Navy Mk38 Gun Systems Gaining Co-Axial Small-Caliber Machine Gun

An Mk38 MOD 2 25 mm machine gun fires during a live-fire exercise aboard the amphibious assault ship USS Boxer (LHD 4). The U.S. Navy is installing a co-axial 7.62 mm machine gun on the mounts of its Mk38 chain gun systems. U.S. Navy/Mass Communication Specialist Seaman Conor Minto)

ARLINGTON, Va. – The Navy is installing a co-axial 7.62 mm machine gun on the mounts of its Mk38 chain gun systems, a Northrop Grumman official said.

The Mk52 7.62 mm is gas-operated and uses recoil to eject spent cartridges and advance to the next round. A misfired round is safely ejected forward of the barrel as well, Jarrod Krull, communications manager for Northrop Grumman Armament Systems, said in an interview with *Seapower*.

The Mk38 Mod 2 gun mount includes an 25mm M242 Bushmaster rapid-fire cannon that fires an explosive round. The mount is automatic, gyro-stabilized and remotely operated, but retains the optional manual firing of the Mk38 Mod 1. The system has day and night sensors and a laser rangefinder.

The Mk52 7.62 mm is designed as a defense against small boats, aircraft and unmanned aerial

vehicles for most U.S. surface warships and as a general-purpose gun for the Cyclone-class coastal patrol ships and Mk VI patrol boats.

Krull said the addition of the co-axial Mk52 machine gun gives the gunner another "right-sized" option for countering a small target, such as pirates or terrorists on jet skis.

The Mk52 is very durable, reliable and accurate," according to a Navy briefing slide.

Northrop Grumman is installing the Mk52 guns in the Mk38 under an indefinite delivery/indefinite quantity contract.

The company also is offering the Navy another upgrade of the Mk38 by switching out the M242 Bushmaster cannon for a larger caliber weapon, the Mk44 30mm cannon, the same gun used as a close-in weapon on the San Antonio-class amphibious transport dock ship, the littoral combat ship's surface warfare module and the Zumwalt-class guided-missile destroyer. Another option is the stretch version of the Mk44, which would allow use of programmable ammunition, such has air-burst ammunition.

Krull said the Mk38 could even be up-gunned to a 40mm cannon.

Former Pacific Fleet Intel Director Warns of Widening Gap Between Chinese, U.S. Fleet Buildup

Chinese navy ships steam in formation as part of a replenishment-at-sea approach exercise during Rim of the Pacific. U.S. Navy/Mass Communication Specialist 1st Class Jason Noble

The Chinese navy already is larger than the U.S. Navy and is building ships four times as fast, with a firm goal of achieving sea control by 2030 and naval superiority by 2039, a former Pacific Fleet director of intelligence warns.

"The biggest challenge for U.S. national security leaders for the next 30 years is the speed and sustainability of the [People's Republic of China] national effort to deploy a global navy," retired Navy Capt. James Fanell said.

By 2220, the People's Liberation Army Navy (PLAN) will have more than 450 surface warships and a submarine force approaching 110, Fanell told a May 14 Hudson Institute forum. And in its rapid move from a force of small ships mainly engaged in coastal operations into a large fleet capable of extended

blue-water operations, the PLAN now exceeds the U.S. Navy not just in numbers but in tonnage, Fanell said.

The U.S. Navy has 289 ships in the active battle fleet, including 80 submarines and counting the 14 ballistic-missile subs and four guided-missile boats. Navy leaders have set a goal of a 355-ship battle force, but the fleet would not reach that strength until the 2030s at projected building rates.

> *"The biggest challenge for U.S. national security leaders for the next 30 years is the speed and sustainability of the [People's Republic of China] national effort to deploy a global navy."*
>
> *Retired Navy Capt. James Fanell*

In the last decade, China has launched more ships that any other country in the world, outbuilding the U.S. Navy four to one, Fanell said, displaying a slide showing the United States building 22 ships to the PLAN's 85 warships from 2015 to 2018. "I expect the [PLAN] will continue to surpass the U.S. Navy in new ships in the next decade."

And the Chinese have an even greater advantage in ship-based anti-ship missiles, Fanell added, with more weapons and missiles that have longer range and are faster than what the U.S. Navy fields. He noted that a new class of PLAN

guided-missile
destroyers has 132 vertical-launch missile tubes.

Over the last
decade, the PLAN has gained valuable experience with task force deployments not
only in its regional waters but in the Eastern Pacific, the Indian Ocean and
recently into the Atlantic Ocean, Fanell said. He predicted there would be even
more operations closer to U.S. coastlines.

https://youtu.be/BUZhxUABWpo
A career
intelligence officer who served most of his time in the Pacific with aviation
units, carrier strike groups and then with the Pacific Fleet staff, Fanell said
that, for most of his time in uniform, U.S. national security officials have
refused to acknowledge the growing threat from China and its determination to
supplant the United States as the dominate power in the western Pacific. He
said that changed with the new National Security and National Defense
Strategies released last year, which recognized China – and Russia – as
strategic rivals and acknowledged the return to “Great Power Competition.”

The rapidly
growing PLAN “will increasingly challenge us,” and given its ship production
projections and its experience of operating farther from China, “we can assess
that the PLA Navy is on track to gain sea control by 2030 and superiority by

2039," Fanell said. The only way to prevent that is by acknowledging the threat
and conducting a whole-of-government campaign to counter its power, which he
said the Trump administration has shown the willingness to do.

Naval Research Lab Debuts Newly Acquired Aircraft for Airborne Research

The U.S. Naval Research Laboratory's science and technology research squadron has added the twin engine DHC-6 Twin Otter aircraft to its versatile fleet. U.S. Navy/Daniel Parry

WASHINGTON
— The U.S. Naval Research Laboratory (NRL) and the Navy's premier science and
technology research squadron, Scientific Development Squadron ONE (VXS-1),
unveiled on May 11 the UV-18 "Twin Otter" as the newest addition to the
squadron's fleet of aircraft research platforms.

The
UV-18 is the military equivalent of the DeHavilland DHC-6 – a high-wing, unpressurized
twin engine turbine powered aircraft with fixed tricycle landing gear.

"The
Twin Otter is a safe, highly maneuverable and extremely versatile aircraft,"

said Cmdr. Erik Thomas, commanding officer of VXS-1. “The fact that it is unpressurized simplifies modifications and will accelerate our ability to get projects airborne for the Naval Research Enterprise.”

The aircraft compliments the VXS-1 “Warlocks” fleet by providing an affordable and stable research platform with slow flight capabilities and an operational payload of up to 3,000 pounds.

> *“The fact that [Twin Otter] is unpressurized simplifies modifications and will accelerate our ability to get projects airborne for the Naval Research Enterprise.*
>
> *Cmdr. Erik Thomas, commanding officer of VXS-1*

The performance capabilities of the UV-18 aircraft offer customers a slow flight speed of 85 mph, a maximum cruise speed of 190 mph, a nominal service ceiling of 13,000 feet (higher with supplemental oxygen) and a six-hour flight duration, depending on payload and flight configuration.

In addition to the UV-18, VXS-1 operates a varying range of aircraft that include three NP-3C and P-3C Orions, an RC-12 King Air and 12 TigerShark unmanned aircraft systems.

The fleet of squadron aircraft are operated and maintained by the men and women of

VXS-1 and contain an S&T framework to provide power, Ethernet and GPS feeds as required for temporary project installations and to quickly conduct airborne research. The squadron has a self-contained configuration and project shop to assist prospective customers with rack designs, gear installations and flight clearances.

“Using our squadron’s aircraft, scientists and engineers can install and test the latest technology they are developing in an operational environment anywhere in the world. We truly turn their ideas into reality,” Thomas said.

Providing proof of concept for the latest technology, VXS-1 enables operational fleet commands to receive time pertinent technological advances to better execute their missions and fill critical capability gaps in their theater.

Historically, the squadron has supported a broad spectrum of research projects, which include magnetic variation mapping, hydro-acoustic research, bathymetry, electronic countermeasures, gravity mapping, electro-optical and radar research and remote measuring of water contained in snow for NASA.

First Navy CMV-22B COD Aircraft Delivery Set for Late 2019

A Marine Corps MV-22 Osprey. The first two fuselages of the Navy carrier-onboard-delivery variant of the Osprey, the CMV-22B, have been detailed for final assembly. U.S. Navy/Mass Communication Specialist 3rd Class John Luke McGovern

ARLINGTON, Va. – The first two fuselages for the Navy's CMV-22B Osprey carrier-onboard-delivery (COD) aircraft have been detailed for final assembly, the aircraft's program manager said.

"First delivery is later this year," said Marine Col. Matthew Kelly, joint program manager for the V-22, speaking May 6 to reporters at the Navy League's Sea-Air-Space exposition in National Harbor, Md. "We're really excited to get it out there."

The CMV-22B will replace the C-2A Greyhound as the Navy's COD aircraft. As a tiltrotor aircraft, it will not need a tailhook for arrested landings. The CMV-22B adds new features such as an HF radio, a public address system for the cabin and extra fuel tankage. The Navy is procuring 42 CMV-22Bs.

Kelly said that V-22 production is closing in on a potential end to the program unless further orders develop. The Marine Corps has received 326 of 354 ordered out of a program of 360 aircraft. The Air Force has received 52 of 54 ordered out of a program of 56 aircraft. The Navy has 42 ordered of a program of 48 aircraft. Japan has ordered 17 Ospreys.

The Ospreys being built now are part of the Multi-Year Procurement-3 contract awarded in 2018. Kelly pointed out that December 2020 is that last opportunity for a potential V-22 customer to order aircraft within the current contract at the current prices.

With V-22 production for the Marine Corps approaching completion, a question for planners is 360 Ospreys enough considering actual and reasonable attrition over the service life of the inventory, or whether the Marine Corps V-22 program would need to add to the program of record.

“We’re continuing to look as to whether or not that would be the call,” Kelly said. Right now, it does seem to be adequate.”

The Corps has begun to induct fleet MV-22Bs into the CC-RAM (Common Configuration-Readiness and Modernization) program, designed to standardize the

different configurations of Ospreys from 70 to five. The program involves 50 engineering change proposals.

The Corps now has four MV-22Bs inducted, with a fifth set for induction this summer. The first CC-RAM completed aircraft is scheduled to roll out by the end of the summer. The Corps plans to put 129 Block B MV-22Bs through the program.

Alion Opens System Sustainment Center in Support of NSWC Crane Division

MCLEAN, Va. – Alion Science and Technology has opened a system sustainment center supporting the Crane Division of the Naval Surface Warfare Center (NSWC), the company announced in a release.

By combining its current facilities footprint in Odon, Indiana, Alion has created a 57,000-square-foot campus that provides research, development, production and sustainment of advanced weapons systems, soldier-carried systems, electronic warfare (EW) and intelligence, surveillance and reconnaissance

systems.

Alion's WestGate facilities recently obtained ISO:9001 and AS9100 certifications and house a series of laboratories for design and integration of hardware, firmware and software for secure radar, EW, communications and processing systems.

Alion recently added a complete prototyping/fabrication capability and an on-site light electronics and cable assembly laboratory to reduce schedule dependencies. The company also is adapting new technology – like artificial intelligence – to solve challenging problems including cyber-resilient mission processors and autonomous system payloads.

"We are proud to offer this innovative one-stop system sustainment center to support NSWC-Crane," said Dino Cencetti, vice president of ISR systems and sensors operations for Alion.

"This provides our fighting forces with a competitive edge by bringing all these capabilities together to create a center that can rapidly respond to today's needs and invest in the future of NSWC-Crane. Alion has been supporting NSWC for over 10 years providing new equipment design, redesign for obsolescence and technology insertion bringing new technology to the

warfighter.”

Navy Secretary Names New Destroyer in Honor of U.S. Senator From Georgia

An artist rendering of the future Arleigh Burke-class guided-missile destroyer USS Sam Nunn. U.S. Navy photo illustration

WASHINGTON – Secretary of the Navy Richard V. Spencer named a future Arleigh Burke-class guided-missile destroyer, DDG 133, in honor of former U.S. Sen. Sam Nunn, who represented Georgia from 1972 to 1997, the secretary’s public affairs office said in a release.

“Senator Nunn’s impact on the Navy and Marine Corps team cannot be overstated,” Spencer said. “His leadership in the Senate, specifically as the long-serving chairman of the Senate Armed Services Committee, helped streamline the military chain of command and strengthen our Navy and Marine Corps team. I am pleased that Senator Nunn’s legacy of service to our nation will continue in the future USS Sam Nunn.”

Nunn’s “leadership in the Senate… helped streamline the

military chain of command and strengthen our Navy and Marine Corps team.”

Secretary of the Navy Richard V. Spencer

Nunn served in the U.S. Coast Guard 1959 to 1960 and remained in the Coast Guard Reserve until 1968. A Democrat, he was elected to the Georgia House of Representatives in 1968 and in 1972 was first elected to the U.S. Senate. During his tenure as a senator, Nunn served as chairman of the Senate Committee on Armed Services and the Permanent Subcommittee on Investigations. He helped draft the Department of Defense Reorganization Act and the Nunn-Lugar Cooperative Threat Reduction Program, which helped Russia and the former Soviet republics to secure and destroy their excess nuclear, biological and chemical weapons.

Arleigh Burke-class destroyers conduct a variety of operations, from peacetime presence and crisis response to sea control and power projection. USS Sam Nunn will be capable of fighting air, surface and subsurface battles simultaneously, with offensive and defensive weapons systems designed to support maritime warfare, including integrated air and missile defense and vertical launch capabilities.

USS Sam

Nunn will be constructed by Huntington Ingalls Industries in Pascagoula,
Mississippi. The ship will be 509 feet long, have a beam of 59 feet and be
capable of traveling in excess of 30 knots.

U.S., Philippine Coast Guards Conduct Joint Search-and-Rescue Exercise


The U.S. Coast Guard Cutter Bertholf (left) moves in formation with Philippine coast guard vessels Batangas (center) and Kalanggaman during an exercise on May 14. U.S. Coast Guard/Chief Petty Officer John Masson

MANILA,
Philippines – The U.S. Coast Guard Cutter Bertholf (WMSL 750) and vessels from
the Philippine coast guard conducted joint search-and-rescue exercises May 14 in
the South China Sea west of Manila, the Coast Guard Pacific Area said in a
release.

The Bertholf,
a 418-foot national security cutter based in Alameda, California, worked
together with the Philippine coast guard vessels Batangas and Kalanggaman on
small-boat search-and-rescue tactics to conduct the mock rescue of a person in
the water. The Bertholf is in the midst of a Western Pacific

deployment under
the tactical control of the U.S. Navy’s 7th Fleet.

In training
with and learning alongside partners in the Philippines on search and rescue,
maritime law enforcement and small-boat tactics, Bertholf’s crew enjoys the
benefits of the strong, often personal ties between the countries, the release
said.

Capt. John J. Driscoll (left), Bertholf’s commanding officer, enjoys breakfast aboard the Philippine coast guard vessel Batangas along with Batangas’ commanding officer (right foreground) and other officers prior to the search-and rescue exercise on May 14. U.S. Coast Guard/Chief Petty Officer John Masson

The work also
strengthens one of the most enduring partnerships in the Indo-Pacific region,
between the United States and the Republic of the Philippines and supports both
countries’ commitment to a free and open Pacific, governed by international
maritime law that promotes peace, security and prosperity of all nations.

“Bertholf
completed an at-sea search-and-rescue exercise today with our counterparts from
the Philippine coast guard. This engagement proved an excellent opportunity to
compare techniques, maintain proficiency and build a friendly relationship
amongst professional mariners and coast guards,” said Capt. John J. Driscoll,

Bertholf’s commanding officer.

> *“This engagement proved an excellent opportunity to compare techniques, maintain proficiency and build a friendly relationship amongst professional mariners and coast guards.”*
>
> *Capt. John J. Driscoll, Bertholf’s commanding officer*

The crew of
Bertholf also will participate in other joint events with members of the
Philippine coast guard during the ship’s Manila port call. The events include a
series of engagements on operational subjects such as damage control and search
and rescue as well as sporting and social events. The activities are designed
to improve interoperability and strengthen the ties between the two countries.

“The U.S.
Coast Guard is proud to operate with our Pacific counterparts, and together we
are dedicated to enhancing our capabilities and strengthening maritime
governance and security while promoting individual sovereignty,” said Vice Adm.
Linda Fagan, commander of the U.S. Coast Guard’s Pacific Area. “Today’s exercise
is a great opportunity to share our experiences and learn from our partners in
the Philippine coast guard.”

Future USNS John Lewis Keel Authenticated

SAN DIEGO, Calif. – The keel for the future USNS John Lewis (T-AO 205), the Navy's first John Lewis-class fleet replenishment oiler, was ceremonially laid at General Dynamics-National Steel and Shipbuilding Co. on May 13, Naval Sea Systems Command said in a release.

A keel laying is the ceremonial recognition of the start of a ship's construction. It is the joining together of a ship's modular components and the authentication or etching of an honoree's initials into a ceremonial keel plate. The ship's namesake, Rep. John Lewis (D-Ga.), and the ship's sponsor, actress Alfre Woodard, etched their initials into the keel plate.

> *"These ships are steadfast, reliable and allow our warships to defend our freedoms for which Representative Lewis has dedicated his life to protecting."*
>
> *Mike Kosar, Support Ships, Boats and Craft program manager, Program Executive Office-Ships*

"We're honored to have Representative Lewis and Ms. Woodard with us today as we lay the foundation for recapitalizing our nation's critical fuel-replenishment-at-sea capabilities," said Mike Kosar, Support Ships, Boats and Craft program manager, Program Executive Office-Ships. "These ships are steadfast,

reliable and
allow our warships to defend our freedoms for which Representative Lewis has
dedicated his life to protecting.”

The John Lewis-class ships are based
on commercial design standards and will recapitalize the current T-AO 187-class
fleet replenishment oilers to provide underway replenishment of fuel to U.S.
Navy ships at sea. These ships are part of the Navy’s Combat Logistics Force.

John Lewis will be operated by the
Navy’s Military Sealift Command and is the first ship named after the civil
rights leader and Presidential Medal of Freedom recipient. Construction of John
Lewis began in September 2018, with delivery planned in late 2020.

Navy’s Next Tomahawk Missile: Block 5

A Tomahawk cruise missile launches from the Arleigh Burke-class guided-missile destroyer USS Shoup during a live-fire exercise. U.S. Navy/Mass Communication Specialist 2nd Class William Collins III

ARLINGTON,
Va.— Raytheon Missile Co. will build a new block upgrade of the Tomahawk cruise
missile for the U.S. Navy even as the company takes older

missiles into a recertification program to return them to service.

“Tomahawk has returned to production [after a one-year gap],” said Chris Daily, Raytheon’s Tomahawk program manager, speaking to reporters May 7 at the Sea-Air-Space Expo in National Harbor, Md. “All production beginning in fiscal ’20 will be Block 5.”

> *“Tomahawk will be in the fleet until the 2050s.”*
>
> *Chris Daily,*
> *Tomahawk program manager at RAYTHEON*

He said the fiscal 2020-2021 production — 90 missiles per year — will emerge as Block 5 versions.

The Block 5 version is an upgrade of the Block 4 Tomahawk, with upgrades such as navigation and communications improvements.

A subversion, Block 5A, will be the Maritime Strike Tomahawk (MST), equipped with a multimode seeker that retains a land-attack capability.

“The MST is going to be a great addition to the fleet,” Daily said.

Another, the Block 5B, will be a Block V armed with the Joint Multiple Effects Warhead and will be fielded in 2024-2025.

Daily said
the Block 4 Tomahawks being recertified after 15 years in service also will
emerge as Block 5 versions. The first deliveries will occur in 2020.

“Tomahawk will be in the
fleet until the 2050s,” Daily said.

Mercury Systems Receives $2.1 Million Order for RF Amplifiers Required for Navy Program

ANDOVER,
Mass. – Mercury Systems Inc. received a $2.1 million order from a leading
defense prime contractor for custom-engineered radio frequency (RF) amplifiers required
for an advanced naval electronic support program, the company said in a release.

The order
was booked in the company’s fiscal 2019 third quarter and is expected to be
shipped over the next several quarters.

Mercury
Systems offers a broad range of RF and microwave product offerings designed and
manufactured in its scalable Advanced Microelectronics Centers

(AMC) located
throughout the United States.

“With
co-located engineering and manufacturing resources, our AMC facilities are the
ideal solution to deliver highly differentiated custom RF microelectronics with
affordable, long-term supply continuity,” said Kevin Beals, vice president and
general manager of Mercury’s RF and Microwave group.

“Receiving this order from
our valued defense prime contractor customer further validates the power of
Mercury’s next-generation business model to support our military forces with
sophisticated microelectronics that are second to none.”