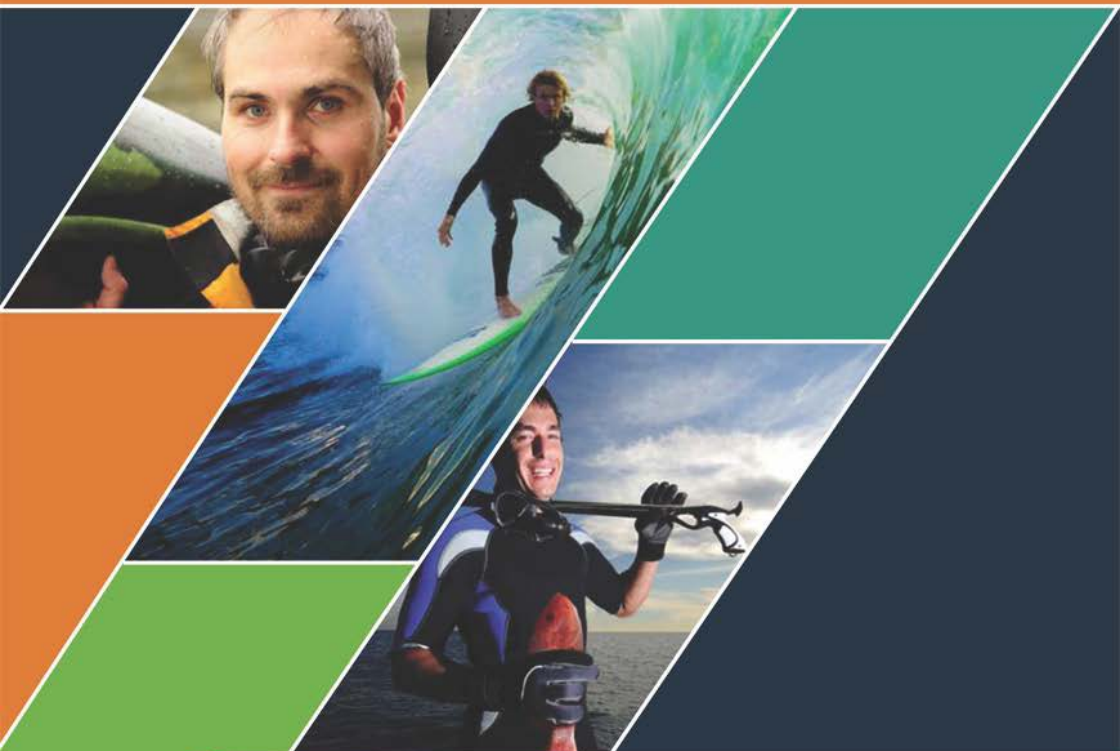




COMFORTABLE • LIGHTWEIGHT • RECHARGEABLE



USERS MANUAL

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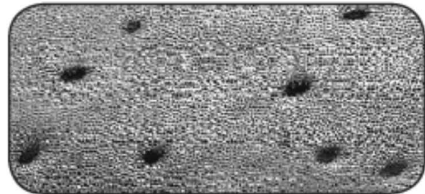
1 Introduction

Shark Shield Pty Ltd is the leader in electronic shark deterrents with a long and proud history in developing a range of safety products used both recreationally and commercially around the world.

As the world's only proven shark deterrent, Shark Shield technology has been developed during two decades of research in partnership with KwaZulu-Natal Sharks Board in South Africa, one of the world's leading experts in predatory sharks. Thousands of divers, surfers, spear fishers, kayakers and swimmers around the world trust Shark Shield to protect themselves.

How does it work?

Shark Shield devices generate a protective electric field which is detected by a shark via its short range sensory receptors called Ampullae of Lorenzini. These Ampullae of Lorenzini are found on the snouts of all predatory sharks.



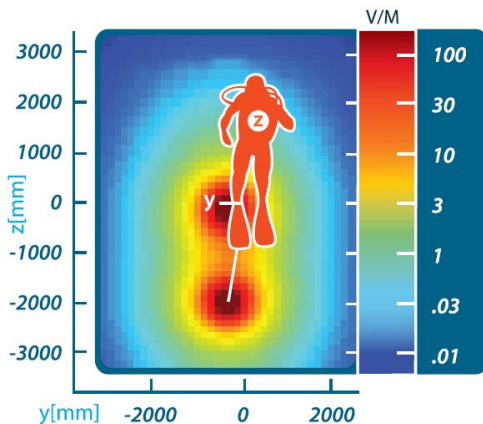
Ampullae of Lorenzini on the snout of a shark (left) and under magnification (right)

The electric field causes discomfort to a shark and this increases the closer the it gets to the electric field, until it becomes intolerable.

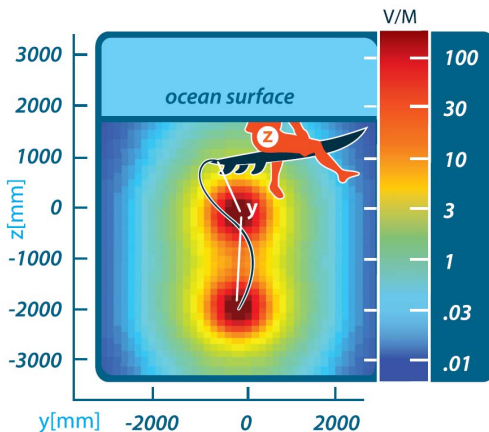
IMPORTANT: Shark Shield devices do **NOT** attract sharks. This is a myth derived from the way scientists describe the sensitivity of shark electroreceptors. As electrical currents can only travel very short distances through water, Shark Shield creates only a very localised electrical field. Shark electroreceptors can only sense electrical

currents at very short distances, typically less than half a metre. When a shark approaches a Shark Shield, these electroreceptors are over sensitised, causing the shark to take flight.

Shark Shield Electronic Fields



SANSA*2012: Estimated magnitude of the E-field surrounding a diver wearing Shark Shield



SANSA*2012: Estimated magnitude of the E-field surrounding a surfer wearing Shark Shield

Shark Shield has been proven to be effective at deterring a shark attack. For detailed scientific research which validates the Shark Shield's capability please visit our website www.sharkshield.com/view/SharkShieldResearch, or our Shark Shield YouTube channel.

**South African National Space Agency*

2 Warnings & Safety Information



1. Sharks can be dangerous and often unpredictable creatures and we encourage people to wear a Shark Shield when working in, or enjoying the sea, in order to minimize the risk of shark attack. While extensive testing has been performed, and great care taken to develop and manufacture the Shark Shield range of products, it is impossible to guarantee that all sharks will be deterred under all circumstances. Water based activities in the presence of sharks is inherently dangerous; therefore, we recommend that if a shark is sighted, the user gets to safety rather than continue with their water activity.
2. A large pulsing current is emitted from the Shark Shield antenna to produce the protective electric field. Anyone with a pacemaker, who is pregnant, or has a health condition which could be affected by the electric field, should not use the device. Some examples of health conditions include heart disease, a history of heart problems, peripheral vascular disease, stroke, a history of fainting or epilepsy, or lung disease. Users unintentionally being in close proximity, or in contact with the antenna, may possibly suffer muscle spasms in varying degrees; we recommend that users may need to make adjustments to limit contact in these situations.
3. Positioning of the Shark Shield antenna/electrodes is critical to the device's performance. Do not attempt to use the Shark Shield in any way other than what is described in this user manual.
4. Shark Shield is designed for sea water use only.
5. Shark Shield has been designed and tested as a personal device. Do not attempt to join multiple Shark Shields together or wear multiple devices.
6. Some bottom-dwelling and non-predatory sharks such as the Wobblygong, Carpet and Port Jackson sharks have limited or no active Ampullae of Lorenzini. Therefore the Shark Shield may have limited or no effect on these sharks.

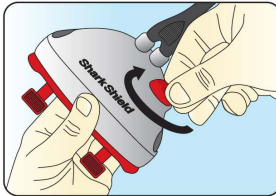
Disclaimer

Whilst every effort has been made to ensure the accuracy of this manual we are not responsible for any errors or omissions within it. The product specifications and descriptions within this manual will be subject to improvements and modifications over time without notice, as changes to software and hardware are implemented.

3 Getting Started

Charging your Shark Shield

1. The charger will need to be assembled prior to the first charge. Select the correct charger mains pins for your region and then slide them onto the charger, making sure they click securely into place.
2. Ensure the Shark Shield device is turned **Off** by turning the red **ON/OFF KNOB** in an anti clockwise direction until the position indicator line is on the opposite side to the line on the Shark Shield casing. In the **Off** position the Shark Shield LEDs should not be illuminated.



CLOCKWISE - **ON**
ANTI - CLOCKWISE - **OFF**

3. Connect the charger plug to the two charger pins on the Shark Shield.
4. A flashing **RED LED** will appear when the Shark Shield is charging.
5. A solid **GREEN LED** will appear when the Shark Shield is fully charged. Note: A full charging cycle takes approximately 4 to 5 hours.

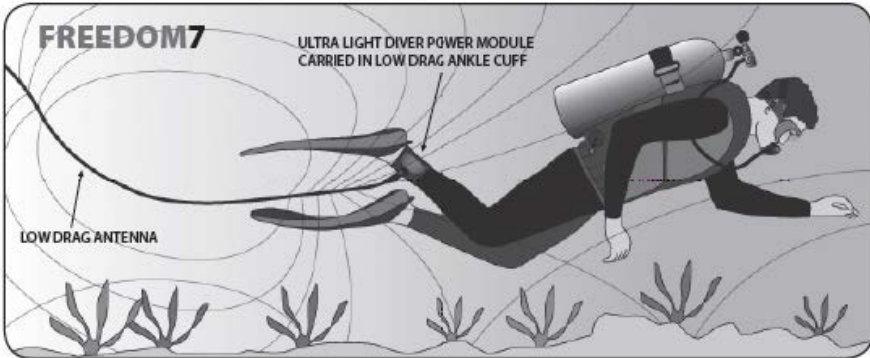


Important Note:

- We recommend each Shark Shield device is stored with some charge when stored for long periods of time to avoid the battery 'going to sleep'.
- When charging the Shark Shield directly after use, be sure to thoroughly dry the charger pin region on the unit before connecting the charger.

4 Mounting the FREEDOM7

Attach the FREEDOM7 to the outside of your ankle using the Velcro flaps on the pouch designed for the unit.



5 Mounting the SURF7

PREPARING THE SURFBOARD

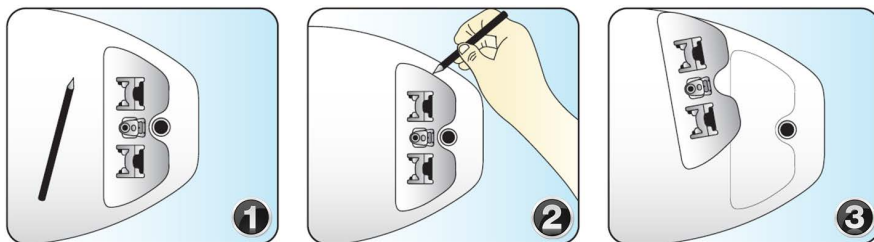
The Shark Shield Surf unit is designed to mount onto the board deck at the tail. If you already have a full deck grip it will require removal of the kicker section of the deck grip; the Shark Shield Surf unit and mounting plate replaces the kicker.

SECURING THE MOUNTING PLATE

Remove the Shark Shield SURF7 unit from the mounting plate by removing the cover plate using the hexagonal key provided. (Please note the position and fitment of the spectra rope protruding from the Flexi-Link)

**WARNING: DO NOT REMOVE THE
ADHESIVE BACKING AT THIS POINT**

1. It is necessary to thoroughly clean the area on the board to which the mounting plate will be attached. **WARNING:** The mounting plate will not successfully bond to the board's surface if it is not prepared correctly.
2. Scrape any visible wax from the area to which the mounting plate will be mounted.
3. Use a commercial surf wax cleaner to remove any wax film remaining on the board.
4. Place two teaspoons of detergent in a cup of warm water and stir well.
5. Use the detergent mix and a glass-safe scourer to rub and clean the area on the board, then dry the surface with a clean cloth.
6. Place the mounting plate on the board and position the cover plate where the kicker or heel wedge of a deck grip is usually located.
7. Mark around the mounting plate with a felt tip pen as shown in the following images.



8. Wipe inside the marked area with the alcohol swab provided and allow the surface to dry.



Caution: The best possible surface preparation is achieved using methyl ethyl ketone (MEK), which is available from fiberglass or plastics suppliers. Follow the supplier safety guidelines provided for the use of MEK.)

9. Remove the adhesive backing from the mounting plate; be careful to not touch the adhesive surface.

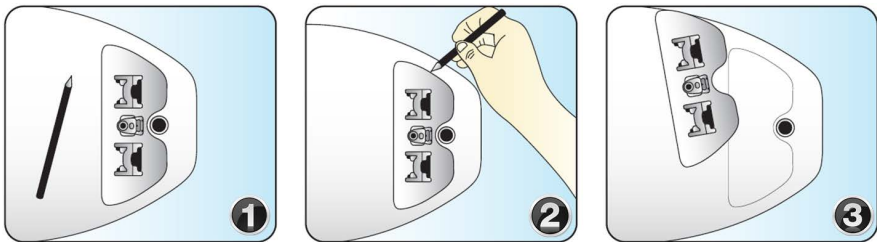
10. Carefully locate the mounting plate over the marked area and press it firmly into place.
11. Place a conforming weight (such as a shopping bag full of sand) onto the mounting plate. Soft rubber-jawed clamps can also be used to apply pressure to the mounting plate.
12. Allow 48 hours before removing the weight and/or clamps.

FITTING THE SHARK SHIELD SURF UNIT AND LEG ROPE

After allowing 48 hours to cure:

1. Remove all weights and clamps.
2. Attach the Shark Shield unit by sliding the tabs of the red Flexi-Link into the slots of the mounting plate. Ensure the tabs are correctly located.
3. Replace the cover plate using the hexagonal key.
4. Attach the leg rope to the normal plug underneath the unit.

Note: The design of the Shark Shield unit allows the tabs to flex in an upwards motion exposing your leg rope plug.

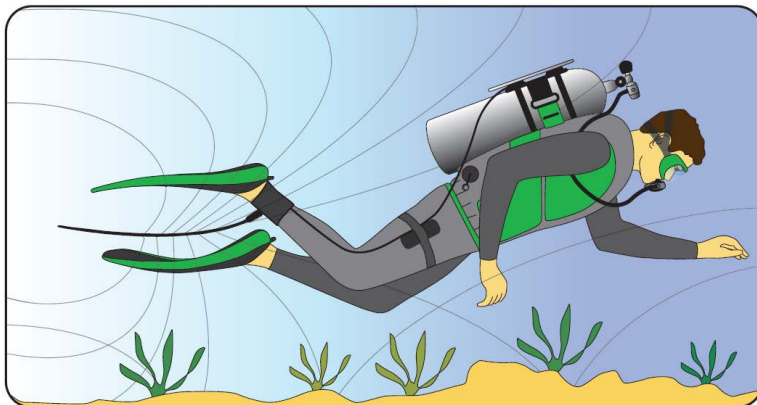


Important Notes:

1. The SURF7 & FREEDOM 7 units are not interchangeable. The SURF7 unit can not be deployed off the leg & the FREEDOM7 unit can not be fixed to the mounting plate of the SURF7 unit.
2. If the SURF7 antenna touches or wraps around the user's limb when falling off their board, untangle the antenna underwater rather than lifting it out of the water. Keeping the antenna underwater will dramatically reduce the possibility of muscle contractions caused by the high power output of the SURF7.

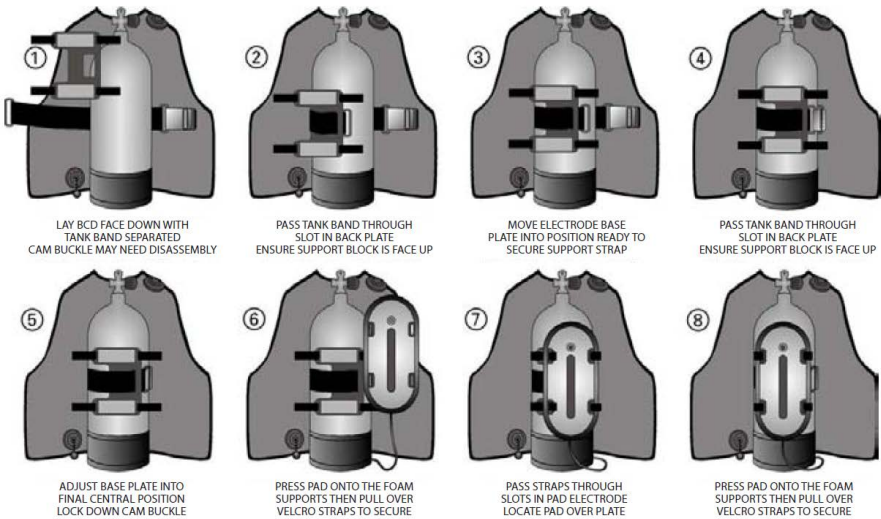
6 Mounting the SCUBA7

The SCUBA7 comprises three parts which are mounted to either the user or their equipment.



Important Note: The SCUBA7 Shark Shield produces a large current output which flows between two electrodes. It is recommended that a full length wetsuit is always worn by SCUBA7 users to reduce the potential for muscle stimulation caused by the current output of the electrodes.

SCUBA7 Tank Electrode Pad



1. Secure the tank electrode base plate to the rear of the tank using the BCD tank strap. Make sure the foam spacers are facing away from the tank.
2. Place the tank electrode pad onto the foam spacers of the electrode base plate and then secure in place with the four Velcro straps. Make sure that the stainless steel face of the tank electrode pad is facing away from the tank.

SCUBA7 Power Module

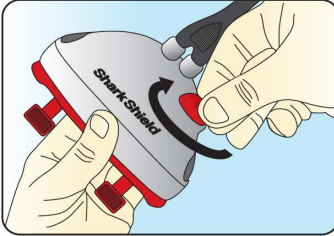
Mount the SCUBA7 power module to your thigh using the thigh strap, or fit to the BCD.

Ankle Electrode

Mount the SCUBA7 ankle electrode to your ankle. Make sure that the antenna is pointing towards the front of you and resting on top of your fin. This ensures the ankle electrode is kept as far away as possible from the SCUBA7 tank electrode pad.

7 Turning the Shark Shield On

1. Turn on the Shark Shield device by turning the red **ON/OFF KNOB** in a clockwise direction until the line on the knob is aligned with the line on the casing.



CLOCKWISE - **ON**

ANTI - CLOCKWISE - **OFF**

2. Once turned **On** the Shark Shield will perform a short self-check procedure. During this process a **RED LED** turns on for 1 second and then blinks quickly twice. Once the self test is completed the Shark Shield will **beep** and a solid **GREEN LED** will appear. The solid **GREEN LED** will start flashing if the Shark Shield detects the antenna/electrode is out of the water .
3. The Shark Shield displays a **GREEN LED** until the battery charge is low. Approximately 10 minutes before the Shark Shield battery power is fully drained, the solid **GREEN LED** will be interrupted approximately every 3 seconds with a **RED LED** which illuminates for approximately 1 second. This LED sequence will continue until the Shark Shield runs out of power.

8 Antenna and Electrode Positioning

Before using Shark Shield it is critical to understand the correct antenna and electrode positioning to ensure the device functions correctly.

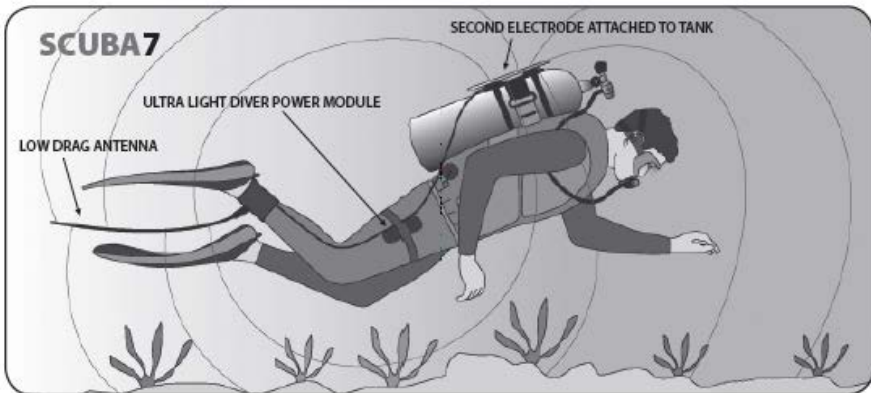
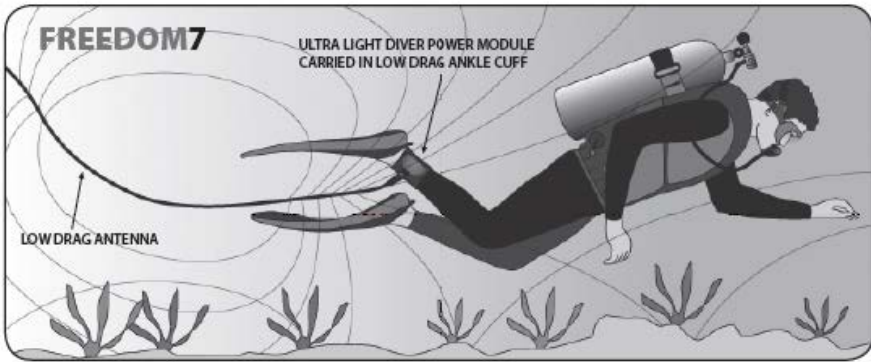
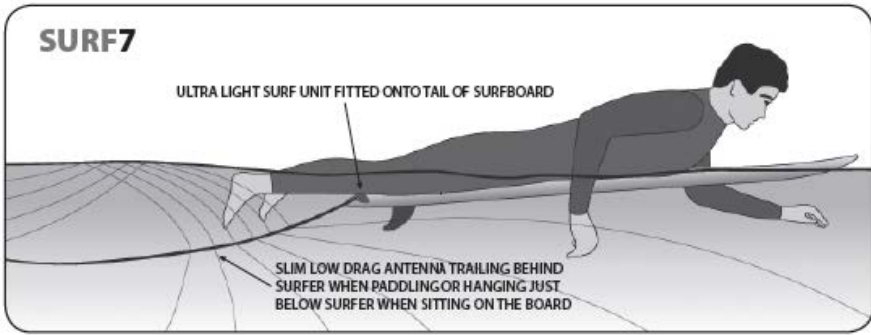
The Shark Shield generates its protective electric field by emitting a large pulsed current via several different antenna and electrode assemblies. This varies depending on the model of Shark Shield unit purchased. For example, the FREEDOM7 and SURF7 use an antenna that incorporates a stainless steel braid electrode at the top and bottom ends, whereas the SCUBA7 uses an ankle antenna that incorporates only one stainless steel braid electrode, with a separate tank-mounted pad electrode.

The current emitted from the Shark Shield flows between the two electrodes to produce the protective electric field; therefore, the positioning of the electrodes is critical for the Shark Shield device to produce an effective protective field, and reduce the risk of muscle contraction to the user. When using Shark Shield please be aware of the following.

- The antenna/electrodes need to be fully submerged for the Shark Shield to function correctly.
- The current that flows between the two electrodes uses the path of least resistance, which is the sea water rather than the user. Avoid situations where one or both electrodes come out of the water because the Shark Shield will no longer produce a protective electric field. In addition, the user could accidentally become the current path between the two electrodes, which may result in mild to severe, but non-harmful muscle contractions.
- The electrodes are a specific surface area and must not be covered with any conductive or non-conductive material.
- Avoid using the Shark Shield next to any large metal objects as this could reduce the size of the protective field.

**Important Notes for SURF7 and FREEDOM7 units:**

- Keep the SURF7 and FREEDOM7 antennas fully extended because reducing the distance between the electrodes will also reduce the size of the protective field. Always mount the electrode pad to the scuba tank and the antenna to your ankle when using a SCUBA7.
- When mounting a FREEDOM7 or SURF7 to a kayak or other water craft, position the Shark Shield as close to the user as possible so the protective field is close to the user.



9 Essential Maintenance and Testing

1. Shark Shield devices perform a self-check each time they are turned on. To confirm the device functions effectively there are several additional options available.
 - a. When the device is submerged under water place your hand close to the antenna/electrodes to feel the electric field pulsing.
 - b. Purchase a simple Shark Shield tester.
 - c. Send the unit to Shark Shield Pty Ltd for a general check up.
2. Thoroughly rinse the Shark Shield in fresh water after each use. Please note that over time it is not uncommon for the stainless steel electrode braid and charger pins to acquire a slight brownish stain. This will have no effect on performance the unit.
3. Leave your Shark Shield to dry before placing it in storage. Avoid direct sunlight when drying the unit.
4. We recommend each Shark Shield device is stored with some charge when stored for long periods of time to avoid the battery 'going to sleep'.



Cautions:

- Thoroughly dry the charger pin area on the Shark Shield before connecting the charger. This is important when charging the Shark Shield immediately after it has been used in water.
- Under no circumstances should you attempt to repair the Shark Shield as this will void any warranty.

10 LED Status Indications

During Operation

State	Indication
Start Up Self Check	RED LED illuminates for 1 second and then blinks quickly twice. If it passes its self check then the unit will beep and at the same time the RED LED will turn Off and the GREEN LED will illuminate
Not Submerged	GREEN LED will flash at roughly 4 times a second
Submerged	GREEN LED is illuminated
Low Battery	The standard GREEN LED indication is interrupted every 3 seconds by a RED LED which turns on for less than 1 second. A beep occurs when the RED LED turns on
Short Circuit Output	GREEN and RED LED will flash alternately with the ALARM sounding continuously

When Charging

State	Indication
Charging	RED LED will flash
Charged	GREEN LED is illuminated

11 Product Specifications

Technical Specification	Actual Specification
Maximum Operating Depth	45 metres (148 feet)
Storage Temperature	0°C - 60°C (32°F – 140°F)
Battery life	Nominal 300 charges
Operating Time (in water)	6-7 hours
Out of water detection	Yes
Battery Type	11.1V Li-ion (3 cell)
Battery Charge Storage Life (off state)	Greater than 6 months
Battery Charger	Input: 110-240 Vac 50/60Hz 0.5A Output: 18Vdc 550mA
Output - Current	150A pulses (approximate)
Output - Time Between Output Pulses	0.6 seconds
Output - Short Circuit Protection	Yes
Protective Field Strength	>1v/m peak @ 1m from centre of electrodes
Dimensions - main housing (without antenna)	80mm L x 140mm W x 35mm H (3.15" x 5.5" x 1.5")
Dimensions – FREEDOM7 antenna	2200mm (86")
Dimensions – SURF7 antenna	2850mm (112")
Dimensions – SCUBA7 antenna	600mm (23")
Dimensions – SCUBA7 electrode pad	290mm L x 130mm W (11.4" x 5.1")

Weight (Dry)	950 grams (2.09lb)
Weight (In Water)	69 grams (2.4oz)
NATO Stock Number	FREEDOM7: 4220/661582710 SCUBA7: 4220/661582671

12 Warranty

For Shark Shield Products Purchased in Australia & New Zealand:

CONSUMER PRODUCT WARRANTY

When you purchase a Shark Shield product, you have the peace of mind of knowing that your product is covered by Shark Shield's Standard Warranty. All Shark Shield products have a 1 year warranty and you can visit http://www.sharkshield.com/view/warranty_reg to register your product and validate your product warranty. The Shark Shield Standard Warranty is provided by:

Shark Shield Pty Ltd (ABN 87 099 782 091)
Building 7, 1 Winton Road
Joondalup, 6027 Western Australia.
+61 8 9468 2082
info@sharkshield.com

GENERAL TERMS AND CONDITIONS

1.1 The benefits given to you in Shark Shield's Standard Warranty are in addition to other rights and remedies you have under law in relation to the products to which Shark Shield's Standard Warranty relates. Shark Shield products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure.

1.2 Subject to section 1.1 and the terms below, as your Standard Warranty Shark Shield agrees to repair or replace at Shark Shield's cost the Shark Shield product, and any Shark Shield accessory supplied with the product, purchased by you in Australia or New

Zealand from a Shark Shield Authorised Dealer when the product does not perform in accordance with the manufacturer's specifications during the Warranty Term specified for the product below, commencing from the date of purchase.

- 1.3 To make a claim under the Standard Warranty you will need to:
- a. Contact the Shark Shield to register your claim and provide the details to enable Shark Shield to assess the claim. Or visit the Shark Shield support section located on the internet, contact details listed below.
 - b. Provide or make the product available to Shark Shield or a Shark Shield Authorised Service Centre as set out in the below or as otherwise agreed with Shark Shield. If you are required to return the product to a Shark Shield Authorised Service Centre, Shark Shield will provide details of the centre to you.
 - c. Please note, you will need to submit proof of purchase (e.g. bill of sale, invoice or purchase receipt) with your claim.

1.4 Products presented for repair may be replaced by refurbished products of the same type rather than being repaired. Refurbished parts may be used to repair the products. Replacement of the product or a part does not extend or restart the Warranty Term.

1.5 The product will be at the owner's risk whilst in transit to and from the Shark Shield Authorised Service Centre, unless transported by Shark Shield or its Authorised representatives.

1.6 Shark Shield and its Authorised Service Centres may seek reimbursement of any costs incurred by them when the product is found to be in good working order.

GENERAL EXCLUSIONS AND LIMITATIONS

2.0 To the full extent permitted by law, but subject always to 1.1, the Standard Warranty will not apply:

2.1 If the product has not been installed, operated, maintained or used in accordance with the manufacturer's instructions or specifications provided with the product.

2.2 Shark Shield disclaims liability for range, coverage, or operation of the Product and ancillary equipment as a whole under this warranty. Shark Shield reserves the right to make changes or improvements in Products, during subsequent production, without incurring the obligation to install such changes or improvements on previously manufactured Products.

2.3 If the factory-applied serial number has been altered or removed from the product.

2.4 To damage, malfunction or failure resulting from alterations, accident, misuse, abuse, fire, liquid spillage, mis-adjustment of customer controls, use on an incorrect voltage, power surges and dips, thunderstorm activity, acts of God, voltage supply problems, tampering or unauthorised repairs by any persons, use of defective or incompatible accessories, the operation of a computer virus of any kind, exposure to abnormally corrosive conditions or entry by any insect, vermin or foreign object in the product.

2.5 To damage arising during transportation, installation or while moving the product, or to any transportation costs of the product or any parts thereof to and from the owner, unless otherwise specified in these warranty terms.

2.6 To any third-party software or hardware not contained in the product as originally configured by the manufacturer.

2.7 To any failure, to the extent that the failure is not a failure of the product to perform in accordance with its specifications.

2.8 To service of any product whilst it is outside Australia and New Zealand.







2.9 To any wear and tear including to antenna assembly if the product is used in commercial, industrial, educational or rental applications.

2.10 To the full extent permitted by law but subject always to section 1.1:

2.11 Shark Shield will not be liable for any loss, damage or alterations to (1) third party hardware or software; or (2) programs, data or information stored on any media or any part of the product, no matter how occurring; or for any loss or damage arising from loss of use, loss of profits or revenue, or for any resulting indirect or consequential loss or damage.

2.12 All Shark Shield products have a 1 year warranty. For service, return your product to Shark Shield or your local Retailer Service Centre.

13 Accessories

	<p>Neoprene Carry Bag - No. SU1800</p> <p>This sturdy neoprene carry bag keeps your FREEDOM7, SURF7 or SCUBA7 protected.</p>
	<p>Shark Shield Case (Hard) - No. SU1804</p> <p>This hard case keeps your FREEDOM7, SURF7 or SCUBA7 well protected.</p>
	<p>Surf Unit Mounting Plate - No. SU1400</p> <p>An additional mounting plate lets you move your SURF7 unit from one board to another.</p>
	<p>FREEDOM7 Pouch & Flexilink - No. SU1801</p> <p>Replacement FREEDOM7 pouch if lost or damaged.</p>
	<p>Shark Shield - Charger - No. SU1614</p> <p>This international charger comes with adapters for Australia, USA, Europe and Asia.</p>
	<p>Shark Shield Tester - NSN 4220/661582994</p> <p>Ensure your FREEDOM7, SURF7 and SCUBA7 is in perfect working order at all times.</p>
	<p>Shark Shield Extended Warranty - 3 Years - No. WA1003</p> <p>Warranty which extends the standard 1 year warranty by 2 years.</p>