

Four Unmanned Surface Vessels Being Demonstrated in RIMPAC



The large unmanned surface vessel Ranger transits the Pacific Ocean to participate in Exercise Rim of the Pacific (RIMPAC) 2022. *U.S. NAVY / Mass Communication Specialist 1st Class Tyler R. Fraser*

WASHINGTON, D.C. – Four prototype unmanned surface vessels are participating in the Rim of the Pacific 2022 exercise, known as RIMPAC, delivering warfighting capabilities and extending the reach of the manned U.S. fleet with fewer risks to the warfighter, Program Executive Office Unmanned and Small Combatants Public Affairs said July 22.

Though unmanned systems have participated in exercises before, the involvement of four different vehicles, operating both autonomously and by manned teams, is a major milestone.

The vessels – Seahawk, Sea Hunter, Nomad and Ranger – will execute a range of missions. The prototypes will work side-by-side with exercise participants, carrying payloads, providing intelligence, and most significantly, gathering data in a real-world environment to determine how they will function in the larger fleet.

The significance of the occasion is not lost on Navy Capt. Scot Searles, program manager of the Unmanned Maritime Systems (PMS 406) program office.

“The integration of autonomous USVs with manned combatants will give fleet commanders much-needed enhancements to maritime domain awareness, thereby increasing decision speed and lethality in surface warfare.” Searles said.

PMS 406, the office responsible for the participating RIMPAC prototypes, is a program office within the Program Executive Office, Unmanned and Small Combatants.

“While our prototyping efforts have grown and matured significantly in the last four years, their performance in the RIMPAC exercise marks another significant milestone in manned-unmanned teams.” Searles said.

The manned-unmanned team, in the case of RIMPAC, will include service members and civilians supporting the mission from various organizations all over the country.

The PMS 406 assets participating in RIMPAC are the Overlord unmanned surface vehicles, Nomad and Ranger, and the medium unmanned surface vehicles, Sea Hunter and Seahawk. Though primarily operated and maintained under the control of PMS 406, personnel from Unmanned Surface Vessel Division One within Surface Development Squadron One control much of the practical execution.

RIMPAC is the largest joint maritime exercise in the world. Lasting over five weeks and spanning massive areas in the

Pacific Ocean, the exercise will include hundreds of ships, submarines and aircraft, along with over 25,000 personnel.

Brian Fitzpatrick, PMS 406 principal assistant program manager for unmanned surface vessels, said, "RIMPAC is an incredible opportunity to not only show that we can develop these vessels, but we're also showing the Navy's commitment to unmanned and manned teams."

Navy F/A-18 Launches AARGM-ER for Third Live-Fire Test



Northrop Grumman's Advanced Anti-Radiation Guided Missile Extended Range (AARGM-ER) is launched from a U.S. Navy F/A-18 Super Hornet. *U.S. NAVY*

LOS ANGELES – Northrop Grumman Corp. successfully completed

the third live fire test of its AGM-88G Advanced Anti-Radiation Guided Missile Extended Range (AARGM-ER), the company said July 21.

The U.S. Navy launched the missile from an F/A-18 Super Hornet aircraft recently at the Point Mugu Sea Range off the coast of California. Utilizing its advanced emitter acquisition system, the missile detected a land-based threat and engaged the threat system.

“The Navy requirement for AARGM-ER is now,” said Captain A.C. Dutko, Navy program manager for Direct and Time Sensitive Strike (PMA-242). “AARGM-ER performed as expected and detected, identified, located and engaged a land-based air defense radar system. The continued success of our developmental testing moves the program closer to fielding and providing the aircrews with the protection they need to remain ahead of adversary threats.”

Since achieving a Milestone C Decision in September 2021, AARGM-ER prime contractor Northrop Grumman has continued to lead its industry team in timely development of critically needed warfighting capability. LRIP Lot 1 AARGM-ER missiles are currently in-production to support initial operational capability fielding. LRIP Lot 2 missiles, under contract, will further augment the inventory in the fleet.

AARGM-ER is being integrated on the Navy F/A-18E/F Super Hornet and EA-18G Growler aircraft as well as the F-35 aircraft.

State Dept. Approves Possible Sale of JASSM-ER Missiles to Australia



Maj. Jacob Rohrbach, a pilot assigned to the 40th Flight Test Squadron at Eglin Air Force Base, Florida, releases the first Joint Air-to-Surface Standoff Missile – Extended Range from an F-16 over the Gulf of Mexico on Sept. 19, 2018. *U.S. AIR FORCE / Master Sgt. Michael Jackson*

WASHINGTON – The State Department has approved a possible Foreign Military Sale to the government of Australia of Joint Air-to-Surface Standoff Missiles – Extended Range (JASSM ER) and related equipment for an estimated cost of \$235 million, the Defense Security Cooperation Agency said July 21.

Australia has requested 80 JASSM ERs (AGM-158B with telemetry kits and/or AGM-158B-2 configurations).

“Also included are missile containers and support equipment; JASSM training missiles; weapon system support; spare parts, consumables, accessories, and repair/return support;

integration and test support and equipment; personnel training; software delivery and support; classified and unclassified publications and technical documentation; transportation; U.S. government and contractor engineering, technical and logistics support services, studies and surveys; and other related elements of logistical and program support," the release said.

"The proposed sale will improve Australia's capability to meet current and future threats by providing advanced, long-range strike systems for employment from Royal Australian Air Force air platforms including, but not limited to, the F/A-18F Super Hornet and F-35A Lightning II," the announcement said.

The principal contractor will be Lockheed Martin, Orlando, Florida.

New Zealand's First Boeing P-8A Poseidon Rolls Out of Paint Shop



Boeing debuted the first P-8A Poseidon aircraft for New Zealand on July 21. *BOEING*

RENTON, Wash. – Boeing debuted on July 21 the first P-8A Poseidon aircraft for New Zealand in its Royal New Zealand Air Force livery, the company said in a release. New Zealand is one of eight nations to have acquired the P-8 as their new multi-mission maritime patrol aircraft.

“The aircraft features the iconic Kiwi roundel, a native bird to New Zealand,” said Sheena Vince Cruz, Boeing P-8 Asia-Pacific region program manager. “Although flightless, the Kiwi bird is recognizable and will continue ‘flying’ as a symbol on the P-8A for decades to come.”

The New Zealand government purchased four Boeing P-8A Poseidon maritime patrol and reconnaissance aircraft that will eventually replace the current fleet of six aging P-3K2 Orion aircraft. The P-8As will provide advanced capabilities to maintain situational awareness in neighboring waters on and below the surface of the ocean.

First flight is scheduled in the coming weeks followed by mission systems installation. The aircraft is scheduled to be delivered to the New Zealand Ministry of Defence later this year.

MARTAC Demonstrates Surveillance Potential of USVs for U.S. Navy



A Maritime Tactical Systems unmanned surface vessel used in Autonomous Warrior 22 in Australia. *MARTAC*

ARLINGTON, Va. – A family of high-speed unmanned surface vehicles has been getting a lot of play in naval exercises over the last year, helping the U.S. Navy to determine future requirements for USVs in roles such as maritime domain awareness.

Maritime Tactical Systems (MARTAC) operates a fleet of USVs the Navy has used in experimentation in such areas as the U.S. Naval Forces Central Command region and Australia.

The MARTAC USVs are contractor-owned and contractor operated. The small, fast craft can be operated in any weather. They are equipped with a forward-looking infrared sensor and can be fitted with various other sensors as the mission demands, such as signals intelligence sensors and sonars.

The missions being performed this summer require the MARTAC craft to be “a remote surveillance platform that can get places quickly and hang out for extended periods of time with high-res cameras,” said Bruce Hanson, CEO of MARTAC, a company based in Melbourne, Florida.

Hanson told *Seapower* that MARTAC’s USV’s participated in several demonstrations in International Maritime Exercise 22 under the control of Task Force 59, the U.S. 5th Fleet’s task force for experimentation of unmanned systems. The USVs also participated in Autonomous Warrior 22 in Australia.

“We’re too small, too dumb to realize what we can’t do, so we did a lot of stuff that people said we really couldn’t do, then we’re pretty successful at it, so some people are going to realize that these things operate pretty well,” Hanson said. “There are no going to replace people, but they are going to augment and enhance capabilities by a lot.”

Hanson said the company’s Devil Ray USV has extended persistence and would be a good partner with Saildrone’s USVs, which also have operated with Task Force 59. With its high speed, the Devil Ray can intercept a contact detected by a Saildrone.

The Devil Ray “can also protect the Saildrone,” Hanson said. “We can do things like picket lines ... [and] non-lethal interdiction.”

He said the ranges on MARTAC's USVs is greater than 1,000 nautical miles. MARTAC has sent its USVs, which are designed to be autonomous but can be optionally manned, on autonomous runs from Florida to the Bahamas and back.

The USVs can be shut down remotely and reactivated on command. Hanson said during Autonomous Warrior the company demonstrated the autonomous "launch and recovery of a T-12 USV off of the back of a T-38 USV." He said the boats work very well in swarms or groups.

MARTACs family of USVs include the man-portable Manta series – 12 feet or less – which are battery and solar electric-powered. The Devil Ray series is 24+ feet long and can be diesel-or gasoline-powered. The company is working on hybrid versions, including fuel cells for power, which give exceptional range.

The various MARTAC craft have a high degree of component interchangeability, Hanson said. They are payload agnostic. They can be operated by different control systems with the flick of a switch, enabling the same craft to be operated by different nation's navies.

Hanson said the MARTAC USVs will be participating in future large-scale exercises, including one in 2023.

HII Positions Senior Team to Accelerate Newport News

Shipbuilding Transformation and Execution



Newport News Shipbuilding's Needy, Caccavale and Glass. *HII* NEWPORT NEWS, Va. – HII's Newport News Shipbuilding division announced July 20 several promotions designed to optimize its shipyard operations and accelerate execution.

"We have been on an aggressive journey to transform the way we run our business. Accomplishing this transformation while running our complex business is not a simple task," said Jennifer Boykin, president of Newport News Shipbuilding. "Our Navy customer expects us to deliver ships on time and on budget so they can meet the evolving demands of the global security environment. Our ultimate success depends on the acceleration of these efforts led by experienced leaders."

Boykin announced several leadership changes, effective immediately.

Matt Needy moves to vice president and chief transformation officer, from vice president of Navy programs. In this new position, the 34-year shipyard veteran is responsible for the overall Newport News strategy execution, advanced development

of business growth, including the next-generation attack submarine SSN(X), enterprise-wide continuous improvement, overall operational health and risk-opportunity management.

With Needy's transition, Bryan Caccavale moves to vice president of Navy programs, from vice president of material and manufacturing. In this role, Caccavale's diverse leadership and strong financial experience will benefit program execution and financial performance of the ships built and maintained by Newport News.

Additionally, the material and manufacturing parts of Newport News are being restructured back into two stand-alone divisions. Julia Jones remains vice president of manufacturing, while Cullen Glass, director of supply chain procurement, moves to vice president of supply chain management. In this role, Glass is responsible for all procurement, outsourcing and material logistics functions across Newport News.

These leadership changes build on a multi-year shipyard modernization effort to enable safe and efficient delivery of the highest quality aircraft carriers and submarines, the company said. The modernization effort, including the shipyard's Integrated Digital Shipbuilding program, has been instrumental in recent completion of the first USS Gerald R. Ford (CVN 78) planned incremental availability, launch of Virginia-class submarine New Jersey (SSN 796) and construction of the first digitally designed and built Ford-class carrier Enterprise (CVN 80).

Boeing F/A-18 Super Hornet Successfully Completes Operational Demonstrations in India



Boeing's F/A-18 Super Hornet successfully completed operational demonstration tests at Indian Naval Station Hansa in Goa, India. *INDIAN NAVY*

GOA, India – Boeing's F/A-18 Super Hornet successfully completed operational demonstration tests at Indian Naval Station Hansa in Goa, India, reinforcing the Super Hornet's ability to effectively and safely operate off Indian Navy carriers, the company said July 20.

Two U.S. Navy F/A-18E Super Hornets completed multiple ski-

jumps, roll-in and fly-in arrestments, as well as performance flights, in a variety of weights in the air-to-air, air-to-ground, and air-to-surface configurations, meeting the Indian navy test requirements.

“The Boeing team was privileged to showcase the F/A-18 Super Hornet’s compatibility with Indian carriers in Goa,” said Alain Garcia, vice president, India business development for Boeing Defense, Space & Security and Boeing Global Services. “As the most advanced frontline multi-role naval fighter, the F/A-18 Super Hornet is one of the world’s most proven and affordable multi-role fighters and continues to evolve with the development of the next-generation Block III capability which will be game-changing for India.”

“With the Super Hornet Block III, the Indian navy would not only get the most advanced platform but would also benefit from tactics, upgrades and knowledge related to the naval aviation ecosystem that the U.S. Navy offers,” he added.

The tests followed eight ski-jumps in various weights and configurations during previous tests held at Naval Air Station Patuxent River in Maryland in late 2020 that demonstrated the Super Hornet’s ability to operate from a short-takeoff-but-arrested-recovery aircraft carrier.

MQ-9 Makes Debut at RIMPAC SINKEX 2022



A U.S. Air Force MQ-9A Reaper lands at Marine Corps Air Station Kaneohe Bay, Hawaii during the Rim of the Pacific 2022. *U.S. AIR FORCE / Airman 1st Class Ariel O'Shea*

JOINT BASE PEARL HARBOR-HICKAM, Hawaii – The first use of a U.S. Air Force MQ-9A Reaper, a remotely piloted aircraft, occurred during a Rim of the Pacific (RIMPAC) 2022 sinking exercise, July 12, the Air Force said July 20.

Participating in the SINKEX provided an opportunity for units from Australia, Canada, Malaysia and the United States to test weapons and systems in a simulated environment, working against opposing forces and eventually culminating in the explosion of a decommissioned naval vessel and marked a significant development in maritime warfighting capability.

The presence of the MQ-9A's at the world's largest international maritime exercise provides an opportunity for combined and joint-force collaboration.

"They need us and we need them," said U.S. Air National Guard Capt. Phillip West, the RIMPAC MQ-9 maritime force integration

lead. "That's where RIMPAC comes into play."

He said the Air Force and the Navy speak different languages, each using their own distinct jargon. Working together on exercises like RIMPAC and the SINKEX promotes smooth communication between the branches. This ensures sharpened combat readiness, increased strategic impact, and strengthened deterrence efforts by providing tactical proficiency to MQ-9A aircrews.

With the MQ-9 flying over the ocean as opposed to routine training in remote land locations, the main objective for the SINKEX was the gathering of practical data about operating in a maritime environment as opposed to a desert environment.

"The data that we have in a simulator feeds off of real-world engagements like SINKEX," West said. "With what's called the new Smart Sensor, they're trying to build a database of what ships look like. They need us to actually do it so that they can build a database, and then they can fit it into a simulator so we can practice it and have more efficient training."

This year is historic not only because of the MQ-9A but because it marks a return to a full-scale exercise not seen since before the COVID-19 pandemic. The 2020 iteration of RIMPAC was reduced in scale to be conducted with less face-to-face contact. The return to a full-scale exercise demonstrates capable, adaptive partners working together to increase the interoperability, resiliency, and agility needed by the joint and combined force.

Raytheon Missiles & Defense Delivers First SPY-6 Radar Arrays to Aircraft Carrier



When three SPY-6(V)3 radar arrays (left) are combined, they provide 360 degree coverage for aircraft carriers, like the future USS John F. Kennedy. *RAYTHEON MISSILES & DEFENSE*
NEWPORT NEWS, Va. – Raytheon Missiles & Defense has delivered SPY-6 radar arrays to the future USS John F. Kennedy (CVN 79), the first aircraft carrier to receive the advanced radar, the company announced July 18.

This delivery is the first of three for the aircraft carrier. Together, the three fixed-face radar arrays will form a SPY-6(V)3, also known as the Enterprise Air Surveillance Radar, which provides 360-degree coverage for the ship. In addition to the proven multi-mission capabilities across the SPY-6 family, SPY-6(V)3 has unique features that meet the needs of an aircraft carrier, including weather mapping and air traffic control functionality.

“This is the first aircraft carrier that will be equipped with SPY-6 radars, the leading naval radar system in the world,” said Kim Ernzen, president of Naval Power at Raytheon Missiles & Defense. “With the recent contract, SPY-6 will provide premier detection and coverage for more than 40 ships in the U.S. Navy throughout the next decade.”

The SPY-6 family of radars provides integrated air and missile defense for seven classes of ships. Its radar modular assemblies, known as RMAs, allow SPY-6 to be scalable and modular to support production for the U.S. and partner nations across all variants.

Missile Exercise Sends Frigate to the Bottom



Rim of the Pacific 2022 military forces from Australia, Canada, Malaysia and the United States fired upon and sunk the

decommissioned ex-USS Rodney M. Davis (FFG 60), July 12, during a sinking exercise to gain proficiency in tactics, targeting and live firing against a surface target at sea.
U.S. NAVY

HAWAII – Units from Australia, Canada, Malaysia and the United States took part in a live-fire missile exercise that resulted in the sinking of a former U.S. Navy guided missile frigate at sea on July 12.

The ships and aircraft, which were participating in the Rim of the Pacific 2022 (RIMPAC) exercise, sank the decommissioned ex-USS Rodney M. Davis (FFG 60) July 12, in waters 15,000 feet deep, 50 nautical miles north of Kauai.

According to a statement from the RIMPAC Combined Information Bureau, “Live-fire events provide realistic training that refine partner nations’ abilities to plan, communicate and conduct complex maritime operations such as precision and long-range strike capabilities.”

The objective of the sinking exercise, or SINKEX, is to “gain proficiency in tactics, targeting and live firing against a surface target at sea,” the statement said.

“This exercise provided a great opportunity for the extremely talented Sailors, soldiers and aviators who comprise the RIMPAC 2022 team to hone their skills in a live-fire setting,” said Royal Canadian Navy Rear Adm. Christopher Robinson, deputy commander of the RIMPAC Combined Task Force. “There is nothing that really replaces the training value of opportunities such as this, which enable us to test our weapons and their associated combat systems with as much realism as possible. These live-fire exercises are vital for maintaining our proficiencies, building our interoperability, and increasing our readiness for future operations.”

Royal Canadian Navy frigate HMCS Winnipeg (FFH 338) fired two Harpoon missiles as part of the SINKEX. A U.S. Navy P-8A Poseidon maritime patrol aircraft deployed an AGM-84D Harpoon

missile, and an F/A-18F Super Hornet from Nimitz-class aircraft carrier USS Abraham Lincoln (CVN 72) launched an GBU-16 laser guided bomb for the event.

The 1,850-ton, 321-foot Royal Malaysian Navy corvette KD Lekir fired an Exocet MM40 missile during the SINKEX. Lekir is the first Royal Malaysian Navy ship to launch a missile and hit a target outside of Malaysian waters. The ship had also recently fired an Exocet during the Taming Sari exercise north of the Strait of Malacca in May.

“The SINKEX was a professionally enriching experience for the crew of KD Lekir,” said Adm. Mohd Reza Mohd Sany, chief of the Royal Malaysian Navy. “These events provide an excellent platform toward enhancing interoperability amongst the participating navies. The involvement is an experience that will elevate the professionalism of the KD Lekir crew,” said Mohd Reza. “The biggest international maritime exercise is an opportunity for a joint exercise involving various countries while strengthening cooperation among the participants,”

“The coordinated firing of anti-ship munitions is a complex activity. This SINKEX demonstrates the interchangeability of the capable and adaptive RIMPAC partners,” said Royal Australian Navy Commodore Paul O’Grady, commander of the RIMPAC maritime forces component. “In doing so, significant measures were taken to protect the maritime training environment.”

The ex-Rodney M. Davis was a 4,100-ton, 453-foot Oliver Hazard Perry-class guided missile frigate that served in the U.S. Navy from 1987 to 2015. Preparing decommissioned ships for sinking follows a rigorous process to ensure there are no hazardous materials, fuels or lubricants still onboard. The target ships must be sunk in water at least 6,000 feet deep and at least 50 nautical miles from land.

RIMPAC Fire

At least one mishap was reported during RIMPAC. A Peruvian navy corvette, BAP Guise (CC 28), suffered a fire outbreak July 18. A statement from the Peruvian navy said the fire was “mitigated and controlled by the crew with support of foreign units.”

The ship was not identified in the initial statements from the RIMPAC Command Information Bureau, but the Guise was identified in subsequent statement from the Peruvian navy.

According to a statement from the CIB, the RIMPAC watch floor received the report of a fire and potential injuries aboard a Combined Task Force ship around 8:00 a.m., Sunday morning Hawaii time. “Two critically stable patients were evacuated from the ship by a helicopter from French Navy frigate FS Prairial (F731) to USCGC Midgett (WMSL 757), and have since been transferred ashore by U.S. Navy helicopter from USS Abraham Lincoln (CVN 72),” the statement said.

“Two crew members suffered burns as a result of it and were evacuated by helicopter for their respective care at a specialized hospital in Honolulu, the details having been communicated to their relatives,” the Peruvian Navy statement said. “It should be noted that the rest of the naval personnel are unharmed.”

RIMPAC is the world’s largest international maritime exercise, with 26 nations, 38 ships, four submarines, more than 170 aircraft, more than 30 unmanned systems and 25,000 personnel participating this year in and around the Hawaiian Islands and Southern California. The biennial exercise will conclude Aug. 4. RIMPAC 2022 is the 28th exercise in the series that began in 1971.