

## AIR GUN Diver Deterrent System

- Deployable system for short duration point protection of high value asset
- An acoustic impulse can create aversive reaction in divers
- Impulse effects are greater when diver is deeper or closer to source
- Air guns are highly reliable and consistent
- Multiple sequential shots produce greater effects than single shots
- The approach is scalable

The ever present underwater risk created by terrorist divers poses a serious threat to high value maritime assets. With correct levels of detection, identification, and warning. **Diver Deterrent System** can be used on a specific target. The DDS releases broadband low frequency acoustic energy which release a non-lethal acoustic bio effect on the suspected terrorist diver/s at a substantial distance from the high value asset. This causes the diver to surface making apprehension possible. The DDS can be fired remotely using encrypted Radio Frequency (RF) signals. DDS can also be delivered as a portable system easy to be deployed from the side of a Rhib or a Patrol Vessel. DDS can also be more permanently installed from a anchored buoy connected to a network system and as a network system.



Figure 1 Stationary Buoy System



Figure 2 Portable System

## Key Features

**Repeatable**, scalable response to the underwater terrorist threat under the control of the operator.

**Safety**, no explosives are handled by the operator or on-board the response vessel.

**Powered**, by self-contained batteries and air supply – no external power source needed to operate the system.

**DDS** utilizes a sophisticated air gun control system which may be remotely operated at a safe distance from the intruder.

**DDS** stationary network would consist of an array of Air-Gun systems deployed to protect a specific area from a single control unit.

**DDS** portable system consists of four components; energy storage unit, controls, cord and air gun. Each component is housed in a ruggedized waterproof case.

**DDS** systems provide a scalable deterrence that can be achieved by setting the frequency with which the pulses are transmitted, the creation of tones on the broadband output, the use of increased air pressure and an increased number of guns that are simultaneously fired maximizing the flexibility of the output.

## Technical Characteristics

- Up to 250,000 Pa/m Peak pressure generated
- Up to 200 atm, in the working chamber
- From 3-15 m Operational depth of the airgun
- Area of damage up to 50 m
- Repeatable recharge time 40 sec



Figure 3 Underwater blast by Air-Gun