blue zone GROUP

UnderCurrents

December 2020 Issue 86

# Take a different view over the summer break!

Wishing you an enjoyable break and a different view on your screens! From all the team at BlueZone Group, we wish all of our customers and suppliers a very Merry Christmas and a Happy New Year!

Our crew has enjoyed supporting your work in Australia's deep oceans, coastal seas, rivers and water infrastructure in a tough year in 2020. We look forward to working with you in 2021 to stay Ahead of the Tide™ in all areas of science, business and industry.

**Christmas & New Year Shutdown: Newcastle and Perth**

Last working day: Friday 18 December

All offices re-open: Monday 4 January

# Unmanned Underwater Vehicles in the Maritime Domain

*Launch of Navy Remote and Autonomous System & Artificial Intelligence Strategy 2040*

On 9 October 2020 Chief of Navy Vice Admiral Michael Noonan launched the Navy's Remote and Autonomous System & Artificial Intelligence Strategy 2040 (RAS-AI Strategy).

The RAS-AI Strategy will build upon existing experience including that of the Defence Science and Technology Group that operates UUVs, including the REMUS 100 and REMUS 600, for testing autonomous vehicle concepts for tasks such as underwater survey and maritime mine detection.

Concurrently, the RAN operates REMUS 100 for hydrographic survey and seabed search and survey. This capability provides high-definition seabed search, depth rated up to 100m of water in addition to collecting soundings to meet charting standards in accordance with the International Hydrographic Organisation. The REMUS 100 can be deployed from a wharf, beach, zodiac or the Deployable Geospatial Support Teams recently introduced Survey Craft.

**REMUS Unmanned Underwater Vehicles in the Maritime Domain**

# Saab MuMNS ROV for MMCM Program

*World's first fully-integrated unmanned mine countermeasures system*

The "Maritime Mine Counter Measures" (MMCM) program is the first step in the renewal of the operational concept for mine warfare in France and the UK, based on the use of unmanned systems that could potentially replace traditional minehunters.

Saab's unique Multi-Shot Mine Neutralisation System (MuMNS) will be included as a powerful, reliable and adaptable vehicle that can be used in a variety of different roles, including live operational mine clearance, peacetime operations against historical

ordnance, mine investigation and underwater demolitions. The system is effective against a complete range of underwater targets: mines (ground, moored, floating and drifting), depth charges, torpedoes and IEDs.

A separate inspection or training round is not required for MuMNS enabling the team to "train as you fight" in harsh conditions including strong currents and tidal flows. This has never been more important as the introduction of unmanned and autonomous systems to Navy presents to the opportunity to revolutionise MCM warfare.

**Saab Multi-Shot Mine Neutralisation System (MuMNS)**

## Seaeye Falcon for Aquaculture Applications

*Ideal for aquaculture work, third Seaeye Falcon delivered to Aquaculture operator*

Reliability when working in extremely remote locations is a key reason for selecting the Seaeye Falcon for aquaculture applications. The Seaeye Falcon is rated the top underwater robotic vehicle in class worldwide, and Chile-based Underdeep's latest Falcon is the second 1000m deep-rated version for the company, who specialise in fish farm inspection and support throughout Chile and the region.

The new Seaeye Falcon DR is fitted with a five-function manipulator and soft rope cutter, a Kongsberg HDTV camera, B&W reverse camera, a BlueView multi-beam sonar and an Applied Acoustic high-end USBL — that is now fitted to all Underdeep's Falcons.

The Falcon's world-winning concept comes from having created a highly reliable vehicle packed with five powerful thrusters and Saab Seaeye's iCON™ intelligent power and distributed control architecture, all fitted into an easily handled metre-sized vehicle that can adopt different tools and sensors for undertaking numerous intricate and demanding tasks.

**Seaeye Falcon for reliable aquaculture applications**

## Work Inspirations Visit

*Engaging students for a future career in STEM*

In December BlueZone was pleased to host a 'Work Inspirations'' visit from Youth Express. Youth Express coordinate work placements for approximately 2000 students from 26 high schools in the Hunter Valley each year.

Mechatronics Engineer Dan Robins spoke with the students and Technician Joe Smith organised demonstration of a Double Eagle Remotely Operated Vehicle at short notice.

Iain Yule, Special Programmes Coordinator at Youth Express, thanked BlueZone for arranging the visit which supported engagement of students in the exciting underwater technology industry.

**Youth Express Work Inspirations Visit**

## BlueZone Support in the West

*Restructuring for Defence Remote and Autonomous Systems Support*

BlueZone is pivoting to meet the needs of Navy on the west coast following the announcement of the Remote and Autonomous Systems (RAS) Strategy to 2040. As an experienced and capable Defence SME, BlueZone has over 20 years' experience in support of RAS. The east and west coast facilities maintained by BlueZone enable local support for Navy systems on both coasts.

For the immediate future our workshop facility at Bibra Lake will be closed for non-Defence work. BlueZone will continue to support and service equipment that we sell and will maintain the capability to manufacture custom cable assemblies and complete subsea moulding work.

We appreciate your understanding of any delays in our RFQ responses during this transition.

If you have any questions in this regard, please contact Mark Musarra in our Perth office.

**RAS including Saab Double Eagle, Hydroid REMUS and MARTAC MANTAS supported in Australia by BlueZone Group**

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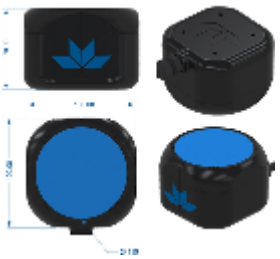
# New Products & Services

## Wayfinder DVL

***Precise Performance in a Pocket-sized Package***



Teledyne RD Instruments has announced the launch of the new highly anticipated Wayfinder Doppler Velocity Log (DVL).

The Wayfinder has been designed to provide Doppler navigation capability for micro vehicles, which are often constrained by stringent size, weight and budget limitations.

Measuring just 10 x 10 x 7 cm and weighing in at 850g, Teledyne RDI's new Wayfinder is ideally suited to address the needs of increasingly smaller subsea vehicles.

The Wayfinder DVL provides precession performance in a pocket sized package that makes it ideal for integration into micro ROVs and UUVs.

Performance matters: Wayfinder has demonstrated superior data quality compared with DVLs of similar size in in-water tests. Don't risk your mission's success to inferior solutions.

Key Features:

- Pocket-Sized Packaging
- Affordable
- Proven Reliability
- Easy to Integrate and Operate

**Precise Performance in a Pocket-sized Package**

**Top Five Reasons Why You Need a Teledyne RD Instruments Wayfinder Doppler Velocity Log**

## ArtemisPRO

The Artemis range of diver handheld sonar and navigation systems is a range of submersible consoles combined with a multibeam sonar, DVL and GPS navigation options designed for use by naval mine clearance divers, combat swimmers, commercial divers, police and search and recovery (SAR) divers.

The Artemis series is a family of handheld diver navigation systems with varying specifications and functionality. The PRO is the most capable, but if a DVL is not required, the ArtemisHHS (Handheld Sonar) is still a highly capable but a more cost-effective option. Other options include the ArtemisSAR with navigation and sonar and the ArtemisLite for navigation without sonar - further cost reductions tailored to meet a reduced capability specification.

**ArtemisPRO provides handheld navigation (DVL and GNSS), forward looking sonar, Diver Tracking, Messaging, Camera and Dive Light.**

**Blueprint Subsea - Artemis Diver Navigation Systems**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