



The
Dolphin
Dissuasive
Device
DDD[®] 03
&
Dolphin
interactive
Dissuasor
DiD[®] 01



effectively reduce the interactions between marine mammals and long lines, trawls, purse seine, gill nets and aquaculture cages, for the benefit of the wildlife and the industry

DEPREDATION & BY-CATCH MITIGATION WITH DDD® 03 & DiD® 01

The **DDD** and the **DiD** have been designed to limit the interactions between marine mammals and the fishing nets. The goal is to protect both the animals safety and the fisheries' profitability. **STM** has developed these products in collaboration with prestigious research centers. Since the first tests the **DDD** achieved great success becoming the first solution that showed persistently positive results.

The **DDD** employment is very simple: it is just to be hanged to the nets. The **DDD** activates as it touches the water and then starts emitting special random ultrasound sequences. These have been studied to interfere with the cetaceans acoustical perception system in order to disturb the identification of the preys in the nets/lines. The random variation of the signals parameters avoids the mammals habituation. All **DDD** versions emit the same ultrasound sequences, they differ only by the duration of the intervals.

The last evolution of the **DDD** is the *interactive* model **DiD**. This device produces the same modulated signals as the **DDD** but only when it detects the presence of cetaceans in the area by perceiving their echolocation signals. This strategy improves the interference adding a surprise effect while it increases the batteries life and the charge duration. The placement of several **DiD** at a regular distance allows a chain reaction that protects the whole net/line.

There is scientific evidence demonstrating the **DDD** and the **DiD** reduce mammals by-catch and the damages to the nets, while increasing the target catch.

USE

The **DDD** and the **DiD** are to be placed at least 10 m below the water surface, up to 200 m. depth but not too close to the sea bed.

The signals reach 150÷200 m. all around (depending on the ambient conditions) and about 80 m. under the device.

The model, the number of units to place and the position respect to the nets depend on the type of net, the kind of fishing operation and the mammal species. The **STM** team will be pleased to offer advise for each particular situation.

TECHNICAL INFORMATION

The devices are ruled by a 16 bits microprocessor which manages the automatic switch-on when sunk in water, the low battery alarm, identifies the echolocation signals (**DiD**) and randomizes the output signals.

Emission frequency: from 5 to 500 kHz. Weight: 905 gr. Height: 210 mm. Diameter 61 mm. Tested pressure: 30 bar.

The device has a pack of internal rechargeable 1.6 Ah NiMH batteries (sealed).

MODELS	DDD 03L low frequency	DDD 03N normal freq.	DDD 03H high frequency	DDD 03U ultra frequent	DiD 01 interactive
color	yellow	yellow	orange	orange	green
batteries (hs)	300	120	40	12	> 300
use	aquaculture ports and exclusion areas	long gill nets aquaculture	short gill nets trawler purse seine	squid lines deep long lines	aquaculture gill nets long lines

ACCESSORIES



VOLTester

To know the battery charge level at any time



Battery Charger

The charging process takes 20 hours. Powered 230V or 110V



Float

It has been calculated to balance the devices weight on the nets/lines in order to maintain the fishing operation dynamics



MultiBatteryCharger MBC4

It charges up to 4 devices simultaneously. The display shows the battery charge level when a device is placed



STM PRODUCTS s.r.l.

Via Schiaparelli, 15 | 37135 VERONA | ITALY

Tel. +39 045 585700 | Fax +39 045 585730

info@stm-products.com

www.stm-products.com

