

UnderCurrents

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# First REMUS Service in Australia

### Building a Sovereign Industry Capability in Unmanned Maritime Systems



BlueZone Group is pleased to announce that service of two Next Generation REMUS (NGR) 100 vehicles have been completed at their Unmanned Maritime Systems (UMS) workshop at Newcastle, NSW.

The NGR 100 Unmanned Underwater Vehicles (UUV) have been delivered to the Royal Australian Navy as one component of Project SEA1770 Rapid Environmental Assessment. Supplied by HII Hydroid, the NGR 100 vehicles are amongst the most advanced in the world and capable of performing hydrographic survey to meeting the demanding needs of Navy Deployable Geospatial Survey Teams.

BlueZone CEO, Elizabeth Karpiel, said that the REMUS support developed by BlueZone and Hydroid was built upon over 20 years' experience in UMS service, repair and modification conducted by BlueZone in Australia. "The sovereign capability for UMS support in Australia is a win-win for Navy and industry," said Elizabeth, "BlueZone provides a capable and dedicated support facility for Navy which means fast turnarounds on routine service, repairs, modification and upgrades, at the same time has grown an Australian industry capability that can support Navy now and into the future."

**Building a Sovereign Industry Capability in Unmanned Maritime Systems** 

## MARTAC MANTAS Accelerating Innovation in Unmanned Surface Vehicles

BlueZone supplier MARTAC has launched a new series of MANTAS Performance and Capability videos showing just how far the MANTAS unmanned surface vehicles have been developed. The MANTAS ballasting system and water-tight compartmentalisation virtually eliminates the risk of broaching. The simultaneous stowage and deployment of payloads, and the ballasting stern well-deck launch/recovery approach, provide flexibility and reduce the time required to complete missions such as MCM and ISR.

MARTAC has evolved the MANTAS over the past several years and continues to participate in fleet concentration exercises to put it into the hands of operators, building experience from real-world operations and feeding lessons-learner back into the evolving design. MARTAC shares the U.S. Navy's commitment—as well as the commitment of other navies—to making unmanned surface vehicles like MANTAS an important part of the war fighters' arsenal.





Accelerating Innovation in Unmanned Surface Vehicles

# DeepSea in the Challenger Deep

## First ever 4K video of Challenger Deep 10,925m



BlueZone supplier, DeepSea Power & Light, were excited to be part of The Five Deeps Expedition in 2019. The IP Multi SeaCam®, SeaBattery and LED SeaLite were utilised in this expedition on each of the seafloor landers. During these more recent dives, attached to the front of the sub "Limiting Factor" has been the IP OPTIM SeaCam® which includes the following features:

- 4K UHD real-time IP streaming protocols
- Days of continuous onboard 4K recording
- NTSC/PAL analog video monitor output
- 78° horizontal FOV at full wide
- Proprietary corrector optics
- 15.5x optical zoom
- Titanium housing depth rated to 6km, 11km option

First ever 4K video of Challenger Deep 10,925m

# Bravo for Falcon State-of-the-art manipulators add to Falcon tooling

The Saab Seaeye Falcon ROV is the most successful underwater electric robotic system of its class and is proven in numerous intricate and demanding missions across many commercial, security and scientific sectors. A key feature of the Falcon capability is the wide range of options, tooling and accessories developed over many years for demanding customer applications.



Adding to the Falcon tooling options, Sydney-based robotics start-up, Blueprint Laboratories, has integrated their Reach Bravo manipulator into the Falcon. The Reach Bravo is a range of tough, electric subsea manipulators changing the remote operations landscape for inspection class vehicles. With high accuracy (0.1°) joint positioning and intuitive control options, the Reach Bravo system is a must for operators in the new era of close inspection work and complex intervention.

### State-of-the-art manipulator adds to Falcon tooling

# BlueZone Birthday BlueZone Group 5 Years – ATSA Defence Services 20 Years

BlueZone Group staff took the time to celebrate significant milestones for two companies in September 2020.

ATSA Defence Services was founded in 2000 as the In-Service Support partner for Saab's Double Eagle Mine Disposal System operated from the HUON Class Minehunter Costal ships by the Royal Australian Navy. ATSA's important work providing a sovereign industry capability for unmanned systems support continues with more than 400 Double Eagle overhauls completed and many other activities to maintain, modify and modernise the Double Eagle system.

In 2015 BlueZone Group was created when ATSA Defence Services and UVS (formerly Underwater Video Systems, founded in 1973) were merged. BlueZone Group maintains an Australia-wide footprint operating from offices and fully-equipped workshops in Newcastle and Perth, offering local service, backup and sales to customers in markets including Defence; Offshore Oil & Gas, Oceanographic; Hydrographic Survey and Water Resources.

Newly appointed CEO, Elizabeth Karpiel, welcomed new starters to BlueZone including Business Administration Manager, Kathryn Bowdler, and also noted that many staff had been with BlueZone for several years, providing a continuity of service and deep understanding of underwater technology that was unrivalled in Australia. Many

suppliers have also been with BlueZone for many years and the strength of the relationships with customers, staff and suppliers was a source of ongoing trust and respect that enabled and innovative approach to the challenges of working in Australia's oceans, coastal seas and rivers.



# **EVENTS**

Please join BlueZone Group at these upcoming events!

We are keen to talk to you about how innovative new technologies offered by BlueZone can solve issues for your challenges in Australia's oceans, coastal seas, and rivers.

We are happy to answer your questions and arrange on-site demonstrations and further discussion if required.

## 2020 ANI Goldrick Webinars - Remote and Autonomous Systems at Sea

The Australian Naval Institute in partnership with the Naval Studies Group at the University of NSW – ADFA, the Royal Australian Navy and the Submarine Institute of Australia will present the 2020 ANI Goldrick Webinars overviewing Remote and Autonomous Systems at Sea. The Goldrick Program will comprise eight webinars each approximately one hour in duration conducted weekly (Wednesday 1300-1400 AEDT) over eight weeks.

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BlueZone will present at two webinars:

Webinar 6: RAS in the Undersea Domain – 11 November 2020

Theatre ASW – Off board DCL Using Wave Gliders, Darren Burrowes, Chief Technology Officer, Blue Zone Group

Webinar 8: Evaluating and Sustaining RAS Capabilities – 25 November 2020

Sustainment of RAS Systems, Mr Neil Hodges, CEO, Blue Zone Group



The Wave Glider SV3 v300 and the Double Eagle Mine Disposal System will be amongst the subjects covered by BlueZone in the 2020 Goldrick Webinars.

2020 Goldrick Webinars: Remote and Autonomous Systems at Sea – Program

# 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 & Operate

Precise Performance in a Pocket-sized Package



### **RESON SeaBat F30 sonar**

Understanding the most unique sonar from Teledyne Marine

The RESON SeaBat F30 sonar, is a unique and highly capable sonar that provides simultaneous 3D Forward Looking Bathymetry and 2D Imaging optimised for Uncrewed Underwater Vehicle (UUV) platforms. The unique features of the sonar include:



- 200kHz forward looking bathymetry (3D mode)
- 635kHz high resolution 2D imaging
- Switching between forward looking and imaging modes

The sonar has recently been ported to the latest Reson platform – the T-Series platform – making it robust and cost-effective technology that is non-ITAR. This provides new acoustic arrays and electronics technology. The footprint of the receiver is reduced to almost half that of its predecessor and the depth rating has been increased from 3000m to 6000m. The T-series processing provides improved imaging and a faster switch between forward looking bathymetry and 2D imaging.

#### **RESON SeaBat F30 sonar**

### DISCONTINUED PRODUCTS

### DeepSea Power & Light - 6V SeaBattery

DeepSea Power & Light have advised that the 6V-210Amp-hour SeaBattery® Power Module has been discontinued due to low market demand. This in no way affects the availability of the remaining 12V, 24V, or 48V configurations.

### DeepSea Power & Light - Multi SeaLite Frosted Dome

The frosted dome for the Multi SeaLite is no longer available

### AML Oceanographic - Blue X•change Line End of Life Notice

On September 1, 2020 AML Oceanographic launched its new product line, referred to as X2•change (aka Orange Line). Identified by orange sensor collars, this ecosystem is the next evolution of AML's original Xchange™ technology, reflecting AML's decades of instrumentation experience and feedback from a global user base. Details of the new line may be found at <u>https://amloceanographic.com/news/orange-is-here/</u>.

If you have an existing or future project and/or tender planned that specifically calls out a Blue Line (original X•change) instrument, please contact BlueZone by 15 October 2020 to discuss options.

The end of life schedule for the Blue Xchange<sup>™</sup> Line is as follows:

Current inventory forecasts availability of the following instruments through the following dates. Note these dates are subject to change based on inventory drawdown:

- · BaseX2 100m No longer offered.
- · BaseX2 500m 1 November 2020
- · SmartX 500m 1 December 2020
- · SmartX 6000m 1 March 2021
- · MicroX 1 December 2020
- · MetrecX/XL 500m 1 December 2020
- · MetrecX/XL 6000m 1 March 2021
- · PlusX 1 March 2021
- · MinosX 1000m 1 March 2021

· MinosX 6000m - 1 March 2021

The remaining end of life plan is as follows:

- · Calibration of Blue Xchange<sup>™</sup> sensors will continue for the foreseeable future.
- · Blue Xchange<sup>™</sup> Sensors (SVx, Px, etc) will remain available for sale until December 31st 2025.
- · General service of instruments will continue until at least December 31st 2025.
- · Parts availability for service will continue until at least December 31st, 2022.

· All orders for the corresponding products will qualify for an automatic upgrade to their Orange Line replacements within 30 days prior to the EOL date.

It is also worth noting that the Orange (X2•change) and Blue (X•change) sensors are not cross compatible in that:

- · Blue Sensors are not compatible with Orange Instruments
- · Orange Sensors are not compatible with Blue Instruments

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