



Cochran Undersea Technology

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Stealthy Diving

Diving stealthy is a broad subject and this Tech Pub will focus only on Stealthy Dive Computers. Cochran is the exclusive provider of dive computers to the U.S. Navy and other international militaries. A number of different models are available for a range of applications from covert SEAL missions to Explosive Ordnance Disposal (EOD) units. Discussed here are some of the dive computer attributes seen in those units.

Magnetic Signature

For EOD applications it is critical that the equipment used by the diver have an extremely low magnetic signature to prevent setting off a magnetic mine. After a very challenging design and careful monitoring of production, Cochran supplies the required product to world-wide militaries. Its magnetic signature is extraordinarily low, far below the Military requirement.

EMF Emissions

Typically, dive computers that consume a relatively high power may also emit significant EMF energy that can be detected by sensitive instruments. Furthermore, pixelated displays that have high power and fast scan rates can also have relatively higher EMF emissions. Cochran displays are not pixelated and use very low power with very low scan rates.

Audible Emissions

During underwater covert missions it is critical to avoid any sounds that could be picked up by hydrophones. These sounds could be caused by the dive computers audible warnings or mechanical noise caused by the dive computers attachment to the diver. The Cochran dive computers audible warning can be disabled via the Military Master version of the Analyst[®] PC software. Products are also designed to eliminate any noise created by the mounting hardware.

Visible Light Emissions

On a covert underwater mission, using a dive computer that has an illuminated display that can be seen from the surface or by another diver can be deadly. This can be a significant issue if using a dive computer with an OLED display or LED display that emits light over a wide spectrum typical of color displays. Red light does not propagate well underwater. All Cochran dive computers use a transfective segmented LCD display that reflects most of the ambient light such that it usually can be seen without any artificial or emitted light. Cochran units have an on-demand Red backlight for use in

very dark ambient light conditions. The backlight is turned on by the diver by tapping on the dive computer. The Red backlight stays on for ten seconds then automatically turns off. This ten second period can be changed via the Analyst[®] PC software.

For more information:

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- See Cochran Tech Pub: "**Task Loading**"