January/February 2024

Corey J Beitler's

"Distelfink Airlines"

An Online Aviation Newsletter

A B-17 Walk Around: "Aluminum Overcast"

Boeing C-32A

Franklin Mint 1/48 Scale Junkers F.13

Authentic Models Curtiss "Jenny" Model Airplane

Loving-Wayne WR-3

Heinkel He 219 A-2 Uhu (Eagle Owl)

Frecce Tricolori To Tour North America In 2024

The EAA's restored Boeing B-17G Flying Fortress "Aluminum Overcast" prepares to land at the Lehigh Valley International Airport for a stop during a nationwide tour in 2013. During the visit, flight experiences were available in the B-17, and people had the opportunity to tour the inside of the aircraft, getting a rare up-close look at one of World War II's most famous heavy bombers.

FROM THE EDITOR'S DESK

B-17 Walk Around, He 219, Loving-Wayne WR-3, Boeing C-32A, Frecce Tricolori

Greetings Everyone:

Welcome to the first edition of "Distelfink Airlines" for 2024! This will be the 11th year the newsletter is in publication, and I am glad to be sharing aviation content with you once again in 2024. In 2023, "Distelfink Airlines" was read by over 8,000 people in 51 different countries. I hope to continue the growth of the newsletter in 2024 by reaching more readers and covering a full schedule of airshows, aviation events, air museums, and other aviation-related content.

The feature for this first edition of "Distelfink Airlines" in 2024 is a walk around in photographs of the Experimental Aircraft Association's restored Boeing B-17G Flying Fortress "Aluminum Overcast". "Aluminum Overcast" visited the Lehigh Valley International Airport in 2013 as part of a nationwide tour. During the stop in the Lehigh Valley, aviation enthusiasts could take a ride in "Aluminum Overcast" or tour the aircraft on the ground. With the B-17 being featured in the recent "Masters of the Air" miniseries now being shown on Apple TV+, I thought this was a great time to feature the B-17 in the newsletter. This content has been featured before in the newsletter several years back but in a slightly different format. This feature is an excellent opportunity for an up-close look at "Aluminum Overcast" and one of America's famous heavy bombers of World War II. Currently, "Aluminum Overcast" is under heavy maintenance and restoration work at the EAA Headquarters in Oshkosh, Wisconsin. The EAA hopes to have the B-17's maintenance and restoration work completed and the aircraft back flying on nationwide tours within a few years.

Another World War II aircraft featured in this edition is the unusual Heinkel He 219 night fighter. The He 219 was the only dedicated night fighter built for the German Luftwaffe during World War II. The He 219 had excellent performance and had more of them been built, they may have been a credible threat to British night bombers. An example of the He 219, the world's only intact example, is on display in the National Air and Space Museum's Steven F. Udvar-Hazy Center in Virginia. This He 219 was captured by the Allies after World War II and shipped to the United States for evaluation.

In honor of Black History Month, the Loving-Wayne WR-3 is featured in the "Aircraft of the National Air and Space Museum" section. The WR-3 was built by Neal Vernon Loving, the first African-American and double amputee to be certified as a racing pilot. During his career, Loving built several homebuilt aircraft and worked as an aeronautical engineer for the Flight Dynamics Labatroty at Wright-Patterson Air Force Base.

The "Aviation Sightings" section of the newsletter features the Boeing C-32A, a military VIP transport version of the Boeing 757. The C-32A visited the Lehigh Valley International Airport in January, operating as "Air Force One" for a visit to the Lehigh Valley by President Biden.

Finally, North American airshow fans and aviation enthusiasts are excited that the Italian Air Force Aerobatic Team, the Frecce Tricolori, will visit airshows in the United States and Canada this summer. The small article in this newsletter has some early details about the visit and confirmed airshows where the team will be performing.

Thank you for reading "Distelfink Airlines" and supporting my aviation photojournalism efforts!

Regards,
-Corey

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What's Inside:

Boeing C-32A

A Boeing C-32A operating as "Air Force One" prepares to land at the Lehigh Valley International Airport in Allentown, PA on January 12, 2024, for President Joe Biden's second visit to the Lehigh Valley region since he took office. This C-32A began life as a civilian Boeing 757 commercial airliner, being delivered to Finnair in 1997. The aircraft was purchased by the U.S. Air Force and converted to the C-32A configuration in 2018.

The Boeing C-32A is a military VIP passenger transport variant of the Boeing 757 narrow-body commercial airliner. The C-32A serves with the U.S. Air Force in the Special Air Mission role, providing transportation to the Vice President, First Lady, or Secretary of State of the United States to meetings and other diplomatic functions worldwide. When used to transport Vice President, the aircraft operates under the callsign "Air Force Two". On rare occasions, a C-32A is used by the President of the United States as "Air Force One" on travel to domestic destinations when flight operations with the larger VC-25A (military transport version of the Boeing 747) are not possible due to runway length or ramp space at the destination airport.

The first of four C-32A aircraft acquired by the U.S. Air Force was delivered to the 89th Airlift Wing at Andrews Air Force Base in 1998. The C-32A is powered by a pair of Pratt & Whitney PW 2000 (military designation F117) turbofan engines, and has winglets installed for improved fuel efficiency and range. For enhanced security, the aircraft serial numbers are changed frequently to disguise individual aircraft and fleet movements. The C-32A has a specially designed interior featuring a communications center, a fully furnished stateroom, conference rooms, and a general passenger section with seating for 45 people. In addition to the interior, the C-32A is equipped with advanced avionics, weather, and navigation systems, including a Global Positioning System, Wind Shear Warning System, and Air Traffic Collision Avoidance System. The C-32A is equipped with defensive countermeasures such as flares and chaff to protect the aircraft against air-to-air and air-to-ground threats. In the last several years, each of the C-32As have received upgrades to their interiors, including improved lighting, new carpeting, and leather seats and tables. The U.S. Air Force expects to keep the C-32A fleet in service until at least 2040.

This C-32A visited the Lehigh Valley International Airport on January 12, 2024. The C-32A operated as "Air Force One" and brought President Joe Biden to the Lehigh Valley for his second visit to the area since he took office. The President visited the small businesses and spoke with the owners and employees on Main Street in the small town of Emmaus. President Biden also visited the nearby Allentown Fire Training Academy and gave remarks about his economic agenda to an audience of special guests.

Franklin Mint 1/48 Scale Junkers F.13

The Franklin Mint's 1/48 scale Junkers F.13 is an excellent model of the world's first all-metal transport aircraft. This version of the model is finished in the colorful paint scheme of the airline Lloyd Ostflug/Danzig Luftpost, which operated during the early 1920s, carrying passengers and mail to cities and towns in Germany and Switzerland.

The Junkers F.13 was the world's first all-metal transport aircraft. Built in Germany by Junkers after World War I, the F.13 was an advanced cantilever-wing monoplane with enclosed accommodations for four passengers and a two-seat open cockpit for the pilots. A total of 322 F.13s were manufactured and operated by airlines worldwide. The F.13 was in production for 13 years and in service with commercial operators for over 30.

The F.13 was a very advanced aircraft for its time, being an aerodynamically clean design constructed entirely of metal. In a time when most airplanes were biplanes, the F.13 was a cantilever low-wing monoplane. Similar to other Junkers aircraft, the structure was constructed of duralumin (an aluminum alloy) and covered with corrugated and stressed duralumin skin. The cockpit for the crew was semi-enclosed and roofed. The passengers sat in an enclosed heated cabin behind the cockpit. Unusually for the time, the passenger seats were equipped with seat belts. The F.13 could be fitted with conventional landing gear or floats if flight operations required. Initially powered by a Mercedes D. IIIa inline engine, various engine types were used to power the F.13 during its production run. These engine types included units made by BMW, Pratt & Whitney, Armstrong Siddeley, Gnome-Rhône, and Junkers themselves. The F.13 flew for the first time in 1919 and was introduced into commercial airline service in 1920.

The F.13 was a very popular civilian aircraft, especially with European operators. During the 1920s, an estimated 40% of the world's air passenger traffic was carried by F.13s. The F.13 was license-built in the United States and the Soviet Union to fulfill production orders in those countries. The Junkers machine was also used in small numbers by the Colombian Air Force as bombers. One reason for the popularity of the F.13 among airlines was the ease with which its landing gear could be converted to floats. This was especially important in countries and remote locations where bodies of water, such as lakes and rivers, were more abundant. Most of the F.13s were retired in the mid-to-late 1930s. Today, five F.13s survive as museum display exhibits in science and aviation museums in Europe.

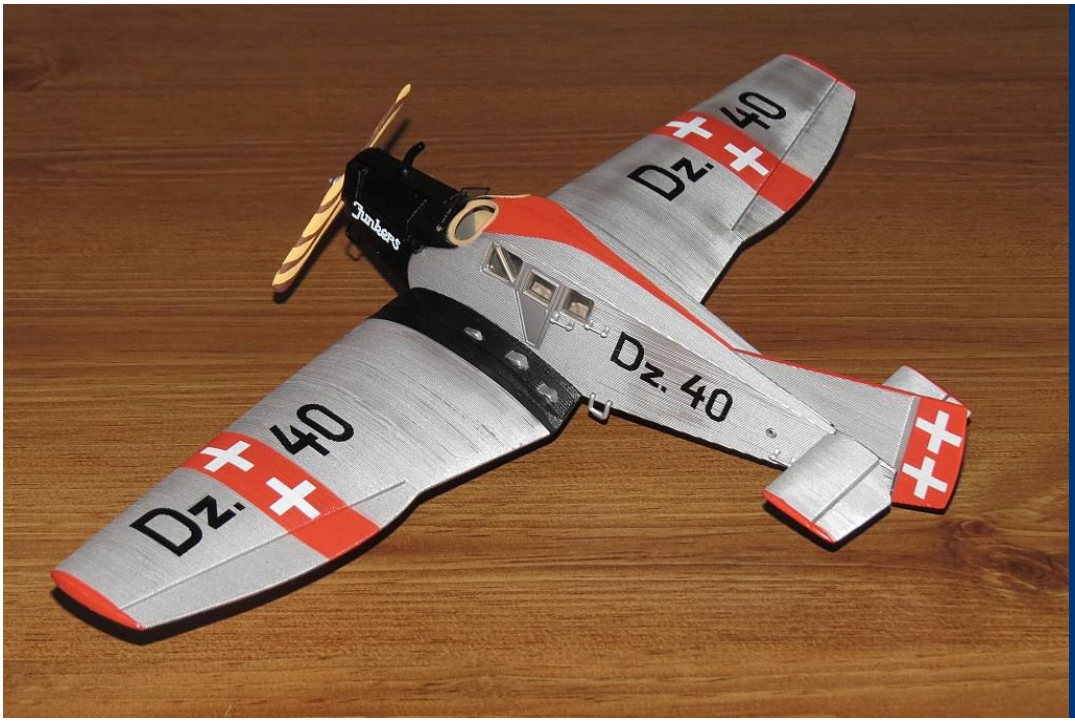
This 1/48 scale Junkers F.13 model is one of the models manufactured by the Franklin Mint as part of their Armour Collection line of die-cast aircraft models manufactured in the early-to-mid 2000s. Although the Franklin Mint focused on models of military aircraft, a select number of civilian aircraft were part of the product lineup. The Junkers F.13 was released in several different paint schemes, with some of the versions of the model representing float plane variants. The F.13 models were produced in limited numbers compared to other Franklin Mint model aircraft, making them very difficult to find today on the secondary market.

This colorful F.13 replicates an example operated by the airline Lloyd Ostflug/Danzig Luftpost in the early 1920s. The airline operated in Germany and Switzerland, carrying mail and passengers with six Junkers F.13 aircraft. The airline only operated for a short time before it was bought out, and its assets and aircraft were absorbed into another airline, Aerolloyd.

The Franklin Mint F.13 model is an excellent replica of this innovative but obscure aircraft in aviation history. This F.13 has all the correct markings, and its colorful paint scheme makes it stand out on any bookshelf or desk. The Franklin Mint did a terrific job recreating some of the unique details of the F.13, such as the corrugated skin of the wings and fuselage, the open-air cockpit for the pilots, the wooden propeller, the passenger door, and handholds on the side of the fuselage, and the steps on the wing to help passengers board the aircraft.

There are some minor areas where the model could have been improved. The corrugated texture of the wings and fuselage created some difficulty with painting for the Franklin Mint, as there are minor instances of red and black overspray on the silver sections of the model, mostly confined to the undersides of the wings. The passenger handholds on the fuselage seem to be larger than they should be when comparing the model to reference pictures of an actual F.13.

Franklin Mint die-cast aircraft models have been out of production for several years and get more difficult to find all the time. Although their line of World War II and Modern Military aircraft are most popular with collectors, this fine example of the Junkers F.13 should not be overlooked. The model has excellent detail and in the case of the Lloyd Ostflug version, a colorful paint scheme. The model represents one of commercial aviation's most innovative early designs and will be an interesting addition to any die-cast airplane collection.



The excellent details of the Franklin Mint's 1/48 scale Junkers F.13 include a replicated wooden propeller, the passenger steps on the wing used to climb into the aircraft, and the handholds mounted on the fuselage so passengers could climb up on the F.13 to enter the cabin. The model also has a colorful paint scheme and unique shape, making it a conversation piece in any model airplane collection.

Authentic Models Curtiss "Jenny" Model Airplane

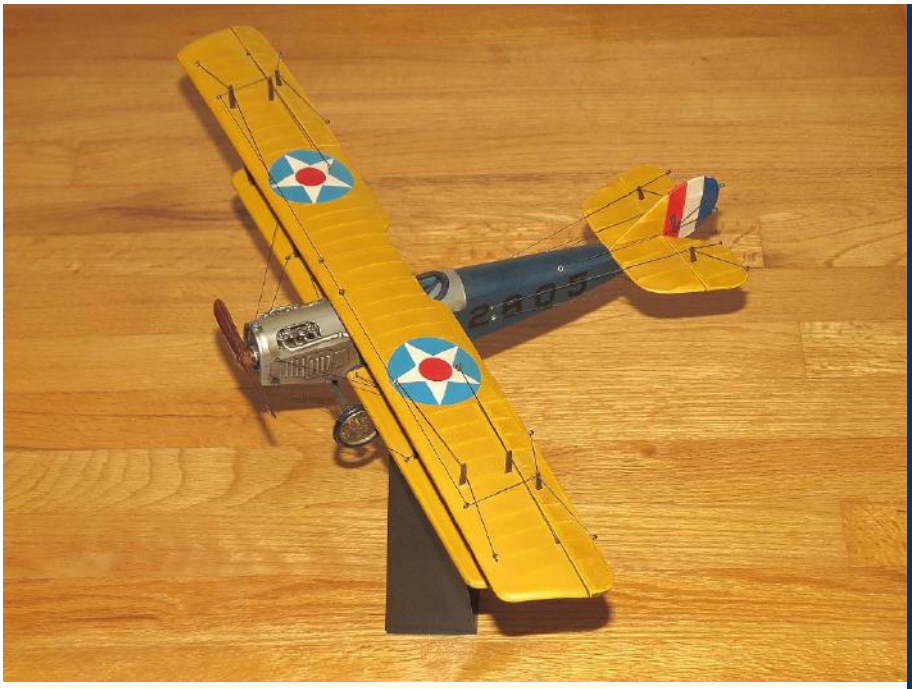
Authentic Models made this excellent Curtiss "Jenny" model as part of their Flight Collection of home décor products in the early 2000s. This model with its vintage style features such as its metal accents, hand-painted markings, and wire rigging, takes any collector back in time to the early days of model airplane building. Model airplanes like these were constructed by aviation enthusiasts in model and flying clubs during the 1920s and 30s, using similar materials and construction methods.

The Curtiss "Jenny" is one of America's most well-known early airplanes. The "Jenny" was widely used as a trainer during World War I, with thousands of American and Canadian pilots completing their flight training in the type. After World War I, thousands of "Jennys" were sold as surplus and bought by pilots returning home from the war. Throughout the 1920s, pilots barnstormed across the United States in the old "Jennys" hauling mail, giving rides, and performing in flying circus airshows. Today, the "Jenny" is beloved as one of America's classic airplanes and has been the subject of models, artwork, stamps, books, and other collectible items.

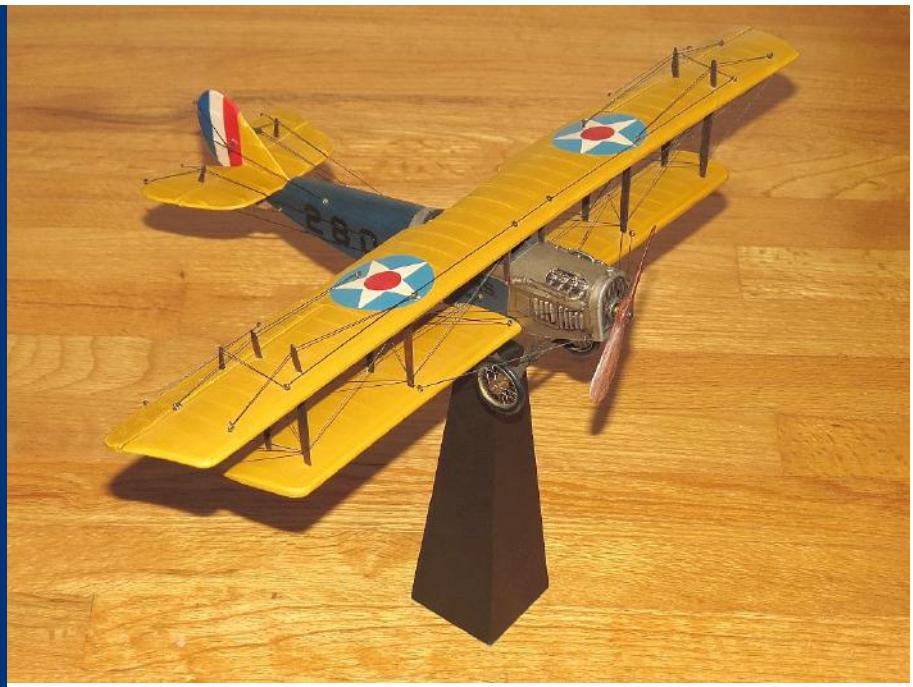
Authentic Models is a furniture and home décor company based in the Netherlands. The company produces high-end furniture and home décor items with distinct European heritage that reflect cherished memories, family histories, and personal interests. For many years, as part of their home décor products, Authentic Models has offered a Flight Collection. The Flight Collection includes aircraft and balloon models, aircraft and balloon mobiles, aviation-themed balance toys, and wooden propellers.

In the early 2000s, Authentic Models offered this scale model of a Curtiss JN-4 "Jenny" biplane as part of their Flight Collection of home décor products. Unlike most model airplanes from Authentic Models, which are large in size and designed to hang from the ceiling of a den, study, or office, the "Jenny" was sized to display on a desktop or bookshelf. The "Jenny" featured incredible detail, including a wooden frame construction with fabric covering, colorful markings, metal accents like a detailed engine and spoke wheels, and wire rigging. Unfortunately, the "Jenny's" size was still too large for most desks and bookshelves, and the model never sold well. The model was also hard to find because Authentic Models has a limited dealership network in the United States.

This model was acquired from a local gift shop that was an Authentic Models dealership for many years, where it hung from the ceiling. When the shop owner retired and sold the business, he offered this model to the editor of this newsletter, who had admired it every time he visited the shop. Aside from years of dust and needing a good cleaning, the "Jenny" was in perfect condition. The owner even had the original box and the model's display stand stuffed in a corner of the shop's backroom. The "Jenny", with its colorful markings and nostalgic construction features, is a perfect replica of the classic American trainer and barnstorming biplane.



A black wooden display stand was included with the "Jenny". The display stand allows the model to be displayed so it takes up less space on a desk or shelf. The display stand also included a plaque that the buyer could install if they wished that stated the name of the airplane and some of its performance specifications.



The craftsmanship involved in making this model of the Curtiss "Jenny" was incredible, as the model features wood frame construction with fabric covering and full rigging. The craftsmanship of this model also makes it extremely fragile, and great care must be taken when handling it and cleaning it.

A B-17 Walk Around: "Aluminum Overcast"

In 2013, the Experimental Aircraft Association's restored World War II B-17 Flying Fortress bomber visited the Lehigh Valley International Airport in Allentown, Pennsylvania for a stop on a nationwide tour, giving Lehigh Valley residents the unique opportunity to fly in and see one of World War II's most famous bombers up close.

The EAA's Boeing B-17G Flying Fortress "Aluminum Overcast" on approach to the Lehigh Valley International Airport in Allentown, Pennsylvania in 2013. The Experimental Aircraft Association is currently completing heavy maintenance and restoration work on "Aluminum Overcast", and hopes to be able to fly the B-17 to tour stops once again in the future.

The EAA's Boeing B-17G Flying Fortress "Aluminum Overcast" in flight on a ride experience flight near the Lehigh Valley International Airport in Allentown, Pennsylvania. The restored World War II-era B-17G is one of less than ten that remain airworthy. Grayscale color tones for this photo provide a glimpse back in time to how a B-17 would have looked flying in World War II.

The Boeing B-17 Flying Fortress is one of the most famous American heavy bombers used during World War II. Developed in the late 1930s, the B-17 was primarily used for daylight strategic bombing raids against German industrial and military targets. The B-17 also saw use in the Pacific for raids against Japanese shipping and airfields.

The B-17 was designed for a 1934 Army Air Corps proposal for a multi-engine bomber to replace the Martin B-10 then in service at the time. The prototype, designated the Model 299 by Boeing, was built at the company's own expense. The prototype could carry 4,800 lb of bombs, had five machine guns for defensive armament, and was powered by four Pratt & Whitney R-1690 radial engines. When reporter Richard Williams from *The Seattle Times* saw the aircraft, he called it a "Flying Fortress". Boeing saw value in the name and quickly trademarked it. During an evaluation of the design conducted by the U.S. Army Air Corps, the Model 299 outperformed its competition in both speed and range. Despite the fact the Model 299 prototype crashed during a test flight, the U.S. Army Air Corps saw value in the aircraft and placed an order for a small number. That decision would prove very prudent, as the B-17 would play a pivotal role in World War II as one of the Allies' most strategic weapons in the airpower war.

B-17s and their crews dropped more bombs than any other U.S. aircraft in World War II. Improvements throughout the war made the B-17 faster and upgraded the aircraft's defensive armament. The B-17 developed a reputation for toughness and was well-liked by its crews for its ability to take severe combat damage, yet remain flying and return to base. In addition to its role as a bomber, the B-17 was employed as a transport, anti-submarine, and search and rescue aircraft. Over 12,000 B-17s were built during World War II, and they served in all theatres of operation.

In 2013, the Experimental Aircraft Association's restored B-17 Flying Fortress *Aluminum Overcast* visited the Lehigh Valley International Airport as part of a nationwide tour. The B-17 was open for walkthrough tours, allowing Lehigh Valley residents the opportunity to see up close an example of one of World War II's most famous heavy bombers.

The EAA's Boeing B-17G Flying Fortress "Aluminum Overcast" was delivered to the U.S. Army Air Corps on May 18, 1945. The aircraft was built too late to see action in World War II. The B-17G was the definitive version of the Flying Fortress. The G variant was the most produced version of the B-17, with over 8,600 examples built. The B-17G had a defensive armament of 13 .50-caliber machine guns. The B-17G had a top speed of 287 miles per hour and a range of 2,000 miles with a 6,000 lb bombload.

"Aluminum Overcast" on taxi at Lehigh Valley International Airport. The B-17G Flying Fortress had a length of just over 74 feet and a wingspan of just over 103 feet. The B-17G Flying Fortress had a top speed of 287 miles per hour and cruised at about 180 miles per hour. Typically, the B-17G operated at altitudes of about 35,000 ft. Over 12,000 B-17s were produced during World War II. The B-17G was the most produced version, with 8,600 built. The B-17G typically carried a crew of 10 on combat missions.

The EAA B-17G Flying Fortress "Aluminum Overcast" on approach to land at the Lehigh Valley International Airport after a ride experience flight. After its service with the U.S. Army Air Corps, the B-17 was sold as surplus in 1946 for $750. The aircraft had most of its military equipment removed as part of the sale. Since 1946, this B-17 has flown over one million miles. Several owners previously used the B-17 for hauling cargo, aerial mapping, pest control, and forest dusting applications.

Curious visitors check out "Aluminum Overcast" displayed on the ramp for visitors at the Lehigh Valley International Airport. After a failed attempt to return the B-17 to its former glory by a prior owner, the aircraft was donated to the EAA in 1983. Since the donation, the EAA has spent several years and thousands of volunteer hours to restore the B-17G to its World War II appearance. The EAA also located much of the original equipment needed to restore "Aluminum Overcast" to its military configuration.

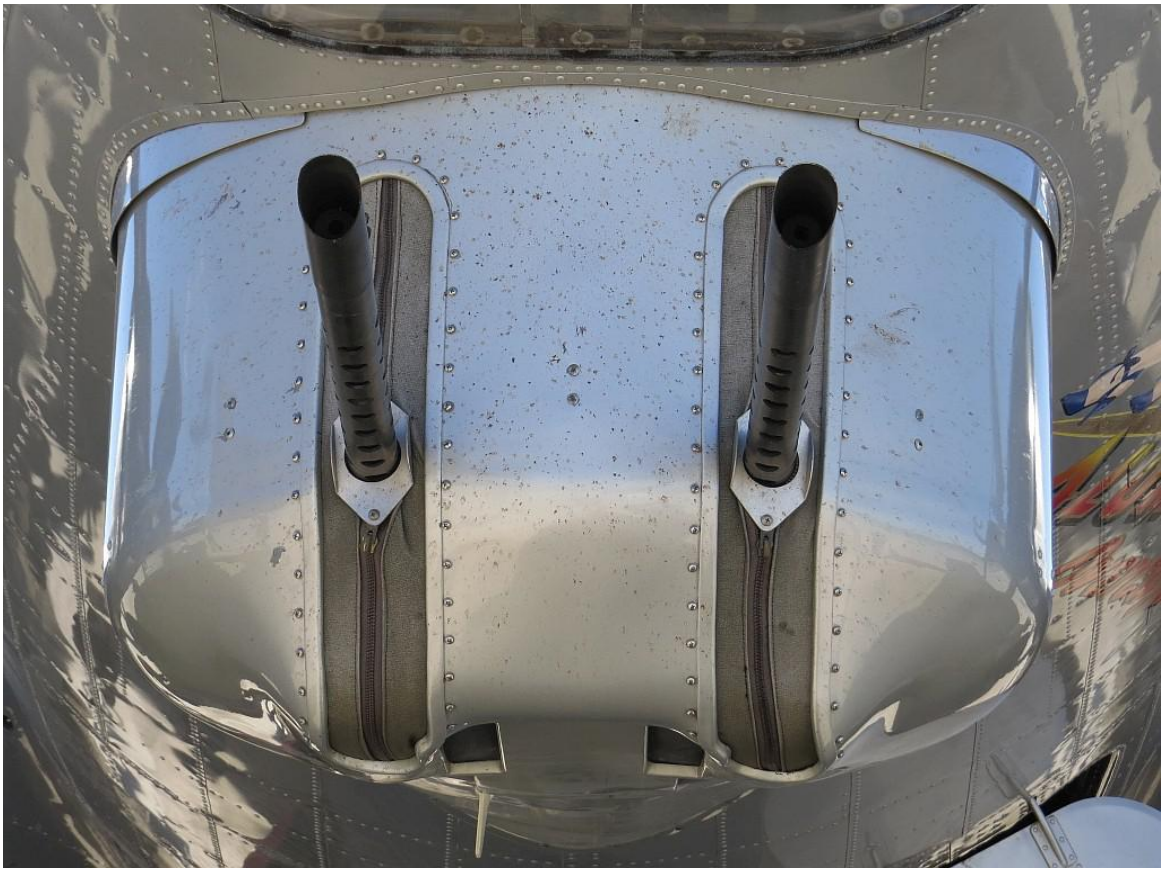
The EAA's B-17G carries the markings and nose art of "Aluminum Overcast", a B-17G that flew with the 398th Bomb Group during World War II. The 398th Bomb Group flew hundreds of missions over Nazi-held Europe during the war. "Aluminum Overcast" commemorates B-17G #42-102516, which was shot down on its 34th combat mission over France on August 13, 1944. When "Aluminum Overcast" was restored, veterans of the 398th Bomb Group helped fund the restoration.

The B-17G Flying Fortress was powered by four Wright R-1820-97 "Cyclone" turbosupercharged radial engines rated at 1,200 horsepower each. A three-blade propeller produced by Hamilton Standard was attached to the engines. These reliable engines provided enough power so that the B-17 could fly safely on two engines, a sometimes daily occurrence on combat missions. The streaks on the engine pictured are oil, as it is common for radial engines to leak small amounts of oil due to their design.

The main landing gear of the EAA's Boeing B-17G "Aluminum Overcast". Although tricycle landing gear was becoming more common in the late 1930s, Boeing used a conventional tailwheel layout on the B-17. The main landing gear retracted into the inner engine nacelles. The landing gear operated electrically but had a backup crank system that allowed the crew to lower it manually with a wrench in an emergency. This photograph also shows the B-17's bomb bay doors open.

Combat experience led to changes in the B-17's armament throughout its service career. One of the simple ways to recognize the B-17G variant of the Flying Fortress is the chin turret located under the nose of the aircraft. The addition of this gun turret resulted from combat experience. German fighter pilots were successful in shooting down B-17s with head-on attacks as they knew the aircraft had weak nose defensive armament. The addition of the chin turret attempted to rectify that weakness.

The chin turret on the EAA's B-17G Flying Fortress "Aluminum Overcast". The chin turret was manufactured by Bendix and contained a pair of .50-caliber machine guns. The bombardier remotely operated the turret from the aircraft's nose. The addition of the chin turret greatly improved the B-17's forward defensive firepower. The chin turret was tested and added on late model B-17Fs and became standard equipment on all production B-17G models.



One of the "cheek" defensive machine guns on the EAA B-17G Flying Fortress "Aluminum Overcast". In addition to the chin turret, the B-17G also had two defensive machine guns in cheek positions on either side of the nose. These guns were .50-caliber as well and were manned by the bombardier and navigator. These gun positions, along with the chin turret, provided some defensive protection for the nose section of the B-17 against head-on attacks by German fighter aircraft.

The Plexiglass nose of the B-17 Flying Fortress held the Norden bombsight. This technologically advanced bombsight used an analog computer and an autopilot to calculate a bomb's impact point baseed on changing flight and weather conditions. This device allowed large formations of B-17s to bomb accurately during daylight raids from high altitudes. During large raids, only the bombardier on the lead B-17 would use the bombsight, the other B-17s dropped their bombs when the lead aircraft did.

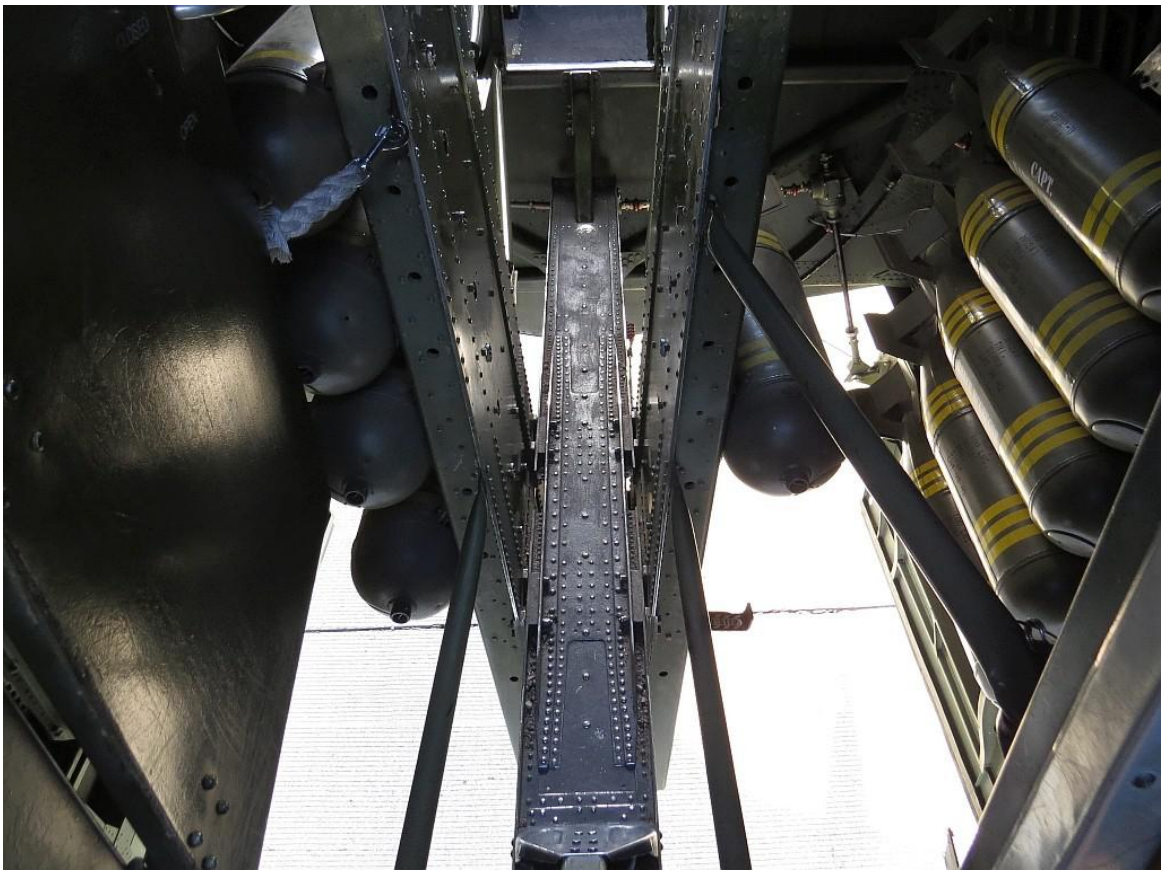
This hatch on the lower left side of the nose is one of two crew entry and exit points on the B-17. This hatch may seem small, but it is important to remember that the B-17 was designed to be operated by young men in prime physical condition. This hatch had no ladder installed, and to enter the B-17, crewmen would pull themselves up into the aircraft. To do this, a crewman would grab hold of handles located just inside the hatch, then pull themselves up, feet first, into the B-17.

The inside of the nose section of the EAA's B-17G "Aluminum Overcast". The nose section is tight, and to get to each location one must crawl, as there is not enough room to stand upright. This is where the bombardier and navigator were stationed. The bombardier sat in the chair in the nose, and the navigator's position was at the wooden table on the left. These two crew members would have also been responsible for manning the two cheek machine guns in the nose section.

A tight crawlspace through the nose section allows access to the cockpit of "Aluminum Overcast". The cockpit of "Aluminum Overcast" looks much like it would have when it rolled off the assembly line in 1945. There are a few modern instruments added for safety, but most of the gauges are original. The instrument box between the pilot and copilot seats is the autopilot control panel. When this was activated, the bombardier would fly the plane to the target using the Norden bombsight.

An outside view of the cockpit of "Aluminum Overcast". The side windows of the cockpit opened to allow the pilot and copilot to get some air when the aircraft was taxing or waiting to takeoff. The B-17 had no air conditioning and no heat. To protect the top of the B-17, the aircraft had a top turret manufactured by Sperry with twin .50-caliber machine guns. The window on the fuselage is the location of the B-17's radio room. The bomb bay is located between these two crew spaces.

The bomb bay is located between the cockpit and radio room on a B-17. This narrow walkway connects the two crew spaces. As with everything on the B-17, space was premium, and this walkway is a tight fit for most adults that tour the inside of "Aluminum Overcast". The bombs were attached to racks inside the bay. The bombs were armed by the bombardier after the aircraft was airborne to prevent detonation if a B-17 crashed on takeoff. A typical B-17 bomb load was 4,000 lb.



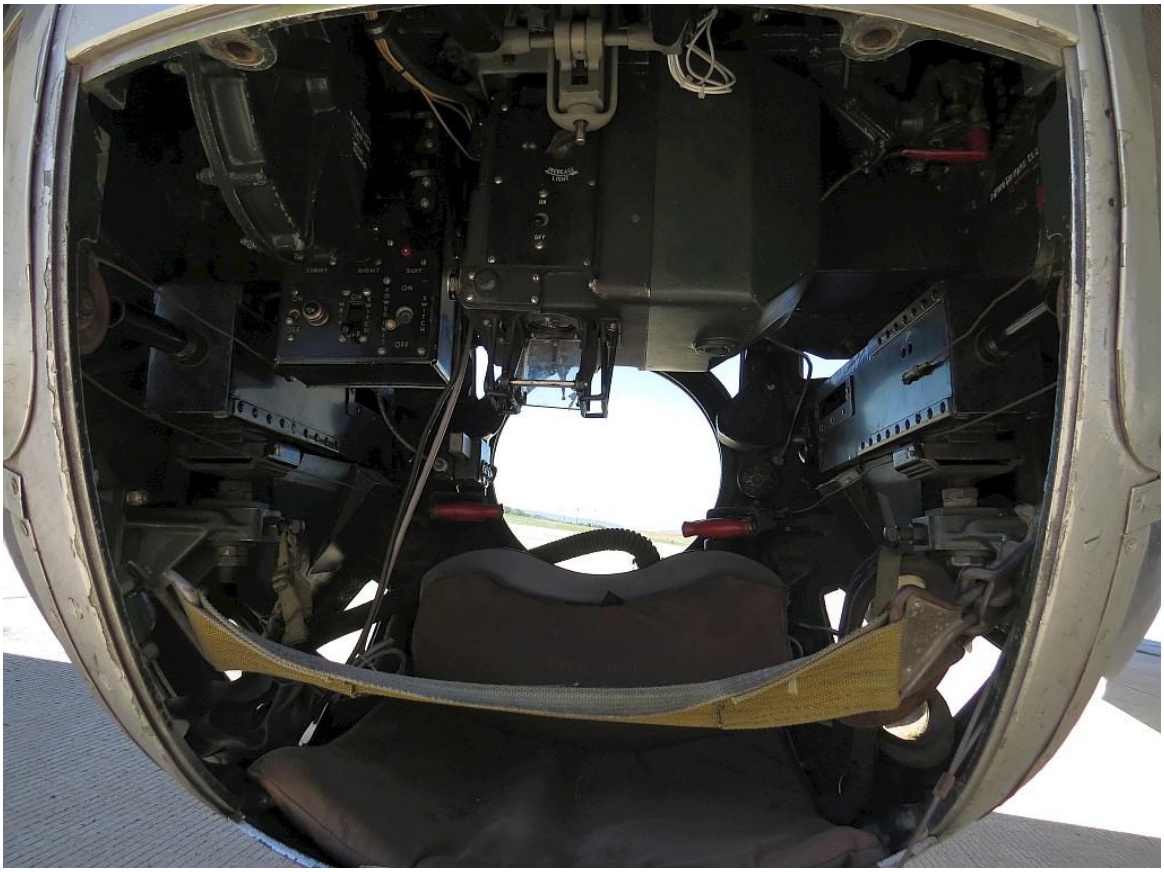
The radio operator's room was one of the most spacious areas on the B-17. The radio operator communicated to the crew as well as other B-17 aircraft in the bombing formation. The radio operator would have used a set much like the one seen in this picture of the radio compartment of "Aluminum Overcast". Behind the radio operator's seat is a yellow oxygen bottle. Since the B-17 was not pressurized the crew needed to use bottles of oxygen, like these, to breathe normally at high altitudes.

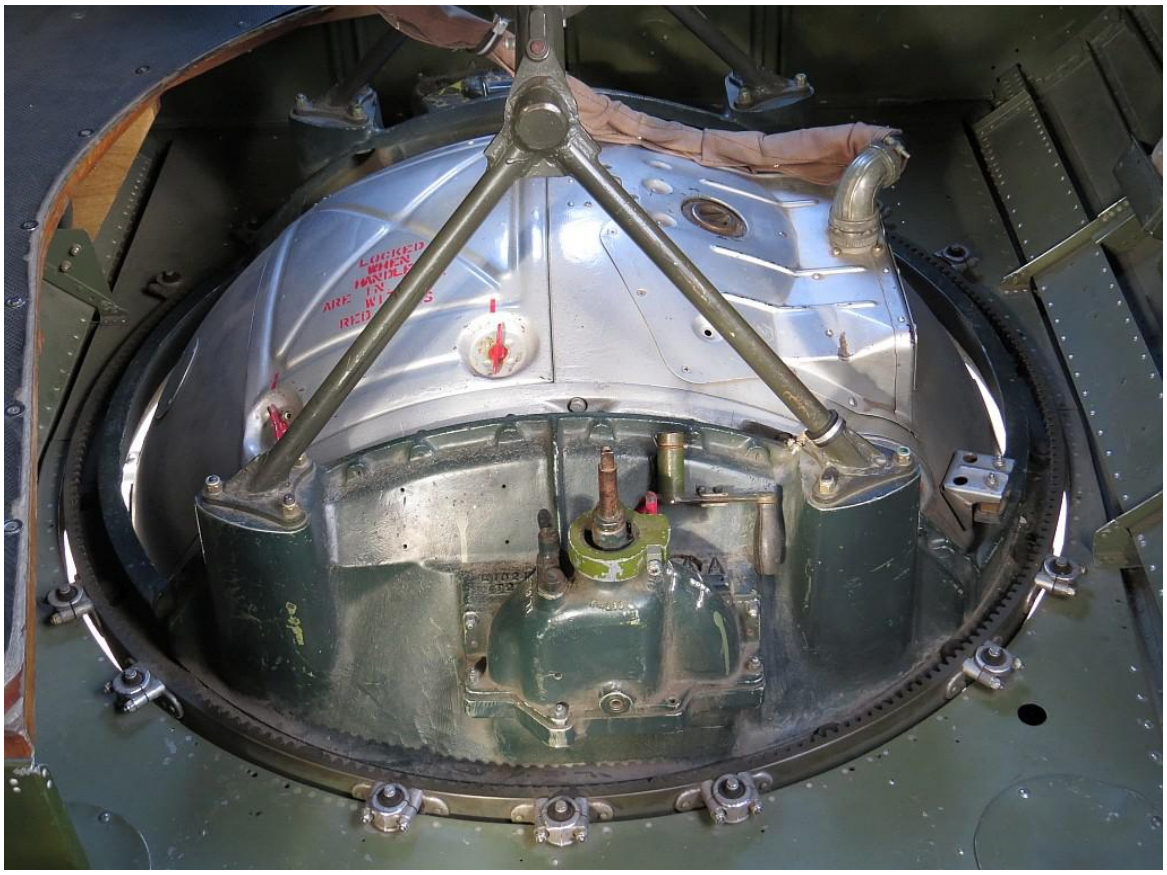
The other side of the radio operator's room features additional seating. The gunners stationed in the back of the aircraft used these seats during takeoff and landing. The radio operator's room was one of the strongest parts of the B-17 airframe, which made it one of the safest places to be in the aircraft in the event of an accident. The radio operator's room also has doors on each end that the radio operator could close to help him limit excess noise and listen to radio transmissions.

The rear fuselage of the B-17G may look like a lot of open space, but the four crew members stationed there were vital to the survival of a B-17 on a combat mission. The four crew members stationed in this section include the ball turret gunner, two gunners at the "waist" positions, and a tail gunner. This view shows the ball turret and waist gun stations. The yellow bottle supplied oxygen to the ball turret. The clear Plexiglass section on the floor is the top hatch for the radio operator's room.

An engineering marvel itself, the vulnerable underside of the B-17 Flying Fortress was protected by a gunner in a small spherical turret manufactured by Sperry. This ball turret accommodated one gunner, featured a shatterproof windshield, and mounted a pair of .50-caliber machine guns. Ammunition, oxygen, and electrical power were fed to the turret from inside the aircraft. The gunner controlled the movement of the turret. The turret was never occupied by the gunner until after the B-17 was airborne.

The inside of the Sperry ball turret. The turret was small and required the gunner to sit in a fetal position for up to eight hours on a combat mission. The gunner moved the turret and fired the guns using hand, and foot controls. Manning the ball turret usually fell to the shortest person on the crew. The turret was lightly armored and a favorite target of attacking enemy fighter pilots. The turret's size meant most gunners could not use a parachute while inside, as there was not enough room.





View of the ball turret from inside "Aluminum Overcast". To enter and exit the ball turret, the turret had to be rotated so that the hatch was inside of the airplane. If the turret was damaged and could not be rotated, there was a small escape hatch designed to allow the gunner to bail out. Unfortunately, this hatch was too small for many gunners to fit through. Although parachutes were designed to be sat on, many gunners elected not to use one, as it made the confines of the turret even tighter.

The rear fuselage section of the B-17G Flying Fortress also contained the two waist gun positions. This is the right waist gun position viewed from the outside of "Aluminum Overcast". The waist gun positions underwent many revisions throughout the production of the B-17 based on gunner feedback and combat experience. On early B-17s, these positions were open, and the gunners were exposed to cold air. On the B-17G, a swivel mount for the gun allowed the opening to be covered with Plexiglass.

The left waist machine gun on the EAA's B-17G Flying Fortress, "Aluminum Overcast". Another change made to the waist gun positions on the B-17G was that the gun positions were staggered. In the early B-17s, both waist guns were located at the same point in the fuselage. This layout often caused the waist gunners to interfere with each other when firing at enemy fighters. The staggering of the guns allowed each waist gunner plenty of room to maneuver while operating their gun.

Another change made to the waist guns during the B-17's production run is visible inside. In the early B-17s, the waist guns were fed by ammunition cans. The cans proved difficult and time-consuming to change. The waist guns were redesigned so the guns could use belts of ammunition instead. The ammunition was stored in these wood boxes attached to the fuselage. Below the ammunition box is where the oxygen bottle used by the waist gunner would be located and stored.

This door on the B-17G is located on the right side of the rear fuselage and served as the entry and exit for the crew members stationed in the aircraft's rear section. The tail gunner position is located to the left of this door, at the very back of the tail. In an emergency this door, and the front hatch, could be jettisoned so the crew could bail out. The crew members could also bail out through an open bomb bay. The tight confines of the B-17 meant bailing out was often difficult, especially if a plane was on fire.

A tail gunner manned the tail gun station protected the B-17's tail. The tail gunner operated two .50-caliber machine guns from the station. Access to the station required the tail gunner to crawl through the tail section of the B-17. Because of this, the tail gunner station is not accessible to visitors when they tour the inside of "Aluminum Overcast". The EAA has put a mannequin in a historic flight uniform inside the tail gunner station, which is visible when walking around the outside of the aircraft.

"Aluminum Overcast" basks in late-day sunshine on the ramp at Lehigh Valley International Airport after a busy day of ride experience flights and visitors touring the inside of the aircraft. "Aluminum Overcast" is visited by thousands of people each year. These tours and the ride experience flights are a wonderful way for the public to learn about a World War II aircraft and the men who flew in them. The EAA hopes to continue flying "Aluminum Overcast" on tours for many years to come.

Loving-Wayne WR-3

Neal Vernon Loving's Loving-Wayne WR-3 homebuilt aircraft on display in the National Air and Space Museum's flagship building on the National Mall in Washington D.C. An accomplished racing pilot and aeronautical engineer, Loving designed and built five homebuilt aircraft during his lifetime. The WR-3 was designed as a "roadable" airplane. The wings folded back against the fuselage and the landing gear was fixed, allowing the WR-3 to be towed behind an automobile like a trailer from a pilot's home to an airport for flying.

Neal Vernon Loving was the first African-American and double amputee to be licensed as a racing pilot. Loving was known for his work as an inventor and aeronautical engineer, and designed five aircraft during his career, including the WR-3 now displayed in the National Air and Space Museum's building on the National Mall in Washington D.C.

Loving was born in 1916 in Detroit, Michigan. His father held the distinction of being the state's first black optometrist. Loving had an interest in aviation from an early age. In 1927 when Loving was 11 years old, Charles Lindbergh completed the first solo nonstop flight across the Atlantic Ocean. This flight drew worldwide media attention and fueled Loving's interest in aviation even further.

Loving studied aeronautics at the Cass Technical High School in Detroit. During this time, he became a licensed aircraft mechanic and began building flightless ground trainer aircraft. The groundless trainer built by Loving earned *Mechanix Illustrated* Project-of-the-Month award, and the trainer was displayed at Detroit City Airport. In 1936, the Detroit Department of Recreation hired Loving to teach model aircraft building. He later became the first black teacher at the Aero Mechanics High School. Loving continued his education by taking accelerated classes in drafting and engineering at Highland Park Junior College. He also joined the Ace Flying Club, an organization for black aviators, and met Earsly Taylor, who became a close friend and business partner.

Loving and Taylor set up a company in Detroit called the Wayne Aircraft Company to build a glider designed by Loving designated the S-1. Unfortunately, World War II began before the two partners could formulate their plans. To help with the war effort, Taylor and Loving formed the Civil Air Patrol squadron 639-5 to train young people in military drills, flight theory and practice, and parachute training. In 1943, Loving was laid off from his job as a teacher at a local high school. He began working seven days a week at a nearby Ford assembly plant while still working at the Wayne Aircraft Company and training pilots for the Civil Air Patrol. With no time to rest, Loving developed long-term fatigue.

In July 1944, flying on only two hours of sleep, Loving crashed his S-1 glider. The crash crushed his legs, requiring them to be amputated, and resulted in a five-month hospital stay. Loving recovered, was fitted with wooden prosthetics, and in 1946, began flying again.

In 1950, Loving designed and built his first airplane, a midget racer designated the WR-1 and named *Loving's Love.* In 1954, the Experimental Aircraft Association (EAA) recognized *Loving's Love* as the most outstanding new homebuilt aircraft design. Loving entered Wayne State University as an engineering student in 1955. In 1961, at age 45, Loving became the oldest full-time engineering student to graduate from the university. While working on his degree, Loving designed and built a "roadable" airplane, the WR-2. Loving intended for pilots to tow the WR-2 behind an automobile to an airport and store the airplane in their garage. He abandoned the project when the design did not meet his expectations and vowed to design an improved airplane.

After Loving earned his aeronautical engineering degree, he joined the staff of the Flight Dynamics Laboratory at the Wright-Patterson Air Force Base in Dayton, Ohio. During the 1960s, he was the project engineer for the High Altitude Clear Air Turbulence Project. He later studied how to make composite aircraft structures made of carbon fibers bonded with resin and developed the composite speed brake fitted to the McDonnell Douglas/Boeing F-15 Eagle jet fighter.

In 1967, Loving designed a second "roadable" airplane, the WR-3. The two-seat aircraft had foldable wings so it could be legally towed behind an automobile. The WR-3 was constructed of wood and fabric and powered by a Continental four-cylinder, air-cooled engine. Between 1968 and 1991, Loving flew the WR-3 over 690 hours. Neal Vernon Loving died in 1998 from colon cancer.

The Loving-Wayne WR-3 was originally donated to the Hoosier Air Museum in Auburn, Indiana. In February 2020, the museum generously donated the WR-3 to the Smithsonian Institution for inclusion in the National Air and Space Museum. The WR-3 is on display in the National Air and Space Museum's flagship building on the National Mall in Washington D.C.

Heinkel He 219 A-2 Uhu (Eagle Owl) (1942)

The Heinkel He 219 Uhu (Eagle-Owl) was the only sole dedicated night fighter built for the Luftwaffe during World War II. Introduced in service in 1943, the He 219 was an innovative design equipped with radar that allowed the aircraft to intercept enemy bombers at night. An expensive and complex aircraft to build, production of the He 219 was delayed by developmental problems and political rivalries among officials in charge of its production and deployment. As a result, less than 300 He 219s were built between 1943 and 1945. Had more He 219s been built, they may have had an effect on the Royal Air Force's night strategic bombing campaign against Germany. The He 219 A-2 pictured here is part of the collection of the Smithsonian Institution and is on display at the National Air and Space Museum's Steven F. Udvar-Hazy Center.

Heinkel He 219 A-2 Uhu (Eagle Owl)

Crew: 2 (Pilot & Radar Operator)

Length: 50 ft 4 in

Height: 13 ft 5 in

Wingspan: 60 ft 8 in

Wing Area: 479 sq ft

Powerplant: Daimler-Benz DB603AA V-12 inverted liquid-cooled piston engines (x2)

Range: 834 nmi

Cruise Speed: 340 mph

Maximum Speed: 420 mph

Empty/Maximum Takeoff Weights: 24,692 lb/33,730 lb

Service Ceiling: 41,700 ft

Armament: 20 mm MG 151/20 cannon in fairing under fuselage (x2), 20 mm MG 151/20 cannon in wing roots (x2), 30 mm MK 108 cannon in *Schräge Musik* upward firing system oriented 65° above horizontal (x2)

Insectoid Looks, Deadly Night Fighter

Operations

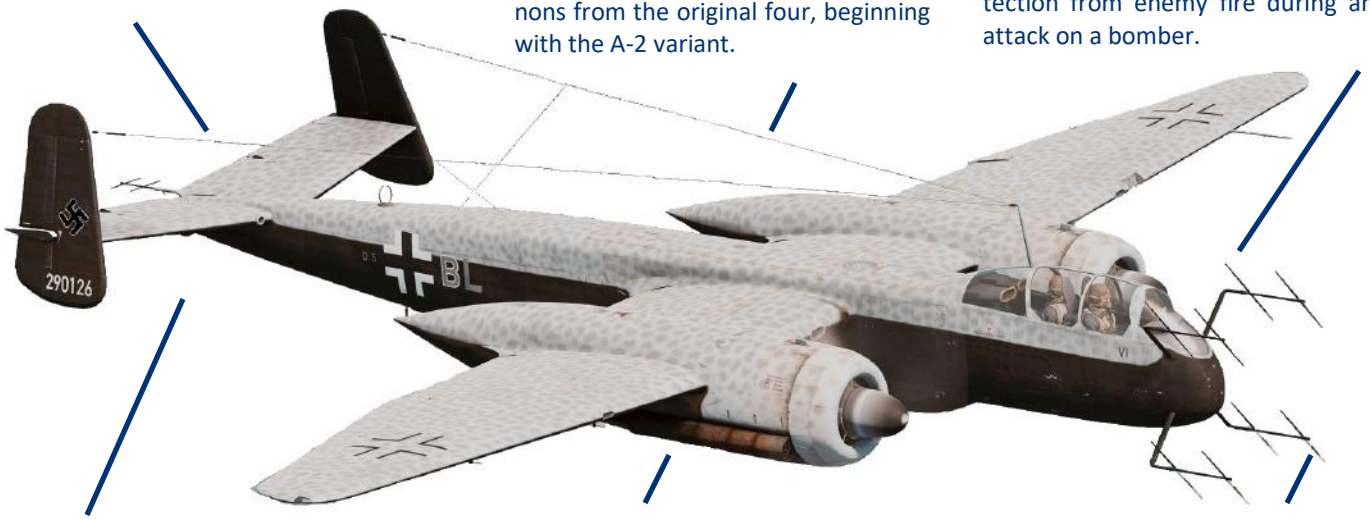
The He 219 was first used on operations during the night of June 11-12, 1943. During this mission, pilot Werner Streib flew one of the pre-production aircraft on a night sortie and shot down five enemy bombers. From 1943 until 1945, upgraded variants of the He 219 were operated as night fighters to intercept enemy bombers at night. German ground controllers directed the He 219s to the general area of the bombers, and then He 219 crews hunted down enemy bombers independently. Unfortunately, less than 300 He 219s were built of all variants, and there were never enough available to stem the tide of thousands of British bombers attacking Germany on nightly bombing raids.

Armament

Initially, the He 219 was armed with a pair of 20 mm cannons in the wing roots and either two or four 20 mm cannons in a ventral weapons bay. Beginning with the A-2 variant, two 30 mm cannons in an offensive *Schräge Musik* upward-firing system were installed in the rear fuselage. This armament allowed He 219s to attack enemy bombers by flying underneath them. Due to space and weight limitations from the addition of the upward -firing system on the He 219, the armament in the ventral weapons pack was reduced to a pair of 20 mm cannons from the original four, beginning with the A-2 variant.

Cockpit

The pressurized cockpit held a crew of two, consisting of the pilot and a radar operator sitting back-to-back. The cockpit provided the pilot with excellent visibility, and all levers and knobs were located within easy reach. In a first for an aircraft, the cockpit was equipped with rocket-powered ejection seats so the crew could exit the aircraft and clear the propellers in an emergency. Later versions of the He 219 had a bullet-proof shield that could be pulled up in the cockpit to increase crew protection from enemy fire during an attack on a bomber.



Flight Characteristics

Despite its unusual looks, the He 219 was well-liked by its flight crews. The aircraft was easy to fly, had excellent maneuverability, and the cockpit's location provided the crew with excellent visibility. The He 219 was also the first German aircraft equipped with tricycle landing gear, making it easy to land and taxi on the ground. The He 219's high top speed made it one of the only German aircraft capable of catching the British de Havilland Mosquito fighter-bombers.

Engines

The Heinkel He 219 used a pair of Daimler-Benz DB603 V-12 inverted liquid-cooled engines. The engine nacelles were built into the wings and an integral part of the wing structure of the He 219. The engines were equipped with exhaust flame dampers to conceal exhaust visibility at night. The engines drove three-bladed, variable-pitch, constant-speed propellers that featured their own reservoirs of de-icing fluid. The DB603 was designed as a unitized modular engine. If an engine developed a problem or failed, the whole engine unit was designed to be changed rather than individual parts by utilizing simple connections and attachment points. The slow development and teething problems with the DB603 meant that the He-219 initially entered service with lower-power versions of the engines installed than planned. The result was that early variants of the He 219 were underpowered. Only the late-production He 219 A-7 variant used the DB60E engines that were originally intended for the aircraft.

Radar

Most of the He 219s built were delivered with the Telefunken FuG 220 Lichtenstein SN-2 radar system installed. This radar operated on a 90 MHz VHF-band and had a detection range of approximately three miles. This radar had 4x2 dipole element *Hirschgeweih* aerials. This radar had improved accuracy and resolution over earlier systems, but the aerials contributed to drag on the airframe of the He 219 and reduced its overall top speed.

Frecce Tricolori To Tour North America In 2024

The Italian Air Force Aerobatic Team, the Frecce Tricolori, recently announced they will tour North America in 2024. The team will visit a select number of airshows in both the United States and Canada during the summer months. The Frecce Tricolori currently fly the Aermacchi MB-339PAN jet fighter trainer and are known for the use of colored smoke, representing the colors of the Italian flag, in their airshow performances. (Map and Images Courtesy of the Italian Air Force/Frecce Tricolori).

The Italian Air Force recently announced through their official social media channels that the Italian Air Force Aerobatic Team, the Frecce Tricolori, will tour North America during the 2024 airshow season. The team will visit locations in the United States and Canada during the tour of North America, the first time the team has toured the continent in over 30 years.

The Frecce Tricolori, which translates to “Tricolor Arrows” in English, are officially known as the 313° Gruppo Addestramento Acrobatico Pattuglia Acrobatica Nazionale (PAN) (English translation: 313th Acrobatic Training Group, National Aerobatic Team (PAN)). The Frecce Tricolori was established in 1961 at the Rivolto Air Base in the province of Udine. The Frecce Tricolori are a national symbol of Italy and are known for their use of colored smoke during their airshow displays, representing the colors of the Italian flag. During their 30-minute airshow display, the nine formation pilots and one solo pilot of the Frecce Tricolori fly up to 20 different solo and formation maneuvers. Currently, the team flies the Aermacchi MB-339PAN, a two-seat jet fighter trainer and light attack aircraft introduced into service with the Italian Air Force in 1979. Other aircraft flown by the Frecce Tricolori in the past include the North American F-86E Sabre fighter and the Fiat G.91PAN fighter.

The Frecce Tricolori recently announced nine scheduled airshows for their appearances in the United States and Canada during the two-month tour of North America. To help celebrate the 100th Anniversary of the Royal Canadian Air Force, the Frecce Tricolori will perform at the airshows in Bagotville, Quebec (June 22-23) and Trenton, Ontario (June 29-30). The team will return to Canada in July to perform at an airshow in Cold Lake, Alberta (July 20-21).

The Frecce Tricolori will make their first appearance at an event in the United States when they visit Los Angeles, California (July 6-7). The team will also perform at airshows in Sacramento, California (July 13-14), Oshkosh, Wisconsin (July 23), Milwaukee, Wisconsin (July 27-28), Rochester, New York (August 3-4), Orange County, New York (August 10-11), Norfolk, Virginia (August 21), and Ocean City, Maryland (August 24-25). Additional airshow and public display dates may be announced in the next few months as preparations for the visit to North America by the Frecce Tricolori are finalized.

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.