

## Double Eagle Next Generation Technology at Multinational Mine Warfare Exercise

*Key technology utilised in the Mine Warfare task*



The Double Eagle Mine Disposal System operated from the Huon Class Minehunter Coastal has continued to prove to be a potent capability at the Multinational Mine Warfare Exercise (MIWEX 19) off the coast of the Republic of Korea.

Unmanned Underwater Vehicles (UUV) and autonomous systems can undertake Search, Classification and Identification tasks for Minewarfare. For the final step, Disposal, only divers or tethered Remotely Operated Vehicles (ROVs) can provide the real-time control required to re-acquire a contact and then deploy a counter charge to destroy it. Only a powerful electrical vehicle like the Saab Double Eagle Mk II ROV can provide reliable mine disposal capability in all of the environmental conditions that may be encountered in Australia's area of operations, including strong currents and turbid waters with zero visibility.



[Saab Double Eagle Mk II ROV MIWEX 19 off the coast of the Republic of Korea](#)

## REMUS Training at Jervis Bay

*BlueZone and Hydroid support training of Navy Deployable Geospatial Survey Teams*

BlueZone and Hydroid have been pleased to complete extensive training of Navy Deployable Geospatial Survey Teams at Jervis Bay, NSW. The pristine waters of Jervis Bay provided the ideal location for operational training of Navy teams.

The Hydrographic, Meteorological and Oceanic Group's four Deployable Geospatial Survey Teams have been introducing a number of new capabilities since the Maritime Geospatial Warfare Unit was stood up in October 2018. The Remus 100 Autonomous Underwater Vehicles (AUVs) join a range of new technologies, including the Fly Away Survey Kit and Survey Craft.



[REMUS Training at Jervis Bay](#)

## Measuring Coastal Currents Using ADCPs on AUVs

*Revealing Transport and Spread of Effluent and Water Properties*

The invention of the Acoustic Doppler Current Profiler (ADCP) revolutionised studies of coastal circulation worldwide. Working from moving vessels, ADCP operators measure continuous transects of full-depth current profiles, often around consecutive circuits throughout a tidal cycle. Autonomous Underwater Vehicles (AUVs) can replace boats in coastal surveys, observing both flow fields and water properties continuously and concurrently—for instance, while tracking effluent plumes or river discharge.

Vehicles fitted with a Teledyne RDI Doppler Velocity Log (DVL) carry an embedded ADCP, which can measure coastal currents at many depths simultaneously—above and below the vehicle if a dual head is installed—while the AUV flies at a constant depth.



#### [Measuring Coastal Currents Using ADCPs on AUVs](#)

## BlueZone Supports Team Orca for Subs in Schools

Western Australia Overall Champions to compete at National Finals

BlueZone is pleased to announce support for “Team Orca” of the Newton Moore Senior High School of Bunbury WA for the 2019 Subs in Schools’ competition.

After three days of competition at the 2019 WA State Subs in Schools Finals, Team Orca were awarded 11 out of 12 possible certificates and named 'Overall Champions' of the division. Team Orca has received an official invite to the National Finals in Adelaide, December 9-11, and are currently preparing and improving for the next level of competition.



Team Orca has high aspirations and hopes to finish in the top three teams in Australia - Go Team Orca!

#### [Team Orca to compete at National Subs in Schools Finals](#)

## BlueZone Supports 2019 Navy Interservice Golf Team

BlueZone Group has supported Navy Golf in the ACT Interservice Matchplay Championships staged at Mollymook in October 2019.

The Navy team was not quite victorious. It was a very close-run thing, with Navy drawing 6-6 with Air Force and then being beaten 7-5 by Army.

#### [Navy ACT Interservice 2019 Team at Mollymook, NSW](#)



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## 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.

## Teledyne Marine Asia Technology Day – 18 to 19 February – George Town, Penang Island, Malaysia



Join BlueZone staff for two days of presentations, live demonstrations and networking. Internal and external speakers will introduce the Teledyne Marine product range and highlight some of the most interesting applications. The second day is dedicated to live demonstrations. Teledyne Marine will showcase a range of their newest and most popular products on-water and at the dockside. During the two days, you will have the opportunity to network and share with our team and your industry peers.

[Teledyne Marine Asia Technology Day 2020](#)

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## New Products & Services



### Lithium Battery Pack for Workhorse ADCP

Workhorse Lithium Battery Packs triple the duration of your ADCP deployments, compared with RDI standard alkaline batteries. The Battery Packs can be used in Workhorse Sentinel, Workhorse Long Ranger and Workhorse Quartermaster. The packs can be used interchangeably in any of these instruments.

The packs are too large to fit inside the Long Ranger battery holders, but they can be installed directly inside the case without the holders. All you need to add is a plate on the end to hold them in place. This works well because the lithium battery packs are light. They are only 60% of the weight of an alkaline pack.

BlueZone is importing lithium battery packs for stock and immediate distribution with expected availability in January 2020.

[Lithium Battery Packs for Extended ADCP Duration](#)

## Safe-Moor™

*Affordable, Reliable, Durable Conservation Moorings*

Safe-Moor™ provides advanced mooring technology to protect the environment with the advantage of a smaller watch circle and mooring versatility for water depth and load bearing.

Reduce habitat destruction while using a durable, reliable and affordable mooring. Safe-Moor™ is an ecologically friendly conservation mooring solution, with the strength and safety for all mooring scenarios

Unlike conventional chain moorings, Safe-Moor™ eliminates habitat destruction and scouring, encouraging the restoration of endangered seagrass and coral reefs. Safe-Moor™ also provides the strongest and most secure mooring solution for your vessel.



[Safe-Moor](#)

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