



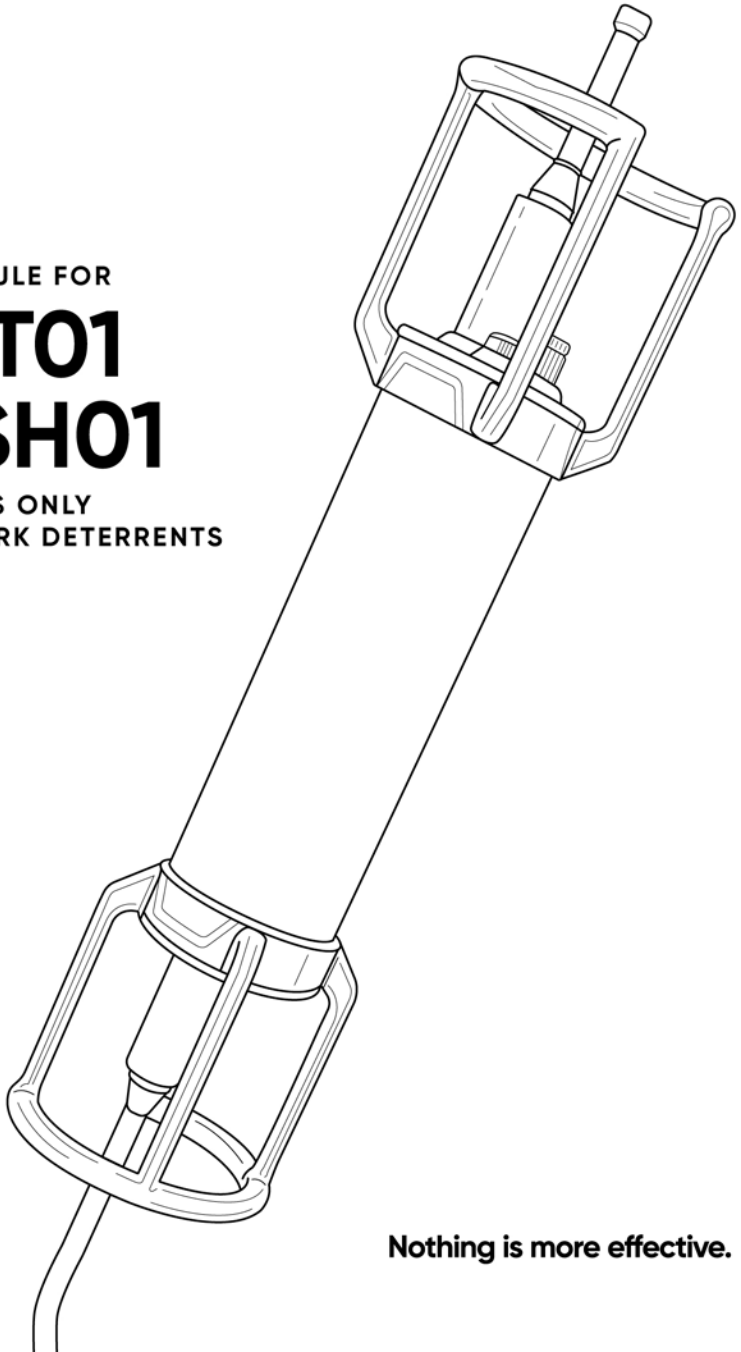
OCEAN
GUARDIAN

Powered by
Shark Shield® Technology

POWER MODULE FOR

BOAT01 & FISH01

THE WORLD'S ONLY
PROVEN SHARK DETERRENTS



USER MANUAL

Nothing is more effective.

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1 Warnings & Safety Information



1. Electrical power must be off before connecting or separating any connectors on the **POWER MODULE**.
2. DO NOT use the **CHARGER** or **POWER EXTENSION CABLE** as a tether with the **BOAT01** or **FISH01**. The **POWER CABLES** are NOT designed to take the strain of tethering the **BOAT01** or **FISH01** to the vessel. Always securely tether the **BOAT01 BUOY** or **FISH01** using a rope and not the **POWER CABLES**.
3. Keep away from children, this device is not a toy.
4. Carefully read instructions before use.
5. Sharks can be dangerous and often unpredictable creatures and we encourage people to use an Ocean Guardian when working in, or enjoying the sea, to minimize the risk of an unwanted shark encounter. 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.
6. 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.

7. Positioning of the Ocean Guardian is critical to the device's performance. Do not attempt to use the device in any way other than what is described in this user manual.
8. Ocean Guardian is designed for sea water use only.
9. 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.
10. **Power Module Battery Warnings:**
 - Do not use any charger other than that specifically provided for use with the **POWER MODULE**.
 - The **POWER MODULE** 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 **POWER MODULE**.
 - Avoid subjecting the **POWER MODULE** to mechanical shock.
 - Do not store the device longer than 1 month in a discharged state.
 - Do not store the device longer than 1 year without recharge.
 - The batteries in the **POWER MODULE** must be recycled or disposed of properly.
 - When transporting the **POWER MODULE** check the latest regulations in relation to air, sea and road transport of devices containing lithium-ion batteries, to ensure you comply with all regulations.
 - If lithium-ion batteries are packed with, or contained in equipment, then it is the responsibility of the shipper to ensure that the consignment is packed in compliance with the latest edition of the IATA Dangerous Goods Regulations section II of either Packing Instruction 966 or 967 in order for that consignment to be declared as NOT RESTRICTED (non-hazardous/non-Dangerous). If lithium-ion batteries are packed with or contained in equipment, UN No. is UN3481.

- For worldwide sea transportation see the IMO-IMDG code and special provision 188.
- For European road transportation see ADR special provision 188.

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. For the most up-to-date version of this user manual please visit our website.

2 How to Use the Documentation

Overview of this User Manual

Use this manual to learn how to:

- Assemble the Ocean Guardian BOAT01 and FISH01 products ready for use.
- Charge the Ocean Guardian **POWER MODULE**.
- Deploy and turn the Ocean Guardian on and monitor operational status.
- Understand charging and operational LED status indications.
- Store, test and follow a proper maintenance schedule is followed for the Ocean Guardian.

Manual Conventions



WARNINGS: Instructions that, if ignored, could result in death or serious personal injury caused by dangerous voltages or incorrect operation of the equipment. These must be observed for safe operation.



CAUTIONS: Instructions warning against potential hazards, or to detail practices that must be observed for safe operation and to prevent damage to equipment or personnel.



Important Note: Information important to installation, attachment or operation of equipment.

Typographic Conventions

- Operation states are in bold, e.g. **On/Off**
- Hardware elements are in bold capitals, e.g. **GREEN LED**

3 Introduction

Ocean Guardian is the world's leading shark deterrent technology company. Since 2001 the company's Shark Shield Technology has protected tens of thousands of ocean lovers and prevented the unnecessary killing of animals from environmentally fatal shark nets, drum-lines and shark culling.

Ocean Guardian's Shark Shield Technology is the only scientifically proven electrical shark deterrent supported by peer reviewed published research, and successful in deterring Great Whites. The technology is so effective government has approved the devices for consumer rebates. Nothing is more effective.

Sharks have short-range electrical receptors in their snouts used for finding food. Shark Shield Technology is used to create a powerful three-dimensional electrical field which causes spasms in these sensitive receptors turning sharks away. There are no known harmful effects on sharks or humans.

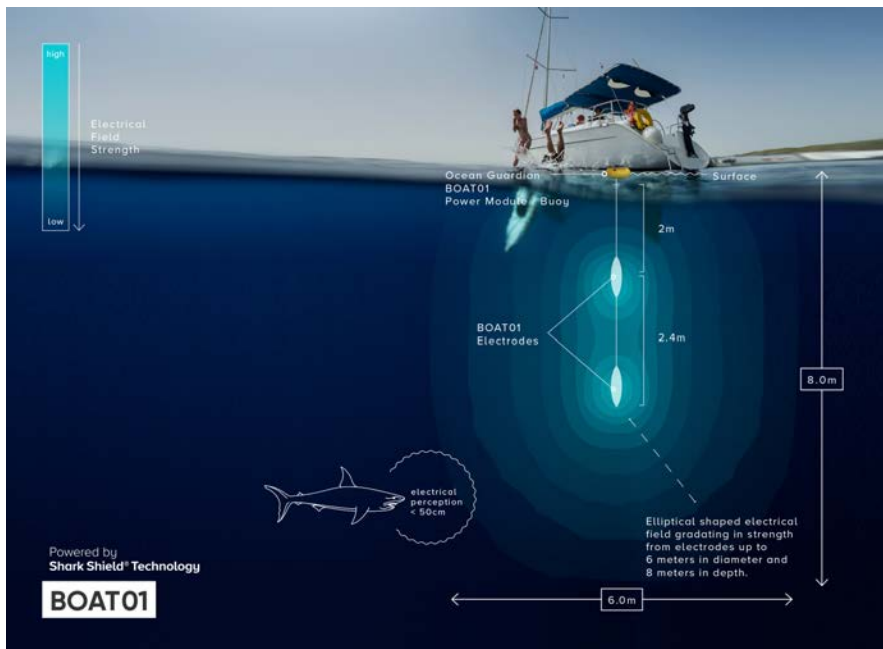
Ocean Guardian products are trusted by ocean goers around the world, whether you're swimming off your boat with family and friends, out seeking to land your next big fish, or simply heading off to enjoy a dive, snorkel or surf, our technology is here to enhance your ocean experience and provide peace of mind.

About the BOAT01

Powered by Shark Shield Technology, the Ocean Guardian BOAT01 is the world's first innovative long-range shark deterrent system designed specifically for boating. The BOAT01 is powered by Shark Shield Technology, the world's only scientifically proven and independently tested shark deterrent technology. Boat owners and their guests will have the confidence to enjoy the ocean anytime, anywhere. Imagine swimming off the back of your boat with the family knowing that everyone is protected by proven shark deterrent technology!

Easy to deploy off the back of any vessel, the new BOAT01 is based on the proven design of the Ocean Guardian FREEDOM7 dive product and provides a large and powerful protective swimming area. Powered by either the internal Lithium battery or from your vessel, you can also daisy-chain up to four devices to create a “virtual shark net”. The BOAT01:

- Delivers a powerful electrical field over 8 metres (26') deep and 6 metres (19') wide.
- Comes standard with 4.4 metre (14'5") antenna and optional 2.2 metre (7'3") antenna for shallower water, or an optional 6.8 metre (22'4") antenna.
- Supports up to four devices daisy-chained using the same vessel power cable.
- Can create a protective "virtual shark net" around the vessel.
- Offers annual safety testing and certification service.



About the FISH01

Say no to shark tax! The Ocean Guardian FISH01 is the world's first innovative long-range shark deterrent system designed specifically for fishing, and it is Powered by Shark Shield Technology, the world's only scientifically proven and independently tested electrical shark deterrent technology; fish off the back of your boat knowing that your catch is protected from the dreaded 'shark tax'.

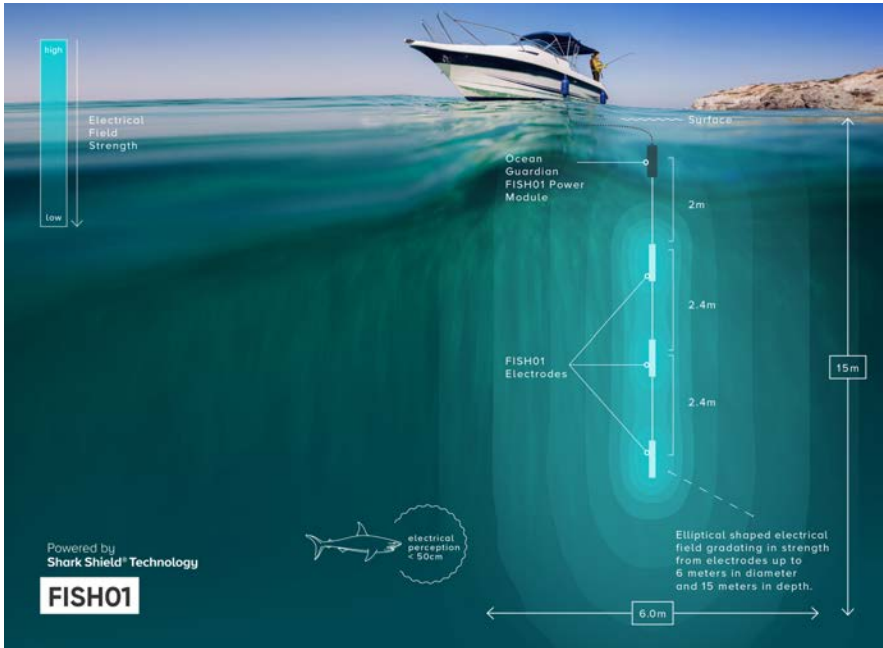
Sharks are opportunistic by nature and will naturally single out any food source that appears easy to exploit. Nowhere is a shark's opportunistic behavior more apparent than when fishing. It is well known among both the commercial and recreational fishing communities that a struggling fish is irresistible to sharks.

Significantly improve your catch rate with research showing the use of Shark Shield Technology in fishing resulted in:

- Preventing the majority of shark species from attacking hooked fish.
- A significant reduction in the number of predatory incidents.
- Improvements in the efficiency of fishing operations.
- Less time spent at sea.

Easy to deploy off the back of any vessel, the FISH01 is based on the proven technology in Ocean Guardian FREEDOM7 dive products. It provides a large and powerful protective area to keep your catch safe from sharks and features:

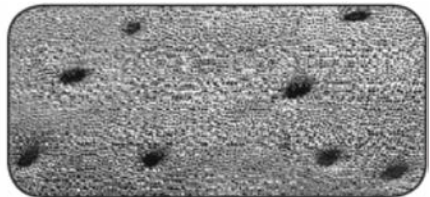
- Powerful electrical field created over 15 metres (49') deep and 6 metres (19') wide.
- Standard with 6.8 metre (22'4") antenna and optional 4.4 metre (14'5") or 2.2 metre (7'3") antenna for shallower water.
- 6.6 metre antenna has three electrodes, with the outer electrodes toggling between the centre one.
- Protect your catch at depths up to 200 metres (656').



Both the BOAT01 and FISH01 use the same Power Module which means if you purchase the BOAT01 you can remove the Power Module and use it as a FISH01 for fishing with the 4.4 metre antenna.

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 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 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 metre. When a shark approaches an Ocean Guardian, these electroreceptors are over-sensitized, causing the shark to turn away.

Ocean Guardian Electrical 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 capability, please visit our website at www.ocean-guardian.com/technology, or our Ocean Guardian YouTube channel.

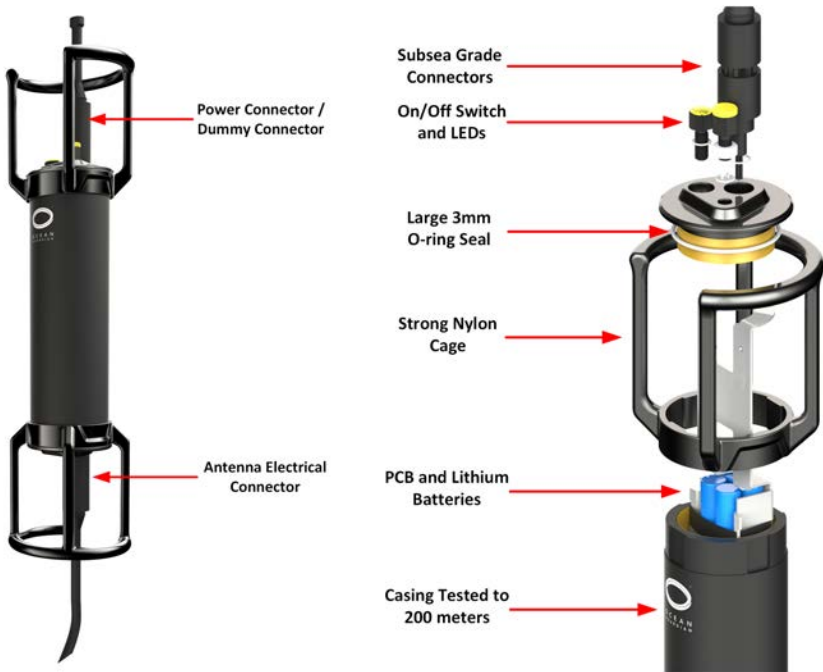
4 About the Power Module

The same **POWER MODULE** is used for operating both the BOAT01 and FISH01 products.

Ocean Guardian Power Module Features

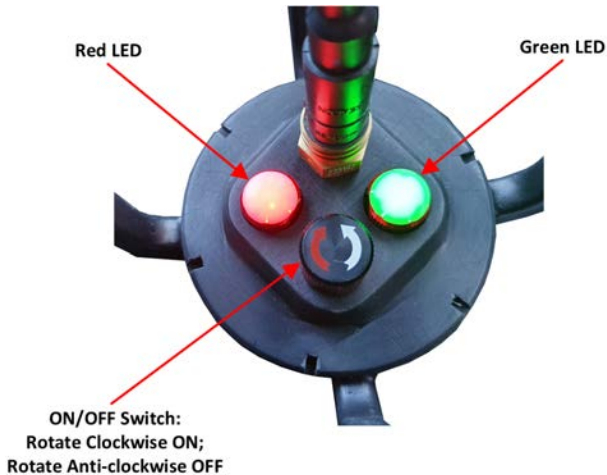
During operation the **POWER MODULE** can be powered from:

- The internal lithium battery for up to 10-12 hours.
- 12V/24VDC using the optional 6 metre (19'8") Ocean Guardian Tether **POWER EXTENSION CABLE** (Female-to-Male), which connects the device to vessel power for continual use.
- The optional Ocean Guardian Solar Power Accessory.



LEDs and Power On/Off

A rotary sub-sea **ON/OFF SWITCH** is used to activate and deactivate the device. Turn clockwise to activate the device and anticlockwise to deactivate the device. The **POWER MODULE** has a **RED LED** and **GREEN LED** which provide charging and operational status indications. For more details see [Operational LED Status Indications](#).



Sub-Sea Connectors



CAUTION:

- Electrical power must be off before connecting or separating any connectors on the **POWER MODULE**.
- When joining two sub-sea connectors DO NOT force the male pins into the female connector or pins may be damaged. Engage the connectors with firm and smooth connection without forcing them together, using the 'lead in' guide pin to ensure the connectors join correctly.
- Before use ensure the protective **DUMMY CONNECTOR** with a watertight sleeve is fitted at all times to the **POWER MODULE** to prevent water ingress and damage and corrosion to the charging connector.

Fixed sub-sea connectors on the **POWER MODULE** and associated power and antenna cables use a proven water expulsion mating process to achieve ratings of up to 10,000 psi.



5 BOAT01 Setup

Standard Items Shipped with the BOAT01

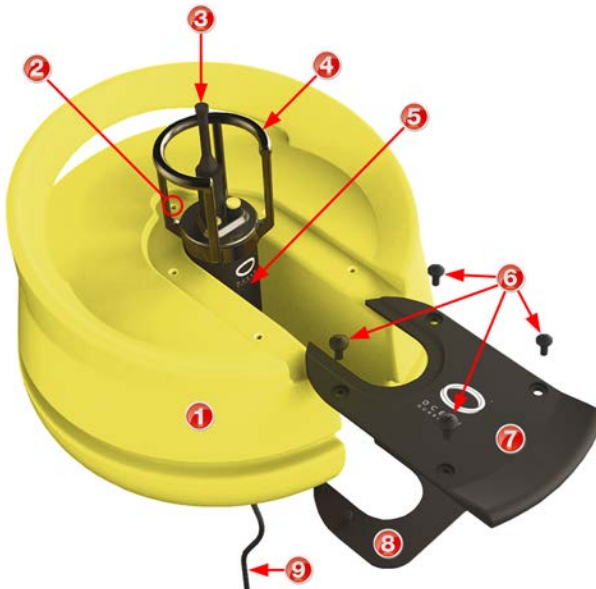
Ocean Guardian BOAT01

The standard Ocean Guardian BOAT01 bundle is shipped with:

- BOAT01 Buoy Yellow or White.
- **UPPER** and **LOWER MOUNTING BRACKET** and 8 x 10mm mounting bolts.
- **POWER MODULE** Electronics.
- 12/24v DC Power and Charging Cable (6M).
- 4.4 metre (14'5") **ANTENNA**.
- User Manual.

Note: Additional units can be daisy-chained together with a custom Y-connector which is available as an accessory.

BOAT01 Components



	Feature	Explanation
1	BOAT01 Buoy	Durable Roto Molded Construction.
2	Dive Flag Insert	Threaded insert for optional dive flag attachment.
3	Dummy Connector	Protective DUMMY CONNECTOR with watertight sleeve which must be fitted at all times to the POWER MODULE to prevent water ingress and damage and corrosion to the charging connector.
4	Nylon Cage	Strong nylon cage protects connections, LEDs and ON/OFF SWITCH .
5	Power Module	POWER MODULE with charging and antenna connectors. Ships with 12V/24V DC car/boat charger.
6	Mounting Bolts	8 x 10mm marine-grade 316 stainless steel Phillips head BOLTS for attaching the UPPER and LOWER MOUNTING BRACKET .
7	Upper Mounting Bracket	Strong nylon UPPER MOUNTING BRACKET for attaching the POWER MODULE . Requires 4 BOLTS .
8	Lower Mounting Bracket	Strong nylon LOWER MOUNTING BRACKET for attaching the POWER MODULE . Requires 4 BOLTS .
9	Antenna	4.4 metre (14'5") ANTENNA with two electrodes.

Assembling the Power Module and Buoy



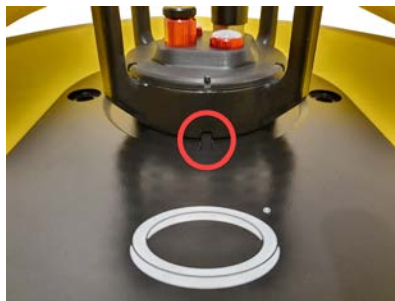
CAUTION:

- Electrical power must be off before connecting or separating any connectors on the **POWER MODULE**.
- When joining two sub-sea connectors DO NOT force the male pins into the female connector or pins may be damaged. Engage the connectors with firm and smooth connection without forcing them together, using the 'lead in' guide pin to ensure the connectors join correctly.

- Before use ensure the protective **DUMMY CONNECTOR** with a watertight sleeve is fitted at all times to the **POWER MODULE** to prevent water ingress and damage and corrosion to the charging connector.
1. Slide the **POWER MODULE** into the **BOAT01 BUOY** with the **POWER CONNECTOR** at the top and the open section of the **NYLON CAGE** facing towards the entry channel. Note: The grooves at the top and bottom of the **POWER MODULE** need to align centrally.



2. Slide the **UPPER MOUNTING BRACKET** into the top of the entry channel towards the **POWER MODULE**, taking care to align the groove in the **POWER MODULE** with the raised section on the **MOUNTING BRACKET**.



3. Insert 4 of the supplied 10mm marine-grade 316 stainless steel Phillips head **BOLTS** into the threaded inserts on the **BOAT01 BUOY** to fix the mounting **UPPER MOUNTING BRACKET**.



4. Slide the **LOWER MOUNTING BRACKET** around the base of the **POWER MODULE**, taking care to align the groove in the **POWER MODULE** with the raised section on the **MOUNTING BRACKET**.



5. Insert 4 of the supplied 10mm marine-grade 316 stainless steel Phillips head **BOLTS** into the threaded inserts on the **BOAT01 BUOY** to fix the **LOWER MOUNTING BRACKET**.



6. Attach the 4.4m (14'5") **ANTENNA** to the **ANTENNA CONNECTOR** at the base of the **POWER MODULE**.



7. Attach a rope to the **BOAT01 BUOY** to tether the device to the vessel.



Note: Both the BOAT01 and FISH01 use the same **POWER MODULE** which means if you purchase the BOAT01 you can remove the **POWER MODULE** and use it as a FISH01 for fishing with the optional 6.8 metre (22'4") **ANTENNA**.

6 BOAT01 Deployment



CAUTION: DO NOT use any **POWER CABLES** as a tether. The **POWER EXTENSION CABLE** is NOT designed to take the strain of tethering the **BOAT01 BUOY** to the vessel.

Attaching the Ocean Guardian 6 Metre (19'8") Power Extension Cable

If the optional **POWER EXTENSION CABLE** has been purchased for use with the **BOAT01 BUOY** it can be attached to the **POWER CONNECTOR** on the **POWER MODULE** for continual in-water use. Always securely tether the **BOAT01 BUOY** using a rope and not the **POWER EXTENSION CABLE**.

Deployment from a Vessel

When deploying the device:

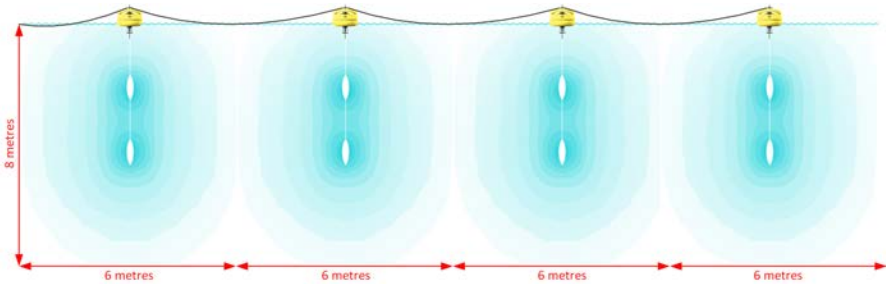
1. Securely attach a tethering rope to the handle on the **BOAT01 BUOY** before deploying the device from a vessel.



2. Lower the **BOAT01 BUOY** and **ANTENNA** into the water and secure the device to the vessel using the rope.

Daisy-Chaining the BOAT01

Multiple **POWER MODULES** can be daisy-chained together from a single vessel power source to create a virtual net using an optional Ocean Guardian **Y-CONNECTOR** and 6 metre **DAISY-CHAIN POWER CABLE (Male-to-Male)** for each extension. A maximum of four devices can be daisy-chained.



Attaching a Dive Flag

The optional Ocean Guardian Dive Flag can be attached to the threaded insert on the **BOAT01 BUOY** as required when using the device when diving. Note: Example flag shown not a dive flag.



7 FISH01 Setup

Standard Items Shipped with the FISH01

Ocean Guardian FISH01

The Ocean Guardian FISH01 is shipped with:

- **POWER MODULE** Electronics.
- 12/24v DC Power and Charging Cable (6M)
- 6.8 metre (22'4") **ANTENNA**.
- User Manual

Additional hardware required:

- At least 1kg (two pounds) of weight to attach to the **POWER MODULE**.
- A drop line of sufficient length.
- Cable ties.
- Lightweight sinker to keep the antenna vertical (optional)

About Using the FISH01

When deploying the FISH01 below a boat for fishing applications most anglers create a "drop line" and attach the **POWER MODULE** direct to the bottom of the line. Attach an effective weight to the **NYLON CAGE** on the **POWER MODULE** to submerge the device to the chosen depth.

The amount of weight required is dependent on current and drift, but at least 1 kg will be required. Using a fish release weight is one option. Diving belt weights are also worth considering. Essentially any weighty, compact object should work well. Be prepared to experiment with the amount of weight and have a system where weight can be added or subtracted depending on the conditions on the day. Aim to ensure the drop line hangs below the boat vertically if possible. This assists anglers to keep track of where the device is located in relation to their own lines and avoids tangles with the drop line.

Attaching FISH01 Components



CAUTION:

- Electrical power must be off before connecting or separating any connectors on the **POWER MODULE**.
- DO NOT use the **POWER EXTENSION CABLE** with the **FISH01 POWER MODULE** to avoid damage from the strain of tethering.
- DO NOT attach heavy weight directly to the **ANTENNA** or the sub-sea connectors may be damaged. A small weight, 500 grams (1lb) or less, may be added to the end of the **ANTENNA** to keep it vertical under the **POWER MODULE** if required.
- DO NOT anchor the device to a vessel using a metal chain as this may affect the operation of the electrodes and electric field.
- When joining two sub-sea connectors DO NOT force the male pins into the female connector or pins may be damaged. Engage the connectors with firm and smooth connection without forcing them together, using the 'lead in' guide pin to ensure the connectors join correctly.
- Before use ensure the protective **DUMMY CONNECTOR** with a watertight sleeve is fitted at all times to the **POWER MODULE** to prevent water ingress and damage and corrosion to the charging connector.

The FISH01 is configured by securing a rope to the **POWER MODULE** and attaching the **ANTENNA** to the unit. The device needs the addition of weight to ensure it will sink to the depths required for use when fishing. It is recommended that weight is attached to the **POWER MODULE** and **ANTENNA** prior to deployment as this is easier to configure than when at sea.

1. Insert the male **ANTENNA CABLE CONNECTOR** into the female **POWER MODULE ANTENNA CONNECTOR** at the base of the unit.

2. Attach a rope to the nylon cage at the top of the **POWER MODULE**.

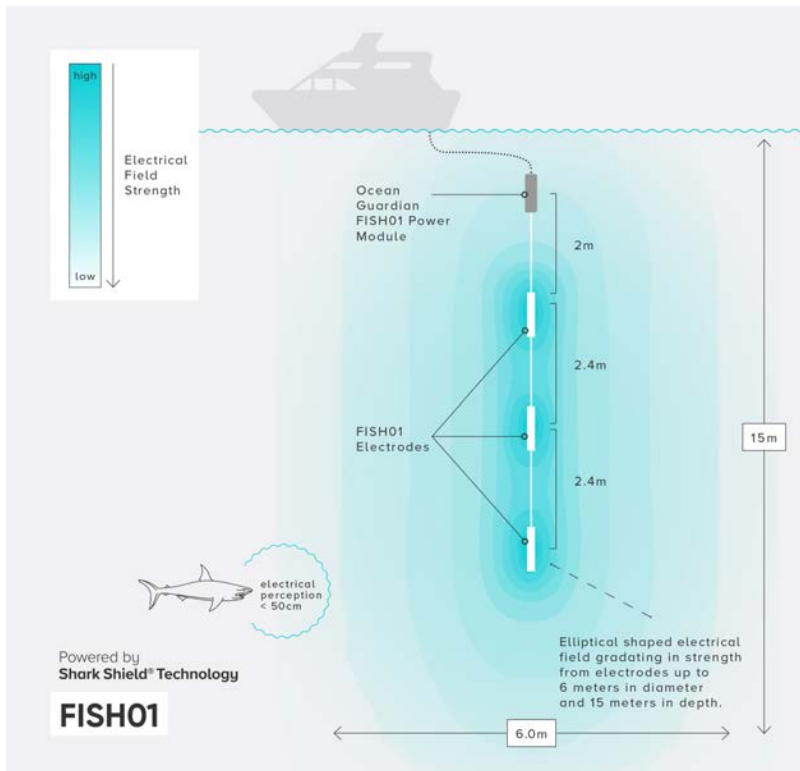


3. Attach at least 1kg (two pounds) of weight to the **NYLON CAGE** on the **POWER MODULE** to submerge the device to a preferred depth.
4. Extend the drop line from the **NYLON CAGE** on the **POWER MODULE** along the length of the **ANTENNA**, attaching it using cable ties. Allow a metre or so at the end of the **ANTENNA** to attach a lightweight sinker to keep the **ANTENNA** vertical if required.



8 FISH01 Deployment

Anglers using the Ocean Guardian FISH01 have observed an effective sphere of influence of approximately 15 metres (49') in depth and 6 metres (19'8") width. Use this information to position the device in the most effective position to deter sharks from taking hooked fish. Outer antenna electrodes toggle between the centre one during operation. Most anglers position the device to create a broad coverage zone from the surface to the bottom. In waters deeper than 20 metres (65') be prepared to experiment with the deployment depth. It can be impossible to predict where in the water column sharks are likely to strike fish. Anglers experimenting with Ocean Guardian devices generally try to position the unit as close to sharks as possible. This could be near the bottom, or close to the boat depending on the day.



9 Charging the Power Module



CAUTION:

- Electrical power must be off before connecting or separating any connectors on the **POWER MODULE**
- When charging and not in use the **POWER MODULE** requires 7.2Watt max.
- If charging and operational in water the **POWER MODULE** requires 9.4 Watt max.
- For 12VDC power supplies the current is 0.6A and 0.78A, therefore it is best to use a 1A adapter with 80% derating.
- For 24VDC please use a 0.5A adapter.
- When joining two sub-sea connectors DO NOT force the male pins into the female connector or pins may be damaged. Engage the connectors with firm and smooth connection without forcing them together, using the 'lead in' guide pin to ensure the connectors join correctly.
- We recommend storing the **POWER MODULE** with approximately 50% charge remaining. If the battery is completely discharged after use, only charge it for approximately half the recommended charge time, e.g. 3.5 hours. View the section in this manual titled [Operational LED Status Indications](#) for more details on battery charge status indications.

To charge the **POWER MODULE**.

1. Remove the **DUMMY CONNECTOR** from the **POWER MODULE** if it is attached.
2. Attach the male connector on the Ocean Guardian 6 metre **CHARGING CABLE** to the female **POWER CONNECTOR** on the **POWER MODULE**.



3. Attach the charging cable to a vessel's 12/24V DC power source and the **RED LED** and **GREEN LED** will illuminate while the device is charging. When the **POWER MODULE** is fully charged only the **RED LED** is illuminated.



Power Module Charging

4. After charging ensure the protective **DUMMY CONNECTOR** with a watertight sleeve is attached to the **POWER MODULE** to prevent water ingress and damage and corrosion to the charging connector during use.

10 Operational LED Status Indications

The Ocean Guardian **POWER MODULE** has a **GREEN LED** and **RED LED** to indicate operation states and the battery charge level.

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 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: RED LED flashes 3 times 20% Battery: RED LED flashes twice 10% Battery: RED LED flashes 10 times
Not Submerged	GREEN LED flashes approximately 4 times a second
Submerged - normal operation	GREEN LED is illuminated
Low Battery - 1/2 hour of operation remaining	The standard GREEN LED indication is interrupted every 3 seconds by a RED LED which flashes 4 times
Fault or Antenna Short Circuit	GREEN LED and RED LED will flash alternately

LED Charging Indications

LED State	LED Indication
Charging	RED and GREEN LED illuminated
Fully Charged	RED LED illuminated GREEN LED Off

11 Safe Storage and Regular Maintenance

Regular Maintenance

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.
3. Allow the Ocean Guardian to dry before placing it in storage. Avoid direct sunlight when drying the unit. Store it in a cool, dry place away from sunlight, preferably in the case shipped with the unit.
4. The device should be kept free of dirt and sand at all times.



Warnings:

- Thoroughly dry 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.

Power Module Storage

We recommend storing the Power Module with approximately 50% charge remaining. If the battery is completely discharged after use, only charge it for approximately half the recommended charge time, e.g. 3.5 hours. View the section in this manual titled [Operational LED Status Indications](#) for more details on battery charge status indications.

Care and Maintenance of Ocean Guardian Cable and Antenna Connectors

The sub-sea connectors require very little maintenance. They are designed to be used in harsh environments and limited amounts of dirt and grit do not affect their performance. It is recommended that, upon disconnecting or retrieving the system, the connectors are cleaned, to storage (if possible, remate with dummy plugs). Prior to deployment the following maintenance procedure is recommended:

1. Demate the connector set.
2. Flush connector interface with fresh water (deionized water if available), remove all dirt, grit and grease.
3. Inspect for damage in sealing areas, excessive corrosion, debonding of the cable and connector interface and cuts in the cable jacket.
4. Apply a thin film of dielectric compound (DC) grease, silicon based, to sealing areas of male connector and across the face of the female connector*. If the BC is removed from it's housing then replace facial o-ring and make sure that o-rings are lubricated and in good condition.
5. Mate the connector halves, wipe away any excess grease off the interface line of the mated set.



CAUTION:

- *The use of some oil-based propellants in spray cans can cause conductivity problems in neoprene.
- Only qualified technicians should perform the installation and maintenance of connectors on charging cables and antennas

Cable and Antenna Connector Continuity Preservation

Avoid sharp bends in cables. Cables subjected to vibration or exposed to seawater drag should be adequately clamped to prevent conductor fatigue and ultimate failure.

12 Warranty Registration and Annual Certification

After purchase it is essential to register for Ocean Guardian Warranty and Annual Certification reminders. Visit https://sharkshield.freshdesk.com/support/tickets/new?type=product_registration to register your Ocean Guardian product and ensure it is maintained for optimal performance.

Annual Certification and Testing

It is recommended that the BOAT01 and FISH01 is serviced and certified annually. Servicing is easy and efficient and includes:

- Replacement of Power Module components.
- Bench testing of device components.
- O-ring replacement.
- Annual service labeling and certification.
- Cleaning of the Antenna to remove 'tea-staining' from stainless steel electrodes.

13 Product Specifications

Product Feature	Specification
Maximum Operating Depth	Power Module depth rated up to 200 metres (656 feet)
Storage Temperature	0°C - 60°C (32°F – 140°F)
Operating Temperature	12°C - 40°C (53.6°F – 104°F) Lower temperatures will reduce operating time
Battery pack life	Nominal 1000 charges
Operating Time (in water)	10 - 12 hours (temperature dependent)
Out of water sensing / detection	Yes
Battery Type	ICR18650 7.4V/3200mAh battery pack, 3 packs x 3200mAh (6 cells total - 2 cells per pack)
Battery Charge Storage Life (off state)	6 months at 40% battery charge
Boat Charger	Input: 12/24VDC for boat charger Output: 7.0VDC~8.4VDC / 1200mA
Charge time: Car/Boat Charger	Up to 7 hours from empty battery to full
Output - During operation	115VDC pulses (30mh load)
Output - Time Between Output Pulses	0.65 seconds
Output - Short Circuit Protection	Yes
Protective Field Strength	>1v/m peak @ 1m from center of electrodes
Power Module Dimensions	545mm L x 140 mm W x 125mm H (21.45" x 5.51" x 4.92")
BOAT01 Buoy Dimensions	530mm L x 530mm W x 353mm H (20.87" x 20.87" x 13.9")
Upper Mounting Bracket Dimensions	330mm L x 188mm W x 20mm H (13" x 7.4" x 0.78")
Lower Mounting Bracket Dimensions	164mm L x 185mm W x 10mm H (6.45" x 7.28" x 0.39")
Power Module Weight	1.6kg (3lb 8oz)
BOAT01 Buoy Weight	4.72kg (10lb 6oz)
Upper Mounting Bracket Weight	600 grams (1lb 5oz)

Lower Mounting Bracket Weight	120 grams (4oz)
Antenna (4.4 metre; 14'5")	960 grams (2lb 1oz)
Charger Compliances	UL (UL60065/File no. E251844); FCC (Part-15/File no. LCS1502060308E); CE (EN55013/File no. LCS1502060307E); RCM (AS/NZS60065/SAA-161746-EA).

14 Warranty

Ocean Guardian (Shark Shield Pty Ltd) Standard Warranty

When you purchase an Ocean Guardian (Shark Shield Pty Ltd) product, you have the peace of mind in knowing that your product is covered by Ocean Guardian's Standard Warranty. All Ocean Guardian electronic products have a 1-year warranty (excludes accessories such as Tail Pad / Decal Antennas which have a 3-month warranty). The Ocean Guardian Standard Warranty is provided by Shark Shield Pty Ltd (ABN 87 099 782 091), Factory 1, 6A Prosperity Parade, Warriewood, NSW 2102, Australia.

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 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 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 an Ocean Guardian Authorised 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 If the product presented for repair is capable of retaining user-generated data, you are advised that repair of the product may result in loss of the data.

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

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





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

3.1 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.

All Ocean Guardian electronic products have a 1-year warranty (excludes accessories like Tail Pad / Decal Antennas which have a 3-month warranty). For service, return your product to Ocean Guardian or your local Retailer Service Centre.

15 Accessories

Part number: LR-BOAT01-YE	Ocean Guardian BOAT01 Yellow Buoy (4.4 metre (14'5")) antenna)
Part number: LR-BOAT01-WH	Ocean Guardian BOAT01 White Buoy (4.4 metre (14'5")) antenna)
Part number: LR-FISH01	Ocean Guardian FISH01 6.8 metre (22'4") antenna)
Part number: 	Ocean Guardian 110/220 AC International Charger AC to DC charger for charging the Power Module.
Part number: LR-CPE01 	Ocean Guardian 12/24VDC Car/Boat Charging Cable The BOAT01 and FISH01 come standard with a 6 metre power / charging cable with a cigarette lighter fitting for use with vessel 12/24V DC and a male connector for plugging into the Power Module.
Part number: LR-CTP01	Ocean Guardian Tether Power Extension Cable (6M) (Female-to-Male) Optional 6 metre power/charging cable for tethering the BOAT01 off the vessel with power connected, this is a female to male cable
Part number: LR-CTP02	Ocean Guardian Daisy-Chain Power Cable (6M) (Male-to-Male) Optional daisy-chain power cable for use with the Ocean Guardian Y-connector for daisy-chaining BOAT01 devices together. This is a male-to-male cable
Part number: LR-YC01	Ocean Guardian Y-connector Y-connector for daisy-chaining BOAT01 devices together from a single power source. Note: Requires an both an optional Y connector and optional daisy-chain power cable. Maximum of 4 devices can be daisy-chained.
Part number: LR-SPA01	Ocean Guardian Solar Power Accessory Solar accessory for Power Module charging.

<p>Part number: LR-PM00</p> 	<p>Ocean Guardian Power Module Only The BOAT01 and FISH01 use the same Power Module</p>
<p>Part number: LR-PM00C</p> 	<p>Ocean Guardian Power Module (with 6M Charging Cable)</p>
<p>Part number: LR-CAE0122</p>	<p>Ocean Guardian Antenna Electrode 2.2 metre (7'3") Optional BOAT01 short 2.2 metre antenna available for use with the BOAT01 in shallower water where the 4.4 metre antenna is too long.</p>
<p>Part number: LR-CAE0144</p>	<p>Ocean Guardian Antenna Electrode 4.4 metre (14'5") Standard BOAT01 4.4 metre antenna which creates an electrical field approximately 8 metres (26'3") deep and 6 metres (19'8") wide.</p>
<p>Part number: LR-CAE0168</p>	<p>Ocean Guardian Antenna Electrode 6.8 metre (22'4") Standard FISH 01 6.8 metre antenna which creates an electrical field approximately 15 metres (49'3") deep and 6 metres (19'8") wide. Includes three electrodes with two outer electrodes toggling between the middle electrode.</p>
<p>Part number: LR-BOATBB-YE</p> 	<p>Ocean Guardian BOAT01 Buoy Yellow (with Mounting Brackets) Yellow BOAT01 buoy with mounting brackets included.</p>
<p>Part number: LR-BOATBB-WH</p> 	<p>Ocean Guardian BOAT01 Buoy White (with Mounting Brackets) White BOAT01 buoy with mounting brackets included.</p>

<p>Part number: LR-BOATMB</p> 	<p>Ocean Guardian Power Module Buoy Mounting Brackets Only Mounting brackets with bolts.</p>
<p>Part number: LR-AHC01</p> 	<p>Ocean Guardian Hard Carry Case - LR Carry case for shipping and storage of the Power Module.</p>
<p>Part number: LR-ADF01</p>	<p>Ocean Guardian Dive Flag Dive flag attaches to an Ocean Guardian BOAT01 Buoy.</p>
<p>Part number: NSN 4220/661582994</p> 	<p>Ocean Guardian Tester Place the probes on device electrodes to test Power Module antennas and ensure they are in perfect working order at all times.</p>
<p>Part number: LR-WAE03</p> 	<p>Additional 2 Year Extended Warranty Extend the standard One Year Warranty on your Ocean Guardian to a Three Year Warranty. (excludes accessories)</p>