Israel Adapts Iron Dome Missile Defense to Navy Corvettes



Israel has successfully tested the C-Dome, a naval configuration of the Iron Dome defense system. *RAFAEL* HAIFA, Israel – The Israel Missile Defense Organization, Israeli Defense Forces and Rafael Advanced Defense Systems have completed a successful series of live-fire tests of the C-Dome, an advanced naval configuration of the Iron Dome defense system, Rafael said Feb. 25.

The C-Dome was operated for the first time aboard the Israeli Naval Ship Magen, a Sa'ar 6 corvette, against multiple advanced threats. Crew members of the INS Magen led the C-Dome tests.

"I commend the DDR&D [Directorate for Defense R&D, parent of the missile defense organization], IDF and Rafael for the completion of an unprecedented test," said Defense Minister Benny Gantz. "The systems that we are developing as part of Israel's multi-tier missile defense array enable us to operate against Iranian proxies in the region and defend against their weapon systems, which are constantly being upgraded. We continue to be two steps ahead of them and we will continue developing and upgrading our capabilities in order to maintain security superiority in the region and to defend the citizens and assets of the state of Israel."

The test campaign consisted of a number of scenarios simulating advanced threats, including rockets, cruise missiles and unmanned aircraft. The C-Dome is capable of successfully intercepting such threats.

This successful live-fire test is an important milestone and demonstrates the operational capability of the Israeli navy to defend the strategic assets and vital interests of Israel against current and evolving threats.

The C-Dome onboard missile defense system is based on the Iron Dome defense system developed by Rafael, with the command-andcontrol system developed by mPrest. C-Dome interfaces with the Sa'ar 6's Adir radar, developed by Israel Aerospace Industries' Elta division. It joins other advanced systems that make up Israel's multi-tier missile defense array, including the Arrow and David's Sling systems. Development of C-Dome was led by the Israel Missile Defense Organization.

"The success of this test constitutes a significant technological breakthrough in the field of missile defense and is the result of the directorate's vision and cooperation with the IDF and Israeli defense industries," said Brig. Gen. (Res.) Danny Gold, head of the Directorate for Defense R&D in the ministry of defense.

"Today we mark another historic milestone for the Iron Dome defense system – the completion of a series of successful offshore tests of the missile defense system onboard a naval vessel," said Moshe Patel, director of the Israel Missile Defense Organization. "The advanced detection system accurately identified various threats including rocket fire, cruise missiles and UAVs. The system successfully intercepted the threats with surgical precision. The success of today's tests further strengthens our confidence in our missile defense systems as well as the ability of the Israeli navy to defend the maritime assets of the state of Israel."

Austal Lays Keel of Future LCS USS Kingsville



Ship sponsor Katherine Kline, center, welded her initials onto a USS Kingsville keel plate with the assistance of Austal Aclass welder Joseph Bennett Jr., to the right of Kline. *AUSTAL USA*

MOBILE, Ala. — Austal USA celebrated the keel laying of the

future littoral combat ship USS Kingsville (LCS 36) at its ship manufacturing facility on Feb. 23, the company said in a release.

Kingsville will be an Independence-variant LCS, one of 18 the Navy has contracted Austal to build. The ship is the first U.S. Navy ship named for the city of Kingsville in Texas.

A keel laying ceremony is the formal recognition of the start of a ship's construction. At Austal USA, the keel laying symbolically recognizes module erection in final assembly and the ceremonial beginning of a ship.

The ship's sponsor is Katherine Kline, a member of the sixth generation of the King Ranch family, decendents of Capt. Richard King who founded the King Ranch located in Kingsville, Texas, in 1853. Naval Air Station Kingsville, located three miles from Kingsville, was founded in 1942 and continues a special relationship with the King Ranch.

As the keel authenticator, Kline welded her initials onto an aluminum keel plate with the assistance of Austal USA A-class welder, Joseph Bennett Jr.

Keel of LPD Harrisburg Authenticated at Ingalls Shipbuilding



Ingalls pipe welder Stephen Guiney welds the initials of Alexandra Curry onto the keel plaque that will be permanently part of the San Antonio-class amphibious transport dock Harrisburg (LPD 30). *HII / Luis Solis* NEWPORT NEWS, Va. – HII's Ingalls Shipbuilding division ceremonially has authenticated the keel of the San Antonioclass amphibious transport dock Harrisburg (LPD 30), the company said Feb. 23.

The ship's sponsor, Alexandra Curry, a resident of Middletown, Pennsylvania, and wife of the Middletown mayor, was unable to attend the ceremony, so Program Executive Officer Ships Rear Adm. Tom Anderson stepped in to declare the keel "truly and fairly laid."

"While she could not join us, we welcome Mrs. Curry in spirit as she is now an important part of our shipbuilding family," said Kari Wilkinson, president of Ingalls Shipbuilding. "We look forward to being with her throughout the life of the ship, and we are very grateful for her commitment to this crew. She is a true patriot, with deep respect and gratitude for military service."

The keel ceremony marked the start of construction for Harrisburg by welding the initials of the ship's sponsor into a ceremonial plate.

Harrisburg is being built at Ingalls Shipbuilding and will be the first Flight II amphibious ship in the San Antonio class. LPD Flight II is the next generation amphibious ship to replace Whidbey Island (LSD 41) and Harpers Ferry (LSD 49) classes of dock landing ships. Ingalls has delivered 11 San Antonio-class ships to the U.S. Navy and has three more under construction.

The San Antonio class is a major part of the Navy's 21st century amphibious assault force. The 684-foot-long, 105-footwide ships are used to embark and land Marines, their equipment and supplies ashore via air cushion or conventional landing craft and amphibious assault vehicles, augmented by helicopters or vertical takeoff and landing aircraft such as the MV-22 Osprey. The ships support a Marine Air Ground Task Force across the spectrum of operations, conducting amphibious and expeditionary missions of sea control and power projection to humanitarian assistance and disaster relief missions throughout the first half of the 21st century.

Bell Begins Production on

Czech Republic AH-1Z Helicopter



The cabin of an Czech Republic AH-1Z is loaded onto the manufacturing line at the Amarillo Assembly Center to begin production. *BELL TEXTRON*

AMARILLO, Texas – Bell Textron, a Textron company, has started production of the first AH-1Z Viper for the Czech Republic at Bell's Amarillo Assembly Center, the company said Feb. 23. The production of the Viper joins UH-1Y production as part of the Czech Republic Foreign Military Sale FMS of mixed fleet aircraft.

"Bell understands what it means to execute a successful international program," said Mike Deslatte, vice president and H-1 program director for Bell. "We understand the importance of providing the unmatched capability of the H-1 aircraft to our customers. Bell remains focused on producing exceptional combat aircraft and providing modern capabilities for the Czech Air Force as a partner in the H-1 program, along with the U.S. government."

Bell's work beyond aircraft manufacturing includes building a flight training device for the Czech Republic, essential to integrating the new helicopters into the Czech Armed Forces.

Bell began production on the Czech Republic UH-1Y in 2021, marking the first production for an international operator of the UH-1Y. The Czech Republic's purchase of both the AH-1Z and UH-1Y takes full advantage of the 85% commonality between parts and enabling full mission capabilities between both aircraft.

In addition to the Czech Republic, Bell is actively producing AH-1Zs for the U.S. Marines Corps and the Kingdom of Bahrain. In total, the H-1 program is on track to produce 217 AH-1Zs and 168 UH-1Ys, with more than 100 consecutive H-1s delivered on time for the USMC and FMS customers.

NATO ASW Exercise Under Way off Sicily



Standing NATO Maritime Group 2 ships and submarines sail in formation in the Ionian Sea off the coast of Sicily Feb. 21 during Exercise Dynamic Manta 22. NATO ALLIED MARITIME COMMAND MEDITERRANEAN SEA – While the NATO maritime forces have had to navigate around the rocks and shoals of the global pandemic, it has not stopped them from exercising and raising their game in looking for adversary submarines in the Mediterranean.

The annual Dynamic Manta antisubmarine warfare exercises are conducted in the central Mediterranean, usually around Sicily, and takes advantage of the maritime patrol air bases at Sigonella and Catania in Italy. This year is no exception.

Ships, submarines, aircraft and personnel from nine allied nations will take part in the antisubmarine warfare and antisurface warfare training exercises from Feb. 21 to March 4.

Submarines from France, Greece, and Italy have been joined by surface combatants from Canada, France, Greece, Italy, Spain, Turkey, the United Kingdom and the U.S. for the exercise. Maritime patrol aircraft from Canada, France, Germany, Greece, Italy, U.K. and the U.S. are supporting the simulated, multi-threat environment during the exercise.

The task group is joining up in Catania harbor. The nearby Italian naval helicopter base in Catania and U.S. Naval Air Station at Sigonella are supporting Dynamic Manta 22 operations. Logistical support is being provided from the Italian naval base at Augusta Bay.

Dynamic Manta is one of the two major antisubmarine warfare exercises led every year by NATO Maritime Command. Dynamic Manta involves NATO Standing Maritime Group Two in the Mediterranean. The other, Dynamic Mongoose, takes place in the North Atlantic in the summer, involving NATO Standing Maritime Group One.

"NATO's maritime power lies in the ability of the standing forces to rapidly join with high readiness, high-capacity national forces to deliver effects when and where needed," said U.S. Navy Rear Adm. Stephen Mack, commander, Submarines NATO, who is commanding Dynamic Manta 22. "Exercises like this, along with regular training between allied navy units and our multinational standing naval forces, is a force multiplier that provides a collectively trained and interoperable force, ready to work together as the maritime portion of the VJTF [Very High Joint Readiness Task Force]."

Mack added, "This exercise is a visible demonstration of the alliance's ability to cooperate and effectively integrate. Alliance unit, solidarity, and cohesion are the core of NATO."

Noble Fusion 2022 Prepares Maritime Forces for Distributed Maritime Operations in the Pacific



Ships of the America and Essex Amphibious Ready Groups and Abraham Lincoln Carrier Strike Group fall out of formation with the Japan Maritime Self-Defense Force during operation Noble Fusion. Front row: Landing craft, air cushion from the USS Essex (LHD 2). Second row, left to right: USS America (LHA 6), USS Abraham Lincoln (CVN 72), Essex. Third row, left to right: USS Dewey (DDG 105), JS Kongō (DDG 173), USS Mobile Bay (CG 53), USS Spruance (DDG 111). Back row, left to right: USS Ashland (LSD 48), USS Miguel Keith (ESB 5). U.S. NAVY / Mass Communication Specialist 3rd Class Thaddeus Berry PACIFIC OCEAN — A multi-national and multi-strike group conducted a sweeping series of operations the Western Pacific

earlier this month.

Noble Fusion 2022 took place Feb. 3-7, involving two Amphibious Ready Groups with embarked Marine Expeditionary Units along with a Carrier Strike Group. U.S. Army and Air Force units, and units of the Japan Self Defense Forces, also took part.

The exercise was led by Combined Task Force 76/79. According to a Navy statement, Noble Fusion 2022 units operated from "the Luzon Strait to the Miyako Strait and the East China Sea, encompassing a wide swath of the First Island Chain, including littoral areas in the vicinity of Okinawa."

"For the first time since 2018, two Amphibious Ready Groups with embarked Marine Expeditionary Units conducted operations together in the Indo-Pacific region," said Navy spokesperson Lt. Cmdr. Sherrie Flippin. "The most recent exercise Noble Fusion highlighted Naval Expeditionary Forces' capability to rapidly aggregate Marine Expeditionary Unit/Amphibious Ready Group teams at sea with joint force elements, allies and a Carrier Strike Group, in order to conduct sea-denial, seize key maritime terrain, guarantee freedom of movement, and create advantage for U.S., partner and allied forces."

The exercise commenced with amphibious maneuvers to demonstrate the ability to seize key maritime terrain involving the 11th MEU/USS Essex (LHD 2) ARG and Carrier Strike Group-3's USS Abraham Lincoln (CVN-72) flying AV-8B Harriers, MV-22B Ospreys and a Navy E-2D Advanced Hawkeye over the Luzon Strait. Abraham Lincoln was escorted by the Arleigh Burke-class destroyer USS Spruance (DDG 111) and the Ticonderoga-class cruiser USS Mobile Bay (CG 53).

Later, the 31st MEU/USS America (LHA-6) ARG conducted strikes in the First Island Chain with F-35B Lightning II fighters. Additionally, F-35B's of Marine Aircraft Group 12 out of Iwakuni, Japan, as well as F-15C Eagles with the U.S. Air Force's 18th Wing out of Kadena Air Base, teamed up with a P-8 Poseidon from Task Force 72, to conduct a maritime strike. "This type of training demonstrates the resilience and interoperability with our joint forces and our partners and allies," said Col. Michael Nakonieczny, commander of the 31st MEU, speaking to reporters Feb. 16.

"It's important for us to consider ourselves partners, trying to figure out how we become better warfighters as a combined team," said Capt. Greg Baker, commodore of Amphibious Squadron 11, who joined Nakonieczny on the call with journalists.

USS Dewey (DDG 105) and JS Kongo (DDG 173) conducted surface operations to protect and defend the force. Commander Destroyer Squadron 7 was the surface warfare commander throughout the exercise.

"Sea-denial operations with cruisers and destroyers, seizing key maritime terrain with aviation and surface movement, guaranteeing freedom of movement — these are the things we do every day in the Indo-Pacific," said Navy Capt. Tom Ogden, the DESRON 7 commodore. "This exercise validates the ability of U.S. forces and allies to establish sea control and maintain readiness while also providing security and enabling stability."

Brig. Gen. Kyle Ellison, commanding general, 3rd Marine Expeditionary Brigade and CTF-79 commander, said Noble Fusion 2022 was about using the sea as maneuver space to achieve positional advantage.

"It was about exercising our ability to maneuver critical capability to locations in the time and space of our choosing," Ellison said. "We achieved positional advantage with the integration of two ARGs with their associated MEUs enabled by a carrier strike group. These capable warships must remain a critical component of our integrated deterrence strategy. Rest assured, we proved as an integrated, naval, joint and allied force that we are completely committed to a free and open Indo-Pacific region. We are effectively contributing to that goal now and our operational prowess will only improve."

The capstone event was a night strike in the First Island Chain by F-35C Lightning II aircraft from Lincoln and AV-8B Harriers from Essex, along with F-18E Super Hornets acting as an aggressor force. Night aerial refueling supported the strike, with 11th MEU AV-8B Harrier attack aircraft being refueled by KC-130J Hercules aircraft of Marine Aircraft Group 12.

"Noble fusion has been an incredible opportunity to rapidly, and at a time and place of our choosing, demonstrate that when our allies and U.S. joint forces come together, we are the premier fighter force in the region," said Rear Adm. Chris Engdahl, commander of Expeditionary Strike Group 7/Task Force 76. "Seamlessly integrating our advanced platforms alongside our professional staffs at sea and ashore allowed us the chance to reinforce our command and control in the air, on the ground, at sea, and below the surface."

First Sea Lord: Royal Navy Is 'Back to the Modern Era,' Tilting to the Indo-Pacific



Chief of Naval Operations Adm. Mike Gilday, left middle, meets with Royal Navy Adm. Sir Ben Key, First Sea Lord and Chief of the Naval Staff of the United Kingdom. U.S. NAVY / Mass Communication Specialist 1st Class Sean Castellano ARLINGTON, Va. — The head of the United Kingdom's Royal Navy said his fleet is modernizing and expanding its reach around the world to respond to the current and future challenges.

"It's the end of the beginning for us, "Adm. Sir Ben Key, First Sea Lord and chief of staff of the U.K. Royal Navy, speaking Feb. 16 at the Center for Strategic and International Studies, a Washington think tank, commenting on the Royal Navy's return to operating large aircraft carriers.

Key said he was challenged by the government to grow the Royal Navy and focus on the changing competition in the world, away from a 20-year focus in the Middle East to more of a tilt to the Indo-Pacific region.

The 2021 deployment of the Royal Navy's Carrier Strike Group 21 – centered on the new carrier HMS Queen Elizabeth and its fifth-generation strike fighters, F-35Bs Lightning IIs – all

the way to Japan and back was termed by Key as a "reaching deployment."

"We're merely bringing our history back to the modern era," Key said, also noting that "we're back in the big carrier game."

The HMS Queen Elizabeth and the HMS Prince of Wales were designed from the keel up to support and operate fifth-generation fighters, he noted.

Decades ago, the Royal Navy operated several aircraft carriers and maintained a significant naval presence "east of Suez," as strategists and historians called the presence.

Key also mentioned the presence in the Pacific of two Royal Navy offshore patrol vessels, HMS Spey and HMS Tamar, which are on long-term multi-year deployments to the region, engaging with partner nations.

"We want to be part of an ongoing dialogue," he said, noting the need to enforce rules-based order in the maritime domain, including efforts against transnational crime and fisheries enforcement. He said the Royal Navy needs to work alongside the navies and coast guards of the United States, Australia, New Zealand, France and the South Pacific island nations.

Key cited the recent AUKUS agreement "as a good example of opening up rather than closing down" and said that it would reduce barriers to sharing, and not just in the realm of nuclear-powered submarines.

He sees a benefit of Royal Navy presence in the Indo-Pacific region as not only beneficial with navy leadership but also opportunities for the Royal Navy to learn.

Navy Orders Six CH-53K Helicopters for Israel



An artist's rendering of a CH-53K helicopter for the Israeli air force. *SIKORSKY AIRCRAFT* ARLINGTON, Va. – The U.S. Navy has ordered six CH-53K King Stallion helicopters for the Israeli air force, following an agreement signed in December.

The Naval Air Systems Command awarded Sikorsky Aircraft a \$372 million fixed-price incentive contract modification under the Foreign Military Sales program "to exercise an option for the production and delivery of four low-rate initial production, Lot 6, CH-53K Heavy Lift aircraft, as well as associated aircraft programmatic and logistical support for the government of Israel," the Defense Department said in a Feb. 15 announcement.

The Israeli air force and the U.S. government signed an agreement Dec. 4 for the procurement of the CH-53Ks.

The CH-53K is in production for the U.S. Marine Corps as the

service's newest heavy-lift helicopter and is replacing the CH-53E Super Stallion. In Israeli service, the CH-53Ks will replace the 50-year-old CH-53D Sea Stallion helicopters, which are named Yasurs by Israel. The King Stallions primarily will support Israeli special operations forces, but also support other vertical lift missions and rescue operations.

Delivery of the Israeli CH-53Ks is expected to be completed by November 2025.

Bell to Advance U.S. DoD High-Speed VTOL Capabilities



An artist's conception of Bell Textron's entry in the AFWERX High-Speed Vertical Take-Off and Landing Concept Challenge. BELL TEXTRON

Fort Worth, Texas – Bell Textron Inc. has advanced to the next phase of the AFWERX High-Speed Vertical Take-Off and Landing

Concept Challenge, a crowdsourcing effort for the U.S. Air Force and Special Operations Command, the company said Feb. 16.

Bell is one of 11 companies from more than 200 challenge entrants selected to receive market research investments aimed at advancing solutions that enable optimal agility in austere environments.

"Bell is thrilled that our HSVTOL concepts have been selected for the next phase of the U.S. Air Force's AFWERX Challenge," said Jason Hurst, Bell's vice president of Innovation. "In entering this next phase, Bell's teams will continue to lay the groundwork for the production of another revolutionary military aircraft and provide USSOCOM and the U.S. Air Force with conceptual designs and development roadmaps to accelerate this capability to the warfighter."

Bell's HSVTOL vehicles blend the hover capability of a helicopter with the speed, range and survivability features of fighter aircraft. This family of scalable aircraft concepts is designed to support a range of missions, including personnel recovery, autonomous ISR/Strike and tactical mobility, with low-downwash hover capability and jet-like speeds of more than 400 knots.

Bell's concepts are envisioned as part of a broader HSVTOL mission system framework that provides the next generation of speed, range, and survivability. These concepts provide the flexibility to carry out USAF and USSOCOM missions across the full spectrum of conflict and political scenarios. It emerged as a top-tier entrant in the HSVTOL Concept Challenge by meeting or exceeding rigorous evaluation criteria focused on technical merit, reliability, scalability, and other factors.

"The HSVTOL Concept Challenge has surfaced an impressive range and caliber of solutions to help us understand how to build a new class of air vehicles," said Dr. Reid Melville, chief innovation officer, Air Force Research Laboratory Transformational Capabilities Office. "We believe the organizations selected to receive market research investments at this stage have the potential to deliver truly groundbreaking innovation."

Over the next six months, Bell will further develop its HSVTOL solution, working closely with the USAF, USSOCOM, and Collaboration.Ai, the prime contractor facilitating the HSVTOL Concept Challenge.

Boeing to Offer the P-8A Poseidon for Canada's Multi-Mission Aircraft Project



An artist's rendering depicts the P-8A Poseidon in Canadian livery. *BOEING*

OTTAWA, Ontario — Boeing announced on Feb. 10 its intent to offer the P-8A Poseidon in response to Canada's request for information for long-range maritime patrol aircraft. The Canadian Multi-Mission Aircraft project will replace the Royal Canadian Air Force fleet of CP-140 Aurora aircraft and enhance its antisubmarine warfare and intelligence, surveillance and reconnaissance capabilities.

With more than 140 aircraft in service, the P-8 has executed more than 400,000 mishap free flight-hours around the globe. Militaries that operate or have selected the P-8 include the U.S. Navy, the United Kingdom's Royal Air Force, Royal Australian Air Force, Royal New Zealand Air Force, Indian navy, Royal Norwegian Air Force, Republic of Korea navy and German navy.

"The P-8A Poseidon has demonstrated that it is the world's most capable multi-mission aircraft currently in production complete solution for Canada's and offers CMMA а requirements," said Tim Flood, international business development director for Europe and Americas. "The range, speed, and endurance of the P-8 makes it the perfect platform to monitor Canada's northern and maritime approaches and the P-8 will ensure allied interoperability to meet Canada's security commitments. Coupled with a robust industrial partnership plan, Boeing's offer will build on its successful record of contributing to Canada's economic growth throughout the life of the CMMA program."

The P-8A's multi-mission capability has delivered mission success in antisubmarine warfare, ISR, humanitarian assistance and disaster relief and search and rescue missions. These multi-mission capabilities are enhanced through secure, interoperable, net-ready systems that will provide Canada with the ability to engage/control and to fully integrate with other antisubmarine warfare and ISR assets.

In addition, the P-8 shares extensive commonality with

Boeing's 737NG, which has support infrastructure around the globe. Commonality in spares and training for aircrews and maintainers reduces costs substantially and enables military operators to leverage support throughout the world.