August 2025

Corey J Beitler's

"Distelfink Airlines"

An Online Aviation Newsletter

Soar and Shore Festival: 2025 Atlantic City Airshow

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Third Strike Wingwalking, featuring wingwalker Carol Pilon, performs during the 2025 Atlantic City Airshow held on July 16, 2025. After a one-year hiatus, the popular annual summer event returned to the skies above the Atlantic City Beach and Boardwalk as part of the week-long Soar and Shore Festival presented by Visit Atlantic City.

FROM THE EDITOR'S DESK

Atlantic City Airshow, Space Shuttle Discovery, F-35 Lightning, MH-65E Dolphin

Greetings Everyone:

Welcome to the August edition of "Distelfink Airlines". The summer airshow season is in full swing for me and my aviation photojournalism efforts. I just covered the National Warplane Museum's Geneseo Airshow and the Soar and Shore Festival Atlantic City Airshow. Both airshows were fortunate to have generally good weather and great crowd turnouts. It was great to see so many friends and colleagues at the Geneseo Airshow and to see an airshow return to the skies of Atlantic City again.

The featured content for this edition of "Distelfink Airlines" is a photo feature from the Soar and Shore Festival: 2025 Atlantic City Airshow on July 16, 2025. As mentioned, the airshow returned to the skies of Atlantic City, New Jersey, this year after being canceled last year due to financial difficulties and a headline performer having to withdraw from the event. This year, the airshow was part of a week-long festival of events in the city presented by Visit Atlantic City. Although the airshow was smaller and shorter in length than it has been in the past, it was great to see the event return, and hopefully, Visit Atlantic City can expand the airshow in the years ahead. Visit Atlantic City is already making plans to hold the airshow once again in 2026. I was fortunate to be able to cover this year's Atlantic City Airshow with media credentials. I would like to thank Jessica Kasunich from Visit Atlantic City for her assistance in obtaining media credentials so I could cover the airshow for the newsletter. It was also great to work with fellow aviation photojournalist Werner R. Ennesser from W.R.E. Productions at the event.

Also included in this edition of the newsletter is a feature about the Space Shuttle Discovery. This feature ran in the past, but it is being republished because, as many may be aware, the Discovery has been caught up in a political battle over its ownership and where it should be displayed. Currently, the Discovery is displayed at the National Air and Space Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia. Recent legislation passed by U.S. Congress is pushing for the Discovery to be moved for display at the Johnson Space Center in Houston, Texas. The Smithsonian Institution is insisting Discovery cannot be moved without damaging it, and they own the orbiter. The planned move has also sparked concerns from lawmakers, former NASA officials and astronauts, and aviation and spaceflight enthusiasts. The feature about Discovery highlights the orbiter's rich history and some of its record-breaking missions in space.

The "Aircraft of Special Interest" section this month features Lockheed Martin F-35A Lightning II. This version of the fifth-generation multirole stealth strike fighter is the conventional take-off and landing (CTOL) variant of the aircraft. The F-35A featured in this section was on display during Central PA Airshow held at the Harrisburg International Airport in May and is operated by the 187th Fighter Wing of the Alabama Air National Guard.

Finally, "Aviation Sightings" has a small feature about the MH-65E Dolphin helicopter used by the U.S. Coast Guard. It is hard to believe, but the MH-65 Dolphin is celebrating 40 years in service with the U.S. Coast Guard this year. Recently, MH-65s and their crews were used to rescue victims from the devastating flooding in Texas in early July.

Thank you again for supporting my aviation photojournalism efforts and "Distelfink Airlines" this year. Please feel free to share the newsletter with whoever you wish and invite them to join the newsletter's official social media pages listed below.

Regards,
-Corey

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What's Inside:

Airbus Helicopters/Eurocopter MH-65E Dolphin

An Airbus Helicopters/ Eurocopter MH-65E Dolphin operated by Coast Guard Air Station (CGAS) Atlantic City performs a search and rescue demonstration during the 2025 Atlantic City Airshow. The Dolphin has been in service since 1985, and is celebrating its 40th year of service this year with the U.S. Coast Guard. Since its introduction into service, the Dolphin has been frequently upgraded to improve its capabilities and performance in roles such as medevac-capable search and rescue, drug interdiction, and maritime law enforcement.

The Airbus Helicopters/Eurocopter MH-65E Dolphin is a short-range, twin-engine helicopter operated by the U.S. Coast Guard for medevac-capable search and rescue (SAR) and armed Airborne Use of Force and Homeland Security Missions. The MH-65E Dolphin typically carries a crew of four consisting of a Pilot, Copilot, Flight Mechanic, and Rescue Swimmer. Although the MH-65E is primarily operated from shore bases, the helicopter can be deployed from medium and high-endurance Coast Guard Cutters as well as Polar Icebreakers. The Dolphin is a variant of the French-built Eurocopter AS365 Dauphin.

In 1979, the U.S. Coast Guard selected the SA366 G1 Dauphin as its new short-range recovery air-sea rescue helicopter to replace the aging Sikorsky HH-52A Sea Guard. A total of 99 helicopters, optimized for U.S. Coast Guard search and rescue missions and designated the HH-65A Dolphin, were acquired. Seventy-five percent of the Dolphin's structure, including the fuselage, rotor blades, and rotorhead, was manufactured from corrosion-resistant materials. The HH-65A also featured an advanced avionics system, which allows the Dolphin to fly automatic search patterns and fly an unaided approach to hover automatically 50 feet (15 m) above the water. Unlike most helicopters, the Dolphin uses an enclosed Fenestron tail rotor system, which operates similarly to a ducted fan. The Dolphin entered operational service in 1985. Since its introduction, the Dolphin has been regularly upgraded to improve its capabilities and performance. Upgrades to the Dolphin have included new engines, updated avionics, and the addition of armament to perform maritime law enforcement and military readiness missions. The current variant of the Dolphin is the MH-65E, which entered service in 2017. The MH-65E features more powerful and reliable engines, a digital "glass" cockpit, an automatic digital flight control system, and a digital weather radar system. Missions typically performed by the MH-65E Dolphin include medevac-capable search and rescue, drug interdiction, maritime law enforcement, pollution control, polar ice breaking, and military readiness.

This MH-65E Dolphin is operated by Coast Guard Air Station (CGAS) Atlantic City. CGAS Atlantic City operates 12 MH-65E Dolphin helicopters, with two always maintained in a 30-minute response time status. The MH-65E and its crew were performing a search and rescue demonstration as part of the 2025 Atlantic City Airshow.


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U.S. COAST GUARD

Hallmark Kinner Sportwing Keepsake Christmas Ornament

The Kinner Sportwing is the 29th airplane featured in Hallmark's long-running "Sky's The Limit" series of Keepsake Christmas ornaments representing historic American aircraft. For the duration of the series, the aircraft ornaments have been sculpted by Hallmark artist Lynn Norton. The Sportwing was a two-seat light sport monoplane designed by the Kinner Airplane & Motor Corporation in the early 1930s.

For 29 years, Hallmark Cards Inc. has produced a series of Christmas ornaments replicating historic American aircraft as part of its Keepsake ornament product line. The "Sky's The Limit" series has featured many famous aircraft in ornament form since its debut in 1996, including the Wright Flyer, the Ryan NYP *"The Spirit of St. Louis"* flown by Charles Lindbergh, and the bright red Lockheed Vega 5B flown by Amelia Earhart on her record-breaking solo flight across the Atlantic Ocean in 1932. In addition to these famous historic American aircraft, unusual types have also been featured in the series, such as the Hall Bulldog Racer, a racing plane financed by Marion Price Guggenheim and designed by Bob Hall for competition in the 1932 National Air Races. For 2025, the aircraft chosen for the "Sky's The Limit" ornament series is the Kinner Sportswing, a two-place light sport monoplane designed and built in the early 1930s by the Kinner Airplane & Motor Corporation in Glendale, California.

The Sportwing was designed by the company's chief engineer, Max B. Harlow, and Robert Porter, and flew for the first time in 1933. The Sportwing was built in two variants, the B-2 powered by a 125-horsepower Kinner B-5 engine, and the B-2R, powered by a 160-horsepower Kinner R-5 engine. Both engines were five-cylinder, air-cooled, radial engines and gave the Sportwing a top speed of 122 miles per hour (196 km/h), a cruise speed of 110 miles per hour (180 km/h), and a range of 450 miles (720 km). The Sportwing featured a fabric-covered fuselage and wings, with the cowling and landing gear fairings made of metal. To match the design styles of the period, the Sportwing featured chrome door handles, a leather interior, a streamlined split cockpit windscreen, and burnished aluminum levers in the cockpit. Unfortunately, the Great Depression limited sales of the Sportwing, and only eight examples were built. The Kinner Aircraft & Motor Corporation did not survive the Great Depression, going bankrupt in 1937. The company's engine business was reorganized as Kinner Motor Inc. and produced aircraft engines until 1946, when it ceased operations. Today, only one Sportwing, owned by David Devries of New Hampshire, survives. Devries maintains the restored Sportwing in airworthy condition and flies it regularly.

Hallmark's ornament faithfully captures the unique features of the Kinner Sportwing, such as its distinctly shaped landing gear wheel pants, sharply slanted split windscreen for the cockpit, its louvered engine cowling, and a colorful classic paint scheme. This excellent ornament of the Kinner Sportwing is now available at Hallmark.com and Hallmark retail locations throughout the United States and Canada.

The Kinner Sportwing ornament comes in a standard Hallmark Keepsake ornament box. The front of the box features a picture of the ornament, and the back of the box has a brief biography of the ornament's artist, Lynn Norton. The ornament is wrapped in tissue paper within the box to protect it from damage.

The Kinner Sportwing ornament is an excellent replica of the actual aircraft. The ornament captures many distinctive features of the aircraft including the louvered engine cowling and slanted cockpit windscreen. The ornament is finished in a beautiful classic paint scheme that perfectly fits the Golden Age of Flight era.

Easy Model 1/48 Scale Grumman J2F-5 Duck

This excellent 1/48 scale assembled and painted plastic model of a Grumman J2F-5 Duck amphibious biplane is sold by Easy Model. This model was manufactured by the company as part of their 1/48-scale Winged Ace "Platinum" line of plastic model airplanes. The J2F-5 Duck is decorated in the markings of an aircraft belonging to the Fleet Air Photographic Unit Atlantic in 1941.

The Grumman J2F Duck (company designation G-15) is an American single-engine amphibious biplane. Designed during the mid-1930s, the J2F Duck was used by every branch of the U.S. Armed Forces during World War II, primarily in utility and air-sea rescue roles. The Argentine Navy, which took delivery of its first example of the Duck in 1937, was also a major user of the aircraft. After World War II, surplus examples of the J2F Duck saw extensive service with civilian operators, particularly in remote locations where the Duck's ability to land on both conventional runways and bodies of water was ideal.

The J2F Duck was designed as an improvement to Grumman's earlier JF Duck, which was similar in design and layout. The main differences between the two aircraft were that the J2F had a large main float and was equipped with a more powerful engine. The J2F's float was blended into the fuselage, giving the amphibious aircraft the appearance of a flying boat. The central float also housed the J2F's main landing gear, which was extended and retracted using a hand crank in the cockpit. The J2F had single-bay, equal-span wings with strut-mounted stabilizing floats on the lower wings. The tandem cockpit had room for two or three crewmembers. A cabin located in the fuselage of the J2F could carry up to two seated passengers or one patient on a stretcher.

The J2F Duck flew for the first time on April 2, 1936. The prototype was powered by a 750-horsepower Wright R-1820-20 Cyclone nine-cylinder, air-cooled, radial engine. The prototype J2F Duck was delivered to the U.S. Navy on the same day it flew for the first time. The U.S. Navy received 28 more J2F-1s, which were similar to the prototype. The next production version, the J2F-2, was built for the U.S. Marine Corps. The J2F-2 featured nose and dorsal machine guns and had bomb racks installed on the lower wings. The U.S. Marine Corps received 21 J2F-2s. In 1939, 20 J2F-3s were built for the U.S. Navy. These Ducks were fitted with a Wright R-1820-26 engine that produced 850 horsepower. These aircraft also had plush interiors for use as executive transport aircraft for high-ranking U.S. Navy officials.

In 1941, production of the J2F Duck was transferred to the Columbia Aircraft Corporation of New York so Grumman could concentrate on production of fighters and bombers for the war effort. The Columbia Aircraft Corporation built 330 J2F Ducks for the U.S. Navy and U.S. Coast Guard, mostly J2F-5 and J2F-6 variants. The J2F-6 was the final production variant of the Duck. This variant of the Duck had a 1,050-horsepower Wright R-1820-64 Cyclone engine and a long chord cowling to accommodate the larger engine. The J2F-6 was also fitted with underwing racks to carry bombs or depth charges, and could be equipped with target towing gear.

The J2F Duck was used by the U.S. Navy, Marines, Army Air Forces, and Coast Guard throughout World War II. Typically, the J2F Duck was operated in general utility and light transport roles. Missions flown by the J2F Duck included mapping, scouting and observation, anti-submarine patrols, air-sea rescue operations, photographic surveys, and target towing. Despite its slow speed and ungainly appearance, the J2F Duck earned a reputation in service for being a sturdy and reliable aircraft that could take off and land from almost anywhere. The Duck was also known for its excellent handling qualities on water, even in rough and heavy seas, and its ability to carry loads beyond its published weight limits. In several air-sea rescue operations during World War II, J2Fs carried up to five people crammed in their cabins to safety when the official capacity was just two.

Following World War II, several ex-U.S. Navy J2F Ducks were sold as surplus. The U.S. Air Force operated several ex-U.S. Navy Ducks as OA-12s in the air-sea rescue role in 1948. Argentine Naval Aviation purchased 32 J2F Ducks from the U.S. Navy in 1946-1947, operating them until 1958. The Mexican and Colombian Navies each acquired three ex-U.S. Navy J2Fs, operating these aircraft throughout the early 1950s. The Peruvian Navy acquired a single J2F-6 from the U.S. Navy, operating it from 1961 to 1964. Other examples of the J2F Duck were acquired by independent civilian operators, who operated them as bush aircraft in remote locations such as the Alaskan and Canadian wilderness. These operators loved the J2F's amphibious design and its ability to carry people and cargo. Unfortunately, the extreme weather conditions in these regions and the operations flown by these Ducks took their toll. Many were lost in accidents, while others simply wore out in service and were scrapped. Today, only nine J2F Ducks survive, with four examples being listed in airworthy condition.

This angle of the Easy Model 1/48 scale Grumman J2F-5 Duck highlights some of the unique design features of the aircraft, including the stabilizing floats mounted on the lower wings, the externally braced tailplane, and the landing gear that retracted into the central float. Easy Model did an excellent job replicating these features on their J2F-5 Duck.

The colors and markings on Easy Model's 1/48 scale Grumman J2F-5 Duck are an exact match to an aircraft operated by Fleet Air Photographing Unit Atlantic in 1941. The markings match those in photographs of the actual aircraft operating during World War II. Unfortunately, the model's paint finish lacks any weathering and staining that would have existed on an aircraft continuously operated during wartime.

Easy Model is a manufacturer of plastic model airplanes, helicopters, tanks, ships, and weapons. Easy Model products are distributed by the Model Rectifier Corporation (MRC) to select hobby shops and other retailers in the United States. The plastic model airplanes made by Easy Model are part of their Winged Ace product line and are manufactured in 1/72 scale and 1/48 scale, which is considered the "premium" line. Easy Model aircraft models are known for their affordability and unusual nature of the subjects produced by either type or markings. Unfortunately, it seems that Easy Model has discontinued their model aircraft product lines, as there have been no new releases in several years. As of this writing, most of the previously released Easy Model aircraft models remain available in stock at online hobby shops and retailers.

This 1/48 scale Grumman J2F Duck model is part of Easy Model's Winged Ace 1/48 scale "Platinum" line of assembled plastic model aircraft. Additional aircraft models in this series include the Curtiss P-40M Warhawk, Republic P-47D Thunderbolt, North American P-51D Mustang, and a Gloster Gladiator Mk. I biplane fighter. Each model is offered in at least two paint schemes. The J2F-5 Duck from Easy Model is available in two paint schemes: a postwar J2F-5 operating with Argentine Naval Aviation, and this aircraft, a U.S. Navy J2F-5 assigned to Fleet Air Photographic Unit Atlantic (Aircraft #3) in 1941.

The Easy Model J2F-5 Duck is an excellent model. The manufacturer did a great job on the mold of the model, replicating the various unique features of the actual airplane, such as the large central float, tandem cockpit, long chord engine cowling, and the main landing gear wheels. The thin molded plastic the model is made of was an excellent material to replicate the J2F-5's panel lines and wing ribs. In comparing the model to pictures of the actual aircraft, the model has the correct overall lines and design features of the J2F-5 Duck, which make it easily identifiable in any wartime photos.

Another highlight of this model is its markings. Several pictures exist of the actual J2F-5 Duck in service, which the model is based on, clearly showing its markings and stenciling. Easy Model researched the actual aircraft and correctly replicated all the markings and stenciling on their J2F-5 Duck model. The Duck is also accurately painted in a standard two-tone blue and gray color scheme that U.S. Navy aircraft wore in the early stages of World War II.

Finally, Easy Model deserves credit for making a truly unusual subject as a 1/48 scale model. Until this model was released, the only J2F Duck models available were plastic model kits that needed to be painted and assembled or expensive finished wooden models. Easy Model's J2F-5 Duck model gives aviation enthusiasts who are not interested or unable to build a model of the Duck the opportunity to have one in their collection at an affordable price point and in a scale that easily fits on a desk or bookshelf.

Despite being an excellent model, the Easy Model J2F-5 Duck does have some shortcomings. One of the significant shortcomings of this model is that there are no pilot figures in the cockpit. The tandem cockpit with its clear canopy looks empty without pilots in it. Some collectors have inserted 1/48 scale pilot figures into the model by prying the cockpit canopy off with a hobby knife, but there is a risk of cracking or scratching the canopy if someone chooses to go this route.

Another shortcoming of this model is that it lacks the wire bracing that is present on the actual aircraft. Wire bracing is difficult to get tight and adds time and cost to the manufacturing process for aircraft models. It is most likely that Easy Model elected to leave the wire bracing off the J2F-5 Duck to save on production costs and avoid it breaking during transit.

Finally, there are two other shortcomings with Easy Model's J2F-5 Duck. The first is that the paint finish is basic, and lacks any type of weathering or staining that would be common on an aircraft in service. Secondly, the J2F-5 Duck is constructed of extremely thin plastic. As a result, the model is more fragile than some might expect it to be. Collectors must handle Easy Model's J2F-5 Duck carefully to avoid breaking a wing strut or one of the stabilizing floats on the lower wings.

Easy Model's 1/48 scale replica of the Grumman J2F-5 Duck is an interesting addition to any model airplane collection. The replica is a model of an unusual airplane that carried out important, often behind-the-scenes roles during World War II. The model's crisp plastic parts and molding accurately capture the lines and features of Grumman's excellent amphibious biplane. Easy Model's J2F-5 Duck replica is also available at an excellent price point and comes assembled, painted, and ready to display. The J2F-5 and its unique design features will be a conversation piece in any model airplane collection and an excellent addition to the desk or bookshelf of anyone interested in World War II aircraft.

Despite some minor shortcomings, the Easy Model 1/48 scale Grumman J2F-5 Duck is an excellent addition to any model airplane collection. The J2F-5 Duck is a unique subject, and this model honors one of the behind-the-scenes workhorse aircraft of World War II. The Duck's colorful markings and the interesting elements of its design will make it a conversation piece when displayed on any desk or bookshelf.

Soar and Shore Festival: 2025 Atlantic City Airshow

After a one-year hiatus, the popular summer airshow returned to the skies above the Beach and Boardwalk of Atlantic City, New Jersey, as part of a week-long festival of special events presented by Visit Atlantic City.

Nathan K. Hammond flies his de Havilland DHC-1 Super Chipmunk during the 2025 Atlantic City Airshow. Performing as GhostWriter Airshows, Hammond can fly three different types of acts at airshows: a day show, a night show, and skywriting, where Hammond can draw pictures and write words in the sky with the aircraft's smoke system to promote an airshow and its sponsors.

Thom Richard flies a low pass over the ocean in front of the airshow crowd in John Baugh's restored General Motors FM-2 Wildcat during the 2025 Atlantic City Airshow. The Wildcat was a naval fighter used throughout World War II by the U.S. Navy and Marine Corps, as well as the Royal Navy's Fleet Air Arm, which named the fighter the Martlet.

For 20 years beginning in 2003, the coastal resort city of Atlantic City, New Jersey, held a large airshow over the Beach and Boardwalk every summer. The annual event, initially named "Thunder Over The Boardwalk: The Atlantic City Airshow" and later "The Atlantic City Airshow: A Salute To Those Who Serve", became one of the largest beach airshows in North America. The airshow attracted top military and civilian performers and was attended by thousands of people each year.

Unfortunately, the event was grounded in 2024 when promised funding to support the event from the State of New Jersey never materialized, and one of the headline performers scheduled for the event was forced to withdraw. Despite initially canceling the airshow again for 2025, city officials made the surprise announcement in March that the airshow would take place this summer, with the official airshow day scheduled for July 16, 2025, and a rehearsal day planned for July 15.

For 2025, the airshow returned as part of a Soar and Shore Festival presented by Visit Atlantic City. In addition to the airshow, the week-long festival of special events included Jimmy Johnson's "Quest For The Ring" sportfishing tournament at the Frank S. Farley Marina sponsored by the Golden Nugget Casino, a car show & Silent Movie Experience in Boardwalk Hall, a Beachfront fireworks display by Grucci, and ESPN's *Slippery Stairs*, a competitive stair-climbing game show on the beach.

As this was a new start for the event in several ways, the 2025 Atlantic City Airshow was smaller and shorter in length than in previous years. Despite the short timeframe provided to the organizers to put the airshow together, they did an incredible job. The airshow featured several well-known civilian performers flying a variety of aircraft. Local military assets from the U.S. Air Force, New Jersey Air National Guard, and U.S. Coast Guard also performed flybys or flight demonstrations during the airshow.

The following photographs capture some of the action from the Soar and Shore Festival: 2025 Atlantic City Airshow on July 16, 2025.

The 2025 Atlantic City Airshow opened with a parachute jump by the Misty Blues All Woman Skydiving Team. This jumper is carrying the American flag down to the airshow during the playing of the national anthem. The practice of a skydiver bringing down the American flag during the playing of the national anthem is a part of many airshow opening ceremonies in the United States. In this photo, the Misty Blues jumper is lining up for a landing on the beach in the designated landing zone at airshow center.

Two jumpers from the Misty Blues All Woman Skydiving Team descend to the target landing area on the beach. Each jumper carries a colorful banner, which serves as a visual aid to other jumpers in the sky and enhances the visual appeal of the performance for the airshow audience. The Misty Blues All Woman Skydiving Team has been performing at airshows since the early 1980s. In addition to airshows, the team also jumps at corporate events, concerts, sporting events, and other special occasions.

The Misty Blues All Woman Skydiving Team uses modern parachutes that are steerable. These modern parachutes permit the team to jump into small locations, such as sports stadiums and concert venues. The steering lines attached to the parachute not only allow the jumper to turn right or left but can also be used to slow the descent speed of the parachute by tugging on both sets of steering lines simultaneously. Each jumper also carries a reserve parachute in case their main chute fails to open.

There are approximately 35,000 active skydivers in North America. Only 15% of those skydivers are women. The skydivers on the Misty Blues All Woman Skydiving Team come from a variety of different skydiving backgrounds and from all over the United States. Several of the women on the team are prorated skydivers and have won awards in competitive skydiving contests. The team strives to be great role models and inspire all those they meet at events to follow their dreams.

The 2025 Atlantic City Airshow also featured a performance by Skip Stewart in his "Prometheus" biplane. Stewart is a well-known aerobatic pilot in the airshow industry, with over 10,000 flight hours in various types of aircraft. He has also won numerous awards in aerobatic competitions and is known as one of the best aerobatic pilots in the airshow industry. Stewart has been featured in articles in aviation magazines such as World Airshow News, Plane & Pilot, and Smithsonian: Air and Space.

Skip Stewart flies his aerobatic biplane "Prometheus" during the 2025 Atlantic City Airshow. "Prometheus" was custom-built by Stewart and started life as a Pitts Special. Changes to the aircraft made by Stewart include the installation of a 400-horsepower Lycoming engine, a larger three-bladed propeller, and a paint scheme resembling one found on a classic American street rod. Stewart flies approximately 24 airshows a year throughout the United States with "Prometheus".

A fixture among the airshow performances at the Atlantic City airshow every year is a search and rescue demonstration by Coast Guard Air Station (CGAS) Atlantic City with one of their Dolphin helicopters. CGAS Atlantic City once again provided this popular demonstration for the 2025 airshow. CGAS Atlantic City is located at the Atlantic City International Airport and is equipped with 12 MH-65E Dolphin helicopters, with two MH-65Es always maintained on a 30-minute response time status.

The MH-65E Dolphin operated by CGAS Atlantic City demonstrates how a victim would be rescued by a U.S. Coast Guard rescue swimmer and brought aboard the helicopter. If a victim is severely injured or unconscious, a basket can be hooked to the winch and the victim can be placed inside the basket to be hoisted to safety. The MH-65E Dolphins are medevac-equipped helicopters with life-saving medical equipment onboard to provide care to a victim until the helicopter reaches a medical facility.

In addition to CGAS Atlantic City, the Atlantic City International Airport is home to the 177th Fighter Wing of the New Jersey Air National Guard. Nicknamed the "Jersey Devils", the 177th Fighter Wing currently flies the Lockheed Martin F-16C Fighting Falcon multirole aircraft and has a long history of supporting the Atlantic City Airshow with flybys of their F-16s. The 177th Fighter Wing once again supported the event in 2025, with several flybys by a pair of their F-16C Fighting Falcons.

A closer view of one of the 177th Fighter Wing's Lockheed Martin F-16C Fighting Falcon aircraft as it performs a flyby over the beach during the 2025 Atlantic City Airshow. Initially designed as a lightweight air superiority fighter, the F-16 has evolved through avionics and weapons upgrades during its service life into an all-weather, multirole aircraft capable of performing both air superiority and ground-attack missions. The upgraded F-16C variant of the Fighting Falcon was introduced into service in 1991.

Initially introduced in 1978, the F-16 Fighting Falcon was one of the first fighter aircraft to feature a fly-by-wire flight control system and a reclined ejection seat to reduce G-forces on the pilot. The F-16 is one of the most successful combat jet designs in history. The F-16 is the world's most common jet fighter, with over 2,084 operational worldwide. Although the new F-35 Lightning has replaced some F-16s in service, the jet remains the backbone of air defense in the air forces of many NATO countries.

A new aircraft in the skies above the Atlantic City Beach and Boardwalk for the 2025 airshow was an appearance by a U.S. Air Force Boeing KC-46A Pegasus. The KC-46 Pegasus is a military aerial refueling and strategic airlift aircraft developed from the Boeing 767 commercial airliner. The KC-46 was developed to meet a requirement to replace the U.S. Air Force's aging KC-135 Stratotankers. The KC-46A was introduced into service in 2019. The U.S. Air Force plans to acquire up to 180 KC-46s from Boeing through 2027.

Another photo of the Boeing KC-46A performing a flyby of the airshow crowd with its refueling boom in the extended position. The 108th Wing of the New Jersey Air National Guard operates this KC-46A Pegasus. The unit is an associate squadron of the 305th Air Mobility Wing and is based at the McGuire Air Force Base entity of Joint Base McGuire-Dix-Lakehurst. The unit's primary mission is aerial refueling, but the 108th Wing also supports intelligence and cyber operations squadrons.

Also making an appearance at the 2025 Atlantic City Airshow was the Delaware Aviation Museum's North American B-25 Mitchell, "Panchito". The B-25 was one of the most widely used medium bombers during World War II. Over 11,000 B-25s were built during World War II, and the versatile aircraft served in several different roles. In addition to its use as a bomber, the B-25 was also used as a VIP transport, gunship, anti-submarine warfare, cargo transport, aerial reconnaissance, and in the anti-shipping role.

"Panchito" performs a flyby during the airshow. The B-25 is famous for its use during the Doolittle Raid in early 1942. Led by Lt. Col. James Doolittle, 16 B-25s launched from the aircraft carrier U.S.S. Hornet to bomb Tokyo and other targets in a daring attack on the Japanese mainland. Although the raid caused minor damage and all the B-25s crash-landed in China or the Soviet Union, it raised morale in the United States after the devastating attack on Pearl Harbor just a few months before.

The New Jersey Forest Fire Service also performed a flyby of the 2025 Atlantic City Airshow with one of its Bell UH-1H Iroquois helicopters. Commonly known as the "Huey", the UH-1 is one of the most iconic helicopters ever built. The "Huey" was used extensively during the Vietnam War and has also been used for a variety of other military and civilian roles during its long service career. This UH-1 is an H model and can be fitted with a "Bambi Bucket" for fighting forest and brush fires.

For its flyby of the airshow, the New Jersey Forest Fire Service Bell UH-1H Iroquois had a special passenger on board, Smokey Bear. Smokey Bear is an American campaign and advertising icon for the U.S. Forest Service in the Wildfire Prevention Campaign. First appearing in 1944, Smokey Bear is the longest-running public service announcement campaign in the United States. Today, the character of Smokey Bear continues to be used to educate the public on how to prevent forest and wildfires.

Warbird Thunder is an airshow team consisting of two North American SNJ advanced training aircraft from World War II and pilots Chris "CT" Thomas and Mike "Buick Eberhardt. The team can perform either a single-ship or two-ship routine at an airshow that consists of formation loops, aileron rolls, barrel rolls, and Cuban Eights. For the 2025 Atlantic City Airshow, the Warbird Thunder routine was a single-ship performance, with Mike "Buick" Eberhardt performing the flight demonstration.

Mike "Buick" Eberhardt from Warbird Thunder Airshows performing in his World War II-era North American SNJ advanced trainer at the 2025 Atlantic City Airshow. The SNJ was an advanced training aircraft designed to be the final step for student pilots before transitioning into fighter aircraft such as the F6F Hellcat and F4U Corsair. The SNJ is a large aircraft, but fully aerobatic. Surviving SNJs remain popular with airshow performers due to their large size, power, and aerobatic capabilities.

The 2025 Atlantic City Airshow took a trip back in time to the Golden Age Of Aviation with performer Carol Pilon from Third Strike Wingwalking walking on the wings of her Boeing Stearman biplane. Pilon is from Masham, Quebec, Canada, and has been professional wingwalking at airshows since 2000. In addition to wingwalking at airshows, Pilon has mentored wingwalkers and wingwalking teams. Pilon also has the distinction of being the first and only Canadian wingwalker.

Wingwalker Carol Pilon from Third Strike Wingwalking strikes a pose on her Boeing Stearman biplane to salute the crowd a final time at the 2025 Atlantic City Airshow. The Boeing Stearman was a primary training biplane used throughout World War II. After World War II, many were sold as surplus to civilian owners and modified for crop dusting, sport flying, and performing in airshows. The Stearman's slow speed and pleasant flying characteristics make it ideal for wingwalking acts at airshows.

The 2025 Atlantic City Airshow also featured a flight demonstration of this General Motors FM-2 Wildcat owned by John Baugh and flown by Thom Richard. Richard is a well-known figure in the airshow industry, flying warbirds such as the North American P-51 Mustang and Curtiss P-40 Warhawk. Initially designed by Grumman, the Wildcat was license-built during World War II by General Motors. The FM-2 was a more powerful and improved variant of the Wildcat built by the company.

The Wildcat was the only effective fighter available to the U.S. Navy at the start of World War II to combat the Japanese Mitsubishi A6M Zero. Early versions of the Wildcat played a key role in the Battle of Midway and the Battle of Guadalcanal. When the Wildcat was superseded on larger aircraft carriers by the F6F Hellcat, it continued to serve on smaller escort carriers. Later versions of the Wildcat, like the FM-2, were noted for their excellent maneuverability and rugged construction.

After circling the Misty Blues All Woman Skydiving Team during the opening ceremonies, Nathan K. Hammond returned to the skies of the 2025 Atlantic City Airshow later in the afternoon with his GhostWriter Airshows de Havilland DHC-1 Super Chipmunk. Hammond performed a high-energy aerobatics routine in the Chipmunk, using colored smoke during his performance for added visual appeal. Hammond has been flying in airshows since 1998 and has amassed over 8,000 hours of flight time.

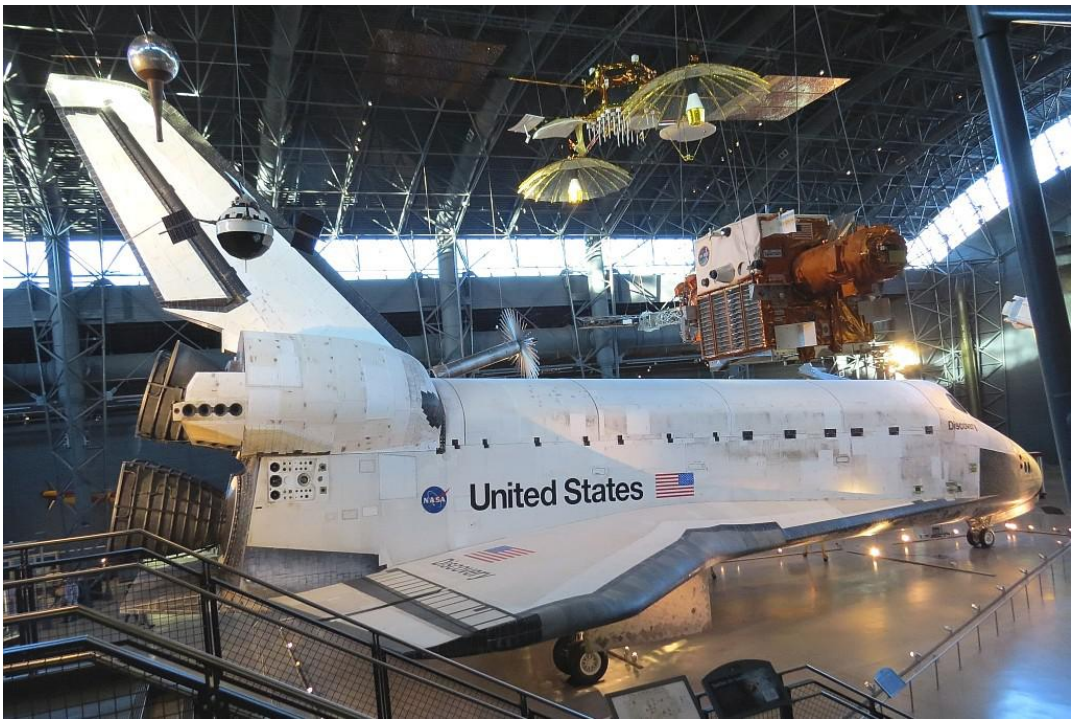
The de Havilland Canada DHC-1 Chipmunk was designed as a two-seat primary flight trainer immediately after World War II. The Chipmunk was sold in large numbers to air forces worldwide. Many Chipmunks were sold as surplus after they were retired from military use. GhostWriter has been modified into a Super Chipmunk, which features a more powerful engine and other improvements for a higher cruising speed and greater climb rate, allowing it to perform airshow aerobatics.

The final performance of the 2025 Atlantic City Airshow was a demonstration of a Mikoyan-Gurevich MiG-17 Cold War-era Soviet jet fighter. The MiG-17 is owned by Randy W. Ball of FIGHTERJETS INC., which has several Cold War-era jets in its collection. Flying the MiG-17 in the airshow demonstration was Michael Terfehr. The MiG-17 was an advanced development of the earlier MiG-15 used during the Korean War and entered service with the Soviet Air Force in 1952.

Michael Terfehr flying the MiG-17 during his airshow flight demonstration. The MiG-17 was designed to shoot down enemy bombers in straight and level flight, not for dogfighting with enemy fighters. The MiG-17 was surprisingly successful when used by North Vietnamese pilots against American fighters and fighter-bombers during the Vietnam War. This success was due to the MiG-17 being more maneuverable than its American counterparts, which were designed for speed and range.

The MiG-17 was one of the first jet fighter aircraft that was a successful transonic type before the advent of true examples of the type, such as the North American F-100 Super Sabre. The MiG-17 was operated by several air forces worldwide. Over 10,000 MiG-17s were built during the type's production run, including license-built versions in China and Poland. Primary users of the MiG-17 were the Soviet Air Force, Polish Air Force, the People's Liberation Army Air Force, and the Vietnam People's Air Force.

Space Shuttle *Discovery*



The Space Shuttle Discovery on display in the National Air and Space Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia. The third orbiter built, Space Shuttle Discovery was considered to be the "Champion of the Fleet" for NASA's Space Shuttle Program. Discovery flew 39 Earth-orbit missions and traveled 150,000 miles (214,401 km) in space. Notable flights for the orbiter included missions to dock with the Russian Mir space station and missions to launch and later repair the Hubble Space Telescope.

The Space Shuttle *Discovery* entered service in 1984 and was the champion of the orbiter fleet. *Discovery* flew on 39 Earth-orbit missions and spent a total of 365 days in space. Since *Discovery* flew every type of mission the Space Shuttle was designed to fly, and tells the story of the 30-year history of the U.S. Space Shuttle Program from 1981 to 2011 and the impact it had on human spaceflight. *Discovery* is the centerpiece of the collection of spacecraft and other space artifacts on display in the James S. McDonnell Space Hangar in the National Air and Space Museum's Steven F. Udvar-Hazy Center.

The *Discovery* was the third of five orbiters to be built for the U.S. Space Shuttle program and the third to enter operational service, preceded by the *Columbia* and *Challenger*. The name *Discovery* was chosen to carry on a tradition of ships of exploration carrying that name, primarily the *HMS Discovery*, one of the ships commanded by Captain James Cook during his third and final voyage from 1776 to 1779.

As the third orbiter built, weight optimizations learned during the construction and testing of the orbiters *Enterprise*, *Columbia*, and *Challenger* were put into place on *Discovery*, making it over 6,000 pounds (2,722 kg) lighter than the previously built orbiters. These weight optimizations included using quilted AFRSI blankets rather than white LRSI tiles on the fuselage and the use of graphite epoxy instead of aluminum for the payload bay doors and some of the wing spars and beams.

One curious aspect of *Discovery's* construction is that black heat-resistant tiles were installed below the corner pilot-side window on the orbiter. It is unknown if this was done intentionally to give *Discovery* a distinctive look or was a mistake during the construction process. This feature was nicknamed the "teardrop" by space shuttle enthusiasts. These tiles made *Discovery* instantly recognizable in pictures and videos of the orbiters.

The Space Shuttle *Discovery* entered service in 1984. *Discovery* flew its first shuttle mission, STS-41-D, from August 30 to September 5, 1984. *Discovery's* second mission, STS-51-A, lasted from November 8 to November 16, 1984. During this mission, *Discovery's* crew launched and rescued two communications satellites.

The Space Shuttle *Discovery* flew four more missions in 1985. During these missions, *Discovery* and its crews launched and rescued communications satellites and deployed a satellite for the Department of Defense. Tragedy struck the U.S. Space Shuttle Program in 1986 when the orbiter *Challenger* exploded during launch, killing the seven-person crew. As NASA and government officials investigated to learn what went wrong, future launches for *Discovery* and the rest of the space shuttle fleet were put on hold.

At the time of the *Challenger* disaster, the Department of Defense had expressed interest in launching space shuttle payloads from Vandenberg Air Force Base on the West Coast. These shuttle missions would have been dedicated to launching payloads, mostly in the form of spy satellites, for the U.S. Air Force. Had these plans gone ahead, *Discovery* would have been the shuttle dedicated to launching payloads for the U.S. Air Force and operating from the West Coast. This plan was canceled in the aftermath of the *Challenger* disaster due to logistical and budget considerations.

In 1988, *Discovery* was chosen for the mission to "Return To Flight" the U.S. Space Shuttle Program after the *Challenger* disaster. *Discovery* launched on STS-26 on September 29, 1988. NASA and government officials held their breath as the countdown ticked closer to zero. Thankfully, *Discovery* launched without incident, and eight and a half minutes later, eased into orbit above Earth while billions of people around the world breathed a collective sigh of relief. During the four-day mission, *Discovery* and its crew launched the TDRS-3 communications satellite.

Discovery went on to fly some of the most significant missions of the U.S. Space Shuttle Program. In 1990, the *Discovery* and its crew launched the Hubble Space Telescope as part of STS-31. On STS-41, *Discovery* launched *Ulysses*, a robotic probe designed to study the Sun. In February 1994, *Discovery* completed the first docking mission with the Russian *Mir* space station. In 1995, the *Discovery* once again docked with the *Mir* space station. During this mission, NASA astronaut Eileen Collins became the first female space shuttle pilot.

In late 1995, *Discovery* entered a period of extended maintenance at Palmdale, California. During this maintenance period, the orbiter was fitted with a fifth set of cryogenic tanks and an external airlock to support missions to the International Space Station. This maintenance work took nine months to complete. After the completion of this maintenance, *Discovery* was transported back to Kennedy Space Center on the back of a specially modified Boeing 747.

Discovery returned to flight in 1997 and continued to be used for high-profile NASA shuttle missions. During STS -82 in 1997, *Discovery's* crew completed servicing of the Hubble Space Telescope. On STS-91 in June 1998, *Discovery* was the last space shuttle to visit *Mir* before the space station was decommissioned. History was made in 1998 during STS-95 when *Discovery* carried John Glenn into space for the second time. At 77 years of age, Glenn became the oldest person to fly in space. In May of 1999, *Discovery* became the first space shuttle to dock with the International Space Station, and later that year, completed another mission to service the Hubble Space Telescope. *Discovery* flew the 100th space shuttle mission in October 2000. During STS-92, *Discovery's* crew assembled part of the International Space Station. On two missions in 2001, *Discovery* carried crew and supplies to the International Space Station.

In 2002, *Discovery* became the first orbiter in the fleet to undergo Orbiter Major Modification (OMM) at Kennedy Space Center. This work included upgrades and safety modifications. In 2003, the orbiter *Columbia* disintegrated in the atmosphere during its return to Earth due to wing damage sustained during liftoff while *Discovery* was in this planned refit. This tragedy grounded the space shuttle fleet for the second time in its history while a government investigation was conducted and safety changes were made within NASA.

In 2005, *Discovery* was again the orbiter chosen for NASA's "Return to Flight" following the *Columbia* tragedy. On July 26, 2005, *Discovery* lifted off on STS-114 for a 13-day mission. During this mission, *Discovery* tested and evaluated new safety procedures and delivered supplies to the International Space Station.

After further concerns about foam debris damage from the external fuel tank on STS-114, *Discovery* completed a "Second Return to Flight" mission in 2006. During this mission, *Discovery's* crew tested new safety and repair techniques and delivered supplies to the International Space Station. In 2011, NASA decided to end the Space Shuttle Program and retire the fleet, mainly due to budgetary considerations. *Discovery* flew for the final time on February 24, 2011, on STS-133 and landed 12 days later. *Discovery* was the first of the three remaining orbiters to be retired. The Space Shuttle *Atlantis* flew the final shuttle mission, STS-135, in July 2011.

Discovery retired with an incredible record in spaceflight, traveling nearly 150 million miles (214,401 km) in space and spending 365 days in orbit during 39 missions. *Discovery* flew every type of mission the U.S. Space Shuttle Program was designed for, including satellite launch and repair, space station supply and construction, and scientific experiments. *Discovery* was also flown by the first female pilot, Eileen Collins, in 1995, and the first female commanders, Collins in 2005 and Pamela Melroy in 2006, as well as the first African American commander, Frederick Gregory, in 1989. Today, the Space Shuttle *Discovery* is preserved on display in the James S. McDonnell Space Hangar at the National Air and Space Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia, where the orbiter is seen by millions of museum visitors from around the world each year.

Recently, *Discovery's* future at the National Air and Space Museum's Steven F. Udvar-Hazy Center has been put into question. Recent legislation passed by the U.S. Congress requires a plan to be put into place to move the *Discovery* to Houston, Texas, for display at the Johnson Space Center. The Smithsonian Institution is challenging the legislation, claiming they own the 172,000-pound (78,018 kg) orbiter and that moving the large spacecraft would damage it. The Smithsonian Institution also argues that *Discovery* is a central artifact to their telling of the story of human spaceflight. The plan has also drawn concern from spaceflight enthusiasts worldwide. It is expected that *Discovery's* final fate may end up being decided legally through court proceedings.

Lockheed Martin F-35A Lightning II (2016)

The Lockheed Martin F-35A Lightning II is the conventional take-off and landing (CTOL) variant of the F-35 Lightning II family of American single-seat, single-engine, supersonic multirole stealth strike fighters. The F-35 Lightning II family also includes the short take-off and vertical-landing (STOVL) F-35B and the carrier variant (CV) catapult-assisted take-off but arrested recovery (CATOBAR) F-35C. The development of the F-35 Lightning II was primarily funded by the United States, but also supported by NATO allies. The F-35 flew for the first time in 2006, with the F-35B the first variant to enter service with the U.S. Marine Corps in 2015. The F-35A entered service with the U.S. Air Force in 2016, and the F-35C with the U.S. Navy in 2019. The F-35 is expected to be the cornerstone of U.S. and NATO airpower until at least 2070.

Lockheed Martin F-35A Lightning II

Crew: 1

Length: 51.4 ft (15.7 m)

Height: 14.4 ft (4.39 m)

Wingspan: 35 ft (10.7 m)

Wing Area: 460 sq ft (42.74 m^2)

Powerplant: Pratt & Whitney F135-PW-100 afterburning turbofan (x1)

Range: 1,500 nmi (2,800 km)

Maximum Speed: Mach 1.6 (1,227 mph/1,814 km/h) high altitude, Mach 1.06 (806 mph/1,296 km/h) sea level

Cruise Speed: Mach 0.86 (659 mph/1,061 km/h)

Empty/Gross/Maximum Takeoff Weights: 29,300/49,540/65,918 lb (13,290/22,741/29,990 kg)

Service Ceiling: 50,000 ft (15,200 m)

Armament: Internal 25 mm GAU–22/A four-barrel rotary cannon (x1). Up to 18,000 lb (8,200kg) of ordnance on four internal and six external weapons stations. Ordnance options include air-to-air missiles, air-to-ground missiles, anti-ship missiles, conventional and nuclear bombs, and other stores such as targeting pods, flare and chaff dispensers, and external fuel tanks to increase range.

Fifth-Generation Stealth Strike Fighter

Cockpit

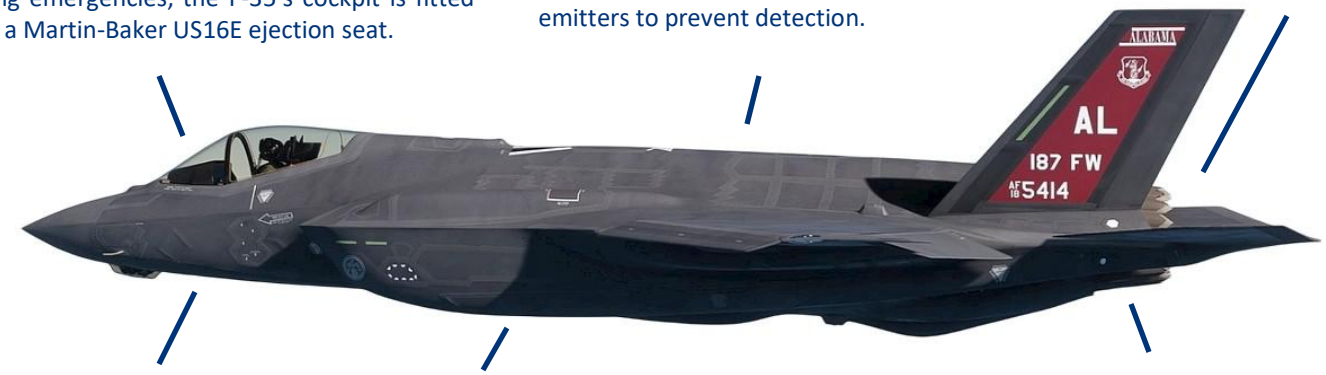
The F-35's cockpit was designed to give the pilot good situational awareness. The main display is a large panoramic touchscreen, which shows flight instruments, weapons stores management, and integrated cautions and warnings. The pilot can customize the arrangement of this information. Below the main display is a smaller stand-by display. The cockpit has a speech-recognition system developed by Adacel. The F-35 does not have a heads-up display; instead, flight and combat information is displayed on the visor of the pilot's helmet in a helmet-mounted display system (HMDS). The cockpit has a right-hand side stick and throttle hands-on-throttle-stick system. The cockpit also houses the onboard oxygen-generation system and a backup system for emergencies. For escape during emergencies, the F-35's cockpit is fitted with a Martin-Baker US16E ejection seat.

Stealth

Stealth is a key aspect of the F-35's design. The Lightning II's radar cross-section (RCS) is minimized by careful shaping of the airframe and the use of radar-absorbent materials (RAM). Visible measures to reduce the F-35's radar signature include the continuous curvature of surfaces, serration of skin panels, and the masking of the engine face and turbine. Building on lessons learned from the B-2 Spirit and F-22 Raptor, the F-35's radar-absorbent fibermat skin is more durable and requires less maintenance than older materials. The F-35 also has reduced infrared and visual signatures as well as strict controls of radio frequency emitters to prevent detection.

Engine

All variants of the F-35 Lightning II are powered by a single Pratt & Whitney F135-PW-100 low-bypass augmented turbofan engine. The engine contributes to the F-35's stealth characteristics by having a low-observable afterburner that incorporates fuel injectors into thick curved vanes. These vanes are covered by ceramic radar-absorbent materials that mask the turbine. The exhaust nozzle features 15 partially overlapping flaps that create a sawtooth pattern at the trailing edge. These design elements reduce the radar and infrared signature of the exhaust plume.



Avionics And Sensors

The F-35's avionics are the most complex part of the aircraft. The avionics and sensor fusion systems on the F-35 are designed to improve the pilot's situational awareness, command-and-control capabilities, and facilitate network-centric warfare. These systems were designed by Northrop Grumman, Raytheon, and BAE Systems. The F-35's sensors and systems were designed to work together to provide a cohesive image of the local battlespace. The F-35 Lightning II was designed to accept upgrades to its sensors, processors, and software over its lifetime. A recent upgrade to the F-35's avionics and sensors included a new core processor and an updated cockpit display.

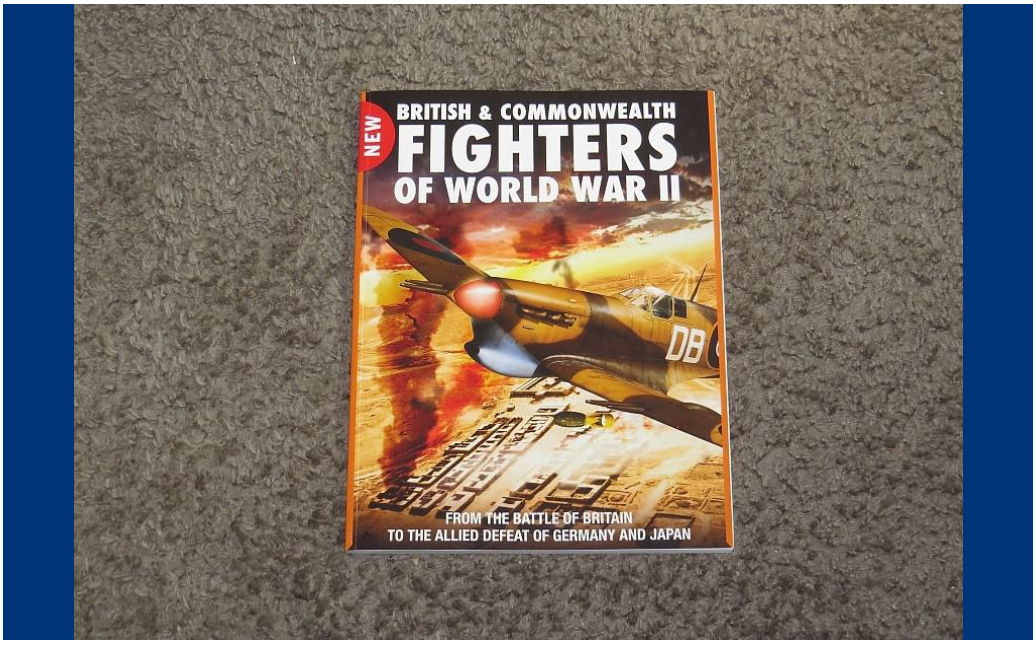
Ordnance

To preserve its stealth shaping, the F-35 stores its armament in two internal weapons bays, each with two weapons stations. Two smaller compartments behind the weapons bays are used to store countermeasures such as flares and chaff. For missions that do not require stealth, the F-35 can carry weapons or external stores on two wingtip pylons and four underwing pylons. The wingtip pylons are canted outward to reduce their radar signature. The F-35A variant is equipped with an internal 25 mm GAU-22A rotary cannon mounted near the left wing root. On the F-35B and C, this gun is carried when necessary in a pod mounted on the centerline of the aircraft instead. The total weapons payload internally and externally for the F-35 Lightning II is 18,000 pounds (8,200 kg).

F-35A

The F-35A is the conventional take-off and landing (CTOL) of the Lightning II operated by the U.S. Air Force. The F-35A is also the variant intended for sale to NATO and Allied air forces worldwide. The F-35A is the lightest variant of the Lightning II and is capable of 9 g, the highest of the Lightning II variants. This F-35A is operated by the 187th Fighter Wing of the Alabama Air National Guard. The "Red Tails" are currently transitioning to the F-35A Lightning II from the Lockheed Martin F-16C Fighting Falcon. The 187th Fighter Wing expects to be fully operational with the F-35A Lightning II by 2026.

British & Commonwealth Fighters Of WWII Bookazine



British & Commonwealth Fighters of World War II is a new title now available from publisher Amber Books Ltd. in their continuing series of aviation reference bookazines. The bookazine is an excellent quick reference guide to the fighter aircraft types used by Great Britain and the Commonwealth countries during World War II. The bookazine includes photographs, performance specifications, cutaway diagrams, profile drawings, and colorful illustrations of each aircraft featured in the publication.

Amber Books Ltd. is a United Kingdom-based publisher of nonfiction illustrated reference books. The company publishes illustrated reference books for children and adults on military history, military technology, animals, pets, photography, travel, natural history, music, health, and transportation topics. The publishing company currently offers over 1,000 titles that are available in 40 different languages. In addition to publishing reference books under its branding, Amber Books Ltd. also offers book packaging services for clients, publishing materials for them with the clients paying royalty fees to use the material. Recently, Amber Books Ltd. began offering some of its military and aviation reference book titles in an affordable and concise reference bookazine format. Some aviation titles published in this series of reference bookazines have included *Japanese Aircraft of World War II, German Aircraft of World War I*, *Modern Russian Military Aircraft,* and *Chinese Military Aircraft*.

The latest release in the series of aviation-themed bookazines is *British & Commonwealth Fighters of World War II,* which features fighter aircraft used by Great Britain and the Commonwealth countries during World War II. The bookazine has color profile illustrations of each aircraft featured, performance specifications, and a brief operational history of each. Famous British types from the war, such as the Supermarine Spitfire, Hawker Hurricane, and de Havilland Mosquito, are represented. The Gloster Meteor and de Havilland Vampire, two jet fighters fielded by the Royal Air Force late in the war, are also featured in the bookazine. Also covered in *British & Commonwealth Fighters of World War II* are some lesser-known aircraft types used by Great Britain and the Commonwealth countries during the war, such as the Commonwealth Boomerang, a stop-gap fighter built in Australia and used by the Royal Australian Air Force and the Gloster Gladiator, a rugged biplane fighter used early in the war that aquitted itself well against more modern enemy fighters. Finally, the bookazine covers various American fighter aircraft acquired by Great Britain and the Commonwealth countries through Lend-Lease, such as the Curtiss P-40 Kittyhawk, Republic P-47 Thunderbolt, Vought F4U Corsair, and the Grumman F6F Hellcat.

British & Commonwealth Fighters of World War II is now available from booksellers and newsstands in the United Kingdom, Australia, Canada, and the United States. Amber Ltd.'s *British & Commonwealth Fighters of World War II* is an excellent addition to the publisher's series of aviation bookazines. The title is a great quick reference guide for anyone interested in World War II fighter aircraft or aviation history.

SINGLE-ENGINE FIGHTERS

Commonwealth Boomerang

The only Australian designed and built fighter to enter production and see combat service, the Boomerang was tough, manoeuvrable, and versatile.

Following the attack on Pearl Harbor, Australia found itself thrust into the frontline of the Pacific war and desperately short of modern fighters. To answer this deficiency, Lawrence Wackett (1896–1982), the influential manager and chief designer of Commonwealth Aircraft Corporation (CAC) enlisted Fred David (1898–1992), an Austrian engineer with recent experience at Heinkel as well as Aichi and Mitsubishi to help design a stop-gap fighter. Powered by the 895kW (1200hp) Pratt & Whitney R-1830 Twin Wasp engine, which was then being licence-produced in Sydney for local manufacture of the Bristol Beaufighter, the design incorporated as many parts as possible from the existing Wirraway. The Defence Department authorised CAC to proceed in late December and work went ahead swiftly, greater impetus being added following the Australian War Cabinet's decision to order 100 examples of the new aircraft 'off the drawing board' on 2 February 1942, confirming the name 'Boomerang' on the aircraft shortly after. The first 105 CA-12 Boomerangs (sometimes referred to as the Mk I), would be built followed by 95 of the slightly improved CA-13 (or Mk II).

First combat

The prototype Boomerang flew for the first time on 29 May 1942 and during flight testing the aircraft proved to be easy to handle and manoeuvrable, as well as being well-armed, with two 20mm (0.79in) cannon and four 7.7mm (0.303in) machine guns all mounted in the wings. In mock combat against a lightened Brewster Buffalo, intended to approximate the flight characteristics of the Mitsubishi A6M Zero, the Boomerang proved the faster aircraft, though the Buffalo could outmanoeuvre it, but compared to other contemporary fighters the Boomerang was undeniably slow.

Initial Boomerang deliveries began in October 1942 to operational training units with the first fighter squadron, No. 83, receiving aircraft from April 1943, to replace the unit's Airacobras. Sporadic encounters with Japanese bombers occurred over the next few months but no successful interceptions were made as the Boomerang simply wasn't fast enough to catch the enemy aircraft. With Curtiss Kittyhawks available in greater numbers from September 1943, the Boomerang was transferred to the close support role, serving with Nos 4 and 5 (Army Co-operation) Squadrons in the Solomon Islands from November 1944, where the disappointing interceptor became an extremely effective light attack aircraft.

Agile, easy to fly, possessing heavy armament, featuring extensive armour plating, and able to withstand significant battle damage, the Boomerang proved to be ideally suited to the ground war in the South West Pacific where widely dispersed, small actions were typical, fought at close quarters and with rapid front lines. Boomerangs were also used for artillery spotting, aerial supply drops, tactical reconnaissance, and anti-malarial spraying, as well as marking targets with a 1kg (20lb) smoke bomb for other, larger aircraft to attack. No. 5 Squadron formed a particularly effective partnership marking targets for Royal New Zealand Air Force (RNZAF) Corsairs during the Bougainville Campaign, and the Boomerang would continue in the close support role until the end of hostilities. Late production CA-19 variants were also equipped with vertical cameras and were in considerable demand for reconnaissance missions.

CA-14

Cognisant of the Boomerang's pedestrian speed performance, particularly at altitude, CAC developed the CA-14, later developed into the square-tailed CA-14A which also utilised fan cooling for its R-1830 engine. The CA-14 featured a General Electric B-2 turbo supercharger from a B-24 Liberator, and a Harrison intercooler taken from a B-17 Flying Fortress. Performance was greatly improved, the CA-14 proving 122km/h (75mph) faster than the CA-12 and demonstrating a climb rate more than triple that which could be achieved by the earlier aircraft. Despite an order for 50 turbocharged Boomerangs to be powered by the enlarged R-2000 Twin Wasp being placed, better performing fighters from the US and Britain were already arriving in Australia, and this, coupled with the decision to locally manufacture P-51D Mustangs saw the 50 aircraft on order completed as the CA-19 tactical reconnaissance variant instead, with similar performance to the standard CA-12.

Commonwealth CA-12 Boomerang
Weight (maximum take-off): 2,742kg (6046lb)
Dimensions: length 7.77m (25ft 6in), wingspan 10.97m (36ft), height 2.92m (9ft 7in)
Powerplant: One 895kW (1200hp) Pratt & Whitney R-1830 Twin Wasp 14-cylinder air-cooled radial piston engine
Maximum speed: 491km/h (305mph)
Range: 1,609km (932 miles)
Ceiling: 9,830m (26,000ft)
Crew: 1
Armament: Two 20mm (0.79in) Hispano or CAC cannon and four 7.7mm (0.303in) Browning machine guns fixed, firing forward in wings

Commonwealth CA-12 Boomerang
'Phooey' was serving with No. 4 Squadron RAAF at Labuan in North Borneo during 1945 in support of the Australian Army's Borneo campaign.

Commonwealth CA-12 Boomerang
No. 1 Squadron RAAF operated the CA-12 from late 1943 until the end of the conflict. The squadron primarily marked targets for other Allied aircraft in the skies of New Britain, Bougainville and Borneo.

Commonwealth CA-12 Boomerang
Glenister Mehaux, a British jet fighter first flown in 1943.

Distelfink Airlines

Est. 2013

ABOUT DISTELFINK AIRLINES

My late grandfather, John Brey, and I at the 2007 Geneseo Airshow. This was one of the few times that we had our photo taken together at an airshow.

The story of "Distelfink Airlines" begins in the early 1990s when my late grandfather, John Brey, began building and flying remote control model aircraft in his retirement. He enjoyed the hobby and quickly amassed a large fleet of model airplanes, which filled his garage and woodworking shop. He gave a name to his fleet of aircraft, "Distelfink Airlines". For the symbol of his fleet, he chose the Pennsylvania Dutch/German hex sign featuring the "Distelfink", a colorful bird that is a symbol of good luck and happiness. This hex sign and symbol is very common on Pennsylvania Dutch/German barns in Eastern Pennsylvania and is an important part of our local culture. He had custom "Distelfink" decals made for all his airplanes and had T-shirts made with "Distelfink Airlines" printed on them. It wasn't long before curious people began asking about "Distelfink Airlines" and what it was. My grandfather told anyone who asked that "Distelfink Airlines" was a new startup airline that was going to be offering service between the Lehigh Valley International Airport and Philadelphia International Airport with more routes to come soon.

In addition to flying his model airplanes, my grandfather enjoyed attending airshows and we traveled to airshows together for almost 20 years. He also enjoyed local aviation history and was particularly fascinated by the history of the Consolidated TBY Sea Wolf, a torpedo bomber that was built locally in Allentown, Pennsylvania during World War II. He also remembered when famous aviator Amelia Earhart visited the Lehigh Valley in the early 1930s to raise funds for her failed attempt to become the first woman to fly around the world.

Established in 2013 in memory of my grandfather, "Distelfink Airlines" is an online aviation newsletter that carries on a tradition of sharing a love for aviation that my grandfather shared with me. This newsletter features photographs and writings on a variety of aviation topics. The logo that was chosen for "Distelfink Airlines" is the hex sign that my grandfather chose for his fleet of remote control model aircraft many years ago. This proud symbol of local Pennsylvania Dutch/German culture is joined by a pair of Consolidated TBY Sea Wolf torpedo bombers, the aircraft that was built locally in Allentown during World War II and is such an important part of our local aviation history. Thank you for reading "Distelfink Airlines" and sharing in the passion for aviation that my grandfather shared with me.

"Distelfink Airlines" is an online newsletter featuring the aviation photography and writings of Corey J. Beitler. Contributions from guest photographers and writers are sometimes featured and are used only with prior permission. Public domain and/or copyright free images are utilized for some articles. All text and images are copyright to the original owners and may not be reproduced or reused without permission.