



OCEAN
GUARDIAN

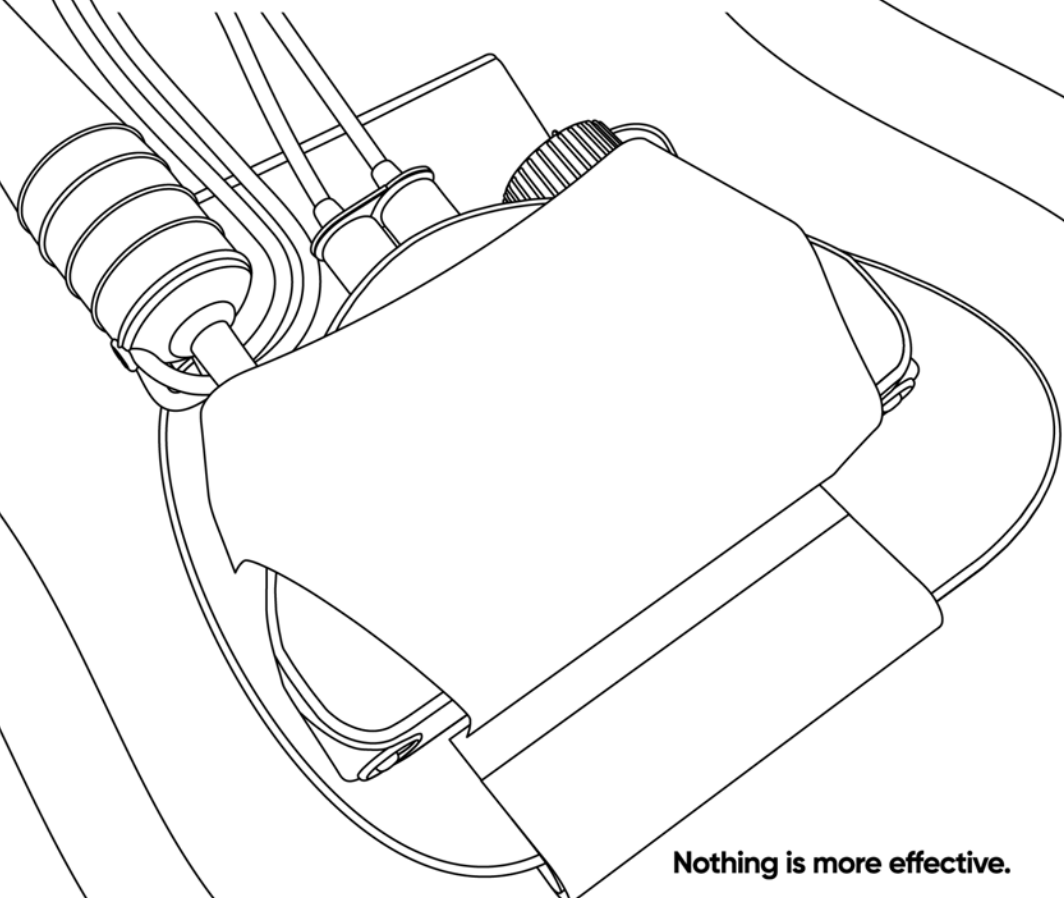
Powered by
Shark Shield® Technology

USER MANUAL

FOR

FREEDOM7 & SCUBA7

THE WORLD'S ONLY PROVEN SHARK DETERRENTS



Nothing is more effective.

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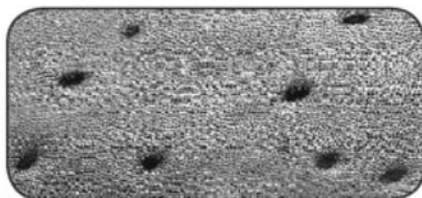
1 Introduction

Ocean Guardian powered by Shark Shield Technology is for professional adventurers and is the world's only scientifically proven and independently tested electrical shark deterrent. Ocean Guardian products have been consistently proven to effectively turn sharks away by the world's leading scientific experts on sharks. Independent research and testing by universities has resulted in a number of peer reviewed science journals confirming the effectiveness of the technology.

The technology and patents have a twenty-year development history, in partnership with organizations such as the world's leading experts in White Sharks, the KwaZulu-Natal Sharks Board in South Africa. As a result, Ocean Guardian is trusted by professional adventurers around the world, including navies, military and police divers, and is mandated safety equipment in many industries.

How does it work?

Ocean Guardian 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 sharks.



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

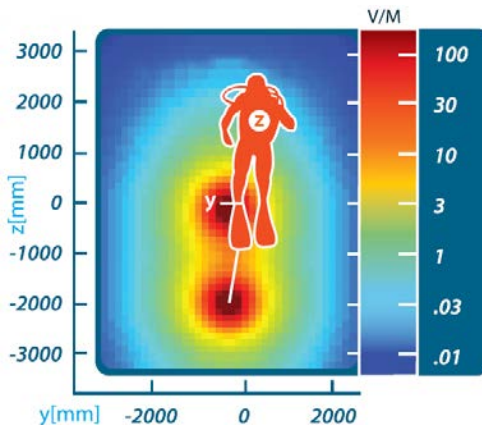
The electric field causes discomfort to a shark and this increases the closer the it gets to the electric field, until it becomes intolerable.

The electrical field transmitted by Ocean Guardian devices has no known long term effect on sharks. It also has no effect on other marine creatures.

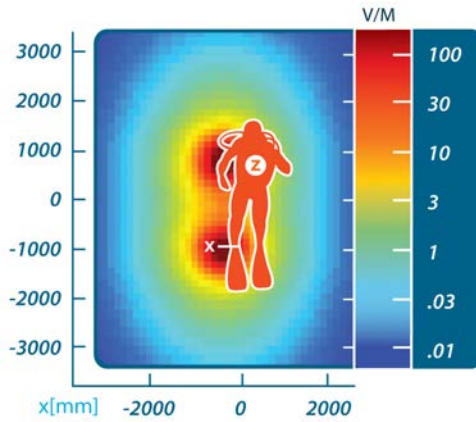
IMPORTANT: Ocean Guardian devices do **NOT** attract sharks. This is a myth and independent scientific research has shown that electrical deterrents do not attract sharks. As electrical currents can only travel very short distances through water, the Ocean Guardian creates only a very localized electrical field. Shark electroreceptors can only sense electrical currents at very short distances, typically less than half a meter. When a shark approaches an Ocean Guardian, these electroreceptors are over-sensitized, causing the shark to turn away.

Ocean Guardian Electronic Fields

Ocean Guardian has been scientifically proven and independently tested to be effective at turning sharks away. For detailed scientific research which validates the Ocean Guardian's capability, please visit our website at www.ocean-guardian.com/technology, or our Ocean Guardian YouTube channel.



Estimated magnitude of the electrical field surrounding a diver wearing an Ocean Guardian FREEDOM7. Model developed by South African National Space Agency.



Estimated magnitude of the electrical field surrounding a diver using an Ocean Guardian SCUBA7. Model developed by South African National Space Agency.

2 Warnings & Safety Information



1. Sharks can be dangerous and often unpredictable creatures and we encourage people to wear an Ocean Guardian 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 Ocean Guardian 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 Ocean Guardian antenna to produce the protective electric field. Anyone with any electronic medical device (EMD) such as 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 Ocean Guardian antenna/electrodes is critical to the device's performance. Do not attempt to use the Ocean Guardian in any way other than what is described in this user manual.
4. Ocean Guardian is designed for sea water use only.
5. Ocean Guardian has been designed and tested as a personal device. Do not attempt to join multiple Ocean Guardians together or wear multiple devices.

6. Some bottom-dwelling and non-predatory sharks such as the Wobblygong, Carpet and Port Jackson sharks have limited active Ampullae of Lorenzini. Therefore, the Ocean Guardian may have limited or no effect on these sharks.
7. **Ocean Guardian Battery Warnings:**
 - Do not use any charger other than that specifically provided for use with Ocean Guardian devices.
 - The Ocean Guardian contains Li-ion batteries. Ensure it is not stored in high temperatures.
 - Do not expose batteries to heat or fire. Avoid storage in direct sunlight.
 - Do not short-circuit the Ocean Guardian.
 - Avoid subjecting the Ocean Guardian to mechanical shock.
 - Do not store batteries longer than 1 month in a discharged state.
 - Do not store batteries longer than 1 year without recharge.
 - The batteries in the Ocean Guardian must be recycled or disposed of properly.
 - This device includes a Lithium-ion battery and it is the owner's responsibility to ship this device in full compliance with all of the latest applicable transportation regulations. For air transport, refer to current IATA and FAA regulations, as appropriate, and to your carrier for air transport compliance information.
 - For worldwide sea transportation see the IMO-IMDG code and special provision 188.
 - For European road transportation see ADR special provision 188.
 - Do not ship the Ocean Guardian in the hold when flying. Lithium-ion batteries must be carried in personal carry-on luggage.

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

This user manual is valid for the Ocean Guardian:

- FREEDOM7 (version GU1000B & GU1000C).
- SCUBA7 (version GU1000C).

FREEDOM7 (GU1000B) and FREEDOM7 (GU1000C) models have different LED indications and battery performance.

See the section titled [FREEDOM7 \(GU1000B\) LED Status Indications](#) to view LED indications for this device. See the section titled [FREEDOM7 \(GU1000C\) & SCUBA7 \(GU1000C\) LED Status Indications](#) to view LED indications for these devices.

How do I tell the difference between the FREEDOM7 GU1000B and GU1000C?

These products look the same so check the model number listed on the FREEDOM7 product label to verify which version you have.

Charging your Ocean Guardian

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 Ocean Guardian 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 Ocean Guardian casing. In the **Off** position the Ocean Guardian LEDs should not be illuminated.



3. Connect the charger plug to the two charger pins on the Ocean Guardian. Ensure the arrow on the unit and the arrow on the charger meet.
4. Charging indications:
 - FREEDOM7 (GU1000B): A flashing **RED LED** will appear when the Ocean Guardian is charging.
 - FREEDOM 7 & SCUBA 7 (GU1000C): A solid **RED** and **GREEN LED** will appear when the Ocean Guardian is charging.
5. Indications when charge cycle completed:
 - FREEDOM7 (GU1000B): A solid **GREEN LED** will appear when the Ocean Guardian is fully charged. Note: A full charging cycle takes approximately 4 to 5 hours.
 - FREEDOM 7 & SCUBA 7 (GU1000C): A solid **RED LED** will appear when the Ocean Guardian is fully charged. Note: A full charging cycle takes approximately 2-3 hours



Important Note:

- We recommend each Ocean Guardian device is stored with some charge when stored for long periods of time.
- When charging the device 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 straps on the pouch designed for the unit.



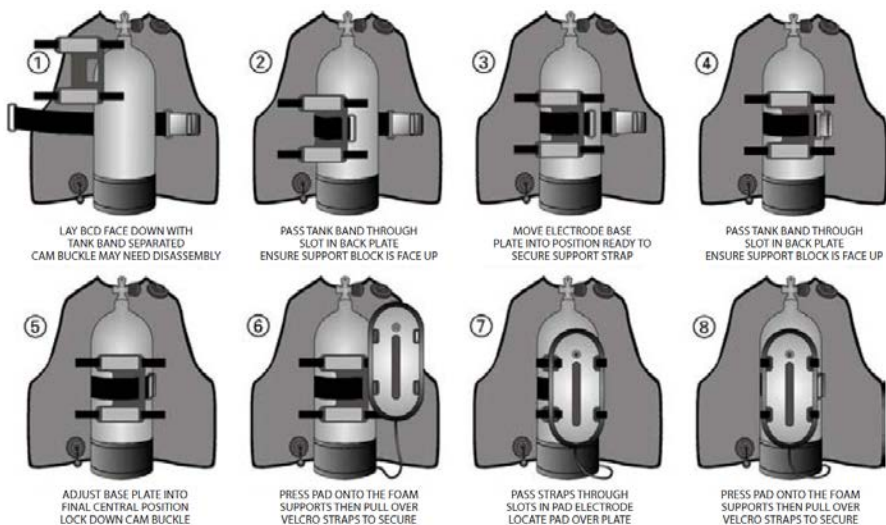
5 Mounting the SCUBA7

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



Important Note: The Ocean Guardian SCUBA7 produces a large current output which flows between two electrodes. Some people are more sensitive to electrical fields, and therefore may experience minor muscle stimulation caused by the current output of the electrodes. If this occurs, wearing a full length wetsuit will help insulate your body from the field and reduce the muscular stimulation.

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.



6 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.



2. When turned **On** the Ocean Guardian performs a short self-check procedure with the following indications:
 - FREEDOM7 (GU1000B): A **RED LED** turns on for 1 second and then blinks quickly twice. When the self-test is complete the Ocean Guardian will **beep** and a solid **GREEN LED** will appear. The solid **GREEN LED** will start flashing if the Ocean Guardian detects the antenna/electrode is out of the water.
 - FREEDOM 7 & SCUBA 7 (GU1000C): **RED LED** illuminates for 1 second and then flashes quickly twice. If it passes the self-check the unit will **beep** and at the same time the **RED LED** will turn **Off**. The device then displays up to 10 battery status LED flashes. When battery life indications are complete a **GREEN LED** flashes approximately 4 times a second to indicate the unit is not submerged in salt water.

3. The Ocean Guardian displays a **GREEN LED** until the battery charge is low. Shortly before the Ocean Guardian 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 Ocean Guardian runs out of power.

7 Antenna and Electrode Positioning

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

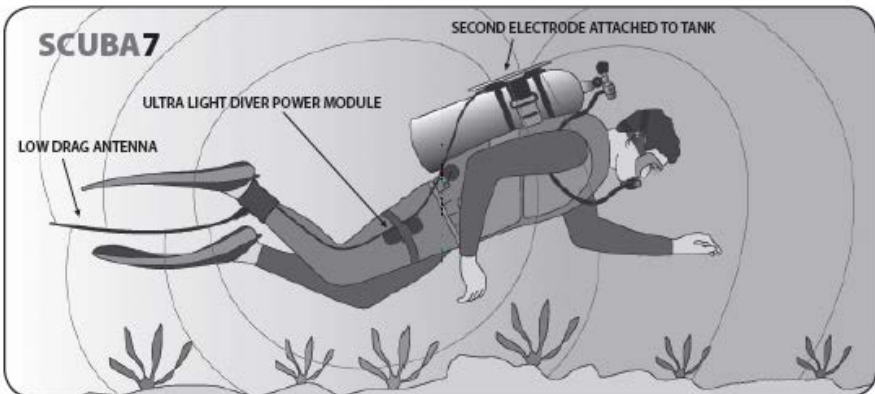
The Ocean Guardian generates its protective electric field by emitting a large pulsed current via different antenna and electrode assemblies. This varies depending on the model of Ocean Guardian unit purchased. For example, the FREEDOM7 use an antenna that incorporates a stainless steel braid electrode 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 Ocean Guardian flows between the two electrodes to produce the protective electric field; therefore, the positioning of the electrodes is critical for the Ocean Guardian device to produce an effective protective field and reduce the risk of muscle contraction to the user. When using Ocean Guardian please be aware of the following.

- The antenna/electrodes need to be fully submerged for the Ocean Guardian 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 Ocean Guardian 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 Ocean Guardian next to any large metal objects as this could reduce the size of the protective field.

**Important Notes for FREEDOM7 units:**

- When using the FREEDOM7 keep the antenna 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 to a kayak or other water craft, position the Ocean Guardian as close to the user as possible to ensure the protective field is close to the user.



8 Essential Maintenance and Testing

1. Ocean Guardian devices perform a self-check each time they are turned on. To confirm the device functions effectively you can also:
 - a. Place your hand close to the antenna/electrodes to feel the electric field pulsing when the device is submerged under salt water .
 - b. Purchase an Ocean Guardian Tester to verify whether the Ocean Guardian is producing an electric field.
2. Thoroughly rinse the Ocean Guardian in fresh water after each use. Dry the unit and store it in a cool, dry place away from sunlight, or purchase the Ocean Guardian carry case for safe storage.
3. Both connectors should be kept free of dirt and sand at all times. Ensure both connectors are clean before attaching the Ocean Guardian device.
4. Allow the Ocean Guardian unit to dry before placing it in storage. Avoid direct sunlight when drying the unit.
5. We recommend each Ocean Guardian device is stored with some charge when stored for long periods of time.
6. 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 is called "tea staining." There are no materials currently available that avoid this staining. This will have no effect on performance of the unit, but we recommend you clean the stainless steel (marine grade 316L) with either WD40, or an electronic circuit board cleaner.



Cautions:

- Thoroughly dry the charger pin area on the Ocean Guardian before connecting the charger. Be especially vigilant when charging the Ocean Guardian immediately after it has been used in water.
- Under no circumstances should you attempt to repair the Ocean Guardian as this will void any warranty.

9 FREEDOM7 (GU1000B) LED 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	LED Indication
Charging	RED LED will flash
Charged	GREEN LED is illuminated

10 FREEDOM7 & SCUBA7 (GU1000C) LED Indications

The Ocean Guardian FREEDOM7 (GU1000C) and SCUBA7 (GU1000C) have a **GREEN LED** and **RED LED** to indicate various operation states and the charge level of the battery. These devices also provide warning tone **beeps** in various operation states.

LED State	LED Indication
Start Up Self Check	RED LED illuminates for 1 second and then flashes quickly twice. If it passes the self check the unit will beep and at the same time the RED LED will turn Off . The device then displays the Battery Status Condition LED flashes.
Battery Status (after self check)	100% Battery: GREEN LED flashes 10 times 90% Battery: GREEN LED flashes 9 times 80% Battery: GREEN LED flashes 8 times 70% Battery: GREEN LED flashes 7 times 60% Battery: GREEN LED flashes 6 times 50% Battery: GREEN LED flashes 5 times 40% Battery: GREEN LED flashes 4 times 30% Battery: GREEN LED flashes 3 times 20% Battery: RED LED flashes twice with simultaneous beeps 10% Battery: RED LED flashes 10 times with simultaneous beeps
Not Submerged	GREEN LED flashes approximately 4 times a second
Submerged - normal operation	GREEN LED is illuminated
Low Battery - ½ hour of operation remaining	The standard GREEN LED indication is interrupted every 3 seconds by a RED LED

	which illuminates for less than 1 second. A beep occurs when the RED LED turns On .
Fault or Antenna Short Circuit	GREEN LED and RED LED will flash alternately with continuous beeps

LED Charging Indications

LED State	LED Indication
Power ON	RED LED illuminated while charger power is connected to FREEDOM7C and SCUBA7 (GU1000C)
Charging	GREEN LED and RED LED illuminated
Charged	RED LED illuminated and GREEN LED not illuminated

11 Product Specifications

Technical Specification	FREEDOM7 & SCUBA7 Specification
Maximum Operating Depth	50 metres (164 feet)
Storage Temperature	0°C - 60°C (32°F - 140°F)
Battery life	Nominal 300 charges for FREEDOM7 (GU1000B) & SCUBA7; Nominal 1000 charges for FREEDOM7 GU1000C).
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 - 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 Ocean Guardian Products Purchased in Australia & New Zealand:

CONSUMER PRODUCT WARRANTY

When you purchase an Ocean Guardian product, you have the peace of mind of knowing that your product is covered by Ocean Guardian's Standard Warranty. All Ocean Guardian products have a 1 year warranty and you can visit www.ocean-guardian.com to register your product and validate your product warranty. The Ocean Guardian Standard Warranty is provided by:

Ocean Guardian Limited (ABN 87 099 782 091)
Factory 1, 6A Prosperity Parade
Warriewood, NSW 2102 Australia
Phone (Australia & ROW): +61 2 9979 1748
Phone (Americas): +1 727 767 9990
support@ocean-guardian.com

NOTE: Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods.

GENERAL TERMS AND CONDITIONS

1.1 The benefits given to you in Ocean Guardian's Standard Warranty are in addition to other rights and remedies you have under law in relation to the products to which Ocean Guardian's Standard Warranty relates. Ocean Guardian 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 Ocean Guardian agrees to repair or replace at Ocean Guardian's cost the Ocean Guardian product, and any Ocean Guardian accessory supplied with the product, purchased by you in Australia or New Zealand from an Ocean Guardian 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 Ocean Guardian to register your claim and provide the details to enable Ocean Guardian to assess the claim. Or visit the Ocean Guardian support section located on the internet, contact details listed below.
 - b. Provide or make the product available to Ocean Guardian or an Ocean Guardian Authorized Service Centre as set out in the below or as otherwise agreed with Ocean Guardian. If you are required to return the product to a Ocean Guardian Authorized Service Centre, Ocean Guardian 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 Ocean Guardian Authorized Service Centre, unless transported by Ocean Guardian or its Authorized representatives.

1.6 Ocean Guardian and its Authorized Service Centers 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 Ocean Guardian disclaims liability for range, coverage, or operation of the Product and ancillary equipment as a whole under this warranty. Ocean Guardian 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 unauthorized 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 Ocean Guardian 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 Ocean Guardian products have a 1 year warranty. For service, return your product to Ocean Guardian or your local Retailer Service Centre.

13 Accessories

	<p>Neoprene Carry Bag: No. SU1800</p> <p>This sturdy neoprene carry bag keeps your FREEDOM7, FREEDOM7C, or SCUBA7 protected.</p>
	<p>Ocean Guardian Case (Hard): No. SU1804</p> <p>This hard case keeps your FREEDOM7, FREEDOM7C, or SCUBA7 well protected.</p>
	<p>FREEDOM7 Pouch & Flexilink: No. GU1252A</p> <p>Replacement FREEDOM7 and FREEDOM7C pouch.</p>
	<p>12V Ocean Guardian Charger: No. SU1614</p> <p>Charger comes with adapters for Australia, USA, Europe and Asia. Note: FREEDOM7 uses 18 volt DC output charger</p>
	<p>18V Ocean Guardian Charger: No. SU1614</p> <p>Charger comes with adapters for Australia, USA, Europe and Asia. Note: FREEDOM7C and SCUBA7 (GU1000C) use 12 volt DC output charger.</p>
	<p>Ocean Guardian Tester: NSN 4220/661582994</p> <p>Ensure your FREEDOM7, FREEDOM7C and SCUBA7 is in perfect working order at all times.</p>
	<p>Ocean Guardian Extended Warranty: No. WA1003</p> <p>Warranty which extends the standard 1 year warranty by 2 years.</p>